



2 Peckleton Road, Kirkby Mallory, Leicester, LE9 7QH

Prepared for: Hazel Davenport

Bat& Bird Survey - Preliminary Roost Assessment

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Executive Summary

Midland Ecology undertook a Preliminary Roost Assessment of a detached bungalow at 2 Peckleton Road, Kirby Mallory, Leicester, LE9 7QH on the 15th June 2023. The aim of the assessment was to consider the value and suitability of the buildings for roosting bats. The development proposal briefly comprises the demolition of the existing buildings and the construction of three residential houses.

Building number	Potential for roosting bats	Recommendations for further survey and assessment
B1 (main house)	Low	A minimum of one nocturnal survey carried out between May-August in order to establish presence or absence of bats.
B2 (Kennels)	Negligible	No further surveys needed.

The assessment concludes that the building (B1) has low bat roosting potential. A minimum of one nocturnal survey is therefore required in order to more firmly establish whether or not roosting bats are present. Building B2 had negligible bat roosting potential, and so no further surveys of that building are required.

It is possible nesting birds will be affected by the proposed works so ideally works to be timed outside of the bird nesting season (March-August inclusive) or the site checked for birds' nests immediately prior to works. If a bird's nest is encountered during works, then all work is to stop and advice sought from an Ecologist.

1.0 Introduction and Context

1.1 Background

Midland Ecology was commissioned by Hazel Davenport to undertake a Preliminary Roost Assessment (PRA) of a detached bungalow at 2 Peckleton Road, Kirby Mallory, Leicester, LE9 7QH. The assessment is informed by the Bat Conservation Trust publication *Bat Surveys – Good Practice Guidelines* (Collins, 2016).

No previous reports have been produced for this site by Midland Ecology. The author is not aware of any previous ecological surveys at this site.

1.2 Scope of the Report

This report provides a description of all structural features suitable for roosting bats, and evaluates those features in the context of the site and wider environment. It further documents any physical evidence collected or recorded during the site survey that establishes the presence of roosting bats. It provides information on constraints to the proposals as a result of roosting bats, and summarises the requirements for any further surveys, to inform subsequent mitigation proposals, achieve Planning or other statutory consent, and to comply with wildlife legislation.

The aim of the assessment was to determine the presence or evaluate the likelihood of presence of roosting bats, and to gain an understanding of how they could use the building or structure. To achieve this, the following steps have been taken:

- A desk study has been carried out.
- In line with CIEEM guidance, biological records data is not routinely requested for surveys relating to a single residential building (particularly if relatively modern).
- A field survey has been undertaken, including an external and internal inspection of the building
- An outline of likely impacts on any known roosts has been provided, based on current development proposals
- Recommendations for further survey and assessment have been made, along with advice on European Protected Species Mitigation Licensing if appropriate

A survey plan is presented in Appendix 1, and the proposed Project Plan is included in Appendix 2. Photographs taken during the site survey can be found in Appendix 3. A summary of relevant legislation is included in Appendix 4, and further desk study information in Appendix 5. The spreadsheets used to assess bat potential of the buildings are in Appendix 6.

1.3 Site Context

The site is located at SK45693 00638 and comprises an area of 170m². It is a detached bungalow with a garden located on the outskirts of Kirkby Mallory in Leicestershire. The vicinity of the site is predominantly similar residential properties with gardens, along with fields and lines of trees.

1.4 Project Description

This report is prepared in relation to a planning application for the site. The development proposals are for the demolition of the existing building and the construction of three residential houses. All works areas, storage and haul routes will be included within the site boundaries; access will be provided by the existing driveway and as such, no additional working footprints are anticipated. It is not considered likely that the proposal would have any impact on the surrounding land, habitat blocks, mature trees etc.

2.0 Methods

2.1 Desk Study

A review of the following information sources has also been undertaken to inform the assessment:

- Landscape structure using aerial images from Google Earth
- Designated sites, habitat and species data held on Magic.gov.uk.
- Designated sites information found on Natureonthemap.naturalengland.org.uk
- Information on the surrounding area using OS Opendata 2010

In line with CIEEM guidance, biological records data is not routinely requested for surveys relating to a single residential building (particularly if relatively modern).

2.2 Site Survey

The survey was undertaken by Phillip Playford BSc (Hons), MSc, MCIEEM MRSB, NE bat licence number: 2020-44658-CLS-CLS on the 15th June 2023.

All buildings that will be impacted by the project proposals (the survey area) were assessed for their potential to support roosting bats. The surveyor systematically searched for features suitable for roosting bats and signs of bat activity, by conducting a non-intrusive visual appraisal from the ground using binoculars, inspecting the external features of the buildings for potential access/egress points, and for signs of bat use. An internal inspection of the building was also made, including the living areas of derelict or abandoned buildings and the roof spaces of all buildings, using an endoscope, torch and ladders. The surveyor paid particular attention to the floor and flat surfaces, window shutters and frames, lintels above doors and windows, and carried out a detailed search of numerous features within the roof space.

2.2.1 Breeding birds and other incidental observations

The surveyor also made note of any other ecological constraints observed during the survey, notably the likelihood of presence or signs of breeding birds, and the suitability of the site for breeding barn owls *Tyto alba*.

2.3 Suitability Assessment

The buildings were categorised according to the likelihood of bats being present, in line with best practice guidelines (Collins, 2016); the features of the building that dictate the likelihood of roosting bats are summarised in Table 1. Roost suitability is classified as high, moderate, low and negligible and dictates any further surveys required before works can proceed.

Table 1: Features of a building that are correlated with use by bats during the summer

Likelihood of bats being present	Feature of building and its context
Higher	Buildings/structures with features of particular significance for roosting bats e.g. mines, caves, tunnels, icehouses and cellars. Habitat on site and surrounding landscape of high quality for foraging bats e.g. broadleaved woodland, tree-lined watercourses and grazed parkland. Site is connected with the wider landscape by strong linear features that would be used by commuting bats e.g. river and or stream valleys and hedgerows. Site is proximate to known or likely roosts (based on historical data).
Lower	A small number of possible roost sites/features, used sporadically by more widespread species. Habitat suitable for foraging in close proximity, but isolated in the landscape. Or an isolated site not connected by prominent linear features. Few features suitable for roosting, minor foraging or commuting.

2.4 Limitations

It should be noted that whilst every effort has been made to describe the features on site in the context of their suitability for roosting bats, this does not provide a complete characterisation of the site.

Where only four figure grid references are provided for bat records, it is not possible to determine their precise location as they could be present anywhere within the given 1km x 1km National Grid square.

This survey provides a preliminary view of the likelihood of bats being present. This is based on suitability of the habitats on the site and in the local area, the ecology and biology of bats as currently understood, and the known distribution of bats as recovered during the desk study.

3.0 Results and Evaluation

3.1 Desk Study Results

A summary of desk study results are provided below; further details are included in Appendix 5.

3.1.1 Designated sites

There are no statutory designated sites within 1km of the site.

3.1.2 Landscape

A site check for habitats & species of conservation importance within a 1km radius revealed that there is deciduous woodland within 1km of the site. This can support the ecological requirements of bats and other protected species & conservation priority species such as badgers and hedgehogs.

A review of aerial photographs (Figure 1) and OS maps shows the site is in a sub-urban area with agricultural fields, residential housing and gardens in proximity. Commuting routes are around with lines of trees in proximity to the site.

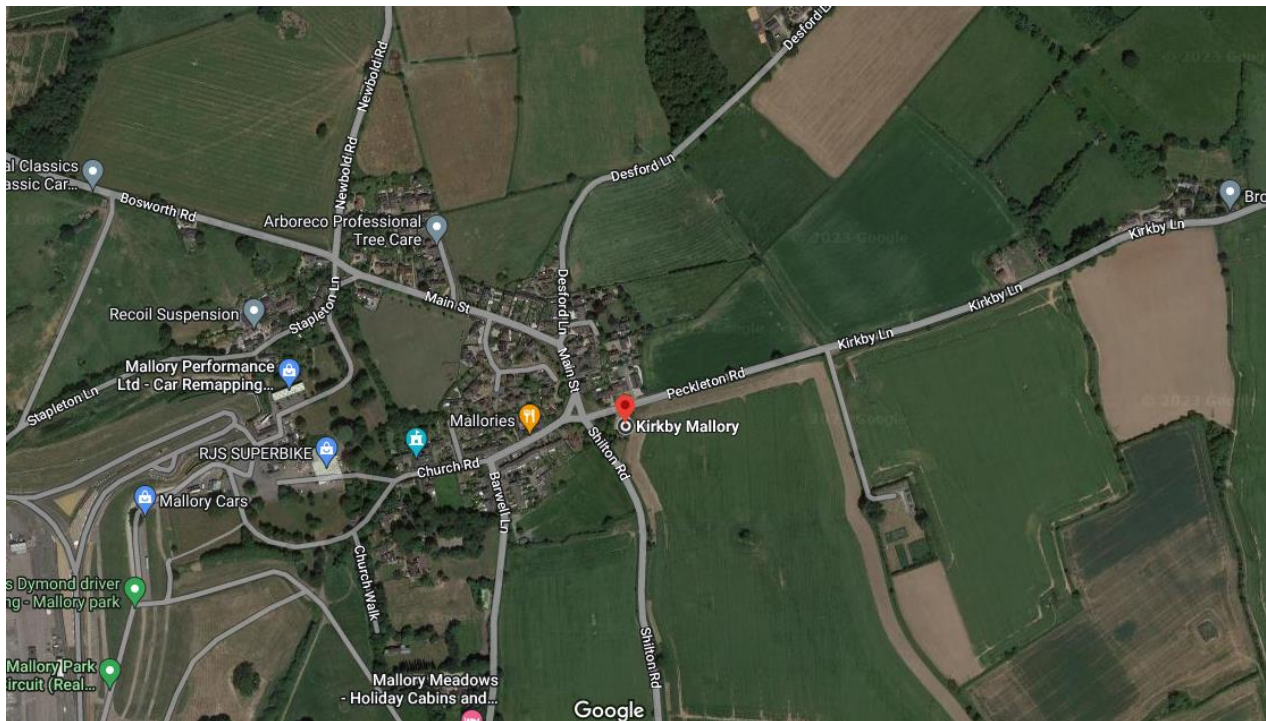


Figure 1: Aerial photo of site, showing landscape structure © Google 2023

3.1.3 Historical records

A search of the Magic.gov.uk database shows no European Protected Species Mitigation Licences (EPSML) that has been granted for bats within 1km of site.

3.2 Survey Results

The building within the survey area comprised of a single storey detached bungalow with garage and roof void above the garage. An additional kennels building was present adjacent to the main building. Potential roosting features (PRF) described below are illustrated on the map in Appendix 1.

B1 – Main building

Building description

- Approx. 20m x 5m
- Walls of brick. The walls were in good condition, with no visible cracks or crevices of a suitable size to accommodate bats.
- The roof was clad in tiles with felt liner and no insulation present underneath.
- There were some gaps under the tiles. The ranged in size, but several were large enough to allow access by bats (>5mm).
- The lead flashing around the chimneys was tightly sealed.
- The soffits were tightly sealed.
- There was a standard sized roof void, with timber support beams and a bitumen felt liner. The roof lining was largely intact, although some areas of damage were observed.

Evidence of bats

- No evidence of bat presence was discovered during either the external or internal inspections.

B2 – Office building

Building description

- Approx. 5m x 2m
- Walls of Wood
- The roof was wood with a felt covering.
- The walls were tightly sealed, there were some small gaps under the liner to the roof and there was no roof void.
- The front was open fronted with a steel mesh front.

Evidence of bats

- No evidence of bat presence was discovered during either the external or internal inspections.

3.2.1 Breeding birds and other incidental observations

No evidence was found for nesting birds. Birds are likely to nest in adjacent trees however.

3.3 Evaluation – Likelihood of bats being present

Taking the desk-based assessment and site survey results into account, the following value for roosting bats has been placed on each building.

Table 4: Evaluation of buildings/structures on site

Reference	Likelihood of bats using the building for roosting	Brief summary of justification
B1 (main house)	Low	Several gaps of suitable size for bats were identified during the external inspection. Some of these were not accessible during the internal inspection, due to the presence of a (largely) intact roof lining. The surrounding area has good foraging habitat and commuting routes. The bat trigger index returned a score of 0.59 (low potential).
B2 (office building)	Negligible	While the kennels were open-fronted (potentially allowing easy access by bats), they had no roof void and no features suitable for roosting bat species. All parts of this building were fully accessible for both external and internal inspection, and no evidence of bats was found. The bat trigger index returned a score of 0.43 (negligible potential).

4.0 Conclusions and Recommendations

4.1 Conclusions and Impact Assessment

The PRA concludes that the house (B1) has low bat roosting potential, with B2 (Kennels) having negligible bat roosting potential.

Bats and their roosts are protected under the Wildlife and Countryside Act and Conservation Regulations; see Appendix 3 for a summary of legislation protecting bats in the UK.

4.1.1 Breeding birds and other incidental observations

Legislation protects all wild birds whilst they are breeding, and prohibits the killing, injuring or taking of any wild bird or their nests and eggs. It is an offence to disturb any bird or their young during the breeding season. Birds are likely to nest in the adjacent trees, and so it is possible that nesting birds could be affected by the proposed works.

4.2 Recommendations

4.2.1 Survey and assessment

Best practice survey guidelines (Collins, 2016) recommend additional surveys for all buildings assessed as having low to high suitability for roosting bats. The survey effort recommended at this stage is iterative and if bats are recorded emerging from the buildings; the survey effort should be adjusted to provide sufficient information to inform European Protected Species Mitigation licensing (EPSML). Buildings assessed as comprising negligible suitability for roosting bats do not normally require further surveys. Appropriate justification for this assessment is provided in Section 3.0 and Table 4 of this report. Those found to support roosting bats may require further survey to inform an EPSML application, depending on the proposed works and assessment of impacts, and the species present/likely to be present.

However, if unexpected bats are found during any stage of the development (regardless of survey findings), work must stop immediately, and a suitably qualified ecologist contacted to seek further advice. Recommendations for further survey/assessment associated with each building are provided in Table 5.

Table 5: Survey recommendations

Building Ref	Value for / Likelihood of supporting roosting bats	Recommendations
B1 (main house)	Low	A minimum of one nocturnal survey carried out between May-August in order to establish presence or absence of bats.
B2 (Kennels)	Negligible	No further surveys needed.

4.2.2 Breeding birds

It is possible nesting birds will be affected by the proposed works, so ideally works occur outside of the bird nesting season (March-August inclusive). If this is not possible, then the site is to be checked for birds' nests immediately prior to works. If an active bird's nest is encountered during works, then all work is to stop, and advice sought from an ecologist.

4.2.3 Opportunities for enhancement

The provision of bird nesting boxes is recommended as an enhancement for biodiversity on the site. Ideally these should be either swift boxes, house martin nests or sparrow terrace nest boxes but other nest boxes discussed below. These should be installed in sheltered locations (such as under the eaves of a suitable building), installed at a minimum height of 2m and orientated in southerly/ westerly direction. All bird boxes must be retained in perpetuity and their exact location/ specification may be discussed with a suitably-qualified ecologist, and alternative options can be considered. A selection of reliable options is detailed below, although suitable equivalents are acceptable (Figure 2):

- Schwegler and Manthorpe Swift bricks (this would be the preferred option).
- WoodStone Swift nest boxes.
- Schwegler Single & Double House Martin Nests.
- Schwegler 1SP Sparrow Terrace nest boxes.
- Schwegler Woodcrete 1B nest boxes (for trees) and/ or Schwegler Bird House nest boxes (for buildings).

All bird boxes must be retained in perpetuity and their exact location/ specification may be discussed with a suitably qualified ecologist and alternative options can be considered.



Figure 2: Examples of Schwegler swift brick (top left), Manthorpe swift brick (top right). WoodStone swift box (middle left) Schwegler 1SP Sparrow Terrace nesting box (middle right); Schwegler Double House Martin Nests (middle left); Schwegler Woodcrete 1B nest boxes (middle right); and a Schwegler Bird House boxes (bottom).

5.0 Bibliography

- Collins, J. (ed), (2016), Bat Surveys for Professional Ecologists: Good Practice Guidelines 3rd Edition, BCT
- Mitchell-Jones, A.J. (2004). Bat Mitigation Guidelines. English Nature, Peterborough.
- Garland & Markham (2008) Is important bat foraging and commuting habitat legally protected?
- CIEEM (2016) Guidelines for Accessing and Using Biodiversity Data
- Swift Ecology (2018). *Bat Roost Trigger Index* (online). URL: <https://www.swiftecology.co.uk/trigger.php>.

Appendices

Appendix 1: Survey Plan



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Only figured dimensions to be taken from this drawing, do not scale.

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Boundaries are shown for indicative purposes only, all boundaries are to be confirmed by the legal owner.



Appendix 3: Photographs

Image 1: B1 viewed from north side



Image 2: B1 viewed from north side. Close up on soffits



Image 3: B1 viewed from east side.



Image 4: B1 viewed from east side.



Image 5: B1 viewed from east side.



Image 6: B1 viewed from east side. Close up on roof



Image 7: B1 viewed from east side. Close up on roof



Image 8: B1 viewed from south side.



Image 9: B1 viewed from west side.



Image 10: B1 viewed from west side



Image 11: B1 viewed from west side



Image 12: B1 viewed from west side



Image 13: B1 garage interior

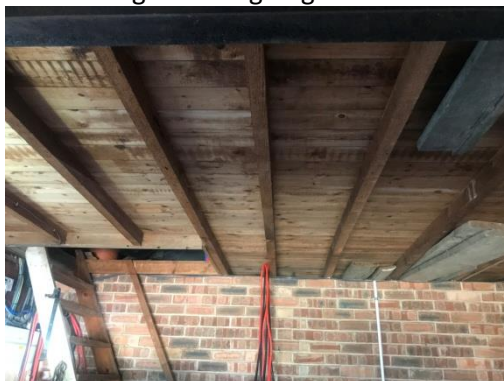


Image 14: B1 garage interior



Image 15: B1 garage interior



Image 16: B1 interior roof void



Image 17: B1 interior roof void



Image 18: B1 interior roof void



Image 19: B1 interior roof void



Image 20: B2 viewed from the north

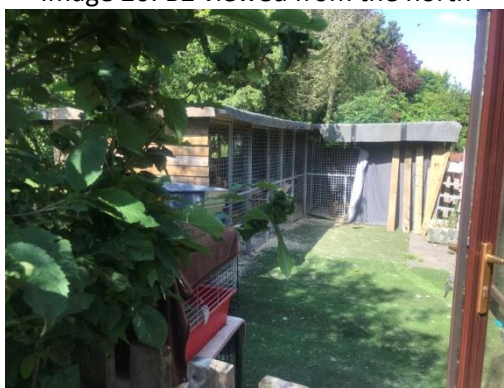


Image 21: B2 viewed from the north

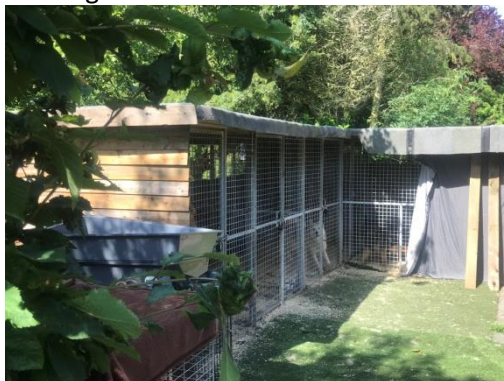


Image 22: Surrounding habitat to the east



Image 23: Surrounding habitat to the east



Image 24: Surrounding habitat to the east



Image 25: Surrounding habitat at the west of building



Image 26: Surrounding habitat at the west of building



Image 27: Surrounding habitat at the west of building



Appendix 4: Legislation and Planning Policy related to bats

LEGAL PROTECTION

All species of bat are fully protected under The Conservation of Habitats and Species Regulations 2010 (as amended) through their inclusion on Schedule 2.

Regulation 41 prohibits:

- Deliberate killing, injuring or capturing of Schedule 2 species (e.g. all bats)
- Deliberate disturbance of bat species as:
 - a) To impair their ability:
 - (i) To survive, breed, or reproduce, or to rear or nurture young
 - (ii) To hibernate or migrate
 - b) To affect significantly the local distribution or abundance of the species
- Damage or destruction of a breeding site or resting place

Bats are also protected under the Wildlife and Countryside Act 1981 (as amended) through their inclusion on Schedule 5. Under this Act, they are additionally protected from:

- Intentional or reckless disturbance (at any level)
- Intentional or reckless obstruction of access to any place of shelter or protection
- Selling, offering or exposing for sale, possession or transporting for purpose of sale

Effect on development works:

A European Protected Species Mitigation (EPSM) Licence issued by the relevant statutory authority (e.g. Natural England) will be required for works likely to affect a bat roost or for operations likely to result in a level of disturbance which might impair their ability to undertake those activities mentioned above (e.g. survive, breed, rear young and hibernate). The licence is to allow derogation from the relevant legislation but also to enable appropriate mitigation measures to be put in place and their efficiency/success to be monitored.

The legislation may also be interpreted such that, in certain circumstances, important foraging areas and/or commuting routes can be regarded as being afforded *de facto* protection, for example, where it can be proven that the continued usage of such areas is crucial to maintaining the integrity and long-term viability of a bat roost (Garland & Markham, 2008)

NATIONAL PLANNING POLICY (ENGLAND)

National Planning Policy Framework

The National Planning Policy Framework promotes sustainable development. The Framework specifies the need for protection of designated sites and priority habitats and species. An emphasis is also made on the need for ecological infrastructure through protection, restoration and re-creation. The protection and recovery of priority species (considered likely to be those listed as UK Biodiversity Action Plan priority species) is also listed as a requirement of planning policy.

In determining a planning application, planning authorities should aim to conserve and enhance biodiversity by ensuring that: designated sites are protected from harm; there is appropriate mitigation or compensation where significant harm cannot be avoided; opportunities to incorporate biodiversity in and around developments are encouraged; and planning permission is refused for development resulting in the loss or deterioration of irreplaceable habitats including aged or veteran trees and also ancient woodland.

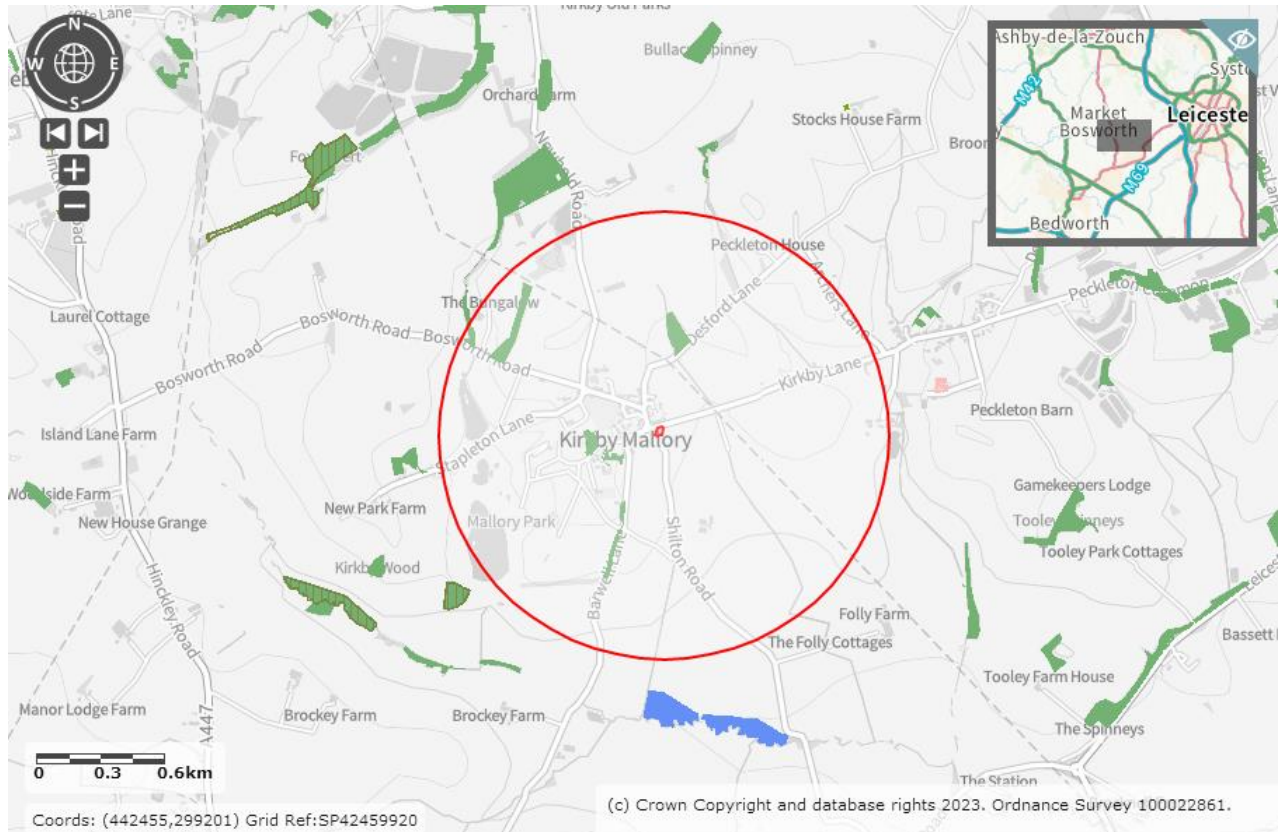
The Natural Environment and Rural Communities Act 2006 and The Biodiversity Duty

Section 40 of the Natural Environment and Rural Communities (NERC) Act, 2006, requires all public bodies to have regard to biodiversity conservation when carrying out their functions. This is commonly referred to as the 'biodiversity duty'.

Section 41 of the Act (Section 42 in Wales) requires the Secretary of State to publish a list of habitats and species which are of 'principal importance for the conservation of biodiversity.' This list is intended to assist decision makers such as public bodies in implementing their duty under Section 40 of the Act. Under the Act these habitats and species are regarded as a material consideration in determining planning applications. A developer must show that their protection has been adequately addressed within a development proposal.

Appendix 5: Desk Study Information

Priority habitats within 1km



Appendix 6: Bat suitability trigger spreadsheet (After Swift Ecology, 2018)

B1 (main house)		
TRIGGER INDICES	CATEGORY	TI VALUE
A) Location, habitat and environmental context of structure		
T1: General location	Suburban or intensive farmland	0.67
T2: Foraging opportunities within 250 m	Good	1
T3: Foraging opportunities within 5 km	Good	1
T4: Commuting opportunities	Good	1
T5: Cover in vicinity of structure	Moderate	0.67
T6: External lighting in vicinity of structure	Low level	0.67
T7: Number and character of nearby buildings	Mixture of old and new	0.67
T8: Structure/building exposure	Low	1
B) Exterior features and characteristics of structure or building		
T9: Structure/building age	Intermediate	0.67
T10: Size of Building	Intermediate size	0.67
T11: Main wall construction material	Modern	0.33
T12: Condition of wall/roof pointing/render	Tightly sealed	0.33
T13: Condition of lintel/door frame features	Tightly sealed	0.33
T14: Condition of eaves/soffits/bargeboards	Tightly sealed	0.33
T15: Condition of weatherboarding/cladding	Some gaps, cracks or crevices noted	0.67
T16: Condition of lead flashing	Flashing tightly sealed	0.33
T17: Roofing material	Modern tiling or mixture	0.67
T18: Bat access potential	Several small gaps noted	0.67
C) Interior features and characteristics of structure or building		
T19: Character of roof void/roof space	Typical single void or dark roof space	0.67
T20: Character and condition of roof supports	Tightly sealed modern timbers/supports	0.33
T21: Presence and extent of cobwebbing	Numerous cobwebs in roof space	0.33
T22: Presence and condition of roof lining	Lined with few gaps or mixture	0.67
T23: Light levels in roof void/space	Intermediate	0.67
T24: Protection from weather/wind	Well protected	1
T25: Temperature regime	Variety of temperatures	1
T26: Level of (human, animal) disturbance	High	0.33
T27: Flight Space	Good	1
T28: Flying Access (Horseshoe bats)	None	0.33
TRIGGER INDEX SCORE =		0.59
BAT ROOST SUITABILITY =		LOW

B2 (kennels)		
TRIGGER INDICES	CATEGORY	TI VALUE
A) Location, habitat and environmental context of structure		
T1: General location	Suburban or intensive farmland	0.67
T2: Foraging opportunities within 250 m	Good	1
T3: Foraging opportunities within 5 km	Good	1
T4: Commuting opportunities	Good	1
T5: Cover in vicinity of structure	Moderate	0.67
T6: External lighting in vicinity of structure	Low level	0.67
T7: Number and character of nearby buildings	Mixture of old and new	0.67
T8: Structure/building exposure	Low	1
B) Exterior features and characteristics of structure or building		
T9: Structure/building age	Less than 50 years	0.33
T10: Size of Building	Small size	0.33
T11: Main wall construction material	Modern	0.33
T12: Condition of wall/roof pointing/render	Tightly sealed	0.33
T13: Condition of lintel/door frame features	Tightly sealed	0.33
T14: Condition of eaves/soffits/bargeboards	Tightly sealed	0.33
T15: Condition of weatherboarding/cladding	No boarding present	0.2
T16: Condition of lead flashing	Flashing tightly sealed	0.33
T17: Roofing material	Corrugated metal/asbestos/similar	0.33
T18: Bat access potential	Numerous gaps or open-sided structure	1
C) Interior features and characteristics of structure or building		
T19: Character of roof void/roof space	No void or very limited roof space	0.2
T20: Character and condition of roof supports	No apparent supports or flat roof	0.2
T21: Presence and extent of cobwebbing	Numerous cobwebs in roof space	0.33
T22: Presence and condition of roof lining	Unlined or cavity filled with insulation	0.2
T23: Light levels in roof void/space	Light	0.33
T24: Protection from weather/wind	Draughty and exposed	0.33
T25: Temperature regime	Cold, north-facing or too hot	0.33
T26: Level of (human, animal) disturbance	High	0.33
T27: Flight Space	Poor	0.33
T28: Flying Access (Horseshoe bats)	Good	1
TRIGGER INDEX SCORE = BAT ROOST SUITABILITY =		0.43 NEGLIGIBLE

BACK PAGE

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