Eric Bennett Consultancy Ltd

Protected species survey and advice

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Workshop, Pennine Cottage Hazlehead

Bat Survey

April 2011.

Registered in England & Wales – Company Number 4907827

Details of Surveyor

Surveyor	Experience
Mr Eric Bennett	Licensed bat worker since 1988. Licensed by Natural England for all bat species in all counties. NE Licence No: 20110098

Record of revisions

Date	Details
20 April 2011.	Original Report

Report of Bat Survey
Workshop, Pennine Cottage, Hazlehead

1 Introduction

1.1 The survey was required in connection with proposals for the conversion of a workshop to residential use. The site was located off Whams Road at O.S. Grid Reference SE 190027.

2 Details of work proposed

2.1 Full details not known but in terms of potential impacts on protected species are likely to involve roof removal and replacement, work to external walls, repair of timber work and remedial timber treatment and the permanent loss of separate loft space.

3 Background to the special protection afforded to bats under UK and EC legislation.

3.1 Bats are highly specialised creatures and require a relatively narrow range of suitable conditions in order to sustain a viable population. Bats require an abundant supply of flying insect food in places where they can easily be caught and they need safe and reliable roosting sites, particularly during breeding and hibernation.

3.2 Bats are heavily dependent on buildings and trees for their roost sites and, therefore, extremely susceptible to disturbance from human activities ranging from simple maintenance work through major conversion and renovation schemes to building demolition. Development schemes can also isolate bat populations and sever roost sites from favoured feeding areas, by removing hedgerows and trees that bats use as commuting routes.

3.3 Bats are susceptible to disturbance and have been known to abandon roosts sites after instances of disturbance. The effects of disturbance are more pronounced at different times of year. Serious disturbance during breeding can result in the breeding females being killed or the abandonment and subsequent starvation of dependent young. Repeated disturbance during winter hibernation can result in the death of adult animals from starvation.

3.4 The level of protection afforded to bats in UK and European legislation reflects the fact that it is now generally accepted that bats have declined substantially, maybe by as much as 60% over recent years. Most species are declining and vulnerable and all are protected.

4 Details of Survey

4.1 Daytime survey by a single surveyor.

5 Methodology for the survey

5.1 A detailed internal and external inspection of the building was carried out to identify potential roost sites and access points and any signs of actual occupation such as droppings, discarded moth wings, staining etc.

5.2 A dusk emergence and activity survey was not carried out because of the season.

5.3 Assessment of site and surrounding habitats.

5.4 Search of existing bat roost records.

6 Description of habitats

6.1 The site was situated alongside the Trans Pennine Trail created on the former Woodhead Railway line and surrounded by mature woodland on the slopes north of the track and regenerating scrub birch and willow along the edges of the trail. The River Don was close by to the north. Away from the valley the land was open with some permanent sheep grazed pasture extending to heather moorland to the west.

7 Results of daytime survey

7.1 The survey was carried out on 18 April 2011.

7.2 The building concerned was a large stone built workshop with a corrugated steel sheet roof. The building was cut into sloping ground with the eaves on the south side, next to the access road, approx. 1.5 metres above ground level and much too low to be likely to be attractive to bats. The north wall facing the Trans Pennine Trail was a full height plain wall with two glazed windows and with few open joints and these mostly along the eaves. The gaps under the edge of the corrugated sheeting were generally considered too large to be likely to attract roosting bats. External views are shown in Fig 1.

7.3 The west gable contained a large sliding doorway. The walls around the door were generally well pointed with few open joints. A bricked-up window was located to the side of and above the doorway. On the south side of the apex there were some gaps under the edge of the corrugated roof sheets and on the north side the verge was covered with a metal fascia. The east gable was a plain wall, well pointed but gaps were present under the edge of the roof sheets. No signs were found at either gable.

7.4 On the west end of the building the walls extended at eaves height over what appeared originally a larger building. Some window openings remained with stone lintels but no roof structure remained. Open joints were noted particularly on the north side and parts appeared almost dry stone construction.

7.5 Internally the building was fully open to the underside of the roof. The roof was supported on four timber trusses, two of which were reinforced with steelwork supports. The trusses were sawn timber with no socket holes or mortise joints that might be attractive to bats.

7.6 The internal gable walls finished short of the roof sheets leaving large openings along the inside of the verge. These generally appeared too large to be likely to be attractive to bats. The ridge area was open and there was no enclosed ridge tunnel feature normally found in traditional roof construction and which provide the favoured locations for roosting bats. The building itself contained numerous surfaces, plastic covered storage, timber boarding etc. There were no signs of any urine spotting, bat droppings or discarded insect remains to suggest any use by bats. Internally these signs would be expected to persist for many years in the absence of weathering. Internal views are shown in Fig 2.

7.7 As a matter of course the building was also checked for other protected species such as Barn Owl but no signs were found.

8 Results of dusk survey

8.1 A dusk survey was not carried out because of the season.

9 Existing local records

9.1 The following roost sites are known from the area.

Site Name	District	Roost Type	NGR	Species	Count	Date
River Don Tunnel	Hazlehead	Tunnel	SE193029	Natterers	8	27/07/91
Hazlehead Station Tunnel	Hazlehead	Tunnel	SE192028	Brown Long-eared	1	17/01/88
Don Villa	Hazlehead	House	SE 195030	Indet	+Dr	01/06/91
Manchester Road	Thurlstone	House	SE 233034	Pipistrelle	+ Dr	22/07/95
Thurlstone Co-op	Thurlstone	House	SE233034	Pipistrelle	2	25/04/88

10 Protected species legislation

10.1 Bats and their roosts are fully protected at all times (whether the bats are currently present or not). This protection comes from the Wildlife & Countryside Act 1981 (updated by the Countryside & Rights of Way Act 2000) and the Habitats Regulations 1994 (updated by the Conservation (Natural Habitats) (Amendment) Regulations 2007. Under this legislation it is an offence to deliberately kill, injure, capture or disturb bats or to damage, destroy or obstruct access to any place used by bats as a breeding site or resting place.

10.2 Under the habitats regulations, where bats may be affected by development proposals, a licence is required from Natural England. Published guidelines on the licence procedure indicate that if, on the basis of survey information and specialist knowledge of the species concerned, the proposed activity is reasonably likely to result in an offence then, a licence is required. If, on the other hand the proposed activity is reasonably unlikely to result in an offence, then a licence is not required.

11 *Evaluation of survey results*

11.1 The survey produced no information at all to suggest the possible presence of a bat roost in the building and generally the metal roof construction was unsuitable for bats. The ridge area, normally the favoured location for bat roosts in traditionally roofed buildings, was open with no suitable crevices at all. The internal gables showed gaps below the roof sheets at wall top level but these generally appeared too large to be attractive to bats. Internally there were no signs of any urine spotting, bat droppings or discarded insect remains to suggest any use by bats. Internally these signs would be expected to persist for many years in the absence of weathering.

11.2 Externally the walls were generally well pointed with few suitable openings that might be attractive to bats. Summer breeding roosts are invariably located on warmer south aspects of buildings but in this case the south wall was only 1.5 metres above ground level, too low for bats. Both gables showed gaps under the edge of the roof sheets but these were generally quite large with limited appeal for roosting bats.

11.3 Despite the good quality foraging opportunities for bats and the known bat roosts in the vicinity, this building did not appear to be used by bats.

12 Site & species status assessment

12.1 No evidence to suggest the presence of a bat roost. A summer breeding roost appears unlikely although single bats could be encountered in wall crevices in any building.

13 Assessment of Impacts

13.1 No negative impacts are predicted. The building would in fact be likely to be more attractive to bats after conversion.

Development effect	Scale of Impact			
	Negligible	Low	Medium	High
Destruction of roost site	+			
Temporary loss of roost site during building works.	+			
Modification of roost site	+			
Risk of entombing bats during building work		+		
Risk of killing/injuring bats during roof stripping	+			
Temporary disturbance from building works during breeding season	+			
Temporary disturbance from building works outside the breeding season	+			
Post development interference	+			

14 Mitigation guidelines

14.1 Mitigation is required to avoid or reduce the impact of development proposals on the population of bats present, either roosting or feeding. Licences are normally required where a roost site is threatened in some way by a scheme, but might also be necessary where the viability of a roost is threatened by the removal of the availability of crucial feeding habitat.

14.2 Natural England in their published guidelines (Bat Mitigation Guidelines Jan 2004) defines the key principles involved. i.e. Mitigation involving changes to the scheme or altering the timing of work to reduce or remove impacts and Compensation, the creation of new replacement roosts or habitats.

14.3 Natural England also requires mitigation/compensation to be proportionate to the size of the impact and the importance of the population affected and as a principle:

- There should be no net loss of roost sites and that compensation should provide an enhanced resource since the adoption of new roost sites bay bats is not guaranteed.
- The scheme should aim to replace like with like in terms of the status of the site. i.e. male roost, maternity roost, hibernation roost etc.
- Compensation should ensure that the affected bat population could continue to function as before so attention may need to be given to surrounding habitats.

15 Mitigation proposals

15.1 In this case since there are no indications to suggest the presence of a bat roost, no formal mitigation measures are required although some simple precautionary measures are recommended in all cases because single male Pipistrelle bats can be found just about anywhere.

15.2 Purely as a precaution care should also be taken during roof stripping lifting rather than sliding roof sheets over wall tops and checking beneath for signs of bats. If bats or droppings are found further advice should be sought immediately and work halted in that area.

15.3 Any timber treatment should be carried out using only safe Permethryn type chemicals on the Natural England list of approved safe chemicals. The work area should be checked for the presence of bats prior to application (including mortise joints) to ensure that bats are not directly sprayed with the chemical. Use of new pre-treated timber such as tanalised, is safe provided the treated timber has been allowed to dry before use.

15.4 Care should be taken with masonry work and re-pointing walls. Bats will use crevices at any time of year but are more vulnerable during winter hibernation when they are unable to escape when disturbed. At this time they are likely to use sites deep in the rubble filled core of walls, gaining access through open joints etc. The roost site can be a considerable distance from the access point. For this reason where bats may be present this type of work should preferably not be done in the winter months with spring and autumn being the preferred seasons.

15.5 During the active season bats are likely to be disturbed by the erection of scaffolding, general building work disturbance etc and move to other sites. Work to crevices should therefore be started after a sustained period of disturbance in that part of the building.

- Shallow crevices where the full extent can be easily seen and that can clearly be seen to be empty may be filled.
- Any crevices that appear to extend into the rubble filled core of the wall or disappear behind other building stones and cannot be fully seen may be reduced by careful pointing leaving small permanent escape holes approx. 15x30mm in size at regular intervals accessing the core of the wall.
- Any such crevices that have to be fully filled and where permanent escape openings cannot be retained will need to be checked by a licensed batworker with an endoscope or similar instrument or by dusk emergence observations.

15.6 Open joints at eaves level which extend under the edge of roof sheets and openings below stone window cills should generally be retained for potential use by bats in the future. These should be identified in advance and clearly marked in order to prevent accidental filling

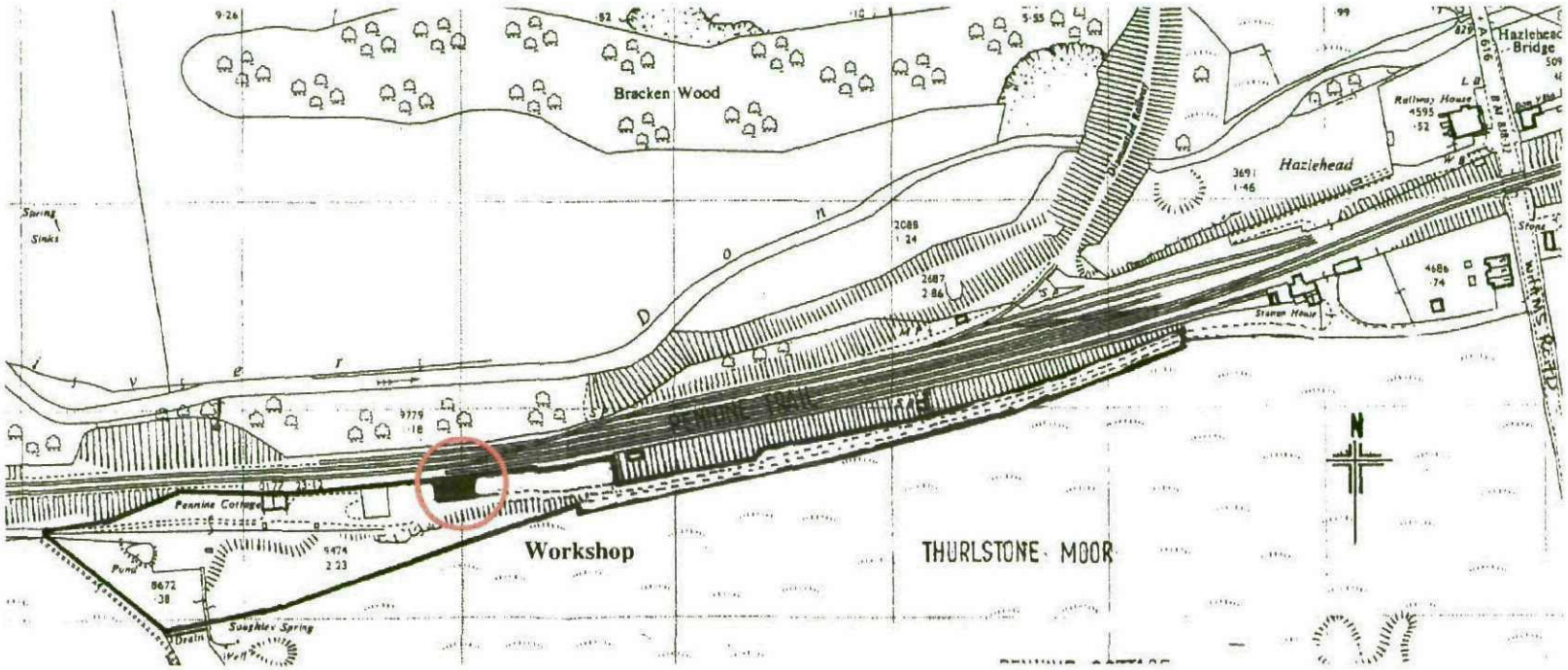
15.7 It would be beneficial in conservation terms to retain some openings for bats in the converted building. These need be no more than small un-pointed openings in gable apex locations approximately 15x50mm in size or unsealed openings behind fascias. Locations over doors and windows should be avoided.

16 Conclusions & Recommendations

16.1 As things stand there is no evidence to suggest the presence of a bat roost and accordingly no need, therefore, to seek a Natural England license. It should be kept in mind, however, that if bats are subsequently discovered or suspected, (droppings appearing in patches on external walls, or audible sounds of scratching or chattering are heard, work should be stopped and further advice sought without delay.

16.2 The precautionary measures are recommended.

EM Bennett
20 April 2011.



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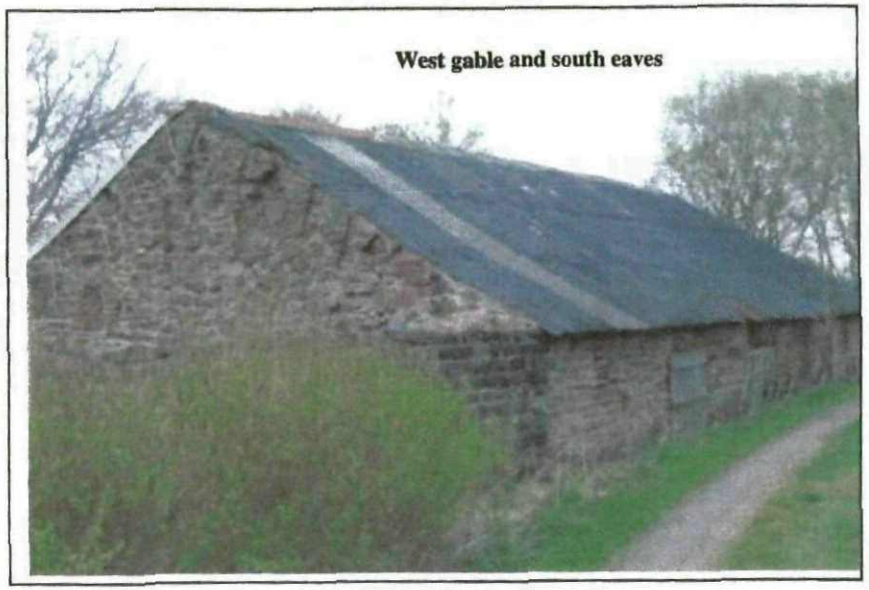
Pennine Cottage, Hazlehead
Bat Survey of Workshop
Not to Scale

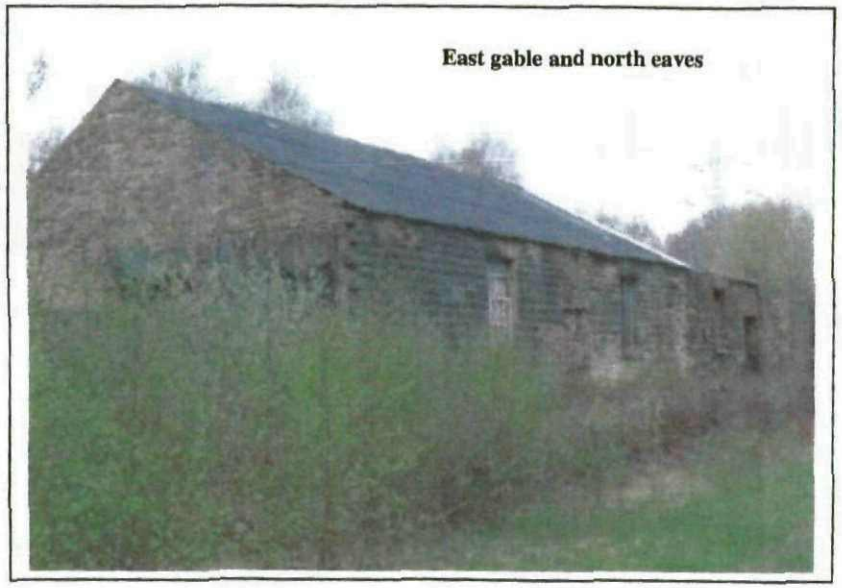


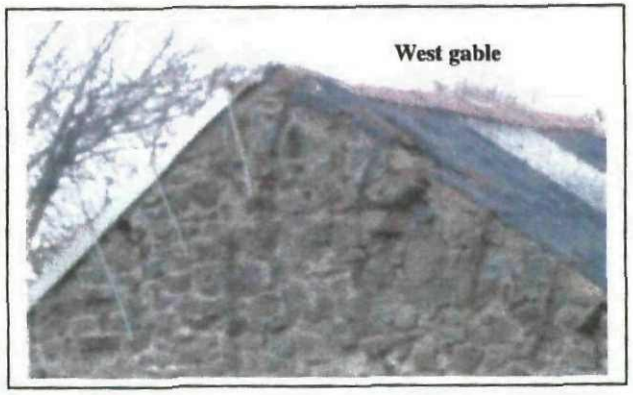
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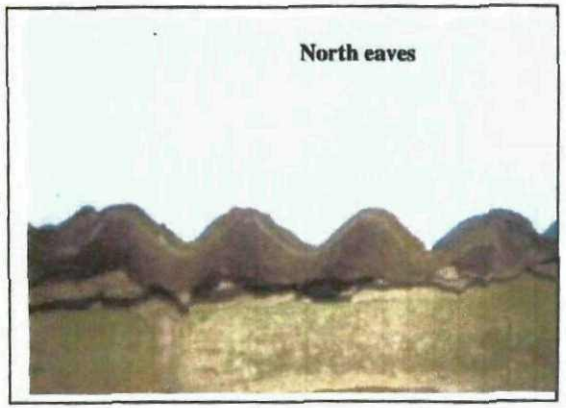
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FIG 1


West gable and south eaves


East gable and north eaves


West gable


North eaves


East gable

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Bat Survey – April 2011.

FIG 2

