



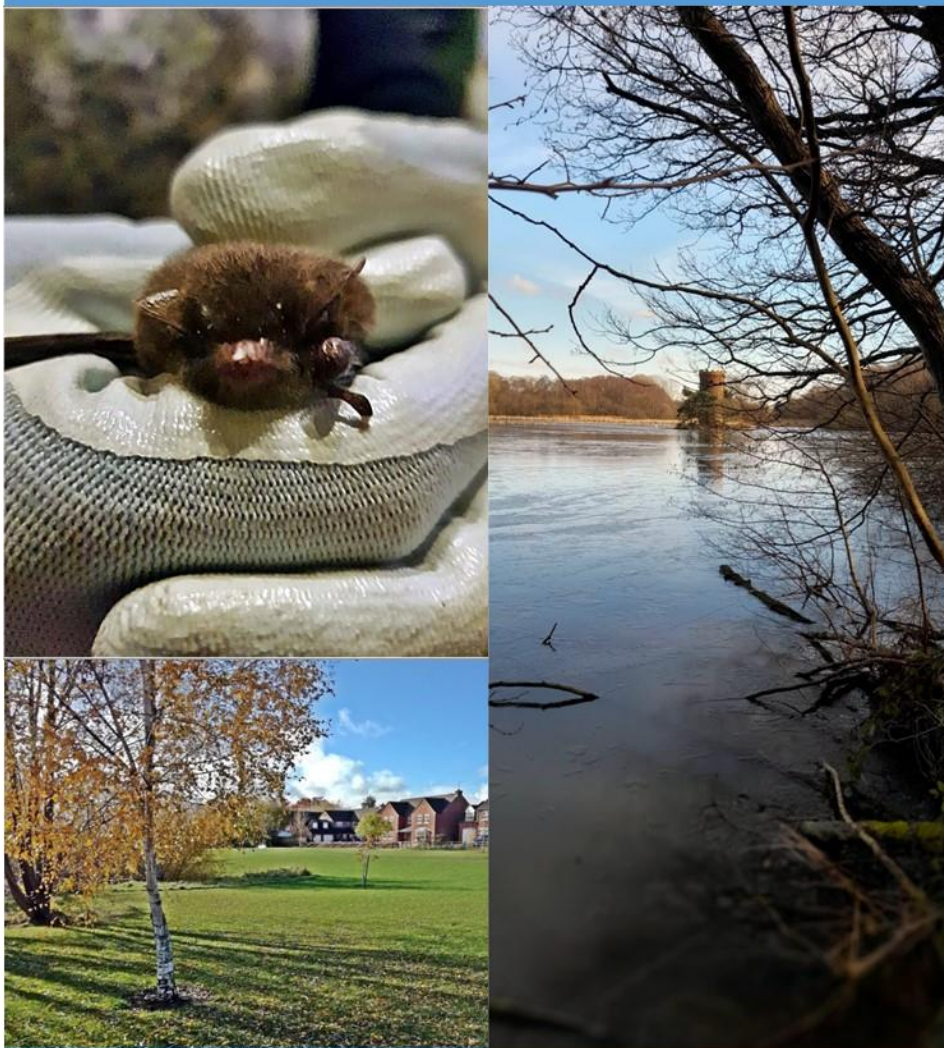
45 Main Street,
Carlton,
Market Bosworth,
Leicestershire

**Consolidated Bat Roost Assessment
with Mitigation Strategy**

Prepared by:
Griffin Ecology Ltd

Instructed by:
Mr & Mrs G. Turner

Project Number: **GE0702**



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

Quality Management

Client	Mr & Mrs Turner	
Project	The Farmhouse at 45 Main Street, Carlton, Nuneaton, CV13 0BZ	
Report Title	Consolidated Bat Roost Assessment with Mitigation Strategy	
Project No	GE0702	
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1. Introduction

1.1 Background

Griffin Ecology Ltd. has been appointed by the client to undertake a Bat Roost Assessment, to include an intrusive inspection and supporting bat activity surveys, of 45 Main Street, Carlton in Leicestershire.

This report seeks to demonstrate an understanding of the potential for the subject building to support roosting bats and nesting birds. As well as provide a detailed Method Statement in support of the required derogation licence application in respect of the proposed refurbishment works.

1.2 Site description

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

The site is located, centrally within the 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.

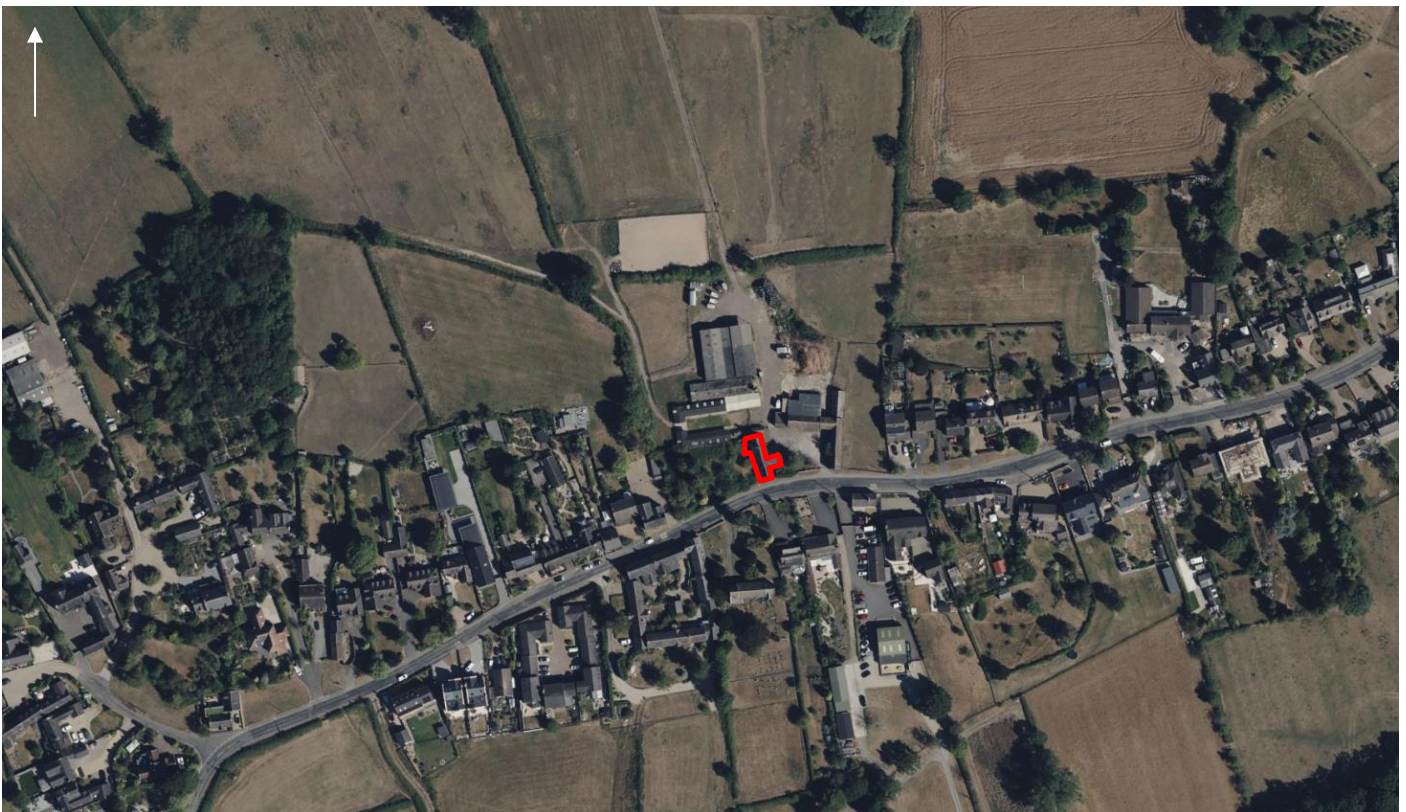


Figure 1: Site location

1.3 Survey Purpose

The purpose of this survey is to gain an understanding of the importance of the site to support roosting bats as well as inform appropriate mitigation in respect of perceived impacts anticipated as a result of repair and refurbishment works. Where a derogation licence is required to enable works, a Method Statement will be informed, detailing how suitable mitigation will be implemented and enforced through delivery of the proposals.

The objectives of this assessment are to:

- Assess the extent of roosting bats within the subject building.
- Assess the likely impacts as a result of the proposed on roosting bats in accordance with appropriate legislation.
- Determine, where possible, the need for a Natural England European Protected Species Mitigation (EPS) licence.

1.4 Proposed Plans

Griffin Ecology Ltd. has been provided with the following plans to inform this report:

- Proposed Elevations, Job No. 24-15, dwg. no. PL05B
- Proposed Demolitions, Job No. 24-15, deg. No. PL06B
- Proposed Floor Plans, Job No. 24-15, dwg. no. PL03-B
- Site Layout and Parking, dwg. no. 24-15-PL02A
- Bat Loft and Access Details, Job No. 24-15, dwg no. PL08-B

It is understood that proposals will include the refurbishment of the dwelling, to include the re-roofing and reconfiguring of internal living space.

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. Subsequent to this survey and following the results of the Bat Activity Survey (Griffin Ecology, 2023), the Preliminary Roost Assessment was updated by the licencing Ecologist Richard Crompton MCIEEM and Casey Griffin MCIEEM on 9th July 2024.

Weather conditions at the time of survey were recorded.

The intrusive 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 and exterior of the building has been systematically 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 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 a systematic 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. Bat Activity Surveys

Two dusk emergence surveys have been undertaken to cover the subject building, identified as offering moderate bat roosting suitability during the informing assessment. All activity surveys have been led by experienced and licenced bat ecologist Casey Griffin (Principal Ecologist, MCIEEM, level 2 bat survey licence: 2016-23916). Surveys have been undertaken in appropriate weather conditions following standard guidelines (BCT, 2023) and when bats are likely to be active. All surveyors have also been equipped with handheld infra-red night vision scopes (Nightfox Whisker and Red) to assist in the observation of the building in poor light.

Observations have been made from locations adjacent to the structure and from where it is considered bats might emerge. Both dusk emergence surveys, undertaken on 28th May 2024 & 18th June 2024, commenced approximately 15 minutes prior to the recorded sunset and have lasted for approximately 2hrs after sunset.

A combination of static bat detectors (Anabat Swift) and hand held detectors (EMT Pro 2 and Anabat Scout) have been used to record the echolocation calls of any emerging bats as well as bats in close proximity to the subject building.

Additionally, the surveys have been aided by 4, tripod mounted, Infra-red night vision cameras (Nightfox Whisker and Riolink HD). One was placed within the sheltered courtyard and focused on the north eastern elevation, providing a wide angle view of activity, in this location, for the duration of the surveys. The second was placed to focus on the southern gable end, providing a wide angle view of the gable wall and window at this location. The third camera was placed within the garden, alongside a surveyor, providing a wide angle view of the western elevation of the building. The fourth camera was placed, alongside a static bat detector, within the roof space, providing a focused view of the areas of internal space where bat droppings were recorded. Supporting IR focused and flood luminaires were also deployed to provide careful and considered IR illumination of the building.

All observed bat passes have been noted, and all bats have been identified to species level where possible. Echolocation calls have been recorded where possible and subsequently analysed using BatSound and Analook Insight computer software which facilitates species identification. Where possible additional notes on size, flight height, type of flight (such as commuting, foraging, fast or slow) and direction of flight have also been recorded.

2.4. 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 roof voids has not been possible at the time of survey due to 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 height 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*). In addition, 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) on the 1st May 2024. A subsequent updating inspection has been undertaken by Richard Crompton MCIEEM on 9th July 2024.

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

Table 2: Weather conditions at the time of the survey on 9th July 2024

Parameter	Recorded Figure
Temperature	14°C
Cloud cover	100%
Precipitation	None
Wind speed (Beaufort scale)	0

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 for this agricultural complex. Although, not likely to meet the qualifying criteria for classification as priority habitat, a number of fruit trees are located within the garden space 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. 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 with clay tiles supported by a traditional purlin and rafter timber frame. The underside of the roof benefits from a lining. However, this is damaged extensively in places and areas of historic water ingress are noted. 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 repair of the roof finish and replacement of supporting timbers as necessary. Additionally, areas of the external wall have deteriorated and works will also include repointing and tying as 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 viewed from scaffold

The external assessment of the house 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 potential bat droppings have been noted atop the rockwool insulation within the eastern projection. These have been 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 submitted alongside 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 nest 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.

The inclusion of at least 3 artificial sparrow terraces at the eaves, post development, will seek to compensate for the identified bird nesting features lost during works.

4. Bat Emergence Surveys

4.1 Bat Activity Survey Results

As a consequence of the identified bat roosting suitability noted within the subject building during the PRA, further bat activity surveys have been undertaken to inform an appropriate mitigation strategy and licence application should this be required.

4.1.1 1st Dusk Emergence Surveys 28th May 2024

The weather conditions at the time of these surveys have been recorded as follows:

Table 4: Weather conditions during Dusk Activity Survey 28th May 2024

Parameter	Start of survey	End of survey
Temperature	16°C	15°C
Cloud cover	100%	100%
Precipitation	Light intermittent rain	None
Wind speed (Beaufort scale)	2	1

This survey has been conducted in line with BCT survey guidelines (BCT, 2023) commencing approximately 15mins before sunset and continuing for approximately 2hrs after sunset. Sunset has been recorded at 20:22hrs on the date of the survey.

Surveyors included:

Casey Griffin MCIEEM Licence No: 2016-123916 (Lead) – using Anabat Scout hand held detector and Nighfox Red HD

Leah Tardivel – using EMT2 Pro with android tablet and Nightfox Whisker

Masha Tarnavska ACIEEM – using EMT2 Pro with android device and Nightfox Red HD

An AnaBat Swift Static bat detector alongside tripod mounted IR cameras have been deployed to three locations externally and a tripod mounted IR camera and Anabat Swift have been placed within the accessible roof void focused within the void where bat droppings have been recorded.

The first bat contact recorded at 21:40hrs related to a common pipistrelle observed within the yard close to the adjacent barn complex. This was located away from the building and this bat was not considered to have emerged from the subject building.

Following this, at 21:43 a single common pipistrelle (a) was noted to emerge from the crack on the southern gable wall at a height above the window. This bat was then seen to commute across the road to the south and away from the site. Then at 21:46 a second common pipistrelle (b) was observed to emerge from the crack on the southern gable wall, from a point near the window.

A single noctule pass was recorded at height over the subject building at 21:52hr. Further common pipistrelle foraging activity was recorded both within the garden to the west and the yard to the east of the subject building for the duration of the survey.

At 22:58hrs, a single brown long-eared pass was recorded by Leah Tardivel. The bat was not seen but was thought likely to have been associated with habitat to the east of the building.

Figure 3, below, seeks to illustrate the locations of emerging bats.

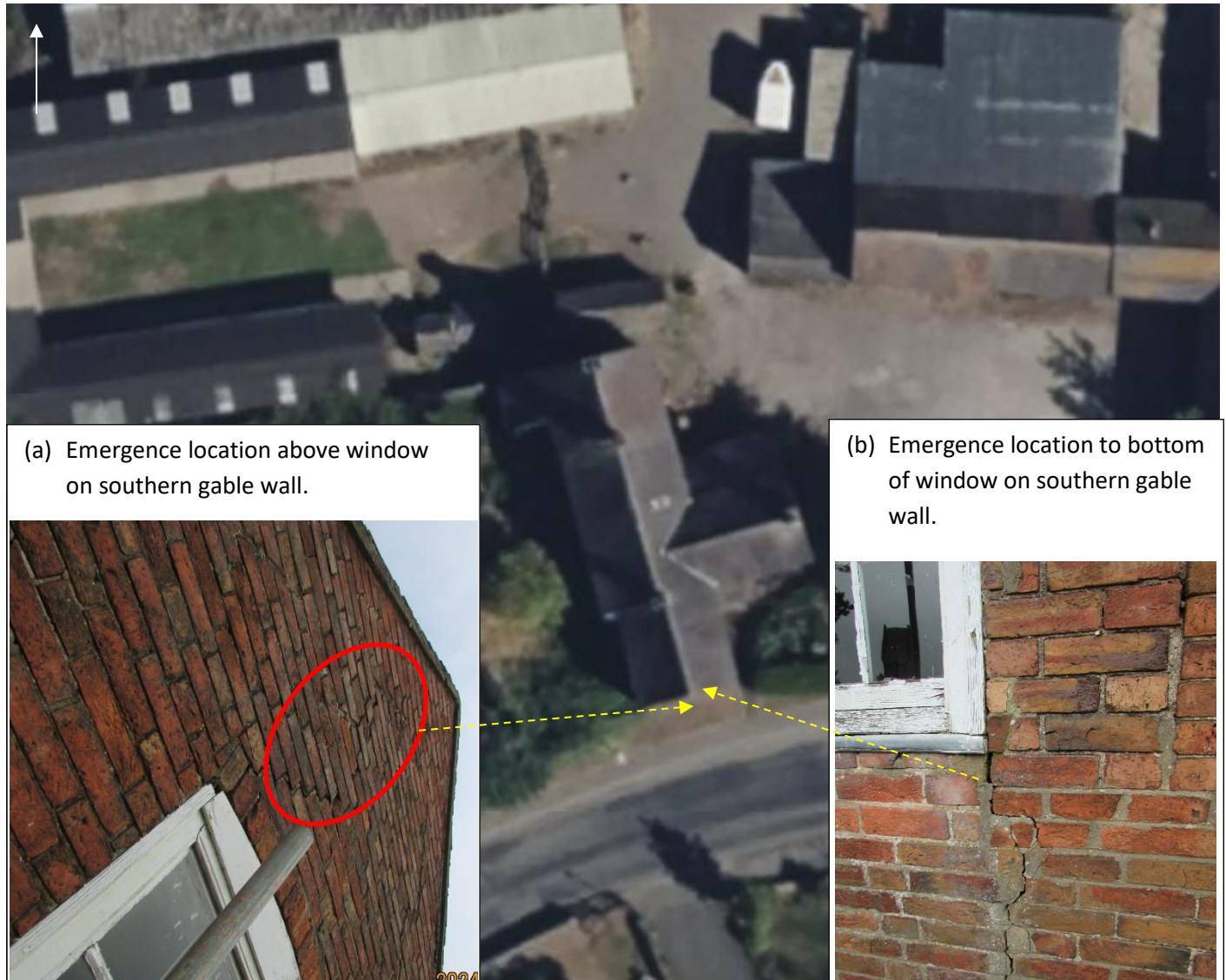


Figure 3: Bat emergence locations

No further bat roosting activity has been associated with the subject building for the duration of the survey. The camera and static detector placed within the main roof void recorded no bat activity.

Analysis of the camera and static bat detectors confirms commuting and foraging activity by common pipistrelle for the duration of the survey.

4.1.2 2nd Dusk Emergence Survey 18th June 2024

The weather conditions at the time of survey has been recorded as follows:

Table 5: Weather conditions during Dusk Activity Survey 18th June 2024

Parameter	Start of survey	End of survey
Temperature	12°C	11°C
Cloud cover	90%	20%
Precipitation	Light rain	None
Wind speed (Beaufort scale)	2	2

This survey has been conducted in line with BCT survey guidelines (BCT, 2023) commencing approximately 15mins before recorded sunset on the date of survey and continuing for approximately 2hrs after sunset. Sunrise has been recorded at 21:29hrs on the date of the survey.

Surveyors included:

Casey Griffin MCIEEM Licence No: 2016-123916 (Lead) – using Anabat Scout hand held detector and Nighfox Red HD

Leah Tardivel – using EMT2 Pro with android tablet and Nightfox Whisker

Masha Tarnavska ACIEEM – using EMT2 Pro with android device and Nightfox Red HD

An AnaBat Swift Static bat detector alongside a tripod mounted IR camera have been deployed to three locations externally and a tripod mounted IR camera and Anabat Swift have been placed within the accessible roof void focused within the void where bat droppings were recorded.

At 21:58, single common pipistrelle is recorded to emerge from near the window on the southern gable wall. This observed activity was recorded on the supporting IR camera with a snip of the footage provided below:



No other bat roosting activity was observed in relation to the building during this survey, however a good amount of common pipistrelle foraging and commuting activity has been observed within the habitats associated with the wider site for the duration of the survey.

A single noctule pass was recorded at 22:58hrs. The camera and static detector placed within the roof void recorded no bat activity.

6. Conclusion

The subject building is considered to have 'moderate' suitability for roosting bats, and the surveys have confirmed the presence of a day roost for common pipistrelle (up to two individuals). This roost is located within a large crack which runs both above and below the window in the southern gable wall. Common pipistrelle are common and widespread in Leicestershire and the UK. In consideration of the Bat Mitigation Guidelines (CIEEM, 2023), the conservation significance of this roost, for individual/low numbers of non-breeding common species, are relatively low. As such, the ecological importance of this roost would be limited to within a site context.

Furthermore, bat droppings collected from within the roof void have confirmed the presence of a brown long-eared roost although no individual bats were confirmed in occupation at the time of survey. The small number of droppings found and the conditions provided within the roof void, in which the droppings were located, suggests the presence of either an individual or low numbers of bats. Brown long-eared are a species considered to be common and widespread in Leicestershire and the UK. In consideration of the Bat Mitigation Guidelines (CIEEM, 2023), the conservation significance of this roost, for individual/low numbers of common species, is confined to within a site context.

The building supports opportunities for nesting birds and as such works should be time to avoid the typical bird breeding season of February to August, where possible. At least 3 sparrow terraces will be placed at eaves level on an appropriate elevation, post development, to compensate for the loss of bird nesting features.

The scale and extent of proposals is limited to repair and refurbishment works ensuring a level of maintenance appropriate for the occupation of the building. These works will include the re-roofing of the dwelling and where appropriate the addition of further timber supports and trusses to the roof. Additionally, the internal space will be reconfigured to accommodate a bathroom and dressing room within the roof space.

Notwithstanding the low status of the bat roosts, the proposals have the potential to directly impact upon their ecological functionality. Therefore, the proposals have the potential to conflict with the nature conservation legislation afforded to bats. In view of this a European Protected Species licence is required to enable works.

In the absence of mitigation, the works have the potential to have the following adverse impacts on bats:

- Permanent loss of the existing roosts within the building;
- Possible harm to bats that may be roosting within or under materials to be removed (e.g. within wall crevices, and roof coverings);
- Disturbance to bats while works are going on, including increased noise, dust and vibration;
- Loss, interference with, and obstruction of access points;
- Interference with or obstruction of flight lines used by bats dispersing between roost access points and foraging grounds; and
- Changes to the light and temperature regime.

In order to avoid a legislation breach relating to European Protected Species a derogation licence, granted by Natural England, is required prior to the commencement of potentially disturbing works.

7. Bat Mitigation Strategy

Licence Requirement:

1 No. day roost of common pipistrelle is present within the subject building. Additionally droppings, confirmed to be brown long-eared through DNA analysis, have been recorded within an enclosed roof void. As such a protected species mitigation licence, from Natural England, is required to lawfully enable the proposed re-roofing and refurbishment works. Based on the existing information, the site is assessed as being eligible for registration under the Earned Recognition licence held by Richard Crompton MCIEEM.

No works that might disturb or directly impact on the roosts can be undertaken until the protected species mitigation licence is obtained from Natural England. All works must be undertaken in accordance with the licence conditions. A copy of the licence must be kept on site at all times.

Introduction:

This mitigation strategy seeks to include the following elements, in order to ensure that bats are not harmed during proposed works and that there are no adverse effects on the favourable conservation status of the targets species:

- Responsible parties nominated;
- Toolbox training talk for all operatives;
- Provision of temporary alternative roosting features;
- Appropriate timing of works;
- Working methods (to be supervised by a suitably licenced ecologist) to ensure minimal disturbance to bats, and avoidance of killing or injury to bats;
- Creation of appropriate dedicated bat roosting areas;
- Use of approved materials and timber treatment chemicals;
- Methods to be followed in the event of a bat being discovered during works in the absence of an ecologist;
- Requirements in relation to lighting and retention of flight lines;
- Final site check to ensure compliance with the mitigation strategy.

Responsible parties:

A copy of this document will be kept on site for the duration of works with a copy made available to all contractors, ensuring that the requirements and mitigation measures are effectively communicated. All site worker will be briefed by the appointed ecologist prior to the commencement of works. It remains the responsibility of the land owner to ensure that this mitigation strategy is complied with during works. Any deviation to the mitigation measures or working practices set out must be agreed in writing to be appropriate by the ecologist named on the granted licence.

Details of responsible parties and main contractors are provided below:

Responsible party	Details
Land owner	Graeme and Jude Turner
Architect	Jane Tillotson BA(Hons) BArch PGDip ARB Haywood Architects Ltd. 19 Station Road Hinckley Leicestershire LE10 1AW Tel: 01455635665 E: Jane@haywoodarchitects.co.uk
Contractor	Jamie Underwood JB Stonework & Restoration Ltd 2A School Lane Peterborough Cambridgeshire PE6 9EL E: jlb.restoration@gmail.com
Ecologists	Named Ecologist (Earned Recognition) Richard Crompton BSc, CEnv, MCIEEM, FLS Richard Crompton 1 Llwyn Bryn Melyn Radyr Cardiff CF15 8DL Tel: 07711848174 E: richard@ecologyod.co.uk Appointed Ecologist Casey Griffin BSc (Hons), MCIEEM Griffin Ecology Ltd. Bloxxham Mill, Barford Road Bloxxham Oxfordshire OX15 4FF Tel: 07508038273 E: casey@griffinecology.co.uk

Toolbox Talk:

All contractors will be provided with a “toolbox talk” by the named ecologist or an appointed agent. This talk will be undertaken immediately prior to the commencement of works, being tailored to ensure contractors are aware of all relevant issues relating to the site as well as their responsibilities should a bat be found during the course of works.

The toolbox talk will seek to cover, as a minimum, the following topics:

- Presence of bat roosts
- Relevant legislation relating to bats
- Measures employed to protect them
- Good working practices
- Actions requiring a licence
- Action to take in the event of a bat being found on site during the course of works

A written record will be kept by the named ecologist as to the recipients of the toolbox talk.

Temporary Replacement Bat Roost Features:

Prior to the commencement of works, a total of 2 No. suitable bat boxes will be installed on the mature turkey oak tree located within the yard, >10m to the east of the building. This location has been selected due to its proximity to existing known roost locations, being close to existing dispersal and foraging habitat. Figure 4, seeks to illustrate the location of temporary roost feature.

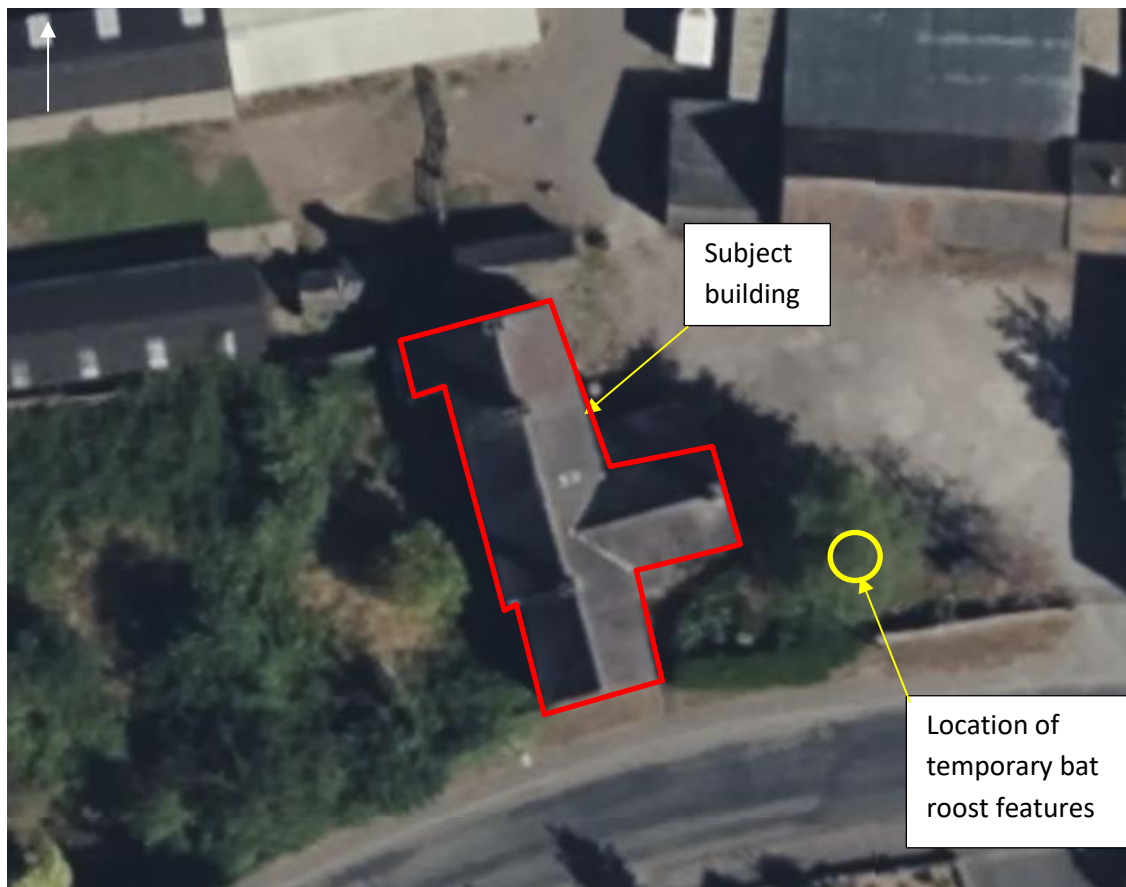


Figure 4: Location of temporary bat roost features

Two bat boxes (1x Chambord Bat Boxes and 1no. Convex bat box) will be installed at a height between 3m and 5m, facing south, south-east and/or south-west.



Chambord Bat Box available from Wildcare



Convex Bat Box available from Wildcare

The bat boxes will remain in place for at least 5 years. Should bats use the boxes to roost, then they cannot be removed without a bat licence.

Timing:

Surveys have confirmed that bat roosting within the building did not relate to breeding activity and therefore it is not considered appropriate to apply timing restrictions to the works. Furthermore, hibernation suitability is considered to be low when understanding the conditions prevailing within the building. The extent of potentially disturbing works is considered to be of low impact relating to the re-roofing and repair to the southern gable wall. As such, works will be undertaken as soon as reasonably possible and in accordance with any granted listed building consent. No works will occur during the hours of darkness, and no further external lighting will be added to avoid disturbing foraging/commuting bats.

Working method:

Immediately prior to the commencement of works affecting potential roosting features, a licensed bat ecologist will check the building internally and externally to look for any roosting bats, so far as it is safe to do so using a torch and an endoscope. Should any roosting bats be found, they will be identified and their numbers determined to ensure that there is no conflict with the stipulations in the mitigation licence.

If bats are present and cannot be safely captured, or the absence of bats cannot be confirmed, then exclusion methods will be applied to allow bats to escape but not return to the roost areas. Exclusion devices will need to remain in place for sufficient time and in suitable weather conditions to give confidence that bats have dispersed. This will be advised by the named ecologist.

All roofing materials will be removed carefully by hand. Site workers will inspect any potential roosting spaces for the presence of bats. The named ecologist or accredited agent will be present during this process in order to recover any bats that are revealed. Any roosting bats revealed will be transferred to the pre-installed bat boxes.

At other times, the named ecologist on the bat mitigation licence or an accredited agent will be available at short notice should bats be found.

Creation of roosts:

Common pipistrelle day roost

A common pipistrelle day roost, supporting up to 2no individuals will be directly impacted as a result of the repair and rebuild work necessary to the southern gable wall. These works do require listed building consent as they will include the reinstatement of a previously blocked up window. When retaining roosts in buildings, it is preferable to maintain entrances in their original position and of a similar size, type and orientation.

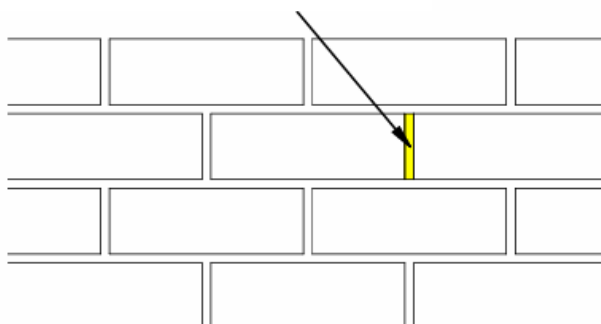
To ensure suitable replacement roosting will be permanently provided following works. Two man-made crevices, with access dimensions of (W) 15mm x (H) 100mm, will be created within the rebuilt southern gable wall. These will be at an approximate height of 3.5m from ground level and 5m from ground level. The locations of these proposed crevices will seek to replicate the existing height and orientation of known roost locations. The precise location for these crevices will be advised by the licensing ecologist on completion of the destructive search. Crevices within the solid brick walls will be created by modifying the brick to remove the rear 1/3 allowing access into a crevice behind the first course of bricks.

Figure 5 seeks to illustrate the access detail of replacement common pipistrelle roosts.

★
Crevice
location



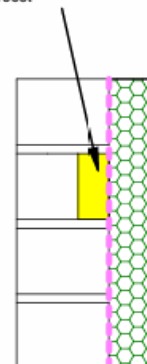
★ 2 No. mortar gaps of 15mm (w) x 100mm (h) to be created in rebuilt wall to allow access for crevice dwelling bats, in accordance with Ecologist's recommendations (see Griffin Ecology report ref: GE0702, page 26)



Elevation View

1:10

Rear third of brick to be manually chipped away to create roost



Section View

1:10

Figure 5: Location of recreated crevices in southern gable wall

BLE day roost

The existing roof void, where droppings have been located, will be reasonably retained as part of the proposed re-roofing works. This roof space will be lined with TLX Batsafe (or similar). In this instance the use of 1f bitumen felt was not considered appropriate as the risk of creating fluctuating humidity between the two types of lining would be detrimental to the preservation of the building.

This retained roof space provides a volume and ceiling to apex height that is not typically suitable for BLE maternity roosting. However, given the very small number of droppings observed and no BLE activity associated with the building during the emergence surveys, it is concluded that this evidence related to a BLE day roost used infrequently by a small number individuals.

Following the necessary re-roofing works, access into this roof space will be provided via 2no. modified ridge tiles creating an access gaps of (H) 15mm x (W) 100mm along the ridge of the retained loft space, with the gap located towards one end of the ridge slate. The tear in the lining must be located near the other end of the ridge tile to minimise draughts into the loft. The tear in the membrane must be located adjacent to a rafter to provide a landing platform for bats exiting the roost. The precise location for the ridge accesses will be advised by the licensing ecologist on completion of the destructive search. The supporting drawing – Bat Loft and Access, Job No. 24-15, dwg. No. PL08, seeks to illustrate the loft detail and indicative locations of access tiles.

The bat loft will remain permanently in place and for the use of bats and separate from any proposed living space. No alterations may be made to the loft area, or roof finish, once fixed, without prior consultation with Natural England or a qualified and licensed bat ecologist.

Timber treatment and modern roofing materials:

It is understood that works will include the targeted treatment of timbers. Only those products approved by Natural England will be used during the course of refurbishment at 45 Main Street. Advice on suitable timber treatment products and active ingredients approved for use in bat roosts can be found via the link below to the gov.uk website (Bat roosts: use of chemical pest control products and timber treatments in or near them):

<https://www.gov.uk/guidance/bat-roosts-use-of-chemical-pest-control-products-and-timbertreatments-in-or-near-them>

All roof areas/voids/wall cavities not designed for use by roosting bats will be completely sealed off to bats to avoid future conflicts with modern roofing materials such as, non-bat safe breathable roofing membranes.

Procedure in the event of a discovery of a bat in the absence of an ecologist:

All site workers will be made aware of the possibilities of finding bats and the procedure to follow should they be found when the ecologist is not on site.

If at any point a bat is discovered, contractors will stop work immediately and telephone an ecological professional qualified and licenced to deal with bats. Telephone numbers of such will be held on site.

Should any bats fall out of structures or be injured, they will be gently placed in a secure ventilated box (e.g. a cardboard box) by the contractor and left in a cool dark place, until appropriate advice can be sought. Bats should not be handled without gloves.

Retention of flight lines and control of lighting:

Flight lines:

No loss of potential dispersal habitat will occur.

Lighting:

No external lighting is proposed, however if this not the case, any lighting installed will be done sensitively and to the minimal level necessary for security. No lighting will illuminate bat roosts or bat boxes installed on the nearby mature turkey oak tree. Where security lighting may be required the following mitigation measures will be incorporated:

- careful placement of luminaires so that they illuminate only the required areas,
- avoid light spill on roost access points, and minimise light spill on suitable foraging habitat nearby (especially the adjacent garden space);
- installation of directional lighting, specialist bollard or low-level downward directional luminaires;
- use of appropriate luminaires with warmer colours, no UV component (i.e. more yellow/orange, ideally <2700Kelvin and peak wavelength higher than 550nm;
- LED luminaires with an upward light ratio of 0% and with good optical control;
- Use of security lighting with motion sensors and short (1minute) timers; and/or use of dimming or part night lighting

Further information can be found in 'Bats and artificial lighting in the UK; Guidance Note 08/18' (Miles et al., 2018) and 'Domestic exterior lighting: getting it right!; Guidance Note 09/19' (Institute of Lighting Professionals, 2019).

Compliance checks and monitoring:

The named ecologist will visit the site on completion of the works to check that the mitigation plan has been complied with and that all mitigation measures for bats have been correctly installed. A report will be supplied as confirmation. No ongoing monitoring is required as part of this low impact Earned Recognition licence.

8. References

- Reason, P.F. and Wray, S. (2023). UK Bat Mitigation Guidelines: a guide to impact assessment, mitigation and compensation for developments affecting bats. Version 1.1. Chartered Institute of Ecology and Environmental Management, Ampfield.
- CIEEM (2019) Advice Note on the Lifespan of Ecological Reports and Surveys
<https://cieem.net/wpcontent/uploads/2019/04/Advice-Note.pdf>
- CIEEM (2020) Guidelines for Accessing, Using and Sharing Biodiversity data in the UK. <https://cieem.net/wp-content/uploads/2016/03/Guidelines-for-Accessing-and-Using-Biodiversity-DataMarch-2020.pdf>
- Google Earth Pro.
- Collins, 2023. Bat Surveys: Good Practice Guidelines. 4th edition. London: Bat Conservation Trust.
- JNCC, 2004. Bat Workers Manual. 3rd edition.
- NHBS website www.nhbs.com
- Natural Environment and Rural Communities (NERC) Act 2006
- Wildlife and Countryside Act 1981 (as amended)
- Institute of Lighting Professionals (2012) Guidance for The Reduction of Obtrusive Light.
- Swift, S. M., 1998. Long-eared bats. London: T & AD Poyser Ltd.
- The Conservation of Habitats and Species Regulations, 2012.

Appendix 1 – DNA Results

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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