



envirotech

**Ecological Consultants
Environmental and Rural Chartered Surveyors**

BAT SURVEY AT

Hakodadi, Arlecdon, CA26 3UW



RICS

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Accuracy of report

This report has been compiled based on the methodology as detailed and the professional experience of the surveyor. Whilst the report reflects the situation found as accurately as possible, bats are wild and can move freely from site to site. Their presence or absence detailed in this report does not entirely preclude the possibility of a different past, current or future use of the site surveyed.

We would ask all clients acting upon the contents of this report to show due diligence when undertaking work on their site and or in their interaction with bat species. If bats are found during a work programme and continuing the work programme could result in their disturbance, injury or death either directly or indirectly an offence may be committed.

These species may only be disturbed, injured or killed under licence.

If in doubt, stop work and seek further professional advice.

Quality and Environmental Assurance

This report has been printed on recycled paper as part of our commitment to achieving both the ISO 9001 Quality Assurance and ISO 14001 Environmental Assurance standards. Envirotech has been awarded the gold standard by the Cumbria Business Environmental Network for its Environmental management systems.

Signed

Andrew Gardner BSc (Hons), MSc, MRICS, Dip NDEA
Director

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1. EXECUTIVE SUMMARY

It is understood that of the two attached barns at Hakodadi, Arlecdon, one will be demolished, and the other will be altered and converted to create additional residential accommodation.

A daytime inspection was undertaken on the 22nd January 2025. This involved a close inspection of the buildings for signs of use by bats both internally and externally.

A desk study and data search were also undertaken to ensure the reasonable probable use of the site by bats could be determined.

The habitat around the site offers a low-moderate potential for foraging being mostly open and exposed. There is poor connectivity between the site and higher quality foraging areas.

The buildings have low potential for use by bats.

No indications of use of the site by bats were found during the survey.

On the basis of the survey work carried out, under guidance provided in respect of the Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019 and considering the plans for the site, it is considered that a Protected Species Mitigation Licence (PSML) for bats will not be required prior to works being carried out.

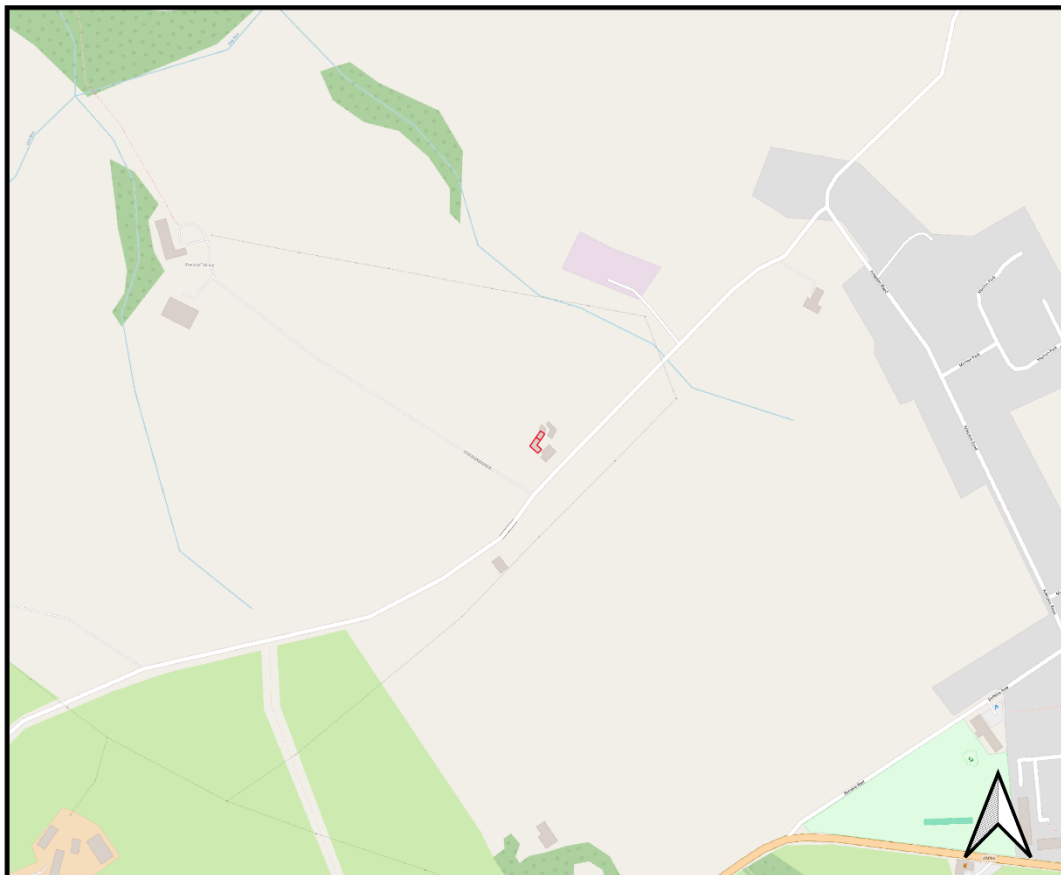
A mitigation strategy has been prepared and should be followed in order to ensure that the welfare of the local bat population is maintained during, and following the works.

2. INTRODUCTION

2.1 Site Description

The site lies in a rural location >300m South-west of Arlecdon. The surveyed buildings are two attached stone barns, one without a roof, and one under a lined concrete tile roof.

There is fragmented woodland in the local area but the site is in an exposed position at NY 04472 19102, Figure 1 and 2.



Site Boundary

Figure 1

Ordnance Survey map of
site location





- Site Boundary
- Building Number

Figure 2
Site Boundary



2.2 Proposed Works

It is proposed that building 1 is demolished, and building 2 is repaired, altered, and converted into additional residential accommodation. There will be significant internal and external alteration to the areas of the buildings affected.

The timing of work is unknown.

2.3 Aims of Study

To ensure that the proposed development does not affect any bat species which are listed under the Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019 and or the Wildlife and Countryside Act 1981 (as amended), Environment Act 2021, and The Environmental Damage (Prevention and Remediation) (England) Regulations 2015: -

- ⇒ Identify past and/or current use of the site by bat species.
- ⇒ Assess the likely impact of the proposed development on these species.
- ⇒ Provide an outline mitigation/compensation scheme (if required) for bat species affected by the development.

3. METHODOLOGY

3.1 Bats

3.1.1 Rationale of Survey

The methods used **comply with those described in** Collins, J (ed) (2023) Bat Surveys for Professional Ecologists Good Practice Guidelines (4th Edition). The following extracts from Collins, J (ed) (2023) are used to determine the appropriate level of survey in accordance with the guidelines.

Key point 1: Guidelines should be interpreted using Expertise and professional expertise.

“The guidelines do not aim to either override or replace knowledge and experience.”
Section 1.1.3

“It is accepted that departures from the guidelines (e.g., either decreasing or increasing the number of surveys carried out or using alternative methods) are often appropriate.”
Section 1.1.4

“However, in this scenario an ecologist should provide documentary evidence of (a) their expertise in making this judgement and (b) the ecological rationale behind the judgement.” Section 1.1.5

“Equally, it would be inappropriate for someone with no knowledge or experience to read these guidelines and expect to be able to design, carry out, interpret the results of and report on professional surveys as a result, simply following the guidelines without the ability to apply any professional judgement.” Section 1.16

“Training and experience are necessary to carry out all of the surveys described in these guidelines and interpret the survey results appropriately” Section 1.1.7

Key point 2: Guidelines are descriptive rather than prescriptive and must be adapted on a case-by-case basis.

“The guidelines should be interpreted and adapted on a case-by-case basis according to site-specific factors and the professional judgement of an experienced bat ecologist. The question should not be whether the guidelines were followed, but were the defined objectives of the surveys met? Where examples are used in the guidelines, they are descriptive rather than prescriptive.” Section 1.1.10

Key point 3: Surveys should be undertaken where it is reasonably likely bats are present and may be affected by the proposal. Where bats are not likely to be present and or will not be affected by the proposal, survey could but need not be undertaken.

“It is reasonable to request surveys where proposed activities are likely to negatively impact bats and their habitats. However, surveys should always be tailored to the predicted, specific impacts of the proposed activities. Excessive, speculative surveys are expensive and cause reputational damage to the ecological profession.” Section 2.1.1

Key point 4: Surveys should be proportionate to predicated impacts.

“When planning surveys, it is important to take a proportionate approach. The type of survey (or suite of surveys) undertaken and the amount of effort expended should be proportionate to the predicted impacts of the proposed activities on bats, but it needs to be recognized that robust surveys are fundamental to understanding what those impacts are.” Section 2.2.17

“Clause 4.1.2 of BS42020 (BSI, 2013) states that ‘professionals should take a proportionate approach to ensure that the provision of information with the (planning) application is appropriate to the environmental risk associated with the development and its location’ Section 2.2.18

3.1.2 Desk Study

“The aim of a desk study for bats is to collate and review existing information about a site and its surroundings to inform the design of subsequent bat surveys (if needed) and inform the impact assessment for the project.” Section 4.2.1

“As a minimum, it is recommended that background data searches should be carried out up to 2km from the proposed development boundary (including temporary works). However, the data search should be related to the scheme’s Zol and consider the CSZs of species likely to be present so may need to extend up to 10km or beyond for larger projects.” Section 4.2.9

Key point 5: A records search was undertaken of the Envirotech dataset. No additional data searches were considered necessary at this site as the bat species likely to be found in the local area could be adequately determined from the records searched.

“The desk study records provide contextual information for the survey design stage as well as the evaluation of the survey results. They should be interpreted to identify:

- *if proposed activities are likely to impact on a SAC or the qualifying feature of a SAC;*
- *if the proposed activities are likely to impact on other designated sites and thus require consultation with relevant bodies;*
- *any species (or genera) confirmed/thought to be present;*
- *any bat roosts that will be impacted (on or off-site);*
- *if it is likely that the CSZs of bats from roosts off-site will be impacted; and*
- *if there are any rare species in the area that may require species-specific survey methodologies.”* Section 4.2.12

Key point 6: Likely bat roosting and feeding sites on and adjacent to the site were identified from aerial photography and the use of Google Street View for ground level analysis. This allows us to identify habitat connectivity and potential foraging areas at a landscape level. We are also able to relate the results of the records search against habitat types and the species of bat which could and or are recorded in the local area. Identification of bat species which may occur locally allows for additional field-based surveys to be correctly targeted.

3.1.3 Field Survey

Key Point 7: To ground truth the desktop data (Key point 5) a field assessment of habitat at and adjacent to the site was made. This allows us to cross check our interpretation of aerial photography with actual habitat on the ground. There is occasionally significant change between landscape detailed on aerial photographs and habitat on the ground. Buildings, hedgerows and roads may be built or removed. For example, occasionally woodland is felled or has been replanted.

“We have termed a Preliminary Ecological Appraisal (PEA) for bats as a Daytime Bat Walkover (DBW) of the proposed development site to observe, assess and record any habitats suitable for bats to roost, commute and forage both on site and in the surrounding area (it is important that connectivity within the landscape is also considered at this stage). The aim is to determine the suitability of a site for bats, to assess whether further bat surveys will be needed and how those surveys should safely be carried out. For smaller sites, a PRA for structures (see Chapter 5) or a GLTA (see Chapter 6) may also be carried out at the same time.” Section 4.3.1

Key point 8: A thorough inspection of the walls and eaves was undertaken using a torch and short focus binoculars to locate potential bat roosts. Gaps and cracks in the walls or under the eaves and soffits may provide access to the buildings by bats. Where possible all gaps and cracks judged to be of a suitable size for bats to take entry to the buildings were inspected either from the ground or the top of a ladder. Where appropriate an endoscope was used to fully inspect these gaps internally.

Key Point 9: A thorough inspection of the roof was undertaken using a torch and short focus binoculars to locate potential bat roosts. Gaps under the roof coverings, ridge lines and flashing may provide suitable roost sites for bats. All gaps and cracks judged to be of a suitable size for bats to take entry to the buildings were inspected either from the ground or the top of a ladder. Using short focus high quality binoculars and a torch to illuminate any gaps underneath the roof coverings it is often possible to see residual evidence of bats such as droppings, scratch, grease and urine staining, lichen build-up from increased nutrient levels, or bats themselves.

Key Point 10: A thorough inspection of the interior and exterior of the buildings to look for signs of bats such as grease or scratch marks, bat droppings and feeding detritus was made. Windows and or other items in and around the site were inspected for urine staining.

Key Point 11: A thorough search for detritus associated with bat feeding perches and roosts was undertaken. These roosts are usually in roof voids, under eaves and open buildings.

Key Point 12: Internal voids and rooms were assessed where it was considered bats may be able to take access. Indications of use such as grease and scratch marks, urine staining, droppings, desiccated young bats, dead bats in water tanks and cobweb free areas under the roof and roof supports were all assessed.

“The time needed for a preliminary roost assessment will vary according to the complexity of the structure and the number of ecologists deployed. Large structures with multiple roof spaces, multiple human access points and/or abundant voids and crevices will clearly take some time to understand and search thoroughly. Also, structures may contain several different bat roosts of different species each with their own access point and used at different times of the year. This all adds time to the survey.” Section 5.2.39

Key Point 13: It is the considered opinion of the surveyor who undertook this survey that the time taken to undertake the survey was sufficient given the complexity of the buildings, methods used, time of year and species of bat which may be present. The times in Collins, J. (ed) (2023) should be considered in light of Key Point 1 (Professional judgement), Key point 2 (interpretation on a case-by-case basis) and Key Point 3 (survey should cover areas where it is reasonably likely bats are present and may be affected by the proposal).

“If the structure has been classified as having low suitability for bats (see Table 4.1), an ecologist should make a professional judgement on how to proceed based on all of the evidence available and the balance of probabilities. Thought processes and decision making should be adequately recorded as a paper trail. If all areas (including voids, cracks and crevices) of a structure have been inspected and no evidence found (and is unlikely to have been removed by weather or cleaning or be hidden), then further surveys are not appropriate. If complete inspection is not possible then proportionality must be considered. A single survey during the summer months may be adequate to ensure nothing obvious has been missed and/or precautionary measures could be applied during works. This is likely to be a more proportionate approach than carrying out multiple surveys.” Section 5.2.44

“Information (photographs and detailed descriptions) should be presented in the survey report to justify this conclusion and the likelihood of bats being present at other times of the year estimated. If there is a reasonable likelihood that bat roosts could be present, and particularly if there are areas that are inaccessible for survey, then further surveys may be needed, but these should be proportionate to the circumstances.” Section 5.2.45

“If no suitable habitat for bats is found, then further surveys are not necessary. In this scenario, it is necessary to document how this decision has been reached; photographs and detailed descriptions should be made available as evidence of a robust survey and assessment.” Section 5.2.46

Key Point 14: The suitability of a sites potential for roosting is categorised by BCT Collins, J (ed) (2023) as None, Negligible, Low, Moderate and High and then suggests a level of survey effort required to be confident in the absence of bats. We consider this range to be too coarse, there being a transition between each level of suitability which is not reflected in the guidelines. We have a modified schedule of suitability using a risk level between 0 and 5. See Key points 1, 2, 3, 4 and 13 which justify this approach.

Suitability Collins (2023)	Description Roosting habitats	Risk Level	Survey level
	Modified from Collins (2023)		
None	<p>No habitat features on site likely to be used by any roosting bats at any time of the year (i.e., a complete absence of crevices/suitable shelter at all ground/underground levels).</p> <p>No habitat features on site likely to be used by any commuting or foraging bats at any time of the year (i.e., no habitats that provide continuous lines of shade/protection for flight-lines, or generate/shelter insect populations available to foraging bats).</p>	0	A Preliminary Roost Assessment (PRA) / Daytime Bat Walkover (DBW) sufficient
Negligible	<p>No obvious habitat features on site likely to be used by roosting bats; however, a small element of uncertainty remains as bats can use small and apparently unsuitable features on occasion.</p> <p>No obvious habitat features on site likely to be used as flight-paths or by foraging bats; however, a small element of uncertainty remains in order to account for non-standard bat behavior.</p>	1	
Low	<p>A structure with one or more potential roost sites that could be used by individual bats opportunistically at any time of the year. However, these potential roost sites do not provide enough space, shelter, protection, appropriate conditions and/or suitable surrounding habitat to be used on a regular basis or by larger numbers of bats (i.e., unlikely to be suitable for maternity and not a classic cool/stable hibernation site, but could be used by individual hibernating bats)</p> <p>Habitat that could be used by small numbers of bats as flight-paths such as a gappy hedgerow or unvegetated stream, but isolated, i.e., not very well connected to the surrounding landscape by other habitat.</p> <p>Suitable, but isolated habitat that could be used by small numbers of foraging bats such as a lone tree (not in a parkland situation) or a patch of scrub.</p>	2	Surveyor to make judgement as to if additional surveys likely to provide useful information about the site. RAM's and provision of new roosting provision to be recommended
		3	<p>Single bat emergence survey in the optimum time period (May and August).</p> <p>Roosts are often transitional, surveys early and late in season may be appropriate. Consider additional survey in transitional period April and September</p>
Moderate	<p>A structure with one or more potential roost sites that could be used by bats due to their size, shelter, protection, conditions and surrounding habitat but unlikely to support a roost of high conservation status (with respect to roost type only, such as maternity and hibernation - the categorisation described in this table is made irrespective of species conservation status, which is established after presence is confirmed).</p> <p>Continuous habitat connected to the wider landscape that could be used by bats for flight-paths such as lines of trees and scrub or linked back gardens. Habitat that is connected to the wider landscape that could be used by bats for foraging such as trees, scrub, grassland or water.</p>	4	Two bat emergence surveys between May and September with at least one survey in the optimum time period (May to August).

High	<p>A structure with one or more potential roost sites that are obviously suitable for use by larger numbers of bats on a more regular basis and potentially for longer periods of time due to their size, shelter, protection, conditions and surrounding habitat. These structures have the potential to support high conservation status roosts, e.g., maternity or classic cool/stable hibernation site.</p> <p>Continuous, high-quality habitat that is well connected to the wider landscape that is likely to be used regularly by bats for flight-paths such as river valleys, streams, hedgerows, lines of trees and woodland edge.</p> <p>High-quality habitat that is well connected to the wider landscape that is likely to be used regularly by foraging bats such as broadleaved woodland, tree-lined watercourses and grazed parkland.</p> <p>Site is close to and connected to known roosts.</p>	5	Three bat emergence surveys between May and September with at least two surveys completed in the optimum time period (May and August).
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Table 1 *Risk and need for additional survey following preliminary appraisal for bats.*

This site was assessed at the following period in the bat year. Some roost types can be clearly identified when not in use or can be inferred from habitat type/residual evidence.

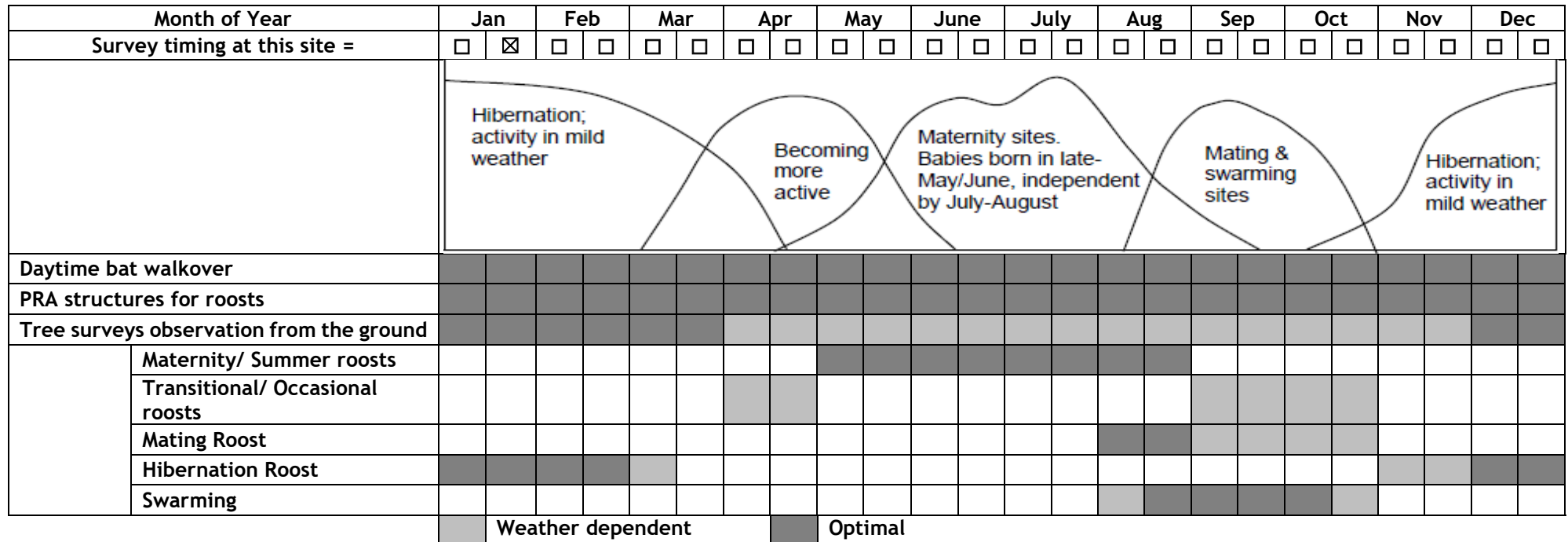


Figure 3 Survey timing in the bat year from Mitchell-Jones (2004).

Date of visit		22 nd January 2025	Notes
Weather conditions	Cloud	100%	1
	Wind	Nil	1
	Rain	Nil	1
	Temperature	5 ° C	1
Surveyors		AC	

Table 2 *Survey dates and times.*

Surveyors

1. (AC) Miss Amy Cooke BSc (Hons)
Natural England Bat Class Licence (Level 1- Agent)
BCT Competence level 2

4. DEFINITIONS

Definitions used in this report are detailed here, in reference Collins ed. (2023).

Building

A structure with walls and a roof, for example a residential property, block of flats, office block, warehouse, garden house, folly, barn, stable, lime kiln, tower, church, former military pill box, school, hospital or village hall. Some buildings have cellars (underground sites) beneath them.

Built structure

A structure that was made by humans but cannot be described as a building or as an underground site, for example a bridge, wall, monument, statue, free-standing chimney, or derelict building consisting only of walls.

Underground site

A human-made or natural structure that is entirely or partially underground, for example a cave, cellar, subterranean, mine, duct, tunnel, military bunker, well, or ice house.

Roost (breeding site / resting place)

The implementation of the EU Habitats Directive provides general definitions for breeding sites and resting places. For bats the two often overlap, which is why in many cases they are both referred to as roosts. Any interpretation of the terms 'breeding sites', 'resting places' and 'roosts' must take into account the prevailing conditions.

Natural England licensing guidelines (Natural England, 2011) discusses the age of roosts and mitigation requirements as well as the period of time bat roosts are protected when not used. The following is reproduced from this document.

"Q. The development site ceased to be inhabited last year and it is prone to vandalism. I found evidence of a maternity roost but all current signs suggest that the site is now abandoned by bats. What should I mitigate for?

Wildlife Advisers do not use a tightly defined period within which bat need to have used a structure beyond which it is no longer regarded as a bat roost. A structure can be regarded as a bat roost even if not knowingly occupied by bats for a year or two."

The Method Statements mitigation should reflect compensation for a roost at its highest status within recent years. For example, meagre mitigation for an occasionally used, summer, non-maternity roost that had declined from a maternity roost as a result of human induced change to the roosts conditions e.g., vandalism, may not be acceptable to the Wildlife Adviser.

A demolished structure, irrespective of its previous bat occupancy, clearly, ceases to be a bat roost. An intact structure without bat occupancy perhaps after a few years, and more assuredly after five years, also ceases to be a bat roost". [Emphasis added]

Natural England's guidelines are derived from the European Commission's Article 12 guidance on the definition of resting places for European Protected species.

European Commission (2021), section (54) and (59) state

The 2021 guidance states of this offence: *“The protection applies all year round if these sites are used on a regular basis”* (pg. 32). It goes on to state: *“Thus, it follows from Article 12(1)(d) that such breeding sites and resting places also need to be protected when they are used only occasionally or are even abandoned but where there is a reasonably high probability that the species concerned will return to these sites and places. If, for example, a certain cave is used every year by a number of bats for hibernation (because the species has the habit of returning to the same winter roost every year), the functionality of this cave as a hibernating site should be protected in summer as well so that the bats can reuse it in winter”* (pg. 33).

The guidance also states that breeding sites and resting places “that are used regularly either within or between years, must be protected even when not occupied” (pg. 33 and pg. 35).

Resting places: a definition

Resting places are defined here as the areas essential to sustain an animal or group of animals when they are not active. For species that have a sessile stage, a resting place is defined as the site of attachment. Resting places will include structures created by animals to function as resting places, such as roosts, burrows or hides. Resting places that are used regularly, either within or between years, must be protected even when not occupied.

Resting places essential for survival may include one or more structures and habitat features required for:

1. thermoregulatory behaviour, e.g., *Lacerta agilis* (sand lizard);
2. resting, sleeping or recuperation, e.g., *Nyctalus leisleri* (Leisler's bat) roosts;
3. hiding, protection or refuge, e.g., *Macrothele calpeiana* burrows; and
4. hibernation, e.g., bat dormitories, and *Muscardinus avellanarius* (common dormouse) hides.

It is clear that for a site to be classified as a roost when not occupied there must have been past habitual and the probability of future use within at least a two-year period as defined as “within or between years”.

European Commission (2021) summaries the requirement for the protection of resting sites thus

“Breeding sites and resting places must be strictly protected because they are crucial to the life cycle of animals and are vital elements of a species’ entire habitat. Article 12(1)(d) should therefore be understood as aiming to safeguard the continued ecological functionality of such sites and places, ensuring that they continue to provide all the elements needed by the animal to rest or to breed successfully. The protection applies all year round if these sites are used on a regular basis.” [Emphasis added]

As the Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019 derives and is guided by legislation and guidelines issued by the European Commission, this definition is still valid within the transition period.

Summary

“Breeding site”

Breeding is defined here as mating, giving birth to young (including egg laying) or production of offspring where reproduction is asexual. A breeding site is defined here as the areas needed to mate and to give birth in, and covers also the vicinity of the nest or parturition site, where offspring are dependent on such sites. For some species, a breeding site will also include associated structures needed for territorial definition and defence. For species that reproduce asexually, a breeding site is defined as the area needed to produce offspring. Breeding sites that are used regularly, either within or between years, must be protected even when not occupied.

The breeding site may thus include areas required for:

1. courtship;
2. mating;
3. nest construction or selection of egg laying or parturition site;
4. places used for the purpose of parturition or egg laying or production of offspring where reproduction is asexual;
5. places of egg development and egg hatching;
6. nest or parturition sites when occupied by young dependent on that site; and
7. wider habitats that make reproduction successful, including feeding grounds.

Resting place

Resting places are defined here as the areas essential to sustain an animal or group of animals when they are not active. For species that have a sessile stage, a resting place is defined as the site of attachment. Resting places will include structures created by animals to function as resting places, such as roosts, burrows or hides. Resting places that are used regularly, either within or between years, must be protected even when not occupied.

1. Thermoregulatory behaviour
2. Resting, sleeping or recuperation
3. Hiding, protection or refuge
4. Hibernation

5. RESULTS

5.1 Desk Study

A search of the Envirotech dataset returned three records of two bat species within 2km but no records for the site.

Records are shown on Figure 4.



The habitat at and adjacent to the site was assessed from satellite imagery this was then ground truthed, Figure 5.



 Site Boundary

Figure 5
Habitat Adjacent
Site



From the pre-existing records, a review of aerial photography, a field assessment of the area adjacent to the site and the experience of the surveyor, bat species which may occur on or adjacent to the site and the rationale for this decision are detailed in Table 3. This assessment does not look at the roosting potential of the site. The assessment of bats which are indicated as potentially occurring on the site or local area is based on the initial largely desk based scoping survey. Additional site-specific assessment is provided later in this report. This assessment does however allow for the scope of site survey to be refined.

BAT SPECIES	ROOST PREFERENCE*			NICHE*	SUITABLE HABITAT		RECORDED WITHIN 2KM
	Crevice	Void	Tree		Locally	On site	
Common pipistrelle <i>Pipistrellus pipistrellus</i>	✓	✗	✓	Generalist	☒	<input type="checkbox"/>	☒
Soprano pipistrelle <i>Pipistrellus pygmaeus</i>	✓	✗	✓	Riparian/Generalist	☒	<input type="checkbox"/>	<input type="checkbox"/>
Nathusius pipistrelle <i>Pipistrellus nathusii</i>	✓	✗	✓	Enclosed woodland	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Brown long-eared <i>Plecotus auritus</i>	✗	✓	✓	Enclosed woodland	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Whiskered <i>Myotis mystacinus</i>	✓	✓	✓	Linear vegetation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Brandt's <i>Myotis brandtii</i>	✓	✓	✓	Linear vegetation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Natterer's <i>Myotis nattereri</i>	✗	✓	✓	Enclosed riparian	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Daubenton's <i>Myotis daubentonii</i>	✓	✗	✓	Open aquatic	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Alcathoe's <i>Myotis alcathoe</i>	✗	✗	✓	Enclosed woodland	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Noctule <i>Nyctalus noctula</i>	✗	✗	✓	Above woodland/water	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Table 3 Bat species whose geographical range extends to the region in which the site is located. *Typically, but not exclusively.

5.2 Field Survey

5.2.1 Habitat Description

The habitat on and adjacent to the site identified from satellite images was ground truthed. Details of the habitats found on and adjacent to the site are detailed in Figure 5.

It is judged that the most suitable commuting route for bats into and out of the site is the road to the North-east. The surrounding habitat is considered to have moderate foraging potential.

The site is not considered to offer optimal foraging opportunities. There are some animal manures associated with the surrounding land. There is limited vegetative diversity around the buildings which are in an exposed location.

5.2.2 Bat Roost Survey

5.2.2.1 General description Building 1

A rendered stone-built barn with a fully collapsed roof.

5.2.2.2 External walls/ Eaves

The walls of the building are made from natural stone and are rendered. The rendering to the South-east elevation is in good condition with no gaps or cracks. To the North-west, the render is missing to the top of the wall, exposing the stone underneath. There are gaps between the exposed stones where the rendering is missing. However, these are very open and exposed, and no indications of use by bats could be found, such as droppings externally below the gaps.

There are no soffits or eaves boards, and the roof is completely missing.

5.2.2.3 Roof

The roof of the building is completely missing.

5.2.2.4 Internal walls

The internal walls of the barn are available to roosting by bats as the roof is completely missing, exposing the internal structure. The render is largely missing over the internal walls, and there are some gaps between the exposed stones and the bottom of the broken render. No indications of use by bats could be found, such as droppings on the walls.

5.2.2.5 Roof Voids/ Roof structure

The timber beams in the roof were found to be in good condition with no rot, splits or gaps suitable for roosting or hibernating bats.

5.2.2.6 Summary

To summarise the building is small in size and the external walls are in moderate condition with some gaps and cracks, but exposed due to the missing roof. The roof is missing, and the internal

walls are exposed. Overall, the exposed internal space offers little to no opportunity for roosting bats, and as such, our categorisation would be 2 - low. Further details of our categorisation can be found in Table 1.

5.2.2.7 General description Building 2

A rendered stone-built barn under a lined concrete tile roof.

5.2.2.8 External walls/ Eaves

The walls of the building are rendered and in generally moderate condition; however, a large area of the Western corner of the building has collapsed, providing direct access inside.

As well as this, there are several deep structural cracks in the stonework to the South-west of the building, one of which may offer opportunity for roosting by bats. These were assessed from the ground using binoculars and a 1,000,000-candle power torch. Indications of use of the cracks, such as droppings on the external walls below, were searched for, but none could be found.

The render is partially missing on the North-west elevation, exposing the stones and pointing underneath. Several gaps in the stonework were identified. All gaps between stones were assessed from the ground using a 1,000,000-candle power torch, and no indications of use by bats could be found.

Gaps were noted to extend under the eaves into the building. There were no indications of roosting by bats in these areas.

5.2.2.9 Roof

The roof of the building is made from concrete tiles and is lined. There were no raised slates on any of the roof pitches, and it was noted that the South-western roof pitch had two Velux windows installed; these contribute towards the brightness of the internal space, making it unfavourable to bats. The roof is partially covered in moss, suggesting the tiles are damp and undisturbed.

The ridgelines appeared well-sealed, except at the North-east gable end where the building connects to building 1, and the roof is partially collapsed. Here, there is a gap under the end ridgeline tile, which was judged to be too open and exposed to be favourable to roosting bats, and when assessed from the ground with binoculars and a 1,000,000-candle power torch, no indications of use by bats could be found.

The full extent of the roof could be seen from the ground with close focus binoculars and a 1,000,000-candle power torch. No indications of use by bats could be found.

5.2.2.10 Internal walls

The internal walls of the barn are available to roosting bats as there are no doors or windows, and there is a large corner of the building missing which provides direct access into the internal space. However, despite this, no indications of use of the building by bats could be found. It is judged that because of the large gaps providing direct access into the building, the internal space is too draughty and cold to be favourable to roosting bats.

5.2.2.11 Roof Voids/ Roof structure

The timber beams in the roof were found to be in excellent condition with no rot, splits or gaps suitable for roosting or hibernating bats. The underside of the roof is exposed due to the gaps in the walls, and as such is cold and draughty, making it unfavourable to roosting bats. The collapsed corner of the building, and the presence of the Velux roof lights make the internal space light and bright, and further unfavourable to roosting bats. The lining is in generally good condition, and in one area of the building looks new. No indications of use by bats could be found.

5.2.2.12 Summary

To summarise the building is of moderate size and the external walls are in generally moderate condition, but several deep structural cracks were identified. One of these is large enough that it may offer roosting opportunity for bats; however, no indications of use by bats could be found. The collapsed corner of the building provides direct access into the building by bats, but also exposes the internal space to the elements, making it cold and draughty. The roof is in generally good condition with no raised or slipped slates. There is a gap to the ridgeline where the gable of building 2 intersects with building 1, but this is judged to be too open and exposed to be favourable for roosting bats. The internal fabric and timber beams are in excellent condition. Overall, although this building offers one or more potential roost sites that could be utilised by bats, it is judged that these do not provide enough shelter, protection, or appropriate conditions to be used by large numbers of bats, or on a regular basis by individual bats. Thus, it is judged that this building has a low potential for roosting by bats, our categorisation would be 2. Further details of our categorisation can be found in Table 1.

6. CONSTRAINTS

We judge that the site survey is sufficient to address the risk to bats at the site based on the species present in the local area, construction of the buildings and nature of the proposed work. The level of survey effort accords with the recommendations of Collins ed. (2023). The reasonable probable use of the site by bats has been determined.

7. INTERPRETATION

7.1 *Presence / absence*

There was no past or current evidence of bats roosting found at the site during the survey.

We consider that the buildings are unlikely to be used by significant numbers of bats for roosting. It is highly unlikely the buildings are essential for species survival. Precautionary mitigation would be appropriate.

7.2 *Population size class assessment*

From a review of adjacent habitat, the maximum number of bats that are likely to use an area within 250m of the site is of the magnitude 1-9 (small).

7.3 *Site status assessment*

Whilst the site itself is unlikely to be used as a roost by a significant number of bats, there is use of the adjacent landscape. Bats are likely to rely on a number of roost sites in buildings and trees in the local area. It is therefore likely that the site has a low significance for bats. We consider the Continued Ecological Functionality of the site is unlikely to be affected as a result of the proposal.

8. POTENTIAL IMPACTS

8.1 *Bat Roosts*

8.1.1 *Pre- and mid-activity impacts*

A worst-case scenario will be considered in addressing potential impacts at the site without mitigation.

8.1.1.1 *Maternity Roosts*

No signs of past maternity or gathering roosts were found at the site during the survey. The potential for a maternity or gathering roost in the buildings is judged to be very low due to the absence of highly suitable roost sites. Evidence of past use of the site by large numbers of bats such as would occur in a maternity or gathering roost, such as staining on the roof or walls, was absent. Evidence of intensive/regular use such as occurs in such roosts can usually be found at any time of year. **We judge there is no risk to a maternity colony or gathering roost at this site from the proposed work.**

8.1.1.2 *Satellite Roosts*

We do not consider that satellite roosts will be affected by the proposal. We consider the local environs are unlikely to support linked maternity roosts. There was no indication of elevated use of the site such as would occur if this roost type were present. **We judge there is no risk to a satellite roost at this site from the proposed work.**

8.1.1.3 *Transitional and day roost sites*

We judge there is a low risk of disturbing bats in or loss of transitional or day roost sites. We judge that on balance it is unlikely this sites potential for use for these purposes will be degraded by the proposed work. There are likely to be numerous other more suitable sites in other buildings and trees in the wider area. The buildings are unlikely to offer significant roosting potential.

8.1.1.4 *Night Roosts*

We do not consider the site is sufficiently close to or linked with high quality foraging habitat such that bats may use it for night roosting.

8.1.1.5 *Feeding roosts*

We do not consider the site is sufficiently close to or linked with high quality foraging habitat such that bats may use it for feeding roosts.

8.1.1.6 *Lek sites*

In our experience lek sites are commonly found in proximity to the main feeding and commuting routes. The primarily commuting and feeding area at the site was judged to be the woodland some distance from the site to the West. There were no potential lek sites identified in the buildings facing this commuting route which are also close enough to it to be used by male bats for leks. It is therefore unlikely there will be use of the buildings by bats for lekking.

8.1.1.7 *Hibernation*

There are no areas of rotten wood in the buildings and or damp walls which also offer crevices which could be suitable for hibernating *Pipistrelle* spp. bats.

There are no areas of the buildings which are sufficiently damp, cool and darkened which would be ideal for hibernating *Myotis* spp. bats. There is very little evidence and limited potential for hibernation at the site; it is therefore unlikely there will be loss of hibernation sites.

8.1.1.8 *Swarming*

There is unlikely to be any loss of a swarming site. Swarming sites are generally found at or near hibernation sites. We judge that the site is unlikely to be used by *Myotis* spp. bats and brown long-eared bats which have been known to swarm as there are no hibernation sites for these species in the buildings.

8.1.1.9 *Summary*

Without mitigation, there is considered to be only a low potential for the alteration or loss of occasional, unconfirmed roost sites for bats at the site and this is unlikely to have a significant impact on their local distribution.

8.1.2 *Long term impacts*

There is on balance a low risk of long-term negative impacts on the favourable conservation status of bats in the local area as a result of the proposed work.

8.1.3 *Post activity interference impacts*

There is unlikely to be disturbance to roosting bats during the post construction phase of the project. There is already significant disturbance at the site from existing use of the site and surrounds.

8.1.4 *Other impacts*

It is our opinion that there will be no significant other negative impacts relating to the proposed work which may affect bat species.

8.1.5 *Bat Foraging and Commuting Habitat*

There is unlikely to be a disruption to any commuting routes at the site. The site does not lie on or near to a high-quality commuting route.

There is unlikely to be a disturbance to feeding bats during and after the construction phase of the project. It is judged that the foraging areas near the site will be unaffected by the proposed work.

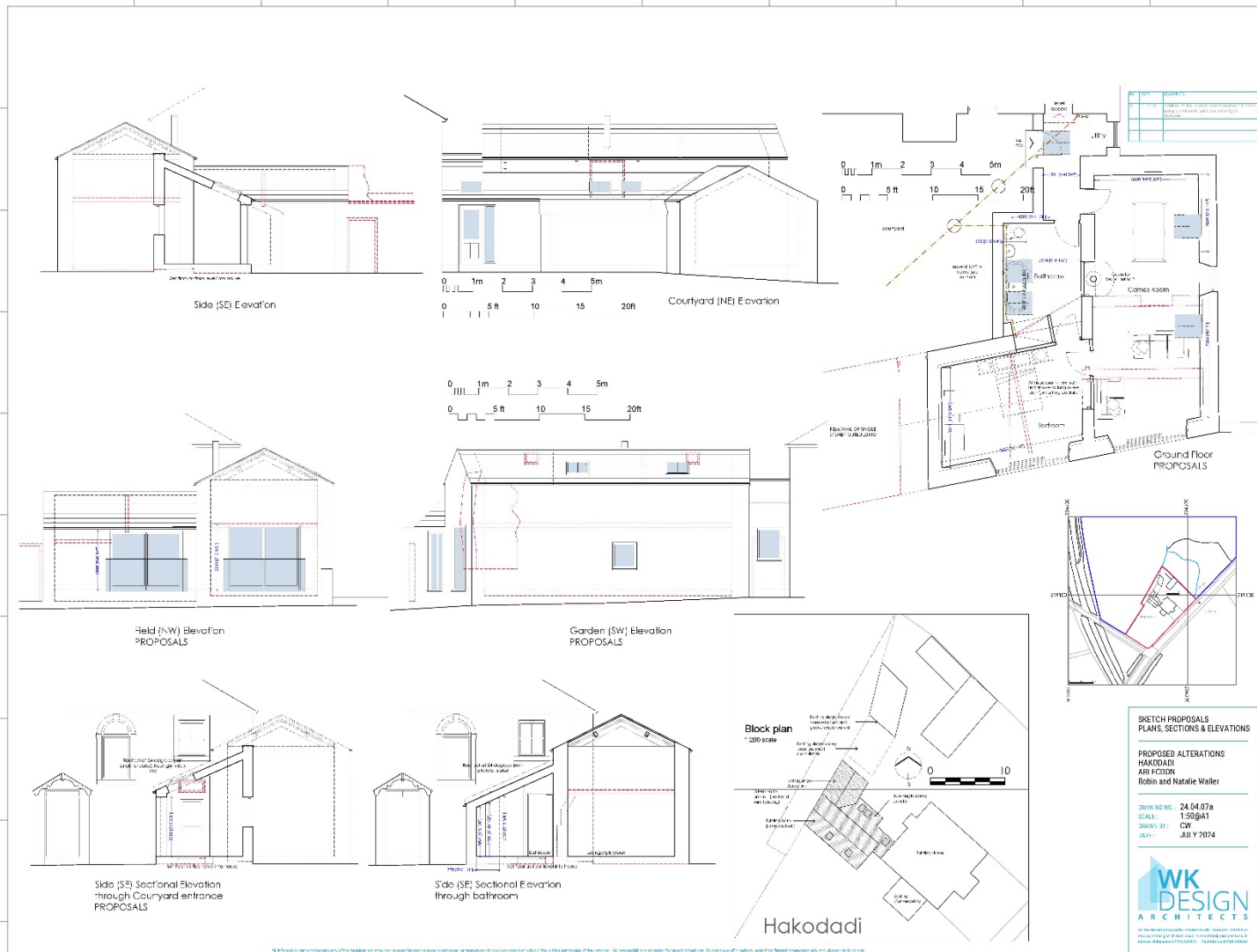


Figure 6
Impacts

SCALE: NTS

REV 01

9. RECOMMENDATIONS AND MITIGATION

9.1 *Further Survey*

We consider that the risk to bats in the buildings will remain low and no additional survey work is required prior to the determination of the planning application.

9.2 *Mitigation Measures*

9.2.1 *Bats*

Natural England requires that mitigation addresses the impacts picked up by the site assessment, as follows: -

- Quantitative characteristics: There should be no net loss of roost sites, and in fact where significant impacts are predicted there will be an expectation that compensation will provide an enhanced resource compared with that to be lost. The reasoning behind this concept is that the acceptability of newly created roosts by bats is not predictable.
- Qualitative characteristics: the plans should aim to replace like with like. As an extreme example, it would be unacceptable to replace maternity roosts with hibernation sites.
- Functional characteristics: compensation should aim to ensure that the affected bat population can function as before. This may require attention to the environment around the roost.

Natural England also recommends that precautions are taken to avoid the deliberate killing or injury of bats during development work at the site.

The site survey found no evidence of habitual use of the buildings by roosting bats in or between years, although there is a possibility of a low level of opportunistic use at some times of the year. The survey effort was sufficient to allow for an assessment of this to be made.

9.2.1.1 *Bat Roosts*

As a precautionary approach the following guidelines will be adhered to.

1. All contractors on the site will be made aware of the possible presence of bats prior to the commencement of work.
2. Contractors will be provided with the contact details of an appropriately qualified individual who can provide advice in relation to bats at any time during work. In the event that bats are found during work, unless the action has already been cleared by a suitably qualified individual, **all work will cease** and an appropriately qualified individual will be contacted for further advice.
3. Contractors will be observant during demolition work for bats which may use the buildings if new areas of the roof are exposed and left open overnight. Bats are opportunistic and may make use of gaps opened up during work overnight.
4. If it is necessary to remove a bat to avoid it being harmed, gloves should be worn. It

should be carefully caught in a cardboard box and kept in the dark in a quiet place until it can be released at dusk near to where it was found, or moved to an undisturbed part of the buildings, with outside access, and placed in a location safe from predators.

5. **If bats or bat roosts are found during work, all work should cease.** The site will need to be re-assessed in regard to its use by bats. A Natural England licence will be required if continuing work is, on balance, likely to result in the disturbance, killing or injury of bats or the alteration, destruction or obstruction of roost site.
6. Remove all roof coverings by hand only.
7. Retain at least 8 gaps along the eaves lines of the buildings which allow access to the wall tops under the eaves during any re-roofing which is undertaken. A plan for this type of roost is shown on Figure 7. These potential roost sites will be a significant improvement on existing site conditions.
8. There is no need to restrict the timing of work. Use of the structure by bats is equally likely to occur at any time of the year but will be at low levels.

Following English Nature (Natural England) guidance Mitchell-Jones (2004), if these guidelines are followed, we would consider that on balance, a disturbance to bat species which could be contrary to the Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019 and Wildlife and Countryside Act (1981) (as amended) is unlikely. **If bats are found prior to or during work a licence application will be required.**

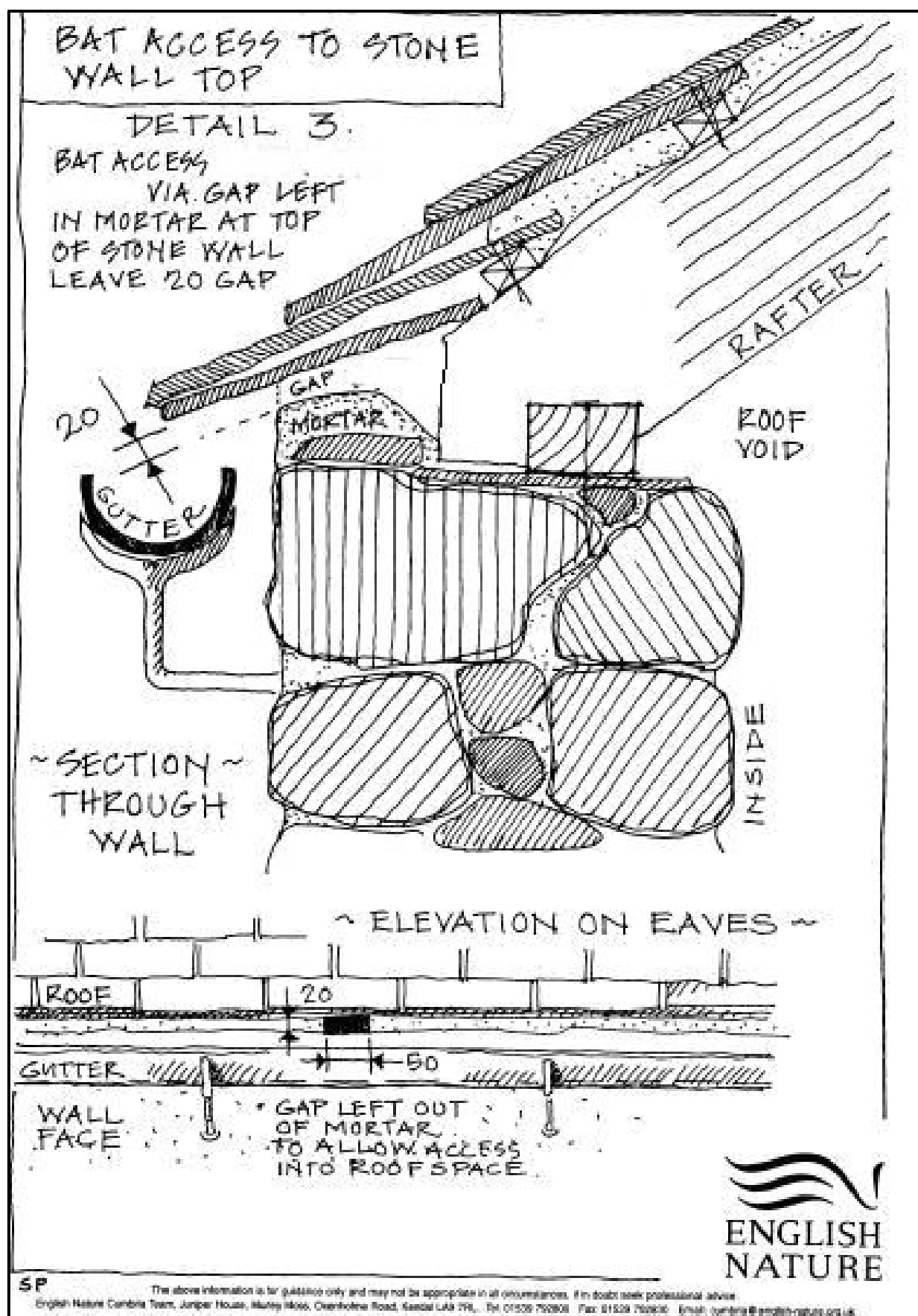


Figure 7 New roost site creation

9.2.1.2 Mitigation for Foraging and Commuting Habitat

No specific mitigation for foraging and commuting habitat is necessary. The habitat surrounding the site does not change significantly.

9.2.1.3 Requirement for Habitats Regulations (EPS) Licence

At this stage, we judge that a Natural England licence will not be required to cover work on the buildings. No bats were confirmed as breeding or roosting at the site, the loss of potential roost sites will be avoided and no significant disturbance to bats will occur, so long as the recommendations of this report are followed.

If bats are likely to be significantly disturbed or bat roosts or breeding sites are found as a result of work, all work must cease and the site will need to be re-assessed by a suitably qualified person with regard to its use by bats. A Natural England licence will be required if continuing work is, on balance, likely to result in the disturbance, killing or injury of bats or the alteration, destruction or obstruction of a roost or breeding site.

10. MITIGATION SUMMARY

The site survey found no evidence of bats roosting although there is a possibility of opportunistic use by low numbers of bats at some times of the year. The level of use is not considered likely to be significant and with the retention/creation of gaps at the eaves and precautionary mitigation, a significant disturbance and/or the loss of roost sites is unlikely to occur.

On the basis of survey information, specialist knowledge of bat species and the mitigation that has been proposed, it is considered that on balance the proposed activity is reasonably unlikely to result in an offence under regulation 39 of the Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019). We do not consider there to be a need for a Natural England licence at this time.

11. REFERENCES

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APPENDIX 1 PHOTOGRAPHS

Photograph	Notes
	<p>The buildings are attached and situated in an exposed location.</p>
 	<p>Building 1</p> <p>The roof is missing.</p> <p>The rendering over the external walls is in moderate condition, with some areas missing and exposing the stone underneath.</p>



The internal walls of building 1 are partially rendered. No indications of use by bats could be found.



Building 2

There is a large gap in the corner of building 2 where the wall has collapsed.

The roof is in generally good condition with no raised slates.

The rendering is in generally good condition, but is missing in some areas.







The deep structural cracks were assessed, and showed no indications of use by bats.



A gap under the ridge-tile where the roof of attached building 1 has collapsed. This was judged to be too open and exposed to be favourable to bats.





The internal lining is in generally good condition, but is missing in some areas. Despite this, no indications of use on the internal building by bats could be found.