



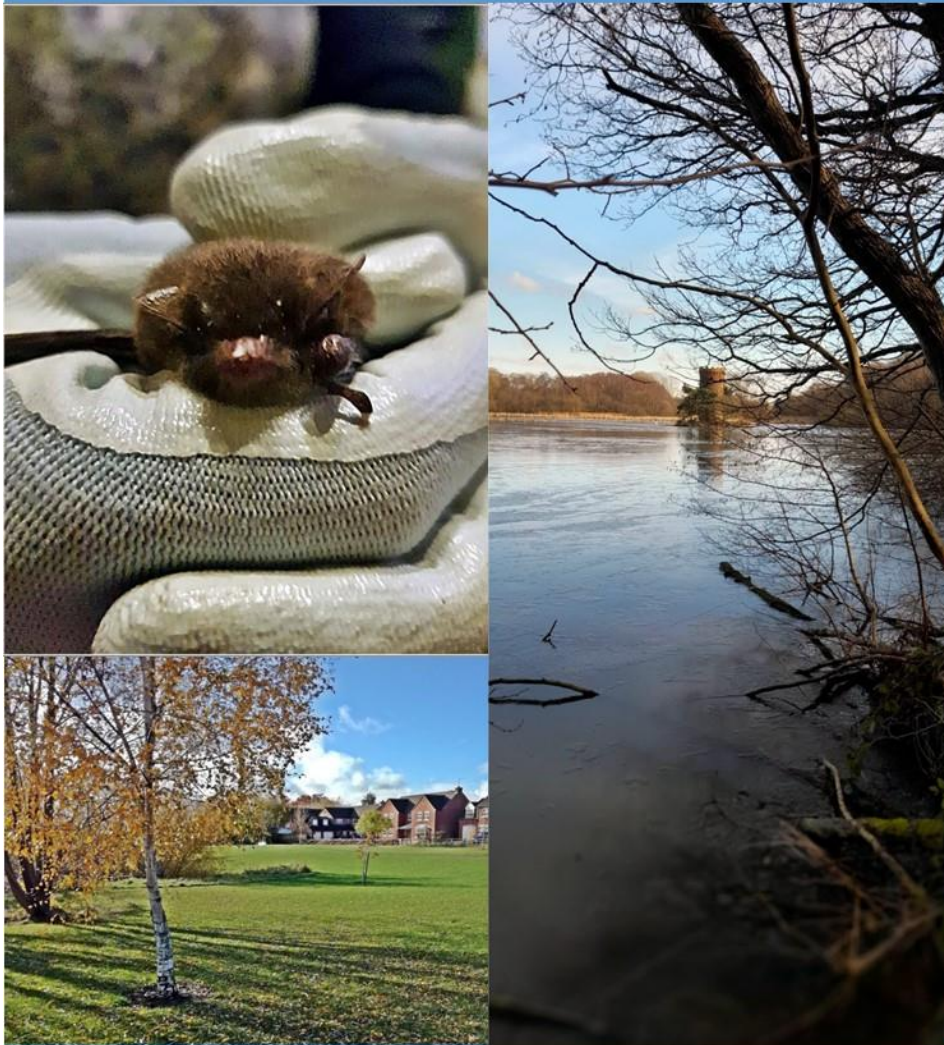
The Farmhouse at
45 Main Street, Carlton,
Nuneaton,
CV13 0BZ

Preliminary Bat Roost Assessment

Prepared by:
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Instructed by:
Mr & Mrs Turner

Project Number: GE0654



We assist our clients to deliver a measurable net gain in biodiversity.

Quality Management		
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1. Introduction

1.1 Background

Griffin Ecology Ltd. has been appointed by the client to undertake a Preliminary Bat Roost Assessment, to include an intrusive inspection, of the farmhouse at 45 Main Street, Carlton in Leicestershire.

This report seeks to gain an understanding of the potential for the subject building to support roosting bats and nesting birds.

1.2 Site description

The site (central grid reference: SK 39654 05049) is accessed off a private road leading from the A5199 and set within a hardstanding curtilage, associated outbuildings and landscaped gardens to the rear.

The site is located within a rural settlement of Carlton, some 2km to the north west of Market Bosworth, Leicestershire. The surrounding landscape offers a good mosaic of habitats including a mix of grazed pasture, intensive arable cultivation and pockets of woodland that are potentially connected to the site by an established network of hedgerows. Such a rural mosaic of habitats is likely to support roosting, foraging, and commuting opportunities for local bats.

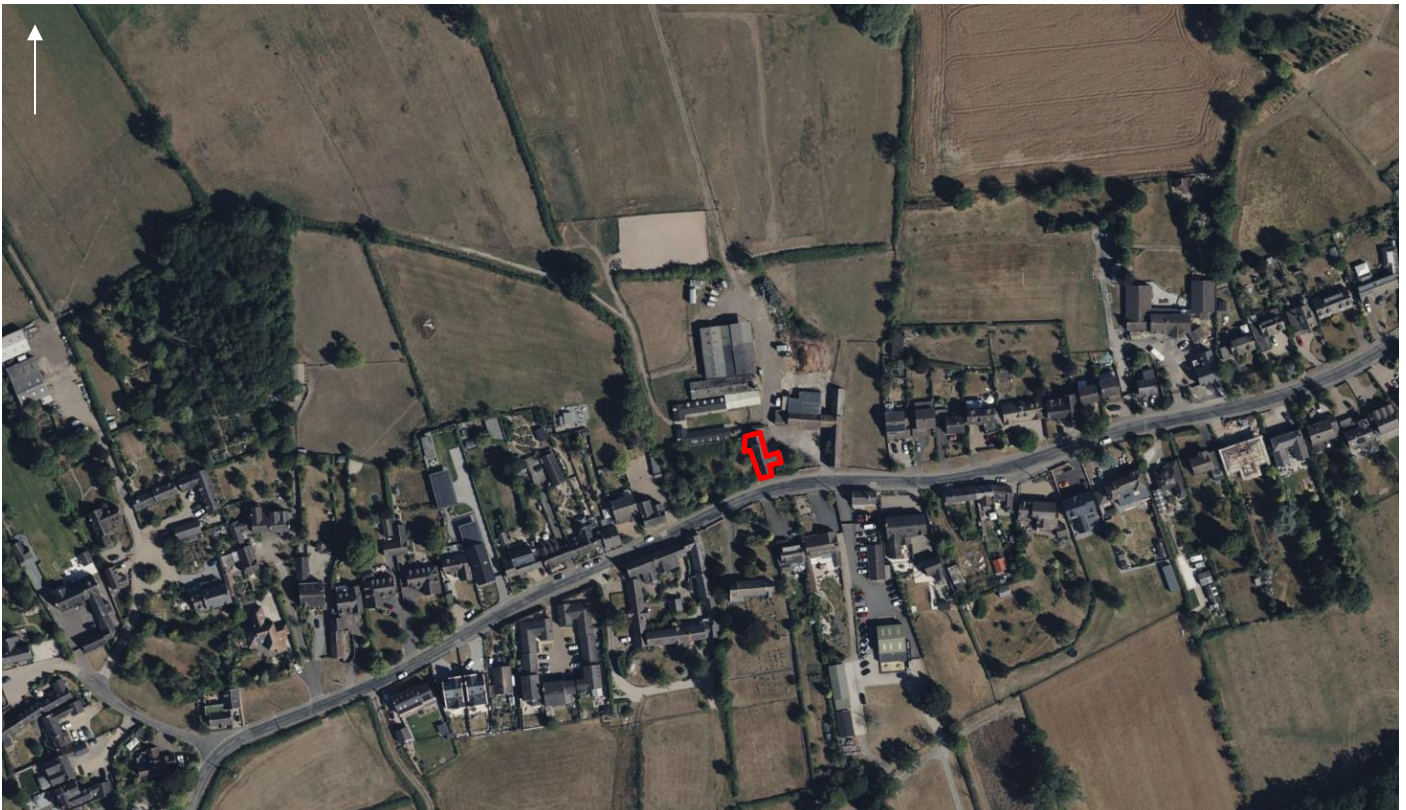


Figure 1: Site location

1.3 Survey Purpose

The purpose of this survey is to gain a preliminary understanding of the potential for the subject building to support roosting bats as well as inform appropriate mitigation in respect of perceived impacts anticipated as a result of refurbishment works.

The objectives of the survey and this assessment are to:

- Assess potential presence / likely absence of roosting bats within the building to be impacted;
- Assess any impacts that the proposals may have on any roosting and foraging / commuting bats;
- Determine, where possible, the need for further surveys to inform appropriate mitigation and the need for a Natural England European Protected Species Mitigation (EPSM) licence;

1.4 Proposed Plans

No detailed plans have been available, however it is understood that the extent of proposed works will include rebuilding damaged walls, repointing, replacing damaged bricks and removing and replacing the roof. These works will be undertaken with the purpose of restoring and refurbishing the Grade 2 listed historic farmhouse building.

1.5 Relevant Legislation

A number of UK and European legislations and policies deal with the conservation of biodiversity. Below is listed a brief outline of the legal and policy protection afforded to bats.

Bats and their roost sites are protected under UK and European legislation including the Wildlife and Countryside Act 1981 (as amended), Countryside Rights of Way Act 2000, the Conservation of Habitats and Species Regulations 2010 and the Habitats Directive. This legislation makes it an offence for any person to:

- Deliberately capture, injure, or kill a bat.
- Intentionally or recklessly disturb bats, where that disturbance may affect the ability of those bats to survive, breed, rear or nurture their young, or is likely to significantly affect the local distribution or abundance of any bat species, whether in a roost or not.
- Damage or destroy a place of shelter (roost) of a bat, be that a resting or breeding place.
- Possess a bat, whole or in part, alive or dead.
- Intentionally or recklessly obstruct access to a roost
- Sell or offer for sale or exchange whole or parts of bats, alive or dead.

When interpreting the relevant legislation within context it is important to acknowledge that bat roosts are protected throughout the year, regardless of whether or not bats are present at the time. Under the Regulations, the offence of damaging or destroying a breeding site or resting place of bats is subject to strict liability, i.e. an offence will have been committed even if the damage or destruction occurs accidentally.

Where development is will result in an offence under the above legislation a suitable derogation licence needs to be obtained by Natural England to permit an act that would otherwise be unlawful. This provides for a specific derogation from the legislation, to prevent a legal infringement occurring.

2. Methodology

2.1. Desk Study

A biological records search has been undertaken by the Leicestershire and Rutland Environmental Records Centre (LRERC) for historic bat records within a 2km search radius of the site.

The Multi-Agency Geographic Information for the Countryside (MAGIC) website has also been accessed for information on notable habitats, statutory designated sites, and historic bat EPSL granted within a 2km radius of the site.

2.2. Preliminary Roost Assessment

The site has been visited by a suitably experienced and licensed surveyor, Casey Griffin (Principal Ecologist, MCIEEM, level 2 bat survey licence: 2016-23916) assisted by Masha Tarnavska ACIEEM, on Wednesday 1st May 2024.

Weather conditions at the time of survey were recorded.

The inspection of the subject building included a search for suitable bat roosting features with an assessment made as to the potential value to bats in accordance with Bat Surveys for Professional Ecologists: Good Practice Guidelines 4th edition (BCT, 2023). The inspection was aided by a one million candlepower torch, extendable ladders, binoculars, and a rigid endoscope where suitable for detailed inspections of accessible areas.

Bat evidence: The interior (where access was possible) and exterior of the buildings have been searched for evidence of bats including:

Live or dead bats, droppings, staining and feeding remains.

Evaluation of roosting suitability:

The building has been assessed both internally (where accessible) and externally for suitability to support roosting bats as well as the likely species, roost type and numbers of bat the building could support.

Following the survey of the building and consideration of possible factors it will be assessed as having negligible, low, moderate, or high suitability for roosting bats, in accordance with the BCT Guidelines.

Nesting bird evidence:

The building has also been searched for evidence of bird nesting activity such as active or historic nests. In addition, the building has been searched for evidence of activity such as bird droppings, splashings and pellets.

2.3 Survey limitation

The baseline conditions reported and assessed within this document represent those identified at the time of the survey.

Access into one of the enclosed void voids was not possible at the time of survey as a result of the poor condition of the supporting timber floor.

Many species of bat in the UK are crevice-dwelling, therefore signs of bat occupation may be obscured from view. As such a precautionary view has been adopted. The external inspection of the building has been undertaken both from ground level and at high with full scaffolding assisting the surveyors view of the roof and the walls up to eaves level.

3. Results

3.1 Desk Study

The desk study confirms the site to lay some 1.2km to the north east of the Ashby Canal SSSI. This statutory designation retains one of the richest invertebrate communities of eutrophic standing water still found in Leicestershire. No other statutory designations are present within a 2km radius of the site.

A small number of pockets of priority habitat including deciduous woodland and lowland fen are located within a 1km radius of the site. None of these habitats are directly connected to the site.

The desk study reveals a single granted EPSL, in relation to roosting bats, issued relating to a building some 1.8km to the south of the site. This licence allows for the destruction of a common pipistrelle resting place.

The historic records held by LRERC identify four confirmed bat species within the 2km search radius. These include common pipistrelle (*Pipistrellus pipistrellus*), soprano pipistrelle (*Pipistrellus pygmaeus*), brown long-eared (*Plecotus auritus*) and Noctule (*Nyctalus noctula*). Furthermore records are held for indeterminate bat and indeterminate Myotis species. These records include confirmed roosts supporting common pipistrelle and brown long-eared. The nearest of these roosts is a brown long-eared bat roost, recorded in 2022 located some 161m to the west of the site and along Main Street.

3.2 Preliminary Roost Assessment

The site was visited by suitably experienced and licensed surveyor Casey Griffin (Principal Ecologist, MCIEEM, level 2 bat survey licence: 2016-23916 CLS - CLS), assisted by Masha Tarnavska ACIEEM.

3.2.1 Weather Conditions

The weather conditions recorded during the site visits are as follows:

Table 1: Weather conditions at the time of the survey on 1st May 2024

Parameter	Recorded Figure
Temperature	12°C
Cloud cover	100%
Precipitation	None
Wind speed (Beaufort scale)	1

3.2.2 Preliminary Roost Assessment

The site comprises a large residential building set adjacent to Main Street forming part of a larger complex of buildings extending to the north. Figure 2, below, aims to illustrate the location of the building subject to assessment.



Figure 2: Building location

This large historic, residential building is grade 2 listed and has functioned as the main farmhouse to this agricultural complex. Although not likely to meet the qualifying criteria for classification as priority habitat, a number of fruit trees are located to the immediate west of the building and it is possible that these may have once functioned as a small orchard.

The subject building is constructed in solid brick, however a partial remanent of historic stone wall is present within part of the eastern and western elevations. Four large brick chimneys are present. The main roof space is accessed via a staircase leading up from the first floor. The presence of windows and the boarded floors here suggest that this may have previously been living space, however this area functioned as storage at the time of survey. Two internal walls divide the main roof space, with the southernmost void access being separate via a loft hatch. The condition of the timbers and the floor, within living space below, resulted in this void being inaccessible to the surveyors, however fiberglass insulation was noted at ceiling level within the void.

A small lean-to adjoins to the north western corner and the main roof slope extends down over the lean-to, creating a separate enclosed void above the store room below. Damage to the external wall at eaves height on this lean to enables a view inside the enclosed void.

The large gabled roof is finished in clay tiles supported by a traditional purlin and rafter timber frame. The underside of the roof benefits from a felt lining, however this is damaged extensively in places and areas of historic water ingress are recorded. Three glazed windows to the eastern elevation, a partially boarded window to the northern gable and a roof light provide for a generally light internal environment. This is with the exception of the eastern gable projection where the ceiling to apex height is less and ceiling level insulation is present atop the rafters.

The extent of proposals include the refurbishment of the roof finish and replacement of supporting timbers where required. Additionally, areas of the external wall have deteriorated and works will also include repointing and tying where appropriate.



North eastern elevation



Southern view of eastern projection from scaffolding



Northern gable end



Northern gable end with lean-to



Southern gable wall from scaffold



Western elevation from scaffold



Lean-to view from scaffold

The external assessment of the farmhouse reveals ample suitable bat access opportunities within the roof finish, including missing, damaged and lifted slope and ridge tiles. The internal assessment of the roof lining also reveals corresponding damage to the felt lining below in a number of places along the ridge where daylight is visible.



Daylight visible from within the roof space



Damaged ridge tile



Damaged and lifted slope tiles

The external faces of the walls are in poor condition resulting in numerous shallow crevices. Where these crevices are more significant they relate to damage to the structural integrity of the southern gable wall. These features have been investigated with an endoscope revealing a suitable, small dry cavity at the apex of the crevice leading through the southern gable wall.



Crevice within southern gable wall



Crevice within southern gable wall

Further access points into the internal roof spaces are provided via gaps around the windows, through the open window on the northern gable and via open damage into the void above the lean-to.



Gap above window



Access into lean-to void



Open window northern gable

The internal inspection of the building reveals a number of potential bat roosting features within the roof space including an exposed timber ridge (with ample room provided within the roof space for social flight by species such as long-eared), timber junctions and gaps within internal brick walls, particularly where the timbers adjoin the walls.



Exposed ridge and gaps in internal wall

Furthermore, where access is available via damaged roof tiles, the presence of felt roof lining creates suitable crevices within which bats could roost and conceal themselves from view.



Internal view



Exposed ridge and felt lining

The light, humidity and temperature within this internal roof space would be likely to vary. However, at the time of survey it was noted that internal temperature within this cell was similar to the external temperature.

No significant accumulations of bat droppings have been recorded during the intrusive inspection of the building, however a total of three scattered small to medium sized droppings were noted atop the rockwool insulation within the eastern projection. These were identified amongst ample accumulations of mouse droppings.



*Bat dropping identified amongst
mouse droppings*

In addition to the small number of bat droppings, a number of discarded butterfly wings have been recorded. These have been caught within spider webs directly below a timber adjacent to the rooflight and within the bowl below. This evidence may be indicative of foraging bats.



Butterfly wings

A sample of the droppings observed have been subject to DNA analysis which has confirmed the presence of brown long-eared DNA. Detailed results of this are included within appendix 1.

When considering the proposed refurbishment works, the identified roosting features will be directly impacted. Therefore the presence of bat roosting represents a significant constraint and a Natural England EPS derogation licence is required. In order to meet the requirements under current legislation, a suitable and informed bat mitigation strategy will need to be complied to be submitted with the Natural England derogation licence application. Such a strategy would need to demonstrate how the proposals will maintain the continued favourable conservation status of bats locally.

When assessing the barn in line with the Bat Conservation Trust's "Bat Surveys for Professional Ecologists, Good Practice Guidelines" (Collins, 2023) and considering Table 4.1 which attributes suitability for bat roosting based on features offered and habitat present within the locality, the building is considered to offer moderate suitability. The presence of bat droppings, in this instance provides a strong indication of bat roosting within the subject building.

When understanding this suitability within a local context, it is important to note the confirmed presence of bat roosts locally as well as the presence of suitable foraging and dispersal routes within the surrounding landscape.

Nesting birds:

The inspection of the subject building has identified an active house sparrow nesting along the eaves of the western elevation with a number of individuals noted to enter the building via gaps created under the roof tiles.

No direct evidence of barn owl activity has been recorded and suitable ledges for nesting are limited. This species are heavily dependent on the presence of suitable rough grassland within a 4km radius of a roosting or nesting site. Such habitat is abundant locally and their presence within this landscape is concluded to be likely.

As such a precautionary approach is recommended to include the timing of disturbing works outside of the active bird nesting season and a pre-commencement check of all the buildings for barn owl.

Where features are lost, replacement nesting opportunities should be provided in the form of integrated bird nest boxes.

4. Conclusion

The subject building is considered to have 'moderate' suitability for roosting bats and the presence of bat droppings provides a strong indication of bat roosting activity. The proposed works have the potential to directly impact upon the identified potential bat roosting features.

When understanding this suitability within a local context, it is important to note the confirmed presence of bat roosts locally as well as the presence of suitable habitat within the surrounding landscape. Furthermore, the environmental conditions provided within the subject building are conducive to sustained roosting. However, with internal temperatures and humidity levels variable as a result of the building levels of use and construction, these features are most suited for use within the summer months when bats are likely to be present within the surrounding landscape.

As such, further survey effort is recommended to better understand the status of roosting bats within the subject building. These further surveys should also inform, where appropriate, a mitigation strategy seeking to ensure the favourable conservation status of bats is maintained. Where roosting is confirmed, a Natural England EPS derogation Licence will be required to enable works.

Birds are afforded protection whilst nesting and as such a precautionary approach to works should be adopted.

5. Recommendations

Further Survey Effort:

Further survey work for bats should be undertaken, to include at least three bat activity surveys of building, identified as offering “moderate suitability” in accordance with the industry standard. These surveys are required to confirm the extent and importance of existing bat roosting taking place on site. The results of this further survey effort would then seek to provide sufficient information to inform a detailed mitigation strategy in support of the proposed renovation works.

As a result of the legal protection afforded to bats, a derogation licence from Natural England must be in place prior to any works that may potentially disturb bats or damage/destroy their place of shelter.

Note: Such surveys can only be conducted during the bat activity season of May to September and should be appropriately spaced across the season.

Precautionary Approach:

The surrounding landscape provides suitable habitat for use by barn owl and although no direct evidence of occupation of the site by this species has been identified, any development works should be immediately preceded by a check for barn owl. This check should only be undertaken by a suitability experienced ecologist and no later than ten days prior to the start of works on site.

Nesting opportunities for house sparrow have been identified within the subject buildings. As such, any disturbing works must be carried out sensitively to ensure that nesting birds are not disturbed. Ideally, potentially disturbing works should be timed to avoid the main nesting season (March to September inclusive), or alternatively disturbing works to the building should be immediately preceded by a nesting bird check by a suitably qualified ecologist and following any recommendations made as a result of this check. If nesting birds are found to be present prior to or during works, a suitable buffer of no disturbance must be maintained around the nest(s) until all of the young have naturally fledged and are no longer dependent on the nest.

Where nesting opportunities are lost replacement opportunities should be provided.

6. References

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- Swift, S. M., 1998. Long-eared bats. London: T & AD Poyser Ltd.
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Appendix 1

Order Number: 2706



casey@griffinecology.co.uk

Samples submitted

Sample Code	Multi-species?	Sample Type	Date Sample Found	Species Group	Site postcode/ post town /grid ref	Site description / comments (Optional)	Suspected identity of species
SEL-2706-1	No	Faecal	01/05/2024	C. Bats	Market Bosworth		

Analysis Results

Sample Code	DNA Extraction Code	Species Identified	ID Method	Ct value	% match
SEL-2706-1	EG-2024-0826	Plecotus auritus (Brown long-eared bat)	qPCR	16	

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