



NOCTURNAL BAT SURVEY REPORT

SITE LOCATION

The Old Rectory,
Rectory Lane,
Nuneaton,
CV13 0LS

ISSUE DATE

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SEED REF

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CLIENT

Witherslack Group

ARBORICULTURAL CONSULTANCY

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DOCUMENT CONTROL

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1. Introduction

Scope & Purpose

- 1.1.1. Seed Arboriculture Ltd were commissioned by Witherslack Group to undertake Nocturnal Bat Surveys at The Old Rectory, Rectory Lane, Nuneaton, CV13 0LS. A planning application has been submitted to in the relation to the change of use of the site to a school with associated facilities (23/00667/FUL). No works to the roof is proposed under the planning approval where the development will include the installation of a suspended ceiling on the top floor, thereby minimising the need of installing services within the loft void. However due to the condition of the roof, selective repair works are required to. As such, these surveys have been completed to allow the proposed repair works to be completed, in a lawful manner.
- 1.1.2. The author of this report is Katie Bird MEnvSci, ACIEEM Principal Ecologist. Katie is highly experienced managing schemes and has produced many ecological reports to inform planning permission. Katie holds a Class 2 Bat Licence from Natural England, as is the licenced ecologist on several bat mitigation projects.
- 1.1.3. A Preliminary Roost Assessment (PRA) was undertaken at the site in March 2023 by SEED Arboriculture, as part of the Preliminary Ecological Appraisal. The PRA assessed building as having **'high'** bat roosting potential. As such, three further nocturnal bat surveys were recommended, as detailed within this report.

Site Location

- 1.1.4. Please refer to Figure 1 for the site location. The site is located within a residential area of Market Bosworth with agricultural fields on the southern aspect of the site boundary. The site is bound by Rectory Lane to the north.



Figure 1 - Site Location Plan

Objectives

1.1.5. The objectives of the Nocturnal Bat Survey are as follows:

- Identify any bats roosting within the buildings.
- Assess the value of the buildings for roosting bats.
- Identify the species assemblage of bats using the site.
- Provide recommendations on any further surveys or mitigation required for bats.

2. Methodology

Nocturnal Bat Surveys

- 2.1.1. The nocturnal surveys were undertaken as dusk and dawn surveys on 17/07/2023, 03/08/2023, 16/08/2023, and 31/08/2023 by seven suitably experienced surveyors. An infrared camera (Nightfox Red, Digital Night Vision Goggles) was used during the surveys completed in August; the camera was placed at the eastern aspect to aid the survey (See Figure 2 referenced as IRC).
- 2.1.2. Please refer to Figure 2 for locations of vantage points (VPs) used during the dusk survey.

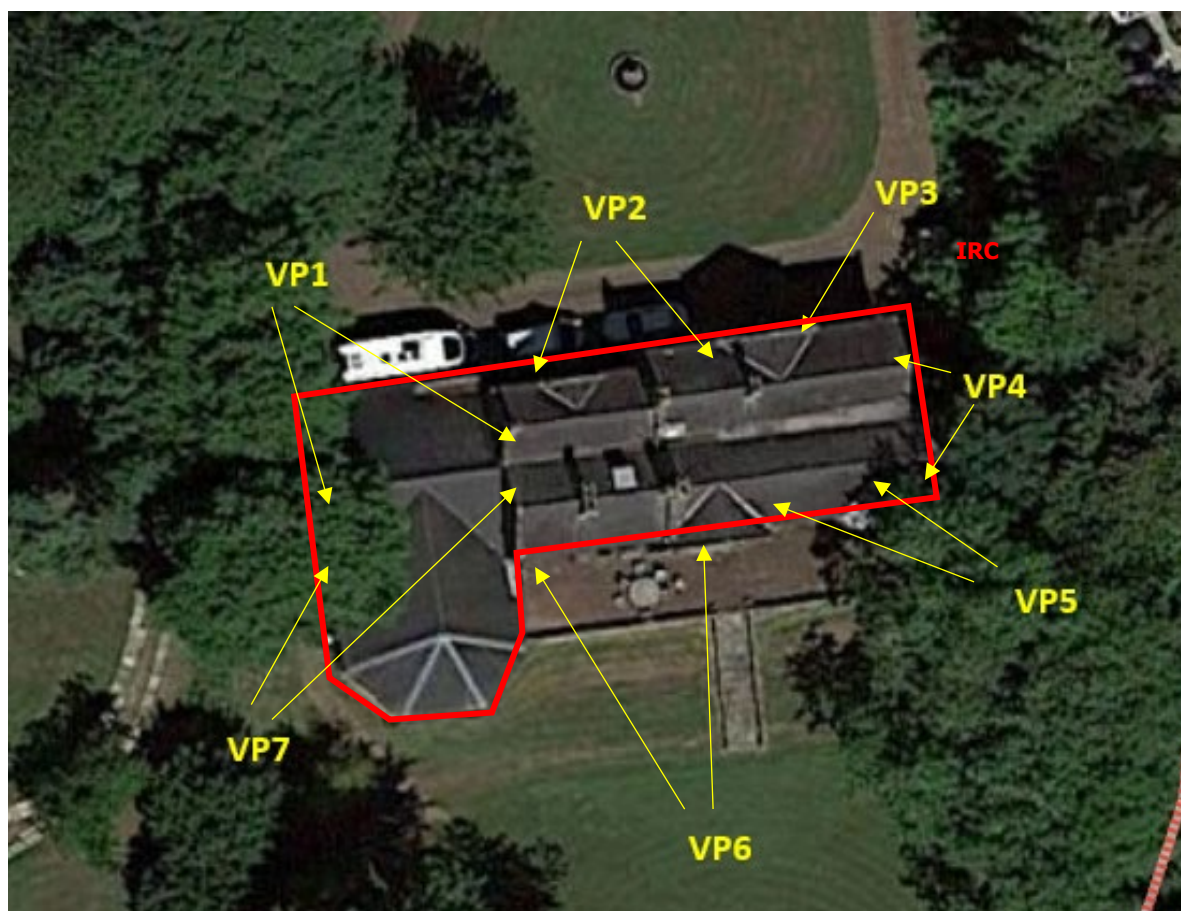


Figure 2 – Surveyor locations

2.1.3. The surveys were undertaken in line with guidance as set out in Collins (2016). Surveyors used heterodyne handheld bat detectors and Echo Meter Touch 2. All surveyors were suitably experienced undertaking bat emergence surveys. Please refer to Table 1 below for details of surveyors and the Appendix for the Emergence Plan.

Table 1 - Bat Survey Details

Date	Sunset/ Sunrise Time	Start	Finish	Surveyors	Weather Conditions
17/07/23	21:20	21:05	22:50	VP1 – Kacie Henson VP2 – Harry Fox VP3 – Charlotte Nuttall VP4 – Iman Rafiq VP5 - Rhiannon Hobbs VP6 – Katie Brewer VP7 – Sam Penrhyn-Lowe	Temp: 17 Celsius Cloud: 3/8 Wind: 1 max (Beaufort scale) Precipitation: None

03/08/23	20:55	20:40	22:25	VP1 – Kira Lawton VP2 – Harry Fox VP3 – Charlotte Nuttall VP4 – Jacob Ng VP5 - Rhiannon Hobbs VP6 – Katie Brewer VP7 – Tiernan O Ceallaigh	Temp: 16 Celsius Cloud: 6/8 Wind: 1 max (Beaufort scale) Precipitation: None
01/09/23	06:16	04:46	06:31	VP1 – Iman Rafiq VP2 – Harry Fox VP3 – Charlotte Nuttall VP4 – Darnell Shaw VP5 - Rhiannon Hobbs VP6 – Andrew Taylor VP7 – Jacob Ng	Temp: 13 Celsius Cloud: 8/8 Wind: 1 max (Beaufort scale) Precipitation: Mist

Roost Assessment and Mitigation

- 2.1.4. The roost assessment was completed following guidance set out in UK Bat Mitigation Guidelines (2023). The guidance was also utilised to assist in mitigation proposals, where necessary.

3. Survey Results

Dusk Survey (13/07/2023)

- 3.1.1. Bat activity was recorded throughout the survey by all vantage points with species identified within the local area including common pipistrelle (*Pipistrellus pipistrellus*), soprano pipistrelle (*Pipistrellus pygmaeus*) and noctule (*Nyctalus noctula*). Common pipistrelles were recorded more frequently than other species. Behaviour recorded mainly related to foraging bats in relation to the surrounding grasslands on site and commuting and foraging along the edges of the broadleaved woodland.
- 3.1.2. No bats were identified emerging or re-entering by VPs; VP1, VP2 and VP7.
- 3.1.3. The following emergence locations (E.g. E1, E2) were recorded with associated times and references:
- VP3 recorded one brown long-eared bat emerging from the roofing tiles/guttering at 22:55 (E1).
 - VP4 recorded two common pipistrelles emerging from the open vent on the eastern aspect at 21:44 and 21:45 (E2).
 - VP5 recorded one common pipistrelle emerging from the roofing tiles on the southern aspect of the site at 21:45 (E3).
 - VP6 recorded two common pipistrelles emerging from (1 count per emergence point); base of middle chimney, from lead flashing (E4) at 21:44 and from ridge tile at 22:06 (E5).
- 3.1.4. Please see Table 2 for the emergence locations.

Table 2 – Emergence points recorded on the 13/07/2023.

Reference	Location
E1	

E2	
E3	
E4 in red E5 in orange	

Dusk Survey (03/08/2023)

- 3.1.5. Bat activity was recorded throughout the survey by all vantage points but in fewer frequencies than the previous dusk survey. Species recorded included common pipistrelle, brown long-eared bat (*Plecotus auritus*) and unidentified myotis. Similar behaviour as the first survey was recorded.
- 3.1.6. No bats were identified emerging or re-entering by VPs; VP1, VP2 and VP7.
- 3.1.7. The following emergence locations were recorded with associated times and references:
- VP1 recorded nine common pipistrelles emerging from three locations on the northern aspect of the site; E6 related to six bats emerging from roof and ridge tiles (times: 21:04, 21:17 and 21:40), E7 related to one emerging from a ridge tile (times: 21:24) and E8 related to two emerging at a ridge tile (times: 21:27 and 21:36).
 - VP2 recorded one common pipistrelle at the ridge tiles at 20:58 (E9).

- VP3 recorded five common pipistrelles emerging at ridge tiles at 21:25, 21:29 and 21:31 on the northern aspect (E10).
- VP4 recorded eight common pipistrelles emerging from the open vent on the eastern aspect at 21:15, 21:25, 21:27, 21:32 and 21:42 (E2).
- VP5 recorded one common pipistrelle bat emerging from the roofing tiles on the southern aspect of the site at 21:30 (E3).
- VP6 recorded two common pipistrelles emerged from a vent on the southern aspect of the site at 21:40 (E11).
- VP7 recorded one common pipistrelle bat emerging from under ridge tiles at 20:59 (E8).

3.1.8. Please see Table 3 for the emergence locations.

Table 3 – Emergence points recorded on the 03/08/2023.

Reference	Location
E6	
E7	

E8			
E9 in red E10 in orange			
E11			

Dawn Survey (01/09/2023)

- 3.1.9. Lower levels of bat activity were recorded on the dawn survey, with brown long-eared, common pipistrelle, noctule,
- 3.1.10. No bats were identified emerging or re-entering by VPs; VP1, VP2, VP3, VP4 and VP7.
- 3.1.11. VP5 recorded two common pipistrelle re-entering at roof tiles at 05:32 and 05:48 (E3).

Assessment

- 3.1.12. Bat activity was recorded consistently throughout each nocturnal bat survey conducted at the site with a range of species identified. Species included: common pipistrelle, soprano pipistrelle, brown long-eared bat, noctule bat and unidentified myotis. Common pipistrelles were the most identified bats whilst other species were only recorded occasionally.
- 3.1.13. The building comprised a vacant two storey building with a single storey modern extension on the western aspect. The emergence points all related to the roof structure of the building. There are three loft voids present: two relating to the main house and one relating to the extension. Upon review of the data collected over the three surveys and the condition of the building, the emergence points relate to multiple non-breeding roosts, with low numbers of common pipistrelle

and brown long-eared scattered across the roof structure. The maternity season for common and soprano pipistrelles is typically May-July and maternity colonies range from 20-1000 bats (Collins, 2016), where behaviour and numbers observed does not meet this criterion. Whilst the emergence and re-entry points relate to three separate loft voids which aren't connected.

3.1.14. Please find the following summarising the roosts:

- **Roost 1** – located emerging from the roofing tiles/guttering. A count of 1 brown long-eared bat (E1) recorded on 1st survey only - **Assessed as a transitional, non-breeding roost.**
- **Roost 2** – emerged from open vent on eastern aspect which will lead to loft void, with a peak count of 8 common pipistrelle (E2), recorded on 1st and 2nd survey – **Assessed as a day, non-breeding roost.**
- **Roost 3** – emerged from slipped tiles, with a peak count of 2 common pipistrelle (E3), recorded on all surveys– **Assessed as a day, non-breeding roost.**
- **Roost 4** – emerged from lifted lead flashing at base of middle chimney, with a peak count of 1 common pipistrelle (E4), recorded on 1st survey only - **Assessed as a transitional, non-breeding roost.**
- **Roost 5** – emerged from ridge tile, with a peak count of 1 common pipistrelle (E5), recorded on 1st survey only - **Assessed as a transitional, non-breeding roost.**
- **Roost 6** - emerged from slipped tiles and ridge tiles, with a count of 6 common pipistrelle (E6), recorded on 2nd survey only - **Assessed as a transitional, non-breeding roost.**
- **Roost 7** – emerged from under the ridge tile on the western aspect of the single storey extension built in 2000. A count of 1 common pipistrelle (E7) recorded on 2nd survey only - **Assessed as a transitional, non-breeding roost.**
- **Roost 8** - emerged from under the ridge tile. A count of 3 common pipistrelle (E8) recorded on 2nd survey only - **Assessed as a transitional, non-breeding roost.**
- **Roost 9** - emerged from under the ridge tile. A count of 1 common pipistrelle (E9) recorded on 2nd survey only - **Assessed as a transitional, non-breeding roost.**
- **Roost 10** - emerged from under the ridge tile. A count of 5 common pipistrelle (E10) recorded on 2nd survey only - **Assessed as a transitional, non-breeding roost.**
- **Roost 11** - emerged from vent on southern aspect which connects to the loft void on the southern aspect. A count of 2 common pipistrelles (E11) recorded on 2nd survey only - **Assessed as a transitional, non-breeding roost.**

4. Recommendations & Mitigation

Impact Assessment

- 4.1.1. The proposed works relate to the selective repair works of the roof and installation of additional insulation fabric on the base of the loft. The extent of required repair works will need to be determined by a contractor. The repair works should seek to minimise impacting the roosts identified during the surveys. Once specific repair works and extent of works is known, this Mitigation Strategy may require updating.
- 4.1.2. If works will require the destruction of roosts identified, it is considered that there is a risk the works will cause the disturbance and destruction of the roosts identified throughout the nocturnal bat surveys. As such, all roosts will be lost to facilitate development. Without mitigation, the works have the risk of injuring and/or killing bats and will result in the destruction of known bat roosts, an offence under the Conservation of Habitats and Species Regulations (2017).
- 4.1.3. The works will need to be undertaken in compliance with a suitable Natural England Bat Licence which must be obtained following planning approval and prior to any works being completed on the roof and associated loft void. Internal works on the first and second floor can proceed.
- 4.1.4. The roof repair works will need to be undertaken in compliance with a suitable Bat Licence which must be obtained following planning approval and prior to any works being completed on the building.
- 4.1.5. All bats have some degree of sensitivity to artificial, night-time lighting. Introducing artificial lighting to areas that are not currently illuminated may sever important bat flight lines and discourage bats from using roost provisions. It is recommended external lighting is not to be provided on the building to ensure roosting bats are not impacted by introduced lighting.

European Protected Species Licence (EPSL)

- 4.1.6. The licence application typically comprises of five elements:
- Application Form
 - Method Statement
 - Work Schedule
 - Associated Figures
 - Reasoned Statement (not required for this site).
- 4.1.7. A method statement is to be produced to outline the required mitigation and compensation for roost and habitat loss for the relevant planning application. The licence can be submitted to Natural England once full planning permission and all wildlife conditions have been discharged.

Compensation and Alternate Roost Provision

- 4.1.8. Development must not result in overall loss of bat roost sites therefore replacement roost site will be required for each species and roost affected at a ratio of 1:1. Full details of the mitigation will be provided within the EPSL documentation. An outline of the mitigation, compensation and enhancements is included below:

- 4.1.9. **Bat Boxes:** Based on the evidence gained during the nocturnal bat surveys, there are 10 non-breeding roosts of common pipistrelle and 1 non-breeding roost of brown long-eared bat. As stated the extent of roosts to be lost is unknown, however a bat box per roost to be impacted will be provided as part of the EPSL mitigation. A maximum of 11 boxes may be required.
- 4.1.10. These will be compensated for through the provision of suitable bat boxes such as Vincent Pro Bat Box, greenwood “small hollow” and Vivara Pro Large Multi Chamber Woodstone Bat Box (or similar as available), which have all been recorded in use by common pipistrelle and brown long eared bat, known to be roosting on site. The boxes are also suitable for a range of myotis species which are known to be present within the local area. These boxes will be installed immediately prior to the proposed works per roost, on retained mature trees and/or façade of the building, where works will not be completed.
- 4.1.11. The locations of the boxes will be determined by a licensed bat ecologist to ensure the likelihood of uptake is increased. The boxes will be located retained mature broadleaved trees to the boundaries of the site and/or façade of the building, sheltered from strong winds but will be exposed to sun for parts of the day. They will be situated at a height of between 4-10m, preferably on sheltered, southern, un-cluttered aspects with good connectivity to linear features such as other mature trees and hedgerows. The boxes must be installed prior to the building works and remain on site in perpetuity. This will ensure that roosting opportunities are always available on site during and post-development and will be used as release sites for bats encountered during works by the licensed ecologist.
- 4.1.12. The UK Bat Mitigation Guidelines (Reason, P.F. and Wray, S., 2023) detail the efficacy of bat boxes mounted on different surfaces and found that wall mounted boxes are most frequently occupied by roosting bats and would be the most ideal option.
- 4.1.13. **Access Tiles:** If the ridge tiles which have been identified as supporting bat roosts require repair works, consideration of the installation of new tiles to provide a bat access gap should be included. As stated within the UK Bat Mitigation Guidelines (Reason, P.F. and Wray, S., 2023), access gaps can be created under ridge tiles by leaving out mortar (particularly at the end of the ridge) and removing ventilation structures within them or using specific bat access tiles. The roofing felt can be cut to allow access into the roof void at these points also. See Figure 3 for example imagery extracted from the guidelines (2023).



Figure 3 – Imagery of example ridge access points (Reason, P.F. and Wray, S., 2023)

- 4.1.14. In addition, if roosts relating to slate tiles will be impacted by the repair works, access points could be created within the new slates. The roof tile bat accesses can be created through the DIY construction of the ‘Morris’ bat-slate, as detailed under Case Study 15 of the UK Bat Mitigation Guidelines (Reason, P.F. and Wray, S., 2023).

Method Statement

- 4.1.15. **Toolbox Talk:** Before commencing any work on site, all contractors will be given a toolbox talk by a licensed bat ecologist or their accredited agent to ensure that they are aware of the presence of bat roosts and any other protected species, to ensure working practices on site follow legal requirements. The toolbox talk will also include information on how to proceed if a bat is discovered during the work. Further topics to be covered will include safe working practices to minimise the chances of bats being present during the works and how to proceed if a bat is discovered during the work.
- 4.1.16. **Ecological Supervision:** Following the toolbox talk and immediately before to the commencement of works, the bat licenced ecologist will undertake an internal and external inspection of the building to confirm no Potential Roosting Features have formed since the survey date, as well as to confirm the absence of bats within the works area and immediate surrounds. Any bats recorded will be moved to

a suitable alternative roosting location e.g., bat box. No works to the roof (internal or external) are to be conducted without the supervision of suitably qualified ecologist unless agreed in advance. Please keep your ecologist informed of the progress of your planning application to apply for the bat licence.

- 4.1.17. The features which are known to support bats will be removed under supervision of the licensed bat ecologist. Features with bat roosting potential will be removed by hand under direct supervision of a bat licensed ecologist services may need to be accessed via scaffolding, cherry picker, or alternative lifting platform. Please note that works proceed safer and quicker with the use of scaffolding and is the preferred option in most instances.
- 4.1.18. Once the most likely areas for bats have been cleared, it is at the ecologist's discretion if further supervision is required.
- 4.1.19. Contactors are forbidden to handle bats discovered during the development process, unless the bat appears to be in immediate danger (i.e., falling debris).
- 4.1.20. **Timing of Works:**
- 4.1.21. In principle, the optimum time for works of all types is likely to lie outside the maternity and hibernation seasons. Spring and autumn therefore represent the periods when bats are least vulnerable to disturbance (Reason, P.F. and Wray, S., 2023). The roosts identified are non-breeding summer roosts, however the building does have the potential to support hibernating roosts. As demonstrated in Figure 4 (extracted Table 6.1 of Reason, P.F. and Wray, S., 2023), the optimum period to carry out works is **April to end of October**, as no restrictions are outlined for non-breeding summer roosts.

Table 6.1: Optimum season for works in different types of roosts

The period of works may be extended if the way in which the bats use the site is well understood.

Roost type	Months to avoid	Optimum period for carrying out works (some variation between species and weather-dependent) ^a
Maternity	May-August (potentially September)	September to end April
Hibernation (not used for swarming)	November to March	April to end October [see also 6.2.14 et seq]
Hibernation and swarming site	August to March (key); potentially July until April	April to July (potentially later, depending on site and nature of works)
Mating/swarming: not used for hibernation	August to October (key); potentially July until mid-November Also April-early May in at least some species ^b	Mid-November – end March (potentially later, maybe species-specific) Broader restrictions if site also used for hibernation: see above
Non-breeding summer roost	None	No restrictions – assuming bats can be excluded if present in small numbers or otherwise safely managed

Figure 4 – Table 6.1 (Reason, P.F. and Wray, S., 2023)

Lighting Mitigation

- 4.1.22. All bats have some degree of sensitivity to artificial, night-time lighting. Introducing artificial lighting to areas that are not currently illuminated may sever important bat flight lines and discourage bats from using roost provisions. It is recommended external lighting is not to be provided on the building to ensure roosting bats are not impacted by introduced lighting.
- 4.1.23. It is advised that a light mitigation plan is produced to assess the pre- and post-development changes in lighting and to advise on an appropriately sensitive lighting scheme as part of the development.

4.1.24. The following measures will be implemented in the final proposed lighting strategy, following guidance outlined in the Institute for Lighting Engineers document “Guidance for the Reduction of Obtrusive Lighting” (2005) and BCT’s “Bats and Artificial Lighting in the UK” (2023):

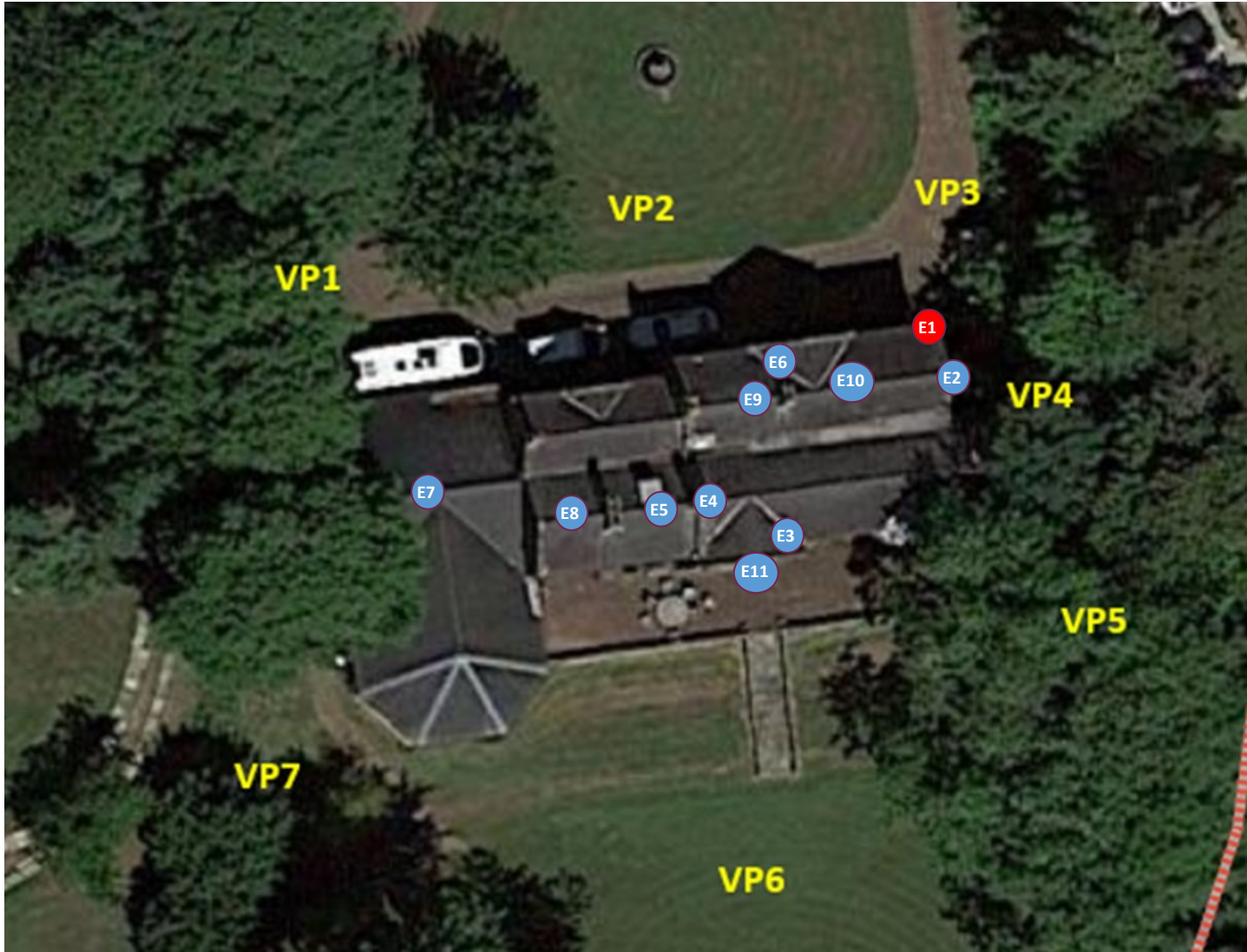
- Keep site lighting to minimum levels.
- LED lighting with a warm white light to be used over cool white light (<2700Kelvin).
- Lighting feature peak wavelengths greater than 550nm.
- Light placement to be downward facing to prevent excess horizontal or vertical light spill.
- Avoid illuminating habitats of value.
- Use of time security lights should be set on motion-sensors and using short, 1-minute timers, to minimise light use.

Summary

- 4.1.25. The proposed works will involve the destruction of a non-breeding roosts of common pipistrelle and brown long-eared bat. As stated, the extent of repair works required is unknown but will be agreed upon between the contractor, applicant and ecologist. The works will seek to minimise impacting the roosts identified.
- 4.1.26. Appropriate mitigation has been recommended to ensure that the proposed development does not result in an overall loss of bat roosts with multiple options outlined that will be dependent on practicability of repair works required.
- 4.1.27. All works will commence under an EPSL which will be applied for with data from the most recent bat survey season.

5. Bibliography

- Bat Conservation Trust (2018). Bats and Artificial Lighting in the UK: Bats and the Built Environment Series.
- Institute of Lighting Engineers (2005). Guidance Notes for the Reduction of Obtrusive Light.
- Mitchell-Jones (2004). Bat Mitigation Guidelines: Working Today for Natura Tomorrow. English Nature.
- Mitchell-Jones and McLeish (2004). Third Edition Bat Workers' Manual.
- Reason, P.F. and Wray, S. (2023). UK Bat Mitigation Guidelines: a guide to impact assessment, mitigation and compensation for developments affecting bats. Chartered Institute of Ecology and Environmental Management, Ampfield. Collins, J. (ed.) (2016). Bat Surveys for Professional Ecologists: Good Practice Guidelines, 3rd edition. The Bat Conservation Trust, London.



Drawing Title:

Location Bat emergence points

Key:

-  Site Boundary
-  Common Pipistrelles
-  Brown Long eared

Notes:

Scale: NTS	
Drawn by	KBrewer
Checked by	GL
Approved by	GL



Base Map: Google Earth	
Site: The Old Rectory, Market Bosworth	
Client Ref No: 1512	Rev: 1.0
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