MEDMERRY PARK CAMP SITE

ECOLOGY SURVEY REPORT

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Medmerry Park Camp
Site
Ecology Survey Report
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Prepared for:

Cove Communities

Contents

1 INTRODUCTION

1.1 Background to this Report

1.1.1 RPS was commissioned by Cove Communities to undertake ecology surveys of Medmerry Park Camp Site, Chichester, Sussex.

1.1.2 Following an initial site walkover, a number of further ecological surveys were undertaken:

- great crested newt surveys;
- reptile surveys;
- bat activity surveys; and
- preliminary bat roost assessment of the buildings on site.

1.2 Site Location

1.2.1 The site is located just inland of Bracklesham Bay in Chichester, West Sussex. The site is approximately 32.5 ha in size. The National Grid coordinates for the centre of the site are SZ819956.

1.2.2 The site comprised an existing holiday park with associated buildings and hard standing. A network of drains and ditches ran through the site while grassland fields occurred towards the periphery.

1.2.3 The wider landscape comprised the RSPB Medmerry Reserve to the east, further fields to the north and the village of Bracklesham Bay to the west. Medmerry Park Beach is found to the south.

1.3 Aims, Objectives and Legislation

Great Crested Newt Survey

1.3.1 During the initial walk-over of the site, a single adult great crested newt (GCN) *Triturus cristatus* was observed within one of the ditches on site. Therefore, further surveys were undertaken to determine how many GCN were utilising the suitable habitat on site.

1.3.2 GCN are listed on Schedule 5 of the Wildlife and Countryside Act 1981 (and as amended), which affords the species protection under Section 9. The species is also listed on Schedule 2 of the Conservation of Habitats and Species Regulations 2017 (as amended). In combination, this makes it an offence to:

- intentionally kill, injure or take (capture etc.) a GCN;
- possess a GCN;
- intentionally or recklessly damage, destroy, obstruct access to any structure or place used by GCN for shelter or protection, or disturb any animal occupying such a structure or place; and sell, offer for sale, possess or transport for the purpose of sale (live or dead animal, part or derivative) or advertise for buying or selling such things.

1.3.3 GCN are also listed as a species of principal importance for biodiversity in England & Wales under Section 41 of the Natural Environment & Rural Communities Act (2006).

Reptile Survey

1.3.4 The habitat on site provides good-quality habitat to support reptiles. The grassland provided excellent foraging and basking habitat while the scrub provides suitable refugia. There were multiple areas providing good hibernacula for a range of reptile species. Therefore, a survey was undertaken to establish presence of any reptile species.

1.3.5 All common UK reptile species (adder *Vipera berus*, grass snake *Natrix Helvetica*, common llizard *Zootoca vivipara* and slow worm *Anguis fragilis*) are protected through part of Section 9(1 and 5) of the Wildlife & Countryside Act 1981 (as amended). This prohibits:

- Intentional or reckless injuring or killing;
- Selling, offering or exposing for sale, or having in possession or transporting for the purpose of sale, any live or dead wild animal or any part of, or anything derived from, such an animal; or
- Publishing or causing to be published any advertisement likely to be understood as conveying buying or selling, or intending to buy or sell, any of those things.

Bat Survey

1.3.6 The objective of the study was to determine the current use of the site by bats, to inform the future development of the site. The study aimed to determine the potential impacts (if any) of the development by establishing:

- whether any bats were roosting on site.
- the general level of bat activity on the site.
- the range of species using the site.
- the best course of action to minimise the impacts of the development on the local bat population.

1.3.7 All British bat species are fully protected under Schedule 5 of the Wildlife and Countryside Act 1981, as amended. All bat species are also included on Schedule 2 of the Conservation of Species and Habitats Regulations 2017 (as amended). Taken together, these pieces of legislation make it an offence to:

- intentionally or recklessly kill, injure or capture bats.
- deliberately or recklessly disturb bats (whether in a roost or not).
- damage, destroy or obstruct access to bat roosts.

1.3.8 A roost is defined as 'any structure or place which [a bat] uses for shelter or protection'. As bats tend to reuse the same roosts, it is considered within the legal opinion that a roost is protected whether or not bats are present at the time of the survey.

1.3.9 Barbastelle bats *Barbastella barbastellus*, Bechstein's bat *Myotis bechsteinii*, noctule *Nyctalus noctula*, soprano pipistrelle *Pipistrellus pygmaeus,* brown long-eared bat *Plecotus auritus*, greater horseshoe bat *Rhinolophus ferrumequinum* and lesser horseshoe bat *Rhinolophus hipposideros* are also listed as being species of principle importance to the conservation of biodiversity in England under Section 41 of the Natural Environment and Rural Communities Act 2006.

1.3.10 Barbastelle, Bechstein's, greater horseshoe and lesser horseshoe bats are also listed on Annex II of the Habitats Directive. As such a site may be designated a Special Area of Conservation (SAC) due to the presence of these species.

2 METHODS

2.1 Great Crested Newt Surveys

2.1.1 During the site walk-over, a single adult GCN was located in Ditch 5. Subsequently, the other ditches across the site were surveyed for GCN (Figure 2.1).

GCN Population Surveys

2.1.2 A GCN population survey was carried out in the suitable waterbodies on-site. In compliance with best practice guidelines (Gent & Gibson, 2003; English Nature, 2001), a combination of the survey techniques, described below, were used to assess the presence or likely absence of GCN and if present, to determine the population size of GCN on-site.

2.1.3 Six survey visits were undertaken between late May and mid June 2022. All surveyors were experienced in carrying out this type of survey and held or were named as accredited agents on great crested newt survey licences issued by Natural England.

2.1.4 Survey visits were undertaken during suitable weather conditions with overnight temperatures always above 5°C (See Table 2.1).

2.1.5 Three GCN survey techniques are included for the waterbodies identified for the survey:

- Torchlight Counts - The surveyors walked around the perimeter of each waterbody approximately 30 minutes after dusk and scanned the water's edge with a high-powered CLU light torch, recording the number of GCN and other amphibians that were present. Additional species of notable interest can also be recorded where present. This is most effective when the pond is not heavily weeded, and the water is clear.
- Bottle Trapping – Aquatic newt traps (consisting of 2L plastic bottles with an inverted lid) were deployed approximately every two metres around the accessible sections of the pond margin in early evening (always before dusk). The traps were suspended on bamboo canes with trapped air bubbles. The traps are then checked early the following morning within 12 hours of being set; with the number of GCN and other amphibians in each trap recorded. This technique is often the most effective where there is sufficient water depth to place out traps.
- Egg Searching - Accessible aquatic vegetation surrounding the waterbody margin were searched for newt eggs. Great crested newt eggs are yellowish and laid individually, usually wrapped within a submerged leaf. Unwrapping eggs can increase mortality rates for GCN and other newt species and once the presence of GCN eggs is confirmed in a pond, this technique is no longer be included during subsequent survey visits.

Table 2.1: Survey and weather descriptions for GCN population survey.

Date	Survey Number	Weather Description
28.05.2022	V1	18°C /15°C, Wind 1/8, 0% Cloud Cover, No rain
31.05.2022	V2	16°C/14°C, Wind 2/8, 30% Cloud Cover, No rain
03.06.2022	V3	18°C/12°C, Wind 3/8, 90% Cloud Cover, No rain
10.06.2022	V4	18°C/15°C, Wind 1/8, 0% Cloud Cover, No rain
12.06.2022	V5	20°C/13°C, Wind 2/8, 0% Cloud Cover, No rain
16.06.2022	V6	23°C/16°C, Wind 3/8, 90% Cloud Cover, No rain

2.2 Reptile Survey

2.2.1 A seven-visit presence / absence reptile survey was carried out between May and September 2022 within areas of suitable habitat in accordance with good practice guidelines outlined in the Herpetofauna Workers' Manual (JNCC, 2003) and Froglife, Advice Sheet 10 (1999). This is considered a sufficient number of visits in order to meet the survey objectives of determining the presence or likely absence of reptiles within a site.

2.2.2 The survey was conducted using artificial refugia made from roofing felt measuring 50 cm x 50 cm. These provide shelter and basking opportunities for reptiles, which can be recorded on or under the refugia during suitable weather conditions, i.e., avoiding periods of strong wind, heavy rain, or extreme temperatures; typically, surveys are undertaken when the air temperature is between 9 and 20°C.

2.2.3 The refugia were set out on site on 6th June 2022, locations of refugia are shown on Figure 2.2. Whilst setting out the refugia, a visual search of all areas of suitable habitat for reptiles was also undertaken. The refugia were left to bed down for two weeks. During this time, they develop favourable conditions (e.g., suitable humidity and temperature gradient) and the reptiles become more familiar with them. The survey effort was at the higher end (175 mats) of the number of refugia recommended by Froglife (1999) (5-10 per hectare) to further increase the likelihood of encountering reptiles. Refugia were then checked on seven separate days in suitable weather conditions (dry and warm >9 °C - =/<18°C) to optimise the chances of encountering reptiles (see Table 2.2 for weather summary across the survey).

2.2.4 All reptile species present were recorded. Any reptiles observed whilst walking between refugia were also recorded. The refugia were collected and removed from site upon completion of the fieldwork.

Table 2.2: Reptile survey dates and conditions.

Visit	Date	Start Temp (ºC)	Weather
Deployment	06.06.2022	-	-
1	17.08.2022	18	Cloud: 8/8; Wind: 1F
2	03.09.2022	20	Cloud: 8/8; Wind: 3F; dry and breezy
3	05.09.2022	21	Cloud: 3/8; Wind: 2F; warm and damp
4	12.09.2022	20	Cloud: 2/8; Wind: 3F; breezy and warm
5	27.09.2022	15	Cloud: 5/8; Wind: 1F; cool
6	01.10.2022	17	Cloud: 2/8; Wind: 3F; warm and breezy
7	16.10.2022	15	Cloud:7/8; Wind: 2F

2.3 Bat Surveys

Bats - Roost Assessment

2.3.1 Bat Roost Assessments of onsite buildings were carried to further inform on the use (by bats) of buildings on site. All visits and subsequent assessments were conducted in accordance with Bat Surveys for Professional Ecologists: Good Practice Guidelines (BCT, 2016).

2.3.2 A systematic external inspection of buildings on-site was completed from ground level using close focusing binoculars and a high-powered torch as necessary. Internal inspection of buildings was also completed in a systematic fashion where safe access was available. Areas of interest for surveyors included (but were not limited to):

- Structural features that may influence the suitability of a building to support roosting bats include the presence of a roof void, the presence of access points into the building (including gaps beneath barge boards, soffits and fascia boards, gaps under lead flashing, gaps within masonry and under loose tiles, gaps between mortise and tenon joints), the complexity and size of any roof voids and daytime light levels in the roof voids.
- The suitability of the buildings for roosting bats was also assessed by examining the surrounding habitat. Important habitat features surrounding the structure which may influence roost potential include whether the structure is in a semi-rural or parkland location, its proximity to significant linear habitat features such as a watercourse, mature hedgerow, wooded lane, or an area of woodland.
- Any evidence of bats using the buildings including droppings, urine stains, fur or food remains. If droppings were present these were collected with tubes and sent for DNA analysis.

2.3.3 Taking account of these architectural and habitat features, the buildings were then assigned a level of roost suitability (Table 2.3) based on the criteria given in the Bat Conservation Trust's Bat Surveys: Good Practice Guidelines (Collins, 2016) and professional judgement. The primary objective of this exercise was to identify the need for further detailed bat survey later in the year, or alternatively to obtain sufficient information that would dismiss the need for further assessment.

Table 2.3: Categories for Bat Roosting Potential.

Category	Criteria
Negligible Potential	No evidence, no suitable Potential Roost Features (PRFs)
Low Potential	No evidence of use, one or two features suitable for low numbers of bats, with very limited roosting potential. Limited connectivity to wider landscape with other bat habitats.
Moderate Potential	No evidence of use, several suitable features, but unlikely to support a roost type of high conservation status, connected to wider landscape with good foraging habitat.
High Potential	No evidence of use, but many suitable features for use by larger numbers of bats on a more regular basis and potentially for longer periods. Well connected to good foraging habitat and known roosts nearby.
Confirmed Roost	PRFs with evidence of use present, observation or previous records of bats confirmed to be roosting in the feature/building/tree.

Bats - Activity Surveys

2.3.4 Bat activity surveys were carried out in line with good practice guidelines as outlined by the Bat Conservation Trust (BCT). Five walking activity transect visits were carried out within the wider site each month between May and October, 2022.

2.3.5 Surveys commenced at sunset (or within a suitable time period before / after) with the route walked at a steady pace recording any bats encountered as well as numbers and behaviour where possible. The transect route was devised to ensure an accurate representation of the species present on site, encompassing the habitats on site likely to be important to supporting foraging/committing bats such as the broadleaf woodland and pond areas.

2.3.6 All bat passes were recorded by two experienced bat surveyors equipped with an Elekon Bat Logger M, and all bats were identified to species level, where possible, on site. Echolocation calls were

subsequently analysed using computer software (Kaleidoscope Pro Analysis) for confirmation of species. Where possible, additional notes on size, flight height, type of flight (such as commuting, foraging, fast or slow) and direction of flight were also recorded.

2.3.7 Bat activity can be strongly dependent on weather conditions. Therefore, the surveys were only conducted in suitable weather conditions as prescribed in the good practice guidelines (BCT), when bat activity was deemed to be likely (sunset temperature 10ºC or above, no rain or strong wind). Table 2.5 summarises the weather during the surveys.

Table 2.4: Bat activity transect survey dates, weather conditions and surveyors

Date	Visit Number	Weather Conditions	Sunset Time	Start Time	End Time
28.05.2022	1	14°C, Humidity: 59%, Partially cloudy, Wind Speed: 12.5, No rain	21:03	21:03	22:33
10.06.2022	2	16°C, Humidity: 81%, Clear, Wind Speed: 23.7, No rain	21:15	21:15	22:48
28.08.2022	3	20°C, Humidity: 64%, Partially cloudy, Wind Speed: 10.5, No rain	19:57	19:57	21:27
27.09.2022	4	11°C, Humidity: 88%, Overcast, Wind Speed: 11.7, Rain	18:50	18:50	20:20
16.10.2022	5	15°C, Humidity: 92%, Overcast, Wind Speed: 23.2, Rain	18:08	18:08	19:38

2.4 Constraints and Limitations

Survey

2.4.1 It should be noted that whilst every effort has been made to provide a comprehensive description of the site, no investigation can ensure the complete characterisation and prediction of the natural environment.

2.4.2 The protected/notable species assessment provides a preliminary view of the likelihood of these species occurring on the site, based on the suitability of the habitat, known distribution of the species in the local area provided in response to our enquiries and any direct evidence on the site. It should not be taken as providing a full and definitive survey of any protected/notable species group.

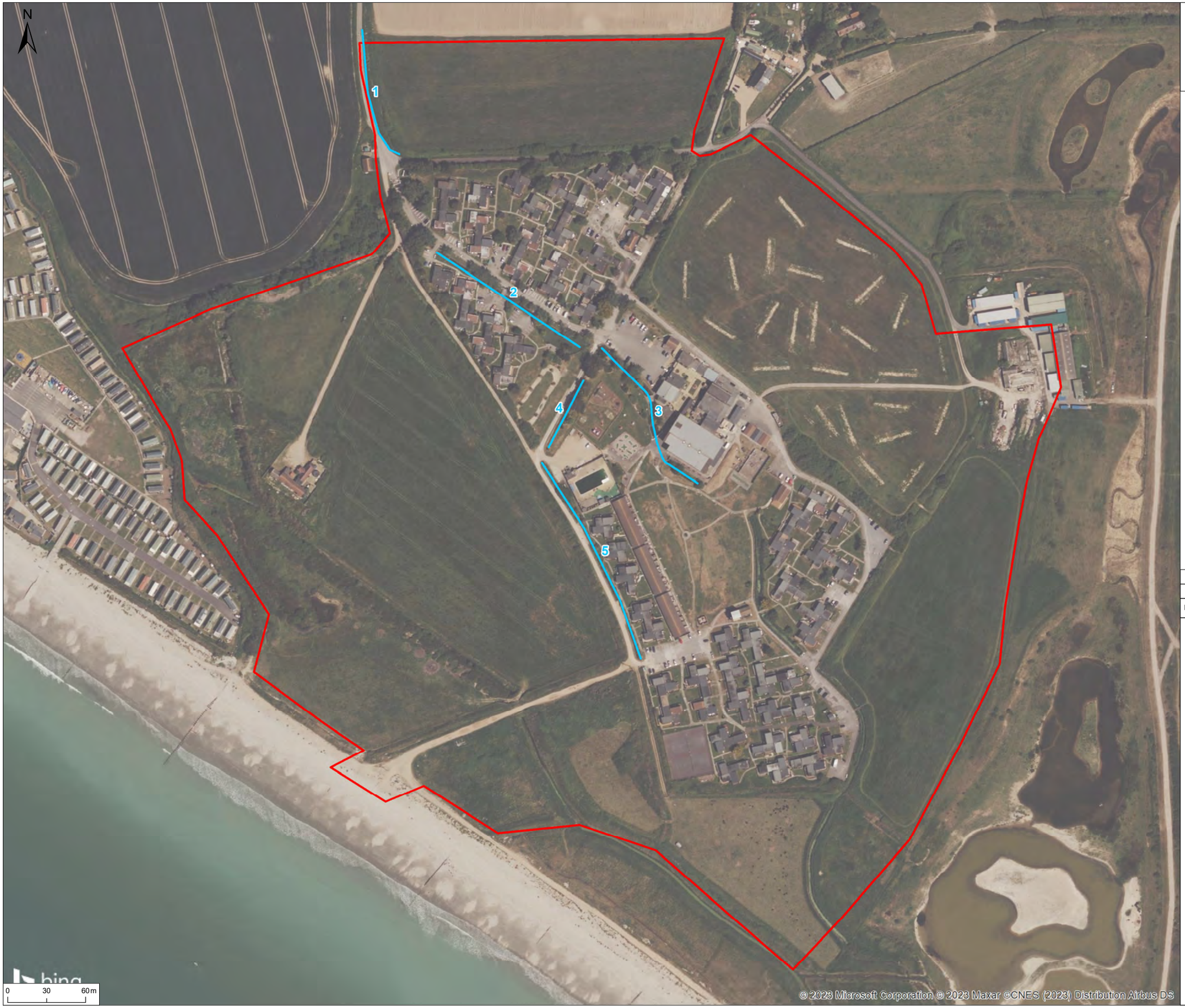
2.4.3 Due to the timing at which surveys were commissioned, surveys between mid-April and mid-May were not achievable for GCN surveys. As such, the peak survey season was missed. Therefore, the peak count for a population may not represent the full extent of the population actually present on site. The results can still, however, provide evidence of the presence of GCN on site and, as such, demonstrate the need for mitigation with respect to this species.

2.4.4 Due to equipment failure, the bat activity surveys during July did not produce any results, and May activity survey could not provide GPS locations of the bats recorded during the survey.

Accurate Lifespan of Ecological Data

2.4.5 The majority of ecological data remain valid for only short periods due to the inherently transient nature of the subject. The survey results contained in this report are considered accurate for two years, assuming no significant considerable changes to the site conditions.

Figure 2.1: Locations of ditches subject to GCN survey



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Legend

- Site boundary
- Ditch (1-5)

Rev	Description	By	CB	Date

MAKING COMPLEX EASY

Atholl Exchange, 1st Floor, 6 Canning Street, Edinburgh EH3 8EG
T: +44(0)131 555 5011 E: rpsed2@rpsgroup.com

Client: Cove Communities Venture

Project: Medmerry Camp Site

Title: Location of Ditches on Site

Status	Drawn By	PM/Checked By
DRAFT	DGH	SP
Project Number	**Scale @ A3**	**Date Created**
ECO02578	1:2,800	APR 2023

Figure Number: **2.1**

Rev: -

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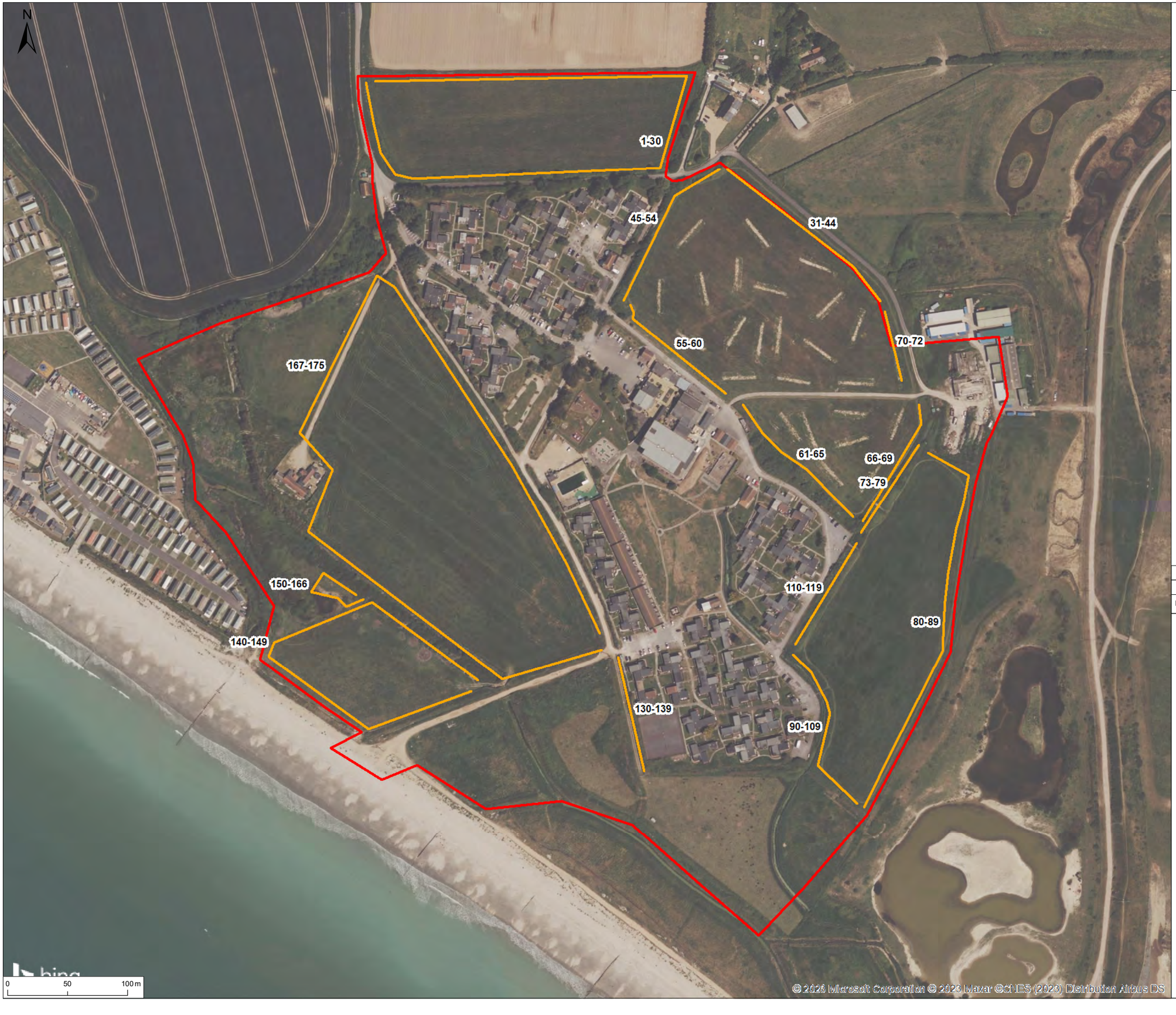
Figure 2.2: Locations of reptile refugia



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Legend

- Site Boundary
- Location of reptile refugia (x175)

Rev	Description	By	CB	Date

MAKING COMPLEX EASY

20 Western Avenue, Milton Park, Abingdon, Oxfordshire, OX14 4SH
T: +44(0)1235 821 888 E: rpsox@rpsgroup.com

Client: Cove Communities

Project: Medmerry Camp Site

Title: Location of Reptile Refugia

Status	Drawn By	PM/Checked By
DRAFT	LP	SP/NB

Project Number	Scale @ A3	Date Created
ECO02578	1:3,000	MAY 2023

Figure Number	Rev
2.2	-

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3 RESULTS

3.1 Great Crested Newt Surveys

3.1.1 A single adult GCN was observed in Ditch 5 during an initial walk-over. Therefore, a population survey comprising six visits was carried out between late-May and mid-June 2022.

3.1.2 GCN efts (immature individuals) were found to be present in Ditch 5 in both bottle traps and via torching. No eggs were found at any point in the survey, but this may be due to the late season survey (hence the presence of efts). The other four ditches contained no GCN.

3.1.3 Eels were found during the survey in Ditch 2 and Ditch 3.

3.1.4 Water voles were also found during the survey in Ditch 3 and Ditch 5.

3.1.5 The results for each pond are displayed below in Table 3.1 - Table 3.5.

Table 3.1 GCN Population survey results for Ditch 1.

Date	Survey	Great Crested Newt Results			Other Species' Results
	Method	Male	Female	Efts	
28.05.2022	Torching	0	0	0	3 x smooth (torching)
	Bottle trapping	0	0	0	
	Egg search	0	0	0	
31.05.2022	Torching	0	0	0	2 x smooth (torching)
	Bottle trapping	0	0	0	
	Egg search	0	0	0	
03.06.2022	Torching	0	0	0	Nothing.
	Bottle trapping	0	0	0	
	Egg search	0	0	0	
10.06.2022	Torching	0	0	0	Nothing.
	Bottle trapping	0	0	0	
	Egg search	0	0	0	
12.06.2022	Torching	0	0	0	Nothing.
	Bottle trapping	0	0	0	
	Egg search	0	0	0	
16.06.2022	Torching	0	0	0	Nothing.
	Bottle trapping	0	0	0	
	Egg search	0	0	0	

Table 3.2 GCN Population survey results for Ditch 2.

Date	Survey	Great Crested Newt Results			Other Species' Results
	Method	Male	Female	Efts	
28.05.2022	Torching	0	0	0	3 smooth (bottle trap) Eels Marsh frogs
	Bottle trapping	0	0	0	
	Egg search	0	0	0	
31.05.2022	Torching	0	0	0	8 smooth (bottle trap) Eels Marsh frogs
	Bottle trapping	0	0	0	
	Egg search	0	0	0	
03.06.2022	Torching	0	0	0	4 smooth (torching) Eels Marsh frogs
	Bottle trapping	0	0	0	
	Egg search	0	0	0	
10.06.2022	Torching	0	0	0	Eels Marsh frogs
	Bottle trapping	0	0	0	
	Egg search	0	0	0	
12.06.2022	Torching	0	0	0	Eels

	Bottle trapping	0	0	0	Marsh frogs
	Egg search	0	0	0	
16.06.2022	Torching	0	0	0	Eels Marsh frogs
	Bottle trapping	0	0	0	
	Egg search	0	0	0	

Table 3.3 GCN Population survey results for Ditch 3.

Date	Survey	Great Crested Newt Results			Other Species' Results
	Method	Male	Female	Efts	
28.05.2022	Torching	0	0	0	2 smooth (bottle trap) Eels Carp Marsh frogs
	Bottle trapping	0	0	0	
	Egg search	0	0	0	
31.05.2022	Torching	0	0	0	Eels, Marsh frogs
	Bottle trapping	0	0	0	
	Egg search	0	0	0	
03.06.2022	Torching	0	0	0	Marsh frogs 2 x water vole
	Bottle trapping	0	0	0	
	Egg search	0	0	0	
10.06.2022	Torching	0	0	0	Marsh frogs 1 x water vole
	Bottle trapping	0	0	0	
	Egg search	0	0	0	
12.06.2022	Torching	0	0	0	Marsh frogs
	Bottle trapping	0	0	0	
	Egg search	0	0	0	
16.06.2022	Torching	0	0	0	Marsh frogs 1 x water vole
	Bottle trapping	0	0	0	
	Egg search	0	0	0	

Table 3.4 GCN Population survey results for Ditch 4.

Date	Survey	Great Crested Newt Results			Other Species' Results
	Method	Male	Female	Efts	
28.05.2022	Torching	0	0	0	15 smooth (bottle trap) 6 smooth (torching) Marsh frogs
	Bottle trapping	0	0	0	
	Egg search	0	0	0	
31.05.2022	Torching	0	0	0	9 smooth (bottle trap) 8 smooth (torching) Marsh frogs
	Bottle trapping	0	0	0	
	Egg search	0	0	0	
03.06.2022	Torching	0	0	0	3 smooth (bottle trap) 8 smooth (torching) Marsh frogs
	Bottle trapping	0	0	0	
	Egg search	0	0	0	
10.06.2022	Torching	0	0	0	5 smooth (bottle trap) 10 smooth (torching) Marsh frogs
	Bottle trapping	0	0	0	
	Egg search	0	0	0	
12.06.2022	Torching	0	0	0	1 smooth (torching) Marsh frogs
	Bottle trapping	0	0	0	
	Egg search	0	0	0	
16.06.2022	Torching	0	0	0	1 smooth (torching) Marsh frogs
	Bottle trapping	0	0	0	
	Egg search	0	0	0	

Table 3.5 GCN Population survey results for Ditch 5.

Date	Survey	Great Crested Newt Results			Other Species' Results
	Method	Male	Female	Efts	
28.05.2022	Torching	0	0	20+	23 smooth (bottle trap) 6 smooth (torching) Marsh frogs 1 x water vole
	Bottle trapping	0	0	0	
	Egg search	0	0	0	
31.05.2022	Torching	0	0	30+	35 smooth (bottle trap) 15 smooth (torching) Marsh frogs 1 x water vole
	Bottle trapping	0	0	3	
	Egg search	0	0	0	
03.06.2022	Torching	0	0	30+	17 smooth (bottle trap) 12 smooth (torching) Marsh frogs
	Bottle trapping	0	0	10	
	Egg search	0	0	0	
10.06.2022	Torching	0	0	30+	5 smooth (bottle trap) 4 smooth (torching) Marsh frogs
	Bottle trapping	0	0	10	
	Egg search	0	0	0	
12.06.2022	Torching	0	0	30+	4 smooth (bottle trap) 3 smooth (torching) Marsh frogs
	Bottle trapping	0	0	4	
	Egg search	0	0	0	
16.06.2022	Torching	0	0	30+	1 smooth (torching) Marsh frogs
	Bottle trapping	0	0	4	
	Egg search	0	0	0	

3.2 Reptile Survey

3.2.1 There was an adult peak count of one grass snake *Natrix Helvetica*, three common lizard *Zootoca vivipara*, nine slow-worm *Anguis fragilis*, and two adder *Vipera berus* (albeit these were juveniles).

3.2.2 Results are presented below in Table 3.6 and Figure 3.6.

Table 3.6: Reptile Survey Results

Date	Grass Snake		Common Lizard		Slow-Worm		Adder	
	Adult	Juvenile	Adult	Juvenile	Adult	Juvenile	Adult	Juvenile
17.08.2022	0	0	0	0	1F	0	0	2
03.09.2022	0	0	1	1 (juvenile) 2 (sub-adult)	4F 4M	2 (sub-adult)	0	0
05.09.2022	0	0	0	0	2F	2 (juvenile) 2 (sub-adult) 2F (sub-adult)	0	0
12.09.2022	0	1	0	0	1F 1 (undet.)	1 (sub-adult)	0	0
27.09.2022	1	0	0	0	1F	0	0	0
01.10.2022	0	3 (juvenile) 2 (sub-adult)	3	1 (sub-adult)	2F 4M 1 (undet.)	3 (sub-adult) 10 (juvenile)	0	0
16.10.2022	0	0	3	0	4F 5M	0	0	0

3.3 Bat Surveys

Preliminary Bat Roost Assessment

3.3.1 The buildings on site were subject to an external assessment for their potential to support bat roosts. Results are shown in Table 3.6 below and Figure 3.1.

3.3.2 Generally, the buildings on site were single storey residential buildings with a combination of wood and brick/breeze block construction. Some had pitched roofs while others were flat.

3.3.3 Of the 86 buildings on site, 18 were found to have high roost potential, 23 had moderate potential, 18 had low potential with the remaining 27 negligible potential.

Bat Transect Activity Surveys

May 2022 Transect

3.3.4 Thirty common pipistrelle, nine soprano pipistrelle, and three Nathusius' pipistrelle passes were recorded during the transect.

June 2022 Transect

3.3.5 Seven common pipistrelle passes were recorded during the transect (Figure 3.2).

August 2022 Transect

3.3.6 Nineteen common pipistrelle, fourteen soprano pipistrelle, six common noctule, and one Myotis spp. passes were recorded during the transect (Figure 3.3).

September 2022 Transect

3.3.7 Five common pipistrelle passes, three soprano pipistrelle passes, and two Myotis spp. passes were recorded (Figure 3.4).

October 2022 Transect

3.3.8 Seventeen soprano pipistrelle and two common pipistrelle passes were recorded during the transect (Figure 3.5).

Table 3.6 Preliminary bat building assessment results

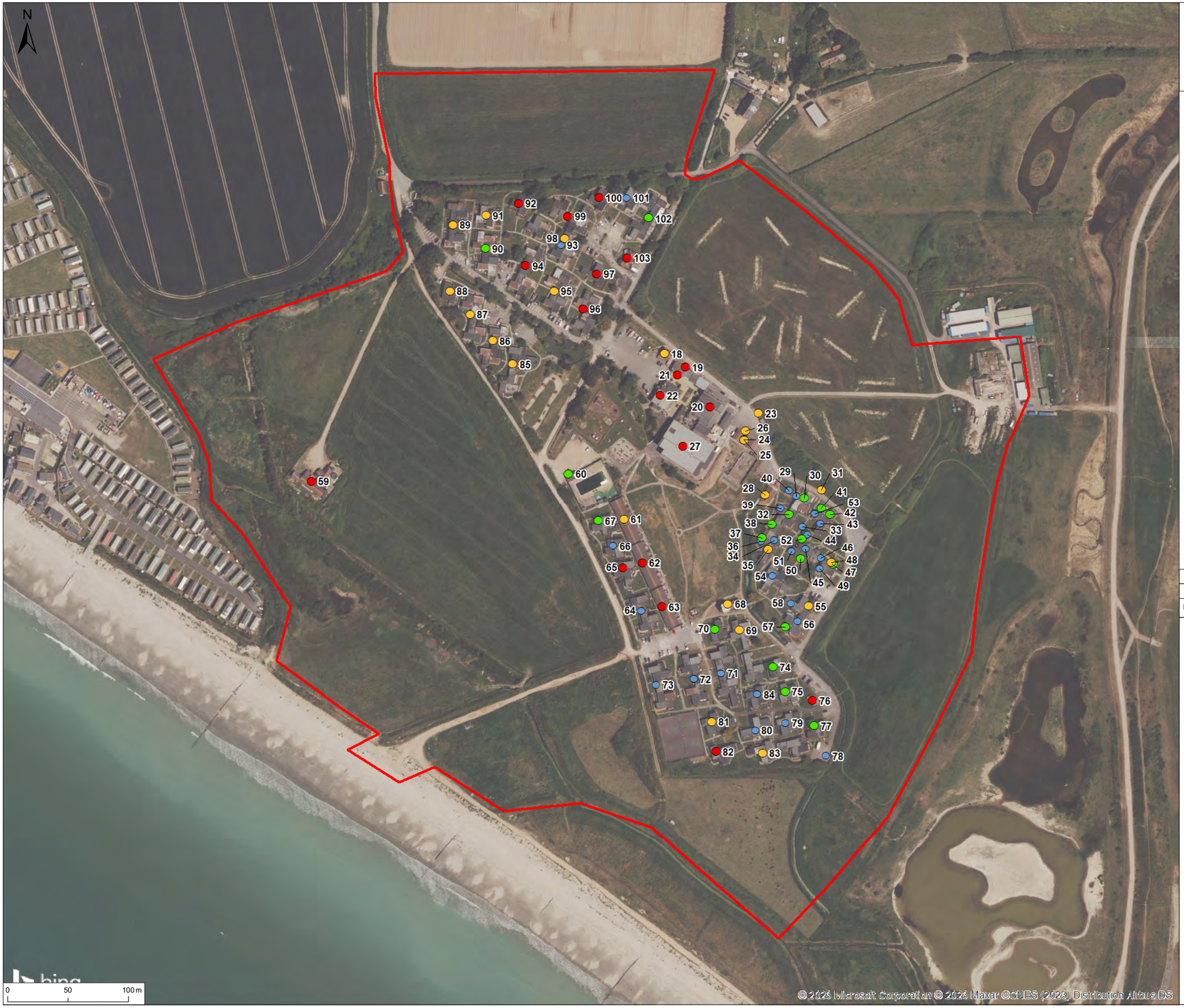
Building_number	Building_use	Building use - notes	Building structure	Roof structure	Roof material	Loft/roof void present?	Number of storeys	Roost potential
1	Residential		Breeze_block,Wood,Brick	Pitched_roof,Flatroof	Clay_tiles,Roofing_felt	yes	1	Moderate
2	Commercial	Offices, shop,storage	Brick,Corrugated_asbestos_type,Wood	Pitched_roof	Corrugated_asbestos_type	yes	1	High
2	Residential		Brick,Breeze_block,Wood	Pitched_roof,Flatroof	Asphalt_shingles,Roofing_felt	yes	1	Moderate
3	Commercial	Storage	Brick,Wood	Pitched_roof,A-frame	Corrugated_asbestos_type,Glass	no	1	High
3	Residential		Wood,Breeze_block,Brick	Pitched_roof,Flatroof	Asphalt_shingles,Roofing_felt	yes	1	Moderate
4	Commercial	Reception and shop	Brick,Wood	Pitched_roof	Corrugated_asbestos_type	yes	1	High
4	Residential		Breeze_block,Brick,Wood	Pitched_roof,Flatroof	Roofing_felt	yes	1	Moderate
5	Commercial	Bar and restaurant	Wood,Brick,Breeze_block	Pitched_roof,Flatroof	Corrugated_metal,Roofing_felt	yes	2	High
5	Residential		Breeze_block,Brick,Wood	Pitched_roof,Flatroof	Concrete_tiles,Roofing_felt	yes	1	Moderate
6	Commercial	Substation	Brick	Pitched_roof	Corrugated_asbestos_type	no	1	Moderate
6	Residential		Brick,Breeze_block,Wood	Pitched_roof,Flatroof	Concrete_tiles,Roofing_felt	yes	1	Low
7	Commercial		Wood	Pitched_roof	Asphalt_shingles	no	1	Moderate
7	Residential		Brick,Breeze_block	Pitched_roof,Flatroof	Roofing_felt	yes	1	Moderate
8	Commercial		Wood	Pitched_roof	Asphalt_shingles	no	1	Moderate
8	Residential		Breeze_block,Brick,Wood	Pitched_roof,Flatroof	Roofing_felt	yes	1	High
9	Commercial		Wood	Pitched_roof	Asphalt_shingles	no	1	Moderate
9	Residential		Breeze_block,Brick,Wood	Flatroof,Pitched_roof	Roofing_felt	yes	1	Negligible
10	Commercial		Brick,Breeze_block,Corrugated_metal,Wood	A-frame	Corrugated_metal	no	2	High
10	Residential		Breeze_block,Brick,Wood	Pitched_roof,Flatroof	Roofing_felt	yes	1	High
11	Residential		Wood,Breeze_block	Pitched_roof	Asphalt_shingles	yes	1	Moderate
11	Residential		Brick,Breeze_block,Wood	Pitched_roof,Flatroof	Roofing_felt	yes	1	Moderate
12	Residential		Brick,Breeze_block,Wood	Flatroof,Pitched_roof	Roofing_felt	yes	1	High
12	Residential		Brick,Breeze_block,Wood	Pitched_roof,Flatroof	Roofing_felt	yes	1	High
15	Residential		Breeze_block,Brick,Wood	Pitched_roof,Flatroof	Roofing_felt	yes	1	High
16	Residential		Brick,Breeze_block,Wood	Pitched_roof,Flatroof	Roofing_felt	yes	1	Negligible
17	Commercial		Breeze_block,Brick	Pitched_roof,Flatroof	Roofing_felt	yes	1	Low

23	Residential	Breeze_block,Brick,Wood	Pitched_roof,Flatroof	Roofing_felt	yes	1	Low
24	Residential	Brick,Breeze_block,Wood	Flatroof,Pitched_roof	Roofing_felt	yes	1	Negligible
25	Residential	Brick,Breeze_block	Pitched_roof,Flatroof	Roofing_felt	yes	1	Moderate
26	Residential	Breeze_block,Brick	Pitched_roof,Flatroof	Roofing_felt	yes	1	High
27	Residential	Brick,Breeze_block,Wood	Pitched_roof,Flatroof	Roofing_felt	yes	1	Moderate
28	Residential	Brick,Breeze_block,Wood	Pitched_roof,Flatroof	Roofing_felt	yes	1	Negligible
29	Residential	Brick,Breeze_block,Wood	Flatroof,Pitched_roof	Roofing_felt	yes	1	Negligible
30	Residential	Brick,Breeze_block,Wood	Flatroof,Pitched_roof	Roofing_felt	yes	1	Low
31	Residential	Brick,Breeze_block,Wood	Flatroof	Roofing_felt	yes	1	Negligible
32	Residential	Brick,Breeze_block,Wood	Pitched_roof	Roofing_felt	yes	1	Low
34	Residential	Brick,Breeze_block,Wood	Pitched_roof,Flatroof	Roofing_felt	yes	1	Negligible
35	Residential	Breeze_block,Wood,Brick	Flatroof,Pitched_roof	Roofing_felt	yes	1	Negligible
36	Residential	Brick,Breeze_block,Wood	Pitched_roof,Flatroof	Roofing_felt	yes	1	Negligible
37	Residential	Brick,Breeze_block,Wood	Flatroof,Pitched_roof	Roofing_felt	yes	1	Moderate
38	Residential	Breeze_block,Brick,Wood	Pitched_roof,Flatroof	Roofing_felt	yes	1	Low
39	Residential	Brick,Breeze_block,Wood	Pitched_roof,Flatroof	Roofing_felt	yes	1	Negligible
40	Residential	Brick,Breeze_block,Wood	Pitched_roof,Flatroof	Roofing_felt	yes	1	High
41	Residential	Breeze_block,Brick,Wood	Pitched_roof,Flatroof	Roofing_felt	yes	1	Negligible
42	Residential	Breeze_block,Wood,Brick	Pitched_roof	Roofing_felt	yes	1	Low
43	Residential	Brick,Breeze_block	A-frame	Concrete_tiles	yes	1	Moderate
44	Residential	Breeze_block,Brick	A-frame	Concrete_tiles	yes	1	High
45	Residential	Breeze_block,Brick	A-frame	Concrete_tiles	no	1	High
14a-e	Residential	Brick,Breeze_block,Wood	Flatroof,Pitched_roof	Roofing_felt	yes	1	Moderate
14f-n	Residential	Brick,Breeze_block,Wood	Pitched_roof,Flatroof	Roofing_felt	yes	1	High
18a	Residential	Wood	Flatroof	Roofing_felt	no	1	Low
18b	Residential	Wood,Breeze_block	Pitched_roof	Clay_tiles,Wood	yes	1	Moderate
18c	Residential	Wood	Flatroof	Roofing_felt	no	1	Low
18d	Residential	Wood	Pitched_roof	Roofing_felt	yes	1	Negligible
18e	Residential	Wood	Pitched_roof	Roofing_felt	yes	1	Negligible
18f	Residential	Wood	Flatroof	Roofing_felt	no	1	Moderate
18h	Residential	Wood	Flatroof	Roofing_felt	yes	1	Negligible
18h	Residential	Wood	Flatroof	Roofing_felt	no	1	Low
18k	Residential	Wood	Flatroof	Roofing_felt	no	1	Low
18L	Residential	Wood	Pitched_roof	Roofing_felt	yes	1	Negligible

18n	Residential		Breeze_block	Flatroof	Roofing_felt	no	1	Negligible
18-O	Residential		Wood	Pitched_roof	Roofing_felt	no	1	Negligible
19 b and c	Residential		Wood	Flatroof	Roofing_felt	no	1	Negligible
19a	Residential		Wood,Breeze_block	Pitched_roof	Roofing_felt	yes	1	Low
19d	Residential		Wood	Pitched_roof	Roofing_felt	yes	1	Negligible
19e	Residential		Wood	Flatroof	Roofing_felt	no	1	Low
20 e and f	Residential		Wood,Breeze_block	Flatroof	Roofing_felt	no	1	Low
20 i and h	Residential		Wood	Flatroof	Roofing_felt	no	1	Negligible
20a	Residential		Wood	Flatroof	Roofing_felt	no	1	Moderate
20b	Residential		Wood	Pitched_roof	Roofing_felt	yes	1	Negligible
20c	Residential		Wood	Flatroof	Roofing_felt	no	1	Low
20d	Residential		Wood	Pitched_roof	Roofing_felt	yes	1	Negligible
20f	Residential		Breeze_block	Flatroof	Roofing_felt	no	1	Negligible
20g	Residential		Wood	Pitched_roof	Roofing_felt	no	1	Negligible
20j	Residential		Wood	Pitched_roof	Roofing_felt	yes	1	Low
21 a,b,c,d,e & f	Residential	6 individual holiday units, mix of two styles	Wood,Breeze_block	Flatroof,Pitched_roof	Roofing_felt	yes	1	Negligible
22 d and e	Residential		Wood	Flatroof	Roofing_felt	no	1	Negligible
22 H I and A	Residential		Breeze_block,Wood	Pitched_roof,Flatroof	Roofing_felt	yes	1	Negligible
22b	Residential		Wood	Flatroof	Roofing_felt	no	1	Low
22g	Residential		Wood	Flatroof	Roofing_felt	no	1	Moderate
Farmhouse	Residential		Brick,Breeze_block	Pitched_roof,A-frame	Slate_tiles,Roofing_felt,Concrete_tiles,Corrugated_asbestos_type	yes	1	High
Pool filter house	Commercial		Breeze_block,Brick	Pitched_roof,Flatroof	Roofing_felt	no	1	Low
Su21	Commercial		Brick	A-frame	Roofing_felt	no	1	High
WW	Residential		Brick,Breeze_block,Wood	A-frame	Clay_tiles	yes	2	High

X	Residential	Breeze_block,Wood	Pitched_roof	Roofing_felt,Corrugated_metal,Concrete_tiles	yes	2	Moderate

Figure 3.1: Preliminary bat roost assessment results



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Legend

- Site Boundary

Bat Roost Potential

- High
- Moderate
- Low
- Negligible

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Title: PBRA Building Survey Results

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Figure Number	Rev
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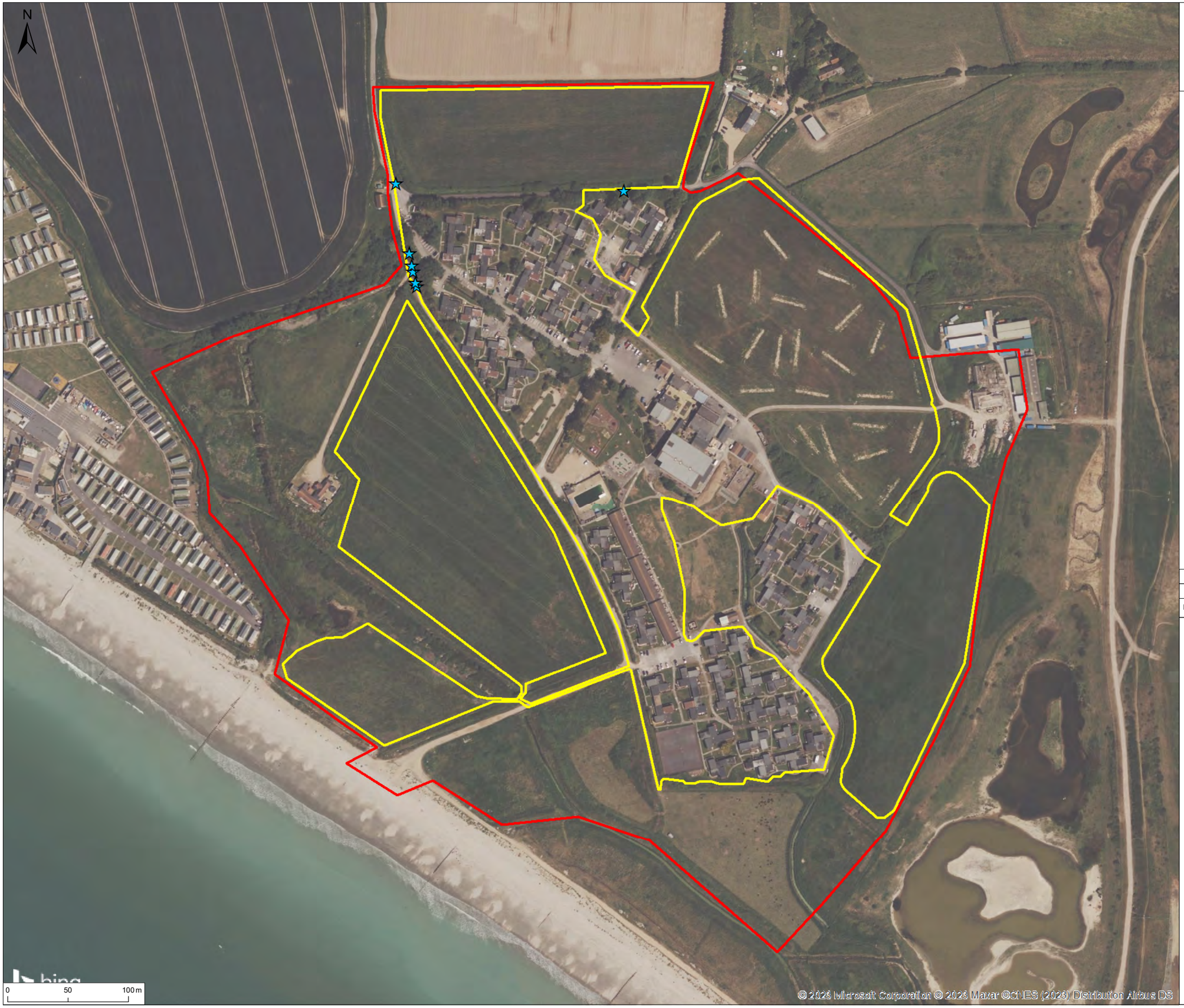
Figure 3.2: June bat transect results



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Legend

- Site boundary
- Bat transect route
- Pipistrellus pipistrellus

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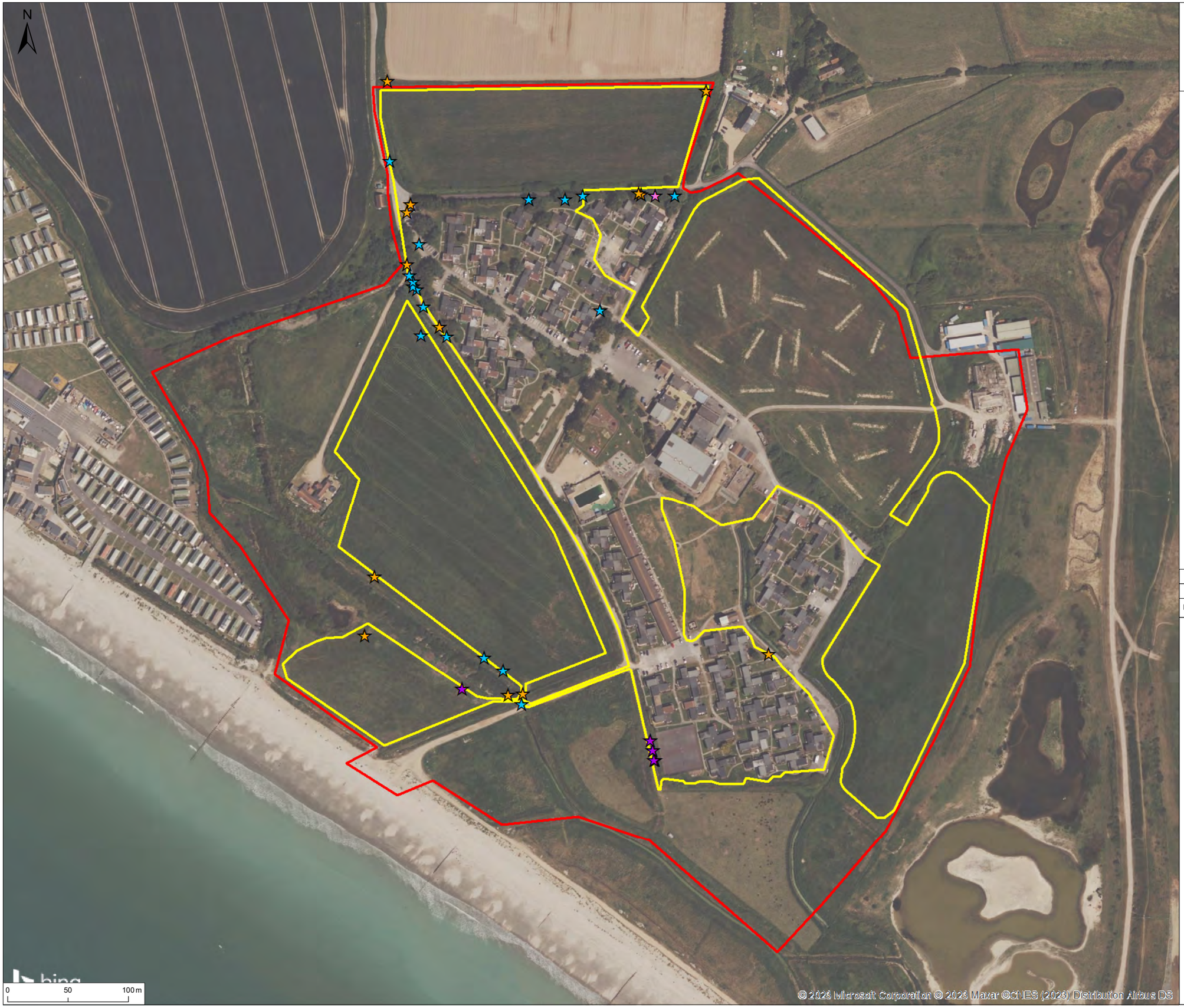
Figure 3.3: August bat transect results



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Legend

- Site boundary
- Bat transect route
- Myotis species
- Nyctalus noctula
- Pipistrellus pipistrellus
- Pipistrellus pygmaeus

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Project: Medmerry Camp Site

Title: Bat Transect Survey Results: August 2022

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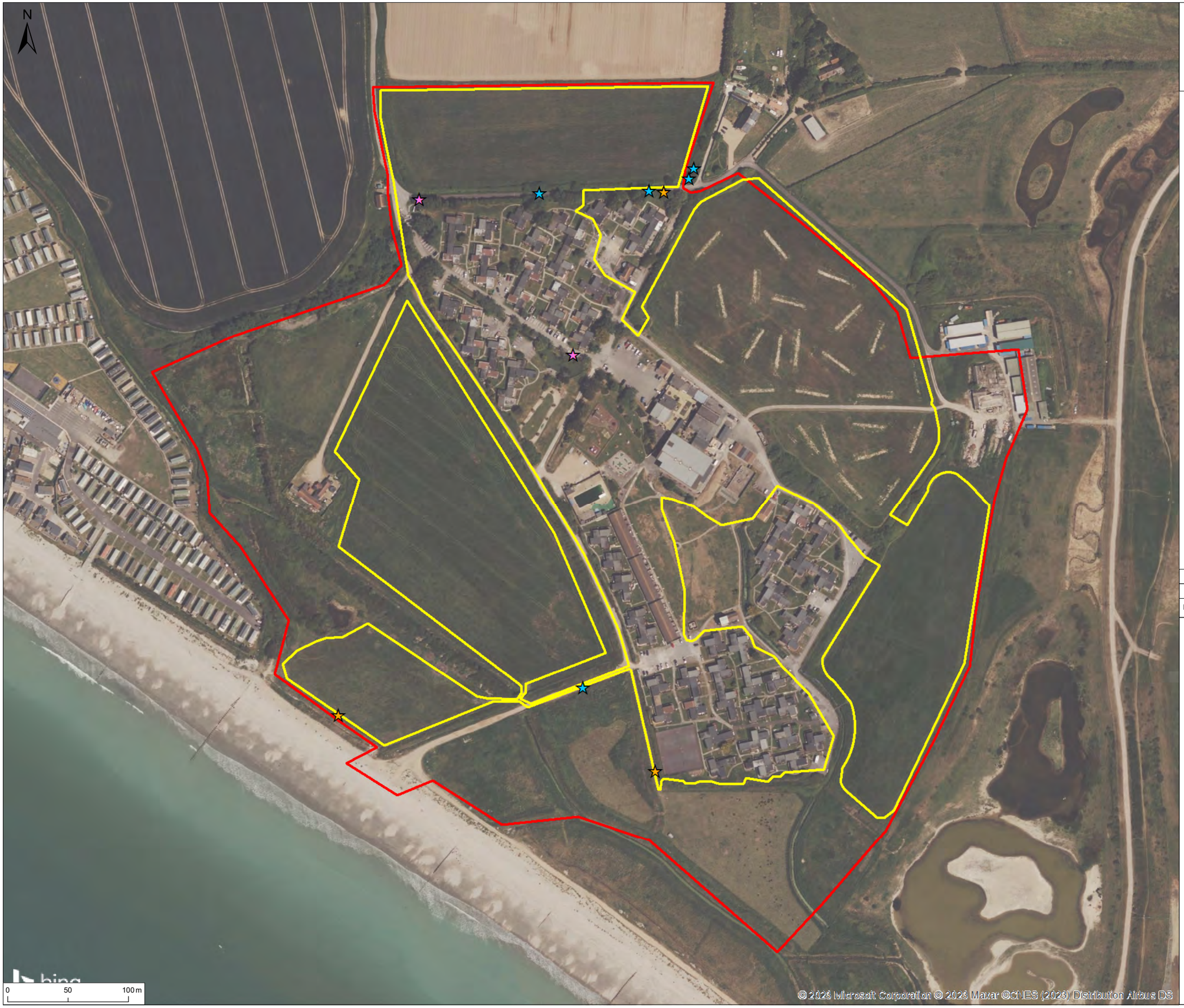
Figure 3.4: September bat transect results



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Legend

- Site boundary
- Bat transect route
- Myotis species
- Pipistrellus pipistrellus
- Pipistrellus pygmaeus

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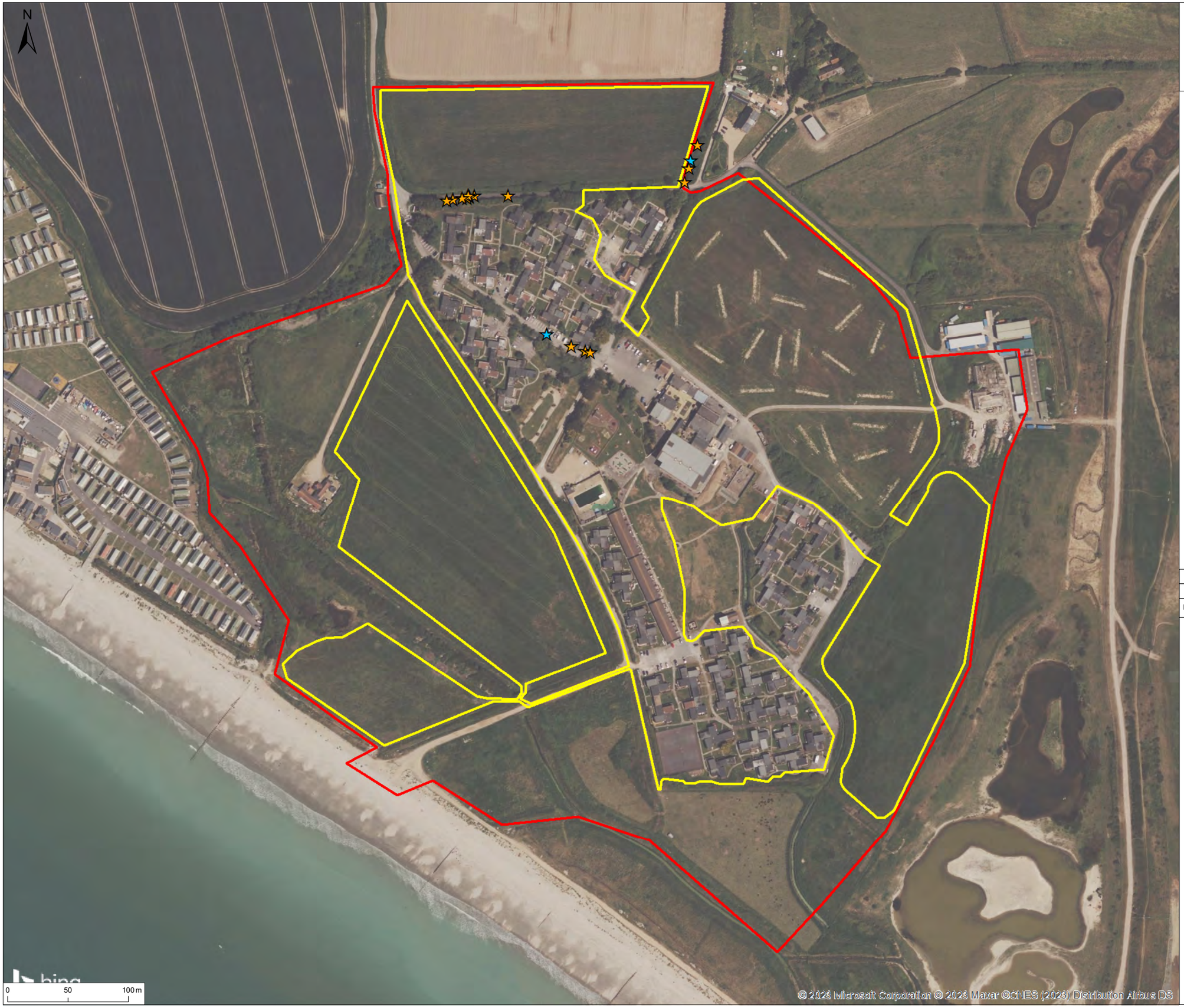
Figure 3.5: October bat transect results



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Legend

- Site boundary
- Bat transect route
- Pipistrellus pipistrellus
- Pipistrellus pygmaeus

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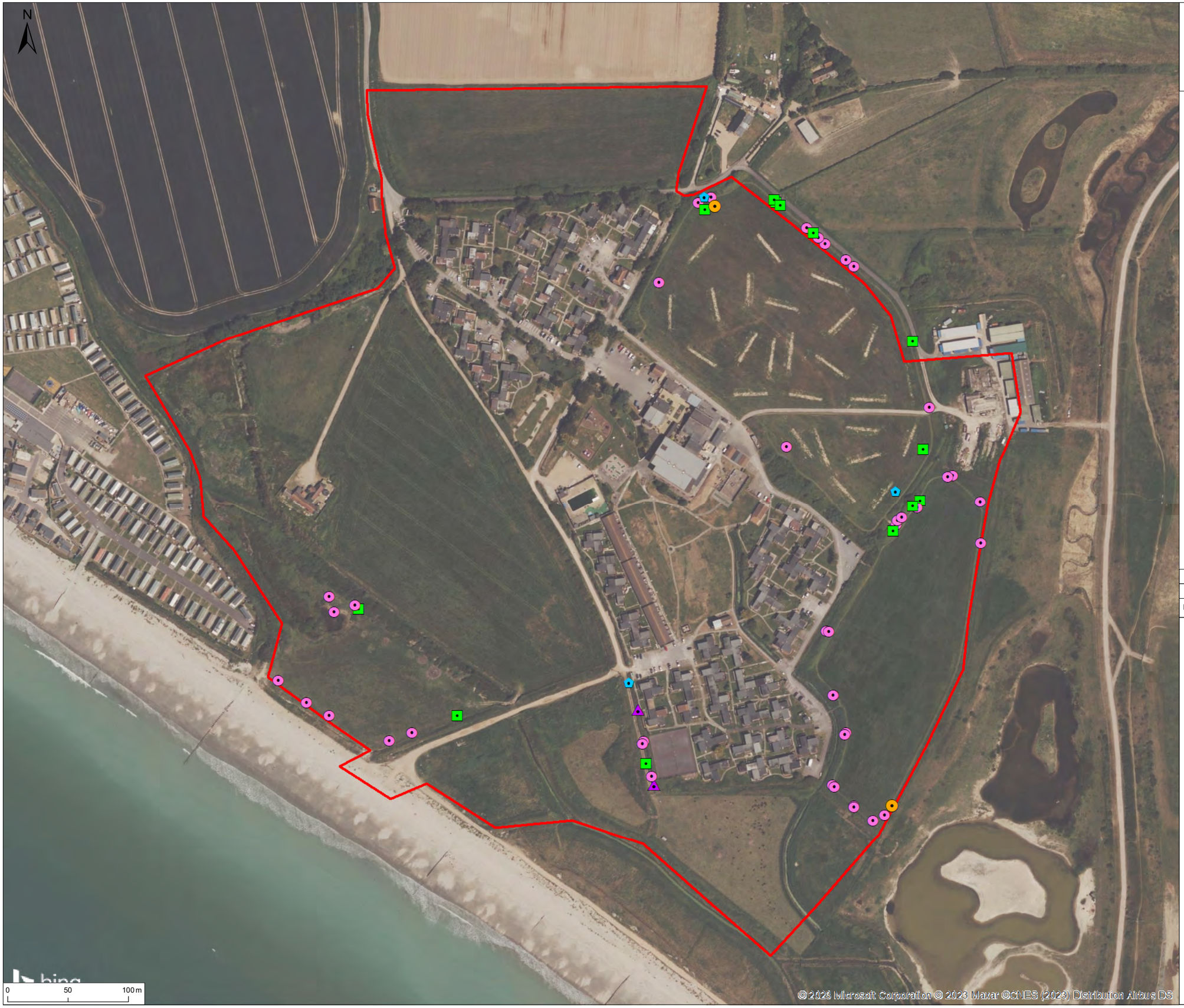
Figure 3.6: Reptile survey results



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Legend

- Site Boundary

Reptile Survey Results 2022

Species (No. of individuals recorded)

- Adder (1-2)
- Common lizard (1-2)
- Grass snake (1-2)
- Slow worm (1-2)
- Slow worm (3-4)

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Project: Medmerry Camp Site

Title: Reptile Survey Results

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4 EVALUATION AND CONCLUSIONS

4.1 Great Crested Newts

4.1.1 Great Crested Newt (GCN) were recorded as being present in one of the five ditches on site (Ditch 5). The surveys were completed within the survey period for this species but did not include three visits between mid-April and mid-May. Therefore, it is not possible to determine the size of the population present using the Natural England criteria (English Nature 2001).

4.1.2 However, efts were present within the ditch indicating that this species is breeding on site. Since efts were not recorded as present in the other ditches, it is likely that this species is only breeding in Ditch 5. They may use the other ditches for shelter, earlier in the active season, however.

4.1.3 The campsite itself is not considered to be optimum GCN terrestrial habitat, given it comprises mainly hardstanding and mown amenity grassland. However, the network of ditches is likely to be of use for this species with respect to both breeding and commuting into the surrounding fields and wider landscape which are of value. Other water bodies that may be suitable are also present in the wider landscape, including the network of ditches across the Selsey peninsula. As such, it is possible that the population present in Ditch 5 is part of a wider population and a precautionary approach to the interpretation of survey data is recommended.

4.1.4 Given the presence of GCN within one of the ditches on site, any development is likely to require an application to Natural England for a European Protected Species Mitigation License (EPSML) before any works commence, unless a District Level Licensing scheme becomes available for this area. Such a licence would set out the impacts of any development and the mitigation necessary to preserve the conservation status of this species both during construction and operation of any development.

4.2 Reptiles

4.2.1 The reptile survey identified populations of four reptile species on site (slow-worm, common lizard, grass snake and adder). The criteria in the Reptile Survey guidelines (Froglife 1999) are scaled at a density of 10 reptile refugia per hectare of suitable habitat. There is circa 15 ha of habitat on site, that was, at varying times, suitable for reptiles, comprising the grassland fields and their margins, depending upon management – some were cut during the survey period and some grazed by cows. A total of 175 refugia were used within the survey giving a density of 11.7 refugia per ha. On this basis, the population thresholds in the guidelines need to be multiplied by 1.17 to account for the increased density of refugia used in the current survey compared to the guidelines.

4.2.2 Table 4.1 therefore provides the population size estimates for the four species, scaled to the density of refugia used.

Table 4.1 Reptile population assessment

Species	Peak count	Population size
Adder	2 (juvenile)	Low
Slow-worm	9	Good
Common lizard	3	Low
Grass snake	1	Low

4.2.3 The site therefore qualifies as a Key Reptile Site (Froglife, 1999) due to reaching the following criteria:

- Supports three or more reptile species;

- Supports two snake species; and
- Supports an assemblage scoring at least four (total for the site is five).

4.2.4 As such, appropriate mitigation will be required to ensure the assemblage of reptiles present is maintained post development.

4.3 Bats

Evaluation of Roost Importance

4.3.1 Of the 86 buildings surveyed, 18 were deemed to be of high likelihood of containing a bat roost, with 23 of moderate likelihood, and 18 of low likelihood, the remaining were considered to have negligible potential to support bat roosts. These buildings will require three, two, or one emergence/re-entry survey(s), respectively, to determine their current use by bats. Such surveys comprise ecologists with bat detection equipment watching the buildings at dusk/dawn and recording any bats observed leaving/re-entering the buildings.

4.3.2 Should any roosts be found, a comprehensive mitigation strategy will be required to ensure that any loss of bat roosts is mitigated for appropriately to ensure that there are no long-term impacts to the multiple species bat populations on site.

Bat Activity

4.3.3 Five species of bat were recorded in small numbers throughout the 2022 surveys: common pipistrelle, soprano pipistrelle, Nathusius' pipistrelle, common noctule, and Myotis spp..

4.3.4 The presence or Nathusius' pipistrelle on the first survey but not subsequently suggests this species does not regularly use the site for foraging/commuting.

4.3.5 Should proposed development impact the suitable foraging and commuting habitats on site, then it is recommended that these types of habitats are considered for replacement within the landscape design. A sensitive lighting scheme should also be included in the development, following good practice guidelines (BCT & ILP 2018).

5 REFERENCES

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Oldham, R.S., Keeble, J., Swan, M.J.S. & Jeffcote, M. (2000), *Evaluating the suitability of habitat for the Great Crested Newt (*Trituris cristatus*)*. Herpetological Journal 10 (4), 143-155.

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