

GEOSPHERE ENVIRONMENTAL

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SITE: Hitchin Swimming Pool, Fishponds Rd, Hitchin SG5 1HA
DATE: 03/07/2025



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Please note that the reported surveys were conducted on the date(s) stated in the report and that it represents site conditions at the time of the visit. The findings and recommended mitigation are based upon these conditions. If site conditions change materially after the site survey, the original report cannot be relied upon and will need to be updated. Bat Activity reports can typically be relied on for 12 to 24 months from the date of survey.

VERSION RECORD

Version:	Date:	Details:	Author(s):	Reviewed By:	Authorised By:
1	03-07-25	Original version	Sarah Jarrett Ecological and Arboricultural Consultant	Katie Linehan Technical Director of Ecology	Katie Linehan Technical Director of Ecology

Non-Technical Executive Summary

Report Description	This report has been prepared by Geosphere Environmental Limited for Wilmott Dixon Construction Limited and relates to the proposed refurbishment development of the site at Hitchin Swimming Pool, Fishponds Rd, Hitchin SG5 1HA. The purpose of the survey is to assess the bat presence / likely absence of roosting bats within buildings considered suitable for roosting bats, determine species and numbers of bats using any identified roosts and characterise any identified roosts. Recommendations for any avoidance measures, mitigation, compensation and enhancement are included.
Summary of Main Findings	The building offers a number of potential roost features in the form of loose and slipped tiles, and vents along the ridge beams. The building had substantial artificial lighting at night and machine noise present which resulted in most of the low-level features identified in the PRA as unsuitable. Three emergence surveys were undertaken. One common pipistrelle emerged from a loose tile near a chimney in the southeastern side of the building on the second survey visit. No emergence occurred on the first or third survey. Foraging was noted along the southern boundary by a low number of common pipistrelles on all survey visits. The species assemblage and numbers observed are considered to be of less than local importance only.
Ecological Constraints	The constraints to development will be the removal of, or impacts to, a day roost utilised by a common pipistrelle.
Avoidance Measures & Timings of Works to Reduce Impact	All habitats confirmed in use by foraging and commuting bats should be retained within the development wherever possible. Ideally, a buffer should be retained between such habitats to minimise increase in human disturbance, and they should remain unlit between sunset and sunrise.
Mitigation and Compensation Requirements	The Natural England EPS Mitigation licence will detail exact measures on how to avoid, mitigate and compensate for works impacting the bat roost. Any new lighting to be implemented, or any lighting to be replaced should be selected/designed to be ecologically sensitive (see Section 5.5). UK legislation protects all bat roosts from damage, destruction, modification or disturbance. The proposed works have the potential to/will damage, destroy, modify, disturb the identified roost. Therefore, a Natural England (NE) European Protected Species (EPS) Mitigation Licence will be required prior to any such works to ensure that they are undertaken legally.
Enhancement Opportunities	Bat ridge boxes should be considered for incorporation within the scheme, situated close to (and facing) tree lines with recorded bat activity.

Conclusions	A NE EPS Mitigation Licence will be required prior to any works impacting the building. This may also require additional survey effort post planning to facilitate a licence application. The level of additional survey required would be at the licence holder’s discretion. The recommendations within Section 5 of this report should be adhered to, to reduce the impact on protected species.
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1. Introduction

1.1 Purpose

This report has been prepared by Geosphere Environmental Limited for Willmott Dixon Construction Ltd and relates to the proposed refurbishment of the site at Hitchin Swimming Pool and Fitness Centre, Fishponds Road, Hitchin, SG5 1HA

The purpose of this report is to assess the bat presence / likely absence of roosting bats within the buildings considered suitable for roosting bats, determine species and numbers of bats using any identified roosts and make recommendations for any mitigation and compensation, if required.

Any limitations and conditions pertaining to the report are stated within Appendix 1 with a full list of technical references provided within Appendix 2.

1.2 Site Description

The report relates to the proposed refurbishment of the leisure centre. The site is located around National Grid Reference TL 18207 29605.

The building is shown on Figure 1 below:

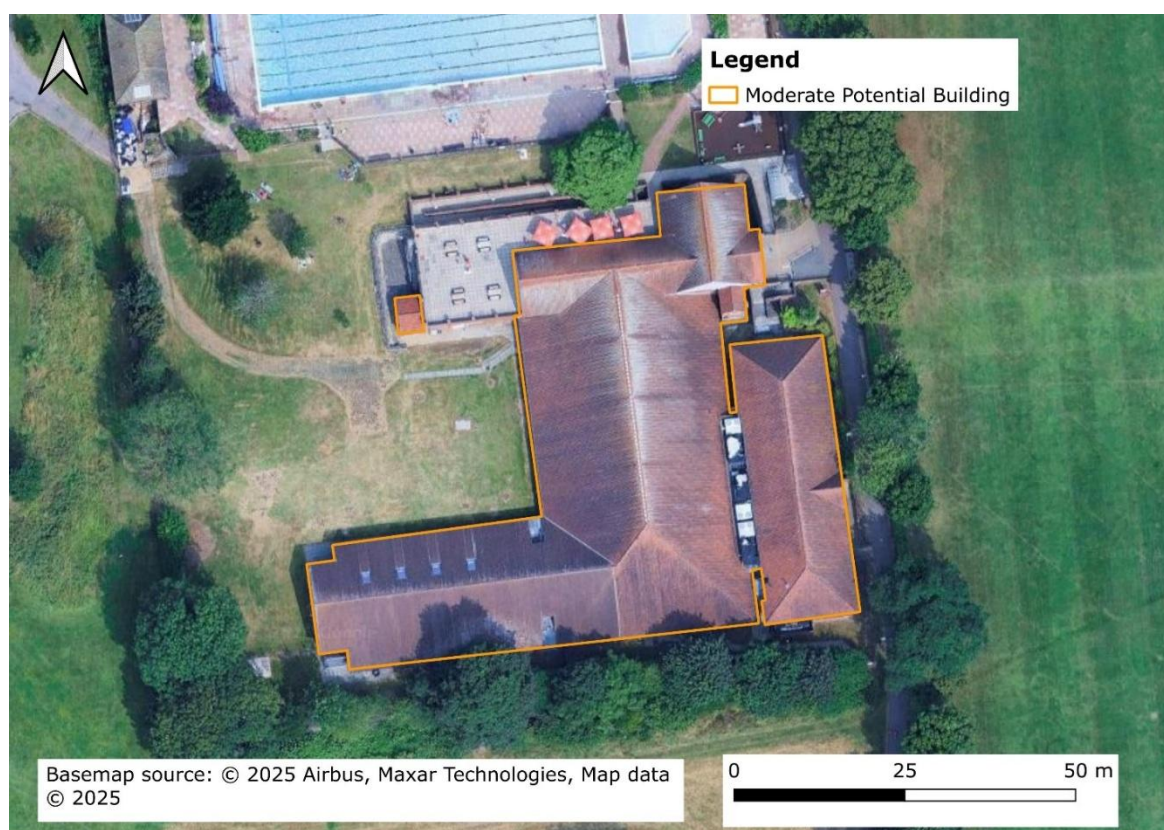


Figure 1 – Moderate Potential Building

1.3 Legislation and Policy Context

1.3.1 Current UK Legislation

Within England and Wales, bats are protected under The Wildlife and Countryside Act 1981 (as amended) and The Conservation of Habitats and Species Regulations 2017 as amended. Under the regulations, public bodies have a duty in exercising their functions to provide for the protection of 'European Sites' and 'European Protected Species' (EPS). This legislation makes it illegal to kill or disturb any bats, or to damage, destroy or block access to a place of shelter. All bat species in the UK are afforded full protection under the regulations, including all 17 bat species known to breed in the UK:

- Common pipistrelle (*Pipistrellus pipistrellus*).
- Soprano pipistrelle (*Pipistrellus pygmaeus*).
- Nathusius' pipistrelle (*Pipistrellus nathusii*).
- Noctule (*Nyctalus noctula*).
- Leisler's bat (*Nyctalus leisleri*).
- Serotine (*Eptesicus serotinus*).
- Brown long-eared bat (*Plecotus auritus*).
- Grey long-eared bat (*Plecotus austriacus*).
- Daubenton's bat (*Myotis daubentonii*).
- Bechstein's bat (*Myotis bechsteinii*).
- Natterer's bat (*Myotis nattereri*).
- Whiskered bat (*Myotis mystacinus*).
- Brandt's bat (*Myotis brandtii*).
- Alcaethoe bat (*Myotis alcathoe*).
- Barbastelle (*Barbastella barbastellus*).
- Greater horseshoe bat (*Rhinolophus ferrumequinum*).
- Lesser horseshoe bat (*Rhinolophus hipposideros*).

Seven species of bat are listed as species of principle importance under Section 41 of the Natural Environment and Rural Communities Act 2006, including barbastelle, Bechstein's bat, noctule, soprano pipistrelle, brown long-eared bat, greater horseshoe bat and lesser horseshoe bat. All public bodies, including local authorities, are obligated to consider whether their activities can contribute to the protection of wildlife, with reference to species of principle importance.

The reader is referred to the original legislation for definitive interpretation.

1.3.2 Planning Policy

The recommendations of this report are in line with the key principles of the National Planning Policy Framework (NPPF) (ref. **R.1**) and Government Circular 05/06: Biodiversity and Geological Conservation – (ref. **R.2**).

Local planning policies relating to ecology are invariably based upon the conservation of species protected under the above legislation, including species and habitats of principal importance listed under Section 41 of the NERC Act 2006, and the protection of designated sites.

All of these features are considered within the scope of this report and therefore any recommendations made herein are likely to be in line with this policy.

2. BACKGROUND INFORMATION

The building was considered to have moderate potential for roosting bats during a preliminary bat roost assessment undertaken by RPS Group Limited on the 15th November 2024 (ref **R.3**).

2.1.1 Desk Study Data

The Multi-Agency Geographic Information for the Countryside (MAGIC) online database (ref. **R.4**) was consulted to obtain geographic information on key statutory designated nature conservation sites and to determine priority habitats in close proximity to the site, particularly those likely to be used by bats, including deciduous woodland. The surrounding 1km was also assessed using aerial imagery to identify other areas of habitat likely to be used by both foraging and roosting bats. The results are included on Figure 2 below.

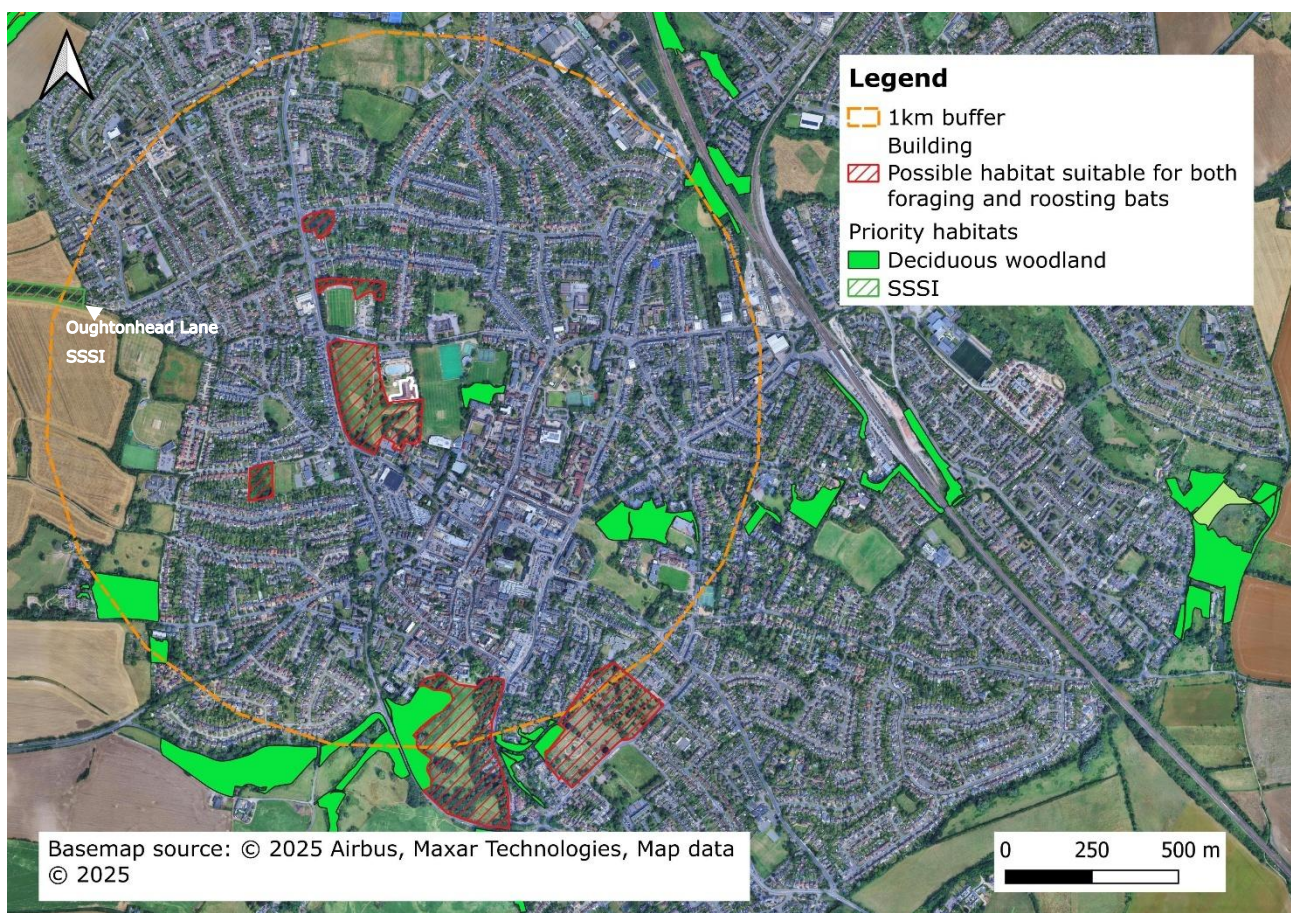


Figure 2 – Desk Study Data

Areas of priority deciduous woodland can be found within 1km of the site. Further areas noted as suitable for foraging and roosting bats include a cemetery to the south of site and other patches of habitat with ponds and scrub. The swimming pool at Hitchin is largely well connected to the wider landscape as shown in Figure 2. Immediately adjacent to the building there are suitable foraging and commuting routes in the form of lines of trees alongside well vegetated residential gardens that lead into the wider environment.

Oughtonhead Lane, a geological site of scientific interest, is also noted within 1km west of the site.

2.1.2 External PRA of Buildings

An external PRA was undertaken on the 15th November 2024 concluding that the building is of moderate potential for roosting bats (ref.**R.3**). The report details that a total of 33 potential roosting features were identified including:

- Exposed shutters.
- Gaps in roof tiles.
- Weep holes.
- Gaps in lead flashing.
- Gaps in soffit.
- Exposed vent shutter doors.
- Lifted tiles.
- Uncovered holes.

Recommendations were therefore made for two emergence surveys to be undertaken on the property, at least 3 weeks apart with 13 surveyors (ref **R.3**).

3. METHODOLOGY

3.1 Technical Approach

All surveys have been undertaken in accordance with Bat Conservation Trust (BCT), JNCC and Natural England guidelines (refs. **R.1**, **R.6** and **R.7** respectively).

3.1.1 Reporting Personnel

This report was produced by Sarah Jarrett BSc (Hons) MSc (Ecological and Arboricultural Consultant) who is experienced in ecological consultancy including surveys and mitigation for a range of protected species and impact assessments. This report was reviewed and approved by Katie Linehan BSc (Hons) MSc PIEMA MCIEEM (Technical Director), who is experienced in ecological consultancy including the production of bat roost and activity reports, as well as ecological impact assessments.

All surveyors used to establish baseline information are suitably qualified and experienced; surveyors' names and qualifications are stated in relevant survey headings below.

3.1.2 Survey Personnel

Surveyors used for the emergence surveys include Sarah Jarrett BSc (Hons) MSc TechArborA (Ecologist), Joanne Reynolds Class 2 bat license 2017-32694-CLS-CLS, BSc (Hons), MCMA, AMIEnvSc, QCIEEM (Subcontractor Ecologist), Charles Kilshaw BSc (Hons) (Subcontractor Ecologist), Katie Linehan BSc (Hons) MSc PIEMA MCIEEM (Technical Director), Tom Cox HND MArborA QCIEEM (Senior Ecological and Arboricultural Consultant), Ariana Segura BSc (Hons) MSc QCIEEM (Ecologist), Eleanor Baker BSc (Hons) MSc (Ecologist), Fletcher Telling BSc (Hons) (Graduate Ecologist), Loren Holgate BSc (Hons) (Graduate Ecologist), Matthew Lawrence BSc (Hons) MSc (Seasonal Ecologist), Sam Bellamy BSc (Hons) MSc QCIEEM (Graduate Ecologist) and Seasonal Survey Assistants Flynn Waldron (MSc), Adam Willis (BSc), Jonathon Kahn (MChem), Rob Slater (MEng), and James Bonham BA(Hons).

3.2 Detailed Bat Scoping Survey

A visual inspection of the buildings was undertaken to identify the suitability of the building to provide potential roost space for bats. In particular, potential access points and evidence of bats were searched for. This was conducted in full day light with the aid of binoculars, endoscope, torch and ladders to identify the following features:

- Age and structure of the building.
- Condition of the roof noting any missing, dislodged or lifted tiles that would provide entry.
- Condition of the walls, doors and windows that may provide entry.

- Windowsills, walls and sheltered areas are searched for bat droppings.
- Grease marks, scratch marks and urine staining around possible entry points.

3.3 Emergence Survey

To ensure all aspects that were highlighted as having roost potential were observed during the survey, a total of 13 surveyors were used, surveying from 13 vantage points with the assistance of night vision aids (NVAs), to observe features from a fixed point. The locations of the surveyors during building emergence surveys are shown on Drawing ref. 9264,EC/8001/Rev0 in Appendix 3.

Emergence surveys commenced 15 minutes before sunset and concluded between 90 and 120 minutes after sunset, depending upon the potential for late emerging species, to ensure that all species of bats were afforded time to egress from the roost.

The building onsite was deemed to have moderate potential; therefore, two emergence surveys were initially undertaken. Following confirmation of a roost, a third survey was undertaken.

Surveys were undertaken on the 6th May, 28th May and 24th June 2025. Specific timings of surveys, and a record of the weather during the surveys, are included in Appendix 4.

3.3.1 Equipment

Each surveyor used a Wildlife Acoustics Echo Meter Touch (EMT) Pro with Amazon Fire 8 HD Tablet or a Batlogger. FS AnaBat Express detectors were deployed nearer the building or on the other side of plant stations to reduce the impact of machine noise on the ability to detect clear calls and/or deployed alongside the unmanned camera location. Recordings were analysed using Kaleidoscope software, where necessary, to aid accurate species identification.

Night Vision Aids (NVAs) were used during each survey. Two Guide TrackIR 19 thermal imaging monoculars, one Guide TrackIR TK612 thermal imaging monocular, and three Canon (Models XA75, XA60 and XA15) infrared (IR) camcorders, supported by 850nm Infrared Floodlights were used. In addition, three Nightfox Whisker night vision binoculars (infra-red) were used in unmanned locations supported by FS Anabat Express detectors and were reviewed in full.

NVAs were viewed in real time once light levels became too low for human eye observation of the survey structures. External monitors connected to the IR camcorders and wireless tablets connected to the thermal scopes were also used.

All NVAs were set to record for the duration of the survey, with video footage played back to determine numbers, locations and species of bats emerging from roost, (if any). Screenshots from NVA's can be found in Appendix 5.

3.4 Ecological Impact Assessment

The ecological evaluation and impact assessment detailed below is based upon CIEEM Guidelines for Ecological Impact Assessment in the United Kingdom, (ref. **R.9**).

CIEEM Guidelines state that the value or potential value of an ecological resource or feature should be determined within a defined geographical context from an international to site scale as follows in Table 1 below:

Table 1 – Assessment of Conservation Value of Bat Species	
Geographical Frame of Reference	Brief Description
International	- A species which is part of the cited interest of a SAC. - A species which regularly occurs in internationally or nationally important numbers. (>1% of international population).
National	- A species which is part of the cited interest of a SSSI onsite or with direct habitat connectivity with the site. - A nationally important population of a European species / s41 NERC species of principal importance.
Regional	Species listed as principal importance under s41 NERC, which are not covered above, and which regularly occurs in regionally important numbers in a feature such as a woodland, hibernation roost or maternity roost.
County	- Species listed as principal importance under s41 NERC, which regularly occurs in county important numbers in a feature such as a woodland, hibernation roost or maternity roost. - Habitats which support sustainable populations of a species that is rare or scarce within a county.
District	- Sustainable populations of a species that is rare or scarce within the locality / listed on the local BAP. - Good quality foraging habitat (e.g., woodland) with good linkages to the wider environment supporting diverse assemblages of commonly encountered bat species. - A significant roost (such as large maternity) for regularly occurring species.
Local	- Good quality foraging habitat with linkages to the wider environment. - Areas of habitat with medium or high potential to be used as a roost site by commonly encountered species in relatively low numbers.
Less than local	- Low populations of common species utilising areas of the site for foraging or commuting purposes. - Summer roost with few individual common bats.

Bat mitigation guidelines (ref. **R.10**) also offer a method of assessing the importance of the cumulative bat assemblage, to be completed after the species and roosts present onsite have been evaluated. They state that sites of importance to bats often support several species and therefore assessing the assemblage as a whole should be undertaken when considered necessary and / or useful following assessment of species and roosts. The score provided should be used as contextual information only, and the assemblage as a whole should not be assessed as an important ecological feature on its own.

A score for the site was generated based upon the survey data, with reference to the desk study data. Scoring works on a geographical basis, where species considered widespread in (almost) all geographies score as 1 each, widespread in many geographies, but not as abundant in all score 2 each, rarer or restricted distribution score 3 each and rarest Annex II species and very rare score 4 each.

Table 2, below, shows what species are considered in each category in East Anglia, with the total scores present on the right.

Table 2 – Assessment of Conservation Value of Bat Assemblage		
Rarity Category [Points Per Species]	Southeastern / East Anglia to The Wash	
	Species	Maximum Score
Widespread all geographies. [Score 1]	Common pipistrelle Soprano pipistrelle Brown long-eared bat	3
Widespread in many geographies, but not as abundant in all. [Score 2]	Daubenton's bat Natterers bat Noctule	6
Rare or restricted distribution. [Score 3]	Whiskered bat Brandts bat Serotine Leisler's bat Nathusius pipistrelle	15
Rarest Annex II species and very rare. [Score 4]	Barbastelle bat	4
Thresholds	Maximum	28
County Importance Threshold 45%	County	13
Regional Importance Threshold 55%	Regional	15

Table 2 – Assessment of Conservation Value of Bat Assemblage

Rarity Category [Points Per Species]	Southeastern / East Anglia to The Wash	
	Species	Maximum Score
National Importance Threshold 70%	National	20

4. FIELD SURVEY RESULTS

4.1 Site Specific Limitations

Members of the public were present throughout the survey, any instances where a surveyor considered public interference a limitation were subject to footage review to ensure that nothing had been missed.

External lighting was present on the majority of the build; infrared cameras were adjusted throughout the night to facilitate best view of the features; however, in some circumstances some of the infrared imagery is overexposed; however, data recorded on EMTs from each location would be unaffected in terms of detecting bat calls, if present in that location.

4.2 Emergence Survey

Surveyor positions, unmanned cameras, the location of trees with lots of foraging activity and the location of the roost can be found in Drawing 9264,EC/001/Rev0 in Appendix 3. All screenshots from cameras and image of the roost location can be found in Appendix 5.

4.2.1 Survey 1 – 06/05/2025

No emergencies were noted during the survey. A very low number of bats were recorded during the survey all of which appeared from offsite. *Pipistrellus sp.* were noted coming onto site from the southwest around 24 minutes after sunset.

4.2.2 Survey 2 – 28/05/2025

A single common pipistrelle was recorded emerging from a small area of loose tile near a chimney in the southeast corner of the building at 21:32, 26 minutes after sunset. It was observed by a surveyor; however, the exact emergence was not within the camera view. The bat flew north, which was recorded as it flew past the camera.

A small number of at least two common pipistrelles were observed commuting to the boundary habitats onsite from nearby, specifically most activity was noted on a tree in the southwestern corner. These common pipistrelles were observed foraging from 21:33 onwards throughout the survey. They occasionally flew close to the eaves of the building, but no re-entry was observed.

This survey was extended to 2 hours after sunset to assess if the bat would come back near the roost; however, no further activity was noted near the tiles.

4.2.3 Survey 3 – 24/06/2025

No emergence was observed during this survey. Common pipistrelles utilised the southern boundary treeline to commute and foraging, and similar levels of foraging was observed in the southwestern corner of the site.

4.2.4 Discussion

The building onsite is subject to substantial artificial light at night, and substantial noise is generated by the building. The tiles on the second-storey roof offer the darkest areas that are most suitable for roosting bats, and the majority of activity was noted along the southern boundary and southwestern corner.

The single emergence of a common pipistrelle is considered to be an opportunistic use of loose tiles present in the southwestern corner near the chimneys; this area is well lit but is in good connectivity with common flyways utilised by a low number of common pipistrelles.

Table 3 shows a summary of the earliest recorded passes by the species noted during surveys.

Table 3 – Summary of Earliest and Latest Recorded Passes			
Common Name	Earliest Pass (dusk) (Minutes after sunset)	Recorded Roosting?	Maximum Count
Common pipistrelle	24	Yes – Individual day roost	2 (only one roosting)

4.3 Conservation Status of Bats

The conservation status of the species noted onsite are shown in Table 4 below:

Table 4 – Conservation Status and Assemblage Score of Bat Species Noted Onsite			
Common Name	Relevant Legislation	Conservation Status in Hertfordshire*	Rarity (Assemblage Score)**
Common pipistrelle.	Hab Regs Sch 2, WCA sec 9.	Widespread, occasionally common. One of the two species most likely to be encountered.	Widespread. 1 point per species. Score 1 for this part of the assemblage (of a maximum of 3).
Total based on known species**			
1 (less than county significance).			
- UKBAP: UK Biodiversity Action Plan, WCA: Wildlife & Countryside Act, Hab Regs: The Conservation of Habitat & Species Regulations 2017, NERC: Natural Environment Research Council Schedule 41 Species of Principal Importance. * From Hertfordshire & Middlesex Bat Group website: https://hmbg.org.uk/bats-in-hertfordshire-middlesex/ (accessed 08/05/2025). ** Based on 2023 bat mitigation guidelines (ref R.9).			

These surveys were designed to determine the presence / likely absence of roosting bats within the survey area. Therefore, the value of the site as a whole for foraging and commuting bats cannot be reliably assessed using these results. Recommendations are made in Section 5 to ensure that potential impacts to habitats onsite, of potential value to foraging and commuting bats, are minimised and avoided wherever possible.

5. ECOLOGICAL CONSTRAINTS AND RECOMMENDATIONS FOR MITIGATION AND ENHANCEMENT OPPORTUNITIES

5.1 Roosting Bats - Buildings

Results have confirmed the presence of a day roost used by an individual common pipistrelle. The survey area is considered to be of less than local importance for roosting bats and less than county importance regarding general assemblage of bat species noted during the surveys.

UK legislation protects all bat roosts from damage, destruction, modification or disturbance. The proposed works have the potential to/will damage, destroy, modify, disturb the identified roost. Therefore, **a Natural England (NE) European Protected Species (EPS) Mitigation Licence will be required prior to any such works** to ensure that they are undertaken legally.

5.2 Roost Mitigation

Mitigation and compensation measures associated with impacts to bats and their roosts will be detailed within the Method Statement section of the NE EPS Mitigation Licence. These are likely to include:

- Careful timing of works to avoid disturbing bats during hibernation or breeding (preferred months are September to November or March to April, weather dependent).
- A 'toolbox talk' by a licensed bat worker to all contractors prior to works.
- Supervision of all works with the potential to encounter bats by a suitably experienced Ecologist.
- Placement of bat boxes suitable for the species involved onsite prior to commencement.
- Inclusion of compensatory roost provisions suitable for the species involved within the new build.

5.3 Foraging and Commuting Habitat

It is recommended to retain as much bat foraging habitat as possible in the final development. This should include the retention of the tree lines along the boundaries, to allow bats to continue to use these habitats for foraging.

The trees to be retained should be protected in line with BS 5837 2012- Trees in Relation to Design, Demolition and Construction (ref. **R.11**). The tree protection measures, (barrier fencing etc), should provide a suitable buffer during the construction phase, to avoid direct impact upon these trees during construction.

5.4 Lighting during Construction

It is best practice to avoid overnight working (between sunset and sunrise), to avoid disturbance to foraging and commuting bats.

The building and trees should remain unlit during any works at the site, unless undertaken under a NE EPS Mitigation Licence which permits illumination of the roost.

During the construction phase, lighting should be directed away from boundary vegetation and areas of suitable foraging habitat (hedgerows and trees), to ensure light does not obstruct bat flight paths or disrupt bat foraging activities.

5.5 Lighting Within Final Development

Any retained trees or buildings should not be subject to an increase in the baseline light levels post development. Any new lighting to be installed onsite should be designed according to current best practice guidelines (ref. **R.12**).

Lighting can act as a barrier to bats, potentially restricting their movement between habitats. Any lighting to be included within the proposed development, should ideally be UV free LEDs emitting warm white light (<2700 Kelvin) with peak wavelength >550nm.

Below are broad examples of what could be considered regarding any replacements needed for existing lighting for the scheme to reduce impact:

- With the aid of a lighting professional, all outdoor light fittings should be designed to reduce glare from adjacent surfaces, including the ground.
- Lighting columns throughout the development should be carefully designed to minimise light spill.
- Luminaires should be restricted to those with good optical control and no upward spill and mounted horizontally.
- Where appropriate, all lighting should be set on motion-sensors and 1-minute timers.
- Where necessary, to achieve additional lighting control, control accessories such as baffles, hoods and cowls can be used to direct lighting.

6. BIODIVERSITY ENHANCEMENTS

Bat ridge boxes should be considered for incorporation within the scheme, situated close to (and facing) tree lines with recorded bat activity. These should be positioned at least 4m above the ground, sheltered from strong winds and exposed to the sun for part of the day (usually orientated south to southwest).

Precise locations of bricks and boxes should be determined by an Ecologist. Examples are included within Appendix 6.

7. CONCLUSIONS

One common pipistrelle was noted egressing from a section of loose tile near chimneys in the southeast corner of the building on the second survey. No bats emerged from the build on the first or third surveys.

Loose tiles on the building were observed to have a day roost used by one common pipistrelle, considered to be of less than local importance for roosting bats. A NE EPS Mitigation Licence will be required prior to any works impacting this building. This may also require additional survey effort post planning to facilitate a licence application. The level of additional survey required would be at the licence holder's discretion.

Bat ridge boxes should be considered for incorporation into the final development to provide additional roosting opportunities.

Provided that works are undertaken following methods as detailed in an appropriate NE licence and the mitigation, compensation and enhancement measures within are adhered to, it is considered likely that the development could proceed with no significant impact on local bat populations.

APPENDICES

Appendix 1 – Report Limitations and Conditions

General Limitations and Exceptions

This report was prepared solely for our Client for the stated purposes only and is not intended to be relied on by any other party or for any other use. No extended duty of care to any third party is implied or offered.

Geosphere Environmental Ltd does not purport to provide specialist legal advice.

The Executive Summary, Conclusions and Recommendations sections of the report provide an overview and guidance only and should not be specifically relied upon until considered within the context of the whole report.

Interpretations and recommendations contained within the report represent our professional opinions, which were arrived at in accordance with currently accepted industry practices at the time of reporting and based upon current legislation in force at that time.

Ecology Limitations and Exceptions

Any limitations associated with the report will be stated. The consequences of any limitations, findings and / or recommendations in the report are made clear in line with CIEEM (2013) 'Guidelines for Preliminary Ecological Appraisal' (GPEA) and BSI (2013) BS 42020:2013 Biodiversity – 'Code of practice for planning and development'.

This report is prepared and written in the context of the proposals stated within the introduction to this report and should not be used in a differing context.

The wildlife and habitats present on any site are subject to change over time. Surveys of this kind can have limited validity, with the possibility of behaviour patterns and territory boundaries varying over time due to the dynamics of adjacent populations.

New information, improved practices and legislation may necessitate an alteration to the report in whole or in part after its submission. Therefore, with any change in circumstances or after the expiry of one year from the date of the report, the report should be referred to us for re-assessment and, if necessary, re-appraisal.

It should be noted that whilst every effort has been made to provide a comprehensive description of the site, no investigation can ensure the complete characterisation of the natural environment.

The scoping survey does not assess the presence or absence of a species but is used to assess the potential for habitat to support them. Additional surveys may be recommended if, on the basis of the preliminary

assessment or during subsequent surveys, it is considered reasonably likely that protected species may be present.

This survey does not constitute an invasive species survey and should not be treated as such.

Owing to seasonal variances and prevailing weather, conditions may sometimes be sub-optimal for surveying, and this may delay or disrupt planned survey programmes. If applicable, full details are given in the report.

Geosphere Environmental Ltd may not be aware of information that could be held by other organisations or individuals, and it is always possible for features of nature conservation interest to be unrecorded during surveys.

Scientific survey data will be shared with local biological records centre in accordance with the CIEEM professional code of conduct.

Appendix 2 – References

- R.1.** Department for Levelling Up, Housing and Communities (2025) National Planning Policy Framework (NPPF). <https://www.gov.uk/government/publications/national-planning-policy-framework--2>
- R.2.** ODPM (2005) Government Circular: Biodiversity and Geological Conservation – statutory obligations and their impact within the planning system.
- R.3.** RPS Group Limited (2024) Preliminary Bat Roost Assessment, NHDC Decarbonisation Project: Hitchin Swimming Pool. Report Ref: 794-ENV-ECO-21554b
- R.4.** Magic [accessed 8th May 2025] Site Check Report. www.magic.gov.uk.
- R.5.** Collins, J (ed) (2023). 'Bat Surveys for Professional Ecologists – Good Practice Guidelines 4th Edition.' Bat Conservation Trust, London.
- R.6.** Neil Middleton (08/10/2019). Assessing Sites for Hibernation Potential. A Practical Approach including a Proposed Method and Supporting Notes. Draft/V2.2019
- R.7.** JNCC (2004). 'Bat Workers Manual' 3rd edition. Joint Nature Conservation Committee, Peterborough.
- R.8.** English Nature (2004) Bat mitigation guidelines.
- R.9.** CIEEM (April 2022) Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater, Coastal and Marine. Version 1.2. Chartered Institute of Ecology and Environmental Management, Winchester.
- R.10.** Reason, P. and Wray, S. (2023). UK Bat Mitigation Guidelines: a guide to impact assessment, mitigation and compensation for developments affecting bats. Version 1.1. Chartered Institute of Ecology and Environmental management, Amphfield.
- R.11.** BS 5837: (2012), 'Trees in Relation to Design, Demolition and Construction'.
- R.12.** Institution of Lighting Professionals (2023) Bats and artificial lighting at night – Guidance Note 08/23

Appendix 3 – Drawings

Surveyor location and results Plan – Drawing ref. 9264,EC/001/Rev0



Legend

- Building
- Surveyor
- Unmanned camera position
- Roost
- Area with most foraging activity

Note - surveyor positions on the first survey reflected what was recommended in the initial PRA

On the second survey 10 and 12 were unmanned cameras, and a surveyor with suitable experience was switching between positions 5 - 6 with 7 unmanned.



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Hitchin Swimming Pool & Fitness Centre,
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Drawing Title

Surveyor location and results plan

Drawing Number

9264,EC/001/Rev0

Date

26/06/2025

Author / Checked By

SJ / KL

Source

Basemap source: © 2025 Airbus, Maxar
Technologies, Map data © 2025

Appendix 4 – Emergence Survey Timings & Weather

BAT ACTIVITY SURVEYS - WEATHER RECORDS

Project Number: 9264,EC

Project Name: Hitchin Swimming Pool & Fitness Centre, Fishponds Road, Hitchin, SG5 1HA

Surveyor Names:									
Date	Building	Time		Ambient Temp (°C)		Time of Sun Set	Wind Speed* (Beaufort)	Cloud Cover (%)	General Weather Observation
		Start	End	Start	End				
06/05/2025	1	20:19	22:04	11	8	20:34	0	0	Sunny
28/05/2025	1	20:51	23:06	15	13	21:06	2	100	Cloudy, humid
24/06/2025	1	21:09	22:54	20	19	21:24	1	0	A few temporary gentle breezes.

*Beaufort Scale

Beaufort Scale		Wind Speed (mph)	Beaufort Scale		Wind Speed (mph)
0	Calm	0 - 1	4	Moderate breeze	13 - 17
1	Light air	1 - 3	5	Fresh breeze	18 - 24
2	Light breeze	4 - 7	6	Strong breeze	25 - 30
3	Gentle breeze	8 - 12	7	Near gale	31 - 38

Appendix 5 – NVA Screen Shots from Emergence Survey

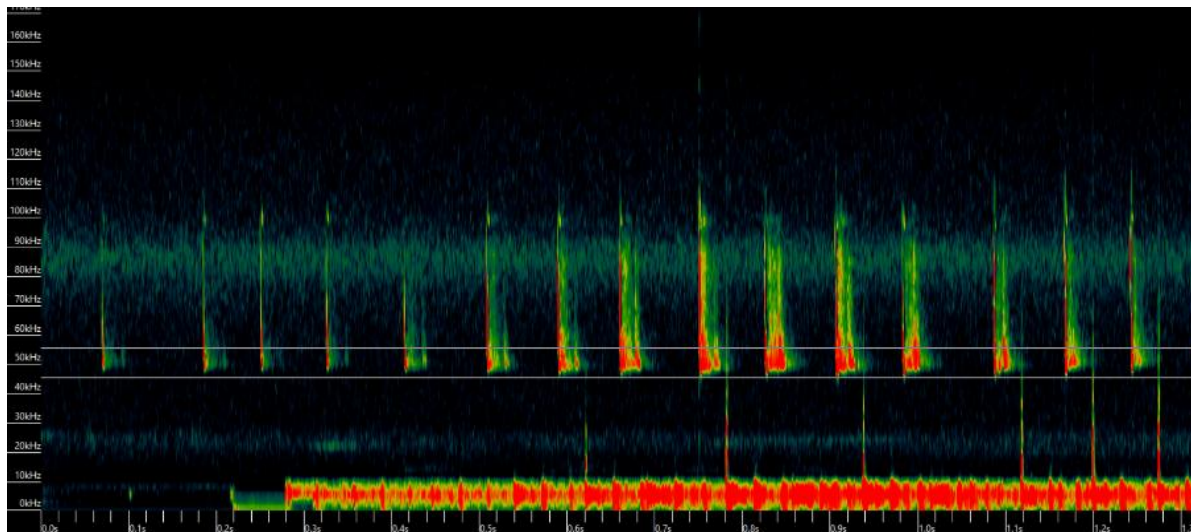
Screenshot 1



Screenshot 2



Screenshot 3



DESCRIPTION

Screenshot 1

Location of tiles where bat emerged.

Screenshot 2

Screenshot showing rough bat trajectory.

Screenshot 3

Call recorded during the emergence.

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Screenshot 4



Screenshot 6



Screenshot 5



Screenshot 7



DESCRIPTION

Screenshot 4

View from position 1, Survey 1.

Screenshot 5

View from position 3, Survey 1.

Screenshot 6

View from unmanned camera in northwest on Survey 1.

Screenshot 7

View from position 5 on Survey 1.

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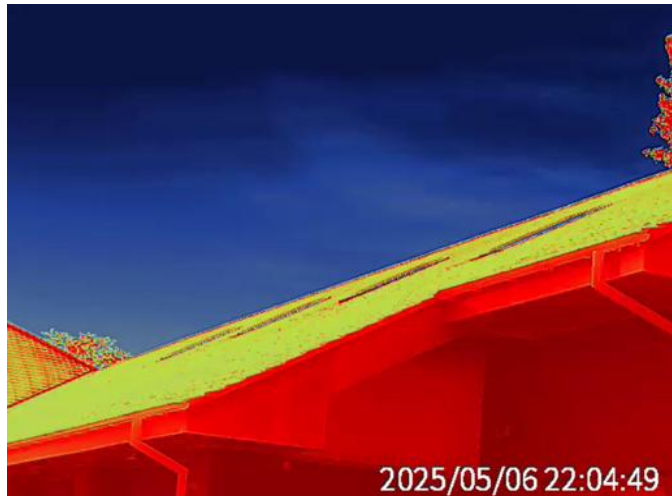
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Screenshot 8



Screenshot 9



DESCRIPTION

Screenshot 8

View from position 10, Survey 1.

Screenshot 9

View from position 9, Survey 1.

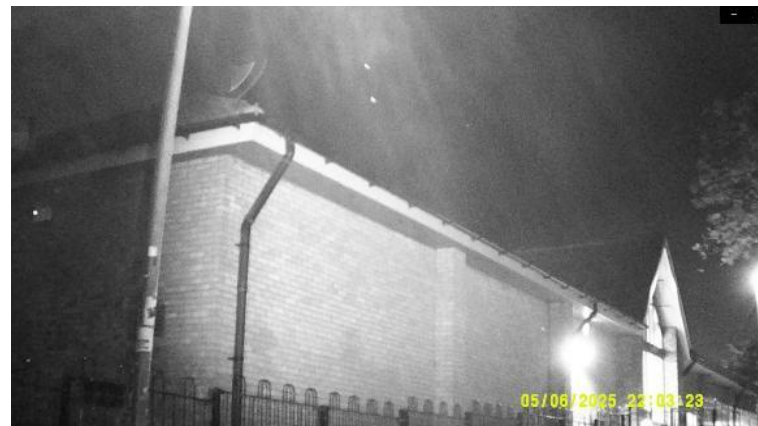
Screenshot 10

View from position 7, Survey 1

Screenshot 10



Screenshot 11



Screenshot 11

View from position 4, Survey 1.

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Screenshot 12



Screenshot 13



Screenshot 14



Screenshot 15



Screenshot 16



DESCRIPTION

Screenshot 12

View from position 13, Survey 1.

Screenshot 13

View from unmanned camera north of position 3 on Survey 1.

Screenshot 14

View from position 12, Survey 1.

Screenshot 15

View from position 7, Survey 1.

Screenshot 16

View from position 8, Survey 1.

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Screenshot 17



Screenshot 18



DESCRIPTION

Screenshot 17

View from position 5, Survey 2.

Screenshot 18

View from position 3, Survey 2.

Screenshot 19

View from position 11, Survey 2.

Screenshot 19



Screenshot 20



Screenshot 20

View from position 13, Survey 2.

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Screenshot 21



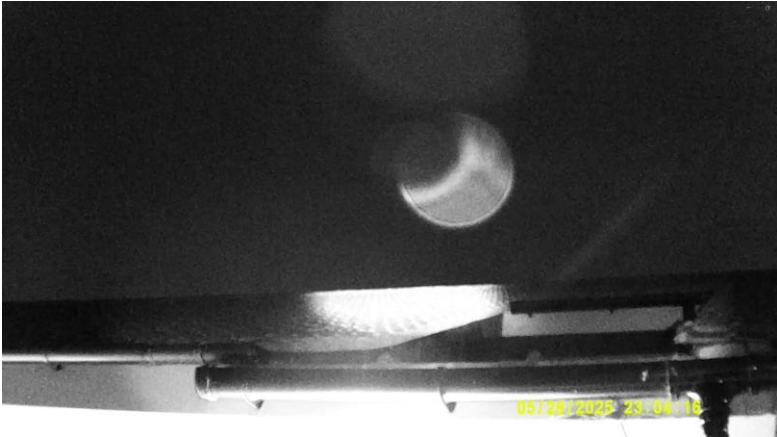
Screenshot 22



Screenshot 23



Screenshot 24



DESCRIPTION

Screenshot 21

View from unmanned camera at position 10 on Survey 2.

Screenshot 22

View from position 2, Survey 2.

Screenshot 23

View from unmanned camera at position 12 on Survey 2.

Screenshot 24

View from position 8 on Survey 2.

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Screenshot 25



Screenshot 27



Screenshot 26



Screenshot 28



DESCRIPTION

Screenshot 25
View from position 9 on Survey 2.

Screenshot 26
View from position 4 on Survey 2.

Screenshot 27
View from position 1 on Survey 2,

Screenshot 28
View from unmanned camera in northwest on Survey 2.

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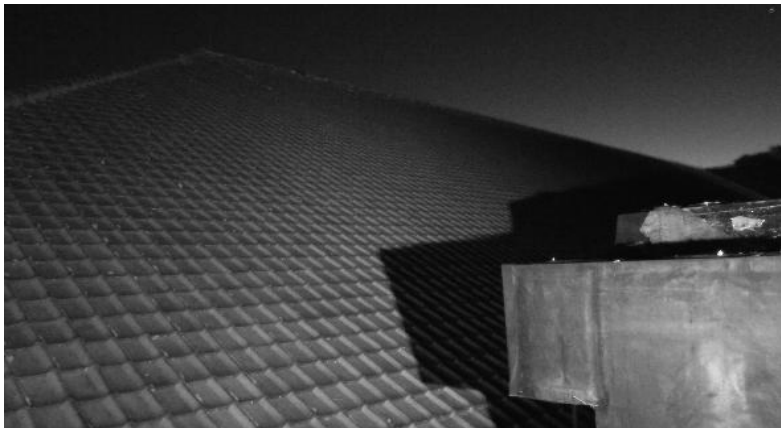
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Screenshot 29



Screenshot 30



DESCRIPTION

Screenshot 29
View from position 5 on Survey 3.

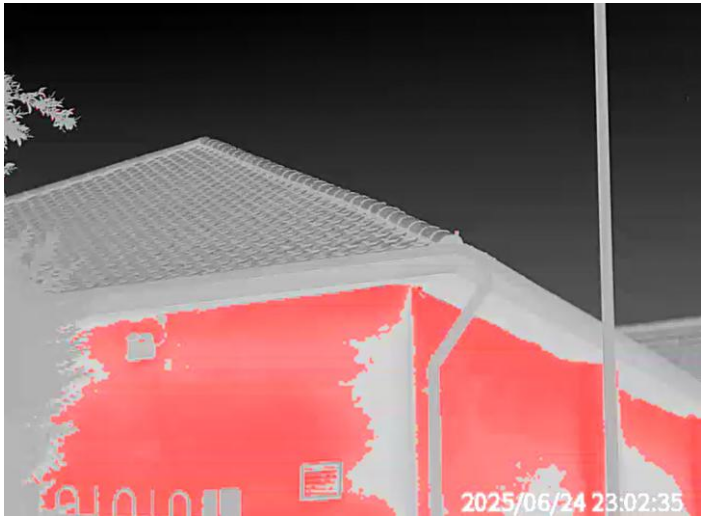
Screenshot 30
View from position 3 on Survey 3.

Screenshot 31
View from position 10 on Survey 3.

Screenshot 31



Screenshot 32



Screenshot 32
View from position 4 on Survey 3.

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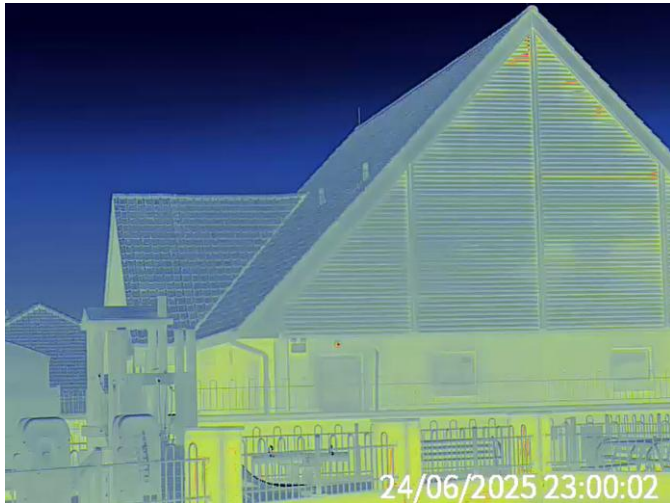
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Screenshot 33



Screenshot 34



DESCRIPTION

Screenshot 33

View from position 1 on Survey 3.

Screenshot 34

View from position 9 on Survey 3.

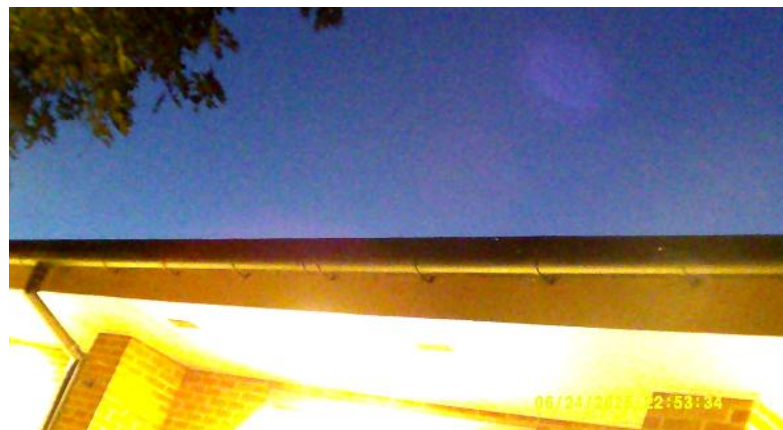
Screenshot 35

View from position 6 on Survey 3,

Screenshot 35



Screenshot 36



Screenshot 36

View from position 8 on Survey 3.

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Screenshot 37



Screenshot 38



Screenshot 39



Screenshot 40



DESCRIPTION

Screenshot 37

View from position 13 on Survey 3.

Screenshot 38

View from position 12 on Survey 3.

Screenshot 39

View from position 11 on Survey 3.

Screenshot 40

View from position 7 on Survey 3.

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Screenshot 41



Screenshot 42



DESCRIPTION

Screenshot 41

One of 2 views from position 2 on Survey 3.

Screenshot 42

One of 2 views from position 2 on Survey 3.

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Appendix 6 – Example Bat Boxes & Bat Bricks

EXAMPLE BAT BOXES

External Bat Box: Manthorpe Bat Ridge Roost



This bat ridge roost from Manthorpe is an innovative solution to increasing bat roosting opportunities on existing buildings and new buildings alike, replacing the ridge end caps with an occupiable space on the gable end. The roost is suitable for both half-round and segmental ridge tiles and can be mounted on roofs with a maximum pitch of 55 degrees and a minimum of 15 degrees. It is also designed for both round concrete and clay ridge tiles. Made from UV stabilised Polypropylene, this box is designed to last the test of time and is maintenance-free. Water is drained away from the wall due to the clever design to prevent gable end staining.

SOURCE

<https://www.nhbs.com/manthorpe-bat-ridge-roost>

External Bat Box: Eco Kent Bat Box



The Eco Kent Bat Box is based on the popular and proven Kent Bat Box design. However, this box has an added weatherproof outer shell, making it more secure and long-lasting. The additional plastic layer also reduces draughts inside the box, providing a more attractive roosting environment for bats.

The Eco Kent Bat Box is suitable for crevice-dwelling species. The two crevices inside the box are approximately 18mm wide, ideal for common and soprano pipistrelles. The FSC-certified spruce wood is rough on the inside providing good grip for bats once inside the box. This box is self-cleaning and does not require any maintenance, as the droppings fall straight down out of the bottom entrance.

These bat boxes can be mounted on either a tree or building using the 3 concealed keyhole fixings located at the top of the box. If possible, site the box at a height of between 4m and 6m in a sheltered sunny place, away from artificial light sources. The box should not be positioned in direct sunlight. Ideally, several boxes should be placed facing different directions, as this provides a choice for roosting bats. A clear path to the entrance of the box is essential.

SOURCE

<https://www.nhbs.com/eco-kent-bat-box>

TITLE

Example Bat Boxes



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Fr

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Ge

Geotechnical.

En

Environmental.

Kw

Knotweed.

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