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4 New Park Road  
Chichister  
West Sussex  
PO19 7XA

3<sup>rd</sup> May 2017

***Bat survey results and mitigation plan for the farmhouse on Brook Lane, Rustington, West Sussex.***

The Ecology Partnership was commissioned by Store Properties to undertake a dusk bat survey at the farmhouse on Brook Lane, Rustington, West Sussex. Bat surveys were recommended following the results of a PEA carried out in June 2016. This report details the findings of the emergence survey as well as what can be expected in terms of mitigation pending the results of further survey work.

***Methodology***

A single dusk emergence was carried out on the 2<sup>nd</sup> May 2017. During the survey, all activity including emergence points from the building were recorded. The surveys followed BCT guidelines (2016). Prior to the surveys the building was inspected externally in order to assess features of interest and all potential exit locations. Surveyors were positioned in such a way in order to cover areas of interest and record any flyovers and activity around the building.

The dusk survey commenced 30 minutes before sunset and observations were maintained until 2 hours after sunset. Bats usually emerge about twenty minutes after sunset depending on the species, light level, weather conditions and time of year. Peak activity will normally last for about two hours after sunset, during times of peak insect activity.

All surveyors were equipped with heterodyne or frequency division bat detectors, Echometer Touch and Anabat walkabout bat detectors.

The surveyors were positioned around the house as shown below in Figure 1.



*Figure 1: Locations of the surveyors on the 2nd May 2017 emergence survey*

## ***Results***

An internal inspection of the roof void on the 22<sup>nd</sup> June 2016 revealed no evidence of bat activity within the void. Loose and lifted weatherboarding around the windows of the house were considered to offer some opportunities for roosting bats.

The emergence survey was carried out on the 2nd May 2017. Sunset was at 20.35. Surveyors were on site from 19.45. The weather was overcast with a light breeze. The temperature at the start was 12.2°C, falling to 10.9°C by the end of the survey. There was a brief light rain shower for approximately 10 minutes occurring around 20.40.

The bat activity around the site on the 2nd May was considered to be relatively high. The first bat was heard at 20.15 by surveyor 1 and was a common pipistrelle call. All three surveyors observed both common and soprano pipistrelles foraging and commuting around the farmhouse, within the driveway and the garden throughout the survey.

Surveyor 1 was positioned close to the lane, with 33 bat passes observed commuting up and down the lane. This surveyor also heard approximately 15 *Myotis sp.* passes at various times between 21.00 and 21.44 and a Serotine pass at 21.14.

Surveyor two heard predominantly pipistrelle calls from common and sopranos, with a serotine pass at 21.23. Pipistrelles were seen to be foraging within the driveway for a continuous 10 minutes between 21.25 and 21.34. A bat was seen by surveyor 2 to emerge from the corner of the eastern dormer window, from underneath the weatherboarding, three boards up. The bat did not echolocate, however the next call heard was from a soprano pipistrelle. It is considered likely that the bat was a pipistrelle species.

Surveyor 3 had the lowest number bat calls altogether and had the same species as the other surveyors with the addition of three brown long-eared bat passes at 21.06. The bat was not seen however. The bat calls heard have been summarised below in table 1.

**Table 1: Number of bat calls heard at each surveyor point**

| Bat species                                            | Surveyor 1 | Surveyor 2 | Surveyor 3 | Total |
|--------------------------------------------------------|------------|------------|------------|-------|
| Common pipistrelle<br><i>Pipistrellus pipistrellus</i> | 6          | 15+        | 4          | 25+   |
| Soprano pipistrelle<br><i>Pipistrellus pygmaeus</i>    | 11         | 4          | 2          | 17    |
| Myotis species<br><i>Myotis sp.</i>                    | 15         | 0          | 2          | 17    |
| Serotine<br><i>Eptesicus serotinus</i>                 | 1          | 1          | 4          | 6     |
| Brown long-eared bat<br><i>Plecotus auritus</i>        | 0          | 0          | 3          | 3     |
| <b>Total:</b>                                          | <b>33</b>  | <b>20</b>  | <b>15</b>  |       |



*Figure 2: Yellow circles indicate areas of lifted weatherboarding.  
Red arrow indicates where the bat was seen to emerge from on the 2nd May 2017*



*Figure 3: Photograph of the area where the bat was seen to emerge from on the 2nd May 2017*

## *Discussion*

Internal inspection of the roof void above the farmhouse in June 2016 revealed no evidence of bat activity with the void. It is considered that bats are not roosting within the void. Externally the loose and lifted weatherboarding around the dormer windows of the farmhouse were considered to create opportunities for roosting bats.

An emergence survey was carried out on the 2nd May from 19.55 to 22.00. A high number of common and soprano pipistrelle passes were recorded foraging around the farmhouse and up and down the lane. Myotis species, serotine and brown long-eared bats were also recorded using the site (numbers detailed in table 1).

A single bat was seen to emerge from the weatherboarding around the eastern dormer window from surveyor position 2 at 20.20. The bat did not echolocate but is considered likely to be a pipistrelle species.

It is recommended that another two bat surveys be carried out this season (May-September 2017). One dusk and one dawn survey are recommended. This will assist in determining the exact location of the roost, the number of bats using the roosting feature and confirmation of the species and if there are any additional bats using crevice features on other aspects of the house.

The house itself only supports very limited external features, largely confined to the dormer windows and the weatherboarding associated with these windows. As such it is considered likely that only a low number of bats would be associated with the building and the species would be limited to bats which are associated with crevices rather than internal loft spaces and more open conditions.

Based on what is currently known of the building in terms of the species present and number of bats likely to use the external features of the building, it is considered likely a low-impact Natural England bat license will be required for the development to ensure the works are compliant with relevant EU legislation. This license will need to be applied for prior to commencing any works related to the buildings on site. However, should the further survey work indicate the presence of a species outside the remit of the low impact license, more than three species of bats or a maternity or hibernation roost, then a European Protected Species License may be necessary.

## *Mitigation*

The development will be required, as part of the licence, to include suitable mitigation measures in order to alleviate the loss of bat roosts and foraging/commuting habitat. While it is not possible to fully determine the species or extent to which they are utilising the building until further surveys are performed, a number of likely mitigation recommendations based on what is currently known are included below.

Demolition works to the roof should be undertaken under Ecological Clerk of Works by the Registered Consultant (RC) during times where bats are less likely to be roosting under the roof / hanging tiles or within the void (October – November).

Pipistrelle bats are a crevice dwelling species; the erection of bat boxes can mitigate for the loss of roosting opportunities caused by the demolition of the farmhouse. Schwegler 1FS and 2FS boxes are recommended, both general purpose boxes utilised by a range of smaller UK bat species. In the event of further survey work indicating larger species such as serotines or species with more specific roosting requirements, then other bat boxes may be required. Ideally the bat boxes should be situated on the southern or western aspect of a mature tree in close proximity to suitable habitat features such as hedgerows and trees.

The instillation of Schwegler 1FR and/or 2FR bat tubes is recommended on the proposed new buildings around the edges of the site. While south or southwest aspects are generally favourable for bats, the exact siting of these tubes will depend on the results of the emergence surveys as mitigation should attempt to mimic the conditions of the existing roost.

Finally, it is recommended that a Habibat Rocket Box 008 is recommended for the western section of the site. This is a freestanding double-chambered access box and would be considered a suitable box for a range of species which are currently using the site. The wood has an EPC coating for durability and can be delivered in a wood finish or in a colour of the property owner's choice. The box is 2.8m high at its highest point and it is recommended that 30cm of the pole is sunk into a concrete footing.

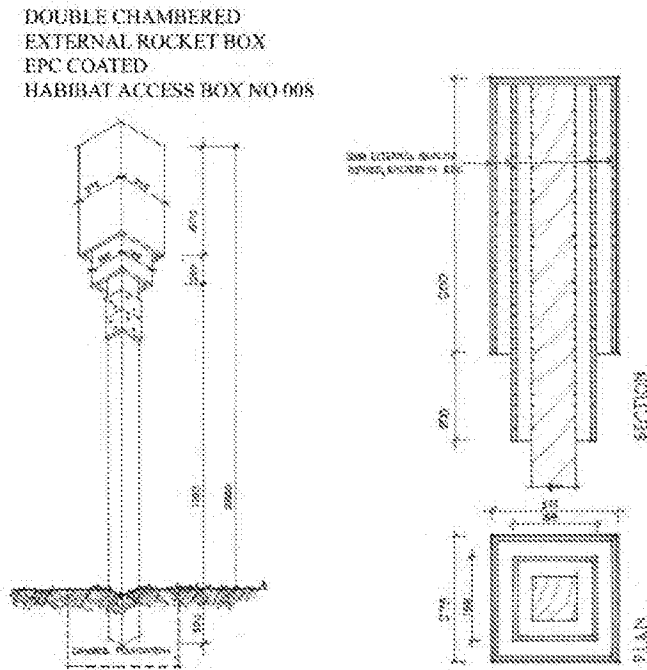


**Figure 4: A Habibat Rocket Box design**

In the unlikely event of the further surveys indicating the presence of a maternity roost then a like-for-like replacement roost may be required as part of mitigation. The design and specification of this roost will depend greatly upon the outcome of the surveys as different species have different requirements.

#### *Timing of Works*

In the event of the surveys finding a low number of common species, the timing of the works with regards to the Natural England Low Impact Class licence requirements is as follows:

- Once planning has been approved and conditions are discharged the low impact bat licence will be applied for. This can be submitted a minimum of 15 days prior to the works being completed. An update survey must occur (walk over or internal survey) in the last 3 months prior to demolition works;
- Stand-alone bat boxes (Schwegler 1FS and 2F) should be established on the trees on site prior to any works commencing on site;
- The rocket box should also be established on site prior to any site works;

- Once the licence is issued (the licence should take 10 working days for issue), all licensable works can commence (if weather conditions appropriate). All licensable works (removal of tiles etc.) should take in the region of 1 or 2 days.
- The registered low impact bat licence consultant (the RC) must be on site for all of the licensable works.
- Once the licensable works are complete and the RC is satisfied that the structure is free of bats the building can then be demolished.
- The enhancement bat boxes will be included within the development build programme. The bat boxes will be checked to ensure they are fitted during the build process.

It should be noted that the above recommendations are advisory only, a more robust and informed mitigation strategy will be included as part of the full bat report following completion of the emergence / re-entry surveys to be carried out this season between May and September 2017. These are recommended to be conditioned based on the information provided by the internal and external surveys performed in June 2016 and May 2017.

It is however considered that bat mitigation can be included within the design of the development and that a suitable mitigation strategy is achievable within the red line boundary. Redevelopment of the site will be undertaken to ensure bat friendly features are created within buildings and that prior to the erection of buildings on site, bat boxes will provide a continual roosting opportunities within the red line boundary.

It is considered that the development would not result in the detrimental impact of the favourable conservation status of bats in the local area. The redevelopment of the site will not result in the alteration of the ecological functionality of the local landscape.

Finally, it is considered that a licence from Natural England will be granted once the further surveys have been completed and a robust mitigation strategy, to be based on the recommendations in this report, have been developed.

If you require any further details. Please do not hesitate to contact me.

Kind regards



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Managing Director

## Appendix 1: Photographs of the Site:

**Photo 1:** Internal void above the farmhouse. Very shallow void. No evidence of bats.



**Photo 2:** Apex covered in cobwebs suggesting little disturbance.



**Photo 3:** Aspect surveyed by surveyor 3 on 03/05/2017. No bats seen to emerge from here.



**Photo 4:** Aspect surveyed by surveyor 2 and the emergence location on 03/05/2017

