Bat Emergence Survey
EPSL required

Manor Farm
Hannington
Tadley
Hampshire
RG26 5TZ

GR: SU 53827 55428

August 2022

Paul Diamond. Director.
Ecological Surveys Ltd.

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Contract Details	
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1 Summary

Please refer to the body of the report for full details of all results, mitigation, enhancement and conclusions.

Proposal	It is understood that proposed works include the conversion of the loft void, creation of several new dormers / roof lights, and a single storey rear extension following the demolition of the garage. The house is also understood to be re-roofed. Unmitigated works will destroy access points used by bats and destroy roosting habitat. It is understood that works are not proposed for the barn at this stage.
Size of Site	Site = 0.5 Ha; House = 168 sqm; Barn = 289 sqm; Garage = 29 sqm
Dates of Surveys	Initial Investigation: - 27/11/2020 Dusk Emergence 1: - 26/05/2021 Dusk Emergence 2: - 09/06/2021 Dusk Emergence 3: - 23/06/2021 Dusk Emergence 4 (update survey for the house): - 31/08/2022 Final Inspection: - 31/08/2022
Roosting value: -	The house has a confirmed maternity roost for: - • 29 Common pipistrelle bats (*Pipistrellus pipistrellus*) (peak count) The barn has a confirmed maternity roost for: - • 13 Common pipistrelle bats (*Pipistrellus pipistrellus*) (peak count) Bats did not emerge from the garage – this structure is therefore not a confirmed roost.
Impact of unmitigated works.	The results of the surveys indicate that UNMITIGATED work to the house will cause disturbance/harm or death to bats. A Natural England Licence will be required to legally disturb/modify or destroy the existing roosts.
E.P.S.L.	A European Protected Species Licence (EPSL) will therefore be required. ✓ If granted, by Natural England, the EPSL legally allows for the disturbance/modification or destruction of a resting or breeding site for protected species in order to permit the development. ✓ Without this licence, the development cannot legally proceed. ✓ An application for an EPSL can only be made after planning permission / listed building consent is granted, if applicable. ✓ A licenced/ acting ecologist should be commissioned to complete the licence.

Summary of Bat Activity onsite	✓ Bats were active in the area on each Emergence Survey demonstrating the weather was suitable for bat activity.
Mitigation	**Pre-Construction: -** - Constraints will apply to timings: commencement and end of works (outside of the bat maternity period); - Works can only legally proceed once an EPS licence is granted, and then - ONLY under licenced ecological supervision for works relating to impact of bat ingress and bat roosts Following a Toolbox talk Following installation of safe capture bat boxes onsite under supervision. **Construction: -** - Constraints will apply to material used in the construction of a new roof; - Roosts and access must be re-created of similar quantity, quality and functionality; - Enhancement features must be installed. - A Lighting Strategy must be applied to limit artificial lighting spill. **Post Construction: -** - The client/agent must provide notification to the acting ecologist all works are complete regarding mitigation and enhancement for bats – there is a maximum window for licensable works of 6 months) - The client must arrange a final site visit and/or evidence installation of bat provision with digital imaging;
Enhancement	Enhancement is required. Section 6.

1.1 Legal Framework & Responsibilities of the client/acting agent: -

a) Submit this Bat Emergence Survey Report together with any other related reports to the Planning Authority.
Once planning approval has been granted, an Ecologist may be engaged to undertake the EPSL application. This action requires specific professional qualifications and experience. Ecological Surveys Ltd is able to perform this action on your behalf.
It is worth noting the Natural England EPSL approval time can vary significantly and 90 days has been exceeded on occasion. The ecologist has no influence over the approval time taken. Consequently, early instruction is strongly advised.

b) The EPSL requires specific commitments to be agreed by the client for the protection of bats and maintenance of roosts onsite.
The EPSL requires that the final date the site was inspected is provided. The 1st or last Emergence Survey undertaken may provide this date for the licence. The date must be within 3 months of the licence application being made. If the EPSL application is made outside of this 3 month time-frame, a surveyor must be commissioned to inspect the site/roosting features prior to application.

c) The EPSL will determine the actual requirements for this site in order for proposed work to proceed and give the timeframe under which must occur. The EPSL requirements must be strictly adhered to. Any changes to the works will require a modification application to be submitted to Natural England for approval.

d) Once Natural England have granted permission to proceed with works as pertaining to the specific details within the EPSL arrange for the appointed ecologist to supervise works on site for the protection of bats. Works which occur without specified supervision will break the terms of the licence and a criminal act will have been committed.

e) The ecologist must be professionally qualified and licenced to handle bats and formally appointed/booked with as much notice as possible prior to the roof strip/works commencing. **Failure to plan ahead may mean that the Ecologist is unable to attend site according to the contractor's schedule and as NO LICENCED WORKS can be undertaken this could have serious implications for the project schedule.**

f) The person appointing the contractors is strongly advised to ensure that the contractors are aware of the EPSL requirements and that the Supervising Ecologist is fully aware of the length of time they are likely to be required on site.

g) It is illegal for any construction to occur where an EPSL has been required UNLESS the

acting ecologist:

- ✓ Is either the '*Named ecologist*' or '*accredited agent*' specified on the EPSL (and any authorised assistants working directly under the supervision of one the aforementioned categories).

h) It is a criminal offence to disturb/handle bats unless it is to save the bat from harm, injury or death, none of which must as a result of your own action. Consequently, uncovering a bat during construction / demolition works and moving it to permit works to continue, without a licence, is a criminal offence.
The client/acting agent and all contractors must refer to the law and legislation for the protection for bats. A brief overview is given within Appendix 1: Legislation Bat and Bird Species for details of Bat and Bird Law and Legislation and http://www.nwcu.police.uk/ regarding avoiding committing wildlife crime.

i) In the event that a bat is found during any unsupervised stages of the works, activity should stop in the vicinity of the bat/s and advice should be sought from Ecological Surveys Ltd (Tel: 01503 240846 or 07736 458609) or from the Bat Conservation Trust Helpline (Tel: 0345 1300 228). Bats should not be handled, but should ideally be left in situ, gently covered until advice is obtained, unless leaving them is a bigger risk to them than moving them (with gloves) to a place of safety.

j) In addition, structures associated with this site may not be demolished if nesting has occurred until all nesting birds' chicks are fledged and flown (nesting is usually between March and September inclusive). Nesting birds are protected by law and further advice should be sought from the acting ecologist if birds are nesting.

k) The mitigation and enhancements given in this report do not negate or alter the responsibilities of the client in respect of any other ecological reports associated with this site.

2 Executive Summary

Ecological Surveys Limited was commissioned to undertake Bat Emergence Surveys at the Site for the client following a previous Preliminary Ecological Assessment (PEA) on 27/11/2020 at Manor Farm, Hannington, Tadley, Hampshire, RG26 5TZ.

The house (GR: SU 53827 55428) was found to have numerous potential roosting features and bat droppings were present in the loft. A large numbers of bat droppings were found under most mortis joints in the barn (SU 53829 55484). Low potential for bat access was recorded within the garage (GR: SU 53834 55414). A stable (SU 53785 55460) was assessed as offering negligible potential for bat roosting.

It was concluded that any unmitigated development works to the proposed structures (house, barn, garage) would cause disturbance/harm or death to bat species and 3 Emergence Surveys were therefore recommended for the house and the barn.

1 Emergence Survey was recommended for the garage in accordance with Bat Conservation Trust (BCT) guidelines (Collins, 2016) to glean sufficient evidence and inform licensing.

A further Emergence Survey was carried out on the house in August 2022 to update the previous 2021 surveys and assess any changes in conditions.

The Emergence Surveys were undertaken with all proper and reasonable skill and care in a professional manner and in accordance with accepted standards, methodologies and guidelines.

This report is based on the evidence recorded at the site at the time of the survey. The information gathered is considered to be sufficient to provide an assessment of the ecological interest on the site and to justify the recommendations produced in this report.

It is the responsibility of the client/developer to ensure they familiarise themselves with and comply with any law and legislation relating to this survey's findings and recommendations. An overview of specific governance relating to this survey may be found within this report but is by no means comprehensive. Refer to Appendix 1: Legislation Bat and Bird Species for details of Bat and Bird Law and Legislation and http://www.nwcu.police.uk/ regarding avoiding committing wildlife crime.

It should be noted that this report relates specifically to the specified brief and proposal description. If any changes to the brief or the proposal are made, then Ecological Surveys Ltd should be consulted. A re-appraisal or appraisal amendment may be required.

The results of the Bat Emergence Surveys are deemed to be valid for 12 months from date of survey provided any constraints or advisories recommended have been followed. If development works are to be carried out after this time has elapsed, an updated survey will be required.

2.1 Survey Objectives

The Bat Emergence Survey was undertaken in order to establish:

- Whether bats are currently using the structure/s for roosting.
- If so, to identify the species present.
- To locate access / entry / exit points.
- To identify any potential ecological constraints on the development.
- To provide guidance on the Natural England EPSL (European Protected Species Licensing) or alternative procedures if required.

The survey specifically aimed to provide:

- Confirmation of the bat species, number of bats and access points used.
- Advice on the need for further survey/s and/or appropriate mitigation required.

2.2 Survey Methodology

The bat survey was undertaken in accordance with guidance provided by the Bat Conservation Trusts Good Practice Guidelines 3rd Edition (Collins, 2016). This guidance covers all aspects of emergence surveys, including recommendations relating to the months during which the surveys should be carried out, as well as recommended timings of the surveys themselves.

Bat Conservation Trust (BCT) guidelines recommend Bat Emergence Surveys should ordinarily consist of a minimum of one visit for low suitability, two visits for moderate suitability or three for high roost potential and confirmed roosts

Recommended minimum number of survey visits for Presence/Absence Emergence Surveys		
Low Roost Suitability One survey visit.	**Moderate Roost Suitability Two separate survey visits.**	**High Roost Suitability Three separate survey visits.**
One dusk emergence or dawn re-entry (structures). No further survey: Trees.	One dusk emergence and a separate dawn re-entry survey.	At least one dusk emergence and a separate dawn re-entry survey. The third visit could be either dusk or dawn.
Timings		
May to August (structures) No further surveys (trees)	May to September with at least one of surveys between May and August.	May to September with at least two of surveys between May and August.

Professional judgement is permitted in deciding the actual type of surveys. Whilst dawn surveys can be very useful for locating bat access points if this has not been possible to do during dusk surveys, as access points were clearly observed and recorded it was considered on this occasion that dusk surveys were sufficient.

- The surveyors were positioned to cover all aspects of the dwelling to be impacted by the proposed works, with particular emphasis placed on those areas most likely to be used by emerging bats.

- When a bat was detected, it was identified with its position and activity noted on a field base plan. The time and position of each bat was recorded, along with its direction of flight (light permitting) and whether the bat was emerging/returning, foraging or commuting.

- Wind strength, precipitation, humidity and temperature were all recorded at the start and on completion of the survey.

- The surveyors were each equipped with a bat detector and recording device, comprising of an Echo Meter 3, Peersonic or a Batbox Baton. To aid species identification, all recordings were analysed using Analook (ver. 4.4a) computer software.

2.3 Survey Constraints

During the PEA, no perceived constraints existed. All internal and external surfaces were inspected with an assessment made of the roof structure. Overall, the survey effort was considered sufficient to draw appropriate conclusions form the evidence obtained. It took into account the time of year (optimal period is April – September) and likely availability of evidence, with appropriate emphasis on suitable roosting or nesting conditions, opportunities for potential access through ingress points, free-flight, crawl spaces externally and internally, and features that may have been hidden from full view.

Therefore, the Bat Emergence Survey was able to progress not limited by constraints and the results can be considered to be a viable record of emergence/re-entry.

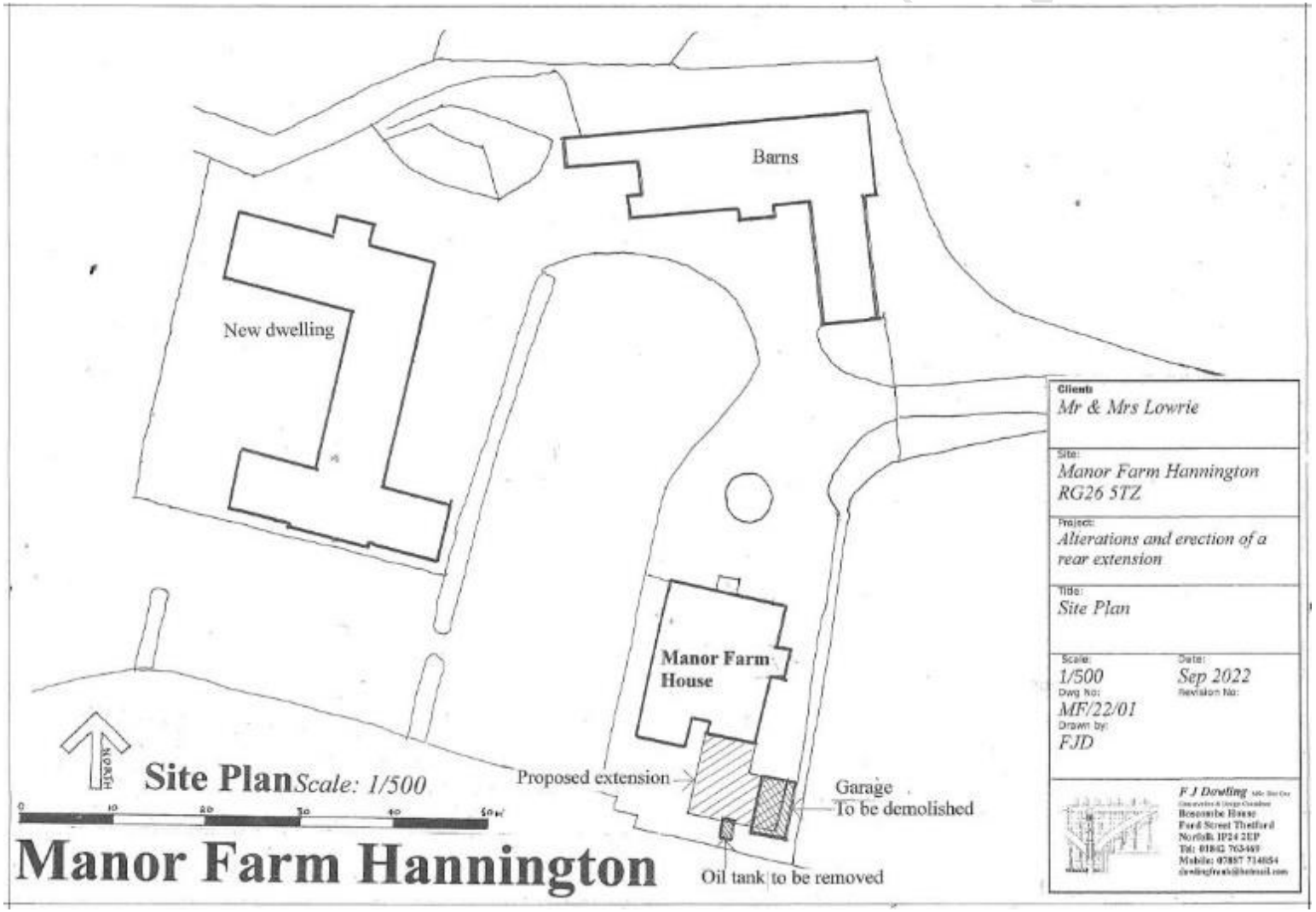
3 Site Details

3.1 Figure 1 - Map of Location

3.2 Illustrated Proposal

It is understood that proposed works include the conversion of the loft void, creation of several new dormers / roof lights, and a single storey rear extension following the demolition of the garage. It is also thought that the existing areas of hanging tiles will be removed.

It is understood that works are not proposed for the barn at this stage.



3.3 Figure 2: Surveyed Area – PEA & Emergence Surveys

4 Survey Results

Table 4.1.0 - 1st Visual Inspection

Date	Structures Surveyed	Equipment Used	Weather	Surveyor
27/11/2020	The house (GR: SU 53827 55428), the barn (SU 53829 55484), the garage (GR: SU 53834 55414) and the stable (SU 53785 55460).	Head & hand-held torches, endoscope, close-range binocular/ monocular, Bat-box Duet, digital camera	1°C, light breeze, misty	T. Woo-Glover BSc (Hons), MSc NE Class 2 bat licence holder
Assessment	The house: **Confirmed bat roosting** The barn: **Confirmed bat roosting** The garage: **Low potential for bat roosting** The stable: **Negligible potential for bat roosting**			

Table 4.1.1 - 2nd Visual Inspection

Date	Structures Surveyed	Equipment Used	Weather	Surveyor
23/06/2021	The house (GR: SU 53827 55428), The barn (SU 53829 55484), The garage (GR: SU 53834 55414)	Head & hand-held torches, endoscope, close-range binocular/ monocular, Bat-box Duet, digital camera	16°C, light breeze	T. Woo-Glover BSc (Hons), MSc NE Class 2 bat licence holder
Assessment	**No material changes were noted against the 1st PEA assessment.**			

Table 4.1.2 - Dusk Survey 1

Date	Start & End Times Time of Sunset	Equipment Used	Weather			Comments (N° Surveyors)
			Start		End	
26/05/2021	Start: - 20:43 Sunset: - 21:03 End: - 22:33	EM3, Peersonic and Batbox Baton Bat Detectors	Temp °C	13	11	7 Surveyors
			Wind (B)	2	2	
			Precip.'	0	0	
			Humidity %	67	77	

Structure ref	Emergence Location	Species & total	Roost Type	Assessed Impact of Unmitigated Work
The house (GR: SU 53827 55428)	A soffit B soffit C soffit D soffit E roof tile F hanging tile G roof tile	5 common pipistrelles 8 common pipistrelles 8 common pipistrelles 2 common pipistrelles 3 common pipistrelles 1 common pipistrelle 2 common pipistrelles	Maternity roost	Destruction of bat roost.
The barn (SU 53829 55484)	H bargeboard I eave J eave K ridge L ridge	7 common pipistrelles 1 common pipistrelle 1 common pipistrelle 3 common pipistrelles 1 common pipistrelle	Maternity roost	Not known

Table 4.1.3 - Dusk Survey 2

Date	Start & End Times Time of Sunset	Equipment Used	Weather			Comments (N° Surveyors)
			Start		End	
09/06/2021	Start: - 21:19 Sunset: - 20:59 End: - 22:49	EM3, Peersonic and Batbox Baton Bat Detectors	Temp °C	18	18	7 Surveyors
			Wind (B)	2	2	
			Precip.'	0	0	
			Humidity %	75	85	

Structure ref	Emergence Location	Species & total	Roost Type	Assessed Impact of Unmitigated Work
The house (GR: SU 53827 55428)	A soffit D soffit F hanging tile M ridge tile	1 common pipistrelle 2 common pipistrelles 1 common pipistrelle 1 common pipistrelle	Maternity roost	Destruction of bat roost.
The barn (SU 53829 55484)	H bargeboard I eave J eave N eave O weatherboarding P door top Q eave	1 common pipistrelle 1 common pipistrelle 6 common pipistrelles 1 common pipistrelle 1 common pipistrelle 1 common pipistrelle 1 common pipistrelle	Maternity roost	Not known
The garage (GR: SU 53834 55414)	No emergence	No emergence	N/A	N/A

Table 4.1.4 – Dusk Survey 3

Date	Start & End Times Time of Sunset	Equipment Used	Weather			Comments (N° Surveyors)
			Start		End	
23/06/2021	Start: - 21:05 Sunset: - 21:25 End: - 22:55	EM3, Peersonic and Batbox Baton Bat Detectors	Temp °C	16	14	7 Surveyors
			Wind (B)	2	1	
			Precip.'	0	0	
			Humidity %	58	70	

Structure ref	Emergence Location	Species & total	Roost Type	Assessed Impact of Unmitigated Work
The house (GR: SU 53827 55428)	A soffit D soffit M ridge tile S hanging tile	1 common pipistrelle 2 common pipistrelles 1 common pipistrelle 3 common pipistrelles	Maternity roost	Destruction of bat roost.
The barn (SU 53829 55484)	J eave N eave P door top R weatherboarding	2 common pipistrelles 1 common pipistrelle 1 common pipistrelle 1 common pipistrelle	Maternity roost	Not known

Table 4.1.5 – Dusk Survey 4

Date	Start & End Times Time of Sunset	Equipment Used	Weather			Comments (N° Surveyors)
			Start		End	
31/08/2022	Start: - 19:23 Sunset: - 19:53 End: - 21:23	Peersonic and Batbox Baton Bat Detectors	Temp °C	20	17	4 Surveyors
			Wind (B)	2	1	
			Precip.'	0	0	
			Humidity %	50	60	

Structure ref	Emergence Location	Species & total	Roost Type	Assessed Impact of Unmitigated Work
The house (GR: SU 53827 55428)	E roof tile F hanging tile T roof tile	1 common pipistrelle 1 common pipistrelle 3 common pipistrelles	Maternity roost	Destruction of bat roost.

Table 4.1.5 - Bats Passing and in Association with the Site.

Dusk Survey 1

Species	Scientific names	Counted Passes
Common pipistrelle	*Pipistrellus pipistrellus*	182
Barbastelle bat	*Barbastella barbastellus*	9
Myotis bat species	*Myotis sp.*	6
Soprano pipistrelle	*Pipistrellus pygmaeus*	1
Serotine	*Eptesicus serotinus*	1

Dusk Survey 2

Species	Scientific names	Counted Passes
Common pipistrelle	*Pipistrellus pipistrellus*	129
Myotis bat species	*Myotis sp.*	8
Serotine	*Eptesicus serotinus*	2

Dusk Survey 3

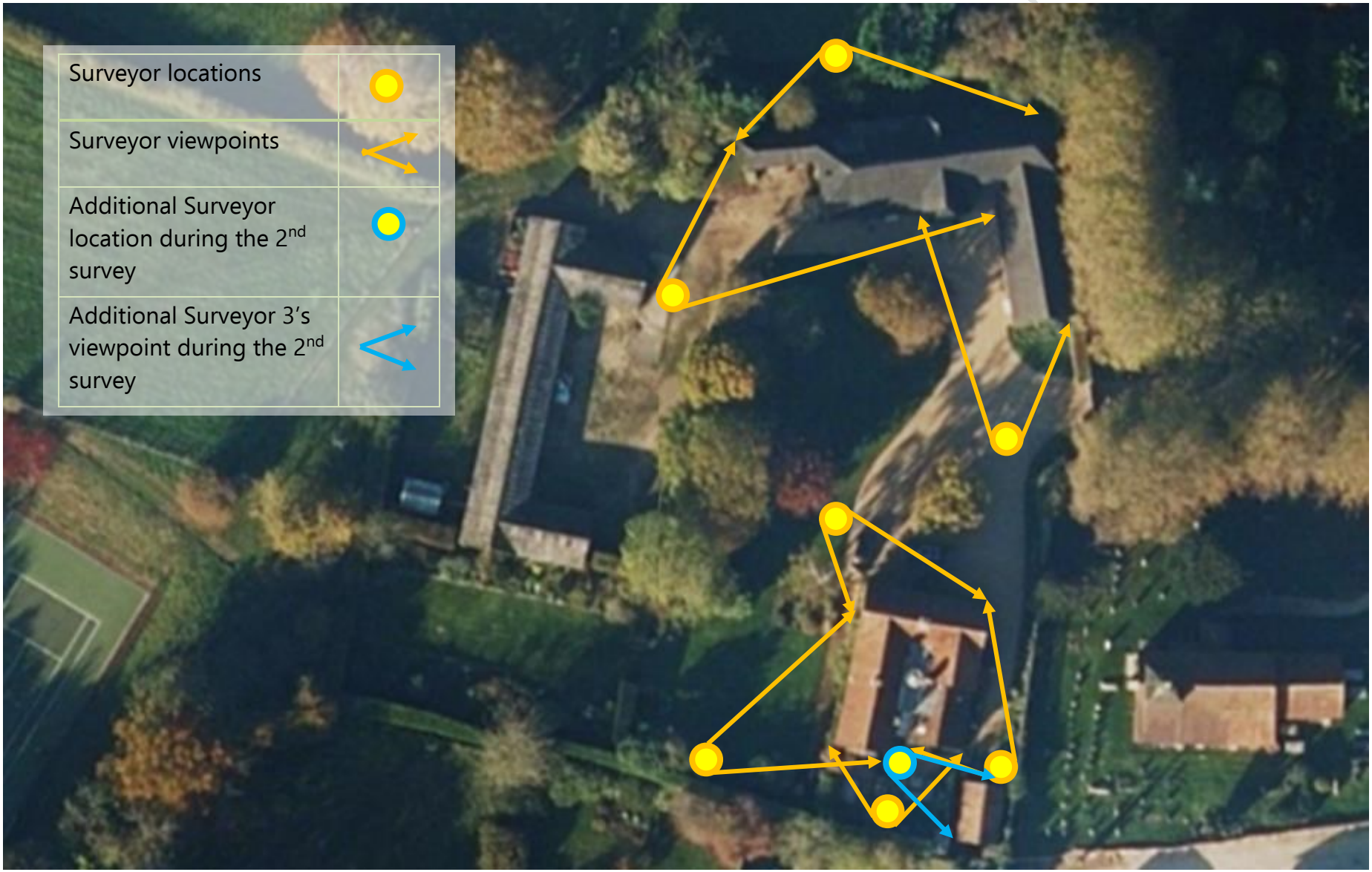
Species	Scientific names	Counted Passes
Common pipistrelle	*Pipistrellus pipistrellus*	334
Myotis bat species	*Myotis sp.*	20
Serotine	*Eptesicus serotinus*	11
Barbastelle bat	*Barbastella barbastellus*	1

Dusk Survey 4

Species	Scientific names	Counted Passes
Common pipistrelle	*Pipistrellus pipistrellus*	114
Myotis bat species	*Myotis sp.*	6

4.1 Figure 3a Illustration of Survey Results

This figure indicates an approximate location of bat droppings, ingress features, surveyor location and viewpoint.



Surveyors Viewpoints

			
Surveyor 1's Viewpoint	Surveyor 2's Viewpoint	Surveyor 3's Viewpoint	Surveyor 4's Viewpoint
			
Surveyor 5's Viewpoint	Surveyor 6's Viewpoint	Surveyor 7's Viewpoint	Additional Surveyor's Viewpoint during the 2nd survey

4.2 Figure 3b: Illustration of Survey Results and Perceived Impacts

This Figure indicates the Emergence Points.

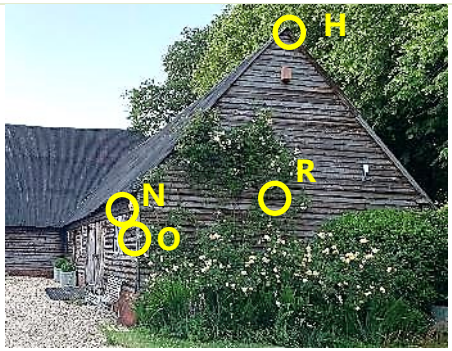
Bat Emergence Points

Bat Emergence points A, B, C, D, M

Bat Emergence points B, C, D

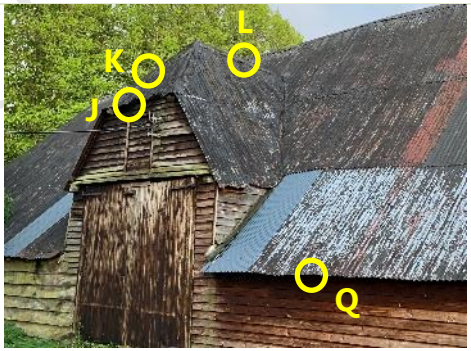
Bat Emergence point E

Bat Emergence points F, G, A

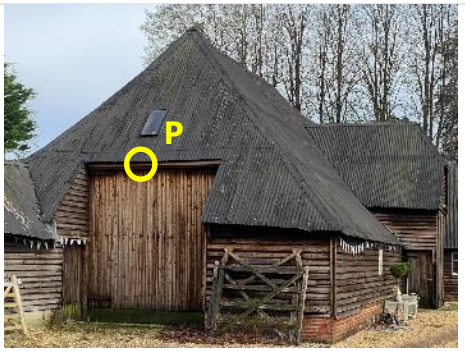


Bat Emergence points H, N, O

Bat Emergence points I, N, O



Bat Emergence points J, J, L, Q



Bat Emergence point P

4.3 Assessment of Roost and Habitat Characterisation

The cumulative assessment of the site through each survey taken has led to the professional consideration that confirmed roosts exist within the house and the barn. The type of roosts present can be characterised as pre-maternity, maternity, and day roosts.

The barn is considered to support a relatively small common pipistrelle maternity roost. This is due to the presence of a peak count of 13 bats which remained similar on survey 2, albeit reducing in number on survey 3. The barn is relatively open internally, and consequently it is possible that despite emerging from differing access points, these bats are part of the same roost.

The structure is also considered to be a maternity roost due to a peak count of 29 common pipistrelles emerging on the first survey in 2021.

Only 4 bats were recorded emerging during the 2022 survey, although this was carried out in late August, with the roost potentially having already broken up. Consequently, this roost is remains assessed as a maternity roost.

Any work that might/will potentially cause disturbance, harm or death to bat species through noise, vibration, illumination, exposure and which causes a modification or destruction of a roost – including preventing access to features that provide access to a roost or to be the roost itself, is prohibited without an EPSL. This could include, but not limited to, works such as re-roofing for repairs, works to loft voids, replacing soffits, loft conversion, and converting the barn internally. Should any works be proposed to the house or barn, consultation with a licenced ecologist must take place to avoid accidentally committing a wildlife crime.

The Emergence Survey results indicate that bats are associated with this site and nearby habitat as bats passed across the site on all surveys. The rare Barbastelle bat was also recorded passing through the site in small numbers.

The presence of foraging/commuting bats indicates that weather conditions were suitable for bats to emerge. 'Passes' should not be confused with the number of individual bats onsite. Although it is possible to determine individual species present, it is not possible to determine if it is one or few or many individuals passing and returning.

5 Mitigation Requirements

Following the granting of Planning Permission, a European Protected Species Licence (EPSL) must be applied for from Natural England to allow any legal disturbance, damage or destruction of onsite bat roosts and associated features/habitats. In order to apply for the licence, full planning (if required) will need to be successfully obtained along with listed building consents (if required) from the respective authorities. Once applied for, Natural England may take up to 30 working days to *approve* and grant such a licence.

In respect of the Habitat Regulations, the following three regulations must also be taken into account in respect of bats:

- The proposed works or development may be for the purposes of "preserving public health or public safety or other imperative reasons of overriding public interest including those of a social or economic nature and beneficial consequences of primary importance for the environment." [R.44(2) (e)];
- "There is no satisfactory alternative" [R.44(3)(a)]; and,
- "The action will not be detrimental to the maintenance of the population of the species concerned at a favourable conservation status in their natural range." [R.44(3)(b)].

5.1 Mitigation Specification

Works Schedule – without exception, the following applies: -

- **Proposed site works which will impact (disturb/damage/destroy) any features associated with this bat roost may only proceed on receipt of the EPSL licence;**
- **Must proceed & end strictly between the dates given on the EPSL licence;**
- **Cannot proceed without the acting ecologist supervising the disturbance, damage or destruction of the roost and associated features;**
- **Any extension to timings for works must be applied for in advance to Natural England via the acting ecologist.**

5.2 Timing of Works:

Construction work which directly or indirectly affects this roost may only be undertaken outside of the maternity period.

Works must therefore commence from September to be completed by 1st May OR commencing from March to be completed by 1st May.

- Work MUST be complete before 1st May to allow bats to re-occupy the roost without any further risk of disturbance, harm or death from construction works.
- NO work should commence if it CANNOT be completed by 1st May as this will be in breach of the EPSL and then –

  Only under an approved European Protected Species Licence, which legally allows this to occur;

  Only between the dates given on the European Protected Species Licence;

  Only under supervision by the licensed ecologist, or their appointed agent (also licenced).

5.3 Mitigation: - Pre-Construction Phase

Ecological Supervision

The licensed ecologist, or their appointed agent (also licenced). must supervise all works deemed likely to disturb, damage or destroy bat roosts and their associated roosting features on this site in order to comply with the law and the terms of the European Protected Species Licence. The licensed ecologist, or their appointed agent (also licenced), must be present to protect and safeguard any bats which may be present on site. Please note, the works will be scheduled for when the least harm by impact is expected.

Booking the Acting Ecologist to Supervise Works

The licensed ecologist, or their appointed agent (also licenced), must be commissioned by the client/acting agent to be on site at a date as determined by the EPSL and where timings are sensitive to bat habitation.

As the work associated with the disturbance, damage or destruction of onsite roosts and associated features cannot proceed without a licensed ecologist, or their appointed agent (also licenced), being present, it is strongly advised that sufficient communication/liaison is actioned between the client, the construction team and the licensed ecologist, or their appointed agent (also licenced).

It might not be possible for the licensed ecologist, or their appointed agent (also licenced), to attend on any given date, so some flexibility may be required.

Tool-box Talk

An internal & external inspection of the roost will be completed by the acting ecologist prior to any work associated with roosting features commences.

The acting ecologist will advise those associated with the works (roofing and associated features) which could or will disturb, damage or destroy the roost/s, of their legal responsibilities and how to proceed for the safety and protection of any bats potentially onsite.

The construction team are obliged to be aware of how they must either protect roosts and access to roosts that are being retained; modify roosts to enable bat habitation post construction; re-instate roosting features; or create new roosting features.

The acting ecologist will be on hand for the safe capture and release into secure protected bat provision for any bats uncovered onsite during works.

- These boxes must be purchased by the client under advice of the acting ecologist as given in this report. (below).
- These boxes must be ordered in advance of any works and be available on the day of the start of the works as according to the EPS licence. Work cannot proceed on the disturbance, damage or destruction of the roost/s unless these boxes are installed and considered fit for purpose.

Safe Capture Bat Provision

Bat box provision is required for the safe capture and relocation of any bats uncovered during pre-construction work by the ecologist.

- Provision will be erected in a location suited to protection and safety of any occupying bats by the developer under guidance from the ecologist prior to the soft demolition – roof strip: more than 3m high, away from predation, on a S or W orientation on site, away from any artificial light spill, in proximity to suitable commuting habitat.
- Artificial light spill is restricted/prohibited in the vicinity of these boxes and their flight lines.
- These boxes will be retained throughout construction process.
- Boxes occupied by bats (where bats are relocated to them) must be retained indefinitely.

5.4 Construction Phase: - Retention/Modification or Creation of Bat Roosts

Quantitative Characteristic: - When modifying a roost or access into a roost or creating a new roost after destruction of a roost, the quantitative characteristic must remain the same: - there should be no net loss of roost sites. There is an expectation that mitigation/compensation will provide an enhanced resource compared to that lost.

The Qualitative Characteristic should remain the same: - the plans should aim to replace like with like. The modified or newly created roost must provide the same function as before: be suited to the same species & average number of bat and roost type e.g. maternity, hibernation, day/night and be of similar capacity/fit for purpose to accommodate quantity of bats.

The Functional Characteristic should remain the same or be further enhanced so that the roost can continue to function as before, e.g. be accessed from the same or similar location. This may include ensuring the habitat around the roost is maintained e.g. hedge-line protected, no or restricted lighting on access or flight lines.

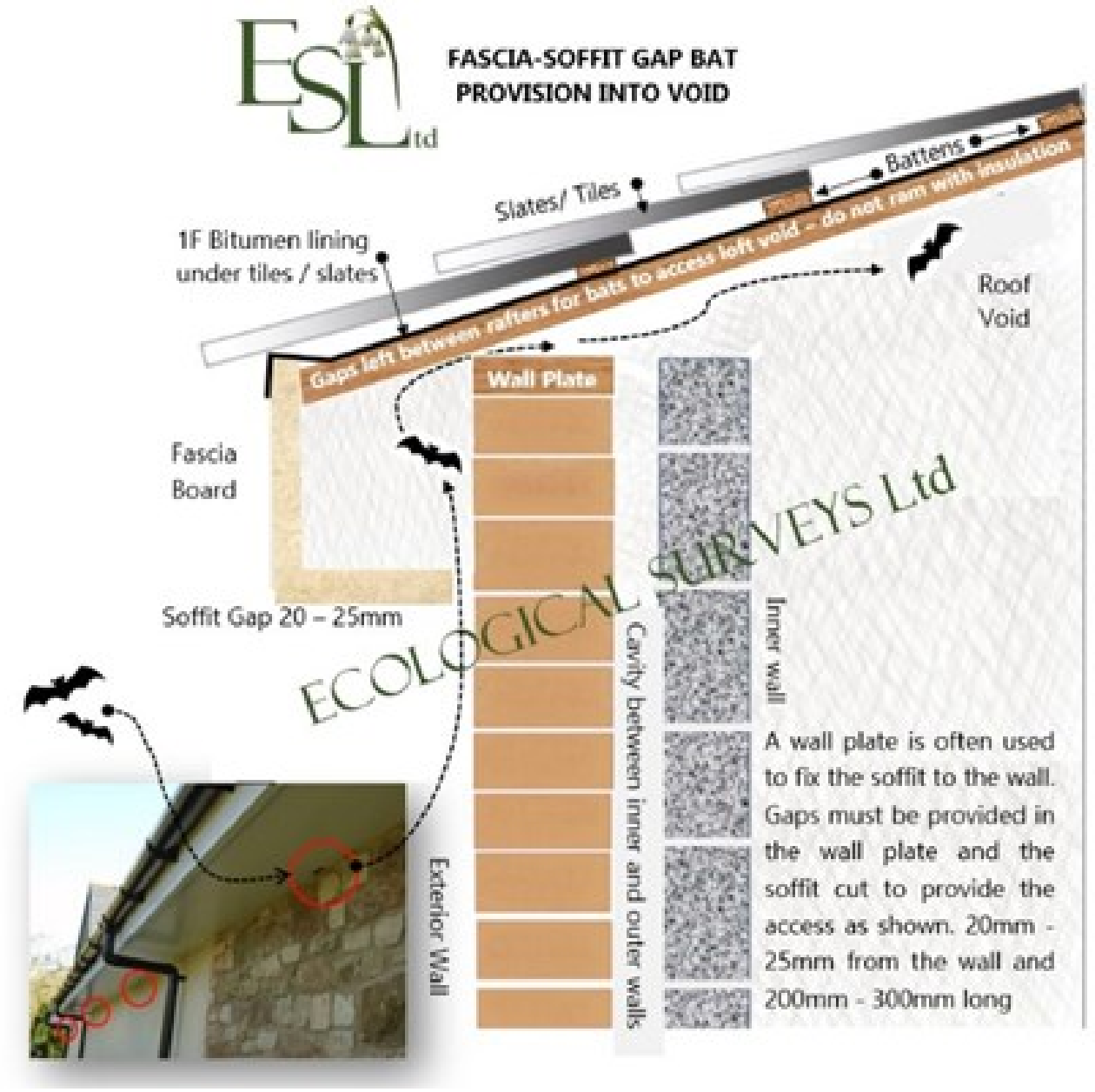
The maternity roost within the house will be lost as a result of the loft conversion and re-roofing. Consequently: -

- A section of loft must be retained to be used as a 'bat loft'. This will be for the exclusive use of bats.
- Access points A, B, C, D, F, and S, under bargeboards / hanging tiles will not necessarily be blocked, although their value will be significantly degraded from construction disturbance and works proposed. These will therefore need to be replaced, though the existing access points must be retained as these are still likely to be suitable, albeit for a smaller number of bats.
- Access points E, G, M, and T will be lost and will require replacement.
- In total, 10 new access points are required, specifically, 3 gaps under eaves, 4 bat access tiles, and 3 ridge tile gaps. These must be located on the north, east, and west aspects, as these were the most used aspects by bats. Refer to the Summary Mitigation & Enhancement Specification for approximate locations.

- Restrictions apply to the type of roof lining used. A certificate that proves the roofing membrane has passed a 'snagging propensity test' is required if a non-bitumen coated roofing membrane is to be used. A certificate is not needed for bitumen 1F felt that has a non-woven, short fibre construction.
    - A snagging propensity test checks that the membrane can stand the repeated snagging actions of roosting bats. To pass, a membrane must show no change in the average number of loops per cm2 as rotations are increased from 0 to 1000.
- An Artificial Lighting Strategy applies. This includes the use of blackout blinds on the proposed dormer windows.

Gaps Under Eaves

3x Gaps are required to be created under eaves to provide access into the bat loft.

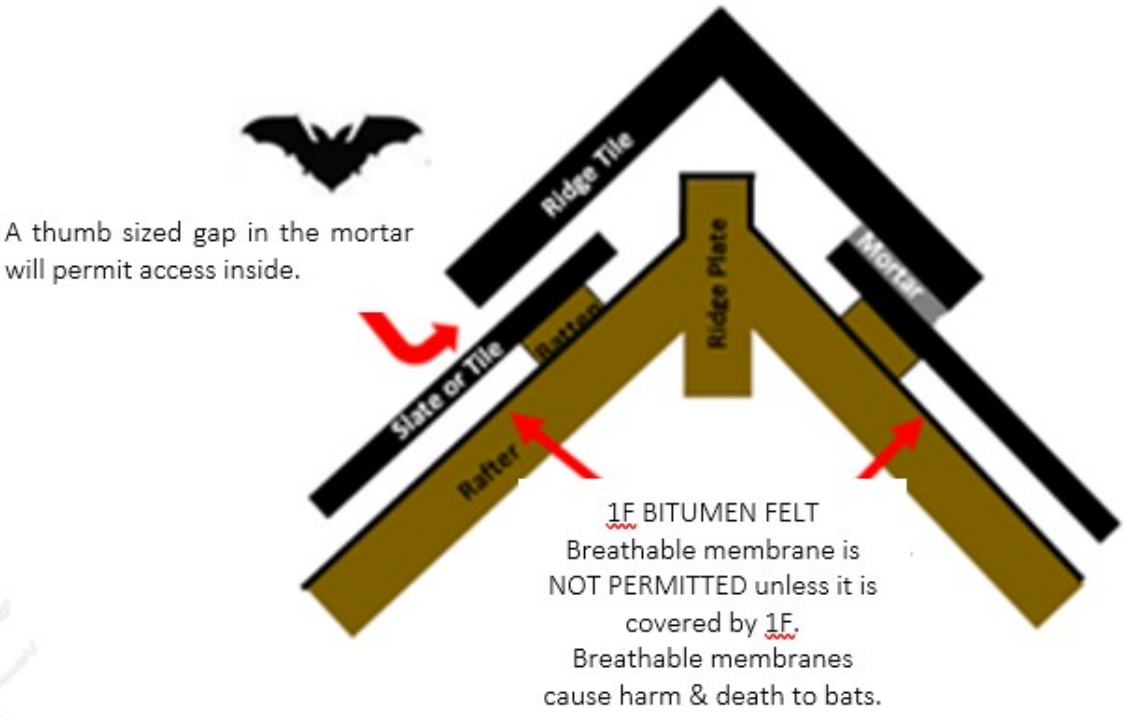


Bat Access Tiles

4x bat access tiles are required to be installed within the roof.

Ridge Tile Gaps

As mitigation, 3x Ridge tiles are to be set with a thumb sized gap in mortar allowing access into ridge cavity. Dry ridges are prohibited in this mitigation – traditional wet ridge must be used. Further ridge tile gaps are required as enhancement.



Artificial Lighting Strategy

Because different species vary in their response to light disturbance, advice is tailored to the specific conditions of the project. Examples of where the no-lighting approach should be taken in particular include:

- Roosting and swarming sites for all species and their associated flightpath/commuting habitat.
- Foraging or commuting habitat for highly light-averse species (greater and lesser horseshoe bats, some Myotis bats, barbastelle bats and all long-eared bats).
- Foraging or commuting habitat used by large numbers of bats as assessed through survey.
- Foraging or commuting habitat for particularly rare species (grey longeared bat, barbastelle, small Myotis, Bechstein's bat and horseshoe bats).
- Any habitat otherwise assessed by your ecologist as being of importance to maintaining the 'favourable conservation status' of the bat population using it.

Therefore: -

- Avoid artificial lights shining on known or potential bat roosts, their access points and their flight paths across specific habitats.
- Light ONLY when and where it is needed for health and safety.
- The skylights and dormer windows to be installed in the roof must be of light reducing glass or have timed blackout blinds installed. This will minimise impacts on retained roosting features.
- Prevent light-spill and spread by eliminating bare bulbs, upward pointing lights, keeping light near to or below the horizontal. E.g., flat cut-off lanterns. Such light should be positioned to only illuminate the required areas, limiting light spill, both horizontally and vertically. Additionally, hoods, cowls, louvers and/or shields may be utilised to further direct any lighting.
- Decrease light intensity, avoid the UV spectrum: attracting insects is NOT an aim.
- Timer switch on any proposed outdoor lighting to facilitate dark periods.

Impact Avoidance During the Construction Phase

All activities on site should bear in mind the potential for other wildlife or the environment being harmed through the process of development from inception to end, with a proactive approach occurring for lawful protection of wildlife and the environment regarding use of materials, machines, chemicals, and human activity on site. Therefore: -

- Contractors must ensure that no harm can come to wildlife by maintaining the site efficiently, clearing away any material such as wire in which animals can become entangled and preventing access to toxic substances.

- Trenches or large excavations should be covered overnight to prevent wildlife such as badgers or hedgehogs falling in and failing to escape. If this is not possible then a strategically placed plank may provide a means of escape.
- Any large bore pipes should be capped at the end of the day to reduce the potential for badgers and other wildlife entering and becoming trapped.
- Areas that are being retained should be protected from damage during construction by erecting Heras (or similar) fencing around these features. The fencing should be erected outside the line of the canopy as this helps protect the roots from compaction of the soil.
- Any areas proposed for planting post-development should be fenced off where possible to prevent compaction of the soil through vehicle movements.
- If there is a substantial delay before development commences, the site should be maintained in a way that would prevent wildlife colonising it and causing constraints in the future. Such management should include mowing grassland at least twice a year and preventing scrub encroachment.
- Piles of brush wood and or log piles should be carefully inspected for signs of wildlife prior to their removal. This is especially crucial during the period March – September (inclusive) as some species of bird choose such sites to construct their nests. Ideally removal of such features should be done outside of the nesting season. If this is not possible, it is recommended that these features are covered in such a way as to exclude / prevent birds and / or reptiles taking up residence. Should nesting birds or reptiles be discovered, work must cease immediately, and ecological advice sought.
- All hedgerows / trees / shrubs removal should be done outside of the bird nesting season March – September (inclusive). If removal is not possible during this period, careful checks of such, must be conducted by a suitably experienced ecologist prior to works commencing.

5.5 Post Construction Phase: -

On completion of works, the client /agent must inform the acting ecologist that works have been completed in line with the Mitigation & Enhancement Specification.

- It is the responsibility of the client/agent to initiate this contact.
- A short report by the ecologist will verify to the LPA/NE that the terms and conditions of the EPSL has been complied with.

5.6 Future Monitoring

Maternity roosts require monitoring under the terms of an EPSL to record the viability of the roost over several years. It is the client's responsibility to ensure the monitoring is booked in with a licenced bat ecologist and that the licence is abided by.

6 Enhancement Feature

This site will be enhanced for bats. The National Planning Policy Framework (NPPF) sets out the UK Government's national policies on enhancement of biodiversity and promotion of ecosystem services through the planning system.

Under NPPF, the Local Planning Authorities (LPA) has an obligation to promote the preservation, restoration and recreation of priority habitats, ecological and the protection and recovery of priority species as identified under the Natural Environment and Rural Communities Act (2006). LPAs will therefore seek to produce a net gain in biodiversity by requiring developers to design wildlife into their plans and to ensure that any unavoidable impacts are appropriately mitigated for. As a minimum LPAs now expect any new structure to include bat roost or bird nesting provision.

6.1 Bat Provision.

Additional features are required to enhance the structure for bats. Specifically: -

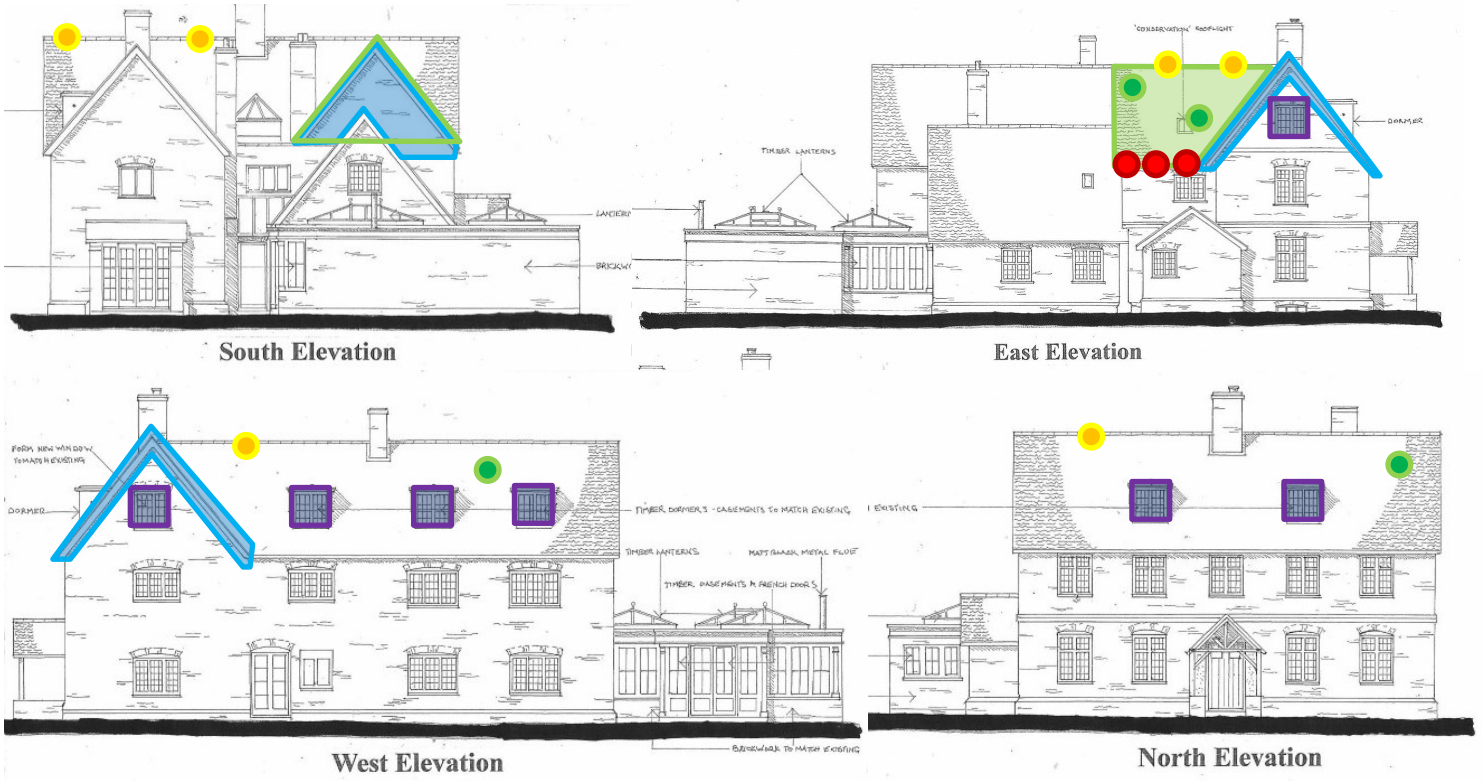
- 3x additional ridge tile gaps are required.

7 Summary Mitigation & Enhancement Specification

A fully detailed Mitigation & Enhancement Specification will be necessary for the purpose of applying for a European Protected Species Licence – the below offers a summary outline of the requirements.

Retained Roosting Features	
Bat Access Tiles	
Ridge Tile Gaps	
Gaps under Eaves	
Blackout blinds	
Bat Loft	

Unmappable Features
EPSL Application
Specified Timings of works
Soft demolition supervision
Toolbox talk



8 Conclusions

The survey results conclusively indicate that bats are roosting within the identified structure.

Bats and their roosts are afforded legal protection: making it illegal to destroy a bat roost, or to disturb bats within a roost without a licence.

Unmitigated works to features associated with bats will destroy roosts on this site causing disturbance harm and death to these species. An application for a European Protected Species Licence is therefore required, with the licence approved by Natural England prior to any works commencing.

An appropriate mitigation strategy will detail the method for the protection of these bats whilst legally enabling the disturbance/modification or destruction of these identified roosts.

Mitigation and/or compensatory measures have been given within this report, including: - a tool-box talk by the ecologist; initial soft demolition of the roof structure under supervision by the licensed ecologist, or their appointed agent (also licenced) and the incorporation of suitable replacement roosting provisions within the extension.

The client must apply for and obtain planning approval from the LPA before the licenced ecologist can submit a licence application to Natural England. Once the Licence is approved and providing the mitigation and enhancement measures contained within this report are agreed and adhered to, it is considered that the proposed development will have not necessarily have a negative impact on local bat populations within this area.

Enhancement for birds is required to obtain a biodiversity gain for this site. Enhancement is detailed in The Mitigation & Enhancement Specification and within this report.

Under no circumstances can works proceed until Natural England have granted a derogation licence.
Failure to adhere to this exposes the risk of a criminal prosecution. This might involve a fine or imprisonment or both.

9 Appendices

9.1 Appendix 1: Legislation Bat and Bird Species

Bat: - All bat species and their roosts are legally protected in the UK. All bats are listed as European protected species of animals in the European Union's Council Directive 92/43/EEC of 21 May 1992 on the Conservation of Natural Habitats and of Wild Fauna and Flora, better known as the Habitats Directive. This Directive is implemented in the UK by The Conservation of Habitats and Species Regulations 2010 (better known as the Habitats Regulations).
There is also some protection for bats and roosts in England and Wales under the Wildlife & Countryside Act 1981 (as amended by the Countryside and Rights of Way Act 2000). For practical purposes, the protection of bats and their roosts now falls mostly under the Habitats Regulations.

In summary, it is an offence to

- Deliberately, capture, injure or kill a bat
- Deliberately, disturb in a way that would significantly affect their local distribution or abundance, or affect their ability to survive, breed or rear young
- Damage or destroy a roost (this is an 'absolute' offence)
- Possess, control, transport, sell, exchange or offer for sale/exchange any live or dead bat or any part of a bat

('Deliberately' may be interpreted as someone who, although not intending to injure, kill, etc. performed the relevant action, being sufficiently informed and aware of the consequences their action will probably have.)

A person who needs to carry out actions that would result in an offence being committed should apply for a derogation licence from Natural England. They have powers to grant Habitats Regulations derogation licences in certain circumstances, for certain reasons and with certain terms attached, so that the licence holder remains within the law. Application for a derogation licence should be made in plenty of time, and the services of a bat expert utilised in making the application. It is an offence to make a false statement to obtain such a licence.

This information is not provided as legal advice and before making decisions relating to the law a qualified legal representative should be consulted.

Legal Status, Birds

Bird: - All wild birds, their nests and young are protected throughout England and Wales by the Wildlife & Countryside Act 1981 (as amended). It is illegal to kill, injure or take any wild bird, or damage or destroy the nest or eggs of breeding birds. The legislation applies to all bird species, common and rare. In addition to the protection afforded to all wild birds, rarer or particularly vulnerable species listed on Schedule 1 of the 1981 Act, such as the barn owl, receive enhanced protection when breeding. Schedule 1 species, including their dependent young, are protected from intentional or reckless disturbance whilst at or near the nest, in addition to the protection afforded the more common species.

If nests, whether completed or in the process of being built, are found on site, any works with the potential to damage or destroy the nest, eggs or young birds, must stop until the birds have completed breeding. This includes any activity that could potentially cause an adult bird to desert the nest resulting in death or egg failure. Nesting sites should be inspected only by experienced ecologists.

Any disturbance of a breeding Schedule 1 bird is an offence, regardless of whether this impacts upon the breeding attempt. These nests can only be visited by an ecologist with a licence for the specific species concerned.
Birds may nest on machinery or scaffolding and other temporary site structures. If this happens the equipment cannot be used until the birds have finished nesting and such areas may need to be sealed off to prevent disturbance.

Breaking the law can lead to fines of up to £5000 per offence and potential prison sentences of up to six months. Vehicles implicated in an offence can be compounded and both the company, and/or the individual(s) concerned, can be held liable.

9.2 Appendix 2: Bat Survey Triggers.

A Bat Survey is ordinarily triggered when there is to be:

Conversion, modification, demolition or removal of buildings (including hotels, schools, hospitals, churches, commercial and derelict buildings) which are:

- Agricultural buildings (e.g. farmhouses, barns and outbuildings) of traditional brick or stone construction and/or with exposed wooden beams
- Buildings with weather boarding and/or hanging tiles that are within 200m of woodland and/or water
- Pre-1960 detached buildings and structures within 200m of woodland and/or water
- Pre-1914 buildings within 400m of woodland and/or water
- Pre-1914 buildings with gable ends or slate roofs, regardless of location
- Located within, or immediately adjacent to woodland and/or immediately adjacent to water
- Dutch barns or livestock buildings with a single skin roof and board-and-gap or Yorkshire boarding if, following a preliminary roost assessment, the site appears to be particularly suited to bats.
- At the behest of the LPA / County Ecologist.
- Further details of other triggers can be found below.

Development and Planning Trigger for Bat Surveys

Development and planning trigger list for bat surveys, which can be adapted to local circumstances (taken from the Association for Local Government Ecologists (ALGE) template for biodiversity and geological conservation validation checklists 2007, available from http://alge.org.uk/publication/index.php

Conversion, modification, demolition or removal of buildings (including hotels, schools, hospitals, churches, commercial premises and derelict buildings) which are:

- Agricultural buildings (e.g. farmhouses, barns and outbuildings) of traditional brick or stone construction and/or with exposed wooden beams;
- Buildings with weather boarding and/or hanging tiles that are within 200m of woodland and/or water;
- Pre-1960 detached buildings and structures within 200m of woodland and/or water;
- Pre-1914 buildings within 400m of woodland and/or water;
- Pre-1914 buildings with gable ends or slate roofs, regardless of location;
- Located within, or immediately adjacent to woodland and/or immediately adjacent to water;
- Dutch barns or livestock buildings with a single skin roof and board-and-gap or Yorkshire boarding if, following a preliminary roost assessment, the site appears to be particularly suited to bats.

Development affecting built structures:

- Tunnels, mines, kilns, ice-houses, adits, military fortifications, air-raid shelters, cellars and similar underground ducts and structures; unused industrial chimneys that are unlined and brick/stone construction;
- Bridge structures, aqueducts and viaduct (especially over water and wet ground).

Floodlighting of:

- Churches and list buildings, green space (e.g. sports pitches) within 50m of woodland, water, field hedgerows or lines of trees with connectivity to woodland or water;
- Any building meeting the criteria listed in (1) above.

Felling, removal or lopping of:

- Woodland;
- Field hedgerows and/or lines of trees with connectivity to woodland or water bodies;
- Old and veteran trees that are more than 100 years old;
- Mature trees with obvious holes, cracks or cavities, or that are covered with mature ivy (including large dead trees).

Proposals affecting water bodies:

- **In or within 200m of rivers, streams, canals, lakes, reed beds or other aquatic habitats.**

Proposal located in or immediately adjacent to:

- Quarries or gravel pit;
- Natural cliff faces and rock outcrops with crevices or caves and swallets.

Proposals for wind farm developments:

- Of multiple wind turbines and single wind turbines (depending on the size and location) (NE TIN 051 – undergoing updates at the time of writing)

All proposals in sites where bats are known to be present[1]

- This may include proposed development affecting any type of buildings, structures, features or location.

Notes:

1. Where sites are of international importance to bats, they may be designated as SACs. Developers of large sites 5-10km away from such SACs may be required to undertake a HRA.

9.3 Appendix 3: Assessing the Potential Value for Buildings

Classification Criteria

It should be noted that the grading system below only reports on the situation at the time of survey; should bat activity levels change after the initial survey, or should the buildings be modified (for example if roof tiles are removed or facia boards develop cracks), the category may need revision.

Category (Potential	Description
Please note: Intermediate categories (e.g. Low – Moderate value) may apply.	
None / Negligible value	Buildings with no or very few features capable of supporting roosting bats. Often buildings are of 'sound' well- sealed structure or have a single skin and no roof void. They tend to have high interior light-levels, and little or no insulation. Buildings without any roofs may also fall into this category.
Low value	Buildings of largely unsuitable construction, but with few features of potential value to bats (e.g. gaps above windows, apparently shallow crevices). No supporting evidence (e.g. droppings / staining) found. Buildings may be surrounded by poor or sub-optimal bat foraging habitat, as is often the case in urban-centre locations.
Moderate value	Buildings usually of brick or stone construction with a number of features of obvious potential value to roosting bats e.g. loose roof / ridge tiles, gaps in brickwork, gaps under fascia boards, and/or warm sealed roof-spaces with under-felt.
High value	Buildings with a large number of features of obvious potential value to bats (as above). Bats may be suspected to roost within the building (at least at certain times of year), but no supporting evidence found.
Confirmed roost	Bats discovered roosting within the building or recorded emerging from / entering the building at dusk and / or dawn. Building found to contain conclusive evidence of occupation by bats, such as bat droppings. A confirmed record (as supplied by an established source such as the local bat group) would also apply to this category.

9.4 Appendix 4: Bat Species

1	Alcathoe	*Myotis alcathoe*
2	Barbastelle	*Barbastella barbastellus*
3	Bechstein's bat	*Myotis bechsteinii*
4	Brandt's bat	*Myotis brandtii*
5	Brown long-eared bat	*Plecotus auritus*
6	Common pipistrelle	*Pipistrellus pipistrellus*
7	Daubenton's bat	*Myotis daubentonii*
8	Greater horseshoe bat	*Rhinolophus ferrumequinum*
9	Greater Mouse eared bat	*Myotis myotis*
10	Grey long-eared bat	*Plecotus austriacus*
11	Leisler's bat	*Nyctalus leisleri*
12	Lesser horseshoe bat	*Rhinolophus hipposideros*
13	Nathusius' pipistrelle	*Pipistrellus nathusii*
14	Natterer's bat	*Myotis nattereri*
15	Noctule	*Nyctalus noctula*
16	Serotine	*Eptesicus serotinus*
17	Soprano pipistrelle	*Pipistrellus pygmaeus*
18	Whiskered bat	*Myotis mystacinus*

9.5 Appendix 5: Roost Type Description

Type of roost	Description
Day roost	A place where individual bats, or small group of males, rest or shelter in the day but are rarely found by night in the summer.
Night roost	A place where bats rest or shelter in the night but are rarely found in the day. May be used by a single individual on occasion or it could be used regularly by the whole colony.
Feeding roost	A place where individual bats or a few individuals rest or feed during the night but are rarely present by day.
Transitional / occasional roost	Used by a few individuals or occasionally small groups for generally short periods of time on waking from hibernation or in the period prior to hibernation.
Swarming site	Where large numbers of males and females gather during late summer to autumn. Appear to be important mating sites.
Mating sites	Sites where mating takes place from late summer and can continue through winter.
Maternity roost	Where female bats give birth and raise their young to independence.
Hibernation roost	Where bats may be found individually or together during winter. They have a constant cool temperature and high humidity.
Satellite roost	An alternative roost found in close proximity to the main nursery colony used by a few individual breeding females to small groups of breeding females throughout the breeding season.

9.6 Appendix 6: Bat Roost Warning Sign

Please print off the below and attached it to any loft hatches or other human access points into a known bat roost.

KNOWN BAT ROOST

DO NOT ENTER!

Do not illuminate!

All bats & their roosts are protected by law.

Only licence holders or those accompanying a licence holder are permitted.

If any work is due to take place within or access is necessary including but not limited to plumbing, electrical, roof repairs, drilling – or other

Contact
Bat Conservation Trust
0345 130 0228
enquiries@bats.org.uk
Or
Ecological Survey Ltd
01503 240846
07736 458 609

Display this notice prominently at the roost site!

10 References and Further Information

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