

2021

Restoration works at The Mill, Clee St Margaret,  
Specialist Bat Assessment

Prepared by CRC Ecology Ltd on behalf of Yeat Investments  
Report number – cc-74715102021

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## **Executive Summary**

CRC Ecology Ltd was commissioned by Yeat Investments to carry out a specialist bat survey of buildings to be restored/re-developed at the property referred to as 'The Mill', Clee St Margaret. The walkover and initial daytime assessment was undertaken on Tuesday 27th July 2021.

<b>What</b>	<b>Bat survey of land to be developed – including specialist survey of buildings for the potential for roosting bats.</b>
<b>Why</b>	<b>All species of bat and other wildlife are protected by law and, by way of conservation status, form a material consideration within any planning application. The proposals for the site include the restoration and refurbishment of buildings which have the potential for roosting bats and nesting birds.</b>
<b>How and When</b>	<b>Daytime inspection of site during July 2021 and subsequent Dusk emergent and Dawn swarming surveys in August</b>
<b>Key Findings</b>	<b>Existing buildings offer high potential for roosting bats. Evidence of roosting bats was found on site, droppings, bat present in loft space and exiting/returning bats during survey works. 1 x scarce bat species has been found to be utilising the Mill. 1 x rare bat species has been found to be utilising the loft of the main house. 3 x common species of bat have been found to be utilising the mill and main house buildings with 2 species forming maternity roosts. High value habitat bordering site to include mature trees, small ponds and hedgerow corridors. High value features within and upon buildings identified on site for nesting birds. Spotted flycatcher was seen to be nesting within the roof of the mill building. No use by owl species was noted during survey visits.</b>
<b>Significance</b>	<b>A single Barbastelle bat which is a scarce bat species in Shropshire has been surveyed using features on the mill building. A single Lesser Horseshoe bat has been surveyed using the loft space and first floor bedroom of the farmhouse. Both bat species are classed as Priority Species under the UK Post-2010 Biodiversity Framework. The Barbastelle is also Listed as 'Near Threatened on the global IUCN Red List of Threatened Species'. A maternity roost of more than 6 Whiskered/Brants myotis species and multiple (circa 6) Brown Long-eared bats, thought to be also a maternity roost has been surveyed using the Farmhouse and Mill building. A single soprano pipistrelle bat species has been seen to return to the mill building and at least 2 emerged from the farmhouse. All three species are described as common and widespread (BCT 2012) with populations thought to be stable. However, all species are listed in the Shropshire Species Action Plan, the UK Priority Species Action plan and Schedule 41 of the NERC Act 2006 list of species of Principle Importance in England.</b>
<b>Potential Impacts</b>	<b>Loss/disturbance of maternity roosts for two species. Loss/disturbance of roost to scarce and rare bat species and loss/disturbance to common bat species.</b> <ul style="list-style-type: none"> <li><b>Loss of nesting potential for UK conservation status: <a href="#">Red</a> species such as the Spotted Flycatcher. Potential for disturbance of other</b></li> </ul>

		<b>bird species during nesting season such as swallows and house sparrows.</b>
<b>Avoidance measures</b>		<p>Pre-development checks for nesting birds/or re-development of buildings outside of nesting season.</p> <p>Supervision as mitigation measures to be put in place as per licence requirements to change/destroy known roost features. A mitigation strategy and development time line will be critical to ensuring disturbance to maternity roosts are minimised and the loss of roosts to scarce and rare bat species is temporary or avoidable.</p>
<b>Enhancement opportunities</b>		Bat box/bat slates and bird nesting boxes incorporated into buildings and nearby mature trees. Native tree and shrub planting, potential grassland enhancement works through wildflower seeding.
<b>Further survey requirements</b>		<p>In order to ensure compliance with wildlife legislation and relevant planning policy, the following recommendations are made (see Section 5.3 for further details) in order to 'maintain conservation value':</p> <ul style="list-style-type: none"> <li>• <b>Bats:</b> The buildings offer High value features for bats and are utilised by multiple species. As such, a development license from Natural England will need to be obtained in order to proceed with the proposed development works. Mitigation to avoid or minimize impacts on bats and their roosts can be carried out under a full licence to disturb/alter roosting features. Further surveys to fulfil Natural England requirements and to ascertain the value of the 2 x maternity roosts will be required within the active season for bats during 2022. Monitoring and hibernation surveys are required during the winter months.</li> <li>• <b>Nesting Birds:</b> Vegetation/demolition clearance should be undertaken outside the nesting bird season.</li> </ul>
<b>Conclusion</b>		<p>Buildings on site offer High potential for roosting bats and high value connecting habitat with high value foraging. Should re-roofing or internal works be required that may alter or affect the known bat roosts, a Natural England development licence will be required. It is not felt that any of the bat roost features will be lost, post development works, through the construction activities if mitigated for. It is felt that favourable conservation value can be maintained for each of the species throughout the development with strict timing and monitoring works. The installation of bat boxes as an alternative roost will be required should works to the mill building be required due to the potential for the building to collapse and, therefore, a bat licence application will be made under 'clause 4' (health and safety reasons). No offence during construction activities is expected should strict guidance be followed as part of the bat mitigation process.</p> <p>Ecological precautionary measures to be put in place prior to site clearance and re-development works. Maintain dark corridor along pond/garden boundary. No works to commence without strict guidance and supervision by a qualified bat ecologist.</p>

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## **1. Introduction**

The following report has been prepared by CRC Ecology Ltd following an instruction from Yeat Investments. It sets out the findings of a specialist bat survey for the proposed re-development of three buildings within the property known as The Mill, Clee St Margaret. The bat survey aims to:

- Review the site in relation to its bat roost potential;
- Identify any bat species potentially utilising the site as a roost;
- Evaluate the site in terms of its conservation status;
- Assess potential impacts; and
- Recommend appropriate mitigation or licence requirements where possible.

This report presents the bat survey information in a standard format accepted by ecological consultees across the country, adopting various best practice procedures and methodologies.

## **2. Summary of Methods**

### **2.1 Desktop Biological Records Search**

An assessment of the bat roosting potential was made in accordance with the best practice survey techniques set out in the Good Practice Guidelines (Bat conservation Trust 2016).

CRC Ecology Ltd then assimilated and reviewed the desk study data provided by these organisations.

The consultees for the Desk Study were:

- Natural England - MAGIC website for statutory conservation sites;
- The Shropshire Biodiversity Records Centre (SBRC National Biodiversity Network Gateway website).

### **2.2 Day time assessment**

The preliminary bat survey on the 27<sup>th</sup> July was undertaken by Colin Cross of CRC Ecology Ltd on all areas of the buildings. Colin Cross holds a Natural England Class licence for the disturbance of bats for all counties of England (2016-23802-CLS-CLS). Colin is a qualified ecologist with an MSc in Ecology and Management of the Natural Environment. For the last 10 years Colin has been the Director of CRC Ecology based in Bewdley and, prior to that, as a Countryside Sites Manager for over 15 years with a Local Authority. Colin is also an active member of the Worcestershire Bat Group which carries out local bat conservation projects and has served several years on the committee.

An internal and external inspection of the three buildings impacted by the proposed re-development was undertaken. This included internal areas and loft space and was carried out to identify any possible exit or entry points for bats and to search for evidence of bat activity. Within the buildings, particular attention was paid to areas thought suitable to allow entry and support roosting bats, including: expansion joints and gaps within brickwork or roofing materials. Field signs, that would indicate the presence of bats, were searched for. These included:

- Bat droppings on floor, surfaces and walls.
- Feeding remains
- Evidence of urine staining
- Areas cleared of cobwebs
- Oily stains around roost entrances
- Individual animals

Equipment used included high power LED head torches, binoculars, and a D240x bat detector.

### **2.3 Dusk and dawn Activity Survey**

The surveys have been carried out in accordance to best practice guidelines set out within the bat workers' Manual (JNCC 2004), Bat mitigation Guidelines (JNCC 2004) and recent guidelines published by the Bat Conservation Trust (BCT) in 2016.

A dusk emergence and dawn swarming and activity survey was carried out at the buildings during the active season August 2021. This involved five experienced surveyors (comprising licenced ecologists and experienced assistant ecologists over several evenings and mornings) using bat detectors at dusk and dawn to determine whether any roosting bats emerged from, or re-entered into, features identified during the daytime scoping survey as well as recording general bat passes within the site during a transect around the building.

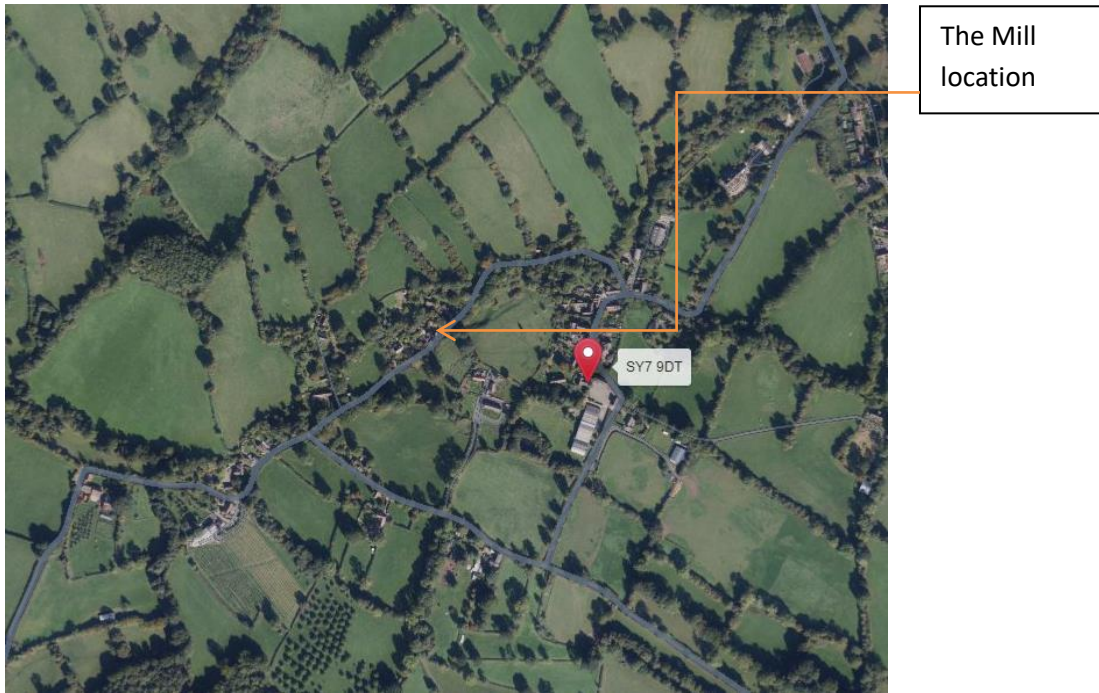
### **2.4 Survey Constraints**

The surveys were undertaken near the end of the active season although in good weather conditions.

### **2.5 Ecological Context**

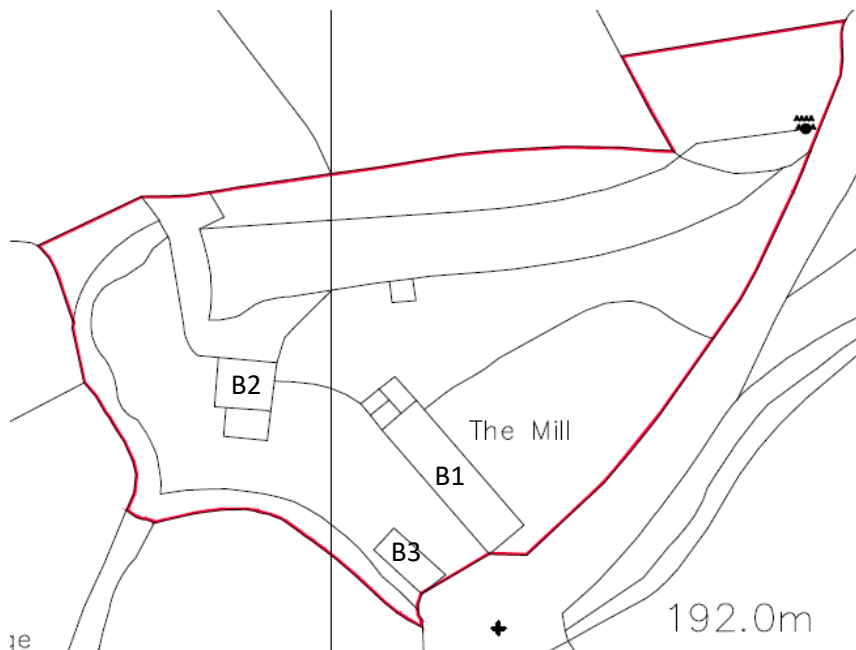
The property, known as 'The Corn Mill', consists of a complex of three 18<sup>th</sup> century grade 2 listed buildings, the main house with adjoining barn and pig sty, water-powered corn mill and bread oven buildings. The main house and bakery building appear to be in good condition with the corn mill building in a poor state with a collapsed roof. The buildings are all timber frame and constructed from red sandstone. Located within the countryside west of the Brown Clee Hill, the property sits on the edge of the village of Clee St Margaret; an historical landscape of agriculture interspersed with small pockets of woodland, grassland meadow and small water courses.

The site is Located at National Grid Reference SO5631484447.



Building 1 is the main house and has an adjoining barn and pig sty to the northern end. The main building is of stone and timber construction with clay tiles. The adjoining barn is of timber construction with a more recent gable wall of breeze block construction. The building has a small cellar located to the southern end and a loft space the length of the main house. Building 2 is an old corn mill with mill workings maintained within. The construction is the same as the main house with stone and timber and clay tiles although the building is in a state of collapse. The building has three floors with step/ladder access between each floor. Building 3 is the old bakery. The building is split into two with a bread oven situated within the southern end and a northern shed /storage area. The building is of stone/brick and timber construction with a slate roof.

Figure 1. Reference numbered buildings within the redevelopment plans



## 2.6 Legal Context

It is important to identify ecological resources/features that are subject to specific legislation. In all cases, legal and other, guidance should be followed to determine whether a proposal will cause any contravention of legal status or protection, or have a significant effect on the integrity of a system, resource or feature. However, it is important to remember that legal protection does not necessarily reflect biodiversity value and biodiversity value should be assessed.

**Bat roost assessment:** All species of bat are afforded full protection provided by both UK and European legislation. The Conservation of Habitats and Species Regulations 2010 ("Habitats Regulations") states that:

"It is an offence -

- A) deliberately to capture or kill a wild animal of a European protected species;
- B) deliberately to disturb any such animal;
- C) deliberately to take or destroy the eggs of such an animal; or
- D) to damage or destroy a breeding site or resting place of such an animal."

Furthermore, the Wildlife & Countryside Act, 1981 (as amended) states that a criminal offence will be caused if a person:

- Intentionally kills, injures or takes any species of bat

and/or

- Damages, destroys or obstructs access to any place the animal uses for rest or shelter.

If present, bats pose an ecological constraint to works. If impacts to the roosts cannot be avoided, derogation from the appropriate legislation must be sought in the form of a European Protected Species licence (EPSL).

## 3. Results

### 3.0 Desk Top Study

The table below provides a summary of bat species records (Shropshire biodiversity records) within a 2 km radius of the study area. It should be noted that the absence of records should not be taken as confirmation that a species is absent from the search area. There are no known statutory protected habitats within 2km of the survey boundary.

Bat Species	Nearest approx. distance from Site	Description
	SO5631484447	
Daubentons Bat <i>Myotis daubentonii</i>	700m	No large known roosts.
Noctule Bat <i>Nyctalus noctula</i>		



Common Pipistrelle <i>Pipistrellus pipistrellus</i>	700m
	583m
Soprano Pipistrelle <i>Pipistrellus pygmaeus</i>	
Brown Long-eared bat <i>Plecotus auritus</i>	800m
	1980m

### 3.1 Building assessment and Inspection

The boundary of the survey area is made up of three stone-built buildings set within a small courtyard with a watercourse forming the western boundary. A garden and 'old' mill pool (now dry) exists to the northern and eastern aspects.

At the time of the survey, the existing buildings were not habitable, although ceilings and floors were intact within B1 and B3. The roofs in both these buildings appeared in relatively good condition. B2 the old mill building was in a poor state. The roof had partially collapsed and water damage to the interior floors had caused several collapsed areas. The 2nd floor was not accessible at the time of the survey works and was surveyed from the ladder access using torch light and binoculars.

- B1 the main house

The main house had many features that were suitable to roosting bats. The northern gable end with exposed timbers and gaps in the mortar of the stone walls presented features suitable for a range of species. Gaps along ridge tiles and slipped tiles also presented high value features.



Figure 2 – north western aspect of B1


The barn, connected to the main house at the northern end, presented good features to include gaps under the ridge tiles and a lined roof along with gaps within the stone walls. A range of bat droppings circa 50+ were noted, scattered across the stone floor and walls of this structure (figure 3). Droppings pending DNA analysis.

Figure 3 – droppings scattered within internal barn structure of B1.



The main house appeared to be water tight with roof and windows intact. The upstairs bedroom central to the house had a small gap in the ceiling leading to the loft space and door wedged open. The main bedroom to the northern part of the house had a loft hatch open. Droppings were found within the central small bedroom (figure 4) circa. 100+ with fresh droppings noted. Droppings appeared to represent a feeding or roosting perch for a Lesser-horseshoe bat. Droppings were of size and shape to that from a Lesser-horseshoe Bat (figure 5).

On further inspection of the loft space a single Lesser-horseshoe bat LHB was seen hanging from the roofing felt central to the building. Scattered droppings were also present within the loft space of size and shape to that from a LHB and of numbers representative of that of a single bat roosting.

Figure 4 – B1 first floor layout showing position of droppings 

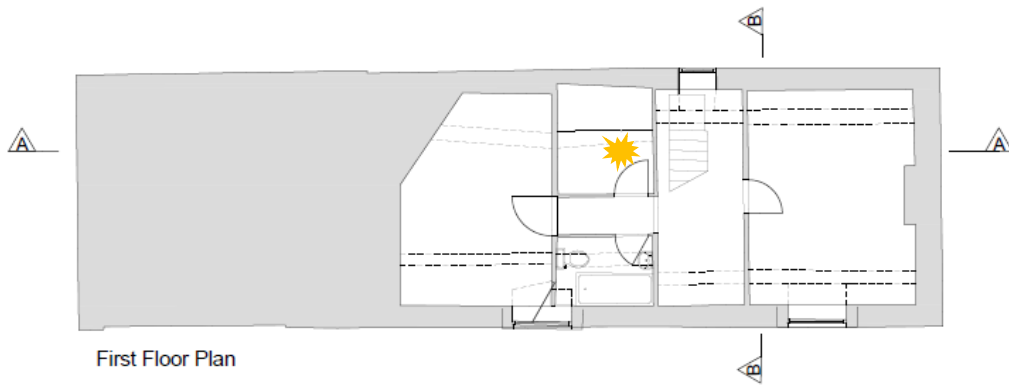


Figure 5 – B1 first floor bedroom with droppings noted on floor



The building represents high value roosting opportunities for summer and winter roosting bats.

- B2 The Mill

The mill building is of historic value with the mill workings still present. The three storey building (figure 6) has a variety of high value features suitable to a variety of species of bat to include slipped and broken tiles, timber frame with notable gaps. Internally, the mill structure presents many holes and gaps that bats could exploit (Figure 7).

Figure 6 – B2 The mill building - southern aspect



The building has holes within the roof structure with partial collapse and therefore water damage to the lower floors is evident with partial collapse. The mill has exposed timbers with suitable roosting potential within both for summer roosting and possible winter hibernation.



Figure 7 – Internal mill feature with exposed timbers with suitable roosting opportunities for bats

No roosting bats or evidence of roosting bats was noted during the day time assessment.

- B3 The bakery

The bakery differs from the other buildings, having a slate tile roof which is not lined. The building does, however, offer other opportunities with small gaps along the ridge tiles and gable end timbers as can be seen in figure 8.

Internally, the building is split into two rooms with the bread oven situated within the southern section. Both areas present suitable roosting features along the roof line where timbers meet the stone walls and where mortar has dropped out (figure 9).

Figure 8 – northern aspect of B3 showing gaps along the gable end



Figure 9 – internal picture of northern gable end with gaps in mortar.



No roosting bats or evidence of roosting bats was noted during the day time assessment.

### 3.2 Bat Roost Assessment Summary

The internal/external assessment of the buildings identified multiple droppings throughout the loft space and barn of B1. The droppings along with other evidence suggests a bat roost of several species are using B1. Further survey works to include dusk and dawn surveys are required to establish the ecological value of the three buildings to local bat populations.

### 3.3 Dusk Activity Bat Survey


A dusk and dawn bat emergence and bat activity survey was commissioned. This involved experienced surveyors (comprising Natural England licenced ecologists) using bat detectors and inferred video scopes at dusk to determine whether any roosting bats emerged from the buildings, as well as recording general bat passes within the site and activity levels along boundary features as per positions noted in figure 10. The survey conditions for the survey visits are shown table 1. The weather conditions were conducive to bat activity with the surveys validated by the presence of active bats.

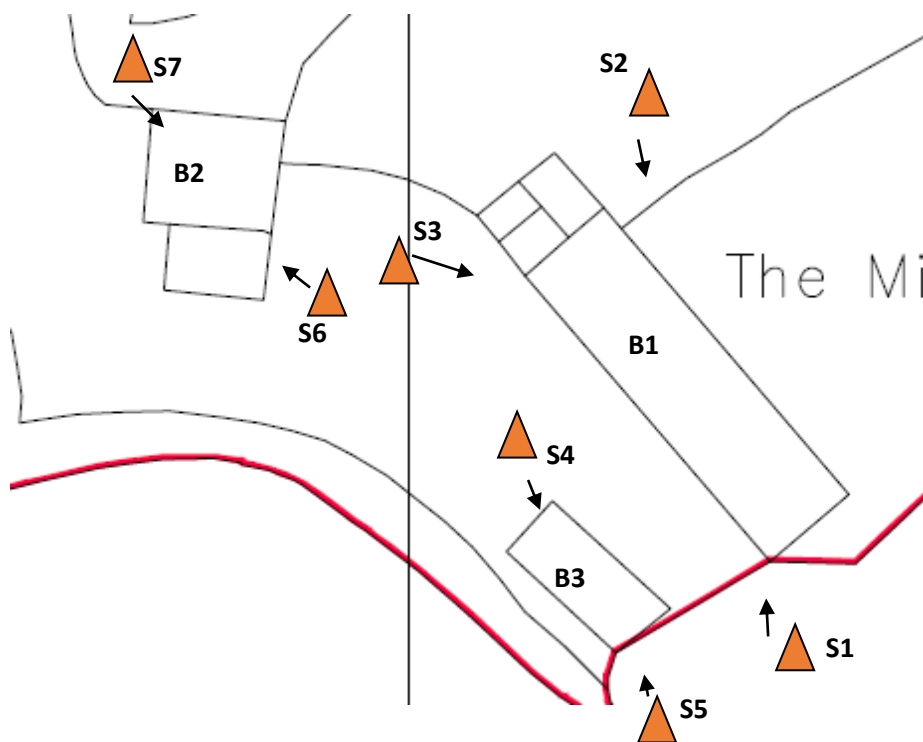
Surveys were carried out during August within the active survey period for bats. Equipment used were Pettersson Ultrasound 240X bat time expansion detector with an Edirol wav recorder and Anabat Walkabout detectors. Surveyors were positioned and static with good visibility of features identified during day time survey as per figure 10 across several surveys.

Table 1 - Survey conditions for activity surveys

Survey Date	Start/End of Survey	Temperature °C	Wind (beaufort scale)	Rain	Comments
6/8/2021 Dusk Survey	Start 20:40	17.5	0	non	Dry day before and during survey. Wind picked up half way though and cloud cover from 0% to 60%. Humidity ending 67%.
	End 22:25	13.8	1	non	
18/8/2021 Dawn Survey	Start 04:15	17.5	0	non	Dry before and mostly during survey until approx. 30min light drizzle was recorded. Humidity ending 84%
	End 06:15	15.8	0	yes	

18/8/2021 Dusk Survey	Start 20:13	15.2	0	non	Dry before survey and during. No wind although 100% cloud. Humidity ending 72%
	End 2210	13.7	0	non	
25/8/2021 Dawn survey	Start 04:40	12.2	0	non	Dry before and during survey. No wind and 40% cloud cover. Humidity ending 64%
	End 06:25	10.4	0	non	

Figure 10 – Surveyor  positions during activity surveys of each building.



Surveyor positions were generally static, although notes were taken of activity across the three buildings during individual building surveys.



## Survey Results Dusk 6/8/2021 – B1 Main house and B3 Bakery

Surveyor	Recorded Emergence	Comments (Heard not seen HNS)
S1	None	<p>A total of at least 5, possibly 6, species were recorded during the survey; common pipistrelle <i>Pipistrellus pipistrellus</i> and soprano pipistrelle <i>Pipistrellus pygmaeus</i>, Leisler's Bat <i>Nyctalus leisleri</i> (confirmed from recording), Brown long-eared <i>Plecotus auritus</i>, Natterer's bat <i>Myotis nattereri</i> and a myotis species unconfirmed. The first bat recorded was a common pipistrelle at 21.15 HNS (approximately 20 minutes after sunset).</p> <p>A total of six common pipistrelle passes were recorded during the survey 21:25, 21:43, 21:56, 22:19, and 22:24 with the majority along the roadside. The soprano pipistrelle was heard at 21:31 and again at 21:43. A myotis species HNS at 21:27 followed by a Natterer's bat 21:31 and 21:57 HNS.</p> <p>A single Leisler's bat at 21:45 but the bat was HNS.</p> <p>A brown long-eared bat pass heard only was noted at 22:13</p> <p>The last bat recorded was a common pipistrelle at 22.24 HNS</p>
S2	None	<p>A total of at least 6, possibly 7, species were recorded during the survey; common pipistrelle <i>Pipistrellus pipistrellus</i> and soprano pipistrelle <i>Pipistrellus pygmaeus</i>, noctule <i>Nyctalus noctula</i>, Leisler's Bat <i>Nyctalus leisleri</i> (confirmed from recording), Brown long-eared <i>Plecotus auritus</i>, Natterer's bat <i>Myotis nattereri</i> and a myotis species unconfirmed. The first bat recorded was a noctule at 21.09 (approximately 15 minutes after sunset).</p> <p>A total of two common pipistrelle passes were recorded during the survey (21:12 (off site) and 21:38. The soprano pipistrelle was seen flying over the roof south at 21:32</p> <p>A single noctule pass was recorded and then a Leisler's bat at 21:45 HNS</p> <p>A brown long-eared bat was seen and heard flying along the roof at 22:13</p> <p>The last bat recorded was a common pipistrelle at 22.21 and the bat was seen flying along the ridge of B1 north.</p>
S3	Yes 3 x species	<p>A total of at least 7, possibly 8, species were recorded during the survey; common pipistrelle <i>Pipistrellus pipistrellus</i> and soprano pipistrelle <i>Pipistrellus pygmaeus</i>, noctule <i>Nyctalus noctula</i>, Leisler's Bat <i>Nyctalus leisleri</i> (confirmed from recording), Brown long-eared <i>Plecotus auritus</i>, Barbastelle Bat <i>Barbastella barbastellus</i> Natterer's bat <i>Myotis nattereri</i> and a myotis species unconfirmed.</p> <p>The first bat recorded was a soprano pipistrelle at 21.01 (approximately 6 minutes after sunset).</p> <p>A total of two soprano pipistrelle bats were seen to <b>emerge</b> from the eaves of the timber barn with the second only one minute later 21:02. One more pass was recorded during the survey at 21:07. A common pipistrelle was HNS at 21:10. A single noctule pass 21:09 was recorded and then a Leisler's bat at 21:25, 21.45 HNS.</p> <p>A myotis species 21:20 was noted to <b>emerge</b> from eaves of the barn nearby to where the soprano pipistrelle had exited. At 21:24 a single barbastelle call was recorded at 21:24.</p> <p>At 21:26 a brown long-eared bat BLE was seen to <b>emerge</b> western</p>

	<p>doorway gap. At the same time a <i>Myotis</i> sp or possible BLE not confirmed <b>emerged</b> from the eaves of the timber barn also.</p> <p>At 21:36 a BLE was seen to <b>emerge</b> from the NW gable end and then at 21:37 and 21:41 another BLE was seen to <b>emerge</b> also from the timbered gable end.</p> <p>The last bat recorded was a <i>Myotis</i> sp.22:10 HNS.</p>
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Figure 11. Emergence noted

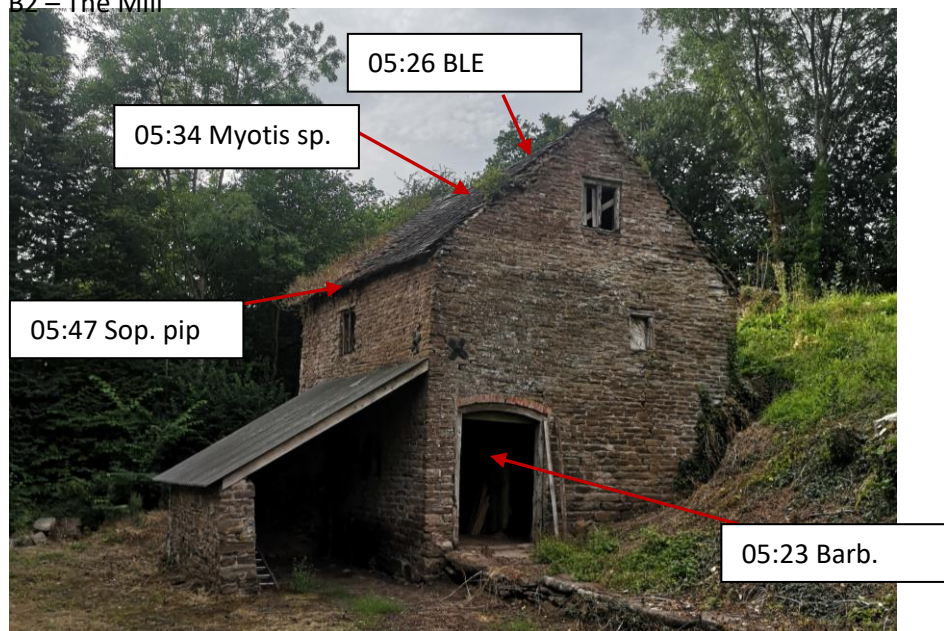


Surveyor	Recorded Emergence	Comments (Heard not seen HNS)
S4	None	<p>A total of at least 6 species were recorded during the survey; common pipistrelle <i>Pipistrellus pipistrellus</i> and soprano pipistrelle <i>Pipistrellus pygmaeus</i>, noctule <i>Nyctalus noctula</i>, Leisler's Bat <i>Nyctalus leisleri</i> (confirmed from recording), Brown long-eared <i>Plecotus auritus</i>, and a myotis species unconfirmed.</p> <p>The first bat recorded was a soprano pipistrelle at 21.01 (approximately 6 minutes after sunset).</p> <p>A total of two soprano pipistrelle bats were HNS 21:02. One more pass was recorded during the survey at 21:07. A common pipistrelle was heard but not seen at 21:10.</p> <p>A single noctule pass 21:09 was recorded and then a Leisler's bat at 21:25, 21.45 HNS</p> <p>A myotis species 21:21 HNS.</p> <p>At 21:41 a BLE HNS</p> <p>The last bat recorded was a Myotis sp.22:10 HNS.</p>
S5	None	<p>A total of at least 3, possibly 4, species were recorded during the survey; common pipistrelle <i>Pipistrellus pipistrellus</i>, Leisler's Bat <i>Nyctalus leisleri</i> (confirmed from recording), Brown long-eared <i>Plecotus auritus</i> and a myotis species unconfirmed.</p> <p>The first bat recorded was a common pipistrelle at 21.15 HNS (approximately 20 minutes after sunset).</p> <p>A total of six common pipistrelle passes were recorded during the survey 21:25, 21:43, 21:56, 22:19, and 22:24 with the majority along the roadside.</p> <p>A myotis species was HNS at 21:27</p> <p>A single Leisler's bat at 21:44 HNS.</p> <p>A brown long-eared bat pass heard only was noted at 22:13</p> <p>The last bat recorded was a common pipistrelle at 22.24 and the bat was HNS.</p>

## Survey Results Dawn 18/8/2021 – B2 The Mill

Surveyor	Recorded Returning to roost	Comments (Heard not seen HNS)
S6	None although swarming noted.	<p>A total of at least 5, possibly 6, species were recorded during the survey; common pipistrelle <i>Pipistrellus pipistrellus</i> and soprano pipistrelle <i>Pipistrellus pygmaeus</i>, Brown long-eared <i>Plecotus auritus</i>, Natterer's bat <i>Myotis nattereri</i>, Barbastelle Bat <i>Barbastella barbastellus</i> and a myotis species unconfirmed.</p> <p>A total of three common pipistrelle passes were recorded during the survey with the latest being 05:25 approx. 25 minutes prior to dawn. The soprano pipistrelle was noted foraging 04:41 and then noted swarming around the roof top of the mill from 05:39 – 05:47.</p> <p>BLE foraging calls noted 05:31 and seen to swarm around the roof and ridge at 05:36.</p> <p>A myotis species was heard to forage between 05:25 and then swarming around roof between 05:36 and 05:38.</p> <p>A Natterer's bat was noted 05:29 HNS.</p> <p>A barbastelle was HNS at 04:54.</p> <p>The last bat noted was a soprano pipistrelle bat swarming around the mill building but then left site in a south westerly direction 05:55.</p>
S7	Yes. 4 x species	<p>A total of at least 5, possibly 6, species were recorded during the survey; common pipistrelle <i>Pipistrellus pipistrellus</i> and soprano pipistrelle <i>Pipistrellus pygmaeus</i>, Brown long-eared <i>Plecotus auritus</i>, Natterer's bat <i>Myotis nattereri</i>, Barbastelle Bat <i>Barbastella barbastellus</i> and a myotis species unconfirmed.</p> <p>A total of three common pipistrelle passes were recorded during the survey with the latest being 05:03 approx. 50 minutes prior to dawn. The soprano pipistrelle was not heard foraging throughout the survey and only noted swarming around the roof top of the mill and returning <b>to roost</b> 05:47.</p> <p>BLE were seen to be flying around inside the building around 04:46 and again at 05:00. Foraging calls noted outside 04:54 and 05:04 and seen to swarm around the roof and ridge at 05:16. 2 x BLE went <b>to roost</b> at 05:26 under ridge tile.</p> <p>A myotis species was heard to forage between 04:49 and with 4 returning <b>to roost</b> between 05:34 and 05:38 within the tiles and ridge.</p> <p>A Natterer's bat was noted 05:13 HNS.</p> <p>A barbastelle was heard at 04:54 as a brief pass. A second pass towards the house was seen and heard at 05:18. At 05:23 a single barbastelle was noted entering the southern doorway and is thought to have gone <b>to roost</b>.</p> <p>The last bat noted was a soprano pipistrelle bat swarming around the mill building but then left the site in a south westerly direction 05:55.</p>

B2 – The Mill



**Dusk survey 18/8/2021 B3 the bakery**

Surveyor	Recorded Emergence	Comments (Heard not seen HNS)
S4	None	<p>A total of at least 6 species were recorded during the survey; common pipistrelle <i>Pipistrellus pipistrellus</i> and soprano pipistrelle <i>Pipistrellus pygmaeus</i>, noctule <i>Nyctalus noctula</i>, Brown long-eared <i>Plecotus auritus</i>, and a myotis species unconfirmed.</p> <p>The first bat recorded was a common pipistrelle at 20.37 (approximately 10 minutes after sunset).</p> <p>A total of six common pipistrelle bats were heard and seen 20:41, 20:47, 21:01 and 21:45. A soprano pipistrelle was heard and seen at 20:59 and again at 21:45. A single noctule pass not seen at 21:49.</p> <p>A myotis species was recorded as a pass at 20:51, 20:54, 21:28 and at 21:49.</p> <p>At 21:04 a BLE was HNS and then at 21:24 was seen onto the road from driveway.</p> <p>The last bat recorded was a Myotis sp. 21:10 HNS.</p>
S5	None	<p>A total of at least 6 species were recorded during the survey; common pipistrelle <i>Pipistrellus pipistrellus</i> and soprano pipistrelle <i>Pipistrellus pygmaeus</i>, noctule <i>Nyctalus noctula</i>, Brown long-eared <i>Plecotus auritus</i>, and a myotis species unconfirmed.</p> <p>The first bat recorded was a common pipistrelle at 20.37 (approximately 10 minutes after sunset).</p> <p>A total of six common pipistrelle bats were heard and seen 20:41, 20:47, 21:01 and 21:45. A soprano pipistrelle was heard and seen at 20:59 and again at 21:45. A single noctule pass HNS at 21:49.</p> <p>A single lesser horseshoe bat <i>Rhinolophus hipposideros</i> was recorded briefly passing position HNS 21:54.</p>

	<p>A myotis species was recorded as a pass at 20:51, 21:28 and at 21:49. At 21:04 a BLE was HNS and then at 21:24 was seen flying south towards the road from driveway. The last bat recorded was a Myotis sp. 21:10 HNS.</p>
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**Dawn survey 25/8/2021 B1 Main House**

Surveyor	Recorded returning to roost	Comments (Heard not seen HNS)
S1	None	<p>A total of at least 4 species were recorded during the survey; common pipistrelle <i>Pipistrellus pipistrellus</i>, noctule <i>Nyctalus noctula</i>, Natterer's bat <i>Myotis nattereri</i> and a myotis species unconfirmed.</p> <p>The first bat recorded was a common pipistrelle at 04:44 foraging multiple passes.</p> <p>A total of five common pipistrelle passes were recorded during the survey with the latest in the survey being 05:37 with the majority along the roadside and roadside hedges HNS.</p> <p>A single noctule was HNS at 04:54</p> <p>A myotis species HNS commuting pass at 04:59 and then again at 05:07 and 05:26. Two loud passes HNS of Natterer's bat commuting past noted at 05:40 and 05:49 HNS.</p>
S2	None	<p>A total of at least 5, possibly 6, species were recorded during the survey; common pipistrelle <i>Pipistrellus pipistrellus</i> and soprano pipistrelle <i>Pipistrellus pygmaeus</i>, noctule <i>Nyctalus noctula</i>, Brown long-eared <i>Plecotus auritus</i>, Natterer's bat <i>Myotis nattereri</i> and a myotis species unconfirmed.</p> <p>The first bat recorded was a common pipistrelle at 04:47 heading down the driveway.</p> <p>A total of two common pipistrelle passes were recorded during the survey with the latest one being 04:59. The soprano pipistrelle was HNS on several passes foraging around the garden north of position. First recorded 05:14 and then 05:21.</p> <p>A single noctule pass was recorded 04:54 HNS</p> <p>A brown long-eared bat was HNS at 05:09</p> <p>Natterer's bat was recorded 05:39 HNS</p> <p>The last bat recorded was a myotis sp 05:26 HNS</p>
S3	Yes 1 x species	<p>A total of at least 5, possibly 6, species were recorded during the survey; soprano pipistrelle <i>Pipistrellus pygmaeus</i>, noctule <i>Nyctalus noctula</i>, Brown long-eared <i>Plecotus auritus</i>, Barbastelle Bat <i>Barbastella barbastellus</i> Natterer's bat <i>Myotis nattereri</i> and a myotis species unconfirmed.</p> <p>The first bat recorded was a common pipistrelle at 04:45 HNS. No further common pipistrelle bats were recorded.</p> <p>A single soprano pipistrelle bats was seen to swarm briefly before entering <b>roost</b> 05:56 within the eaves of the timber barn where one was spotted emerging 1<sup>st</sup> survey. One more pass was recorded during the</p>

		<p>survey at 05:57. A single noctule pass HNS was recorded 04:54. A myotis species was noted 05:40 to swarm around roof line and then head north towards the Mill.</p> <p>A single barbastelle call was recorded at 05:32 close to position although HNS.</p> <p>At 05:20 a brown long-eared bat BLE was seen to emerge from the barn structure and forage around garden briefly. At 05:28 a single BLE was seen to enter the barn briefly foraging around inside and then out through the doorway and north.</p>
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General bat activity within the grounds was low, with common species foraging to include Common Pipistrelle, Soprano Pipistrelle and BLE, although in low numbers. The roadside and rear north eastern gardens had the most foraging.

In total, 9 species were noted as either commuting, foraging or passing over the site and buildings surveyed. Of these 9, 5 species have been confirmed as utilising the buildings for day and night roosting opportunities.

- Single summer bat roosts of Soprano Pipistrelle bats have been found within the roof of B1 and B2.
- Multiple BLE bats have been found to be utilising the main house as what is thought to be a maternity roost although further data is required to confirm. This roost is thought to have broken up at the end of the survey season and was found to be also utilising the roof of B2.
- Multiple Myotis sp (unknown and awaiting DNA confirmation of species) have been found to be utilising the roof of the attached barn of B1. Although low numbers, this could also be a maternity roost although further data is required to confirm. This roost is thought to have broken up at the end of the survey season and was found to be also utilising the roof of B2.
- A single Barbastelle bat was seen to enter B2 at dawn and is thought to have returned to roost within the building.
- A single Lesser-horseshoe bat has been found to have been using the loft space and first floor bedroom of B1 as a summer roost. The bat was seen on multiple visits with droppings present to indicate a small roost.

When the weather gets warmer, usually in early summer, pregnant female bats gather together in warm, safe places to have their babies. These roosts are called maternity roosts. BLE and Myotis species of bats are known to return to the same site every year if conditions are right.

Survey works to include dusk and dawn surveys were carried out towards the end of the survey season. Although within the active season for bats, maternity roosts may have separated/broken up into satellite roosts causing potential survey data inaccuracies.

Both the farmhouse B1 and the Mill B2 buildings offer potential roosting features for winter roosts such as the cellar within B1 and gaps and crevices within stone walls and timbers within B2.

All species of British bat, and their roosts, are protected under British law by the WCA 1981 (as amended), and bats are classified as European Protected Species under The Conservation of Habitats

and Species Regulations 2010. This makes it an offence to kill, injure or disturb a bat and/or to damage or destroy a breeding site or resting place for a bat.

It is also an offence to disturb the animals such that it impairs their ability to survive, to reproduce, to nurture their young, or such that it impairs their ability to hibernate or migrate. It is an offence to disturb the bat(s) in such a way as it affects significantly the local distribution or abundance of the species to which they belong.

In summary, the site is of interest, locally, for uncommon and rare bats as well as more common bat species.

#### **4. Potential Impacts**

- The redevelopment of the buildings are likely to have an impact upon a protected species and roost of conservation value should mitigation not be put in place.
- Works planned could result in disturbance to a protected species as well as damage to a breeding place or place of rest.

#### **5. Recommendations**

- Renovation plans amended and timed to include the protection of bats whilst utilising the property. Architectural plans to include maximum protection of roost feature and Brown Long-eared and Lesser-horseshoe bat roost requirements (attic space).
- Bat mitigation and protection plan created for the property to include actions required by Natural England for the protection of bats using the buildings B1 and B2 along with mitigation to ensure no bats are disturbed should they utilise B3.
- A Natural England licence to disturb will be required prior to works to renovate and extend the properties.
- Supervision by a bat licenced ecologist during all renovation work especially around features of interest and those with roosting potential.

#### **6. Summary and Conclusions**

Although this survey provides only a 'snapshot' within the active bat season, the surveyed conditions and results indicate that the site is of high interest, locally, for at least 5 species of bat to include maternity roosts.

It is felt that development works planned to convert the property and renovate can be implemented in a sympathetic way so that the risk of harm to bats using the property is low (seasonal development works). Roost access from the roof will not be affected by works planned, although several roost access points will require adapting.

It is felt that the BLE maternity roost and Myotis sp. maternity roost could be modified to allow for plans to convert the adjoining barn into a habitable space. The conversion of The Mill will include maintaining roosting opportunities for BLE, Myotis sp, Barbastelle and Soprano Pipistrelle bats. Monitoring by visual inspection and further bat surveys during the



following season to include a winter hibernation survey will be required in order to gather the necessary data to inform a licence application to permit works.

For the conversion of The Mill and restoration and extension to the main house, a Natural England licence to 'disturb' and to 'amend' roost accesses will be required. Further surveys during 2022 will be required to supplement 2021 survey information as required by Natural England.

Should The Mill building be condemned due to potential for building collapse, as surveyed by a suitably qualified person and therefore classified as a 'dangerous building', a bat licence application could be made under 'clause 4' (Health and safety reasons).

Consequently, a mitigation licence would be required from Natural England to ensure that the development proposals do not adversely affect the favourable conservation status of bat species at the site to comply with the legal protection afforded to all UK bat species.