



51 Desford Road, Newbold, Verdon, Leicester, LE9 9LG

Prepared for: Lewis and Samantha Gibbons

Bat & Bird Survey - Preliminary Roost Assessment

21st November 2023

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Executive Summary

Midland Ecology Ltd undertook a Preliminary Roost Assessment of a detached house at 51 Desford Road, Newbold, Verdon, Leicester, LE9 9LG on the 21st of November 2023. The aim of the assessment was to consider the presence or likely-absence of roosting bats, and the value/suitability of the building(s) for roosting bats. The development proposals briefly comprise front and rear extensions.

Potential for roosting bats	Recommendations for further survey and assessment
B1 - Low	One bat presence/likely-absence survey (dusk or dawn), conducted during the optimal survey period for bats (May to August inclusive).
B2 – Negligible	No further surveys required.

The assessment concludes that the house (B1) shows only low suitability for use by roosting bats. It was not however possible to firmly rule out their presence. Nationally accepted best practice therefore recommends one bat presence/likely-absence survey, in order to give a firmer conclusion on whether or not roosting bats are present.

1.0 Introduction and Context

1.1 Background

Midland Ecology Ltd were commissioned by Lewis and Samantha Gibbons to undertake a Preliminary Roost Assessment (PRA) of a detached house at 51 Desford Road, Newbold, Verdon, Leicester, LE9 9LG. The assessment is informed by the Bat Conservation Trust publication *Bat Surveys – Good Practice Guidelines* (Collins, 2023).

No previous reports have been produced for this site by Midland Ecology Ltd. 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. Results from the Bat Roost Trigger Index can be found in Appendix 6.

1.3 Site Context

The site is located at National Grid Reference SK 45457 03796 and comprises an area of approximately 0.01ha. There is one building within the site boundary, with houses adjacent. The site is situated in the Verdon, Newbold area. This is a suburban location, with residential properties and gardens on all sides and agricultural fields and woodland nearby.

1.4 Project Description

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

It is proposed that the current property has front and rear extensions. This would require internal and external works, with alterations to the 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 Katrina Wells BSc (Hons) MSc ACIEEM, English bat licence number: 2019-39619-CLS-CLS ; and Abigail Franks BSc (Hons): on the 21st of November 2023.

2.2.1 Roosting bats

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.

2.2.2 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, 2023); 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.

If no firm evidence of bat presence was found, a PRA bat survey trigger index was created to assess the likelihood of roosting bats within the building (see Appendix 6). The index is based on a list of 28 features which reflect: A) the location, habitat and environmental context of the structure or building (8 features); B) exterior features and characteristics of the structure or building (10 features); and C) interior features and characteristics of the structure or building, particularly those comprising, or within, the roof void (10 features). Each feature is subdivided into three or four descriptive categories which summarise the feature 'condition', while indicative descriptions are provided which loosely define each category; these are used as a prompt to assign a numerical score (i.e. 1.0, 0.67, 0.33 or 0.2) to the feature.

Table 2: Bat Roost Trigger Index scores and the roost suitability classes

> 0.7	High
0.6 - 0.7	Medium
0.5 - 0.6	Low
< 0.5	Negligible

While this trigger index should not be interpreted as a prescriptive classification of the building's suitability for roosting bats, it is a useful additional tool, and helps to provide greater continuity and objectivity when assessing buildings.

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 2km of the site; this is described in Table 3 below.

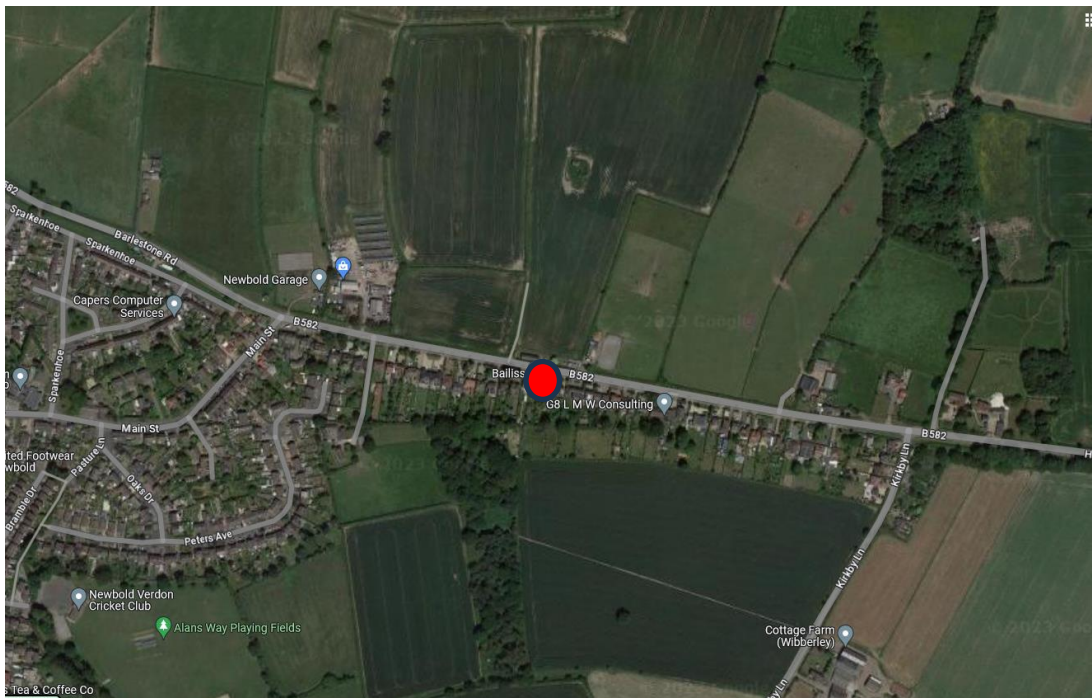
The site also falls within the Impact Risk Zones (IRZ) of one Sites of Special Scientific Interest (SSSI); Botcheston Bog SSSI, 3.1km to the east. However, the proposals are not of a type that require further consultation with Natural England on the likely impacts of the proposals.

3.1.2 Landscape

A search of the Magic.defra.gov.uk database shows numerous areas of deciduous woodland present throughout the 2km study area, the closest lying approx. 70 metres to the south). 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 unlikely to be important in the context of the surrounding landscape. It shows no clear role in connecting blocks of woodland to the wider hedgerow network, or otherwise providing suitable habitat corridors for bats.

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



3.1.3 Historical records

A search of the Magic.defra.gov.uk database shows no European Protected Species Mitigation Licences (EPSML) that have been granted for bats within 2km of site.

3.2 Survey Results

Weather conditions during survey	
Temperature (°C)	12
Cloud cover (oktas)	8
Wind (Beaufort scale)	1
Rain	0

3.2.1 Roosting Bats

The building within the survey area comprised a relatively modern, two-storey, brick house (B1). Potential roosting features (PRF) described below are illustrated on the map in Appendix 1. B2 was a garage at the rear of the property.

B1 – House

Building description:

- Approx. 9m x 9m
- Walls were a mixture of bare brick and rendering.
- The roof shape was pitched and clad in interlocking tiles, with an internal bitumen felt lining. This internal lining was generally in good condition, however there were some areas of damage.
- There was also a single storey extension/conservatory on the south side of the building with a mono-pitched roof, with plastic sheeting. This extension had bare brick and cladding on the side of the roof.
- The windows and doors were uPVC framed and in a good state of repair.
- Soffit boxes were present on all aspects of the building and were constructed from uPVC.
- Flashing was present on the property.

PRF observed:

- There was a small number of lifted tiles/slightly raised on the main roof, notably at the south-western corner and north-eastern corner.
- There was an area of missing mortar below the tile board on the eastern gable end.
- At the roof's southeast corner, the soffit box was uncapped at its end; leaving a large gap which could be used by bats to access the roof.

- There were gaps between the soffit and the wall, however inspection of these found that they were too shallow to provide suitable roosting sites for bats.
- There were gaps under the lead flashing of the mono-pitched roof, however again, after inspection, these were too shallow for roosting bats.
- The internal roof void was cobwebbed, with some light noted shining in from the outside (western gable end).

Evidence of bats:

- No evidence of bat presence was discovered during either the external or internal inspections.
- Whilst the internal ridge beam was exposed (presenting a PRF) this was coated in cobwebs; suggesting that no bats had been roosting here.
- Inspection of the roof interior was constrained however, as tightly-fitting internal felt lining prevented access to some areas of the underside of the tile for inspection. It was therefore not physically possible to reach all of the PRF observed.

B2 – Garage

The garage was single-storey, made of concrete and covered in rendering. The roof shape was flat and covered in metal sheeting. The internal also had metal and concrete supports. The internal was every cobwebbed, with no suitable roosting locations for bats due to the type of material the building was made from. The building was assessed as having negligible potential to support roosting bats.

3.2.2 Breeding birds and other incidental observations

No evidence of nesting birds was observed within, on or adjacent to the building.

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	Low	Small number of potential roosting features, some of which could not be adequately accessed/inspected to rule out their use by bats. The Bat Roost Trigger Index recovered a score of 'low potential' (0.59).
B2	Negligible	No suitable roosting features located. Unsuitable building materials used.

4.0 Conclusions and Recommendations

4.1 Conclusions and Impact Assessment

4.1.1 Roosting bats

The PRA concludes that the house shows a low likelihood of supporting roosting bats. It is considered likely that (if present) the house could 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 alterations to the roof of this building, any roost present could be damaged or 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.

4.1.2 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.

4.2 Recommendations

4.2.1 Bat survey and assessment

Best practice survey guidelines (Collins, 2023) 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 4.

Table 4: Survey recommendations

Building Ref	Value for / Likelihood of supporting roosting bats	Recommendations
B1	Low	One bat presence/likely-absence survey (dusk or dawn), conducted during the optimal survey period for bats (May to August inclusive).
B2	Negligible	No further surveys required.

4.2.2 Breeding birds

No further surveys recommended.

5.0 Bibliography

- Collins, J. (ed), (2023), Bat Surveys for Professional Ecologists: Good Practice Guidelines (4th Edition). BCT
- Reason, P.F. and Wray, S. (2023). UK Bat Mitigation Guidelines: a guide to impact assessment, mitigation and compensation for developments affecting bats. CIEEM
- Garland & Markham (2008) Is important bat foraging and commuting habitat legally protected?
- CIEEM (2016) Guidelines for Accessing and Using Biodiversity Data

Appendices

Appendix 1: Survey Plan



Legend

-  Point Feature
-  Linear Feature
-  Bat Droppings

Appendix 2: Proposed Site Plan



Appendix 3: Photographs



Image 1: View of the front of B1



Image 2: View of rear of the property



Image 3: View of missing soffit box cap



Image 4: Missing mortar at the north-eastern corner

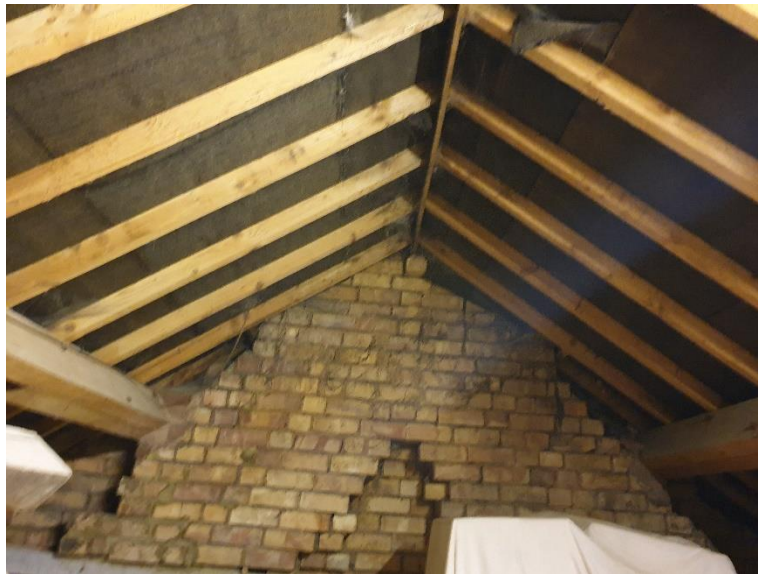


Image 5: View of the internal roof void



Image 6: View of B2

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.

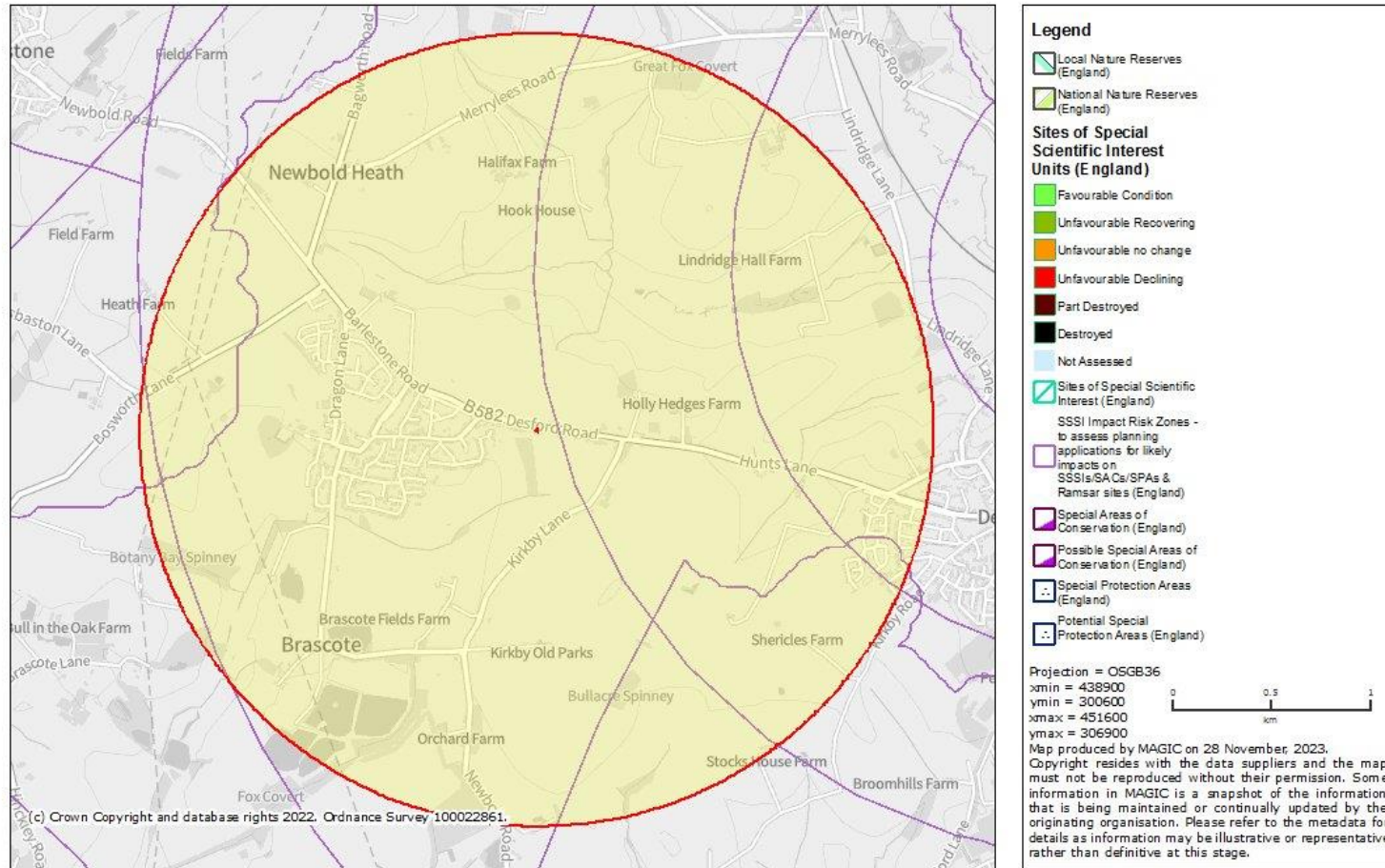
The Natural Environment and Rural Communities Act 2006 and The Biodiversity Duty

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.

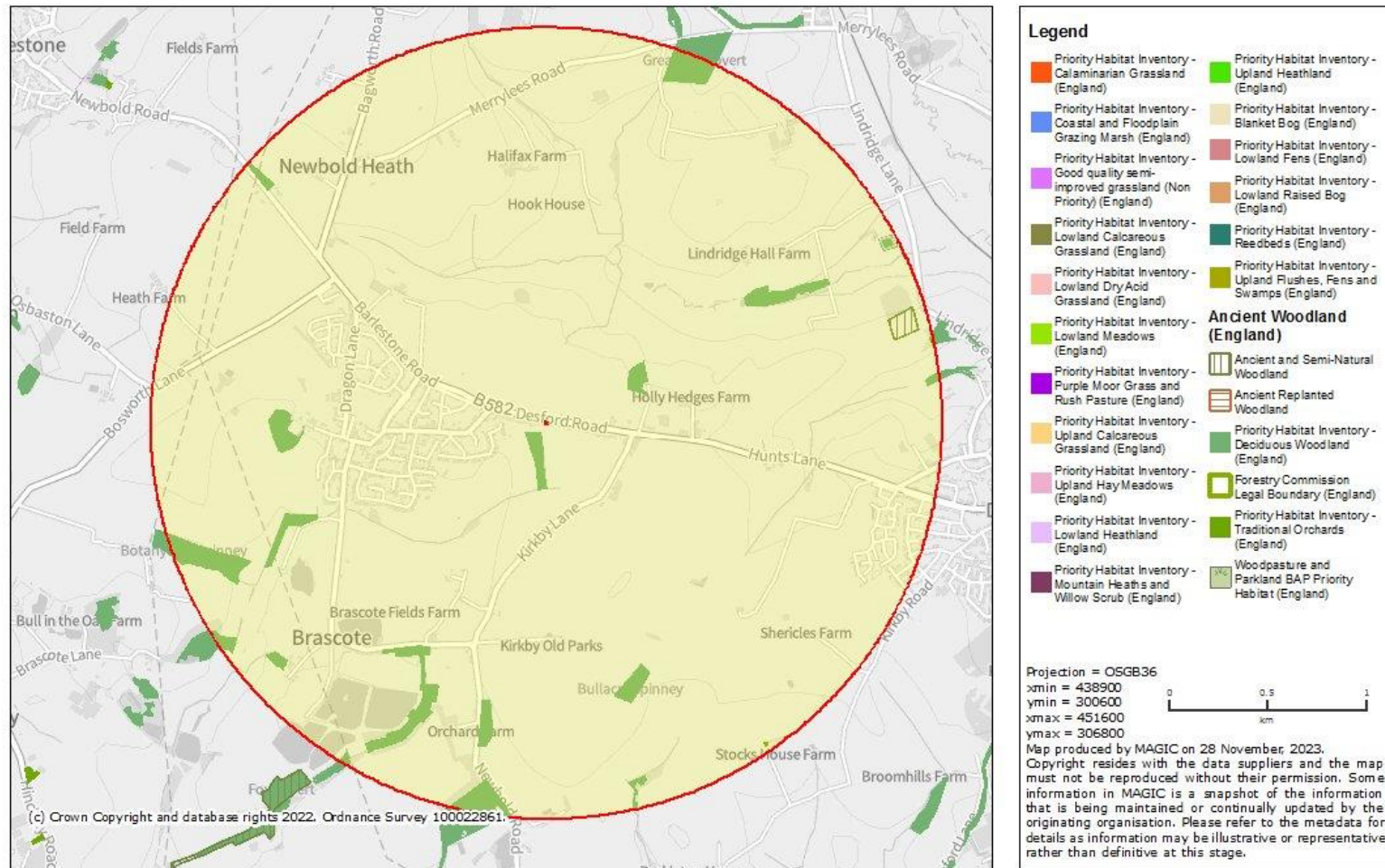
Appendix 5: Desk Study Information

MAGiC Statutory Designated Sites Within 2km of the Site



MAGiC

Priority Habitats Within 2km of the Site



Appendix 6: Bat Roost Trigger Index Score

BAT ROOST TRIGGER INDEX (TI): RESULTS			 Swift Ecology
Project:	51 Desford Road	Evidence:	None
Code:	0	Constraints:	Yes - significant
Date:	November 2023	Surveyor:	Katrina Wells
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	Moderate		0.67
T3: Foraging opportunities within 5 km	Moderate		0.67
T4: Commuting opportunities	Moderate		0.67
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	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	Tightly sealed		0.33
T16: Condition of lead flashing	Some lifting of flashing		0.67
T17: Roofing material	Modern tiling or mixture		0.67
T18: Bat access potential	No gaps noted		0.33
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	Dark		1
T24: Protection from weather/wind	Well protected		1
T25: Temperature regime	Intermediate		0.67
T26: Level of (human, animal) disturbance	Moderate		0.67
T27: Flight Space	Moderate		0.67
T28: Flying Access (Horseshoe bats)	None		0.33
TRIGGER INDEX SCORE = BAT ROOST SUITABILITY =		0.59 LOW	



BACK PAGE

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