URBAN EDGE ENVIRONMENTAL CONSULTING

NATURAL PROGRESSION

Goldie Leigh Hospital, 136 Lodge Hill, Welling, Bexley, London

Bat Survey

November 2023

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Bat Survey

Client:	Oxleas NHS Foundation Trust	
Report No.:	UE0594_GoldieLeighHosp_Bats_0_231130	
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CIEEM REGISTERED PRACTICE 2023-2024

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Abbreviations

BCT	Bat Conservation Trust
BMCL	Bat Mitigation Class Licence
CHS	Conservation of Habitats and Species Regulations 2017 (as amended)
EPS	European Protected Species
EPSML	European Protected Species Mitigation Licence
GiGL	Greenspace Information for Greater London CIC
MAGIC	Multi-Agency Geographic Information for the Countryside
NERC	Natural Environment and Rural Communities (Act 2006)
NPPF	National Planning Policy Framework
PEA	Preliminary Ecological Appraisal
PRA	Preliminary Roost Assessment
PRF	Potential Roost Feature
SAC	Special Area of Conservation
SSSI	Site of Special Scientific Interest
TN	Target Note
WCA	Wildlife and Countryside Act 1981 (as amended)

0 Executive Summary

0.1 Introduction

0.1.1 A bat survey was carried out for the site of a proposed open space development at Goldie Leigh Hospital, 136 Lodge Hill, Welling, Bexley, London. The study was undertaken to establish the presence or likely absence of bats using potential roosts within the site, identify and evaluate potential impacts of the development on roosting bats, and make recommendations accordingly.

0.2 Results

0.2.1 The desk study data search returned eight records of at least two species of bat from within 2km of the survey area, all in 2018. There are no granted mitigation licenses for bats within a 2km radius of the site. There are 10 Sites of Special Scientific Interest within 10km of the survey area. Bat populations do not form part of the notified features for these sites.

0.2.2 The survey area is set within a landscape of moderate quality habitat for foraging bats, dominated by large blocks of woodland to the north and north-west; densely populated areas of housing to the east and south; and Plumstead Cemetery to the south-west. The Preliminary Roost Assessment concluded that buildings B1 and B2 are both of high suitability for roosting bats.

0.2.3 Three surveys of each of the buildings were completed, comprising of three dusk emergence surveys of building B2 and two dusk emergence and one dawn re-entry survey of building B1 between August and September 2023.

0.2.4 Moderate levels of foraging and commuting activity were recorded in the grounds around the buildings. The species assemblage included noctule, common pipistrelle, soprano pipistrelle, serotine and *Nyctalus sp.*

0.2.5 A summary of roosting bats recorded on site is presented in Table 0.1.

Table 0.1: Summary of roosting bats

Roost	Aspect	Species	Indiv.*	Freq.**	Max.***	Status
1	B2 - gable apex on the south-eastern elevation	Soprano pipistrelle	1	1	1	Day roost, occasional
2	B2 - right of a roof valley on the north-western elevation	Soprano pipistrelle	1	1	1	Day roost, occasional
3	B2 - gap between the timber facias on	Common pipistrelle	1	1	1	Day roost, occasional

Roost	Aspect	Species	Indiv.*	Freq.**	Max.***	Status
	the north-western elevation					

* Individuals: Number of bats recorded using the roost over three surveys
** Frequency: Number of surveys during which use of the roost was recorded
*** Max.: Maximum count per survey

0.3 Evaluation

0.3.1 The survey results provide a good level of confidence that low numbers of soprano and common pipistrelle bats were roosting in building B2 during the 2023 breeding season. All three roosts were considered to be day roosts that were used occasionally. Both species are widespread and have previously been recorded within 2km of the site.

0.3.2 Without mitigation redevelopment of the site will result in a short-term risk of killing / injury to low numbers of two common bat species (soprano pipistrelle and common pipistrelle) if present during the works, and site significance impacts from the destruction of two summer day roosts (Roost 1 and 2) used by low numbers of soprano pipistrelle bats and one summer day roost (Roost 3) used by low numbers of common pipistrelle bats.

0.3.3 These impacts would constitute an offence under wildlife legislation, and will require mitigation, but are not considered to be detrimental to maintaining the local populations of common pipistrelle and soprano pipistrelle at a favourable conservation status within their natural range.

0.4 Recommendations

0.4.1 A mitigation strategy is required to (a) remove or reduce the likelihood of damage to bats or their habitats, and (b) offset the damage caused by development through compensation. Mitigation should be implemented in accordance with an agreed Method Statement which will form part of a Bat Mitigation Class Licence. The following bullets provide an indicative outline of what is likely to be necessary:

- Appointment of a licenced Ecological Clerk of Works to oversee mitigation and construction works;
- Works to the internal or external roof structure of building B2 will be carried out between April and October, i.e. during the period in which hibernating bats are least likely to be present.
- Prior to any works to B2, two bat boxes will be installed on nearby mature trees which are to be retained.
- A pre-commencement return-to-roost survey;
- Provision of information and toolbox talks to guide site operatives;
- Supervised removal of roofs to ensure any bats found can be captured and safely relocated into the pre-installed bat boxes;
- Specified procedures should bats be encountered during the works;

- Adjustments to be made to account for nesting birds, if necessary; and
- Commencement of construction once the supervised roof strip is complete.

0.4.2 To minimise the general risk of disturbance to roosting, foraging and commuting bats on and around the site during and after construction, lighting precautions are recommended for consideration during the detailed design stage.

0.5 Conclusions

0.5.1 The Proposed Development will result in negative impacts to low numbers of two common species of bat. Mitigation and compensatory methods are recommended to reduce and offset the predicted impacts on a proportionate basis. Taking account of the recommended mitigation, detrimental effects on the conservation status of these species are not predicted.

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1 Introduction

1.1 Background

1.1.1 A Preliminary Ecological Appraisal (PEA) was carried out on 15 June 2023 for the proposed open space development at Goldie Leigh Hospital, 136 Lodge Hill, Welling, Bexley, London (Grid Reference: TQ 47036 77461). It was recommended that further surveys for bats should be carried out due to the presence of potential roost features (PRF).

1.2 Objectives and Approach of the Study

1.2.1 The study was commissioned to fulfil the following objectives:

- To determine the presence or likely absence of bats using potential roosts within the site or adjacent habitats which may be affected by works on the survey area;
- To establish the baseline assemblage and relative abundance of bat species using the survey area;
- To identify and evaluate the types of roost present and assess the potential impacts of the Proposed Development on bats;
- To provide sufficient data to inform a European Protected Species Mitigation Licence (EPSML) application, if required; and
- To outline the measures required for avoiding and mitigating negative impacts, including compensation of habitat losses if necessary, and make recommendations for ecological enhancement.

1.2.2 To meet these objectives the survey approach involved:

- A desk study involving a review of bat records from the local area (2km radius from the centre of the Proposed Development site) and designated site citations;
- Emergence and return-to-roost surveys of potential bat roost features likely to be affected by Proposed Development, based on current industry guidelines (Collins (ed.), 2016), to establish the presence or likely absence of bats.

1.3 Survey Area

1.3.1 The Application Site boundary is expected to be the same as the survey area boundary.

1.3.2 The survey area lies to the north-east of the town of Welling in the London Borough of Bexley. The survey area comprises c.0.2ha of previously developed land, currently dominated by two buildings surrounded by small areas of modified grassland, scattered trees and car parking.

1.3.3 The survey area is bounded on all sides by roads and hospital buildings, which form part of the larger Goldie Leigh Hospital complex. The extent of the survey area is outlined in red on Figure 1.1.

1.3.4 The wider landscape is dominated by large blocks of woodland to the north and north-west; densely populated areas of housing to the east and south; and Plumstead Cemetery to the south-west.

1.4 Proposed Construction Activities

1.4.1 Full planning consent is being sought for the demolition of two existing buildings (Thistle and Shamrock), to be replaced with soft landscaping. A Sketch Concept for the Proposed Development is shown at Figure 1.2.

Goldie Leigh Hospital, Welling

Survey area

Figure 1.1: Survey area

0 100 200

Metres

N

Scale (at A4): 1:4,000 **Created by:** MT

Date: Aug 2023 **Reviewed by:** NP

Drawing number:

UE0594ECO-GoldieLeighHospital_SitePlan_230814

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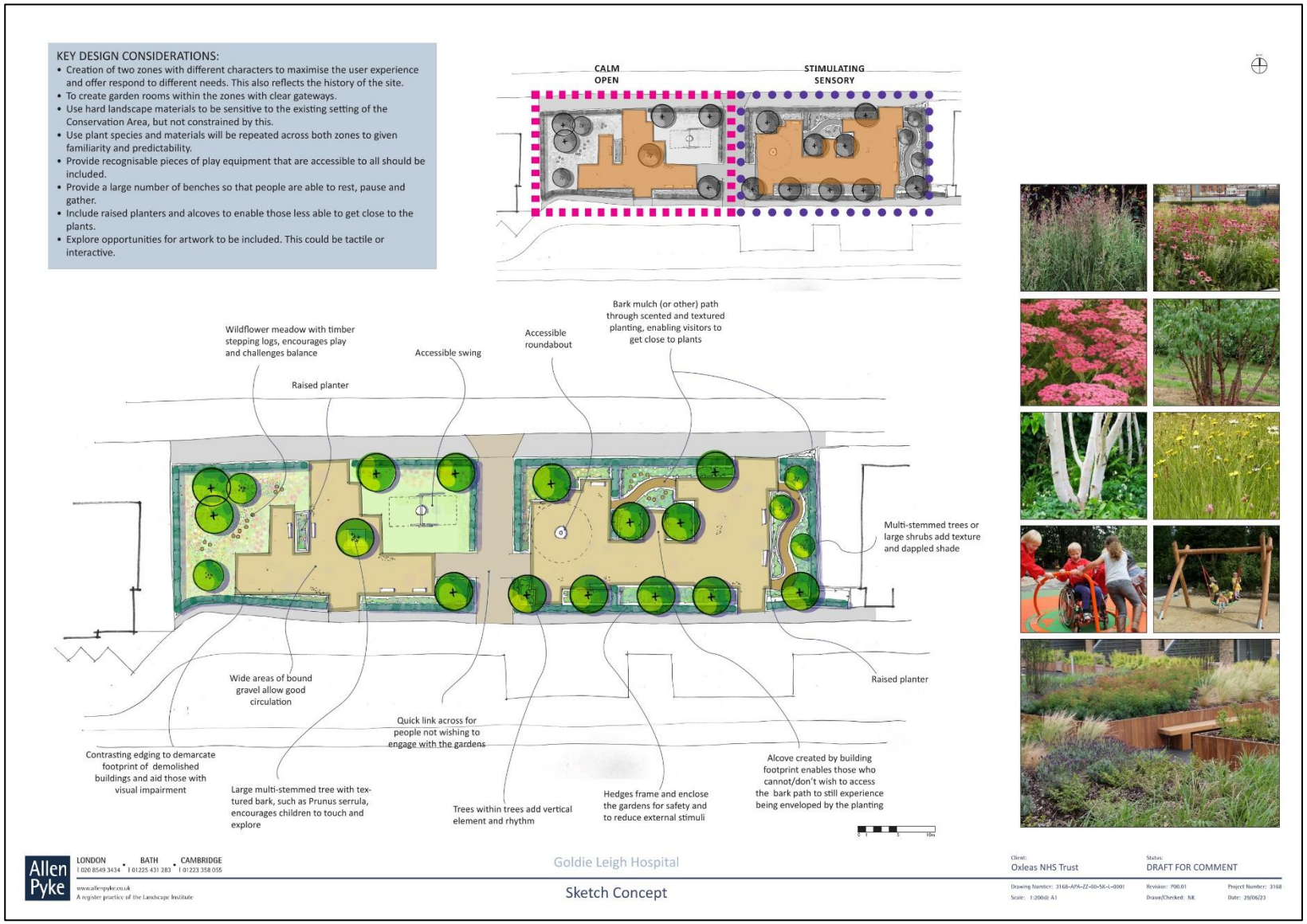

Figure 1.2: Sketch Concept

2 Bat Distribution, Ecology and Status

2.1 Distribution

2.1.1 There are eighteen native species of bats found in the UK. These range from relatively common and widespread species such as common pipistrelle *Pipistrellus pipistrellus* and brown long eared bat *Plecotus auritus* to the rare species such as Bechstein's bat *Myotis bechsteinii* and barbastelle bat *Barbastella barbastellus.*

2.1.2 Both common pipistrelle and brown long eared bats can be found throughout the UK. However, many other bat species have a much more limited distribution. The greater horseshoe bat *Rhinolophus ferrumequinum* is confined to south-west England and southern Wales and Bechstein's bat is located exclusively in the south of England. However, it should be noted that there may still be areas of the country where bats are under recorded, and hence the distribution of species is not fully understood.

2.2 Ecology

2.2.1 The habitat preferences of different bat species are diverse, with some species being specialists and others more generalist. For instance, Bechstein's bat typically forages and hibernates in mature woodland whereas Daubenton's bat *Myotis daubentonii* tends to hunt prey close to water. Pipistrelle bats on the other hand can be found foraging in almost any habitat and will roost in a variety of habitats ranging from hanging tiles on new buildings to beneath loose bark on trees.

2.2.2 Bat activity is highly seasonal and weather dependent. Generally, they enter torpor when the temperature becomes unfavourable, usually from October to March, although bats may still emerge to feed on warmer nights. However, during the active period their behaviour is affected by weather conditions and breeding activity. Typically, they are active in warm dry weather and are less active during heavy rain, high winds or in temperatures much below 10°C at dusk.

2.2.3 Mating occurs prior to hibernation with the young being born the following year around April and May. Female bats congregate in maternity roosts often numbering several hundred individuals and will give birth around June or July. Once the young are weaned the females will leave the roost to find mates prior to hibernation.

2.3 Status, Legislation and Policy

2.3.1 In the UK, the general trend is that bat populations have declined over the last century. In an attempt to halt this decline, all species of bat receive the greatest protection afforded by both European and UK wildlife legislation. National legislation (Wildlife and Countryside Act 1981 (as amended)) gives full protection to the species and their habitats and this is further strengthened

by European-derived legislation (Conservation of Habitats and Species Regulations 2017 (as amended)) which provides protection from disturbance and disturbing activities. Under this legislation it is an offence to:

- Intentionally kill, injure or capture/take a bat.
- Intentionally or recklessly damage, destroy, or obstruct access to any structure or place of shelter or protection. This is taken to mean all bat roosts whether or not bats are present.
- Intentionally or recklessly disturb a bat while it occupies such a structure or place that it uses for shelter or protection.
- Sell, offer or expose for sale, or possess, or transport for the purpose of sale, any live or dead bat, any part of a bat, or anything derived from a bat.

2.3.2 Under the Habitats Regulations disturbance includes any activity which is likely to:

- Impair the ability of a bat to survive, breed, reproduce, or rear/nurture its young.
- Impair the ability of a bat to migrate or hibernate.
- Significantly affect the local distribution or abundance of the species.

2.3.3 Local Planning Authorities are obliged to have regard to conserving biodiversity when undertaking their functions. Section 40 of the Natural Environment and Rural Communities Act 2006 (NERC) places a duty on public bodies to have regard to biodiversity conservation when carrying out their functions. Section 102 of the Environment Act 2021 expands this duty to include biodiversity enhancement as well conservation. NERC Section 41 requires the Secretary of State to maintain a list of Habitats and Species of Principal Importance in England; the list includes several species of bat.

2.3.4 Furthermore, Government policy (National Planning Policy Framework – Section 15: Conserving and enhancing the natural environment) directs that planning decisions should be "*minimising impacts on and providing net gains for biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures*".

2.4 Guidance and Best Practice

2.4.1 The methodology for the bat surveys was based on the latest *Good Practice Guidelines* from the Bat Conservation Trust (Collins (ed.), 2016) as well as Natural England Standing Advice on bats. The following documents were used for reference:

- *Acoustic Ecology of European Bats: Species Identification, Study of their Habitats and Foraging Behaviour* (Barataud, 2015);
- Bat Conservation Trust websites; www.bats.org.uk and http://roost.bats.org.uk/;
- UK Bat Mitigation Guidelines: a guide to impact assessment, mitigation and compensation for developments affecting bats (Reason, P.F. and Wray, S., 2023);
- *Bat Workers Manual* (Joint Nature Conservation Committee, 2004; 3rd edition);
- *Bats of Britain and Europe* (Dietz & Kiefer, 2016); and
- *Bat Calls of Britain and Europe: A Guide to Species Identification* (Russ, 2021).

3 Methods

3.1 Desk Study

3.1.1 Greenspace Information for Greater London CIC (GiGL) was consulted for records of bat species within a 2km search radius. The desk-study data search was carried out as part of the PEA (UEEC, 2023). Additionally, the Multi-Agency Geographic Information for the Countryside (MAGIC) website was consulted for granted EPSML for bats within a 2km radius, and for citations of Sites of Special Scientific Interest (SSSI) or Special Areas of Conservation (SAC) which are notified for important populations of bats within 10km of the survey area.

3.2 Presence / Absence Surveys

3.2.1 Where a structure/tree is found to contain evidence of roosting bats, or judged to be potentially suitable as a roost, then further surveys are required prior to undertaking works in order to confirm whether bats are currently present or are likely to be absent. These surveys typically take the form of emergence surveys (carried out as the bats leave the roost at dusk) and re-entry surveys (as bats return to the roost at dawn) and can be carried out between May and September (May to August being the optimal period).

3.2.2 Guidelines used during the 2023 survey season (Collins (ed.), 2016) recommend the minimum levels of presence / absence survey effort for structures, based on their overall suitability for roosting bats; see Table 3.1. The Preliminary Roost Assessment (PRA) concluded that buildings B1 and B2 had high suitability for roosting bats and three presence / absence surveys were undertaken. Appendix I presents a map of surveyor positions.

Table 3.1: Recommended minimum survey effort for presence/absence surveys

Low roost suitability	Moderate roost suitability	High roost suitability
One survey visit: One dusk emergence or dawn re-entry survey	Two survey visits: One dusk emergence and a separate dawn re-entry survey	Three survey visits: At least one dusk emergence & at least one separate dawn re-entry survey

3.2.3 The emergence surveys commenced at least 15 minutes before dusk and continued for up to 2 hours after sunset, while return-to-roost surveys (where applicable) began 1.5 to 2 hours before dawn and continued until 15 minutes after sunrise. The objective was to establish the presence or likely absence of bats within each feature, determine the assemblage and relative abundance of bat species using the features, and identify the type(s) of roost (e.g. day roost or maternity roost).

3.2.4 Detection equipment included Wildlife Acoustics Echo Meter Touch2 Pro, Anabat Scout, Batlogger M full spectrum detectors, Canon XA11 infrared cameras, illuminated by infrared flood and spot lighting, and Guide IR510 Nano thermal imaging scopes. Where infrared cameras were

used in place of a surveyor, they were paired with a Wildlife Acoustics Echo Meter Touch 2 Pro full spectrum detector to correlate audio recordings to the infrared camera footage.

3.2.5 Infrared cameras were used in place of a surveyor at positions 3, 4 and 9 during the first survey, position 9 during the second survey, positions 3 and 4 during the third survey and positions 3, 4 and 9 during the final survey.

3.2.6 Unmanned camera footage was reviewed manually by a suitably qualified ecologist, at a maximum of 2x speed, using BORIS (Behavioural Observation Research Interactive Software; v8.17.1) which allows the user to set the playback speed and does not skip frames. A screen shot from each camera at the darkest point of the final survey is provided at Appendix II to demonstrate the field of view and level of illumination.

3.2.7 Recordings of bat calls were analysed using Kaleidoscope Pro (v5.6.3) software. The number of bats leaving / entering each of the buildings were noted, together with observations regarding point of emergence / re-entry, type of behaviour and areas of particularly high activity. Survey covariates were also noted (minimum / maximum air temperatures, wind speed / direction, precipitation and cloud cover). Table 3.2 shows the dates and weather conditions for each survey visit.

Table 3.2: Survey number, dates, buildings surveyed and weather conditions

Survey number	Date (2023)	Time	Building number	Weather conditions
1	8 August	Dusk	B1 + B2	18-17°C, 100% cloud cover, light air (Beaufort 1), moderate precipitation from 21:15 till survey end
2	29 August	Dusk	B2 only	18-16°C, 100% cloud cover, light breeze (Beaufort 2), light precipitation between 20:38 and 20:42
3	30 August	Dawn	B1 only	13-12°C, 5% cloud cover, light air (Beaufort 1), no precipitation
4	27 September	Dusk	B1 + B2	20°C, 95%-80% cloud cover, light breeze (Beaufort 2), no precipitation

3.3 Evaluation

3.3.1 The importance of bat roosts is classified as Site, Local, District, County or Regional with reference to Table 3.2 in the *Bat Mitigation Guidelines* (Reason, P.F. and Wray, S. (2023). However, these are relative terms which require an interpretation of the rarity of different species and regional variations therein. The terms are hence applicable within the survey area only and are intended to indicate which features of the survey area may be of importance to the conservation status of local bat populations. Evaluation of the potential impacts on bats was undertaken with reference to Reason, P.F. and Wray, S. (2023) and Natural England Standing Advice, with predicted impacts to each Important Ecological Feature noted as of Site, Local, District, County or Regional significance.

3.4 Limitations

3.4.1 The presence / absence survey reported herein was carried out during August and September 2023, with at least 14 days between each survey on the same feature. Two of the surveys were carried out in August within the peak maternity period and therefore undertaken in accordance with the BCT's recommended timings for presence / absence surveys (Collins (ed.), 2016).

3.4.2 It was initially planned to carry out two dusk surveys and one dawn survey on each building, in line with the guidelines at the time (Collins (ed.), 2016). However, the dawn survey for B2 had to be cancelled due to poor weather and could not be re-scheduled as a dawn survey due to scheduling conflicts towards the end of the season, so for B2 three dusk surveys were carried out instead. This is not considered to be a significant limitation because all the surveys were undertaken with night vision aids and were therefore in line with BCT interim guidance (Collins, 2022) and the new guidelines (Collins (ed.), 2023) which were published in September 2023.

3.4.3 There were no difficulties in gaining access to the site to carry out the presence / absence surveys. Only the aspects of the buildings that were considered to have bat features were covered. The south-western elevation of building B2 and north-western elevation of B1 were not surveyed. However, no features on these aspects were identified during the PRA. There were no equipment malfunctions or other limitations of relevance to the methods applied.

3.4.4 Temperature and wind conditions were within optimal parameters throughout the four surveys, but moderate rain fell during the first survey c.47 minutes after sunset. In order to protect the survey equipment, Survey 1 finished 17 minutes earlier than the recommended 1.5 hours after sunset. A short period of lighter rain was also experienced during Survey 2, but the survey continued up to the recommended minimum of 1.5 hours after sunset. Bat activity was consistent during all surveys, even during periods of rainfall.

3.4.5 The surveys were completed with the assistance of bat detectors. All survey techniques are subject to bias, and bat detector surveys may under-record species with weak echolocation calls, such as Noctule bats. These biases were considered when interpreting results.

3.4.6 See Appendix V for General Legal and Technical Limitations, which apply to this document.

3.5 Personnel

3.5.1 The personnel deployed on the surveys are listed in Table 3.3.

Table 3.3: Survey personnel and qualifications

Feature / Task	**Personnel**
Presence / Absence Surveys	Christina Pullan (Lead), Tim Lees, Dan Maude, Ben Nelumbu, Rich Emerson, Michael Tink, Joe Dale, Zoe Benefer, Joe Hopkins and IR Cams.
Personnel	**Qualifications**
Tim Lees BA (Hons) MSc MCIEEM	Associate Director of Ecology with eleven years' experience leading survey and impact assessment teams for a wide range of ecology and

Feature / Task	Personnel
	environmental planning projects. Natural England Class Licences to survey for bats (WML-CL17) and great crested newt (WML-CL08).
Christina Pullan BSc (Hons) MSc qCIEEM	Consultant Ecologist with seven years' experience in environmental disciplines.
Dan Maude BSc (Hons) MRes qCIEEM	Consultant Ecologist with three years' professional consultancy experience.
Ben Nelumbu BSc (Hons) ACIEEM	Senior Ecologist with nine years' professional consultancy experience. Licences to survey for great crested newt (WML-CL08).
Rich Emerson BSc (Hons) qCIEEM	Assistant with two seasons' professional consultancy experience.
Joe Dale BSc (Hons) MSc	Assistant with one seasons' professional consultancy experience.
Michael Tink BSc MSc PhD	Assistant with intermittent bat experience over a 15-year period.
Zoe Benefer BSc (Hons)	Assistant with two seasons' bat experience.
Joe Hopkins BSc (Hons)	Assistant with one seasons bat experience.

4 Results

4.1 Desk Study

4.1.1 GiGL returned eight records of at least two species of bat from within 2km of the survey area, all during 2018, as summarised in Table 4.1. This included one undefined breeding record for *Chiroptera*, although its precise location is not provided. The closest record was a Leisler's bat *Nyctalus leisleri* c. 298m south-east of the survey area in 2005. The remaining records comprised records for noctule *Nyctalus noctula*, brown long-eared, soprano pipistrelle *Pipistrellus pygmaeus*, Daubenton's Bat *Myotis daubentonii*, common pipistrelle, Nathusius' pipistrelle *Pipistrellus nathusii* and serotine *Eptesicus serotinus*.

Table 4.1: Summary of bat records data within 2km of the site

Species	Protection
Serotine	Habs.Dir.Ax.4, CHS Sch.2, WCA Sch.5 full
Daubenton's bat	Habs.Dir.Ax.4, CHS Sch.2, WCA Sch.5 full
Leisler's bat	Habs.Dir.Ax.4, CHS Sch.2, WCA Sch.5 full
Noctule	Habs.Dir.Ax.4, CHS Sch.2, WCA Sch.5 full, NERC s41
Nathusius' pipistrelle	Habs.Dir.Ax.4, CHS Sch.2, WCA Sch.5 full
Common pipistrelle	Habs.Dir.Ax.4, CHS Sch.2, WCA Sch.5 full
Soprano pipistrelle	Habs.Dir.Ax.4, CHS Sch.2, WCA Sch.5 full, NERC s41
Brown long-eared	Habs.Dir.Ax.4, CHS Sch.2, WCA Sch.5 full, NERC s41

Habs.Dir.Ax.2/4	Habitats Directive 92/43/EEC Annex 2 and/or 4
CHS Sch.2	Conservation of Habitats & Species Regulations 2017 Schedule 2 (EPS animals)
WCA Sch.5 full	Wildlife and Countryside Act (1981), Schedule 5 (fully protected)
NERC s41	Natural Environment and Rural Communities (Act 2006) Section 41

4.1.2 A search of the MAGIC database for granted EPSML for bats within a 2km radius found no granted licences associated with the site. There are 10 SSSI within 10km of the survey area, but no SAC. Bat populations do not feature among the notified features of any of these sites.

4.2 Preliminary Roost Assessment

Landscape setting

4.2.1 The wider landscape is dominated by large blocks of woodland to the north and north-west; densely populated areas of housing to the east and south; and Plumstead Cemetery to the south-west. The adjacent woodland provides high quality commuting and foraging habitat, while the line of trees adjacent to the survey area provide a linear habitat feature which bats may also use.

Adjacent to the survey area is a residential development, therefore the site is exposed to moderate levels of artificial lighting.

4.3 Presence / Absence Surveys

Survey 1: Dusk - B1 and B2

4.3.1 Sunset on 8 August was at 20:37; the survey started at 20:22 and ended at 21:45.

4.3.2 One bat was recorded emerging from building B2 during the survey; a soprano pipistrelle bat at 21:01 from the gable apex on the eastern elevation of the building (Roost 1 on Photo 1). No other roosting bats were recorded during Survey 1.

4.3.3 Moderate levels of foraging and commuting activity were recorded within and around the survey area by all surveyor positions. The first bat recorded was a common pipistrelle at 20:52 (15 minutes after sunset). All bat activity was attributed to common and soprano pipistrelle bats.

Survey 2: Dusk - B2

4.3.4 Sunset on 29 August was at 19:53; the survey started at 19:38 and ended at 21:23.

4.3.5 One soprano pipistrelle bat was recorded emerging from the northern elevation of building B2 at 20:21. The bat was seen emerging right of a roof valley where several roof tiles were missing, exposing the internal timber roof frame (Roost 2 on Photo 2). As the bat emerged, it circled the courtyard north-west of building B2 before flying west towards the woodland. No other roosting bats were recorded during Survey 2.

4.3.6 High levels of soprano pipistrelle and moderate levels of common pipistrelle were recorded foraging and commuting around building B2 and along the tree line west of the survey area. Other species recorded included noctule bats. The first bat recorded was a soprano pipistrelle at 20:09 (16 minutes after sunset).

Survey 3: Dawn - B3

4.3.7 Sunrise on 30 August was at 06:08; the survey started at 04:38 and ended at 06:23.

4.3.8 No re-entries were recorded and there was very limited background activity recorded from all positions throughout the survey. Species recorded included soprano and common pipistrelles and a single serotine from surveyor position 5, west of B1. The last bat recorded was a common pipistrelle at 05:37.

Survey 4: Dusk - B1 and B2

4.3.9 Sunset on 27 September was at 18:47; the survey started at 18:32 and ended at 20:27.

4.3.10 One bat was recorded emerging from building B2 during the survey; a common pipistrelle bat emerged at 19:22 from a gap between the timber fascia (Roost 3 on Photo 2). No other roosting bats were recorded during Survey 4.

4.3.11 Very limited background activity was recorded around B1 and low bat activity was recorded around B2. Species recorded included common and soprano pipistrelles and one *Nyctalus sp*. at 19:33 from position 9. The first bat recorded was a soprano pipistrelle at 18:40.

4.3.12 The locations of all bat roosts recorded are illustrated in the photos below. Sample sonograms recorded at the site are given at Appendix III.

Photo 1: Location of Roost 1 - recorded emergence on Survey 1.

Photo 2: Left: Location of Roost 2 recorded during Survey 2. Right: Roost 3 recorded during Survey 4.

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5 Evaluation

5.1 Presence or Absence of Bats

5.1.1 The survey results provide a good level of confidence that low numbers of common and soprano pipistrelle bats were roosting in building B2 during the 2023 breeding season, as summarised in Table 5.1. Each of the roosts were considered to be day roosts that were used occasionally (i.e. only observed to be used once during the course of three repeat surveys). See Appendix I for roost locations.

Table 5.1: Summary of roosting bats

Roost	Aspect	Species	Indiv.*	Freq.**	Max.***	Status
1	B2 - gable apex on the south-eastern elevation	Soprano pipistrelle	1	1	1	Day roost, occasional
2	B2 - right of a roof valley on the north-western elevation	Soprano pipistrelle	1	1	1	Day roost, occasional
3	B2 - gap between the timber facias on the north-western elevation	Common pipistrelle	1	1	1	Day roost, occasional

* Individuals: Number of bats recorded using the roost over three surveys
** Frequency: Number of surveys during which use of the roost was recorded
*** Max.: Maximum count per survey

5.1.2 Surveys were carried out at an appropriate time of year and within acceptable wind and temperature parameters. Given the number of surveys carried out, the precipitation in Survey 1 and 2 and the early finish of Survey 1 are not considered to be significant limitations. The results are therefore considered to provide an accurate account of the bat roost status of the buildings.

5.2 Species Assemblage

5.2.1 Species diversity recorded during the presence / absence surveys included five species. Their local and national conservation status is listed in Table 5.2. (Mathews *et al.*, 2018; Russ, 2021; London Bat Group[1]). All five species have previously been recorded within 2km of the site, as confirmed during the desk study stage.

5.2.2 Some of the *Nyctalus sp.* call parameters recorded overlapped between the typical ranges encountered with noctule and Leisler's bat. Both species have been recorded previously within the desk study. As such, both members of this genus are included in Table 5.2.

[1] London Bat Group website: Bats in London. Accessed online [28.11.23] at: The London Bat Group | A Bat Conservation Trust Partner Group (londonbats.org.uk)

Table 5.2: Conservation status of recorded bat species (abundance and distribution)

Species	London abundance/distribution	UK abundance/distribution	UK status
Serotine	Relatively abundant, widespread	Widespread, relatively abundant	Least concern
Nyctalus sp.	Uncommon, widespread	Uncommon, widespread, absent in Scotland	Least concern
Noctule	Uncommon, widespread	Uncommon, widespread, absent in Scotland	Least concern
Common pipistrelle	Abundant, widespread	Widespread, abundant	Least concern
Soprano pipistrelle	Fairly common, widespread	Fairly common, widespread	Least concern

5.3 Population Size Class Assessment

5.3.1 Table 5.3 sets out a population size class assessment for each of the bat species using building B2 within the application site.

Table 5.3: Population size class assessment

Data	Soprano pipistrelle	Common pipistrelle
Number of droppings	n/a	n/a
Pattern/extent of droppings	n/a	n/a
Pattern/extent of feeding remains	n/a	n/a
Number of bats counted inside roost	n/a	n/a
Positions of bats in roost	▪ Roost 1: gable apex on the south-eastern elevation ▪ Roost 2: right of a roof valley on the north-western elevation	▪ Roost 3: gap between the timber facias on the north-western elevation
Number of bat registrations*	2	1
Maximum count of bats per survey	1	1
Roost status	▪ 2x summer day roost for low numbers in occasional use	▪ 1x summer day roost for low numbers in occasional use
Species rarity	Widespread	Widespread
Importance	Site	Site

* Registrations are instances of emerging from or re-entering the roost

5.4 Impact Assessment

Designated sites

5.4.1 No designated sites notified for their bat populations will be affected by the proposals for the site.

Roosts – buildings

5.4.2 Proposed redevelopment of the site as an area of open space would result in demolition of both B1 and B2 and replacement with soft landscaping. On this basis, it is assumed that Roosts 1, 2 and 3 will be destroyed by the works.

Short-term impacts

5.4.3 Demolition of B2 is likely to result in the following short-term impact unless mitigated, which would constitute an offence under the CHS and WCA.

- Risk of killing or injury to low numbers of at least two common bat species (soprano pipistrelle and common pipistrelle) if present during the works.

Long-term impacts

5.4.4 Unless mitigated, the demolition of B2 will result in the following long-term impacts, which would constitute an offence under the CHS and WCA. The significance of roost loss impacts is predicted for each species with reference to Reason & Wray (2023) taking into account their recorded abundance and frequency within the application site, and rarity in a local context.

- Site significance impact from the destruction of two summer day roosts (Roost 1 and 2) used by low numbers of soprano pipistrelle bats.
- Site significance impact from the destruction of one summer day roosts (Roost 3) used by low numbers of common pipistrelle bats.

Foraging and commuting habitats

5.4.5 It is currently understood that the development proposals do not include any works that would directly (e.g. through habitat loss) or indirectly (e.g. through artificial lighting) affect foraging and commuting habitats. Foraging and commuting bats were not considered to present a constraint to development proposals and bat activity surveys were not required.

Summary

5.4.6 In conclusion, without mitigation the proposed demolition of B2 will result in a short-term risk of killing / injury to low numbers of two widespread species of bat. The demolition will also result in Site significance impacts from the destruction of two summer day roosts used by low numbers of soprano pipistrelle bats and one summer roost used by low numbers of common pipistrelles. These impacts would constitute an offence under wildlife legislation, and will require mitigation, but are not considered to be detrimental to maintaining the local populations of common pipistrelle and soprano pipistrelle at a favourable conservation status within their natural range.

6 Recommendations and Conclusions

6.1 Recommendations for Avoidance, Mitigation and Compensation of Impacts

6.1.1 A mitigation strategy is required to (a) remove or reduce the likelihood of damage to bats or their habitats, and (b) offset the damage caused by development through compensation. The aim is to achieve both the avoidance of harm to individual bats and compensation for loss of suitable habitat or connectivity, thereby ensuring the local conservation status of the species is maintained.

European Protected Species Mitigation Licence / Bat Mitigation Class Licence

6.1.2 An EPSML or low impact Bat Mitigation Class Licence (BMCL) will need to be obtained from Natural England prior to commencing the works. A mitigation Method Statement will form part of the licence application and will specify precautionary working methods, mitigation and compensation of lost habitats, based on the recommendations outlined below.

Risk of killing, injury or disturbance

6.1.3 Other than the roof voids no significant voids or cavities (e.g. cellars) suitable for hibernation were noted within the buildings. The possibility nonetheless exists that bats could be present in small numbers during the winter months as common pipistrelle and brown long-eared bats are known to use buildings for hibernation (Collins (ed.), 2023; English Nature, 2004; Dietz and Kiefer, 2016).

6.1.4 An outline of the precautionary working methods to be followed under the EPSML / BMCL is given below:

- ***Appointment of Ecological Clerk of Works***: A named Ecological Clerk of Works (ECoW) who is licenced by Natural England will be appointed to oversee operations which could negatively affect bats and other ecological features of value.
- ***Timing of the works***: Works to the internal or external roof structure of building B2 will be carried out between April and October, i.e. during the period in which hibernating bats are least likely to be present.
- ***Creation of temporary replacement habitat***: Prior to any works to B2, two bat boxes will be installed on nearby mature trees which are to be retained. These will provide a safe refuge for any bats which are found and moved during the works; 2no. Schwegler 1FF bat boxes (or another manufacturer's equivalent) will be suitable.
- ***Pre-commencement return-to-roost survey***: Prior to any works to B2, a dawn return-to-roost survey will be carried out on the day works are scheduled to commence unless weather conditions are such that bats are very unlikely to be active. This will allow particular attention to be paid by the ECoW to any part of the structure known to contain a bat.

- ***Toolbox talks***: All site operatives will receive a briefing from the ECoW to explain the legal protection for bats, the precautionary methods to be followed, tips on identifying bats, and the procedure to be followed should a bat be found at any stage during the works.
- ***Supervised roof strip***: Demolition works will be preceded by a 'soft-strip' of the roof tiles, soffit and bargeboard on B2 using hand tools only, under the supervision of an ecologist licenced to handle bats. Particular attention will be paid to the roost locations listed in Table 5.3 and any other part of the structure known to contain a bat as a result of the pre-commencement survey. If any bats are found during the roof strip, they will be captured and safely relocated into the pre-installed bat boxes by the supervising ecologist.
- ***Procedure if bats are encountered***: If bats are found within the construction zone during subsequent works, site operatives will be advised to cease activity in its vicinity while advice from the ECoW is sought. The ECoW will then assess the most appropriate course of action which may include removing the individual(s) from the site and moving it to a pre-installed bat box or nearby area of suitable habitat outside of the construction zone.
- ***Nesting birds***: A survey for active bird nests will be carried out by the ECoW immediately prior to the demolition works (feral pigeons *Columba livia* are known to nest all year round). If an active nest is found, the nest must be cordoned off and works adjacent to this nest must be delayed until such time that the chicks have fledged.
- ***Commencement of construction works***: Once the supervised roof tile / soffit / bargeboard strip is complete, it is likely that no bats will be present within the areas to be affected and demolition works can commence.

6.1.5 It should be noted that the above bullets are indicative and that the mitigation strategy will be finalised following consultation with Natural England prior to an EPSML / BMCL being issued. The current report is based on three emergence survey and one return-to-roost survey during the 2023 active season. If a licence is not obtained within 12 months of the date of these surveys (i.e. by November 2024), updated active season surveys may be required to confirm the status of the roost and identify any changes which may have occurred in the interim.

Roost loss – buildings / structures

6.1.6 The destruction of two summer day roosts used by low numbers of soprano pipistrelle bats and one summer day roost used by low numbers of common pipistrelle bats is unavoidable if the scheme is to proceed as planned. Compensatory measures are required to ensure there is no net loss of roosting habitats and to enable the recorded bat population to persist in the long-term.

6.1.7 It is recommended that replacement roosting habitat features are installed prior to works commencing and fixed in similar positions and aspects on the nearby retained features. The precise number, type and location of features to be installed will be agreed as part of the EPSM licence, however it is currently recommended that one bat box is installed on the retained horse chestnut *Aesculus hippocastanum* tree (T3) and two bat boxes are installed on the Barefoot Lodge Building located to south of the Application Site, as follows:

- Northern aspect of T3: 1 x Schwegler 1FF Flat Bat Box on stem of tree, 3.5m from the ground; and

- Northern and eastern aspects of Barefoot Lodge Building (adjacent to Application Site): 2no. Ibstock Enclosed Bat Box (or Schwegler Bat Tube 1FR) wall mounted or integrated.

Further details on the specification of these and alternative systems can be found in Gunnell *et al.*, 2013. Indicative locations for replacement bat roost features are marked on Figure 6.1.

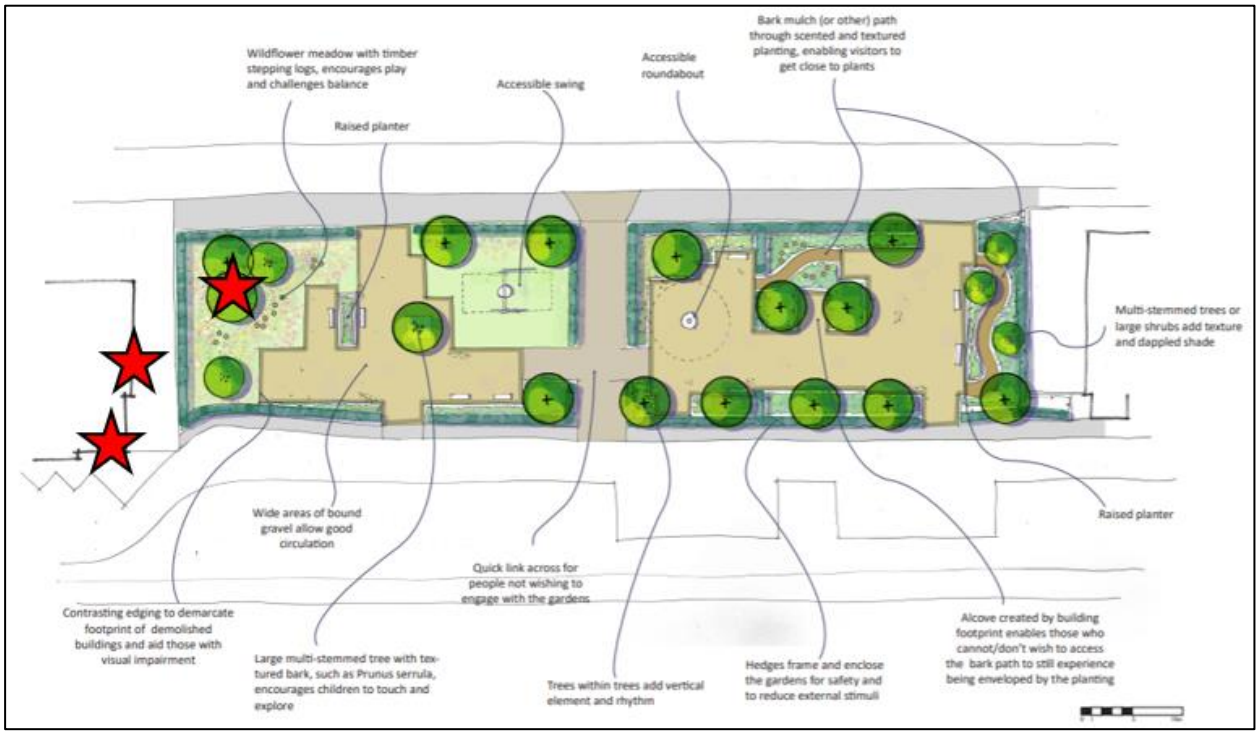

Figure 6.1: Indicative locations for replacement bat roost features

6.1.8 General considerations for installation of bat roosts are listed in Box 1 below, while bat box specifications are listed at Appendix IV.

Table 6.1: Considerations & key requirements for crevice-dwelling bats (after Gunnell et al., 2013)

Species	**Barbastelle, serotine, Bechstein's, Brandt's, Daubenton's, whiskered, Noctule, Leisler's, Pipistrelles (common, soprano & Nathusius')**
Consideration	***Solution***
Where in a development	Anywhere that the access is not illuminated by artificial lighting If possible, they should be installed facing vegetation features such as mature hedgerows or trees, but with a clear line of flight for bats entering or leaving the roost
Where in a building	Summer maternity roosts in most southerly or westerly aspect for solar heating, or in a location that provides thermal stability Male roosts and winter hibernation roosts on northerly aspect
Height	2m–7m, preferably >4m above ground level
Dimensions	Any size as long as some components of the area are crevices of c.20-30mm wide Total area of >c.1m^2 would be useful for summer maternity roosting Male roosts contain a smaller number or individual bats

Species	Barbastelle, serotine, Bechstein's, Brandt's, Daubenton's, whiskered, Noctule, Leisler's, Pipistrelles (common, soprano & Nathusius')
Access dimensions	20mm–50mm (w) x 15mm–20mm (h)
Other considerations	Rough interior surface (for grip) Non-toxic and non-corrosive materials Absence of breathable roofing membranes to avoid the risk of entanglement Suitable thermal properties (reducing 24hr fluctuations), providing stability but allowing maximum thermal gain for summer roosts The use of thermal insulation materials for maternity roosts should be carefully considered in relation to other desired properties e.g. energy efficiency

Artificial lighting

6.1.9 To minimise the general risk of disturbance to roosting, foraging and commuting bats on and around the site during and after construction, it is recommended that the following lighting precautions are considered during the detailed design stage (ILP / BCT, 2023):

- Lighting should not be directed towards the replacement roost features, lines of trees to the east and woodland to the west which bats were noted to forage during the surveys.
- All luminaires should lack UV elements when manufactured. Metal halide, fluorescent sources should not be used.
- LED luminaires should be used where possible due to their sharp cut-off, lower intensity, good colour rendition and dimming capability.
- A warm white spectrum (ideally <2700Kelvin) should be adopted to reduce blue light component.
- Luminaires should feature peak wavelengths higher than 550nm to avoid the component of light most disturbing to bats (Stone, 2012).
- Internal luminaires can be recessed where installed in proximity to windows to reduce glare and light spill.
- The use of specialist bollard or low-level downward directional luminaires to retain darkness above should be considered. However, this often comes at a cost of unacceptable glare, poor illumination efficiency, a high upward light component and poor facial recognition, and their use should only be as directed by the lighting professional.
- Column heights should be carefully considered to minimise light spill.
- Only luminaires with an upward light ratio of 0% and with good optical control should be used (refer to ILP guidance for the reduction of obtrusive light).
- Luminaires should always be mounted on the horizontal, i.e. no upward tilt.
- Any external security lighting should be set on motion-sensors and short (1min) timers.
- As a last resort, accessories such as baffles, hoods or louvres can be used to reduce light spill and direct it only to where it is needed.

Monitoring

6.1.10 Any requirement to monitor the success of mitigation and compensatory habitats will be established by the EPSML / BMCL licence.

6.2 Ecological Enhancement

6.2.1 The measures recommended in section 5.5 of the PEA (UEEC, 2023) should be implemented to deliver ecological enhancements for a range of wildlife following construction.

6.2.2 Conclusions

6.2.3 The Proposed Development will result in negative impacts to low numbers of two common species of bat. Mitigation and compensatory methods are recommended to reduce and offset the predicted impacts on a proportionate basis. Taking account of the recommended mitigation, detrimental effects on the conservation status of these species are not predicted.

References and Bibliography

Barataud M. (2015): *Acoustic Ecology of European Bats: Species Identification, Study of their Habitats and Foraging Behaviour*. Museum national d'Histoire naturelle.

Bat Conservation Trust websites: www.bats.org.uk and http://roost.bats.org.uk/

BORIS (2023): *Behavioral Observation Research Interactive Software v8.17.1*. Department of Life Sciences and Systems Biology, University of Torino, Italy.

British Standards Institution (BSI; 2013): *BS42020:2013 Biodiversity – Code of practice for planning and development*. BSI Standards Limited, London.

Chartered Institute of Ecology and Environmental Management (CIEEM; 2017): *Guidelines for Ecological Report Writing*. 2nd Edition, CIEEM, Winchester.

Collins, J. (ed.) (2016): *Bat Surveys for Professional Ecologists: Good Practice Guidelines*. 3rd Edition, Bat Conservation Trust, London.

Collins, J. (2022): *Interim Guidance Note: Use of night vision aids for bat emergence surveys and further comment on dawn surveys*.

Collins, J. (ed.) (2023): *Bat Surveys for Professional Ecologists: Good Practice Guidelines*. 4th Edition, Bat Conservation Trust, London.

Dietz, D. & Kiefer, A. (2016): *Bats of Britain and Europe*. Bloomsbury Publishing, London.

English Nature (2004): *Bat Mitigation Guidelines*. Peterborough.

Gunnell K., Grant, G. and Williams, C. (2012): *Landscape and Urban Design for Bats and Biodiversity*. Bat Conservation Trust, London.

Gunnell K, Murphy B, Williams C (2013): *Designing for biodiversity: A technical guide for new and existing buildings*. RIBA Publishing and Bat Conservation Trust, London.

Institute of Lighting of Professionals (2023): *Guidance Note 08/23: Bats and Artificial Lighting At Night*. Co-authored by the Bat Conservation Trust, August 2023.

Joint Nature Conservation Committee (2004): *Bat Workers Manual*. 3rd edition, Peterborough.

Mathews F, Kubasiewicz LM, Gurnell J, Harrower CA, McDonald RA, Shore RF (2018): *A Review of the Population and Conservation Status of British Mammals*. A report by the Mammal Society under contract to Natural England, Natural Resources Wales and Scottish Natural Heritage. Natural England, Peterborough.

Ministry for Housing, Communities & Local Government (MHCLG; 2023): *National Planning Policy Framework*.

Multi-agency Geographic Information for the Countryside (MAGIC) website: www.magic.gov.uk

Natural England: Standing Advice on bats.

Reason, P.F. and Wray, S. (2023): *UK Bat Mitigation Guidelines: a guide to impact assessment, mitigation and compensation for developments affecting bats*.

Russ, J. (2021): *Bat Calls of Britain and Europe: A Guide to Species Identification.* Pelagic Publishing, UK.

UEEC (2023): *Goldie Leigh Hospital 136 Lodge Hill, Welling, Bexley, London: Preliminary Ecological Appraisal Report.*

Appendix I: Roost Locations and Surveyor Positions

Goldie Leigh Hospital, Welling

- Survey area
- Building
- Field of vision
- Surveyor
- Roost, Emergence

0 10 20
Metres

N

Scale (at A4): 1:500 **Created by:** EM

Date: Nov 2023 **Reviewed by:** NP

Drawing number:
UE0594ECO-GoldieLeighHospital_Bats_231025

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Appendix II: Infrared Camera Field of View

View from Canon XA11 infrared camera on 8 August 2023, illuminated by infrared flood and spot lighting that replaced a surveyor at position 3.

View from Canon XA11 infrared camera on 8 August 2023, illuminated by infrared flood and spot lighting that replaced a surveyor at position 4.

View from Canon XA11 infrared camera on 8 August 2023, illuminated by infrared flood and spot lighting that replaced a surveyor at position 9.

View from Canon XA11 infrared camera on 29 August 2023, illuminated by infrared flood and spot lighting that replaced a surveyor at position 9.

View from Canon XA11 infrared camera on 30 August 2023, illuminated by infrared flood and spot lighting that replaced a surveyor at position 3.

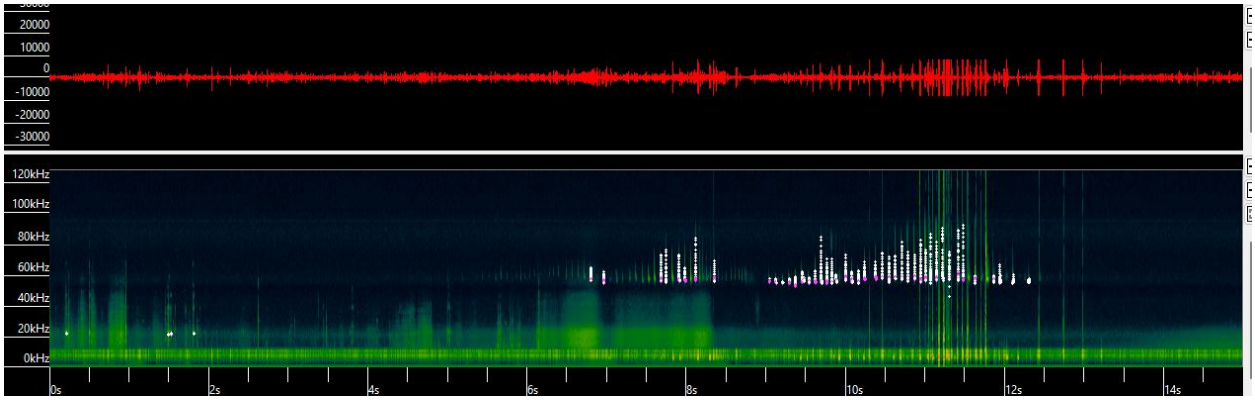
View from Canon XA11 infrared camera on 30 August 2023, illuminated by infrared flood and spot lighting that replaced a surveyor at position 4.

View from Canon XA11 infrared camera on 27 September 2023, illuminated by infrared flood and spot lighting that replaced a surveyor at position 3.

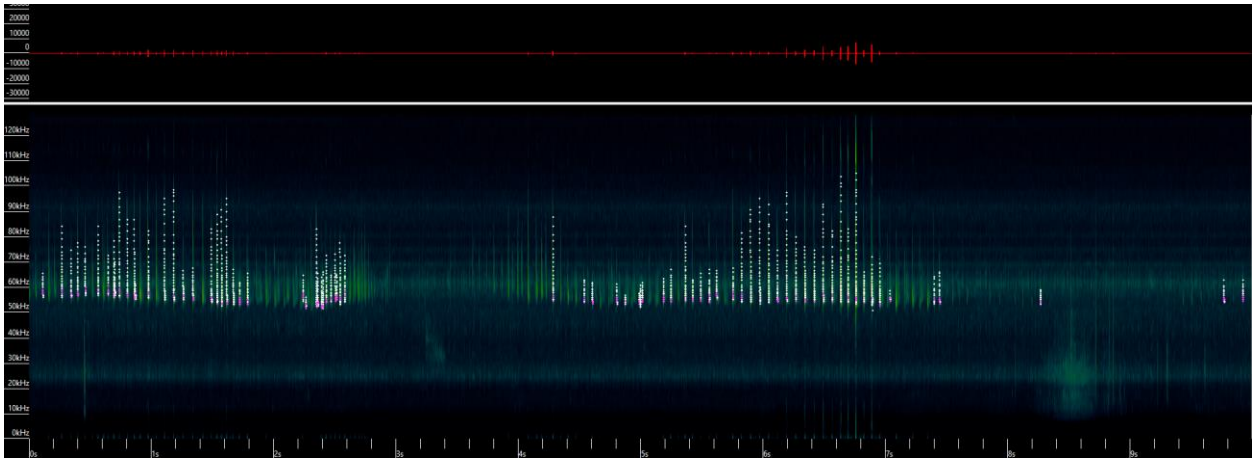
View from Canon XA11 infrared camera on 27 September 2023, illuminated by infrared flood and spot lighting that replaced a surveyor at position 4.

View from Canon XA11 infrared camera on 27 September 2023, illuminated by infrared flood and spot lighting that replaced a surveyor at position 9.

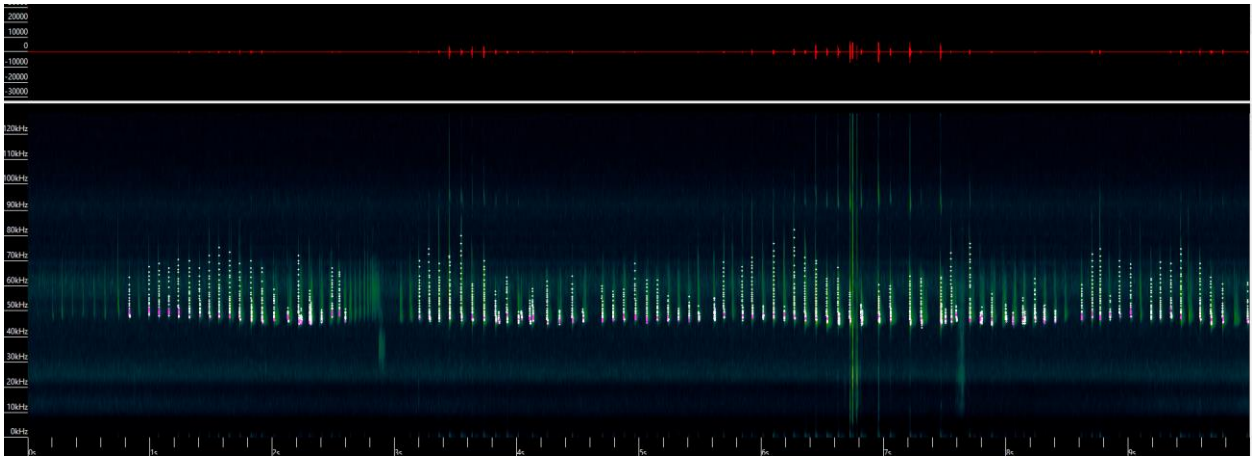
Appendix III: Example Sonograms



Soprano pipistrelle bat emerging from B2 at 21:01 on the 8 August 2023.



Soprano pipistrelle bat emerging from B2 at 20:21 on the 29 August 2023.



Common pipistrelle bat emerging from B2 at 19:22 on 27 September 2023.

Appendix IV: Bat Box Specifications

Schwegler 1FF Flat Bat Box:
Open at bottom so cleaning not required. Varied internal roost surfaces. Suitable for crevice roosters such as pipistrelles, and large enough for use as maternity roost

Siting & positioning:
On the tree-stem or on buildings

Cleaning and inspection:
Open at bottom, cleaning not required. Easy to inspect due to removable front panel. If occupied by bats, inspection and cleaning must be carried out by a licensed professional

Entrance hole:
Width 12-24 mm x Length 21cm

Occupants:
Bats

Material:
Air-permeable and long lasting SCHWEGLER wood-concrete

Schwegler 1FR/2FR Bat Tube:
Suitable for building into or mounting onto external walls. Open at bottom so cleaning not required. Can be used individually (1FR) or by connecting two or more 2FR. Suitable for bats that use buildings e.g. pipistrelles or serotine

Siting & positioning:
Can be installed on external walls – either flush or beneath a rendered surface in concrete and, during renovation work, under wooden panelling or in building cavities (e.g., slab-type building structures, bridges, etc). If required, it can be painted using standard air-permeable exterior paint. Birds will not occupy this box.

Cleaning:
Maintenance-free

Entrance hole:
Height: 20mm
Width: 150mm

Kit includes:
Roost box with swing-away front panel
Galvanized steel hanger - forestry approved
Aluminium Nail - forestry approved

Colour:
Black

Dimensions:
Depth: 140mm
Width: 270mm
Height: 430mm

Weight:
10kg approx.

Occupants:
Bats

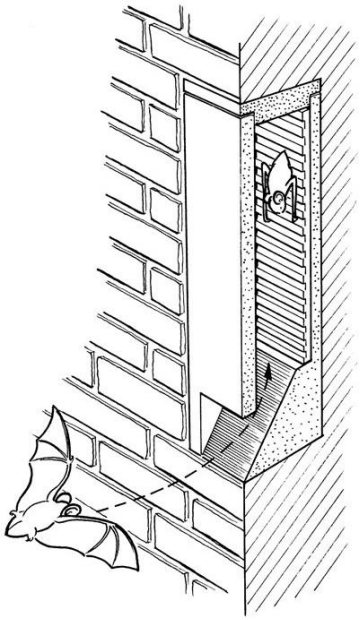
Material:
SCHWEGLER wood-concrete

Kit includes:
1 x Bat Tube

Colour:
Grey material, paintable with standard air-permeable wall-paint

Dimensions:
Height: 475mm;
Width: 200mm;
Depth: 125mm

Weight:: 10kg approx.



Ibstock Enclosed Bat Box (Type B or C):

- Designed specifically for pipistrelle bats
- Available in all brick types
- Discrete home for bats
- Various sizes
- Several roosting zones are created inside the box
- Bats are contained within the bat box itself
- Maintenance free with entrance at the base
- Suitable for new build & conservation work

Bat Box Type B: 215 x 215 or 215 x 290 / Bat Box Type C: 215 x 215 or 215 x 290

Appendix V: Legal and Technical Limitations

- This report has been prepared by Urban Edge Environmental Consulting Ltd (UEEC Ltd) with all reasonable skill, care and diligence within the terms of the contract made with the Client to undertake this work, and taking into account the information made available by the Client. No other warranty, expressed or implied, is made as to the professional advice included in this report or any other services provided by us.
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- The advice provided in this report does not constitute legal advice. As such, the services of lawyers may also be considered to be warranted.
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- Where this report presents or relies upon the findings of ecological field surveys (including habitat, botanical or protected/notable species surveys), its conclusions should not be relied upon for longer than a maximum period of two years from the date of the original field surveys. Ecological change (e.g. colonisation of a site by a protected species) can occur rapidly and this limitation is not intended to imply that a likely absence of, for instance, a protected species will persist for any period of time;
- This report has been prepared using factual information contained in maps and documents prepared by others. No responsibility can be accepted by UEEC Ltd for the accuracy of such information;
- Every effort has been made to accurately represent the location of mapped features, however, the precise locations of features should not be relied upon;
- Populations of animals and plants are often transient in nature and a single survey visit can only provide a general indication of species present on site. Time of year when the survey was carried out, weather conditions and other variables will influence the results of an ecological survey (e.g. it is possible that some flowering plant species which flower at other times of the year were not observed). Every effort has been made to accurately note indicators of presence of protected, rare and notable species within and adjacent to the site but the possibility nonetheless exists for other species to be present which were not recorded or otherwise indicated by the survey;
- Any works undertaken as a consequence of the recommendations provided within this report should be subjected to the necessary health & safety checks and full risk assessments.

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