Birkwood Primary School, Barnsley

Bat Survey Report

02/09/2022

ER-6406-01 Bat Survey

Report reference	**ER-6406-01 Bat Survey**
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Date	02/09/2022

Summary Statement

Based on the features present, certain areas (highlighted within this report) at Birkwood Primary School were assessed as providing low bat roost suitability. In line with guidance, a single nocturnal survey was recommended to ascertain the status of roosting.

Subsequent bat emergence survey has confirmed the likely absence of roosting bats within the proposed development area.

Introduction

1. Brooks Ecological was commissioned by Barnsley Metropolitan Borough Council to carry out a bat roost suitability assessment at Birkwood Primary School, Cudworth, Barnsley, S72 8HG (grid reference SE 3924 0818).

2. The application site, 'the Site', comprises the sections of Birkwood Primary School highlighted in Figure 1 below.

3. Proposals are for extensive refurbishment across the survey area as well as the construction of an extension to the southwest.

Figure 1 The Site boundary (red line).

Method

4. A thorough daytime inspection of the site was made in August 2022 to look for evidence of bats and assess suitability for roosting. 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.

5. Bat roosting potential of the building was classified according to the following criteria set out in Table 1, taken from the Bat Conservation Trust Good Practice Guidelines (2016).

Table 1 Bat Roosting Suitability of Buildings and Trees.

Suitability	Criteria
Negligible	Negligible habitat features on site likely to be used by roosting bats.
Low	A structure with one or more potential roost sites that could be used by individual bats opportunistically. However, these potential roost sites do not provide enough space, shelter, protection, appropriate conditions, and/or suitable surrounding habitat to be used on a regular basis or by a larger number of bats (i.e. unlikely to be suitable for maternity or hibernation). A tree of sufficient size and age to contain PRFs but with none seen from the ground or features seen with only very limited roosting potential.
Moderate	A structure or tree with one or more potential roost sites that could be used due to their size, shelter, protection, conditions, and surrounding habitat but unlikely to support a roost of high conservation status (with respect to roost type only - the assessments in this table are made irrespective of species conservation status, which is established after presence is confirmed).
High	A structure or tree with one or more potential roost sites that are obviously suitable for use by larger numbers of bats on a more regular basis and potentially for longer periods of time due to their size, shelter, protections, conditions and surrounding habitats.

Box 1 *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.

Box 2 *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 Habitats 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.

Records

6. The local records provider, in this case South Yorkshire Bat Group (SYBG), was asked to provide all records from within a 2km radius of the site.

7. Thirty-three records have been returned including seven relating to roosts, all of pipistrelle species. The most notable, and the only one to occur within 500m of the school, is that of a possible soprano pipistrelle day roost recorded within residential development c.250m west in 2012.

EPSM Licences

8. A search was made for granted EPSM (European Protected Species Mitigation) licences within 1km of the proposed development. None were found.

National, regional and local Status

9. The application Site lies within the natural range of 10 species of bat. These are summarised in the table below, together with a note on each species national status, relative abundance and status within the 1km search area.

Table 2 List of bat species known to occur in South Yorkshire, ordered in increasing level of significance to their national proportion.

Species	National Status	Within 1km radius	
		Recorded	Roosts known
Common pipistrelles *Pipistrellus pipistrellus*	Common and increasing	Yes	Yes
Soprano pipistrelle *P. pygmaeus*	Common and stable	Yes	Yes
Daubenton's *Myotis daubentonii*	Common and increasing	-	-
Brown long-eared *Plecotus auritus*	Common and stable	-	-
Natterer's *M. nattereri*	Common and increasing	-	-
Whiskered *M. mystacinus*	Uncommon but stable	-	-
Noctule *Nyctalus noctula*	Uncommon but stable	Yes	-
Brandt's *M. brandtii*	Uncommon but stable	-	-
Leisler's *Nyctalus leisleri*	Uncommon and trend unknown	-	-
Nathusius' Pipistrelle *P. nathusii*	Uncommon but stable	Possible	-

Site Context

10. The Site is located within Cudworth, an urban village approximately 6km northeast of Barnsley.

11. The Site lies to the south of the village within residential development. Beyond these urban limits arable farmland extends to the south and east, punctuated by villages and industry. Pockets of broadleaved woodland to the east present the only areas of better structured habitat within the wider landscape, sharing no links with the Site.

12. No major linear features lie within proximity of the Site, with the closest being a railway line c.700 southwest at its closest point, and the River Dearne c.1km south.

Figure 2 Site context.

Survey Results

14. The school consists of a series of single storey redbrick buildings of slightly varying heights, adjacent one another or linked via connecting corridors and surrounding a central playground.

Figure 3 Typical view of surveyed building.

15. Roofs across the survey area are either flat or have a very shallow pitch. The majority are roofed with roofing felt which appears well sealed along its edges. A more recent extension is found to the south with an interlocking tile roof, in good condition throughout.

Figure 4 Showing typical felt roof (left) and tile roof of more recent extension (right).

16. Plastic guttering rests directly below the eaves and adjacent the wooden/ plastic soffit box partway along some of the roofs. In certain locations to the north, a gap is noted where the guttering sits away from the soffit, presenting a potential roost feature (PRF) suitable for a small number of crevice-dwelling bats.

Figure 5 Showing gap behind guttering.

17. Wooden and plastic soffits run the perimeter of the school. For the most part these are in good condition, resting flat against adjacent brickwork. A single exception is noted close to the linking corridor at school's centre. A small gap in evident suitable for roosting.

Figure 6 Showing typical sealed plastic soffit (left) and gap to wooden soffit (right).

18. Two holes are noted in the brickwork of the boiler room to the Site's north. These could not be examined closely and could lead to wall cavities beyond, presenting a PRF. The brickwork across the rest of the survey area is in good condition, with minimal signs of weathering and mortar intact.

19. Windows and doors are mostly uPVC framed with some wooden in older parts of the school. All are in fine condition and rest flush with surrounding brickwork.

Figure 7 Showing hole in wall of boiler room (left) and typical view of uPVC windows (right).

20. A metal air conditioning unit sits atop the boiler room. The unit has no PRFs and the thermal properties of the metal casing make it unsuitable for roosting. To its south, an unused wooden clad water tower rises above the boiler room. Cladding is well-sealed, with an outlet pipe the only possible point on ingress into the tower for bats. The potential for bats to access the water tower via this feature is very low.

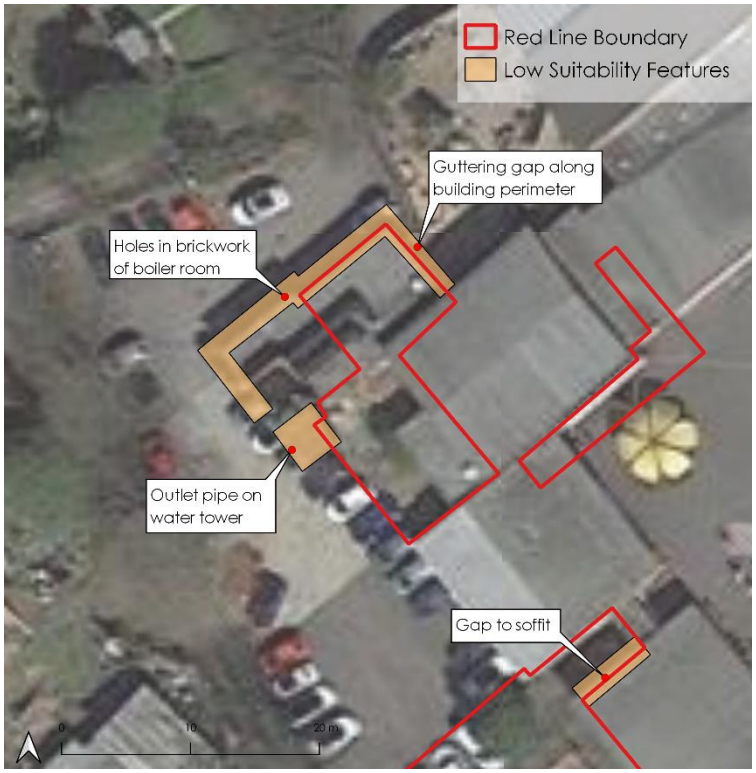
Figure 8 Showing air conditioning unit atop boiler room (left) and outlet pipe to water tower (right).

Summary & Recommendations

21. Based on the features outlined in Figure 9 below, the highlighted areas at Birkwood Primary School are assessed as providing <u>low</u> bat roost suitability.

22. In line with best practice guidelines (Bat Conservation Trust, 2016), further survey should be carried out to establish if potential roost features are being used by bats.

Figure 9 Showing location of features with bat roost suitability.



Bat Emergence Survey

23. Subsequent to recommendations set out in the Bat Roost Suitability Assessment section of this report, Brooks Ecological was commissioned to carry out Bat Emergence Survey of the highlighted features at Birkwood Primary School, Barnsley.

Method

24. 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 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 (2016). However, these guidelines are not prescriptive, and we approach each site individually as required using our professional judgement and significant experience base.
25. In this case, a single visit with a team of three surveyors was deemed necessary to fully evaluate the potential use of the Site for roosting.
26. Surveys were carried out with surveyors positioned around the building to cover all aspects where bats could potentially emerge or return, and to establish activity levels around the Site.
27. The surveyors, using heterodyne detectors, were in place at least 15 minutes before sunset 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 conditions.

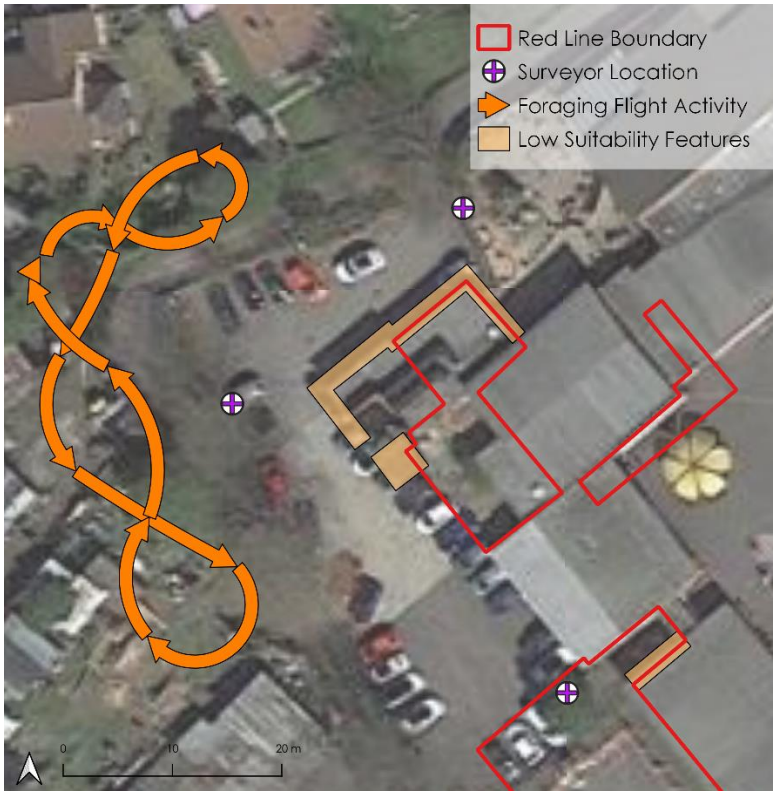
Date	Survey Type	Temp. Start/End	Weather
30.08.2022	Emergence	17/16°C	Dry. 90% cloud. Gentle breeze (B3).

Survey Results

Emergence – 30th August 2022 (sunset 20:01)

28. Surveyors were positioned to cover all features with bat roost suitability.
29. Overall, bat activity was considered to be low, with contacts being made by solitary bats.
30. The first contact was logged at 20:21 when a common pipistrelle was heard foraging around off-site trees to the northwest. This continued up until 20:48, after which no further bats were recorded.
31. No roosts were identified or suspected on Site.

Figure 10 Summary of bat activity observed during emergence survey.



Evaluation & Conclusion

32. Survey has demonstrated a likely absence of roosting within the re-development area at Birkwood Primary School, and as such, the proposed works present little risk of impacting upon bats or their roosts.

Standard Precaution

33. Although no evidence of roosting has been found and the likely absence of roosting has been concluded, it must be noted that bats frequently move between roost sites, can be very casual in their choice of roosting location and can turn up unexpectedly at any time.

34. On this basis the developer should always be mindful of bats as a potential constraint and have a protocol in place should any bats be seen or suspected during works: works should stop, a suitably licenced ecologist consulted, and their advice followed.

Enhancement

35. The NPPF puts emphasis on development delivering biodiversity enhancement above and beyond mitigating or compensating for any impacts. To this end the new development could include integral bat roost features to offer suitable habitat in the long term.

References

Bat Conservation Trust (2016) *Bat Surveys for Professional Ecologists – Good Practice Guidelines*

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

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