Bat Emergence Survey

Land at Glenelm and 160 Anyards Road, Surrey

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LIABILITIES:

Whilst every effort has been made to guarantee the accuracy of this report, it should be noted that living animals and plants are capable of migration/establishing and whilst such species may not have been located during the survey duration, their presence may be found on a site at a later date.

This report provides a snap shot of the species that were present at the time of the survey only and does not consider seasonal variation. Furthermore, where access is limited or the site supports habitats which are densely vegetated only dominant species maybe recorded.

The recommendations contained within this document are based on a reasonable timeframe between the completion of the survey and the commencement of any works. If there is any delay between the commencement of works that may conflict with timeframes laid out within this document, or have the potential to allow the ingress of protected species, a suitably qualified ecologist should be consulted.

It is the duty of care of the landowner/developer to act responsibly and comply with current environmental legislation if protected species are suspected or found prior to or during works.

1.0 Introduction

Background

1.1 The Ecology Partnership was commissioned by Shanly Homes to undertake a series of emergence surveys on the land at Glenelm and 160 Anyards Road, Surrey, hereafter referred to as the 'site'. This follows an initial preliminary ecological assessment (PEA) (The Ecology Partnership, 2023) including site visit on the 14th March 2023.

1.2 A previous preliminary ecological appraisal and dusk emergence survey was undertaken by Bright Green Environmental in 2021 (Bright Green Environmental, 2021). These surveys found the bungalow on site (building 1) to support a common pipistrelle roost.

1.3 This report presents the results of The Ecology Partnership's emergence surveys conducted on the buildings between June and August 2023, and how the results may affect the proposed development.

Site context and Status

1.4 The site (TQ10776063) includes multiple buildings and hardstanding car parks. The site is surrounded by residential properties, with units of woodland and arable fields in the wider landscape.

1.5 The aerial photograph overleaf (Figure 1) shows the site and its immediate surroundings. The building surveyed is outlined in red.

Description of Proposed Development

1.6 The proposed development includes the Outline Application for the demolition of the existing buildings and erection of 26 residential dwellings, with layout, scale, access and appearance for consideration (Figure 2).

Figure 1: Approximate location of the surveyed buildings on site outlined in yellow

Figure 2: Proposals for the site.

Legislation

1.6 Under the NERC Act (2006) it is now the duty of every Government department in carrying out its functions "*to have regard, so far as it is consistent with the proper exercise of those functions, to the purpose of conserving biological diversity in accordance with the Convention*".

1.7 Bats are covered by the following relevant legislation: the Wildlife and Countryside Act (1981) (as amended); the Countryside and Rights of Way Act, 2000; the Natural Environment and Rural Communities Act (NERC, 2006); and by the Conservation of Habitats and Species Regulations (2010).

2.0 Methodology

Bat Emergence Survey

2.1 Building 1 is a previously confirmed common pipistrelle roost. Building 9 was identified as having 'low' potential to support roosting bats. Consequently, three emergence surveys were undertaken on building 1, and a single emergence survey on building 9. These surveys were carried out between June and August 2023.

2.2 The aim of the survey effort is to confirm the site's usage by bats, type of roost, access/egress points and the numbers of bats present within the building. The results of the survey will inform the application for a Natural England licence to legalise the loss / disturbance to bat roosts on site as part of proposals and to inform appropriate mitigation.

2.3 Dusk emergence surveys commence at least 15 minutes before sunset until 1.5-2 hours after sunset, during which time, bats are identified and recorded. Bat surveys are required to be undertaken during suitable weather conditions, when conditions are relatively dry and mild with little/no wind.

2.4 Table 1 shows the survey dates and surveyors present. The surveyors were equipped with a Batscanner, an Echometer Touch and/or Anabat Walkabout technology. IR cameras were also used on each of the surveys to support data collection.

2.5 Figure 2: Location of surveyors on the building

Survey Details	Surveyors
Dusk (Both buildings) 28/06/2023	• Digby Hayden BSc (Hons) QCIEEM • Matt Pendry BSc (Hons) • Eddie Selwyn BSc (Hons) MSc QCIEEM • Emer Hicks BSc (Hons) MSc QCIEEM • Benjamin Prego BSc (Hons) QCIEEM • Alistair McNaughton BSc (Hons) QCIEEM • 2x IR cameras
Dusk (Building 1) 20/07/2023	• Digby Hayden BSc (Hons) QCIEEM • Anthony Owers • Greg Holland • Matt Pendry BSc (Hons) • 2x IR cameras
Dusk (Building 1) 07/08/2023	• Digby Hayden BSc (Hons) QCIEEM • Eddie Selwyn BSc (Hons) MSc QCIEEM • Emer Hicks BSc (Hons) MSc QCIEEM • Benjamin Prego BSc (Hons) QCIEEM • 2x IR cameras

Limitations

2.6 It should be noted that whilst every effort has been made to provide a comprehensive description of the site, no single investigation could ensure the complete characterisation and prediction of the natural environment.

3.0 Results

Building 1

Dusk Emergence Survey 28th June 2023

3.1 A dusk emergence survey was carried out on the building on 28th June 2023. Four surveyors watched the building and also noted any bat activity observed around the building. IR cameras were used in addition to surveyors to support the survey effort.

3.2 On the date of this survey sunset was at 21:21, with a survey start time of 20:06. The temperature during the survey was 21°C , falling to 19°C. The weather was cool and dry with 10% cloud, and a light breeze (1 on the Beaufort scale).

3.3 Only common pipistrelles (*Pipistrellus pipistrellus*) and soprano pipistrelles (*Pipistrellus pygmaeus*) were recorded passing over the site throughout the survey. Activity started at 21:40, as a common pipistrelle was observed commuting over the site. The last activity was recorded at 22:13, as a common pipistrelle was foraging on site.

3.4 No bats were seen to emerge from the building during the survey.

Dusk emergence Survey 20th July 2023

3.5 A dusk emergence survey was carried out on the building on the 20th July 2023. On the date of this survey sunset was at 21:06, with a survey start time of 20:51. The temperature during the survey was 19°C , dropping to 17°C. The warm and dry, with 100% cloud cover and a light breeze (1 on the Beaufort scale).

3.6 Three species of bat were recorded passing over the site throughout the survey, including common pipistrelles, soprano pipistrelles and noctule (*Nyctalus noctula*). Common pipistrelles

and soprano pipistrelles were also recorded foraging over the site, with recorded activity starting at 21:43.

3.7 No bats were seen to emerge from the building during the survey.

Dusk emergence Survey 1st June 2023

3.8 A dusk emergence survey was carried out on the building on 1st June 2023. On the date of this survey, sunset was at 20:39, with a survey start time of 20:24. The temperature during the survey was 18°C , dropping to 17°C. The weather was cool and dry, with 10% cloud cover and a light breeze (1 on the Beaufort scale).

3.9 Only common pipistrelles (*Pipistrellus pipistrellus*) and soprano pipistrelles (*Pipistrellus pygmaeus*) were recorded passing over the site throughout the survey. Activity started at 20:56, as a common pipistrelle was observed commuting over the site. The last activity was recorded at 21:32, as a common pipistrelle was foraging on site.

3.10 No bats were seen to emerge from the building during the survey.

Building 9

Dusk Emergence Survey 28th June 2023

3.11 A dusk emergence survey was carried out on the building on 28th June 2023. Two surveyors watched the building and also noted any bat activity observed around the building. IR cameras were used in addition to surveyors to support the survey effort.

3.12 On the date of this survey sunset was at 21:21, with a survey start time of 20:06. The temperature during the survey was 21°C , falling to 19°C. The weather was cool and dry with 10% cloud, and a light breeze (1 on the Beaufort scale).

3.13 Only common pipistrelles (*Pipistrellus pipistrellus*) and soprano pipistrelles (*Pipistrellus pygmaeus*) were recorded passing over the site throughout the survey. Activity started at 21:41, as a common pipistrelle was observed commuting over the site. The last activity was recorded at 22:14, as a common pipistrelle was foraging on site

4.0 Discussion

4.1 Building 1 contained a previously confirmed bat roost. Consequently, further surveys were therefore recommended to support the planning application.

4.2 Despite being in an urban environment, parcels of deciduous woodland are numerous in the local area. The grassland habitats on site were considered to have some, albeit limited, foraging potential.

4.3 No bats were recorded emerging from either building. Works to building 9 can therefore commence without any further consideration for bats.

4.4 Due to the previously confirmed common pipistrelle roost in building 1, it is considered that the roof tiles of the main house are not of major significance and is being used as an opportunistic / day roost by a low number of common pipistrelles.

4.5 As a single bat roost has been identified within building 1, roof works or redevelopment of this building will need to occur under a Natural England low-impact license.

4.6 With regards to the licence, the following methods are considered to be implemented;

- Establish alternative roosting provision such as the CJ WIldlfie Bat Boxes or similar box on any of the retained mature trees on site, prior to any works as mitigation;
- Conduct a Tool Box Talk (TBT) to all team members on site with regards to the presence of bats using the building, bats legal protection, measures that will be undertaken to ensure that bats are not harmed, good working practises, licensable activities and what to do if a bat is found;
- Once this TBT has been conducted then works to the building can commence under direct supervision of a registered consultant (RC) / accredited agent;
- The tiles of the building will be hand removed. All tiles will be removed by hand individually, with the tiles being turned prior to stacking. If a bat is found, then the RC will gently move the bat to a bat box on site;
- Once the tiles of the building have been removed, other features such as the felt lining will be removed, again under direct supervision from the RC;

- Any soffit boards will finally be removed using hand tools and checked gently before final removal. All works to be supervised by the RC;
- Once the RC has rechecked the whole of the building and is happy that all licensable activities to the building have occurred (i.e. the features which bats are using for roosting have been removed), then the remaining works to the buildings can occur without further supervision;
- It is considered that this process is likely to take between 1 to 2 days

Licence Application

4.7 The timing of the works with regards to the licence requirements is as follows:

- A licence application will be made following planning permission being granted;
- Furthermore, any conditions which are pertinent to ecology will be discharged before the low impact bat licence will be applied for. An update survey must occur (walk over or internal survey) in the last 3 months prior to works;
- One bat box is to be established on an unaffected outer wall of the main house
- Once the licence is issued (the licence should take 10 working days for issue), all licensable works can commence. All licensable works (removal of tiles etc) should take in the region of 1 or 2 days;
- Works under a low impact licence have no seasonal restrictions.

Compensation/ Mitigation Strategy

4.8 To compensate for the loss of any roosts as a result of the proposals, suitable replacement roosts will be required. As the final proposals are yet to be confirmed, exact placement and specifications may be subject to change, but the following are all recommended to be included.

4.9 A single, large chamber bat box should be installed on mature tree within the site, in order to provide a temporary roost for any bats found during the tile strip, as well as a more permanent replacement roost to mitigate for the loss of the summer house. Boxes should ideally be exposed to the sun for most of the day, so southern and western aspects are preferable, and should be hung as high as possible (around 5m above ground). Recommended boxes include:

- Vivara Pro WoodStone Bat Box – A general purpose bat box that supports a range of species (Figure 8). These can be hung on trees in a variety of heights and aspects in order to provide a variety of micro-climates.
- Large Multi Chamber WoodStone Bat Box – This is a multipurpose box designed for larger colonies and a range of bat species including pipistrelles, noctules and brown long-eared bats. These should be hung on mature trees around the site (Figure 5).

Figure 5: Vivara Pro WoodStone Bat Box (left) and Large Multi Chamber WoodStone Bat Box (right)

4.11 Integrated bat boxes may be incorporated into the proposed buildings. The use of these boxes within the structure of the buildings would provide the features which pipistrelles species (the more crevice dwelling species) would be able to exploit.

Additional Measures

4.12 Any proposed lighting scheme as part of the development will have to take into account bats in the surrounding area as well as on site. All bat species are nocturnal, resting in dark conditions in the day and emerging at night to feed. Bats are known to be affected by light levels which can affect both their roosting behaviour as well as their foraging behaviour. This needs to be taken into account, with a sympathetic lighting scheme for the development.

4.13 Recommendations include:

- Lighting should only be installed if there is a significant need;
- Lighting should be avoided near woodland and tree-lines, with light angled away from these areas, bats use linear features such as hedgerows to commute across the landscape to forage;

- Lights should have focussed luminance on their target area, preventing light spill and pollution into other areas of the site and local area.
- Dark buffer zones can be used as a good way to separate habitats or features from lighting by forming a dark perimeter around them. Buffer zones rely on ensuring light levels within a certain distance of a feature do not exceed certain defined limits;
- Light levels should be kept low. All luminaires should lack UV elements when manufactured and metal halide, fluorescent sources should not be used. LED luminaires should be used where possible due to their sharp cut-off, lower intensity, good colour rendition and dimming

4.14 Sweet nectar and protein-rich pollen, especially night-scented flowers, are bait to encourage insects, a food source for bats. These species should be incorporated into the development where possible:

- Evenings primrose (*Oenothera biennis*)
- Field poppies (*Papaver rhoeas*)
- Knapweed (*Centaurea sp.)*
- Night-scented stock (*Matthiola longipetala*)
- Red campion (*Silene dioica*)
- Honeysuckle (*Lonicera periclymenum*)
- Sweet williams (*Dianthus barbatus*)
- Angelica species
- Wisteria (*Wisteria floribunda*)
- Lavenders (*Lavandula sp)*

5.0 Conclusions

5.1 Building 1 was previously confirmed as a common pipistrelle roost. Consequently, 3 emergence surveys were undertaken between June and August 2023. Building 9 was assessed as having 'low' potential to support roosting bats, so a single survey was undertaken in June 2023.

5.2 The surveys on the buildings were all undertaken between June and August 2023 in optimal conditions. No emergences were recorded from either building.

5.3 Due to the previously confirmed presence of a common pipistrelle roost in building 1, the building is considered likely to support an opportunistic day roost for the species.

5.4 As this building is to be demolished, they must commence sensitively under a Natural England low-impact licence.

5.5 Works can commence to all other buildings on site without any consideration for roosting bats.

5.6 Recommendations and enhancements have been made to ensure that bats can continue to roost, forage and commute within the site post development.

6.0 References

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Google Earth: www.earth.google.co.uk

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