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Rectory Farm, Northmoor

Bat Roost Characterisation Survey Report

September 2021

Mr F Winand

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Version	Date	Author	Checked	Approved
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Contact details can be found at the end of this document.

1.0 Introduction

Background

1.1 Keystone Ecology was instructed by Mr Francis Winand to undertake Presence/Absence and Bat Roost Characterisation Surveys comprising 2 dusk surveys and a single dawn return survey of several buildings associated with Rectory Farm in Northmoor, Oxfordshire. The survey includes the main farmhouse and 3 additional buildings including a Dovecote, a detached house known as Extra Cover and an outbuilding. These buildings are referred to as Buildings 1–4 in this document. The site is centred at national grid reference SP 4212 0283. It is understood that re-roofing works are proposed at the main farmhouse, Extra Cover and the outbuilding and this report is required in support of a planning application for these works. It is likely the farmhouse will be refurbished and some internal/external alterations to other buildings will take place at a later stage.

1.2 The surveys were recommended following a Bat Roost Inspection Survey ((BRIS), Keystone Ecology, 2021) which confirmed bat roosts in the Farmhouse (Building 1), the Dovecote (Building 2) and Extra Cover (Building 3). The evidence of bats recorded in Buildings 1 and 2 indicates the presence of low status bat roosts for common bat species, however, there is an increased volume of bat evidence in Extra Cover (Building 3) which could indicate a roost of higher conservation significance i.e., a maternity roost. The Outbuilding (Building 4) has high bat roost potential and at the time of the BRIS, no evidence to indicate the presence of roosting bats was recorded.

Aims and Objectives

1.3 The aim of the survey was to ascertain the following:

- Presence/absence of bat roosts;
- Status of roosts if present;
- Whether additional surveys are required;
- Whether a European Protected Species (EPS) licence is required to ensure legal compliance; and
- Which type of mitigation measures would need to be employed (if any).

Site Characteristics

1.4 Rectory Farm is a Grade II listed farmhouse (Building 1), with a Dovecote (Building 2), a modern property known as Extra Cover (Building 3), an Outbuilding (Building 4), Granary and 2 cottages within its curtilage. The site forms a cluster of buildings surrounding a hardstanding driveway and courtyard with mature gardens, primarily situated to the south of the farmhouse.

1.5 The site is located in a semi-rural location in Northmoor, a picturesque village characterised with scattered properties, associated gardens and a Church. The River Thames and associated tributaries are located to the south of the site, with Linch Hill Fisheries located to the

north. The intervening habitats are largely open with hedge lined field boundaries providing connectivity to them. The local surroundings offer a variety of roosting, foraging and commuting opportunities for bats.

Legislation, Planning Context and Status[1]

Protection Legislation

1.6 All UK bat species are listed under Schedule 2 of the Conservation of Habitats and Species Regulations 2010) (as amended) (the Conservation Regulations) and as such receive protection under Regulation 41 of these Regulations. All UK bat species are also listed under Schedule 5 of The Wildlife and Countryside Act 1981 and therefore receive protection under Section 9 of this Act (as amended by the Countryside and Rights of Way Act 2000).

1.7 This legislation makes it an offence to:

- Deliberately capture or kill a bat;
- Deliberately disturb[2] a bat;
- Intentionally or recklessly disturb[3] a bat;
- Intentionally or recklessly obstruct access to any structure or place a bat uses for shelter or protection; and
- Damage or destroy a breeding site or resting place of a bat.

1.8 In the case of Vivienne Morge vs. Hampshire County Council (2010), the Supreme Court has defined deliberate disturbance as 'an intentional act knowing that it will or may have a particular consequence, namely disturbance of the relevant protected species.'

1.9 Since 2007 it is no longer a valid defence to show that the killing, capture or disturbance of a species covered by the Conservation Regulations or the destruction or damage of their breeding sites or resting places was the incidental and unavoidable result of an otherwise lawful activity.

1.10 EPS licences can be granted by Natural England in respect of development to permit activities that would otherwise be unlawful under the Conservation Regulations, providing that the following 3 tests (set out in the EC Habitats Directive) are passed:

- The development is for reasons of overriding public interest;
- There is no satisfactory alternative; and

[1]Please note that this legal information is a summary and intended for general guidance only. The original legal documents should be consulted for definitive information. Web addresses providing access to the full text of these documents are given in the References Section.

[2] Affect its ability to survive, breed or rear young, impair its ability to migrate or hibernate, affect its local distribution or abundance.

[3] Whilst occupying a structure or place used for shelter or protection.

- The favourable conservation status of the species concerned will be maintained and/or enhanced.

Protection Afforded by the Planning System

1.11 The National Planning Policy Framework (NPPF) sets out government policy regarding consideration of biodiversity in planning decisions. Under the NPPF the presence of a protected species is a material consideration when a planning authority is considering a development proposal that, if carried out, would be likely to result in harm to the species or its habitat.

1.12 The NPPF states that:

'When determining planning applications, local planning authorities should aim to conserve and enhance biodiversity by applying the following principles:

- *if significant harm resulting from a development cannot be avoided (through locating on an alternative site with less harmful impacts), adequately mitigated, or, as a last resort, compensated for, then planning permission should be refused;*
- *proposed development on land within or outside a Site of Special Scientific Interest (SSSI) likely to have an adverse effect on a SSSI (either individually or in combination with other developments) should not normally be permitted. Where an adverse effect on the site's notified special interest features is likely, an exception should only be made where the benefits of the development, at this site, clearly outweigh both the impacts that it is likely to have on the features of the site that make it of special scientific interest and any broader impacts on the national network of SSSIs;*
- *development proposals where the primary objective is to conserve or enhance biodiversity should be permitted;*
- *opportunities to incorporate biodiversity in and around developments should be encouraged;*
- *the following wildlife sites should be given the same protection as European sites: potential Special Protection Areas (SPA) and possible Special Areas of Conservation (SAC); listed or proposed Ramsar sites; and sites identified, or required, as compensatory measures for adverse effects on European sites, potential SPAs, possible SACs, and listed or proposed Ramsar sites.'*

1.13 Under Section 40 of the Natural Environment and Rural Communities (NERC) Act 2006 public bodies, including Local and Regional Planning Authorities have a duty to 'have regard' to the conservation of biodiversity in England when carrying out their normal functions, which includes consideration of planning applications. In compliance with Section 41 of the Act, the Secretary of State has published a list of species considered to be of principal importance for conserving biodiversity in England under the UK Post-2010 Biodiversity Framework. This is referred to as the list of Species/Habitats of Principal Importance in England, of which there are 56 habitats (HPI) and 943 species (SPI). The list is used to guide planning authorities in implementing their duty under the NERC Act.

1.14 Seven bat species are SPI species. These are:

- Barbastelle Bat;
- Bechstein's Bat;
- Noctule Bat;
- Soprano Pipistrelle Bat;
- Brown Long-eared Bat;
- Greater Horseshoe Bat; and
- Lesser Horseshoe Bat.

1.15 Oxfordshire has a spatial approach to biodiversity action planning with no species-specific action plans relating to bats available to review. Oxfordshire County Council has adopted a holistic approach to protect, enhance and link existing habitats and in turn the species they support (Oxfordshire County Council, no date).

1.16 Under Regulation 9(5) of the Conservation Regulations, Planning Authorities also have a legal duty to 'have regard to the requirements of the Habitats Directive in the exercise of their functions.' As demonstrated by the case of Woolley vs. Cheshire East Borough Council and Millennium Estates Ltd (2009), this means that they must consider the 3 Habitats Directive tests (see above) when determining whether Planning Permission should be granted for developments likely to cause an offence under the Conservation Regulations. As a consequence, Planning Applications for such developments must demonstrate that the 3 tests will be passed.

2.0 Methodology

2.1 This report has been produced in accordance with Chapter 11 of Collins (2016) and report writing guidelines produced by the Chartered Institute for Ecology and Environmental Management (CIEEM, 2017).

Desk Study

2.2 As part of the BRIS (Keystone Ecology, 2021), Thames Valley Environmental Records Centre (TVERC) was contacted for records of bats, bat roosts and non-statutory sites designated for bats within 2 kilometres of the proposed development site.

2.3 Web-resources (Natural England, 2016; Gov.uk 2016) were also searched for any European statutory sites designated for bats on site and within a 15 kilometre radius of the site boundary and any national statutory sites designated for bats on site and within a 10 kilometre radius of the site boundary.

Field Survey

2.4 Two dusk emergence surveys and 1 dawn re-entry survey were undertaken within the main bat activity season with reference to national good practice guidelines (Collins, 2016). Details of the survey dates and times are provided in *Table 1*. Weather conditions during the surveys are presented in *Appendix 1*.

Table 1: Survey Timing

Survey Type	Date	Sunset/Sunrise	Start Time	End Time
Dusk 1 (B2, B3)	05/08/2010	20:47	20:32	22:17
Dusk 1 (B1, B4)	10/08/2021	20:41	20:26	22:11
Dawn (B2, B3)	24/08/2021	06:05	04:35	06:20
Dawn (B1, B4)	25/08/2021	06:06	04:36	06:21
Dusk 2 (B1, B2, B3, B4	16/09/2021	19:19	19:04	20:49

2.5 Each survey involved the use of 8 surveyors, strategically positioned around the buildings so as to be able to monitor all potential roost egress points identified during the BRIS (Keystone Ecology, 2021). The surveyor locations are shown on *Drawing Number: 213217/2/dwg1*. The surveys were orchestrated and led by a licensed bat ecologist (Tas Adcock, BSc, MSc, ACIEEM and Natural England Licence Number: 2020-47820-CLS-CLS) who satisfies all necessary field survey competencies as set out by our governing body, the Chartered Institute for Ecology and Environmental Management (CIEEM).

2.6 The surveyors were equipped with Batbox Duet (Stag Electronics, Steyning, West Sussex) combined frequency division/heterodyne bat detectors for audible monitoring and Song Meter SM4BAT-ZC (Wildlife Acoustics Inc., Concord, MA) automated bat detector recording units.

The time and location of all emerging/re-entering bats was recorded on a detailed site plan, along with incidental observations of other species foraging and/or commuting in the vicinity. All recordings analysed and identified as far as possible using AnalookW (Chris Corben). In addition, 1 or 2 thermal imaging device (model FLIR T540) were used to aid the survey process with footage viewed following the survey to corroborate surveyor observations/observe additional bat behaviour. On the first survey 2 units were deployed and on the remaining surveys a single unit was used. The location of thermal imaging devices is shown on *Drawing Number: 213217/2/dwg1*.

Site Status Assessment and Valuation

2.7 Based on the field survey results and the results of the BRIS (Keystone Ecology, 2021), any structures with evidence of bats have been assessed to determine which of the following categories they fall into, if any (based on Collins, 2016):

- Transitional/Occasional roost (April-September/October) - used by a few individuals or occasionally small groups of bats on waking from hibernation or in the period prior to hibernation;
- Maternity roost (May-August) - used by breeding females, where babies are born and raised to independence. Adult males rarely found here;
- Satellite roost (May-August) - used by a few individuals to small groups of breeding females throughout the breeding season as alternative roost sites in close proximity to maternity roosts;
- Mating roost (September-November) - established by males of some species to display/call to females to mate. May continue to be used over the winter;
- Hibernation roost (October-March) - where bats may be found individually or together during the winter. They have a constant temperature and humidity. They vary greatly in terms of the number of individuals and diversity of species using them;
- Night roost (March-November) - used by bats as roosts other than traditional day roosts to rest in during the night. May be used by a single individual on occasion or regularly by an entire colony;
- Day roost (March-November) - used by bats during the day to rest in, often by males. Rarely found by night in the summer. Bats may regularly use a number of days roosts or the same site for several weeks;
- Feeding roost (May-November) - can be occupied by a single bat or a few individuals to an entire colony to feed, shelter from the weather or to rest temporarily. Rarely present by day; and
- Swarming sites (August-November) - where large numbers of bats from several species gather, generally around caves and mines. Appear to be important mating sites.

2.8 Following the framework for valuing bats in Ecological Impact Assessment set out by Wray *et al.* (2010) and in accordance with guidance produced by CIEEM (CIEEM, 2018), the site's bat

roosts were each assigned a level of ecological importance, based on roost type and species rarity, using a geographic frame of reference (see *Table 2*). Refer to *Appendix 2* for further information regarding categorisation of bat species by national rarity.

Table 2: Roost Valuation System (from Wray et al., 2010)

Geographic Frame of Reference	Roost Types
District, Local or Parish	Feeding perches (common species) Individual bats (common species) Small numbers of non-breeding bats (common species) Mating sites (common species)
County	Maternity sites (common species) Small numbers of hibernating bats (common and rarer species) Feeding perches (rarer/rarest species) Individual bats (rarer/rarest species) Small numbers of non-breeding bats (rarer/rarest species)
Regional	Mating sites (rarer/rarest species) including well-used swarming sites Maternity sites (rarer species) Hibernation sites (rarest species) Significant hibernation sites
National/UK	Maternity sites (rarest species) Sites meeting SSSI (Sites of Special Scientific Interest) guidelines
International	SAC sites (Special Areas of Conservation)

Nomenclature

2.9 The English names of flora and fauna species are given in the main text of this report. Scientific names are used only in the absence of English names. Vascular plants and Charophytes follow the nomenclature of The Botanical Society for the British Isles database (2007) with all other flora and fauna following the UK Species Inventory (Natural History Museum, 2016).

Limitations

2.10 The results of the survey and assessment work undertaken by Keystone Ecology are representative at the time of surveying.

2.11 Keystone Ecology staff and their sub-consultants will endeavour to identify the presence of protected species wherever possible on site, where this falls within the agreed scope of works.

2.12 Up to date standard methodologies will be used, which are accepted by Natural England and other statutory conservation bodies. No responsibility will be accepted where these

methodologies fail to identify all species on site. Keystone Ecology cannot take responsibility where Government, national bodies or industry subsequently modify standards.

2.13 Keystone Ecology cannot accept responsibility for data collected from third parties.

2.14 Once light levels drop below a given point it is possible to miss bats emerging from egress points. While every effort is made to detect emerging bats, it cannot be guaranteed that all emerging bats will be detected.

2.15 It should be noted that Brown Long-eared Bats in particular echolocate more quietly, and Horseshoe Bat species in particular echolocate more directionally, compared to other bat species and so can sometimes be more difficult to detect and often go unrecorded.

2.16 Species from the Myotis and Nyctalus genera are notoriously difficult to distinguish in the field and from recorded sonograms, as there is considerable overlap in their range of echolocation frequencies. Where the species cannot be determined only the genus is stated.

3.0 Results and Assessment

Desk Study

3.1 There are no European statutory sites designated for bats within 15 kilometres, no national statutory sites designated for bats within 10 kilometres, and no non-statutory sites designated for bats within 2 kilometres of the proposed development site.

3.2 There are records of at least 3 bat species roosting within 2 kilometres of the site and records of an additional 3 bat species otherwise occurring within 2 kilometres of the site. Details are provided below in *Table 3*.

Table 3: Bat Records within 2 Kilometres of the Site

Species	**Roost records (No. of Records / Closest Minimum Distance from Proposed Development Site (m))**	**Other records (No. of Records / Closest Minimum Distance from Proposed Development Site (m))**
Soprano Pipistrelle Bat	6/82	3/672
Pipistrelle Bat species	1/88	
Brown Long-eared Bat	6/88	4/158
Unknown Bat species	2/699	
Common Pipistrelle Bat	2/1,298	5/158
Noctule Bat		4/158
Barbastelle Bat		1/158
Myotis Bat species		4/158

Field Survey

3.3 The results are presented in *Appendix 3,* with a summary provided in *Table 4*. All of the surveyed buildings support roosting bats. No behaviour indicative of breeding was observed and the overall numbers of bats across the site is low i.e., peak count of 4 Brown Long-eared bats, peak count of 4 Common Pipistrelle bats and peak count of 5 Soprano Pipistrelle bats across all buildings on a single survey. Due to the number of different emergence/re-entry points observed it is likely there is interchange of individuals across the buildings and no single entry/exit point is favoured. Given the fluctuation in the number of Common and Soprano Pipistrelle bats recorded emerging from and/or returning to the buildings, an alternative roost site in the vicinity of Rectory Farm is probable as Soprano Pipistrelle bats did not emerge from any of the surveyed buildings during the first emergence survey and Common Pipistrelle bats did not return to any of the surveyed buildings during the dawn survey.

3.4 Brown Long-eared as opposed to Grey Long-eared was confirmed via eDNA analysis (results provided in *Appendix 4*).

Table 4: Results/Assessment Summary

Building/Structure Ref.	Evidence	Status	Value
Building 1 (Farmhouse)	*Survey 1* A single Brown Long-eared bat emerged from Access Point D at 21:21. *Survey 2* A single Brown Long-eared returned to this building via Access Point I at 05:39. Two Soprano Pipistrelle bats returned to the building via Access Point H at 05:24. A further single Soprano Pipistrelle bat returned to this building via Access Point M at 05:39. *Survey 3* Single Common Pipistrelle bats emerged from 3 locations. The first emergence from Access Point O at 19:33, the second from Access Point R at 19:50 and the third from Access Point Q at 19:55. A single Brown Long-eared bat emerged from Access Point S at 19:53. Two Soprano Pipistrelle bats emerged from Access Point P at 19:47.	Brown Long-eared Day Roost Common Pipistrelle Day Roost Soprano Pipistrelle Day Roost	Local Local Local

Building/Structure Ref.	Evidence	Status	Value
Building 2 (Dovecote)	*Survey 1* No bats emerged from this building. *Survey 2* A single Brown Long-eared bat returned to the building via Access Point K at 05:42. A single Soprano Pipistrelle bat returned to the building via Access Point J at 04:38. *Survey 3* A single Brown Long-eared bat emerged from Access Point L at 20:14. A single Soprano Pipistrelle bat emerged from Access Point L at 20:43.	Brown Long-eared Day Roost Soprano Pipistrelle Day Roost	Local Local
Building 3 (Extra Cover)	*Survey 1* A Common Pipistrelle bat emerged from Access Point A at 21:16. A further Common Pipistrelle bat emerged from Access Point C at 20:58. A Brown Long-eared bat emerged from Access Point B at 21:31. *Survey 2* No bats returned to this building. *Survey 3* A Common Pipistrelle bat emerged from Access Point N at 19:44.	Brown Long-eared Day Roost Common Pipistrelle Day Roost	Local Local

Building/Structure Ref.	Evidence	Status	Value
Building 4 (Outbuilding)	*Survey 1* Two Brown Long-eared bats emerged from this building. The first from Access Point E at 21:03, the second from Access Point F at 21:04. *Survey 2* A single Brown Long-eared bat was observed inside the building at 05:19 and resting at Access Point G. *Survey 3* Two Brown Long-eared bats emerged from Access Point G and exited the open front of the building. The first bat emerged at 19:52, the second bat emerged at 19:55.	Brown Long-eared Day/Night Roost	Local

3.5 Occasional passes by Noctule and Myotis Sp. were recorded during the surveys although overall foraging/commuting activity around the site was generally low.

4.0 Impacts

4.1 The main farmhouse, Extra Cover and the outbuilding are to undergo re-roofing works. Bat roosts, of low conservation value, will be modified as a result and there is a risk that bats could be killed, injured or disturbed by these works.

4.2 Examples of activities that could generate further impacts beyond roof works include:

- Removal/installation/repair of services;
- Internal layout re-configurations including loft conversions;
- Installation/use of scaffolding;
- Timber treatment;
- Full or part outbuilding conversions or demolitions;
- Extensions and tying into existing roof spaces;
- Alterations to existing external lighting.

4.3 Predicted impacts and their effect on the bats in accordance with CIEEM guidelines (CIEEM, 2018) are presented in *Table 5*.

Table 5: Predicted Impacts and their Effect on Bats

Broad Impact	Specific Nature of Impact	Predicted Effect
Short-term impacts: disturbance	Refurbishment or construction activities within or near bat roosts in Buildings 1-4 leading to an increase in human presence and/or noise during the daytime.	Temporary or permanent abandonment of Brown Long-eared, Common Pipistrelle or Soprano Pipistrelle Day roosts. Death of Brown Long-eared, Common Pipistrelle or Soprano Pipistrelle if roused from torpor (hibernation potential only observed in Buildings 1 and 3).
Long-term impacts: roost modification	Restoration of Buildings 1-4, for example, activities such as roof repairs, extensions, loft/outbuilding conversions, scaffolding etc. could alter roost access points, reduce roost space available to bats, change ventilation/air flow/roost temperatures and/or introduce materials that are damaging to bats e.g., breathable roof membranes.	Modifications to roost sites could change the bats' use of the roost sites and thus damage them or even result in roost loss. Roosts of local value, affecting common species would be affected. Bats could be killed or injured by contractors as they carry out activities and/or by breathable roof membranes on completion of modification works.
Long-term impacts: roost loss	Given the listed nature of Rectory Farm demolition of Buildings 1-4 is considered to be highly unlikely.	N/A
Long-term impacts: fragmentation and isolation	None expected.	N/A
Post-development interference impacts:	Illumination at or in the vicinity of retained/modified bat roost entrances resulting in disturbance to bats. Use of breathable membranes in any roof replacement works.	At worst abandonment of Brown Long-eared Day/Night roosts and Common Pipistrelle or Soprano Pipistrelle Day roosts. Use of breathable membranes poses an entanglement risk to bats. Brown Long-eared, Common and Soprano Pipistrelle bats could be killed by its presence.

5.0 Recommendations and Requirements

Further Survey

5.1 Sufficient information has been obtained to inform a planning application relating to re-roofing works at this site which will affect Buildings 1, 3 and 4. The status of bat roosts on site is understood as well as the associated impacts meaning an appropriate mitigation strategy has been developed.

5.2 Some updated survey effort will be required to inform the EPS licence application to Natural England, which cannot be submitted until planning permission is secured. An updated Bat Roost Inspection Survey and Roost Characterisation Surveys would be recommended prior to the EPS licence application being submitted to confirm that the status of the site remains the same as that described within this report. A single updated Roost Characterisation Survey may be sufficient however, if the findings vary from that observed in 2021, a second and possibly third updated survey may be required.

Legal Compliance

5.3 An EPS licence is required in order to proceed with re-roofing works at Rectory Farm.

5.4 To ensure that the favourable conservation status of the species concerned will be maintained and/or enhanced, an appropriate mitigation strategy must be devised, as discussed below.

5.5 This mitigation strategy must be submitted with the Planning Application so that the Planning Authority can determine whether the favourable conservation status criterion is likely to be met before granting Planning Permission. Information will also need to be provided to show that the proposed development will meet the other 2 Habitats Directive tests (i.e., there is an overriding public interest and no satisfactory alternative - see Legislation, Planning Context and Status).

5.6 The following future works are likely to result in the need for an EPS licence:

- Loft conversion or outbuilding conversion;
- Construction near known bat roosts, including creation of extensions, tying in, alteration of the eaves;
- Installation of services within loft areas;
- Internal re-configuration of floors directly below loft areas; and
- Altered external lighting regime.

5.7 Beyond re-roofing, all future proposals must be discussed in detail with a licensed bat worker to confirm if an EPS licence is required or if a modification can be made to the one which must be secured prior to re-roofing works taking place.

5.8 Depending on the nature of the future works proposed it is possible that the need for an EPS licence could be avoided by use of precautionary working measures. Should this be the case, a Precautionary Working Method Statement (PWMS) would need to be produced to ensure that all personnel working on site have a strict protocol to follow to prevent contravention of relevant protection legislation.

Mitigation

5.9 All mitigation options provided follow the established Mitigation Hierarchy as set out in Section 5.2 of BS42020:2013. This seeks as a preference to avoid impacts then to mitigate unavoidable impacts, and, as a last resort, to compensate for unavoidable residual impacts that remain after avoidance and mitigation measures. The following measures have been identified as proportional to the scale and magnitude of impacts and their effects on bats as set out in *Section 4*.

Provision for Bats – Re-roofing Phase

5.10 All existing bat access points should be retained wherever possible in the event of localised roof repairs, or in the event of roof replacement, access points should be returned to a similar location. The re-roofing works are not expected to alter the dimensions of any roof spaces currently occupied by bats.

5.11 Any replaced roofs must be lined with a type 1F roofing felt with a hessian matrix e.g., bitumen felt with relevant ventilation systems in place to accommodate this roofing material (Natural England, 2015). The use of Breathable Roofing Membranes (BRM) or Non-Woven Textiles must not be installed into a roof that is used by bats. The long fibres that make up BRMs pose an entanglement threat to the bats and will not be permitted.

5.12 Breathable membrane already exists within Buildings 3 and 4. Depending on the nature of works to Buildings 3 and 4, consideration should be given to replacing the existing breathable membrane with a type 1F roofing felt with a hessian matrix as bat roosts have been confirmed.

5.13 If re-roofing cannot be undertaken in a phased manner, refer to Paragraph 5.15 below, it will be necessary to install 9 bat boxes on suitable trees in the grounds (Schwegler 2F-DFP, or equivalent) to ensure comparable roosting opportunities exist on site at all times and to ensure there is sufficient space to relocate any bats identified during the exclusion works, refer to Paragraph 5.19).

Provision for Bats – Future Phase

5.14 If the existing internal roosting space associated with Buildings 2 and 4 will be lost through conversion, alternative internal roosting space, which provide bats with comparable dimensions for open flight must be sought.

Timing of Works – Re-roofing Phase

5.15 To ensure bats are not left without suitable roosting opportunities at any point Buildings 1, 3 and 4 should not be re-roofed at the same time. Whilst some bats could be re-located to Building 4 (unaffected by re-roofing) it is unlikely all bats could be re-located to this building given that it is small in size and already utilised by bats. If the phasing of the re-roofing works

is not possible, bat boxes must be fitted to trees in the grounds prior to commencement to ensure there is sufficient roosting provision whilst these buildings cannot be used (refer to Paragraph 5.13 above).

5.16 The Bat Mitigation Guidelines (2004) indicate the best time of year to carry out works to known Day/Night roosts is between 1st September and 1st May. As breeding bats have not been identified there could be some flexibility outside this timeframe i.e., in the summer months.

5.17 As Buildings 1 and 3 have features which could be used by hibernating individuals, any demolition/disturbance works must avoid the main hibernation period for bats in these buildings. The Day Roosts for Common Pipistrelle, Soprano Pipistrelle or Brown Long-eared bats must be excluded from Buildings 1 and 3 when bats are active i.e., daytime temperatures above 8°Celsius.

Timing of Works – Future Phase

5.18 This will be determined once proposals are fixed. It is likely the same timing restrictions described for the re-roofing phase will still apply.

Exclusion and Pre-works Survey – Re-roofing Phase

5.19 The removal of suitable roosting features must be supervised by a bat licensed ecologist to ensure that bats are absent at the time of works. This will include the direct supervision of all tile removal and any roof lining present. Any bats recovered would be re-located to a suitable roof which is not undergoing re-roofing works, or a bat box installed in the grounds.

Exclusion and Pre-works Survey – Future Phase

5.20 This will be determined once proposals are fixed. Works which may cause disturbance impacts are also likely to require direct supervision.

Care and Vigilance during Works

5.21 In respect of planned works, after bats have been excluded under EPS licence or where a suitably qualified ecologist has agreed that planned works are highly unlikely to affect any bat roost which is to be retained, the contractor should be advised to adhere to the following procedures in the event bats are found unexpectedly during works:

- If an unexpected bat roost is located during works, the roost is still intact and bats are not injured, stop work and contact a bat licensed ecologist. If help is not available, allow bats to fly out of harm's way;
- If material containing a roost has been removed, the roost is not exposed and the bats are not injured, stop work and seek advice from a bat licensed ecologist. If advice is not readily available, allow bats to relocate of their own accord;
- If the roost has been exposed, and especially if bats have been injured, stop work immediately and contact a bat licensed ecologist. Any bats discovered lose on the ground should be placed carefully into a well-ventilated dark container pending arrival of the bat licensed ecologist and freshwater provided in a shallow container. Please note

that bats should never be handled with bare hands, and clean gloves should be worn whilst moving them to the container; and

- If a bat is seen flying around during the daytime, works must temporarily cease and a suitably qualified ecologist contacted for advice. Works would not be permitted to proceed until a suitable course of action, that ensures a wildlife offence is not committed, has been determined.

Monitoring

5.22 Further monitoring is unlikely to be condition of an EPS licence as only low status bat roosts, used by common bats, have been found.

Lighting

5.23 In the first instance, the inclusion of external lighting should be avoided. If the inclusion of external lighting is considered absolutely necessary the following recommendations are made to ensure roosting opportunities are unaffected (BCT, 2018):

- Security lighting should be motion sensitive and set to remain on for short periods of time i.e., no longer than 1 minute, once triggered.
- External security lighting should always be mounted on the horizontal with no upward tilt.
- Type of lamp (light source) - All luminaries should lack UV elements when manufactured. Metal halide, fluorescent sources should not be used. Luminaires should feature peak wavelengths higher than 550 nanometres to avoid the component of light which is most disturbing to bats.
- Luminaire and light spill accessories – Lighting will be directed to where it is needed and light spillage avoided. An upward ratio of 0% and with good optical control should be adopted to avoid illuminating wider areas than necessary which can disturb foraging and commuting bats as well as people and other wildlife.
- Light levels - The light should be as low as guidelines permit. A warm white spectrum (ideally <2700 Kelvin) should be adopted to reduce blue light component. Avoid unnecessary lighting where possible.
- Aim of light - The light should be aimed to illuminate only the immediate area required by using as sharp a downward angle as possible. As a last resort, accessories such as hoods, cowls, louvers and shields can direct the light to an intended area.

Opportunities for Biodiversity Enhancement

5.24 In accordance with national and local planning policy, opportunities for biodiversity enhancement (above and beyond those required to mitigate for the identified impacts) are set out below:

- A selection of the following shrubs and plants should be incorporated into any landscaping schedule: Night Scented Stock; Common Evening Primrose; Bladder Campion; Wild Marjoram; Borage; Bell Heather; Hebe; Lavender; Guelder Rose; Elder.

6.0 References

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Web Addresses for Access to Full Legislation and Policy Text:

Conservation of Habitats and Species Regulations 2010 (as amended):
http://www.legislation.gov.uk/uksi/2012/1927/contents/made

Countryside and Rights of Way Act 2000:
http://www.legislation.gov.uk/ukpga/2000/37/contents

Habitats Directive:
http://ec.europa.eu/environment/nature/legislation/habitatsdirective/index_en.htm

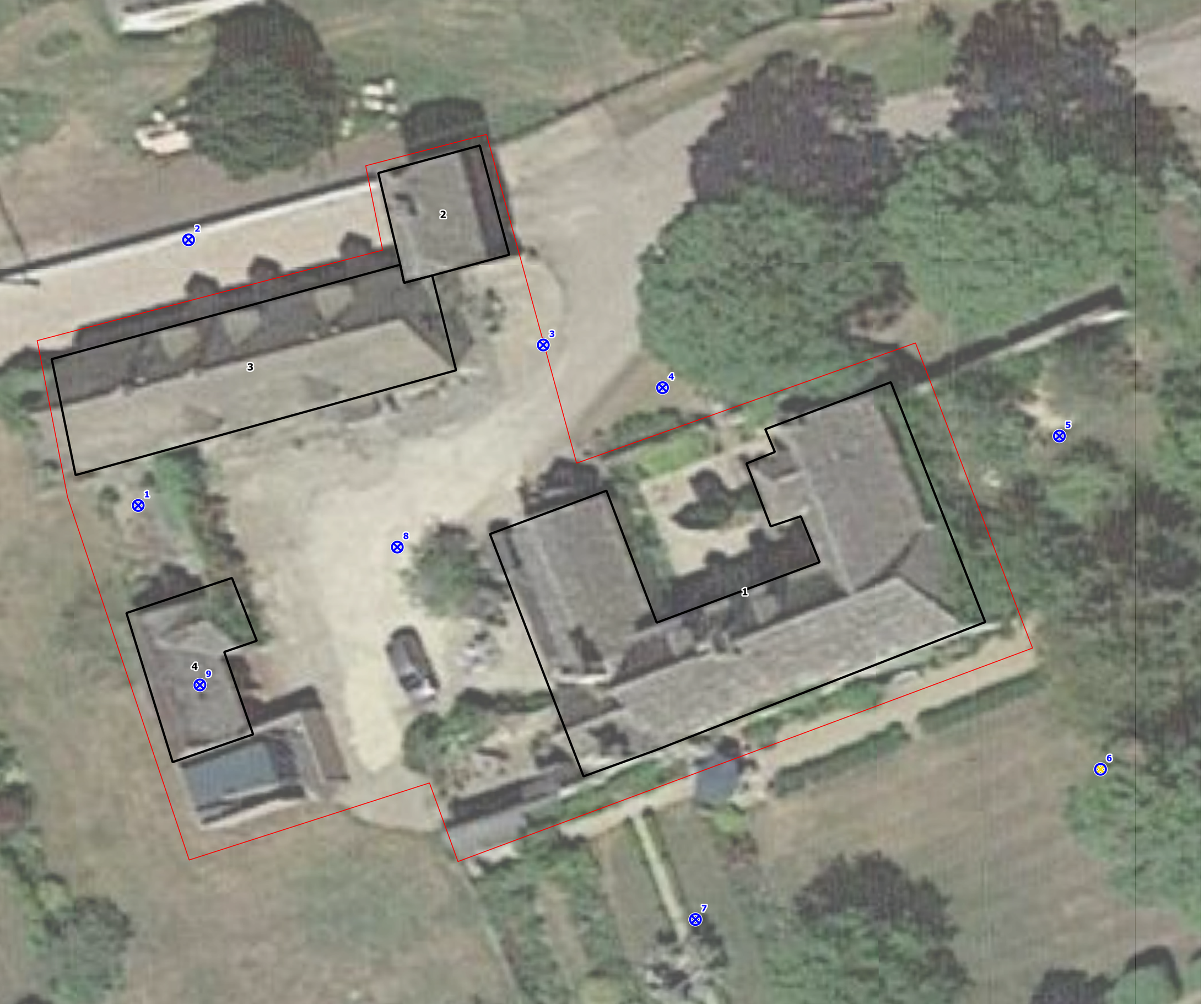
National Planning Policy Framework:
http://www.communities.gov.uk/documents/planningandbuilding/pdf/2116950.pdf

Natural Environment and Rural Communities Act 2006:
http://www.legislation.gov.uk/ukpga/2006/16/contents

UK Post-2010 Biodiversity Framework:
http://jncc.defra.gov.uk/page-6189

Wildlife and Countryside Act 1981:
http://www.legislation.gov.uk/ukpga/1981/69

Plans



Key

- Site boundary
- Building
- Indicative surveyor position
- Camera position

keystone ecology

Mr & Mrs Winand c/o Mark Van Oss & Associates

Rectory Farm, Witney

Drawing Number: 213217/2/dwg1

Bat Roost Characterisation Survey Results: Surveyor Positions

Revision	Date	Drawn	Approved
rev0	14/1/2022	MM	ER

0 1 2 3 4 5 m

Central grid ref: SP421028

No dimensions to be scaled from this drawing
All dimensions are to be checked on site
Measurements displayed are for indicative purposes only

Head/Southern Office T+44 (0) 1666 503687
Welsh Office T+44(0) 2920 504024
www.keyenv.co.uk

Date	Surveyor Position	Species	Time	Number	Activity	Access Point
05/08/2021	2	Common Pipistrelle	21:16	1	Emerged	A
10/08/2021	8	Common Pipistrelle	20:58	1	Emerged	C
16/09/2021	4	Common Pipistrelle	19:33	1	Emerged	O
16/09/2021	3	Common Pipistrelle	19:44	1	Emerged	N
16/09/2021	7	Common Pipistrelle	19:50	1	Emerged	R
16/09/2021	4	Common Pipistrelle	19:55	1	Emerged	Q

Key

- Site boundary
- Building
- Common Pipistrelle access point

keystone ecology

Mr & Mrs Winand c/o Mark Van Oss & Associates

Rectory Farm, Witney

Drawing Number: 213217/2/dwg2

Bat Roost Characterisation Survey Results: Common Pipistrelle Bat

Revision	Date	Drawn	Approved
rev0	19/1/2022	MM	ER

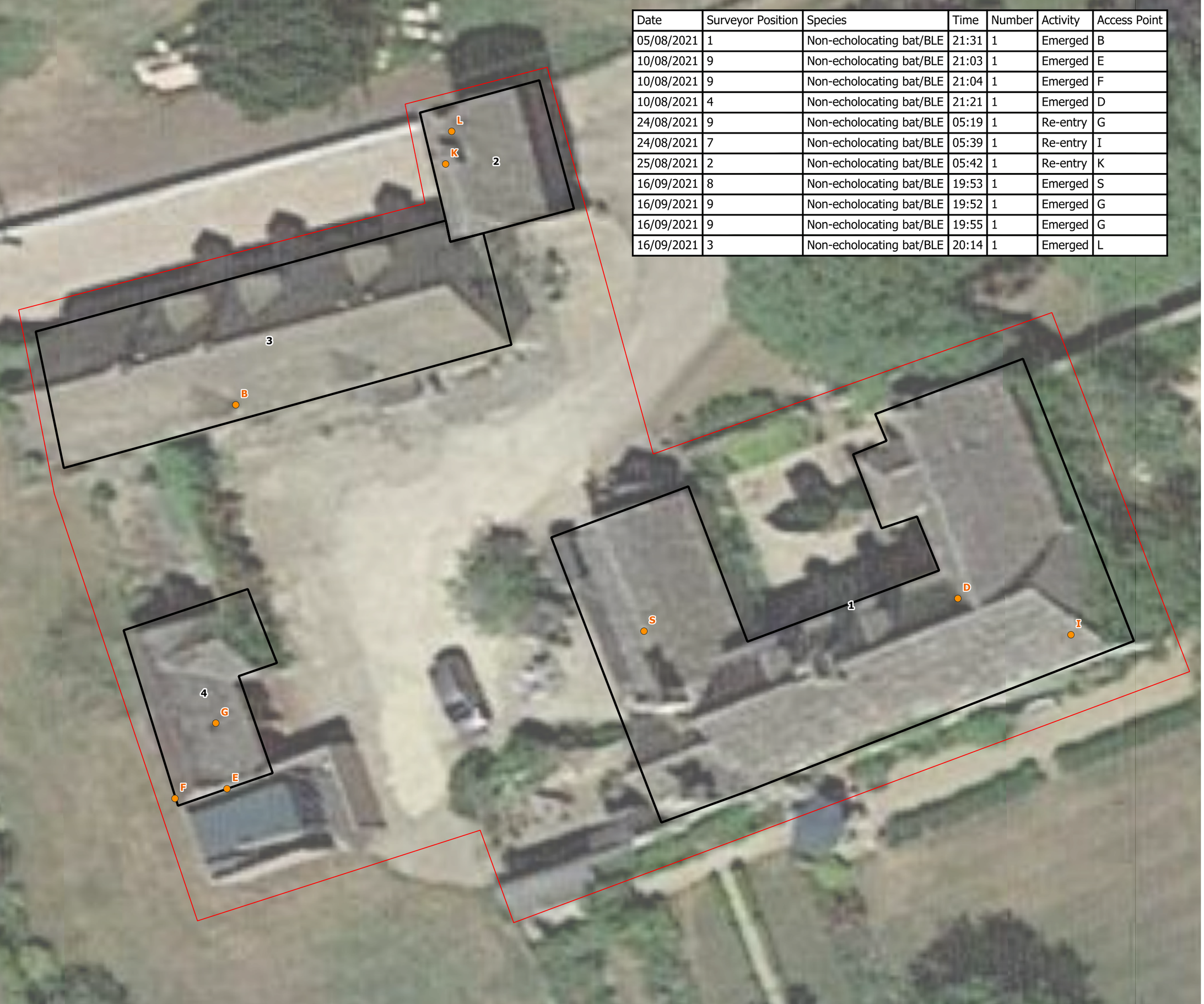
N

0 1 2 3 4 5 m

Central grid ref: SP421028

No dimensions to be scaled from this drawing
All dimensions are to be checked on site
Measurements displayed are for indicative purposes only

Head/Southern Office T+44 (0) 1666 503687
Welsh Office T+44(0) 2920 504024
www.keyenv.co.uk



Date	Surveyor Position	Species	Time	Number	Activity	Access Point
05/08/2021	1	Non-echolocating bat/BLE	21:31	1	Emerged	B
10/08/2021	9	Non-echolocating bat/BLE	21:03	1	Emerged	E
10/08/2021	9	Non-echolocating bat/BLE	21:04	1	Emerged	F
10/08/2021	4	Non-echolocating bat/BLE	21:21	1	Emerged	D
24/08/2021	9	Non-echolocating bat/BLE	05:19	1	Re-entry	G
24/08/2021	7	Non-echolocating bat/BLE	05:39	1	Re-entry	I
25/08/2021	2	Non-echolocating bat/BLE	05:42	1	Re-entry	K
16/09/2021	8	Non-echolocating bat/BLE	19:53	1	Emerged	S
16/09/2021	9	Non-echolocating bat/BLE	19:52	1	Emerged	G
16/09/2021	9	Non-echolocating bat/BLE	19:55	1	Emerged	G
16/09/2021	3	Non-echolocating bat/BLE	20:14	1	Emerged	L

Key

- Site boundary
- Building
- Brown Long-eared/Non echolocating bat access point

keystone ecology

Mr & Mrs Winand c/o Mark Van Oss & Associates

Rectory Farm, Witney

Drawing Number: 213217/2/dwg3

Bat Roost Characterisation Survey Results: Brown Long-eared Bat

Revision	Date	Drawn	Approved
rev0	19/1/2022	MM	ER

N

0 1 2 3 4 5 m

Central grid ref: SP421028

No dimensions to be scaled from this drawing
All dimensions are to be checked on site
Measurements displayed are for indicative purposes only

Head/Southern Office T+44 (0) 1666 503687
Welsh Office T+44(0) 2920 504024
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Date	Surveyor Position	Species	Time	Number	Activity	Access Point
24/08/2021	7	Soprano Pipistrelle	05:24	2	Re-entry	H
24/08/2021	4	Soprano Pipistrelle	05:39	1	Re-entry	M
25/08/2021	2	Soprano Pipistrelle	04:38	1	Re-entry	J
25/08/2021	3	Soprano Pipistrelle	04:59	1	Re-entry	L
16/09/2021	4	Soprano Pipistrelle	19:47	2	Emerged	P
16/09/2021	3	Soprano Pipistrelle	20:43	1	Emerged	L

Key

- Site boundary
- Building
- Soprano Pipistrelle access point

keystone ecology

Mr & Mrs Winand c/o Mark Van Oss & Associates

Rectory Farm, Witney

Drawing Number: 213217/2/dwg4

Bat Roost Characterisation Survey Results: Soprano Pipistrelle Bat

Revision	Date	Drawn	Approved
rev0	19/1/2022	MM	ER

N

0 1 2 3 4 5 m

Central grid ref: SP421028

No dimensions to be scaled from this drawing
All dimensions are to be checked on site
Measurements displayed are for indicative purposes only

Head/Southern Office T+44 (0) 1666 503687
Welsh Office T+44(0) 2920 504024
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Appendices

Appendix 1

Survey Weather Conditions

Keystone Ecology

Rectory Farm

Bat Roost Characterisation Survey 2021

Weather Conditions at Start of Survey

Date	Temp (°C)	Wind Speed	Wind Direction	Cloud Cover (%)	Precipitation
05/08/21	19	Light	-	100	Dry
10/08/21	21	Light	-	20	Dry
24/08/21	16	None	-	0	Dry
25/08/21	15	Light	-	100	Drizzle
16/09/21	19	None	-	0	Dry

Weather Conditions at End of Survey

Date	Temp (°C)	Wind Speed	Wind Direction	Cloud Cover (%)	Precipitation
05/08/21	16	Light	-	100	Dry
10/08/21	19	Light	-	10	Dry
24/08/21	12	None	-	10	Dry
25/08/21	13	Light	-	100	Dry
16/09/21	18	Light	-	60	Dry

Time of Sunset/Sunrise

Date	Sunset/Sunrise
05/08/21	20:47
10/08/21	20:41
24/08/21	06:05
25/08/21	06:06
16/09/21	19:19

Appendix 2

Categorisation of Bats by National Rarity

(From Wray *et al*., 2010)

Rarity within Range	England	Wales	Scotland	Northern Ireland
Common (population over 100,000)	Common Pipistrelle Bat Soprano Pipistrelle Bat Brown Long-eared Bat	Common Pipistrelle Bat Soprano Pipistrelle Bat	Common Pipistrelle Bat Soprano Pipistrelle Bat	Common Pipistrelle Bat Soprano Pipistrelle Bat
Rarer (population. 10,000 - 100,000)	Lesser Horseshoe Bat Whiskered Bat Brandt's Bat Daubenton's Bat Natterer's Bat Leisler's Bat Noctule Bat Nathusius' Pipistrelle Bat Serotine Bat	Lesser Horseshoe Bat Daubenton's Bat Natterer's Bat Brown Long-eared Bat	Daubenton's Bat Natterer's Bat Brown Long-eared Bat	Daubenton's Bat Natterer's Bat Leisler's Bat Nathusius' Pipistrelle Bat Brown Long-eared Bat
Rarest (population under 10,000)	Greater Horseshoe Bat Bechstein's Bat Mouse-eared Bat Greater Mouse-eared Bat Barbastelle Bat Grey Long-eared Bat	Greater Horse-shoe Bat Whiskered Bat Brandt's Bat Bechstein's Bat Mouse-eared Bat Noctule Bat Nathusius' Pipistrelle Bat Serotine Bat Barbastelle Bat	Whiskered Bat Brandt's Bat Mouse-eared Bat Noctule Bat Nathusius' Pipistrelle Bat Leisler's Bat	Whiskered Bat

Appendix 3

Roost Activity Survey Results

Keystone Ecology

Rectory Farm

Bat Roost Characterisation Survey 2021

Survey Results

Date	Surveyor Position	Species	Time	Number	Activity	Access Point
05/08/2021	2	Common Pipistrelle	20:58	1	Foraging/commuting	
05/08/2021	2	Common Pipistrelle	21:07	1	Foraging/commuting	
05/08/2021	2	Common Pipistrelle	21:08	1	Foraging/commuting	
05/08/2021	2	Common Pipistrelle	21:09	1	Foraging/commuting	
05/08/2021	2	Common Pipistrelle	21:11	2	Foraging/commuting	
05/08/2021	3	Common Pipistrelle	21:11	3	Foraging/commuting	
05/08/2021	2	Common Pipistrelle	21:12	2	Foraging/commuting	
05/08/2021	2	Soprano Pipistrelle	21:12	1	Foraging/commuting	
05/08/2021	2	Common Pipistrelle	21:13	2	Foraging/commuting	
05/08/2021	2	Common Pipistrelle	21:14	1	Foraging/commuting	
05/08/2021	2	Common Pipistrelle	21:15	3	Foraging/commuting	
05/08/2021	2	Common Pipistrelle	21:16	1	Emerged	A
05/08/2021	2	Common Pipistrelle	21:17	3	Foraging/commuting	
05/08/2021	2	Soprano Pipistrelle	21:17	1	Foraging/commuting	
05/08/2021	2	Brown Long-eared	21:19	1	Foraging/commuting	
05/08/2021	3	Common Pipistrelle	21:19	1	Foraging/commuting	
05/08/2021	2	Common Pipistrelle	21:20	2	Foraging/commuting	
05/08/2021	3	Common Pipistrelle	21:20	2	Foraging/commuting	
05/08/2021	2	Noctule	21:21	2	Foraging/commuting	
05/08/2021	3	Noctule	21:21	6	Foraging/commuting	
05/08/2021	2	Common Pipistrelle	21:22	1	Foraging/commuting	
05/08/2021	3	Noctule	21:22	2	Foraging/commuting	
05/08/2021	2	Common Pipistrelle	21:23	1	Foraging/commuting	
05/08/2021	3	Common Pipistrelle	21:23	1	Foraging/commuting	
05/08/2021	2	Common Pipistrelle	21:24	1	Foraging/commuting	
05/08/2021	3	Common Pipistrelle	21:24	1	Foraging/commuting	
05/08/2021	2	Brown Long-eared	21:25	1	Foraging/commuting	
05/08/2021	2	Common Pipistrelle	21:25	1	Foraging/commuting	
05/08/2021	2	Common Pipistrelle	21:26	2	Foraging/commuting	
05/08/2021	3	Common Pipistrelle	21:26	2	Foraging/commuting	
05/08/2021	2	Common Pipistrelle	21:27	2	Foraging/commuting	
05/08/2021	3	Common Pipistrelle	21:29	2	Foraging/commuting	
05/08/2021	2	Common Pipistrelle	21:31	1	Foraging/commuting	
05/08/2021	2	Common Pipistrelle	21:34	1	Foraging/commuting	
05/08/2021	1	Non-echolocating bat/BLE	21:31	1	Emerged	B
05/08/2021	1	Noctule	21:36	1	Foraging/commuting	
05/08/2021	3	Myotis species	21:41	1	Foraging/commuting	
05/08/2021	2	Brown Long-eared	21:43	1	Foraging/commuting	
05/08/2021	2	Myotis species	21:43	1	Foraging/commuting	
05/08/2021	3	Myotis species	21:43	2	Foraging/commuting	
05/08/2021	3	Myotis species	21:46	2	Foraging/commuting	
05/08/2021	2	Myotis species	21:54	1	Foraging/commuting	
05/08/2021	3	Soprano Pipistrelle	22:04	1	Foraging/commuting	
05/08/2021	2	Common Pipistrelle	22:12	1	Foraging/commuting	
05/08/2021	1	Common Pipistrelle	22:12	1	Foraging/commuting	
05/08/2021	2	Soprano Pipistrelle	22:12	1	Foraging/commuting	
05/08/2021	2	Common Pipistrelle	22:14	2	Foraging/commuting	
05/08/2021	3	Common Pipistrelle	22:14	14	Foraging/commuting	
05/08/2021	3	Noctule	22:14	2	Foraging/commuting	
05/08/2021	3	Common Pipistrelle	22:15	10	Foraging/commuting	
05/08/2021	3	Noctule	22:15	1	Foraging/commuting	
05/08/2021	3	Common Pipistrelle	22:16	1	Foraging/commuting	
05/08/2021	3	Noctule	22:16	1	Foraging/commuting	
10/08/2021	9	Soprano Pipistrelle	20:45	1	Foraging/commuting	
10/08/2021	9	Common Pipistrelle	20:47	3	Foraging/commuting	
10/08/2021	7	Brown Long-eared	20:48	4	Foraging/commuting	
10/08/2021	9	Common Pipistrelle	20:48	7	Foraging/commuting	
10/08/2021	9	Common Pipistrelle	20:49	7	Foraging/commuting	
10/08/2021	9	Common Pipistrelle	20:50	7	Foraging/commuting	
10/08/2021	9	Common Pipistrelle	20:51	7	Foraging/commuting	
10/08/2021	9	Common Pipistrelle	20:52	5	Foraging/commuting	
10/08/2021	9	Soprano Pipistrelle	20:52	2	Foraging/commuting	
10/08/2021	9	Common Pipistrelle	20:53	6	Foraging/commuting	
10/08/2021	7	Brown Long-eared	20:54	3	Foraging/commuting	
10/08/2021	9	Common Pipistrelle	20:54	5	Foraging/commuting	
10/08/2021	9	Soprano Pipistrelle	20:54	1	Foraging/commuting	
10/08/2021	9	Common Pipistrelle	20:55	7	Foraging/commuting	
10/08/2021	9	Common Pipistrelle	20:56	2	Foraging/commuting	
10/08/2021	9	Soprano Pipistrelle	20:56	4	Foraging/commuting	
10/08/2021	9	Common Pipistrelle	20:57	3	Foraging/commuting	
10/08/2021	9	Soprano Pipistrelle	20:57	1	Foraging/commuting	
10/08/2021	8	Common Pipistrelle	20:58	1	Emerged	C
10/08/2021	4	Common Pipistrelle	20:58	1	Foraging/commuting	
10/08/2021	9	Common Pipistrelle	20:58	4	Foraging/commuting	
10/08/2021	9	Soprano Pipistrelle	20:58	5	Foraging/commuting	
10/08/2021	9	Common Pipistrelle	20:59	2	Foraging/commuting	
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10/08/2021	9	Soprano Pipistrelle	20:59	4	Foraging/commuting	
10/08/2021	9	Common Pipistrelle	21:00	7	Foraging/commuting	
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10/08/2021	9	Common Pipistrelle	21:02	1	Foraging/commuting	
10/08/2021	9	Soprano Pipistrelle	21:02	2	Foraging/commuting	
10/08/2021	7	Common Pipistrelle	21:03	1	Foraging/commuting	
10/08/2021	9	Common Pipistrelle	21:03	2	Foraging/commuting	
10/08/2021	9	Soprano Pipistrelle	21:03	1	Foraging/commuting	
10/08/2021	9	Common Pipistrelle	21:04	7	Foraging/commuting	
10/08/2021	9	Soprano Pipistrelle	21:04	2	Foraging/commuting	
10/08/2021	9	Common Pipistrelle	21:05	8	Foraging/commuting	
10/08/2021	9	Common Pipistrelle	21:06	4	Foraging/commuting	
10/08/2021	9	Non-echolocating bat/BLE	21:03	1	Emerged	E
10/08/2021	9	Non-echolocating bat/BLE	21:04	1	Emerged	F
10/08/2021	8	Common Pipistrelle	21:06	1	Foraging/commuting	
10/08/2021	8	Soprano Pipistrelle	21:06	1	Foraging/commuting	
10/08/2021	9	Common Pipistrelle	21:07	5	Foraging/commuting	
10/08/2021	4	Noctule	21:07	1	Foraging/commuting	
10/08/2021	9	Soprano Pipistrelle	21:07	1	Foraging/commuting	
10/08/2021	8	Soprano Pipistrelle	21:07	1	Foraging/commuting	
10/08/2021	7	Common Pipistrelle	21:08	1	Foraging/commuting	
10/08/2021	8	Common Pipistrelle	21:08	1	Foraging/commuting	
10/08/2021	4	Noctule	21:08	1	Foraging/commuting	
10/08/2021	9	Soprano Pipistrelle	21:08	3	Foraging/commuting	
10/08/2021	8	Soprano Pipistrelle	21:09	1	Foraging/commuting	
10/08/2021	8	Common Pipistrelle	21:10	1	Foraging/commuting	
10/08/2021	9	Soprano Pipistrelle	21:10	1	Foraging/commuting	
10/08/2021	8	Soprano Pipistrelle	21:10	1	Foraging/commuting	
10/08/2021	9	Common Pipistrelle	21:11	1	Foraging/commuting	
10/08/2021	7	Myotis species	21:11	1	Foraging/commuting	
10/08/2021	8	Soprano Pipistrelle	21:11	4	Foraging/commuting	

Keystone Ecology

Rectory Farm

Bat Roost Characterisation Survey 2021

Survey Results

Date	Surveyor Position	Species	Time	Number	Activity	Access Point
10/08/2021	9	Common Pipistrelle	21:12	1	Foraging/commuting	
10/08/2021	7	Myotis species	21:12	1	Foraging/commuting	
10/08/2021	8	Soprano Pipistrelle	21:12	6	Foraging/commuting	
10/08/2021	8	Soprano Pipistrelle	21:13	7	Foraging/commuting	
10/08/2021	9	Common Pipistrelle	21:14	6	Foraging/commuting	
10/08/2021	8	Soprano Pipistrelle	21:14	11	Foraging/commuting	
10/08/2021	7	Common Pipistrelle	21:15	1	Foraging/commuting	
10/08/2021	4	Common Pipistrelle	21:15	1	Foraging/commuting	
10/08/2021	9	Common Pipistrelle	21:15	4	Foraging/commuting	
10/08/2021	7	Noctule	21:15	2	Foraging/commuting	
10/08/2021	4	Noctule	21:15	2	Foraging/commuting	
10/08/2021	9	Noctule	21:15	1	Foraging/commuting	
10/08/2021	8	Soprano Pipistrelle	21:15	6	Foraging/commuting	
10/08/2021	9	Common Pipistrelle	21:16	3	Foraging/commuting	
10/08/2021	9	Soprano Pipistrelle	21:16	4	Foraging/commuting	
10/08/2021	8	Soprano Pipistrelle	21:16	7	Foraging/commuting	
10/08/2021	7	Noctule	21:17	2	Foraging/commuting	
10/08/2021	9	Noctule	21:17	2	Foraging/commuting	
10/08/2021	8	Noctule	21:17	1	Foraging/commuting	
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10/08/2021	9	Soprano Pipistrelle	21:17	3	Foraging/commuting	
10/08/2021	8	Soprano Pipistrelle	21:17	7	Foraging/commuting	
10/08/2021	9	Common Pipistrelle	21:18	1	Foraging/commuting	
10/08/2021	7	Soprano Pipistrelle	21:18	2	Foraging/commuting	
10/08/2021	9	Soprano Pipistrelle	21:18	2	Foraging/commuting	
10/08/2021	8	Soprano Pipistrelle	21:18	7	Foraging/commuting	
10/08/2021	9	Common Pipistrelle	21:19	3	Foraging/commuting	
10/08/2021	7	Soprano Pipistrelle	21:19	7	Foraging/commuting	
10/08/2021	9	Soprano Pipistrelle	21:19	1	Foraging/commuting	
10/08/2021	8	Soprano Pipistrelle	21:19	1	Foraging/commuting	
10/08/2021	9	Common Pipistrelle	21:20	2	Foraging/commuting	
10/08/2021	7	Soprano Pipistrelle	21:20	8	Foraging/commuting	
10/08/2021	9	Soprano Pipistrelle	21:20	1	Foraging/commuting	
10/08/2021	9	Common Pipistrelle	21:21	4	Foraging/commuting	
10/08/2021	7	Soprano Pipistrelle	21:21	7	Foraging/commuting	
10/08/2021	9	Soprano Pipistrelle	21:21	1	Foraging/commuting	
10/08/2021	8	Soprano Pipistrelle	21:21	2	Foraging/commuting	
10/08/2021	9	Common Pipistrelle	21:22	2	Foraging/commuting	
10/08/2021	7	Soprano Pipistrelle	21:22	4	Foraging/commuting	
10/08/2021	9	Soprano Pipistrelle	21:22	1	Foraging/commuting	
10/08/2021	8	Soprano Pipistrelle	21:22	5	Foraging/commuting	
10/08/2021	9	Common Pipistrelle	21:23	4	Foraging/commuting	
10/08/2021	8	Myotis species	21:23	1	Foraging/commuting	
10/08/2021	7	Soprano Pipistrelle	21:23	9	Foraging/commuting	
10/08/2021	8	Soprano Pipistrelle	21:23	13	Foraging/commuting	
10/08/2021	9	Common Pipistrelle	21:24	1	Foraging/commuting	
10/08/2021	7	Soprano Pipistrelle	21:24	10	Foraging/commuting	
10/08/2021	8	Soprano Pipistrelle	21:24	12	Foraging/commuting	
10/08/2021	9	Common Pipistrelle	21:25	2	Foraging/commuting	
10/08/2021	7	Soprano Pipistrelle	21:25	7	Foraging/commuting	
10/08/2021	9	Soprano Pipistrelle	21:25	1	Foraging/commuting	
10/08/2021	8	Soprano Pipistrelle	21:25	5	Foraging/commuting	
10/08/2021	9	Common Pipistrelle	21:26	3	Foraging/commuting	
10/08/2021	7	Soprano Pipistrelle	21:26	11	Foraging/commuting	
10/08/2021	8	Soprano Pipistrelle	21:26	1	Foraging/commuting	
10/08/2021	9	Common Pipistrelle	21:27	4	Foraging/commuting	
10/08/2021	8	Common Pipistrelle	21:27	1	Foraging/commuting	
10/08/2021	7	Soprano Pipistrelle	21:27	5	Foraging/commuting	
10/08/2021	9	Soprano Pipistrelle	21:27	1	Foraging/commuting	
10/08/2021	8	Soprano Pipistrelle	21:27	2	Foraging/commuting	
10/08/2021	9	Common Pipistrelle	21:28	1	Foraging/commuting	
10/08/2021	8	Common Pipistrelle	21:28	2	Foraging/commuting	
10/08/2021	7	Soprano Pipistrelle	21:28	4	Foraging/commuting	
10/08/2021	9	Common Pipistrelle	21:29	4	Foraging/commuting	
10/08/2021	7	Soprano Pipistrelle	21:29	5	Foraging/commuting	
10/08/2021	9	Common Pipistrelle	21:30	1	Foraging/commuting	
10/08/2021	8	Common Pipistrelle	21:30	1	Foraging/commuting	
10/08/2021	7	Soprano Pipistrelle	21:30	6	Foraging/commuting	
10/08/2021	7	Soprano Pipistrelle	21:31	7	Foraging/commuting	
10/08/2021	9	Soprano Pipistrelle	21:31	1	Foraging/commuting	
10/08/2021	8	Soprano Pipistrelle	21:31	1	Foraging/commuting	
10/08/2021	7	Soprano Pipistrelle	21:32	5	Foraging/commuting	
10/08/2021	9	Soprano Pipistrelle	21:32	1	Foraging/commuting	
10/08/2021	7	Soprano Pipistrelle	21:33	6	Foraging/commuting	
10/08/2021	4	Non-echolocating bat/BLE	21:21	1	Emerged	D
10/08/2021	4	Soprano Pipistrelle	21:33	1	Foraging/commuting	
10/08/2021	9	Soprano Pipistrelle	21:33	1	Foraging/commuting	
10/08/2021	8	Common Pipistrelle	21:34	4	Foraging/commuting	
10/08/2021	8	Common Pipistrelle	21:35	1	Foraging/commuting	
10/08/2021	9	Soprano Pipistrelle	21:35	3	Foraging/commuting	
10/08/2021	7	Soprano Pipistrelle	21:36	1	Foraging/commuting	
10/08/2021	9	Soprano Pipistrelle	21:36	3	Foraging/commuting	
10/08/2021	8	Common Pipistrelle	21:37	1	Foraging/commuting	
10/08/2021	7	Myotis species	21:37	1	Foraging/commuting	
10/08/2021	7	Myotis species	21:40	1	Foraging/commuting	
10/08/2021	7	Myotis species	21:41	1	Foraging/commuting	
10/08/2021	7	Soprano Pipistrelle	21:41	2	Foraging/commuting	
10/08/2021	4	Myotis species	21:42	1	Foraging/commuting	
10/08/2021	8	Myotis species	21:42	1	Foraging/commuting	
10/08/2021	9	Common Pipistrelle	21:44	2	Foraging/commuting	
10/08/2021	7	Myotis species	21:44	1	Foraging/commuting	
10/08/2021	9	Common Pipistrelle	21:45	1	Foraging/commuting	
10/08/2021	7	Soprano Pipistrelle	21:45	1	Foraging/commuting	
10/08/2021	7	Myotis species	21:48	1	Foraging/commuting	
10/08/2021	4	Myotis species	21:48	1	Foraging/commuting	
10/08/2021	4	Myotis species	21:50	1	Foraging/commuting	
10/08/2021	4	Myotis species	21:53	1	Foraging/commuting	
10/08/2021	4	Common Pipistrelle	21:55	1	Foraging/commuting	
10/08/2021	8	Common Pipistrelle	21:55	1	Foraging/commuting	
10/08/2021	9	Common Pipistrelle	21:57	1	Foraging/commuting	
10/08/2021	9	Soprano Pipistrelle	21:57	1	Foraging/commuting	
10/08/2021	4	Common Pipistrelle	22:01	1	Foraging/commuting	
10/08/2021	8	Common Pipistrelle	22:01	2	Foraging/commuting	
10/08/2021	9	Common Pipistrelle	23:08	1	Foraging/commuting	
10/08/2021	4	Soprano Pipistrelle	23:08	1	Foraging/commuting	
24/08/2021	9	Soprano Pipistrelle	04:35	4	Foraging/commuting	
24/08/2021	9	Soprano Pipistrelle	04:36	5	Foraging/commuting	
24/08/2021	9	Soprano Pipistrelle	04:37	5	Foraging/commuting	
24/08/2021	9	Soprano Pipistrelle	04:38	4	Foraging/commuting	
24/08/2021	4	Soprano Pipistrelle	04:38	1	Foraging/commuting	

Keystone Ecology

Rectory Farm

Bat Roost Characterisation Survey 2021

Survey Results

Date	Surveyor Position	Species	Time	Number	Activity	Access Point
24/08/2021	9	Soprano Pipistrelle	04:39	6	Foraging/commuting	
24/08/2021	8	Common Pipistrelle	04:40	1	Foraging/commuting	
24/08/2021	7	Common Pipistrelle	04:40	1	Foraging/commuting	
24/08/2021	9	Soprano Pipistrelle	04:40	5	Foraging/commuting	
24/08/2021	9	Soprano Pipistrelle	04:41	4	Foraging/commuting	
24/08/2021	9	Soprano Pipistrelle	04:42	3	Foraging/commuting	
24/08/2021	6	Soprano Pipistrelle	04:42	1	Foraging/commuting	
24/08/2021	7	Myotis species	04:43	1	Foraging/commuting	
24/08/2021	9	Soprano Pipistrelle	04:43	8	Foraging/commuting	
24/08/2021	9	Soprano Pipistrelle	04:44	6	Foraging/commuting	
24/08/2021	9	Soprano Pipistrelle	04:45	1	Foraging/commuting	
24/08/2021	9	Soprano Pipistrelle	04:46	1	Foraging/commuting	
24/08/2021	6	Common Pipistrelle	04:47	1	Foraging/commuting	
24/08/2021	9	Soprano Pipistrelle	04:47	1	Foraging/commuting	
24/08/2021	4	Soprano Pipistrelle	04:47	1	Foraging/commuting	
24/08/2021	7	Soprano Pipistrelle	04:48	1	Foraging/commuting	
24/08/2021	8	Common Pipistrelle	04:49	4	Foraging/commuting	
24/08/2021	6	Common Pipistrelle	04:49	2	Foraging/commuting	
24/08/2021	7	Myotis species	04:49	1	Foraging/commuting	
24/08/2021	8	Common Pipistrelle	04:50	1	Foraging/commuting	
24/08/2021	6	Common Pipistrelle	04:50	1	Foraging/commuting	
24/08/2021	9	Myotis species	04:50	1	Foraging/commuting	
24/08/2021	9	Soprano Pipistrelle	04:50	1	Foraging/commuting	
24/08/2021	6	Soprano Pipistrelle	04:50	2	Foraging/commuting	
24/08/2021	9	Myotis species	04:52	1	Foraging/commuting	
24/08/2021	7	Common Pipistrelle	04:53	1	Foraging/commuting	
24/08/2021	7	Common Pipistrelle	04:54	1	Foraging/commuting	
24/08/2021	4	Common Pipistrelle	04:54	1	Foraging/commuting	
24/08/2021	9	Myotis species	04:54	1	Foraging/commuting	
24/08/2021	7	Soprano Pipistrelle	04:54	1	Foraging/commuting	
24/08/2021	9	Myotis species	04:55	1	Foraging/commuting	
24/08/2021	9	Myotis species	04:56	1	Foraging/commuting	
24/08/2021	9	Myotis species	04:57	1	Foraging/commuting	
24/08/2021	4	Soprano Pipistrelle	04:57	3	Foraging/commuting	
24/08/2021	9	Myotis species	04:58	1	Foraging/commuting	
24/08/2021	4	Soprano Pipistrelle	04:58	4	Foraging/commuting	
24/08/2021	6	Soprano Pipistrelle	05:00	1	Foraging/commuting	
24/08/2021	4	Common Pipistrelle	05:02	1	Foraging/commuting	
24/08/2021	4	Soprano Pipistrelle	05:02	1	Foraging/commuting	
24/08/2021	6	Soprano Pipistrelle	05:02	1	Foraging/commuting	
24/08/2021	7	Soprano Pipistrelle	05:03	1	Foraging/commuting	
24/08/2021	6	Soprano Pipistrelle	05:03	2	Foraging/commuting	
24/08/2021	7	Common Pipistrelle	05:04	1	Foraging/commuting	
24/08/2021	9	Myotis species	05:04	1	Foraging/commuting	
24/08/2021	9	Soprano Pipistrelle	05:04	3	Foraging/commuting	
24/08/2021	7	Soprano Pipistrelle	05:04	3	Foraging/commuting	
24/08/2021	4	Soprano Pipistrelle	05:04	1	Foraging/commuting	
24/08/2021	9	Soprano Pipistrelle	05:05	5	Foraging/commuting	
24/08/2021	7	Common Pipistrelle	05:06	1	Foraging/commuting	
24/08/2021	4	Common Pipistrelle	05:06	1	Foraging/commuting	
24/08/2021	7	Soprano Pipistrelle	05:06	4	Foraging/commuting	
24/08/2021	4	Soprano Pipistrelle	05:06	3	Foraging/commuting	
24/08/2021	9	Soprano Pipistrelle	05:07	3	Foraging/commuting	
24/08/2021	7	Soprano Pipistrelle	05:07	2	Foraging/commuting	
24/08/2021	6	Soprano Pipistrelle	05:07	2	Foraging/commuting	
24/08/2021	9	Soprano Pipistrelle	05:08	1	Foraging/commuting	
24/08/2021	4	Soprano Pipistrelle	05:09	3	Foraging/commuting	
24/08/2021	9	Soprano Pipistrelle	05:10	1	Foraging/commuting	
24/08/2021	9	Soprano Pipistrelle	05:11	1	Foraging/commuting	
24/08/2021	7	Soprano Pipistrelle	05:11	1	Foraging/commuting	
24/08/2021	4	Soprano Pipistrelle	05:11	2	Foraging/commuting	
24/08/2021	7	Common Pipistrelle	05:12	1	Foraging/commuting	
24/08/2021	4	Soprano Pipistrelle	05:12	1	Foraging/commuting	
24/08/2021	6	Soprano Pipistrelle	05:12	1	Foraging/commuting	
24/08/2021	7	Soprano Pipistrelle	05:13	1	Foraging/commuting	
24/08/2021	6	Soprano Pipistrelle	05:13	1	Foraging/commuting	
24/08/2021	8	Common Pipistrelle	05:14	2	Foraging/commuting	
24/08/2021	6	Soprano Pipistrelle	05:14	1	Foraging/commuting	
24/08/2021	7	Common Pipistrelle	05:16	1	Foraging/commuting	
24/08/2021	4	Common Pipistrelle	05:16	3	Foraging/commuting	
24/08/2021	8	Common Pipistrelle	05:17	2	Foraging/commuting	
24/08/2021	7	Common Pipistrelle	05:17	5	Foraging/commuting	
24/08/2021	7	Soprano Pipistrelle	05:17	1	Foraging/commuting	
24/08/2021	7	Common Pipistrelle	05:18	1	Foraging/commuting	
24/08/2021	4	Common Pipistrelle	05:18	2	Foraging/commuting	
24/08/2021	8	Soprano Pipistrelle	05:18	1	Foraging/commuting	
24/08/2021	9	Soprano Pipistrelle	05:18	1	Foraging/commuting	
24/08/2021	7	Soprano Pipistrelle	05:18	2	Foraging/commuting	
24/08/2021	7	Common Pipistrelle	05:19	4	Foraging/commuting	
24/08/2021	7	Soprano Pipistrelle	05:19	2	Foraging/commuting	
24/08/2021	7	Common Pipistrelle	05:20	1	Foraging/commuting	
24/08/2021	4	Common Pipistrelle	05:20	1	Foraging/commuting	
24/08/2021	7	Soprano Pipistrelle	05:20	3	Foraging/commuting	
24/08/2021	7	Common Pipistrelle	05:21	2	Foraging/commuting	
24/08/2021	4	Common Pipistrelle	05:21	1	Foraging/commuting	
24/08/2021	9	Soprano Pipistrelle	05:21	1	Foraging/commuting	
24/08/2021	7	Soprano Pipistrelle	05:21	1	Foraging/commuting	
24/08/2021	4	Soprano Pipistrelle	05:21	1	Foraging/commuting	
24/08/2021	6	Soprano Pipistrelle	05:21	1	Foraging/commuting	
24/08/2021	7	Soprano Pipistrelle	05:22	1	Foraging/commuting	
24/08/2021	7	Common Pipistrelle	05:23	3	Foraging/commuting	
24/08/2021	4	Common Pipistrelle	05:23	1	Foraging/commuting	
24/08/2021	9	Non-echolocating bat/BLE	05:19	1	Re-entry	G
24/08/2021	8	Soprano Pipistrelle	05:23	1	Foraging/commuting	
24/08/2021	7	Soprano Pipistrelle	05:23	5	Foraging/commuting	
24/08/2021	6	Soprano Pipistrelle	05:23	1	Foraging/commuting	
24/08/2021	7	Common Pipistrelle	05:24	9	Foraging/commuting	
24/08/2021	7	Soprano Pipistrelle	05:24	2	Re-entry	H
24/08/2021	7	Non-echolocating bat/BLE	05:39	1	Re-entry	I
24/08/2021	7	Common Pipistrelle	05:25	8	Foraging/commuting	
24/08/2021	9	Soprano Pipistrelle	05:25	1	Foraging/commuting	
24/08/2021	9	Noctule	05:27	1	Foraging/commuting	
24/08/2021	9	Noctule	05:28	1	Foraging/commuting	
24/08/2021	9	Soprano Pipistrelle	05:28	1	Foraging/commuting	
24/08/2021	7	Soprano Pipistrelle	05:31	3	Foraging/commuting	
24/08/2021	9	Soprano Pipistrelle	05:35	2	Foraging/commuting	
24/08/2021	9	Soprano Pipistrelle	05:39	3	Foraging/commuting	
24/08/2021	4	Soprano Pipistrelle	05:39	1	Re-entry	M
25/08/2021	2	Soprano Pipistrelle	04:36	1	Foraging/commuting	
25/08/2021	2	Soprano Pipistrelle	04:38	1	Re-entry	J

Keystone Ecology

Rectory Farm

Bat Roost Characterisation Survey 2021

Survey Results

Date	Surveyor Position	Species	Time	Number	Activity	Access Point
25/08/2021	3	Soprano Pipistrelle	04:42	2	Foraging/commuting	
25/08/2021	1	Soprano Pipistrelle	04:42	1	Foraging/commuting	
25/08/2021	3	Soprano Pipistrelle	04:43	4	Foraging/commuting	
25/08/2021	3	Common Pipistrelle	04:44	1	Foraging/commuting	
25/08/2021	3	Soprano Pipistrelle	04:44	3	Foraging/commuting	
25/08/2021	3	Soprano Pipistrelle	04:47	2	Foraging/commuting	
25/08/2021	2	Soprano Pipistrelle	04:47	1	Foraging/commuting	
25/08/2021	3	Soprano Pipistrelle	04:52	1	Foraging/commuting	
25/08/2021	3	Soprano Pipistrelle	04:53	6	Foraging/commuting	
25/08/2021	2	Soprano Pipistrelle	04:53	1	Foraging/commuting	
25/08/2021	3	Soprano Pipistrelle	04:54	7	Foraging/commuting	
25/08/2021	3	Soprano Pipistrelle	04:55	10	Foraging/commuting	
25/08/2021	3	Soprano Pipistrelle	04:56	8	Foraging/commuting	
25/08/2021	2	Soprano Pipistrelle	04:56	1	Foraging/commuting	
25/08/2021	3	Soprano Pipistrelle	04:57	4	Foraging/commuting	
25/08/2021	1	Noctule	04:58	1	Foraging/commuting	
25/08/2021	3	Soprano Pipistrelle	04:58	4	Foraging/commuting	
25/08/2021	1	Soprano Pipistrelle	04:58	1	Foraging/commuting	
25/08/2021	3	Soprano Pipistrelle	04:59	1	Re-entry	L
25/08/2021	3	Common Pipistrelle	05:00	1	Foraging/commuting	
25/08/2021	3	Common Pipistrelle	05:01	1	Foraging/commuting	
25/08/2021	3	Soprano Pipistrelle	05:01	2	Foraging/commuting	
25/08/2021	3	Soprano Pipistrelle	05:03	2	Foraging/commuting	
25/08/2021	2	Myotis species	05:04	1	Foraging/commuting	
25/08/2021	3	Soprano Pipistrelle	05:04	1	Foraging/commuting	
25/08/2021	2	Soprano Pipistrelle	05:04	1	Foraging/commuting	
25/08/2021	2	Common Pipistrelle	05:06	3	Foraging/commuting	
25/08/2021	3	Soprano Pipistrelle	05:07	3	Foraging/commuting	
25/08/2021	3	Soprano Pipistrelle	05:08	3	Foraging/commuting	
25/08/2021	2	Common Pipistrelle	05:09	1	Foraging/commuting	
25/08/2021	2	Common Pipistrelle	05:10	2	Foraging/commuting	
25/08/2021	3	Soprano Pipistrelle	05:10	5	Foraging/commuting	
25/08/2021	1	Soprano Pipistrelle	05:10	1	Foraging/commuting	
25/08/2021	3	Soprano Pipistrelle	05:11	5	Foraging/commuting	
25/08/2021	3	Soprano Pipistrelle	05:12	9	Foraging/commuting	
25/08/2021	1	Soprano Pipistrelle	05:12	1	Foraging/commuting	
25/08/2021	2	Soprano Pipistrelle	05:12	1	Foraging/commuting	
25/08/2021	1	Common Pipistrelle	05:13	2	Foraging/commuting	
25/08/2021	2	Common Pipistrelle	05:13	1	Foraging/commuting	
25/08/2021	3	Soprano Pipistrelle	05:13	1	Foraging/commuting	
25/08/2021	3	Soprano Pipistrelle	05:14	6	Foraging/commuting	
25/08/2021	3	Soprano Pipistrelle	05:15	1	Foraging/commuting	
25/08/2021	1	Common Pipistrelle	05:16	1	Foraging/commuting	
25/08/2021	2	Common Pipistrelle	05:16	1	Foraging/commuting	
25/08/2021	1	Noctule	05:16	1	Foraging/commuting	
25/08/2021	3	Soprano Pipistrelle	05:16	2	Foraging/commuting	
25/08/2021	1	Soprano Pipistrelle	05:16	2	Foraging/commuting	
25/08/2021	3	Common Pipistrelle	05:17	3	Foraging/commuting	
25/08/2021	3	Soprano Pipistrelle	05:17	7	Foraging/commuting	
25/08/2021	3	Soprano Pipistrelle	05:18	4	Foraging/commuting	
25/08/2021	3	Common Pipistrelle	05:19	1	Foraging/commuting	
25/08/2021	2	Common Pipistrelle	05:19	1	Foraging/commuting	
25/08/2021	3	Soprano Pipistrelle	05:19	4	Foraging/commuting	
25/08/2021	3	Common Pipistrelle	05:20	1	Foraging/commuting	
25/08/2021	3	Soprano Pipistrelle	05:20	4	Foraging/commuting	
25/08/2021	3	Myotis species	05:21	2	Foraging/commuting	
25/08/2021	3	Soprano Pipistrelle	05:22	9	Foraging/commuting	
25/08/2021	1	Soprano Pipistrelle	05:22	1	Foraging/commuting	
25/08/2021	3	Common Pipistrelle	05:23	4	Foraging/commuting	
25/08/2021	2	Common Pipistrelle	05:23	1	Foraging/commuting	
25/08/2021	3	Soprano Pipistrelle	05:23	7	Foraging/commuting	
25/08/2021	2	Soprano Pipistrelle	05:23	1	Foraging/commuting	
25/08/2021	3	Common Pipistrelle	05:24	3	Foraging/commuting	
25/08/2021	3	Soprano Pipistrelle	05:24	3	Foraging/commuting	
25/08/2021	1	Soprano Pipistrelle	05:24	1	Foraging/commuting	
25/08/2021	2	Soprano Pipistrelle	05:24	1	Foraging/commuting	
25/08/2021	3	Common Pipistrelle	05:25	1	Foraging/commuting	
25/08/2021	2	Common Pipistrelle	05:25	1	Foraging/commuting	
25/08/2021	3	Soprano Pipistrelle	05:25	15	Foraging/commuting	
25/08/2021	3	Common Pipistrelle	05:26	2	Foraging/commuting	
25/08/2021	3	Soprano Pipistrelle	05:26	5	Foraging/commuting	
25/08/2021	2	Soprano Pipistrelle	05:26	3	Foraging/commuting	
25/08/2021	3	Common Pipistrelle	05:27	4	Foraging/commuting	
25/08/2021	2	Common Pipistrelle	05:27	1	Foraging/commuting	
25/08/2021	3	Soprano Pipistrelle	05:27	1	Foraging/commuting	
25/08/2021	2	Soprano Pipistrelle	05:27	1	Foraging/commuting	
25/08/2021	2	Common Pipistrelle	05:28	1	Foraging/commuting	
25/08/2021	3	Soprano Pipistrelle	05:28	6	Foraging/commuting	
25/08/2021	1	Soprano Pipistrelle	05:28	1	Foraging/commuting	
25/08/2021	2	Soprano Pipistrelle	05:28	2	Foraging/commuting	
25/08/2021	3	Soprano Pipistrelle	05:29	9	Foraging/commuting	
25/08/2021	1	Soprano Pipistrelle	05:29	2	Foraging/commuting	
25/08/2021	2	Soprano Pipistrelle	05:29	1	Foraging/commuting	
25/08/2021	2	Common Pipistrelle	05:30	1	Foraging/commuting	
25/08/2021	3	Common Pipistrelle	05:31	5	Foraging/commuting	
25/08/2021	2	Common Pipistrelle	05:31	1	Foraging/commuting	
25/08/2021	3	Soprano Pipistrelle	05:31	4	Foraging/commuting	
25/08/2021	3	Common Pipistrelle	05:32	8	Foraging/commuting	
25/08/2021	3	Soprano Pipistrelle	05:32	7	Foraging/commuting	
25/08/2021	1	Soprano Pipistrelle	05:32	1	Foraging/commuting	
25/08/2021	2	Soprano Pipistrelle	05:32	9	Foraging/commuting	
25/08/2021	3	Common Pipistrelle	05:33	14	Foraging/commuting	
25/08/2021	2	Soprano Pipistrelle	05:33	4	Foraging/commuting	
25/08/2021	3	Common Pipistrelle	05:34	10	Foraging/commuting	
25/08/2021	2	Common Pipistrelle	05:34	1	Foraging/commuting	
25/08/2021	2	Soprano Pipistrelle	05:34	6	Foraging/commuting	
25/08/2021	3	Common Pipistrelle	05:35	18	Foraging/commuting	
25/08/2021	2	Soprano Pipistrelle	05:35	11	Foraging/commuting	
25/08/2021	3	Common Pipistrelle	05:36	13	Foraging/commuting	
25/08/2021	2	Common Pipistrelle	05:36	4	Foraging/commuting	
25/08/2021	2	Soprano Pipistrelle	05:36	8	Foraging/commuting	
25/08/2021	3	Common Pipistrelle	05:37	1	Foraging/commuting	
25/08/2021	2	Common Pipistrelle	05:37	1	Foraging/commuting	
25/08/2021	2	Soprano Pipistrelle	05:37	14	Foraging/commuting	
25/08/2021	3	Common Pipistrelle	05:38	8	Foraging/commuting	
25/08/2021	3	Noctule	05:38	1	Foraging/commuting	
25/08/2021	3	Soprano Pipistrelle	05:38	2	Foraging/commuting	
25/08/2021	1	Soprano Pipistrelle	05:38	1	Foraging/commuting	
25/08/2021	2	Soprano Pipistrelle	05:38	10	Foraging/commuting	

Keystone Ecology

Rectory Farm

Bat Roost Characterisation Survey 2021

Survey Results

Date	Surveyor Position	Species	Time	Number	Activity	Access Point
25/08/2021	3	Soprano Pipistrelle	05:39	3	Foraging/commuting	
25/08/2021	2	Soprano Pipistrelle	05:39	11	Foraging/commuting	
25/08/2021	2	Soprano Pipistrelle	05:40	7	Foraging/commuting	
25/08/2021	3	Common Pipistrelle	05:41	1	Foraging/commuting	
25/08/2021	1	Common Pipistrelle	05:41	1	Foraging/commuting	
25/08/2021	3	Soprano Pipistrelle	05:41	3	Foraging/commuting	
25/08/2021	2	Soprano Pipistrelle	05:41	11	Foraging/commuting	
25/08/2021	3	Common Pipistrelle	05:42	1	Foraging/commuting	
25/08/2021	3	Soprano Pipistrelle	05:42	2	Foraging/commuting	
25/08/2021	2	Non-echolocating bat/BLE	05:42	1	Re-entry	K
25/08/2021	2	Soprano Pipistrelle	05:42	12	Foraging/commuting	
25/08/2021	3	Common Pipistrelle	05:43	5	Foraging/commuting	
25/08/2021	2	Soprano Pipistrelle	05:43	12	Foraging/commuting	
25/08/2021	2	Common Pipistrelle	05:44	1	Foraging/commuting	
25/08/2021	2	Soprano Pipistrelle	05:44	8	Foraging/commuting	
25/08/2021	3	Soprano Pipistrelle	05:45	2	Foraging/commuting	
25/08/2021	2	Soprano Pipistrelle	05:45	9	Foraging/commuting	
25/08/2021	2	Soprano Pipistrelle	05:46	12	Foraging/commuting	
25/08/2021	3	Soprano Pipistrelle	05:47	4	Foraging/commuting	
25/08/2021	2	Soprano Pipistrelle	05:47	8	Foraging/commuting	
25/08/2021	3	Soprano Pipistrelle	05:48	2	Foraging/commuting	
25/08/2021	2	Soprano Pipistrelle	05:48	5	Foraging/commuting	
25/08/2021	3	Soprano Pipistrelle	05:49	2	Foraging/commuting	
25/08/2021	1	Soprano Pipistrelle	05:50	1	Foraging/commuting	
16/09/2021	4	Noctule	18:57	1	Foraging/commuting	
16/09/2021	4	Noctule	18:59	1	Foraging/commuting	
16/09/2021	1	Noctule	19:09	1	Foraging/commuting	
16/09/2021	9	Noctule	19:27	1	Foraging/commuting	
16/09/2021	6	Noctule	19:27	2	Foraging/commuting	
16/09/2021	7	Noctule	19:31	2	Foraging/commuting	
16/09/2021	3	Noctule	19:31	6	Foraging/commuting	
16/09/2021	4	Noctule	19:31	9	Foraging/commuting	
16/09/2021	9	Noctule	19:31	5	Foraging/commuting	
16/09/2021	2	Noctule	19:31	4	Foraging/commuting	
16/09/2021	1	Noctule	19:31	3	Foraging/commuting	
16/09/2021	6	Noctule	19:31	5	Foraging/commuting	
16/09/2021	7	Noctule	19:32	1	Foraging/commuting	
16/09/2021	3	Noctule	19:32	6	Foraging/commuting	
16/09/2021	4	Noctule	19:32	6	Foraging/commuting	
16/09/2021	9	Noctule	19:32	4	Foraging/commuting	
16/09/2021	8	Noctule	19:32	4	Foraging/commuting	
16/09/2021	2	Noctule	19:32	9	Foraging/commuting	
16/09/2021	1	Noctule	19:32	4	Foraging/commuting	
16/09/2021	6	Noctule	19:32	6	Foraging/commuting	
16/09/2021	4	Common Pipistrelle	19:33	1	Emerged	O
16/09/2021	9	Common Pipistrelle	19:33	1	Foraging/commuting	
16/09/2021	4	Noctule	19:35	1	Foraging/commuting	
16/09/2021	9	Noctule	19:35	2	Foraging/commuting	
16/09/2021	6	Noctule	19:35	3	Foraging/commuting	
16/09/2021	9	Noctule	19:36	4	Foraging/commuting	
16/09/2021	6	Noctule	19:36	6	Foraging/commuting	
16/09/2021	7	Common Pipistrelle	19:37	1	Foraging/commuting	
16/09/2021	1	Common Pipistrelle	19:37	1	Foraging/commuting	
16/09/2021	3	Noctule	19:37	3	Foraging/commuting	
16/09/2021	4	Noctule	19:37	3	Foraging/commuting	
16/09/2021	9	Noctule	19:37	4	Foraging/commuting	
16/09/2021	8	Noctule	19:37	2	Foraging/commuting	
16/09/2021	1	Noctule	19:37	3	Foraging/commuting	
16/09/2021	6	Noctule	19:37	3	Foraging/commuting	
16/09/2021	7	Soprano Pipistrelle	19:38	1	Foraging/commuting	
16/09/2021	3	Noctule	19:41	1	Foraging/commuting	
16/09/2021	4	Noctule	19:41	1	Foraging/commuting	
16/09/2021	9	Noctule	19:41	1	Foraging/commuting	
16/09/2021	3	Brown Long-eared	19:44	1	Foraging/commuting	
16/09/2021	3	Common Pipistrelle	19:44	1	Emerged	N
16/09/2021	4	Common Pipistrelle	19:44	2	Foraging/commuting	
16/09/2021	9	Common Pipistrelle	19:44	3	Foraging/commuting	
16/09/2021	2	Common Pipistrelle	19:44	2	Foraging/commuting	
16/09/2021	4	Soprano Pipistrelle	19:44	1	Foraging/commuting	
16/09/2021	3	Brown Long-eared	19:45	4	Foraging/commuting	
16/09/2021	9	Common Pipistrelle	19:45	3	Foraging/commuting	
16/09/2021	4	Soprano Pipistrelle	19:45	3	Foraging/commuting	
16/09/2021	9	Common Pipistrelle	19:46	10	Foraging/commuting	
16/09/2021	2	Common Pipistrelle	19:46	1	Foraging/commuting	
16/09/2021	6	Common Pipistrelle	19:46	2	Foraging/commuting	
16/09/2021	4	Soprano Pipistrelle	19:46	1	Foraging/commuting	
16/09/2021	2	Soprano Pipistrelle	19:46	1	Foraging/commuting	
16/09/2021	4	Common Pipistrelle	19:47	2	Foraging/commuting	
16/09/2021	9	Common Pipistrelle	19:47	7	Foraging/commuting	
16/09/2021	6	Common Pipistrelle	19:47	3	Foraging/commuting	
16/09/2021	7	Soprano Pipistrelle	19:47	1	Foraging/commuting	
16/09/2021	4	Soprano Pipistrelle	19:47	2	Emerged	P
16/09/2021	9	Common Pipistrelle	19:48	7	Foraging/commuting	
16/09/2021	6	Common Pipistrelle	19:48	4	Foraging/commuting	
16/09/2021	7	Soprano Pipistrelle	19:48	2	Foraging/commuting	
16/09/2021	4	Soprano Pipistrelle	19:48	1	Foraging/commuting	
16/09/2021	2	Soprano Pipistrelle	19:48	1	Foraging/commuting	
16/09/2021	1	Soprano Pipistrelle	19:48	1	Foraging/commuting	
16/09/2021	6	Soprano Pipistrelle	19:48	1	Foraging/commuting	
16/09/2021	9	Common Pipistrelle	19:49	6	Foraging/commuting	
16/09/2021	6	Common Pipistrelle	19:49	1	Foraging/commuting	
16/09/2021	7	Soprano Pipistrelle	19:49	1	Foraging/commuting	
16/09/2021	9	Soprano Pipistrelle	19:49	1	Foraging/commuting	
16/09/2021	7	Common Pipistrelle	19:50	3	Foraging/commuting	
16/09/2021	4	Common Pipistrelle	19:50	2	Foraging/commuting	
16/09/2021	9	Common Pipistrelle	19:50	6	Foraging/commuting	
16/09/2021	2	Common Pipistrelle	19:50	1	Foraging/commuting	
16/09/2021	7	Common Pipistrelle	19:50	1	Emerged	R
16/09/2021	7	Myotis species	19:50	1	Foraging/commuting	
16/09/2021	4	Noctule	19:50	2	Foraging/commuting	
16/09/2021	9	Noctule	19:50	2	Foraging/commuting	
16/09/2021	8	Noctule	19:50	1	Foraging/commuting	
16/09/2021	1	Noctule	19:50	2	Foraging/commuting	
16/09/2021	6	Noctule	19:50	3	Foraging/commuting	
16/09/2021	6	Common Pipistrelle	19:51	7	Foraging/commuting	
16/09/2021	3	Noctule	19:51	9	Foraging/commuting	
16/09/2021	4	Noctule	19:51	4	Foraging/commuting	
16/09/2021	9	Noctule	19:51	1	Foraging/commuting	
16/09/2021	2	Noctule	19:51	1	Foraging/commuting	
16/09/2021	1	Noctule	19:51	2	Foraging/commuting	

Keystone Ecology

Rectory Farm

Bat Roost Characterisation Survey 2021

Survey Results

Date	Surveyor Position	Species	Time	Number	Activity	Access Point
16/09/2021	3	Soprano Pipistrelle	19:51	1	Foraging/commuting	
16/09/2021	7	Common Pipistrelle	19:52	2	Foraging/commuting	
16/09/2021	9	Common Pipistrelle	19:52	7	Foraging/commuting	
16/09/2021	1	Common Pipistrelle	19:52	1	Foraging/commuting	
16/09/2021	6	Common Pipistrelle	19:52	6	Foraging/commuting	
16/09/2021	3	Noctule	19:52	12	Foraging/commuting	
16/09/2021	2	Soprano Pipistrelle	19:52	2	Foraging/commuting	
16/09/2021	3	Brown Long-eared	19:53	2	Foraging/commuting	
16/09/2021	3	Common Pipistrelle	19:53	11	Foraging/commuting	
16/09/2021	9	Common Pipistrelle	19:53	4	Foraging/commuting	
16/09/2021	6	Common Pipistrelle	19:53	4	Foraging/commuting	
16/09/2021	3	Noctule	19:53	1	Foraging/commuting	
16/09/2021	3	Soprano Pipistrelle	19:53	2	Foraging/commuting	
16/09/2021	4	Soprano Pipistrelle	19:53	2	Foraging/commuting	
16/09/2021	9	Soprano Pipistrelle	19:53	2	Foraging/commuting	
16/09/2021	2	Soprano Pipistrelle	19:53	2	Foraging/commuting	
16/09/2021	6	Soprano Pipistrelle	19:53	1	Foraging/commuting	
16/09/2021	3	Common Pipistrelle	19:54	5	Foraging/commuting	
16/09/2021	4	Common Pipistrelle	19:54	2	Foraging/commuting	
16/09/2021	9	Common Pipistrelle	19:54	4	Foraging/commuting	
16/09/2021	6	Common Pipistrelle	19:54	4	Foraging/commuting	
16/09/2021	8	Non-echolocating bat/BLE	19:53	1	Emerged	S
16/09/2021	7	Soprano Pipistrelle	19:54	1	Foraging/commuting	
16/09/2021	3	Soprano Pipistrelle	19:54	1	Foraging/commuting	
16/09/2021	4	Soprano Pipistrelle	19:54	1	Foraging/commuting	
16/09/2021	9	Soprano Pipistrelle	19:54	2	Foraging/commuting	
16/09/2021	2	Soprano Pipistrelle	19:54	5	Foraging/commuting	
16/09/2021	3	Common Pipistrelle	19:55	6	Foraging/commuting	
16/09/2021	4	Common Pipistrelle	19:55	1	Emerged	Q
16/09/2021	6	Common Pipistrelle	19:55	8	Foraging/commuting	
16/09/2021	4	Soprano Pipistrelle	19:55	3	Foraging/commuting	
16/09/2021	9	Soprano Pipistrelle	19:55	1	Foraging/commuting	
16/09/2021	2	Soprano Pipistrelle	19:55	2	Foraging/commuting	
16/09/2021	3	Brown Long-eared	19:56	1	Foraging/commuting	
16/09/2021	3	Common Pipistrelle	19:56	6	Foraging/commuting	
16/09/2021	4	Common Pipistrelle	19:56	2	Foraging/commuting	
16/09/2021	9	Common Pipistrelle	19:56	3	Foraging/commuting	
16/09/2021	6	Common Pipistrelle	19:56	3	Foraging/commuting	
16/09/2021	7	Soprano Pipistrelle	19:56	3	Foraging/commuting	
16/09/2021	3	Soprano Pipistrelle	19:56	1	Foraging/commuting	
16/09/2021	4	Soprano Pipistrelle	19:56	4	Foraging/commuting	
16/09/2021	9	Soprano Pipistrelle	19:56	1	Foraging/commuting	
16/09/2021	2	Soprano Pipistrelle	19:56	3	Foraging/commuting	
16/09/2021	1	Soprano Pipistrelle	19:56	2	Foraging/commuting	
16/09/2021	3	Common Pipistrelle	19:57	3	Foraging/commuting	
16/09/2021	9	Common Pipistrelle	19:57	7	Foraging/commuting	
16/09/2021	6	Common Pipistrelle	19:57	5	Foraging/commuting	
16/09/2021	7	Soprano Pipistrelle	19:57	1	Foraging/commuting	
16/09/2021	4	Soprano Pipistrelle	19:57	2	Foraging/commuting	
16/09/2021	2	Soprano Pipistrelle	19:57	5	Foraging/commuting	
16/09/2021	3	Common Pipistrelle	19:58	2	Foraging/commuting	
16/09/2021	4	Common Pipistrelle	19:58	2	Foraging/commuting	
16/09/2021	9	Common Pipistrelle	19:58	5	Foraging/commuting	
16/09/2021	6	Common Pipistrelle	19:58	4	Foraging/commuting	
16/09/2021	7	Soprano Pipistrelle	19:58	1	Foraging/commuting	
16/09/2021	3	Soprano Pipistrelle	19:58	2	Foraging/commuting	
16/09/2021	4	Soprano Pipistrelle	19:58	3	Foraging/commuting	
16/09/2021	9	Soprano Pipistrelle	19:58	2	Foraging/commuting	
16/09/2021	2	Soprano Pipistrelle	19:58	2	Foraging/commuting	
16/09/2021	3	Brown Long-eared	19:59	2	Foraging/commuting	
16/09/2021	3	Common Pipistrelle	19:59	7	Foraging/commuting	
16/09/2021	9	Common Pipistrelle	19:59	4	Foraging/commuting	
16/09/2021	2	Common Pipistrelle	19:59	1	Foraging/commuting	
16/09/2021	6	Common Pipistrelle	19:59	6	Foraging/commuting	
16/09/2021	7	Soprano Pipistrelle	19:59	1	Foraging/commuting	
16/09/2021	3	Soprano Pipistrelle	19:59	5	Foraging/commuting	
16/09/2021	4	Soprano Pipistrelle	19:59	5	Foraging/commuting	
16/09/2021	9	Soprano Pipistrelle	19:59	1	Foraging/commuting	
16/09/2021	2	Soprano Pipistrelle	19:59	2	Foraging/commuting	
16/09/2021	1	Soprano Pipistrelle	19:59	1	Foraging/commuting	
16/09/2021	7	Common Pipistrelle	20:00	1	Foraging/commuting	
16/09/2021	9	Common Pipistrelle	20:00	4	Foraging/commuting	
16/09/2021	6	Common Pipistrelle	20:00	3	Foraging/commuting	
16/09/2021	7	Soprano Pipistrelle	20:00	4	Foraging/commuting	
16/09/2021	4	Soprano Pipistrelle	20:00	3	Foraging/commuting	
16/09/2021	9	Soprano Pipistrelle	20:00	3	Foraging/commuting	
16/09/2021	2	Soprano Pipistrelle	20:00	1	Foraging/commuting	
16/09/2021	1	Soprano Pipistrelle	20:00	2	Foraging/commuting	
16/09/2021	9	Common Pipistrelle	20:01	5	Foraging/commuting	
16/09/2021	6	Common Pipistrelle	20:01	8	Foraging/commuting	
16/09/2021	7	Noctule	20:01	1	Foraging/commuting	
16/09/2021	3	Noctule	20:01	4	Foraging/commuting	
16/09/2021	4	Noctule	20:01	4	Foraging/commuting	
16/09/2021	2	Noctule	20:01	6	Foraging/commuting	
16/09/2021	1	Noctule	20:01	2	Foraging/commuting	
16/09/2021	7	Soprano Pipistrelle	20:01	3	Foraging/commuting	
16/09/2021	3	Soprano Pipistrelle	20:01	2	Foraging/commuting	
16/09/2021	4	Soprano Pipistrelle	20:01	3	Foraging/commuting	
16/09/2021	9	Soprano Pipistrelle	20:01	1	Foraging/commuting	
16/09/2021	1	Soprano Pipistrelle	20:01	1	Foraging/commuting	
16/09/2021	7	Common Pipistrelle	20:02	1	Foraging/commuting	
16/09/2021	9	Common Pipistrelle	20:02	5	Foraging/commuting	
16/09/2021	6	Common Pipistrelle	20:02	5	Foraging/commuting	
16/09/2021	7	Soprano Pipistrelle	20:02	4	Foraging/commuting	
16/09/2021	4	Soprano Pipistrelle	20:02	1	Foraging/commuting	
16/09/2021	9	Soprano Pipistrelle	20:02	3	Foraging/commuting	
16/09/2021	2	Soprano Pipistrelle	20:02	1	Foraging/commuting	
16/09/2021	1	Soprano Pipistrelle	20:02	1	Foraging/commuting	
16/09/2021	7	Common Pipistrelle	20:03	1	Foraging/commuting	
16/09/2021	3	Common Pipistrelle	20:03	1	Foraging/commuting	
16/09/2021	9	Common Pipistrelle	20:03	5	Foraging/commuting	
16/09/2021	6	Common Pipistrelle	20:03	5	Foraging/commuting	
16/09/2021	3	Noctule	20:03	1	Foraging/commuting	
16/09/2021	7	Soprano Pipistrelle	20:03	3	Foraging/commuting	
16/09/2021	4	Soprano Pipistrelle	20:03	6	Foraging/commuting	
16/09/2021	9	Soprano Pipistrelle	20:03	2	Foraging/commuting	
16/09/2021	7	Common Pipistrelle	20:04	1	Foraging/commuting	
16/09/2021	4	Common Pipistrelle	20:04	2	Foraging/commuting	
16/09/2021	9	Common Pipistrelle	20:04	2	Foraging/commuting	
16/09/2021	6	Common Pipistrelle	20:04	4	Foraging/commuting	

Keystone Ecology

Rectory Farm

Bat Roost Characterisation Survey 2021

Survey Results

Date	Surveyor Position	Species	Time	Number	Activity	Access Point
16/09/2021	7	Soprano Pipistrelle	20:04	1	Foraging/commuting	
16/09/2021	3	Soprano Pipistrelle	20:04	1	Foraging/commuting	
16/09/2021	4	Soprano Pipistrelle	20:04	1	Foraging/commuting	
16/09/2021	9	Soprano Pipistrelle	20:04	6	Foraging/commuting	
16/09/2021	6	Soprano Pipistrelle	20:04	1	Foraging/commuting	
16/09/2021	4	Common Pipistrelle	20:05	2	Foraging/commuting	
16/09/2021	9	Common Pipistrelle	20:05	5	Foraging/commuting	
16/09/2021	6	Common Pipistrelle	20:05	6	Foraging/commuting	
16/09/2021	7	Myotis species	20:05	2	Foraging/commuting	
16/09/2021	7	Soprano Pipistrelle	20:05	1	Foraging/commuting	
16/09/2021	1	Soprano Pipistrelle	20:05	1	Foraging/commuting	
16/09/2021	4	Common Pipistrelle	20:06	4	Foraging/commuting	
16/09/2021	9	Common Pipistrelle	20:06	3	Foraging/commuting	
16/09/2021	6	Common Pipistrelle	20:06	6	Foraging/commuting	
16/09/2021	7	Soprano Pipistrelle	20:06	1	Foraging/commuting	
16/09/2021	4	Soprano Pipistrelle	20:06	3	Foraging/commuting	
16/09/2021	9	Soprano Pipistrelle	20:06	1	Foraging/commuting	
16/09/2021	7	Common Pipistrelle	20:07	1	Foraging/commuting	
16/09/2021	4	Common Pipistrelle	20:07	2	Foraging/commuting	
16/09/2021	9	Common Pipistrelle	20:07	1	Foraging/commuting	
16/09/2021	6	Common Pipistrelle	20:07	6	Foraging/commuting	
16/09/2021	3	Soprano Pipistrelle	20:07	2	Foraging/commuting	
16/09/2021	4	Soprano Pipistrelle	20:07	6	Foraging/commuting	
16/09/2021	9	Soprano Pipistrelle	20:07	1	Foraging/commuting	
16/09/2021	2	Soprano Pipistrelle	20:07	1	Foraging/commuting	
16/09/2021	3	Brown Long-eared	20:08	1	Foraging/commuting	
16/09/2021	7	Common Pipistrelle	20:08	2	Foraging/commuting	
16/09/2021	4	Common Pipistrelle	20:08	5	Foraging/commuting	
16/09/2021	9	Common Pipistrelle	20:08	1	Foraging/commuting	
16/09/2021	6	Common Pipistrelle	20:08	10	Foraging/commuting	
16/09/2021	4	Soprano Pipistrelle	20:08	3	Foraging/commuting	
16/09/2021	9	Soprano Pipistrelle	20:08	3	Foraging/commuting	
16/09/2021	4	Common Pipistrelle	20:09	2	Foraging/commuting	
16/09/2021	6	Common Pipistrelle	20:09	6	Foraging/commuting	
16/09/2021	7	Myotis species	20:09	1	Foraging/commuting	
16/09/2021	3	Soprano Pipistrelle	20:09	1	Foraging/commuting	
16/09/2021	4	Soprano Pipistrelle	20:09	8	Foraging/commuting	
16/09/2021	6	Soprano Pipistrelle	20:09	1	Foraging/commuting	
16/09/2021	7	Common Pipistrelle	20:10	5	Foraging/commuting	
16/09/2021	3	Common Pipistrelle	20:10	1	Foraging/commuting	
16/09/2021	4	Common Pipistrelle	20:10	3	Foraging/commuting	
16/09/2021	1	Common Pipistrelle	20:10	1	Foraging/commuting	
16/09/2021	6	Common Pipistrelle	20:10	10	Foraging/commuting	
16/09/2021	7	Myotis species	20:10	1	Foraging/commuting	
16/09/2021	3	Soprano Pipistrelle	20:10	1	Foraging/commuting	
16/09/2021	4	Soprano Pipistrelle	20:10	6	Foraging/commuting	
16/09/2021	9	Soprano Pipistrelle	20:10	2	Foraging/commuting	
16/09/2021	7	Common Pipistrelle	20:11	2	Foraging/commuting	
16/09/2021	3	Common Pipistrelle	20:11	1	Foraging/commuting	
16/09/2021	4	Common Pipistrelle	20:11	3	Foraging/commuting	
16/09/2021	2	Common Pipistrelle	20:11	1	Foraging/commuting	
16/09/2021	6	Common Pipistrelle	20:11	1	Foraging/commuting	
16/09/2021	7	Myotis species	20:11	1	Foraging/commuting	
16/09/2021	3	Soprano Pipistrelle	20:11	1	Foraging/commuting	
16/09/2021	4	Soprano Pipistrelle	20:11	3	Foraging/commuting	
16/09/2021	9	Soprano Pipistrelle	20:11	4	Foraging/commuting	
16/09/2021	6	Soprano Pipistrelle	20:11	1	Foraging/commuting	
16/09/2021	3	Brown Long-eared	20:12	1	Foraging/commuting	
16/09/2021	9	Common Pipistrelle	20:12	1	Foraging/commuting	
16/09/2021	6	Common Pipistrelle	20:12	3	Foraging/commuting	
16/09/2021	4	Soprano Pipistrelle	20:12	1	Foraging/commuting	
16/09/2021	7	Common Pipistrelle	20:13	2	Foraging/commuting	
16/09/2021	3	Common Pipistrelle	20:13	3	Foraging/commuting	
16/09/2021	4	Common Pipistrelle	20:13	4	Foraging/commuting	
16/09/2021	9	Common Pipistrelle	20:13	2	Foraging/commuting	
16/09/2021	6	Common Pipistrelle	20:13	7	Foraging/commuting	
16/09/2021	3	Soprano Pipistrelle	20:13	1	Foraging/commuting	
16/09/2021	4	Soprano Pipistrelle	20:13	7	Foraging/commuting	
16/09/2021	9	Soprano Pipistrelle	20:13	1	Foraging/commuting	
16/09/2021	3	Common Pipistrelle	20:14	1	Foraging/commuting	
16/09/2021	4	Common Pipistrelle	20:14	6	Foraging/commuting	
16/09/2021	9	Common Pipistrelle	20:14	1	Foraging/commuting	
16/09/2021	3	Noctule	20:14	1	Foraging/commuting	
16/09/2021	3	Soprano Pipistrelle	20:14	1	Foraging/commuting	
16/09/2021	4	Soprano Pipistrelle	20:14	4	Foraging/commuting	
16/09/2021	9	Soprano Pipistrelle	20:14	3	Foraging/commuting	
16/09/2021	4	Noctule	20:15	2	Foraging/commuting	
16/09/2021	9	Noctule	20:15	3	Foraging/commuting	
16/09/2021	1	Noctule	20:15	2	Foraging/commuting	
16/09/2021	6	Noctule	20:15	5	Foraging/commuting	
16/09/2021	4	Soprano Pipistrelle	20:15	4	Foraging/commuting	
16/09/2021	3	Noctule	20:16	2	Foraging/commuting	
16/09/2021	3	Soprano Pipistrelle	20:16	1	Foraging/commuting	
16/09/2021	4	Soprano Pipistrelle	20:16	6	Foraging/commuting	
16/09/2021	9	Soprano Pipistrelle	20:16	2	Foraging/commuting	
16/09/2021	3	Common Pipistrelle	20:17	2	Foraging/commuting	
16/09/2021	4	Common Pipistrelle	20:17	1	Foraging/commuting	
16/09/2021	3	Soprano Pipistrelle	20:17	1	Foraging/commuting	
16/09/2021	4	Soprano Pipistrelle	20:17	2	Foraging/commuting	
16/09/2021	9	Soprano Pipistrelle	20:17	2	Foraging/commuting	
16/09/2021	6	Common Pipistrelle	20:18	1	Foraging/commuting	
16/09/2021	7	Myotis species	20:18	1	Foraging/commuting	
16/09/2021	7	Soprano Pipistrelle	20:18	1	Foraging/commuting	
16/09/2021	3	Soprano Pipistrelle	20:18	1	Foraging/commuting	
16/09/2021	4	Soprano Pipistrelle	20:18	6	Foraging/commuting	
16/09/2021	9	Soprano Pipistrelle	20:18	2	Foraging/commuting	
16/09/2021	6	Soprano Pipistrelle	20:18	2	Foraging/commuting	
16/09/2021	7	Noctule	20:19	1	Foraging/commuting	
16/09/2021	3	Noctule	20:19	2	Foraging/commuting	
16/09/2021	4	Noctule	20:19	1	Foraging/commuting	
16/09/2021	4	Noctule	20:19	3	Foraging/commuting	
16/09/2021	2	Noctule	20:19	3	Foraging/commuting	
16/09/2021	1	Noctule	20:19	3	Foraging/commuting	
16/09/2021	6	Noctule	20:19	4	Foraging/commuting	
16/09/2021	7	Soprano Pipistrelle	20:19	1	Foraging/commuting	
16/09/2021	3	Soprano Pipistrelle	20:19	1	Foraging/commuting	
16/09/2021	4	Soprano Pipistrelle	20:19	1	Foraging/commuting	
16/09/2021	9	Soprano Pipistrelle	20:19	1	Foraging/commuting	
16/09/2021	6	Soprano Pipistrelle	20:19	1	Foraging/commuting	
16/09/2021	3	Noctule	20:20	1	Foraging/commuting	

Keystone Ecology

Rectory Farm

Bat Roost Characterisation Survey 2021

Survey Results

Date	Surveyor Position	Species	Time	Number	Activity	Access Point
16/09/2021	7	Soprano Pipistrelle	20:20	1	Foraging/commuting	
16/09/2021	4	Soprano Pipistrelle	20:20	8	Foraging/commuting	
16/09/2021	9	Soprano Pipistrelle	20:20	3	Foraging/commuting	
16/09/2021	3	Common Pipistrelle	20:21	1	Foraging/commuting	
16/09/2021	4	Common Pipistrelle	20:21	1	Foraging/commuting	
16/09/2021	3	Soprano Pipistrelle	20:21	1	Foraging/commuting	
16/09/2021	4	Soprano Pipistrelle	20:21	10	Foraging/commuting	
16/09/2021	9	Soprano Pipistrelle	20:21	2	Foraging/commuting	
16/09/2021	6	Common Pipistrelle	20:22	5	Foraging/commuting	
16/09/2021	3	Noctule	20:22	4	Foraging/commuting	
16/09/2021	4	Noctule	20:22	1	Foraging/commuting	
16/09/2021	9	Noctule	20:22	3	Foraging/commuting	
16/09/2021	2	Noctule	20:22	1	Foraging/commuting	
16/09/2021	1	Noctule	20:22	2	Foraging/commuting	
16/09/2021	6	Noctule	20:22	1	Foraging/commuting	
16/09/2021	7	Soprano Pipistrelle	20:22	1	Foraging/commuting	
16/09/2021	4	Soprano Pipistrelle	20:22	14	Foraging/commuting	
16/09/2021	9	Soprano Pipistrelle	20:22	2	Foraging/commuting	
16/09/2021	7	Common Pipistrelle	20:23	6	Foraging/commuting	
16/09/2021	3	Common Pipistrelle	20:23	1	Foraging/commuting	
16/09/2021	4	Common Pipistrelle	20:23	3	Foraging/commuting	
16/09/2021	6	Common Pipistrelle	20:23	1	Foraging/commuting	
16/09/2021	3	Soprano Pipistrelle	20:23	3	Foraging/commuting	
16/09/2021	4	Soprano Pipistrelle	20:23	6	Foraging/commuting	
16/09/2021	9	Soprano Pipistrelle	20:23	1	Foraging/commuting	
16/09/2021	7	Common Pipistrelle	20:24	6	Foraging/commuting	
16/09/2021	3	Common Pipistrelle	20:24	2	Foraging/commuting	
16/09/2021	4	Common Pipistrelle	20:24	19	Foraging/commuting	
16/09/2021	9	Noctule	20:24	1	Foraging/commuting	
16/09/2021	7	Common Pipistrelle	20:25	2	Foraging/commuting	
16/09/2021	3	Common Pipistrelle	20:25	2	Foraging/commuting	
16/09/2021	4	Common Pipistrelle	20:25	18	Foraging/commuting	
16/09/2021	2	Common Pipistrelle	20:25	1	Foraging/commuting	
16/09/2021	7	Myotis species	20:28	1	Foraging/commuting	
16/09/2021	3	Common Pipistrelle	20:30	2	Foraging/commuting	
16/09/2021	3	Noctule	20:30	6	Foraging/commuting	
16/09/2021	7	Soprano Pipistrelle	20:30	4	Foraging/commuting	
16/09/2021	3	Soprano Pipistrelle	20:30	1	Foraging/commuting	
16/09/2021	1	Soprano Pipistrelle	20:30	4	Foraging/commuting	
16/09/2021	3	Common Pipistrelle	20:31	3	Foraging/commuting	
16/09/2021	4	Common Pipistrelle	20:31	2	Foraging/commuting	
16/09/2021	7	Noctule	20:31	1	Foraging/commuting	
16/09/2021	3	Noctule	20:31	1	Foraging/commuting	
16/09/2021	2	Noctule	20:31	3	Foraging/commuting	
16/09/2021	1	Noctule	20:31	1	Foraging/commuting	
16/09/2021	7	Soprano Pipistrelle	20:31	3	Foraging/commuting	
16/09/2021	3	Soprano Pipistrelle	20:31	3	Foraging/commuting	
16/09/2021	4	Soprano Pipistrelle	20:31	3	Foraging/commuting	
16/09/2021	1	Soprano Pipistrelle	20:31	1	Foraging/commuting	
16/09/2021	3	Common Pipistrelle	20:32	7	Foraging/commuting	
16/09/2021	7	Soprano Pipistrelle	20:32	6	Foraging/commuting	
16/09/2021	1	Soprano Pipistrelle	20:32	5	Foraging/commuting	
16/09/2021	3	Common Pipistrelle	20:33	4	Foraging/commuting	
16/09/2021	4	Common Pipistrelle	20:33	2	Foraging/commuting	
16/09/2021	7	Soprano Pipistrelle	20:33	3	Foraging/commuting	
16/09/2021	3	Soprano Pipistrelle	20:33	1	Foraging/commuting	
16/09/2021	4	Soprano Pipistrelle	20:33	2	Foraging/commuting	
16/09/2021	9	Soprano Pipistrelle	20:33	1	Foraging/commuting	
16/09/2021	1	Soprano Pipistrelle	20:33	3	Foraging/commuting	
16/09/2021	3	Common Pipistrelle	20:34	3	Foraging/commuting	
16/09/2021	4	Common Pipistrelle	20:34	2	Foraging/commuting	
16/09/2021	7	Soprano Pipistrelle	20:34	4	Foraging/commuting	
16/09/2021	3	Soprano Pipistrelle	20:34	1	Foraging/commuting	
16/09/2021	9	Soprano Pipistrelle	20:34	1	Foraging/commuting	
16/09/2021	1	Soprano Pipistrelle	20:34	3	Foraging/commuting	
16/09/2021	3	Common Pipistrelle	20:35	1	Foraging/commuting	
16/09/2021	7	Soprano Pipistrelle	20:35	3	Foraging/commuting	
16/09/2021	1	Soprano Pipistrelle	20:35	3	Foraging/commuting	
16/09/2021	3	Common Pipistrelle	20:36	5	Foraging/commuting	
16/09/2021	4	Common Pipistrelle	20:36	3	Foraging/commuting	
16/09/2021	7	Soprano Pipistrelle	20:36	4	Foraging/commuting	
16/09/2021	3	Soprano Pipistrelle	20:36	1	Foraging/commuting	
16/09/2021	4	Soprano Pipistrelle	20:36	2	Foraging/commuting	
16/09/2021	1	Soprano Pipistrelle	20:36	1	Foraging/commuting	
16/09/2021	7	Common Pipistrelle	20:37	2	Foraging/commuting	
16/09/2021	3	Common Pipistrelle	20:37	3	Foraging/commuting	
16/09/2021	1	Common Pipistrelle	20:37	1	Foraging/commuting	
16/09/2021	6	Common Pipistrelle	20:37	1	Foraging/commuting	
16/09/2021	7	Soprano Pipistrelle	20:37	2	Foraging/commuting	
16/09/2021	3	Soprano Pipistrelle	20:37	2	Foraging/commuting	
16/09/2021	4	Soprano Pipistrelle	20:37	1	Foraging/commuting	
16/09/2021	9	Soprano Pipistrelle	20:37	2	Foraging/commuting	
16/09/2021	1	Soprano Pipistrelle	20:37	2	Foraging/commuting	
16/09/2021	7	Common Pipistrelle	20:38	3	Foraging/commuting	
16/09/2021	3	Common Pipistrelle	20:38	4	Foraging/commuting	
16/09/2021	4	Common Pipistrelle	20:38	2	Foraging/commuting	
16/09/2021	9	Common Pipistrelle	20:38	1	Foraging/commuting	
16/09/2021	1	Common Pipistrelle	20:38	1	Foraging/commuting	
16/09/2021	6	Common Pipistrelle	20:38	2	Foraging/commuting	
16/09/2021	7	Soprano Pipistrelle	20:38	1	Foraging/commuting	
16/09/2021	4	Soprano Pipistrelle	20:38	5	Foraging/commuting	
16/09/2021	3	Common Pipistrelle	20:39	3	Foraging/commuting	
16/09/2021	4	Common Pipistrelle	20:39	3	Foraging/commuting	
16/09/2021	3	Soprano Pipistrelle	20:39	2	Foraging/commuting	
16/09/2021	4	Soprano Pipistrelle	20:39	8	Foraging/commuting	
16/09/2021	9	Soprano Pipistrelle	20:39	5	Foraging/commuting	
16/09/2021	3	Soprano Pipistrelle	20:40	3	Foraging/commuting	
16/09/2021	4	Soprano Pipistrelle	20:40	4	Foraging/commuting	
16/09/2021	9	Soprano Pipistrelle	20:40	2	Foraging/commuting	
16/09/2021	7	Common Pipistrelle	20:41	3	Foraging/commuting	
16/09/2021	3	Common Pipistrelle	20:41	3	Foraging/commuting	
16/09/2021	4	Common Pipistrelle	20:41	6	Foraging/commuting	
16/09/2021	2	Common Pipistrelle	20:41	1	Foraging/commuting	
16/09/2021	3	Soprano Pipistrelle	20:41	3	Foraging/commuting	
16/09/2021	4	Soprano Pipistrelle	20:41	6	Foraging/commuting	
16/09/2021	9	Soprano Pipistrelle	20:41	1	Foraging/commuting	
16/09/2021	7	Common Pipistrelle	20:42	3	Foraging/commuting	
16/09/2021	3	Common Pipistrelle	20:42	11	Foraging/commuting	
16/09/2021	4	Common Pipistrelle	20:42	12	Foraging/commuting	
16/09/2021	9	Common Pipistrelle	20:42	2	Foraging/commuting	

Keystone Ecology

Rectory Farm

Bat Roost Characterisation Survey 2021

Survey Results

Date	Surveyor Position	Species	Time	Number	Activity	Access Point
16/09/2021	3	Soprano Pipistrelle	20:42	2	Foraging/commuting	
16/09/2021	4	Soprano Pipistrelle	20:42	7	Foraging/commuting	
16/09/2021	9	Soprano Pipistrelle	20:42	4	Foraging/commuting	
16/09/2021	7	Common Pipistrelle	20:43	2	Foraging/commuting	
16/09/2021	4	Common Pipistrelle	20:43	1	Foraging/commuting	
16/09/2021	9	Common Pipistrelle	20:43	1	Foraging/commuting	
16/09/2021	6	Common Pipistrelle	20:43	2	Foraging/commuting	
16/09/2021	7	Soprano Pipistrelle	20:43	2	Foraging/commuting	
16/09/2021	3	Soprano Pipistrelle	20:43	1	Emerged	L
16/09/2021	4	Soprano Pipistrelle	20:43	6	Foraging/commuting	
16/09/2021	9	Soprano Pipistrelle	20:43	1	Foraging/commuting	
16/09/2021	7	Common Pipistrelle	20:44	8	Foraging/commuting	
16/09/2021	3	Common Pipistrelle	20:44	2	Foraging/commuting	
16/09/2021	4	Common Pipistrelle	20:44	7	Foraging/commuting	
16/09/2021	1	Common Pipistrelle	20:44	1	Foraging/commuting	
16/09/2021	6	Common Pipistrelle	20:44	3	Foraging/commuting	
16/09/2021	4	Soprano Pipistrelle	20:44	3	Foraging/commuting	
16/09/2021	9	Soprano Pipistrelle	20:44	2	Foraging/commuting	
16/09/2021	7	Common Pipistrelle	20:45	9	Foraging/commuting	
16/09/2021	3	Common Pipistrelle	20:45	2	Foraging/commuting	
16/09/2021	4	Common Pipistrelle	20:45	16	Foraging/commuting	
16/09/2021	9	Common Pipistrelle	20:45	1	Foraging/commuting	
16/09/2021	9	Non-echolocating bat/BLE	19:52	1	Emerged	G
16/09/2021	9	Non-echolocating bat/BLE	19:55	1	Emerged	G
16/09/2021	8	Common Pipistrelle	20:45	1	Foraging/commuting	
16/09/2021	1	Common Pipistrelle	20:45	4	Foraging/commuting	
16/09/2021	6	Common Pipistrelle	20:45	3	Foraging/commuting	
16/09/2021	4	Soprano Pipistrelle	20:45	2	Foraging/commuting	
16/09/2021	7	Common Pipistrelle	20:46	10	Foraging/commuting	
16/09/2021	4	Common Pipistrelle	20:46	7	Foraging/commuting	
16/09/2021	9	Common Pipistrelle	20:46	1	Foraging/commuting	
16/09/2021	6	Common Pipistrelle	20:46	1	Foraging/commuting	
16/09/2021	3	Soprano Pipistrelle	20:46	3	Foraging/commuting	
16/09/2021	4	Soprano Pipistrelle	20:46	4	Foraging/commuting	
16/09/2021	9	Soprano Pipistrelle	20:46	2	Foraging/commuting	
16/09/2021	6	Soprano Pipistrelle	20:46	1	Foraging/commuting	
16/09/2021	7	Common Pipistrelle	20:47	7	Foraging/commuting	
16/09/2021	3	Common Pipistrelle	20:47	1	Foraging/commuting	
16/09/2021	4	Common Pipistrelle	20:47	9	Foraging/commuting	
16/09/2021	9	Common Pipistrelle	20:47	2	Foraging/commuting	
16/09/2021	2	Common Pipistrelle	20:47	1	Foraging/commuting	
16/09/2021	1	Common Pipistrelle	20:47	3	Foraging/commuting	
16/09/2021	6	Common Pipistrelle	20:47	2	Foraging/commuting	
16/09/2021	3	Soprano Pipistrelle	20:47	1	Foraging/commuting	
16/09/2021	4	Soprano Pipistrelle	20:47	2	Foraging/commuting	
16/09/2021	9	Soprano Pipistrelle	20:47	2	Foraging/commuting	
16/09/2021	7	Common Pipistrelle	20:48	9	Foraging/commuting	
16/09/2021	3	Common Pipistrelle	20:48	9	Foraging/commuting	
16/09/2021	4	Common Pipistrelle	20:48	11	Foraging/commuting	
16/09/2021	9	Common Pipistrelle	20:48	1	Foraging/commuting	
16/09/2021	2	Common Pipistrelle	20:48	3	Foraging/commuting	
16/09/2021	1	Common Pipistrelle	20:48	10	Foraging/commuting	
16/09/2021	3	Soprano Pipistrelle	20:48	1	Foraging/commuting	
16/09/2021	7	Common Pipistrelle	20:49	9	Foraging/commuting	
16/09/2021	3	Common Pipistrelle	20:49	7	Foraging/commuting	
16/09/2021	4	Common Pipistrelle	20:49	5	Foraging/commuting	
16/09/2021	2	Common Pipistrelle	20:49	4	Foraging/commuting	
16/09/2021	1	Common Pipistrelle	20:49	1	Foraging/commuting	
16/09/2021	7	Common Pipistrelle	20:50	4	Foraging/commuting	
16/09/2021	3	Common Pipistrelle	20:50	6	Foraging/commuting	
16/09/2021	4	Common Pipistrelle	20:50	1	Foraging/commuting	
16/09/2021	2	Common Pipistrelle	20:50	1	Foraging/commuting	
16/09/2021	3	Soprano Pipistrelle	20:50	3	Foraging/commuting	
16/09/2021	2	Soprano Pipistrelle	20:50	1	Foraging/commuting	
16/09/2021	3	Non-echolocating bat/BLE	20:14	1	Emerged	L
16/09/2021	3	Soprano Pipistrelle	20:51	4	Foraging/commuting	
16/09/2021	4	Soprano Pipistrelle	20:51	3	Foraging/commuting	
16/09/2021	4	Soprano Pipistrelle	20:51	3	Foraging/commuting	
16/09/2021	2	Soprano Pipistrelle	20:51	1	Foraging/commuting	
16/09/2021	3	Common Pipistrelle	20:52	1	Foraging/commuting	
16/09/2021	2	Common Pipistrelle	20:53	2	Foraging/commuting	
16/09/2021	4	Soprano Pipistrelle	20:56	1	Foraging/commuting	
16/09/2021	3	Noctule	22:06	1	Foraging/commuting	

Appendix 4

DNA Results

WARWICK
THE UNIVERSITY OF WARWICK

EcoWarwicker
Ecological Forensics

24 September 21

Re: Identification Results for Elizabeth Robinson, Keystone Ecology

Job number 17277, received 10 September 2021
Sample labelled: Rectory Farm, Northmoor, Building 1
PCR amplification successful. DNA sequence:
ATGACCAACATTCGAAAGTCCCACCCTCTCATAAAAATTATCAATGACTCATTCATTG
ACTTACCTGCTCCCTCAAATATTTCATCATGATGAAACTTTGGATCTCTTCTAGGCATT
TGCCTAGCAC

Phylogenetic analysis identification: *Plecotus auritus*

Confirmed by maximum likelihood, maximum parsimony, bootstrap 100%.

Best regards,

Professor Robin Allaby

The results and conclusions in this report are based on an investigation of mtDNA sequence analysis. The results obtained have been reported with accuracy. The interpretation represents the most probable conclusion for the DNA sequence obtained rather than the sample provided given current levels of species data. It should be borne in mind that different circumstances might produce different results. Therefore, care must be taken with interpretation of the results especially if they are used as the basis for commercial recommendations.

Professor Robin Allaby

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Email: r.g.allaby@warwick.ac.uk

WARWICK
THE UNIVERSITY OF WARWICK

EcoWarwicker
Ecological Forensics

11 October 21

Re: Identification Results for Elizabeth Robinson, Keystone Ecology

Job number 17278, received 10 September 2021
Sample labelled: Rectory Farm, Northmoor, Building 2 a
PCR amplification successful. DNA sequence:
ATGACAAACATTCGAAAATCCCACCCCCTGATCAAAATCATCAATAACTCATTCATTG
ATCTACCAGCTCCATCAAACATTTCAGCATGATGAAATTTTGGGTCCCTATTAGGCAT
C

Phylogenetic analysis identification: *Pipistrellus pipistrellus*

Confirmed by maximum likelihood, maximum parsimony, bootstrap 100%.

Best regards,

Professor Robin Allaby

The results and conclusions in this report are based on an investigation of mtDNA sequence analysis. The results obtained have been reported with accuracy. The interpretation represents the most probable conclusion for the DNA sequence obtained rather than the sample provided given current levels of species data. It should be borne in mind that different circumstances might produce different results. Therefore, care must be taken with interpretation of the results especially if they are used as the basis for commercial recommendations.

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WARWICK
THE UNIVERSITY OF WARWICK

EcoWarwicker
Ecological Forensics

11 October 21

Re: Identification Results for Elizabeth Robinson, Keystone Ecology

Job number 17279, received 10 September 2021
Sample labelled: Rectory Farm, Northmoor, Building 2 b
PCR amplification successful. DNA sequence:
ATGACAAACATTCGAAAATCCCACCCCCTGATCAAAATCATCAATAACTCATTCATTG
ATCTACCAGCTCCATCAAACATTTCAGCATGATGAAATTTTGGGTCCCTATTAGGCAT
C

Phylogenetic analysis identification: *Pipistrellus pipistrellus*

Confirmed by maximum likelihood, maximum parsimony, bootstrap 100%.

Best regards,

Professor Robin Allaby

The results and conclusions in this report are based on an investigation of mtDNA sequence analysis. The results obtained have been reported with accuracy. The interpretation represents the most probable conclusion for the DNA sequence obtained rather than the sample provided given current levels of species data. It should be borne in mind that different circumstances might produce different results. Therefore, care must be taken with interpretation of the results especially if they are used as the basis for commercial recommendations.

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WARWICK
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EcoWarwicker
Ecological Forensics

11 October 21

Re: Identification Results for Elizabeth Robinson, Keystone Ecology

Job number 17280, received 10 September 2021
Sample labelled: Rectory Farm, Northmoor, Building 2 c
PCR amplification successful. DNA sequence:
ATGACAAACATTCGAAAATCCCACCCCCTGATCAAAATCATCAATAACTCATTCATTG
ATCTACCAGCTCCATCAAACATTTCAGCATGATGAAATTTTGGGTCCCTATTAGGCAT
C

Phylogenetic analysis identification: *Pipistrellus pipistrellus*

Confirmed by maximum likelihood, maximum parsimony, bootstrap 100%.

Best regards,

Professor Robin Allaby

The results and conclusions in this report are based on an investigation of mtDNA sequence analysis. The results obtained have been reported with accuracy. The interpretation represents the most probable conclusion for the DNA sequence obtained rather than the sample provided given current levels of species data. It should be borne in mind that different circumstances might produce different results. Therefore, care must be taken with interpretation of the results especially if they are used as the basis for commercial recommendations.

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WARWICK
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EcoWarwicker
Ecological Forensics

28 September 21

Re: Identification Results for Elizabeth Robinson, Keystone Ecology

Job number 17281, received 10 September 2021
Sample labelled: Rectory Farm, Northmoor, Building 3
PCR amplification successful. DNA sequence:
ATGACCAACATTCGAAAGTCCCACCCCCTGATCAAAATCATCAATAACTCATTCATTG
ATCTACCAGCTCCATCAAACATTTCAGCATGATGAAATTTTGGGTCCCTATTAGGCAT
CTGTTTGGAC

Phylogenetic analysis identification: *Plecotus auritus*

Confirmed by maximum likelihood, maximum parsimony, bootstrap 100%.

Best regards,

Professor Robin Allaby

The results and conclusions in this report are based on an investigation of mtDNA sequence analysis. The results obtained have been reported with accuracy. The interpretation represents the most probable conclusion for the DNA sequence obtained rather than the sample provided given current levels of species data. It should be borne in mind that different circumstances might produce different results. Therefore, care must be taken with interpretation of the results especially if they are used as the basis for commercial recommendations.

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