

Preliminary Roost Assessment

of

2 Bridge Street, Needham Market,
Suffolk, IP6 8AG.

Carried out for:

Steve Lawson – Smith

c/o

Nick Barber

1st

Prepared by:

Abrehart Ecology

The Barn, Bridge Farm
Friday Street, Brandeston
Suffolk IP13 7BP

Tel: 01728 684362 - 07798 941555

e-mail: toby@abrehartecology.com

Website: abrehartecology.com

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CONTENTS

EXECUTIVE SUMMARY	2
1 BACKGROUND TO COMMISSION	3
2 METHODS	6
3 RESULTS	7
4 CONCLUSIONS & RECOMMENDATIONS.....	11
5 REFERENCES	12
APPENDIX I – BUILDING LOCATIONS.....	13
APPENDIX II – PHOTOS	14
APPENDIX III – DATA SEARCH FIGURES	20
APPENDIX IV - RELEVANT PROTECTED SPECIES LEGISLATION.....	23

Executive summary

Overview

Abrehart Ecology Ltd was commissioned by Nick Barber to carry out a Preliminary Roost Assessment (PRA) of 2 Bridge Street, Needham Market, Suffolk, IP6 8AG (hereafter referred to as the Site). The assessment was required to determine the presence, potential presence or likely absence of roosting bats using the buildings proposed for works, to inform a future permitted development application at the Site.

The site is approximately 6m², comprising of a two-storey timber framed barn with a pitched pan tile roof and timber cladding, the surrounding habitat is hardstanding and buildings. The building is likely to have been constructed in the 1700's and is now a listed building. Internally there appears to have been historic fire damage, with some replaced timber and some remaining timber with areas of fire damage.

A Preliminary Roost Assessment was carried out on the 13th of January 2023 by Sorrel Kiamil BSc (Hons) MSc (level 1 great crested newt license and hazel dormouse license) of Abrehart Ecology Ltd.

Results

The habitats recorded on and adjacent to the Site included:

- Buildings
- Scattered trees
- Hardstanding

The building had features recorded that could provide potential roosting habitat for bats, and during the internal inspection bat droppings were collected on the ground and first floor and sent off for DNA analysis at SureScreen Scientifics.

Recommended further survey efforts are detailed in Section 4.

1 Background to Commission

- 1.1 Abrehart Ecology Ltd was commissioned by Steve Lawson – Smith c/o Nick Barber to carry out a Preliminary Roost Assessment (PRA) of a proposed barn conversion at 2 Bridge Street, Needham Market, Suffolk, IP6 8AG (central grid reference TM 0855 8114; Fig. 1; hereafter referred to as the Site).
- 1.2 The assessment was required to determine the presence, potential presence or likely absence of roosting bats using the building proposed for works, to inform a future permitted development application at the Site: to include a barn conversion to the existing two-storey barn which will include the barn to be stripped back to the timber frame.

Aims of Study

- 1.3 This report provides results and recommendations based on a bat roost inspection of one building at the Site. The aim of this study was to:
 - Assess the suitability of the building to support roosting bats;
 - Identify the presence of any evidence of roosting bats, where reasonably possible;
 - Determine, where possible, the likely type of roost present, if any;
 - To provide the legislative and/or policy protection afforded to any habitats present or bat species assessed as likely to be associated with the site; and
 - To recommend any further ecological surveys considered necessary to inform mitigation requirements for the planning application within the Site.

Site Description

- 1.4 The Site is approximately 69m², comprising of a two-storey timber framed barn with a pitched pan tile roof and single skin timber cladded walls. The surrounding habitat is hardstanding and further buildings, with an occasional scattered tree. The building is likely to have been constructed in the 1700's and is now a listed building. Internally there appears to have been historic fire damage, with some replaced timber and some remaining timber with areas of fire damage. Most timber beams within the barn were rough with multiple cracks and ingress points at the joins.
- 1.5 The Site is located off Bridge Street within the town of Needham Market, Suffolk. The immediate adjacent landscape includes further areas of residential housing with small pockets of amenity ground and scattered trees. The wider landscape, beyond the housing, consists of the River Gipping to the east, Needham Lakes, and beyond this is largely agricultural land with associated ditches, hedgerows, and boundary tree habitats (see Figure 1).

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Magic Map

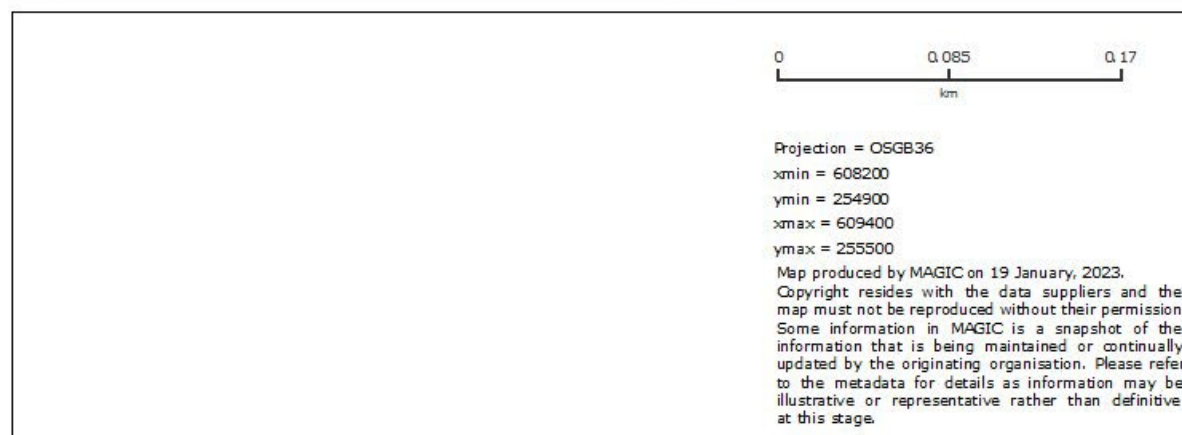
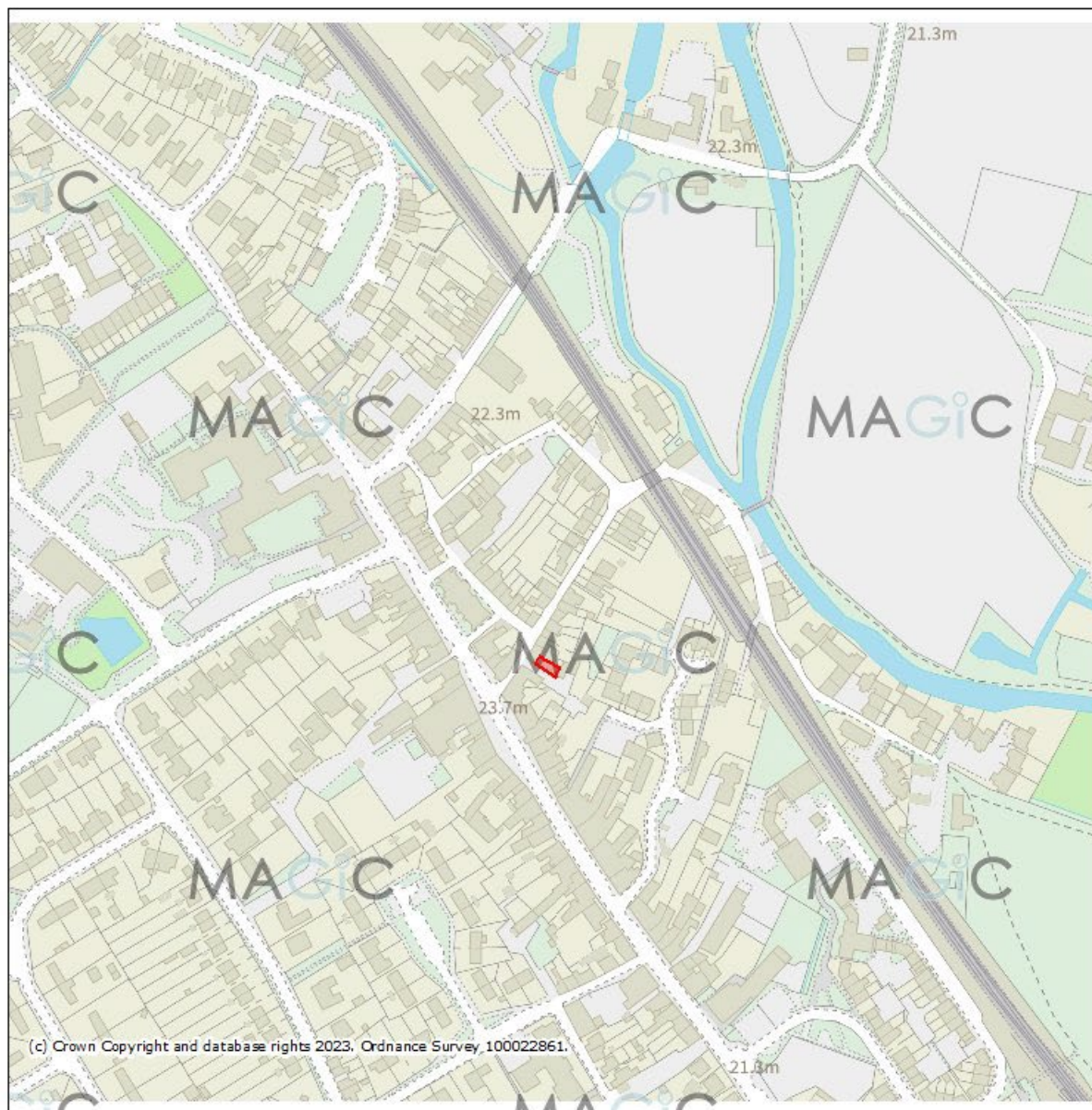


Figure 1. Site location

Relevant Legislation

- 1.6 All bat species and their roosts are protected under the Wildlife and Countryside Act 1981 (as amended) (WCA) and the Conservation of Habitats and Species Regulations 2010 (as amended). Under this legislation it is an offence to intentionally or recklessly:
- capture, injure or kill a bat;
 - disturb a bat; or
 - destroy or obstruct access to a bat roost.
- 1.7 The National Planning Policy Framework (NPPF) 2012 places responsibility on Local Planning Authorities (LPAs) to aim to conserve and enhance biodiversity in and around developments. Section 40 of the NERC Act requires every public body to “have regard, so far as is consistent with the proper exercise of those functions, to the purpose of conserving biodiversity”. Biodiversity, as covered by the Section 40 duty, is not confined to habitats and species of principal importance but refers to all species and habitats. However, the expectation is that public bodies would refer to the Section 41 list (of species and habitats) through compliance with the Section 40 duty.
- 1.8 Appendix IV - Relevant Protected Species Legislation details legislation which protects species and groups relevant to the site (bats).

2 Methods

Desk Study

- 2.1 Data obtained from the Suffolk Biodiversity Information Service (SBIS) and were used to conduct a bat data search¹ for any information regarding statutory and non-statutory sites and records of protected and priority species within a 2 km radius of the Site. The data was received on the 20th of January 2023.

Field Survey

- 2.2 A Preliminary Roost Assessment was carried out by Sorrel Kiamil BSc (Hons), MSc (level 1 great crested newt licence and hazel dormouse licence) on 13th of January 2023 in accordance with standard best practice methodology for roost assessments set out by the Bat Conservation Trust (BCT). Weather conditions during the surveys were 100% cloud cover, dry, a light breeze (Beaufort Scale 3), and a temperature of -9°C, with good visibility.
- 2.3 The buildings were surveyed externally, and internally where possible, for their suitability to support roosting bats according to Bat Conservation Trust Good Practice Guidelines (Collins, 2016). The buildings were systematically searched for potential bat roost features (PRFs) and any evidence of roosting bats such as fur staining, urine splashes, droppings, smoothness at entry points, and feeding remains. A torch was used to investigate accessible features where necessary.

Survey Limitations

- 2.4 There was no access to the externally inspect the northern side of the building. It is not considered to be a limitation to the PRA survey as it will not alter the recommendations within this report. However, if emergence and return to roost surveys are undertaken it is recommended that access to the third-party land is obtained.

¹ The bat data search identifies priority species identified by the:- Wildlife & Countryside Act 1981 Schedules 1, 5 & 8; Conservation of Habitats & Species Regulations 2010 Schedules 2 & 5; Bonn Convention Appendix 1 & 2; ; Habitats Directive Annex 2, 4 & 5; NERC Act 2006 Section 41; UKBAP (both local and national); IUCN Red List species.

3 Results

3.1 The following section details the results of the desk study and field survey. Consideration has been given to species likely to be found in the habitats recorded on site and potential impacts to designated sites within the local area.

Data Search

3.2 The data search returned 20 records of bats in the area, some of which could potentially roost within the Site (these are detailed with Appendix III – Data Search). The species recorded were common pipistrelle (*Pipistrellus pipistrellus*), soprano pipistrelle (*Pipistrellus pygmaeus*), brown long-eared bat (*Plecotus auratus*), noctule (*Nyctalus noctule*), and bat sp. The majority of records were from Needham Market and four were from the next town of Creeting St Peter. One maternity roost was returned 1.9km south west of the site. The closest return was 50m west of the Site, this was recorded as 2 common pipistrelles emerging from a building in 2017. The most recent record was in 2021 approximately 670m north east of the Site.

3.3 There are two SSSI sites within 2km of the Site, these are:

- Creeting St Mary Pits – approximately 695m east of the Site - This complex of old quarry sections allows a very important part of the Lower Pleistocene stratigraphy of Suffolk to be demonstrated. The site is of great importance as the type-site of the recently defined Creeting Sands, thought to be shallow marine/intertidal sediments laid down during an early Pleistocene interglacial. These occur at the base of the sequence and are overlain by gravels, either early Thames deposits (Kesgrave Formation) or Anglian outwash, which are in turn overlain by till (Lowestoft Formation). The description of these newly defined marine/intertidal beds and the appraisal of their relationship to better established parts of the East Anglian stratigraphy are at an early stage but will clearly focus considerable attention on the Creeting St Mary Pits. The latter therefore have considerable research potential as well as great importance as a key stratigraphic site.
- Barking Woods – approximately 1448, southwest of the Site - The Barking Woods are an inter-related group of ancient woodlands, whose history has been well documented since 1251. The majority of the medieval earth banks still remain and are marked by large pollards of oak and ash. The woodland structure is predominantly coppice-with-standards, composed of a variety of different stand-types. The diverse ground flora is typical of ancient woods and reflects a change in soils from the heavy boulder clay of Priestley and Swingen’s Woods to the chalky sand of Titley Hill Wood.

Field Survey

3.4 The survey area included a two-storey timber framed barn with a pitched pan tile roof and timber cladding, the surrounding habitat is hardstanding and buildings with an occasional scattered tree. The building is likely to have been constructed in the 1700’s and is now a listed building. Appendix I shows the location of survey areas within the Site. Recorded potential bat roosting features (PRFs) are detailed in Table 1 below and in detail photos can be found in Appendix II – Detailed Result Locations and Photos.

Table 1: Recorded Features During the PRA

Photo	Description
<p data-bbox="164 304 288 334"><i>Exterior</i></p> 	<p data-bbox="799 850 1428 1110">The barn was an old timber framed structure with a clay pan tiled pitch roof, likely to have been constructed in the 1700's and is now a listed building. The walls were single skin timber cladding with multiple areas of ingress with damaged and slipped boards (see appendix II for detailed plan). The north-east elevation could not be inspected as no access to third-party land.</p> <p data-bbox="799 1152 1428 1310">There were multiple lifting and slipped tiles with several damaged ones. There were multiple areas of missing concrete beneath the edge and ridge tiles and an area of lifting lead flashing in the south-west corner (see Appendix II for detailed plan).</p> <p data-bbox="799 1352 1428 1543">Adjacent to the south-east elevation is a single-story section of barn which is owned and used by the fish shop (fish shop is adjacent to the south-west elevation of the barn). This is directly adjacent to the barn and is made of the same materials, with similar external PRFs.</p>



Internal inspection

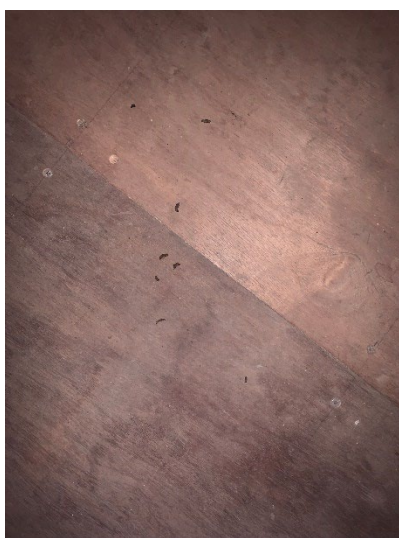
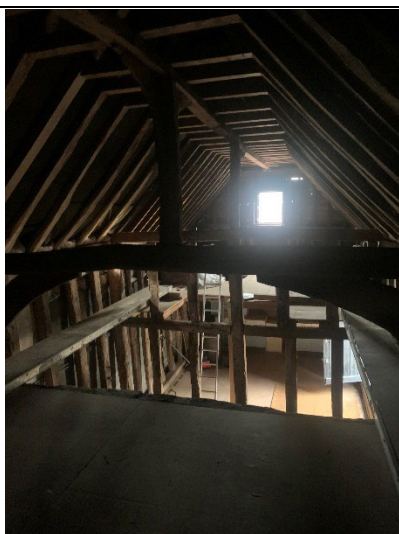


Directly under tiles was a nonbreathable membrane and no insulation. The walls were single skin timber cladding with multiple areas of ingress. All the rough timber beams were exposed and there were multiple splits and gaps at the joins allowing for multiple PRFs.

The ceiling was too tall in multiple areas to be able to fully inspect with a ladder.

Works had previously begun in the barn so there was area of plaster board to the north-west (potentially the start of a bathroom); there were bat dropping observed in this converted section, and multiple droppings scattered across the barn on both floors (see Appendix II for detailed plan).

The adjoining wall to the neighbouring building (north-east elevation) was a section of barn with out timber cladding, here was an area of breeze blocks.



- The barn had many exposed rough timber beams with gaps observed between joints. These could provide roosting opportunities for bats. There was also many cracks and holes on multiple beams.
- There was nonbreathable membrane under the roof tiles which had areas of lifting and missing sections.
- From the interior of the barn multiple areas of ingress could be observed on every aspect of the building (see Appendix II for detailed plan)
- Multiple bat droppings were observed on the ground floor and 1st floor (see Appendix II for plan), and a representative selection of these were collected and sent to SureScreen Scientifics.
- No bats were seen at the time of survey.

Summary

Internal inspection of the barn.

The interior of the barn contained multiple features which were suitable to support roosting bats including exposed rough beams, splits in the beams, and gaps around the joints. There were multiple areas of ingress on all aspects of the barn. Multiple bat droppings were observed on both floors in multiple areas (see appendix II for detailed plans of dropping locations and points of ingress).

External inspection of the barn.

Externally many potential roosting features were identified, including lifting lead flashing, damaged and slipped/lifting tiles. And there were multiple areas of missing concrete along the edge and ridge tiles allowing multiple areas of ingress (see appendix II for detailed plan of points of ingress)

Overall, it is considered that the residential house has **high bat roost potential**.

4 Conclusions & Recommendations

- 4.1 There are two statutory sites within 2 km of the Site, and there were no National Site Network conservation sites within 7 km of the Site.
- 4.2 **The barn had high bat roost potential, with many features noted throughout the external and internal survey. Bat droppings were also observed throughout the barn which have been sent off for analysis. Therefore, it is recommended that full surveys are carried out – consisting of three emergence/return to roost surveys, designed or led by a level 2 bat licenced ecologist (to BCT Guidelines). These surveys can be carried out between May and September (weather dependent) but two are to be undertaken between May-August. Further survey should also include the DNA analysis of the droppings.**
- 4.3 It is considered that there will be no significant long-term impacts to the conservation status of protected species in the area, if the proposed development follows precautionary methodologies and recommendations for further surveys set out within this report, and any mitigation measures suggested within subsequent protected species reports or mitigation licences.

5 References

Collins, J (ed.) (2016) *Bat Surveys for Professional Ecologists: Good Practice Guidelines* (3rd ed.). The Bat Conservation Trust, London.

JNCC (2010) *Handbook for Phase 1 habitat survey: a technique for environmental audit* (revised reprint)
JNCC: Peterborough.

Web references

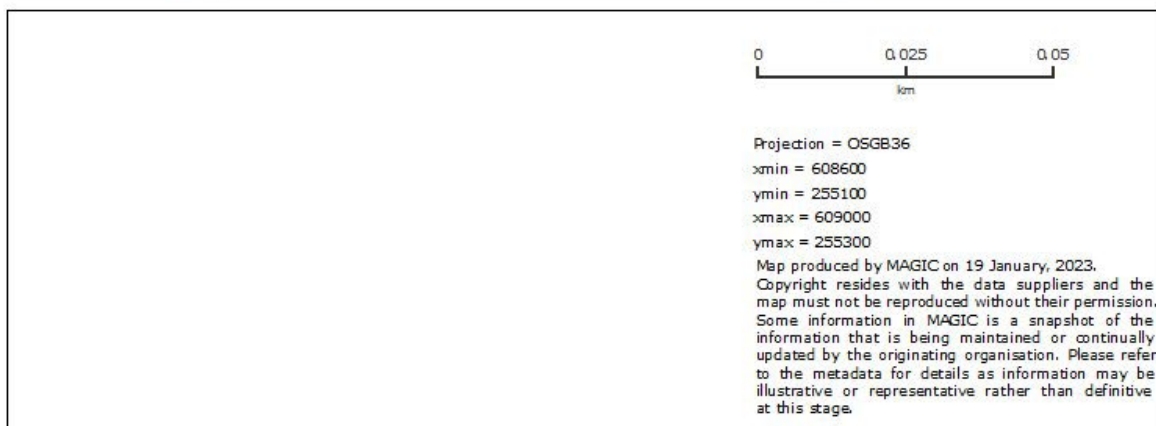
http://www.bats.org.uk/data/files/bats_and_lighting_in_the_uk_final_version_version_3_may_09.pdf

<http://www.natureonthemap.naturalengland.org.uk/MagicMap.aspx>

Appendix I – Building locations





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Magic Map



Location of surveyed buildings (red lines indicate surveyed buildings)

Appendix II – Photos

	
<p>Photograph taken from ground floor showing south-east side elevation window and surrounding the window are multiple potential entry points.</p>	<p>Photograph of the breeze blocks of the adjoining building on the north-east elevation with a large potential point of ingress above this,</p>
	
<p>South-east side elevation example of multiple potential points of ingress.</p>	<p>Photograph of exposed rough beams with gaps around the joins to the north-west.</p>



Photograph of exposed rough beams with gaps and splits on the beams of pitched roof with the nonbreathable membrane.



Photograph of exposed rough beams with gaps around the joins.



Photograph of exposed rough beams with gaps around the joins and lifting roofing membrane.



Photograph of the entry and example of some of the works that had been undertaken (new floor and beams on 1st floor)



Area of multiple bat droppings on the ground floor.



Photograph of the south-east elevation of the barn and the adjoining barn, used as storage of the fish and chip shop.



Photograph of single skin timber cladding walls on the front of the building with some potential points of ingress under the cladding.



Photograph of edge tile with missing concrete allowing potential points of ingress.






Photograph of single skin timber cladding walls on the front of the building and doors on the first floor with some potential points of ingress under the cladding and around the door.



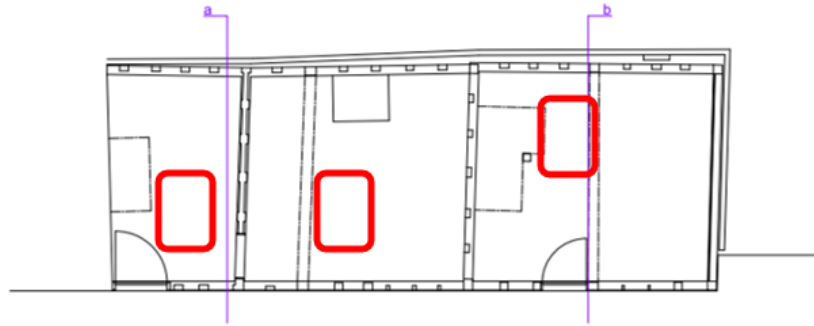
Photograph of edge tile with missing concrete allowing potential points of ingress. On the adjoining single-story Barn.

Appendix II - Detailed Result Locations

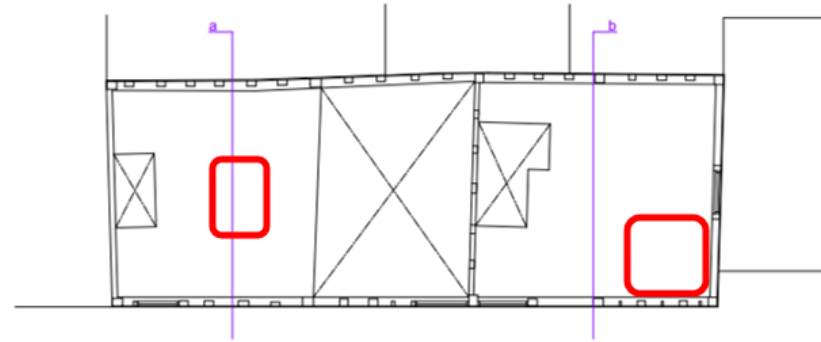


Key	Description
	Areas with multiple or large points of ingress (seen clearly from the inside with natural light entering).
	Lifting or damaged tiles or missing concrete under the edge and ridge tiles.
	Lifting lead flashing and lifting tiles.


Note - No access to rear elevation (north-east).



ground floor plan



first floor plan

Key	Description
	Areas where multiple bat droppings were observed

Appendix III

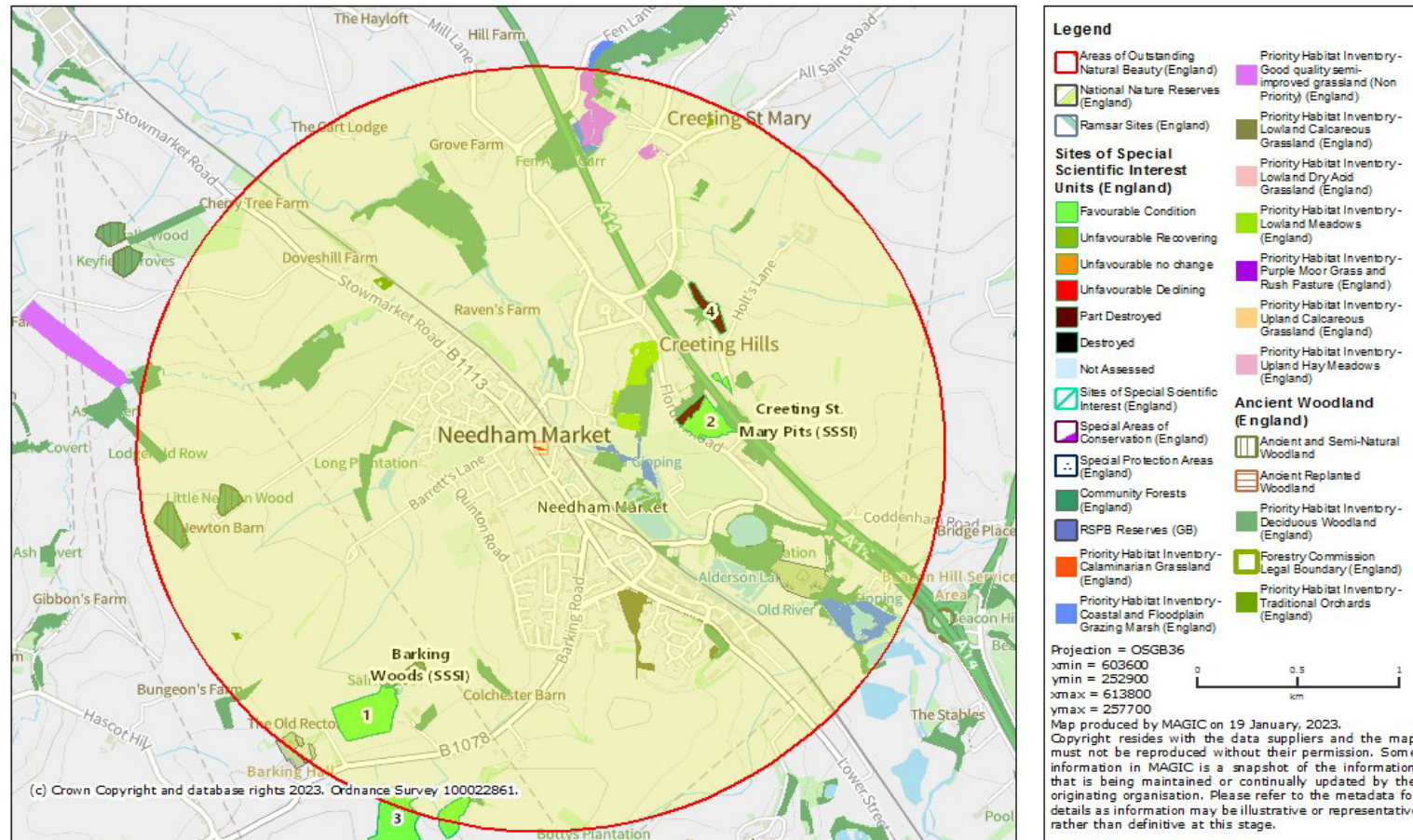


Image of bat data search returns, taken from Grid Reference Finder 20/01/2023.

Habitat Classifications within 2 km of the Site

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Appendix IV - Relevant Protected Species Legislation

Species	Legislation	Protection
Bats	<ul style="list-style-type: none">▪ Conservation of Habitats and Species Regulations (2010) (as amended)▪ Wildlife and Countryside Act (WCA) (1981), Schedule 5 (as amended)▪ Wild Mammals Act (1996)	It is an offence to: <ul style="list-style-type: none">▪ Intentionally kill, injure or take any bat▪ Intentionally or recklessly disturb a bat▪ Intentionally or recklessly damage, destroy or obstruct access to a bat roost