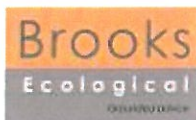


**Bat Survey
Wombwell High School,
South Yorkshire**

Report reference: BE-R-1310-01
September 2012

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Summary Statement

No bats have been found to use the buildings and demolition poses minimal risk of affecting bats or their roosts.

Introduction

1. Brooks Ecological was commissioned by Laing O' Rourke to carry out a bat survey of Wombwell High School, Roebuck Street, Wombwell, South Yorkshire (SE 401 023).
2. The application site is a high school built in the first half of the C20th and added to over the years. The school closed at the end of the summer term.

Figure1 The application site



Site Proposals

3. As part of the reorganisation of schools within the Barnsley area, the school is due for demolition with current students relocating to a new school building.

Box 1 Legal background

Bats are afforded full protection under The Wildlife and Countryside Act (1981) plus amendments, and the Conservation of Habitats and Species Regulations 2010. Under these Acts it is an offence among others, to recklessly kill, injure or disturb bats. It is also an offence to destroy or obstruct a roost even if bats are not in occupancy at the time of the action.

There are no defences against contravention of the Conservation of Habitats and Species Regulations 2010 which means that it is important for detailed and well designed bat surveys to be carried out, prior to carrying out activities that may impact upon bat roosts such as demolition of buildings or removal of trees.

Where bats are found within a potential development site, a license from Natural England may need to be secured if works that could otherwise contravene legislation are to be carried out. These licences are only issued where Natural England is satisfied that works are unavoidable and would not have a negative impact on the favourable conservation status of bats. A Natural England license requires that the potential development site has full planning permission and that bats were a material consideration of the planning permission.

Box 2 Bat roosts

Bats roost in buildings and trees in different locations depending upon time of year and environmental factors such as position of the sun, proximity to heat sources and feeding grounds. The following types are commonly referred to:

Transitional roosts:

Bats frequently gather early in the season (March to April) before dispersing to summer roosts. Bats can be found in high numbers in these roosts for a very short period. Transitional roosts can also be found shortly before hibernation in August to October when bats (depending upon species) can gather in roosts not used earlier in the season.

Maternity roosts:

These are among the most important roosts and are normally occupied from May to August. Depending on the species involved, some maternity roosts can contain a very significant proportion of the local population.

Summer (non-breeding) roosts

Small groups of non-breeding female and male bats can gather in these roosts or bats from a local population may choose to roost individually. There are normally a large number of suitable locations for summer non-breeding roosts and these may be routinely used or used only on an occasional basis. Irregularly used summer roosts can be very hard to find without unreasonable survey effort.

Mating roosts

Around September bats will gather in roost to mate; these are often in different locations than summer or breeding roosts.

Hibernation roosts

As bats in hibernation roosts are highly vulnerable to disturbance and bats can be present in large numbers these are considered to be among the most important bat roosts. Many species of bats roost in large and nationally important hibernation roosts associated with underground sites, many of which are well known and protected. However, the most common bat in the UK (the common pipistrelle) is largely unaccounted for in winter but thought to disperse and roost individually or in small groups in thermally stable cracks and crevices in thick walls or trees.

Local Status

4. The application site is within the natural range of species of bats listed in Table 1.

Table 1: Bat species recorded within 100km of the application site

Species	National status
Pipistrelles (<i>Pipistrellus pipistrellus</i> and <i>P. pygmaeus</i>)	widespread/common
Nathusius' Pipistrelle (<i>Pipistrellus nathusii</i>)	Widespread/rare
Noctule (<i>Nyctalus noctula</i>)	widespread/frequent
Leisler's (<i>Nyctalus leisleri</i>)	widespread/rare
Brown long-eared (<i>Plecotus auritus</i>)	widespread/common
Natterer's (<i>Myotis nattereri</i>)	widespread/frequent
Daubenton's (<i>Myotis daubentonii</i>)	widespread/common
Whiskered/Brandt's (<i>Myotis mystacinus</i> and <i>M. brandtii</i>)	widespread/scarce
Alcathoe's (<i>Myotis alcathoe</i>)	Local/unknown

Bat Roost Potential Survey

Method

- A thorough daytime inspection of the site was made in July 2012 in order to look for evidence of bats and assess bat roosting potential. Evidence of bats may take the form of droppings, feeding remains, live bats, dead bats, stains on masonry or timber from the oils in bats' fur and claw marks made by bats regularly roosting in the same location.
- Bat roosting potential of the building was classified according to the following criteria set out in table 2, developed with reference to the Bat Mitigation Guidelines (2004), Bat Workers Manual (2004) and the Bat Conservation Trust Good Practice Guidelines (2012).

Table 2: Bat roosting potential in buildings

Roosting potential	Criteria
Good	Buildings that have many areas suitable for roosting with a large number of potential access points. These are normally in sheltered locations, subject to low variation in temperature. Buildings with good potential could be used for a whole range of roosts including maternity roosts.
Moderate	Buildings with a smaller number of areas suitable for roosting, but still supporting features that could be attractive to bats and potentially support maternity roosts.
Limited	Buildings with limited roosting opportunities. These may be in locations that are subject to wide temperature fluctuations and drafts. They could be used as occasional or transient roosts, but are unsuitable for maternity roosts. Buildings that would otherwise be moderate to good potential but have reduced value due to other factors such as exposed location, separation from nearby foraging, or presence of strong lighting.
Very Limited	Buildings that have no obvious places for bats to roost, but could be used on a sporadic or occasional basis for feeding or solitary day roosting.
None	Buildings which appear unsuitable for roosting bats due to clear lack of roosting spaces such as voids etc and/or absence of suitable access points.

- Survey work was directed by Anne Proud BA (Hons), MSc AIEEM. Anne has over 5 years experience of carrying out bat surveys in a professional capacity, holds a Natural England scientific licence for all counties of England (20122159) and is an active member of the West Yorkshire Bat Group.

Records

8. Barnsley Biological Records Centre (BBRC) was contacted for all bat records within 1km of the application site. The BBRC returned several records for pipistrelle and vesper species.
9. Daubenton's bats have been recorded over a number of years at Parkhill Brick Works approximately 770m to the south west of the site, while records exist for pipistrelle bat species on Poplar Road, 335m east of the school and on Park Hollow, 460m to the east. A single record for a common pipistrelle bat is held for the school itself from 2004. There are no details as to whether this relates to a field record or a roost.

Results

10. The site is located on the edge of a housing estate on the southern edge of Wombwell. Directly to the north is a wide band of housing, while more houses are located across the playing fields to the south and east. At the western edge of the school is an area of open land with a golf course, pockets of scrub and trees with scattered arable fields providing some limited foraging for bats. More suitable habitat is present in the wider landscape with Elsecar canal located 475m to the north east while Wombwell Wood is found just over 1km to the west.
11. The application site comprises a series of original brick buildings with a number of more modern sections forming a large complex campus. For clarity, buildings with a similar structure have been described together.

Original brick buildings

12. These make up the majority of the school site and comprise a series of detached solid brick classrooms, with up to two storeys and pitched slate roofs. It also includes a detached house formerly used by the caretaker. The largest of these buildings is located at the south western end of the campus and is arranged to form three separate courtyards. A section of this building was damaged by a fire in March of this year with many of the loft spaces suffering smoke damage.
- 13.



Figure 2

General view of original brick sections of the school



Figure 3

Former caretaker's house at the north eastern edge of the site.

14. The solid walls are generally in very good condition and offer little in terms of potential for bats. A series of boxed eaves run the length of these buildings and though generally well sealed, some small gaps are occasionally present between the soffits and the walls which could offer bats access to voids for roosting.



Figure 4

General view of boxed eaves present within many areas of the school

15. Most of the roofs are in a sound condition, though there are a small number of slipped tiles and gaps along the ridge which could provide occasional roosting space or give access to potentially large spaces within the roof void. Large areas of the loft spaces had suffered smoke damage making them much less attractive to bats.
16. One section of roof is corrugated steel sealed at the ridge with lead flashing. Some of this flashing is slightly raised creating gaps which could provide occasional roosting for small numbers of bats.



Figure 5

View of metal roof section with raised lead flashing.

Modern brick buildings

17. The most recent addition to the site is a small brick built section which houses staff rooms and offices. This has little in terms of bat roost potential with the exception of a slightly raised roof tile on the northern elevation.



Figure 6

Modern brick built section

Metal clad buildings

18. These are typical of modern school buildings with single skinned walls comprising glass panels and metal cladding. The largest of these is three storeys and all have flat felt roofs with little potential for roosting bats. The only exception was an area of wooden panelling around the tank room on the roof although initial inspection from the ground showed the panels to be fairly snug with no obvious gaps.



Figure 7

Example of metal clad buildings, viewed from the northern boundary

Concrete clad buildings

19. These are located at the eastern edge of the site and houses the sports facilities for the school with flat roofs and tightly fitting concrete panels lining the walls. They present no clear entry points for bats and are very unlikely to be suitable for roosting.



Figure 8

Concrete clad building at
the eastern side of the school

Evaluation of Roosting Potential

20. The school presents a number of potential roosting opportunities for bats, though this is chiefly centred around the older brick buildings on site with features including occasional gaps at boxed eaves and gaps created by slipped roof tiles. These buildings are assessed as having moderate roost potential and emergence surveys were undertaken in order to watch for any bats using the site.

Emergence Survey

Method

21. Brooks Ecological specialise in bat surveys ranging from individual buildings through to complex sites requiring numerous visits with large teams. In terms of the survey effort, number of personnel required and number of visits required to be able to properly evaluate the building(s) use by bats we refer to the Bat Conservation Trust, Survey Good Practice Guidelines (2012). However these guidelines are not prescriptive and we approach each site individually as required using our professional judgement and significant experience base.
22. In this case, 2 visits with a team of up to 7 surveyors, was deemed necessary to fully evaluate the potential use of the site for roosting. The surveys were carried out on the 16th and 24th August 2012 with surveyors positioned around the site to cover all aspects where bats could potentially emerge, and to establish activity levels around the site.
23. The surveyors, using heterodyne detectors, were in place at least half an hour before dusk and left once all species of bat would be expected to have left a roost and patterns of activity within the site had been appraised. Conditions and dates are summarised in table 3 below:

Table 3: Survey summary

Date of Survey	Temperature	Weather	Invertebrate activity
16.08.12	22°C	Overcast, slight breeze, humid and warm	Very good
24.08.12	18°C	Fine, warm, full cloud cover, very light breeze	Good

24. Emergence survey work was directed by Anne Proud BA (Hons), MSc AIEEM. Anne has over 5 years experience of carrying out bat surveys in a professional capacity, holds a Natural England scientific licence for all counties of England (20122159) and is an active member of the West Yorkshire Bat Group.

Results

Survey - 16th August 2012 sunset: 20:33

25. The first bat seen, a common pipistrelle, was at 20: 51 along the north eastern edge of the site, and given the closeness to sunset, was probably roosting within houses close to the school boundary. This was followed at 20:53 when two common pipistrelles flew into the site from a hedgerow at the south western corner. They followed the line of the western boundary before crossing over the site to forage within trees within one of the school courtyards.
26. Throughout the rest of the survey, bat activity was limited to occasional passes by single common pipistrelle bats with foraging activity centred around hedgerows along the northern boundary and the former caretaker's house, also to the north. Single bats were heard passing close to the southern edge of the site at 20: 59 and 21:10 though these clearly came from across the playing fields and not the buildings.
27. A single noctule bat was heard crossing the site at 21:19 and 21:28.
28. No bats were seen to emerge from any of the buildings on the application site.

Survey – 24th August 2012 sunset 20:17

29. Activity during this survey was very similar with the first bat seen at 20:29 flying into the site from across playing fields to the south. This flew across the school towards the hedgerow along the northern boundary. This was joined by an additional common pipistrelle at 20:30 which entered the site from the north eastern corner and flew along the boundary hedgerow where it was observed foraging for some time.
30. Additional activity was noted at the south western boundary hedgerow where a bat was seen entering the site from the direction of the golf course at 20:31. It remained to forage within trees on the site and was detected by several surveyors as it crossed buildings at the western side of the school.
31. For the remainder of the survey, activity was limited to occasional foraging chiefly along the northern boundary. In addition, a single noctule was heard crossing the site from the south at 20:37.
32. No bats were seen to emerge from any of the buildings on the application site.

Evaluation and recommendations

33. Despite the findings of the bat roost potential survey which classified the site as having moderate bat roost potential, the surveys that followed show that roosting here is unlikely. The paucity of bat passes at the peak time for recording activity demonstrates a sparse local population and was used to scope out further survey visits.
34. On this basis it is concluded that bats are very unlikely to roost in the building and work can go ahead as planned with little risk of any harm or disturbance to bats.

General guidance

35. Even where surveys have been carried out which demonstrate absence of roosting, site workers should always be aware that bats can move into buildings previously found not to support them. On this basis work should proceed with care and if a bat is found, works should stop immediately and a professional ecologist and/or the bat helpline on 0845 1300 228 (Bat Conservation Trust) should be contacted. The local office of Natural England could also be contacted to seek advice.
36. If the works on this site are not undertaken before May 2013 an update emergence survey should be undertaken prior to works commencing in order to ensure no roosts have become established in the intervening period.

References

Bat Conservation Trust (2012) Bat Surveys – Good Practice Guidelines

English Nature (2004) Bat Mitigation Guidelines. English Nature, Peterborough.

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