Bat Survey Report

Barn off Church Street, Bolton upon Dearne.

30th August 2016.

Prepared by:

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1. Report summary

1.1 The bat survey was commissioned by planning consultant Michael Townsend on behalf of client.

1.2 The preliminary roost assessment survey was conducted on the 28th August 2016 followed by a dusk emergence survey on 30th August 2016 and a dawn re-entry survey on the 1st September 2016.

1.3 Whilst there were no visible signs of bat presence on the inside or outside of the building it has features commonly used by crevice dwelling bats. The building therefore was assessed as having moderate/high bat roost potential.

1.4 The emergence survey confirmed that no bats were roosting in the building subject to the planning application but the barn does harbour a pair of barn owls *Tyto alba*.

1.5 It was concluded that a European Protected Species licence is not required and no further survey effort is necessary. Recommendations in terms of mitigation for the barn owls are given in the report.

2. Introduction

2.1 The building is subject to a planning application and subsequent demolition. Middleton Ecological Consultancy were therefore contracted initially to conduct a baseline assessment to confirm presence of bats and to identify roost locations, access points, species present, level of use and the importance of nearby landscape features. This report confirms the findings of the survey carried out by one/two surveyors.

3 Site description

3.1 The site consists of an old derelict detached barn in a suburban location off Church Street at Bolton on Dearne. The building is mostly stone built but has an original brick dividing load bearing wall plus some modern concrete blocks on the east elevation. The original south section has collapsed together with a large part of the east elevation and a small part of the west elevation. The barn has what remains of a Welsh slate roof with ridge and a north gable. The building is in an extremely dangerous condition with one area in particular on the west elevation about to collapse (see plates 2, 3 & 4). Additionally, there is what remains of the southern section/barn (see plate 5).

3.2 Habitat assessment

3.2.1 The surrounding area consists predominantly of the built environment (residential) and arable land with associated hedgerows. There are no woodlands

or water bodies near to the application site and therefore the immediate surrounding habitat is relatively poor for bats (see plate 1). Table 1 summarises the habitats present, adjacent to and further afield to the barn off Church Street at Bolton upon Dearne.

Table 1

Name and address: Barn off Church Street, Bolton upon Dearne, Rotherham			
OS Grid Ref. SE4548 0248		**Altitude. 31m**	
Local Planning Authority: Barnsley			
Features on site and adjacent to site			
Feature	**On site**	**Adjacent**	**Comments**
Buildings	✔	✔	**Residential**
River bordered by trees			**River Dearne 425m south**
Standing water			**More than 650m**
Bridges tunnels and culverts			**River Dearne**
Trees	✔	✔	
Woodland			**No woodland within 1.5km**
Grassland	✔		**brownfield**

Plate 1 The site

3.3 Aims of survey

3.3.1 The surveys were conducted to find out the following:

- The presence of bats.
- Where in the building are bats likely to roost.
- Where bats are likely to enter and exit.
- Whether additional survey work is required.

4. Methodology

4.1 Field survey

4.1.1 The following personnel conducted the survey:

Surveyor: Peter Middleton (WML-A34-level 2; 2015-11028-CLS-CLS)
Carl Dixon

4.1.2 The following activities were carried out during the surveys.

- A brief inspection and assessment of the site and habitats present to within 500m.
- An extensive examination of all parts of the building both inside and out to record structural features and condition and to record features that may be suitable for roosting bats.
- A thorough search of all sections of the inside of the building for the presence or evidence of roosting bats including droppings, scratch marks and staining.
- activity surveys in the form of an emergence survey on the building beginning 15 minutes before sunset and finishing 75 minutes after sunset and a dawn re-entry survey beginning 90 minutes before sunrise. Two surveyors were used.

4.1.3 The following equipment was used or at hand during the survey:

- Cluelite
- Binoculars
- Torch
- Ladder
- Camera
- Ipad & Iphone EM touch

5. Results

5.1 Desk survey - Data supplied by South Yorkshire Bat Group for a 2km radius of site

5.1.1 The data search shows that there are no known roosts near to the application site. The absence of data however does not necessarily indicate that there are no bats or bat roosts in the immediate area.

Table 2

Date	GridRef 6Fig	Address line 1	Address line 2	Type	Species	No
29/07/2003	SE433010	Brook Farm Mews	Wath on Dearne	Roost	Vespertillionidae	1
28/06/2006	SE4301	Manvers way	Wath		Noctule	1
	SE430010	Wath-upon-Dearne between Barnsley Road & line of Dove & Dearne Canal			Vespertillionidae	
1997	SE437021	Old Moor	Wombwell	Bridge	Daubenton's bat	+ Dr
07/06/2000	SE437021	Old Moor	Wombwell		Myotis sp.	
19/03/1998	SE440000	Sandymount Road			Vespertillionidae	
30/01/2002	SE441008	Carr Road	Wath-upon-Dearne		Vespertillionidae	
16/03/2007	SE443008	Cadman Street	Wath on Dearne		Vespertillionidae	1
20/11/2010	SE442700				Vespertillionidae	0
01/11/2004	SE457022	Watermead	Bolton on Dearne	Roost	Vespertillionidae	
16/06/2006	SE455024	Church Street	Bolton on Dearne		Vespertillionidae	1
03/06/2011	SE453020	river	Bolton on Dearne	foraging	Common pipistrelle	3
03/06/2011	SE453020	river	Bolton on Dearne	foraging	Noctule	1
03/06/2011	SE453020	river	Bolton on Dearne	foraging	Daubenton's bat	3
22/09/2012	SE455029	Wath, S63 8HU			Common pipistrelle	1
-	SE457022	Watermead	Bolton-on-Dearne	House	Vespertillionidae	+
08/07/2014	SE458032			Bat Care	Common pipistrelle	1
31/03/2012	SE453046	Thurnscoe Dyke			Noctule	1
04/07/1993	SE457051	Turnesc Grove	Thurnscoe	House	Pipistrelle sp.	187

04/07/1993	SE457051	Turnesc Grove	Thurnscoe		Vespertillionidae	138
06/07/1993	SE457051	Turnesc Grove	Thurnscoe		Pipistrelle sp.	120
17/07/1993	SE457051	Turnesc Grove	Thurnscoe		Pipistrelle sp.	187
01/08/1993	SE457051	Turnesc Grove	Thurnscoe		Pipistrelle sp.	125
07/08/1993	SE457051	Turnesc Grove	Thurnscoe		Pipistrelle sp.	63
08/07/1999	SE450057	Butcher Street	Thurnscoe		Pipistrelle sp.	1
08/07/1995	SE465040	Frederick Street	Goldthorpe	House	Pipistrelle sp.	+ Dr
08/07/1995	SE465040	Frederick Street	Goldthorpe		Pipistrelle sp.	4
18/04/2005	SE463045	Lockwood Road	Goldthorpe		Common pipistrelle	1
02/08/2005	SE460040	Goldthorpe			Vespertillionidae	Unknown
24/07/1997	SE473034	Green Lane	Barnburgh	House	Pipistrelle sp.	25
06/07/2014	SE473034			Bat Care	Common pipistrelle	1

5.2 Preliminary daytime assessment

5.2.1 The building was internally and externally inspected for bats using a high powered lamp. The potential of the building to accommodate bats was assessed along with a search for signs (e.g. droppings, moth wings, scratch marks, staining etc) or bats that were present. Particular attention was paid to any crevices or gaps in walls, lintels, gaps between beams and joists and to the possibility of finding droppings stuck to walls, floors or other surfaces, or insect remains below beams, among a number of other factors and signs indicative of a bat roost.

5.3 Inside inspection of barn

5.3.1 A proper inspection of the inside of the building was not possible for reasons of health and safety (see plate 4). However, by standing in the doorways and looking inside the presence of barn owl *Tyto albo* was immediately evident in the section where the roof is water tight on the west elevation (see plate 2). One of the king-post roof timbers was heavily streaked with white and the floor beneath was adorned with pellets. I search for bat droppings or other signs of bat occupation was not however possible because of the extremely dangerous condition of the building. Nevertheless, the inside walls will have suitable features in mortar joints with potential to accommodate bats.

5.4 Outside inspection of Barn

5.4.1 There is no membrane beneath the slates and therefore bats are unlikely to be found roosting under slates or ridges. The walls however have a plethora of holes that are mostly large but with several holes in mortar joints on both the west and east elevations suitable for crevice dwelling bats.

Plate 2 West elevation with this section of roof in the best condition

Plate 3 East elevation

5.5 Inspection of ruin

5.5.1 The google earth image shows an 'L' shaped barn complex but the southern section has gone (collapsed) with only low walls still present (see plate 5). Most of the rubble has emptied from the inner core of the walls through large holes or above windows. Furthermore, there is nothing to prevent the ingress of water even in sections where the rubble filled core of the walls are intact. Consequently, the ruins are not considered to have anything more than negligible bat roost potential.

Plate 4 Very dangerous section of west elevation

Plate 5 Ruin what's left of the remaining barn

5.6 Emergence/re-entry surveys

5.6.1 **Dusk survey, 30th Aug 2016** – Two people undertook the survey and both were in position 15 minutes before sunset (Sunset 19.59). The surveyors were positioned so that all of the barn could be monitored for bat activity.

5.6.2 The temperature at the beginning of monitoring was 21c with a force 0 wind and a clear sky. The temperature dropped to 19.5c by the end of monitoring and the other conditions remained the same.

5.6.3 A Noctule bat *Nyctalus noctula* was heard foraging at 20.17 and at 20.20 a common pipistrelle *Pipistrellus pipistrellus* emerged from beneath the end ridge tile of the adjacent dwelling (number 6 Church Street). Thereafter, there was intermittent foraging of one/two common pipistrelles and a single pass of a *Myotis* species at 20.52. No bats were seen to emerge from the building being monitored.

5.6.4 **Dawn survey, 1st Sept 2016** – Two people undertook the survey and both were in position 90 minutes before sunrise (Sunrise 6.16). The surveyors were positioned so that all of the barn and the ruin could be monitored for bat activity.

5.6.5 The temperature at the beginning of monitoring was 13.3c with a force 0/1 westerly wind and 90% cloud. The conditions remained the same throughout the survey.

5.6.6 A Natterer's bat *Myotis nattererii* was heard foraging on both sides of the barn at 04.49 and there was intermittent foraging by a common pipistrelle mainly on the west elevation until 05.34. At 05.37 a none echo locating bat re-entered under the end ridge tile of the adjacent dwelling (number 6 Church Street). A minute later a common pipistrelle prospected the west elevation of the barn before flying south. No bats were seen to re-enter the building being monitored.

6. Assessments

6.1 Summary and evaluation of findings

6.1.1 No bats were found roosting in the building during the preliminary daytime assessment and there were no signs of bat occupation. The building has many holes in the stone walls with several with potential to accommodate crevice dwelling bats. Consequently, the barn was assessed has having moderate/high bat roost potential.

6.1.2 The barn supports a pair of barn owls which were flushed from the building during the dusk activity survey and were prevented from returning to the barn because of the presence of the surveyors during the dawn survey. Bats seldom occupy buildings with resident barn owls and therefore its roost potential is more likely to be for hibernacula inside the rubble filled core of the walls. The absence of roosting bats during this survey is therefore considered an accurate account of the status of bats at the site.

6.2 Survey limitations

6.2.1 The survey was undertaken at the appropriate time of year albeit late in the season. The BCT Good Practice Guidelines recommend a two week interval between surveys during the summer months but late in the season there is nothing

to be gained from such an approach. Furthermore, the building is in urgent need of demolition for reasons of health and safety and a delay is not desirable.

6.2.2 A daytime bat survey is used only to determine whether bats are present and if a more detailed survey is required in preparation for a protected species license application. A dusk/dawn bat activity survey in the summer months when bats are most active can give a much greater indication of the level of use of the building, in addition to the species present, roosting locations and access and exit points.

6.2.3 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.

6.3 Legislation and policy guidance

6.3.1 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.

6.3.2 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.

6.3.3 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.

6.3.4 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.

6.3.5 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".

6.3.6 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.

6.3.7 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.

6.3.8 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).

6.3.9 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.

6.3.10 NPPF: 11 Conserving and enhancing the natural environment. The planning system should contribute to and enhance the natural and local environment by:

- Protecting and enhancing valued landscapes, geological conservation interests and soils.

- Recognising the wider benefits of ecosystem services.

- Minimising impacts on biodiversity and providing net gains in biodiversity where possible, contributing to the Government's commitment to halt the overall decline in biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures.

7. Recommendations/mitigation

7.1 No bats were recorded roosting on site during the survey works and consequently there is no compulsory requirement for mitigation. However, in order to enhance the ecological value of the site and in accordance with the aims of planning policy NPPF: 11, it is suggested that the developer integrates bat roosting features into the new development by installing a small cavity bat roost integral to the fabric of the building high on gables or under a soffits on the south or west elevations (see fig 1 for example). For further information on appropriate bat roosting features please contact Middleton Ecological Consultancy.

Figure 1 Small cavity bat roost

7.2 It is recommended that demolition takes place before the end of October 2016 to avoid any potential harm to hibernating bats.

7.3 Barn owl – The barn has a resident pair of barn owls which are protected under schedule 1 of the Wildlife and Countryside Act 1981. Consequently, provision for the birds must be provided in the form of a barn owl box on a tree or a pole near the boundary of the site. If a tree is chosen some pruning of the tree may be necessary. The box should be installed as soon as possible in order for the owls to acclimatise themselves with it before the demolition of the barn. It should be

noted that the site is surrounded on all sides by dwellings and further development of the site may make the site less attractive to barn owls in the future. Additionally, a barn owl box may attract the attention of children, and for this reason an alternative site may be the better option in the long term. Nevertheless, there is no alternative to providing a box on site in the short term (see figure 2).

7.3 Most electricity or telegraph poles are suitable. Minimum length 6m. Minimum diameter 150mm. Erection normally requires specialist machinery or a digger. Bury 1.5m in the ground leaving a height of 4.5m. Wherever possible the box should be secured to the pole before erection. The position in relation to habitat features is not critical but ensure that the main entrance hole is not screened by a building or tree(s). For further information on appropriate barn owl boxes and where to install please contact Middleton Ecological Consultancy.

Figure 2 Example of barn owl box

8. Conclusion

8.1 The building contains features with potential to accommodate bats. Consequently, it was considered to have moderate/high bat roost potential. The emergence surveys confirmed that no bats are roosting in the building subject to the planning application.

8.2 No further survey effort is necessary for the building subject to the planning application and therefore a European Protected Species License is not required.

8.3 Works should proceed with caution and vigilance for unexpected bat presence, as single bats can roost almost anywhere. If bats are subsequently discovered, work should be stopped and further advice sought without delay.

8.4 The precautionary measures are recommended.

References

Bat Conservation Trust, 2007. Bat Surveys, Good Practice Guidelines.

Mitchel- Jones AJ, 2004, Bat Mitigation Guidelines, English Nature.