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RECENT BAT SURVEY.

Initial Assessment Bat 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. Otherwise, a single, daytime initial assessment, in which no bats were found, is not normally considered sufficient (Hundt 2012).

Taking into consideration the desk study and site survey findings, this report concludes that the proposed development of the site presents a low probability of harm to bats.

Therefore, in order to provide adequate support for this planning application, bat emergence surveys should be undertaken, compliant to industry best practice, such as are set out in the Bat Conservation Trust publication, Bat Surveys–Good Practice Guidelines (Hundt 2012).

A full specification for bat emergence surveys that is appropriate to the scale and scope of the proposed development can be found in the 'Conclusions' and 'Recommendations' sections of this report.

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.

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The Surveyor

The surveyor and principal author of this report is Mr Anthony Bird BSc, PGDip, MCIEEM.

Bat Licence Number

England: 2014-470-CLS-CLS

Scotland: 2014 32653

Wales: 55600:OTH:CSAB:2014

The Client:

The client is Mrs Kath Mitchell.

The Site of Proposed Development

The client is preparing a planning application to develop the building at Pennine Cottage, Hazlehead, Crowedge, South Yorkshire. S36 4HJ.

The Survey Brief

The client has commissioned Arbtech to undertake a scoping bat 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 initial assessment bat survey is to observe and catalogue *"informing and identifying the type and extent of further bat survey work needed (if any)"* (Hundt 2012).

Controls

This survey provides a 'snap-shot' of the potential habitat and wildlife value of the sites at the time of survey only and may require further survey effort to provide robust, scientifically valid evidence of species absence.

Data Searches

Arbtech advises all clients that the incorporation of third party biological records and data ("BRD") into the desk study element of our survey is very important. We further advise that depending upon the type of report, BRD is frequently required to comply with the NPFF, BS:42020 and CIEEM's reporting Standards. If BRD is not referred to in the 'Local Environment' section of this report, it is because the customer has not authorised Arbtech to purchase BRD.

Date of the Survey

9 July 2014.

Seasonality

This type of assessment can be conducted at any time of year.

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	Technical Advice Note ("TAN") 5.

		Rural Communities Act 2006.	
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 surveyor has observed the widely accepted industry best practice standard; set out in the Bat Conservation Trust publication Bat Surveys–Good Practice Guidelines (Hundt 2012).

The survey includes for a thorough internal and external inspection of all buildings (and trees) referred to in the Survey Results section of this report for cracks, holes, cavities and voids in buildings and cracks, fissures and voids in trees.

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

An initial assessment bat survey is performed during daylight hours and provides an opportunity to exclude the need for further survey work, if the following triggers can be confirmed absent from the site of proposed development:

- Bats.
- Evidence of recent bat activity e.g. droppings, prey remains, urine staining.
- Features suitable for roosting.

If bats, evidence of their recent activity and or features suitable for roosting cannot be confirmed absent from the site of proposed development, this report will make recommendations for further survey work and or design mitigation, where this is consistent with the Hundt (2012) and considered appropriate by the surveyor in the context of the proposed development.

Recommendations for further survey work may include "emergence surveys" (Hundt 2012) which enable e.g. apertures through which roosts are accessed, population numbers and species to be identified and quantified. Essentially, the survey is designed so that with confidence, the surveyor can confirm bats to be present, indeterminate or absent.

Bat Potential and Habitat Value

Table 2: Bat roost habitat value assessment criteria, adapted from the Bat Surveys– Good Practice Guidelines (Hundt 2012).

Bat Habitat Value	Trigger or Description
Confirmed Bat Presence	Bats are found to be present during the survey. Evidence of bats is found to be present during the survey. Bats heard 'chattering' inside a roost on a warm day or at dusk.
Significant Habitat Value	Buildings, trees or other structures with features of particular significance for roosting bats e.g. mines, caves, tunnels, icehouses and cellars. Habitat of high quality for foraging bats e.g. broadleaved woodland, tree-lined watercourses and grazed parkland. Site is connected with the wider landscape by strong linear features that would be used by commuting bats e.g. river and or stream valleys and hedgerows. Site is proximate to known roosts.
Moderate Habitat Value	Several potential roosts in buildings, trees or other structures. Habitat could be used by foraging bats e.g. trees, shrub, grassland or water. Site is connected with the wider landscape by linear features that could be used by commuting bats e.g. lines of trees and scrub or linked back gardens.
Low Habitat Value	A small number of potential roosts, most likely less significant roosts. Isolated habitat for foraging e.g. a lone tree or patch of scrub but not parkland. An isolated site not connected by prominent linear features.
Negligible Habitat Value	No features suitable for roosting, minor foraging or commuting.

Table 2 (above) presents a scale continuum adapted from Hundt (2012) against which the significance of habitat value and roosting opportunities at the site can be graded. By referring to this continuum and using their expert judgment, surveyors classify features of buildings or trees as representing low, medium or high value as habitat for bats.

Survey Results

Table 3: The Desk Study Results

Desk Study Records	The survey preparation has been informed by the use of a desk study utilising: - aerial images from Google Earth, MAGIC and other freely available information e.g. Natural England's nature on the map website, and OS Opendata 2010 using grid reference SE190 028 and postcode 536 4HJ. No other data set has been consulted.
Notes on the Local Environment	The site is totally rural, surrounded by upland pasture, mature trees and the 'Trans Pennine Way' is immediately adjacent to the site. The site is quite isolated with the nearest neighbour being approx. 400m away. There are small copse and new plantations to the south and west approx. 200m from the site. There is also a stream to the south approx. 100m from the site. The site consists of Pennine Cottage with a small garden, and the old barn/workshop to which this report refers. The nearest town is Penistone approx. 6km north east. Weather conditions at time of survey: Temperature: 18°C. Cloud Cover: 50%. Precipitation: none. Wind: 1/8.

Table 4: The Site Survey Results

Buildings and trees are referred to by number, in accordance with the sketch plan at Appendix I.

Reference Number	Habitat Value Table 2 Refers	Description of Roosting Features Access to Roosting Features	Confirmation of Bat Presence
B1	Low Habitat Value	Exterior: The building was most probably built in the late nineteenth century, possibly as a workshop or storage shed for the railway which used to run immediately adjacent to the site. The railway line is now the 'Trans Peninne Way' long distance walking route. The building is situated to the east of the cottage approx. 60m away. The building is quite substantial in size approx. 20m x 10m x 6m high. The building is built entirely from sandstone and has a corrugated metal sheet roof, which is three sheets deep and has at some time been painted with bitumen. The building has six windows at exterior ground level along the path; all but one is boarded up. The building has large double doors which are apparently rarely closed. The building is surrounded by tall trees; mature and semi-mature. There are obvious cracks in the walls of varying size and depth, gaps between the stones and the wall plate timbers, window frames and door. There are also gaps within the roof sheets. However, there were no signs of bats or breeding birds on the exterior of the building. No nesting material, droppings, smoothing or scratches were discovered. Interior: The building is one room floor to ceiling and is deceptively large inside as it is built into the hill side. The windows which are at ground level on the path outside are approx. 1.5m high within. The building is presently used for various activities; storage and as a workshop. Antique furniture, Timber and scrap metal adorn the floor in separate sections, with the majority of the floor area being dedicated to mechanics and engineering. An old car, several bikes, an inspection pit, welding gear and tools are evident throughout. It is obvious that engines and motors have been regularly tested within and that exhaust fumes must linger within the beams for some time, as the beams are blackened and sooty, as are most of the walls within these areas of the building.	There was no sign of bats within the workshop/barn. However the site is contains suitable roosting features particularly the gaps at the wall tops and is surrounded by key foraging and commuting areas and is open to wildlife.

		As with the exterior there are possible potential roost sites in several areas, however, I believe the workshop environment within would be wholly unsuitable for bats. Cobwebs hang from roof and roof beams in thick clusters. There are several possible potential roost sites within the workshop/barn; cracks within walls, gaps within beams etc.	

Any additional notes:

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Conclusions

Table 5: Summary of Conclusions

Reference	Habitat Value [Table 2 refers]	Are emergence survey works necessary? [1]	Best Estimate of Roost Type (See appendix 3)
B1	Confirmed ☐ Significant ☐ Moderate ☐ Low ☒ Negligible ☐	Yes. The evidence gathered during this initial assessment implies that there is an unacceptable probability (risk) of harm to bats if the development is allowed to progress without further surveys.	D

[1] Hundt (2012) states that *"If a building or built structure is considered to have a moderate or high likelihood of use by bats, the preliminary roost assessment, even if negative for bats, should be followed by several presence/absence surveys."*

Recommendations

The surveyor has used the industry best practice publication Bat Surveys—Good Practice Guidelines (Hundt 2012) to guide the following conclusions and recommendations of this report.

Table 6: Specification for Further Surveys

Reference	Specification for Surveys [2]	Seasonality for Emergence Surveys
B1	This is a suspected transitional/occasional roost. 1 further dusk emergence survey should be undertaken. 2 surveyors are required to provide full coverage of the building.	Optimal: Mid May to August inclusive. Sub-optimal: May to September inclusive - will require a greater survey effort and justification.

The purpose of further surveys is to determine the species of bats, their population and the type of roost - or to confirm a negative result beyond doubt.

If the further surveys positively identify bats roosting at the site, the results will enable the client to design appropriate mitigation and if necessary, apply for a European protected species licence.

[2] If bats are discovered emerging from any of the buildings during surveys, the survey effort may need to be appropriately increased pursuant to table 8.5, Bat Surveys—Good Practice Guidelines (Hundt 2012).

Bibliography

Hundt, L. (2012). Bat Surveys—Good Practice Guidelines, 2nd edition, Bat Conservation Trust, London. Mitchell-Jones, A.J. (2004). Bat Mitigation Guidelines. English Nature, Peterborough.

Document Production and Approval

Status	Issue	Surveyor	Date
Draft	1	ADB	09/07/2014
Final	2	JG (Proofed)	10/07/2014

Limitations

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Appendix 1 Plan

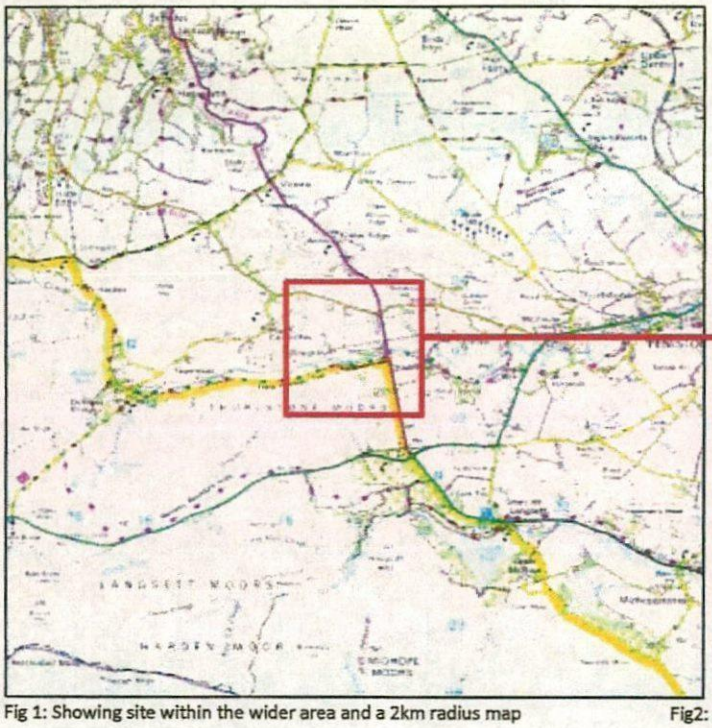


Fig 1: Showing site within the wider area and a 2km radius map

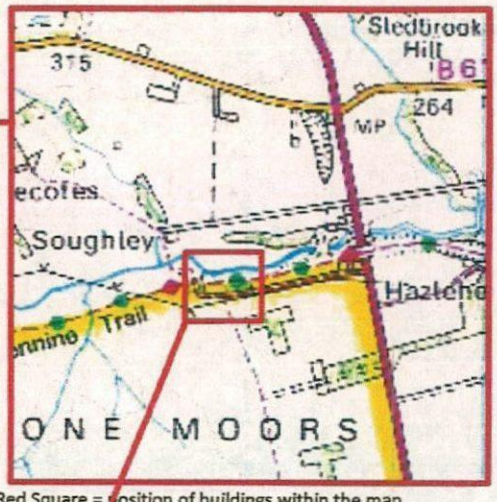


Fig2: Red Square = position of buildings within the map



Fig 3: Satellite Image: red square symbolises the building surveyed

Appendix 2 Photos



Fig 4: Front elevation of the building



Fig 5: Side elevation of the building

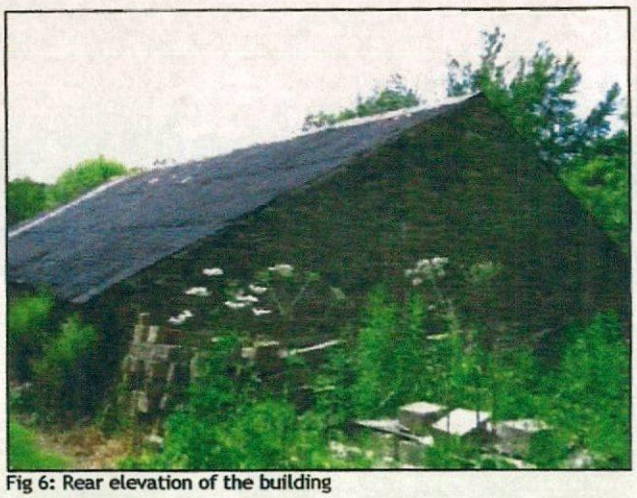


Fig 6: Rear elevation of the building

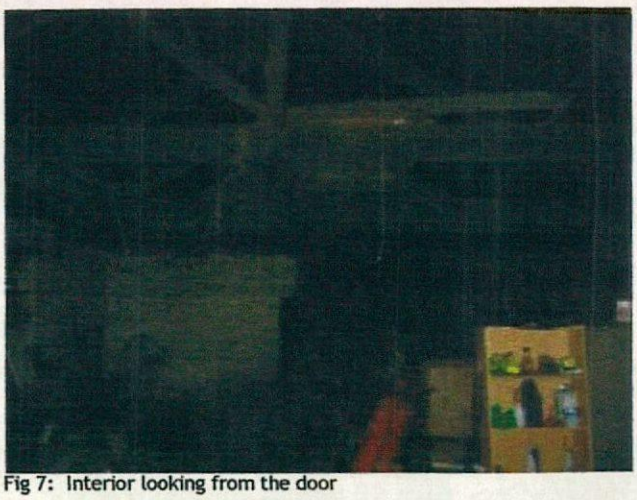


Fig 7: Interior looking from the door

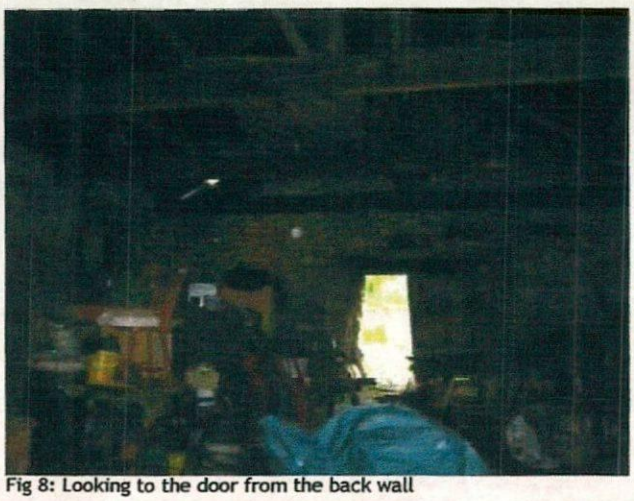


Fig 8: Looking to the door from the back wall

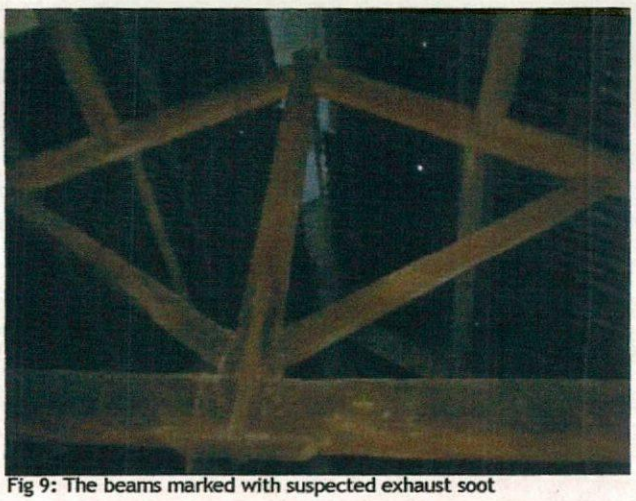


Fig 9: The beams marked with suspected exhaust soot

Appendix 3 Roost Types

A. Day roost: a place where individual bats, or small groups of males, rest or shelter in the day but are rarely found by night in the summer.
B. Night roost: a place where bats rest or shelter in the night but are rarely found in the day. May be used by a single individual on occasion or it could be used regularly by the whole colony.
C. Feeding roost: a place where individual bats or a few individuals rest or feed during the night but are rarely present by day.
D. Transitional / occasional roost: used by a few individuals or occasionally small groups for generally short periods of time on waking from hibernation or in the period prior to hibernation.
E. Swarming site: where large numbers of males and females gather during late summer to autumn. Appear to be important mating sites
F. Mating sites: sites where mating takes place from later summer and can continue through winter.
G. Maternity roost: where female bats give birth and raise their young to independence.
H. Hibernation roost: where bats may be found individually or together during winter. They have a constant cool temperature and high humidity.
I. Satellite roost: an alternative roost found in close proximity to the main nursery colony used by a few individual breeding females to small groups of breeding females throughout the breeding season.
J. Other - Explain what the roost type is if not one of the above (it is recognised that roost types are interchangable and not always easy to classify according to the nuances of certain species).