



# **GREAT GROVEHURST FARM, KENT**

## **Preliminary Ecological Assessment for Bats Bat Emergence and Re-Entry Surveys**

Date of Report: September 2017



## Preliminary Ecological Assessment for Bats Bat Emergence and Re-Entry Surveys

Client: G H Dean & Co. Ltd

Reference: J006353

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**NON-TECHNICAL SUMMARY**

Site location and size	Great Grovehurst Farm, Kent; TQ 90439 66626; 4.8ha
Scope and purpose of works	Preliminary Ecological Assessment for Bats  Bat Emergence and Re-Entry Surveys
Dates of site visits and names of surveyors	3 July 2017 – Darren Hood FdSc MArborA and Liat Wicks 4 July 2017 – Darren Hood FdSc MArborA and Liat Wicks 24 July 2017 – Darren Hood FdSc MArborA, Kevin Hume and Liat Wicks 1 August 2017 – Darren Hood FdSc MArborA and Liat Wicks 2 August 2017 – Darren Hood FdSc MArborA and Liat Wicks 21 August 2017 – Darren Hood FdSc MArborA, Kevin Hume and Liat Wicks 6 September 2017 – Sara King BSc (Hons) MCIEEM and Annie Hatt BSc (Hons)
Overview	<p>An update internal building assessment was completed on 3 July 2017 which indicated that the buildings had not changed since the previous surveys undertaken in 2015. However, they have been subject to vandalism as some windows have been broken and some buildings exhibited fire damage. Bat droppings were recorded within Buildings 4 and 5.</p> <p>Two surveys, a dusk emergence and a dawn re-entry survey, were completed on Building 1 whilst three surveys were completed on Buildings 4 and 5. No bat emergences or re-entries were recorded during these surveys. However, bats were recorded foraging within Building 5.</p> <p>Moderate levels of bat activity were recorded over the site. Species recorded include common pipistrelle, soprano pipistrelle, noctule and brown long-eared.</p>
Action required for planning and/or legal compliance	Building 5 is a confirmed night-feeding roost. As a result, a Low Impact Class Licence for Bats is required to allow the demolition of Building 5.
Recommendations for ecological enhancement  (Site ecological enhancement is required under current planning policy)	The installation of bat roosting features on retained trees.

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**1 INTRODUCTION**

1.1 In June 2017, Ecosulis was commissioned by G H Dean & Co. Ltd to undertake an update Preliminary Ecological Assessment for bats on the five buildings on site, and bat emergence and re-entry surveys on Buildings 3, 4 and 5 on land at Great Grovehurst Farm.

1.2 The current proposals for the site include the demolition of the five buildings on site.

1.3 Ecologists representing Ecosulis visited the site on several occasions between July and September to undertake the survey. Access was provided by the landowner.

**Previous Survey Works**

1.4 During the emergence and swarming surveys completed in 2015 (report reference: J005867), no bat roosts were recorded within the buildings on site. These surveys, in conjunction with the activity surveys also completed in 2015, found that the site is used by four species of bat including common pipistrelle, soprano pipistrelle, noctule and brown long-eared. Moderate levels of commuting and foraging activity were also recorded.

**Objectives of Study**

1.5 The objectives of this study are: to provide information on the existing ecological conditions at the site; to identify potential constraints and opportunities that ecology may pose to the development plans; and to identify further ecological studies that may be required to ensure that ecology is fully considered within the proposals.

**General Description of Site**

1.6 The site is located on the northern outskirts of Kemley and is centred on OS grid reference TQ 904 666. It covers an area of 4.8ha and includes an unoccupied cottage and former farm buildings. Other areas on site include hard-standing and grassland.

1.7 The site is surrounded by built-up areas on all sides, with Sheerness railway running along the east boundary.

## 2 METHODS

### **Preliminary Ecological Assessment for Bats**

- 2.1 Five buildings are present on the site, which have been assessed in terms of their suitability to support roosting bats. Three of the buildings on site were assessed as providing Medium suitability to support roosting bats. All other buildings and the trees on site were assessed as having Negligible suitability to support roosting bats.
- 2.2 The survey was undertaken on 3 July 2017 by Dr Liat Wicks CECol MCIEEM, experienced representative of Ecosulis. Methodologies followed current best practice guidelines including those outlined within the Bat Mitigation Guidelines (English Nature, 2004), the Bat Workers' Manual (JNCC, 2004) and the Bat Surveys Good Practice Guidelines (Bat Conservation Trust, 2016).

#### Buildings

- 2.3 The buildings were assessed externally for their suitability to offer roost sites for bats. This was undertaken by determining the style and construction of the building and presence of features such as roof voids as well as cracks and holes in brickwork/tiling. The buildings were then rated as having Negligible, Low, Medium or High suitability as roost sites (Appendix I provides guidance on the criteria used in this assessment).
- 2.4 Following the initial assessment, the buildings were searched externally for signs of bat use. External evidence of bat use may include droppings and/or staining on walls, window ledges, in cobwebs and on the ground under suitable roost entry and exit points (e.g. around soffits, fascias, eaves, flashing etc). Internal evidence of bat use may include droppings (floors, walls, window ledges and other structural elements), staining, scratch marks, feeding remains, or bats themselves. The surveyors used high-powered torches to search for bat evidence.

#### Ecological Context

- 2.5 An assessment of the ecological context of the site was undertaken with notes made with respect to the suitability of the site habitats and surrounding habitats to support foraging and commuting bats. The ecological context of a structure, such as a building or tree, can significantly influence the likelihood of it supporting roosting bats. For example, a structure of Low suitability is more likely to be used if it is set within an area of high-quality habitat with few alternative roosting opportunities. Likewise, a highly suitable structure is less likely to be used by roosting bats if it is isolated within an area providing no suitable foraging or commuting habitat.

### **Bat Emergence and Re-Entry Surveys**

- 2.6 Two to three surveyors were present during all surveys and focused their efforts on specific areas of the site highlighted as being suitable for roosting bats within the previous daytime assessment completed on 3 July 2017. Buildings which were

surveyed and details of the suitability for roosting bats, along with the locations of each surveyor, are shown in Figure 1. The surveys were undertaken during suitable weather conditions with little or no rain and light winds. Surveys were undertaken on 3 July, 4 July, 24 July, 1 August, 2 August and 21 August and were led by Liat Wicks, an experienced representative of Ecosulis. The final survey was completed on 6 September and led by Sara King BSc (Hons) MCIEEM.

- 2.7 The emergence surveys commenced half an hour before sunset and continued for two hours after sunset. The swarming survey commenced one and a half hours before sunrise and continued for up to 30 minutes after dawn. Frequency division 'duet' bat detectors were used together with visual observations on flight patterns and feeding behaviour to aid identification to species level. Notes were recorded on times, locations, species and behaviour. General bat activity across the site was also observed. Recordings of bat echolocation calls were made and later analysed using dedicated computer software 'Bat Sound'.

### 3 RESULTS

#### Update Preliminary Ecological Assessment for Bats

3.1 The buildings have not changed since the previous report completed in 2016 (report reference: J005845). However, they have been subject to vandalism including broken windows and fire damage. Buildings 3, 4 and 5 continue to be assessed as providing Moderate suitability to support roosting bats. The remaining buildings continue to support Negligible opportunities for roosting bats.

#### Emergence and Re-Entry Surveys

3.2 Full results are included within Appendix II. During the course of these surveys no bats were recorded emerging from or entering any of the buildings on the site. Bats were recorded foraging within Buildings 4 and 5. Species recorded during these surveys included: common pipistrelle, soprano pipistrelle, noctule and brown long-eared.

Building Number	Suitability for Bats	Evidence of Bats	Emergence/ Re-Entry Survey Results	Confirmed Roost	Type of Roost
1	Moderate	None	No emerging or re-entering bats	No	-
2	Negligible	None	N/A	N/A	-
3	Negligible	None	N/A	N/A	-
4	Moderate	Scattered droppings on ground floor	No emerging or re-entering bats. Bats recorded foraging within the building.	No	-
5	Moderate	Scattered droppings and feeding remains	No emerging or re-entering bats. Bats recorded foraging within the building.	Yes	Night feeding roost



#### **4 ECOLOGICAL CONSIDERATIONS AND RECOMMENDATIONS**

4.1 This section provides considerations in relation to the ecology of the site and any adjacent habitats that should be considered within development proposals to ensure that impacts on ecology are avoided and/or mitigated within the scheme. It is recommended that a review of local planning policies and objectives set out within the UK and local Biodiversity Action Plans for habitats and species is undertaken to ensure that these are taken into consideration within any detailed design.

##### **Bats**

4.2 All British species of bat and their place of shelter are protected under the Wildlife and Countryside Act 1981 (as amended) and the Conservation of Habitats and Species Regulations 2010 from deliberate capture, injury and killing, intentional or reckless disturbance, intentional or reckless obstruction of access to any structure or place which any such animal uses for shelter or protection, and deliberate damage or destruction of a breeding site or resting place. This includes buildings and trees and applies throughout the year whether bats are present or not at the time of survey or work being carried out.

4.3 Although foraging areas and commuting routes are not legally protected, the effects of development proposals on these are a material consideration when assessing the impact of the proposal on the maintenance of favourable conservation status (NPPF).

4.4 Buildings 1 to 4 can be demolished with no further works required. Due to the presence of droppings and feeding remains within Building 5, as well as the evidence of foraging bats recorded on the surveys, it has been assessed as a night roost. As such a Low Impact Class Licence (LICL) will be required prior to demolition taking place. This will include the presence of an Ecological Clerk of Works (in this case this will need to be the LICL holder) to supervise the removal of the roof.

##### **Ecological Opportunities**

4.5 Any lighting required within the scheme should be kept to a minimum and carefully consider bats (BCT, 2008).

4.6 Consideration should be given to installing built-in bat and bird features within new buildings on site to increase nesting/roosting opportunities.

4.7 Further enhancement of the site for bat species should include the planting of night-scented flowers within the landscape scheme for the site. Night-scented flowers attract moths and other invertebrates which form the diet of UK bat species. Suitable plant species include honeysuckle, dog-rose, ivy, evening primrose and night-scented catchfly. More information can be found in the Bat Conservation Trust's 'Landscape and Urban Design for Bats and Biodiversity' document.

4.8 Future management should aim to enhance the value of the site for wildlife whilst maintaining amenity function, such as leaving longer edge grassland zones





(adjacent to boundaries and around the trees, for example) and rotational management of new planting.

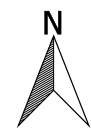
**5 LIMITATIONS OF SURVEY AND REPORT**

- 5.1 This report records wildlife found during the survey and anecdotal evidence of sightings. It does not record any plants or animals that may appear at other times of the year and were therefore not evident at the time of visit. Some species that might use the site or be apparent at other times of year, or only in certain years, would not have been detected.
- 5.2 The behaviour of animals can be unpredictable and may not conform to standard patterns recorded in current scientific literature. This report therefore 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.
- 5.3 The advice contained in this report relates primarily to factual survey results and general guidance only. On all legal matters you are advised to take legal advice.



**Key**

-  Site Boundary
-  Surveyor Location
-  Moderate
-  Negligible



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Project: Great Grovehurst, Sittingbourne

Title: Bat Emergence and Re-entry Surveys

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**Figure 1**

[www.ecosulis.co.uk](http://www.ecosulis.co.uk)

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**Appendix I: SPECIES LIST**

<b>Fauna</b>	
<b>Common Name</b>	<b>Latin Name</b>
Brown Long-eared	<i>Plecotus auritus</i>
Common Pipistrelle	<i>Pipistrellus pipistrellus</i>
Noctule	<i>Nyctalus noctula</i>
Soprano Pipistrelle	<i>Pipistrellus pygmaeus</i>

**Appendix II: SURVEY RESULTS**Table 1: Results of Building 1 Emergence Survey, 24 July 2017

<b>Date:</b> 24 July 2017	<b>Start Time:</b> 20:40	<b>Weather:</b> 10% cloud, 15.6°C, Light wind		
	<b>End Time:</b> 22:30	<b>Weather:</b> 10% cloud, 14°C, Light wind		
<b>General Weather Notes:</b> Clear with low wind				
<b>Location of Surveyor</b>	<b>Time</b>	<b>Species</b>	<b>Number</b>	<b>Behaviour</b>
2	21:17	Common pipistrelle	1	Foraging
1	21:18	Common pipistrelle	1	Commuting
1	21:41	Common pipistrelle	1	Commuting
2	21:42	Common pipistrelle	1	Commuting
<b>General Activity</b>				
Low levels of activity were present over the site which included common pipistrelles				

Table 2: Results of Building 1 Dawn Survey, 21 August 2017

<b>Date:</b> 21 August 2017	<b>Start Time:</b> 04:35	<b>Weather:</b> 100% cloud, 15.6°C, Light wind		
	<b>End Time:</b> 05:45	<b>Weather:</b> 100% cloud, 14°C, Light wind		
<b>General Weather Notes:</b> Cloudy and cool with a light wind				
<b>Location of Surveyor</b>	<b>Time</b>	<b>Species</b>	<b>Number</b>	<b>Behaviour</b>
1	04:42	Common pipistrelle	1	Commuting
1	04:53	Common pipistrelle	1	Commuting
2	04:54	Common pipistrelle	1	Commuting
1	05:01	Common pipistrelle	1	Commuting
2	05:04	Common pipistrelle	1	Commuting
<b>General Activity</b>				
Low levels of activity were present over the site which included common pipistrelles				

Table 3: Results of Building 4 Dawn Survey, 4 July 2017

<b>Date:</b> 4 July 2017	<b>Start Time:</b> 03:11	<b>Weather:</b> 0% cloud, 16.5°C, No wind		
	<b>End Time:</b> 04:48	<b>Weather:</b> 30% cloud, 10°C, No wind		
<b>General Weather Notes:</b> Clear and warm with no wind				
<b>Location of Surveyor</b>	<b>Time</b>	<b>Species</b>	<b>Number</b>	<b>Behaviour</b>
1	03:30	Common pipistrelle	1	Commuting
2	03:39	Common pipistrelle	1	Foraging
2	03:41	Common pipistrelle	1	Foraging
<b>General Activity</b>				
Very low levels of activity were present over the site which included common pipistrelles				

Table 4: Results of Building 4 Emergence Survey, 1 August 2017

<b>Date:</b> 1 August 2017	<b>Start Time:</b> 20:40	<b>Weather:</b> 100% cloud, 18.7°C, Light wind		
	<b>End Time:</b> 22:15	<b>Weather:</b> 100% cloud, 18°C, Light wind		
<b>General Weather Notes:</b> Cloudy and cool with a light wind				
<b>Location of Surveyor</b>	<b>Time</b>	<b>Species</b>	<b>Number</b>	<b>Behaviour</b>
1	21:07	Noctule	1	-
1	21:27	Common pipistrelle	1	Commuting
2	21:36	Brown long-eared	1	Commuting
<b>General Activity</b>				
Very low levels of activity				

Table 5: Results of Building 4 Emergence Survey, 6 September 2017

<b>Date:</b> 6 September 2017	<b>Start Time:</b> 19:00	<b>Weather:</b> 75% cloud, 20°C, Slight wind		
	<b>End Time:</b> 21:30	<b>Weather:</b> 75% cloud, 12°C, Slight wind		
<b>General Weather Notes:</b> Cloudy and warm but decreased in temperature quickly				
<b>Location of Surveyor</b>	<b>Time</b>	<b>Species</b>	<b>Number</b>	<b>Behaviour</b>
2	19:55	Brown long-eared	1	Commuting



<b>Date:</b> 6 September 2017	<b>Start Time:</b> 19:00	<b>Weather:</b> 75% cloud, 20°C, Slight wind		
	<b>End Time:</b> 21:30	<b>Weather:</b> 75% cloud, 12°C, Slight wind		
<b>General Weather Notes:</b> Cloudy and warm but decreased in temperature quickly				
<b>Location of Surveyor</b>	<b>Time</b>	<b>Species</b>	<b>Number</b>	<b>Behaviour</b>
2	20:20	Soprano pipistrelle	2	Foraging and commuting
<b>General Activity</b>				
Low levels of activity at the beginning of the survey, fading to no activity towards the end.				

Table 6: Results of Building 5 Dawn Survey, 2 August 2017

<b>Date:</b> 2 August 2017	<b>Start Time:</b> 04:06	<b>Weather:</b> 100% cloud, 14.7°C, No wind		
	<b>End Time:</b> 05:22	<b>Weather:</b> 100% cloud, 14°C, No wind		
<b>General Weather Notes:</b> Cloudy and cool				
<b>Location of Surveyor</b>	<b>Time</b>	<b>Species</b>	<b>Number</b>	<b>Behaviour</b>
2	04:13	Common pipistrelle	1	Foraging
2	04:15	Brown long-eared	1	Commuting
2	04:46	Brown long-eared	1	Foraging inside building
<b>General Activity</b>				
Moderate levels of activity, brown long-eared and common pipistrelles				

Table 7: Results of Building 5 Emergence Survey, 3 July 2017

<b>Date:</b> 3 July 2017	<b>Start Time:</b> 21:00	<b>Weather:</b> 50% cloud, 18°C, No wind		
	<b>End Time:</b> 23:00	<b>Weather:</b> 50% cloud, 16°C, No wind		
<b>General Weather Notes:</b> Cloudy and cool				
<b>Location of Surveyor</b>	<b>Time</b>	<b>Species</b>	<b>Number</b>	<b>Behaviour</b>
1	21:01	Common pipistrelle	1	Foraging
2	21:53	Brown long-eared	1	Commuting
2	21:59	Common pipistrelle	1	Foraging around the building

<b>Date:</b> 3 July 2017	<b>Start Time:</b> 21:00	<b>Weather:</b> 50% cloud, 18°C, No wind		
	<b>End Time:</b> 23:00	<b>Weather:</b> 50% cloud, 16°C, No wind		
<b>General Weather Notes:</b> Cloudy and cool				
<b>Location of Surveyor</b>	<b>Time</b>	<b>Species</b>	<b>Number</b>	<b>Behaviour</b>
1	22:26	Common pipistrelle	1	Foraging
<b>General Activity</b>				
Moderate levels of activity, brown long-eared and common pipistrelles				

Table 8: Results of Building 5 Emergence Survey, 6 September 2017

<b>Date:</b> 6 September 2017	<b>Start Time:</b> 19:00	<b>Weather:</b> 75% cloud, 20°C, Slight wind		
	<b>End Time:</b> 21:30	<b>Weather:</b> 75% cloud, 12°C, Slight wind		
<b>General Weather Notes:</b> Cloudy and warm but decreased in temperature quickly				
<b>Location of Surveyor</b>	<b>Time</b>	<b>Species</b>	<b>Number</b>	<b>Behaviour</b>
2	19:49	Noctule	1	Commuting
2	20:04	Soprano pipistrelle	1	Foraging inside building
<b>General Activity</b>				
Low levels of activity at the beginning of the survey, fading to no activity towards the end.				