BE Brooks Ecological Ltd

Bat Roost Potential Survey.
Land off Longcar Lane, Barnsley,
South Yorkshire.

Report reference: BE-R-0195-01
June 2007

Report Title:	Bat Roost Potential Survey, land off Longcar Lane, Barnsley, South Yorkshire
Report Reference:	BE-R-0195-01

Reviewed and approved for issue
Peter James Brooks BSc (Hons) MA MIEEM CEnv
Director



Date 07.06.07

High Street House, 2 High Street, Yeadon, Leeds, LS19 7PP
Phone **0113 250 6101**
Fax **0113 250 6944**
Email: pjb@brooks-ecological.co.uk

Registered in England Number 5351418

Introduction

Brooks Ecological was commissioned to produce a bat roost potential survey of the buildings of Longcar Lane Primary School, adjacent garage complex and several trees within the sites. The site is off Longcar Lane, Barnsley, South Yorkshire. The site is surrounded by dense residential settlement which opens to agricultural land within 1km to the south of the site.

Bats are afforded full protection under The Wildlife and Countryside Act (1981) plus amendments, and The Conservation (Natural Habitats &c.) Regulations (1994). Under these Acts it is an offence among others, to recklessly kill, injure or disturb bats when in their place of shelter or refuge (roost). It is also an offence to destroy or obstruct a roost even if bats are not in occupancy at the time of the action.

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

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
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

Method

A thorough daytime inspection of the exterior of the buildings and trees was made in June 2007 in order to look for evidence of bats and assess bat roosting potential. Survey work was directed by Peter Brooks BA (Hons) MSc MIEEM CEnv. Peter is a licensed bat surveyor (20070530) with many years experience of bat survey and mitigation design.

Evidence of bats may take the form of droppings, feeding remains, live bats, dead bats, stains on timber from the oils in bats' fur and claw marks made by bats regularly roosting in the same location.

Bat roosting potential of the buildings was classified according to the following criteria set out in table 2, developed with reference to the Bat Mitigation Guidelines (2004) and Bat Workers Manual (2004);

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.

Results

Main school buildings

The primary school facility complex has three main single story stone buildings with newly constructed stone and red brick flat roofed extensions. The brickwork is in a good state of repair and no pointing was missing. The buildings have UPVC double glazed windows which are well sealed with the brickwork. There were a series of ventilation hatches on the gable ends of these buildings which offer access into the loft space. Several were boarded with wood or Perspex sheeting; the wood covered hatches were not well sealed and could provide access into the roof space. A small number of the hatches were open and only covered by a wire meshing wide enough to allow access to bats (see figure one). This form of entry into the building would not be favoured by bats as they cannot fly directly to a roost point but would have to navigate through the mesh. Although bats could fit through the mesh it is unlikely to be used by bats as it is an inconvenient entry point.

The roofs of these buildings are a series of flat felted roofs and double pitched clay tiled. The central building in this complex has a bell tower in the centre. This is a larger construction than the surrounding buildings. It is covered with a wire mesh of finer grade than that covering the gable end hatches. Bats would not be able to gain access through this space. The roofs of all three buildings are in a moderate state of repair but several tiles missing and small gaps within the ridge beam pointing, all could provide access for bats in to the roof space.

The roofs design is such that they have overhanging wooden eaves and the roof is not flush with the buildings brickwork and would provide ideal access for bats to enter (Figure 2). Birds were noted to be using the area under these eaves at the rear of the building with the clock tower, highlighting its potential accessibility for bats.

No evidence of bats was found on the exterior of the building. However, the recent rain and the maintenance of the school yard could easily have removed such evidence and roosting bats cannot be ruled out at this stage.

Red brick school building

To the east of the main school complex is another school building which appears to have been converted from use as a stable block. This is a two storey red brick building with the same roof structure as the previous three buildings. Tiles were observed to be missing and pointing was missing at places along the ridge tiles. In areas the overhanging eaves were heavily cobwebbed, unlike the main three school buildings which were not cobwebbed.

Adjacent to this building is a small utility building. This is a single storey red brick construction with double pitched clay roof tiles. This is much newer than the previous buildings and consequently in a much better state of repair. It is well sealed and there are no entry points into this building for roosting bats.

Garage complex

Adjacent to the school complex, within the application site boundary, off Blenheim Road is a small garage complex which was also assessed for roosting bats. The main complex contains 6 single storey brick and sheet concrete garages with flat corrugated asbestos sheet roofs. There was easy access into the interior of these buildings. They would not be favoured by bats as a roosting site as the flat unlined roofs would be subject to high temperature fluctuations and drafts making them unsuitable for roosts.

Within the garage complex is a Victorian era two storey red brick garage building. The ground floor is used as garage storage and the first storey as living / office accommodation. This has a double pitch clay tile roof which is in good condition with no tiles missing and the pointing in good repair on the ridge tiles. at the rear of the property the guttering overlaps with the top of the wall preventing access however at the front the guttering is proud of the wall and allows access underneath into the roof space.

The doors and windows of this property are wood and in poor state of repair. The lintel stones of the first floor windows and doors are not flush with the windows and could provide access into the cavity space. The windows would provide

difficult access as bats could not adhere to the glass surface on entry however the wooden doors may provide more suitable access.

Trees

The trees within the application site were assessed for bat roosting potential, particular attention was paid to those trees earmarked for removal. These trees were identified in figure 8016/TT provided by JCA Ltd.

Trees 28, 37 and 39 on plan 8016/TT are earmarked for removal. Of which, tree 39, a dead silver birch tree is the only tree that would provide suitable bat roost potential. This tree has a number of small holes and areas of peeling bark which could be used by transient bats as temporary roost sites but unlikely to be used as a breeding site. Trees 28 and 37 did not have suitable roost locations for bats.

Further reference is made with respect to trees 50 and 23. Neither is earmarked for removal; however these trees both support suitable roosting locations. Tree 50 has a large and dense thicket of ivy suitable for roosting bats whilst tree 23 contains several holes also suitable for use by bat species.

Evaluation and Recommendations

The majority of buildings on site have been classified as having *Moderate* potential to support bats based on the evidence presented here. Tree 39 also has *Moderate* potential support occasional roosting bats. Table 2 summarises the roosting potential of the buildings on site.

Table 2. bat roosting potential within the site buildings

Plot	Roost Potential	Summary and Recommendations
Main school complex	*Moderate*	This building has a number of features suitable for roosting bats. These include: • Overhanging eaves not flush with brickwork • Missing tiles and poorly pointed ridge beams • Open access to roof space through gable end hatches
Red brick school building	*Moderate*	This building has also been assessed as moderate for the similar roof structure to that of the main school complex, allowing access to the roof space, coupled with the missing roof tiles and poor pointing of the ridge beam tiles.
Red brick utility building	*None*	This small utility block is well sealed and does not provide any bat roosting potential.
Garage buildings	*Very Limited*	The series of garage buildings, although provide access for bats are likely to be affected by temperature fluctuations and drafts and so not favoured by roosting bats.
Two storey red brick garage building	*Moderate*	Easy access to the roof space can be found underneath the guttering on the front side of this building. Possible access could be gained into the cavity space between the windows and lintel stones of the windows and doors on the first floor.

Buildings

It is recommended that the site be further surveyed during 2007 (between June and August). This will allow evening emergence survey to be carried out, and will provide the clearer picture of the building's use by bats. If bats are found to be using the buildings of this complex it is likely that any demolition or building works will require a DEFRA/Natural England License.

Tree 39

It is likely that this tree is only used as a short term roost by transient bat species and would not be used as a hibernation roost. Further inspection will be required before this tree can be removed An endoscope survey by a licensed bat surveyor is recommended. Safe access at height will be required to all parts of the tree and a mechanical "cherry picker" is recommended for this purpose.

Trees 37 and 28 have been assessed as having No bat roost potential and can be removed without further inspection. Although not earmarked for removal, trees 50 and 23 provide Moderate roost potential and further surveys will be required if any alterations to plans require their removal.

Although the utility building and trees 37 and 28 have not been assessed as having high bat roosting potential, site workers should always be made aware of the potential to find bats in buildings and trees. If a bat is found during development, works should stop immediately and a professional ecologist and/or the bat helpline on 0845 1300 228 should be contacted. The local office of English Nature should also be contacted to seek advice.

Figure 1: gable end hatch with wire mesh



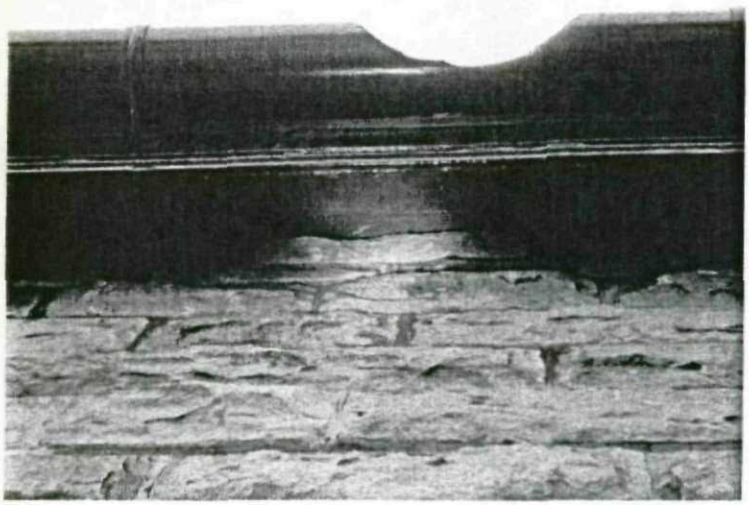


Figure 2: Overhanging eaves on school buildings

References

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

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

Arboriculture survey: Figure 8016/TT JCA Ltd