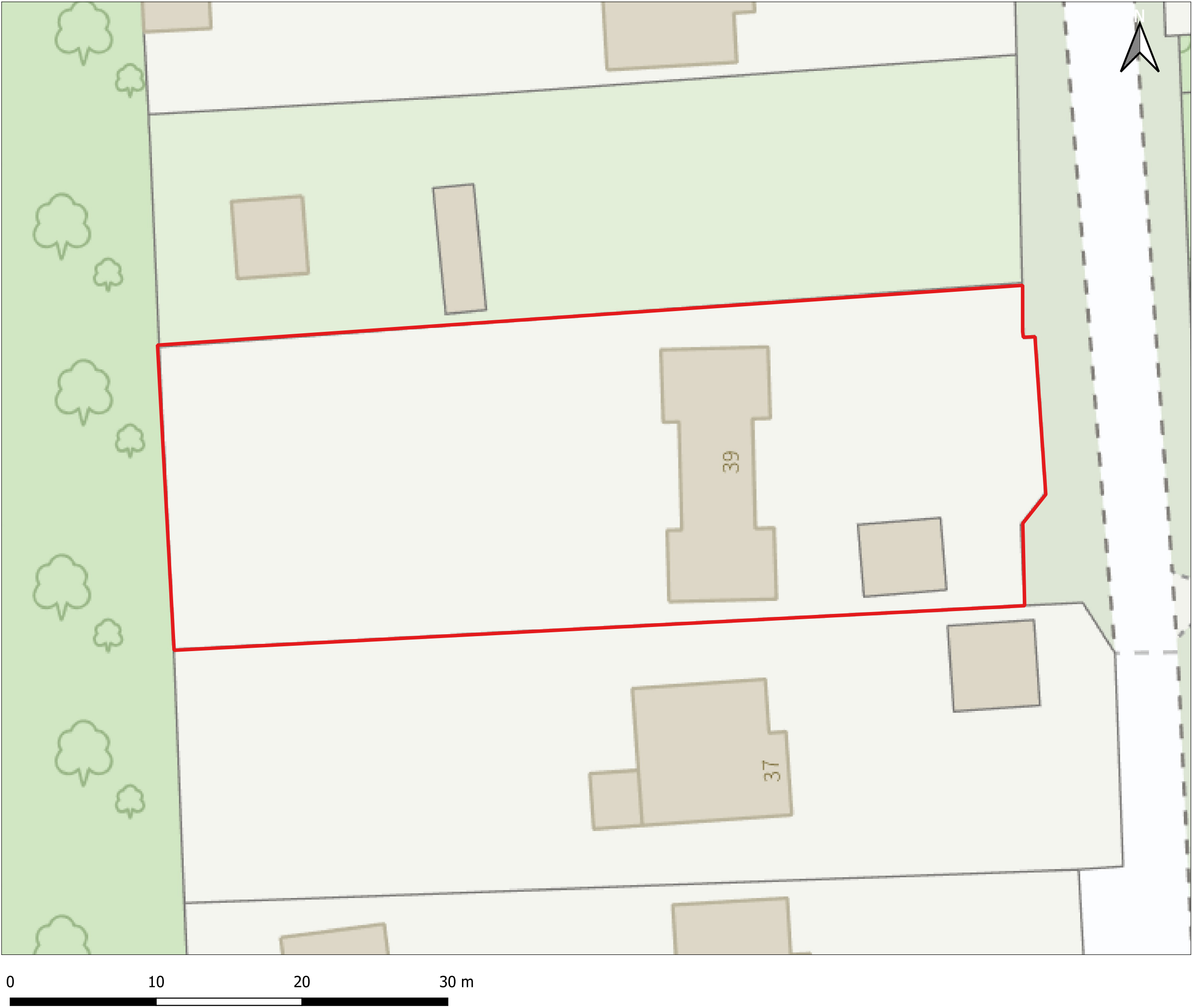
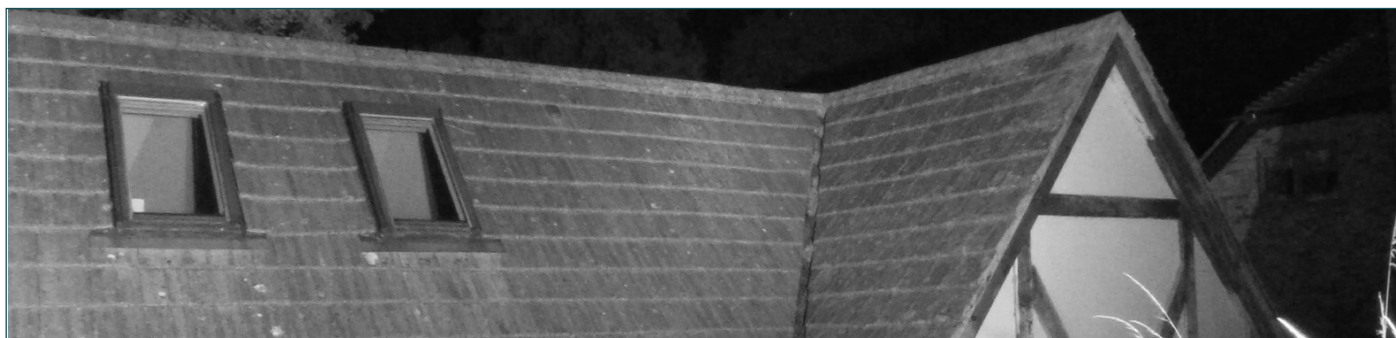




Legend

Site boundary

native ecology PROMOTING BIODIVERSITY INTEGRATION	
Existing Site Location Plan	
Astrality 39 Rhododendron Avenue, Meopham Kent, DA13 0TU	
Drawing ref:	2076_Figure 2
Revision:	-
Date:	27-08-2025
Scale:	1:250
Paper size:	A3



BAT SURVEY REPORT

ASTRALITY

MEOPHAM, KENT

DISCLAIMER

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Nothing in this report constitutes legal opinion. If legal opinion is required the advice of a qualified legal professional should be sought.

Reference	Ref: 2076_R01_Bat Survey Report
Report status	Information
Author	Maia Jones BSc (Hons)
Checked by	Amy Wright BSc MSc CEcol MCIEEM
1st issue date	2nd September 2025
Revised	-
Revision issue	-

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CONTENTS

1.	INTRODUCTION	4
2.	SITE LOCATION PLAN	5
3.	EXISTING SITE PLAN	6
4.	METHODOLOGY	7
5.	RESULTS AND ASSESSMENT	10
6.	MITIGATION AND ENHACEMENT	12
7.	REFERENCES	14
8.	APPENDIX 1: SUMMARY OF PLANNING POLICY AND LEGISLATION	15
9.	APPENDIX 2: SUITABILITY ASSESSMENT OF ROOSTING HABITAT FOR BATS	16
10.	APPENDIX 3: SURVEY PLAN	17
11.	APPENDIX 4: NIGHT VISION AID (NVA) SCREENSHOTS	18

1. INTRODUCTION

- 1.1 This report details presence/ likely absence survey work for bats undertaken in respect of proposed development at Astrality, 39 Rhododendron Avenue, Meopham, Kent, DA13 0TU.
- 1.2 Figure 1, Section 2 provides a Site location plan.

COMMISSION

- 1.3 Native Ecology was commissioned by Michael and Natasha Louth in July 2025 to undertake bat presence/likely absence surveys for a residential dwelling (B1) within the Site.

APPLICATION SITE

- 1.4 The site comprises a residential dwelling with associated gardens and vehicular parking.

PROPOSED WORKS

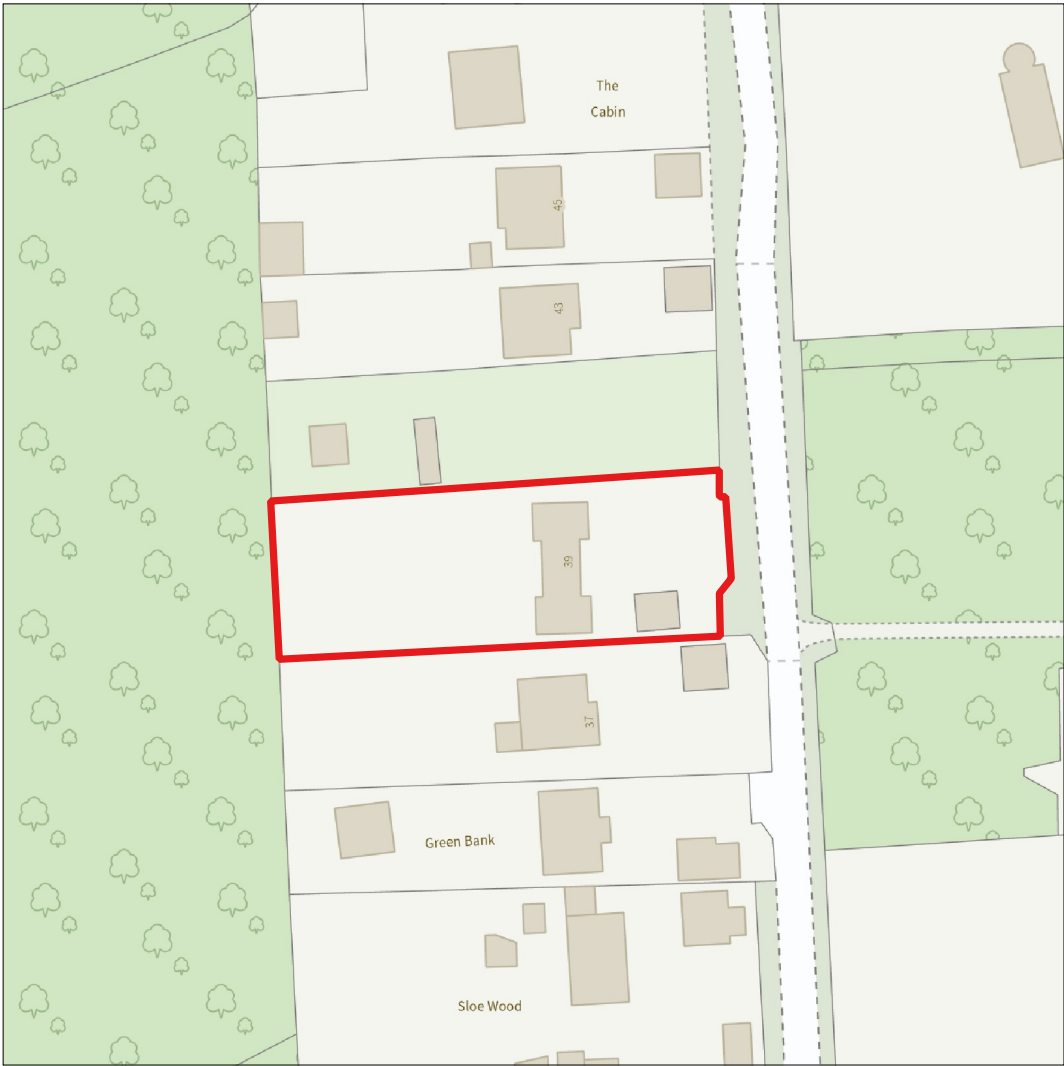
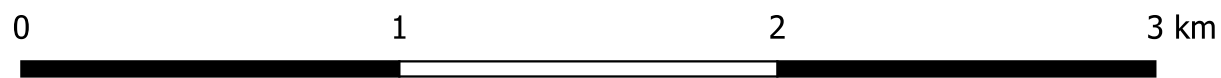
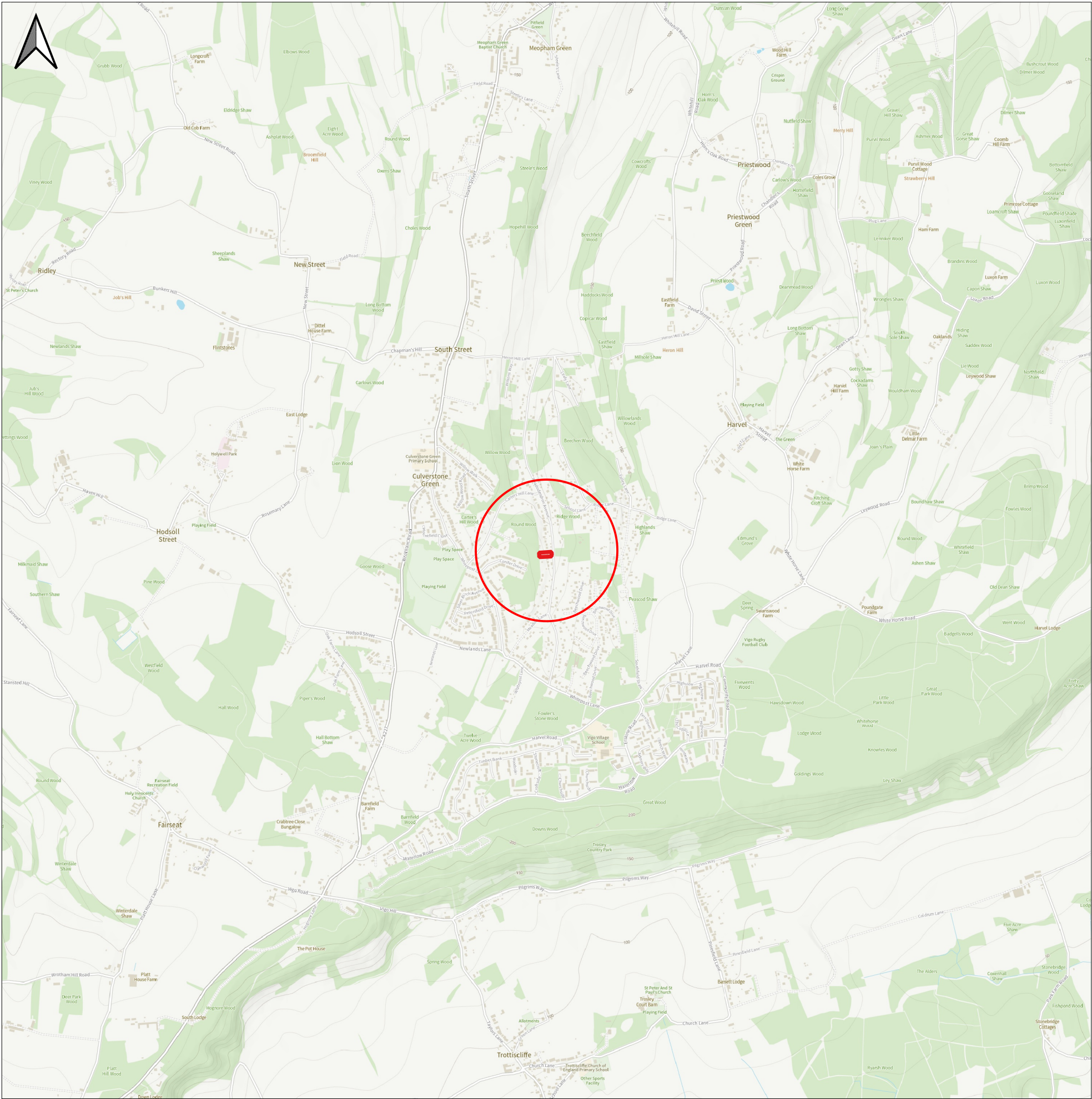
- 1.5 The proposed development includes the renovation of the existing residential dwelling, including the construction of an additional storey and works to the roof.

BACKGROUND

- 1.6 A Preliminary Roost Assessment (PRA) was undertaken by Native Ecology in July 2025. Building B1 was assessed as providing 'moderate' suitability for roosting bats and further survey work to ascertain presence / likely absence of roosting bats was recommended.

PURPOSE OF REPORT

- 1.7 The objectives of the report are to:
- To determine whether roosting bats are present; and
 - Establish whether the proposed development is likely to impact on roosting bats. The degree of impact is determined by a number of factors:
 - The species present;
 - Number of bats present;
 - The type of roost present; and
 - Location of roost and access points.



 PROMOTING BIODIVERSITY INTEGRATION	
Site Location Plan	
Astrality 39 Rhododendron Avenue, Meopam Kent, DA13 0TU	
Drawing ref:	2076_Figure 1
Revision:	-
Date:	27/08/2025
Scale:	1:20,000 (Main canvas)
Paper size:	A3

4. METHODOLOGY

PRELIMINARY ROOST ASSESSMENT

- 4.1 A systematic search of the exterior and interior of building B1 was undertaken to identify potential bat access points and roosting places and to locate any evidence of bats such as bat droppings, urine staining and fur-oil staining. The inspection included exterior features of the buildings, such as sills, window panes, walls and the ground beneath potential access points to look for signs of bats, such as droppings. Buildings were categorised as none, negligible, low, moderate or high suitability.

Table 1. Survey details

Survey date	29th July 2025
Surveyor	Cali Tardivel BSc MSc
Time on site	19:30-20:00
Weather	18°C, 100% cloud cover, BF 0 no rain, ground dry

PRESENCE/ABSENCE SURVEYS

- 4.2 The survey effort was proportionate to the suitability of the building to support roosting bats, as determined during the Preliminary Roost Assessment (detailed in Table 2 below).
- 4.3 In accordance with the Bat Conservation Trust Good Practice Guidelines (Collins, 2023), building B1 assessed as providing moderate suitability for roosting bats was surveyed on two separate sessions.
- 4.4 Surveys were undertaken in July and August 2025.

Table 2. Building suitability and number of surveys

Building no.	Suitability to support roosting bats	No. of surveys undertaken
B1	Moderate	2no. dusk emergence surveys

- 4.5 Surveys commenced 15 minutes prior to sunset and continued for 1.5 hours after sunset and undertaken in accordance with the Bat Conservation Trust Good Practice Guidelines (Collins, 2023).
- 4.6 Night vision aids (NVAs) comprising InfraRed (IR) cameras were used to record bat activity during the surveys. NVAs and surveyors (listed in Table 4 below) were positioned around the buildings so that the features with suitability to support roosting bats were visible and any emerging or re-entering bats could be observed.
- 4.7 NVA cameras comprised Canon XA60 Professional UHD 4K Camcorders with associated appropriate light sources, mounted on tripods and positioned to cover a full surveyor location. An EMT Pro 2 with an associated tablet was also mounted on a tripod close to the camera to record sound files for any bats emerging from or re-entering the building. Appendix 3 includes screen-shots of each IR camera position at the darkest point of the survey to show illumination.

- 4.8 A survey plan is available in Appendix 2.
- 4.9 Two experienced surveyors (see Table 3 below) were onsite to check the set-up of the NVAs, including lighting, prior to the start of the survey and intervals throughout. These surveyors also conducted a walkover survey of the site throughout the duration to monitor any bat species present, and record species, behaviour and location for each bat recorded.
- 4.10 Each surveyor used an EMT Pro and a Elekon Bat Scanner to identify and record bat activity within the Site. Data was recorded as to the species, number of bats, survey position, any emergence or re-entry locations, time and general activity.
- 4.11 Table 3 below includes full survey details.

Table 3. Survey details for the dusk emergence surveys

Survey location	Survey no.	Survey date	Surveyors	Sunset time	Time		Weather conditions			
							°C	Wind BF	Precip.	Cloud cover %
B1	1	29/07/25	CT THu	20:42	Start	20:27	18	0	None	100
					Finish	22:12	17	0	None	100
	2	20/08/25	MK SE	20:11	Start	19:56	17	2	None	50
					Finish	21:41	15	3	None	80

- 4.12 On completion of the survey, the footage was reviewed using appropriate software and any emergence or re-entry activity recorded, including species (cross-referenced with the associated detector), emergence / re-entry location and behaviour. Any emergence / re-entry video clips were cut and saved for reference. Details of the NVA review are provided in Table 4 below.

Table 4. NVA review details

Survey number	Survey Position	Reviewer	Review date
1	1	JR	31/07/2025
	2	JR	31/07/2025
	3	KF	31/07/2025
	4	KF	31/07/2025
	5	CT	02/08/2025
	6	CT	02/08/2025
2	1	KF	30/08/2025
	2	CT	24/08/2025
	3	KF	30/08/2025
	4	MJ	27/08/2025
	5	CT	30/08/2025
	6	MJ	27/08/2025

Table 5. Surveyor details

Surveyor name (initials)	Experience
Cali Tardivel (CT)	Class 1 bat licence: 2020-49197-CLS-CLS
Megan Knapp (MK)	Class 1 bat licence: 2022-10627-CL17-BAT
Tom Hurst (TH)	4 years bat survey experience
Katy Fuller (KF)	5 years bat survey experience
John Rowland (JR)	3 year bat survey experience
Maia Jones (MJ)	3 year bat survey experience
Sophie Edmonds (SE)	1st year bat survey experience

LIMITATIONS

- 4.13 There were no significant limitations to the survey.
- 4.14 In accordance with CIEEM guidance, consideration should be given to the validity of survey data after a period of 12 month from the date of the survey. This may require a site visit to assess whether ecological conditions within the site have changed and may require further ecological survey work due to the transient nature of roosting bats.

5. RESULTS AND ASSESSMENT

PRELIMINARY ROOST ASSESSMENT

- 5.1 A preliminary roost assessment was undertaken for building B1. The results are detailed within Table 6 below.

Table 6. Results of Preliminary Roost Assessment

BUILDING	POTENTIAL ROOST FEATURES	SUITABILITY FOR ROOSTING BATS	PROPOSALS
B1	Internal: The building comprises a dormer bungalow, with living space within the roof area, which is well lit by windows and largely unsuitable for roosting bats. No evidence of bats was found within the accessible living space. The roof is timber framed and lined with bitumen. A small void (0.5m x 0.5m) is present around the lower edge of the roof, which contains insulation and is likely unsuitable for void dwelling species. Gaps are available into this void under the eaves and overlapping bitumen provides roosting opportunities for individual crevice dwelling bats. External: The majority of the tiles are tight fitting, with the exception of those close to the roof windows, where they are lifted in some places. A small number of other gaps/crevices are present on the roof, including at the apex of the gable ends and beneath lead flashing around the chimney. In addition, there are small gaps under some of the decorative timbers on the lower elevation of the building. These features provide opportunities for small numbers of crevice dwelling species, such as common pipistrelle.	Moderate	Renovate and extend

PRESENCE/ LIKELY ABSENCE SURVEYS

Dusk Emergence Survey - 29th July 2025

- 5.2 No bats were recorded emerging from B1 during the survey.
- 5.3 The first bat recorded was a common pipistrelle passing over the Site at 20:55, 13 minutes after sunset.
- 5.4 Bat activity was low-moderate, with regular activity from common pipistrelles foraging in the garden area and above the woodland canopy near the building. No other species were recorded.

Dusk Emergence Survey - 20th August 2025

- 5.5 No bats were recorded emerging from B1 during the survey.
- 5.6 The first bat recorded was a noctule passing over the Site at 20:10, 1 minute before sunset.
- 5.7 Common pipistrelle foraging behaviour was continuously recorded in the garden and surrounding habitat between 20:11 and the survey end.
- 5.8 No further bat species were recorded.

ASSESSMENT

- 5.9 Emergence surveys on B1 did not record any roosting bats. Therefore, roosting bats are considered to be likely absent from the Site.
- 5.10 Based on the survey undertaken, no further survey work is recommended and no mitigation is required for roosting bats.
- 5.11 The garden and surrounding habitat provide foraging habitat for common pipistrelle. Impacts to foraging bats could occur as a result of the installation of new external lighting. Therefore, mitigation (detailed in Section 6) is recommended.

6. MITIGATION AND ENHANCEMENT

Mitigation Measures

6.1 The following mitigation should be implemented to avoid impacts to foraging and commuting bats.

Careful lighting design

6.2 In order to reduce a low potential, indirect impact on foraging and commuting bats to negligible, mitigation to reduce any effects of artificial lighting should be implemented, as far as possible and where applicable, in accordance with guidance issued by the Bat Conservation Trust and Institute of Lighting Professionals (ILP, 2023) the following measures should be included within a bat sensitive lighting strategy:

- Lighting spill onto all boundaries should be prevented, where possible.
- All luminaires should lack UV elements when manufactured. Metal halide, compact fluorescent sources should not be used.
- LED luminaires should be used where possible due to their sharp cut-off, lower intensity, good colour rendition and dimming capability.
- A warm white light source (2700Kelvin or lower) should be adopted to reduce blue light component.
- Light sources should feature peak wavelengths higher than 550nm to avoid the component of light most disturbing to bats.
- Internal luminaires should be recessed where installed in proximity to windows to reduce glare and light spill.
- Column heights should be carefully considered to minimise light spill and glare visibility.
- Only luminaires with a negligible or zero Upward Light Ratio, and with good optical control, should be considered.
- Luminaires should always be mounted horizontally, with no light output above 90° and/or no upward tilt.
- Where appropriate, external security lighting should be set on motion- sensors and set to as short a possible a timer as the risk assessment will allow. For most general residential purposes, a 1 or 2 minute timer is likely to be appropriate.
- Where appropriate, use a Central Management System (CMS) with additional web-enabled devices to light on demand.
- The use of bollard or low-level downward-directional luminaires is strongly discouraged.
- If all other options have been explored, accessories such as baffles, hoods or louvres can be used to reduce light spill and direct it only to where it is needed.

Enhancement Measures

- 6.3 The following enhancements could be included within the Site to enhance opportunities for roosting bats.

Bat boxes

- 6.4 Integrated bat boxes, such as a 1FR Schwegler Bat Tube, or similar, could be installed within the Site. Integrated bat boxes should be primarily located on the south and west facing aspects located at least 3m above the ground, but can also be installed on different elevations to provide a variety of different environmental roost conditions. Alternatively, bat access tiles can be incorporated into roof elevations of new buildings.
- 6.5 Alternatively, bat boxes, such as 2F Schwegler Bat Box (General Purpose) or similar, could be installed on mature trees within the Site. Boxes will be located at least 3m above ground level and preferably over 4m and in a variety of aspects.

7. REFERENCES

- CIEEM (2017a). Guidelines for Ecological Report Writing. Chartered Institute for Ecology and Environmental Management, Winchester.
- Collins, J. (ed.) (2023) Bat surveys for Professional Ecologists: Good Practice Guidelines (4th edn). The Bat Conservation Trust, London.
- Reason, P.F. and Wray, S. (2023). UK Bat Mitigation Guidelines: a guide to impact assessment, mitigation and compensation for developments affecting bats. Chartered Institute of Ecology and Environmental Management, Ampfield.

8. APPENDIX 1: SUMMARY OF PLANNING POLICY AND LEGISLATION

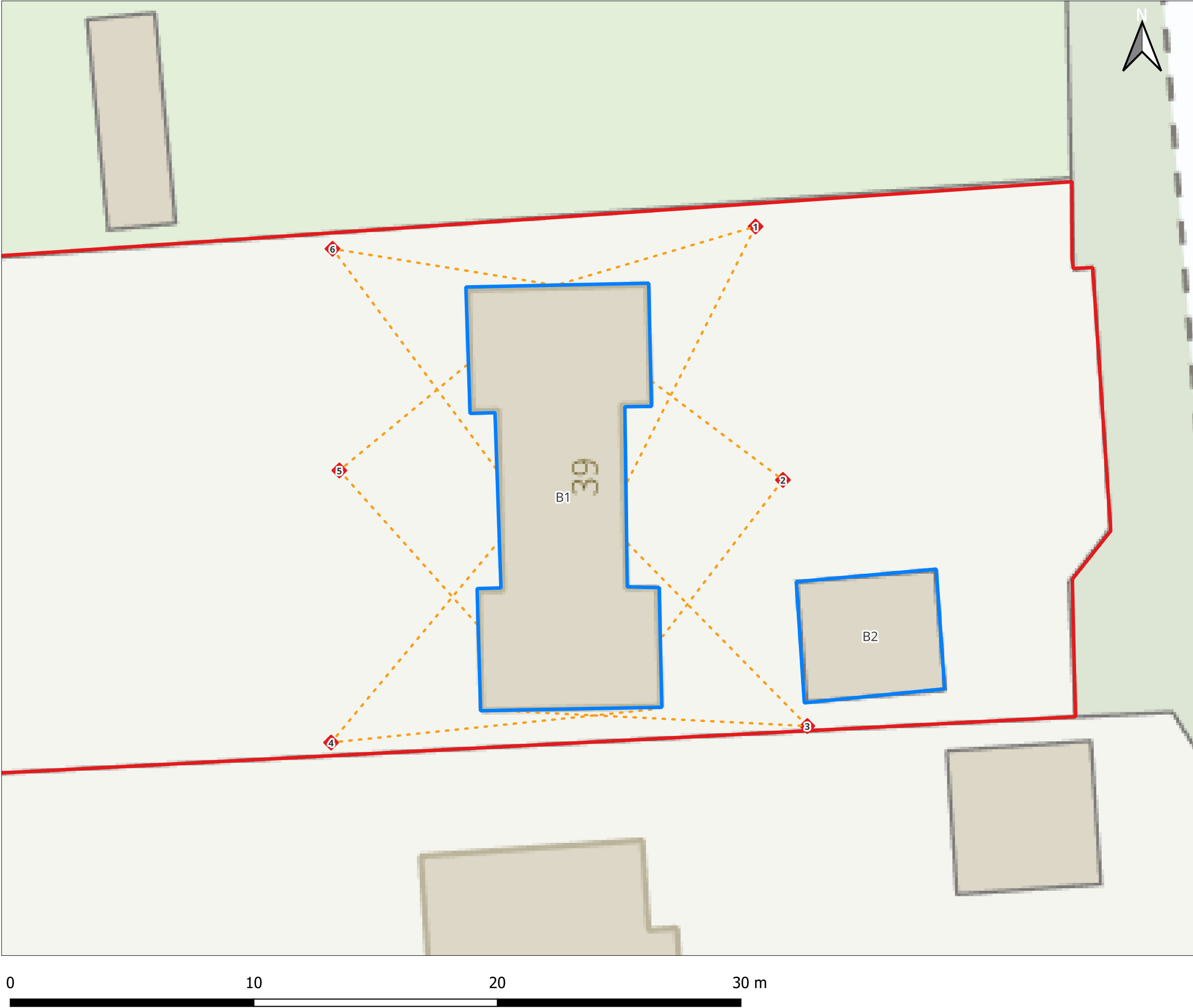
LEGAL PROTECTION FOR BATS

- 8.1 Conservation of Habitats and Species Regulations 2017 are also known as European Protected Species. European Protected Species include all species of bat.
- 8.2 European Protected Species relate to those listed within the Conservation of Habitats and Species Regulations 2017 and are afforded the highest level of protection. These species are also protected under the Wildlife and Countryside Act 1981. Taken together this level of protection makes it an offence to:
- deliberately capture, injure or kill any wild animal of a European protected species,
 - deliberately disturb wild animals of any such species
 - damage or destroy a breeding site or resting place of such an animal
- 8.3 Disturbance of animals includes in particular any disturbance which is likely:
- to impair their ability to survive, to breed or reproduce, or to rear or nurture their young, or
 - in the case of animals of a hibernating or migratory species, impair their ability to hibernate or migrate
 - to affect significantly the local distribution or abundance of the species to which they belong
- 8.4 The legislation requires that any derogation be dealt with by licencing through an appropriate licencing body (Natural England in England). In determining whether a licence can be granted the licencing body must apply the requirements of Regulation 53, and in particular, the three tests:
1. Regulation 55(2)(e) states: a licence can be granted for the purposes of “preserving public health or public safety or other imperative reasons of overriding public interest including those of a social or economic nature and beneficial consequences of primary importance for the environment”.
 2. Regulation 55(9) states: The relevant licensing body must not grant a licence under this regulation unless it is satisfied—
 - (a) that there is no satisfactory alternative; and
 - (b) that the action authorised will not be detrimental to the maintenance of the population of the species concerned at a favourable conservation status in their natural range.

9. APPENDIX 2: SUITABILITY ASSESSMENT OF ROOSTING HABITAT FOR BATS

Table 7. Assessing potential suitability of roosting habitat (structures and trees) for bats and survey effort required. Adapted from Bat Surveys for Professional Ecologists, Good Practice Guidelines 4th Edition (Collins, 2023).

SUITABILITY	DESCRIPTION OF ROOSTING HABITAT	SURVEY EFFORT AND TIMING
None	No habitat features on site likely to be used by any roosting bats at any time of the year (i.e. a complete absence of crevices / suitable shelter at all ground / underground levels).	None required.
Negligible	Negligible habitat features on site likely to be used by roosting bats.	None required.
Low (Buildings / structures) PRF-I (trees)	A structure or tree with one or more PRF-I roost sites that could be used by individual bats opportunistically. However, these potential roost sites do not provide enough space, shelter, protection, appropriate conditions and/or suitable surrounding habitat to be used on a regular basis or by larger numbers of bats (i.e. unlikely to be suitable for maternity or hibernation).	Buildings/structures: One survey visit. One dusk emergence survey (or dawn re-entry survey if appropriate). Timing: May to August. Trees: PRF-I - No further surveys required. Compensation for loss of roosting opportunity recommended.
Moderate (Structures only)	A structure with one or more potential roost sites that could be used by bats due to their size, shelter, protection, conditions and surrounding habitat but unlikely to support a roost of high conservation status (with respect to roost type only – the assessments in this table are made irrespective of species conservation status, which is established after presence is confirmed).	Buildings/structures: Two separate dusk emergence surveys (or dawn re-entry surveys if appropriate). Surveys should be spaced a minimum of three weeks apart. Timing: May to September with at least one survey undertaken between May - August.
High (structures) PRF-M (trees)	A structure or tree with one or more PRF-M roost sites that are obviously suitable for use by larger numbers of bats on a more regular basis and potentially for longer periods of time due to their size, shelter, protection, conditions and surrounding habitat.	Buildings/structures: Three separate dusk emergence survey visits (or dawn re-entry surveys if appropriate). Trees - Three inspection surveys using ladder, climbing or MEWP, or if features are too extensive to survey thoroughly, these could be emergence surveys supported by NVAs. Surveys should be spaced a minimum of three weeks apart. Timing: May to September with at least two surveys undertaken between May - August.



Legend

- Site boundary
- Ownership boundary
- Camera
- Surveyor field of view

 native ecology PROMOTING BIODIVERSITY INTEGRATION	
Bat Surveyor Location Plan	
Astrality 39 Rhododendron Avenue, Meopham Kent, DA13 0TU	
Drawing ref:	2076_Figure 4
Revision:	-
Date:	21-08-2025
Scale:	1:150
Paper size:	A3

11. APPENDIX 4: NIGHT VISION AID (NVA) SCREENSHOTS



Photograph 4. NVA view of survey position S1



Photograph 5. NVA view of survey position S2



Photograph 6. NVA view of survey position S3



Photograph 7. NVA view of survey position S4



Photograph 8. NVA view of survey position S5



Photograph 9. NVA view of survey position S6