



ML-ECOLOGY
SURVEYS & SOLUTIONS

Bat Activity Survey Report for Buildings at Well Street Mill, Well Street, Leek



10th September 2025

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SUMMARY

At Well Street Mill in Leek Staffordshire, planning permission is being sought for the alterations to buildings.

As this could impact on features typically used by bats as roosting and/or hibernating places, a diurnal inspection was undertaken by Elton Ecology in November 2024, to assess the building for signs of bat occupation.

A desk study revealed a small number of bat records within the search area, with species including Common Pipistrelle *Pipistrellus pipistrellus*, Brown Long-eared Bat *Plecotus auritus* and Noctule Bat *Nyctalus noctule*.

This suggested that if any suitable features were present on/within the building, they could be utilised by roosting and/or hibernating bats within the area.

All the internal and external structures, especially those associated with the roofs and walls of the building were examined.

An inspection of the building revealed no signs or evidence of roosting bats. However, a number of potential access points along with suitable internal niches and cavities were present.

As such one building (B1) was classified as having low suitability for roosting and hibernating bats, whilst another building (B2) was classified as having moderate suitability for roosting and/or hibernating bats.

Given the low and moderate suitability buildings, it was recommended a single emergence survey was undertaken on B1 and two nocturnal emergence surveys to be undertaken on B2, in the period May to September (inclusive).

Subsequently, nocturnal surveys were undertaken on the buildings on the evenings of 20th June and of 24th July 2025 by ML-Ecology to confirm the presence or absence of roosting bats in the building.

The survey followed the guidelines recommended by the Bat Conservation Trust.

During the emergence surveys, no bats were recorded emerging from the application buildings; A solitary Noctule Bat was detected flying high over the area on the 1st survey, whilst no bat activity was recorded in the area on the 2nd survey.

From the evidence of these surveys, the status of bats at the building is considered thus:

- Absence of roosting and foraging bats within the application buildings

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It is recommended the proposed development seeks to provide biodiversity enhancement in line with the NPPF. This should include the provision of bat and bird boxes, specifically build in bat tubes (e.g. Woodstone bat tube/bricks) into the building, ideally within the south/west facing aspects.

INTRODUCTION

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The surveys followed the guidelines recommended by the Bat Conservation Trust.

The results of the surveys are contained in this report.

In England, Scotland and Wales, all bat species are fully protected under the Wildlife and Countryside Act 1981 (WCA) (as amended), through inclusion in Schedule 5. In

England and Wales this Act has been amended by the Countryside and Rights of Way Act 2000 (CRoW), which adds an extra offence, makes species offences arrestable, increases the time limits for some prosecutions, and increases penalties.

All bats are also included in Schedule 2 of the Conservation (Natural Habitats, & c.) Regulations 1994, (or Northern Ireland 1995) (the Habitats Regulations), which defines 'European protected species of animals'.

The above legislation can be summarised thus (Mitchell-Jones and McLeish, 2004):

- ❑ *Intentionally or deliberately kill, injure or capture (or take) bats*
- ❑ *Deliberately disturb bats (whether in a roost or not)*
- ❑ *Recklessly disturb roosting bats or obstruct access to their roosts*
- ❑ *Damage or destroy roosts*
- ❑ *Possess or transport a bat or any part of a part of a bat, unless acquired legally*
- ❑ *Sell (or offer for sale) or exchange bats, or parts of bats*

The word 'roost' is not used in the legislation, but is used here for simplicity. The actual wording is 'any structure or place which any wild animal...uses for shelter or protection' (WCA), or 'breeding site or resting place' (Habitats Regulations). As bats generally have both a winter and a summer roost, the legislation is clear that all roosts are protected whether bats are in residence at the time or not.

2. METHODOLOGY

In order to fully assess bat occupation of a particular site, the Bat Conservation Trust (2023) recommends that information gathered from a desk study of known bat records, and a daytime site walkover, is used to inform the type and extent of future bat survey work, potentially including nocturnal emergence surveys.

The preliminary roost assessment (PRA) is usually in the form of a diurnal walkover and can be carried out at any time of the year. It provides an opportunity to check for signs of bat occupancy and/or the suitability for bat roosting.

Evidence of bat activity includes droppings, scratch marks, feeding remains, carcasses, or even roosting animals, whilst suitability is determined by the type and number of potential roost features (PRFs) typically used by bats.

Roosting places vary depending on the species. Pipistrelles usually inhabit narrow cracks or cavities around the outside of buildings, but they will roost in similar niches inside larger barns. Typical sites include soffit spaces, gaps behind fascia boards and end rafters, crevices around the ends of projecting purlins, under warped or lifted roof and ridge tiles, or in gaps in stone and brickwork where mortar has dropped out.

Larger species such as Brown Long-eared Bats *Plecotus auritus*, Myotis bats (Natterer's Myotis *nattereri* and Whiskered/Brandt's *M. mystacinus*/*M. brandtii*), and Lesser Horseshoes *Rhinolophus hipposideros*, like to roost in the roof voids of buildings, and can often be found hanging singly or in small groups from ridge boards or roof timbers, especially where these butt up against gable walls or chimney breasts. They especially favour older structures with timber frames. Here they squeeze into tight crevices making them difficult to observe.

Where bats are found, or there is evidence of bat occupation or activity, i.e. that bat use is confirmed, a roost characterisation survey is undertaken. The results are used to inform the impact assessment and design of mitigation measures. Roost characterisation includes nocturnal emergence surveys, unless sufficient information has already been collected using robust survey methods with no significant constraints.

Nocturnal emergence surveys allow numbers and species of bats to be confirmed, and should only be undertaken when bats are out of hibernation and in their summer roosts.

The bat active period is generally considered to be between April and October, although particularly cold weather will affect the level and extent of bat activity. Indeed, the air temperature at the start of each survey should be at least 10°C or above, with no strong wind or heavy rain. The survey starts 15 minutes before sunset and continues for one and a half to two hours after sunset.

Visits will be a minimum of three weeks apart, and the number of surveys and timing is dependent on the evidence found or the suitability of the site to bats. This will be determined by the ecologist. In general, at least two emergence nocturnal surveys will be carried out, but a third visit may be necessary if the results are inconclusive or further information is required.

Nocturnal emergence surveys are also used to determine the presence or absence of bats, where signs of bat activity are indeterminate or absent but the suitability for bat roosting is considered to be low, moderate or high.

For a site with no evidence but low suitability, just one nocturnal emergence survey is required, this to be in the period May to August.

For moderate suitability a minimum of two visits are needed between May and September, of which one must be in the period May to August.

With high suitability, three visits will be necessary between May and September, of which two must be in the period May to August.

Where there is no evidence of bat presence, and no suitability for roosting, no nocturnal surveys will be needed.

The number of surveyors and/or the use of night vision aids (NVAs) is determined by the ecologist, and is dependent on the complexity of the structure. For simple structures just one surveyor using an appropriate number of NVAs will be sufficient, but for larger sites and/or more complex or irregularly shaped structures, e.g. those with multiple elevations and/or roof slopes, more surveyors will be required.

On the evenings of 20th June and 24th July 2025, surveys were undertaken, commencing approximately 15 minutes before and continuing up to 1hr 30 mins after sunset.

The survey consisted of direct observation by Matt Liston and assistants (all working under Natural England bat licence number No. 2015-16489-CLS-CLS), positioned adjacent to the building.

The surveys were aided by the use of Echometer Touch Pro bat detectors to facilitate the detection of bats and aids in the identification of individual species, in particular those which might be utilising different frequencies simultaneously, whilst Night Vision Aids (Nightfox Vulpes IR) were also used to observe potential emergence points.

The results of the surveys are detailed in Section 3, with the position of the observers shown in Plan 1.

3. RESULTS

3.1 Emergence Survey (1)

The emergence survey was carried out on the evening of 20th June 2025 commencing at 21:15 and finishing at 23:10. The weather conditions during the time of the survey were recorded and are presented in Table 2 below.

Parameter	Value
Temperature (°C)	17.0
Cloud cover (%)	30
Precipitation	None
Wind speed (Beaufort scale)	F0
Sunset	21:39

Table 2 Weather conditions during the emergence survey on 20th June 2025

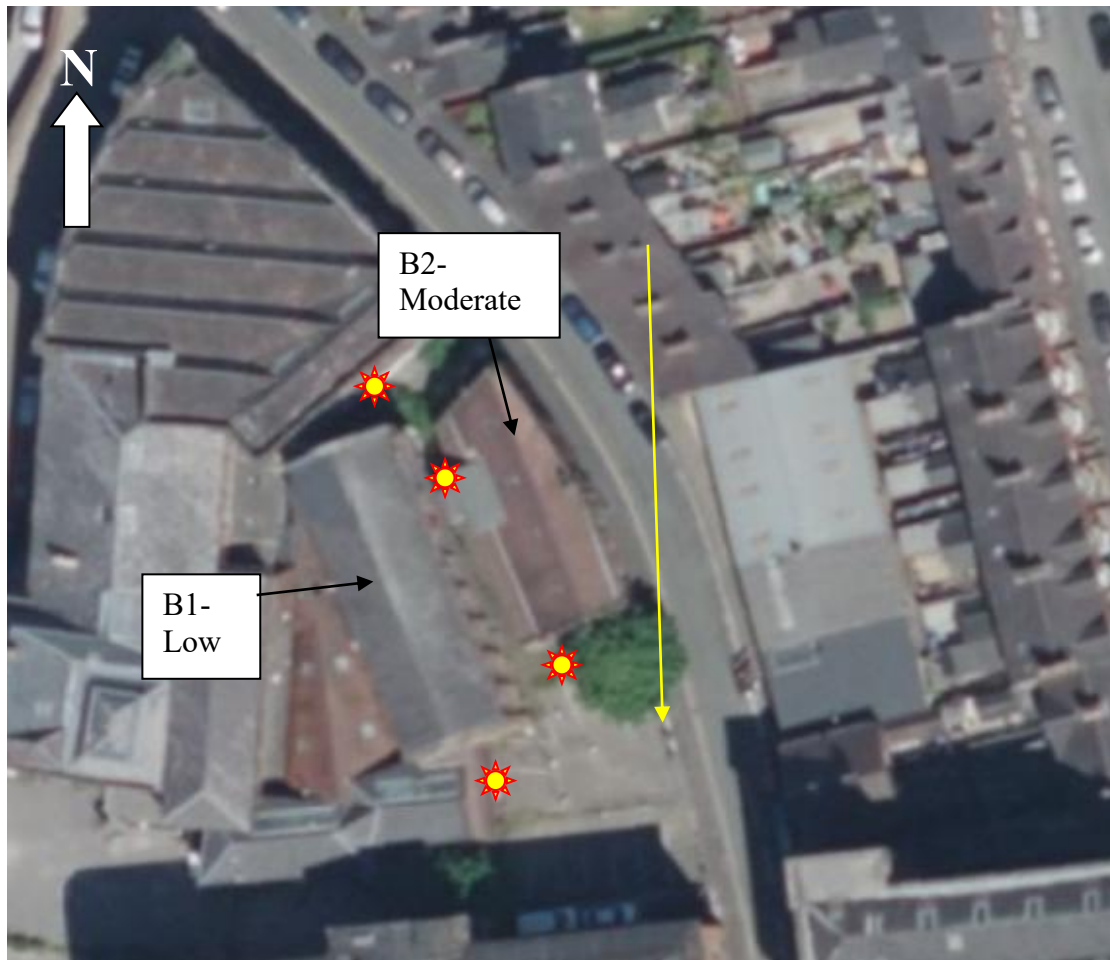
On the evening of 20th June 2025, no bats emerged from the application buildings. A single Noctule bat was recorded flying high over the application site/wider area.

Details of the bat observations and detections are listed below.

Time	Observation
21:15	Survey starts.
21:52	Noctule Bat detected and observed flying high over the area, commuting north-east to south.
23:10	Survey ends with no further detections.

The flight paths of the bats during the emergence survey are shown in Plan 1 - overleaf

Plan 1: Flight paths of bats on 20th June 2025



Positions of observers 

Noctule Bat(s) 

3.2 Emergence Survey (2)

The emergence survey was carried out on the evening of 24th July 2025, commencing at 21:00 and finishing at 22:45. The weather conditions during the time of the survey were recorded and are presented in Table 2 below.

Parameter	Value
Temperature (°C)	18.0
Cloud cover (%)	20
Precipitation	None
Wind speed (Beaufort scale)	F0
Sunset	21:13

Table 2 Weather conditions during the emergence survey on 24th July 2025

On the evening of 24th July 2025, again no bats emerged from the application buildings. No bat activity was detected during the survey.

Details of the bat observations and detections are listed below.

Time	Observation
21:00	Survey starts.
22:45	No further bat detections and survey ends.

The flight paths of the bats during the dawn survey are shown in Plan 2 -overleaf.

Plan 2: Flight paths of bats on 24th July 2025



Positions of observers 🌟

4. CONCLUSIONS AND RECOMMENDATIONS

Bats tend to be seasonal visitors to trees and built structures such as residential properties, and are not usually in occupation all year round. The females normally form maternity colonies during May or June and then leave for adjacent trees and/or woodland during July or August once the young bats are able to fly and become independent. Here they will spend the winter months in hibernation before returning to the house or barn the following spring.

Male bats generally live alone and have a number of favoured roosts. During the summer they visit each of these for a few days at a time, before moving to their chosen hibernation site in mid-late October.

Different species have different habits, but this seasonal movement is common to all.

Bats choose their roosts carefully. During the summer they look for sites which are warmed by the sun, and as a result are most often found on the south and western side of trees and buildings.

Pipistrelles, our smallest and commonest bats, prefer to roost in very confined spaces around the outside of buildings, typical places being behind hanging tiles, weather boarding, soffit, barge and eave boarding, between roof felt and roof tiles or in cavity walls.

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5. REFERENCES

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