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Report prepared for: Mr. David Walsh

For the Site of: The Graylings, Croydon, Surrey, CR3 7LN

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Ecological reports are limited in shelf life, Natural England usually expect reports for licenses to be no more than 12 months old and therefore should the project not proceed within 12 months of this report an updated survey should be undertaken in order to check for changes that may have occurred on site.

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Emergence and Activity Bat Survey (EBS)

0.0 None Technical Summary

Background -

The survey follows national guidelines Collins (2016) allowing for dusk and dawn surveys and recommendations mitigation if considered necessary. If a deviation from the guidelines has been made this will be detailed in the Method Section.

The following report details the findings and recommendations for the site of The Graylings, Croydon, Surrey, CR3 7LN.

The client commissioned Cherryfield Ecology to undertake an EBS as the proposals include for demolishing the current part built dwelling and replacing this with a new build.

Results and Findings -

Although the building is not being used by bats a dead tree located towards the top of the site is being used by common pipistrelle.

Impact Assessment and Recommendations -

It is understood that currently there are no plans to fell the tree, therefore no impacts will occur at this time.

Should the tree need to be felled at any point in the future at least one further survey will be required (if within 12 months of this survey) to meet national standards (three surveys) in order to apply for an EPS licence or if outside this period at least two surveys to update the results, one dusk and one dawn.

1.0 Introduction

The client, Mr. David Walsh, has commissioned Cherryfield Ecology to undertake an EBS for the site of The Graylings, Croydon, Surrey, CR3 7LN. Planning permission is being sought to demolishing the current part built dwelling and replacing this with a new build.

This survey has checked all buildings, trees (from ground level only) or structures due to be affected by the proposals for bats, signs of bats or habitat value e.g. crevices, gaps or holes that cannot be checked for a variety of reasons. In addition surveyors have been positioned around the building, tree or structure to allow for emerging/re-entering bats to be watched for.

The inspection(s) was conducted on the 05/08/2016 and 22/08/2016.

The survey can only ever provide a 'snap shot' of the site at the time of the survey and circumstances may change following this report. Health and Safety restrictions or obstructions may limit the ability to find see emergence and/or evidence.

Biological records have been requested to give the report context and allow a study of the surrounds. The information is often sensitive and therefore a synopsis is provided and the full data released separately for verification.

The survey can be conducted between May and September with the optimal season for surveying maternity colonies limited to mid-May to August inclusive, however it can also be limited due to bad weather, when bats are less active.

Summary of legislation and National Planning Policy that protects bats in England:

- Conservation of Habitats and Species Regulations 2010.
- Wildlife and Countryside Act 1981 as amended.
- Countrywide and Rights of Way Act 2000.
- Natural Environment and Rural Communities Act 2006.
- National Planning Policy Framework ("NPPF").
- Circular 06/05.

This legislation makes it illegal to:

- Intentionally or deliberately kill, injure or capture bats.
- Deliberately disturb bats, whether at roost or not.
- Damage, destroy or obstruct access to bat roosts.
- Possess or transport a bat or any part of a bat, unless acquired legally.
- Sell, barter or exchange bats, or any part of a bat.

A bat roost is well-defined by the legislation as the 'resting place' of a bat. However, the word roost is used to describe this resting place and is generally accepted as the word describing were a bat or bats rest, feed or sleep.

2.0 Methods

The survey follows the national guidelines Collins (2016) and the following equipment is available for the inspection:

- Torches (e.g. LED Lensar type).
- Ladders (Standard 4m telescopic surveying ladder).
- Endoscope where holes, cracks and crevices are accessible.
- Mirrors (extendable and movable mirror face).
- Binoculars (Pentax close focus).
- Thermometer/hygrometer.
- Camera.
- Sample bags for collecting dropping and feeding evidence.
- Echo Meter Touch, EM3, Pettersson D240X and Bat Box Duet.
- IR night vision (when required) Sony HD Camcorder, Spec IR lights.

Surveyors are positioned around the building(s), tree or structure in order to cover all elevations. The survey then observes for emerging or re-entering bats from suitable features such as holes, cracks and crevices. Notes on commuting and foraging bats are also made in the surrounds.

If a deviation from the guidelines has been made the reason and justification will be explained below: -

No deviation from the standard guidelines has been made for this survey.

Table 1: Habitat value (likelihood) of bat presence assessed against Collins (2016) guidelines *Source: Adapted from Collins (2016) pp 35, Table 4.1.*

Likelihood of bat presence (Habitat Value)	**Features that bats can and will use, regardless of evidence being present.**
Confirmed Bat Presence	Bats are found to be present during the survey. Evidence of bats is found to be present during the survey.
Higher likelihood of bat presence.	Pre-20th century or early 20th century construction. Agricultural buildings of traditional brick, stone or timber construction. Large and complicated roof void with unobstructed flying spaces.

	Large (>20 cm) roof timbers with mortice joints, cracks and holes. Entrances for bats to fly through. Poorly maintained fabric providing ready access points for bats into roofs, walls, bridges, but at the same time not too draughty and cool. Roof warmed by the sun, in particular south facing roofs. Weatherboarding and/or hanging tiles with gaps. Low level of disturbance by humans. Bridge structures, follies, aqueducts and viaducts over water and/or wet ground.
Moderate and Lower likelihood of bat presence.	Modern, well-maintained buildings or built structures that provide few opportunities for access by bats. Small, cluttered roof space. Buildings and built structures comprised primarily of prefabricated steel and sheet materials. Cool, shaded, light or draughty roof voids. Roof voids with a dense cover of cobwebs and no sections of clean ridge board. High level of regular disturbance. Highly urbanised location with few or no mature trees, parkland, woodland or wetland. High levels of external lighting.
Negligible likelihood of bat presence.	No features suitable for roosting, minor foraging or commuting.

Notes on using this table

1 The features listed here may not be indicative of use of the site by bats during winter or spring.

2 Pre-1914 buildings may present the greatest likelihood of providing roost space for bats due to their design, materials used and age. Pre-1990 buildings, especially when close to good foraging habitat, and with favoured features such as cavity walls and soffits, also have a high likelihood of providing roost sites for some bat species.

3 Post-1990 buildings are generally less likely than older buildings to house roosts; however, some modern designs provide access to suitable roosting spaces for bats. Pipistrelles in particular occupy modern buildings and built structures providing that there are suitable access gaps (> 8mm) and provided the structure has appropriate characteristics for roosting.

3.0 Results

The following section details the results of the desk study, inspection and survey, it includes MAGIC information, biological records data and map/aerial photo information. The results detail the building, structure or tree (numbered for reference) description of any evidence found and habitat value if no evidence has been located.

3.1 Desk Study

The desk study is centred on Grid Ref - TL073624 and postcode - MK443LR.

Table 2: Weather records -

Date	Survey	Time: from/to	Weather: Start	Weather: Finish
05/08/2016	Dusk	20.52 to 22.45	Temp: 20 ℃ Humidity: 63% Cloudy: 10% Wind: 0/8 Rain: None	Temp: 17 ℃ Humidity: 77% Cloudy: 100% Wind: 1/8 Rain: None
22/08/2016	Dawn	04.30 to 6.00	Temp: 15 ℃ Humidity: 68% Cloudy: 0% Wind: 0/8 Rain: None	Temp: 16 ℃ Humidity: 78% Cloudy: 10% Wind: 0/8 Rain: None

Magic:

The following statutory sites have been located on the search -

- There are two EPS licences that have been issued for the general area. Both are for common pipistrelle ***Pipistrellus pispitrellus*** and both are located northwest of the site, some 1km and 1.6km northwest.
- There is a single SSSI within the search area located approx. 1.8km to the south, known as Woldingham and Oxted Downs and has been designated for its downland habitats including rich calcareous grassland, scrub and mixed woodland habitats.

Biological Records Data:

A 2km data search of existing records for protected species and nature reserves has been commissioned, below details the results and site context:

Biological records have been ordered from Surrey Biodiversity Information Centre (2016). There are no records from the site itself, however there are large numbers of species records for the general area. Most are breeding bird records, deer and butterfly species. There are records of reptile and bat from the general area.

Site Location and Surrounds:

The site is located in Surrey, Croydon and is surrounded by low density housing and grazed fields in the immediate local. Table 3 details the commuting, feeding and habitat features in a 1km radius of the site.

Table 3: Habitat features suitable for bat use

Feature	Description
Water course	There are no water-courses found in the area.
Water bodies	A small pond is located approx. 25m to the east and larger ponds are found to the east over a kilometer away.
Woodland	Woodland is located in small copses scattered in all directions with the closest being approx. 150m to the east.
Linear e.g. hedgerows	There are tree lined roads and hedging found in the wider landscape.
Pasture/arable	Grazed fields are located on the northern boundary and to the south approx. 1km from the site. Arable is located further to the south and east.
Other	A golf course is located to the north approx. 250m from the site, being a mix of habitats including grassland, copses and ponds.

3.2 Building, Tree or Other Structure

The following section details the structures reference, bats located, evidence located and observed emergence/re-entry.

Building/tree/structure reference - B1 and T1

Observations

Table 5: Results and observations of the surveyors located around the building, tree or structure.

Surveyor	Building, Tree or Structure	Dates and Times and survey type	Bat Activity Observed
Martin O'Connor (MOC)	B1	SS: 20.40 20.25 to 22.25 05/08/2016	Common pipistrelle (CP) *Pipistrellus pipistrellus* heard twice at 21.20 and 21.25. Brown long eared bat (BLEB) *Plecotus auritus* heard at 21.42.
Tanya O'Connor (TOC)	B1 and T1	As above	Single CP heard at 21.25
MOC	B1	22/08/2016 SR: 6.00 04.30 to 6.00	CP heard on three occasions passing through the site. BLEB was heard on two occasions at 5.15 and 5.22, but was not seen, although the internal areas of the building were checked.
TOC	B1 and T1	As above	CP heard feeding over the grounds and passing by. At 5.46 a CP was seen dawn swarming around the dead ash tree, it then landed on the tree several times before roosting under loose bark at 5.46.

Figure 1: Site plan

4.0 Conclusions, Discussion and Recommendations

The following section details the conclusions, discussion and recommendations in the context of the proposed works.

Building/tree/structure reference - B1

Conclusion and Discussion

The development will involve demolishing the currently partly built dwelling and replacing this with a new dwelling. A single dead ash tree is also located on site. No bats were found to be using the building, however a single common pipistrelle was found to be using loose bark on the dead ash.

Potential Impact

No impact on the building.

If the tree is to be removed at any point a bat roost will be destroyed when it is felled.

Recommendations

No further surveys are considered necessary at this time (as the tree will be left ***in situ***). Should the tree need to be felled at any point in the future at least one further survey will be required (if within 12 months of this survey) to meet national standards (three surveys) in order to apply for an EPS licence or if outside this period at least two surveys to update the results, one dusk and one dawn.

5.0 References

Batbox (2011). The Batbox Duet: ultrasonic bat detectors [online]. Available at: http://www.batbox.com/duet.html [Accessed 01 January 2011].

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Records: Surrey Biodiversity Information Centre, (2016) Records Data, SBIC