Brooks Ecological
Grounded advice

Bat Roost Potential Survey
Former Foulstone School, Darfield

Report reference: R-2037-01
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Report Title:	Bat Roost Potential Survey Former Foulstone School, Darfield
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Summary Statement

The single remaining building and all trees on site have been assessed as presenting *very limited* bat roost potential.

Demolition of the property and any planned removal of trees can therefore proceed with minimal risk of impacting on roosting bats.

Introduction

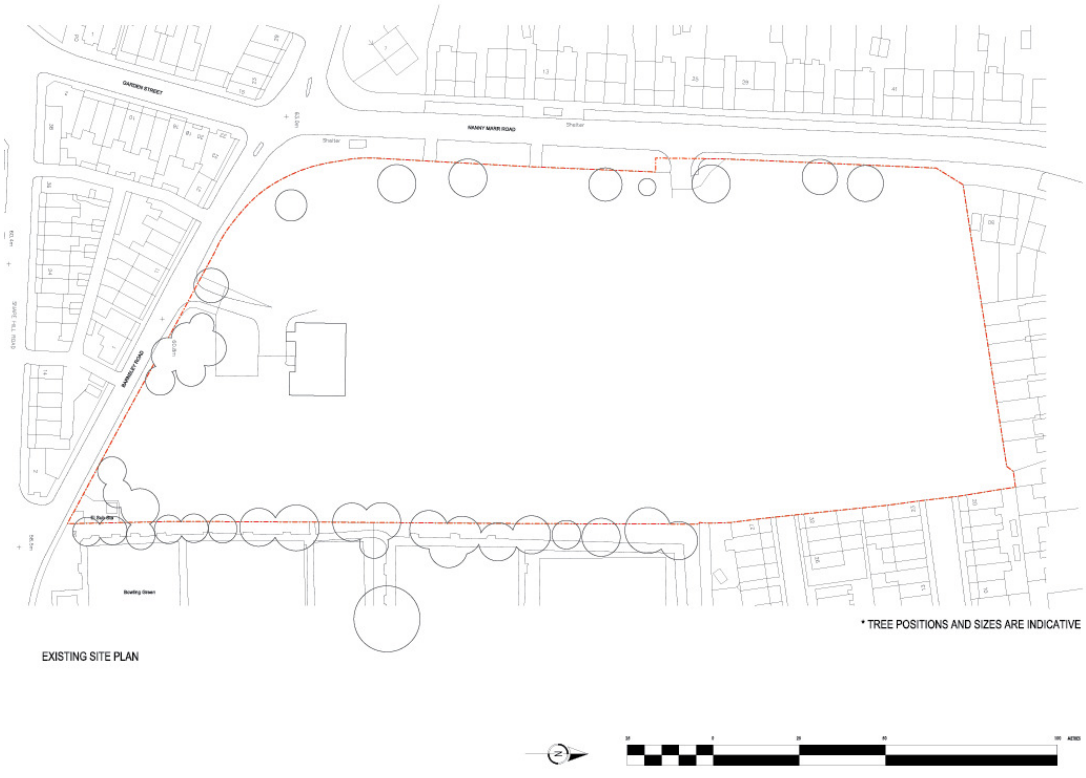
1. Brooks Ecological was commissioned by Peveril Securities Ltd to carry out a bat roost potential survey of the former site of Foulstone School, Nanny Marr Road, Darfield, Barnsley, South Yorkshire (SE 415 044). This report has been re-assigned to Partner Construction Ltd.

2. The application site is a large plot of recently disturbed ground resulting from site clearance. A single building and small number of trees remain on site.

Proposals

3. The proposals are to demolish the one remaining building on site to make way for re-development.

Figure 1 Site boundary as provided.



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

Method

5. A thorough daytime inspection of the site was made in September 2014 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.

6. 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.

7. Survey and assessment was directed by Peter Brooks BSc (Hons) MA, MCIEEM CEnv. Peter has over 15 years experience of carrying out bat surveys in a professional capacity and holds a Natural England license in respect of bats and is a Natural England Roost Warden.

Records

8. The local records provider; South Yorkshire Bat Group was asked to provide all records within 1km of the application site.

9. A number of records were returned from the search, including 5 records of roosts providing various levels of information. The closest of these relates to a pipistrelle species roost containing 104 individuals, in a house c.450m east, this record is somewhat dated being from 1991. The most recent roost record is that of a pipistrelle maternity roost of 36 individuals, recorded 1.2km south of the site in 2012.

10. Additional roost records include a count of 63 individuals of an indeterminate species 1.3km north west, recorded in 1999, 114 pipistrelle bats recorded in 1997, 630m north east, and 85 pipistrelles recorded 640m east of the site in 2001.

11. Notable additional records include a count of approximately 30 foraging daubentons, at a pond 1.3km south east of the site. A survey undertaken in 2010 at a site 1.7km south of the site recorded common and soprano pipistrelle and noctule bats. Survey of a separate site also c.1.7km south recorded over several years saw the drop of daubentons bats from 9 in 1999 to zero in 2002.

12. These records, being distant, of common species or species which would be unlikely to occur within the application site, do not suggest a heightened risk of bats being present within the application site.

Site Context

13. The application site occupies a large plot of brown field land, which once supported a number of school buildings. These have since been demolished leaving only a single building standing.

14. Since being cleared, a community of secondary vegetation has colonised the footprints of former buildings. Amenity space is found to the east, with allotments to the west, and low density residential development to the north and south; the surrounding green space and garden plots provide good connectivity between the site and the wider area.

15. The wider landscape comprises predominantly of arable farmland, with scattered pockets of woodland and villages. Wombwell Ings Nature Reserve lies c.500m to the south of the site; this nature reserve with its large still water

bodies, and likely heightened levels of invertebrate activity, will provide excellent foraging opportunities for bats.

16. The River Dearne runs north to south c.500m to the east of the site providing a level of connectivity to Old Moor Nature Reserve c.1.7km to the south east. A dismantled railway also roughly follows the path of the river. The wooded areas associated with these features would provide a further linear corridor for the movement of bats in the area, as well as foraging opportunities in itself.

17. The local landscape can therefore be seen to provide large areas of excellent foraging habitat, with numerous strong linear corridors connecting these areas to the site.

Results

Buildings

18. The single remaining building is of single storey brick cavity wall construction, with a flat felt roof and wooden barge boards running along the verges.

Figure 2 General view of the property

19. The walls of the property are in very good condition, with mortar in place and intact, providing no access into the cavity walls for roosting bats.

20. The wooden barge boards located along the verges have small blind cavities where they are slightly displaced from the external walls. These shallow gaps terminate where the barge board is mounted to a wooden baton which prevents bats access to a suitable cavity.

Figure 3

Gap between slightly lifted barge board and walls.

21. The flat felt roof is in good condition, and where the felt wraps around on the verges, it sits flush to the barge boards and offers no potential for roosting bats.

Trees

22. A number of semi-mature trees are found on site which are also assessed for their potential to support roosting bats.

Figure 4

General view of the site.

Figure 5

Example of trees on site.

23. None of the trees were found to support any features which would be considered suitable for roosting bats.

24. A single tree on the southern boundary is partially covered with ivy. This on occasion can obscure features on the trees, or create crevices where the stems of the ivy meet the trunk. Close inspection of these trees revealed them to be of a similar age and growth form to others on site, and the ivy to be

fairly young. It is therefore considered very unlikely that they will possess suitable features for roosting bats.

Figure 6

View of ivy covered tree on southern boundary.

Table 3 Bat Roosting Potential checklist

Feature	**Notes**
Walls	No accessible cavities
Roof	Flat felt roof in good condition, with felt on verges sitting flush to exterior walls.
Ridge tiles	N/A
Eaves	N/A
Flashing	Sealed
Basements/cellars	Not found
Trees	No features identified suitable for roosting.

Evaluation and recommendations

25. Despite the building occupying a location which is likely to be attractive to local bats, nature of its construction and general good repair together make it difficult for bats to find access into suitable crevices or voids.

26. The building is therefore assessed as having *very limited* roosting potential, and as such demolition can proceed with very low risk of impacting on local bat populations.

27. Trees on site are classified as having *very limited* roosting potential. Should removal of these trees be necessary, it can proceed with very low risk of impacting on roosting bats.

General advice

28. 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 during the conversion, 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 should also be contacted to seek advice.

Enhancement

29. The UK government's guidance on nature conservation in relation to development (NPPF) makes it clear that opportunities should be sought through their planning system to use development as an opportunity to enhance sites for wildlife where possible.

30. Any new build on site could easily include features to attract roosting and this can be designed without creating conflicts with the home owner. Roosting features could be bespoke and designed in by the architect in cooperation with an ecologist or 'off the peg' bat boxes could be erected.

References

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

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

JNCC (2004) The Bat Workers Manual. 3rd Edition.

ODPM circular 06/05 (2005) Biodiversity and Geological Conservation - Statutory Obligations and Their Impact Within the Planning System http://www.communities.gov.uk/publications/planningandbuilding/circularbiodiversity

Conservation of Habitats and Species Regulations 2010 http://www.legislation.gov.uk/uksi/2010/490/contents/made