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Bat Emergence Survey

Summary of Recommendations

If bats, evidence of their activity and suitable locations for roosting bats, are all absent from the site, then no further visits are normally required (Hundt 2012).

Taking into consideration the desk study, initial assessment bat survey and site survey findings, this report concludes that the proposed development of the site presents a low probability of harm to bats. Caution should be observed during works and should a bat be unexpectedly found work should stop and further advice sought.

The Company and Contact Information

Established in 2005, Arbtech Consulting Limited provides arboricultural and ecological consultancy services in respect to planning and development, throughout the UK.

Tel 0800 072 5596

@ email@arbtech.co.uk

Web www.arbtech.co.uk

The Surveyor

The surveyor and principal author of this report is Jo Gregory BA (Hons), MSc GradIEM.

Other Surveyors

Lorraine McKee.

Bat Licence Number(s)

England: CLS02941.

Wales: 39248.

Scotland: 13660.

The Client

The client is Mr. A Adams.

The Site of Proposed Development

The client is preparing a planning application to convert the barn at Stanley House Langsett, Stockbridge, Sheffield S36 4GY.

The Survey Brief

The client has commissioned Arbtech to undertake a bat emergence survey; referring to a method of ecological assessment outlined in the Bat Conservation Trust publication Bat Surveys—Good Practice Guidelines authored by L. Hundt, 2012.

These guidelines state that the aim of the bat survey is to observe and catalogue *“informing and identifying the type and extent of work needed (if any)”* (Hundt 2012).

Data Searches

The author’s preparation of this report has been assisted by a search of the National Biodiversity Network Gateway.

No other data searches or desk study has been undertaken.

Dates of the Surveys

7th, 14th and 21st August 2013.

Seasonality

This type of assessment can be conducted during the period May to September inclusive, with the optimal season for surveying maternity colonies limited to mid-May to August inclusive (Hundt, 2012).

Informative

Table 1: Summary of Pertinent Legislation and Planning Policy Relevant to the Protection of Bats in the UK

This table is adapted from Table 2.1 and Section 2.5 of the Bat Surveys—Good Practice Guidelines (Hundt, 2012).

Location of Roost	Transposing EC Habitats Directive	Other Relevant Legislation	Planning Policy
England	Conservation of Habitats and Species Regulations 2010.	Wildlife and Countryside Act 1981 as amended. Countrywide and Rights of Way Act 2000. Natural Environment and Rural Communities Act 2006.	National Planning Policy Framework (“NPPF”).
Wales	Conservation of Habitats and Species Regulations 2010.	Wildlife and Countryside Act 1981 as amended. Countrywide and Rights of Way Act 2000. Natural Environment and Rural Communities Act 2006.	Technical Advice Note (“TAN”) 5.
Scotland	Conservation (Natural Habitat & c.) Regulations 1994 as amended.	Wildlife and Countryside Act 1981 as amended. The Nature conservation (Scotland) Act 2004.	National Planning Policy Guidance (“NPPG”) 14 and Planning Advice Note (“PAN”) 60.

Cumulatively, this legislation makes it illegal to:

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

A bat roost is defined by Hundt (2012) as “the resting place of a bat”. Generally however, the word roost is interpreted to mean “any structure or place, which any wild bat uses for shelter or protection.”

The Survey Methodology

In order to fully assess the potential value of bat habitat at the site, the survey observes widely accepted, industry best practice standards set out in the Bat Conservation Trust publication *Bat Surveys—Good Practice Guidelines* (Hundt 2012).

These guidelines state that the aim of the bat emergence survey – also called a nocturnal survey or an activity survey – is to observe and catalogue “the bat activity in a given area” (Hundt 2012), and to make recommendations for further survey work as appropriate.

The survey includes for the observation of all elevations of all buildings, structures (and trees) referred to in the Survey Results section of this report.

Observations are both internal (where possible) and external, making use of torches, ladders, endoscopes, mirrors, binoculars and cameras where appropriate to do so.

More specifically, Hundt (2012) state the aims of the survey are;

- To determine presence/absence of species i.e. the species present in a given area.
- To determine the intensity of bat activity both spatially and temporally i.e. to help estimate bat populations.
- To determine the type of activity, most usually foraging (e.g. by feeding buzzes), commuting (e.g. by high directional pass rates) and mating (e.g. by mating social calls).
- To find roosts by tracking back bat flight paths or observing dawn flight activity at roosts.
- To find or record the emergence of bats from a building or built structure.

If bats, evidence of their recent activity or the emergence of bats from a roost are found during our survey, this report will make recommendations for further survey work and or design mitigation, where this is consistent with the Hundt (2012) and Mitchell-Jones (2004) publications, and considered appropriate by the surveyor in the context of the proposed development.

Previous Survey

The site was the subject of an initial assessment bat survey by Arbtech Consulting Ltd, prior to the bat emergence survey. This survey found suitable roosting features within the gaps in large stone slab tiles, several gaps in the stonework and gaps beneath the wooden barge boards. A single bat dropping resembling that of pipistrelle bat species (*Pipistrellus spp.*) was located on a cobweb beneath a gap in the stonework of the main entrance to the barn.

Table 2: Initial Assessment Bat Survey Summary

Roost	Habitat Value	Are bat emergence surveys required?
Building B1	High	Yes. 3x Dusk surveys. May to September inclusive. 2 x surveyors.

Dates of the Bat Emergence Survey

Table 3: Survey Dates, Times and Weather Records

Date	Survey	Time: from/to	Weather: Start	Weather: Finish
07/08/2013	Dusk	20:35 - 22:30	Temp: 15 °C Humidity: 61% Cloudy: 10% Wind: 0/8 Rain: None	Temp: 12 °C Humidity: 72% Cloudy: 10% Wind: 0/8 Rain: None
14/08/2013	Dusk	20:20 - 22:50	Temp: 17 °C Humidity: 69% Cloudy: 70% Wind: 1/8 Rain: None	Temp: 16 °C Humidity: 70% Cloudy: 100% Wind: 1/8 Rain: None
21/08/2013	Dusk	20:05 - 22:05	Temp: 19 °C Humidity: 52% Cloudy: 90% Wind: 0/8 Rain: None	Temp: 17 °C Humidity: 63% Cloudy: 90% Wind: 0/8 Rain: None

Extents of the Desk Study

Table 4: Buildings and or trees referred to by number and in accordance with the sketch plan at Appendix 1.

Desk Study Records	The NBN Gateway search revealed that within the Ordnance Survey 10 km grid square (SE20) SE212004 where the site is situated the following bat species have been recorded: NBN: <i>Species from the NBN data search cannot be published without the owner's permission.</i> <i>The NBN has been checked for records and no protected species have been recorded from the site.</i>
Local Environment	The site is surrounded by housing, a public house and a Langsett Reservoir in the immediate vicinity. A small woodland block is located approx. 63m away to the east. Further woodland is located approx. 1275m to the east (Hollin Wood and Spring Wood), approx. 343m to the southeast (Cliff Wood), approx. 219m to the southwest (Langsett Wood), approx. 500m to the south (Midhope Cliff and Thick Woods). Open water is located approx. 90m to the south of the site (Langsett Reservoir). Fields are located approx. 30m to the north, approx. 435m to the east, approx. 590m to the south, and approx. 200m to the west of the site. Hedgerows and tree-lined roads are located immediately adjacent to the site offering commuting routes to and from the woodland and other foraging areas. The site comprises of a large open plan two storey traditional stone built barn with a pitched roof comprising of large stone flags. The southwest elevation of the barn is attached to Stanley House. A smaller single storey section is located on the southeast elevation and is constructed in the same style as the main barn.

Survey Results

Table 5: Buildings and or trees referred to by number and in accordance with the sketch plan at Appendix 1 and photographs at Appendix 2.

Surveyors: A - Jo Gregory B - Lorraine McKee				
Surveyor Initials	Suspected Roost Identified on sketch plan at Appendix 1	Dates and Times	Records of Significant Bat Activity	Roost Status: Emergence (Black) Activity (Amber) No Activity (Green)
		07/08/2013 Sunset 20:52		
JG	B1	20:35 - 22:30	Two passes by Common pipistrelles (<i>Pipistrellus pipistrellus</i>) from the direction of the houses to the west of Stanley House flying south towards the reservoir and woodland at 21:09 and 21:10. One pass by a common pipistrelle at 21:11 flying around B1 from the east and continued south towards the reservoir. One pass by a common pipistrelle at 21:25 flying across the ridge line of B1 flying from the west heading east. Two passes by common pipistrelles at 21:30 and 21:31 flying from the south towards the houses to the west of Stanley House. Three distant passes by common pipistrelles at 22:05, 22:08 and 22:14 bats not seen.	Activity
LM	B1	20:35 - 22:30	One pass by a common pipistrelle at 21:11 flying from the north and continued between the houses to the west of Stanley House. One pass by a common pipistrelle at 22:01 flying from the north and continued between the houses to the west of Stanley House. Several passes of common pipistrelles between 21:08 - 22:17 bats not seen.	Activity
		14/08/2013 Sunset 20:38		
JG	B1	20:20 - 22:50	Several passes of a common pipistrelle at 20:46 flying back and forth in front of B1 then commuted towards the reservoir. One pass by a common pipistrelle at 20:48 flying from the south to the large	Activity

			sycamore tree in front of Stanley House and continued on towards the houses to the west of Stanley House. One pass by a common pipistrelle at 21:00 flying from the east towards the sycamore tree. One pass by a common pipistrelle at 21:09 flying from the south heading west.	
LM	B1	20:20 - 22:50	Three passes by common pipistrelles at 20:50 flying from the fields to the north of the site, at 21:06 flying across the roof of B1 heading south and 21:07 flying between the houses to the west of Stanley House. Several passes by common pipistrelle between 20:39 - 21:46 bats not seen. Two passes by myotis bat species at 21:16 and 21:44 bats not seen. One pass by a myotis bat species at 21:29 flying from the west through the garden of B1 heading east. One distant pass of a noctule bat (<i>Nyctalus noctula</i>) at 21:32	Activity
		21/08/2013 Sunset 20:23		
JG	B1	20:05 - 22:05	One pass by a common pipistrelle at 20:58 flying from the houses to the west of Stanley House heading south towards the reservoir. One pass by a common pipistrelle at 21:06 flying from the east towards the sycamore tree. Foraging activity by a common pipistrelle at 21:09 flying around the sycamore tree. Several passes of common pipistrelles between 21:12 - 21:54 bats not seen. One distant pass by a noctule bat at 21:38 bat not seen.	Activity
LM	B1	20:05 - 22:05	Five passes by common pipistrelles between 20:48 - 21:03 with bats flying between the houses to the west of Stanley House heading south towards the reservoir. One pass by a common pipistrelle at 21:13 flying from the west through the garden on the north elevation of B1 heading east. Three distant passes by noctule bats at 21:06, 21:26 and 21:35 bats not seen. Several passes by common pipistrelles between 21:07 - 21:50 bats not seen.	Activity

Bat activity maps and surveyor locations are found at Appendix I.

Conclusions and Recommendations

Table 6: Buildings, Groups or Trees referred to by number and in accordance with the sketch plan at Appendix I.

Suspected roost Identified on sketch plan at Appendix 1	Was the roost confirmed?	Will the development affect the roost?	Roost significance Graded per Natural England Guidance	What recommendations and mitigation are appropriate?	Is a European Protected Species Licence necessary?
B1	Unconfirmed ☒ Further survey work required ☐ Confirmed ☐	N/A No roost confirmed.	Low ☐ Moderate ☐ High ☐ N/A No roost confirmed.	Mitchel-Jones (2004) defines the conservation value of bat habitats and roosts and makes proposals for mitigation that are appropriate to: the species of bat(s); the population using the roost; and the roost's status e.g. maternity, pre-breeding summer roost, <i>hibernacula</i>, etc. No bats were observed to emerge for the building (B1). Several passes were observed by common pipistrelles flying in close proximity to the barn doorway where the bat dropping had been located during the initial bat survey. It is therefore concluded that this dropping was deposited by a passing bat during foraging activity close to the barn. We recommend: Care to be taken during the works and if in the unlikely event that a bat is discovered all work must stop and further advice sought from a licenced bat worker. Biodiversity enhancements of the completed development could include the installation of bat boxes to provide additional roosting opportunities for the common pipistrelles observed at the site. These should be a minimum of 3m above ground level and face south or southwesterly.	Yes ☐ No ☒

Bibliography

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Mitchell-Jones, A. J. (2004), Bat Mitigation Guidelines. English Nature.

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Document Production and Approval

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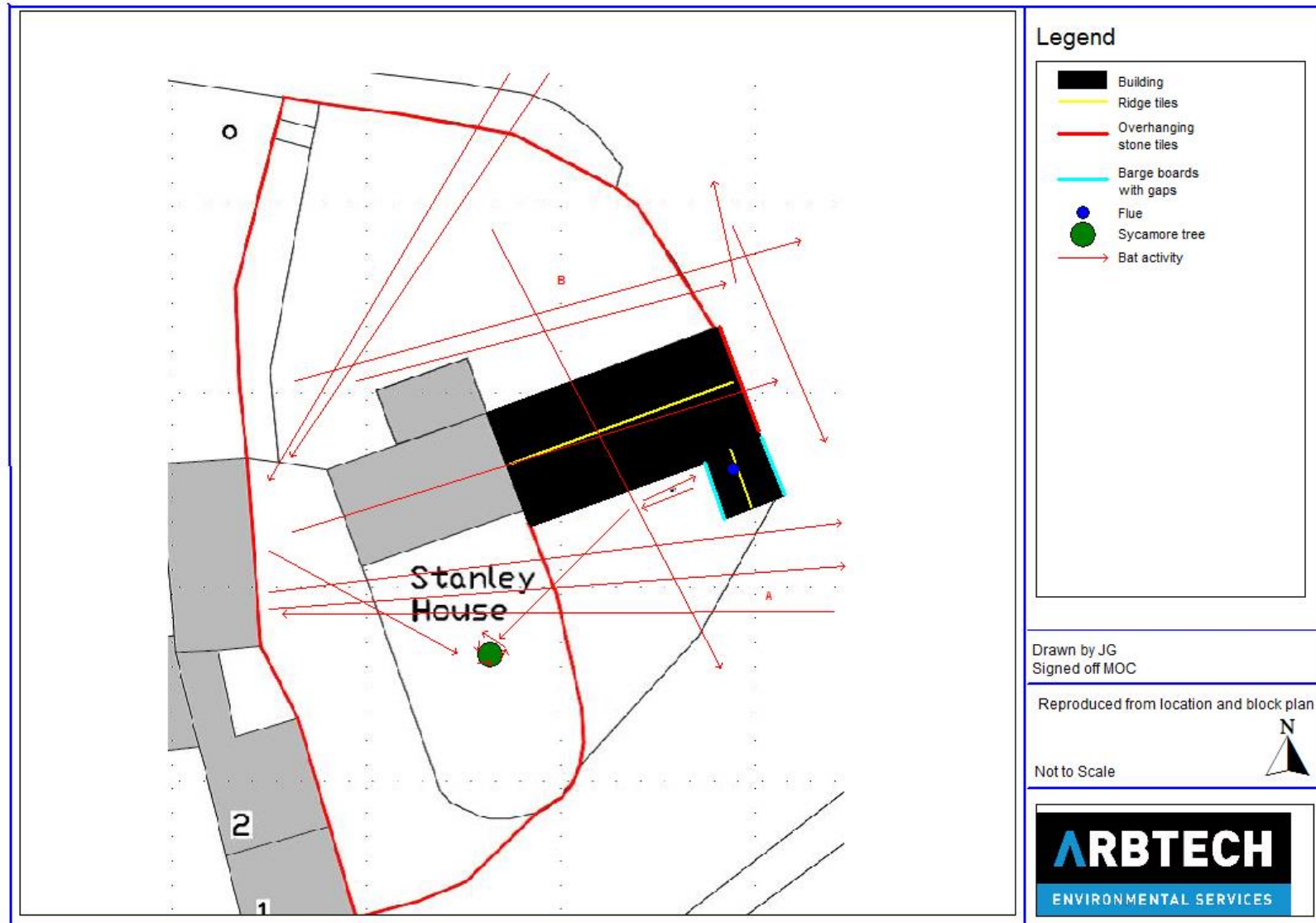
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Appendix 1 Plan



Appendix 2 Photos



Figure 1: Southeast elevation.



Figure 2: Northeast elevation and single storey section.



Figure 3: Northwest elevation.