

# The Drovers Solar Farm

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## Appendix 7.2: Baseline Ecological Survey Report

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The Drovers Solar Farm, Swaffham, Norfolk

## **Baseline Ecological Appraisal**

November 2025

Quality Management	
<b>Client:</b>	The Drovers Solar Farm Limited
<b>Project:</b>	The Drovers Solar Farm, Swaffham, Norfolk
<b>Report Title:</b>	Baseline Ecological Appraisal
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## Executive Summary

- i) **Introduction.** Aspect Ecology was commissioned by The Drovers Solar Farm Ltd in March 2024 to undertake baseline ecological survey and assessment in respect of proposed solar development of land north of Swaffham, Norfolk.
- ii) **Proposals.** The proposals are for the construction, operation, maintenance, and decommissioning of a solar photovoltaic (PV) electricity generating station and associated development including a Battery Energy Storage System (BESS), a Customer Substation and Grid Connection Infrastructure including a new National Grid Substation, representing a Nationally Significant Infrastructure Project (NSIP) under the Planning Act 2008.
- iii) **Survey.** The original site area, measuring approximately 770ha, was surveyed in April 2024. Over the course of the intervening period, the Order Limits, within which the proposed works are contained have been amended, with further survey work undertaken across the relevant areas during May 2024 to October 2025 in order to ensure complete coverage of the relevant survey area. Mapping of habitats was undertaken based on the UK Habitat Classification system. In addition, a general appraisal of fauna was undertaken to record the potential presence of any protected, rare or notable species, with specific surveys conducted in respect of bats, Great Crested Newt, breeding birds, and Badger. Desk study information has also been gathered from the local records centre and online resources.
- iv) **Ecological Designations.** The nearest statutory designation of international importance is Breckland Special Protection Area, which is located approximately 2.6km south west of the site. The nearest statutory designation of national importance is the River Nar Site of Special Scientific Interest, which is located approximately 0.27km north of the site. The nearest non-statutory designations are River Road Roadside Nature Reserves (refs. U33086 & U22086), which are located within and adjacent to the site boundaries, respectively.
- v) **Habitats.** The site is dominated by intensively managed arable fields, bounded by native hedgerows and lines of trees. A minority of fields include those sown for Rye-grass Ley, with a number of the fields used in part for pig farming, chicken, sheep and other livestock on a rotational basis. Field margins are dominated by rough grassland of an improved and semi-improved character. Other habitats present within the site includes blocks of woodland, ponds, ditches, standard trees, tall ruderal vegetation, bare ground, and dense and scattered scrub. Several buildings and structures are also present. Features of ecological importance include native hedgerows, tree lines, woodland, ponds, and veteran trees.
- vi) **Protected Species.** Habitats within the site are suitable to support protected and notable fauna including roosting and foraging bats, Hedgehog, Brown Hare, breeding and wintering birds, Great Crested Newt, and reptiles. Specific survey work for bats (activity surveys), Great Crested Newt, breeding birds, and Badger were completed in 2024. Specific survey work for Wintering birds was completed in 2024/2025, along with specific survey work for reptiles and further Great Crested Newt surveys in respect of additional offsite ponds.
- vii) **Summary.** In summary, this document describes the habitats and ecological features present at the site, outlines the findings of the desk-study exercise, and phase II surveys completed to date. The important ecological features of the Site (which will be subject to specific assessment within the Environmental Statement) are summarised where appropriate.

# 1 Introduction

## 1.1 Background and Proposals

- 1.1.1 Aspect Ecology was commissioned in March 2024 to undertake a Baseline Ecological Appraisal in respect of proposed development of land north of Swaffham, Norfolk, situated at grid reference TF 806 124 (see Plan 6806/ECO1), hereafter referred to as 'the site'.
- 1.1.2 The proposals are for the construction, operation, maintenance, and decommissioning of a solar photovoltaic (PV) electricity generating station and associated development including a Battery Energy Storage System (BESS), a Customer Substation and Grid Connection Infrastructure including a new National Grid Substation. The Scheme would allow for the generation and export of over 50MW Alternating Current (AC) of renewable energy, connecting into the National Electricity Transmission System (NETS) overhead line that passes through the Site.
- 1.1.3 As the Scheme would have a generating capacity in excess of 50MW, it is considered to be a Nationally Significant Infrastructure Project (NSIP) under the Planning Act 2008.

## 1.2 Site Overview

- 1.2.1 The site is located north of Swaffham, in the Breckland District of Norfolk, and is surrounded predominantly by arable farmland. The village of Sporle is located east of the site, with Castle Acre, South Acre, and West Acre located north of the site, and Pentney and Narborough located west.
- 1.2.2 The site itself forms part of an active farming estate, with uses largely centred on arable cultivation, albeit also include rotational livestock rearing and game keeping. The original surveyed area occupied an area of approximately 770ha land, whilst over the course of the project the extent of the proposed Order Limits have been amended to reflect ongoing consultation and scheme development, including additional land areas added. Accordingly, further survey work has been undertaken in respect of a number of additional land parcels in order to ensure appropriate coverage of the entirety of the proposed Order Limits.

## 1.3 Purpose of the Report

- 1.3.1 This report documents the methods and findings of the ecology survey work undertaken and desktop study carried out in order to establish the existing ecological interest of the site as a whole and evaluates the importance of the habitats and species present. Where appropriate, reference is also made to priority habitats and species and local Biodiversity Action Plans (BAPs). The important ecological features of the site are identified to inform an Environmental Impact Assessment.

## 2 Methodology

### 2.1 Desktop Study

- 2.1.1 In order to compile background information on the site and its immediate surroundings, Norfolk Biodiversity Information Centre was originally contacted in April 2024, with updated information requested in September 2025. Data was requested from within a search area extending 2km from the Order Limits.
- 2.1.2 Information on statutory designations was obtained from the online Multi-Agency Geographic Information for the Countryside (MAGIC) database<sup>1</sup>, which uses data provided by Natural England, from within a search area extending to 25km from the site. The MAGIC database was also searched to identify the known presence of any Priority Habitats within or adjacent the site.
- 2.1.3 In addition, the Woodland Trust database<sup>2</sup> was searched for any records of ancient, veteran or notable trees within or adjacent to the site.
- 2.1.4 The information received from these organisations is discussed in the text and reproduced where appropriate on Plan 6806/ECO2.

### 2.2 Habitat Surveys

- 2.2.1 The original site area was initially surveyed in April 2024 in order to ascertain the general ecological value of the land contained within the boundaries of the Order Limits and to identify the main habitats and ecological features present. With additional and update habitat survey work undertaken, (including additional land parcels subsequently included within the Order Limits subsequently to the original surveys), in April/May and September/October 2025.
- 2.2.2 The survey was informed by Phase 1 Habitat Survey methodology<sup>3</sup>, with habitat types identified and mapped in accordance with the UK Habitat Classification system (version 2.0)<sup>4</sup>, together with an assessment of the species composition of each habitat. This technique provides an inventory of the habitat types present and allows identification of areas of greater potential for botanical interest which require further survey. Any such areas identified can then be examined in more detail through Phase 2 surveys. This method was extended, in line with the Guidelines for Preliminary Ecological Appraisal<sup>5</sup> to record details on the actual or potential presence of notable or protected species.
- 2.2.3 In line with guidance<sup>6</sup>, the fine scale minimum mapping unit of 25sqm or 5m in length has been used where appropriate.

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<sup>1</sup> Multi-Agency Geographic Information for the Countryside (MAGIC), at <https://magic.defra.gov.uk/>

<sup>2</sup> Woodland Trust Ancient Tree Inventory, at <https://ati.woodlandtrust.org.uk/>

<sup>3</sup> Joint Nature Conservation Committee (2010, as amended) *Handbook for Phase 1 habitat survey: A technique for environmental audit*.

<sup>4</sup> UKHab Ltd (2023). *UK Habitat Classification Version 2.0* (at <https://www.ukhab.org>)

<sup>5</sup> Chartered Institute for Ecology and Environmental Management (CIEEM) (2013) *Guidelines for Preliminary Ecological Appraisal*.

<sup>6</sup> *The UK Habitat classification User Manual*. Version 1.1. 2020

- 2.2.4 The nomenclature used for plant species is based on the Botanical Society for the British Isles (BSBI) taxon list<sup>7</sup>.

## 2.3 Faunal Surveys

- 2.3.1 General faunal activity, such as mammals or birds observed visually or by call during the course of the surveys was recorded. Particular attention was also paid to the potential presence of protected, rare or notable species, with specific survey work undertaken in respect of bats, breeding birds, Great Crested Newt and Badger, as described below.

### Bats<sup>8</sup>

#### *Preliminary Appraisal*

- 2.3.2 A review was undertaken of the desk study information obtained to identify any known constraints in relation to bats, the bat species recorded and habitats likely to be used by bats within the site and the surrounding area. This included a review of background records, known designations including SACs or SSSIs relevant to bats and an appraisal of OS mapping and aerial photography to identify habitats likely to be of value to bats.
- 2.3.3 During the initial habitat survey, the potential suitability of the site for bats in relation to roosting habitats, potential flight-paths and foraging habitats (termed a 'daytime bat walkover') was investigated. Features were assessed as of negligible, low, moderate or high potential suitability for roosting, foraging and commuting, based on the framework set out under BCT guidance. This appraisal has informed the scope of the survey work undertaken as set out below.

#### *Trees*

- 2.3.4 Trees were assessed for their suitability to support roosting bats based on the presence of features such as holes, cracks, splits or loose bark. Trees were categorised as supporting Potential Roost Features (PRFs), Further Assessment Required (FAR) or supporting no suitable features.
- 2.3.5 **Ground Level Tree Assessment.** Where practical, trees / Trees were subject to a Ground Level Tree Assessment (GLTA) based on relevant guidance<sup>9</sup> with PRFs categorised as PRF-I (only suitable for individual or small numbers of bats) or PRF-M (suitable for multiple bats). Any PRFs identified were inspected using binoculars from ground level for any signs indicating possible use by bats, such as staining, scratch marks or bat droppings. Where accessible from ground level, PRFs were subject to close inspection using a torch.

#### *Activity Surveys*

- 2.3.6 **Night-time Bat Walkover Surveys.** Night-time bat walkovers (NBWs) or walked transect surveys were undertaken in May, August, and October 2024 to investigate foraging or commuting bat activity at the site. This survey method comprises walking transect routes providing coverage across the site, specifically covering habitats and features which have been identified as potentially suitable for use by commuting or foraging bats. A total of six

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<sup>7</sup> <https://bsbi.org/taxon-lists>

<sup>8</sup> Surveys based on: Reason, P.F. and Wray, S. (2023) UK Bat Mitigation Guidelines: a guide to impact assessment, mitigation and compensation for developments affecting bats. CIEEM; and Bat Conservation Trust (2023) Bat Surveys for Professional Ecologists: Good Practice Guidelines (4th edn).

<sup>9</sup> Bat Conservation Trust (2023) Bat Surveys for Professional Ecologists: Good Practice Guidelines (4th edn).

separate transects were followed during each survey period in order to provide appropriate coverage of the site. Anabat Scout handheld bat detectors were employed to aid identification of any bats observed. Each survey began at sunset close to identified potential roosting features or features likely to be of interest as commuting routes, with surveys continuing until at least 2 hours after sunset. The transect routes followed are shown at Plans 6806/ECO4a.

- 2.3.7 This survey work was carried out during suitable weather conditions, as set out in Table 2.1 below.

**Table 2.1.** Dusk walked transect survey details.

Date	Start & end times & time of sunset	Transect / location	Equipment used	Weather
23/05/2024	Start time: 21.00 End time: 23.40 Sunset: 21.00	Transects A1 – A3	Anabat Scout	Dry, 70-90% cloud, BF1-2, 11-14°C
<b>Comments:</b> The survey was undertaken by 2 surveyors under direction of licence holder 2018-33452-CLS-CLS.				
30/05/2024	Start time: 21.09 End time: 23.30 Sunset: 21.09	Transects B1-B3	Anabat Scout	Occasional very light rain, 100% cloud, BF5-6, 12°C
<b>Comments:</b> The survey was undertaken by 2 surveyors under direction of licence holder 2018-33452-CLS-CLS.				
13/08/2024	Start time: 20.25 End time: 23.10 Sunset: 20.25	Transects A1-A3	Anabat Scout	Dry, 100% cloud, BF2, 23°C
<b>Comments:</b> The survey was undertaken by 2 surveyors under direction of licence holder 2018-33452-CLS-CLS.				
27/08/2024	Start time: 07.56 End time: 09.56 Sunset: 07.56	Transects B1-B3	Anabat Scout	Dry, 50%, BF3 17-21°C
<b>Comments:</b> The survey was undertaken by 2 surveyors under direction of licence holder 2018-33452-CLS-CLS.				
15/10/2024	Start time: 18.01 End time: 20:10 Sunset: 18:01	Transects A1 – A3	Anabat Scout	Dry, 80% cloud, BF2-4, 13°C
<b>Comments:</b> The survey was undertaken by 2 surveyors under direction of licence holder 2018-33452-CLS-CLS.				
16/10/2024	Start time: 17.59 End time: 20.03 Sunset: 17.59	Transects B1 – B3	Anabat Scout	Dry, 0-65% cloud, BF1-2, 17-19°C
<b>Comments:</b> The survey was undertaken by 2 surveyors under direction of licence holder 2018-33452-CLS-CLS.				

BF0 = calm, BF12 = hurricane force

- 2.3.8 **Automated Surveys.** Automated static bat detector surveys were also carried out during which Song Meter SM4BAT detectors were positioned at 12 locations within the site to record bat data over weekly periods during each month between May and October 2024. To provide appropriate coverage, and address resourcing limitations, 6 static detectors were used, which were deployed at positions SD1 – SD6 within the east of the site, and then at positions SD7 – SD12 within the west of the site during each survey month. The locations of the individual detectors are shown at Plan 6806/ECO5 and described below.

- 2.3.9 Detector SD1 was deployed at the eastern field boundary of field 34, adjacent to pond P3a and hedgerow F3H2 (see Plan 6806/ECO5).

- 2.3.10 Detector SD2 was deployed at the north west of field 24, along hedgerow H8d.

- 2.3.11 Detector SD3 was deployed at the south eastern corner of field 27, adjacent to an existing marl pit, woodland and adjoining hedgerow H5c.
- 2.3.12 Detector SD4 was deployed at the south western corner of field 23, adjacent to a block of woodland and hedgerow H16c.
- 2.3.13 Detector SD5 was deployed at the northern boundary of field 21, along hedgerow H5e.
- 2.3.14 Detector SD6 was deployed at the south western corner of field 22, along hedgerow adjacent to a parcel of woodland and pond P13a.
- 2.3.15 Detector SD7 was deployed at the northern boundary of field 2, along hedgerow H38Bi (see Plan 6806/ECO5).
- 2.3.16 Detector SD8 was deployed at the southern boundary of field 4, along the northern edge of a block of woodland.
- 2.3.17 Detector SD9 was deployed at the northern boundary of field 10, adjacent to an existing wooded marl pit and existing hedgerow F32H3.
- 2.3.18 Detector SD10 was deployed at the northern boundary of field 8, along existing tree line F35TL1.
- 2.3.19 Detector SD11 was deployed at the north of field 9, along hedgerow H22e.
- 2.3.20 Detector SD12 was deployed at the eastern boundary of field 15, along an existing hedgerow F24H2a.
- 2.3.21 Static bat detectors were set to switch on approximately 30 minutes before sunset and switch off approximately 30 minutes after sunrise. The specific timings and weather conditions during the static detector surveys are set out in Table 2.2.

**Table 2.2.** Weather conditions during automated detector surveys.

Survey Date	Weather Conditions		
	Wind (BF)	Temp(°C)	Precipitation
17/05/2024	2 - 3	18 - 9	None
18/05/2024	3 - 2	14 - 9	None
19/05/2024	3 - 3	14 - 9	None
20/05/2024	3 - 3	12 - 10	None
21/05/2024	2 - 2	13 - 11	Moderate - None
24/05/2024	2 - 2	12 - 8	None
25/05/2024	3 - 2	12 - 10	None - Light
26/05/2024	3 - 3	12 - 8	Light - None
27/05/2024	3 - 3	10 - 6	Light - None
28/05/2024	4 - 4	14 - 12	Light
18/06/2024	3 - 3	10 - 10	None
19/06/2024	3 - 2	10 - 8	None
20/06/2024	3 - 2	11 - 9	None
21/06/2024	3 - 3	14 - 12	Light
22/06/2024	3 - 2	13 - 10	None
24/06/2024	3 - 3	16 - 13	None
25/06/2024	3 - 2	16 - 13	None
26/06/2024	3 - 3	18 - 16	None
27/06/2024	5 - 4	14 - 11	None
28/06/2024	2 - 2	12 - 9	None
16/07/2024	3 - 3	14 - 11	None
17/07/2024	3 - 2	16 - 14	None
18/07/2024	3 - 3	19 - 15	None
19/07/2024	3 - 2	19 - 15	None
20/07/2024	2 - 2	17 - 16	Light - None
24/07/2024	3 - 3	16 - 16	None
25/07/2024	3 - 3	17 - 13	None
26/07/2024	2 - 2	15 - 12	None
27/07/2024	3 - 2	14 - 11	Light - None
28/07/2024	3 - 3	15 - 14	None
14/08/2024	2 - 2	14 - 14	None
15/08/2024	4 - 3	19 - 17	Moderate - Light
16/08/2024	2 - 3	16 - 12	None
17/08/2024	3 - 2	15 - 13	None
18/08/2024	3 - 2	15 - 12	None
20/08/2024	4 - 4	14 - 11	None
21/08/2024	4 - 5	16 - 14	None
22/08/2024	4 - 6	17 - 16	None - Light
23/08/2024	3 - 3	16 - 14	None - Moderate
24/08/2024	3 - 3	13 - 9	None
10/09/2024	3 - 4	12 - 7	None
11/09/2024	3 - 3	11 - 5	None
12/09/2024	4 - 3	10 - 8	None
13/09/2024	2 - 2	12 - 7	None
14/09/2024	3 - 3	14 - 10	None
17/09/2024	3 - 3	13 - 12	None
18/09/2024	3 - 3	15 - 14	None
19/09/2024	3 - 3	17 - 14	None - Light
20/09/2024	3 - 3	16 - 13	None

**Table 2.2.** Weather conditions during automated detector surveys.

Survey Date	Weather Conditions		
	Wind (BF)	Temp(°C)	Precipitation
21/09/2024	3 - 3	18 - 15	None - Light
08/10/2024	3 - 3	14 - 13	None - Light
09/10/2024	3 - 4	12 - 9	None
10/10/2024	3 - 2	7 - 4	None
11/10/2024	2 - 2	8 - 4	None
12/10/2024	3 - 3	9 - 5	Light - None
16/10/2024	4 - 3	17 - 15	Light - None
17/10/2024	3 - 2	13 - 9	None
18/10/2024	3 - 3	12 - 12	None - Light
19/10/2024	2 - 4	10 - 11	None
20/10/2024	6 - 4	15 - 11	None

BF0 = calm, BF12 = hurricane force

### *Analysis of Bat Survey Recordings*

- 2.3.22 All bat calls were analysed using Anabat Insight version 2.0 to identify the species recorded during the survey work. Where recordings could not be reliably attributed to species (such as for *Myotis* species) or where overlaps between otherwise distinguishable species occur (such as in *Pipistrelle* sp. bat calls around 40kHz or 50kHz) calls were identified to genus; in the case of calls which could not be distinguished between *Nyctalus* sp. and Serotine, these have been labelled as 'unidentified big bat' species.

### Badger (*Meles meles*)<sup>10</sup>

- 2.3.23 Badger survey work was carried out in April 2024 and October 2025. The survey comprised two main elements. The first element involved searching for evidence of Badger setts. For any setts that were encountered, each sett entrance was noted and mapped. The following information was recorded:

- Number and location of well used and active entrances; these are clear from any debris or vegetation and are obviously in regular use and may, or may not, have been excavated recently;
- Number and location of inactive entrances; these are not in regular use and have debris such as leaves and twigs in the entrance or have plants growing in or around the edge of the entrance; and
- Number of disused entrances; these have not been in use for some time, are partly or completely blocked and cannot be used without considerable clearance. If the entrance has been disused for some time all that may be visible is a depression in the ground where the hole used to be and the remains of the spoil heap.

- 2.3.24 The second element involved searching for signs of Badger activity such as well-worn paths and push-throughs, snagged hair, footprints, latrines and foraging signs, so as to build up a picture of any use of the site by Badger.

<sup>10</sup> Based on: Mammal Society (1989) Occasional Publication No. 9 – Surveying Badgers

- 2.3.25 An update Badger survey will be undertaken prior to the commencement of works to further update the current use of the site by this species at the relevant time.

#### Reptiles<sup>11</sup>

- 2.3.26 Given the presence of potentially suitable reptile habitat within the site, surveys were undertaken between April and June 2025 to establish the presence/absence of common reptile species at the site.
- 2.3.27 A total of 1040 50x50cm sheets of thick roofing felt were placed within suitable areas across the site to act as artificial refugia (see Plan 6806/ECO8). This represents a density of approximately 11 refugia per hectare of potentially suitable habitats present. The refugia, which provide shelter for reptiles, heat up more quickly than their surroundings in the morning and can remain warmer than their surroundings in the late afternoon. Being ectothermic (cold blooded), reptiles will readily use these refugia to bask upon or beneath so as to raise their body temperature, which allows them to forage earlier and later in the day. Checking the refugia at appropriate times of the day (morning and evening) for the presence of reptiles provides an effective measure of assessing the presence/absence of common reptiles at a site.
- 2.3.28 The refugia were left in place undisturbed for approximately 1-2 weeks to allow reptiles to find and start using them. Following this initial bedding-in period, refugia were checked at appropriate times of the day on seven occasions during suitable weather conditions as set out below in Table 2.1. (Given the size of the site and number of refugia present, individual checks were undertaken over a 2 day period, in line with the details set out at Table 2.3.).

**Table 2.3.** Reptile survey dates and weather conditions.

Survey Visit	Survey Date	Weather Conditions			
		Wind (BF)	Temp(°C)	Cloud Cover (%)	Precipitation
1	15/04/2025	4	11-14	100	Dry
	16/04/2025	8	8-12	60	Dry
2	29/04/2025	2	8-18	10	Dry
	30/04/2025	2	8-13	15	Dry - Dewy
3	07/05/2025	4	13-14	75	Dry
	08/05/2025	4	11-12	100	Dry
4	13/05/2025	4	15-19	0	Dry
	14/05/2025	4	14-18	5	Dry
5	20/05/2025	4	18	0	Dry
	21/05/2025	4	14	50	Dry
6	03/06/2025	7	15-18	100	Intermittent rain throughout day
	04/06/2025	5	15-17	60	Dry
7	12/06/2025	4	14-18	70	Dry
	13/06/2025	4	16-18	20	Dry

BF0 = calm, BF12 = hurricane force

- 2.3.29 Any reptiles that were observed basking in the open or within partial cover were also recorded. Searches were also made of existing natural objects (such as logs and rocks) and

<sup>11</sup> Surveys based on: Froglife Advice Sheet 10 (1999) Reptile Survey - an introduction to planning, conducting and interpreting surveys for snake and lizard conservation.

other artificial refugia (such as debris or discarded tyres), where present, for reptiles or evidence of reptiles (such as sloughed skin).

#### Great Crested Newt (*Triturus cristatus*)

- 2.3.30 As a first step in assessing the possible presence of Great Crested Newt at the site, Ordnance Survey mapping and satellite imagery were examined to identify water bodies within 500m of the site boundary.
- 2.3.31 Guidance set out within Natural England's Method Statement template, to be used when applying for a Great Crested Newt development licence, states that surveys of ponds within 500m of the site boundary are only required *"when all of the following conditions are met: (a) maps, aerial photos, walk-over surveys or other data indicate that the pond(s) has potential to support a large great crested newt population, (b) the footprint contains particularly favourable habitat, especially if it constitutes the majority available locally, (c) the development would have a substantial negative effect on that habitat, and (d) there is an absence of dispersal barriers."*
- 2.3.32 Not all of the points listed above are applicable to the site, such that survey of ponds within 250m<sup>12</sup> is deemed to represent adequate survey effort. Accordingly, pond surveys undertaken in 2024 focused on ponds within 250m of the site boundary at that time. Subsequently, scoping opinion received from the Planning Inspectorate<sup>13</sup> (dated 18<sup>th</sup> December 2024) identified a further requirement for specific Great Crested Newt HSI and eDNA survey work to be undertaken of ponds located within 250-500m of the site, as such, further eDNA survey work was undertaken in April/May 2025 in order to ensure coverage of additional identified ponds in order to reflect relevant changes to the site boundaries and address comments set out within the scoping opinion at that time.

#### *Habitat Suitability Index (HSI)*

- 2.3.33 Where access was available, identified ponds were then subject to a Habitat Suitability Index (HSI) assessment. The HSI is used to assess the likely suitability of water bodies to support Great Crested Newt. The HSI is a score derived from ten component factors that are each scored separately according to the standard method. These are:
- *SI1 Location.* The location of the water body within Great Britain;
  - *SI2 Pond area.* The size of the water body;
  - *SI3 Permanence.* How often the water body dries out;
  - *SI4 Water Quality.* The water quality, based primarily on invertebrate diversity;
  - *SI5 Shade.* The percentage of the perimeter of the water body that is shaded;
  - *SI6 Fowl.* The presence or absence of water fowl;
  - *SI7 Fish.* The presence or absence of fish;
  - *SI8 Pond Count.* The number of water bodies within 1km of the surveyed water body (not counting those on the far side of major barriers such as roads);

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<sup>12</sup> 250m is the typical maximum migratory range of this species, see English Nature (2004) 'An assessment of the efficiency of capture techniques and the value of different habitats for the great crested newt *Triturus cristatus*'. English Nature Research Report 576

<sup>13</sup>

- *SI9 Terrestrial*. The quality of terrestrial habitat surrounding the water body; and
- *SI10 Macrophytes*. The percentage cover of the surface area of the water body by macrophytes (aquatic plants).

2.3.34 The overall HSI is then determined by combining scores for the above criteria into an equation devised by Oldham *et al.* (2000)<sup>14</sup>. The HSI score corresponds with a measure of the suitability of the water body to support Great Crested Newt of either 'poor', 'below average', 'average', 'good' or 'excellent'.

2.3.35 The HSI study was undertaken in line with the guidelines developed by Oldham *et al.* and subsequently adapted by ARG UK (2010)<sup>15</sup>. A suitably experienced ecologist undertook the assessment, informed by desktop research where appropriate.

#### *Environmental DNA (eDNA)*

2.3.36 Water samples were taken for eDNA analysis to investigate the presence/absence of Great Crested Newt from ponds within 500m of the site during 2024 and 2025 (see Plan 6806/ECO6). Water samples for relevant ponds were collected on the 24<sup>th</sup> and 25<sup>th</sup> June 2024 and 30<sup>th</sup> April and 1<sup>st</sup> May 2025. The eDNA surveys followed the procedure outlined in the methods manual prepared for DEFRA by Biggs *et al.* (2014)<sup>16</sup>. The surveys were undertaken within the acceptable seasonal window set out by Natural England (15 April to 30 June inclusive)<sup>17</sup>. Samples were collected by suitably trained Aspect Ecology staff. The water samples were sent for laboratory analysis which was conducted by Cellmark in accordance with the procedure set out by Biggs *et al.* (2014)<sup>14</sup>.

#### Breeding Birds<sup>18</sup>

2.3.37 Breeding bird survey work was undertaken at the site during 2024. The survey methodology is based on the UK Common Bird Census<sup>19,20</sup> devised jointly by the British Trust for Ornithology (BTO)<sup>21</sup>, the Royal Society for the Protection of Birds (RSPB) and the Joint Nature Conservancy Council (JNCC), and Bird Survey Guidelines for assessing ecological impacts<sup>22</sup>.

2.3.38 Owing to its size, in order to provide adequate coverage, the site survey was split into five similarly sized sectors: North, East, South, West, and North-West (see Plan 6806/ECO7a-f). A route through the site was walked and designed by an experienced ornithologist

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<sup>14</sup> Oldham RS, Keeble J, Swan MJS & Jeffcote M (2000) *Evaluating the suitability of habitat for the Great Crested Newt (Triturus cristatus)*. Herpetological Journal 10 (4), 143-155

<sup>15</sup> Amphibian & Reptile Groups of the UK (2010) ARG UK Advice Note 5: Great Crested Newt Habitat Suitability Index

<sup>16</sup> Biggs J., Ewald N., Valentini A., Gaboriaud C., Griffiths R.A., Foster J., Wilkinson J., Arnett A., Williams P. and Dunn F. (2014). *Analytical and methodological development for improved surveillance of the Great Crested Newt. Annex 5. Technical advice note for field and laboratory sampling of great crested newt (Triturus cristatus) environmental DNA*. Freshwater Habitats Trust, Oxford.

<sup>17</sup> Natural England (2015) Great crested newts: surveys and mitigation for development projects. Standing advice for local planning authorities who need to assess the impacts of development on great crested newts. Viewed at [www.gov.uk](http://www.gov.uk) on 24/12/2015.

<sup>18</sup> Surveys based on methodology within: Baille *et al.* RA (2010) *Breeding Birds in the Wider Countryside: their conservation status*, BTO Research Report No. 385, BTO, Thetford.

<sup>19</sup> Gilbert, G., Gibbons, D.W. & Evans, J. (1998) Bird Monitoring Methods. RSPB, Sandy, Beds.

<sup>20</sup> Marchant, J.H. (1983) BTO Common Birds Census instructions. BTO, Tring, Herts.

<sup>21</sup> Heywood, J.J.N., Massimino, D., Balmer, D.E., Kelly, L., Marion, S., Noble, D.G., Pearce-Higgins, J.W., White, D.M., Woodcock, P., Wotton, S. & Gillings, S. (2024) The Breeding Bird Survey 2023. BTO Research Report 765. British Trust for Ornithology, Thetford.

<sup>22</sup> Bird Survey & Assessment Steering Group (2023) Bird Survey Guidelines for assessing ecological impacts, v.1.1.1.1.

(Christopher J Sharpe) to incorporate all features that may serve as nesting bird habitat within the property, taking special care to cover all field boundaries; the interior of fields was accessed via tramlines where appropriate. The sectors were surveyed from east to west in series to provide as close an approximation to a 'snapshot' of the breeding birds present across the entirety of the site during each monthly survey window. Each sector was visited 3 times in the morning, and a further time in the evening between April and July 2024.

**2.3.39** During surveys all birds seen or heard were recorded, along with notes of behaviour indicative of breeding (following standard BTO criteria) and any other relevant information. On morning surveys the location of bird species of conservation concern were entered onto printed base maps, using standard BTO species and breeding behaviour codes. These priority species were identified according to various criteria:

- UK Birds of Conservation Concern 5 (BoCC5; Stanbury et al. 2021)
- Wildlife and Countryside Act 1981 Schedule 1 species (WCA Sch. 1)
- National Biodiversity Action Plans (BAP): species of principal importance in England (listed under Section 41 of NERC Act 2006).

**2.3.40** The dates of each survey, together with a summary of the weather conditions are shown in Table 2.3 below.

**Table 2.3.** Breeding Bird survey dates and weather conditions.

Survey Date	Survey Start & End Timings	Weather Conditions			
		Wind (BF)	Temp(°)	Cloud Cover (0/8)	Precipitation (0/5)
23/04/2024	0520–1045	NNW 0 - 5	4–6°C	8	1 (drizzle)
24/04/2024	0520–0959	NNW 3 – 4/5	3–5°C	8	4 (hail and rain showers)
25/04/2024	0520–0920	SW 1–2	0–4°C	4 - 8	0
26/04/2024	0515–1024	NNW 0 - 3	-1–5°C	1 - 7	3 (rain and sleet)
27/04/2024	0510–0923	NE 1 – 2	3–6°C	8	2 (light rain)
05/05/2024	1923–2338	SSE 0 - 1	8–14°C	0 - 3	0
20/05/2024	0445–1038	ENE 0 - 5	6–13°C	0 - 7	0
21/05/2024	0435–0929	NNE 0 - 4	11–14°C	8	0
23/05/2024	0435–0824	WSW 3–5	11°C	7 – 8	0
24/05/2024	0428–0923	SW 2–3	7–10°C	8	0
25/05/2024	0431–0904	NE 0 - 2	7–12°C	8	0
17/06/2024	1828–2254	NW 0 - 1	13–17°C	1 – 7	0
01/07/2024	0429–1026	WNW 3	11–15°C	2 - 8	0
04/07/2024	0425–0956	WNW 3 to W 4–6	9–13°C	0 - 5	0
05/07/2024	0430–0835	W 4	12–13°C	0 – 1	0
08/07/2024	0420–1008	SW 1 – 3	8–13°C	8	0
10/07/2024	0430–1008	S–SW 3–5	14–17°C	8	1 (drizzle)
10/07/2024	1825–2229	SSE 1–4	19–24°C	2 - 4	0

### Wintering Birds<sup>23</sup>

- 2.3.41 Wintering bird survey work was undertaken at the site in 2024/2025 based around the methodology set out in Scottish Natural Heritage (SNH) Guidance, which although originally designed in relation to onshore windfarms sets out a number of methodologies for bird surveys that are applicable to a wide range of situations.
- 2.3.42 Owing to its size, in order to provide adequate coverage, the site survey was split into five similarly sized sectors: North, East, South, West, and North-West. Thirty visits in total were made to the site during suitable weather between October 2024 and March 2025 (in addition to a visit on 18 December when weather conditions were too poor to complete the survey).
- 2.3.43 On each survey an experienced ornithologist walked a circuitous route around the survey area, covering the majority of field margins, recording the locations, numbers and activity of all bird species encountered in the area during this time. This methodology ensures that the vast majority of species that use the site would be recorded over the course of the visits. Surveys were timed to include hours of darkness to record nocturnal species such as owls. The dates and times of each survey, together with a summary of the weather conditions are set out in Table 2.4 below.

**Table 2.4.** Winter bird survey dates and weather conditions. BF = Beaufort Scale.

Survey Date	Time	Weather Conditions			
		Wind (Direction, BF)	Temp. (°C)	Cloud Cover (eighths)	Precipitation (0-5)
25/10/24	0705–1231 Sunrise 0741	SE 1–2	12–15°C	9/8	0
27/10/24	0605–1118 Sunrise 0645	0 – NW 1	6–11°C	0/8	0
28/10/24	0615–1009 Sunrise 0647	SW 4–6	10–13°C	4/8–6/8	2 (45 mins of rain)
29/10/24	0606–1053 Sunrise 0649	0	11–13°C	8/8	2 (90 minutes of rain)
30/10/24	0610–1019 Sunrise 0651	NW 2 at dawn then 0	9°C	3/8–8/8	0
18/11/24	0650–1238 Sunrise 0726	NW 1	-1–4°C	0/8–7/8	0
20/11/24	0655–1213 Sunrise 0729	WNW 3 –NW 5–6, to sustained 7 by 1130	-2–2.5°C	1/8–4/8	0
21/11/24	0650–1113 Sunrise 0730	W 1–2	-4–0.5°C	4/8–7/8	0
22/11/24	0650–1152 Sunrise 0733	W 4–6	0.5–3°C	1/8–2/8	0
26/11/24	0655–1130 Sunrise 0739	SW 2–3	2.5–6°C	0/8	0
10/12/24	0728–1226 Sunrise 0758	NE 1–2 at first then stiff 4–6	6–7°C	8/8	0
11/12/24	0725–1249 Sunrise 0759	NE 3	5–7°C	8/8	0
12/12/24	0720–1140 Sunrise 0800	NE 2	6–7°C	9/8 mist, then 8/8	1 (fine mizzle)
17/12/24	0730–1228 Sunrise 0804	SSW 3–4	3–8°C	8/8	1 (5 mins drizzle)

<sup>23</sup> Scottish Natural Heritage (2005) *Survey Methods for the use in assessing the Impacts of Onshore Windfarms on Bird Communities*

19/12/24	0725–1202 Sunrise 0805	NW 4–5 sometimes 6	3–5°C	6/8 clearing to 0/8	0
07/01/25	0735–1321 Sunrise 0806	SW 4	0–3°C	6/8 pre-sunrise clearing to 0/8	0
08/01/25	0735–1313 Sunrise 0806	SW 2	-3–0°C	1/8 pre-sunrise becoming 8/8	0
12/01/25	0735–1228 Sunrise 0803	0 – SSW 1	-7–1°C	0/8–1/8	0
13/01/25	0720–1213 Sunrise 0802	SSW 4–5	1–4°C	3/8–7/8	0
14/01/25	0725–1211 Sunrise 0802	SW 3	3–6°C	8/8	1 (light drizzle 0815–0840)
10/02/25	0650–1304 Sunrise 0723	ENE 4–6	4°C	8/8	2 (light rain until 1000, then drizzle)
11/02/25	0645–1214 Sunrise 0722	NE 1–3	2–3.5°C	8/8	1 (drizzle 0730– 0815 & 1200–end)
12/02/25	0645–1104 Sunrise 0720	NE 2–3	3–5°C	8/8	1 (spells of fine drizzle, light rain 1045–end)
13/02/25	0645–1204 Sunrise 0718	NE 2–3	2–3.5°C	8/8	0
14/02/25	0648–1215 Sunrise 0716	E 2 – SE 3	1.5–3°C	8/8	0
17/03/25	0543–1159 Sunrise 0606	NE 2 – E 3–4	3–7°C	8/8	0
18/03/25	0534–1115 Sunrise 0604	E 3–6	-1–7°C	0/8	0
19/03/25	0521–0918 Sunrise 0601	SE 1–2	0–8°C	0/8	0
20/03/25	0523–1055 Sunrise 0559	S 1	3–14°C	1/8	0
21/03/25	0518–1043 Sunrise 0557	NE 4 – SE 6	7–14°C	3/8–7/8	0

## 2.4 Survey Constraints and Limitations

- 2.4.1 Not all of the species that occur in each habitat will necessarily be present or detectable during survey work carried out at any given time of the year, since different species are apparent during different seasons.
- 2.4.2 The habitat survey was undertaken within the optimal season, therefore allowing a robust assessment of habitats and botanical interest within the site to be made.
- 2.4.3 Invasive species listed under Schedule 9 of the Wildlife and Countryside Act 1981 (as amended), including Three-cornered Garlic and Variegated Yellow Archangel were observed during surveys. However, because the detectability of such species varies according to factors such as the time of year or site management regime, the absence of invasive species should not be assumed in other areas even where no such species were recorded during the surveys undertaken.
- 2.4.4 A recognised limitation of bat activity surveys is that bat detectors can only provide an index of activity rather than determine absolute numbers of bats. The results of bat activity surveys should therefore only be considered indicative of the amount of use bats make of an area rather than a measure of the abundance of bats. In addition, some bat species that are more difficult to detect because of their quiet echolocation calls, such as Brown Long-eared Bat, may be under-recorded.

- 2.4.5 A small number of the detector deployments during May to October 2024 included equipment failures, which are likely to have reduced the total sum of bat call data available for analysis. However, the vast majority of detectors recorded appropriately, whilst failures were distributed apparently randomly across the detector locations and recording periods, such that they are not considered to have resulted in significant deficiencies. Accordingly, it is considered that the survey findings are valid and reliable, providing a representative indication of bat activity levels across the habitat types throughout the site and the aims of survey have been fulfilled.
- 2.4.6 Densely vegetated habitats within the site are more difficult to survey for the presence of field signs of species such as Badger (reported within Confidential Annex). Although dense scrub vegetation is present within the site (albeit representing a very small proportion of the site, with the majority of areas represented by open habitats such as arable land), push throughs or other evidence of Badger was absent from the scrub margins, and it is therefore considered that the survey results provide an accurate baseline against which to assess likely impacts on Badger of the proposals.

## 3 Ecological Designations

### 3.1 Statutory Designations

3.1.1 A number of statutory designations of ecological importance occur within the local area around the site, including those of importance at the international level; Special Protection Areas (SPA), Special Areas of Conservation (SAC) and Ramsar sites, as well as those of importance at the national level; Sites of Special Scientific Interest (SSSI), as described below in Table 3.1 and shown on Plan 6806/ECO2.

**Table 3.1.** Statutory designations, proximity to site, and reason for notification.

Statutory Designation	Approximate Nearest Distance and Orientation	Qualifying Feature / Reason for Notification
<i>International Designations within 25km of the Order Limits</i>		
Breckland SPA	2.6km south west	Annex 1 (Birds Directive) species; Stone Curlew <i>Burhinus oedipnemos</i> , Nightjar <i>Caprimulgus europaeus</i> , and Woodlark <i>Lullula arborea</i> .
Norfolk Valley Fens SAC	3.6km north west	Various habitats.
Breckland SAC	8km south	Habitats and Annex II Great Crested Newt (GCN) <i>Triturus cristatus</i> .
Roydon Common Ramsar	12.7km north west	Various habitats. Fauna (Invertebrates only).
Roydon Common & Dersingham Bog SAC	12.7km north west	Various habitats.
River Wensum SAC	12.6km north east	Various habitats. Fauna (Invertebrates only).
Dersingham Bog Ramsar	18.5km north west	Various habitats. Fauna (Invertebrates only).
The Wash SPA & Ramsar	21km north west	Wintering waterfowl.
The Wash & North Norfolk Coast SAC	21km north west	Habitats and Fauna (Annex II species; Harbour Seal <i>Phoca vitulina</i> and Otter <i>Lutra lutra</i> ).
<i>National Designations within 5km</i>		
River Nar SSSI	0.27km north	Habitat (Chalk River) and associated wetland assemblage; including of relevance Lapwing <i>Vanellus vanellus</i> .
Castle Acre Common SSSI	0.44km north	Habitat (Unimproved Grassland) and associated wetland assemblage; including of relevance Lapwing.
Breckland Forest SSSI	2.6km south	Annex 1 (Habitats Directive) species; Nightjar and Woodlark.
Narborough Railway Embankment SSSI	2.8km south	Habitat (Calcareous Grassland), including associated floral and invertebrate assemblage.

East Walton and Adcock's Common SSSI	3.3km north west	Various habitats. Fauna (Invertebrates only).
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## 3.2 Non-statutory Designations

3.2.1 A number of County Wildlife Sites (CWS) and Roadside Nature Reserves (RNR), representing non-statutory designations of ecological importance at the local level, have been identified within the vicinity of the site, as set out below in Table 3.2 and shown on Plan 6806/ECO2.

**Table 3.2.** Non-Statutory designations, proximity to site, and reason for notification.

Non-Statutory Designation	Approximate Nearest Distance and Orientation	Qualifying Feature / Reason for Notification (where available)
River Road U33086 RNR	Within site boundary, along River Road.	Presence of Dropwort.
River Road U22086 RNR	0.05km north	Presence of Knapweed Broomrape.
Land Adjacent to the River Nar CWS	0.5km north	Broadleaved wet and dry semi-natural woodland, with areas of marshy, neutral and acidic grassland.
Priory Meadow CWS	1km north	Neutral grassland.
Lake West of Castle Acre CWS	0.35km north	Lake fringed with woodland and grassland.
Mill House Lake CWS	0.5km north	Lake with wet and dry woodland, as well as neutral and acidic grassland.
Land Adjacent to the River Nar CWS	0.2km north east	Eastern component of Mill House Lake, featuring Broadleaved wet and dry semi-natural woodland, with areas of marshy, neutral and acidic grassland. Presence of ditches also noted.
Castle Acre Castle CWS	0.95km north	Dry, unimproved, species-rich calcareous grassland.
Priory Road U22074 RNR	0.8km north	Presence of Danewort.
Mill House CWS	0.96km north	Species-rich semi-improved grassland.
Narford Lake CWS	1.5km north west	Mesotrophic lake with carr woodland, unimproved grassland, and waterfowl interest.
North of Mill Covert CWS	0.6km north	Majority of CWS is formed of acid grassland with hawthorn scrub and neutral grassland. Developed on stoney and sandy substrate north of River Nar.
The Carr CWS	1.5km north west	Wet deciduous woodland.

Lynn Road Disused Railway CWS	1.6km south	Mixed Scrub.
Walton Road C65 RNR	1.7km north	Presence of Danewort.

### 3.3 Priority Habitats, Ancient Woodland and Notable Trees

- 3.3.1 The site contains several areas of woodland, a number of which are identified on the MAGIC database as the Priority Habitat 'Deciduous Woodland'.
- 3.3.2 No Ancient Woodland is mapped within the site boundary, with all identified Ancient Woodland well-removed from the site. The closest identified Ancient Woodland to the site is Sporle Wood Ancient Replanted Woodland, which is located approximately 4km east of the site. The nearest area of Ancient Semi-natural Woodland is Necton Wood, which is located approximately 8km east of the site.
- 3.3.3 The Woodland Trust Ancient Tree Inventory indicates the presence of two Veteran trees outside of the site boundary along the River Road, adjacent to fields 16 and 17 respectively.
- 3.3.4 Norfolk Biodiversity Information Centre returned records for several veteran trees situated within the site, located at field boundaries and within hedgerows. Veteran trees are considered further below.

## 4 Habitats and Ecological Features

### 4.1 Background Records

- 4.1.1 No specific records of any protected or priority plant species from within or immediately adjacent to the site are included within the information returned from the Records Centre. A number of records of Priority Species were returned from the wider search area around the site, albeit there is no evidence for the presence of any of these species within the site itself based on the information received.

### 4.2 Overview

- 4.2.1 The habitats and ecological features present within the site are described below, with the value of habitats for the fauna they may support considered separately in Chapter 5 below. The following habitats/ecological features were identified within/adjacent to the site:

- Arable;
- Game Cover Crops;
- Modified Grassland;
- Other Neutral Grassland;
- Dense and Scattered Scrub;
- Tall Forb Vegetation;
- Hedgerow and Tree Lines;
- Trees;
- Woodland;
- Ponds;
- Ditches;
- Buildings/Structures and Hardstanding; and
- Bare Ground.

- 4.2.2 The locations of these habitat types and features are illustrated on Plan 6806/ECO3 and individual habitats are described below.

### 4.3 Irreplaceable and Priority Habitats

- 4.3.1 Section 40 of the Natural Environment and Rural Communities (NERC) Act 2006 places duties on public bodies to have regard to the conservation of biodiversity in the exercise of their normal functions. In particular, Section 41 of the NERC Act requires the Secretary of State to publish a list of habitats which are of principal importance for conservation in England. This list is largely derived from the 'Priority Habitats' listed under the former UK BAP, which continue to be regarded as priority habitats under the subsequent country-level biodiversity strategies.

- 4.3.2 Of the habitats within the Order Limits, woodland, hedgerows, and tree lines are considered to qualify as Priority Habitats, whilst a substantial number of veteran trees are present, representing irreplaceable habitat; these habitats therefore constitute important ecological features.

## 4.4 Arable

- 4.4.1 The majority of the fields within the site were recorded to be under arable cultivation at the time of surveys, and were cultivated with single species crops including Wheat *Triticum* sp., Rye *Secale* spp., Barley *Hordeum vulgare*, Maise *Zea mays*, Rapeseed *Brassica napus*, Pea *Pisum* spp., Beetroot *Beta vulgaris* and Potato *Solanum* sp. Where fields were not recorded to contain evident crops, such fields were recorded to be recently ploughed or fallow.
- 4.4.2 The cultivated fields appear to be subject to agricultural spraying regime, with evidence of marginal vegetation die-off at the crop edges. Limited arable weed species were recorded to be present within the internal cropped areas, albeit common weed species were recorded within the field margins with occasional presence of Flax *Linum usitatissimum*, Mustard *Brassica* spp., Groundsel *Senecio vulgaris*, Wild Raddish *Raphanus raphanistrum*, Pineapple Weed *Matricaria discoidea*, Toad Rush *Juncus bufonius*, Creeping Thistle *Cirsium arvense*, Spear Thistle *Cirsium vulgare*, Hogweed *Heracleum sphondylium*, Broad-leaved Dock *Rumex obtusifolius*, Curled Dock *Rumex crispus*, Ribwort Plantain *Plantago lanceolata*, Greater Plantain *Plantago major*, Creeping Buttercup *Ranunculus repens*, and Wild Teasel *Dipsacus fullonum*.
- 4.4.3 A number of fields were dominated by recently sown and short-sward Rye-grass Ley. At the time of initial survey a number of these fields were stock-fenced, and actively browsed by Pigs. Upon inspection of historical aerial imagery it is clear that that the Pig and Poultry livestock are on a rotation within the normally cropped areas, such that these units are likely moved from field to field on a frequent basis. Evidence that the livestock units move on rotation is also demonstrated by the findings of recent winter survey work at the site and update habitat surveys in 2025 which have demonstrated that livestock have been moved on to different fields than those recorded at the time of the initial Phase 1 habitat survey work.

## 4.5 Game Cover Crops

- 4.5.1 A number of the arable fields were noted to contain areas of game cover crops including *Brassica* and *Amaranthaceae* species, which are understood to have been provided in line with countryside stewardship agreements, and range in width between approximately 5 and 50 meters.

## 4.6 Modified Grassland

- 4.6.1 Areas of modified grassland are present, associated with a number of field margins and road verges within areas measuring 5-50m in width. These areas were largely unmanaged, with a sward height of approximately 20–60cm, with signs of die-off likely resulting from herbicide spray drift associated with the adjacent arable areas. The species present in these areas include, but are not limited to, Cock's Foot *Dactylis glomerata* with Perennial Rye-grass *Lolium perenne*, Yorkshire Fog *Holcus lanatus*, Common Nettle *Urtica dioica*, Hogweed, Cleavers *Galium aparine*, Bristly Oxtongue *Picris echioides*, Creeping Thistle, Spear Thistle, Ground-ivy *Glechoma hederacea*, Creeping Buttercup, Greater Plantain, Dandelion *Taraxacum officinale* agg., and Broad-leaved Dock.
- 4.6.2 Young colonising Bramble *Rubus fruticosus* agg., was frequently recorded to be encroaching into the field margins from the boundary hedgerows and adjacent blocks of woodlands, whilst denser patches of Bracken *Pteridium* sp. were noted to be dominant along a small number of field margins.

## 4.7 Other Neutral Grassland

4.7.1 Areas of other neutral grassland are present, associated with a number of field margins, road verges, and a number of larger areas (as shown on Plan 6806/ECO3). These areas vary in size. These areas were largely unmanaged, with a sward height of approximately 20–60cm. The species present in these areas include, but are not limited to, Red Fescue *Festuca rubra*, Yorkshire Fog, Soft Brome *Bromus hordeaceus*, Cock's-foot, False Oat-grass *Arrhenatherum elatius*, Meadow Grass *Poa* spp., Meadow Foxtail *Alopecurus pratensis*, Creeping Bent *Agrostis stolonifera*, Annual Meadow-grass *Poa annua*, Common Knapweed *Centaurea nigra*, Red Clover *Trifolium pratense*, Common Vetch *Vicia sativa*, Common Mallow *Malva sylvestris*, Common Nettle, Groundsel, Common Bird's-foot Trefoil *Lotus corniculatus*, Ribwort Plantain, Meadow Buttercup *Ranunculus acris*, Lady's bedstraw *Galium verum*, Black Horehound *Ballota nigra*, Cow Parsley *Anthriscus sylvestris*, Common Mouse-ear *Cerastium fontanum*, Cut-leaved Cranesbill *Geranium dissectum*, Common Field Speedwell *Veronica persica*, Cat's-ear *Hypochaeris radicata*, Red Campion *Silene dioica*, White Campion *Silene latifolia*, Burdock *Arctium* sp., Broad-leaved Dock, Hemlock *Conium maculatum*, Parsley-piert *Aphanes arvensis*, Herb-Robert *Geranium robertianum*, Shining Crane's-bill *Geranium lucidum*, Selfheal *Prunella vulgaris*, Perforate St Johns-wort *Hypericum perforatum*, Common Vetch *Vicia sativa*, Salad Burnet *Sanguisorba minor* subsp. *minor*, Ragwort *Senecio jacobaea* Oxeye Daisy *Leucanthemum vulgare*, Bush Vetch *Vicia sepium*, Yarrow *Achillea millefolium*, Bugloss *Anchusa arvensis*, Thyme-leaved Speedwell *Veronica serpyllifolia*, Smooth Hawk's-beard *Crepis capillaris* Shepherd's Purse *Capsella bursa-pastoris*, Great Mullein *Verbascum thapsus* Hare's-foot clover *Trifolium arvense*, Field Pansy *Viola arvensis*, Tutsan *Hypericum androsaemum*, Herb-Robert *Geranium robertianum*, Teasel *Dipsacus fullonum*, Viper's-bugloss *Echium vulgare*, Common Cudweed *Filago germanica*, Forget-me-not *Myosotis* sp., Greater Burdock *Arctium lappa*, Common Poppy *Papaver rhoeas*, Round-leaved Cranesbill *Geranium rotundifolium*, Germander Speedwell *Veronica chamaedrys* and Common Chickweed *Stellaria media*. Bramble, Bracken and Ivy *Hedera helix* were recorded to be encroaching from adjacent hedgerows and woodlands in a number of areas. Broom *Cytisus scoparius* young colonising Hawthorn *Crataegus monogyna* were noted to be present within some areas.

4.7.2 During survey work undertaken in May 2024, Dropwort *Filipendula vulgaris* was recorded within the road verge along River Road associated with hedgerow F32H2, broadly consistent with the location of the River Road RNR.

## 4.8 Dense and Scattered Scrub

4.8.1 Disused Marl Pits are present across the Site, the majority of which contain stands of semi-mature to mature Elder *Sambucus nigra* scrub, with less frequent Hawthorn, Blackthorn *Prunus spinosa*, Goat Willow *Salix caprea*, Bramble, and Dog-rose *Rosa canina*. These areas of dense scrub were noted to be relatively open, with ground flora dominated by Common Nettle, Cleavers, Cock's-foot, Cow Parsley, Hogweed, and Broad-leaved Dock. Very occasional instances of White Bryony *Bryonia dioica* also recorded. Standing and fallen deadwood (including piles of brash) were recorded frequently within these areas, with a number of bare areas and deer tracks noted.

4.8.2 Elsewhere within the site, dense and scattered scrub is largely associated with the field boundaries and adjacent to blocks of woodland, dominated by young to semi-mature Elder, Blackthorn, and Hawthorn, with Bramble, Dog-rose and occasional Broom *Cytisus scoparius*. Occasional scattered Blackthorn, young Hawthorn and Bramble is present at a number of field margins where these have not been subject to recent cropping.

## 4.9 Tall Forb Vegetation

- 4.9.1 Areas of tall forb vegetation are present within the site, predominantly associated with field margins and hedgerow corridors. Tall herb vegetation was recorded to be dominated by Common Nettle, Hogweed, Cow Parsley, Creeping Thistle, and Spear Thistle, with less frequent Burdock, Cleavers, Dock *Rumex sp.*, Willowherb, Cow Parsley, Common Field Speedwell, Ground Ivy, Goosefoot *sp.*, Sycamore saplings and young Bramble.

## 4.10 Hedgerows and Tree Lines

- 4.10.1 The majority of field boundaries throughout the site are marked by hedgerows, with a smaller number of tree lines present, as shown on plan 6806/ECO3. Details of individual hedgerows and tree lines are summarised at Annex 6806/3. The Hedgerows are predominantly managed (flailed) and composed of native species, with Hawthorn and Blackthorn most frequently noted as the dominant species. The species-richness of the hedgerows varies, although the majority of the hedgerows are species-poor, with a ground flora dominated by ruderal species indicative of high nutrient inputs such as Common Nettle, Cow Parsley, Hogweed, and Cleavers. Standard trees are frequent within the hedgerows, particularly including young to mature Oak *Quercus sp.*, and Ash *Fraxinus excelsior*. A number of the hedgerows were noted to contain substantial gaps, with colonising Bramble present in places, whilst occasional replanting of young whips was also noted in places.
- 4.10.2 Variegated Yellow Archangel *Lamium galeobdolon subsp. argentatum* was recorded to be frequent within the field margin associated with Hedgerow H34B in the south-west of the site. Variegated Yellow Archangel is listed on Schedule 9, Part II of the Wildlife and Countryside Act 1981 (as amended), making it an offence to cause it to grow in the wild.
- 4.10.3 In addition, Three-cornered Garlic *Allium triquetrum* was recorded at the base of hedgerow H22d, at the north west of field 9. Three-cornered Garlic is listed on Schedule 9, Part II of the Wildlife and Countryside Act 1981 (as amended), making it an offence to cause it to grow in the wild.

## 4.11 Trees

- 4.11.1 A substantial number of trees were recorded within the site, largely located within the hedgerows (as set out within Annex 6806/3). Standard trees within the hedgerows were noted to range from young to mature in age, including a number of veteran trees.
- 4.11.2 A small number of additional young to mature trees located outside the hedgerows were also recorded to be present, including Oak, Ash, Sycamore *Acer pseudoplatanus*, Field Maple *Acer campestre*, Hornbeam *Carpinus betulus* and Crab Apple *Malus sylvestris*.

## 4.12 Woodland

### Lowland Mixed Deciduous Woodland

- 4.12.1 A small number of the former Marl Pits were recorded to contain woodland of a relatively open structure, with clearly defined canopy, understorey, shrub, and ground flora layers dominated by broadleaved species. Canopy and shrub layers were noted to be dominated by Sycamore and Elder respectively, with less frequent Ash, Hawthorn, Blackthorn and Goat Willow. Where further understorey or shrub vegetation is present this was recorded to be largely dominated by sparse Bramble. Ground flora within these areas is typically

dominated by Common Nettle, Cleavers, Cow Parsley and Garlic Mustard indicative of high nutrient inputs consistent with the surrounding arable land. Standing and fallen deadwood was noted to be frequent within the woodland areas.

- 4.12.2 Woodland associated with pond P13a in the south of the site was recorded to be dominated by young to semi-mature Grey Willow *Salix cinerea* and Goat Willow, with a number of large, mature Oaks. The shrub layer is dominated by young Willow *Salix* sp., with frequent Common Nettle and Bramble present.
- 4.12.3 A number of other small areas of Woodland are present across the site, dominated largely by Ash, Sycamore and Field Maple, with mixed understorey species including Hawthorn, Willow, Elder and Blackthorn in varying proportions. Ground flora within these areas is typical of high nutrient input, with frequent ruderal weeds including sparsely vegetated areas supporting species such as Cleavers, Ground Ivy, Common Nettle, and Chickweed. Other species encountered within the ground flora include Rough Chervil, Hawthorn saplings, Sycamore saplings, Willowherbs, Rough Meadow-grass, Garlic Mustard, White Dead-nettle, Lords and Ladies, Barren Brome, Red Campion, Bracken, Broom, Black Horehound, Cow Parsley and Garlic Mustard. Standing and fallen deadwood was recorded to be frequent within woodland parcels, with frequent Ivy cover also recorded.
- 4.12.4 Additional areas of woodland were recorded within the south of the site, associated with the intersection between the A47 Swaffham Bypass and A1065 Castle Acre Rd intersection. Within these parcels, the woodland was recorded to include a canopy dominated by semi-mature to mature Oak, Ash and Sycamore, with occasional Alder, Cherry and Pine sp. Understory vegetation includes Elder, Hawthorn, Dog Rose, Oak, Ash, Field Maple, Bramble and Blackthorn with occasional Alder and Norway Maple, whilst the ground flora was recorded to be dominated by Common Nettle, Bramble and Ground Ivy, with frequent leaf litter present. Standing and fallen deadwood was recorded to be present throughout.

## 4.13 Ponds

- 4.13.1 Nine ponds are located within the site labelled **P2a to P18a and OP3** on Plan 6806/ECO6, with a further pond (**P20a**) located within an area of offsite woodland surrounded entirely by the site (which was therefore similarly surveyed). Individual ponds are summarised in Table 4.1 below:

**Table 4.1.** Pond descriptions.

Pond no.	Brief description	Approx. size	Shading	Aquatic/ emergent & marginal vegetation	Comments
P2a	Woodland Pond	100m <sup>2</sup>	90% shaded by surrounding woodland vegetation	Very limited aquatic vegetation, dominated by algae	Absence of fowl and fish, largely dry with shallow water on east bank, likely to dry out occasionally.
P3a	Field Margin Pond	900m <sup>2</sup>	80% shaded by the surrounding vegetation.	No obvious aquatic / submerged vegetation.	Fowl present at pond.
P6a	Field Margin Pond	~180m <sup>2</sup>	25% shaded by adjacent Ash trees.	Bramble present at margins and 75% pond surface covered by blanketweed. 50% cover by woody Nightshade.	Pond used by Moorhen, no sign of fish.
P7a	Field Margin Pond	~600m <sup>2</sup>	60% shaded by surrounding trees.	Blanketweed cover approximately 50% of the pond. No other obvious	2 Mallard and 2 Moorhen recorded, no sign of fish.

Pond no.	Brief description	Approx. size	Shading	Aquatic/ emergent & marginal vegetation	Comments
				aquatic / submerged vegetation present.	
P8a	Field Margin Pond	~1000m <sup>2</sup>	50% shaded along the northern and western banks by surrounding trees.	Less than 5% emergent vegetation with only minor stems present at south-west end and a fringe of floating willowherb.	Permanently wet, 2 Mallard recorded.
P9a	Field Margin Pond	~140m <sup>2</sup>	Exposed, no cover.	Poor terrestrial habitat (cropped).	Small and shallow (50cm resembles wet scrape), likely dry for most of the year.
P13a	Woodland Pond	~300m <sup>2</sup>	50% shaded by surrounding woodland W1 Canopy	No obvious aquatic / submerged vegetation, albeit marginals around 5% cover comprising Soft Rush and Deadly Night-shade, banks otherwise dominated by Common Nettle and Bramble scrub.	Water turbid, likely deep water, ~20 Mallard and Moorhen recorded.
P18a	Field Margin Pond	~140m <sup>2</sup>	Exposed, no cover	No obvious aquatic / submerged vegetation, with marginals dominated by Broad-leaved Dock, Perennial Rye-grass, Common Nettle, Creeping Thistle, Hogweed and Horsetail	Water turbid, approximately 0.5m deep.
OP3	Woodland Edge Pond	400m <sup>2</sup>	100% shaded by Willow.	No vegetation present, only leaf litter.	Absence of fowl and fish, water brown albeit not turbid (likely poor quality), no invertebrates.
P20a	Woodland pond (offsite)	~150m <sup>2</sup>	Heavily overshadowed by surrounding offsite coniferous woodland.	Single collapsed, regrowing Willow, otherwise none apparent.	Shallow water depth with gently sloping banks.

## 4.14 Ditches

4.14.1 A small number of ditches are present at the site, the majority of which are associated with the hedgerows and treelines (see Annex 6806/3 for further details) and none were recorded to be of sufficient size, nor apparently hold water for sufficient time to qualify under the definition of a watercourse ditch set out within standard Biodiversity Net Gain guidance. Of these, two dry ditches and a further damp ditch were recorded which do not form features associated with hedgerows or tree lines (see Plan 6806/ECO3), and appear to form agricultural drainage channels, which were recorded to be predominantly dry at the time of the survey (with vegetation indicating generally dry conditions), albeit likely route water flows during periods of heavy rainfall. Species recorded within the dry ditches include Bramble, Broadleaved Dock, Willowherb, White Dead-nettle, Yarrow, Hogweed and Common Nettle.

4.14.2 A shallow ditch is present along the field boundary between fields F29 and F30, which was recorded to be relatively shallow in nature (up to 0.5m deep), located within a band of rough grassland and Bracken *Pteridium aquilinum* associated with the field boundaries. A further dry ditch is present along the northern site boundary of field F27, including sections lacking

in hedgerow or tree line. Vegetation present associated with the ditch was recorded to be consistent with the adjacent improved grassland margin.

#### 4.15 Buildings/Structures and Hardstanding

4.15.1 Two buildings (F3B1 and F11B1) are located within the site boundary with a further four buildings present immediately adjacent to the site boundary. All buildings are described in Table 4.2 below. Other areas of hardstanding across the site include existing highways (A1065 Castle Acre Road and River Road) and all hardstanding areas are largely devoid of vegetation.

**Table 4.2.** Building descriptions.

Building ID	Location	Brief description
Onsite		
F3B1	Northern corner of F3	Dilapidated single storey building of red brick and timber construction with pitched clay tiled roof. There is no loft void internally and the roof tiles are lined with felt. Access to the building is along the eastern elevation and the building is currently used for storage.
F11B1	Western boundary of F11	Former earth covered air raid structure of concrete prefab construction with corrugated rounded roof and heavily overgrown with scrub. Access is through the central door on the eastern face. Structure is approximately 12m in length and 4m in width with at least two internal chambers.
Offsite		
B1	South of Field 29	A two storey barn of red-brick and knapped flint wall construction, supporting a pitched roof of timber frame construction with clay roof tiles. The building is in a dilapidated state of repair, with some collapsed and sagging roof sections.
S1		Dilapidated stable block structure of timber frame construction with a pitched roof of corrugated sheet metal.
B2	Offsite – located in land adjacent to northern corner of F23	Dilapidated out building with collapsed roof. Dense bramble scrub growth within the building and the building is covered with dense mature Ivy.
B3	Offsite – located in land adjacent to north western corner of F11	A two storey barn of red-brick and knapped flint wall construction, supporting a pitched roof.

#### 4.16 Bare Ground / Colonising Vegetation

4.16.1 A number of footpaths and tracks are present largely located the site largely associated with field margins and buildings, including Fincham Drove and Petticoat Drove, which are well-used and support bare, compacted ground with recolonising weed species particularly at the margins. Colonising species include Scented Mayweed *Matricaria recutita*, Groundsel, Red Dead-nettle *Lamium purpureum*, Cleavers, Field Pansy, Annual Meadow-grass, Germander Speedwell, Field Penny-cress *Thlaspi arvensis*, Dove's-foot Crane's-bill, Hogweed, Dandelion, Ribwort Plantain, White Dead-nettle, Creeping Buttercup, Yorkshire Fog, Spear Thistle, Perennial Rye-grass, Cow Parsley, Shining Crane's-bill, Broad-leaved Dock, Willowherbs, Cock's-foot, Ground Ivy, Red Fescue, Ragwort, Yarrow and Greater Plantain.

## 4.17 Habitat Evaluation Summary

- 4.17.1 The site is dominated by arable land within a number of large cultivated fields, which provide generally low ecological value. On the basis of the above, the following habitats within and adjacent to the site are considered to form important ecological features:

**Table 4.3.** Evaluation summary of habitats forming important ecological features.

Habitat	Level of Importance
Trees (including veteran trees)	Local
Hedgerows	Local
Woodlands	Local
Ponds	Local

- 4.17.2 Other habitats present within the site include the arable land along with improved and semi-improved grassland margins, scrub, tall herbs, bare ground, buildings and hardstanding. However, these habitats do not form important ecological features.

## 5 Faunal Use of the Site

### 5.1 Overview

- 5.1.1 During the survey work, general observations were made of any faunal use of the area within the Order Limits with particular attention paid to the potential presence of protected or notable species. Specific survey work was undertaken in respect of Badger, bats, breeding and wintering birds, reptiles and Great Crested Newt, the results of which are set out below.

### 5.2 Priority Species

- 5.2.1 Section 40 of the Natural Environment and Rural Communities (NERC) Act 2006 places duties on public bodies to have regard to the conservation of biodiversity in the exercise of their normal functions. In particular, Section 41 of the NERC Act requires the Secretary of State to publish a list of species which are of principal importance for conservation in England. This list is largely derived from the 'Priority Species' listed under the former UK BAP, which continue to be regarded as Priority Species under the subsequent country-level biodiversity strategies.
- 5.2.2 During the survey work undertaken, the Priority Species recorded within the site include a number of bat and bird species, along with very small numbers of common reptiles. This is discussed further below in relation to individual species, at the relevant sections.

### 5.3 Bats

- 5.3.1 **Legislation.** All British bats are classed as European Protected Species under the Conservation of Habitats and Species Regulations 2017 (as amended) and are also listed under Schedule 5 of the Wildlife and Countryside Act 1981 (as amended). As such, both bats and their roosts (breeding sites and resting places) receive full protection under the legislation (see Annex 6806/2). If proposed development work is likely to result in an offence a licence may need to be obtained from Natural England which would be subject to appropriate measures to safeguard bats. Given all bats are protected species, they are considered to represent important ecological features. Several bat species are also S41 Priority Species.
- 5.3.2 **Background Records.** No specific records of bats from within or adjacent to the site were returned from the desktop study. Information received from the LRC includes records of Barbastelle *Barbastella barbastellus*, Common Pipistrelle *Pipistrellus pipistrellus*, Soprano Pipistrelle *Pipistrellus pygmaeus*, Daubenton's Bat *Myotis daubentonii*, Leisler's Bat *Nyctalus leisleri*, Brown Long-eared Bat *Plecotus auritus*, Noctule *Nyctalus noctula*, Natterer's Bat *Myotis nattereri*, Serotine *Eptesicus serotinus*, *Myotis* sp., Long-eared Bat *Plecotus* sp., and Pipistrelle bat species *Pipistrelle* sp. within 2km of the site boundary. The closest records are for Noctule, Common Pipistrelle, Soprano Pipistrelle, Natterer's Bat and Brown Long-eared Bat, recorded in 2014, located within 40m of the site boundary.

#### Survey Results

##### Roosting – Buildings

- 5.3.3 The starting location for the night-time bat walkover survey undertaken of transect 5 on the 30<sup>th</sup> May 2024 was located close to offsite building B3 (see Plan 6806/ECO4a-s). Several Pipistrelle bats were recorded to emerge and re-enter the barn at the southern elevation during the survey work. On further inspection of the barn walls and upper eaves, roosting

was confirmed under the external lip of the roof. Given the off-site position of building B3, which will remain unaffected by the proposed development, further detailed roosting surveys of the building are considered unwarranted in relation to the scheme.

#### Roosting – Trees

- 5.3.4 Trees within the site were subject to an initial assessment for their suitability to support roosting bats. Where practical / where trees may be impacted under the development proposals, these have been subject to a ground level tree assessment (GLTA). Trees identified as supporting PRFs or identified as FAR are indicated on Plan 6806/ECO3. The results of this assessment are provided at Annex 6806/4. Overall, the site supports a large number of trees with identified bat roosting potential.

#### Foraging and Commuting

##### *Night-time Bat Walkover Surveys*

- 5.3.5 The results of the NBW surveys are shown on Plan 6806/ECO4a-s, and a summary of the species recorded and numbers of registrations set out in Table 5.1-5.6, below.

**Table 5.1.** Results of the 2024 NBW surveys at Transect 1 for May, August and October 2024.

Species	Number of Passes Recorded			Approximate % of Total Passes Recorded		
	May	August	October	May	August	September
Common Pipistrelle	106	19	81	69.74	27.14	57.04
Soprano Pipistrelle	42	42	51	27.63	60.00	35.92
'Big Bat' sp.	3	8	2	1.97	11.43	1.41
Long-eared sp.	0	0	1	0.00	0.00	0.70
Myotis sp.	1	1	0	0.66	1.43	0.00
Barbastelle	0	0	7	0.00	0.00	4.93
<b>Total</b>	<b>152</b>	<b>70</b>	<b>142</b>	<b>100</b>	<b>100</b>	<b>100</b>

**Table 5.2.** Results of the 2024 NBW surveys at Transect 2 for May, August, and October 2024.

Species	Number of Passes Recorded			Approximate % of Total Passes Recorded		
	May	August	September	May	August	September
Common Pipistrelle	67	6	26	52.76	42.86	22.81
Soprano Pipistrelle	48	6	81	37.80	42.86	71.05
'Big Bat' sp.	9	1	0	7.09	7.14	0.00
Long-eared sp.	1	0	0	0.79	0.00	0.00
Barbastelle	2	1	7	1.57	7.14	6.14
<b>Total</b>	<b>127</b>	<b>14</b>	<b>114</b>	<b>100</b>	<b>100</b>	<b>100</b>

**Table 5.3.** Results of the 2024 NBW surveys at Transect 3 for May, August, and October 2024.

Species	Number of Passes Recorded			Approximate % of Total Passes Recorded		
	May	August	October	May	August	October
Common Pipistrelle	49	10	3	56.32	24.39	8.57

Soprano Pipistrelle	38	29	32	43.68	70.73	91.43
'Big Bat' sp.	0	2	0	0.00	4.88	0.00
<b>Total</b>	<b>87</b>	<b>41</b>	<b>35</b>	<b>100</b>	<b>100</b>	<b>100</b>

**Table 5.4.** Results of the 2024 NBW surveys at Transect 4 for May, August and October 2024.

Species	Number of Passes Recorded			Approximate % of Total Passes Recorded		
	May	August	October	May	August	October
Common Pipistrelle	83	53	60	61.48	63.10	45.11
Soprano Pipistrelle	50	30	24	37.04	35.71	18.05
'Big Bat' sp.	0	1	42	0.00	1.19	31.58
Barbastelle	2	0	7	1.48	0.00	5.26
<b>Total</b>	<b>135</b>	<b>84</b>	<b>133</b>	<b>100</b>	<b>100</b>	<b>100</b>

**Table 5.5.** Results of the 2024 NBW surveys at Transect 5 for May, August and October 2024.

Species	Number of Passes Recorded			Approximate % of Total Passes Recorded		
	May	August	October	May	August	October
Common Pipistrelle	84	48	160	66.14	46.60	60.84
Soprano Pipistrelle	40	41	48	31.50	39.81	18.25
'Big Bat' sp.	0	14	52	0.00	13.59	19.77
Barbastelle	3	0	3	2.36	0.00	1.14
<b>Total</b>	<b>127</b>	<b>103</b>	<b>263</b>	<b>100</b>	<b>100</b>	<b>100</b>

**Table 5.6.** Results of the 2024 NBW surveys at Transect 6 for May, August and October 2024.

Species	Number of Passes Recorded			Approximate % of Total Passes Recorded		
	May	August	October	May	August	October
Common Pipistrelle	0	15	2	0.00	36.59	4.88
Soprano Pipistrelle	3	25	32	100.00	60.98	78.05
'Big Bat' sp.	0	1	5	0.00	2.44	12.20
Barbastelle	0	0	2	0.00	0.00	4.88
<b>Total</b>	<b>3</b>	<b>41</b>	<b>41</b>	<b>100</b>	<b>100</b>	<b>100</b>

5.3.6 As shown by the above results, during the night-time bat walkover surveys undertaken May, August and October 2024, Common Pipistrelle and Soprano Pipistrelle were the most commonly recorded species across the site. 'Big Bat', Barbastelle, Long-eared Bat and Myotis species were also recorded to a lesser extent, with consistent numbers of Barbastelle in particular recorded during the surveys. Throughout the transect surveys, the recorded bat activity was largely associated with woodland parcel edges and field boundary habitat features including hedgerows and trees.

#### *Automated Surveys*

5.3.7 The results of the monthly automated static bat surveys undertaken in May to October 2024 are illustrated on plans 6806/ECO4b and 6806/ECO4c and summarised within Tables 5.7-5.18 below.

**Table 5.7.** Automated bat activity survey summary for location SD1.

Species	No. registrations							Average registrations per hour						% of total registrations
	Dep. 1	Dep. 2	Dep. 3	Dep. 4	Dep. 5	Dep. 6	Total	Dep. 1	Dep. 2	Dep. 3	Dep. 4	Dep. 5	Dep. 6	
Common Pipistrelle	6252	4	798	324	46	574	7998	116.68	0.49	11.27	5.19	0.54	5.06	90.79
Soprano Pipistrelle	74	0	77	50	175	137	513	1.38	0.00	1.09	0.80	2.04	1.21	5.82
Nathusius' Pipistrelle	4	0	0	0	0	0	4	0.07	0.00	0.00	0.00	0.00	0.00	0.05
'Big Bat' sp.	13	0	40	12	2	4	71	0.24	0.00	0.56	0.19	0.02	0.04	0.81
Myotis sp.	19	0	46	8	10	25	108	0.35	0.00	0.65	0.13	0.12	0.22	1.23
Plecotus sp.	12	0	7	1	6	6	32	0.22	0.00	0.10	0.02	0.07	0.05	0.36
Barbastelle	14	0	13	12	30	14	83	0.26	0.00	0.18	0.19	0.35	0.12	0.94
<b>Total</b>	<b>6388</b>	<b>4</b>	<b>981</b>	<b>407</b>	<b>269</b>	<b>760</b>	<b>8809</b>	<b>119.22</b>	<b>0.49</b>	<b>13.86</b>	<b>6.52</b>	<b>3.14</b>	<b>6.70</b>	

**Table 5.8.** Automated bat activity survey summary for location SD2.

Species	No. registrations							Average registrations per hour						% of total registrations
	Dep. 1	Dep. 2	Dep. 3	Dep. 4	Dep. 5	Dep. 6	Total	Dep. 1	Dep. 2	Dep. 3	Dep. 4	Dep. 5	Dep. 6*	
Common Pipistrelle	195	1073	5863	2522	644	-	10297	3.64	22.01	82.81	40.38	7.52	-	83.88
Soprano Pipistrelle	29	111	224	120	150	-	634	0.54	2.28	3.16	1.92	1.75	-	5.16
'Big Bat' sp.	3	9	243	19	17	-	291	0.06	0.18	3.43	0.30	0.20	-	2.37
Myotis sp.	5	25	33	8	6	-	77	0.09	0.51	0.47	0.13	0.07	-	0.63
Plecotus sp.	2	13	11	7	7	-	40	0.04	0.27	0.16	0.11	0.08	-	0.33
Barbastelle	30	115	75	296	421	-	937	0.56	2.36	1.06	4.74	4.92	-	7.63
<b>Total</b>	<b>264</b>	<b>1346</b>	<b>6449</b>	<b>2972</b>	<b>1245</b>	<b>-</b>	<b>12276</b>	<b>4.93</b>	<b>27.61</b>	<b>91.09</b>	<b>47.59</b>	<b>14.54</b>	<b>-</b>	

**Table 5.9.** Automated bat activity survey summary for location SD3.

Species	No. registrations							Average registrations per hour						% of total registrations
	Dep. 1	Dep. 2	Dep. 3	Dep. 4	Dep. 5	Dep. 6	Total	Dep. 1	Dep. 2	Dep. 3	Dep. 4	Dep. 5	Dep. 6	
Common Pipistrelle	80	509	997	173	38	1267	3064	1.49	10.44	14.08	2.77	0.44	11.17	62.25
Soprano Pipistrelle	40	171	301	39	31	570	1152	0.75	3.51	4.25	0.62	0.36	5.03	23.41
Nathusius' Pipistrelle	3	0	0	0	0	0	3	0.06	0.00	0.00	0.00	0.00	0.00	0.06
'Big Bat' sp.	3	6	16	16	0	5	46	0.06	0.12	0.23	0.26	0.00	0.04	0.93
Myotis sp.	14	3	5	4	13	12	51	0.26	0.06	0.07	0.06	0.15	0.11	1.04
Plecotus sp.	10	6	1	5	11	17	50	0.19	0.12	0.01	0.08	0.13	0.15	1.02
Barbastelle	135	24	104	211	41	41	556	2.52	0.49	1.47	3.38	0.48	0.36	11.30
<b>Total</b>	<b>285</b>	<b>719</b>	<b>1424</b>	<b>448</b>	<b>134</b>	<b>1912</b>	<b>4922</b>	<b>5.32</b>	<b>14.75</b>	<b>20.11</b>	<b>7.17</b>	<b>1.56</b>	<b>16.86</b>	

**Table 5.10.** Automated bat activity survey summary for location SD4.

Species	No. registrations							Average registrations per hour						% of total registrations
	Dep. 1	Dep. 2	Dep. 3	Dep. 4	Dep. 5	Dep. 6	Total	Dep. 1	Dep. 2	Dep. 3	Dep. 4	Dep. 5	Dep. 6	
Common Pipistrelle	50	2429	2982	185	3	123	5772	0.93	49.83	42.12	2.96	0.25	1.08	61.93

Soprano Pipistrelle	38	231	2349	96	0	151	2865	0.71	4.74	33.18	1.54	0.00	1.33	30.74
Nathusius' Pipistrelle	1	5	9	0	0	0	15	0.02	0.10	0.13	0.00	0.00	0.00	0.16
'Big Bat' sp.	3	0	13	127	0	4	147	0.06	0.00	0.18	2.03	0.00	0.04	1.58
Myotis sp.	12	75	19	5	0	7	118	0.22	1.54	0.27	0.08	0.00	0.06	1.27
Plecotus sp.	1	2	0	2	0	2	7	0.02	0.04	0.00	0.03	0.00	0.02	0.08
Barbastelle	124	13	18	201	0	40	396	2.31	0.27	0.25	3.22	0.00	0.35	4.25
<b>Total</b>	<b>229</b>	<b>2755</b>	<b>5390</b>	<b>616</b>	<b>3</b>	<b>327</b>	<b>9320</b>	<b>4.27</b>	<b>56.51</b>	<b>76.13</b>	<b>9.86</b>	<b>0.25</b>	<b>2.88</b>	

**Table 5.11.** Automated bat activity survey summary for location SD5.

Species	No. registrations							Average registrations per hour						% of total registrations
	Dep. 1	Dep. 2	Dep. 3	Dep. 4	Dep. 5	Dep. 6	Total	Dep. 1	Dep. 2	Dep. 3	Dep. 4	Dep. 5	Dep. 6	
Common Pipistrelle	3198	4872	0	0	2659	5	10734	59.68	99.94	-	-	31.05	0.04	77.13
Soprano Pipistrelle	305	1836	0	0	426	11	2578	5.69	37.66	-	-	4.97	0.10	18.53
Nathusius' Pipistrelle	1	0	0	0	0	0	1	0.02	0.00	-	-	0.00	0.00	0.01
'Big Bat' sp.	0	3	0	0	1	3	7	0.00	0.06	-	-	0.01	0.03	0.05
Myotis sp.	2	2	0	0	332	6	342	0.04	0.04	-	-	3.88	0.05	2.46
Plecotus sp.	3	18	0	0	3	6	30	0.06	0.37	-	-	0.04	0.05	0.22
Barbastelle	19	15	0	0	150	40	224	0.35	0.31	-	-	1.75	0.35	1.61
<b>Total</b>	<b>3528</b>	<b>6746</b>	<b>0</b>	<b>0</b>	<b>3571</b>	<b>71</b>	<b>13916</b>	<b>65.84</b>	<b>138.38</b>	<b>-</b>	<b>-</b>	<b>41.70</b>	<b>0.63</b>	

**Table 5.12.** Automated bat activity survey summary for Location SD6.

Species	No. registrations							Average registrations per hour						% of total registrations
	Dep. 1	Dep. 2	Dep. 3	Dep. 4	Dep. 5	Dep. 6	Total	Dep. 1	Dep. 2	Dep. 3	Dep. 4	Dep. 5	Dep. 6	
Common Pipistrelle	1005	170	204	317	1	8	1705	18.76	3.49	2.88	5.08	0.03	0.07	62.68
Soprano Pipistrelle	438	73	94	167	14	31	817	8.17	1.50	1.33	2.67	0.39	0.27	30.04
Nathusius' Pipistrelle	0	0	0	0	0	1	1	0.00	0.00	0.00	0.00	0.00	0.01	0.04
'Big Bat' sp.	4	4	12	8	0	0	28	0.07	0.08	0.17	0.13	0.00	0.00	1.03
Myotis sp.	7	10	2	5	1	8	33	0.13	0.21	0.03	0.08	0.03	0.07	1.21
Plecotus sp.	3	3	1	1	0	1	9	0.06	0.06	0.01	0.02	0.00	0.01	0.33
Barbastelle	2	0	12	95	0	18	127	0.04	0.00	0.17	1.52	0.00	0.16	4.67
<b>Total</b>	<b>1459</b>	<b>260</b>	<b>325</b>	<b>593</b>	<b>16</b>	<b>67</b>	<b>2720</b>	<b>27.23</b>	<b>5.33</b>	<b>4.59</b>	<b>9.50</b>	<b>0.44</b>	<b>0.59</b>	

**Table 5.13.** Automated bat activity survey summary for location SD7.

Species	No. registrations							Average registrations per hour						% of total registrations
	Dep. 1	Dep. 2	Dep. 3	Dep. 4	Dep. 5	Dep. 6	Total	Dep. 1	Dep. 2	Dep. 3	Dep. 4	Dep. 5	Dep. 6	
Common Pipistrelle	1481	461	2332	486	66	311	5137	28.61	8.06	36.15	6.41	0.74	3.03	69.90
Soprano Pipistrelle	148	166	597	179	49	543	1682	2.86	2.90	9.25	2.36	0.55	5.29	22.89
Nathusius' Pipistrelle	0	0	0	0	1	0	1	0.00	0.00	0.00	0.00	0.01	0.00	0.01
'Big Bat' sp.	2	26	31	45	28	9	141	0.04	0.45	0.48	0.59	0.31	0.09	1.92
Myotis sp.	2	0	46	8	16	12	84	0.04	0.00	0.71	0.11	0.18	0.12	1.14
Plecotus sp.	2	0	8	0	3	2	15	0.04	0.00	0.12	0.00	0.03	0.02	0.20

Barbastelle	172	19	34	34	17	13	289	3.32	0.33	0.53	0.45	0.19	0.13	3.93
<b>Total</b>	<b>1807</b>	<b>672</b>	<b>3048</b>	<b>752</b>	<b>180</b>	<b>890</b>	<b>7349</b>	<b>34.91</b>	<b>11.75</b>	<b>47.24</b>	<b>9.92</b>	<b>2.02</b>	<b>8.66</b>	

**Table 5.14.** Automated bat activity survey summary for location SD8.

Species	No. registrations							Average registrations per hour						% of total registrations
	Dep. 1	Dep. 2	Dep. 3	Dep. 4	Dep. 5	Dep. 6	Total	Dep. 1	Dep. 2	Dep. 3	Dep. 4	Dep. 5	Dep. 6	
Common Pipistrelle	19	134	6	2429	7	5858	8453	0.73	2.34	0.22	32.03	0.56	57.03	76.11
Soprano Pipistrelle	5	98	2	359	0	1690	2154	0.19	1.71	0.07	4.73	0.00	16.45	19.39
Nathusius' Pipistrelle	0	2	0	0	0	0	2	0.00	0.03	0.00	0.00	0.00	0.00	0.02
'Big Bat' sp.	0	10	2	168	0	5	185	0.00	0.17	0.07	2.22	0.00	0.05	1.67
Myotis sp.	0	4	1	1	0	7	13	0.00	0.07	0.04	0.01	0.00	0.07	0.12
Plecotus sp.	0	2	0	0	0	1	3	0.00	0.03	0.00	0.00	0.00	0.01	0.03
Barbastelle	0	67	0	11	0	219	297	0.00	1.17	0.00	0.15	0.00	2.13	2.67
<b>Total</b>	<b>24</b>	<b>317</b>	<b>11</b>	<b>2968</b>	<b>7</b>	<b>7780</b>	<b>11107</b>	<b>0.92</b>	<b>5.54</b>	<b>0.40</b>	<b>39.14</b>	<b>0.56</b>	<b>75.74</b>	

**Table 5.15.** Automated bat activity survey summary for location SD9.

Species	No. registrations							Average registrations per hour						% of total registrations
	Dep. 1	Dep. 2	Dep. 3	Dep. 4	Dep. 5	Dep. 6	Total	Dep. 1	Dep. 2	Dep. 3	Dep. 4	Dep. 5	Dep. 6	
Common Pipistrelle	460	179	373	700	703	393	2808	8.89	3.13	5.78	9.23	7.90	3.83	36.79
Soprano Pipistrelle	1736	452	104	219	589	907	4007	33.54	7.90	1.61	2.89	6.62	8.83	52.50
Nathusius' Pipistrelle	5	0	0	0	1	0	6	0.10	0.00	0.00	0.00	0.01	0.00	0.08
'Big Bat' sp.	0	49	26	7	226	5	313	0.00	0.86	0.40	0.09	2.54	0.05	4.10
Myotis sp.	1	0	3	3	5	3	15	0.02	0.00	0.05	0.04	0.06	0.03	0.20
Plecotus sp.	0	1	2	0	3	0	6	0.00	0.02	0.03	0.00	0.03	0.00	0.08
Barbastelle	4	225	44	40	119	46	478	0.08	3.93	0.68	0.53	1.34	0.45	6.26
<b>Total</b>	<b>2206</b>	<b>906</b>	<b>552</b>	<b>969</b>	<b>1646</b>	<b>1354</b>	<b>7633</b>	<b>42.61</b>	<b>15.84</b>	<b>8.56</b>	<b>12.78</b>	<b>18.50</b>	<b>13.18</b>	

**Table 5.16.** Automated bat activity survey summary for location SD10.

Species	No. registrations							Average registrations per hour						% of total registrations
	Dep. 1	Dep. 2	Dep. 3	Dep. 4	Dep. 5	Dep. 6	Total	Dep. 1	Dep. 2	Dep. 3	Dep. 4	Dep. 5	Dep. 6	
Common Pipistrelle	100	1486	869	0	0	0	2455	1.93	25.98	13.47	-	-	-	50.27
Soprano Pipistrelle	383	918	348	0	0	0	1649	7.40	16.05	5.39	-	-	-	33.76
'Big Bat' sp.	0	12	22	0	0	0	34	0.00	0.21	0.34	-	-	-	0.7
Myotis sp.	79	6	248	0	0	0	333	1.53	0.10	3.84	-	-	-	6.82
Plecotus sp.	14	1	11	0	0	0	26	0.27	0.02	0.17	-	-	-	0.53
Barbastelle	286	29	72	0	0	0	387	5.52	0.51	1.12	-	-	-	7.92
<b>Total</b>	<b>862</b>	<b>2452</b>	<b>1570</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>4884</b>	<b>16.65</b>	<b>42.87</b>	<b>24.33</b>	<b>-</b>	<b>-</b>	<b>-</b>	

**Table 5.17.** Automated bat activity survey summary for location SD11.

Species	No. registrations							Average registrations per hour						% of total registrations
	Dep. 1	Dep. 2	Dep. 3	Dep. 4	Dep. 5	Dep. 6	Total	Dep. 1	Dep. 2	Dep. 3	Dep. 4	Dep. 5	Dep. 6	
Common Pipistrelle	7	33	91	47	20	23	221	0.14	0.58	1.41	0.62	0.22	0.22	36.59
Soprano Pipistrelle	5	5	6	21	73	65	175	0.10	0.09	0.09	0.28	0.82	0.63	28.97
Nathusius' Pipistrelle	1	1	0	0	2	0	4	0.02	0.02	0.00	0.00	0.02	0.00	0.66
'Big Bat' sp.	0	1	9	2	13	2	27	0.00	0.02	0.14	0.03	0.15	0.02	4.47
Myotis sp.	2	1	1	3	9	12	28	0.04	0.02	0.02	0.04	0.10	0.12	4.64
Plecotus sp.	0	0	2	0	1	0	3	0.00	0.00	0.03	0.00	0.01	0.00	0.50
Barbastelle	1	1	6	40	51	47	146	0.02	0.02	0.09	0.53	0.57	0.46	24.17
<b>Total</b>	<b>16</b>	<b>42</b>	<b>115</b>	<b>113</b>	<b>169</b>	<b>149</b>	<b>604</b>	<b>0.31</b>	<b>0.73</b>	<b>1.78</b>	<b>1.49</b>	<b>1.90</b>	<b>1.45</b>	

**Table 5.18.** Automated bat activity survey summary for location SD12.

Species	No. registrations							Average registrations per hour						% of total registrations
	Dep. 1	Dep. 2	Dep. 3	Dep. 4	Dep. 5	Dep. 6	Total	Dep. 1	Dep. 2	Dep. 3	Dep. 4	Dep. 5	Dep. 6	
Common Pipistrelle	201	17	640	8	259	29	1154	3.88	1.04	9.92	0.19	2.91	0.28	60.20
Soprano Pipistrelle	139	7	314	11	30	34	535	2.69	0.43	4.87	0.26	0.34	0.33	27.91
Nathusius' Pipistrelle	4	0	0	0	0	0	4	0.08	0.00	0.00	0.00	0.00	0.00	0.21
'Big Bat' sp.	0	0	15	0	3	2	20	0.00	0.00	0.23	0.00	0.03	0.02	1.04
Myotis sp.	1	0	0	0	1	41	43	0.02	0.00	0.00	0.00	0.01	0.40	2.24
Plecotus sp.	5	0	3	0	0	3	11	0.10	0.00	0.05	0.00	0.00	0.03	0.57
Barbastelle	47	0	57	0	1	45	150	0.91	0.00	0.88	0.00	0.01	0.44	7.82
<b>Total</b>	<b>397</b>	<b>24</b>	<b>1029</b>	<b>19</b>	<b>294</b>	<b>154</b>	<b>1917</b>	<b>7.67</b>	<b>1.47</b>	<b>15.95</b>	<b>0.44</b>	<b>3.30</b>	<b>1.50</b>	

**5.3.8 Summary.** As shown by the above results, during the automated static detector surveys across the site, Common Pipistrelle and Soprano Pipistrelle were the most commonly recorded species (representing 91.9% total registrations). Big Bat species, Nathusius' Pipistrelle *Pipistrellus nathusii*, Barbastelle, Long-eared Bat and *Myotis* spp. were also recorded to a much lesser extent, albeit raised numbers of Barbastelle registrations were recorded (representing 4.8% total registrations).

**5.3.9** Overall, across the detector locations, the greatest number of registrations were recorded within the east of the site, with locations SD5 and SD2 returning the highest numbers of registrations.

**5.3.10** The average number of bat registrations per hour fell within the range of 0-6 passes per hour for all species across all deployments, however Common and Soprano Pipistrelle registered between 0 and 37 passes per hour.

## 5.4 Badger

**5.4.1 Legislation.** Badger receives legislative protection under the Protection of Badgers Act 1992 (see Annex 6806/2), and as such should be assessed as an important ecological feature. The legislation aims to protect this species from persecution, rather than being a response to an unfavourable conservation status, as the species is in fact common over most of Britain.

5.4.2 Licences can be obtained from Natural England for development activities that would otherwise be unlawful under the legislation. The types of activity that should be licensed are described in the relevant best practice guidance.<sup>24, 25</sup>

5.4.3 **Background Records and Survey Results.** Survey results and evaluation in respect of Badger are set out in a Confidential Annex separate to this report.

## 5.5 Water Vole and Otter

5.5.1 **Legislation.** Water Vole *Arvicola amphibius* is fully protected under the Wildlife and Countryside Act 1981 (as amended). The legislation affords protection to individuals of the species and their breeding sites and places of shelter (see Annex 6806/2). Water Vole is also a S41 Priority Species. As such, this species is considered to represent an important ecological feature.

5.5.2 Otter *Lutra lutra* is fully protected under the Wildlife and Countryside Act 1981 (as amended) and is a European Protected Species under the Conservation of Habitats and Species Regulations 2017 (as amended). This legislation affords protection to individuals of the species and their breeding sites and places of rest (see Annex 6806/2). Otter is also a S41 Priority Species. On this basis, Otter is considered to represent an important ecological feature.

5.5.3 If, despite all reasonable efforts, properly authorised development will adversely affect Water Vole and there are no alternative habitats nearby, Natural England may issue a licence to displace or trap and translocate Water Vole for the purpose of development. To issue such a licence, Natural England would need to be assured there is no reasonable alternative to the development and that there are no other practical solutions that would allow Water Vole to be retained at the same location. Natural England would also require there to be no net loss of Water Vole habitat as a result of the works.

5.5.4 **Background Records.** Several records for Water Vole were returned by the LRC, along with four records of Otter within the search area. No records for Otter were returned from within the site boundary as the records were largely associated with River Nar with the closest record being 1.1km north of the site. A single record of Water Vole dating from 1984 appears to relate to an OS 1km x 1km grid square, part of which extends into the north of the site, albeit no more specific information is available that would enable the precise location of the record to be confirmed (whilst based on the lack of potential habitats/connectivity within the site, it appears that the record relates to an offsite location within the relevant OS grid square). No other (or more recent) records of Water Vole appear to relate to grid references extending within the site, whilst more specific records of Water Vole relate to the River Nar corridor, with the closest record from the most recent 20 year period located approximately 0.98km north of the site.

5.5.5 **Survey Results and Evaluation.** With the exception of the larger ponds (which themselves are isolated from other suitable habitats), the habitats present within the site are unsuitable for use by Water Vole and Otter, lacking in wetland habitats or vegetation, whilst the nearest identified suitable habitats, including in particular the River Nar (for which background records of both Otter and Water Vole are available) are located over 300m from

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<sup>24</sup> English Nature (2002) *Badgers and Development*

<sup>25</sup> Natural England (2011) *Badgers and Development: A Guide to Best Practice and Licensing*, Interim Guidance Document

the site boundary (and further still from onsite ponds). As such, it is extremely unlikely that Water Vole or Otter would be present within the site.

## 5.6 Other Mammals

- 5.6.1 **Legislation.** Other UK mammal species do not receive direct legislative protection relevant to development activities but may receive protection against acts of cruelty (for example, under the Wild Mammals (Protection) Act 1996). Other mammal species, such as Hedgehog *Erinaceus europaeus*, Brown Hare *Lepus lepus* and Harvest Mouse *Micromys minutus* are S41 Priority Species and should be assessed as important ecological features.
- 5.6.2 **Background Records.** A number of records of mammals were returned within the desk study including records of Brown Hare, Harvest Mouse, Hedgehog, Muntjac *Muntiacus* sp. and Grey Squirrel *Sciurus carolinensis*.
- 5.6.3 **Survey Results and Evaluation.** A number of other mammal species were recorded within the site during the survey work undertaken, including Brown Hare, Roe Deer, Stoat and Muntjac, whilst the desktop study information includes records of Hedgehog, which is likely present. All of these species are common and widespread in England, however Hedgehog and Brown Hare are also Priority Species.
- 5.6.4 Other mammal species likely to use the site, such as Fox *Vulpes vulpes*, remain common in both a local and national context, and do not receive specific legislative protection in a development context.

## 5.7 Amphibians

- 5.7.1 **Legislation.** All British amphibians receive a degree of protection under the Wildlife and Countryside Act 1981 (as amended). Great Crested Newt *Triturus cristatus* is protected under the Act and is also listed as a European Protected Species under the Conservation of Habitats and Species Regulations 2017 (as amended). As such, both Great Crested Newt and habitats used by this species are afforded protection (see Annex 6806/2). Great Crested Newt is also a S41 Priority Species, as are Common Toad *Bufo bufo*, Natterjack Toad *Epidalea calamita*, and Pool Frog *Pelophylax lessonae*. As such, these species should be assessed as important ecological features.
- 5.7.2 **Background Records.** A number of records of mammals were returned by the desk study including records for Great Crested Newt with the closest record located 1.05km north of the site boundary.
- 5.7.3 **Survey Results.** Nine waterbodies are present within the site boundary and an additional thirty-nine offsite ponds were identified to be present within 500m of the site (see Plan 6806/ECO6). HSI scores were calculated for each pond, to initially investigate their likely suitability to support Great Crested Newt. Water samples were taken for eDNA analysis to investigate the presence/absence of Great Crested Newt from ponds within 500m of the site during 2024 and 2025.
- 5.7.4 The proposed Order Limit boundary has subsequently been increased in order to include areas of additional ecological mitigation land to the north, along with small highway sections at the junction of the A47 Swaffham Bypass and A1065 Castle Acre Road, such that a number of further (unsurveyed) ponds are now located within 500m of the proposed Order Limits. However, all of these additional ponds are located greater than 500m from the Solar PV site such that further survey work is unwarranted. . The results of the HSI and eDNA survey work undertaken are summarised at Plan 6806/ECO6 and set out in Table 5.11.

**Table 5.11.** HSI and eDNA survey results.

Pond	Suitability Indices										HSI Score	Suitability	eDNA Survey Result
	SI 1 Location	SI 2 Pond Area	SI 3 Pond Drying	SI 4 Water Quality	SI 5 Shade	SI 6 Water Fowl	SI 7 Fish	SI 8 Ponds	SI 9 Terrestrial Habitat	SI 10 Macrophytes			
Onsite Ponds													
P2a	1	0.2	0.5	0.33	0.6	0.67	0.67	1	0.67	0.9	0.59	Below Average	Negative (GCN Absent)
P3a	1	0.95	0.9	0.33	0.4	0.67	0.67	1	0.33	0.3	0.59	Below Average	Negative (GCN Absent)
P6a	1	0.25	0.9	0.67	1	0.67	1	1	0.33	1	0.71	Good	Negative (GCN Absent)
P7a	1	1	1	0.67	1	0.67	0.67	1	0.33	0.4	0.78	Good	Negative (GCN Absent)
P8a	1	0.95	1	1	1	0.67	1	1	0.33	0.4	0.78	Good	Negative (GCN Absent)
P9a	1	0.2	0.1	0.33	1	1	1	1	0.33	0.5	0.51	Below Average	Negative (GCN Absent)
P13a	1	0.82	1	0.67	0.9	0.33	0.67	1	0.67	0.35	0.69	Average	Negative (GCN Absent)
P18a	1	0.2	0.5	0.33	1	1	1	1	0.67	0.3	0.58	Average	Negative (GCN Absent)
OP3	1	0.8	0.5	0.67	0.2	1	1	1	0.67	0.35	0.65	Average	Negative (GCN Absent)
Offsite Ponds													
P4a	1	0.4	0.5	0.33	0.3	1	1	1	0.67	0.5	0.61	Average	Negative (GCN Absent)
P20a	1	0.4	0.9	0.33	0.2	1	1	0.95	0.67	0.3	0.58	Average	Negative (GCN Absent)
OP1	N/A – Pond Dry during June 2024												N/A
OP2	N/A – Pond Dry during June 2024												N/A
OP4	1	1	0.9	0.67	0.3	0.67	0.67	1	0.67	0.3	0.66	Average	Negative (GCN Absent)
OP5	1	1	0.9	0.33	0.8	0.67	0.67	1	1	0.8	0.75	Good	Negative (GCN Absent)
OP6	1	1	0.9	0.67	0.3	0.67	0.67	1	0.67	0.35	0.67	Average	Negative (GCN Absent)
OP7	1	1	0.9	0.33	1	0.67	0.67	1	0.33	0.3	0.65	Average	Negative (GCN Absent)
OP8	N/A – Pond Dry during April/May 2025												N/A
OP9	1	1	0.9	0.67	0.6	0.67	0.67	1	1	0.3	0.74	Good	Negative (GCN Absent)
OP17	1	1	0.9	0.67	0.4	0.67	1	1	1	0.3	0.79	Average	Negative (GCN Absent)
OP18	1	0.6	0.9	0.67	0.4	0.67	1	1	1	0.3	0.7	Good	Negative (GCN Absent)
OP19	1	0.6	0.9	0.33	1	0.67	1	1	0.33	0.3	0.64	Average	Negative (GCN Absent)
OP21	1	0.6	0.9	0.33	1	1	1	1	0.33	0.3	0.67	Average	Negative (GCN Absent)
OP22	1	0.6	0.9	0.33	0.2	1	1	1	1	0.6	0.68	Average	Negative (GCN Absent)
OP23	1	0.7	0.9	0.33	1	1	1	1	1	0.3	0.76	Good	Negative (GCN Absent)
OP24	N/A – Pond Dry during April/May 2025												N/A

OP40	1	0.6	0.9	0.33	1	1	1	1	1	0.3	<b>0.75</b>	Good	Negative (GCN Absent)
OP42	1	0.4	0.9	0.33	0.5	1	1	1	1	0.3	<b>0.67</b>	Average	Positive (GCN Present)
OP43	1	0.05	0.9	1	1	1	1	1	0.67	0.8	<b>0.69</b>	Average	Negative (GCN Absent)
OP44a	N/A – Pond Dry during April/May 2025												N/A
OP44b	1	0.6	0.9	1	1	0.67	0.67	1	0.67	0.6	<b>0.79</b>	Good	Positive (GCN Present)
OP44c	N/A – Pond Dry during April/May 2025												N/A
OP45	1	0.25	0.9	1	1	0.67	0.67	1	0.01	0.7	<b>0.48</b>	Poor	Positive (GCN Present)
OP46 (F40P1)	N/A – Pond Dry during April/May 2025												N/A

5.7.5 As set out, a number of the ponds present were recorded to provide potentially suitable breeding opportunities for amphibians such as Great Crested Newt. Accordingly, specific presence/absence survey work (in the form of eDNA surveys) for Great Crested Newt were undertaken in June 2024 and May 2025. All of the ponds present within the site returned negative results, confirming the likely absence of Great Crested Newt.

5.7.6 A total of three offsite ponds (OP42, OP44b and OP45) returned positive results, confirming the presence of Great Crested Newt. All of these ponds are located (substantially) over 500m from the Solar PV site. Offsite Pond OP42 is located approximately 195m north of the proposed Order Limits, albeit the closest areas are included solely for the purpose of Skylark mitigation measures (consistent with the existing arable use), such that it is substantially further removed from any proposed construction activities. Offsite Pond OP44b is located approximately 220m east of the proposed Order Limits, the closest areas of which are identified as potential working area for grid connection infrastructure associated with the existing Pylon line, whilst the pond is located over 500m from the Solar PV site (including beyond the A1065 South Acre Road). Offsite pond OP45 is located approximately 680m east of the closest areas within the proposed Order Limits (representing working area for grid connection infrastructure associated with the existing Pylon line) and as such is well-removed from the Scheme.

5.7.7 Accordingly, given the distance and separation of the small number of ponds identified to support Great Crested Newts, in combination with the negative survey results for all closer surveyed ponds, it is extremely unlikely that this species would be present within the proposed Solar PV site.

## 5.8 Birds

5.8.1 **Legislation.** All wild birds and their nests receive protection under Section 1 of the Wildlife and Countryside Act 1981 (as amended) in respect of killing and injury, and their nests, whilst being built or in use, cannot be taken, damaged or destroyed. Species included on Schedule 1 of the Act receive greater protection and special penalties apply to legal offences (see Annex 6806/2).

- 5.8.2 **Conservation Status.** The conservation importance of British bird species is categorised based on a number of criteria including the level of threat to a species' population status<sup>26</sup>. Species are listed as Green, Amber or Red. Red Listed species are considered to be of the highest conservation concern, being either globally threatened and/or experiencing a high level or rapid rate of population decline (>50% over the past 25 years). Numerous birds are also S41 Priority Species. Red and Amber listed species and Priority Species should be assessed as important ecological features.

**Background Records.** Information returned by the desk study included records for several bird species in the vicinity of the site, including the Red and Amber Listed species such as Hen Harrier *Circus cyaneus*, Rook *Corvus frugilegus*, Cuckoo *Cuculus canorus*, Merlin *Falco columbarius*, Kestrel *Falco tinnunculus*, Oystercatcher *Haematopus ostralegus*, Herring Gull *Haematopus ostralegus*, Lesser Black-backed Gull *Larus fuscus*, Nightingale *Luscinia megarhynchos*, Tree Sparrow *Passer montanus*, Marsh Tit *Poecile palustris*, Woodcock *Scolopax rusticola*, Turtle Dove *Streptopelia turtur*, Tawny Owl *Strix aluco*, Shelduck *Tadorna tadorna*, Green Sandpiper *Tringa ochropus*, Fieldfare *Turdus pilaris*, Sedge Warbler *Acrocephalus schoenobaenus* and Skylark *Alauda arvensis*, all of which are also all Priority Species. None of these records originate from within the site itself.

#### **Breeding Bird Survey Results**

- 5.8.3 A total of 75 bird species were recorded during the breeding bird surveys, of which 42 represent species of conservation concern and/or Schedule 1 species (see Plans 6806/ECO6a-f). Of these species, 27 species were identified to be definitely/probably breeding within the site, eleven of which (Grey Partridge, Cuckoo, Skylark, Lapwing, Marsh Tit, Mistle Thrush, Spotted Flycatcher, Yellow Wagtail, European Greenfinch, Common Linnet and Yellowhammer) are Red Listed species, albeit with the exception of Grey Partridge, Skylark, Yellowhammer and Linnet, recorded breeding activity was limited to no more than 1-2 pairs. The remaining 14 species were breeding in adjacent habitats, flying over the site or were represented by non-breeding individuals.
- 5.8.4 A summary of observations for each species is included in Table 5.7, including the estimated number of breeding territories within the site boundary, whilst the distribution of breeding birds is shown at Plan 6806/ECO7a-f.

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<sup>26</sup> Stanbury, A., Eaton, M., Aebischer, N., Balmer, D., Brown, A., Douse, A., Lindley, P., McCulloch, N., Noble, D. and Win I. (2021). 'The status of our bird populations: the fifth Birds of Conservation Concern in the United Kingdom, Channel Islands and Isle of Man and second IUCN Red List assessment of extinction risk for Great Britain. British Birds 114, p.p. 723-747.

**Table 5.7.** Bird Species of conservation concern recorded during the breeding bird surveys.

Systematic List of species (and BTO species code)	BoCC and legal Status	Est. no. pairs (individuals)	Notes
Greylag Goose <i>Anser anser</i>	Amber	Up to 4	Breeding probable but not proven
Common Shelduck <i>Tadorna tadorna</i>	Amber	~7	Breeding probable but not proven
Gadwall <i>Mareca strepera</i>	Amber	1	Breeding probable
Mallard <i>Anas platyrhynchos</i>	Amber	conservatively estimated at 10 pairs	Maximum daily count a post-breeding flock of 170 on 18/07/2024. Probably breeds on most pits around the property, Breeding confirmed.
Grey Partridge <i>Perdix perdix</i>	Red	Minimum of 8 pairs	Breeding confirmed, with at least two families (with 6 & 4 juvs) recorded in July. Maximum daily count of 9.
Stock Dove <i>Columba oenas</i>	Amber	15	Maximum daily count of 35, with a flock of 30+ over Fincham Drove farm buildings on 4 July. Breeding confirmed, with juvs recorded in July.
Common Woodpigeon <i>Columba palumbus</i>	Amber	50	Over 300 mature individuals counted across the site in April & May. Breeding confirmed by presence of juveniles in July, but exact number of pairs hard to estimate.
Common Cuckoo <i>Cuculus canorus</i>	Red	1	A singing male immediately N of the site along Washpit Drove in April and in the same general area in May could have been making use of the property for foraging or breeding. Breeding possible.
Common Swift <i>Apus apus</i>	Red	-	1–2 on July surveys and 12 feeding around vehicles harvesting oilseed rape on the evening of 18 July. There are limited potential nesting sites on site, and no evidence of breeding detected.
Common Moorhen <i>Gallinula chloropus</i>	Amber	5	2 families with downy young (one on Herrington's Pit) confirm breeding and suggest that all pits provide potential reproductive habitat.
Eurasian Oystercatcher <i>Haematopus ostralegus</i>	Amber	3 (probable)	Regular display, territorial and courtship flights in April & May suggest probable breeding albeit not confirmed.
Northern Lapwing <i>Vanellus vanellus</i>	Red	1 (probable)	Displaying birds over Field #5 in April and May indicate probable breeding albeit not confirmed.
Eurasian Curlew <i>Numenius arquata</i>	Red	2	One pair defending centre of field #18, likely defending nest with eggs or young. A second pair was found in Field #5 on 25 May, having previously been heard there on 26 April. It included ringed bird 7T, the first resighting of a bird released in July 2022 in Sandringham as part of the East of England Curlew head starting project.
Black-headed Gull <i>Chroicocephalus ridibundus</i>	Amber	-	Singles and as many as 17 birds recorded on most surveys, almost always foraging at pig units. At least 80 (incl 3+ juv) in a roost/pre-

			roost on recently harvested fields on the evening of 18 July.
Common Gull <i>Larus canus</i>	Amber	-	2 immature individuals, non-breeding.
Herring Gull <i>Larus argentatus</i>	Red	-	Single flying birds seen on half of surveys, usually close to pig units, with 7 immatures at Field 38, non-breeding.
Lesser Black-backed Gull <i>Larus fuscus</i>	Amber	-	1–70 recorded on every survey, usually foraging or roosting on pig units with 60 at an ephemeral flash on pool pig units and 20+ a roost/pre-roost on recently harvested. Non-breeder.
Eurasian Sparrowhawk <i>Accipiter nisus</i>	Amber	-	No evidence of breeding on site, but hunting ♂ seen on 4 occasions and 1♀ flying W with prey, indicates a nest nearby.
Red Kite <i>Milvus milvus</i>	Schedule 1 W&CA 1981	-	1–2 recorded on 6 surveys, always foraging over pig units. No evidence of breeding on site.
Barn Owl <i>Tyto alba</i>	Schedule 1 W&CA 1981	3	3 active nests identified in trees, as shown on plan 6806/ECO7a-f, including 1 in dead Ash <i>Fraxinus</i> on E side of Petticoat Drove; 1 in dead staghorn Oak <i>Quercus</i> tree on S edge Field #28 along E–W track on evening of 17 June; and 1 in large hole 3m up on N side of oak along track on W margin of pond in SW corner of Field #37 on evenings of 17 June & 18 July and morning of 1 July.
Tawny Owl <i>Strix aluco</i>	Amber	3 (probable)	Maximum count 3 territorial males heard on evening of 5 May. Breeding Probable.
Common Kestrel <i>Falco tinnunculus</i>	Amber	1-2	1♂ with probable juvenile at S edge of Field #24 on 4 July. Probably breeding.
Eurasian Hobby <i>Falco subbuteo</i>	Schedule 1 W&CA 1981	-	Two July sightings. No breeding evidence, but probably nesting nearby.
Rook <i>Corvus frugilegus</i>	Amber	-	Recorded on all visits, with maximum daily counts of 325 individuals, albeit no evidence of breeding within the site. A Rookery confirmed adjacent to the site, east of field #39, along the eastern verge of Castle Acre Road.
Marsh Tit <i>Poecile palustris</i>	Red	1 (probable)	Breeding not confirmed albeit probable within the site. Individual birds in hedges on the N-E edge of field #5, and the S corner of field #10, both sides of the River Road on the 8 <sup>th</sup> July.
Eurasian Skylark <i>Alauda arvensis</i>	Red	121	A minimum of 160 mature individuals (in April) and at least 121 territories were counted across the property.
Willow Warbler <i>Phylloscopus trochilus</i>	Amber	2 (probable)	Singing males at pits in Field #32 on 23 April and Field #7 on 24 & 25 May. Possible breeder.
Common Whitethroat <i>Curruca communis</i>	Amber	36 (probable)	Recorded on every visit, with a minimum of 36 territorial males, and a few pairs noted. Associated with hedgerows, using margins and to a lesser extent crops for foraging. Breeding confirmed by a family of 3 on 8 July.
Eurasian Wren <i>Troglodytes troglodytes</i>	Amber	147	Recorded on every visit, with a minimum of 147 territorial singing males across the property. Associated with hedgerows, using margins and to a lesser extent crops for foraging. Breeding confirmed.

Common Starling <i>Sturnus vulgaris</i>	Red	-	No evidence of breeding on site, with no April records and only 5 seen in May, but large numbers (with flocks of up to 230, mostly juvs). Non-breeding.
Mistle Thrush <i>Turdus viscivorus</i>	Red	1 (probable)	1 N over Field #28 on 4 July and a pair at Keepers Cottage on 8 July. Probable breeder. Mistle
Song Thrush <i>Turdus philomelos</i>	Amber	12	Recorded on most visits, with 12 singing males on territories across the property. Birds carrying food in July confirm breeding.
Spotted Flycatcher <i>Muscicapa striata</i>	Red	2 (probable)	A difficult bird to detect, recorded just twice at W corner Field #14 & NW corner of pig units Field #8 on 23 & 24 May. Possible breeder.
Dunnock <i>Prunella modularis</i>	Amber	30	A minimum of 45 birds counted across the property, but a somewhat skulking species that is easily underestimated. Juveniles in July confirm breeding.
House Sparrow <i>Passer domesticus</i>	Red	-	A single record of two birds heard on the evening of 17 June. No evidence of breeding.
Grey Wagtail <i>Motacilla cinerea</i>	Amber	-	A single bird at a puddle on the evening of 17 June. Non-breeding.
Western Yellow Wagtail <i>Motacilla flava</i>	Red	2 (probable)	2 individuals recorded on 23 & 26 April, probably passage birds. No evidence of breeding.
Meadow Pipit <i>Anthus pratensis</i>	Amber	-	Singles near farm buildings on Fincham Drove on 24 April & 20 May, but the only territorial behaviour a male singing from the E hedge of Field #35 on 1 July. Possible breeder.
European Greenfinch <i>Chloris chloris</i>	Red	1 (probable)	Recorded on every visit, with a maximum count across the property of 58 in April.
Common Linnet <i>Linaria cannabina</i>	Red	30	Estimation of breeding pairs difficult; 30 pairs conservatively calculated. 4 adults with a juv on 8 July confirm breeding.
Yellowhammer <i>Emberiza citrinella</i>	Red	54	Recorded on every visit, with a maximum count across the property of 102 in April at least 54 territories. Breeding confirmed by observations of adults entering or leaving presumed nest sites in hedge bottoms during May & July.
Common Reed Bunting <i>Emberiza schoeniclus</i>	Amber	4 (probable)	4 territorial singing males, 3 in oilseed rape fields, 1 in chicken units. Probable breeder.

### Wintering Bird Survey Results

- 5.8.5 The wintering bird survey undertaken from October 2024 to March 2025 recorded a total of 87 bird species.
- 5.8.6 As set out above, given the size of the site, in order to provide appropriate coverage wintering bird survey work was undertaken across 5 separate sectors with individual sectors surveyed on separate days during each surveyed month. Accordingly, in order to provide a representative figure for individual bird species recorded across the site, for each month the recorded numbers of individuals were summed across the 5 sectors. Whilst this approach could introduce some element of double counting, it is considered to provide the most appropriate site-wide measure of wintering bird activity based on the survey work undertaken.

5.8.7 The survey results are summarised at Table 5.8., below. On the basis of the survey work undertaken, the majority of the ornithological interest was recorded to be associated with mature hedgerows, pits, scrub, and field margins, with a number of field interiors and livestock fields also used.

**Table 5.8.** Wintering bird survey results.

Species	BOCC and legal status	October 2024	November 2024	December 2024	January 2025	February 2025	March 2025
Greylag Goose <i>Anser anser</i>	Amber	13	25			3	4
Pink-footed Goose <i>Anser brachyrhynchus</i>	Amber	67	70	568	2		
Canada Goose <i>Branta canadensis</i>	-					2	2
Egyptian Goose <i>Alopochen aegyptiaca</i>	-	4	12	8	8	26	17
Common Shelduck <i>Tadorna tadorna</i>	Amber			1	3	16	31
Gadwall <i>Mareca strepera</i>	Amber	15					
Mallard <i>Anas platyrhynchos</i>	Amber	227	260	175	112	46	44
Eurasian Teal <i>Anas crecca</i>	Amber			2	2		
Tufted Duck <i>Aythya fuligula</i>	-	1					
Grey Partridge <i>Perdix perdix</i>	Red	37	37	49	30	30	49
Common Pheasant <i>Phasianus colchicus</i>	Feral	234	169	133	126	61	105
Indian Peafowl <i>Pavo cristatus</i>	-		1				
Red-legged Partridge <i>Alectoris rufa</i>	Feral	13	14	3	18	4	26
Feral Pigeon <i>Columba livia</i>	Feral	70	62	140	60	140	64
Stock Dove <i>Columba oenas</i>	Amber	46	52	62	35	53	42
Common Woodpigeon <i>Columba palumbus</i>	Amber	700	1380	1200	990	2920	1080
Common Moorhen <i>Gallinula chloropus</i>	Amber	4	6	3	1	4	4
Stone-curlew <i>Burhinus oedipnemus</i>	Amber						1
Eurasian Oystercatcher <i>Haematopus ostralegus</i>	Amber	1					9
European Golden Plover	-	1	275		359	1	153

Species	BOCC and legal status	October 2024	November 2024	December 2024	January 2025	February 2025	March 2025
<i>Pluvialis apricaria</i>							
Northern Lapwing <i>Vanellus vanellus</i>	Red	192	662	345	467	1259	10
Eurasian Woodcock <i>Scolopax rusticola</i>	Red			1	1	2	
Common Snipe <i>Gallinago gallinago</i>	Amber	1	3		7		
Green Sandpiper <i>Tringa ochropus</i>	Amber	2	5	2	3		
Scolopacidae sp. <i>Scolopacidae sp.</i>	-	1					
Black-headed Gull <i>Chroicocephalus ridibundus</i>	Amber	555	870	1730	2200	1770	2579
Mediterranean Gull <i>Ichthyaeetus melanocephalus</i>	Amber	1					1
Common Gull <i>Larus canus</i>	Amber	6	86	132	490	225	392
Caspian Gull <i>Larus cachinnans</i>	Amber					2	1
European Herring Gull <i>Larus argentatus</i>	Red	2	16	24	9	6	7
Yellow-legged Gull <i>Larus michahellis</i>	Amber				2		
Great Black-backed Gull <i>Larus marinus</i>	Amber			2	4		1
Lesser Black-backed Gull <i>Larus fuscus</i>	Amber	245	22	9	10	6	27
Great Cormorant <i>Phalacrocorax carbo</i>	-					1	11
Little Egret <i>Egretta garzetta</i>	-	4					
Western Cattle-Egret <i>Ardea ibis</i>	Amber		1				
Grey Heron <i>Ardea cinerea</i>	-		2				
Eurasian Sparrowhawk <i>Accipiter nisus</i>	Amber	4	4	3	3	3	1
Eurasian Goshawk <i>Astur gentilis</i>	Sch. 1	4					
Red Kite <i>Milvus milvus</i>	Sch. 1	5	8	4	5	9	5
Common Buzzard <i>Buteo buteo</i>	-	18	16	20	15	13	40
Western Barn Owl <i>Tyto alba</i>	Sch. 1						2

Species	BOCC and legal status	October 2024	November 2024	December 2024	January 2025	February 2025	March 2025
Tawny Owl <i>Strix aluco</i>	Amber	1				1	1
Short-eared Owl <i>Asio flammeus</i>	Amber				1		
Great Spotted Woodpecker <i>Dendrocopos major</i>	-	2		1	1	1	4
Eurasian Green Woodpecker <i>Picus viridis</i>	-	2	1				1
Common Kestrel <i>Falco tinnunculus</i>	Amber	5	9	9	7	6	6
Merlin <i>Falco columbarius</i>	Red	1				1	1
Eurasian Jay <i>Garrulus glandarius</i>	-	11	13	10	6	7	7
Common Magpie <i>Pica pica</i>	-		4	2	3	3	3
Eurasian Jackdaw <i>Coloeus monedula</i>	-	116	131	230	194	175	114
Rook <i>Corvus frugilegus</i>	Amber	260	411	451	746	724	103
Carrion Crow <i>Corvus corone</i>	-	52	47	52	63	78	77
Common Raven <i>Corvus corax</i>	-	5	2		3		2
Coal Tit <i>Periparus ater</i>	-	7	5	5	4	5	14
Marsh Tit <i>Poecile palustris</i>	Red	2		1		2	2
Eurasian Blue Tit <i>Cyanistes caeruleus</i>	-	53	41	59	41	43	58
Great Tit <i>Parus major</i>	-	27	12	20	21	21	32
Woodlark <i>Lullula arborea</i>	-					1	1
Eurasian Skylark <i>Alauda arvensis</i>	Red	172	108	300	417	136	175
Common Chiffchaff <i>Phylloscopus collybita</i>	-					60	
Long-tailed Tit <i>Aegithalos caudatus</i>	-	47	35	28	29	27	38
Goldcrest <i>Regulus regulus</i>	-	21	6	7	9	6	12
Eurasian Nuthatch <i>Sitta europaea</i>	-	1	3	1	1	1	1
Eurasian Treecreeper <i>Certhia familiaris</i>	-	4	4	2	1	3	3
Eurasian Wren <i>Troglodytes troglodytes</i>	Amber	94	98	101	80	69	75

Species	BOCC and legal status	October 2024	November 2024	December 2024	January 2025	February 2025	March 2025
Common Starling <i>Sturnus vulgaris</i>	Red	6620	3385	1330	11075	2640	483
Mistle Thrush <i>Turdus viscivorus</i>	Red	10	12	3	6	2	4
Song Thrush <i>Turdus philomelos</i>	Amber	51	69	90	65	52	33
Redwing <i>Turdus iliacus</i>	Sch. 1	180	17	23	1	20	116
Eurasian Blackbird <i>Turdus merula</i>	-	81	133	136	142	70	69
Fieldfare <i>Turdus pilaris</i>	Sch. 1	110	49	128	429	292	790
European Robin <i>Erithacus rubecula</i>	-	128	66	71	43	55	70
European Stonechat <i>Saxicola rubicola</i>	-					1	
Dunnock <i>Prunella modularis</i>	Amber	52	36	38	33	31	47
Grey Wagtail <i>Motacilla cinerea</i>	Amber	3	3	3	3	1	4
Pied Wagtail <i>Motacilla alba</i>	-	70	116	100	48	52	43
Meadow Pipit <i>Anthus pratensis</i>	Amber	50	52	49	122	42	11
Common Chaffinch <i>Fringilla coelebs</i>	-	97	190	183	150	97	94
Brambling <i>Fringilla montifringilla</i>	-	2	3		2		
Hawfinch <i>Coccothraustes coccothraustes</i>	Red	1					
Eurasian Bullfinch <i>Pyrrhula pyrrhula</i>	Amber	4	1	2	5	5	5
European Greenfinch <i>Chloris chloris</i>	Red	7	2		40	1	
Common Linnet <i>Linaria cannabina</i>	Red	73	223	40	181	7	159
European Goldfinch <i>Carduelis carduelis</i>	-	98	65	43	62	37	65
Eurasian Siskin <i>Spinus spinus</i>	-	11	7	5	3	4	2
Yellowhammer <i>Emberiza citrinella</i>	Red	89	50	69	37	101	149
Common Reed Bunting <i>Emberiza schoeniclus</i>	Amber	3	4	7	4	2	3
Totals		11096	9471	8215	19040	11424	7645

## 5.9 Reptiles

**5.9.1 Legislation.** All six species of British reptile are listed under Schedule 5 of the Wildlife and Countryside Act 1981 (as amended), which protects individuals against intentional killing or injury. Sand Lizard *Lacerta agilis* and Smooth Snake *Coronella austriaca* receive additional protection under the Conservation of Habitats and Species Regulations 2017 (as amended), as set out at Annex 6806/2. All six reptile species are also S41 Priority Species. As such, all reptile species should be assessed as important ecological features.

**5.9.2 Background Records.** Information returned from the desk study included a single record of Adder *Vipera berus*, located within the OS 1km x 1km grid square approximately 1.35km north of the site boundary, albeit no more specific information is available that would enable the precise location of the record to be confirmed.

**5.9.3 Survey Results and Evaluation.** Specific survey work for reptiles was undertaken at the site, as shown on Plan 6806/ECO8 and summarised in Table 5. below.

**Table 5.13.** Reptile survey results.

Visit	Date	Common Lizard		Slow Worm		Grass Snake	
		Adult	Juv.	Adult	Juv.	Adult	Juv.
1a	15/04/2025	1	0	0	0	0	0
1b	16/04/2025	0	0	0	0	0	0
2a	29/04/2025	0	1	0	0	0	0
2b	30/04/2025	0	0	0	0	0	0
3a	07/05/2025	0	0	0	0	1	2
3b	08/05/2025	0	0	0	0	0	0
4a	13/05/2025	0	0	0	0	0	0
4b	14/05/2025	0	0	0	0	0	0
5a	20/05/2025	0	0	0	0	1	0
5b	21/05/2025	0	0	0	0	0	0
6a	03/06/2025	0	0	0	0	2	3
6b	04/06/2025	0	0	0	0	0	0
7a	12/06/2025	0	0	0	0	1	1
7b	13/06/2025	0	0	0	0	0	1
Peak Count		1		0		2	

**5.9.4** Peak counts of 1 Common Lizard *Zootoca vivipara* and 2 adult Grass Snake *Naatrix natrix* were recorded, with the majority of animals recorded in the semi-improved and improved grassland along a number of arable field boundaries of the site (transects D, G, H and K – see Plan 6806/ECO8). Given the areas of suitable reptile habitat across the site, the peak counts clearly corresponds to less than 1 individual per hectare for each species. As such, both Common Lizard and Grass Snake are considered to be present at low populations under the standard guidance<sup>27</sup> and it is therefore considered that the population of reptiles supported by the study area is of importance at the local level only.

<sup>27</sup> Herpetofauna Groups of Britain and Ireland (1998) Evaluating local mitigation/translocation programmes: Maintaining Best Practice and lawful standards

## 5.10 Invertebrates

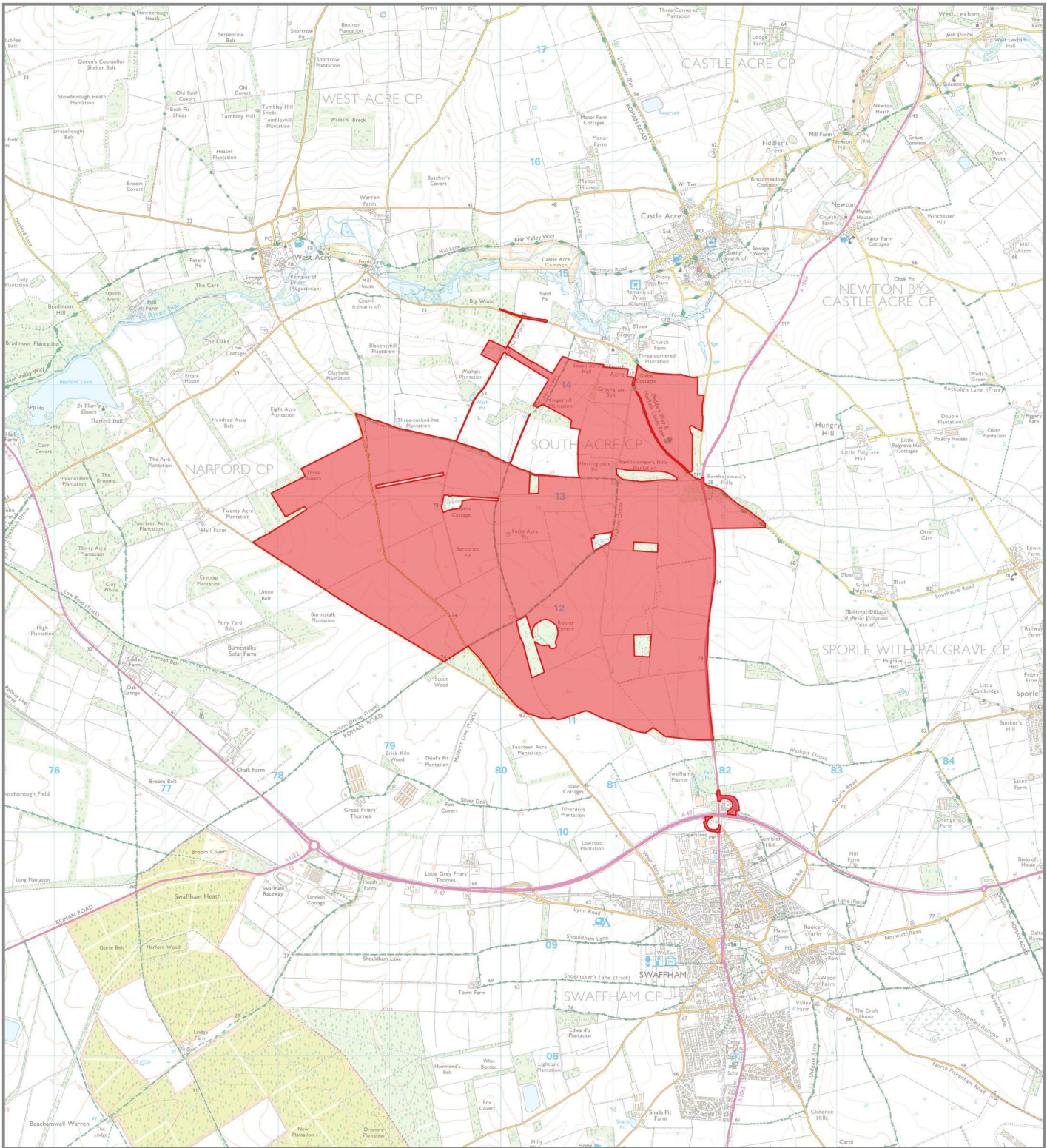
- 5.10.1 Legislation.** A number of invertebrate species are listed under Schedule 5 of the Wildlife and Countryside Act 1981 (as amended). In addition, Large Blue Butterfly *Maculinea arion*, Fisher's Estuarine Moth *Gortyna borelii lunata* and Lesser Whirlpool Ram's-horn Snail *Anisus vorticulus* receive protection under the Conservation of Habitats and Species Regulations 2017 (as amended); refer to Annex 6806/2. A number of invertebrates are also S41 Priority Species. Where such species are present, they should be assessed as important ecological features.
- 5.10.2 Background Records.** A number of records of invertebrate species within the search area around the site were returned within information received from LRC, including a number of species which are identified as priority species. However, none of the specific records appear to relate to land within the site itself.
- 5.10.3 Survey Results and Evaluation.** No evidence for the presence of any protected, rare or notable invertebrate species was recorded within the site during the general survey work undertaken. The site is dominated by intensively managed arable land within large, open fields, which are unlikely to support more than an extremely limited diversity of invertebrate species, albeit boundary habitats including hedgerows and trees (including a number of veteran trees), ponds and woodlands likely provide raised opportunities for invertebrate species.
- 5.10.4** A number of common invertebrate species were recorded at the site during the survey work undertaken, including Green Veined White *Pieris napi*, Seven-spot Ladybird *Coccinella septempunctata*, Yellow Dung-fly *Scathophaga stercoraria*, St Mark's Fly *Bibio marci*, Flesh-fly (Sarcophagidae), Pale-lipped Banded Snail *Cepaea hortensis*, Common Carder Bumblebee *Bombus pascuorum*, Red-tailed Bumblebee *Bombus lapidarius*, Buff-tailed Bumblebee *Bombus terrestris*, Holly Blue *Celastrina argiolus*, Small Tortoiseshell *Aglais urticae*, Orange Tip *Anthocharis cardamines*, and Rose Bedeguar gall indicating the presence of the Gall Wasp *Diplolepis rosae*.

## 6 Conclusions

- 6.1 Aspect Ecology has carried out a baseline ecological assessment of the proposed development site, based on the results of a desktop study, habitat survey and a number of detailed faunal and protected species surveys.
- 6.2 The available information confirms that a number of statutory or non-statutory nature conservation designations are present in the surrounding area.
- 6.3 The habitat survey has established that the existing important ecological habitats and features within the site are formed by trees (including veteran trees), hedgerows, woodlands and ponds, whilst the majority of the site area is dominated by intensively managed arable land which offers limited ecological value or importance.
- 6.4 The habitats within the site support several protected species, including species protected under both national and European legislation.

## Plan 6806/ECO1:

Site Location



Key:



Site Location

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The Drove Solar Farm DCO

Site Location

6806/ECO1

C/BG

August 2025

CL/BG

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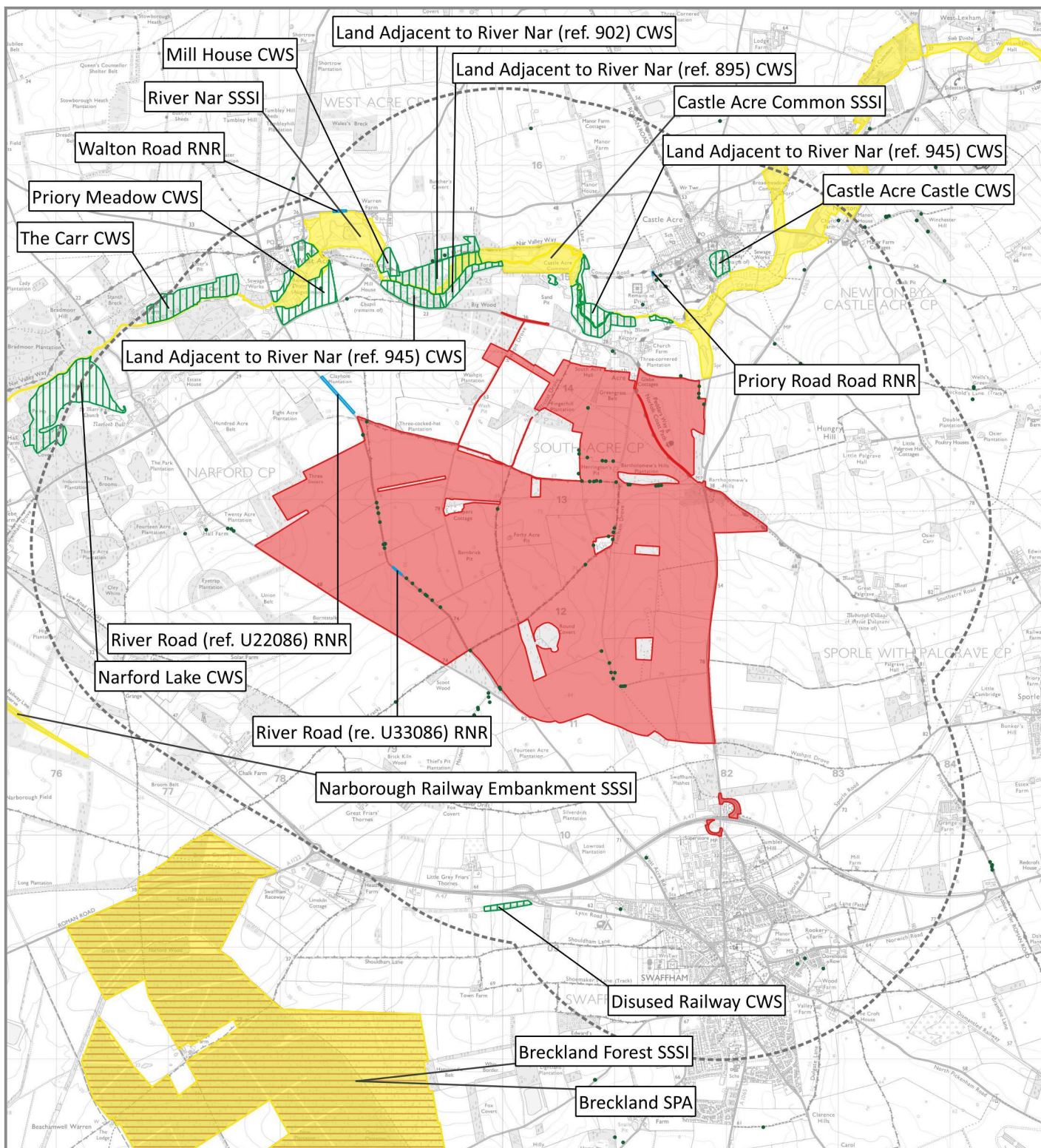
QC



## Plan 6806/ECO2:

Ecological Designations

---



#### Key:

- Site Location
- Site of Special Scientific Interest (SSSI)
- Special Protection Area (SPA)
- County Wildlife Site (CWS)
- Roadside Nature Reserve (RNR)
- Veteran Tree
- 2km Local Records Centre Search Area

Non-statutory data provided by Norfolk Biodiversity Information Service Records Centre

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#### The Doves Solar Farm DCO

#### Ecological Designations

6806/ECO2

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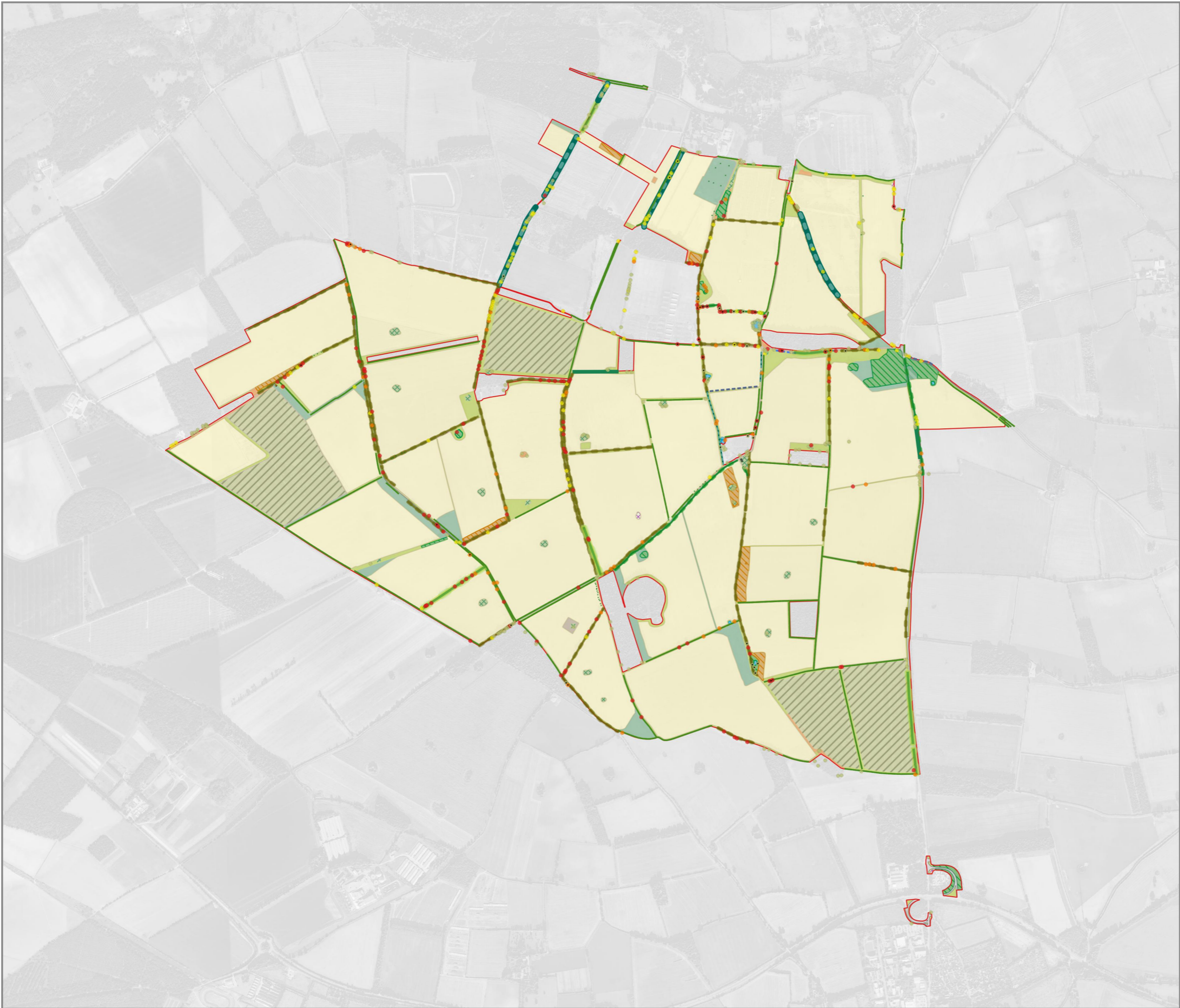
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## Plan 6806/ECO3:

Habitats and Ecological Features

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Habitats and Ecological Features

6806/ECO3a

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Key:

Site Boundary

Arable

Arable field margins game bird mix

Arable ley (Pig-Grazed)

Bare ground

Bracken

Bramble scrub

Building

Building with Moderate Bat Roost Potential

Coniferous plantation woodland

Dense scrub

Hardstanding

Broadleaved woodland

Mixed broadleaved plantation woodland

Mixed woodland

Modified grassland

Other neutral grassland

Pond

Tall forbs

Dry Ditch

Hedgerow

Hedgerow with Trees

Line of Trees

Species-poor Native Hedgerow

Species-poor Native Hedgerow - associated with bank or ditch

Species-poor Native Hedgerow with Trees

Species-rich Native Hedgerow

Species-rich Native Hedgerow with Trees

Wet Ditch

Veteran Tree

Veteran Tree with Bat Roost Potential – PRF-M

Veteran Tree with Bat Roost Potential – PRF-I

Veteran Tree with Bat Roost Potential – FAR

Tree with Bat Roost Potential – PRF-M

Tree with Bat Roost Potential – PRF-I

Tree with Bat Roost Potential – FAR

Tree

Scattered Scrub

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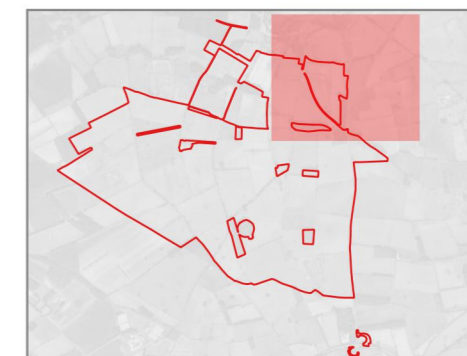
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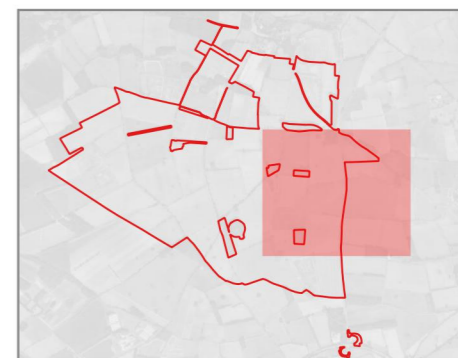
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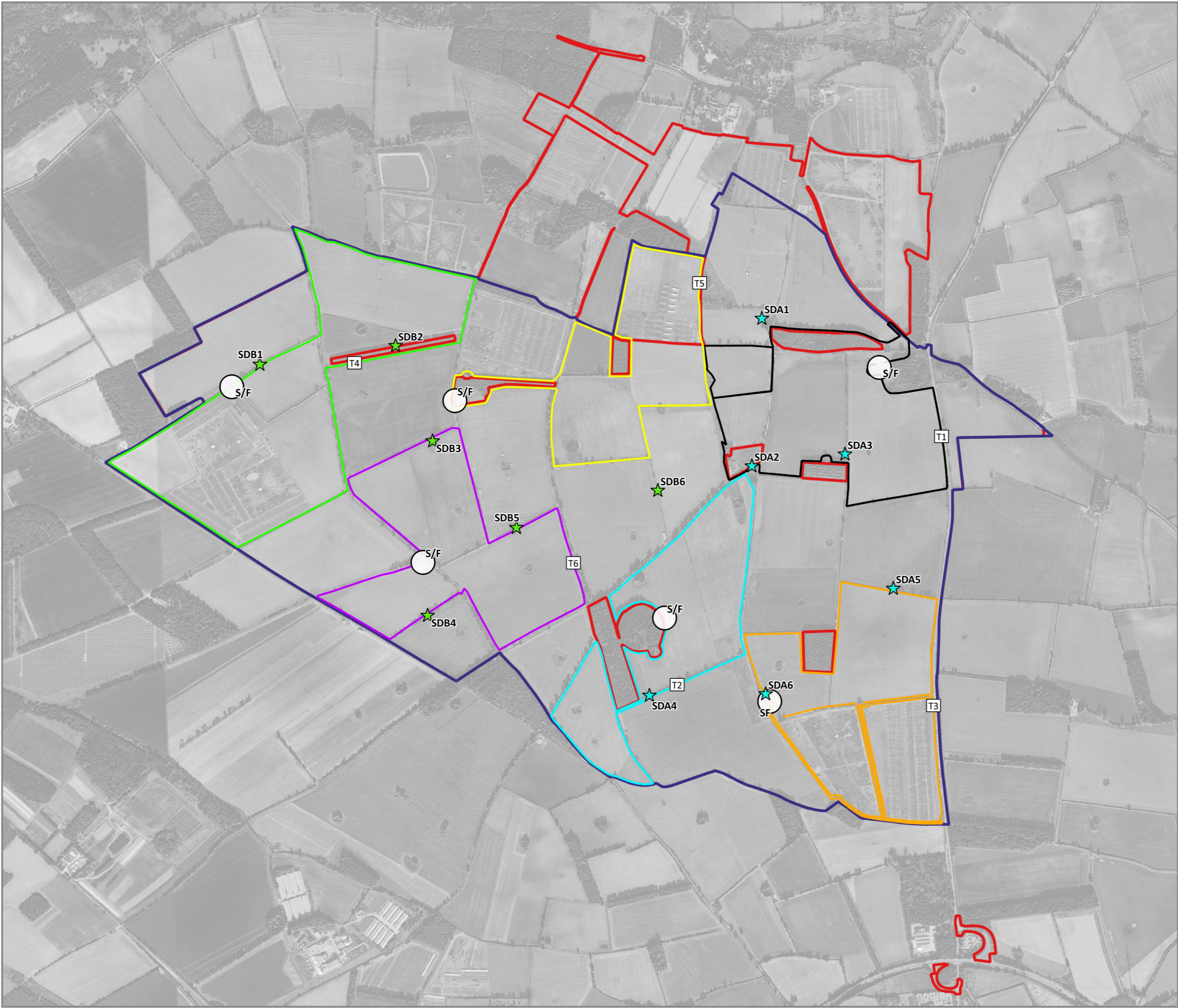
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## **Plan 6806/ECO4a-s:**

### Night-time Bat Walkover Survey Results




Key:

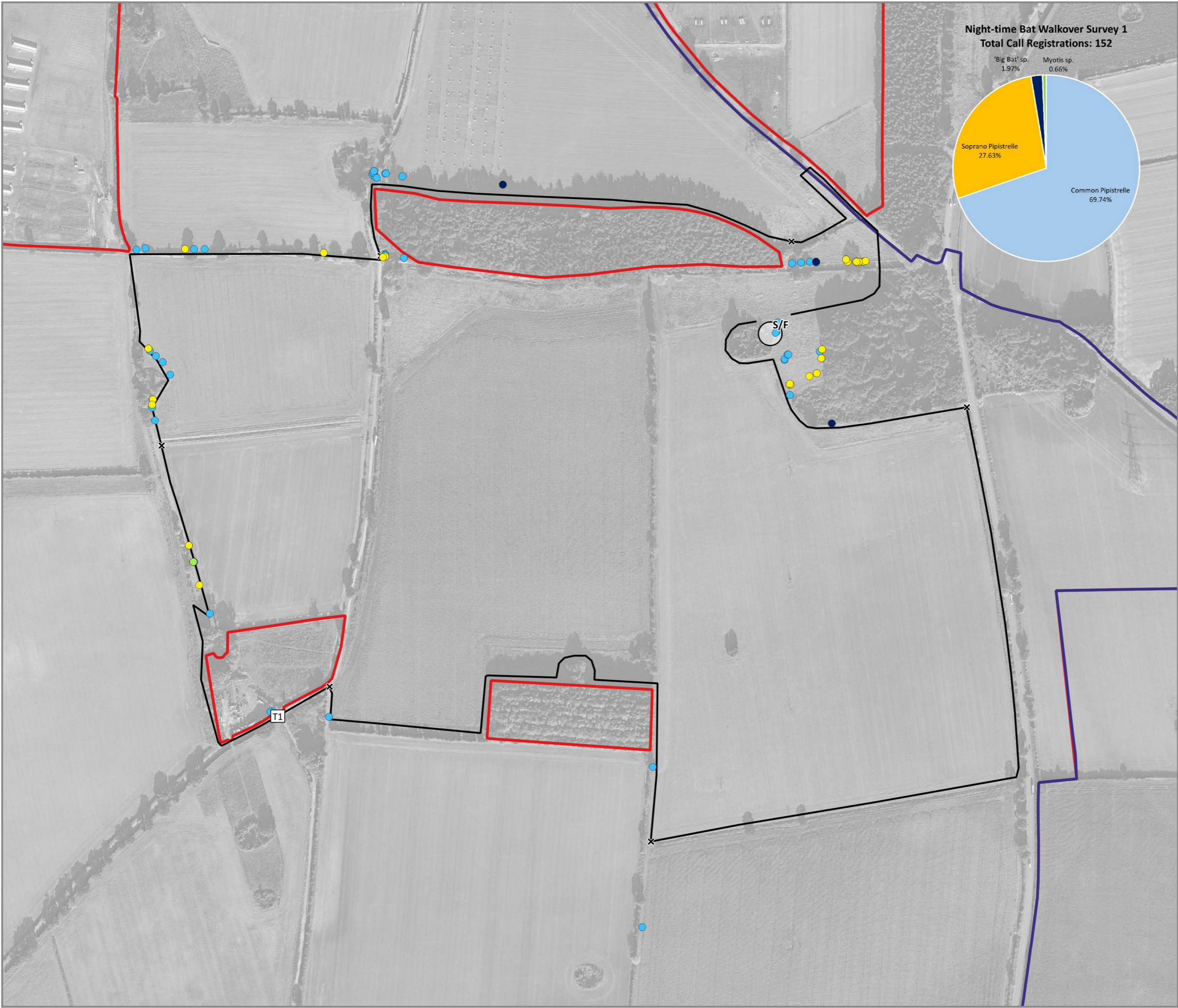
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- Survey Extent
- Transect T1
- Transect T2
- Transect T3
- Transect T4
- Transect T5
- Transect T6
- Transect Section Break
- Start/Finish Location
- Statics Batch A
- Statics Batch B



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	REV B/LS
	DATE September 2025
	QC ES/LS





Key:

- Site Boundary
- Survey Extent
- Transect T1
- Start/Finish Location
- Transect Section Break
- Common Pipistrelle Registration
- Soprano Pipistrelle Registration
- Big Bat species Registration
- Myotis species Registration

Bat call registration defined as presence of one or more call sequences for that bat species within one file recording from Anabat Scout detector, with a maximum recording length of 10 seconds.

Note that bat call registrations which did not have GPS data recorded on the Anabat Scout detector have not been included on this plan.

In instances where bat call registrations were recorded in exactly the same location and thus overlap completely, registrations have been stacked with priority given to rarer species.



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Night-time Bat Walkover Transects Plan	TITLE
Transect 1 (May 2024)	
6806/ECO4b	DRAWING NO.
C/LS	REV
September 2025	DATE
ES/LS	QC





Key:

- Site Boundary
- Survey Extent
- Transect T1
- Start/Finish Location
- Transect Section Break
- Common Pipistrelle Registration
- Soprano Pipistrelle Registration
- Big Bat species Registration
- Myotis species Registration

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Key:

- Site Boundary
- Survey Extent
- Transect T1
- Start/Finish Location
- Transect Section Break
- Common Pipistrelle Registration
- Soprano Pipistrelle Registration
- Long-eared species Registration
- Big Bat species Registration
- Barbastelle Registration

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Night-time Bat Walkover Transects Plan  
Transect 1 (October 2024)

6806/ECO4d

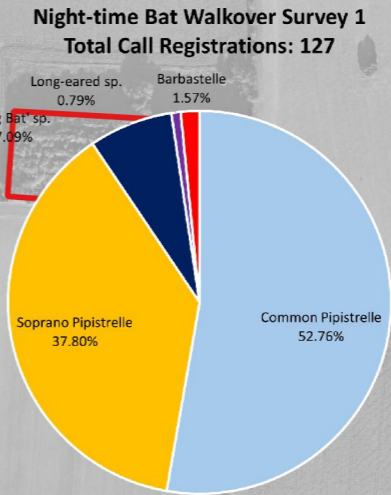
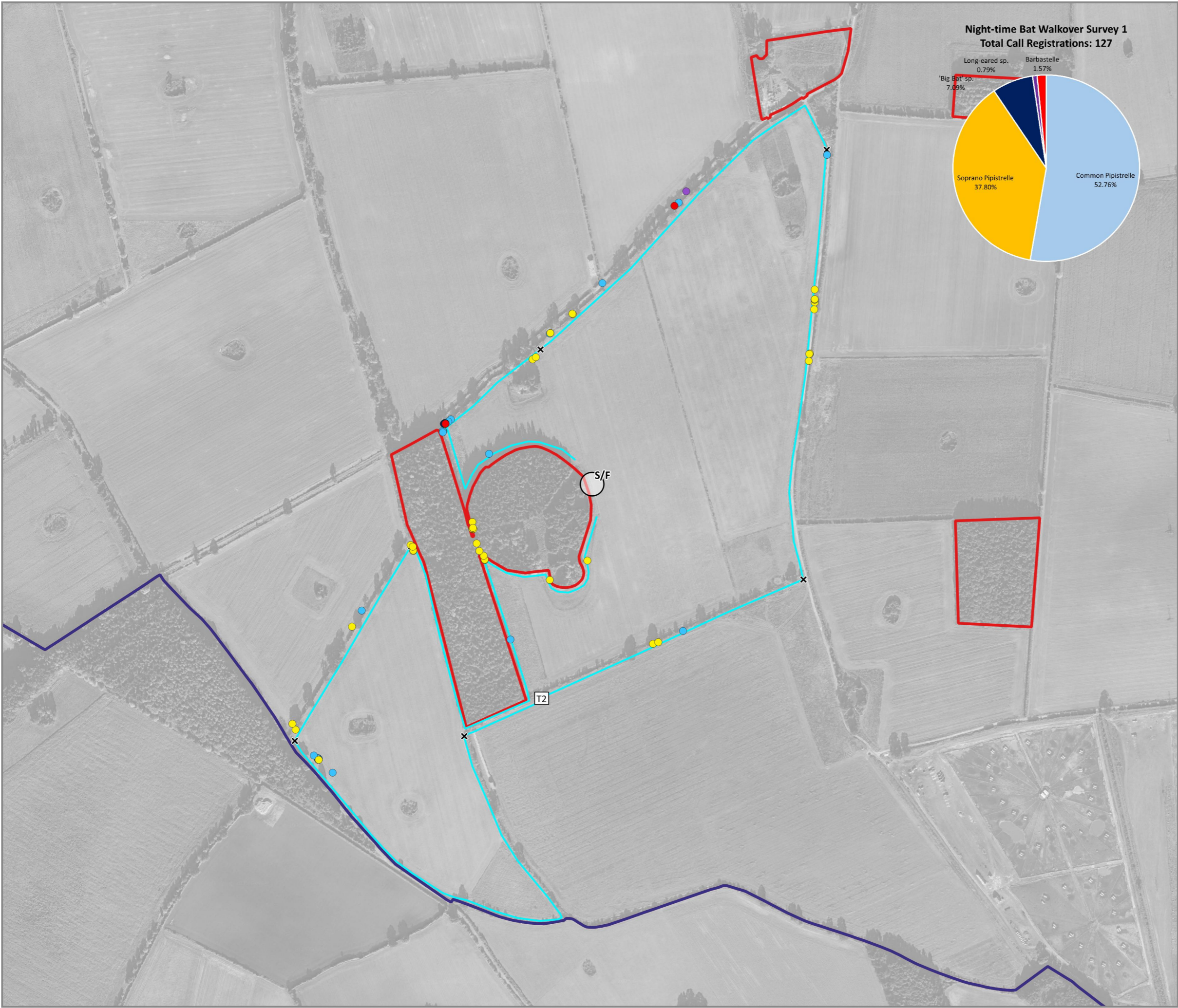
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- Key:**
- Site Boundary
  - Survey Extent
  - Transect T2
  - Start/Finish Location
  - Transect Section Break
  - Common Pipistrelle Registration
  - Soprano Pipistrelle Registration
  - Long-eared species Registration
  - Big Bat species Registration
  - Barbastelle Registration

*Bat call registration defined as presence of one or more call sequences for that bat species within one file recording from Anabat Scout detector, with a maximum recording length of 10 seconds.*

*Note that bat call registrations which did not have GPS data recorded on the Anabat Scout detector have not been included on this plan.*

*In instances where bat call registrations were recorded in exactly the same location and thus overlap completely, registrations have been stacked with priority given to rarer species.*



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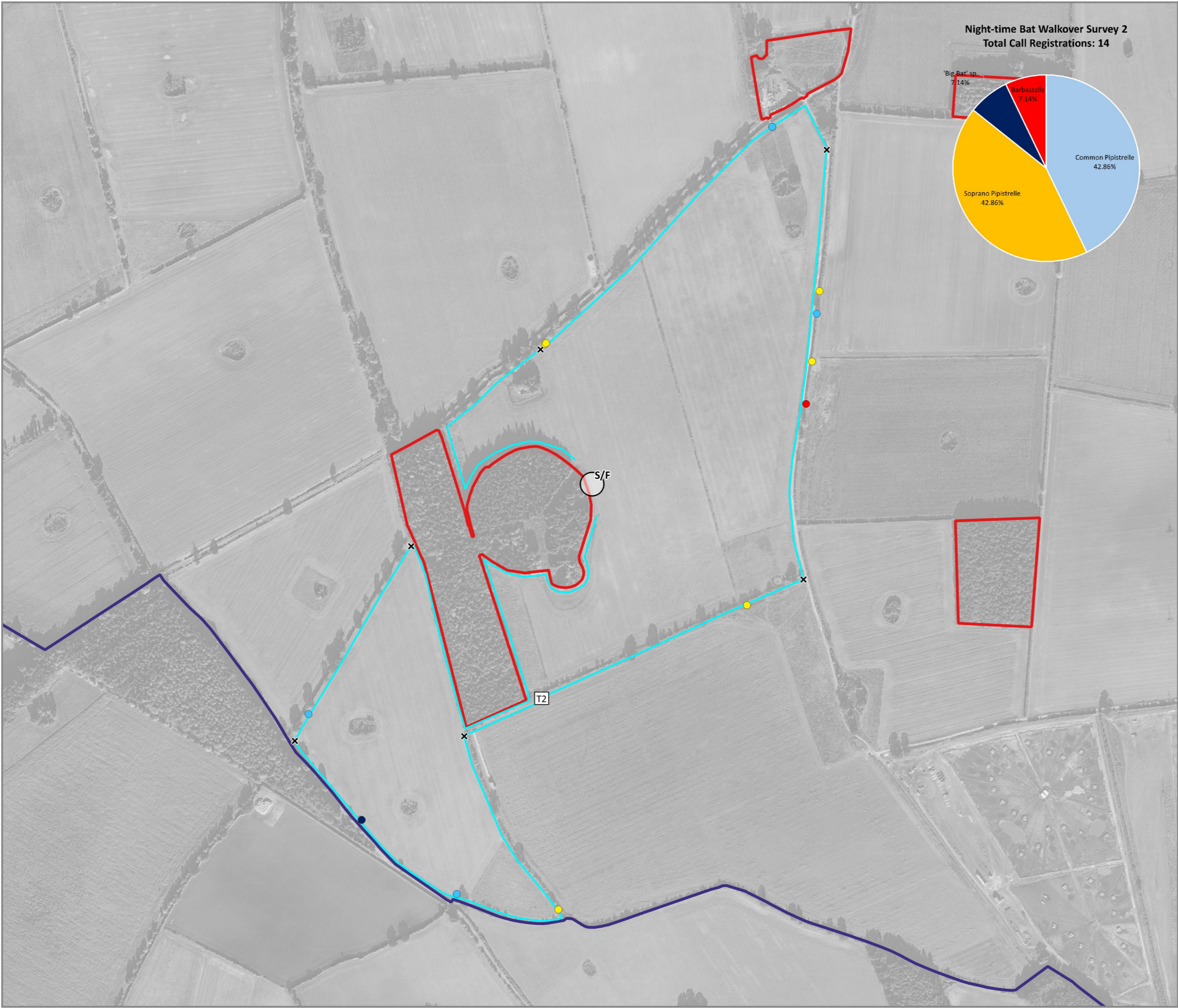
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Transect 2 (May 2024)

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REV  
DATE  
QC



Key:

- Site Boundary
- Survey Extent
- Transect T2
- Start/Finish Location
- Transect Section Break
- Common Pipistrelle Registration
- Soprano Pipistrelle Registration
- Big Bat species Registration
- Barbastelle Registration

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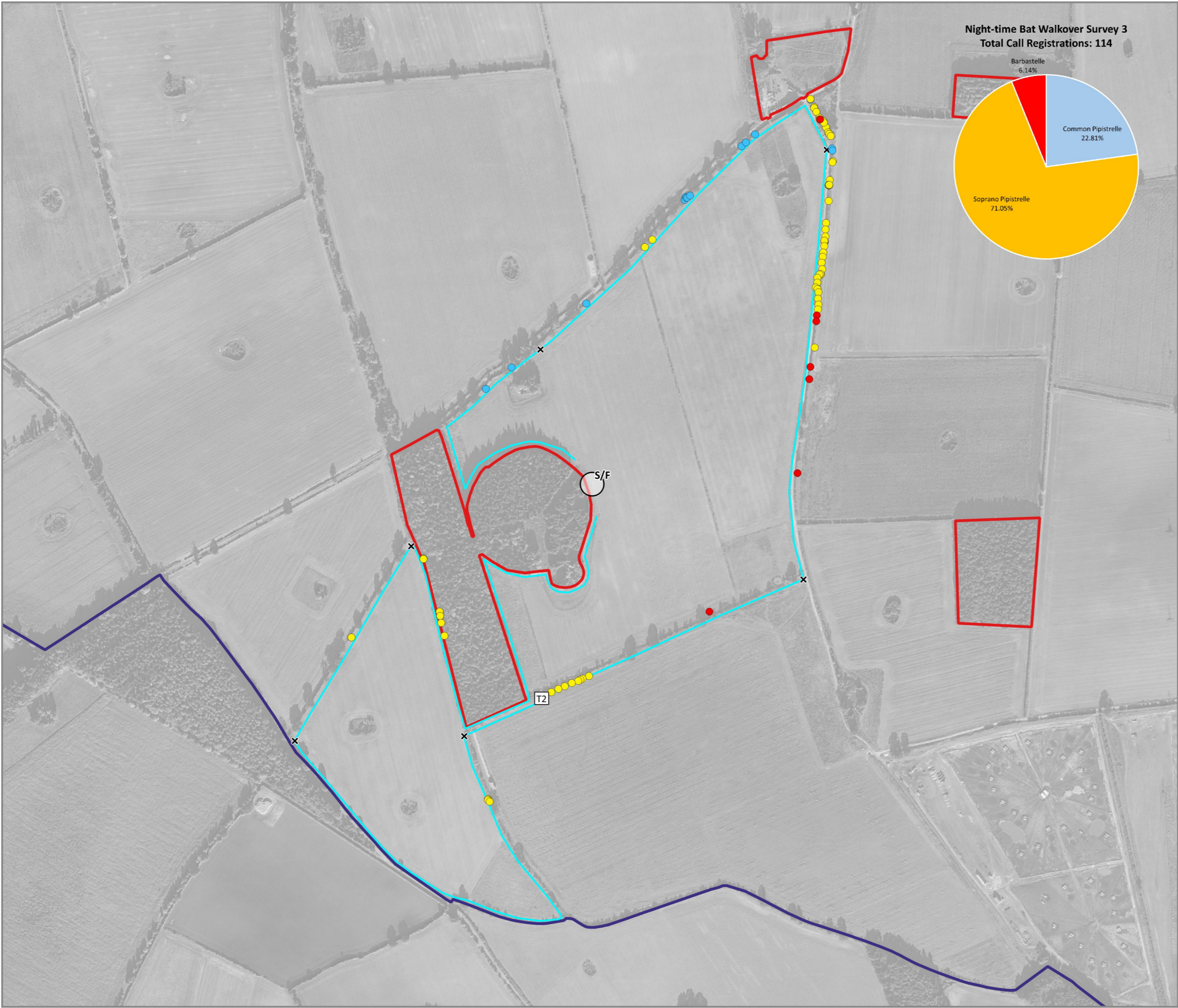
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	DRAWING NO.
	REV
	DATE



Key:

- Site Boundary
- Survey Extent
- Transect T2
- Start/Finish Location
- Transect Section Break
- Common Pipistrelle Registration
- Soprano Pipistrelle Registration
- Barbastelle Registration

Bat call registration defined as presence of one or more call sequences for that bat species within one file recording from Anabat Scout detector, with a maximum recording length of 10 seconds.

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Transect 2 (October 2024)

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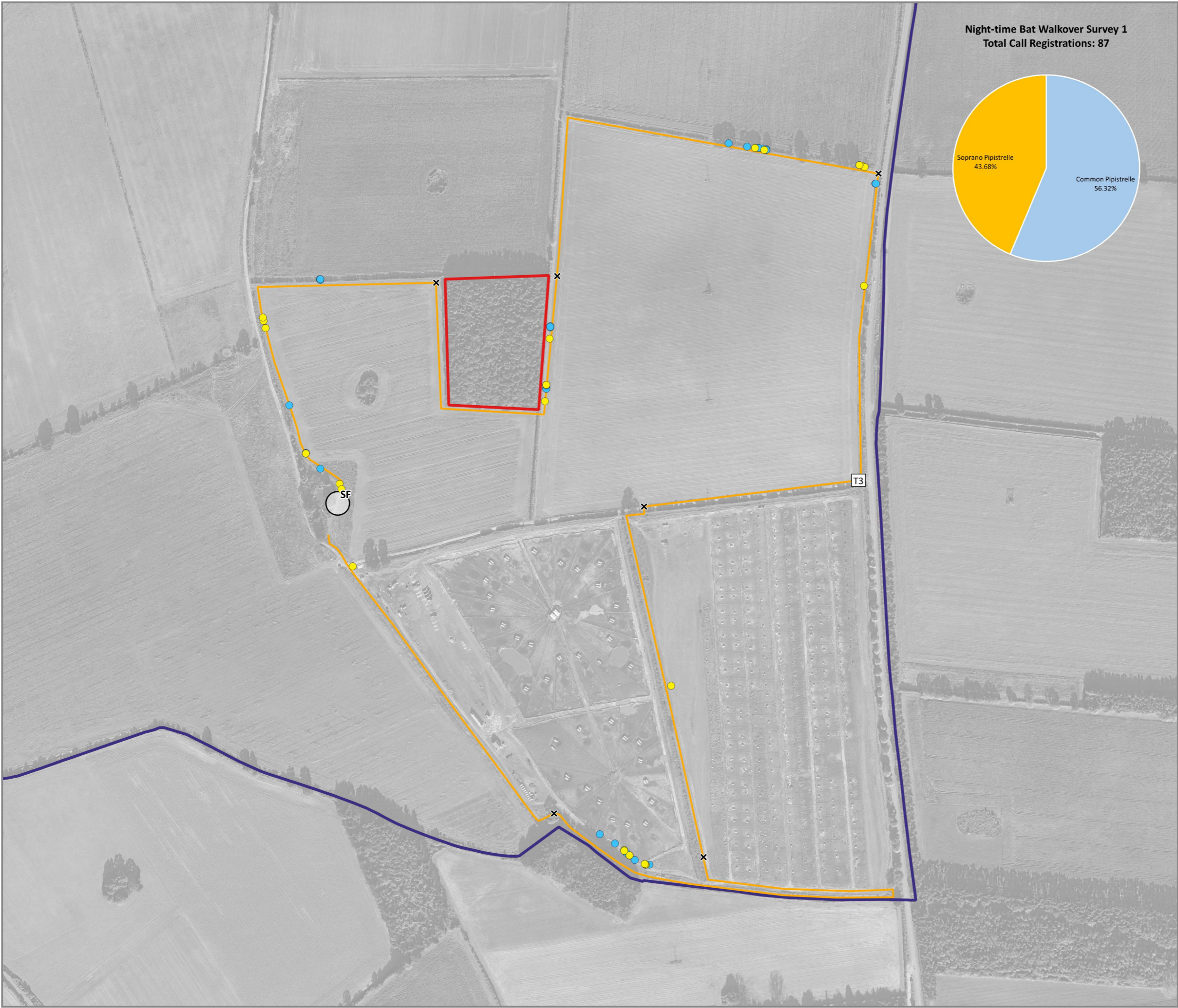
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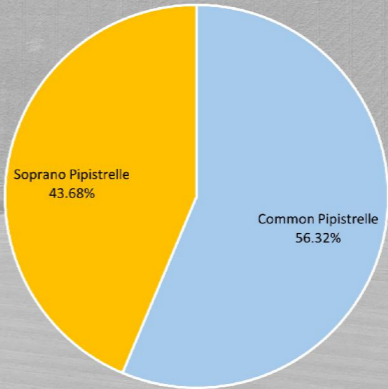
REV

DATE

QC



Night-time Bat Walkover Survey 1  
Total Call Registrations: 87



- Key:
- Site Boundary
  - Survey Extent
  - Transect T3
  - Start/Finish Location
  - Transect Section Break
  - Common Pipistrelle Registration
  - Soprano Pipistrelle Registration

Bat call registration defined as presence of one or more call sequences for that bat species within one file recording from Anabat Scout detector, with a maximum recording length of 10 seconds.

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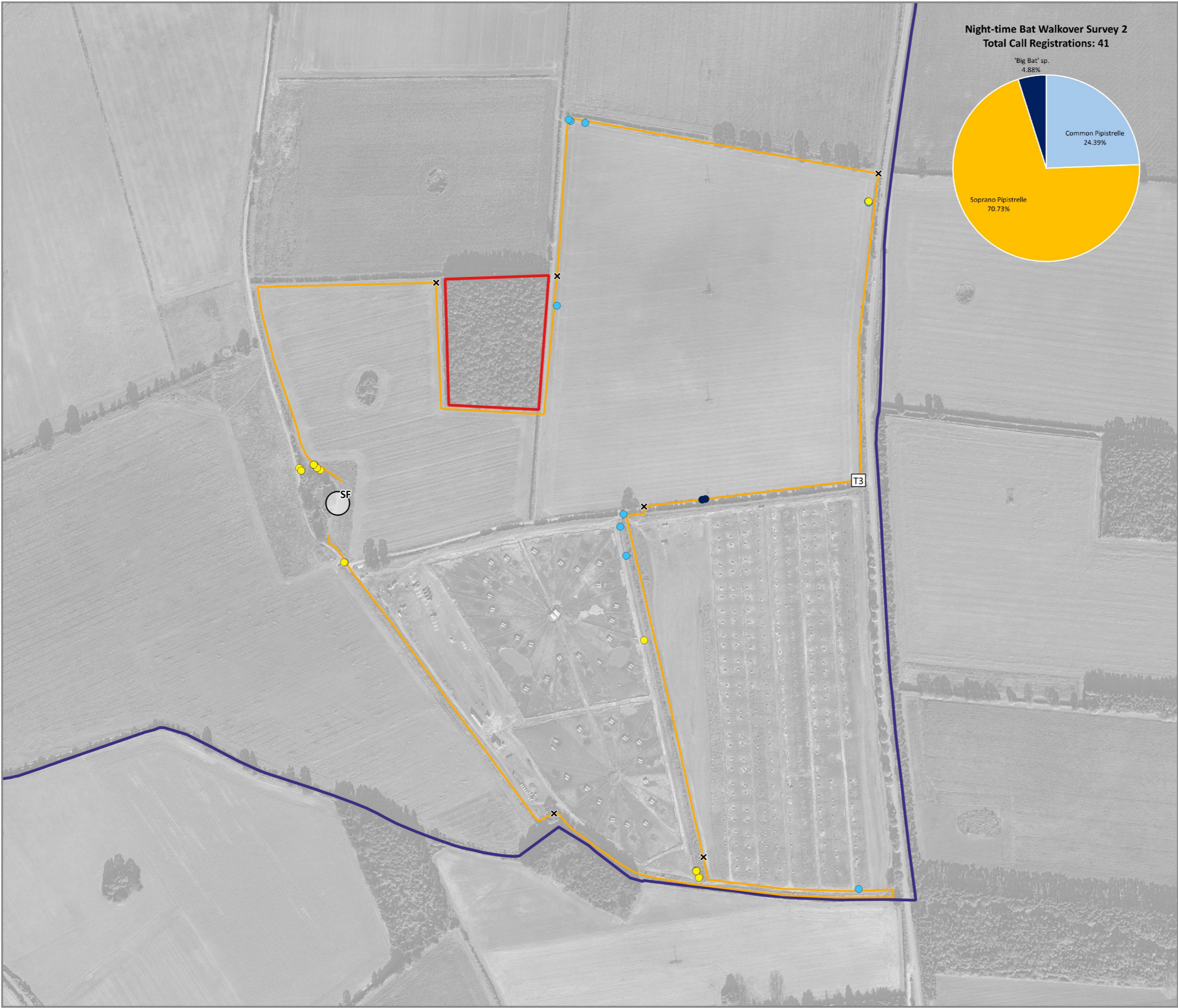
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Night-time Bat Walkover Transects Plan  
Transect 3 (May 2024)

6806/ECO4h



C/LS  
September 2025  
ES/LS

PROJECT  
TITLE  
DRAWING NO.  
REV  
DATE  
QC



Key:

- Site Boundary
- Survey Extent
- Transect T3
- Start/Finish Location
- Transect Section Break
- Common Pipistrelle Registration
- Soprano Pipistrelle Registration
- Big Bat species Registration

Bat call registration defined as presence of one or more call sequences for that bat species within one file recording from Anabat Scout detector, with a maximum recording length of 10 seconds.

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Night-time Bat Walkover Transects Plan  
Transect 3 (August 2024)

PROJECT

TITLE

DRAWING NO.

REV

DATE

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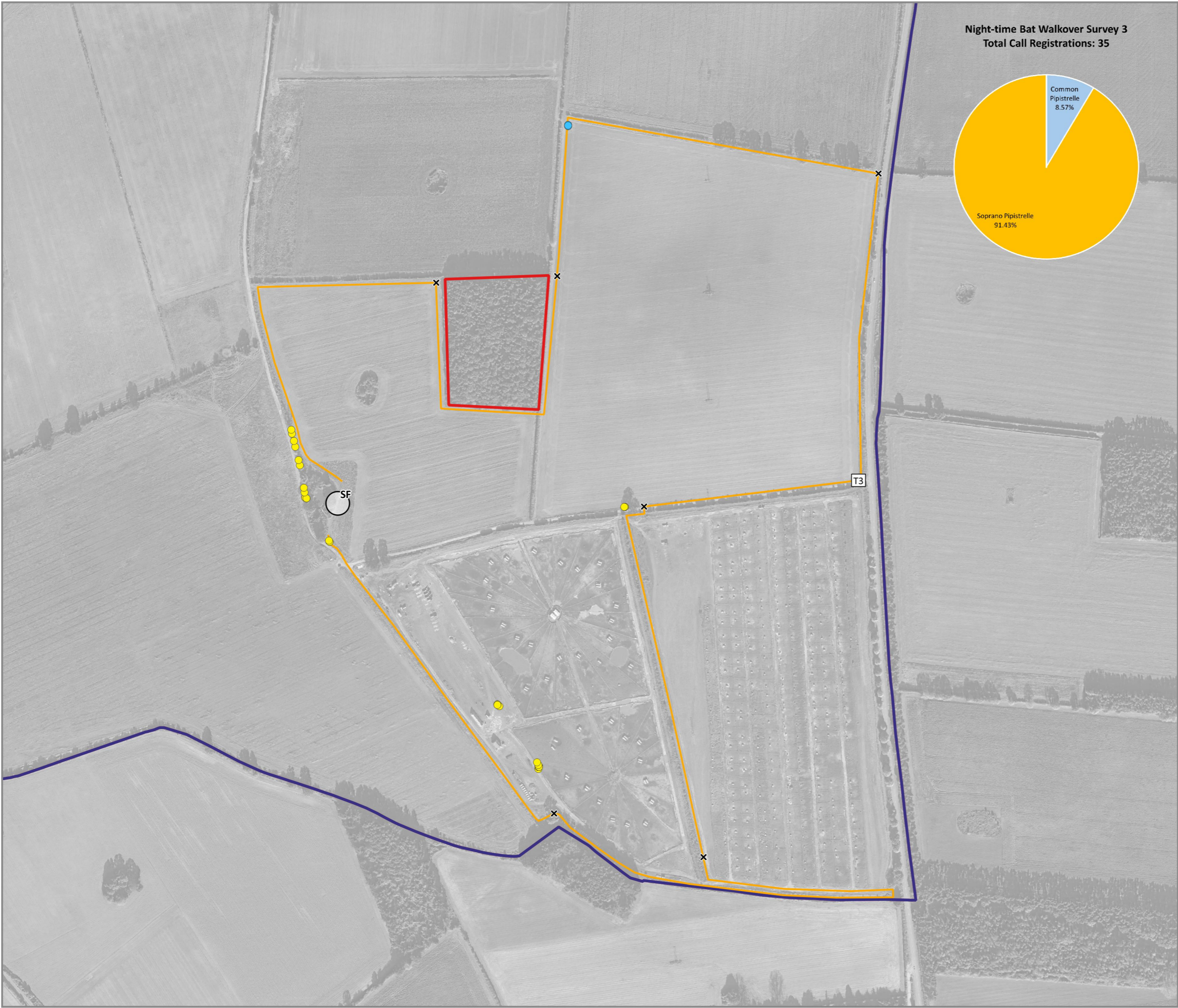


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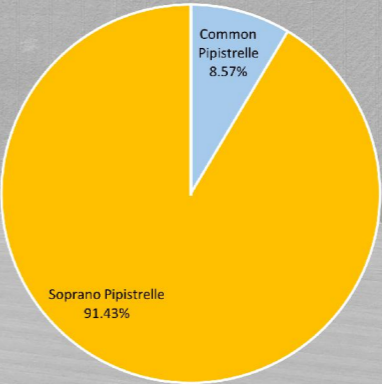
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Night-time Bat Walkover Survey 3  
Total Call Registrations: 35



- Key:
- Site Boundary
  - Survey Extent
  - Transect T3
  - Start/Finish Location
  - Transect Section Break
  - Common Pipistrelle Registration
  - Soprano Pipistrelle Registration

Bat call registration defined as presence of one or more call sequences for that bat species within one file recording from Anabat Scout detector, with a maximum recording length of 10 seconds.

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In instances where bat call registrations were recorded in exactly the same location and thus overlap completely, registrations have been stacked with priority given to rarer species.



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The Drove Solar DCO, Kings Lyn,  
Norfolk  
Night-time Bat Walkover Transects Plan  
Transect 3 (October 2024)

PROJECT

TITLE

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DATE

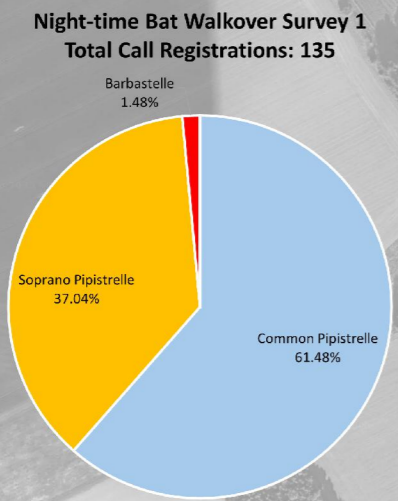
QC



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September 2025

ES/LS



- Key:
- Site Boundary
  - Survey Extent
  - Transect T4
  - Start/Finish Location
  - Transect Section Break
  - Common Pipistrelle Registration
  - Soprano Pipistrelle Registration
  - Barbastelle Registration


Bat call registration defined as presence of one or more call sequences for that bat species within one file recording from Anabat Scout detector, with a maximum recording length of 10 seconds.

Note that bat call registrations which did not have GPS data recorded on the Anabat Scout detector have not been included on this plan.

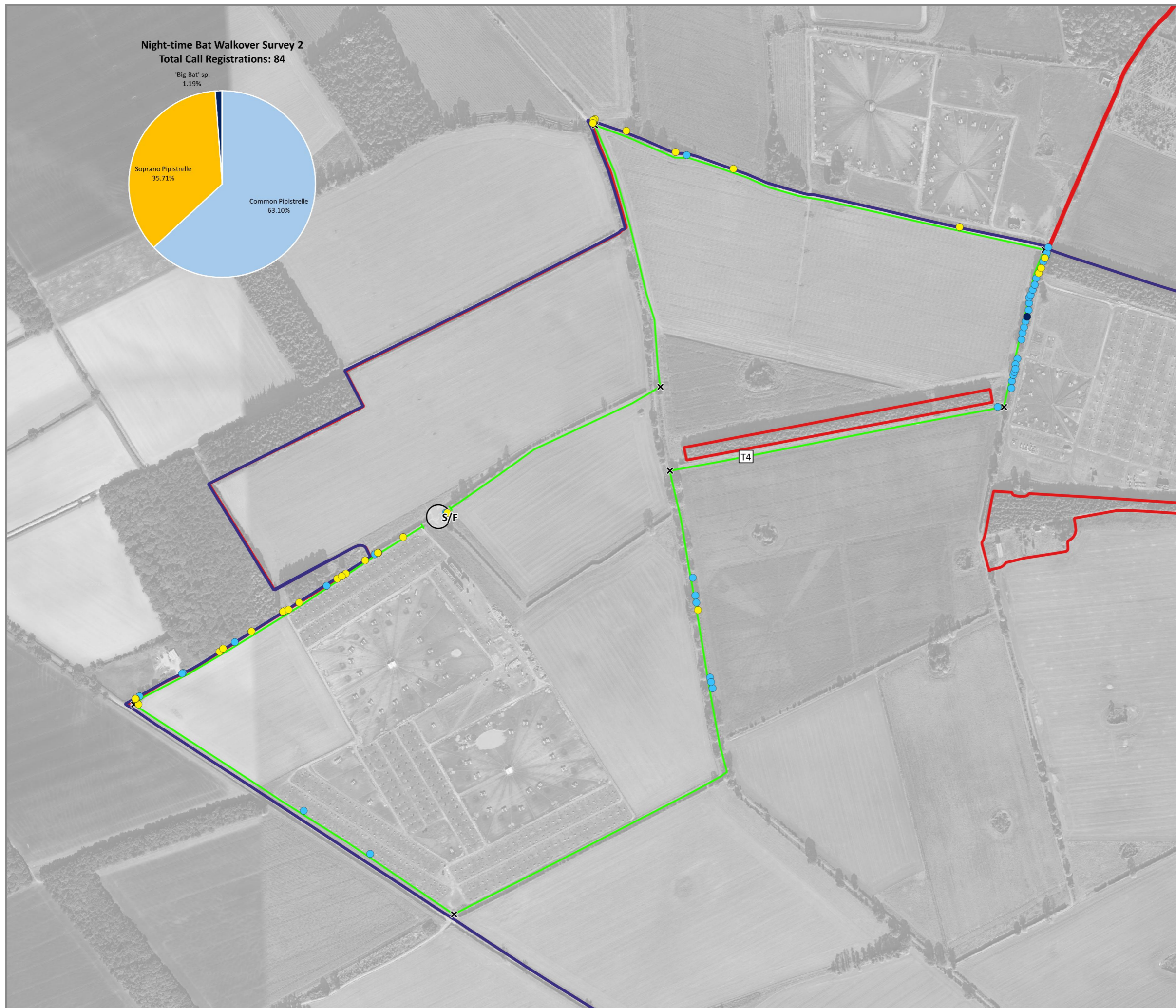
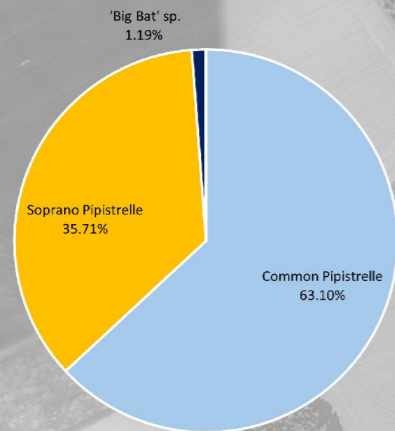
In instances where bat call registrations were recorded in exactly the same location and thus overlap completely, registrations have been stacked with priority given to rarer species.











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	TITLE
	DRAWING NO.
	REV
	DATE
	QC

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-  Site Boundary
-  Survey Extent
-  Transect T4
-  Start/Finish Location
-  Transect Section Break
-  Common Pipistrelle Registration
-  Soprano Pipistrelle Registration
-  Big Bat species Registration

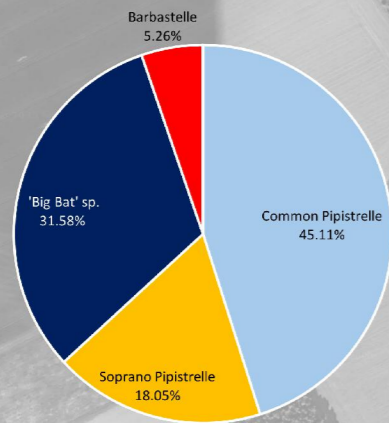
*In instances where bat call registrations were recorded in exactly the same location and thus overlap completely, registrations have been stacked with priority given to rarer species.*

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Night-time Bat Walkover Survey 3  
Total Call Registrations: 133



Key:

- Site Boundary
- Survey Extent
- Transect T4
- Start/Finish Location
- Transect Section Break
- Common Pipistrelle Registration
- Soprano Pipistrelle Registration
- Big Bat species Registration
- Barbastelle Registration

Bat call registration defined as presence of one or more call sequences for that bat species within one file recording from Anabat Scout detector, with a maximum recording length of 10 seconds.

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Night-time Bat Walkover Transects Plan  
Transect 4 (October 2024)

6806/ECO4m

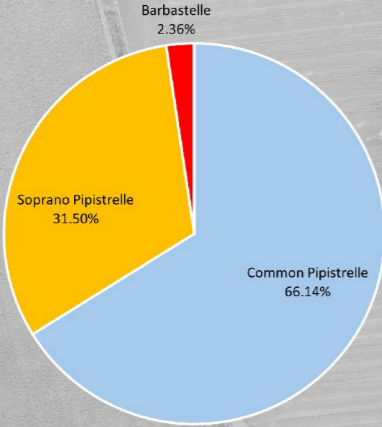


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September 2025  
ES/LS

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TITLE  
DRAWING NO.  
REV  
DATE  
QC



Night-time Bat Walkover Survey 1  
Total Call Registrations: 127



- Key:
- Site Boundary
  - Survey Extent
  - Transect T5
  - Start/Finish Location
  - Transect Section Break
  - Common Pipistrelle Registration
  - Soprano Pipistrelle Registration
  - Barbastelle Registration

Bat call registration defined as presence of one or more call sequences for that bat species within one file recording from Anabat Scout detector, with a maximum recording length of 10 seconds.

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Transect 5 (May 2024)

6806/ECO4n

C/LS

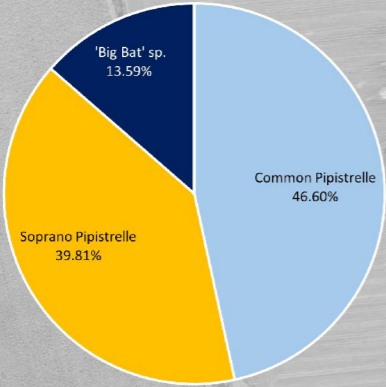
September 2025

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Night-time Bat Walkover Survey 2  
Total Call Registrations: 103



- Key:
- Site Boundary
  - Survey Extent
  - Transect T5
  - Start/Finish Location
  - Transect Section Break
  - Common Pipistrelle Registration
  - Soprano Pipistrelle Registration
  - Big Bat species Registration

Bat call registration defined as presence of one or more call sequences for that bat species within one file recording from Anabat Scout detector, with a maximum recording length of 10 seconds.

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Norfolk  
Night-time Bat Walkover Transects Plan  
Transect 5 (August 2024)

6806/ECO4o

C/LS

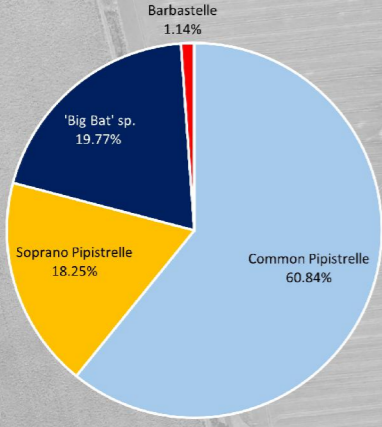
September 2025

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Night-time Bat Walkover Survey 3  
Total Call Registrations: 263



- Key:
- Site Boundary
  - Survey Extent
  - Transect T5
  - Start/Finish Location
  - Transect Section Break
  - Common Pipistrelle Registration
  - Soprano Pipistrelle Registration
  - Big Bat species Registration
  - Barbastelle Registration

Bat call registration defined as presence of one or more call sequences for that bat species within one file recording from Anabat Scout detector, with a maximum recording length of 10 seconds.

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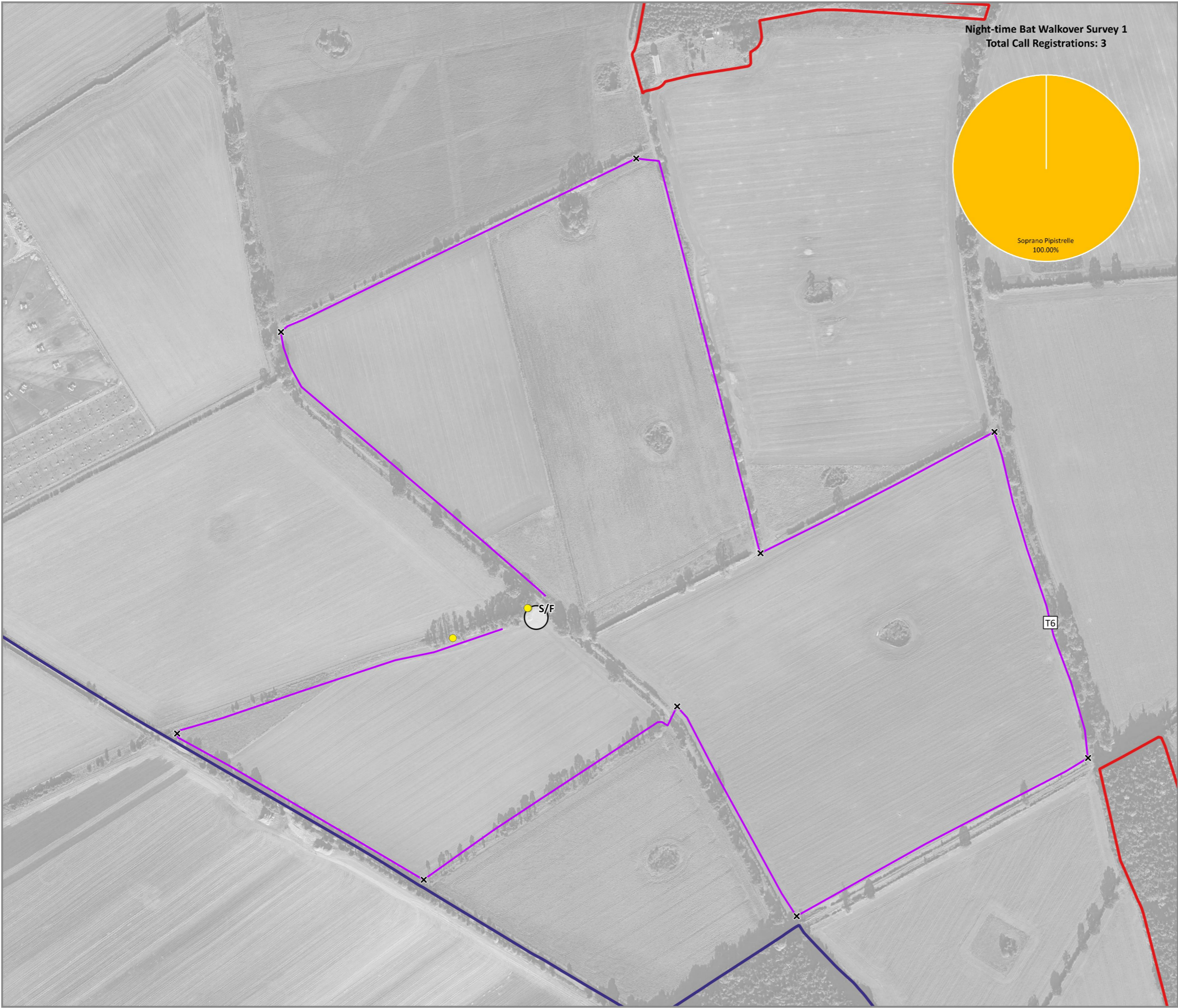
The Drove Solar DCO, Kings Lyn,  
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Night-time Bat Walkover Transects Plan  
Transect 5 (October 2024)

6806/ECO4p

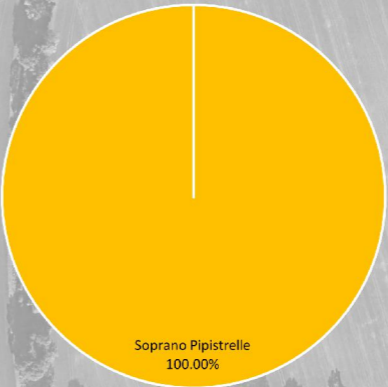


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Night-time Bat Walkover Survey 1  
Total Call Registrations: 3



- Key:
- Site Boundary
  - Survey Extent
  - Transect T6
  - Start/Finish Location
  - Transect Section Break
  - Soprano Pipistrelle Registration

Bat call registration defined as presence of one or more call sequences for that bat species within one file recording from Anabat Scout detector, with a maximum recording length of 10 seconds.

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Norfolk  
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Transect 6 (May 2024)

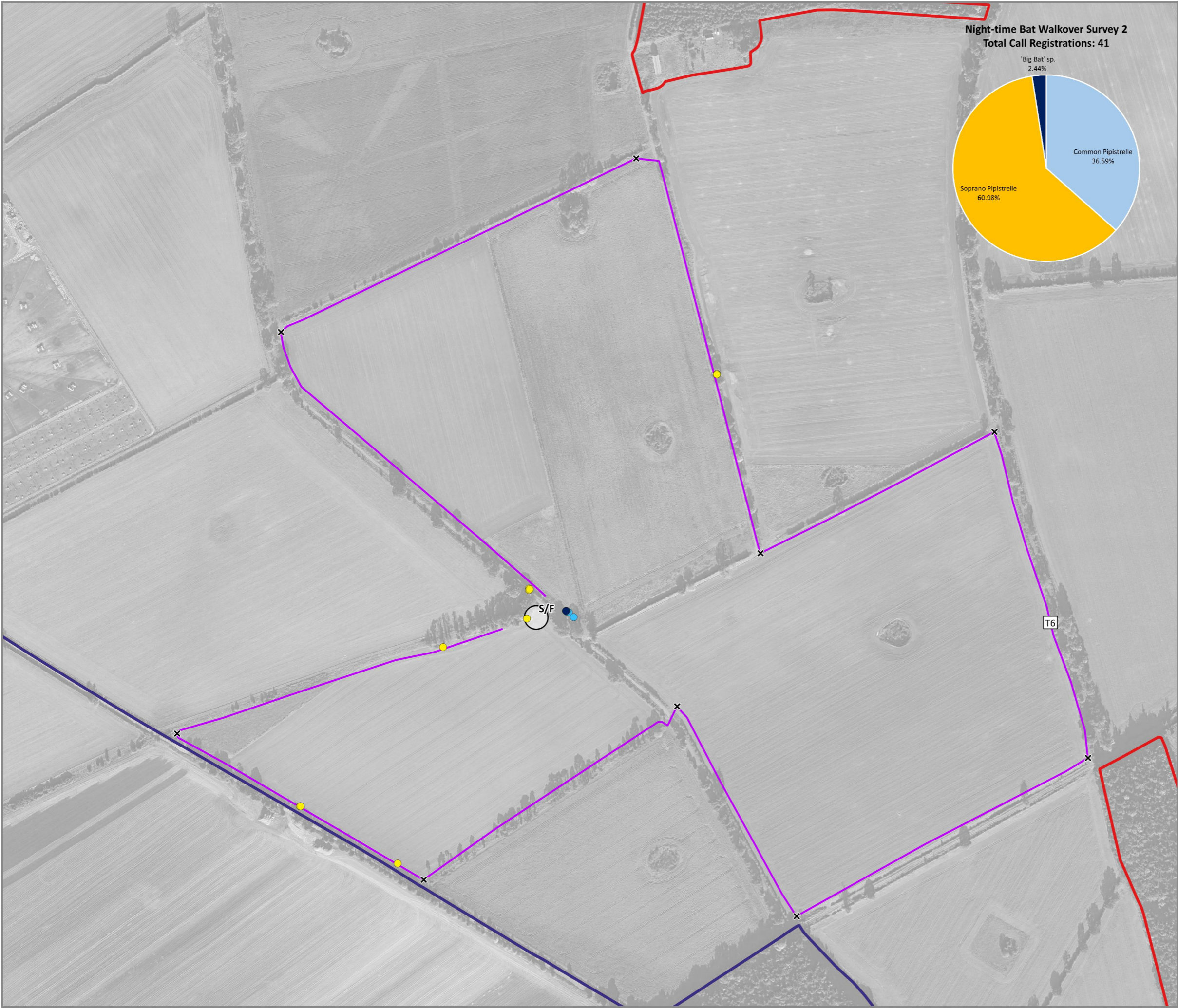
6806/ECO4q

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September 2025

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Key:

- Site Boundary
- Survey Extent
- Transect T6
- Start/Finish Location
- Transect Section Break
- Common Pipistrelle Registration
- Soprano Pipistrelle Registration
- Big Bat species Registration

Bat call registration defined as presence of one or more call sequences for that bat species within one file recording from Anabat Scout detector, with a maximum recording length of 10 seconds.

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Night-time Bat Walkover Transects Plan  
Transect 6 (August 2024)

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NO.

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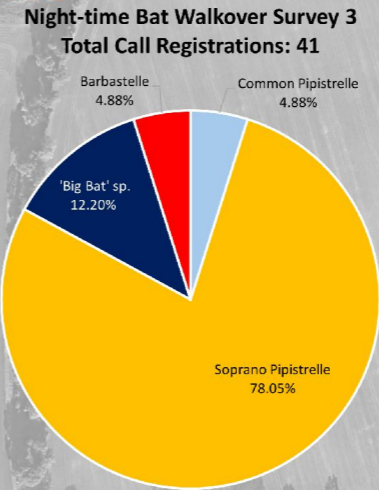
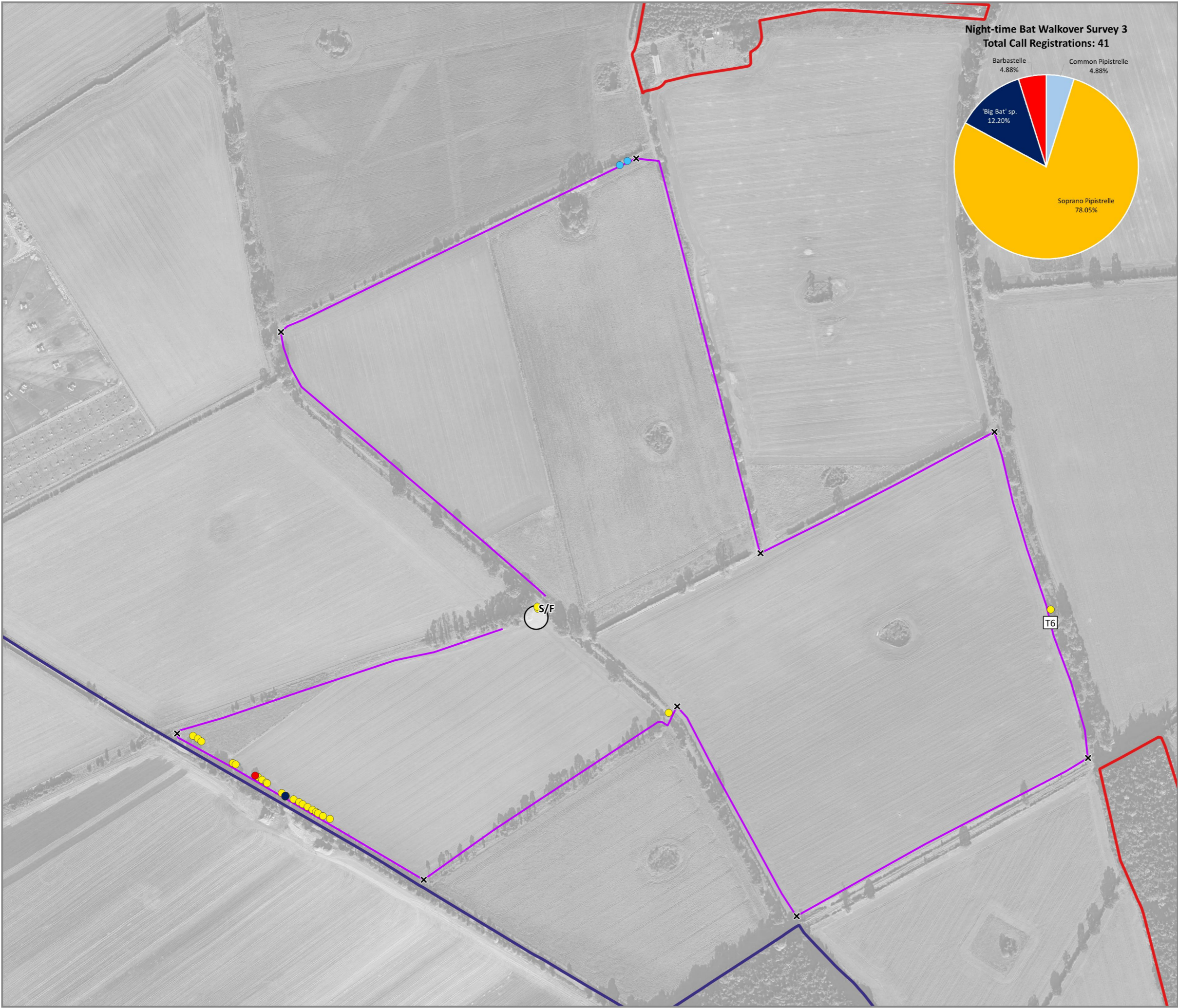


6806/ECO4r

C/LS

September 2025

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- Key:
- Site Boundary
  - Survey Extent
  - Transect T6
  - Start/Finish Location
  - x Transect Section Break
  - Common Pipistrelle Registration
  - Soprano Pipistrelle Registration
  - Big Bat species Registration
  - Barbastelle Registration

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Norfolk  
Night-time Bat Walkover Transects Plan  
Transect 6 (October 2024)

PROJECT

TITLE

DRAWING  
NO.

REV

DATE

QC



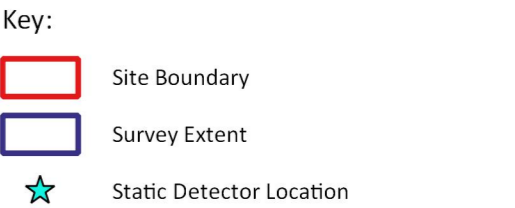
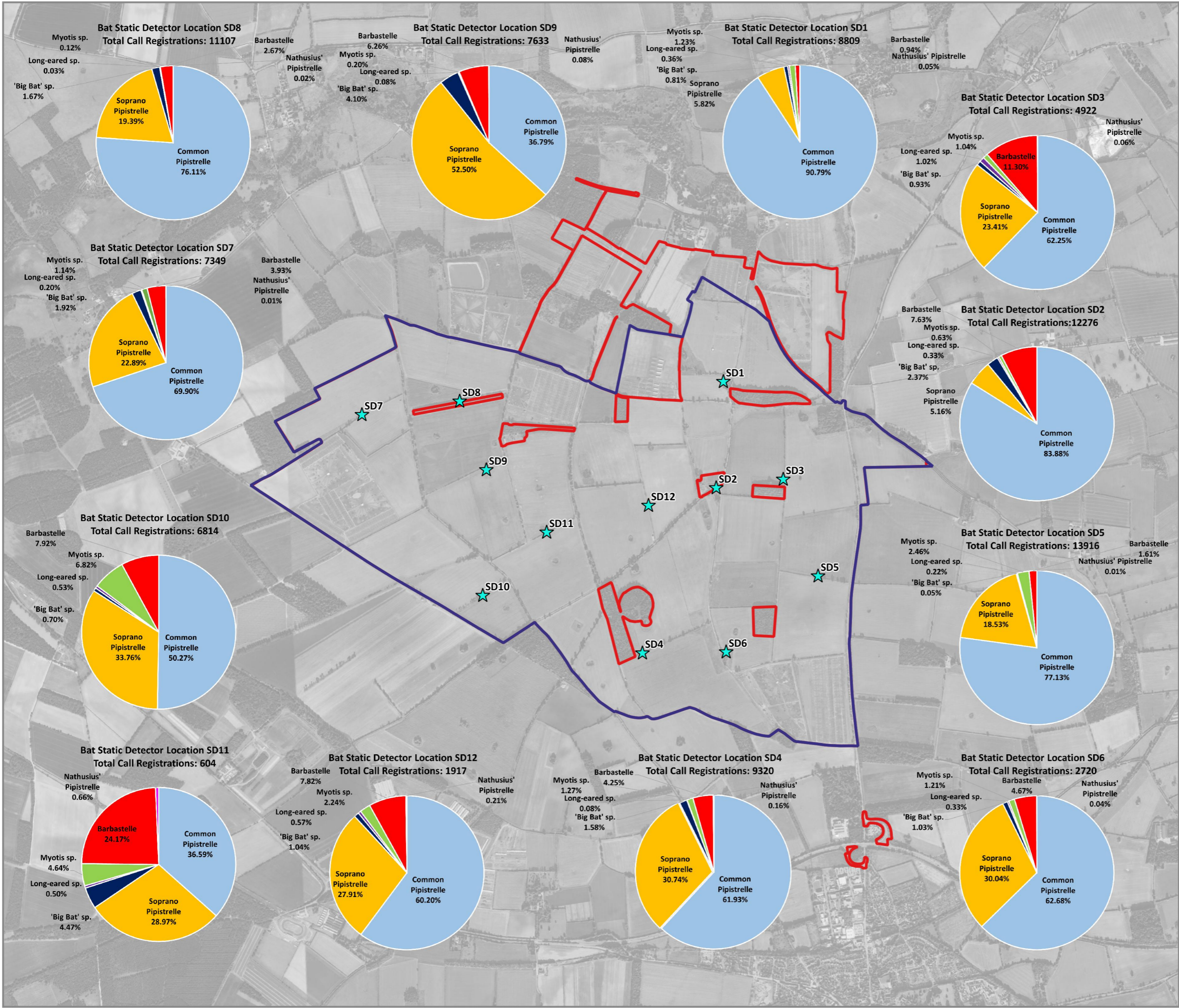
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## Plan 6806/ECO5:

### Static Bat Detector Survey Results



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The Drovers Solar DCO, Kings Lyn, Norfolk

Night-time Bat Walkover Transects Plan

6806/ECO4a

B/LS

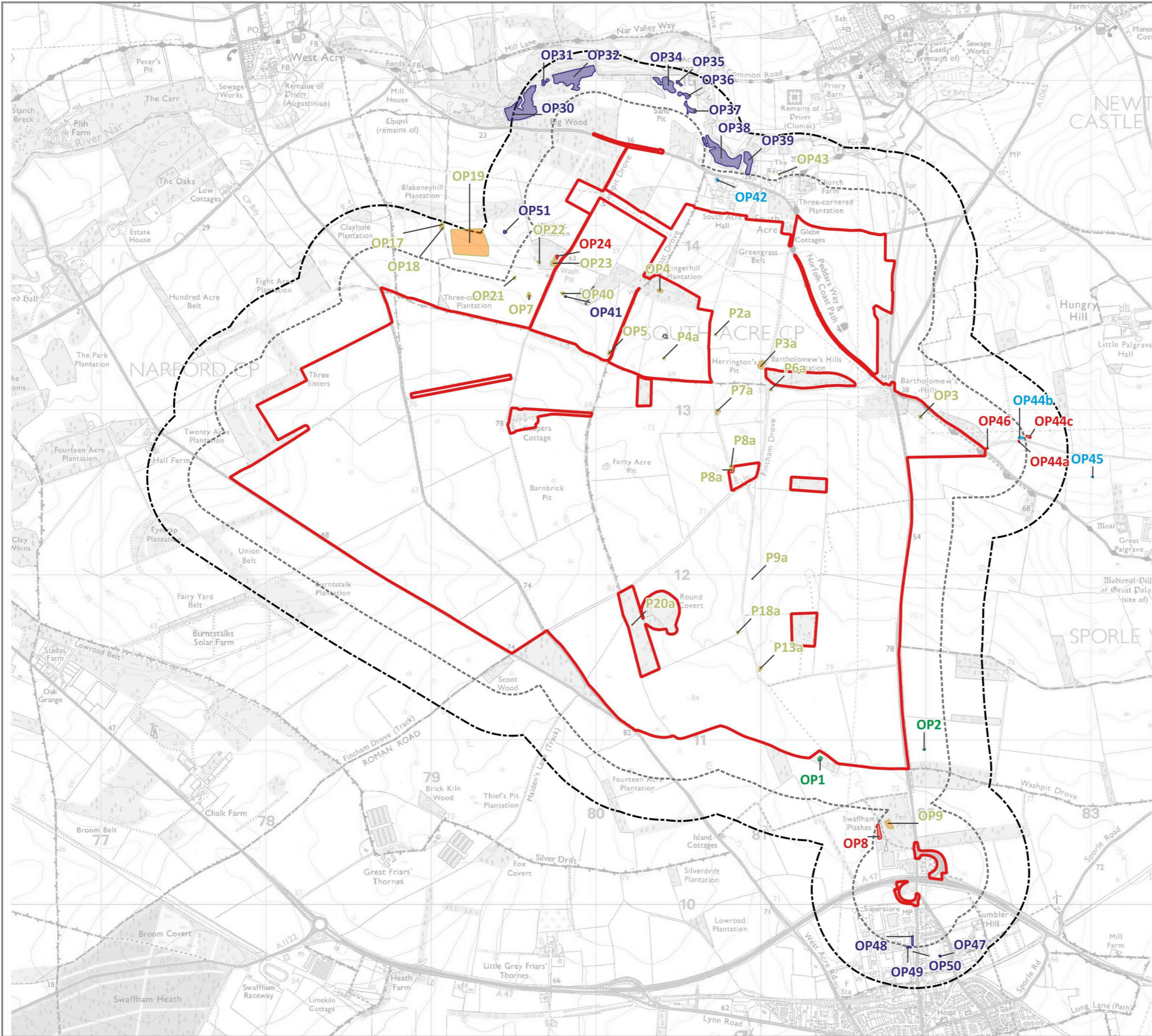
September 2025

ES/LS

PROJECT	TITLE	DRAWING NO.	REV	DATE	QC

## **Plan 6806/ECO6:**

Pond Locations and Survey Results



- Key:
- Site Boundary
  - 250m Site Buffer
  - 500m Site Buffer
  - Ponds recorded dry at time of eDNA survey in April/May 2025
  - Ponds tested negative for Great Crested Newt eDNA in June 2024
  - Ponds tested negative for Great Crested Newt eDNA in June 2025
  - Ponds tested positive for Great Crested Newt eDNA in June 2025
  - Unsurveyed Pond

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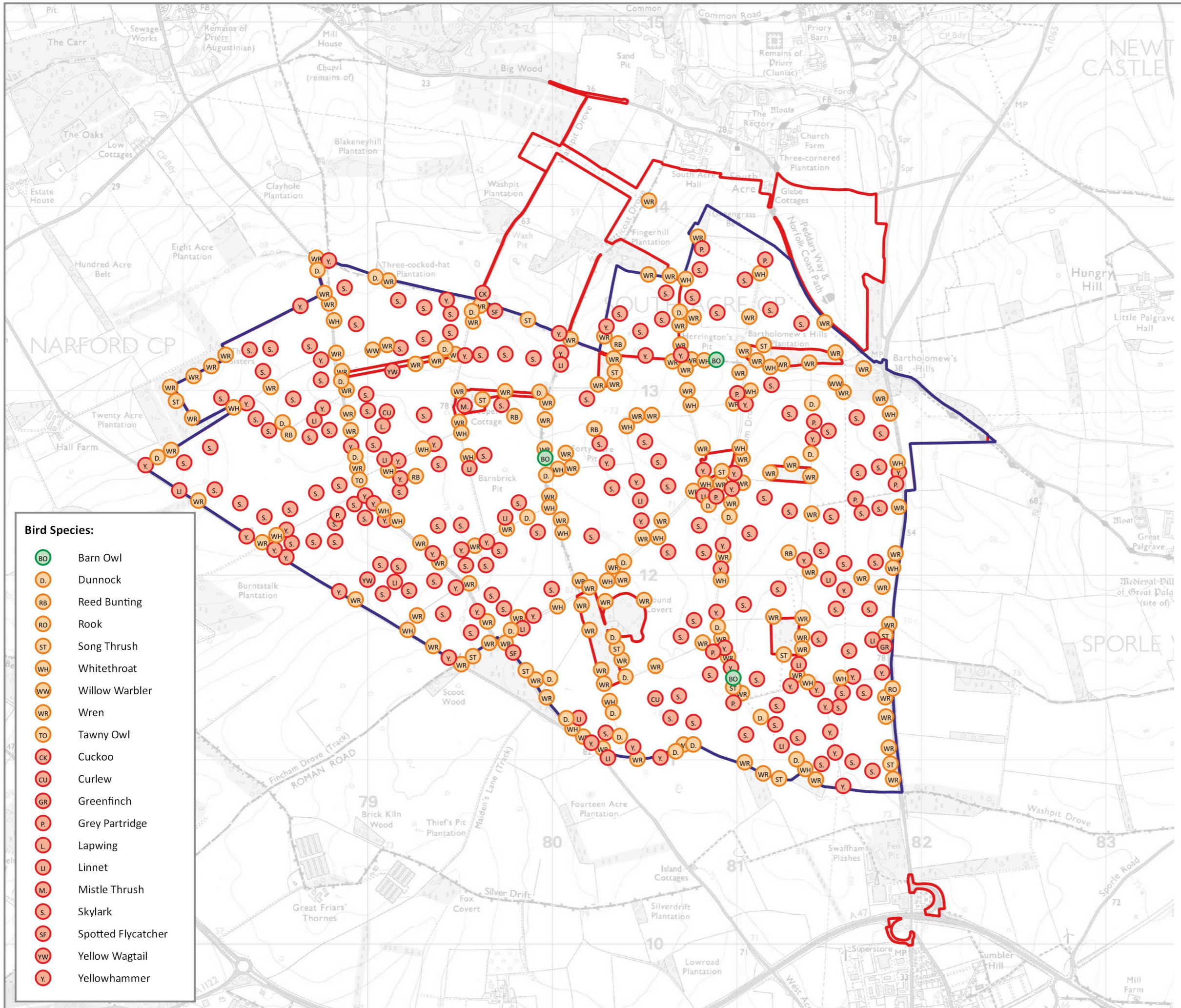
The Drove Solar Farm DCO	PROJECT
Pond Location and Survey Results	TITLE
6806/ECO6	DRAWING NO.
B/LS	REV
September 2025	DATE
ES/LS	QC



## **Plan 6806/ECO7a-f:**

### Breeding Bird Survey Results





**Bird Species:**

- BO Barn Owl
- D. Dunnock
- RB Reed Bunting
- RO Rook
- ST Song Thrush
- WH Whitethroat
- WW Willow Warbler
- WR Wren
- TO Tawny Owl
- CK Cuckoo
- CU Curlew
- GR Greenfinch
- P. Grey Partridge
- L. Lapwing
- LI Linnet
- M. Mistle Thrush
- S. Skylark
- SF Spotted Flycatcher
- YW Yellow Wagtail
- Y. Yellowhammer

**Key:**

- Site Boundary
- Survey Extent
- Breeding / Probable Breeding (BOCC Red List)
- Breeding / Probable Breeding (BOCC Amber List Species)
- Breeding / Probable Breeding (BOCC Green List - Not Threatened)

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Breeding Bird Survey Results

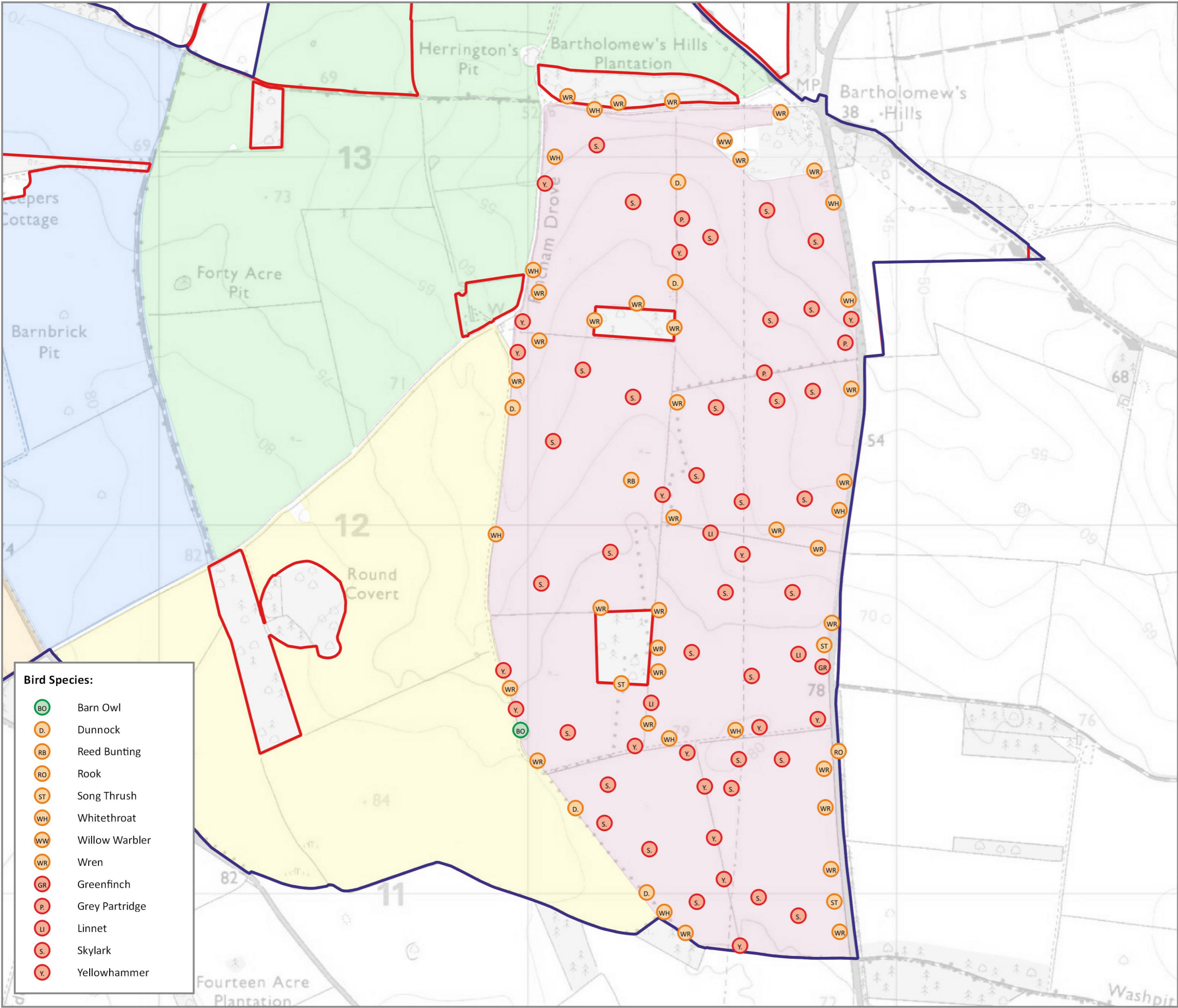
6806/ECO7b

B/BG

September 2025

ES/BG





- Bird Species:**
- BO Barn Owl
  - D Dunnock
  - RB Reed Bunting
  - RO Rook
  - ST Song Thrush
  - WH Whitethroat
  - WW Willow Warbler
  - WR Wren
  - GR Greenfinch
  - P Grey Partridge
  - LI Linnet
  - S Skylark
  - Y Yellowhammer

- Key:**
- Site Boundary
  - Survey Extent
  - Breeding / Probable Breeding (BOCC Red List)
  - Breeding / Probable Breeding (BOCC Amber List Species)
  - Breeding / Probable Breeding (BOCC Green List - Not Threatened)

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Breeding Bird Survey Results - EAST

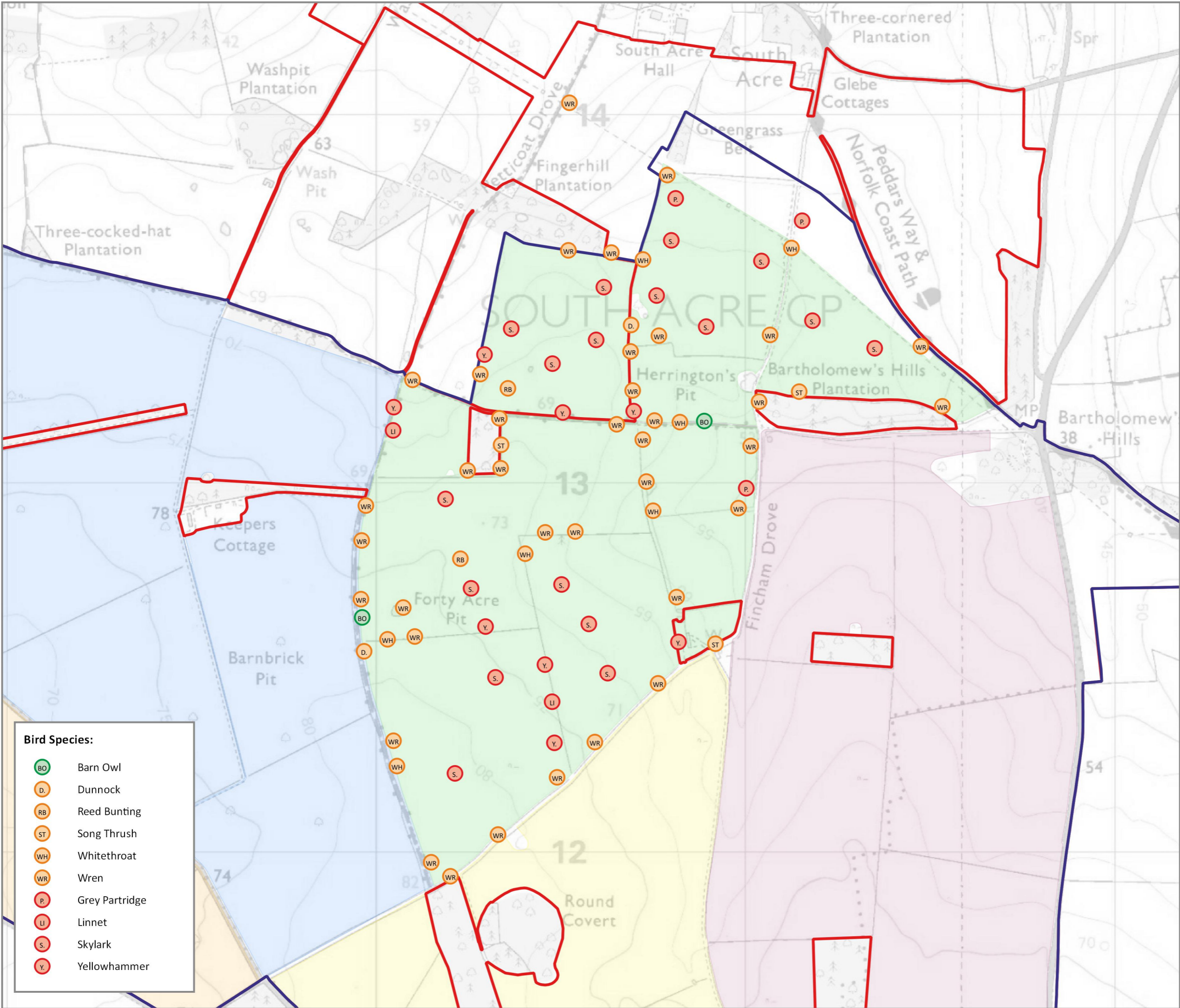
6806/EC07c

C/JP

September 2025

ES/BG





**Bird Species:**

- BO Barn Owl
- D Dunnock
- RB Reed Bunting
- ST Song Thrush
- WH Whitethroat
- WR Wren
- P Grey Partridge
- LI Linnet
- S Skylark
- Y Yellowhammer

- Key:**
- Site Boundary
  - Survey Extent
  - Breeding / Probable Breeding (BOCC Red List)
  - Breeding / Probable Breeding (BOCC Amber List Species)
  - Breeding / Probable Breeding (BOCC Green List - Not Threatened)

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Breeding Bird Survey Results - NORTH

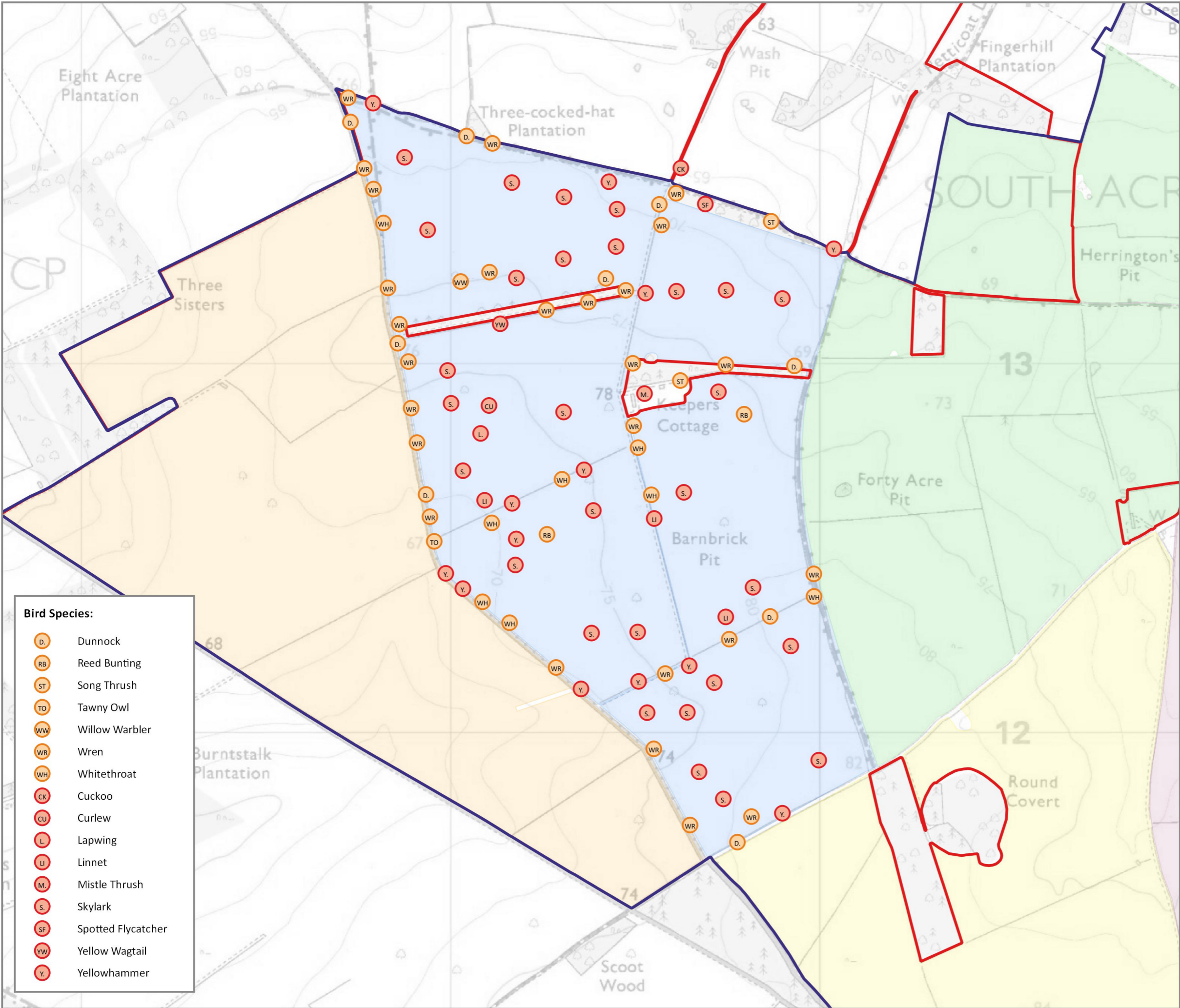
6806/ECO7d

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September 2025

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Key:

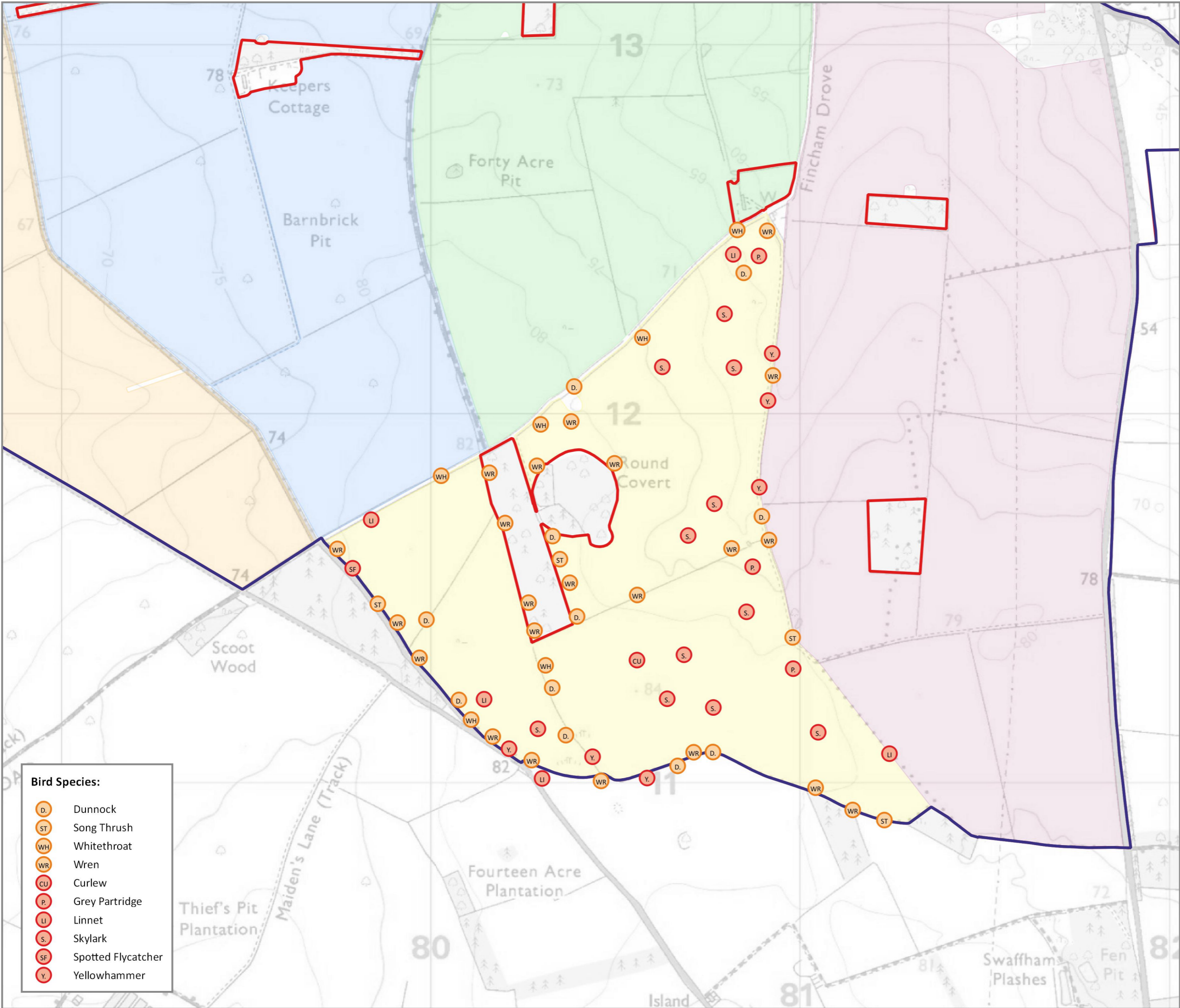
- Site Boundary
- Survey Extent
- Breeding / Probable Breeding (BOCC Red List)
- Breeding / Probable Breeding (BOCC Amber List Species)
- Breeding / Probable Breeding (BOCC Green List - Not Threatened)

- Bird Species:**
- D. Dunnock
  - RB Reed Bunting
  - ST Song Thrush
  - TO Tawny Owl
  - WW Willow Warbler
  - WR Wren
  - WH Whitethroat
  - CK Cuckoo
  - CU Curlew
  - L. Lapwing
  - LI Linnet
  - M. Mistle Thrush
  - S. Skylark
  - SF Spotted Flycatcher
  - YW Yellow Wagtail
  - Y. Yellowhammer

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Breeding Bird Survey Results - NORTH WEST	TITLE
6806/ECO7e	DRAWING NO.
C/JP	REV
September 2025	DATE
ES/BG	QC




Key:

- Site Boundary
- Survey Extent
- Breeding / Probable Breeding (BOCC Red List)
- Breeding / Probable Breeding (BOCC Amber List Species)
- Breeding / Probable Breeding (BOCC Green List - Not Threatened)


Bird Species:

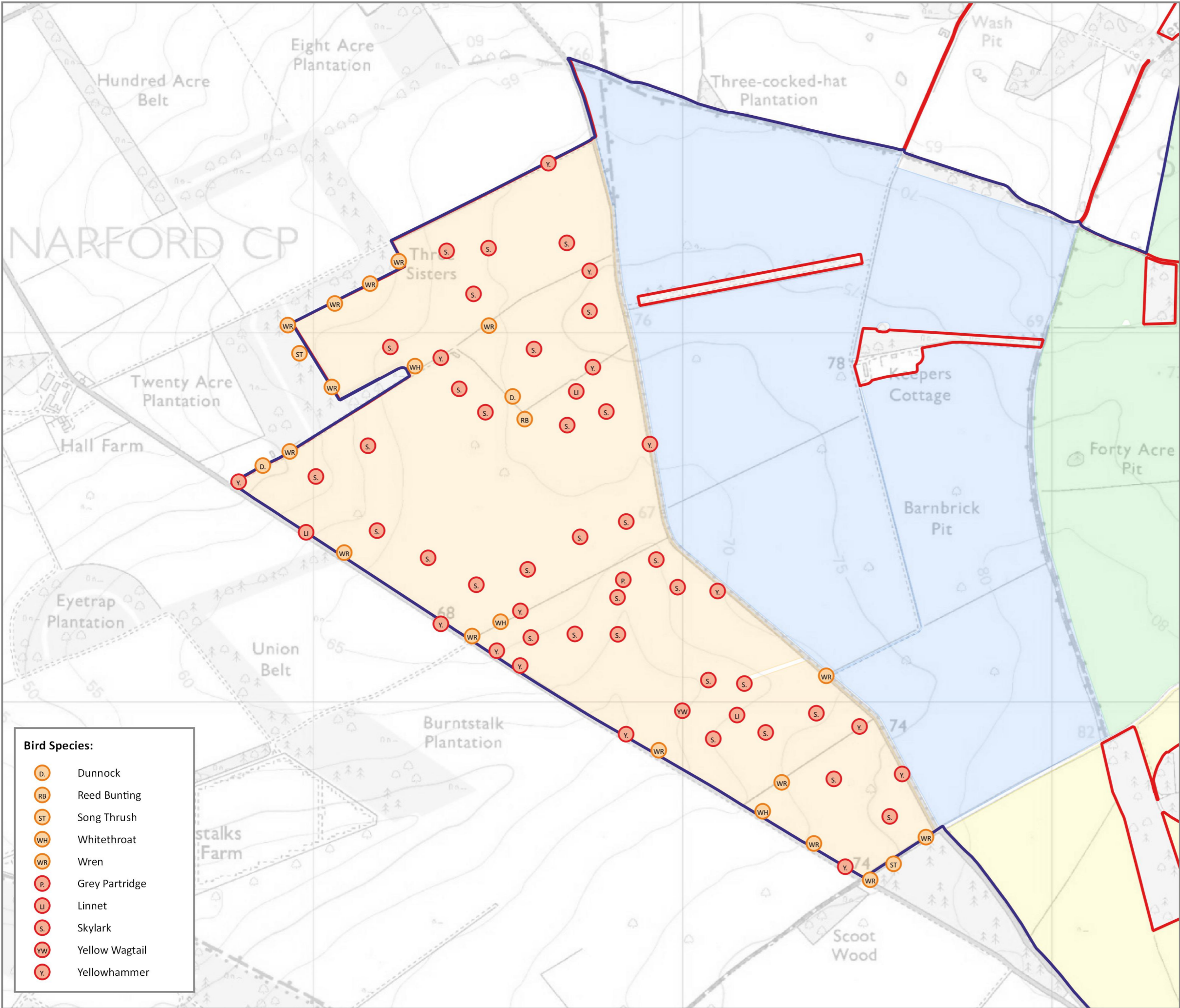
- D. Dunnock
- ST Song Thrush
- WH Whitethroat
- WR Wren
- CU Curlew
- P Grey Partridge
- LI Linnet
- S Skylark
- SF Spotted Flycatcher
- Y Yellowhammer



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The Drove, Swaffham Solar DCO	PROJECT
Breeding Bird Survey Results - SOUTH	TITLE
6806/EC07f	DRAWING NO.
C/JP	REV
September 2025	DATE
ES/JP	QC





- Bird Species:**
- D. Dunnock
  - RB Reed Bunting
  - ST Song Thrush
  - WH Whitethroat
  - WR Wren
  - P. Grey Partridge
  - LI Linnet
  - S. Skylark
  - YW Yellow Wagtail
  - Y. Yellowhammer

- Key:**
- Survey Boundary**
- Red circle: Breeding / Probable Breeding (BOCC Red List)
  - Orange circle: Breeding / Probable Breeding (BOCC Amber List Species)
  - Green circle: Breeding / Probable Breeding (BOCC Green List - Not Threatened)

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Breeding Bird Survey Results - WEST

6806/ECO7g

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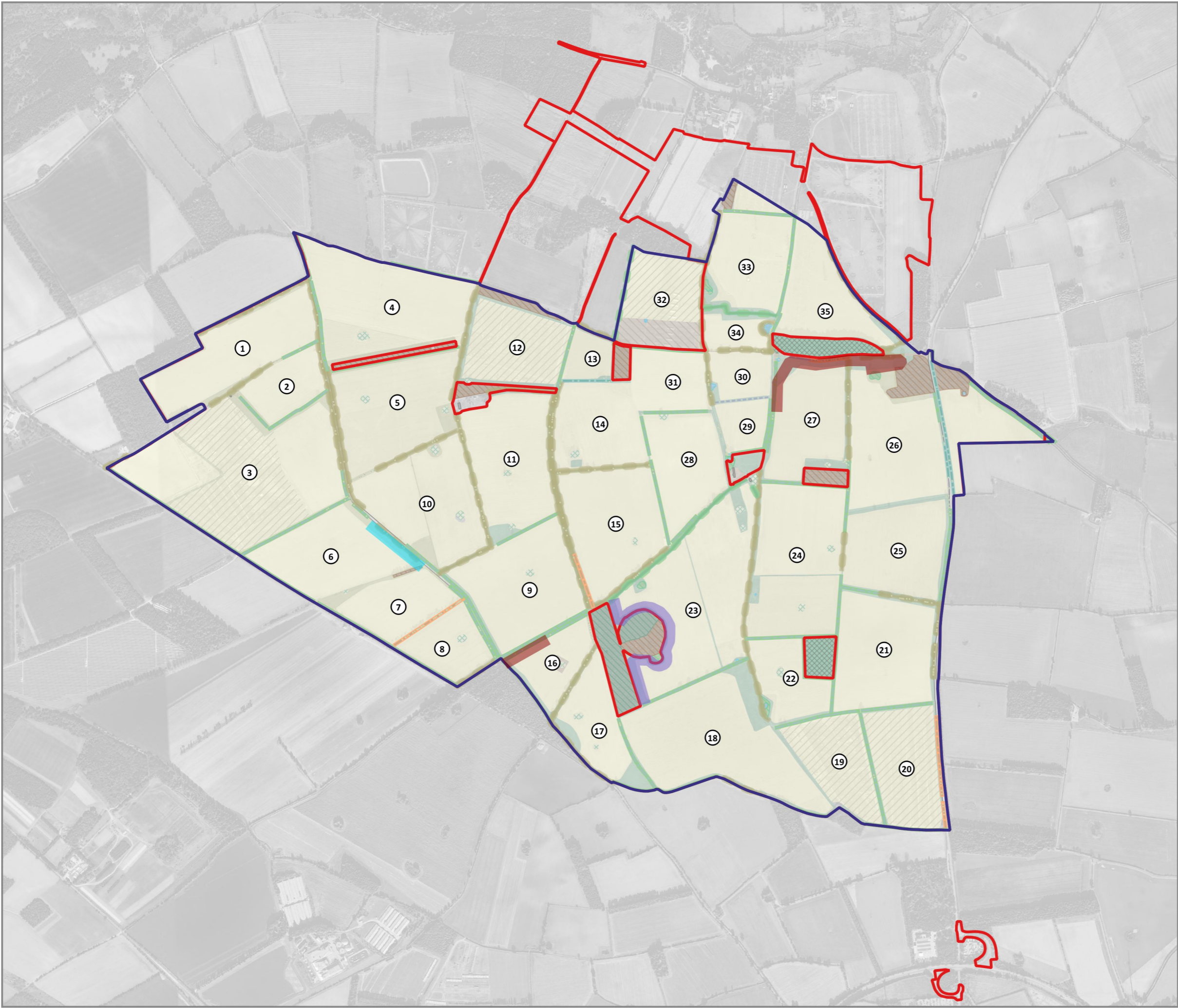
September 2025

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## Plan 6806/ECO8:

### Reptile Survey Results



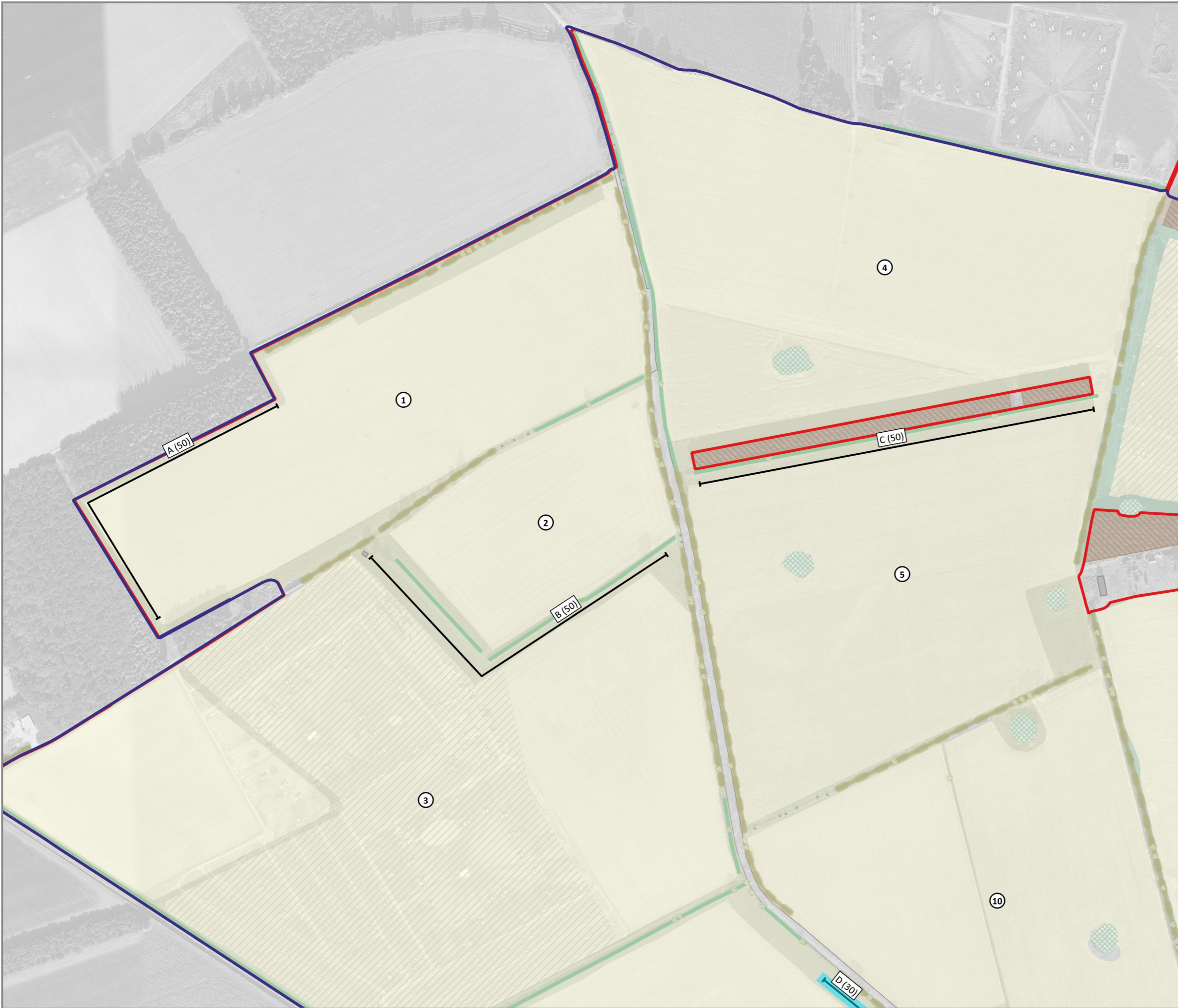
- Key:
- Site Boundary
  - Survey Extent
  - Reptile Transects (number of mats)
  - Transect with Common Lizard Recorded
  - Transect with Grass Snake Recorded
  - Transect with Grass Snake and Common Lizard Recorded

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Kings Lynn/Swaffham Solar DCO	PROJECT
Reptile Transect Plan	TITLE
6806/EC08	DRAWING NO.
C/DO	REV
September 2025	DATE
ES/LS	QC





- Key:
- Site Boundary
  - Survey Extent
  - Reptile Transects (number of mats)
  - Transect with Common Lizard Recorded
  - Transect with Grass Snake Recorded
  - Transect with Grass Snake and Common L



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Reptile Transect Plan

6806/ECO8a

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DATE  
QC



- Key:
- Site Boundary
  - Survey Extent
  - Reptile Transects (number of mats)
  - Transect with Common Lizard Recorded
  - Transect with Grass Snake Recorded
  - Transect with Grass Snake and Common L



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Reptile Transect Plan

6806/ECO8b

C/LS

September 2025

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PROJECT  
TITLE  
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DATE  
QC



- Key:
- Site Boundary
  - Survey Extent
  - Reptile Transects (number of mats)
  - Transect with Common Lizard Recorded
  - Transect with Grass Snake Recorded
  - Transect with Grass Snake and Common L



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Kings Lynn/Swaffham Solar DCO

Reptile Transect Plan

6806/ECO8c

C/LS

September 2025

ES/DO



PROJECT  
TITLE  
DRAWING NO.  
REV  
DATE  
QC



- Key:
- Site Boundary
  - Survey Extent
  - Reptile Transects (number of mats)
  - Transect with Common Lizard Recorded
  - Transect with Grass Snake Recorded
  - Transect with Grass Snake and Common L



**aspect** ecology  
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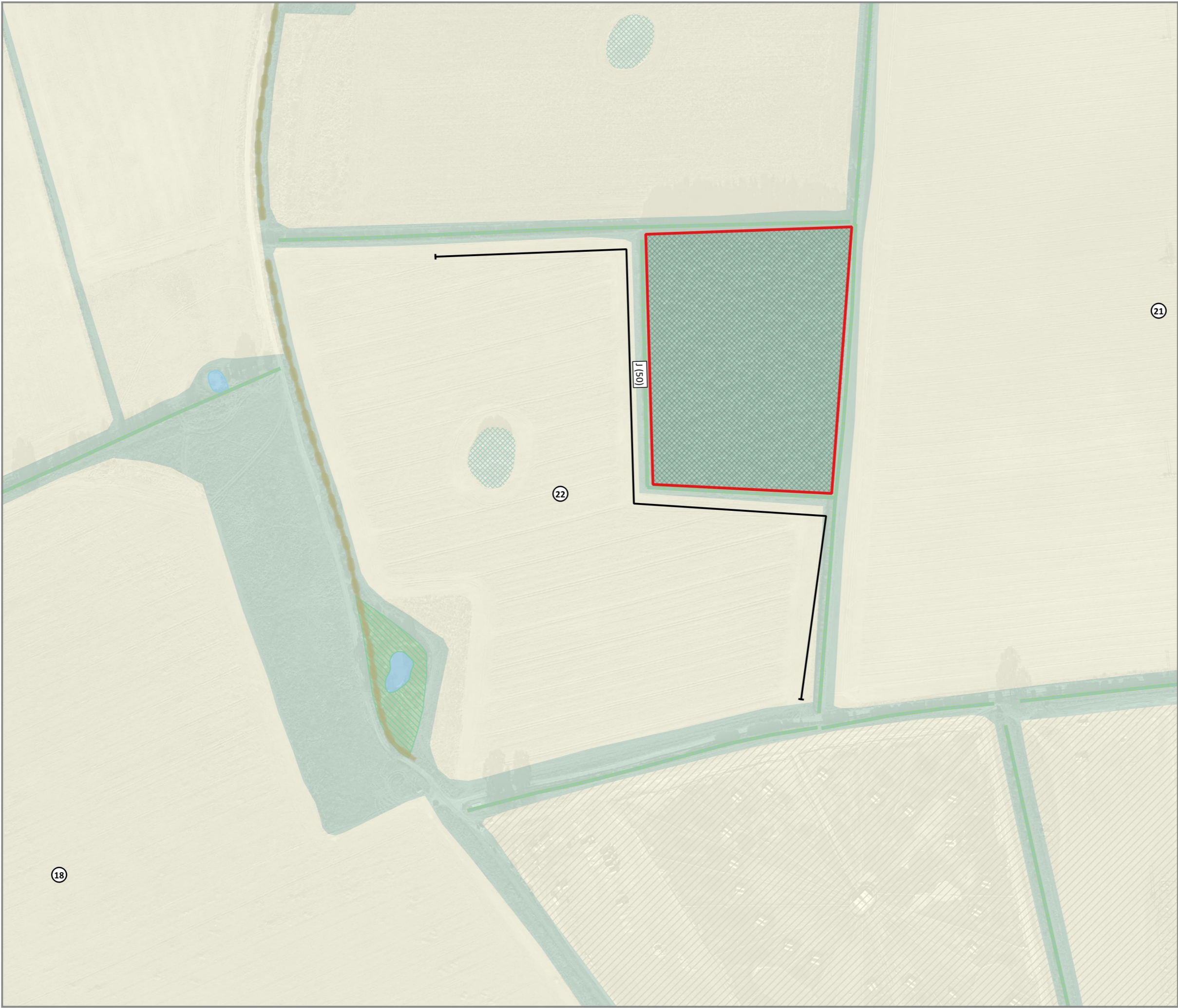
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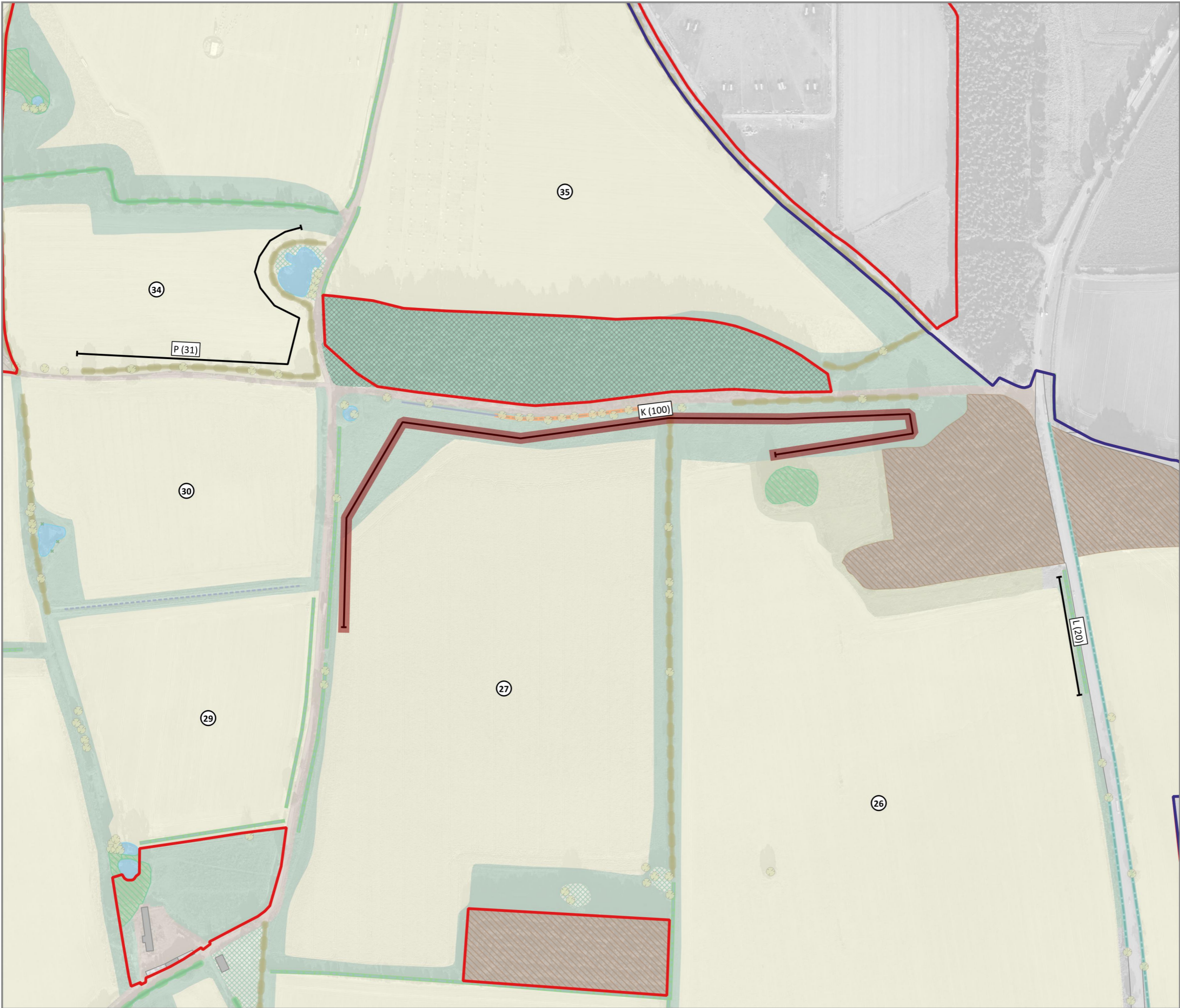
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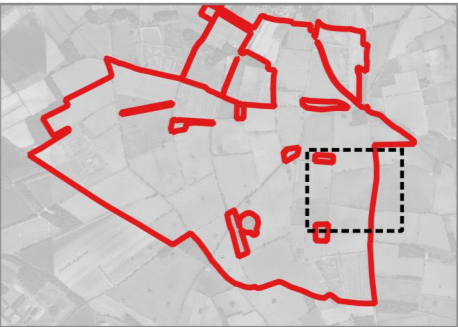
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## **Annex 6806/1:**

### Principles of Ecological Evaluation

## Evaluation Methodology

1. The evaluation of ecological features and resources is based on professional judgement whilst also drawing on the latest available industry guidance and research. The approach taken in this report is based on that described by the Chartered Institute of Ecology and Environmental Management (CIEEM) 'Guidelines for Ecological Impact Assessment in the UK and Ireland' (2018)<sup>1</sup>.

### Importance of Ecological Features

2. Ecological features within the site/study area have been evaluated in terms of whether they qualify as 'important ecological features'. In this regard, CIEEM guidance states that *"it is not necessary to carry out detailed assessment of features that are sufficiently widespread, unthreatened and resilient to project impacts and will remain viable and sustainable"*.
3. Various characteristics contribute to the importance of ecological features, including:
  - Naturalness;
  - Animal or plant species, sub-species or varieties that are rare or uncommon, either internationally, nationally or more locally, including those that may be seasonally transient;
  - Ecosystems and their component parts, which provide the habitats required by important species, populations and/or assemblages;
  - Endemic species or locally distinct sub-populations of a species;
  - Habitat diversity;
  - Habitat connectivity and/or synergistic associations;
  - Habitats and species in decline;
  - Rich assemblages of plants and animals;
  - Large populations of species or concentrations of species considered uncommon or threatened in a wider context;
  - Plant communities (and their associated animals) that are considered to be typical of valued natural/semi-natural vegetation types, including examples of naturally species-poor communities; and
  - Species on the edge of their range, particularly where their distribution is changing as a result of global trends and climate change.
4. As an objective starting point for identifying important ecological features, European, national and local governments have identified sites, habitats and species which form a key focus for biodiversity conservation in the UK, supported by policy and legislation. These are summarised by CIEEM guidance as follows:

### *Designated Sites*

- Statutory sites designated or classified under international conventions or European legislation, for example World Heritage Sites, Biosphere Reserves, Wetlands of International Importance (Ramsar sites), Special Areas of Conservation (SAC), Special Protection Areas (SPA);

<sup>1</sup> CIEEM (2018) 'Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater, Coastal and Marine', Version 1.3, Chartered Institute of Ecology and Environmental Management, Winchester (updated September 2024)

- Statutory sites designated under national legislation, for example Sites of Special Scientific Interest (SSSI), National Nature Reserves (NNR) and Local Nature Reserves (LNR);
- Locally designated wildlife sites, e.g. Local Wildlife Sites (LWS).

#### *Biodiversity Lists*

- Habitats and species of principal importance for the conservation of biodiversity in England and Wales (largely drawn from UK BAP priority habitats and priority species), often referred to simply as Priority Habitats / Species;
- Local BAP priority species and habitats.

#### *Red Listed, Rare, Legally Protected Species*

- Species of conservation concern, Red Data Book (RDB) species;
- Birds of Conservation Concern;
- Nationally rare and nationally scarce species;
- Legally protected species.

5. In addition to this list, other features may be considered to be of importance on the basis of local rarity, where they enable effective conservation of other important features, or play a key functional role in the landscape.

#### Assigning Level of Importance

6. The importance of an ecological feature should then be considered within a defined geographical context. Based on CIEEM guidance, the following frame of reference is used:
  - International (European);
  - National;
  - Regional;
  - County;
  - District;
  - Local (e.g. Parish or Neighbourhood);
  - Site (not of importance beyond the immediate context of the site).
7. Features of 'local' importance are those considered to be below a district level of importance, but are considered to appreciably enrich the nature conservation resource or are of elevated importance beyond the context of the site.
8. Where features are identified as 'important' based on the list of key sites, habitats and species set out above, but are very limited in extent or quality (in terms of habitat resource or species population) and do not appreciably contribute to the biodiversity interest beyond the context of the site, they are considered to be of 'site' importance.
9. In terms of assigning the level of importance, the following considerations are relevant:

### *Designated Sites*

10. For designated sites, importance should reflect the geographical context of the designation (e.g. SAC/SPA/Ramsar sites are designated at the international level whereas SSSIs are designated at the national level). Consideration should be given to multiple designations as appropriate (where an area is subject to differing levels of nature conservation designations).

### *Habitats*

11. In certain cases, the value of a habitat can be measured against known selection criteria, e.g. SAC selection criteria, 'Guidelines for the selection of biological SSSIs' and the Hedgerows Regulations 1997. However, for the majority of commonly encountered sites, the most relevant habitat evaluation will be at a more localised level and based on relevant factors such as antiquity, size, species-diversity, potential, naturalness, rarity, fragility and typicalness (Ratcliffe, 1977). The ability to restore or re-create the habitat is also an important consideration, for example in the case of ancient woodland.
12. Whether habitats are listed as priorities for conservation at a national level in accordance with Sections 41 and 42 of the Natural Environment and Rural Communities Act (NERC) 2006, so called 'Habitats of Principal Importance' or 'Priority Habitats', or within regional or local Biodiversity Action Plans (BAPs) is also relevant, albeit the listing of a particular habitat under a BAP does not in itself imply any specific level of importance.
13. Habitat inventories (such as habitat mapping on the MAGIC database) or information relating to the status of particular habitats within a district, county or region can also assist in determining the appropriate scale at which a habitat is of importance.

### *Species*

14. Deciding the importance of species populations should make use of existing criteria where available. For example, there are established criteria for defining nationally and internationally important populations of waterfowl. The scale within which importance is determined could also relate to a particular population, e.g. the breeding population of common toads within a suite of ponds or an otter population within a catchment.
15. When determining the importance of a species population, contextual information about distribution and abundance is fundamental, including trends based on historical records. For example, a species could be considered particularly important if it is rare and its population is in decline. With respect to rarity, this can apply across the geographic frame of reference and particular regard is given to populations where the UK holds a large or significant proportion of the international population of a species.
16. Whether species are listed as priorities for conservation at a national level in accordance with Sections 41 and 42 of the Natural Environment and Rural Communities Act (NERC) 2006, so called 'Species of Principal Importance' or 'Priority Species', or within regional or local Biodiversity Action Plans (BAPs) is also relevant, albeit the listing of a particular species under a BAP does not in itself imply any specific level of importance.
17. Species populations should also be considered in terms of the potential zone of influence of the proposals, i.e. if the entire species population within the site and surrounding area were to be affected by the proposed development, would this be of significance at a local, district, county or wider scale? This should also consider the foraging and territory ranges of individual species (e.g. bats roosting some distance from site may forage within site whereas other species such as invertebrates may be more sedentary).

## **Annex 6806/2:**

### Legislation Summary

## LEGISLATION SUMMARY

1. In England and Wales primary legislation is made by the UK Parliament, and in Scotland by the Scottish Parliament, in the form of Acts. The main piece of legislation relating to nature conservation in the UK is the Wildlife and Countryside Act 1981 (as amended).
2. Acts of Parliament confer powers on Ministers to make more detailed orders, rules or regulations by means of secondary legislation in the form of statutory instruments. Statutory instruments are used to provide the necessary detail that would be too complex to include in an Act itself<sup>1</sup>. The provisions of an Act of Parliament can also be enforced, amended or updated by secondary legislation.
3. In summary, the key pieces of legislation relating to nature conservation in the UK are:
  - Wildlife and Countryside Act 1981 (as amended)
  - Protection of Badgers Act 1992
  - Hedgerows Regulations 1997
  - Countryside and Rights of Way (CROW) Act for England and Wales 2000
  - Natural Environment and Rural Communities Act 2006
  - Conservation of Habitats and Species Regulations 2017
4. A brief summary of the relevant legislation is provided below. The original Acts and instruments should be referred to for the full and most up to date text of the legislation.
5. **Wildlife and Countryside Act 1981 (as amended)**. The WCA Act provides for the notification and confirmation of Sites of Special Scientific Interest (SSSIs) identified for their flora, fauna, geological or physiographical features. The Act contains strict measures for the protection and management of SSSIs.
6. The Act also refers to the treatment of UK wildlife including protected species listed under Schedules 1 (birds), 5 (mammals, herpetofauna, fish, invertebrates) and 8 (plants).
7. Under Section 1(1) of the Act, all wild birds are protected such that it is an offence to intentionally:
  - Kill, injure or take any wild bird;
  - Take, damage or destroy the nest of any wild bird whilst in use\* or being built;
  - Take or destroy an egg of any wild bird.

\* The nests of birds that re-use their nests as listed under Schedule ZA1, e.g. Golden Eagle, are protected against taking, damage or destruction irrespective of whether they are in use or not.
8. Offences in respect of Schedule 1 birds are subject to special, i.e. higher, penalties. Schedule 1 birds also receive greater protection such that it is an offence to intentionally or recklessly:
  - Disturb any wild bird included in Schedule 1 while it is building a nest or while it is in, on or near a nest containing eggs or young;
  - Disturb dependent young of such a bird.

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<sup>1</sup> <http://www.parliament.uk/business/bills-and-legislation/secondary-legislation/statutory-instruments/>

9. Under Section 9(1) of the Act, it is an offence to:
  - Intentionally kill, injure or take any wild animal included in Schedule 5.
10. In addition, under Section 9(4) it is an offence to intentionally or recklessly:
  - Obstruct access to, any structure or place which any wild animal included in Schedule 5 uses for shelter or protection; or
  - Disturb any wild animal included in Schedule 5 while occupying a structure or place which it uses for that purpose.
11. Under Section 13(1) it is an offence:
  - To intentionally pick, uproot or destroy any wild plant listed in Schedule 8; or
  - Unless the authorised person, to intentionally uproot any wild plant not included in Schedule 8.
12. The Act also contains measures (S.14) for preventing the establishment of non-native species that may be detrimental to native wildlife, prohibiting the introduction into the wild of animals (releases or allows to escape) and plants (plants or causes to grow) listed under Schedule 9.
13. **Protection of Badgers Act 1992.** The Act aims to protect the species from persecution, rather than being a response to an unfavourable conservation status, as the species is in fact common over most of Britain. It should be noted that the legislation is not intended to prevent properly authorised development. Under the Act it is an offence to:
  - Wilfully kill, injure, take, possess or cruelly ill-treat\* a Badger, or attempt to do so;
  - To intentionally or recklessly interfere with a sett# (this includes disturbing Badgers whilst they are occupying a sett, as well as damaging or destroying a sett or obstructing access to it).

\* the intentional elimination of sufficient foraging area to support a known social group of Badgers may, in certain circumstances, be construed as an offence

# A sett is defined as “any structure or place which displays signs indicating current use by a Badger”. Natural England advice (June 2009) is that a sett is protected so long as such signs remain present, which in practice could potentially be for some time after the last actual occupation by Badger. Interference with a sett includes blocking tunnels or damaging the sett in any way
14. Licences can be obtained from the Statutory Nature Conservation Organisation (SNCO) for development activities that would otherwise be unlawful under the legislation, provided there is suitable justification. The SNCO for England is Natural England.
15. **Hedgerows Regulations 1997.** ‘Important’ hedgerows (as defined by the Regulations) are protected from removal (up-rooting or otherwise destroying). Various criteria specified in the Regulations are employed to identify ‘important’ hedgerows for wildlife, landscape or historical reasons.
16. **Countryside and Rights of Way (CROW) Act for England and Wales 2000.** The CROW Act provides increased measures for the management and protection of SSSIs and strengthens wildlife enforcement legislation. Schedule 12 of the Act amends the species provisions of the WCA 1981, strengthening the legal protection for threatened species. The Act also introduced a duty on Government to have regard to the conservation of biodiversity and maintain lists of species and habitats for which conservation steps should be taken or promoted, in accordance with the Convention on Biological Diversity.

17. **Natural Environment and Rural Communities Act 2006.** Section 41 of the NERC Act requires the Secretary of State to publish a list of habitats and species that are of principal importance for the conservation of biodiversity in England. The S41 list is used to guide decision-makers such as local planning authorities, in implementing their duty under Section 40 of the Act, to have regard to the conservation of biodiversity in England, when exercising their normal functions. 56 habitats and 943 species of principal importance are included on the S41 list. These are all the habitats and species in England that were identified as requiring action in the UK Biodiversity Action Plan (BAP).
18. **Conservation of Habitats and Species Regulations 2017 (as amended).** The Regulations enact the European Union's Habitats Directive (92/43/EEC) in the UK. The Habitats Directive was designed to contribute to the maintenance of biodiversity within member states through the conservation of sites, known in the UK as Special Areas of Conservation (SACs), containing habitats and species selected as being of EC importance (as listed in Annexes I and II of the Habitats Directive respectively). Member states are required to take measures to maintain or restore these natural and semi-natural habitats and wild species at a favourable conservation status.
19. The Regulations also require the compilation and maintenance of a register of European sites, to include SACs and Special Protection Areas (SPAs)<sup>2</sup> classified under Council Directive 79/409/EEC on the Conservation of Wild Birds (the Birds Directive). These sites constitute the Natura 2000 network. The Regulations impose restrictions on planning decisions likely to significantly affect SPAs or SACs.
20. The Regulations also provide protection to European Protected Species of animals that largely overlaps with the WCA 1981, albeit the provisions are generally stricter. Under Regulation 43 it is an offence, *inter alia*, to:
  - Deliberately capture, injure or kill any wild animal of a European Protected Species;
  - Deliberately disturb any wild animals of any such species, including in particular any disturbance likely to impair their ability to survive, to breed or reproduce, to rear or nurture their young, to hibernate or migrate, or which is likely to affect significantly their local distribution or abundance;
  - Deliberately take or destroy the eggs of such an animal;
  - Damage or destroy a breeding site or resting place of such an animal.
21. Similar protection is afforded to European Protected Species of plants, as detailed under Regulation 47.
22. The Regulations do provide a licensing system that permits otherwise illegal activities in relation to European Protected Species, subject to certain tests being fulfilled.

<sup>2</sup> Special Protection Areas (SPAs) are protected sites classified in accordance with Article 4 of the EC Directive on the Conservation of Wild Birds (79/409/EEC) (aka the Birds Directive), which came into force in April 1979. SPAs are classified for rare and vulnerable birds (as listed on Annex I of the Directive), and for regularly occurring migratory species.

## **Annex 6806/3:**

### Hedgerow Descriptions Table

# Annex 3 – Hedgerow Details

No.	H	W	Woody species	Avg. per 30m*	Ground flora & climbers	Associated features	Comments (including structure / management)	Likely to qualify <sup>#</sup>
<b>Field 1</b>								
H39a	3m	2m	<u>Hawthorn, Oak (Y)</u>	1	Ivy, White Deadnettle, Common Nettle, Hemlock	<10% gaps	Managed (flailed), dense, continuous	N
H39b	4-6m	3-4	<u>Hazel, Hawthorn, Elder, Crab Apple, Field Maple, Oak (m)</u>	3-4	Ivy	Standard Trees	Gaps present	N
<b>Field 2</b>								
H38a	2.5 m	1.5-2m	<u>Hawthorn, Blackthorn, Dogrose, Elder, Oak (m)</u>	3-4	Ivy, Cleavers, Garlic Mustard, As per field margin	<10% gaps	Managed (flailed), dense, continuous	N
H38bi	2.5-3m	2-3m	<u>Hawthorn, Hornbeam, Hazel, Field Maple, Crab Apple, Elder, Ash (m), Oak (m)</u>	3-4	Cow Parsley, Ivy, White Deadnettle, Common Nettle,	<10% gaps	Managed (flailed), dense	N
H38bii	2.5 - 3m	2-3m	<u>Hawthorn, Hornbeam, Hazel, Field Maple, Crab Apple, Elder</u>	3-4	Cow Parsley, Ivy, White Deadnettle, Common Nettle	Standard Trees and <10% gaps	Managed (flailed)	N
<b>Field 3</b>								
H37a	2.5-3m	2-2.5m	<u>Hawthorn, Dogrose</u>	1	Yorkshire Fog, Common Mallow, Dandelion, Black Horehound, Chickweed, Cow Parsley, Round-leaved Crane's-bill, Crested Field-speedwell, Hemlock, White Deadnettle	<10% gaps	Dense, managed (Flailed/box cut)	N
H37b	2.5 m	2-3m	<u>Hawthorn, Dog Rose, Blackthorn, Crab Apple (sm), Lilac (y)</u>	3	As per H37a	<10% gaps	Dense, managed (Flailed/box cut)	N
H37c	3-4m	2m	<u>Hawthorn, Oak (m)</u>	2	Red Fescue, Cock's-foot, Ribwort Plantain, Hogweed, Ragwort, Dandelion, Hawthorn seedlings, Broadleaved Dock,	<10% gaps	Dense, managed (Flailed/box cut)	N
H37d	2.5-3m	2-3m	<u>Hawthorn, Elder, Oak (m)</u>	2	Cleavers, Common Nettle, White Deadnettle, Common Mallow, Lords and Ladies, Bracken, Ground Ivy, Black Horehound	<10% gaps	Wide, dense, managed (clipped)	N
H37di	2.5-3m	3m	<u>Blackthorn (D), Hawthorn, Ash (m)</u>	2	Hedge Woundwort, Cow Parsley, Cleavers, Ivy	<10% gaps	Flailed	N

# Annex 3 – Hedgerow Details

No.	H	W	Woody species	Avg. per 30m*	Ground flora & climbers	Associated features	Comments (including structure / management)	Likely to qualify <sup>#</sup>
H37ei	2m	1.5-2m	<u>Hawthorn, Elder</u> <b>Oak (sm-m)</b>	2	Hogweed, Cow Parsley	<10% gaps	Gaps present	N
H37eii	2m	1.5-2m	<u>Hawthorn, Elder</u>	1	Ivy, Bracken	Standard trees	Gaps present	N
<b>Field 4</b>								
F33H1	2m	1.5m	<u>Hawthorn (D).</u> <u>Blackthorn, Dogwood,</u> <b>Oak (m)</b>	2	Bramble, Chervil, Ground Ivy, Garlic Mustard, Hogweed, Black Bryony, Common Nettle, Cleavers, Ivy-leaved Speedwell, Mugwort, Cock's-foot, False Oatgrass, Dandelion, Curled Dock	Standard Trees	Semi-defunct hedgerow - Box managed with newly planted gaps	N
F33H2	3.5 m	2.5m	<u>Hawthorn (D), Elder,</u> <u>Malus sp., Blackthorn,</u> <b>Ash (m)</b>	2	Common Nettle, White Deadnettle, Cow Parsley, Cleavers, Black Horehound, Creeping Thistle, Mallow, Common Field Speedwell, Red Fescue, Mugwort, False Oat- grass, Curled Dock, Burdock, Yarrow, Common Chickweed, Hedgerow Cranesbill, Fleabane sp., Groundsel, Garlic Mustard, Bristly Oxtongue, Hemlock, Cow Parsley, Ground Ivy, White Campion	>10% gaps	Face managed, gaps present	N
F33H3a	4- 5m	3- 4m	<u>Hawthorn, Oak (sm- m), Crab Apple, Elder,</u> <u>Field Maple,</u> <u>Blackthorn, Ash (sm)</u>	3	Bramble, Ivy, White Deadnettle, Common Nettle, Creeping Thistle, Garlic Mustard	Standard Trees	Gaps present- filled in with whip planting, previous face management evident	N
<b>Field 5</b>								
F32H1	3m	2m	<u>Hawthorn, Oak (m)</u>	1	Common Nettle, White Dead- nettle, Hogweed, Perennial Ryegrass, Ivy, False Oatgrass, and Cock's-foot	Standard Trees, >10% gaps	Leggy, Unmanaged, Gaps present	N
F32H2	3m	2m	<u>Hawthorn, Elder,</u> <u>Blackthorn, Ash (sm),</u> <b>Oak (sm-m), Norway</b> <b>Maple (sm)</b>	2-3	As per F33H1, Common Rock Rose, Fern-leaf Dropwort, Common Sorrel, Rough Hawksbeard, Hedge Woundwort, Green Alkanet	Standard Trees	Box Managed, Gaps present	N

### Annex 3 – Hedgerow Details

[illegible]

### Annex 3 – Hedgerow Details

No.	H	W	Woody species	Avg. per 30m*	Ground flora & climbers	Associated features	Comments (including structure / management)	Likely to qualify <sup>#</sup>
H34a	2.5 m	2m	<u>Hawthorn, Oak (sm), Holly, Dog Rose, Sycamore (sm), Ash (sm)</u>	3	Common Nettle, Bramble, White Deadnettle, Hogweed, As per road verge	Standard Trees	Gaps Present	N
H34b	8m	4- 5m	<u>Hawthorn, Sycamore, Hazel, Blackthorn, Field Maple, Oak (m)</u>	4-5	Bramble	Standard Trees, <10% gaps	Dense, Continuous, Managed (Flailed), Merges with wooded edge to the east	Y
H34c	8- 15m	4- 5m	<u>Hawthorn, Crab Apple, Field Maple, Oak (m), Ash (sm-m)</u>	3	Bramble, Cock's-foot, Common Nettle, Broadleaved Dock, Hogweed, Cow Parsley	Standard Trees	Gaps present	N
H34d	6- 15m	3- 4m	<u>Hawthorn, Field Maple, Oak (m)</u>	2	Bramble, Cock's-foot, Common Nettle, Broadleaved Dock, Hogweed, Cow Parsley	Standard Trees	Gaps present	N
<b>Field 9</b>								
H22a	2- 3m	2m	<u>Hawthorn (D), Elder, Blackthorn, Ash (m), Dog Rose</u>	<5	Cock's-foot (D in arable margin), Common Nettle, Hedge Woundwort, Hogweed, Cleavers, Cow Parsley, Bracken, White Deadnettle, Burdock, Garlic Mustard, Ivy, Bramble	Standard Tree, <10% gaps	Not recently managed, likely flailed, Some gaps present	N
H22b	2m	2m	<u>Hawthorn, Elder, Ash (m), Blackthorn</u>	<5	Bramble (D)	Standard Tree	Linear Scrub, Very Defunct, Gaps present	N
H22c	3- 4m	2m	<u>Hawthorn (D), Hazel, Crab Apple, Field Maple (m), Oak (y-sm), Ash (y-sm)</u>	<5	Ivy, Bramble, Garlic Mustard, Cow Parsley, Lords and Ladies, White Deadnettle, Creeping Thistle, Ground Ivy, Broadleaved Dock, Cleavers, Common Nettle	Standard Trees	Not recently managed, Gaps Present	Y
H22d	3- 4m	2- 3m	<u>Hawthorn, Blackthorn, Crab Apple, Oak (y- sm), Ash (y-m)</u>	<5	Yorkshire Fog, Cock's-foot, Creeping Bent, Perennial Ryegrass, Three-cornered Garlic, Ribwort Plantain, Creeping Buttercup, Dandelion, Burdock, Common Nettle, Herb Robert, White Dead-nettle, Mugwort, Agrimony, Garlic Mustard, Common Knapweed, Ground Ivy, Yarrow	Standard Trees, <10% gaps	Managed (Flailed)	Y

### Annex 3 – Hedgerow Details

No.	H	W	Woody species	Avg. per 30m*	Ground flora & climbers	Associated features	Comments (including structure / management)	Likely to qualify <sup>#</sup>
H22e	3-4m	2-3m	<u>Hawthorn, Elder, Blackthorn, Ash (m)</u>	3	Bramble, Rose, White Bryony, White Deadnettle, Common Nettle, Yarrow, As per M22d, Hogweed, Hedge Woundwort, Garlic Mustard, Creeping Thistle, Cleavers, Broadleaved Dock, Cow Parsley, Burdock	Standard Trees	Not recently managed (previously failed), Gaps Present	N
<b>Field 10</b>								
H29/30 (H29c)	3-4m	2m	<u>Hawthorn, Crab Apple, Blackthorn, Ash, Oak (m)</u>	4	Nettle, White Deadnettle, Garlic Mustard, Bramble, Ivy, Black Horehound	<10 gaps, Standard Trees	Dense and Continuous <10% gaps	N
H21N & H21S	2.5 m	2m	<u>Hawthorn, Blackthorn, Elder, Ash (m)</u>	3	Common Nettle, Cow Parsley, White Deadnettle, Cock's-foot, Bracken	Standard Trees	Gaps Present	N
<b>Field 11</b>								
H29a	4-5m	2-3m	<u>Hawthorn, Elder, Crab Apple, Blackthorn, Ash (sm-m), Sycamore, Oak (sm-m)</u>	4	Bramble, Ivy, Dogrose, Common Nettle, Cleavers, Hedge Woundwort, White Deadnettle, Garlic Mustard	>10% gaps, Public Right of Way	Not recently managed (previously failed), Gaps present at southern end	N
H29b	4-5m	~1-1.5m	<u>Hawthorn, Sycamore, Hornbeam, Blackthorn, Field Maple, Cherry, Ash (sm)</u>	4	Ivy, Bramble, Yorkshire Fog, Perennial Ryegrass, Hedge Woundwort, Dandelion, Geranium sp., Cow Parsley, Alexanders, Ground Ivy, White Deadnettle, As per Woodland to north	>10% gaps	Recently managed (failed on southern side)	N
<b>Field 12</b>								
F28H1	6m	2m	<u>Hawthorn, Ash (sm), Norway Maple, Malus sp., Dogrose</u>	2	Ivy, Bramble	<10% gaps, Standard trees	Unmanaged, Gaps present, Leggy	N
<b>Field 13</b>								
F27H1	6-8m	3m	<u>Hornbeam, Elder, Hawthorn, Blackthorn, Ash (y)</u>	5	Hedge Woundwort, Ivy	Standard Tree	Unmanaged, Gaps present	N
F27H2	2m	3m	<u>Hawthorn, Elder, Dogrose, Ash (sm), Oak (sm)</u>	3	Ivy	Standard Trees, Public Right of Way	>10% Gaps present, Unmanaged	N

### Annex 3 – Hedgerow Details

[illegible]

# Annex 3 – Hedgerow Details

No.	H	W	Woody species	Avg. per 30m*	Ground flora & climbers	Associated features	Comments (including structure / management)	Likely to qualify <sup>#</sup>
H20ci	8m		<u>Hawthorn (D)</u> , <u>Holly</u> , <u>Dogrose</u> , <b>Oak (m)</b>	2	Common Nettle (50%), Yorkshire Fog, Hogweed, Bent, Cleavers	>10% gaps	Different character to H20c – tall, outgrown, not flailed	N
H20c	2.5 m	2m	<u>Hawthorn (D)</u> , <b>Field Maple (y-sm) &amp; Oak (y- m)</b>	1	Nettle (50%), Ivy, Garlic Mustard, Hogweed, Cleavers, Bramble	<10% gaps	Flailed/cut, narrow verge associated with road, dense and continuous	N
H20b	4- 5m	4- 5m	<u>Hawthorn</u> , <u>Elder</u> , <b>Oak (y) &amp; Ash (m)</b>	2	Common Nettle (50%), Garlic Mustard, Hogweed, Cleavers, Bramble, Cow Parsley, Ground Ivy, Hedge Woundwort, Spear Thistle	>10% gaps	Defunct, multiple gaps, in very poor condition, largely with dense Bramble infill	N
H16c	5m	4- 5m	<u>Hawthorn</u> , <u>Crab Apple</u> , <u>Elder</u> , <u>Field Maple</u> , <b>Ash (m)</b>	4	Nettle (75%), Cocksfoot, White Dead Nettle, Broad-leaved Dock, Spear Thistle, with Bramble in-fill	>10% gaps	Defunct, multiple gaps of 5m	N
<b>Field 18</b>								
H16d	4- 5m	2- 3m	<u>Hawthorn</u> , <u>Elder</u> , <b>Oak (sm-m)</b>	2	Bracken, Cock's-foot, Bramble, White Dead Nettle	<10% gaps	Dense and continuous	N
H13a	3	2	<u>Hawthorn</u> , <u>Elder</u> , <u>Hazel</u> , <b>Ash (m – p.vet)</b>	4	Nettle (50%), Ivy, White Dead Nettle	<10% gaps	Flailed, Multiple gaps, connects to woodland W2	N
H16a	1	1	<u>Hawthorn</u> , <u>Elder</u> , <u>Hazel</u> , <b>Ash (sm-m)</b>	1	Bracken, Bramble	>10% gaps	Largely defunct, multiple gaps in length and base, frequent deadwood, largely individual shrubs	N
H16b	5m	4- 5m	<u>Hawthorn</u> , <u>Elder</u> , <u>Field Maple</u> , <b>Oak (m – p.vet) &amp; Ash (m)</b>	2	Nettle (80%), Bramble	>10% gaps	Multiple gaps, connects to off-site mixed coniferous woodland	N
16bi	5m	4- 5m	<u>Hawthorn</u> , <u>Crab Apple</u> , <u>Elder</u>	3	Nettle (50%), White Dead Nettle, Ground Ivy, Garlic Mustard	>10% gaps	Gaps in hedge base	N
<b>Field 19</b>								
H13d	2m	1- 1.5m	<u>Hawthorn</u> , <b>Oak (m – p.vet)</b> , <u>Elder</u> , <u>Field Maple</u>	2	Nettle (50%)	>10% gaps	Associated with dirt track, multiple gaps, parallel to H11d	N
H11d	2.5 m	1.5m	<u>Hawthorn</u>	1	Common Nettle, Cock's-foot, Hogweed, White Dead-nettle	>10% gaps	Defunct hedgerow, Many gaps present	N

### Annex 3 – Hedgerow Details

No.	H	W	Woody species	Avg. per 30m*	Ground flora & climbers	Associated features	Comments (including structure / management)	Likely to qualify <sup>#</sup>
H14a	2m	1.5m	<u>Hawthorn</u> , <b>Oak (m)</b>	1	Nettle, Hogweed, Bracken	<10% gaps	Flailed, multiple gaps in length and base	N
H15a	2m	2- 3m	Bramble, <u>Blackthorn</u> , <u>Hawthorn</u> , <u>Holly</u> & Gorse	1	White Bryony, Spring Beauty, Bracken and Common Nettle	>10% gaps	Defunct, many gaps, some replanting with tree guards at east	N
<b>Field 20</b>								
F20TL1	8- 10m	3- 6m	<b>Field Maple (y-sm)</b> , <u>Elder</u> , <u>Sycamore (sm)</u>	1	Bramble, Gorse	>10% gaps	Semi-continuous canopy, formed along the A1065	N/A
H11c	1.5	1.5	<u>Hawthorn</u> , <b>Ash (m)</b>	1	Common Nettle, Cleavers, White Dead-nettle, Cow Parsley, Black Horehound, Burdock	>10% gaps	Closely Flailed hedgerow off access from A1065 to field F20/21, Gaps present	N
H14b	3- 4m	2- 3m	<u>Hawthorn</u> , <u>Holly</u> , <u>Blackthorn</u> , <u>Hazel</u> , <u>Buckthorn</u> , <u>Field Maple</u> , <u>Gorse</u> , <b>Oak (m)</b>	5	Nettle (30%), Cocksfoot, Cleavers	<10% gaps	Relatively newly planted with tree guards present	N
<b>Field 21</b>								
H10a1	2.5 m	2m	<u>Hawthorn</u>	1	Ivy, Bramble, Perennial Rye- grass, Cock's-foot, Cleavers, Knapweed, Teasel, Ribwort Plantain, Dog Rose, Hedge Bedstraw	<10% gaps	Box cut/flailed	N
H10a2	2.5 m	1.5- 2m	<u>Hawthorn</u> , <b>Oak (y - m)</b>	2	Cock's-foot, Common Nettle, Cow Parsley, White Dead-nettle, Hogweed, Hedge Bedstraw	<10% gaps, Standard trees	Dense and outgrown	N
H11a	2- 4m	2m	<u>Hawthorn</u> , <b>Oak (y)</b>	1	False Oat-grass, White Dead- nettle, Common Nettle, Campion, Ragwort, Cow Parsley, Bramble, Ivy	<10% gaps	Continuous, relatively recently planted, tree guards present in sections	N
H11b	4m	3- 4m	<u>Hawthorn</u> , <b>Oak (sm)</b> , <b>Field Maple (y-sm)</b>	2	Cock's-foot, Red Fescue, Cat's- ear, Mouse-ear, Hogweed, Common Vetch, Gorse, Bramble	>10% gaps	Semi-defunct, Gaps, leggy	N
H11e	2.5 m	2- 2.5m	<u>Hawthorn</u> & <u>Blackthorn</u>	2	Hogweed, Common Nettle, White Dead-nettle, Cock's-foot, Common Knapweed, Ground Ivy, Cleavers	<10% gaps	Flailed/Box cut, No standard trees, dense and continuous	N

### Annex 3 – Hedgerow Details

[illegible]

### Annex 3 – Hedgerow Details

No.	H	W	Woody species	Avg. per 30m*	Ground flora & climbers	Associated features	Comments (including structure / management)	Likely to qualify <sup>#</sup>
H9d	4-5m	3m	<u>Hawthorn &amp; Ash (sm-m)</u>	1	Cock's-foot, Garlic Mustard, Common Nettle, Ivy, Black Horehound, White Dead-nettle, Cow Parsley, Common Knapweed	<10% gaps	Box managed	N
H9c	4-5m	3m	<u>Hawthorn, Poplar (sm)</u>	1	Cock's-foot, Garlic Mustard, Common Nettle, Ivy, Black Horehound, White Dead-nettle, Cow Parsley, Common Knapweed	<10% gaps	Box managed	N
H10b	3m	2m	<u>Hawthorn (D), Field Maple, Blackthorn, Hazel (r), Crab Apple (r), Oak (sm-m) &amp; Ash (sm-m)</u>	<4	Perennial Rye-grass, Cock's-foot, False Oat-grass, Hedge Bedstraw, Hogweed, Bramble, Ground Ivy, White Dead-nettle, Cow Parsley, Common Knapweed, Mugwort, Cleavers, Garlic Mustard, Dandelion, Yarrow, Red Dead-nettle, Hemlock, Spanish Bluebell	>10% gaps	Parallel Hedge east of A1065	N
<b>Field 26</b>								
H5a	4m	2-3m	<u>Hawthorn (D), Elder, Oak (m)</u>	1-2	Common Nettle, Cleavers, White Deadnettle, Hogweed, Red Campion	Standard Trees, <10% gaps	Along to bare ground track	N
H5b	4m	3m	<u>Blackthorn, Hawthorn, Beech (M), Oak (m)</u>	3	Common Nettle, Lords and Ladies, Cleavers, Red Campion, Ground Ivy	Standard Tree, Dry Ditch	>10m gap separating H5a from H5b, Shallow dry ditch along northern side, managed (flailed)	N
H5c	6.5 m	2-3m	<u>Hawthorn, Elder, Apple, Pear, Sycamore (sm-m), Ash (sm-m)</u>	4	Ground Ivy, Burdock, Common Nettle, Cow Parsley, Lords and Ladies	>10% gaps, Standard Trees	Face managed	N
H5d	3m	1.5m	<u>Field Maple, Elder, &amp; Hawthorn</u>	2	Ground Ivy, Burdock, Common Nettle, Cow Parsley, Lords and Ladies	>10% gaps	Along Woodland edge several gaps; thin and leggy	N
H5e	3-4m	2m	<u>Hawthorn</u>	1	Common Nettle	>10% gaps	Many gaps, semi-defunct	N
H5f	3m	2m	<u>Hawthorn, Blackthorn, Field Maple, Hazel, Apple</u>	5	Common Nettle, Ground Ivy, Bracken, Hogweed, Cleavers, Ivy, White Dead-nettle, Lords and Ladies	>10% gaps	Associated with road verge to East, multiple gaps	N

# Annex 3 – Hedgerow Details

No.	H	W	Woody species	Avg. per 30m*	Ground flora & climbers	Associated features	Comments (including structure / management)	Likely to qualify#
Field 27								
H6a	3m	2m	<u>Hawthorn, Elder (R)</u>	2	Bracken, White Dead-nettle, Cocksfoot, Hogweed	<10% gaps	Along to bare ground track, box cut, canopy gaps	N
H6b	2m	2m	<b>Sycamore (sm), Ash (sm), Blackthorn, Hawthorn</b>	2	Bracken, White Dead-nettle, Cocksfoot, Hogweed	<10% gaps Standard Trees	Along to bare ground track, box cut, canopy gaps	N
H6c	4m	3- 4m	<u>Hawthorn, Blackthorn, Malus sp., Elder, Sycamore</u>	4-5	Bramble, Ivy, White Dead-nettle, Creeping Thistle, Common Nettle	>10% gaps	Outgrown, gaps present	N
Field 28								
F24H1	1m	0.5m	<u>Hawthorn (D), Elder</u>	1	Common Nettle (D), Hogweed, Cock's-foot, Cleavers, White Deadnettle, False Oatgrass, Yorkshire Fog, Perennial Rye, Bramble	<10% gaps, associated with track	Defunct young hedge, gaps present, parallel to hardstanding road	N
F24H2a +b	6m	3m	<u>Hawthorn, Elder, Blackthorn</u>	2	Burdock, Common Nettle (D), Hogweed, Cock's-foot, Cleavers, White Deadnettle, False Oatgrass, Yorkshire Fog, Perennial Rye, Bramble	<10% gaps,	Gaps present, Leggy, Unmanaged	N
Field 29								
H8a	2m	2m	<u>Hawthorn, Elder, <b>Oak (m – p.vet)</b>, Elm (D at south)</u>	4	Common Nettle (D), Hogweed, Cleavers	<10% gaps	Gaps present, nutrient enriched, flailed	N
H8b	3m	2m	<u>Hawthorn, Dogrose, <b>Oak (m)</b></u>	1	Ivy, Common Nettle, Cleavers, as per IG strip	<10% gaps	Flailed	N
H8c	2- 3m	2- 3m	<u>Blackthorn, <b>Field Maple (y), Oak (sm)</b></u>	2	Cleavers, Creeping Thistle, Spear Thistle, Bramble, Creeping Buttercup	>10% gaps, Standard Trees, Dry Ditch	Deep dry ditch along eastern side, face managed	N
H8d	2m	2m	<u>Blackthorn</u>	1	As per IG strip	Dry Ditch	Face Managed	N
Field 30								
H7a	2m	1.5m	<u>Hawthorn, Hazel</u>	2	Common Nettle	Dry Ditch	Gappy hedge (newly replanted), flailed, dry ditch parallel	N

# Annex 3 – Hedgerow Details

No.	H	W	Woody species	Avg. per 30m*	Ground flora & climbers	Associated features	Comments (including structure / management)	Likely to qualify <sup>#</sup>
H7b	2m	2-3m	<u>Elder, Hawthorn, field Maple, Ash (sm)</u>	3	Common Nettle	Dry Ditch	Gappy hedge (newly replanted), flailed, dry ditch parallel	N
H7c	2m	2-3m	<u>Blackthorn, Oak (sm-p.vet), Elm, Field Maple, Hazel, Holly</u>	3	Bramble, Goat Willowherb, Creeping Buttercup, Broadleaved Dock, Hogweed	Standard Trees	Gaps present (newly replanted)	N
<b>Field 31</b>								
F25H1	3m	2m	<u>Hawthorn, Elder, Blackthorn, Scots Pine, Ash</u>	3	Bramble, Goat Willowherb, Creeping Buttercup, Broadleaved Dock, Hogweed	>10% gaps	Thin and leggy in places	N
<b>Field 32</b>								
F4H1	4-6m	2m	<u>Hawthorn (D), Norway Maple (sm), Oak (m)</u>	2	As per F2H3, Bramble, Ground Ivy	Standard Trees	Unmanaged, more than 10% gaps	N
F4H2	5-8m	4m	<u>Wild Apple (F), Elder, Wild Cherry (O), Hawthorn (O), Field Maple, Hornbeam, Oak (sm-m) &amp; Ash (sm-m)</u>	6	Dogrose, Cow Parsley (F), False Oatgrass, Perennial Ryegrass (F), Hogweed (C), Cleavers (F), Common Nettle (C), Ivy, White Dead-nettle, Creeping Thistle	Standard Trees, <10% gaps	Leggy with gaps at the centre, Face managed at south	N
F4H3	3m	2m	<u>Hawthorn, Elder, Ash (m)</u>	2	As per F4H2	>10% gaps, Standard Trees	Face managed	N
<b>Field 33</b>								
F2H1	2.5m	1m	<u>Hawthorn (D), Hornbeam (O), Ash (sm)</u>	2	Common Nettle (F), Cleavers (A), Ivy, Cow Parsley (F), Ribwort Plantain (O), White Dead-nettle, Mallow (R), Ivy-leaved Speedwell (R), Garlic Mustard (F), Dandelion, False Oatgrass (F), Hogweed (F), Ground Ivy (O), White Campion (O), Yorkshire Fog (O), Barren Brome (F)	Standard Tree	Hedge runs along a track	N
F2H2	3m	3m	<u>Hawthorn (D), Field Maple (F), Blackthorn (O), Oak (sm – p.anc), Ash (m)</u>	3	Creeping Thistle (O), Ground Ivy (F), White Dead-nettle (C), Bramble (Y), Cow Parsley (O), Creeping Bent (O), Perennial Ryegrass and Yorkshire Fog (A), Garlic Mustard (O)	>10% gaps, Standard Trees	Face and top managed	N

### Annex 3 – Hedgerow Details

No.	H	W	Woody species	Avg. per 30m*	Ground flora & climbers	Associated features	Comments (including structure / management)	Likely to qualify <sup>#</sup>
F2H3	4-10m	1.5m	<u>Hawthorn (D), Elder, Ash (sm-m) &amp; Hornbeam (O), Blackthorn (O), Apple (R), Oak (m -p.anc), Holly</u>	6	Creeping Thistle (O), Ground Ivy (F), White Dead-nettle (C), Bramble (Y), Cow Parsley (O), Creeping Bent (O), Perennial Ryegrass and Yorkshire Fog (A), Garlic Mustard (O)	Standard Trees (Ash, Oak)	Semi-defunct, leggy, with more than 10% gaps, face managed	Y
F2H4	2m	3m	<u>Hawthorn, Blackthorn, Elder, Field Maple, Oak (sm)</u>	3	Creeping Thistle (O), Ground Ivy (F), White Dead-nettle (C), Bramble (Y), Cow Parsley (O), Creeping Bent (O), Perennial Ryegrass and Yorkshire Fog (A), Garlic Mustard (O)	Standard Trees (Oak)	Dense and continuous, previous signs of box cut	N
<b>Field 34</b>								
F3H1	3m	2m	<u>Hawthorn, Blackthorn, Oak (m), Beech</u>	2	Common Nettle, Hogweed (R), Mallow	Standard Trees	Flail cut, gaps present (>10%)	N
F3H2	3-6m	1.5m	<u>Hawthorn (D), Blackthorn, Holly, Oak (m)</u>	2	Bramble, Herb Robert, Ground Ivy, Cock's-foot, Common Nettle, Garlic Mustard (D)	Standard Trees, Pond	Gaps present, Physical damage present	N
<b>Field 35</b>								
F1H1	2.5 m	2m	<u>Blackthorn (A), Hawthorn (F), Oak (sm-m)</u>	2	Dogrose (F), Ivy (A), Bramble (F), Garlic Mustard (O), White Dead-nettle (O), Mugwort, Herb Robert (F), Hogweed (F), False Oatgrass (F)	Standard Trees, Less than 10% gaps	Box managed (flailed)	N
F1H2	1.5-8m	1.5-4.5m	<u>Ash (sm), Elder (F), Hawthorn (O), Blackthorn (F), Bramble (F), Wild Cherry</u>	4	Common Nettle, White Dead-nettle, Creeping Thistle, Ground Ivy, False Oatgrass, Perennial Ryegrass, Cleavers, Cow Parsley, Bracken, Blackthorn scrub	Offsite woodland, Standard Trees	Adjoin to offsite woodland at the west, Semi-defunct widening with scrubby outgrowth	N
F1H3	2-3m	1m	<u>Ash (y), Hawthorn (A), Field Maple (y)</u>	2	Cleavers (F), Garlic Mustard (C), Common Nettle (F), Ground Ivy (O), Creeping Buttercup (O), False Oatgrass (C), Cow Parsley (F), Hogweed (F), Curled Dock (C), Mugwort (O), White Dead-nettle (O)	Adjacent to pond F3P1, Less than 10% gaps	Face managed, Leggy in places	N
F1H4	2-3	2-3	<u>Blackthorn, Field Maple, Dog-rose, Hawthorn, Ash, Oak (1x sm)</u>	2	Common Nettle, White Campion, Mugwort, Bramble, Ivy, Cleavers	Less than 10% gaps, Standard Tree	Box managed	N

### Annex 3 – Hedgerow Details

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### Annex 3 – Hedgerow Details

No.	H	W	Woody species	Avg. per 30m*	Ground flora & climbers	Associated features	Comments (including structure / management)	Likely to qualify <sup>#</sup>
F42HA	X	X	<u>Hazel, Hawthorn, Oak, Field Maple, Dogrose, Elm, Blackthorn, Malus sp., Oak (3 x m, 2 x sm), Ash (1x m)</u>	4	Nettle, Bramble, Garlic Mustard, White Dead-nettle, Red Campion, Poppy, Mugwort, Bracken, Ivy	Standard Trees, Less than 10% Gaps	Box managed albeit not recently	N
F42HB	X	X	<u>Field Maple, Hawthorn, Blackthorn, Oak, Crab Apple, Hazel</u>	3	Nettle, Bracken, Bramble, Goosefoot sp., Ribwort Plantain, Greater Plantain, Mugwort, White Campion, Knotgrass, Common Fleabane, Spear Thistle, Creeping Thistle, Ragwort, Poppy	Standard Trees, Less than 10% Gaps	Box managed albeit not recently	N
<b>Field 43</b>								
F43HA	3	2	<u>Hawthorn, Oak (2 x m), Ash (1 x m)</u> <u>Dogrose, Elm, Elder</u>	2	Nettle, Ivy, Perennial Rye, False-oat Grass, Cock's Foot, Cow Parsley, Spear Thistle, Hogweed, Broad-leaved Dock, White Dead-nettle, Garlic Mustard, Ground Ivy, Creeping Buttercup, Ribwort Plantain, Greater Plantain, Yorkshire Fog, Common Fleabane, Yarrow, White Campion	Standard Trees, Leggy,	Box managed albeit not recently	N
<b>Field 44</b>								
F44HA	3	3	<u>Field Maple, Hawthorn</u>	2	Cock's Foot, False Oat Grass, Bracken, Yarrow, Ribwort Plantain, Ground Ivy, Mugwort, Ragwort, Yorkshire Fog, Bugloss, Red Fescue, Creeping Thistle, Creeping Bent, Perforate St John's Wort, Common Cat's-ear, Cow Parsley, Hogweed, Common Fleabane	>10% Gaps, Leggy	New Hawthorn and Dogwood planting in gaps	N
F44HB	2-3	2	<u>Hawthorn, Ash, Dogrose</u>	2	Bramble, Tansy, Cock's Foot, False-oat Grass, Perennial Rye, Ribwort Plantain, Cow Parsley, Bracken, Red Fescue, Nettle, White Dead-nettle, Garlic Mustard, Yarrow, Mugwort, Dandelion, Ivy	>10% Gaps	No recent signs of management.	N

### Annex 3 – Hedgerow Details

[illegible]

### Annex 3 – Hedgerow Details

No.	H	W	Woody species	Avg. per 30m*	Ground flora & climbers	Associated features	Comments (including structure / management)	Likely to qualify <sup>#</sup>
F47HA	2	2-3	<u>Ash (1 x m)</u> , <u>Hawthorn</u> , <u>Dogrose</u>	2	Bramble, Common Nettle, False-oat Grass, Cock's Foot, White Dead-nettle, Groundsel, Cow Parsley, White Campion, Ground Ivy, Canadian Fleabane, Mugwort, Black Horehound, Garlic Mustard, Yarrow	>10% Gaps, Canopy gaps >5m, Standard Trees	Box managed albeit not recently	N
F47HB	4-5	3-4	<u>Hawthorn</u> , <u>Malus sp.</u> , <u>Dogrose</u>	2	Bramble, Ivy, Bramble, Yorkshire Fog, Cock's Foot, False-oat Grass, Ragwort, Broad-leaved Dock, Bugloss, Geranium sp., Common Nettle, Bramble, Mugwort, White Campion, Ribwort Plantain, Sow Thistle, Ground Ivy, Musk Thistle.	>10% Gaps, Canopy gaps >5m	Not recently managed.	N
F47HC	4-5	3	<u>Hawthorn</u> , <u>Elder</u> , <u>Sycamore (1 x m)</u>	2	Bramble, Ivy, Bramble, Yorkshire Fog, Cock's Foot, False-oat Grass, Ragwort, Broad-leaved Dock, Bugloss, Geranium sp., Common Nettle, Bramble, Mugwort, White Campion, Ribwort Plantain, Sow Thistle, Ground Ivy, Musk Thistle.	>10% Gaps, Canopy gaps >5m, Standard Trees	Not recently managed.	N
<b>Field 48</b>								
F48HA	2-3	2-3	<u>Hawthorn</u> , <u>Dogrose</u> , <u>Ash (1 x m)</u>	2	Bramble, Ivy, Common Nettle, , Cock's Foot, False-Oat grass, Yorkshire Fog, Creeping Bent, Ragwort, Yarrow, Broad-leaved Dock, White Campion, Hogweed, Ribwort Plantain, Creeping Thistle, Mugwort, Lady's Bedstraw, Goosefoot sp., Agrimony, Black Knapweed, Tansy, Goat's Beard.	>10% Gaps, Standard Trees	Box managed.	N
<b>Field 49</b>								
F49HA	3	2-3	<u>Hawthorn</u> , <u>Field Maple</u> , <u>Malus sp.</u> , <u>Hazel</u> , <u>Oak (1 x m)</u> , <u>Elder</u> , <u>Ash</u> , <u>Elm</u>	3	Bramble, Common Nettle, Greater Plantain, Cock's Foot, False-Oat grass, White Campion, Ivy, Mugwort, Broad-leaved Dock, Cow Parsley	Leggy at base, Standard Trees	Managed by flailing on both sides albeit not recently	N

### Annex 3 – Hedgerow Details

No.	H	W	Woody species	Avg. per 30m*	Ground flora & climbers	Associated features	Comments (including structure / management)	Likely to qualify <sup>#</sup>
F49HB	2-3	2	<u>Field Maple, Hawthorn,</u> <u>Malus sp., Dogrose,</u> <b>Sycamore (1x m, 2x sm), Oak (4 x m), Ash (4 x m, 7 x sm)</b>	2	Ivy, Common Nettle, Bramble, False-oat Grass, Cock's Foot, Ribwort Plantain, Black Horehound, White Dead-nettle, Cleavers, Geranium sp., Mugwort, Goosefoot sp., Shepherd's Purse, Scentless Mayweed.	Standard Trees, Leggy, Less than 10% gaps	Flailed albeit not recently	N
<b>Field 50</b>								
F50HA	2-3	3	<u>Hawthorn, Blackthorn,</u> <u>Hazel, Field Maple,</u> <u>Elder, Dogrose</u>	3	Bramble, Common Nettle, Cock's Foot, False-oat Grass, Ribwort Plantain, Creeping Thistle, Mugwort, Dandelion, Ragwort, Hogweed, Ground Ivy, Cow Parsley, Common Fleabane, Red Campion, White Campion, Bugloss, Geranium sp., Broad- leaved Dock, Creeping Cinquefoil, Re Fescue, Yarrow, White Dead-nettle.	Less than 10% gaps	Box cut albeit not recently	N

Woody species (as listed under Schedule 3 of the Hedgerows Regulations 1997) and woodland ground flora species (as listed under Schedule 2 of the Hedgerows Regulations 1997) underlined, y = young, sm = semi-mature, m = mature, p.vet = possible veteran, p.anc = possible ancient. B = bank, W = wall, br = bridleway, f/p = footpath, b/w = byway, (D) = dominant species. **Standard Trees in Bold.**

\* estimated average number of woody species (as listed under Schedule 3 of the Hedgerows Regulations 1997) in any one 30m stretch

<sup>#</sup> likely to qualify – as 'important' under the wildlife and landscape criteria of the Hedgerows Regulations 1997.

## **Annex 6550/4:**

### Ground Level Tree Assessment Table

## Annex 4 – Ground Level Tree Assessment Results

Tree Ref. (associated feature)	Species	Assessment and potential roosting features	Summary
<b>Field 1</b>			
T65 (H37c)	Mature Oak	Hollow cavity in main stem near the junction at 2m high facing West.	PRF-M
T71 (H38bi)	Mature Ash	2 small knot holes facing on separate limbs (1 at 4.5m high, 2 at 5.5m high).	PRF-M
T72 (H38bi)	Mature Oak	Hollow major split on main stem 6m high.	PRF-M PRF-I
T73 (H38bi)	Oak	Major lifted bark to upper limbs; 2 lower limb knot holes (no obvious cavity).	PRF-M PRF-I FAR
T74 (H38bi)	Oak	Upward likely hollow cavity high on main branch facing south-east.	PRF-M FAR
T75 (H38bi)	Oak	Minor lifted bark in upper limbs.	PRF-Is
T76 (H38bi)	Oak	Moderate hollow cavity in main trunk at 2.5m high facing north-west.	PRF-M
T77 (H39b)	Large Oak	Ivy covered; Minor lifted bark high up.	PRF-Is
T78 (H39b)	Oak	Thick ivy covering; Minor cracks and lifted bark.	PRF-Is
T79 (H39b)	Oak	Major horizontal tear-outs at 3m high in south-west facing limb; Minor Ivy covering.	PRF-M PRF-Is
<b>Field 2</b>			
T66 (H37d)	Mature Oak	Minor cavity at 2.5m high facing West; Upper limbs with exposed heartwood.	PRF-M PRF-I
T67 (H37di)	Ash	2-3 knot holes present in minor stem at 8-10m high facing south; Thin ivy covering on stem.	PRF-Ms PRF-I FAR
T68 (H38a)	Mature Oak	Thick Ivy covering; Failed major limb with upward facing cracks	PRF-Is
T69 (H38a)	Mature Oak	Limb damage with openings	PRF-M FAR
T70 (H38a)	Mature Oak	Rot hole high on south-west facing limb.	PRF-M
<b>Field 3</b>			
T64a-c (H37b)	3 x Mature Oak	Minor damage and lifted bark on upper small limbs; Thick Ivy cover.	PRF-I FAR
T80 (H37ei)	Oak	Knot hole at 4m high in major south-west facing limb.	PRF-M
T81 (H37ei)	Oak	Fallen/leaning stem; Potentially dead; Large areas of lifted bark.	PRF-Is
T82 (H37ei)	Oak	Major lower limb failure but no obvious cavities; Upward facing likely minor cracks.	PRF-M PRF-Is FAR
T83 (H37ei)	Mature Oak	Ivy covering; Minor lifted bark/split in very small dead upper limb.	PRF-Is
<b>Field 4</b>			
F33T1 (Tall ruderal Field 4)	Mature Oak	Several knotholes; Old snap to canopy limbs and upper trunk	Multiple PRF-Ms
F33T2 (Tall ruderal Field 4)	Semi-Mature Oak	Limb tear to upper stem	PRF-M

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<b>Tree Ref. (associated feature)</b>	<b>Species</b>	<b>Assessment and potential roosting features</b>	<b>Summary</b>
F33T3 (Tall ruderal Field 4)	Young Ash	Linear crack in stem to canopy; rot cavities	PRF-M PRF-I
F33T4 (Tall ruderal Field 4)	Semi-Mature Ash	Linear crack in stem to 2.5m	PRF-M
F33T5 (Tall ruderal Field 4)	Mature Oak	Multiple dead limbs with cracks; knotholes; delaminated bark	Multiple PRF-Is
F33T6 A+B (F33H2)	Mature Ash	Dense ivy; limb shear in upper canopy	Multiple PRF-Is PRF-M
F33T7 (F33H2)	Dead tree	Limb tear; linear cracks from trunk to canopy	Multiple PRF-Ms
F33T8 (F33H3A)	Mature Oak	Large upper limb tears to trunk cavity	Multiple PRF-Ms
F33T9 (F33H3A)	Mature Oak	Large upper limb tears to trunk cavity	Multiple PRF-Ms
F33T10 (F33H3A)	Mature Oak	Dense ivy with overlapping stems	PRF-I FAR
F33T11 (F33H3A)	Semi-Mature Oak	Dense ivy into canopy with thick stems	FAR
F33T12 (F33H3A)	Semi-Mature Oak	Dense ivy into canopy with thick stems	FAR
F33T13 (F33H3A)	Semi-Mature Oak	Dense ivy into canopy with thick stems	FAR
F33T14 (F33H3A)	Semi-Mature Oak	Dense ivy into canopy with thick stems	FAR
F33T15 (F33H3A)	Semi-Mature Oak	Dense ivy into canopy with thick stems	FAR
F33T16 (F33H3A)	Likely Ancient Oak	Dense obscuring ivy on trunk and into canopy; limb tears; knotholes	Multiple PRF-Is
F33T17 (F33H3A)	Semi-Mature Oak	Dense ivy into canopy with thick stems	FAR
F33T18 (F33H3A)	Semi-Mature Oak	Dense ivy into canopy with thick stems	FAR
F33T19 (F33H3A)	Likely Ancient Oak	Dense obscuring ivy on trunk and into canopy; limb tears; knotholes	Multiple PRF-Is
F33T20 (F33H3A)	Likely Ancient Oak	Dense obscuring ivy on trunk and into canopy; limb tears; knotholes	Multiple PRF-Is
<b>Field 5</b>			
F32T1-7 (F33H1)	Semi-Mature Ash	Occasional knot holes; Ivy covered.	PRF-M PRF-Is
F32T8 (F32H3)	Semi-Mature Ash	Dense Ivy covering; no obvious BP but knot hole high on south-east branch (doesn't appear to lead anywhere).	PRF-Is FAR
F32T9 (F32H3)	Semi-Mature Oak	Single knot hole; Hollowed branch.	PRF-M
F32T10-16 (F33H3a)	7 x Semi-Mature/Mature Oak	Dense Ivy covering; Knot holes; Hollow dead limbs to cavity.	PRF-M PRF-Is
<b>Field 6</b>			
T80 (H36b)	Mature Oak	Exposed heartwood in major limb 2m high facing South with upward facing cavity.	PRF-M
T81 (H36b)	Mature Oak	Tear-out would at 8m high in 2 <sup>nd</sup> south-western limb.	PRF-M
T82 (H36b)	Mature Oak	Major previous limb failure with minor cracks and bark; Knot holes at 2.5m high facing south.	PRF-M PRF-Is

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Tree Ref. (associated feature)	Species	Assessment and potential roosting features	Summary
T83 (H36b)	Mature Oak	crack at 2m high in both major limbs at fork; Hollowing access into the tree.	PRF-M
<b>Field 7</b>			
T84 (H35a)	Oak	Small minor limb damage; Very minor peeling bark on minor limb at 6m facing north-west.	PRF-Is FAR
T85 (F35TL1)	Pine	Limb damage; Upward facing cracks.	PRF-M PRF-Is
T86-88 (F35TL1)	Scots Pine	Very minor limbs failed/dead; Various small cracks (no obvious cavity/too small).	PRF-M PRF-Is
T89 (F35TL1)	Scots Pine	Twin stem; Failed _ at 4.5m with cracks and a cavity.	PRF-M PRF-Is
T90 (TL35S)	Scots Pine	Partially failed upper limbs at 7m high facing east.	PRF-M
T91 (F35TL1)	Scots Pine	2 degree limb failure at 5m high facing west; Small dead limb facing east with upward facing cracks.	PRF-M PRF-Is
T92 (F35TL1)	Scots Pine	Major old limb/joint leader failure at 5m high; Knot hole facing south at 2.5m high (below limb failure) with cavity.	PRF-M PRF-Is
T93 (F35TL1)	Scots Pine	2 degree leader to north-east dead (4-10m high); Cracks and lifted bark.	PRF-M PRF-Is
T94 (F35TL1)	Scots Pine	2 dead 2-degree leaders to north-east with cracks and lifted bark.	PRF-Is
T102 (H35b)	Oak	Major previous limb failure/heartwood; Few cracks; Very minor lifted bark	PRF-Is
T103 (adjacent to H21S)	Oak	Thick Ivy covering; Major limb failure low on west side albeit only minor lifted bark visible.	PRF-Is FAR
<b>Field 8</b>			
T95 (H34a)	Sycamore	Thick Ivy obscure most of the tree; Minor hazard beam at 5m high facing east.	PRF-M PRF-Is FAR
T96 (H34b)	Oak	Ivy covering; Clear rot in minor limb at 4m high facing north with cavity.	PRF-M PRF-Is FAR
T97 (H34b)	Mature Oak	Major limb failure at 9m high facing south with upper facing hollow.	PRF-M
T98 (H34d)	Mature Oak	Thick Ivy obscuring the tree; 1-2 very minor branches with clear rot/likely cavity.	PRF-M PRF-Is
T99 (H34c)	Ash	Thick Ivy covering; Failed upper limb/leader with vertical crack and likely cavity.	PRF-Is
T100 (H34d)	Mature Oak	Thick Ivy covering obscure most; minor damage lifted bark.	PRF-Is
T101 (H34c)	Mature Oak	Thick Ivy covering; Very minor lifted bark noted.	PRF-Is
<b>Field 9</b>			
T22a (H22a)	Mature Ash	Dense thick Ivy starting to form plates.	PRF-Is
T22b (H22b)	Mature Ash	Large tear-out on the main stem; Rot holes (very exposed).	PRF-M FAR
T22c (H22d)	Mature Ash	Dense Ivy; Deep rot holes; Limb tear-outs.	PRF-M PRF-Is
T22d (H22d)	Mature Oak	Limb tear-out; Some lifted bark.	PRF-M PRF-Is
T22e (H22d)	Mature Ash	Dense mature Ivy; Rote holes; Limb tear-outs.	PRF-M PRF-Is
T22f (H22e)	Mature Ash	Dense Ivy.	PRF-Is FAR

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Tree Ref. (associated feature)	Species	Assessment and potential roosting features	Summary
<b>Field 10</b>			
TA1 (Marl Pit)	Mature Ash	Dense Ivy cover. Limb with major failure	PRF-M FAR
TA2 (H29/30)	Mature Oak	Ivy with thick stems; Very minor knuckling in small rotten limb.	PRF-Is
TA3 (H29/30)	Oak	Ivy cover; Failed major limb with upward cracks.	PRF-Is
TA4 (H29/30)	Oak	Former pollard/collapse; Thick Ivy; Major hollow/crack in stem 0-3m high (likely exposed, no upper limbs).	PRF-M PRF-Is
TA5 (H22d)	Oak	Minor lifted bark	PRF-I
TA6 (H21S)	Ash	Vertical crack 0-1m into hollow stem; Minor knot hole.	PRF-M
TA7 (H21N)	Mature Ash	Thick Ivy cover with knot holes	PRF-Ms
TA9 (H21S)	2 x Ash	Thick Ivy cover but no obvious PRF	FAR
<b>Field 11</b>			
Multiple trees of potential suitability for roosting bats within hedgerow H29a	4 x Ash 3 x Oak	Dence Ivy; Lifted bark; Splits and cracks	FAR
Multiple trees of potential suitability for roosting bats within hedgerow H29b	5 x Semi-Mature Ash	Dence Ivy; Rot holes; Cracks.	PRF-M PRF-Is FAR
<b>Field 13</b>			
F27T1-2 (F27H2)	2 x Semi-Mature Ash	Tree covered with Ivy.	PRF-Is FAR
<b>Field 14</b>			
F26T1-5 (F26H1a)	5 x Mature Ash	Hollow Trunk; Knot holes.	PRF-Ms
F26T6 (F26H1a)	Mature Ash	Knot hole and tree covered with Ivy.	PRF-M PRF-Is
F26T7 (F26H1a)	Dead Ash	Dead; Knot hole; Dense Ivy covering.	PRF-M PRF-Is FAR
F26T8 (F26H1a)	Mature Ash	Tree covered with Ivy.	PRF-Is
F26T9 (F26H1a)	Possible Veteran Ash	Significant deadwood; Split limbs; Rot holes.	Multiple PRF-Is
F26T10 (F26H1a)	Mature Ash	Knot hole and tree covered with Ivy.	PRF-M PRF-Is
F26T11 (F26H1a)	Mature Oak	Knot hole and tree covered with Ivy.	PRF-M PRF-Is
<b>Field 15</b>			
F23T1 (F23H1)	Mature Ash	Dense Ivy and limb split.	PRF-Is

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Tree Ref. (associated feature)	Species	Assessment and potential roosting features	Summary
F23T2 (F23H1)	Semi-Mature Oak	Dense ivy cover	PRF-Is
F23T3 (F23H1)	Hornbeam	Dense ivy cover	PRF-Is
F23T4 (F23H1)	Field Maple	Dense ivy cover	PRF-Is
F23T5-6 (F23TL1)	2 x Semi-Mature Ash	Hollow trunk (basally).	PRF-Ms
F23T7 (F23H2)	Mature Ash	Multi-limb split; Tear out cavity.	PRF-M PRF-Is
<b>Fields 16 - 24</b>			
T64 (H21b)	Mature Ash	Large open cavity in main fork at 4m high on the western elevation	PRF-M
T63 (H21b)	Ash	Major previous limb failure from base to southeastern side. Hollowing leads to upper limbs	PRF-M
T62 (H21a)	Mature Ash	3 woodpecker holes in main trunk on the eastern elevation.	PRF-M
T53 (H21a)	Mature Oak	Major cavity into hollow trunk at 2m high on western elevation.	PRF-M
T54 (H20a)	Mature Oak	2x limb failure hollow at 3m high on eastern elevation; minor knot holes higher up in canopy.	PRF-Ms PRF-Is
T55 (H20a)	Mature Oak	Major cavity, hollow at 2-3m high (and approximately 4m high) on eastern elevation; knot holes higher up	PRF-M
T56 (H20a)	Oak	Major old limb failure at 4m high on southern elevation; minor rot hole beneath doesn't appear to lead anywhere; minor splits in small deadwood	PRF-M PRF-I FAR
T57 (H20a)	Mature Oak	Old _ exposed heartwood on eastern elevation; major cracks splits creating a cavity	PRF-M
T58 (H20a)	Oak	Cracks and splits in upper main stem on northern elevation, hollow at the base	PRF-Ms
T59 (H20a)	Oak	Minor lifted bark and old wound	PRF-Is
T61 (H20Ci)	Mature Oak	Covered in thick ivy; minor lifting bark on small upper dead limb at 12m high on southern elevation. Defunct but no large features.	PRF-Is
T60 (H20b)	Ash	Thick overlapping Ivy stems	PRF-Is
T47 (H16c)	Ash	Woodpecker hole at 5m high on northern elevation	PRF-M
T48 (H16c)	Ash	One knot hole and minor cracks in upward limb failure	PRF-M PRF-I
T43 (H16b)	Mature Oak	Major limb failure, heartwood, cavity, knotholes	PRF-Ms
T44-45 (H16b)	2 x Ash	Single old tear-outs forming likely cavity in each tree	PRF-Ms
T46 (H16b)	Oak	Major large crack in limb on the western elevation 4-7m high	PRF-M
T49 (H16d)	Oak	Large splits and a cavity	PRF-Ms
T50 (H16d)	Oak	Minor lifted bark on old limb failure at 2.5m high on northeastern elevation	PRF-I
T51 (H16d)	Oak	Minor lifted bark on limb at 2.5m high	PRF-I
T52 (H16d)	Oak	Very large oak; thick ivy stems with not much foliage; minor cracks in old limb wound	PRF-Is

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Tree Ref. (associated feature)	Species	Assessment and potential roosting features	Summary
Multiple trees of potential suitability for roosting bats within hedgerow H18a	Mature Oak Mature Sycamore	Dence Ivy; Lifted bark; Splits and cracks; broken limbs in canopy with hazard beams and rot holes	FAR
T36a (H13a)	Likely Veteran Ash	Large stem hollow with rotting; Gap cervices opposite; features below 3m	Multiple PRF-Ms
T37a (H13a)	Ash	Major heartwood exposed /rotting in trunk to height of 2.5m; Ivy obscuring access; few potent hollows	Multiple PRF-Ms
T32 (H10a2)	Semi-mature Oak	Very small limb fracture at ~5m height, with split and minor crevice	PRF-I
T33 (H10a2)	Semi-mature Oak	Minor lifted bark	PRF-I
T34 (H10a2)	Semi-mature Oak	Small deformed oak with very minor lifted bark	PRF-I
T35 (H10a2)	Semi-mature Oak	Very minor lifted bark on single dead limb	PRF-I
T43b-45b (H13d)	Likely Veteran Oak x3	Many holes and a number of areas of exposed wood; Cavities	PRF-Ms PRF-Is
T40a (H14b)	Mature Oak	Dead; leaning stem although only minor lifted bark and no cavities	Potential PRF-Is
T41 (F20TL1)	Sycamore	Opening into stem cavity at 1.5m high in main stem	PRF-M
T42 (H16d)	Oak	Small hazard beam split at 3m high on northwestern elevation	PRF-M
T40b & T40c (H11c)	2x mature Ash	Minor limb splits, hollow at base on southern elevation	PRF-M
<b>Field 26</b>			
T1 (H5a)	Oak	Split limbs and tear outs; Delamination.	PRF-I
T3 (H5a)	Mature Oak	2-3 knot holes (no obvious cavities); Minor lifted bark on the upper limb (likely to fall from tree).	PRF-I
T4 (H5b)	Mature Oak	Multiple long cavities at a number of levels.	Multiple PRF-Ms
T5 (H5B)	Mature Beech	Gnarled trunk, some lifted bark	PRF-Is
T6 (H5C)	Mature Sycamore	2-3 minor knot holes (potential cavities).	3 x PRF-Ms
T7 (H5C)	Semi-Mature Sycamore	Significant hole/hallow at the base (albeit obscured).	PRF-M
T8 (H5C)	Ash	Collapsed; Heavy rot cavities; Lifted bark.	Multiple PRF-Ms
T9 (H5C)	Sycamore	2-3 knot holes (no obvious cavities).	3 x PRF-I
T10 (H5C)	Ash	Lightning damage; Smooth but upward facing cavity.	PRF-M
T11 (Southern margin field 26)	Mature Oak	Small very hollow tree; exposed (no linear features).	PRF-M

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<b>Tree Ref. (associated feature)</b>	<b>Species</b>	<b>Assessment and potential roosting features</b>	<b>Summary</b>
T12 (Southern margin field 26)	Mature Oak	Thick Ivy; Lifted bark; Minor knot holes.	PRF-Is
T13 (South-east field 26 corner)	Mature Oak	Thick Ivy; Small knot holes; Delamination.	PRF-Is
<b>Field 27</b>			
T14 (TL6a)	Mature Oak (Possible Veteran)	Woodpecker hole at 5m high on northern elevation; South facing cavity 3m high.	PRF-M
T15 (northern field boundary)	Mature Oak (Possible Veteran)	Major hollows and lifted bark.	PRF-Ms PRF-Is
T16 (northern field boundary)	Oak	Dead; Lifted bark and hollows.	PRF-Ms PRF-Is
T17 (P6a)	Mature Ash	Split limbs but no obvious cavity.	PRF-Is
T18 (northern field boundary)	Mature Oak	Exposed heartwood with cracks and hollow below 1m,	PRF-M PRF-Is
T19b (H7b)	Ash	Minor cracks.	PRF-Is
T19a (P6a)	Sycamore	A single minor rot hole (unsure if cavity) 5m high facing north.	PRF-M
T23 (Marl Pit)	Mature Ash	2-3 minor knot holes (all North facing approximately 4-6m high on different branches.	PRF-Ms
<b>Field 28</b>			
F24T1 (H8c))	Mature Oak	Various limb splits.	PRF-Is
F24T2 (within scrub along southern boundary)	Mature oak	Covered with Ivy.	PRF-Is FAR
<b>Field 29</b>			
T20 (H8a)	Possible Veteran Oak	Hollow but no obvious cavities as no "Tags".	PRF-Ms
T21 (H8a)	Mature Oak	Hollow present	PRF-M
T22 (H8b)	Mature Oak	Thick Ivy; lifted bark	Multiple PRF-Is
T24 (P8a)	Mature Oak	Lifted bark.	PRF-Is
T25 (H8c)	Mature Oak	Several small holes and lifted bark.	PRF-Is
<b>Field 30</b>			
T26 (P7a)	Semi-Mature Oak	Lifted bark; Minor features only.	PRF-Is
T27 (P7a)	Semi-Mature Oak	Delaminated; Hollow with cavities.	PRF-Ms
T28 (H7c)	Oak (Possible Veteran)	Exposed heartwood with large cracks and cavities.	PRF-Ms
T29 (F3H1)	Oak	Dead; Minor lifted bark, Cavities to limbs.	PRF-M PRF-Is

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Tree Ref. (associated feature)	Species	Assessment and potential roosting features	Summary
T30 (F3H1)	Oak	Minor lifted bark and hollowing.	PRF-M PRF-Is
T31 (F3H1)	Mature (Likely Ancient) Oak	Likely internal hollowing but no obvious features from ground level.	FAR
<b>Field 32 (off-site field, for reference only)</b>			
F4T1 (F4H1)	Mature Oak	Sparse Ivy covering; Superficial split limb with a shallow cavity.	PRF-M PRF-Is
F4T2 (F4H1)	Mature Oak	Split dead limbs in the canopy with a cavity to the trunk.	PRF-M
F4T3 (F4H1)	Dead Tree	Dead; Peeling bark; Hollowing limbs.	PRF-Is
F4T4 (F4H1)	Mature Oak	As per F4T1.	Multiple PRF-Ms
F4T5 (F4H2)	Mature Oak	Sheared limb; Exposed cavity from stump to trunk upper; Knot holes to tight crevice in canopy; Delaminated bark on upper limb.	1 x PRF-M 2 x PRF-I FAR
F4T6 (F4H2)	Mature Oak	Delaminated bark and cracks in the canopy; Trunk shear cavity.	PRF-Ms PRF-Is FAR
F4T7 (F4H2)	Mature Oak	Delaminated bark and cracks in the canopy.	PRF-Is FAR
F4T.8 (F4H2)	Mature Oak	Delaminated bark; limb cracks in canopy	Multiple PRF-Is
F4T9 (F4H2)	Semi-Mature Oak	Dying; Retrenched crown; Significant deadwood; Multiple knot holes and limb splits.	2 x PRF-M 4 x PRF-I FAR
F4T10 (F4H2)	Mature Oak	Limb tear to trunk cavity; Woodpecker hole; Knot hole in upper trunk.	3 x PRF-M FAR
F4T11 (F4H3)	Mature Oak	As per F4T10.	3 x PRF-Ms FAR
F4T12 (F4H3)	Mature Ash	Large cavity in the trunk.	PRF-M
F4T13 (F4H3)	Mature Ash	Dense overlapping Ivy.	PRF-Is FAR
F4T14 (F2H2)	Potentially Ancient Oak	Single knot hole; Limb split; Burl cracks.	PRF-M PRF-Is
<b>Field 33</b>			
F2T1 (F2H1)	Semi-Mature Ash	Two knot holes east and south facing in the canopy.	2 x PRF-Ms
F2T2 (F2H2)	Semi-Mature Oak	Knot holes (appear superficial) in the canopy; Old knot hole on the trunk with a split following up the trunk (1m) long.	1 x PRF-M 2 x PRF-Is FAR
F2T3 (Pond P2a)	Semi-Mature Ash	Several knot holes in the canopy.	2 x PRF-Is
F2T4 (Pond P2a)	Mature Ash	Several knot holes in the canopy.	3 x PRF-Is
F2T5 (Pond P2a)	Mature Ash	Several knot holes; Dense Ivy cover.	3 x PRF-Is
F2T6 (F2H2)	Mature Ash	Knotholes; Limb and trunk splits	Multiple PRF-Is
F2T7 (F2H2)	Mature Ash	Knotholes; Limb and trunk splits	Multiple PRF-Is
F2T8 (F2H2)	Mature Ash	Knotholes; Limb and trunk splits	Multiple PRF-Is
F2T9 (F2H3)	Mature Ash	Multiple knotholes to cavity in trunk	Multiple PRF-Ms

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Tree Ref. (associated feature)	Species	Assessment and potential roosting features	Summary
F2T10 (F2H3)	Dead Mature Tree	Large open cavity to trunk; ivy	PRF-M PRF-I
F2T11 (F2H3)	Likely Veteran Oak	Sheared limb stumps with access to cavity in upper trunk; peeling bark	PRF-M PRF-I
F2T12 (F2H3)	Likely Veteran Oak	Dense ivy cover into canopy with thick stems	Multiple PRF-Is
F2T13 (F2H3)	Likely Veteran Oak	Dying tree with retrenching crown; significant exposed hollowing; various dead limbs with peeling bark and knotholes	PRF-M Multiple PRF-Is
F2T14 (F2H3)	Mature Ash	Dense ivy cover; split limb stumps	Multiple PRF-Is
F2T15 (F2H3)	Likely Veteran Oak	Linear split in trunk to cavity; peeling bark	Multiple PRF-Ms
F2T16 (F2H3)	Likely Veteran Oak	Linear split in trunk to cavity; peeling bark	Multiple PRF-Ms
F2T17 (F2H3)	Mature Oak	Knotholes; sheared limb stumps to trunk cavity	PRF-M
F2T18 (F2H3)	Mature Oak	Knotholes; sheared limb stumps to trunk cavity	PRF-M
F2T19 (F2H3)	Mature Oak	Knotholes; sheared limb stumps to trunk cavity	PRF-M
F2T20 (F2H3)	Likely Ancient Oak	Linear split in trunk to cavity; transverse split in dead limb; peeling bark	Multiple PRF-Ms PRF-I
F2T21 (F2H3)	Mature Oak	Knotholes and cavities in upper limbs	Multiple PRF-Is
F2T22 (F2H3)	Mature Oak	Knotholes and cavities in upper limbs	Multiple PRF-Is
F2T23 (F2H3)	Mature Oak	Significant cavity heartwood	PRF-M
<b>Field 34</b>			
F3T1 (Standard tree at north-east corner of field)	Mature (Possibly Veteran) Oak	Large split in the trunk to the cavity (5m circumference); Knot holes and delaminated bark in the canopy; Bat boxes.	1 x PRF-M 3 x PRF-Is
F3T2 & F3T6 (F3H1)	2 x Mature Oak	Dense ivy cover; split limb	Multiple PRF-Is
F3T5 (F3H2)	Mature Oak	Snapped limb tear with hollowing	PRF-I
<b>Field 35</b>			
F1T1 (F1H1)	Semi-Mature Oak	Split Limb; Ivy with thick, overlapping stems.	PRF-Is
F1T2 (F1H1)	Mature Oak	Knot hole, Ivy with thick, overlapping stems.	PRF-Is
F1T3 (F1H1)	Semi-Mature Oak	Failure in the main stem (tree to 6m) with some retrenching; Sheared limb on north face with cavity feature failing west; Ivy covered.	PRF-M PRF-I
F1T4 (F1H1)	Semi-Mature Oak	Dense Ivy (intact); No obvious thick stems; a single transverse snap western facing on pruned limb.	PRF-M PRF-I
F1T5 (F1H1)	Semi-Mature Oak	Dense Ivy on the main stem and into the canopy (view obscured) with thick overlapping stems.	Multiple PRF-I
F1T6 (F1H1)	Mature Oak	As per F1T5; Dead limb facing west and protruding from canopy at approximately 15m high with rot hole at the tip.	PRF-M Multiple PRF-I
F1T7 (F1H1)	Semi-Mature Oak	Dense Ivy (intact but view obscured).	Multiple PRF-I
<b>Field 36</b>			
F36T1 (F33H4)	Semi-Mature Sycamore	Moderate Covering of Ivy	FAR

## Annex 4 – Ground Level Tree Assessment Results

Tree Ref. (associated feature)	Species	Assessment and potential roosting features	Summary
F36T4	Semi-Mature Ash	Large knothole 4m high on eastern elevation	PRF-M FAR
F36T5	Mature Ash	1 limb tear-out, 1 limb split, 1 knothole, light ivy covering	PRF-Is PRF-M FAR
F36T6	Semi-Mature Ash	Mature ivy growth forming sheets	PRF-Is
<b>Field 37</b>			
F37T2	Mature Oak	Dense ivy covering, superficial broken limbs	FAR
F37T3	Mature Oak	Dense Ivy covering	PRF-Is FAR
F37T4	Mature Oak	Dense Ivy covering	PRF-Is FAR
F37T6	Mature Oak	Dense Ivy covering, superficial limb snap	Multiple PRF-Is FAR
<b>Field 39 (off-site field, for reference only)</b>			
F39T1	Mature Ash	Sparse Ivy cover obscure view, dead limbs in canopy with cracks/splits and knotholes	3 x PRF-M Multiple PRF-Is FAR
F39T2	Semi-Mature Sycamore	Ivy covering on main stem, Dead limbs with peeling bark	2 x PRF-M Multiple PRF-Is FAR
F39T3	Mature Ash	Limb tear-out and knot hole on southern elevation	2 x PRF-M
<b>Field 41</b>			
Single tree within H41a	Mature Oak	Ivy obscuring much of the tree	FAR
T41b	Mature (Possibly Veteran) Oak	Large cavity in main stem	PRF-M
T41e	Field Maple	Small tube features, likely PRF-i	FAR
T41f	Beech?	Large cavities	FAR
T41g	Beech?	Large cavities	FAR
2 x Mature Oak trees in H41b	2 x Mature Oak	Ivy obscuring much of the trees	FAR
<b>Field 42</b>			
3 x Mature Oak trees in H42a	3 x Mature Oak	Ivy obscuring much of the trees and single tree with large cavity at base	2 x FAR and 1 x PRF-M
Mature Oak tree in H42b	Mature Oak	Ivy obscuring much of the tree	FAR
<b>Field 43</b>			
2 trees in H43a	Mature Oak Ash	Large tear out in canopy, likely PRF-M Large holes present, likely PRF-M	2 x FAR
<b>Field 44</b>			
2 trees in H44c	2 x Ash	Ivy obscuring much of the trees	2 x FAR
2 trees in H44d	2 x Mature Oaks	Ivy obscuring much of the one tree and one with large cavity in main stem, potentially PRF-M	2 x FAR
<b>Field 46</b>			
T46a	Ash	Ivy obscuring much of the tree	FAR
T46b	Ash	Deadwood in the canopy	FAR

#### Annex 4 – Ground Level Tree Assessment Results

<b>Tree Ref. (associated feature)</b>	<b>Species</b>	<b>Assessment and potential roosting features</b>	<b>Summary</b>
8 x trees in H46a	Mature Oak	Ivy obscuring much of many of the trees, also presence of holes, splits, and cracks	FAR
<b>Field 47</b>			
Single tree in H47a	Ash	Tear out in canopy	FAR
<b>Field 49 (off-site field, for reference only)</b>			
Single tree in H49a	Mature Oak	Ivy obscuring some of the tree and presence of large holes, likely PRF-M	FAR
Multiple trees in H49b	3 x Mature Oaks 7 x Ash 1 x Sycamore	Ivy obscuring much of many of the trees, also presence of deadwood, lifted bark, rot holes noted	11 x FAR

## **Confidential Annex:**

Badger Survey Results (Available on request)

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