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September 2015

A Bat Survey and Mitigation Report

from

11, Bound Lane

for

Whittington Designer Homes Ltd

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1 Executive Summary

- Whittington Designer Homes Ltd intends to apply for planning permission to build eight new houses on land at 11, Bound Lane.
- In June 2015, Verdant Ecology conducted a baseline ecology survey which concluded that the site seemed likely to support protected species, including bats.
- Verdant Ecology conducted a survey during summer 2015 that considered the bat roost potential of trees and buildings on the site.
- Verdant Ecology conducted bat surveys during summer and autumn 2015.
- No bat roosts were discovered.
- Roosts for Common Pipistrelles are suspected near to but off site.
- Activity was dominated by Common Pipistrelle bats, but at least 5 other species of bats were occasionally detected foraging on/near the site.
- Use of the site was considered low (on a scale of low, medium, high) and largely confined to the site perimeter.
- An outline mitigation plan is provided in section 6. This is considered adequate to demonstrate that impacts on roosts are unlikely and that the conservation status of bats can be maintained or enhanced.
- Bats need not be a reason for refusing planning permission.
- An appropriate condition to any planning consent would be to require compliance with the recommendations herein.

2 Introduction

2.1 Background to Activity/development

The site is 11, Bound Lane, South Hayling, Hampshire PO11 9HU and is at OS grid reference SZ 725990. The site consists of a garden with ornamental plants surrounding a detached two-storey dwelling, with a rear patio, greenhouse and summerhouse. The majority of the site consists of a meadow, cut some years for hay by a local farmer with several scattered trees lining the border.

It is understood that;

- The house of 11 Bound Lane is to be retained.
- Eight new residential dwellings plus associated garage/car ports and access are to be constructed across the remainder of the site.

The applicant has requested information on the site's potential for bats and how any impacts can be offset in order to allow the local planning authority to make an informed decision in line with the National Planning Policy Framework and ODPM 2005. In June 2015, Verdant Ecology was commissioned to conduct an investigation into any use of the site by bats and to provide recommendations.

3 Survey

3.1 Pre-existing Information on Bats at the Survey Site

Hampshire Biodiversity Information Centre provided a number of records within 2km of the site. The full version can be found separately as 11, Bound Lane Datasearch Results. In summary, Serotine, Bechstein's,

Daubenton's, Whiskered or Brandt's, Natterer's, Noctule, Common Pipistrelle, Soprano Pipistrelle, Long-eared (unspecified) and Brown Long-eared bats are all recorded locally.

Included within 1km were the relatively recent apparently significant (breeding?) roosts of (unspecified) Pipistrelles; x21, 1km to the N (2007); x55, 900m to the N (2010); x127, 600m to the E (2013); and of Common Pipistrelles; x347, 700m to the NW (2005); x74, 900m to the N (2012).

3.2 Site/Habitat Description

The areas surrounding the site seemed suitable for bats. Although suburban and well-lit at night, there are foraging opportunities in nearby gardens and the site is connected to the surrounding countryside by lines of vegetation (such as that along roads). There are many buildings and trees nearby that could provide roosts.

3.3 Objectives of the Survey

- To assess the bat roost potential of trees and buildings on and adjacent to the site.
- To find any bat roosts on or adjacent to the site.
- To establish what species forage on and around the site, in what numbers and which areas are favoured.

3.4 Tree Inspection Method

All trees on and adjacent to the site were considered in terms of their bat roost potential during the arboricultural surveys over summer 2015. Detail can be found VE00344 11, Bound Lane Tree Survey Report, Tree Constraints Plan, Arboricultural Impact Assessment and Tree Protection Plan 150911.

3.5 Tree Inspection Results

Most trees were considered to have low bat roost potential (on a scale of Low, Medium, High – see Appendix 6 for an explanation of these relative terms). Trees, 2, 11, 12, 25, 29 were considered to have Medium potential. Trees 13, 18 and 30 were considered to have Low potential but the survey was hampered in some way (extensive ivy or restricted access). These will be retained. Of the trees with Medium potential, only number 25 will be lost.

3.6 Building Inspection Method

In June 2015, the house on site was subject to an internal and external visual inspection. This involved an inspection of the loft from the inside and outside for potential roost sites, access/egress holes and for signs of bats, using torches.

3.7 Building Inspection Results

See photographs in Appendix 1. No evidence of bats was found. The house is a brick and mortar two-storey construction, with a pitched slate roof. The slates were generally close-fitting but a few gaps exist. The loft is clad with timber sarking, behind which is potentially accessible to bats. However, the loft itself is brightly lit by a large rooflight. Roost potential was considered to be medium (on a scale of low, medium, high – see Appendix 6 for an explanation of these relative terms).

The summerhouse and greenhouse are considered to have Low bat roost potential and no evidence of bats was found.

3.8 Activity Survey Method

Details are provided in Appendix 3.

This consisted of two components; automated surveys and transects. These were conducted in accordance with the BCT 2012 guidelines (Table 7.2) for a site of <1ha and considered to be of 'Medium' habitat quality.

Table 1. Comparison Between Work Expected by BCT Guidelines and Work Conducted

Survey type	What the guidelines say	What we did
Activity transects	One transect on 3 occasions during Mar – Sept, optimum period Jun – Aug. Surveys should be approximately spaced through the period of sampling. At least one of the three surveys should comprise dusk and pre-dawn surveys (or a dusk-to-dawn survey) within one 24-hour period.	One transect on 3 occasions (10 th July, 29 th July and the 1 st /2 nd September).
Automated surveys	1 location on 3 occasions (for 3 consecutive nights) during Mar– Sept.	1 location on 3 occasions (for 6, 4 and 3* nights) in early July, end July/Aug and early Sept.

* = detector failed about 2¼ hrs before dawn on the third night.

Transect surveys were combined with roost vigils on the basis that the site is small enough that most of the site can be covered by a stationary surveyor and because walking through the long grass interferes with the detectors making it more likely that bat calls would be missed, especially for 'softer' bats. Consequently, surveyors moved relatively little. For the dusk and dawn vigil within the same 24hr period, two staff were used to cover different parts of the site.

3.9 Activity Survey Results

Details are provided in Appendix 3. In summary, the vast majority of bats detected were Common Pipistrelles. In particular, automated surveys recorded high levels of Common Pipistrelle activity between 11-14th July 2015.

A few passes were recorded for a variety of species including, Soprano Pipistrelle, Noctule, Leisler's, Serotine, Brown long-eared bats and a Myotis species.

3.10 Dusk/Dawn Roost Vigil Method

Details are provided in Appendix 3. In summary, in accordance with the Bat Conservation Trust's 2012 best practice guidelines (Table 8.5) we conducted 2 vigils of features with 'low' to 'moderate' roost potential that might be affected either directly or indirectly, during May to September (although two surveys were just outside the optimum period of May – August).

The table below summarises effort expended;

Table 2. Dusk/Dawn Vigils Summary

Date of vigil	Focus of attention	Staff
10 th July (dawn)	The existing house on site and trees 8 - 11	1 surveyor plus IR video camera.
27 th July (dawn)	Trees 12 and 13 and houses just off site	1 surveyor plus IR video camera.
1 st Sept (dusk)	Trees 25 and 29, the existing house and houses just off site.	2 surveyors plus IR video camera.
2 nd Sept (dawn)	Trees 25 and 29, the existing house and houses just off site.	2 surveyors plus IR video camera.

All surveyors used bat detectors and recording devices. Tuneable bat detectors were generally set at 39-40kHz (but recording all frequencies) so as to maximise the chances of detecting Long-eared bats. Selected recordings were analysed using BatScan 9.0 and AnalookW.

3.11 Dusk/Dawn Roost Vigil Results

Details are provided in Appendix 3. In summary, no roosts were detected. Common Pipistrelle bats are suspected to be roosting just off site to the N. Most bats detected foraging/commuting were Common Pipistrelles but Soprano Pipistrelles, Serotine, Myotis (probably Natterer's) and Brown Long-eared bats were occasionally detected.

4 Interpretation and Evaluation

- Although the precise location was not determined, it is strongly suspected that there is a Common Pipistrelle roost just off site to the N.
- Most bat activity was around the perimeter where foraging and commuting was dominated by Common Pipistrelle bats.
- In particular, the 11th -14th July recorded high numbers of Common Pipistrelle passes (peaking at 1158 passes on the night of the 14th). On the basis of evidence picked up by the manned surveys, this is attributed not to large numbers of bats but to a combination of the value of these trees as a commuting route, constant activity by one or a few bats associated with a seasonal insect resource at this point and may also be a reflection of the fact that the automated detector was sited 6m up a tree (thus closer to the average flying height of bats).
- The perimeter vegetation is valuable in constraining the amount of light spill from off site.

4.1 Survey Limitations

Verdant Ecology was not commissioned to do bat surveys until June, meaning spring had been missed. Our understanding of the recommendation in the Bat Conservation Trust's 2012 best practice guidance for activity surveys being spread from spring to autumn is that bats take advantage of seasonal food sources that may occur in different habitats at different times (e.g. may-flies). Given that the surveys were well spread through summer and autumn, the lack of a spring survey is considered unlikely to be significant. Additionally, the main

aim of the (manned) surveys was roost detection and summer is generally considered best for finding (breeding) roosts.

Some of our surveys were conducted in early September. This is well within the acceptable period for such work but a few days outside the optimum period (according to the Bat Conservation Trust's 2012 guidelines). These few days are not considered significant.

Long-eared bats can be easy to miss because of the 'softness' of their calls. Tuning bats detectors to this frequency and reviewing of recordings using BatScan software was intended to reduce the chances of this and the presence of Long-eared bats has been determined anyway. The rarer Grey Long-eared bat should occur in this region and can be extremely difficult to differentiate from the more common Brown Long-eared by call detection/analysis. It remains possible that (some of) the Long-eared bats detected are Grey but on balance of probability are far more likely to be Brown.

Some trees are on the boundary between the site and currently inaccessible land (private residences). This means some trees could not be viewed from the 'far' side, meaning bat roost potential may have been missed. This is considered unlikely to be significant because perimeter vegetation will be retained because of the presence of slow-worms (see VE 00344 11, Bound Lane Reptile Survey and Mitigation Report 150911) and for screening.

Similarly, buildings adjacent to but off site were only inspected from the site. These will not be affected directly and the proposed constraints on lighting means indirect effects are unlikely either.

During the last automated survey, batteries failed about 2¼ hrs before sunrise on the 3rd (last) night. This is not considered significant as previous automated surveys had covered far more than the minimum 3 nights and have been supplemented by manned surveys.

Anabat Express records temperature but no other weather parameters. This is not considered significant because (according to the BBC weather website) weather during the automated surveys was suitable for bat activity.

5 Impact Assessment

5.1 Potential Impacts

Potential impacts considered are;

- Loss of bat roosts (including obstruction of access/egress).
- Physical harm to bats during work.
- Indirect impacts on foraging habitat or on any roosts that may occur in neighbouring buildings or trees nearby (run-off pollution, light, noise, vibration, fumes etc. associated with the proposed work).
- Habitat fragmentation.
- Post-development impacts.

5.2 Predicted Impacts (Without Mitigation)

On the basis of work reported here and without mitigation, the redevelopment of the site is considered likely to have a Minor Negative impact on bats at a Local scale into the Long Term.

This would be dependent on the following assumptions.

- No pollution events.
- Retention of (most) perimeter vegetation.

5.3 Predicted Scale of Impacts

See Appendix 6 for a definition of the relative terms used here.

With successful mitigation, the proposal is likely to have a Minor-Major Positive impact on bats at the Local scale into the Long Term.

6 Recommendations/Mitigation

Retain existing vegetation where feasible.

Incorporate habitats suitable for bats and connected to the wider area into the project layout; namely, tree planting within the development site, especially at the perimeter.

Adher to a pollution prevention plan in line with the COSHH Regulations and the Environment Agency's Pollution Prevention Guidelines series. This must specifically consider light pollution by including a tightly constrained external lighting plan using the minimum number of external fittings, lowest possible fittings, hoods, downlighting, timers, automated cut-offs, etc. For guidance, see Stone (2013).

Incorporate new potential bat roosts into the new buildings. This can be best achieved by using vented roof designs with 1F 'traditional' bitumen lining (not breathable, 'Tyvek' type) to roof tiles. Alternatives are built-in bat bricks/boxes or bat boxes appended to trees or buildings.

6.1 List of Tasks and Chronology/Timing

It may not be necessary to provide the plans recommended below in complete detail before seeking planning permission. However, there should be enough information provided for it to be reasonable to believe that the proposals are deliverable.

Table 3. Recommendations in Chronological Order

Task	Timing
As it seems unlikely that any building bat roosts would be lost due to the redevelopment of the site the following is a recommendation but is unlikely to be obligatory. Incorporate bat roosts in the development proposals. The easiest and best way to do this is to stipulate that any tiled roofs or hanging tiles are lined with 1F ('traditional' bitumen roofing felt) and not other membranes (which are known to kill bats in some situations). This will mean that the roofs will require a vented	In the design process.

design. The building regulations allow this. Also, we are hearing from some builders and roofers that breathable membranes in many settings become 'clogged' over time and thus lose their breathability, leading to problems.	
Ecology work becomes out-dated and may be invalidated by a change to plans. Consult a competent ecologist regularly.	Every few months or when there is new information or a change to plans.
A project design/layout that avoids or minimises impacts on the existing vegetation, especially at the margins of the site.	Before seeking planning permission.
A landscaping design/layout that includes (connected) habitat suitable for bats.	Before seeking planning permission.
(Commit to) external lighting that is 'minimalistic' (i.e. uses minimum number of external fittings, lowest possible fittings, hoods, downlighting, timers, automated cut-offs, etc). For guidance, see Stone (2013).	Before seeking planning permission.
(Commit to) a pollution prevention plan in line with the COSHH Regulations and the Environment Agency's Pollution Prevention Guidelines series.	Before seeking planning permission.
On precautionary principles, when any tree work considered necessary has been proposed, commission a competent ecologist to conduct a re-inspection of tree 25.	Ideally several months before any tree work commences in case bats are found and licensing from Natural England needs to be sought or plans changed.

7 Summary

No bat roosts were detected.

In terms of foraging/commuting activity, surveys suggest relatively small numbers of common species of bat.

Activity was largely associated with the site's perimeter vegetation, which will largely be retained.

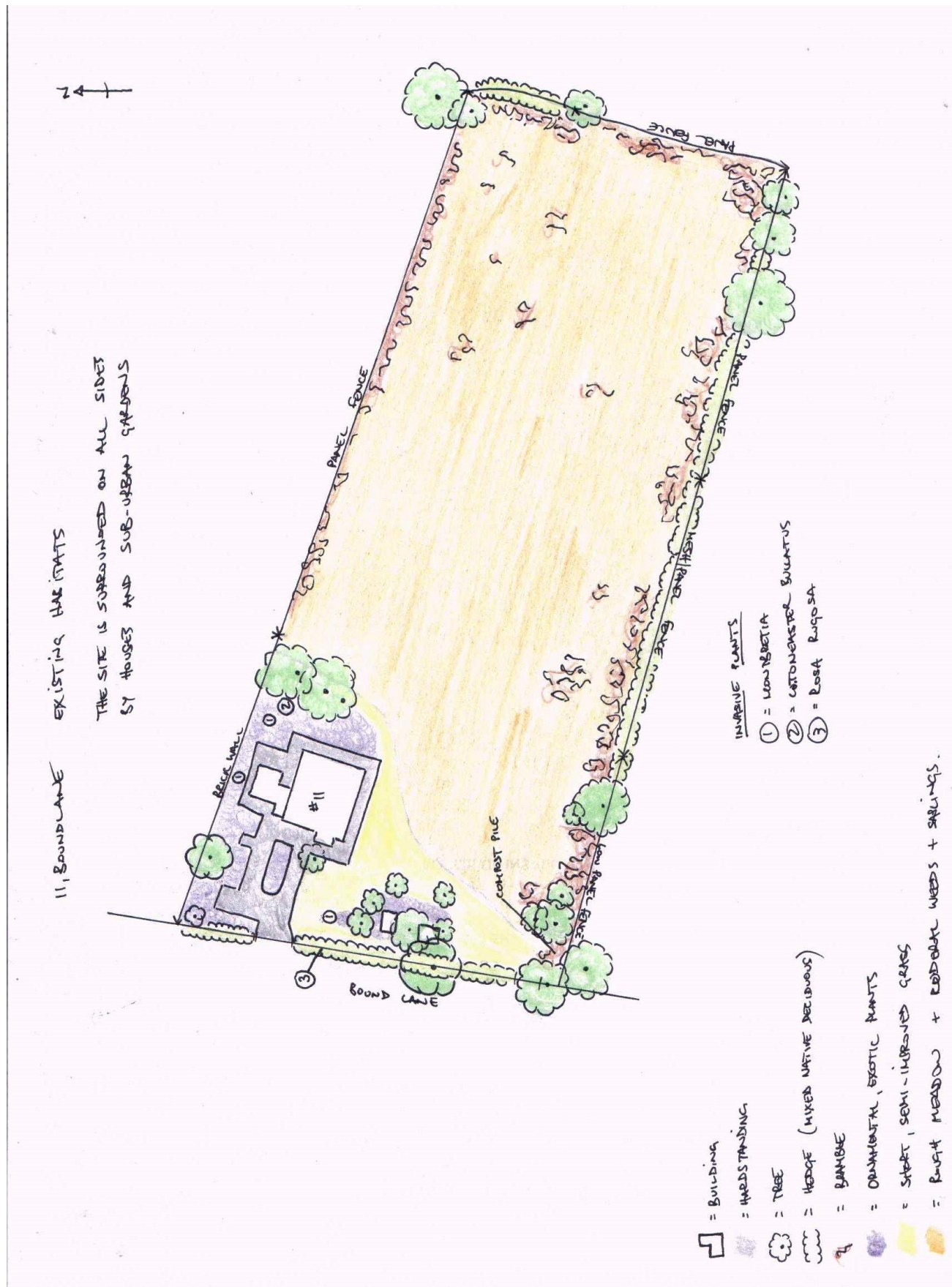
On the basis of work to date, European Protected Species Mitigation licensing from Natural England will not be needed. Thus the planning authority does not need to consider the three licensing tests (whether there is an overriding public need for the development, any reasonable alternative and whether the work would negatively affect the conservation status of bats) whilst making their decision. See Appendix 5 for more information on legislation/policy.

If the proposed mitigation is incorporated, the development is considered likely to enhance the conservation status of bats.

Consequently, it is considered that bats need not be a reason for refusal of planning permission.

8 Appendices

8.1 Appendix 1. Habitats on Site



8.2 Appendix 2. Photographs of Existing House and Site

1. Site from the SW corner looking NE.



2. House from the S.



3. House from the W.



4. House from the N.



5. House roof showing generally close-fitting tiles but occasional apertures.



6. Loft showing sarking and rooflight.



8.3 Appendix 3. Details of Survey Methods and Results

Table 4. Survey Dates, Times, Equipment, Weather, Staff

	Survey 1	Survey 2	Survey 3	Survey 4	Survey 5	Survey 6	Survey 7	Survey 8
date	24/06/15	10/07/15	10/07/15 - 15/07/15	29/07/15	29/07/15 - 01/08/15	1/09/15	2/09/15	1/09/15 - 4/09/15*
type	Visual inspection of trees and buildings.	Dawn roost vigil of house and nearby trees and activity survey.	Automated survey.	Dawn roost vigil of trees in NE corner and activity survey.	Automated survey.	Dusk roost vigil of trees in SW corner and behind house and activity survey.	Dawn roost vigil of trees in SW corner and behind house and activity survey.	Automated survey.
survey times	-	03:14 - 05:10	-	03:48 - 05:36	-	19.35 - 21.20	04.45 -06.20	-
sunset/ rise time	-	Sunrise at 05:02.	-	Sunrise at 05:23	-	Sunset at 19.49	Sunrise at 06.19	-
equipment	Torches, binoculars, 24x optical zoom camera, ladders.	Sony DCR-SR35 NightShot Plus. Anabat Express. Batbox Duet linked to Olympus digital dictafone VN5500PC.	Anabat Express.	Anabat Express. Batbox Duet linked to Olympus digital recorder DM-670.	Anabat Express.	Sony DCR-SR35 NightShot Plus. Two Anabat Expresses. Batbox Duet linked to Olympus digital recorder DM-670. Batbox Duet linked to Olympus digital dictafone VN5500PC.	Sony DCR-SR35 NightShot Plus. Two Anabat Expresses. Batbox Duet linked to Olympus digital recorder DM-670. Batbox Duet linked to Olympus digital dictafone VN5500PC.	Anabat Express.
staff	Jonathan Bradley (Class Licence Level 2 - registration number CLS01709) and Nathan Duszynski (unlicensed trainee)	Jonathan Bradley	-	Nathan Duszynski	-	Jonathan Bradley Nathan Duszynski	Jonathan Bradley Nathan Duszynski	-
weather description	-	Dry. Cool (min. 10°C). Light cloud (2 octas). Calm (Beaufort 0).	See below.	Dry. Cool (min. 11.5°C). Clear (1 octas). Gentle breeze (Beaufort 1 – 2).	See below.	Dry (recent rain). Mild (min. 14.3 °C). Clear (0 octas). Gentle breeze (Beaufort 0 – 1).	Dry. Cool (min. 10.2°C). Cloudy (6 octas). Gentle breeze (Beaufort 0 – 2).	See below.

* = batteries died about 2 ¼ hrs before sunrise on last night

Table 5. Temperature and Humidity for Manned Surveys

Time/date	Humidity (%)	Temperature (°C)
10 th July		
03:29:57	83.9	12.3
03:59:57	91.8	10.3
04:29:57	93.5	10.0
04:59:57	94.5	10.4
29 th July		
03:43:07	80.1	12.5
04:13:07	83.3	11.7
04:43:07	86.0	11.6
05:13:07	85.6	11.6
05:43:07	85.4	11.5
1 st September		
19:44:53	71.5	16.7
20:14:53	74.6	15.6
20:44:53	76.8	14.8
21:14:53	79.0	14.3
2 nd September		
04:59:53	88.2	11.5
05:29:53	91.9	10.8
05:59:53	91.9	10.7
06:29:53	92.0	10.2

Recorded using ETI Thermadata logger

Table 6. Temperature for Automated Surveys

Date ↓	Temperature →	Min. (°C)	Max. (°C)
10 th / 11 th Jul		16.25	19.5
11 th / 12 th Jul		17	18.25
12 th / 13 th Jul		17	17.75
13 th / 14 th Jul		16.75	18.25
14 th / 15 th Jul		17.75	18.25
15 th / 16 th Jul		16.5	22
29 th / 30 th Jul		10.25	16.25
30 th / 31 st Jul		9.5	19.5
31 st Jul / 1 st Aug		10.75	17
1 st / 2 nd Aug		12.75	18.75
2 nd / 3 rd Sept		12.75	17
3 rd / 4 th Sept		13	15.75

Recorded by Anabat Express.

Automated Survey Results

Anabat Express Locations

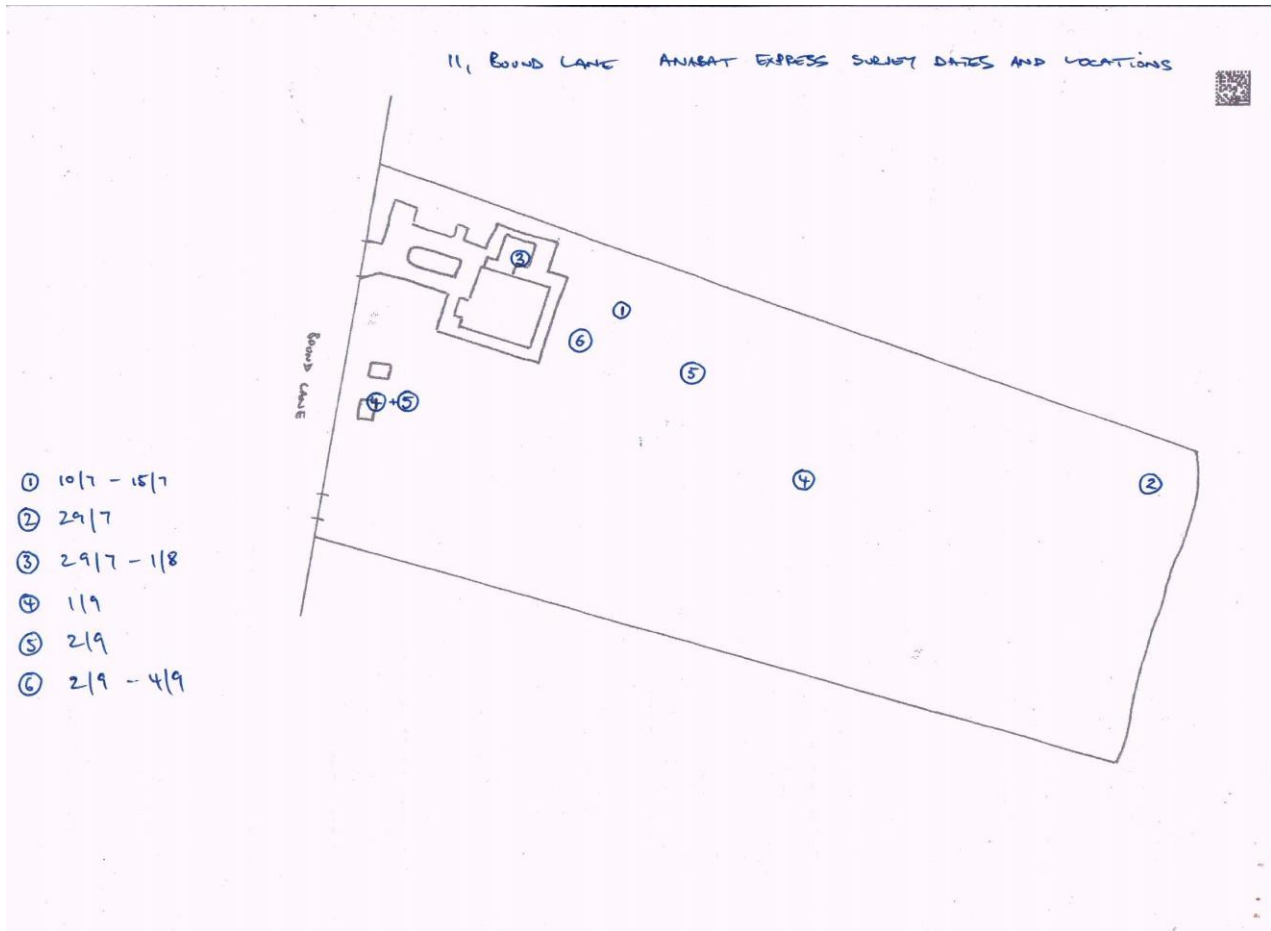


Table 7. Summary of Bat Activity

Example

53	Total number of passes per night
21:41	Time of first pass
	Present
	Potentially present

Visit	Date / detector	Species																	
		C. pip	S. pip	N. pip	Nyct	Noct	Leis	Sero	BLE	GLE	Myot	Daub	Natt	W/B/A	Bech	Barb	LHS	GHS	Unknown
1 st automated survey	10/07/2015 Anabat J	81 21:42	2 21:50				1 23:48												
	11/07/2015 Anabat J	546 21:35					2 22:12												
	12/07/2015 Anabat J	902 21:44							1 22:41										
	13/07/2015 Anabat J	408 21:43	1 03:02					1 00:43											
	14/07/2015 Anabat J	1159 21:26					1 21:43	2 22:02											
	15/07/2015 Anabat J	23 21:26	3 21:25				1 22:08	3 23:32			1 21:38								
2 nd (dawn) vigil/transect	29/07/2015 Anabat J	14 04:18																	
2 nd automated survey	29/07/2015 Anabat J	9 21:25	1 22:23					1 03:23											
	30/07/2015 Anabat J	24 21:19	5 21:51			1 00:01													
	31/07/2015 Anabat J	36 21:12	10 21:30				1 00:30		1 01:05										



	01/08/2015	40					1		2								
	Anabat J	21:08					01:32		03:00								

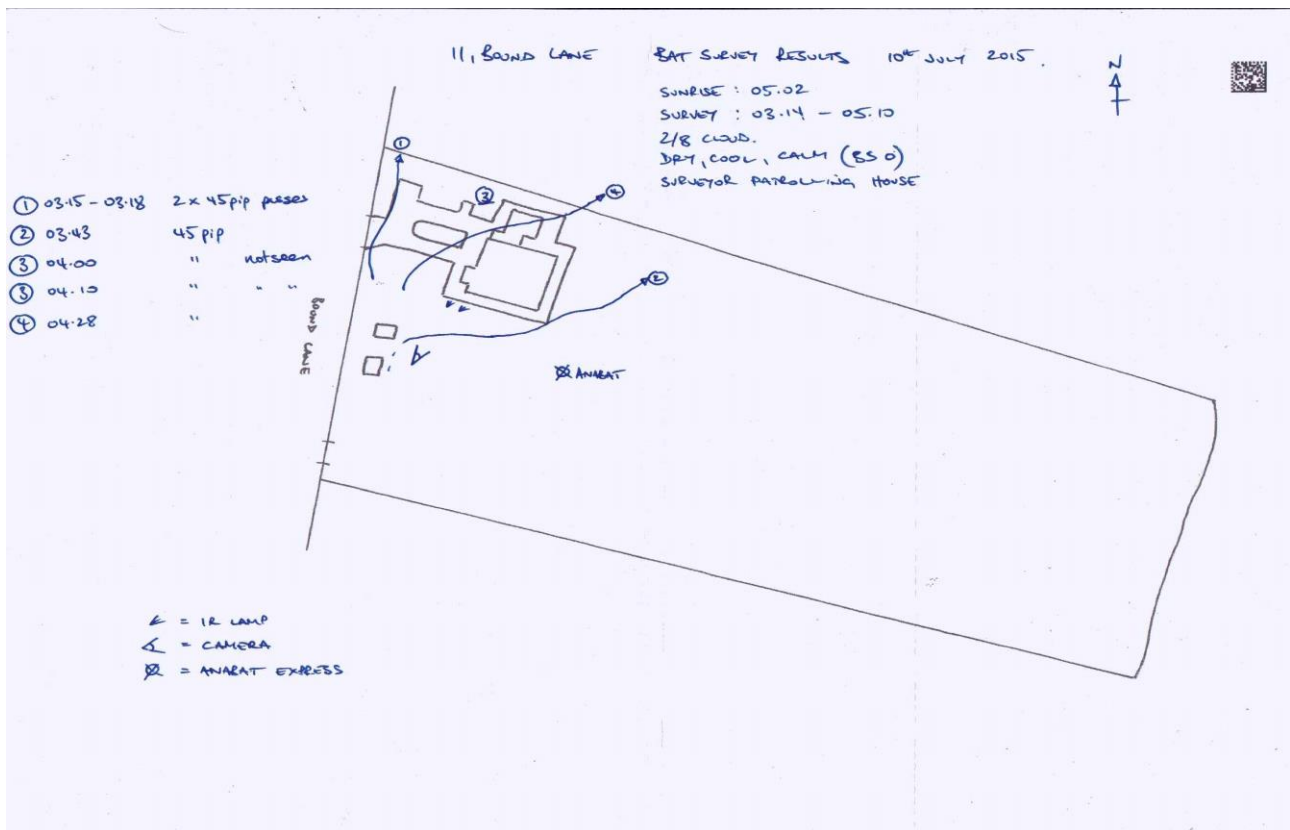
3 rd (dusk and dawn) vigil/transect	01/09/2015	18	4							1							
	Anabat B	20:02	20:50							21:00							
	02/09/2015	1							1		1						
	Anabat A	05:15							04:48		05:06						

3 rd automated survey	01/09/2015	48	15					4			2						
	Anabat J	20:03	20:10					22:49			21:00						
	02/09/2015	67	22				1				5						
	Anabat J	20:04	20:15				00:24				01:13						
	03/09/2015*	40	6						5								
	Anabat J	19:57	19:58						01:55								

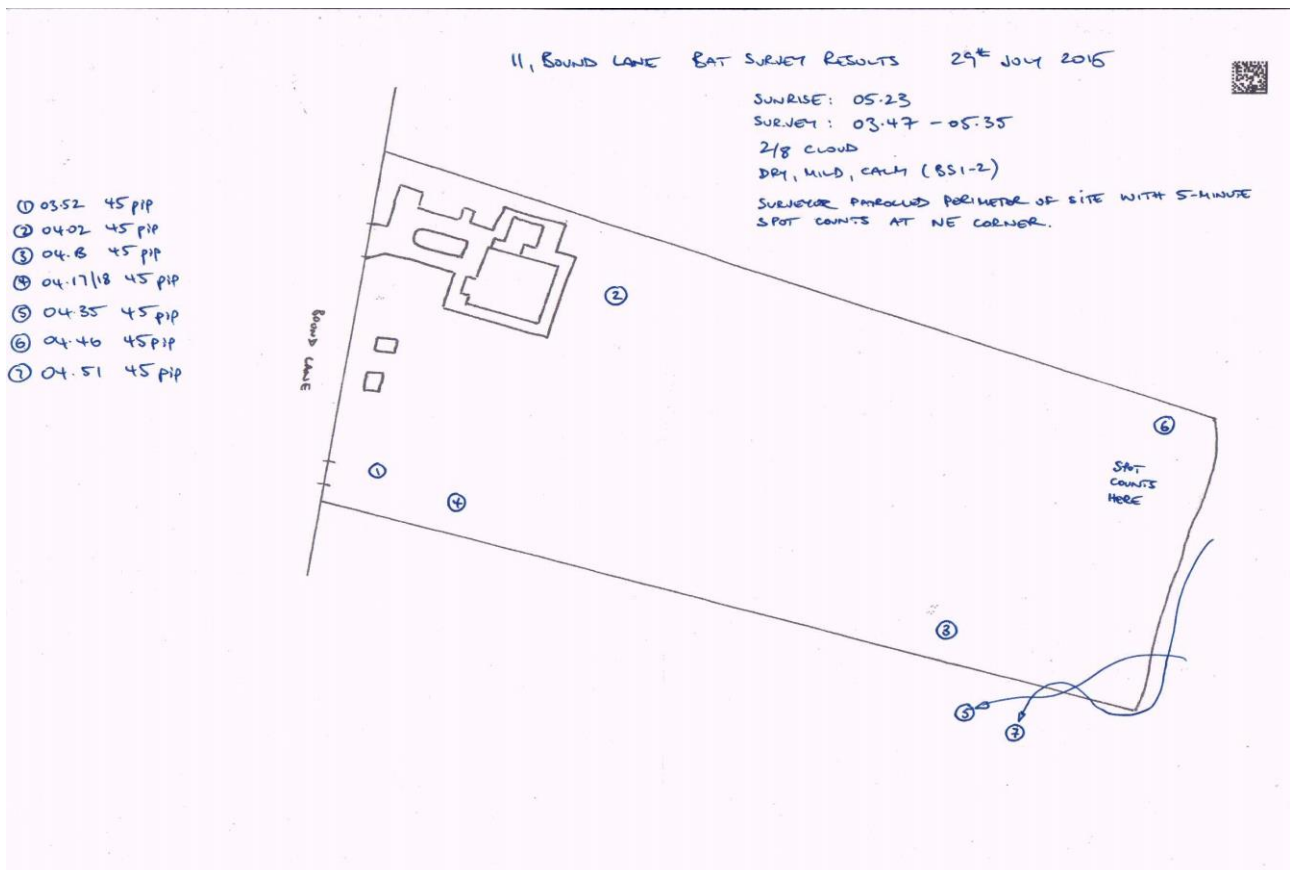
* = batteries failed about 2¼ hrs before sunrise.

Survey Results Shown Pictorially

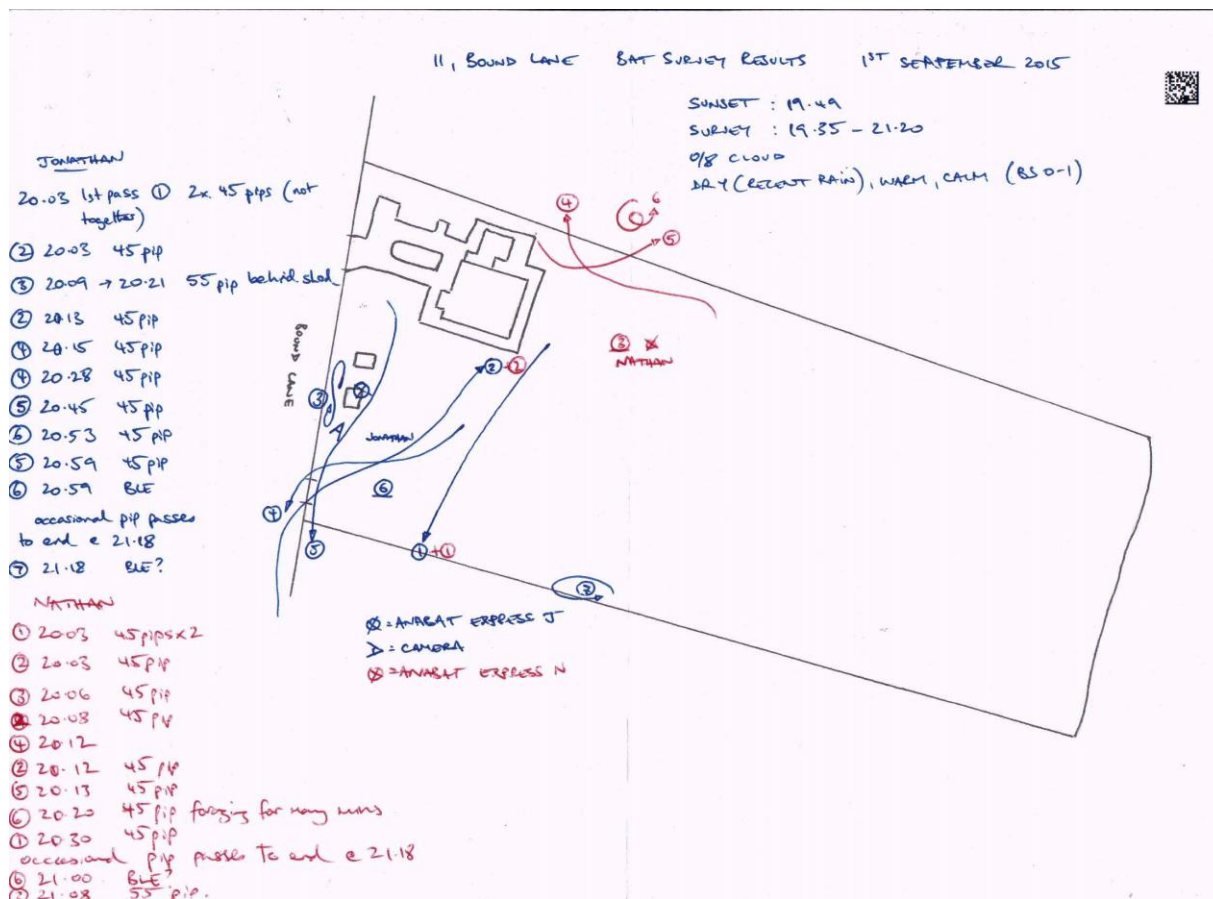
Dawn Survey 10th July



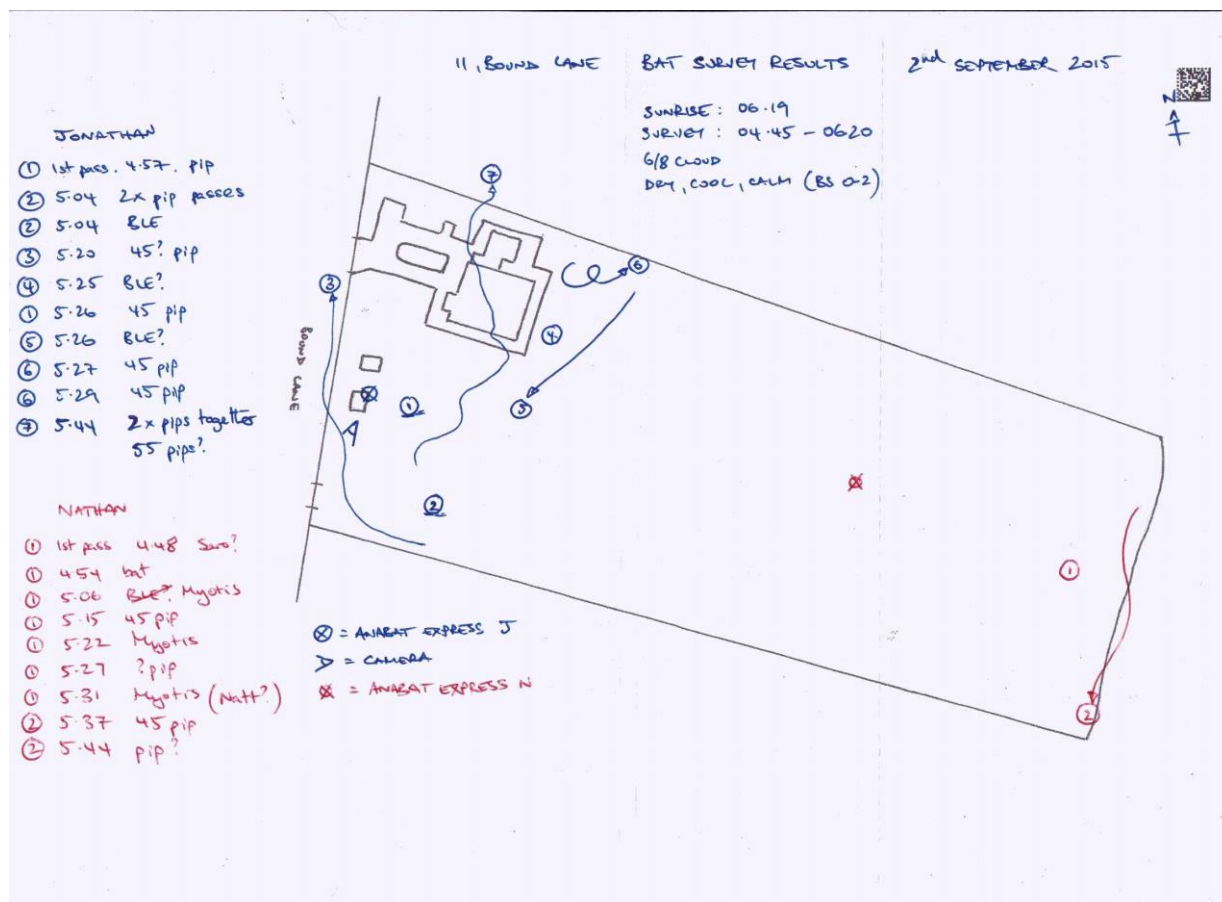
Dawn Survey 29th July



Dusk Survey 1st September



Dawn Survey, 2nd September



8.4 **Appendix 4. Bat Ecology**

The ecology of bats varies somewhat according to species but the following generic information gives an idea of their habits.

All British bats are insectivorous and forage in most habitats (often many kilometres from their roosts) but waterbodies, wetlands and wooded habitats are favoured. They are free-roaming (whilst often showing site fidelity) and use a variety of roosts in sequences that may be hard to predict for resting, giving birth, raising young and 'hibernating'. Roosts may be found in crevices in trees, buildings, tunnels mines and natural stone features such as caves. Some bat species have a tendency to follow linear features (commuting) such as treelines. They mate in the autumn, and females give birth the following summer. They are relatively inactive over winter, 'hibernating' for extended periods. Although some species are widespread and often locally common in England, they are of conservation concern because they are believed to be in rapid decline and because some species are considered especially rare, local or vulnerable.

8.5 **Appendix 5. Protective Legislation Pertaining to Bats**

The main items of legislation protecting bats in England are;

- The Conservation of Habitats and Species Regulations 2010 (a consolidation of The Conservation (Natural Habitats & c.) Regulations 1994 and subsequent amendments).
- The Wildlife and Countryside Act 1981 (as amended).

Combining the legislation means it is an offence to;

Intentionally or recklessly kill, injure, take or disturb bats, or to damage, destroy or obstruct access to any structure or place used for shelter, breeding or protection. Bat roosts are protected even if unoccupied.

Additionally, some bat species are 'Priority Species' in the UK Biodiversity Action Plan and Local Biodiversity Action Plans may also be in place for certain bat species. The Countryside and Rights of Way Act 2000 and The Natural Environment and Rural Communities Act 2006 expect those in a position of influence to consider the impacts of their actions on biodiversity, especially Biodiversity Action Plan features and to seek opportunities to benefit them.

Bats are a material consideration in planning decisions under the National Planning Policy Framework, meaning that local planning authorities must consider the potential impacts of development on bats before granting permission.

Bats may also be indirectly protected by virtue of their association with trees (also a material consideration), veteran trees and habitats that serve to connect (both specifically mentioned in PPS9) and hedgerows (Hedgerow Regulations 1997).

What This Means for You

Planning permission should only be given if the status of the affected protected species can be maintained or enhanced and if measures are taken to avoid harming individuals. Recent changes in legislation and policy are increasing the emphasis on expecting improvements or enhancements.

Changes to the law in 2007 also removed certain defences – the most significant of which was that of an offence being excusable when '*an incidental result of an otherwise lawful operation*' (such as planning permission). Further changes in early 2009 mean remaining defences (such as health and safety issues) no longer apply if there was a suitable alternative and the action negatively affects the favourable conservation status of the species concerned (individuals are still protected from harm by the Wildlife and Countryside Act).

The onus is on the developer to provide enough information to enable the planning authority to make an informed decision as to whether the development will have negative impacts on the local bat population.

If bats are found to be using an affected feature, the developer must demonstrate to the planning authority how, in principle, the work can be carried out without negatively affecting bats.

If planning permission is granted, a European Protected Species mitigation licence from Natural England may be available - to protect you from what may otherwise be an offence (disturbance, destruction of roosts, etc.). Such a licence is only granted if;

- there is no reasonable alternative,
- it is in the overriding interest of the public,
- the population of concern will remain in favourable conservation status.

Recent court cases have suggested that local authorities should also consider these three conditions in making their decision.

The licence application (if needed) will have to justify the need for your proposed actions. It will also have to include a comprehensive plan that seeks to preserve habitats and any roosts, minimise disturbance, prevent killing or injury, ensure a continuation of suitable habitat and provide enhancements. It is usual for several years post-construction monitoring of bat populations to be a condition of licensing.

8.6 Appendix 6. Assessment and Evaluation Tables Used by Verdant Ecology

Table 8. Relative Terms in Assessment and Evaluation of Ecological Features and Potential Impacts

Importance of Ecological Feature		Area of Impact
Negligible		Negligible
Local/Site		Local/Site
District/Borough		District/Borough
County		County
Regional		Regional
National		National
International		International
Duration		Extent of Change
		Major negative
Short term (1-5 years)		Minor negative
Medium term (5-20 years)		Negligible/Neutral
Long term (>20 years)		Minor positive
		Major positive

Table 9. System for Bat Roost Potential Categorisation

	<u>Example</u> results of survey
Roost found	Positive evidence of bats found (bats, squeaking or droppings) or evidence that would be reckless to dismiss (insect wings).
High BRP	Tree located in likely spot. Tree has one or more than one, really good feature or has many fairly suitable ones. Evidence that possibly isn't bats but that would be reckless to ignore (polishing, staining). Trees with sections that cannot be seen properly from the ground but where there is strong suspicion there might be a feature there.
Medium BRP	Either; Tree has bat roost features but in extremely unlikely location. Or; Tree in good habitat but crevices gaping/superficial/minor/ exposed or flaky bark of limited extent.
Low BRP	Tree generally in good structural condition and/or in unsuitable location.

Notes.

These categories do not necessarily correspond directly to those in the table in the Bat Conservation Trust's 2012 guidelines. We suggest that our 'High' category includes both the BCT categories 1* and 1, our 'Medium' approximates to their 2 and our 'Low' to their 3. Where survey is limited in some way (such as rain shower, bright sunshine, extensive ivy, obscuring foliage), this will be noted and/or the category upgraded on precautionary principles.

8.7 Appendix 7. References

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