



57 Eton Avenue, New Malden, Surrey, KT3 5AY

Tel: 0208 942 3094 Mob: 07833 720401

E-mail: [rlaw@sylvaticaecology.co.uk](mailto:rlaw@sylvaticaecology.co.uk)

[www.sylvaticaecology.com/](http://www.sylvaticaecology.com/)

## **Bat Survey and Report**

### **Dunsbury Park Phased Development Project**

Park Lane, Havant,  
PO9 4HT

NGR: SU 69948 09164.

11<sup>th</sup> December 2017

Version 1.0

*Richard Law retains the copyright of this report and its contents are for the sole use of the client (s). Copy of this document may only be undertaken in connection to the planning proposal for Dunsbury Phased Development Project Park Lane, Havant, PO9 4HT NGR: SU 69948 09164. Reproduction of the whole, or any part of the document, without written consent from Richard Law is forbidden.*

|          |                     |           |
|----------|---------------------|-----------|
| <b>1</b> | <b>Introduction</b> | <b>3</b>  |
| <b>2</b> | <b>Methodology</b>  | <b>4</b>  |
| <b>3</b> | <b>Results</b>      | <b>6</b>  |
| <b>4</b> | <b>Discussion</b>   | <b>9</b>  |
| <b>5</b> | <b>References</b>   | <b>11</b> |

# 1 Introduction

## ***Aim of the study***

- 1.1 This report presents the findings of a series of bat surveys (bat activity transect and static monitoring) across the development site located at approximately at Park Lane, Havant, PO9 4HT NGR: SU 69948 09164.

## ***Site description***

- 1.2 The development site is situated on an area of open fields bordered by hedgerow and woodland copses between the urban conurbations of Havant (to the east) and Waterlooville (to the west). Both of these urban areas are also separated by the A3(M) road, which runs on a north – south axis.

- 1.3 ***Figure 1 – Extent of the Site (red line boundary)***



## ***Legal Status of Bats***

- 1.4 All eighteen of the UK's bat species are protected under Section 9 of the Wildlife and Countryside Act (WCA) 1981 (as amended). The WCA states that '*a person is guilty of an offence if intentionally or recklessly they disturb [a bat] while it is occupying a structure or place which it uses for shelter or protection; or he obstructs access to any structure or place which [a bat] uses for shelter or protection*'.
- 1.5 Bats are also protected under the Conservation of Habitats and Species Regulations 2017. Bats are listed as European protected species under which it is an offence if;
- *a person deliberately captures, injures or kills any wild animal of a European protected species;*
  - *deliberately disturbs wild animals of any such species;*
  - *damages or destroys a breeding site or resting place of such an animal.*
- 1.6 Disturbances of animals include in particular any disturbance which is likely to impair their ability to;

- *survive, breed or reproduce, or to rear or nurture their young;*
- *in the case of animals of a hibernating or migratory species, to hibernate or migrate; or*
- *to affect significantly the local distribution or abundance of the species to which they belong.*

## 2 Methodology

2.1 The survey was carried on using standard guidance and best practice methodology outlined in the Bat Workers Manual (Mitchell-Jones & McLeish, 2004), the Bat Mitigation Guidelines (English Nature, 2004) and Bat Surveys Guidelines for Professional Ecologists – Good Practice Guidelines (BCT 2016). The surveyors were led by Richard Law (2015-12576-CLS-CLS).

2.2 **Figure 2 - Transect Survey and Stopping Points 10<sup>th</sup> July & 21<sup>st</sup> September 2017**



2.3 **Figure 3 – Transect Route and Stopping Points 11<sup>th</sup> & 12<sup>th</sup> August 2017**



- 2.4 The transect route was divided into two parts, with the southern part of the route encompassing the south eastern field woodland margins. The route then continued following the bridleway north-west, heading west to follow the northern hedgerow to then incorporate the woodland block bordering the east of the development site. This transect was then routed to include both sides of the central hedge which was hypothesised as being an important feature for commuting bats.

#### ***Equipment Used***

- 2.5 Echo Metre Touch Pro (using iPad Air 125GB) and a Heterodyne (Bat Box duet III) bat detector was used to pick up any ultrasonic calls that bats could have made during the surveys.
- 2.6 SM2 static monitoring bat detectors were installed in July and September in the following two locations; centrally along the northern hedge line (July) and centrally within the central hedge line (September), the locations of which are detailed within Figure 4.

- 2.7 ***Figure 4 – Locations of SM2 Static Monitoring Detectors***



#### ***Limitations***

- 2.8 It should be borne in mind that the behaviour of animals can be unpredictable and may not conform to standard patterns recorded in scientific literature. Therefore, this report cannot predict with absolute certainty, that animal species will occur in apparently suitable locations or habitats, or that they will not occur in locations or habitats that appear unsuitable.

### 3 Results

3.1 **Table 1 – Transect Survey Parameters and Weather Conditions**

| Date                | Start Time | End Time | Sunset (sunrise) | Temperature °C | Wind                   | Cloud Cover % (visual estimate) | Precipitation during survey |
|---------------------|------------|----------|------------------|----------------|------------------------|---------------------------------|-----------------------------|
| 6th July 2017       | 21:10      | 23:12    | 21:11            | 21             | Light southerly breeze | Clear                           | None                        |
| 10th August 2017    | 20:35      | 22:37    | 20:35            | 23             | Still                  | 50                              | None                        |
| 11th August 2017    | 03:45      | 05:48    | 05:45            | 16             | Still                  | 50                              | None                        |
| 21st September 2017 | 19:35*     | 21:37    | 19:03            | 19             | Light SW               | 25                              | None                        |

\*slightly later start due to traffic issues.

3.2 **Table 2 – Stopping Point Timings**

| Stopping Point | 10 <sup>th</sup> July | 11 <sup>th</sup> August | 12 <sup>th</sup> August | 22 <sup>nd</sup> September |
|----------------|-----------------------|-------------------------|-------------------------|----------------------------|
| 1              | 21:10 – 21:20         | 20:35 – 20:45           | 03:45 – 03:55           | 19:35 – 19:45              |
| 2              | 21:42 – 21:52         | 20:51 – 21:01           | 04:01 – 04:11           | 20:07 – 20:17              |
| 3              | 21:58 – 22:08         | 21:07 – 21:17           | 04:17 – 04:27           | 20:23 – 20:33              |
| 4              | 22:14 – 22:24         | 21:23 – 21:33           | 04:33 – 04:43           | 20:39 – 20:49              |
| 5              | 22:30 – 22:40         | 21:39 – 21:49           | 04:49 – 04:59           | 20:55 – 21:05              |
| 6              | 22:46 – 22:56         | 21:55 – 22:05           | 05:05 – 05:15           | 21:11 – 21:21              |
| 7              | 23:02 – 23:12         | 22:27 – 22:37           | 05:37 – 05:48           | 21:27 – 21:37              |

3.3 **Table 3 – 6<sup>th</sup> July 2017 Transect Survey**

| Time               | Species            | Number | Location                 | Behaviour              |
|--------------------|--------------------|--------|--------------------------|------------------------|
| 22:16              | Common pipistrelle | 1      | Along central hedge line | Commuting/<br>Foraging |
| 22:19              | Common pipistrelle | 1      | Along central hedge line | Commuting/<br>Foraging |
| 22:20              | Common pipistrelle | 1      | Along central hedge line | Commuting/<br>Foraging |
| 22:20              | Serotine           | 1      | Along central hedge line | Commuting              |
| 22:24              | Common pipistrelle | 1      | Along central hedge line | Foraging               |
| 22:26              | Common pipistrelle | 1      | Along central hedge line | Commuting/<br>Foraging |
| 22:36              | Common pipistrelle | 1      | Along central hedge line | Commuting/<br>Foraging |
| 22:39              | Common pipistrelle | 1      | Along central hedge line | Commuting/<br>Foraging |
| 22:41              | Common pipistrelle | 1      | Along central hedge line | Commuting/<br>Foraging |
| 22:55              | Serotine           | 1      | Point 6                  | Foraging               |
| 23:12 - Survey End |                    |        |                          |                        |

3.4 **Table 4 – 11<sup>th</sup> August 2017 Dusk Survey**

| Time  | Species            | Number | Location                 | Behaviour              |
|-------|--------------------|--------|--------------------------|------------------------|
| 20:50 | Noctule            | 1      | Point 2                  | Commuting              |
| 21:15 | Common pipistrelle | 1      | Along central hedge line | Commuting/<br>Foraging |
| 21:22 | Common pipistrelle | 1      | Along central hedge line | Commuting/<br>Foraging |
| 21:23 | Common pipistrelle | 1      | Along central hedge line | Commuting/<br>Foraging |
| 21:25 | Common pipistrelle | 1      | Along central hedge line | Foraging               |
| 21:38 | Common pipistrelle | 1      | Point 5                  | Foraging               |
| 21:39 | Common pipistrelle | 1      | Point 5                  | Foraging               |

|                    |                    |   |                           |           |
|--------------------|--------------------|---|---------------------------|-----------|
| 21:40              | Common pipistrelle | 1 | Point 5                   | Foraging  |
| 21:41              | Common pipistrelle | 1 | Along hedge line by track | Commuting |
| 22:37 - Survey End |                    |   |                           |           |

3.5 **Table 5 – 12<sup>th</sup> August 2017 Dawn Survey**

| Time               | Species             | Number | Location                              | Behaviour |
|--------------------|---------------------|--------|---------------------------------------|-----------|
| 03:48              | Soprano pipistrelle | 1      | Point 1                               | Foraging  |
| 03:52              | Common pipistrelle  | 1      | Point 1                               | Foraging  |
| 03:59              | Common pipistrelle  | 1      | North at central hedge line           | Foraging  |
| 04:12              | Common pipistrelle  | 1      | Along western woodland edge           | Commuting |
| 04:15              | Soprano pipistrelle | 1      | Along central hedge line              | Commuting |
| 04:32              | Soprano pipistrelle | 1      | Along central hedge line              | Commuting |
| 05:17              | Soprano pipistrelle | 1      | Along woodland edge at southern field | Foraging  |
| 05:58 - Survey End |                     |        |                                       |           |

3.6 **Table 6 – 21<sup>st</sup> September 2017**

| Time  | Species             | Number | Location                              | Behaviour |
|-------|---------------------|--------|---------------------------------------|-----------|
| 19:47 | Common pipistrelle  | 1      | At woodland edge along southern field | Foraging  |
| 19:54 | Common pipistrelle  | 1      | Along hedge line by track             | Foraging  |
| 20:11 | Common pipistrelle  | 1      | Point 2                               | Foraging  |
| 20:15 | Soprano pipistrelle | 1      | Point 2                               | Foraging  |
| 20:16 | Common pipistrelle  | 1      | Point 2                               | Foraging  |

|                    |                        |   |                                  |                        |
|--------------------|------------------------|---|----------------------------------|------------------------|
| 20:17              | Common pipistrelle     | 1 | Point 2                          | Foraging               |
| 20:18              | Common pipistrelle     | 1 | Along northern hedge line        | Foraging               |
| 20:19              | Common pipistrelle     | 2 | Around northern hedge line       | Foraging               |
| 20:19              | Serotine               | 1 | Around northern hedge line       | Commuting/<br>Foraging |
| 20:20              | Serotine               | 1 | Around northern hedge line       | Commuting/<br>Foraging |
| 20:20              | Common pipistrelle     | 1 | At northern end of central hedge | Foraging               |
| 20:22              | Common pipistrelle     | 1 | Around northern hedge line       | Foraging               |
| 21:05              | Nathusius' pipistrelle | 1 | Point 5 – Central hedge          | Commuting              |
| 21:26              | Common pipistrelle     | 1 | Along hedge line following lane  | Commuting/<br>Foraging |
| 21:37 - Survey End |                        |   |                                  |                        |

3.7 The survey results show that there were two main concentrations of bat activity. One located at the north east of the site around stopping point two and continuing along the northern hedge with another concentration of bat activity located along the central hedge, with both commuting and foraging activity noted here. Nathusius' pipistrelle (*Pipistrellus nathusii*) was recorded utilising the central hedge as were common pipistrelle (*P. pipistrellus*), soprano pipistrelle (*P. pygmaeus*) and serotine (*Eptesicus serotinus*). A single noctule (*Nyctalus noctula*) was noted early on the 11<sup>th</sup> August transect.

3.8 **Table 7 – SM2 Analysis**

|            | <b><i>Soprano Pipistrelle</i></b> | <b><i>Common Pipistrelle</i></b> | <b><i>Myotis sp.</i></b> | <b><i>Nathusius' pipistrelle</i></b> | <b><i>Noctule</i></b> | <b><i>Brown Long Eared</i></b> | <b><i>Barbastelle</i></b> |
|------------|-----------------------------------|----------------------------------|--------------------------|--------------------------------------|-----------------------|--------------------------------|---------------------------|
| 10/07/2017 | <b>3</b>                          | <b>75</b>                        | 0                        | 0                                    | 0                     | <b>1</b>                       | 0                         |
| 11/07/2017 | 0                                 | <b>116</b>                       | <b>3</b>                 | 0                                    | 0                     | 0                              | 0                         |
| 12/07/2017 | 0                                 | <b>129</b>                       | <b>1</b>                 | 0                                    | 0                     | 0                              | 0                         |
| 13/07/2017 | <b>1</b>                          | <b>70</b>                        | <b>1</b>                 | 0                                    | <b>1</b>              | 0                              | 0                         |
| 21/09/2017 | <b>1</b>                          | <b>16</b>                        | <b>5</b>                 | 0                                    | 0                     | 0                              | 0                         |
| 22/09/2017 | <b>2</b>                          | <b>17</b>                        | <b>1</b>                 | 0                                    | 0                     | 0                              | 0                         |

|                       |             |              |             |             |          |          |          |
|-----------------------|-------------|--------------|-------------|-------------|----------|----------|----------|
| 23/09/2017            | <b>10</b>   | <b>91</b>    | <b>0</b>    | 0           | 0        | 0        | <b>2</b> |
| 24/09/2017            | <b>2</b>    | <b>92</b>    | <b>1</b>    | 0           | 0        | 0        | 0        |
| 25/09/2017            | <b>3</b>    | <b>353</b>   | <b>2</b>    | <b>0</b>    | 0        | 1        | <b>1</b> |
| 26/09/2017            | <b>3</b>    | <b>75</b>    | <b>5</b>    | <b>1</b>    | 0        | 0        | <b>1</b> |
| 27/09/2017            | <b>0</b>    | <b>2</b>     | <b>0</b>    | <b>0</b>    | 0        | 0        | <b>0</b> |
| <b>Totals</b>         | <b>25</b>   | <b>1036</b>  | <b>19</b>   | <b>1</b>    | <b>1</b> | <b>2</b> | <b>4</b> |
| <b>Percentage (%)</b> | <b>2.30</b> | <b>95.22</b> | <b>1.75</b> | <b>0.74</b> |          |          |          |

- 3.9 The most number of passes were undertaken by common pipistrelle, which at 95.22% of passes, represented a vast majority of the passes. Soprano pipistrelle at (2.30%) were the second most abundant with Myotis sp (1.75%) the third most abundant. Of particular note were the four Barbastelle (*Barbastella barbastellus*) passes, on the 23<sup>rd</sup>, 25<sup>th</sup> & 26<sup>th</sup> September 2017 respectively and the single Nathusius' pipistrelle pass on the 26<sup>th</sup> September 2017. Brown long eared bat and noctule passes were low with two and one pass each respectively.

## 4 Discussion

- 4.1 There is a clear concentration of bat activity along the central hedge line and at the north eastern part of the site. The central hedge must be retained to enable continued commuting of bats across this site. This would also include the restriction of light pollution spill encompassing this feature and any developmental encroachment that may diminish the ecological integrity of this location
- 4.2 Common pipistrelle, soprano pipistrelle, serotine, noctule and Nathusius' pipistrelle were recorded on site during the transect surveys, with a majority of bats present being common pipistrelle.
- 4.3 The SM2 static monitoring has further reinforced the conclusion that the central hedge is likely to be utilised as a commuting route for bats to travel across the site. Common pipistrelle was the most dominant bat species at the locations of the SM2 detectors. Barbastelle bats were recorded utilising the central hedge line
- 4.4 A buffer zone around the central hedge line is required. It is recommended that this buffer zone be at least 5.0 metres on each side of the hedge measured from the edge of the hedge

## **5 References**

BCT (2016) Bat Survey Guidelines for Professional Ecologist – Good Practice Guidelines

English Nature (2004) Bat Mitigation Guidelines IN13.6

HMSO (1981) The Wildlife and Countryside Act 1981 (as amended) HMSO, London.

HMSO (2017). The Conservation (Natural Habitats, &c). (as amended) Regulations 2017.

Mitchell-Jones, T & McLeish, A.P (2004) Bat Workers Manual, Joint Nature Conservation Committee.