

LEIGHTON PARK SCHOOL

FIELD HOUSE, LEIGHTON PARK SCHOOL, READING

PRELIMINARY BAT ROOST ASSESSMENT & BAT ACTIVITY SURVEY REPORT

DECEMBER 2024



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1	-	Draft for Review	24 May 2024	Daniel Jones (Associate Ecologist)	Dr M. Watts (Director)	M. Watts
2	Inclusion of bat activity survey results	Second Draft	11 October 2024	Daniel Jones (Associate Ecologist)	Dr. M Watts (Director)	M. WATTS
3	Minor text updates to paragraphs 3.9, 3.11, 5.2 and 5.5	For submission	16 December 2024	Daniel Jones (Associate Ecologist)		

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1.0 INTRODUCTION

- 1.1 Soltys Brewster Ecology were commissioned by Leighton Park School to undertake a preliminary bat roost assessment (PRA) of the Field House building located within the school grounds. The existing building is proposed for demolition to allow for redevelopment of the site and the construction of a new sports hall. To inform a planning application for the demolition, survey work is required to establish the presence/absence of protected species. A separate planning application is to be prepared and submitted relating to the new build.
- 1.2 The wider school site is located at Shinfield Road, Reading RG2 7DE. The existing field house and connected residential unit is situated along the eastern boundary of the school grounds, adjacent to Pepper Lane. The proposals will involve the demolition of the existing field house and connected residential unit. A plan showing the existing site plan is included in Appendix I.
- 1.3 The current report presents the findings of an ecological desk study and preliminary bat roost assessment undertaken at the site in April 2024 and identifies any ecological constraints or opportunities associated with the proposed demolition.
- 1.4 Following the findings of the preliminary bat roost assessment, subsequent bat activity surveys were undertaken at the Field House building between June – August 2024 to establish the likely presence/absence of roosting bats. The current report has been updated to include the findings of the bat activity surveys and details of appropriate mitigation measures and licencing requirements.

2.0 METHODOLOGY

- 2.1 In order to establish the baseline ecological conditions at the site, a combination of desk-based consultation and building inspection survey was undertaken in April 2024, with subsequent bat activity surveys undertaken between June – August 2024. The scope of survey work was based on the current best practice survey guidelines (BCT, 2023).

Desk study

- 2.2 The desk study involved consultation with the Thames Valley Environmental Records Centre (TVERC) to identify any records of bats and birds within 1km. A summary plan of the data provided is included in Appendix II.

Preliminary Roost Assessment (PRA)

- 2.3 The fieldwork was undertaken on 25th April 2024 by a suitably experienced & licensed ecologist¹ and comprised of an internal and external inspection of the existing Field House building and connected residential unit to search for evidence of bats or nesting birds.
- 2.4 The external inspection of the field house building involved the use of binoculars to identify possible access/entry points into the building and aimed to identify any evidence of use by bats such as droppings, staining, prey remains, scratch marks, noise etc. The survey was undertaken from ground-level around the exterior of the building, assisted by the use of close-focus binoculars. The survey also included an inspection of the internal loft spaces of the field house, where accessible.
- 2.5 The surveyor searched for roost evidence (e.g., live/dead bats, droppings, staining, scratch marks, noise, etc.) as described above and the scope of the bat inspection survey, including timing, survey effort etc., was based on guidelines published by the Bat Conservation Trust (BCT, 2023). The potential of the building and trees within the site boundary to support roosting bats was determined based on the following categories (BCT 2023):

Trees:

- **PRF-I** – Potential Roost Feature (PRF) is only suitable for individual bats or very small numbers of bats either due to their size or lack of suitable surrounding habitats;
- **PRF-M** – PRF is suitable for multiple bats and may therefore be used by a maternity colony;
- **Negligible** – Negligible habitat features on site likely to be used by roosting bat.

¹Associate Member of the Chartered Institute of Ecology & Environmental Management (CIEEM) & Natural England bat licence holder (Ref: 2022-10762-CL17-BAT)

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Buildings:

- **Known or confirmed roost.**
- **High** - A structure 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, protection, conditions and surrounding habitat. These structures have the potential to support high conservation status roosts, e.g. maternity or classic cool/stable hibernation site.
- **Moderate** – A structure with one or more potential roost sites that could be used by bats 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, such as maternity and hibernation – the categorisation described in this list is made irrespective of species conservation status, which is established after the presence is confirmed).
- **Low** – A structure with one or more potential roost sites that could be used by individual bats opportunistically at any time of the year. 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 larger numbers of bats (i.e. unlikely to be suitable for maternity and not a classic cool/stable hibernation site but could be used by individual hibernating bats).
- **Negligible** – No obvious habitat features on site likely to be used by roosting bats; however, a small element of uncertainty remains as bats can use small and apparently unsuitable features on occasion.
- **None** – No habitat features on site likely to be used by any roosting bats at any time of the year (i.e. a complete absence of crevices/suitable shelter at all ground/underground levels).

2.6 Any evidence of use of the building or surrounding trees by other protected species such as nesting birds was also noted.

Bat Activity Surveys

2.7 Three dusk emergence surveys of the building were undertaken on 25th June, 23rd July and 20th August 2024, with three or four surveyors present on each survey occasion. The surveys commenced 15 minutes before sunset and extended to 90 minutes following sunset, as per best practice guidelines (BCT, 2023). All surveys were conducted under suitable environmental conditions e.g., temperatures >10°C, no rain, light wind (see Table 1).

- 2.8 The dusk surveys were conducted by suitably experienced and qualified surveyors (with two licenced ecologists present on each survey occasion²). Bat calls were recorded on a combination of Anabat units, Echo Meter Touch 2 and Peersonic units, with bat calls later analysed in Anabat Insight Pro.
- 2.9 Night vision aids (infra-red Nightfox Whisker units) were also used on each survey occasion. These were positioned at surveyor locations 1, 2 and 3 (see plan in Appendix IV). The night vision cameras recorded for the entirety of the survey visit and later analysed for any emergencies.

Table 1: Summary of bat survey conditions.

Date	Sunset	Start time: End time:	Temperature	Conditions	Other comments	Surveyors present
25/06/2024	21:15	21:00 22:45	24	Clear skies, no rain, calm	Security lighting (see paragraph 2.11)	3no.
23/07/2024	21:05	20:50 22:35	19	Overcast, no rain, calm	n/a	3no.
20/08/2024	20:05	19:50 21:30	16	Clear skies, no rain, breezy	Ended early due to school closing gates at 21:30	4no.

Limitations

- 2.10 No access was available into the loft space of the southern or eastern wing of the main building. At the time of the PRA survey (April 2024) students were conducting exams in this area of the building.
- 2.11 During the first bat survey visit on 25th June students were still living within the field house building. As a result, the motion sensitive security lighting on the exterior of the building was regularly being triggered – first turning on at 21:36 (11 minutes after sunset) and continuing past 22:00. The lights obstructed the view of the building for surveyors at positions 1 and 2, as well as impacting the image on the infra-red cameras. As such, there is a low risk that potential emergencies may have been missed during this time frame.
- 2.12 The constraints above are not considered to have impacted the overall findings of the surveys, as the following two dusk emergence surveys were unaffected by the security lighting as the field house building was vacant for these dates.

² Licence references: NRW licences S093420/1 & S094325/1, Natural England Class Licence: 2022-10762-CL17-BAT.
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3.0 RESULTS

Desk Study

- 3.1 Consultation with TVERC returned >350no. recent bat records within 2km of the site, including 40no. bat roost records. The nearest of which is a Pipistrelle bat roost located approx. 180m south-east of the site. The data search also included a number of Common and Soprano Pipistrelle *Pipistrellus pipistrellus/ pygmaeus* and Brown Long-Eared bat *Plecotus auritus* roosts associated with the buildings at Reading University located between approx. 650 – 950m from the site. There were also records of foraging and commuting Common, Soprano and Nathusius' Pipistrelle *P. nathusii*, Brown Long-Eared bat, Noctule *Nyctalus noctula*, Serotine *Eptesicus serotinus*, Daubenton's bat *Myotis daubentonii* and other unidentified *Myotis* species within 1km of the site.
- 3.2 The data search also included an extensive list of recent bird records within 1km of the site, the majority of which were associated with the habitats at Whiteknights Park at Reading University. Species of relevance to the demolition proposals recorded within 1km of the site include Black-Headed Gull *Chroicocephalus ridibundus*, Common Gull *Larus canus*, Lesser Black-Backed Gull *Larus fuscus*, House Sparrow *Passer domesticus*, House Martin *Delichon urbicum* and Starling *Sturnus vulgaris*. Summary plans illustrating the TVERC results are included in Appendix II.

Preliminary Roost Assessment

- 3.3 A summary of preliminary bat roost assessment is provided in the following section and Table 2 with a survey plan included in Appendix III.

Field House

- 3.4 The main Field House building comprises of three wings. The northern and southern wing are three-storey, with the eastern wing being two-storey (all of which have pitched roofs). The building is constructed from brick with PVC and wooden window panels, a combination of wooden and Asbestos roof features and concrete roof tiles. The building has had various extensions off the eastern wing, all of which are single-storey with a flat felt roof.
- 3.5 The Field House building is connected to a two-storey residential unit to the east. This building is of similar construction to above. There is also a separate single-storey garage within the surrounding grounds.
- 3.6 Overall, the Field House building was found to be in a poor condition. There are numerous signs of damage to the exterior roof features (e.g., guttering, fascia and soffit boards) which may provide access for bats into the internal loft space, under the roof tiles or into the eaves. The external inspection identified a number of potential

bat roost features (PRFs) associated with missing/damaged roof features, which are summarised in Table 2. In particular the PRFs located at Target Notes 1, 6 & 7 provide bats with direct clear access into the internal loft space.

- 3.7 The internal inspection included a search of the loft spaces for any evidence of roosting bats or nesting birds. At the time of the current survey the loft space above the eastern wing (Loft Space 2 on the plan included in Appendix III) was not accessible due to school examinations, neither was the section of loft above the southern wing (this was deemed not safe). A search of the loft space above the northern wing of the main building did not find any evidence to indicate the presence of roosting bats (e.g., live/dead bats, droppings or feeding remains). The loft comprises of timber and metal roof beams with bitumen felt and insulation. The inspection of the loft space above the residential unit also did not find any evidence of roosting bats. However, access to the gable ends was restricted due to the presence of a water tank.
- 3.8 The school grounds surrounding the Field House comprise of amenity grassland, mature/over-mature trees and woodland corridor (located along Pepper Lane). The habitats were considered suitable to support locally foraging and commuting bat species.
- 3.9 Based on the condition of the building, the number/size of PRFs present, the restrictions on access to roof voids and surrounding habitats the structure was assessed to have High Potential to support roosting bats, on a precautionary basis, as per current best practice guidelines (BCT, 2023). Some of the roost features were considered suitable to support larger numbers of roosting bats on a regular basis (e.g., maternity roost). The building was considered of lower suitability to support hibernating bats – the internal loft space is large and, based on the poor condition of the roof and existing gaps/access points, is unlikely to maintain cool stable conditions over the winter period.
- 3.10 No evidence of nesting birds using the building was found during the survey. However, the features on the building were considered suitable to support building/roof nesting species.

Trees

- 3.11 The current survey included a ground-level assessment (GLA) of trees (those located within close proximity to the building) to support roosting bats. However, it is understood that none of these trees will be removed as part of the demolition works. Trees T10 and T15, as shown on the Arboricultural impact assessment, were subject to a GLA. Tree T10 is an ornamental Purple Leaf Maple *Acer platanoides* and T15 is Weeping Willow *Salix alba x babylonica* = *Salix x sepulcralis* agg. The Willow tree (T15) is a large specimen but was not found to support any obvious PRFs from ground-view, apart from shallow bark fissures and a small shallow knot-hole.

The tree was assessed to be of PRF-I (Low) potential to support roosting bats. The purple leaf maple tree (T10) did not support any PRFs and was considered to be of Negligible potential to support roosting bats.

Table 2: Potential Bat Roost Features Description and Photographs

PRF	Description
1	Damaged/missing fascia and soffit boards at south-west corner of the main building. Potential bat access into loft space and beneath roof tiles. The building also contains a number of small crevices at the gable end. 
2	Missing guttering and damage to fascia, leading to access under roof tiles. Located along eastern elevation of southern wing. 
3	Similar to PRF 2 above, missing guttering and fascia leading to access under roof tiles.

		
4	Minor damage and wear to barge boards on gable end of eastern wing of the main building. Small gap on gable end at apex with potential bat access into loft space. 	
5	Raised roof tiles where bitumen felt flat roof has been installed. Located on south-western corner of residential unit connected to field house. 	

6	Similar to PRF 1, damaged/missing fascia and soffit boards at north-west corner of the main building. Potential bat access into loft space and beneath roof tiles. 
7	Missing soffit board located along eastern elevation next to chimney stack. Direct access into loft space (confirmed by internal inspection). Old wasp/hornet nest in loft near access point. 
8	Damaged soffit board located on northern elevation of eastern wing of the main building. Board is dipping revealing potential bat access into loft or eaves.

	
9	Minor damage to fascia board at north-west corner of residential unit. Potential bat access into eaves. 
10	As above, minor damage to fascia board at north-east corner of residential unit. Potential bat access into eaves.

	
Loft Space	Description
1	Loft space of three-storey section of main building. Northern and southern wing connected via continuous loft space. Loft space comprises of timber and metal roof beams with bitumen felt and fibrous insulation. Access only possible to northern wing, neither gable end were reached during the internal inspection. Access point at PRF 7 was identified – old wasp/hornet nest in loft near access point. No evidence of roosting bats was found (e.g., live/dead bats, droppings or feeding remains). 

	
2	Loft space of two-storey section of main building (eastern wing). No access during the current survey.
3	Loft space of connected residential unit. Eastern gable end of loft only visible during current survey as location of water tank blocked access into loft space. Loft comprises of timber roof beams with bitumen felt and insulation, as well as water tank. No evidence of bats found.

	
Trees	Description
T10	Purple Leaf Maple (T10) located at entrance to Field House from Pepper Lane. Tree has no obvious PRFs. Assessed to be of Negligible potential to support roosting bats. 
T15	Mature Weeping Willow (T15) located within school grounds. Tree is a large specimen and contains shallow bark fissures and one shallow knot-hole. Assessed to be of PRF-I potential to support roosting bats.



Bat Activity Surveys

3.12 A plan illustrating the positions of bat surveyors is included in Appendix IV.

Survey visit 1 – 25th June 2024

3.13 No bats were seen to emerge from the building during the first survey visit. The first bat call recorded was a Soprano Pipistrelle *Pipistrellus pygmaeus* at 21:37 (12 minutes following sunset) by surveyor 1. However, this bat was seen to fly from the trees to the south-west of the building. During the survey each surveyor recorded regular passes by Common Pipistrelle *Pipistrellus pipistrellus*, Soprano Pipistrelle and Noctule bat *Nyctalus noctula*. Bat foraging activity was focused around the two over-mature Turkey Oaks near surveyor 1 and parkland trees to the south and east of surveyor 3. The surveyor at position 1 also recorded occasional passes by Serotine *Eptesicus serotinus*, Myotis sp. and Brown Long-Eared bat *Plecotus auritus*.

Survey visit 2 – 23rd July 2024

3.14 During the second survey visit the surveyor at position 2 identified a potential pipistrelle bat emergence from the gable end of the building's north-western elevation at 21:10 (5 minutes following sunset). Following a review of the infra-red footage this was considered likely to have emerged from the building, either from an edge roof tile or under the soffit (see Figure 1). No other emergences were seen during the survey.

3.15 Similarly to the first survey visit, the majority of bat foraging and commuting activity was focused around survey positions 1 and 3, again associated with the scattered parkland trees. Surveyors recorded regular passes by Common and Soprano Pipistrelle throughout the survey with occasional or single passes by Noctule, Serotine, Myotis and Brown Long-Eared bat.

Survey visit 3 – 20th August 2024

- 3.16 During the final survey visit the surveyor at position 1 identified two separate Common Pipistrelle emergences from the gable end of the building's south-western elevation – see Figures 2 and 3. The first emergence at 21:25 and the second at 21:35 (10 and 15 minutes following sunset, respectively). No other emergences were seen during the survey.
- 3.17 The level of bat activity recorded was lower than during the previous two survey visits. As before, bat activity was focused around survey positions 1 and 3. This included passes by Common and Soprano Pipistrelle, Noctule, Myotis and Brown Long-Eared bat.

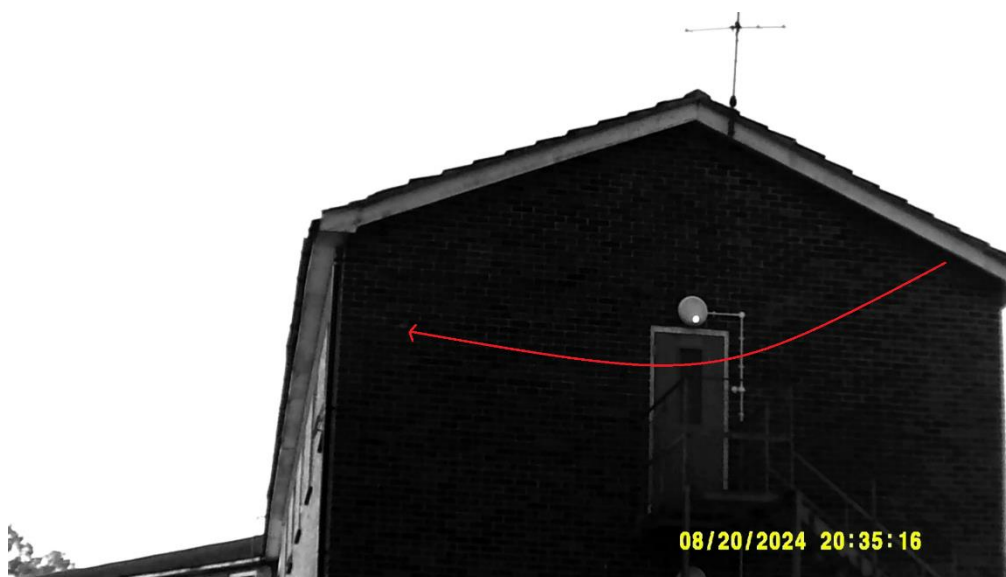
Figure 1 – pipistrelle emergence on 23rd July from north-western elevation.



Figure 2 – common pipistrelle emergence on 20th August from under soffit on south-western elevation.



Figure 3 - common pipistrelle emergence on 20th August from under soffit on south-western elevation.



Assessing the importance of bat roosts

3.18 The survey work identified that the Field House building supports a Common Pipistrelle non-breeding day roost used by small numbers of bats. A peak count of 2no. emergences were recorded on the 20th August survey visit. As per the current Bat Mitigation Guidelines (2023) this type of roost would be considered of Site Importance only.

4.0 LEGISLATION, POLICIES AND PLANS

- 4.1 The following legislation relating to nature conservation and biodiversity are considered of relevance to the current proposals at the property.

Legislation Pertaining to the Protection of Bats

- 4.2 All species of bats in Britain are afforded legal protection under the Wildlife and Countryside Act (1981) (as amended) and the Conservation of Habitats and Species Regulations (2017). This means it is an offence (subject to certain specific exceptions) to deliberately capture or kill/injure a bat, to damage or destroy a place used for shelter or protection (e.g. roosts) or to deliberately disturb a bat in such a place.
- 4.3 Case Law has placed an onus on local planning authorities to satisfy ‘three tests’ under the Conservation of Habitats and Species Regulations when determining applications that could affect European Protected Species. Essentially, these three tests are: i) that there is no satisfactory alternative; ii) that the proposed development is in the over-riding public interest (including those of a social or economic nature) and iii) the proposed development would not adversely affect the Favourable Conservation Status (FCS) of the species locally. Even without the requirement for planning consent in this instance a licence will be required to undertake the works. To obtain a licence from Natural England (NE) the third test will need to be met which means appropriate measures will need to be in place to demonstrate how the works can be achieved without adversely affecting the FCS of the species present.
- 4.4 Bats are also afforded protection within England under the Countryside and Rights of Way Act (2000) and Natural Environment and Rural Communities (NERC) Act (2006).

Legislation Pertaining to the Protection of Birds

- 4.5 Under the Wildlife and Countryside Act (1981) (as amended) all wild birds and their nests are protected against damage or destruction whilst in use or being built.