



PROTECTED SPECIES SURVEY REPORT

THE STOCK YARD

ELMSTONE, KENT

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CONTENTS

1.	INTRODUCTION	4
2.	METHODOLOGY & SURVEY DETAILS	5
3.	RESULTS AND ASSESSMENT	8
4.	ROOST LOCATION PHOTOGRAPHS	10
5.	RECOMMENDATIONS	11
6.	REFERENCES	12
7.	APPENDIX 1: SUMMARY OF PLANNING POLICY AND LEGISLATION	13
8.	APPENDIX 2: SURVEYOR LOCATION PLAN - ROOSTING BATS	14
9.	APPENDIX 3: NIGHT VISION AID (NVA) SCREENSHOTS - ROOSTING BATS	15
10.	APPENDIX 5: SURVEY PLAN - REPTILES	16

1. INTRODUCTION

- 1.1 This report details presence/ likely absence survey work for bats and reptiles undertaken in respect of proposed development at the Stock Yard, (Lodge Farm) Padbrook Lane, Elmstone, Kent, CT3 1HF.
- 1.2 Figure 1, Section 2 provides a site location plan.

COMMISSION

- 1.3 Native Ecology was commissioned by Jennifer Collier in August 2023 to undertake presence / likely absence surveys for roosting bats and reptiles within the application Site

APPLICATION SITE

- 1.4 For site location plan and survey site details please refer to PEA (ref: 1276_R01_PEA) dated 4th September.

BACKGROUND INFORMATION

- 1.5 A Preliminary Ecological Appraisal (PEA) was undertaken by Native Ecology in July 2023 (report ref: 1276_R01_PEA). The report recommended further survey work for roosting bats and reptiles.
- 1.6 Buildings B1 and B2 were assessed as providing 'high' suitability for roosting bats and therefore 3no. emergence surveys were recommended to provide presence / likely absence information and characterise any roosts present.

PROPOSED WORKS

- 1.7 Proposals include the construction of a single residential dwelling on the footprint of the existing building, along with landscaping and access.

PURPOSE OF REPORT

- 1.8 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.
 - Describe the methodology and results of presence / likely absence survey work for reptiles within the Site.

2. METHODOLOGY & SURVEY DETAILS

ROOSTING BATS

Presence / likely absence survey

- 2.1 Three dusk emergence surveys (detailed in Table 1) were undertaken between August and September 2023 in accordance with the Bat Conservation Trust Good Practice Guidelines (Collins, 2016).

Table 1. Survey details for the dusk emergence and dawn re-entry surveys

Survey location	Survey no.	Survey date	Surveyors	Sunrise/sunset time	Time		Weather conditions			
							°C	Wind BF	Precipitation	Cloud cover %
B1 & B2	1	07/08/23	DS MJ	20:33	Start	20:18	19	1	None	25
					Finish	22:03	16	1	None	25
	2	23/08/23	DS MA	20:02	Start	19:47	21	0	None	25
					Finish	21:32	20	0	None	75
	3	11/09/23	DS AW	19:20	Start	19:05	21	0	None	60
					Finish	20:50	20	0	None	0

- 2.2 The emergence surveys commenced 15 minutes prior to sunset and continued for 1.5 hours after sunset.
- 2.3 Surveyors (listed in Table 2 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. A survey plan is available in Appendix 2.
- 2.4 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, any emergence or re-entry locations, time and general activity.
- 2.5 Night vision aids (NVAs) comprising InfaRed (IR) cameras were used to record bat activity during the surveys. 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.
- 2.6 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.

Table 2. Surveyor details

Surveyor name (initials)	Experience
Amy Wright (AW)	Class 2 bat licence: 2015-10994-CLS-CLS

Surveyor name (initials)	Experience
Miriam Anderson (MA)	>4 years bat survey experience
Dani Sheehan (DS)	>3 years bat survey experience
Maia Jones (MJ)	>1 year bat survey experience

REPTILES

Presence / likely absence survey

- 2.7 Reptiles are ectothermic and use their immediate environment to regulate their body temperature. In order to raise their body temperature they either bask in direct sunlight in sloped and sunny positions within suitable habitat or they seek out objects that provide indirect radiation.
- 2.8 Artificial cover objects (ACOs), comprising bitumen roofing felt were deployed within the Site in areas considered to provide suitable habitat for reptiles.
- 2.9 The thermal properties of the ACOs encourage basking reptiles and therefore provide an appropriate and quantitative method on which to base surveys.
- 2.10 30 ACOs were distributed across the Site, in suitable reptile habitat, on 7th August 2023 and left to 'bed in' prior to the first survey on 23rd August 2023. See Appendix 5 for location of ACOs.
- 2.11 The ACOs, suitable basking spots and any other potential refugia within the site were then checked during suitable weather conditions for the presence of basking and sheltering reptiles.
- 2.12 Table 3 below provides details of the dates and weather conditions for each survey. Surveys, were carried out by experienced surveyors with good knowledge of reptile identification and understanding of survey protocol.

Table 3. Survey details for the reptile presence / likely absence surveys

Survey No.	Survey Date	Surveyor	Survey Time		Weather Conditions				
			Start	End	°C	Wind BF	Precipitation	Ground condition	Cloud cover %
1	23/08/23	Miriam Anderson	18:45	19:00	22	0	None	Dry	10
2	25/08/23	Maia Jones	10:40	11:05	17	2	None	Damp	30
3	27/08/23	Maia Jones	11:15	11:25	18	3	None	Damp	10
4	29/08/23	Maia Jones	10:15	10:25	17	2	None	Damp	40
5	01/09/23	Tom Howland	12:00	12:20	20	1	Drizzle	Wet	80
6	04/09/23	Tom Howland	12:30	12:50	22	1	None	Dry	10
7	06/09/23	Tom Howland	11:20	11:30	22	0	None	Dry	0

LIMITATIONS

- 2.13 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 and some reptile species.

3. RESULTS AND ASSESSMENT

ROOSTING BATS

Presence / likely absence

- 3.1 The surveys undertaken between August and September, recorded no bats emerging or re-entering into building B1.
- 3.2 All species were recorded emerging and re-entering into building B2.

Dusk Emergence Survey - 7th August 2023

- A total of six soprano pipistrelle and five common pipistrelle bats emerged from gaps in timber on the north west elevation (roost 1 & 2) and exited the barn through a gap in the timber weatherboarding on the north elevation.
 - Two common pipistrelle emerged from gap in weatherboarding on the northern elevation (roost 3).
 - A single common pipistrelle emerged from timber weatherboarding, behind the vegetation, on the north-west elevation (roost 4).
 - One brown long-eared bat emerged from behind hessian material on the eastern elevation (roost 5) and exited through the barn door on the northern elevation.
- 3.3 Bat activity was moderate, dominated by common and soprano pipistrelle, passing and foraging.
- 3.4 A single noctule was recorded commuting across the site at 21:17.

Dusk Emergence Survey - 23rd August 2023

- Two common pipistrelle bats were recorded emerging from the timber weatherboarding behind the vegetation, on the north west elevation (roost 4).
 - At 20:49 a brown long-eared bat emerged from the main barn door on the north eastern elevation (roost 5).
- 3.5 Bat activity was low to moderate with sporadic foraging and passes from common and soprano pipistrelle between the times 20:17 (15 minutes after sunset) and 20:42.
- 3.6 A single *Myotis sp.* was recorded foraging at 20:52 and a noctule passing frequently between the times 20:39 and 21:02.

Dusk Emergence Survey - 11th September 2023

- Three soprano pipistrelle and one common pipistrelle emerged gaps in timber on the north west elevation (roost 1 & 2) and exited through the barn door on the north elevation.
- Three brown long-eared bats emerged from the hessian material on the eastern elevation (roost 5).
- A single common pipistrelle bat emerged from the timber weatherboarding behind the vegetation, on the north west elevation (roost 4).

- 3.7 Bat activity was low, dominated by common and soprano pipistrelle foraging infrequently between the times 19:46 (16 minutes after sunset) and 20:32.
- 3.8 A single serotine bat was recorded at 20:02, commuting across the site.

Assessment

- 3.9 Based on surveys undertaken, building B2 supports a number of summer day roosts for common pipistrelle, soprano pipistrelle and brown long-eared bats.
- 3.10 A summary of the roosts present is detailed within Table 4 below.

Table 4. Assessment of roosts present within B2

Roost	Species	No. of bats	Type of roost	Location of roost	Conservation status
1	<i>Soprano pipistrelle</i>	Peak count of 6	Small summer day roost	Gaps behind timber on the north west elevation	Low
2	<i>Common pipistrelle</i>	Peak count of 5			
3	<i>Common pipistrelle</i>	Peak count of 2	Small summer day roost	Timber weatherboarding on northern elevation	Low
4	<i>Common pipistrelle</i>	Peak count of 2	Small summer day roost	Timber weatherboarding on north-west elevation	Low
5	<i>Brown long-eared</i>	Peak count of 3	Small summer day roost	Hessian sack material within barn on eastern elevation	Low

REPTILES

Presence / likely absence

- 3.12 No reptiles were recorded within the Site. The seven presence / likely absence surveys therefore confirmed the likely absence of reptiles.

4. ROOST LOCATION PHOTOGRAPHS



Photograph 1. Roost Location 1 and 2 - common and soprano pipistrelle



Photograph 2. Roost location 3 - common pipistrelle



Photograph 3. Roost location 4 - common pipistrelle



Photograph 4. Roost location 5 - brown long-eared

5. RECOMMENDATIONS

ROOSTING BATS

- 5.1 It is recommended that a bat mitigation strategy is produced to detail the avoidance of harm to individual bats in addition to mitigation and long term compensation measures that will be included within the development for roosting bats.
- 5.2 Mitigation and compensation should provide replacement roost opportunities for common pipistrelle, soprano pipistrelle and brown long-eared bats within the Site.
- 5.3 Mitigation, in the form of soft demolition of roost features under the supervision of a licenced ecologist is recommended, along with roost compensation to include the replacement / enhancement of roosting opportunities within the new building, as close as possible to the location of the existing roosts.
- 5.4 Compensation measures could include the integration of roost features within the external fabric of the new building, for example, hanging tiles or weather boards, and the integration of a bat box or loft space.

6. REFERENCES

- A. J. Mitchell-Jones (2004). Bat Mitigation Guidelines (Version. January 2004). English Nature 2004.
- CIEEM (2017a). Guidelines for Ecological Report Writing. Chartered Institute for Ecology and Environmental Management, Winchester.
- Collins, J. (ed.) (2016) Bat surveys for Professional Ecologists: Good Practice Guidelines (3rd edn). The Bat Conservation Trust, London.
- Native Ecology (2023). Preliminary Ecological Appraisal report, Ref:1276_R01_PEA, dated 4th September.

7. APPENDIX 1: SUMMARY OF PLANNING POLICY AND LEGISLATION

LEGAL PROTECTION FOR BATS

7.1 Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019 are also known as European Protected Species. European Protected Species include all species of bat.

7.2 European Protected Species relate to those listed within the Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019 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

7.3 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

7.4 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”.

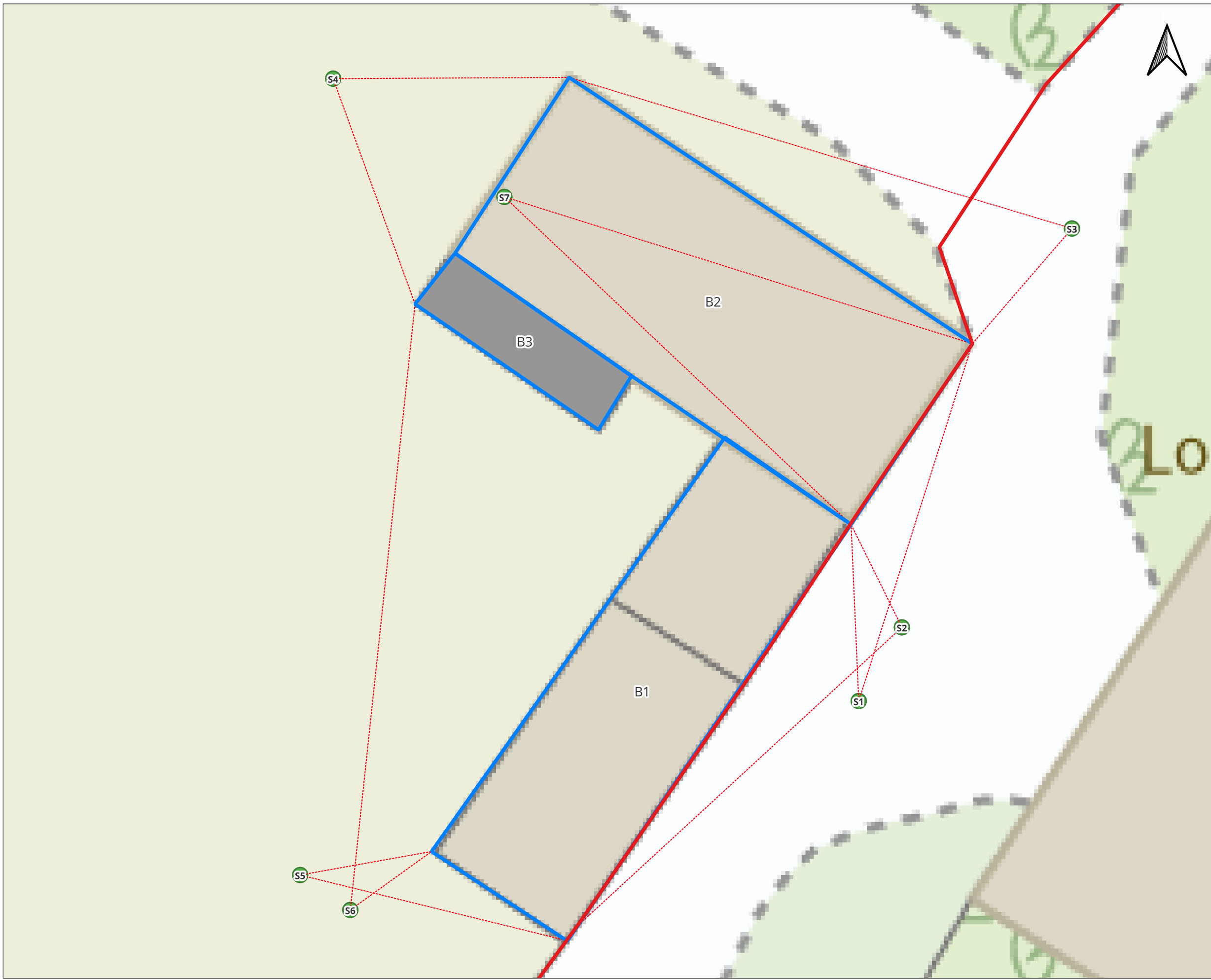
2. Regulation 55(9) states: The relevant licensing body must not grant a licence under this regulation unless it is satisfied—

- (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.

COMMON REPTILES


7.5 All common and widespread reptiles, which include viviparous lizard, slow worm, grass snake and adder are protected under the Wildlife and Countryside Act 1981. This makes it an offence to:

- Intentionally or recklessly kill or injure reptiles
- Sell, offer for sale, possess or transport for the purpose of sale or publish advertisement to buy or sell any reptile.



Legend

- Application Site boundary
- Buildings
- Not surveyed
- Bat surveyor position
- Surveyor field of view

 PROMOTING BIODIVERSITY INTEGRATION	
Bat Surveyor Location Plan	
The Stock Yard Padbrook Lane Elmstone	
Drawing ref:	1276_DR05
Revision:	-
Date:	18/09/2023
Scale:	1:100
Paper size:	A3

9. APPENDIX 3: NIGHT VISION AID (NVA) SCREENSHOTS - ROOSTING BATS



Photograph 5. NVA view of survey position S1



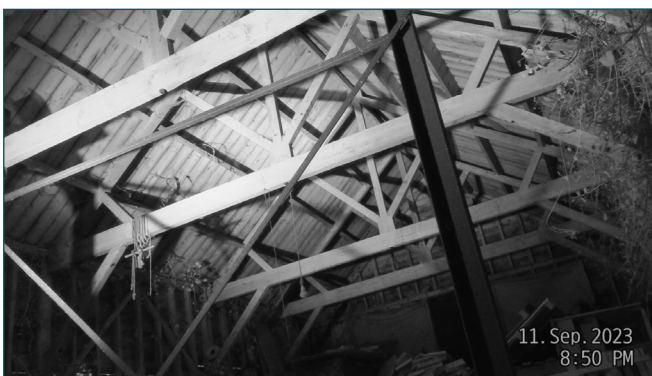
Photograph 6. NVA view of survey position S3



Photograph 7. NVA view of survey position S4



Photograph 8. NVA view of survey position S6



Photograph 9. NVA view of survey position S7 (internal)



Legend

 Application site boundary

Reptile ACO

 Bitumen felt

0 10 20 30 40 50 m



ACO Location Plan

The Stock Yard, Padbrook Lane
Elmstone, Kent
CT3 1HF

Drawing ref: 1276_DR01

Revision: -

Date: 24/08/2023

Scale: 1:250

Paper size: A3