



**2 Hillfoot Cottages, Main Street, Goadby, Marwood, Melton Mowbray, LE14 4LP**

Prepared for: B Hedges Ltd

**Bat & Bird Survey - Preliminary Roost Assessment**

18<sup>th</sup> May 2021

**Document Control**

<b>Draft/Final</b>	<b>Draft</b>	<b>Final</b>
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## Executive Summary

Midland Ecology undertook a Preliminary Roost Assessment of a house and shed at 2 Hillfoot Cottages, Main Street, Goadby, Marwood, Melton Mowbray, LE14 4LP on the 18<sup>th</sup> May 2021. The aim of the assessment was to consider the value and suitability of the buildings for roosting bats. The development proposal briefly comprises extension of the house and alterations to the shed roof.

Building number	Potential for roosting bats	Recommendations for further survey and assessment
B1	High	Three nocturnal surveys between May-September consisting of one dusk, one dawn and one further dusk or dawn survey. These should be spaced at least two weeks apart (preferably more) and take place between May and September (two of the surveys during the optimal May-August period).
B2	Moderate	Two nocturnal surveys to be carried out between May-September.

The assessment concludes that the main house (B1) shows high suitability for use by roosting bats and will require three nocturnal surveys between May-September consisting of one dusk, one dawn and one further dusk or dawn survey. These should be spaced at least two weeks apart (preferably more) and take place between May and September (two of the surveys during the optimal May-August period). B2 shows moderate suitability for use by roosting bats and will require at least two nocturnal surveys to be carried out between May-September.

Due to the potential presence of nesting birds within B1 and B2, it would be wise for the start of works impacting these areas to avoid the nesting bird season (March to September inclusive). If works have already commenced before that time however, then birds are unlikely to start nesting within the impacted area. If work to the buildings needs to take place during the nesting bird season then a check for nesting birds will need to take place immediately prior to works.

## 1.0 Introduction and Context

### 1.1 Background

Midland Ecology was commissioned by B Hedges Ltd to undertake a Preliminary Roost Assessment (PRA) of a house and shed at 2 Hillfoot Cottages, Main Street, Goadby, Marwood, Melton Mowbray, LE14 4LP. 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 National Grid Reference SK78333 26247, and comprises an area of approximately 1000m<sup>2</sup>. This is an attached cottage house and shed with several other houses along the street. The site is situated in the Oadby area on the outskirts of Leicester. This is a rural area with farmland in proximity.

### **1.4 Project Description**

This report is prepared in relation to a planning application for the site.

It is proposed that an extension of the house will be built, and alterations will occur to the shed roof. All works areas, storage and haul routes will be included within the site boundaries; access will be provided by 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.defra.gov.uk](https://magic.defra.gov.uk).
- Designated sites information found on [Natureonthemap.naturalengland.org.uk](https://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, English bat licence number: 2020-44658-CLS-CLS on the 18<sup>th</sup> May 2021.

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*

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

## 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 is provided below; further details are included in Appendix 5.

#### *3.1.1 Designated sites*

There are no statutory designated sites within the study area.

The site does however fall within the Impact Risk Zones of the three Sites of Special Scientific Interest (SSSI); Stonesby Quarry SSSI approx. 2.9km south-east, Croxton Park SSSI approx. 2.6km north-east and Harby Hill Wood SSSI approx. 2.5km north-west. Their location and extent are illustrated in Appendix 5. The site does not share similar habitats or strong connectivity with any of these sites however.

#### *3.1.2 Landscape*

A search of the Magic.defra.gov.uk database shows deciduous woodland fragments are loosely present throughout the study area; the closest lying approx. 350m to the north-west of the site. Also present are two small traditional orchards (the closest lying approx. 340m to the north-west of the site). These habitats are likely to be classified as Priority habitats of principle importance, and of particular value to bats.

A review of aerial photographs (Figure 1) and OS maps shows the site is in a rural area with farmland in proximity. There are some potential commuting routes along the tree lines from the building to these farmlands.

*Figure 1: Aerial photo of site, showing landscape structure © Google 2021*



### 3.1.3 Historical records

A search of the Magic.defra.gov.uk database shows one European Protected Species Mitigation Licences (EPSML) that have been granted for bats within 2km of site. It was issued in 2013 for a project impacting brown long-eared *Plecotus auritus* and common pipistrelle *Pipistrellus pipistrellus* at a location approx. 440m to the north-west of the site.

## 3.2 Survey Results

The building within the survey area comprised of an attached cottage and shed. Potential roosting features (PRF) described below are illustrated on the map in Appendix 1.

### B1 – Main building

#### Building description

- Approx. 10m x 10m
- Walls of brick.
- The roof was clad in old tiles.
- The roof shape was double ridged gable ended
- The roof was in relatively good condition, but several lifted tiles were observed especially around some of the roof apexes.
- The soffits and bargeboards were mostly tightly sealed but several gaps were observed.
- There was some lifted lead flashing around the chimneys.
- There was no liner within the roof void with the tiles nailed straight onto the timbers. The roof void had considerable amounts of insulation on the floorboards of the attic space.

#### Evidence of bats

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

### B2 – Shed

#### Building description

- Approx. 3m x 5m
- Walls of brick.
- The roof was gable ended design with old tiles.
- The roof was in relatively good condition, but several lifted tiles were observed especially around some of the roof apexes.
- There were gaps in the doors and door frames allowing access to the building.
- The walls were all tightly sealed with no gaps observed.
- There was no liner within the roof void with the tiles nailed straight onto the timbers. There was no roof void present.

#### Evidence of bats

- No evidence of bats 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, but an array of common bird species was observed. B1 and B2 have high bird nesting potential.

### **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 2: Evaluation of buildings/structures on site*

Reference	Likelihood of bats using the building for roosting	Brief summary of justification
B1	High	Several lifted tiles especially around apexes, lifted lead flashing around chimneys and gaps in soffits. The roof void had no liner and insulation over the floorboards.
B2	Moderate	Some lifted tiles and gaps in the door and doorframe allowing access to building.

## 4.0 Conclusions and Recommendations

### 4.1 Conclusions and Impact Assessment

The PRA concludes that the house (B1) shows a high likelihood of supporting roosting bats and the shed (B2) shows a moderate likelihood of supporting roosting bats. It is considered likely that (if present) the buildings would likely support small numbers of more widespread crevice dwelling species, and that such a roost would be expected to be used for much of the year.

As the proposals include extension of the house and alterations to the shed roof, any roost present would be destroyed; with the potential for disturbance and/or direct harm to any bats present during works. 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. B1 and B2 showed high potential for nesting birds.

### 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 should be contacted to seek further advice.

Recommendations for further survey/assessment associated with each building are provided in Table 3.

*Table 3: Survey recommendations*

Building Ref	Value for / Likelihood of supporting roosting bats	Recommendations
B1	High	Three nocturnal surveys between May-September consisting of one dusk, one dawn and one further dusk or dawn survey. These should be spaced at least two weeks apart (preferably more) and take place between May and September (two of the surveys during the optimal May-August period).
B2	Moderate	At least two nocturnal surveys to be carried out between May-September.

#### *4.2.2 Breeding birds*

Due to the potential presence of nesting birds within B1 and B2, it would be wise for the start of works impacting these areas to avoid the nesting bird season (March to September inclusive). If works have already commenced before that time however, then birds are unlikely to start nesting within the impacted area. If work to the buildings needs to take place during the nesting bird season, then a check for nesting birds will need to take place immediately prior to works.

It is recommended that four swift boxes be put up to provide net gain for swifts and house sparrows (who will use the swift boxes) in the area.

## 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>.

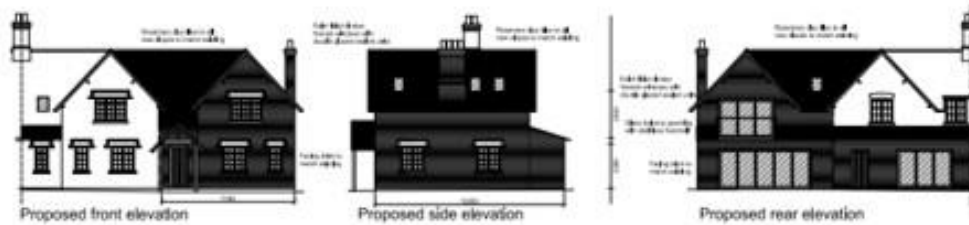
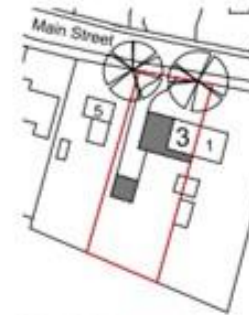
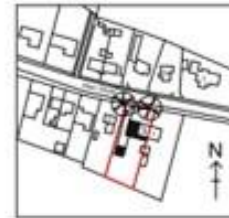
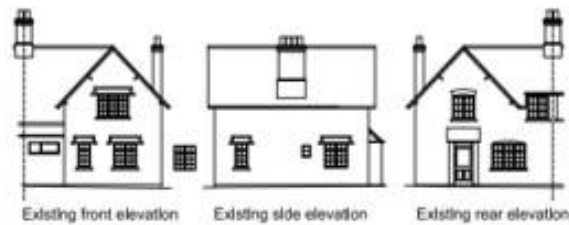
# Appendices

## Appendix 1: Survey Plan

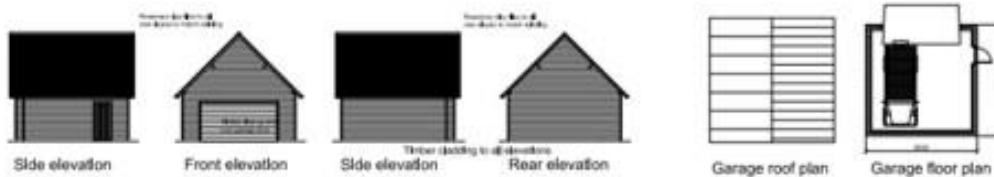




## Appendix 2: Proposed Site Plan



Proposed two storey side and  
single storey rear extensions  
and internal alterations at  
3 Main Street  
Goadby Marwood  
Melton Mowbray  
LE14 0QY  
Mr P Parry



Planning submission;  
Elevations, garage details  
site plan and block plan

Drawing No PP/3 Main St/ 1  
Scale 1:100 at A1  
Site and block plans as indicated  
April 2021 - JB

**B Hedges Ltd**  
Architecture and Surveying  
0116 2598574 [bhedges@bhedges.com](mailto:bhedges@bhedges.com)

### Appendix 3: Photographs



Image 1: B1 viewed from north



Image 2: B1 viewed from north



Image 3: B1 viewed from north. Close-up on roof



Image 4: B1 viewed from north. Close-up on roof



Image 5: B1 viewed from west



Image 6: B1 viewed from west. Close-up on roof



Image 7: B1 viewed from west. Close-up on roof



Image 8: B1 viewed from south



Image 9: B1 viewed from south





Image 10: B1 viewed from south



Image 11: B1 viewed from east covering attached property



Image 12: B1 viewed from east covering attached property



Image 13: B1 interior



Image 14: B1 interior



Image 15: B1 interior roof void



Image 16: B1 interior roof void



Image 17: B1 interior roof void



Image 18: B2 viewed from south



Image 19: B2 viewed from south



Image 20: B2 viewed from south. Interior



Image 21: B2 viewed from west





Image 22: B2 viewed from west. Interior



Image 23: B2 viewed from north.



Image 24: B2 viewed from north. Close up on roof



Image 25: B2 viewed from east



Image 26: B2 viewed from east. Close up on roof apex



Image 27: Front garden



Image 28: Back garden



Image 29: Back garden. Bird box on tree



Image 30: Back garden





Image 31: Back garden



Image 32: Front garden



Image 33: Front garden viewed from the west connecting to the back garden

## 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.

## MAGiC

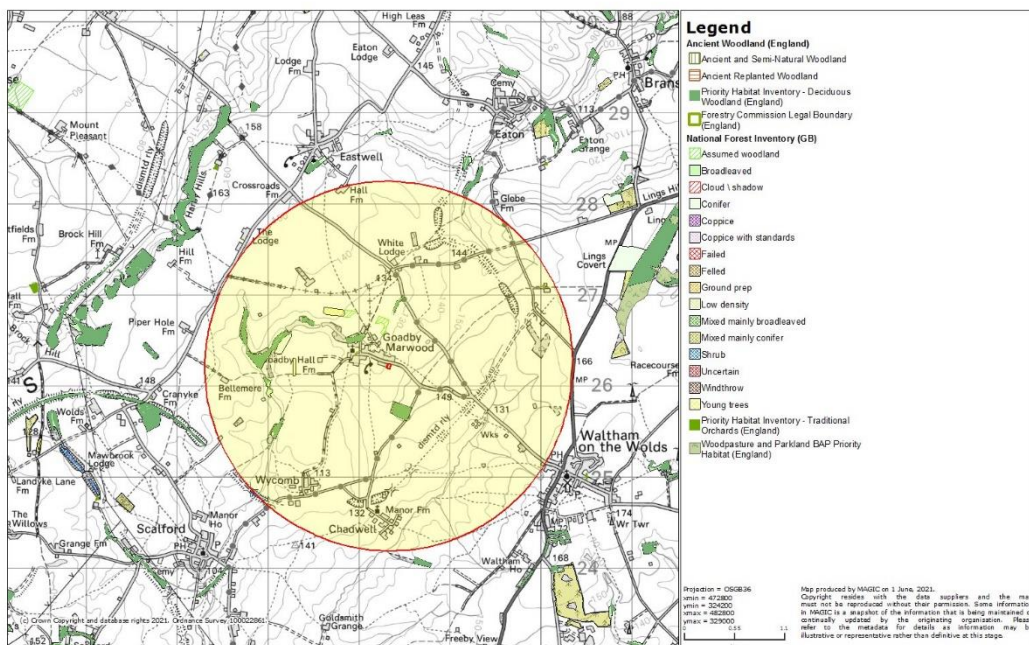
**Legend**

- Areas of Outstanding Natural Beauty (England)
- Limestone Pavement Orders (England)
- Local Nature Reserves (England)
- Moorland Line (England)
- National Nature Reserves (England)
- National Nature Reserves (Scotland)
- National Nature Reserves (Wales)
- National Parks (England)
- Ramsar Sites (England)
- Proposed Ramsar Sites (England)
- Ramsar Sites (Scotland)
- Ramsar Sites (Wales)
- Sites of Special Scientific Interest Units (England)
  - Favourable Condition
  - Unfavourable Recovering
  - Unfavourable no change
  - Unfavourable Declining
  - Part Destroyed
  - Destroyed
  - Not Assessed
- Sites of Special Scientific Interest (England)
  - SSSI Impact Risk Zones - to assess planning applications for likely impacts on SSSIs/SACs/SPAs & Ramsar sites (England)
- Sites of Special Scientific Interest (Scotland)
- Sites of Special Scientific Interest (Wales)
- Special Areas of Conservation (England)
- Special Areas of Conservation (England)
- Special Areas of Conservation (Scotland)
- Special Areas of Conservation (Wales)

Projection = OSGB36  
 year = 470000  
 year = 324000  
 year = 460000  
 year = 320000

Map produced by MADC in June 2021.  
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### Priority Habitats





**Appendix 6: Bat Suitability Trigger Index (After Swift Ecology, 2018)**

<b>B1</b>		
<b>TRIGGER INDICES</b>	<b>CATEGORY</b>	<b>TI VALUE</b>
<b>A) Location, habitat and environmental context of structure</b>		
T1: General location	Rural	1
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	Good	1
T6: External lighting in vicinity of structure	None	1
T7: Number and character of nearby buildings	Good variety of old buildings	1
T8: Structure/building exposure	Low	1
<b>B) Exterior features and characteristics of structure or building</b>		
T9: Structure/building age	Old	1
T10: Size of Building	Intermediate size	0.67
T11: Main wall construction material	Old	1
T12: Condition of wall/roof pointing/render	Some gaps, cracks or crevices noted	0.67
T13: Condition of lintel/door frame features	Tightly sealed	0.33
T14: Condition of eaves/soffits/bargeboards	Some gaps or cracks noted	0.67
T15: Condition of weatherboarding/cladding	No boarding present	0.2
T16: Condition of lead flashing	Some lifting of flashing	0.67
T17: Roofing material	Older style tiling	1
T18: Bat access potential	Several small gaps noted	0.67
<b>C) Interior features and characteristics of structure or building</b>		
T19: Character of roof void/roof space	Typical single void or dark roof space	0.67
T20: Character and condition of roof supports	Some gaps or cracks noted	0.67
T21: Presence and extent of cobwebbing	Some cobwebs	0.67
T22: Presence and condition of roof lining	Unlined or cavity filled with insulation	0.2
T23: Light levels in roof void/space	Dark	1
T24: Protection from weather/wind	Well protected	1
T25: Temperature regime	Variety of temperatures	1
T26: Level of (human, animal) disturbance	Low	1
T27: Flight Space	Good	1



T28: Flying Access (Horseshoe bats)	Potential	0.67
<b>TRIGGER INDEX SCORE =</b> <b>BAT ROOST SUITABILITY =</b>	<b>0.75</b> <b>HIGH</b>	
<b>B2</b>		
<b>TRIGGER INDICES</b>	<b>CATEGORY</b>	<b>TI VALUE</b>
<b>A) Location, habitat and environmental context of structure</b>		
T1: General location	Rural	1
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	Good	1
T6: External lighting in vicinity of structure	None	1
T7: Number and character of nearby buildings	Good variety of old buildings	1
T8: Structure/building exposure	Low	1
<b>B) Exterior features and characteristics of structure or building</b>		
T9: Structure/building age	Old	1
T10: Size of Building	Small size	0.33
T11: Main wall construction material	Old	1
T12: Condition of wall/roof pointing/render	Some gaps, cracks or crevices noted	0.67
T13: Condition of lintel/door frame features	Noticeable cracks or crevices	1
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	No flashing	0.2
T17: Roofing material	Older style tiling	1
T18: Bat access potential	Numerous gaps or open-sided structure	1
<b>C) Interior features and characteristics of structure or building</b>		
T19: Character of roof void/roof space	Small low void or open roof space	0.33
T20: Character and condition of roof supports	Some gaps or cracks noted	0.67
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	Dark	1
T24: Protection from weather/wind	Intermediate protection	0.67
T25: Temperature regime	Intermediate	0.67
T26: Level of (human, animal) disturbance	Low	1
T27: Flight Space	Poor	0.33
T28: Flying Access (Horseshoe bats)	Potential	0.67
<b>TRIGGER INDEX SCORE =</b> <b>BAT ROOST SUITABILITY =</b>	<b>0.64</b> <b>MODERATE</b>	

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