Bat Survey Report
Upper Wood Head Farm Barns



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1. Report summary

1.1 Emergence/re-entry bat surveys of Upper Wood Head Farm barns were commissioned by Mark Booth on behalf of Colin Ibbotson.

1.2 The surveys were conducted on the 29th May, 14th June and the 6th July 2012.

1.3 Foraging/commuting bats of three species were recorded adjacent and around the farm but no bats were found to be roosting in any of the buildings.

1.4 It was concluded that no further monitoring is required and that a Protected Species Licence is not required.

2. Introduction

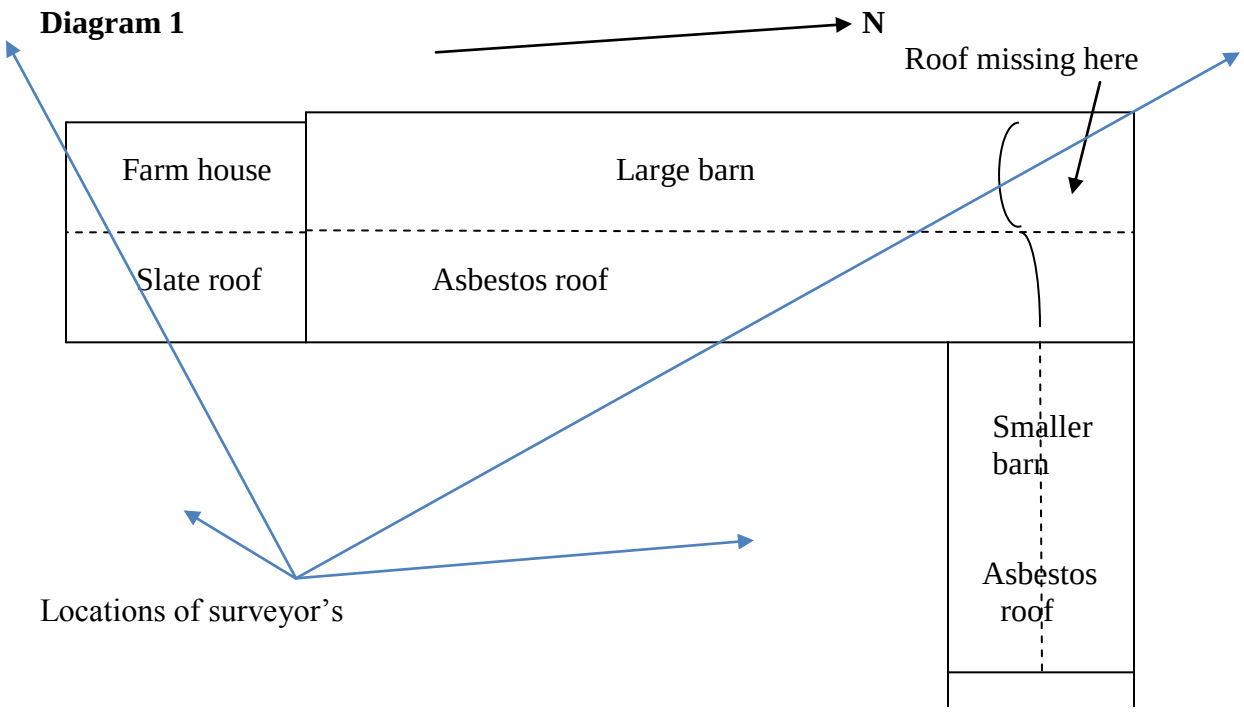
2.1 Upper Wood Head Farm house and adjacent buildings are the subject of a planning application to renovate the farm house and convert the barns into dwellings. Middleton Ecological Consultancy were contracted to undertake dusk emergence and dawn re-entry surveys to determine the actual use of the buildings by bats. This would include identifying roost locations, access points, species present, level of use and the importance of nearby landscape features. This report confirms the findings of those surveys carried out by four surveyors.

2.2 Site description

2.2.1 The barns are situated less than 350m from Wombwell Wood and are part of the Upper Wood Head Farm complex of buildings that lie 250m north-east of Blacker Hill. The buildings that are subject to the planning application include a stone built farmhouse and two stone built barns in an L shape formation (see diagram 1).

2.2.2 The two storey farm house and associated barns have a single ridged roof with gable ends. The farm house and the northern end of the barn has a blue slate roof with the remainder covered with corrugated asbestos sheets. The gable of the northern end has been damaged by storm (see photograph 1)

Diagram 1



Photograph 1 showing northern end of barn damaged by storm



2.3 Habitat assessment

2.3.1 The farm is surrounded on all sides by improved grassland and pasture. Table 1 outlines the habitats present adjacent to and further afield to Upper Wood Head Farm.

Table 1

Name and address: Upper Wood Head Farm			
OS Grid Ref. SE 371024		**Altitude. 142m**	
Local Planning Authority: Barnsley			
Features on site and adjacent to site			
Feature	**On site**	**Adjacent**	**Comments**
Buildings	✔	✔	**The barn is part of the farm complex**
River bordered by trees			
Still water	✔		**Also 900m to east in Wombwell Wood**
Bridges tunnels and culverts			
Trees			
Woodland		✔	**170m west**
Grassland	✔	✔	**adjacent**

2.4 Aims of survey

2.3.1 The survey was conducted to ascertain the following:

- The presence of bats.
- Where in the building do bats roost.
- Where bats enter and exit.

3. Methodology

3.1 Field survey

3.1.1 The following personnel conducted the survey:

Surveyor: Peter Middleton (Licence no 20113997)
Rosario Rios-Brown
Gareth Parkinson (Licence no 20121215)
Maria Hoggart

3.1.2 The following activities were carried out during the survey.

- Activity surveys in the form of a single dusk emergence survey plus two dawn re-entry surveys using four surveyors. Beginning 15 minutes before sunset and finishing approximately 120 minutes after sunset, and for dawn beginning 90 minutes before sunrise and finishing at sunrise.

3.1.3 The following equipment was used during the survey:

- Bat detectors (Pettersson D240x and Batbox duet x 3)
- Digital recorders

4. Results

4.1 Desk Study

4.1.1 Data supplied by Barnsley Biological Records Centre

Latin name	Common name	Observation Comments	Location name	Date	Grid Reference
Chiroptera			Worsborough Dale Sewage Works	24/03/82	SE3603
Myotis		exit count	Button Mill Inn	21/08/81	SE352032
Nyctalus			Worsborough village	18/07/83	SE3602
Chiroptera			Oak Tree, Park Cottages, Worsborough	15/07/01	SE353030
Nyctalus noctula	Noctule		Lower Laithes farm, Ardsley	08/07/01	SE3904
Nyctalus noctula	Noctule	heard	Shortwood, Upper Hoyland	21/07/04	SE358014
Pipistrellus pipistrellus	Commmon pipistrelle		Aldham Junction, Ardsley	22/09/92	SE3804
Nyctalus noctula	Noctule	1 exit count	Button Mill Inn	24/06/99	SE352032
Nyctalus noctula	Noctule	1 exit count	Button Mill Inn	06/07/91	SE352032

Nyctalus noctula	Noctule	1	Welcroft House, Worsborough	23/04/90	SE351028
Nyctalus noctula	Noctule	4 exit count	Button Mill Inn	21/08/81	SE352032

4.2 Dusk Emergence Survey (29th May 2012)

4.2.1 Four surveyors undertook the initial survey and all were in position 15 minutes before sunset (Sunset 21.22 Barnsley). The four surveyors were positioned so that all the building could be monitored for bat activity.

4.2.2 The temperature at the beginning of monitoring was 17.4c a clear sky and calm. At the end of monitoring the temperature was 15.2c with 20% cloud and again calm.

4.2.3 The first foraging bat was a Common pipistrelle around the shrubs in the garden in front of the farm house at 21.57 (35 minutes after sunset). Thereafter, up to three Common pipistrelles foraged all around the buildings but especially around the shrubs until monitoring ceased at 23.00. No bats were observed emerging from any of the buildings.

4.3 Dawn Re-Entry Survey (14th June 2012)

4.3.1 Four surveyors were in position 96 minutes before sunrise (Sunrise 04.36 Barnsley). The four surveyors were positioned so that all the buildings could be monitored for bat activity.

4.3.2 The temperature at the beginning of monitoring was cold at 8.6c with 100% cloud and a force 2 NE wind. The weather conditions remained the same throughout the survey.

4.3.3 The first bat to be recorded was a commuting common pipistrelle at 03.07 on the south side of the barn and on the north side a little later. At 03.27 a single common pipistrelle foraged around the buildings and at 03.23 and a Noctule bat began to forage in the area and was heard at both sides of the buildings until 03.38. Interestingly, one of the recordings had a peak frequency of between 27-34khz, therefore it was probably a Leislers bat. The last foraging Common pipistrelle was observed at 03.48 (48 minute before sunrise).

4.3.4 No bats were observed re-entering any of the buildings during the monitoring.

4.4 Dawn Re-Entry Survey (6th July 2012)

4.4.1 Four surveyors were in position 106 minutes before sunrise (Sunrise 04.46 Barnsley). The four surveyors were positioned so that all the buildings could be monitored for bat activity.

4.4.2 The temperature at the beginning of monitoring was 18.6c with 100% cloud together with mist and fog and a force 2/3 N wind. These condition remained throughout with the temperature dropping slightly to 14.6c by dawn.

4.4.3 A Common pipistrelle was heard foraging at the beginning of the survey at around 03.00 on the west side of the barns. 25 minutes later a possible *myotis* was heard briefly commuting followed by several Common pipistrelle commuting passes on both sides of the barns. At 04.07, activity began by Noctule bats that lasted for 31 minutes. At first foraging was taking place by one/two Noctules over the pasture on the west side followed by 8 minutes of sustained commuting between 04.30 and 04.38. At least 10 bats were involved and all were going north, the time of the commuting suggests that their roost was close.

4.4.4 No bats were observed re-entering any of the buildings during the monitoring.

5. Assessments

5.1 Summary and evaluation of findings

5.1.1 The south facing wall of the large barn has numerous vertical slits approximately 50mm wide and 500mm long in the stone work that are potentially very good for accommodating bats. Although the northern facing side of the barns have holes and crevices, this side has little potential because it is floodlit during hours of darkness.

5.1.2 Surprisingly no bats were found roosting in the building during the surveys in spite of the high potential of the south facing wall to accommodate bats.

5.1.3 Common pipistrelles were commonly recorded around the buildings and especially around the shrubs in the garden in front of the farm house. Noctule bats favoured foraging in the pasture on the western side and both Soprano pipistrelle and Leislers bat were recorded commuting.

5.1.4 The timing of the departure (48 minute before sunrise) of a foraging common pipestrelle on the dawn re-entry survey on the 14th June suggest that the roost place of this particular bat was a considerable distance away.

5.1.5 The time of the commuting Noctules 7 to 15 minutes before dawn on the 6th July suggests that a Noctule roost exists somewhere close in the woodland to the north.

5.2 Survey limitations

5.2.1 Upper Wood Head Farm and associated buildings is relatively large and with a great deal of potential to accommodate bats. However, the limitations were kept to a minimum by using four surveyors. Furthermore two of the surveys were completed at dawn when it is much easier to see bats re-entering.

5.2.2 The weather on the dawn re-entry survey on the 14th June was cold considering the time of year. Whether the low temperatures had the potential to affect bats behaviour remains unknown.

5.2.3 Large or complex buildings require a number of surveyors equipped with appropriate bat detectors and monitoring devices to ensure that the range of frequencies used by British Bats are covered, thus ensuring that no bat species are overlooked during the dusk survey. The 'Frequency Division' detector is a broadband detector i.e. all frequencies used by British bats can be heard at the same time. The heterodyne detector can only monitor one frequency at a time but by continually rotating the frequency dial between 35 and 50 kHz, this covers many of the species likely to be found roosting inside a building. Rotating the dial through all frequencies at regular intervals allows the surveyor to identify the specific frequency of the call.

5.3 Legislation and policy guidance

5.3.1 Bats receive protection under the Conservation of habitats and Species Regulations 2010 (and 2011 Amendment Regulations) and the Wildlife and Countryside Act 1981 (as amended) and the Conservation (Natural Habitats &c.) Regulations 1994.

5.3.2 It is an offence to:

- Deliberately capture (or take), injure or kill a bat.
- Intentionally or recklessly disturb a group of bats where the disturbance is likely to significantly effect the ability of any significant group of animals to survive, breed, rear or nurture their young or likely to significantly effect the local distribution or abundance of the species, whether in a roost or not.
- Damage or destroy the breeding or resting place (roost) of a bat.
- Possess a bat (live or dead), or any part of a bat.
- Intentionally or recklessly obstruct access to a bat roost.
- Sell (or offer for sale) or exchange bats (dead or alive), or parts of parts.

5.3.3 The Convention on Biological Diversity, signed in Rio de Janeiro, Brazil in 1992, requires member states to develop national strategies and to undertake a range of actions aimed at maintaining or restoring biodiversity. The UK Biodiversity Strategy was produced in response to the Convention.

5.3.4 Individual Species Action Plans (SAPs) have been developed to address the causes of decline for those species that have been identified as priorities for UK conservation action. Country-level lists contain species considered of national importance in biodiversity strategies. The current list includes Bechstein's Bat, Greater Horseshoe Bat, Lesser Horseshoe Bat, Barbastelle, Noctule, Soprano Pipistrelle and Brown long-eared bat. At a more local level there are Local Biodiversity Action Plans for smaller geographical areas which may cover a greater or lesser range of bat species.

5.3.5 In England & Wales, the Natural Environment and Rural Communities (NERC) Act, 2006 imposes a duty on all public bodies, including local authorities and statutory bodies, in exercising their functions, "to have due regard, as far as is consistent with the proper exercise of those functions, to the purpose of conserving biodiversity". It notes that "conserving biodiversity includes restoring or enhancing a population or habitat".

5.3.6 Where it is proposed to carry out works which will have an adverse impact on bats or on a bat roost, a European Protected Species (EPS) license must first be obtained from Natural England, even if no bats are expected to be present when the work is carried out.

5.3.7 An EPS license application requires details of the proposed works, the bats which may be affected and the mitigation proposed to maintain the favourable status of bats in the region. The application is usually drawn up on behalf of the client by a specialist ecological consultant. The consultant is likely to be required to check that work is proceeding in accordance with the method statement and to also carry out monitoring of the impact on bats for sometime after completion of the works.

5.3.8 When considering an application, the Natural England licensing section may consult with the local planning authority and specialist conservation staff. This process may take a considerable length of time. Natural England presently states that it aims to make a decision on an application within 30 working days of receipt. There is no guarantee that a license will be granted and no fast track process to obtaining a license. Applications can only be made once planning permission has been granted (where appropriate).

5.3.9 EPS licenses can only be issued if Natural England is satisfied that there is no satisfactory alternative to the development and that the action authorised will not be detrimental to the maintenance of the population of the species at a favourable conservation status in their natural range.

5.3.10 PPS9: Biodiversity and Geological Conservation is the relevant national planning statement in relation to protected species. It provides guidance on how the Government's policies on nature conservation should be implemented through the land use planning system. PPS9 states that "the aim of planning decisions should be to prevent harm to biodiversity and geological conservation interests. Where granting planning permission would result in significant harm to those interests, local planning authorities will need to be satisfied that the development cannot reasonably be located on any alternative sites that would result in less or no harm. In the absence of any such alternatives, local planning authorities should ensure that adequate mitigation measures are put in place. If that significant harm cannot be prevented, adequately mitigated against, or compensated for, then planning permission should be refused.

6. Conclusion

6.1 It is concluded that Upper Wood Head farm was not found to be a bat roost and the conversion of the barns will not require licencing under the Wildlife and Countryside Act 1981 (as amended) and the Conservation (Natural Habitats &c.) Regulations 1994.

6.2 No further survey effort is required.