

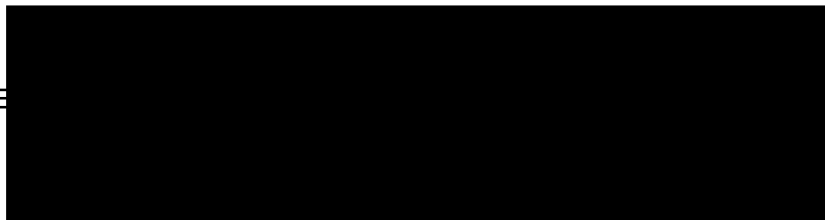
**Report
of
Dusk emergence surveys
28th August and 4th September 2014**

**The Barn
Aldingbourne**

Survey undertaken by:-

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Natural E



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2 Executive Summary

- Two dusk emergence surveys were undertaken on the house on 28th August and 4th September 2014 to follow up the preliminary ecological bat surveys undertaken on 22nd August 2014 when a small number of small bat droppings were found on and under a hanging tiles on the side of a dormer. The summer house on the site was also further considered
- One Soprano pipistrelle (*Pipistrellus pygmaeus*) emerged from under tiling on the house during each of the two dusk emergence surveys undertaken. This confirms that the house is used as a bat roost by this species. There were a small number of small bat droppings seen under hanging tiles where a bat emerged during the first survey. There was no evidence to suggest that the roost is a maternity roost and is probably a male roost
- The proposed extension and changes to the house will destroy the roosts identified under tiles and therefore an appropriate Natural England mitigation bat licence will be required before building work commences that would disturb or destroy the identified roosts. The licence application will need to give details of the mitigation and include information regarding the timing of building work, care required during building work, maintenance of roosting on the site
- Re-provision could be provided under roofing tiles on the new extension or in bat boxes positioned on a tree in the garden.
- There was no evidence to suggest that the summer house is used by bats for roosting. There was no evidence to suggest that the demolition of the building would destroy a bat roost or have any effect on the local ecological functionality of bats in the vicinity
- With mitigation no bat should be harmed during the proposed work and roosting should remain available on the site for the Soprano pipistrelle
- There was no evidence seen to suggest that the proposed development would have any ecological impact on the foraging opportunities available to bats in the locality or that the demolition of the existing building would affect the local bat ecology at the time of the surveys

This report has been completed for the buildings as seen during the survey and discussed in this report. The survey is only valid for the building as seen at during this survey

If work is not commenced within the following two years a further bat survey should be undertaken

3 Background

Two dusk emergence surveys were undertaken on the house on 28th August and 4th September 2014 to follow up a preliminary ecological bat survey undertaken on 22nd August 2014 when a small number of small bat droppings were found on and under a hanging tiles on the side of a dormer on the house. The summer house on the site was also further considered. This report details the outcome of these surveys and must be read in conjunction with the report of the preliminary survey.

The Bat Conservation 'Bat Surveys – Good Practice Guidelines 2nd edition' have been taken into account to determine the extent of the investigative work required on this site.

4 Experience of Ecologist

Sue Harris holds a Natural England Bat Survey Class Licence CL18 (Bat Survey Level 2) registration number CLSO2801 and has considerable experience surveying buildings and land for bats and monitoring bat activity on a consultancy basis and has been the named ecologist in many Natural England European Protected Species Licences. Sue is also experienced using bat detectors and the analysis of bat recordings and monitoring bat activity.

Sue is also is a Natural England roost visitor and holds a Natural England Class Survey Licence WML CL15 (Volunteer Bat Roost Visitor Level 1) rescues and rehabilitates bats in West Sussex and takes part in the Bat Conservation Trusts National Bat Monitoring Program during the summer and winter hibernation counts.

5 Location

Map reference

SU9254 9520

Address

The Barn
Park Lane
Aldingbourne
West Sussex
PO20 3TJ

6 Legislation related to bats

All species of bats and their roosts are legally protected in England. All bats in England are listed as a European Protected Species. The following provides a guide to the legislation.

The Conservation of Habitats and Species Regulations 2010 (the "Habitats Regulations") consolidate and update the Conservation (Natural Habitats, &c.) Regulations 1994 1 ("the 1994 Regulations").

The Conservation of Habitats and Species Regulations 2010 fully protect bats and their roosts, making it an offence to:-

- Deliberately kill, injure or capture a bat
- Deliberately disturb bats
- Damage or destroy a breeding or resting place of bats (even if bats are not occupying the roost at the time)
- Possess or advertise/sell/ exchange a bat (dead or alive) or any parts of bats or transport a bat or any part of a bat
- Intentionally or recklessly obstruct access to a bat roost

Disturbance of animals includes in particular any disturbance which is likely:-

- (a) to impair their ability—
 - (i) to survive, to breed or reproduce, or to rear or nurture their young, or
 - (ii) in the case of animals of a hibernating or migratory species, to hibernate or migrate; or
- (b) to affect significantly the local distribution or abundance of the species to which they belong

In addition, the Wildlife & Countryside Act 1981 (as amended) makes it an offence to: Intentionally or recklessly

- disturb any bat whilst it is occupying a structure or place which it uses for shelter or protection;
- obstruct access to any structure or place which any bat uses for shelter or protection.

Natural England, European Protected Species Licence would be required if an individual wishes to undertake works/activities that would affect bats and would involve one or more of the following: capture, kill, disturbance, transport and/or damage/destroy the roosts or resting places of bats.

Under Regulation 53(2)(e-g) & 53(9)(a-b) of The Conservation of Habitats and Species Regulations 2010 Natural England, under powers conferred by the Secretary of State, has authority to issue licences. In determining whether or not to grant a licence Natural England must apply the requirements of Regulation 53^s of the Regulations and, in particular, the three tests set out in subparagraphs (2)(e), (9)(a) and (9)(b)^s.

- (1) **Regulation 53(2)(e)** states: a licence can be granted for the purposes of “preserving public health or public 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”.
- (2) **Regulation 53(9)(a)** states: the appropriate authority shall not grant a licence unless they are satisfied “that there is no satisfactory alternative”.
- (3) **Regulation 53(9)(b)** states: the appropriate authority shall not grant a licence unless they are satisfied “that the action authorised will not be detrimental to the maintenance of the population of the species concerned at a favourable conservation status in their natural range.”

Evidence of the proposed provisions to accommodate the bats in the future would be required for a licence to be granted where needed—for example, an alternative roost may need to be provided. Details of the conduct of the proposed activities would be required in detail.

7 Objectives of the surveys

- To consider the roof and hanging tiles on the house further to confirm the species of bat roosting under hanging tiles on a dormer window and to consider if any other areas of tiling on the house are used for roosting
- To consider if the summer house roof is used for roosting
- To identify the status and number of the bats roosting in the buildings where relevant
- To identify access points used by bats if relevant
- To consider the full impact of the proposed building work to any bat roosts identified if relevant
- To provide information to enable appropriate mitigation to be planned if required
- To consider the implications of the proposed building work to any bat roosts identified
- To provide information to support a Natural England mitigation licence if required
- To provide recommendations, information and mitigation if bats are found to be using the building as a roost

8 Constraints during the survey

No identified constraints.

9 Dusk emergence surveys - House

9.1 Personnel

Sue Harris undertook the dusk emergence surveys with the assistance of one other person experienced at monitoring bats and with the use of bat detectors

9.2 Equipment

The equipment used to complete the surveys included:-

- Batbox Duet bat detectors with Sony minidisk MZ-RH1 recorders and headphones
- Dictaphones
- Torches as required
- Digital thermometer
- Wave pad and Batscan 9.6 for analysis
- Uniden walkie-talkies

9.3 Survey methodology – house

- The surveyors were positioned as shown approximately by a 'X' in aerial photo below. This enabled all tiling to be seen well



- Bat detector and mini disc recorders were used at all times during the survey
- All bat movements were noted
- The surveyors informed each other of bat movements by walkie talkie to ensure bat movements were accurately recorded
- The tiling was considered by torch light at the end of the survey
- The recordings of bat calls/sounds made were analysed following the survey

9.4 Dusk emergence survey 28th August 2014

9.4.1 Timing of Survey

- Sunset 19.57
- The house was monitored for bat activity from 19.40 - 21.00

9.4.2 Weather Conditions

- Dry, clear skies. Wind calm - Beaufort force 0
- Temperature at beginning of survey 16.5C
- Temperature at end of survey 13.5C

9.4.3 Outcome of dusk survey

9.4.3.1 Bats seen to emerge

At 20.14 a Soprano pipistrelle was seen to emerge from under hanging tiles on the north side of the dormer window where bat droppings were found during the preliminary survey on 22nd August 2014 and flew to the north as marked in the following photos



Approximate position of emergence



Flight path of emerging bat

9.4.3.2 Bat activity around the house

- 19.55 a Common pipistrelle (*Pipistrellus pipistrellus*) was heard to pass the northern rear of the house
- 20.06 a Soprano pipistrelle was heard to pass the northern rear of the house
- 20.15 - 20.19 Pipistrelles heard quietly in the distance and two flew over the house
- 20.19 a Soprano pipistrelle began feeding around the eastern end of the house for several minutes
- 20.29 – 20.43 a Serotine (*Eptesicus serotinus*) was heard several times and was identified as feeding in a garden immediately to the north of the house
- 20.25- 20.56 Soprano pipistrelles were heard to pass the northern end of the house on six occasions

9.5 Dusk emergence survey September 4th 2014

9.5.1 Timing of Survey

- Sunset 19.42
- The building was monitored for bat activity from 19.25 - 20.42 when it became too dark to see bat movements

9.5.2 Weather Conditions

- Dry, overcast. Wind calm - Beaufort force 0
- Temperature at beginning of survey 19.3C
- Temperature at end of survey 17.0C

9.5.3 Outcome of dusk survey

9.5.3.1 Bats seen to emerge

At 20.09 a Soprano pipistrelle was seen to emerge from under roof tiles on the north side of the house and flew to the north as marked in the following photos.



Approximate position of emergence



Flight path of bat seen to emerge

9.5.3.2 Bat activity around the house

- 19.52 a Soprano pipistrelle was heard to pass the northern rear of the house
- 19.54 a Serotine was heard briefly
- 20.08 a Serotine flew across the eastern end of the house from south to north
- 20.10 a Serotine was heard briefly
- 20.16 a Serotine was seen to fly from the north towards the north side of the house, circle and return to the north
- 19.56 a Common pipistrelle was heard briefly
- 19.56 two Soprano pipistrelles were seen to fly from the north and began feeding around a tree and lawn on the eastern end of the house for five minutes
- 20.01 a bat of the myotis species was heard briefly
- 20.13 an unidentified bat was heard to pass
- 20.28 a bat of the myotis species was seen to fly from the north, circle close to the north eastern corner of the house and fly onwards

9.6 Further investigations – summer house

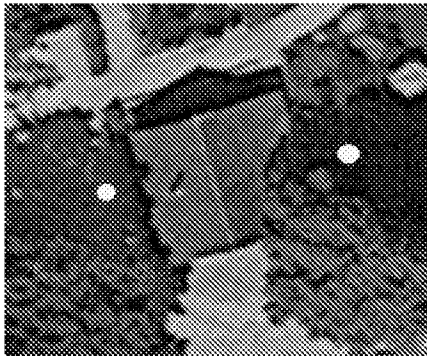
9.6.1 Equipment

The equipment used to complete the surveys included:-

- Batbox Duet bat detectors with Sony minidisk MZ-RH1 recorders
- Torches as required
- Digital thermometer
- Wave pad and Batscan 9.6 for analysis
- Sony nightshot video cameras with additional infra-red lighting

9.6.2 Dusk survey 22nd August 2014

Two video cameras with night shot with additional infra-red lighting were set up to focus on the roofing of the summer house. They were left in place from 19.38 until 21.00. The approximate position of the cameras is shown below. A bat detector and recorder was left with the cameras.



Approximate position of cameras

The roof was considered with binoculars at the commencement of the survey and with a torch at the end of the survey.

No bats were seen to emerge on the video footage.

There was no evidence seen on the roof to suggest that bats were roosting in the roof which was largely very well sealed and the small areas where access appeared available in daylight could be seen at night with a torch to show no evidence of good access or being accessed.

9.6.3 Roof check September 4th 2014

The roof was again checked with a torch in the dark and no evidence of roosting was identified.

10 Summary of dusk surveys

10.1 House

A soprano pipistrelle was seen to emerge from tiling on the north side of the house during each of the two surveys undertaken. The approximate positions of the emergence and flight path is shown in the following photos.



Positions of emergence



Flight path of bats seen to emerge

No bats were seen to emerge from tiling on two dormer windows on the east side of the house.

Soprano pipistrelles were seen and/or heard to pass the house during the surveys and there were bursts of feeding activity around the eastern end of the house. The Common pipistrelle, Serotine and myotis bats were also seen and/or heard in the vicinity of the building but were not seen to emerge from the property.

10.2 Summer house

No bats were seen to emerge from the summer house and there was no evidence seen to suggest that bats were accessing the roof which was fitted with a flat largely tightly fitted roof tile. No bat droppings or specific markings were seen during detailed viewing of the roof.

11 Conclusions

11.1 Summer house

There was no evidence to suggest that the summer house is used by bats for roosting. There was no evidence to suggest that the demolition of the building would destroy a bat roost or have any effect on the local ecological functionality of bats in the vicinity.

11.2 House

One Soprano pipistrelle emerged from under tiling on the house during each of the two dusk emergence surveys undertaken. This confirms that the house is used as a bat roost by this species. There were a small number of small bat droppings seen under hanging tiles where a bat emerged during the first survey.

The Soprano pipistrelle is a small crevice dwelling bat that usually roosts close to water and often roost behind tiling or cladding on buildings. They can form very large maternity roosts. There was no evidence to suggest that the roost is a maternity roost and is probably a male roost.

The proposed extension and changes to the house will destroy the roosts identified under tiles and therefore an appropriate Natural England mitigation bat licence will be required before building work commences that would disturb or destroy the identified roosts. It must be noted that bats crawl well and could be roosting anywhere under the tiling where they were seen to emerge.

The licence application will need to give details of the mitigation and include information regarding the:-

- Timing of building work - see 12.1
- Care required during building work - see 12.2
- Re-provision of roosting on the site – see 12.3

to ensure that :-

- No bats are endangered or harmed during the proposed building work
- The continued ecological functionality of the building is maintained for the Soprano pipistrelle
- The conservation status of bats locally, regionally and nationally will be unaffected by the proposed work
- Roosting opportunities will remain on the site long term
- The building work proposed will not be detrimental to the conservation status and maintenance of the population of any species of bat in the locality
- No bat is disturbed at an inappropriate time in the bats annual life cycle or disturbed in such a way that would :-
 - (a) impair their ability—
 - (i) to survive, to breed or reproduce, or to rear or nurture their young, hibernating
 or
 - (b) to affect significantly the local distribution or abundance of the species to which they belong

With mitigation no bat should be harmed during building work and roosting will remain available long term on the site.

11.3 Natural England Mitigation licence

A bat roost will be destroyed during the proposed building work and therefore a Natural England mitigation licence will be required before any building work commences that would disturb or destroy the roosting identified under tiling. A licence must be applied for by the owner with input from an appropriately experienced bat ecologist/consultant.

The licence application requires details which include how bat roost provision will be maintained on the site which must be appropriate for the species of bat identified, the timing of the work and how the work will be conducted to ensure that no bat is endangered or disturbed at important times of their annual life cycle.

In determining whether or not to grant a licence Natural England must apply the requirements of Regulation 53^s of the Regulations and, in particular, the three tests set out in sub-paragraphs (2)(e), (9)(a) and (9)(b)^s.

- (1) **Regulation 53(2)(e)** states: a licence can be granted for the purposes of “preserving public health or public 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”.*
- (2) **Regulation 53(9)(a)** states: the appropriate authority shall not grant a licence unless they are satisfied “that there is no satisfactory alternative”.*
- (3) **Regulation 53(9)(b)** states: the appropriate authority shall not grant a licence unless they are satisfied “that the action authorised will not be detrimental to the maintenance of the population of the species concerned at a favourable conservation status in their natural range.”*

The licence application takes up to 30 working days to be considered by Natural England from the date the application is acknowledged.

Planning permission is required before a licence can be granted. A survey must be undertaken within three months of the licence application. This can consist of a walkover survey updating the previous reports completed.

12 Mitigation

12.1 Timing of building work

The commencement of the building work should be planned to ensure that roosting areas are not destroyed during the active summer maternity season May 1st to September 1st or the winter hibernation season, November 1st to March 1st. Building work affecting the identified roosting should be commenced during March/April or September/October and if at all possible new roosting completed during this time. It may be possible to consider commencing work on this building during the summer months as there is no evidence of a maternity roost but the winter hibernation period should be avoided.

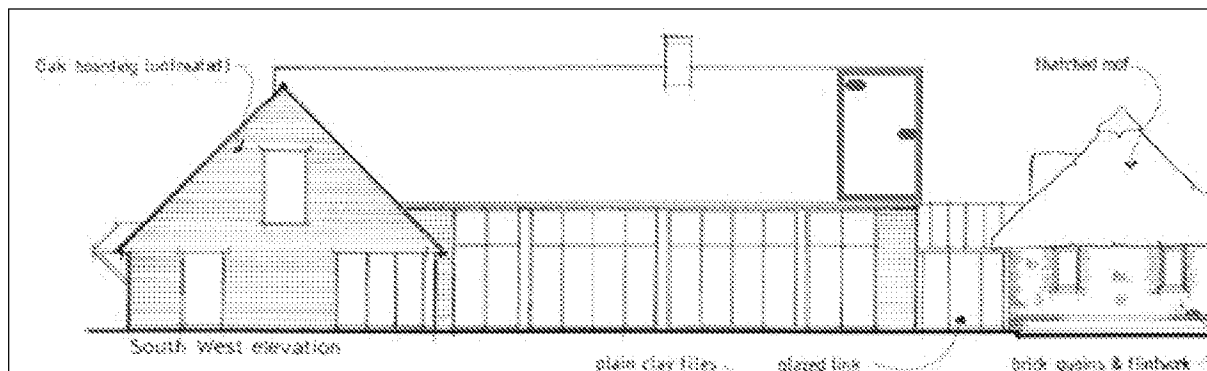
12.2 Care during building work

No work should be undertaken to remove the tiles or destroy roosting over the building until a Natural England mitigation licence has been obtained.

To ensure that no bat is endangered or harmed if roosting behind roof or hanging tiles during demolition/replacement tiles must be removed by hand and each checked underneath to ensure that there are no bats on the underside of the tile. Ridge tiles should be lifted carefully and checked for bats. A licenced bat ecologist with appropriate experience will be required to supervise the removal of the tiles after providing details to workman of the care to be taken and the signs to look for before work begins. This would need to be detailed in the licence application.

12.3 Reprovision of roosting

The new extension will be tiled in plain clay tiles. It would be possible to allow access under these tiles by fitting bat access tiles to part of the roof lined with roofing felt 1F and not breathable membrane. An area such as that shown below could provide roosting by fitting roofing felt and two access tiles



Alternatively given the low number of bats bat boxes could be fitted on a tree close to the house but away from disturbance during building work and away from lighting thrown from windows from the house. The Schweglar 1FF bat box is self-cleaning and would be suitable. Two boxes could be fitted around one tree above three metres with free flying access to the boxes.

13 Bibliography

- *Bat Surveys – Good Practice Guidelines – Bat Conservation Trust*
- *Bat Workers Manual – Joint Nature Conservation Committee*
- *Bat Mitigation Guidelines – English Nature (now Natural England)*
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