Mr. Marcus De Ferranti

Ham Hill

Bat Survey – Emergence and Activity Surveys

13/07/2016
Limitations

Arbtech Consulting Limited has prepared this report for the sole use of the above named Client or his agents in accordance with our General Terms and Conditions, under which our services are performed. It is expressly stated that no other warranty, expressed or implied, is made as to the professional advice included in this Report or any other services provided by us. This report may not be relied upon by any other party without the prior and express written agreement of Arbtech Consulting Limited. The assessments made assume that the sites and facilities will continue to be used for their current purpose without significant change. The conclusions and recommendations contained in this report are based upon information provided by third parties. Information obtained from third parties has not been independently verified by Arbtech Consulting Limited.

Copyright

© This report is the copyright of Arbtech Consulting Limited. Any unauthorised reproduction or usage by any person other than the addressee is strictly prohibited.
## Contents Page

Executive Summary.................................................................................................................. 5

1.0 Introduction and Context.................................................................................................... 6

1.1 Background .......................................................................................................................... 6

1.2 Aims and Objectives............................................................................................................. 6

1.3 Scope of the Report .............................................................................................................. 7

1.4 Site Context .......................................................................................................................... 7

1.5 Project Description .............................................................................................................. 7

2.0 Methodology ....................................................................................................................... 8

2.1 Site Survey .......................................................................................................................... 8

2.1.1 Surveyors and weather conditions ................................................................................. 8

2.1.2 Timing ............................................................................................................................. 8

2.1.3 Equipment ...................................................................................................................... 9

2.2 Limitations .......................................................................................................................... 9

3.0 Results ................................................................................................................................. 10

3.1 Survey Results .................................................................................................................... 10

3.1.1 Presence/absence and roost characterisation surveys ..................................................... 10

4.0 Conclusions and Impact Assessment .................................................................................. 14

4.1 Conclusions ........................................................................................................................ 14

4.2 Impact Assessment ............................................................................................................ 14

4.3 Recommendations ............................................................................................................ 14

4.3.1 Mitigation ....................................................................................................................... 14

4.3.2 Enhancement ................................................................................................................ 15

5.0 Bibliography ....................................................................................................................... 16

Appendix 1: Survey Plan .......................................................................................................... 18
Appendix 2: Proposed Site Plan .......................................................................................................................... 19
Appendix 3: Legislation and Planning Policy related to bats ................................................................................. 20

LEGAL PROTECTION ................................................................................................................................................. 20

Effect on development works: ................................................................................................................................. 20

NATIONAL PLANNING POLICY (ENGLAND) ........................................................................................................... 21

National Planning Policy Framework ......................................................................................................................... 21

The Natural Environment and Rural Communities Act 2006 and The Biodiversity Duty .................. 21
Executive Summary

Arbtech Consulting Ltd. undertook a suite of emergence and activity surveys at Ham Hill, on the 24th May, 14th June and the 2nd July 2016. The aim of the assessment is to determine the presence or likely absence of bats / characterise the roost including species, numbers and levels of activity, to identify entrance and egress points, and to gain an understanding of the activity of bats using the building in the local landscape.

The development proposals being submitted to Basingstoke and Deane Borough Council (BDBC), briefly comprise of the demolition of the existing building on site, with a replacement dwelling and associated garage extension (on the eastern aspect).

<table>
<thead>
<tr>
<th>Building reference</th>
<th>Presence/likely absence of roosting</th>
<th>Roost character</th>
<th>Recommendations for further survey and/or mitigation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Existing Dwelling</td>
<td>Confirmed roost</td>
<td>Occasional summer roost used assessed as being used by one common pipistrelle bat. Roost area identified as between roof tiles on the hipped roof section of the side, southeastern elevation. Droppings identified in previous protected species survey appear to have been from a historical roost.</td>
<td>EPSML will be required to undertake the works.</td>
</tr>
</tbody>
</table>
1.0 Introduction and Context

1.1 Background
Arbtech were commissioned by Mr. Marcus De Ferranti to undertake a suite of emergence/re-entry and activity surveys at Ham Hill, Berkshire. The assessment is informed by the Bat Conservation Trust publication *Bat Surveys for Professional Ecologists: Good Practice Guidelines* (Collins, J, (ed.), 2016).

The Preliminary Roost Assessment undertaken in December 2015 by Tylor Grange LPP, identified suitable roosting features on the building for crevice dwelling species. The survey also identified six bat droppings, believed to be those of a brown long-eared *Plecotus auritus*, present in the loft area of the eastern section of the building.

As such, roost characterisation surveys were recommended to include the collection of information about the characteristics of the roost and surrounding area.

1.2 Aims and Objectives
This report provides a description of the bat activity observed and recorded during each survey, notably the egress and entrance points on the buildings, trees and other structures; the numbers and species of bats using the roost(s); and the type and levels of activity in and around the roost site(s). The aim of the assessment was to characterise the roost and to gain an understanding of how bats use the building, tree or structure. The objectives of the survey(s) were to gain an understanding of the species, numbers and access points, roosting locations, timing of use and type of roost.

Robust data has been collected, following good practice guidelines, to inform an assessment of the potential impacts of the proposed development on bats, and inform mitigation and enhancement. This report provides information on constraints to the proposals as a result of roosting bats, and summarises any mitigation required to achieve Planning or other statutory consent, and to comply with wildlife legislation.
1.3 Scope of the Report
Survey plans are presented in Appendix 1, showing the location of each surveyor and the bat activity observed and recorded during each survey; site plans showing the current site layout and proposed development are in Appendix 2; photographs are provided in Appendix 3; and a summary of relevant legislation can be found in Appendix 4. This report should be read in conjunction with the Protected Species Survey, undertaken by Tylor Grange LPP dated the 27th January 2016.

1.4 Site Context
The site is located at National Grid Reference SU 496 585, and the building comprises an area of approximately 0.05ha. A single building was subject to the survey. The site is located between the villages of Sydmonton and Ecchinswell, approximately 7.5km from Newbury. The site comprises a residential property with associated gardens, a pond and hardstanding surrounded by an arable field and pasture used for grazing. Ham Hill is located in a secluded rural location and accessed from a single track road. The site is on a relatively flat plateau on the top of a hill with view across the undulating surrounding rural landscape. (Description taken from Tylor Grange LPP (2016) Protected Species Survey and Assessment).

1.5 Project Description
This report is prepared in support of a planning application, to be submitted to Basingstoke and Deane Borough Council (BDB). The development proposals being submitted, briefly comprises of the demolition of the existing building on site, with a replacement dwelling and associated garage extension (on the eastern aspect).
2.0 Methodology

2.1 Site Survey

2.1.1 Surveyors and weather conditions

The surveys were undertaken by Simon Pidgeon, BSc (Hons) MRSB; with 20 years’ experience as a licenced bat worker (Licence number 2016-24382-CLS-CLS) with the assistance of Matthew Boucher, an experienced bat surveyor. Weather conditions are shown below in Table 2.

Table 1: Weather conditions during surveys

<table>
<thead>
<tr>
<th>Date of survey</th>
<th>Weather conditions at start of survey</th>
<th>Weather conditions at end of survey</th>
</tr>
</thead>
<tbody>
<tr>
<td>24/05/2016</td>
<td>Temperature: 11.6°C</td>
<td>Temperature: 9.0 °C</td>
</tr>
<tr>
<td></td>
<td>Humidity: 65%</td>
<td>Humidity: 75.5%</td>
</tr>
<tr>
<td></td>
<td>Cloud Cover: 0%</td>
<td>Cloud Cover: 0%</td>
</tr>
<tr>
<td></td>
<td>Wind speed: 2/12</td>
<td>Wind speed: 1/12</td>
</tr>
<tr>
<td></td>
<td>Rain: None</td>
<td>Rain: None</td>
</tr>
<tr>
<td>14/06/2016</td>
<td>Temperature: 12.3 °C</td>
<td>Temperature: 11.1 °C</td>
</tr>
<tr>
<td></td>
<td>Humidity: 87.8%</td>
<td>Humidity: 92.1%</td>
</tr>
<tr>
<td></td>
<td>Cloud Cover: 70%</td>
<td>Cloud Cover: 70%</td>
</tr>
<tr>
<td></td>
<td>Wind speed: 2/12</td>
<td>Wind speed: 2/12</td>
</tr>
<tr>
<td></td>
<td>Rain: None</td>
<td>Rain: None</td>
</tr>
<tr>
<td>02/07/2016</td>
<td>Temperature: 9.6 °C</td>
<td>Temperature: 9.9 °C</td>
</tr>
<tr>
<td></td>
<td>Humidity: 87%</td>
<td>Humidity: 86%</td>
</tr>
<tr>
<td></td>
<td>Cloud Cover: 80%</td>
<td>Cloud Cover: 90%</td>
</tr>
<tr>
<td></td>
<td>Wind speed: 3/8</td>
<td>Wind speed: 2/8</td>
</tr>
<tr>
<td></td>
<td>Rain: None</td>
<td>Rain: None</td>
</tr>
</tbody>
</table>

The survey methods were informed by the Preliminary Roost Assessment (PRA), which identified potential roosting and access points on the building. All buildings that were assessed as being suitable for roosting bats were subject to survey; two surveyors were used to provide sufficient coverage of all suitable structures on site, the location of each surveyor during each survey is shown in Appendix 1.

2.1.2 Timing

The dates and times of each survey are shown in the table below.

Table 2: Survey schedule, dates and times

<table>
<thead>
<tr>
<th>Reference</th>
<th>Suitability</th>
<th>Survey date</th>
<th>Sunset/sunrise time</th>
<th>Survey start time</th>
<th>Survey end time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Existing Dwelling</td>
<td>Confirmed</td>
<td>12/06/15</td>
<td>21:03</td>
<td>20:48</td>
<td>22:48</td>
</tr>
<tr>
<td>Existing Dwelling</td>
<td>Confirmed</td>
<td>23/06/15</td>
<td>21:23</td>
<td>21:08</td>
<td>23:05</td>
</tr>
</tbody>
</table>
The PRA also concluded that the existing dwelling was a confirmed roost. As such, the timing of surveys has been designed to include the maternity season, as well as the main activity season.

### 2.1.3 Equipment

Equipment used – High powered torch, echo meter touch & iPad mini, camera and binoculars (Surveyor A). Echo meter touch, high powered torch and camera (Surveyor B)

### 2.2 Limitations

This survey follows best practice guidance to confirm presence/absence of roosting bats and where present, characterise the roost. However, this information is collected at finite dates and times, and provides an indication of the conditions on site only. The use of the structures and trees, and site as a whole, by bats, at all times cannot be established based on this information.

There were no deviation from good practice methods. All surveys were undertaken during the optimal survey period and suitable weather conditions.
3.0 Results

3.1 Survey Results

3.1.1 Presence/absence and roost characterisation surveys

Existing Dwelling

A single common pipistrelle emerged from a section of valley roof, between roof tiles on the south eastern corner of the building. This was the only emergence recorded during the two dusk and one dawn survey. An inspection of the loft areas was also undertaken prior to the second dusk survey. This confirmed the presence of 3-4 droppings within the loft area. However these appeared old, with no evidence of urine staining or markings on the roof timbers. It is assessed that these droppings are from historical usage of the building. Indeed, they could also be assessed as a bat passing through the building and not roosting.

This information is shown on the plans in Appendix 1 and in Tables 3/4.
Table 3: Summary of survey results, Survey Date: 24/05/2016

<table>
<thead>
<tr>
<th>Building reference</th>
<th>Surveyor and Position</th>
<th>Start Time – End Time</th>
<th>Brief summary of passes and behaviour observed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Existing dwelling</td>
<td>Surveyor A, (located on the south western corner of the building, with a clear view of the rear and side, western elevation)</td>
<td>20:48 – 22:48</td>
<td>The first bat recorded by this surveyor was a passing Nathusius’s pipistrelle <em>Pipistrellus nathusii</em> at 21:22. This bat appeared to fly from the front and came over the building. Constant feeding activity of common pipistrelle <em>Pipistrellus pipistrellus</em> was recorded within the rear garden between 21:30 and 22:01. Two faint passes of a brown long-eared <em>Plecotus auritus</em> were noted at 22:11 and 22:13.</td>
</tr>
<tr>
<td>Existing dwelling</td>
<td>Surveyor B, (Positioned near the north eastern corner, observing the north and east elevations)</td>
<td>As above</td>
<td>A Nathusius’s pipistrelle was the first bat noted passing over the property from the north at 21:22. A mixture of feeding and commuting activity of common pipistrelle bats was recorded between 21:25 and 22:19. The majority of bats appeared to come from the wooded area to the north east.</td>
</tr>
</tbody>
</table>
Table 4: Summary of survey results, Survey date: 14/06/2016

Surveyors:
A: Simon Pidgeon
B: Matt Boucher

Survey Date: 14.06.2016

<table>
<thead>
<tr>
<th>Building reference</th>
<th>Surveyor and Position</th>
<th>Start Time – End Time</th>
<th>Brief summary of passes and behaviour observed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Existing dwelling</td>
<td>Surveyor A, (located on the south eastern corner of the building, with a clear view of the rear and side, eastern elevation)</td>
<td>21:08 – 23:05</td>
<td>The first bat noted by surveyor A was the emergence of a common pipistrelle bat. The bat emerged between the valley roof section of the hipped roof and extension to the rear, and the main roof section (see Appendix 1 and photographs in Appendix 3). This occurred at 21:48 and the bat flew north east towards the trees. Further common pipistrelle passes were also noted at 21:50, 21:54, 21:55, 22:00, 22:05, 22:07, 22:08, 22:20 and 22:22. Most of the activity was passing bats over the rear garden area from the direction of the tree line directly to the east. A noctule was also noted passing over the property at 22:12.</td>
</tr>
<tr>
<td>Existing dwelling</td>
<td>Surveyor B, (Positioned near the north western corner, observing the north and west elevations)</td>
<td>As above</td>
<td>Common pipistrelle bats were noted commuting from the wooded area to the east at 21:51, 21:57, 22:02, 22:05, 22:09, 22:23, 22:30 and 22:34. Two soprano pipistrelle passes were also noted at 22:02 and 22:06. No feeding activity was recorded.</td>
</tr>
<tr>
<td>Building reference</td>
<td>Surveyor and Position</td>
<td>Start Time – End Time</td>
<td>Brief summary of passes and behaviour observed</td>
</tr>
<tr>
<td>--------------------</td>
<td>-----------------------</td>
<td>-----------------------</td>
<td>------------------------------------------------</td>
</tr>
<tr>
<td>Existing dwelling</td>
<td>Surveyor A, (located on the south eastern corner of the building, with a clear view of the rear and side, eastern elevation)</td>
<td>03:05 – 05:10</td>
<td>The pass of a single common pipistrelle bat was heard at 03:58. The bat was not seen and only heard on the detector.</td>
</tr>
<tr>
<td>Existing dwelling</td>
<td>Surveyor B, (Positioned near the south western corner, observing the south and west elevations)</td>
<td>As above</td>
<td>No activity recorded</td>
</tr>
</tbody>
</table>

**Surveyors:**
A: Simon Pidgeon  
B: Matt Boucher  

**Survey Date:** 02.07.2016
4.0 Conclusions and Impact Assessment

4.1 Conclusions
The main conclusions of the PRA and emergence surveys undertaken at this site are described below. The existing dwelling was surveyed, following recommendations made in the Protected Species Survey.

The existing dwelling is known to support roosting bats, and roost characterisation surveys have confirmed that a small summer roost of common pipistrelle bats are present beneath roof tiles. During the survey efforts, only one single bat emerged from the south eastern corner of the building. However due to the highly mobile nature of the species, it is assumed that the roost could be utilised by between 1-5 individuals.

Droppings identified during the protected species survey and seen again during the second dusk survey, have been assessed as being those left from a historical roost. It is agreed that these had similar characteristics to those of a brown long-eared Plecotus auritus bat. The droppings appeared old and all surveys were undertaken not only during the maternity season, but during optimum weather conditions. No further species was recorded emerging from the building, other than a single common pipistrelle.

4.2 Impact Assessment
As the proposals include the demolition of the existing dwelling, the roost will be destroyed. This would result in a contravention of legislation protecting bats, and a European Protected Species Mitigation Licence issued by Natural England is required to ensure legal compliance.

Bats are protected under the Wildlife and Countryside Act and Conservation Regulations; see Appendix 3 for a summary of legislation protecting bats in the UK.

4.3 Recommendations

4.3.1 Mitigation
The surveys undertaken to date in and around the existing dwelling provide sufficient information to inform a European Protected Species Mitigation license (EPSML). An EPSML will be required to enable the proposed works to be undertaken on this building lawfully, whilst ensuring the maintenance of the

BAT EMERGENCE AND ACTIVITY SURVEYS
populations of the species concerned at a favourable conservation status in their natural range; detailed mitigation will be described in the EPSML Method Statement.

Natural England’s *European Protected Species Guidance: How to get a licence* states: “In order to obtain a licence to allow for the capture of EPS, damage or destruction of breeding sites, etc., in advance of any otherwise legitimate activity which may impact on the favourable conservation status of the EPS concerned, you ....must demonstrate that the damage will be adequately compensated for to satisfy Regulation 53(9)(b)” .....“Current Natural England advice is that there should be no net loss in the local population status of the species concerned, taking into account factors such as population size, viability and connectivity. Hence, when it is unavoidable that an activity will affect an EPS population, the mitigation should aim to maintain a population of equivalent status on or near the original site”.

As such, the demolition of the building should be undertaken to avoid the hibernation season, and oft stripping of the building under supervision by a licenced bat ecologist. Consideration should be given to the installation of ‘bat tubes’ or ‘bat access slates’ near the eastern corner of the new dwelling.

Scientific research has shown that Breathable Roof Membranes (BRMs) are harmful to bats with bats becoming entangled in loose fibres resulting in the death of bats. BRMs used in bat roosts can quickly become shredded by the bats claws resulting in a reduced lifespan of the product. There are currently no bat friendly BRM products on the market. For more information visit [www.batsandbrms.co.uk](http://www.batsandbrms.co.uk).

Consideration should also be given to any additional lighting in the area. Ensuring that the new roost access points are not illuminated. This would also include ensuring a dark corridor is present along the eastern fringe of the site, where common and soprano pipistrelle bats appear to be commuting along.

If bats are found during any stage of the development, work should stop immediately and a suitably qualified ecologist should be contacted to seek further advice.

**4.3.2 Enhancement**

The production of an EPSML will enhance the habitat on site for bats. However, in addition to this, two Schwegler 1FF bat boxes should be installed on retained trees.
5.0 Bibliography

- Garland & Markham (2007) ‘Is important bat foraging and commuting habitat legally protected?’
- Tylor Grange LPP (2016) Protected Species Survey and Assessment
Appendices
Appendix 1: Survey Plan

Legend
- Existing Dwelling
- Ridgelines
- Droppings
- Emergence Point
- Bat Flight Path
- Surveyor A
- Surveyor B

Site Plan

Feeding activity recorded within rear garden

Scale
1:500 at A4, not report projection

Drawn by: S. Fidgeon

Reproduced from GoogleEarth 2016

North
Appendix 2: Proposed Site Plan
Appendix 3: Legislation and Planning Policy related to bats

LEGAL PROTECTION

All species of bat are fully protected under The Conservation of Habitats and Species Regulations 2010 (as amended) through their inclusion on Schedule 2.

Regulation 41 prohibits:

- Deliberate killing, injuring or capturing of Schedule 2 species (e.g. all bats)
- Deliberate disturbance of bat species as:
  
  a) to impair their ability:

  (i) to survive, breed, or reproduce, or to rear or nurture young

  (ii) to hibernate or migrate

  b) to affect significantly the local distribution or abundance of the species

- Damage or destruction of a breeding site or resting place

Bats are also protected under the Wildlife and Countryside Act 1981 (as amended) through their inclusion on Schedule 5. Under this Act, they are additionally protected from:

- Intentional or reckless disturbance (at any level)
- Intentional or reckless obstruction of access to any place of shelter or protection
- Selling, offering or exposing for sale, possession or transporting for purpose of sale

Effect on development works:

A European Protected Species Mitigation (EPSM) Licence issued by the relevant statutory authority (e.g. Natural England) will be required for works likely to affect a bat roost or for operations likely to result in a level of disturbance which might impair their ability to undertake those activities mentioned above (e.g. survive, breed, rear young and hibernate). The licence is to allow derogation from the relevant legislation but also to enable appropriate mitigation measures to be put in place and their efficiency/success to be monitored.

The legislation may also be interpreted such that, in certain circumstances, important foraging areas and/or commuting routes can be regarded as being afforded de facto protection, for example, where it can be proven that the continued usage of such areas is crucial to maintaining the integrity and long-term viability of a bat roost (Garland & Markham, 2008)
**NATIONAL PLANNING POLICY (ENGLAND)**

*National Planning Policy Framework*

The National Planning Policy Framework promotes sustainable development. The Framework specifies the need for protection of designated sites and priority habitats and species. An emphasis is also made on the need for ecological infrastructure through protection, restoration and re-creation. The protection and recovery of priority species (considered likely to be those listed as UK Biodiversity Action Plan priority species) is also listed as a requirement of planning policy.

In determining a planning application, planning authorities should aim to conserve and enhance biodiversity by ensuring that: designated sites are protected from harm; there is appropriate mitigation or compensation where significant harm cannot be avoided; opportunities to incorporate biodiversity in and around developments are encouraged; and planning permission is refused for development resulting in the loss or deterioration of irreplaceable habitats including aged or veteran trees and also ancient woodland.

*The Natural Environment and Rural Communities Act 2006 and The Biodiversity Duty*

Section 40 of the Natural Environment and Rural Communities (NERC) Act, 2006, requires all public bodies to have regard to biodiversity conservation when carrying out their functions. This is commonly referred to as the ‘biodiversity duty’.

Section 41 of the Act (Section 42 in Wales) requires the Secretary of State to publish a list of habitats and species which are of ‘principal importance for the conservation of biodiversity.’ This list is intended to assist decision makers such as public bodies in implementing their duty under Section 40 of the Act. Under the Act these habitats and species are regarded as a material consideration in determining planning applications. A developer must show that their protection has been adequately addressed within a development proposal.
Arbtech Consultant’s Contact details:

Add your contact details only

Simon Pidgeon, BSc (Hons) MRSB
07711 591700
sp@arbtech.co.uk

Arbtech Consulting Ltd
https://arbtech.co.uk