



Bat Survey Report



29 Amersham Road, Caversham

On behalf of Ridge and Partners LLP

August 2021

Ecology by Design Ltd,

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1 Executive Summary

Report purpose	This report presents the results of the preliminary roost assessment and bat surveys of a house at 29 Amersham Road, Reading, RG4 5LQ. The client seeks planning permission for demolition of the existing building and construction of either three attached residential dwellings or a building containing five flats.
Date and methods of survey	Surveys of the site were conducted from March to July 2021 including: • A preliminary roost assessment for bats on 26th March 2021; and • One dusk emergence and one pre-dawn re-entry survey in July 2021.
Key findings	Following a preliminary roost assessment conducted by Ecology by Design in March 2021, the building was assigned as having moderate potential for roosting bats due to the presence of external potential roost features. It was not possible to inspect the loft space of the building. One emergence and one pre-dawn re-entry survey was conducted at the site, during which no roosting bats were identified.
Potential Impacts and Recommendations	There are not likely to be any impacts regarding bats and this development. It is recommended that enhancements for bats are included such as the installation of integrated bat boxes into the proposed building(s). If the proposed works do not proceed within two years, then update surveys are recommended.

2 Introduction

2.1 Background and Survey Objectives

- 2.1.1 Ecology by Design Ltd were commissioned by Ridge and Partners LLP on behalf of Reading Borough Council to conduct bat surveys at 29 Amersham Road, Reading, RG4 5LQ (central grid reference SU 72608 74673).
- 2.1.2 During a preliminary roost assessment conducted in March 2021, the building was assigned as having moderate potential to support roosting bats. One dusk emergence and one pre-dawn re-entry surveys was undertaken in July 2021.
- 2.1.3 The objectives of this report are to:
- Identify presence or likely absence of roosting bats and where present, characterise the roost(s);
 - Propose mitigation and enhancement measures to ensure the proposals maintain the favourable conservation status of bats within the site and local area.

2.2 Site Description

- 2.2.1 The site consists of a two-storey residential dwelling with a lean-to extension on the eastern elevation. The building is surrounded by amenity lawn in a built-up residential area in the east of Caversham. The site is surrounded by similar residential properties. In the wider landscape is the River Thames to the south, Thames and Kennet Marina to the south-east and tracts of woodland to the north-east, east, and south-east.

2.3 Proposed Works

- 2.3.1 The client seeks planning permission to demolish the existing building and construct either three attached dwellings or one building containing five flats.

2.4 Personnel

- 2.4.1 The preliminary roost assessment was conducted by Ecology by Design Ecologist Beth England. Beth has over two years experience in consultancy and regularly conducts surveys of this scale.
- 2.4.2 Alys Cervetto, Tony Wells, Stacey Waring and George Graham conducted the dusk emergence survey. Beth England, Anna Kogioni, Tony Wells and Raven Herald conducted the pre-dawn re-entry survey.
- 2.4.3 Project supervision and review of the report was provided by Associate Ecologist Laura Grant, BSc (Hons) MCIEEM, who has been an ecological consultant for 14 years.

2.5 Limitations/ Constraints

- 2.5.1 The wildlife and wider ecological interest of a site can change. The report presented here is a statement of the findings of surveys carried out in March and July 2021.
- 2.5.2 It was not possible to inspect the loft space of the building during the preliminary roost assessment. Two bat surveys were considered appropriate to mitigate for this.
- 2.5.3 Weather conditions were considered suitable to conduct the surveys.

3 Methods

3.1 Desk Study

- 3.1.1 Biological records were obtained from Thames Valley Environmental Records Centre (TVERC). The records were returned on 1st August 2021.

3.2 Preliminary Roost Assessment

- 3.2.1 An external and internal Preliminary Roost Assessment was conducted of the buildings on 26th March 2021 by Ecology by Design Ecologist Beth England. The assessment was based on the guidance in Bat Surveys for Professional Ecologists: Good Practice Guidelines (Collins, 2016).
- 3.2.2 The surveyor used a high-power torch and binoculars to inspect features of interest. All external areas of the buildings were inspected.
- 3.2.3 Equipment used included:
- LEDLenser Lamp; and
 - 10x42mm close focusing binoculars.
- 3.2.4 Evidence searched for included:
- The presence of free hanging bats and bats within gaps, crevices; and
 - Bat droppings, feeding remains, urine stains, rub marks and scratch marks.

3.3 Bat roost surveys

- 3.3.1 Beth England, Anna Kogioni and Alys Cervetto of Ecology by Design conducted the emergence and re-entry surveys assisted by Stacey Waring, Tony Wells, George Graham and Raven Herald.
- 3.3.2 The surveys were based on the guidance included in the Bat Surveys for Professional Ecologists: Good Practice Guidelines (Collins (ed.), 2016). Bat detectors utilized included Elekon Batlogger M detectors to record any bats emerging from or re-entering the buildings.
- 3.3.3 The dusk emergence survey commenced 15 minutes before sunset and lasted for at least 1.5 hours after sunset. The dawn survey commenced 1.5 hours before sunrise and finished at sunrise.
- 3.3.4 Four surveyors were focused on features identified during the preliminary roost assessment as being suitable for roosting bats. During the survey, emergence and/or re-entry points were mapped, species were identified (where possible) and flight lines were noted. The results of the survey are detailed in Figure 1 in Appendix 2.

4 Results

4.1 Desk Study

4.1.1 Thames Valley Environmental Records Centre returned 338 records of at least nine species of bat within 2km of the site, a summary of which is given in Table 4.1 below.

Table 4.1: Records of bats within 2km of the site (TVERC)

Species	Latin Name	Designation	Earliest record	Most recent record	Number of records
Bat species	<i>Chiroptera</i>	EPS, WCA5, S41	2014	2015	2
Brown long-eared bat	<i>Plecotus auritus</i>	EPS, WCA5, S41	1995	2017	15
Common pipistrelle	<i>Pipistrellus pipistrellus</i>	EPS, WCA5	2005	2019	98
Daubenton's bat	<i>Myotis daubentonii</i>	EPS, WCA5	1998	2015	29
Leisler's bat	<i>Nyctalus leisleri</i>	EPS, WCA5	2013	2016	5
Long-eared bat species	<i>Plecotus sp.</i>	EPS, WCA5, S41	2005	2018	5
Myotis species	<i>Myotis sp.</i>	EPS, WCA5, S41	2015	2018	22
Nathusius' pipistrelle	<i>Pipistrellus nathusii</i>	EPS, WCA5	1997	2018	15
Noctule bat	<i>Nyctalus noctula</i>	EPS, WCA5, S41	1999	2018	51
Pipistrelle bat species	<i>Pipistrellus sp.</i>	EPS, WCA5, S41	1995	2017	14
Serotine	<i>Eptesicus serotinus</i>	EPS, WCA5	2016	2018	4
Soprano pipistrelle	<i>Pipistrellus pygmaeus</i>	EPS, WCA5, S41	2007	2019	76
Western barbastelle	<i>Barbastella barbastellus</i>	EPS, WCA5, S41	2016	2018	2

EPS = European Protected Species

WCA5 = Wildlife and Countryside Act 1981 Schedule 5 Species

S41 = Natural Environment and Rural Communities Act section 41 species

4.2 Preliminary Roost Assessment

4.2.1 The c. 9m by 10m building is brick built and c. 6m in height with a pitched roof and clay tiles. The top section of the building has a pebble dash render. There is a single-storey lean-to extension on the eastern elevation which is of the same construction. Access into the loft void was not possible due to the occupants of the building shielding during the COVID-19 pandemic. The following external features were identified:

- Gaps under the lead flashing beneath the dormer window on the western elevation (see Photograph 2);
- Gaps under the lead flashing beneath the chimney on the southern elevation (see Photograph 3);
- Lifted tiles on all elevations, including the lean-to extension (see Photograph 5);
- Missing mortar under ridge tiles on the northern and southern elevations (see Photograph 6); and
- A gap along the top of the wall on the eastern elevation of the lean-to.

4.2.2 No evidence of bats was identified on the exterior of the building. The building was assessed as being of moderate suitability for roosting bats.

4.3 Emergence and Re-Entry Surveys

4.3.1 The timings and weather conditions of the surveys are detailed in Table 4.2 below.

Table 4.2: Survey weather conditions

Date	Sunset/ sunrise	Start	End	Weather
14/07/2021	21:15	21:00	22:45	23-19°C, 2 cloud cover ¹ , 1 Beaufort ²
29/07/2021	05:23	03:50	05:23	13-11°C, 4-3 cloud cover, 1 Beaufort

¹ Cloud cover is measured using the system called oktas. The visible sky is divided into eight and cloud presence is determined within each section. A value of one to eight is then assigned (1 okta being cloudless to 8 oktas being total cloud cover).

² The Beaufort scale is an empirical measure from 0-12 which relates wind speed to observed conditions. 0- Calm, 1- Light air, 2- Light breeze, 3- Gentle breeze, 4- Moderate breeze, 5- Fresh breeze, 6- Strong breeze, 7- Moderate gale, 8- Fresh gale, 9- Strong gale, 10- Whole gale, 11- Storm, 12- Hurricane force.

Dusk emergence 14th July 2021

- 4.3.2 During the survey, there was constant common and soprano pipistrelle foraging around the site. Pipistrelle bats were recorded using the garden around the building to forage and commuted across the site on several occasions. A noctule bat was recorded at 22:41 but not seen. No bats were recorded emerging from or entering the building.

Pre-dawn re-entry 29th July 2021

- 4.3.3 During the survey, common and soprano pipistrelle bats were recorded foraging close to the site between 03:53 and 04:38. Activity was lower than during the dusk emergence survey. No bats were recorded emerging from or entering the building.

Conclusion

- 4.3.4 No bats were recorded roosting within the building during either bat survey. There was common and pipistrelle foraging activity around the site during both surveys.
- 4.3.5 The building is not considered likely to support roosting bats and therefore there are no constraints to this development regarding roosting bats.

5 Potential Impacts and Recommendations

5.1 Potential Impacts

- 5.1.1 No bats were observed roosting within the building and therefore there are no potential impacts regarding roosting bats.
- 5.1.2 Bats including noctule, common pipistrelle and soprano pipistrelle were recorded commuting through and foraging at the site and therefore commuting and foraging habitat could be impacted through increased artificial lighting.

5.2 Recommendations

- 5.2.1 The lighting strategy will be sensitively designed, adopting the following principles:
- Maintaining dark corridors along the site boundaries;
 - Not illuminating the off-site hedgerow to the west of the site; and
 - Where lighting is required, ensuring:
 - Light levels are less than 3 Lux;
 - LED luminaires with a warm white spectrum ideally <2700Kelvin (to avoid blue / UV elements);
 - Bollard or low-level downward directional luminaires are used and mounted on the horizontal (with no upward tilt); and
 - Security lighting, if required, is motion-activated with short (1 minute) timers.
- 5.2.2 As a biodiversity enhancement, it is recommended that two integrated bat boxes are installed into the proposed building(s). Bat boxes should be placed at a minimum height of 4m, on a southern or western aspect. Example boxes are given in Appendix 3.

6 Legislation and Policy

6.1 Bats

6.1.1 Bats and their roost sites are protected by UK and European legislation.

6.1.2 The Wildlife and Countryside Act 1981 (as amended) makes it an offence to:

- Intentionally or recklessly damage, destroy or obstruct access to any structure or place used for shelter or protection by a bat; and
- Intentionally or recklessly disturb a bat while it is occupying a structure or place which it uses for that purpose.

6.1.3 Additionally, the Conservation of Habitats and Species Regulations 2017 (as amended) make it an offence to:

- Deliberately capture or kill a bat;
- Deliberately disturb a bat;
- Damage or destroy a breeding site or a resting place of a bat; and
- Keep, transport, sell or exchange or offer for sale or exchange alive or dead bat or any part of a bat.

6.2 National Planning Policy Framework

6.2.1 The National Planning Policy Framework (NPPF) was updated in February 2019 thereby replacing the older version of July 2018. The new framework sets out in section 15 that to protect and enhance biodiversity and geodiversity, plans should:

- Identify, map and safeguard components of local wildlife-rich habitats and wider ecological networks, including the hierarchy of international, national and locally designated sites of importance for biodiversity; wildlife corridors and stepping stones that connect them; and areas identified by national and local partnerships for habitat management, enhancement, restoration or creation and
- promote the conservation, restoration and enhancement of priority habitats, ecological networks and the protection and recovery of priority species; and identify and pursue opportunities for securing measurable net gains for biodiversity.

6.2.2 When determining planning applications, local planning authorities should apply the following principles:

- if significant harm to biodiversity resulting from a development cannot be avoided (through locating on an alternative site with less harmful impacts), adequately

mitigated, or, as a last resort, compensated for, then planning permission should be refused;

- development on land within or outside a Site of Special Scientific Interest, and which is likely to have an adverse effect on it (either individually or in combination with other developments), should not normally be permitted. The only exception is where the benefits of the development in the location proposed clearly outweigh both its likely impact on the features of the site that make it of special scientific interest, and any broader impacts on the national network of Sites of Special Scientific Interest;
- development resulting in the loss or deterioration of irreplaceable habitats (such as ancient woodland and ancient or veteran trees) should be refused, unless there are wholly exceptional reasons and a suitable compensation strategy exists; and
- development whose primary objective is to conserve or enhance biodiversity should be supported; while opportunities to incorporate biodiversity improvements in and around developments should be encouraged, especially where this can secure measurable net gains for biodiversity.

6.2.3 The following should be given the same protection as habitats sites:

- potential Special Protection Areas and possible Special Areas of Conservation;
- listed or proposed Ramsar sites; and
- sites identified, or required, as compensatory measures for adverse effects on habitats sites, potential Special Protection Areas, possible Special Areas of Conservation, and listed or proposed Ramsar sites.

6.2.4 The presumption in favour of sustainable development does not apply where the plan or project is likely to have a significant effect on a habitats site (either alone or in combination with other plans or projects), unless an appropriate assessment has concluded that the plan or project will not adversely affect the integrity of the habitats site.

6.3 Government Circular ODPM 06/2005 Biodiversity and Geological Conservation

6.3.1 Paragraph 98 of Government Circular 06/2005 advises that “the presence of a protected species is a material consideration when a planning authority is considering a development proposal that, if carried out, would be likely to result in harm to the species or its habitat. Local authorities should consult Natural England before granting planning permission. They should consider attaching appropriate planning conditions or entering into planning obligations under which the developer would take steps to secure the long-term protection of the species. They

should also advise developers that they must comply with any statutory species' protection provisions affecting the site concerned..."

- 6.3.2 Paragraph 99 of Government Circular 06/2005 advises that "it is essential that the presence or otherwise of protected species, and the extent that they may be affected by the proposed development, is established before the planning permission is granted, otherwise all relevant material considerations may not have been addressed in making the decision. The need to ensure ecological surveys are carried out should therefore only be left to coverage under planning conditions in exceptional circumstances, with the result that the surveys are carried out after planning permission has been granted".

6.4 Local Planning Policy

- 6.4.1 Reading Borough Council adopted their Local Plan in November 2019, which guides development in Reading up to 2036. The following policies are of relevance to this development.

EN12: Biodiversity and the Green Network

- 6.4.2 *The identified Green Network, the key elements of which are shown on the Proposals Map, shall be maintained, protected, consolidated, extended and enhanced. Permission will not be granted for development that negatively affects the sites with identified interest or fragments the overall network. The Green Network comprises:*
- *Sites with identified biodiversity interest - Local Wildlife Sites, Local Nature Reserves, Biodiversity Opportunity Areas, protected and priority species and their habitats, Priority and Biodiversity Action Plan habitats, and the River Thames and all its tributaries (including the River Kennet and the Kennet & Avon Canal); and*
 - *Areas with potential for biodiversity value and which stitch the Green Network together - designated Local Green Space and open green spaces, and existing and potential Green Links.*
- 6.4.3 *New development shall demonstrate how the location and type of green space, landscaping and water features provided within a scheme have been arranged such that they maintain or link into the existing Green Network and contribute to its consolidation. Such features should be designed to maximise the opportunities for enhancing this network. All new development should maximise opportunities to create new assets and links into areas where opportunities are as yet unidentified on the Proposals Map.*
- 6.4.4 *On all sites, development should not result in a net loss of biodiversity and geodiversity, and should provide a net gain for biodiversity wherever possible. Development should:*

- *Protect and wherever possible enhance features of biodiversity interest on and adjacent to the application site, incorporating and integrating them into development proposals wherever practicable; and*
- *Provide new tree planting, wildlife friendly landscaping and ecological enhancements (such as wildlife ponds, bird and bat boxes) wherever practicable.*

6.4.5 In exceptional circumstances where the need for development clearly outweighs the need to protect the value of the site, and it is demonstrated that the impacts cannot be: 1) avoided; 2) mitigated or; 3) compensated for on-site; then new development will provide off-site compensation to ensure that there is "no net loss" of biodiversity. Provision of off-site compensation shall be calculated in accordance with nationally or locally recognised guidance and metrics. It should not replace existing alternative habitats, and should be provided prior to development.

EN14: Trees, Hedges and Woodlands

6.4.6 Individual trees, groups of trees, hedges and woodlands will be protected from damage or removal where they are of importance, and Reading's vegetation cover will be extended. The quality of waterside vegetation will be maintained or enhanced.

6.4.7 New development shall make provision for tree retention and planting within the application site, particularly on the street frontage, or off-site in appropriate situations, to improve the level of tree coverage within the Borough, to maintain and enhance the character and appearance of the area in which a site is located, to provide for biodiversity and to contribute to measures to reduce carbon and adapt to climate change. Measures must be in place to ensure that these trees are adequately maintained.

References

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

HM Government (2019). *National Planning Policy Framework*. Department for Communities and local Government.

Reading Borough Council (2019). Reading Borough Local Plan, Adopted November 2019

<http://www.reading.gov.uk/planningpolicy> (accessed 30 July 2021)

Appendix 1 – Photographs

Photograph 1: Western elevation



Photograph 2: Gaps under the tiles and lead flashing on the western elevation



Photograph 3: Gaps under the lead flashing and lifted tiles on the southern elevation



Photograph 4: Eastern elevation of the building



Photograph 5: Lifted tiles on the lean-to extension

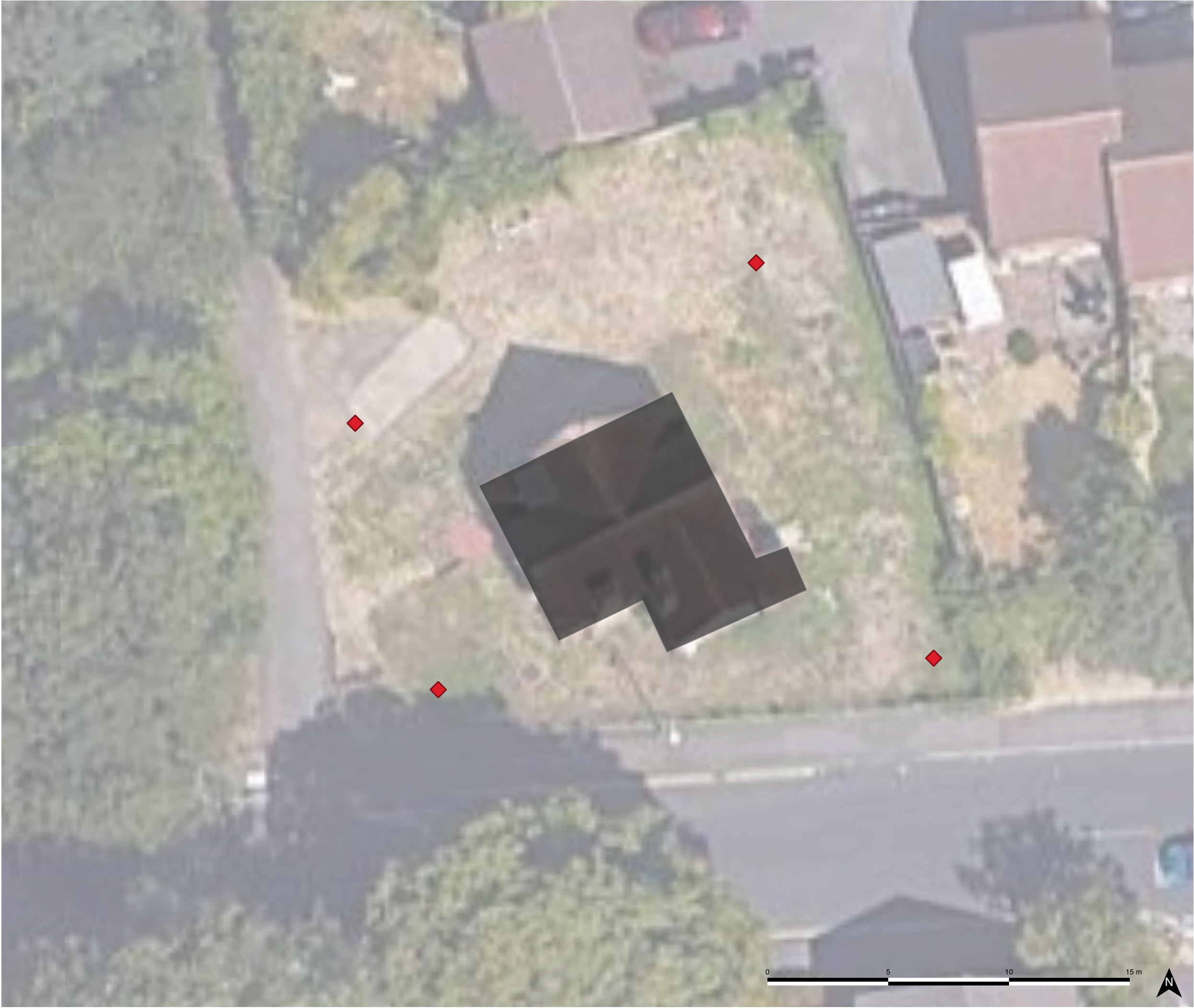


Photograph 6: Gaps under the ridge tiles on the southern elevation



Appendix 2 – Survey Plan

Next page.



LEGEND

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 Building

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 Surveyor locations

Project:
29 Amersham Road, Caversham

Client:
Ridge and Partners LLP

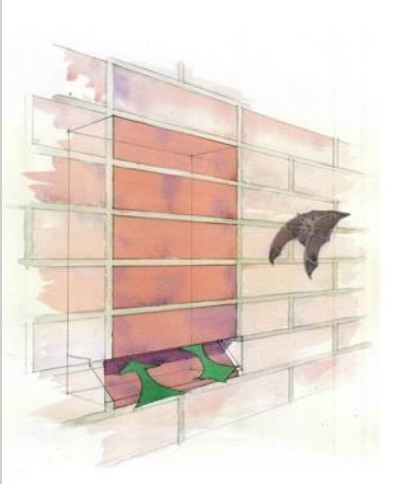
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Bat Survey Plan

Drawing No.:	Scale (@A3):
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Central Eastings, Northings:	Date Drawn:
472606, 174674	31/07/2021
Drawn by:	Approved by:
BE	LG

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Appendix 3 – Recommended Enhancements

Products	Description
 	Habibat Bat Box The Habibat Bat Box is a solid box made of insulating concrete with an internal roost space, which can be incorporated into the fabric of a building as it is built or renovated. A variety of facings can be fitted to suit any building. The box is suitable for Pipistrelle bats and other common UK species. https://www.nhbs.com/habibat-bat-box-plain-for-rendering