BEACON FEN ENERGY PARK

Planning Inspectorate Reference: EN010151

Appendix 7.16 Bat Roost Assessment Report (cable route and access road)

Document Reference: 6.3 ES Vol.2, 6.3.35

April 2025

The Planning Act 2008

The Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009 - Regulation 5(2)(a), 5(2)(l)

Quality information

Prepared by	Checked by	Verified by	Approved by
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1. INTRODUCTION

1.1 Terms of reference

1.1.1 This Bat Roost Assessment Report (**Cable Route Corridor and Bespoke Access Corridor**) has been prepared by Wardell Armstrong LLP (part of SLR) ('WA') on behalf of Beacon Fen Energy Park Ltd (the 'Applicant') in support of an application for a Development Consent Order (DCO) for Beacon Fen Energy Park (the 'Proposed Development').

1.2 Proposed development

1.2.1 The Proposed Development will be located within the DCO Order Limits ('Order Limits') as shown on **Figure 1.2 Site Boundary Plan** (**Document Ref: 6.4 ES Vol.3, 6.4.2**) and comprises the Solar Array Area, the Bespoke Access Corridor and the Cable Route Corridor which are defined as follows:

- **Solar Array Area** - The land within the Order Limits within which the Solar PV and BESS (and their ancillary infrastructure) will be located.
- **Cable Route Corridor** - The land within the Order Limits within which the Cable Route will be located.
- **Cable Route** - The physical development, i.e. the cable itself, to be located within the Cable Route Corridor.
- **Bespoke Access Corridor** - The land within the Order Limits within which the Bespoke Access Road will be located.
- **Bespoke Access Road** - The physical development i.e. the road itself, to be located within the Bespoke Access Corridor.

1.2.2 This report considers land within the Cable Route Corridor and Bespoke Access Corridor. The Solar Array Area was assessed in **Appendix 7.7 Bat Activity Survey** (**Document Ref 6.3 ES Vol 2 6.3.26**).

1.3 Site location and context

1.3.1 The Cable Route Corridor runs southward west of Ewerby Thorpe, parallel to Heckington Road, and crosses the A17 and railway line into Heckington, after which it turns westward and runs parallel to the railway until Great Hale Eau. There it turns to run southwest and southeast and into the Bicker Fen substation. The Bespoke Access Corridor runs southwest from Heckington Road (between Ewerby Thorpe and Howell) to connect the Solar Array Area to the A17 (south-west of Asgarby).

1.3.2 The Site is comprised of agricultural fields of brassicas and other vegetables, wheat and barley, surrounded by hedgerows, ditches and small patches of woodland. A couple of residential properties and their associated gardens are also included in the red-line boundary, as are Donington Wind Farm and Bicker Fen Substation.

2. METHODOLOGY

2.1 Desk study

2.1.1 The Lincolnshire Environmental Records Centre (LERC) were contacted in February 2023 to ascertain whether there are any records of bats or bat roosts within a 2km radius from the Site.

2.1.2 A desk study was also conducted via MAGIC maps (DEFRA, 2024) to search for statutory sites designated for their bat populations or bat activity. A radius of 10 km from the Site was searched for internationally designated sites (in this case only Special Areas of Conservation – SACs - would be relevant for bats) and a radius of 5 km for nationally designated sites (in this case only Sites of Special Scientific Interest – SSSIs). A search for European Protected Species licences granted with reference to bats was conducted within 2 km of the Site.

2.2 Preliminary tree roost assessment

2.2.1 All trees on Site were surveyed by WA between April and July 2024. The trees were visually inspected to search for signs indicating the presence or potential presence of bat roosts. With reference to the bat survey guidelines (Collins, 2023), along with the Bat Worker's Manual (Mitchell-Jones and McLeish 2004) and the Bat Tree Habitat Key (Bat Conservation Trust, 2020), the inspection included a search for the following features:

- Suitable roosting features (e.g. natural holes, woodpecker holes, cracks/splits in major limbs and the trunk, holes/cavities, dense ivy growth, dense epicormic growth, bird and bat boxes);
- Signs indicating possible bat use (e.g. scratches and/or staining at entrance points, bat droppings in, around or below entrance, audible squeaking in warm weather, distinctive smell of bats, smoothing of surface around cavity).

2.2.2 Based upon the location of each tree within surrounding habitat, the potential features present and the indicating signs recorded, each was placed into one of the following suitability categories (Collins, 2023):

- PRF-M – potential roosting feature (PRF) is suitable for multiple bats and may therefore be used by a maternity colony
- PRF-I – PRF is only suitable for individual bats or very small numbers of bats either due to size or lack of suitable surrounding habitats
- FAR – further survey required to establish whether PRFs are present in the tree
- NONE – either no PRFs present or highly unlikely to be any

2.3 Preliminary building roost assessment

2.3.1 All unoccupied buildings within the Bespoke Access Corridor and Cable Route Corridor Order Limits were surveyed alongside the trees. The buildings were externally visually inspected for signs indicating presence or potential presence of bats. With reference to the (Collins, 2023) bat survey guidelines,

along with the Bat Worker's Manual (Mitchell-Jones & McLeish, 2004), this includes:

- Suitable roosting features (bat boxes, behind peeling paintwork or lifted rendering, dislodged tiles, under eaves, soffit boxes, fascias, lifted lead flashing, gaps under felt or tiles or other gaps e.g. in brickwork); and
- Signs indicating possible bat use (droppings, live or dead specimens, urine or fur oil staining on walls, squeaking sounds).

2.3.2 Based upon the location of each building within surrounding habitat, the potential features present and the indicating signs recorded, each was placed into one of the following suitability categories (Collins, 2023):

- Known or confirmed roost.
- High – A structure with one or more potential roost sites that are obviously suitable for use by larger numbers of bats on a more regular basis and potentially for longer periods of time due to their size, shelter, protection, conditions and surrounding habitat.
- Moderate – A structure with one or more potential roost sites that could be used by bats due to their size, shelter, protection, conditions and surrounding habitat but unlikely to support a roost of high conservation status.
- Low – A structure with one or more potential roost sites that could be used opportunistically by individual bats at any time of year. However, they do not provide enough space, shelter, protection, appropriate conditions and/or suitable surrounding habitat to be used regularly or by large numbers of bats.
- Negligible – No obvious habitat features on site likely to be used by roosting bats; however a small element of uncertainty remains, as bats can sometimes use small and apparently unsuitable features on occasion.
- None – No habitat features on site likely to be used by any roosting bats at any time of year.

2.4 Assessment limitations

2.4.1 Any absence of desk study records cannot be relied upon to infer absence of a species/habitat. Often, the absence of records is a result of under-recording within the given search area. Some records are also incomplete, e.g. do not specify the species of bat recorded. Therefore, more species or larger populations could be present than indicated by records.

2.4.2 Ecological surveys are limited by factors that affect the presence of plants and animals (e.g. time of year, weather, migration patterns and species behaviour). The survey was undertaken between April and July and, therefore, the survey data may not be representative of other times of year. The presence of foliage may have obscured the view of some features higher up in the trees. Notwithstanding these limitations, the data collected is sufficient to determine the baseline conditions of the Site.

2.5 Quality assurance and environmental management

2.5.1 The assessment was undertaken by suitably qualified and experienced WA ecologists. All reports are reviewed and approved by WA ecologists who are full members of the Chartered Institute of Ecology and Environmental Management (CIEEM) and are bound by its code of professional conduct. All surveys and assessments have been undertaken with reference to the recommendations given in BS:42020 (British Standards Institute, 2013).

3. RESULTS

3.1 Desk study

3.1.1 There are no internationally designated sites within 10 km of the Bespoke Access Corridor or Cable Route Corridor. There is one nationally designated site within 5 km of the Site's Order Limits: Horbling Fen SSSI, which is about 4 km south-west of the southernmost area of the Site (DEFRA, 2024). It is, however, designated for its geology rather than biodiversity.

3.1.2 One granted European protected species licence was found within 2 km of the Cable Route Corridor and referred to '*damage to a common pipistrelle breeding site'* (DEFRA, 2024).

3.1.3 At least six species of bat were identified from LERC records within 2 km of the 2024 refined Order Limits of the Cable Route Corridor and Bespoke Access Corridor. These include: Daubenton's (*Myotis daubentonii*), Noctule (*Nyctalus noctula*), Common Pipistrelle (*Pipistrellus pipistrellus*), Soprano Pipistrelle (*Pipistrellus pygmaeus*), Brown Long-eared Bat (*Plecotus auritus),* and Barbastelle (*Barbastella barbastellus*).

3.1.4 The table in Appendix 3 shows all relevant records and a further description is provided below.

- Daubenton's Bat– Three records of Daubenton's Bat were returned. The nearest record was recorded in 2014, a feeding area 0.6 km southwest of the Bespoke Access Corridor, while the most recent record was from 2019, another feeding area 1.8 km northwest of the Bespoke Access Corridor.
- Noctule – Two records of Noctule were found: the most recent and closest from 2017, 1 km northeast of the Cable Route Corridor; the second record is immediately next the Solar Array Area.
- Common Pipistrelle – Six records of the Common Pipistrelle were found, the most recent and closest is a roost from 2021, 0.55 km southeast from the Bespoke Access Corridor, likely in the Boughton Plantation. Record 10 is immediately adjacent to the Solar Array Area.
- Soprano Pipistrelle – Three records of the Soprano Pipistrelle were found, the most recent from 2016, 1.6 km southwest of the Cable Route Corridor; the closest record was a feeding area 0.6 km southeast from the Bespoke Access Corridor. Record 15 is immediately adjacent to the Solar Array Area.
- Brown Long-eared Bat – One record of a Brown Long-eared Bat was recorded in 2017, 1.15 km northeast of the Cable Route Corridor.
- Barbastelle – One record of a Barbastelle Bat was recorded in 2017, 1.15 km northeast of the Cable Route Corridor.
- Pipistrellus sp. – six records identified to the genus Pipistrellus were found, the nearest and one of the most recent was a roost 0.02 km north from the Bespoke Access Corridor from 2020, the second most recent record was from the same day 0.67 km north from the Bespoke Access Corridor.
- Unidentified – 55 records of unidentified bats were found, with the most recent records from 2019 and the nearest 0.16 km from the Cable Route Corridor (also from 2019)

3.2 Preliminary tree roost assessment

3.2.1 All mature and semi-mature trees on the Site were assessed for their suitability to support bat roosts. Full results are presented in Appendix 2.

3.2.2 The following results were found:

- PRF-I – 86 trees were assessed as having potential roost features suitable for individual bats or very small numbers of bats
- PRF-M – 40 trees were assessed as possibly having potential roost features suitable for multiple bats and therefore a maternity roost.

3.3 Preliminary building roost assessment

3.3.1 All unoccupied buildings on Site were assessed for their suitability to support bat roosts. Full results are presented in Appendix 2.

3.3.2 The following results were found:

- Two buildings were assigned moderate suitability for roosting bats
- Four buildings were assigned low suitability for roosting bats

4. DISCUSSION AND RECOMMENDATIONS

4.1 Impact avoidance

4.1.1 Construction work around trees or buildings with bat roost suitability has the potential to disturb roosting bats. A precautionary method of working (detailed in the **Outline Construction Environment Management Plan (OCEMP)** (**Document Ref: 6.3 ES Vol 2, 6.3.7**) should be adopted to avoid:

- Excessive noise or vibration near structures with bat roost suitability
- Damage to structures with bat roost suitability
- Excessive illumination of structures with bat roost suitability

4.1.2 In line with the **Outline Construction Environment Management Plan OCEMP** (**Document Ref: 6.3 ES Vol 2, 6.3.7**) illumination of the general area during the construction and operation phase should also be considered.

4.1.3 The Proposed Development will retain the mature trees with suitability for bats as per the **Ecology Chapter** of the Environmental Statement (**Document Ref 6.3. ES Vol 6.3.7**)

5. REFERENCES

- Bat Conservation Trust (2020) Bat Tree Habitat Key – 4th Edition. AEcol, Bridgwater
- Beacon Fen Energy Park (2024) Statutory Consultation Booklet 22 January – 3 March 2024 [redacted]
- British Standards Institute (2013) BS42020:2013: Biodiversity — Code of practice for planning and development. British Standards Institute, London.
- British Standards Institute (2012) BS5837:2012 Trees in relation to design, demolition and construction – Recommendations. British Standards Institute, London.
- Collins, J. (ed.) (2023) Bat Surveys for Professional Ecologists: Good Practice Guidelines (4th edition). The Bat Conservation Trust, London.
- DEFRA (2024) MAGIC maps <https://magic.defra.gov.uk/>
- Hellis Solutions (2024) A Brief Guide to Root Protection Areas and Development [redacted]>
- Institute of Lighting Professionals (2023) Guidance Note 8 Bats and Artificial Lighting [redacted]
- Lincolnshire Environmental Records Centre (2023) Data Search Results
- Mitchell-Jones, A.J, & McLeish, A.P. (ed.), (2004), 3rd Edition Bat Workers' Manual. JNCC, Peterborough.
- Reason, P.F. and Wray, S. (2023). UK Bat Mitigation Guidelines: a guide to impact assessment, mitigation and compensation for developments affecting bats. Chartered Institute of Ecology and Environmental Management, Ampfield.

BFEP Appendices

Appendix 1 Legislation and Policy Summary

Appendix 1: Legislation Summary

All bat species are listed within Schedule 5 of the Wildlife and Countryside Act 1981 (as amended) and receive protection under section 9 of this act. They are also protected under Regulation 43 of the Conservation (Natural Habitats, &c.) Regulations 2017 (as amended) (known as the Habitats Regulations). Taken together the following offences apply under the combined acts:

Taken together the legislation states that a person commits an offence if they:

1. Deliberately or intentionally capture, injure or kill a bat;
2. Intentionally or recklessly damage, destroy or obstruct access to; any structure or place used for shelter or protection by a bat;
3. deliberately, intentionally or recklessly disturb a bat;
4. damage or destroy a breeding site or resting place of a bat; or
5. keep, transport, sell, exchange or offer for sale any bat(s) or anything derived from this species.

Disturbance of animals includes in particular any disturbance which is likely to impair their ability to survive, to breed or reproduce, or to rear or nurture their young, or in the case of animals of a hibernating or migratory species, to hibernate or migrate; or to affect significantly the local distribution or abundance of the species to which they belong.

Appendix 2 Tree and Building Survey Results

Appendix 2: Tree and building survey results

Ref. No.	GPS location	Species/ Structure	Characteristics	PRF Description	Height/ Aspect of PRF	Potential Score (2023)
1	TF1719 043066	Elm	27m height, 150cm diameter	north facing broken branches	5m, 10m/-	PRF -I
2	TF1719 443062	Ash	22m height, 50cm diameter	5 knot holes, 2 woodpecker holes, broken branch	-/all aspects of trees have features suitable for bats	PRF -M
3	TF1759 142990	Ash	18m height, 40cm diameter	woodpecker hole	5m/ East	PRF -I
4	TF1762 342985	Ash	15m height, 30cm diameter	knot hole	2.5m/-	PRF -I
5	TF1768 742972	Ash	20m height, 40cm diameter	knot hole and broken branch	5m, 7m/ East	PRF -I
6	TF1770 842964	Ash	22m height, 49cm diameter	woodpecker hole and knot hole	7m/ East	PRF -M
7	TF1774 042947	Ash	12m height, 30cm diameter	tear out and rotten branch	3m, 7m/ West, East	PRF -M
8	TF1804 842810	Ash	22m height, 50cm diameter	woodpecker hole, callus role	6m/ North	PRF -I
9	TF1808 942793	Ash	25m height, 100cm diameter	2 tear out, 2 woodpecker hole	10m,12m/ East, West	PRF -M
10	TF1811 942782	Ash	25m height, 60cm diameter	hazard beam, callus roll	7m, 6m/ North, South	PRF -M
11	TF1814 642769	Ash	25m height, 60cm diameter	hazard beam	7-8m/-	PRF -I
12	TF1873 242196	Elm?	18m height, 180cm diameter	tear out	12m/ Northeast	PRF -M
13	TF1874 842190	Elm	30m height, 150cm diameter	2 callus roll, hazard beam	12m, 15m, 8m/ Northeast	PRF -M
14	TF1920 441739	Crack Willow	28m height, 100cm diameter	tear out, callus roll	10m/North	PRF -I
15	TF1920 841735	Crack Willow	28m height, 100cm diameter	callus roll, woodpecker hole	25m/North, South	PRF -I
16	TF1920 141730	Willow	20m height, 120cm diameter	dead branch, lifted bark, woodpecker hole	10m, 5m, 12m/ North, South, South	PRF -M
17	TF1920 141728	Willow	15m height, 100cm diameter	tear out	6m/West	PRF -I

Ref. No.	GPS location	Species/ Structure	Characteristics	PRF Description	Height/ Aspect of PRF	Potential Score (2023)
18	TF1918 841710	Crack Willow	20m height, 100cm diameter	tear out	2m/East	PRF -I
19	TF1917 741673	Crack Willow	25m height, 180cm diameter	callus roll	10m/North	PRF -I
20	TF1952 142113	-	150cm diameter	crack and tear in large branch over ditch	37m/-	PRF -I
21	TF1952 242113	-	70cm diameter	woodpecker holes	35m/-	PRF -M
22	TF1953 642109	-	60cm diameter	crack, hollow, hole, large branch leaning East, crack and hole on underside facing ditch, another crack and hole facing farm track	25m/-	PRF -M
23	TF1716 242981	Ash	-	several tear outs	12m/all aspects	PRF -M
24	TF1717 442978	Ash	12m height, 80cm diameter	2 tear out	ground-5m, 6m/South, North	PRF -M
25	TF1818 442619	Ash	60cm diameter	tear out with cracks along edges	25m/West	PRF -I
26	TF1818 142616	Ash	25m height, 100cm diameter	tear out, knot hole	12m, 15m/ North, South	PRF -M
27	TF1817 742608	Oak	18m height, 60cm diameter	split branch	7m/East	PRF -M
28	TF1818 742609	Oak	20m height, 80cm diameter	dead branch	7m/ Northeast	PRF -I
29	TF1818 842621	Ash	40cm diameter	2 woodpecker holes	1 hole ~15m/ Southeast; 1 hole ~20m/North in rotten top branch	PRF -M
30	TF1819 642615	Sycamore	25m height, 100cm diameter	knot hole, dead branch	9m, 15m/ Northeast	PRF -I
31	TF1820 542614	Ash	27m height, 60cm diameter	tear out	6m/East	PRF -M
32	TF1820 642605	Oak	20m height, 70cm diameter	knot hole with dead branch	5m/West	PRF -I

Ref. No.	GPS location	Species/ Structure	Characteristics	PRF Description	Height/ Aspect of PRF	Potential Score (2023)
33	TF1821 342610	Ash	-	several woodpecker holes in rotten branch, lifted bark, tear out/crack	30m/on all aspects, particularly on taller branch on woodland side; -/large tear out on SE aspect	PRF -M
34	TF1823 442602	Sycamore	40cm diameter	knots and broken branch	30m/all Southeast	PRF -I
35	TF1823 742601	Ash	50cm diameter	1 woodpecker hole	35m/ Southeast	PRF -I
36	TF1822 542600	Oak	18m height, 60cm diameter	dead branch	15m/East	PRF -I
37	TF1824 842594	Ash	50cm diameter	tear out/crack woodpecker hole	30m/ Southeast	PRF -I
38	TF1824 242588	Oak	18m height, 70cm diameter	2 dead branches	7m, 9m/ Northeast	PRF -I
39	TF1824 842590	Oak	20m height, 80cm diameter	dead branch	8m/ Northwest	PRF -I
40	TF1710 542890	Ash	2 stems each 60cm diameter	tear out and ivy	30m/South	PRF -I
41	TF1792 142334	Horse Chestnut	20m height, 100cm diameter	knot hole	5m/ Northwest	PRF -I
42	TF1792 742332	Horse Chestnut	main stem 100cm diameter	lifted bark, knots, rot, crack	35m/all aspects	PRF -M
43	TF1790 742317	Horse Chestnut	15m height, 90cm diameter	dead branch	8m/West	PRF -M
44	TF1790 442305	Horse Chestnut	60cm diameter	woodpecker holes, ivy may conceal further features	~30m/ Northeast	PRF -M
45	TF1790 442305	Horse Chestnut	25m height, 150cm diameter	dead branch, knot hole	6m, 4m/ Southeast	PRF -I
46	TF1790 242282	Horse Chestnut	25m height, 120cm diameter	dead branch	8m/East	PRF -I
47	TF1790 242293	Horse Chestnut	60cm diameter	several knots	35m/West towards house	PRF -I
48	TF1793 242303	Barn Building	red brick barn with old wooden beams, no roof	cracks in walls, joints, old beams; some cracks in brickwork which	-	Moderate

Ref. No.	GPS location	Species/ Structure	Characteristics	PRF Description	Height/ Aspect of PRF	Potential Score (2023)
				may extend back; joints which could form niches		
49	TF1675 944805	Ash	15m height, 100cm diameter	2 tear out, one with woodpecker hole	6m, 5m/ West, North	PRF -M
50	TF1945 238326	Oak	12m height, 60cm diameter	knot hole	6m/South	PRF -I
51	TF1977 938414	Ash	15m height, 50cm diameter	knot hole, hedge obstructing flight path	10m/East;	PRF -I
52	TF1996 438748	Ash	18m height, 180cm diameter	2 knot hole	5m, 6m/ Northwest	PRF -I
53	TF1977 838430	Ash	15m height, 50cm diameter	knot hole	17m/ Northwest	PRF -I
54	TF1997 838760	Ash	120cm diameter	dead branch	7m/West	PRF -I
55	TF1985 337776	Crack Willow	15m height, 150cm diameter	1 dead branch, 1 dead stem	8m, ground to 4m/ Southwest, Southeast	PRF -M
56	TF1622 944614	Elm	13m height, 40cm diameter	dead branch	3m/North	PRF -I
57	TF1118 945171	Sycamore	25m height, 60cm diameter	knot hole	8m/ Southwest	PRF -I
58	TF1122 045184	Ash	18m height, 110cm diameter	knot hole, hazard branch	10m, 13m/ Southwest, East	PRF -M
59	TF1125 045238	Silver Birch	16m height, 40cm diameter	knot holes	2m/South, Northwest	PRF -I
60	TF1144 045628	Ash	18m height, 200cm diameter	broken trunk, crevice, 2 woodpecker holes	11-14m, 8m, 9m/ Southeast, West, Northwest	PRF -M
61	TF1147 245670	Ash	20m height, 80cm diameter	crack, hazard branch, woodpecker hole	20, 15, 15/ East, Northeast, North	PRF -M
62	TF1168 246327	Ash	20m height, 60cm diameter	tear out, tear out, hazard branch	10m, 13, 10m/ Southeast, South, South	PRF -I

Ref. No.	GPS location	Species/ Structure	Characteristics	PRF Description	Height/ Aspect of PRF	Potential Score (2023)
63	TF1152 345634	Ash	25m height, 110cm diameter	woodpecker hole, 2 tear outs, hazard branch	9m, 15m, 19m, 10m/ Northeast, North, Northeast	PRF -M
64	TF1151 145640	Ash	25m height, 110cm diameter	hazard branch, woodpecker holes, hazard branch, hazard branch, hazard branch, knot hole	12m, 12m, 9m, 7m, 7m, 7m/ North, North, Northwest, Southwest, Southwest, Southwest	PRF -M
65	TF1155 045618	Ash	22m height, 100cm diameter	crack covered in ivy, hole	11m, 11.5m/ Northeast, North	PRF -M
66	TF1205 146577	Ash	15m height, 100cm diameter	hazard branch, hazard branches, knot hole, tear away	10m, 11-15m, 9m, 9m/ Southwest, South, East, Northeast	PRF -M
67	TF1209 446589	Ash	15m height, 200cm diameter	hazard branch, tear out	10m, 13m Southwest, East	PRF -I
68	TF1221 246611	Ash	15m height, 60cm diameter	crevice, dead stump	9m,10m/ South, East	PRF -I
69	TF1230 446510	Ash	15m height, 60cm diameter	large dead stump	10m/ Northwest	PRF -I
70	TF1232 946506	Ash	25m height, 150cm diameter	knot hole, knot hole, knot hole, knot hole, tear away, tear away, hazard branch	15m, 2m, 15, 15m, 17m/ South, Southeast, East, Southeast, Northeast, Southwest, Southwest	PRF -M
71	TF1236 746516	Ash	25m height, 250cm diameter	large cracked hollow trunk	7m/-	PRF -M
72	TF1240 846524	Ash	27m height, 50cm diameter	knot hole	3m/West	PRF -I

Ref. No.	GPS location	Species/ Structure	Characteristics	PRF Description	Height/ Aspect of PRF	Potential Score (2023)
73	TF1197 246532	Ash	18m height, 200cm diameter	large trunk hollow crack, 2 knot holes, hazard branch	10m, 11m, 15m/West, South, South	PRF -M
74	TF1198 646476	Ash	5m height, 200cm diameter	hollow cracked trunk (stump)	5m/ Northwest	PRF -I
75	TF1333 046881	Ash	15m height, 40cm diameter	knot hole	7m/ Northwest	PRF -I
76	TF1324 546856	Sycamore	20m height, 40cm diameter	small woodpecker hole	7m/ Northwest	PRF -I
77	TF1537 346295	Ash	30m height, 50cm diameter	large woodpecker hole	5m/South	PRF -I
78	TF1591 845651	Ash	10m height, 100cm diameter	hole in hazard branch, tear away	both 5m/West	PRF -I
79	TF1592 045647	Ash	25m height, 100cm diameter	knot hole, knot hole, dead branch hole, bark crack, woodpecker hole	10m, 10m, 15m, 7m, 5m/ Southeast, East, South,West ,West	PRF -M
80	TF1593 345609	Ash	20m height, 150cm diameter	knot hole, knot hole/tear away	10m, 10m/ South, North	PRF -I
81	TF1596 045626	Ash	30m height, 150cm diameter	woodpecker hole, knot hole, hazard branch, rotting wood	12m-25m, 11m-20m, 25m-29m, 26m/ all Southeast-Southwest	PRF -M
82	TF1595 845630	Ash	35m height, 50cm diameter	knot hole, knot hole	10m, 15m/ Southwest, Southwest	PRF -I
83	TF1595 145649	Ash	35m height, 200cm diameter	cracked branch	20m/ Northeast	PRF -I
84	TF1663 145166	White Poplar	25m height, 40cm diameter	hole	10m/West	PRF -I
85	TF1662 045202	White Poplar	25m height, 60cm diameter	cracked branch, cracked branch, crack on bark	10m, 15m, 15m/ West, Northwest, Northwest	PRF -I
86	TF1661 245216	White Poplar	20m height, 25cm diameter	knothole on slightly fallen tree	3m/-	PRF -I

Ref. No.	GPS location	Species/ Structure	Characteristics	PRF Description	Height/ Aspect of PRF	Potential Score (2023)
87	TF1661 845216	White Poplar	25m height, 40cm diameter	-	10m, 11m/ West, West, West	PRF -I
88	TF1660 645254	White Poplar	35m height, 110cm diameter	woodpecker holes	13m/ Northwest	PRF -I
89	TF1660 945251	White Poplar	30m height, 50cm diameter	woodpecker holes	11m, 14m/ North, North	PRF -I
90	TF1659 945286	White Poplar	35m height, 40cm diameter	woodpecker hole group, woodpecker hole group	10-11m, 10-12m/ Southwest, Northeast	PRF -I
91	TF1659 445337	White Poplar	35m height, 70cm diameter	woodpecker hole	5m/-	PRF -I
92	TF1659 145385	White Poplar	35m height, 200cm diameter	woodpecker hole, woodpecker hole, woodpecker hole, woodpecker hole,	8m, 7m, 10m, 7m/ Northeast, East, East, West	PRF -I
93	TF1658 445405	White Poplar	30m height, 50cm diameter	crack, woodpecker hole, knot hole	6m, 10m, 6m/ Southwest, East, West	PRF -I
94	TF1658 145407	White Poplar	30m height, 100cm diameter	woodpecker hole	11m/North	PRF -I
95	TF1658 645416	Ash	28 m height, 40 cm diameter	knot hole	6 m/ Northwest	PRF -I
96	TF1658 045421	White Poplar	30m height, 200cm diameter	woodpecker hole	15m/East	PRF -I
97	TF2038 540436	Ash	15m height, 40cm diameter	knot hole, small crack	5m, 13m/ Northwest, Southeast	PRF -I
98	TF2030 538982	Ash	15m height, 80cm diameter	broken branches	7m/South	PRF -I
99	TF2039 238932	Sycamore	20m height, 100cm diameter	hole in branch	8m/ Southeast	PRF -I
100	TF2047 838904	Horse Chestnut	25m height, 120cm diameter	knot hole, broken branch	7m, 10m/ Northeast	PRF -I
101	TF2001 639146	Lawson Cypress	18m height, 100cm diameter	ripped trunk, small cracks	3-7m/ South (multiple)	PRF -I
102	TF1997 939165	Ash	15m height, 200cm diameter (multi-trunk tree)	hole in branch, dead branch	8m, 5m/ South	PRF -I

Ref. No.	GPS location	Species/ Structure	Characteristics	PRF Description	Height/ Aspect of PRF	Potential Score (2023)
103	TF1996 439180	Ash	22m height, 400cm diameter (multi-trunk tree)	holes in bark, knot holes	5m, 6m-12m/ Southwest-Southeast	PRF -I
104	TF1949 039212	Horse Chestnut	25m height, 150cm diameter	4 knot holes and and one broken branch	4m, 6m, 8m 9m, 12m/all aspects	PRF -M
105	TF1952 539133	Building	old farmhouse	lots of gaps in the brickwork and areas where the roof has fallen in; niches suitable for bats	-	Moderate
106	TF1950 939127	Horse Chestnut	12m height, 100cm diameter	lots of ivy all over tree	-/all aspects	PRF -M
107	TF1951 739115	Small Outbuilding	-	small gaps in brickwork but overall in a bad condition and fairly exposed	-	Low
108	TF1949 739121	Horse Chestnut	15m height, 120cm diameter	knot holes and low trunk cavity	5m, 1m/ Southwest	PRF -I
109	TF1952 539108	Horse Chestnut	18m height, 160cm diameter	several large broken branches	8-15m/-	PRF -M
110	TF1949 539136	Tin Roof Metal Outbuilding	roof unlined, open front	some possible niches in back brickwork wall	-	Low
111	TF1949 539136	Tin Roof Metal Outbuilding	roof unlined, open front	some possible niches in back brickwork wall	-	Low
112	TF1950 639214	New Building	-	not many niches but a small gap under fascia which could be suitable for pips	-	Low
113	TF2045 938896	Oak	10m height, 90cm diameter	broken branch	3.5m/East	PRF -I
114	TF2030 838652	Silver Birch	10m height, 50cm diameter	broken branch	4m/South	PRF -I
115	TF2037 338599	Silver Birch	10m height, 40cm diameter		5m, 4m/ North	PRF -I
116	TF1576 345204	Ash	18m height, 80cm diameter	knot holes	4m/ Northwest	PRF -I

Ref. No.	GPS location	Species/ Structure	Characteristics	PRF Description	Height/ Aspect of PRF	Potential Score (2023)
117	TF1672 243194	Ash	22m height, 100cm diameter	-	5m, 6m, 7m,10m/ Southwest, Southwest, Northeast, Southwest	PRF -I
118	TF1672 843196	Ash	22m height, 50cm diameter	2 dead branches (one with woodpecker hole)	4m, 8m/ South	PRF -I
119	TF1673 343195	Ash	20m height, 40cm diameter	knot hole	5m/slightly facing upward	PRF -I
120	TF1673 943194	Dead Trunk	-	dead tree trunk with cracks on one side	3m/-	PRF -I
121	TF1674 343193	Ash	22m height, 50cm diameter	4 knot holes, 1 tear off	10m/ South, South, South, North, North	PRF -M
122	TF1674 543191	Ash	18m height, 40cm diameter	split trunk, knot hole	2m, 7m/ South, Southwest	PRF -I
123	TF1676 343190	Hawthorn	17m height, 20cm diameter	large knotholes that go into trunk	2m, 1m/ North	PRF -M
124	TF1677 943187	Ash	20m height, 30cm diameter	large knot hole	5m/West	PRF -I
125	TF1678 243183	Ash	18m height, 60cm diameter	hole in trunk	5m/South	PRF -I
126	TF1678 943185	Ash	17m height, 20cm diameter	potentially hollow trunk	5m/North	PRF -M
127	TF1680 143183	Ash	10m height, 10cm diameter	knot hole	6m/North	PRF -I
128	TF1680 543182	Ash	22m height, 40cm diameter	knot hole	5m/North	PRF -I
129	TF1681 543180	Ash	24m height, 50cm diameter	knot hole	10m/North	PRF -I
130	TF1682 843176	Ash	12m height	dead branch, knot hole	5m, 6m/ South, South	PRF -I
131	TF1687 743164	Ash	8m height, 40cm diameter	dead ivy on tree	-	PRF -I
132	TF1686 143162	Ash	20m height, 40cm diameter	hole (maybe woodpecker)	10m/North	PRF -I

Appendix 3 Bat records from desk study data (LERC 2023)

Appendix 3: Bat records from desk study data (LERC 2023)

Record	Species	Location	Date	Record type	Number of bats	Distance
1	Daubenton's Bat	TF118450	18/08/2014	Feeding area	-	0.6km (Access Road)
2	Daubenton's Bat	TF115482	2019	Feeding area	-	1.8 km (Access Road)
3	Daubenton's Bat	TF206426	15/09/2016	Field observation	1	1 km (Cable Route)
4	Noctule	TF162474	14/10/2017	Field observation	1 Female	1 km (Cable Route)
5	Noctule	TF159483	06/08/2014	Field observation	-	1.57 km (Cable Route)
6	Common Pipistrelle	TF118450	18/08/2014	Feeding area	-	0.6 km (Access Road)
7	Common Pipistrelle	TF177370	09/09/2015	Field observation	-	1.85 km (Cable Route)
8	Common Pipistrelle	TF177370	09/09/2015	Field observation	-	1.85 km (Cable Route)
9	Common Pipistrelle	TF177375	24/08/2016	Field observation	-	1.63 km (Cable Route)
10	Common Pipistrelle	TF159483	06/08/2014	Field observation	-	1.57 km (Cable Route)
11	Common Pipistrelle	TF206426	15/09/2016	Field observation	1	1 km (Cable Route)
12	Common Pipistrelle	TF1346	07/2021	Roost	-	0.55 km (Access Road)
13	Soprano Pipistrelle	TF118450	18/08/2014	Feeding area		0.6 km (Access Road)
14	Soprano Pipistrelle	TF177375	24/08/2016	Field observation	1	1.6 km (Cable Route)

Record	Species	Location	Date	Record type	Number of bats	Distance
15	Soprano Pipistrelle	TF159483	06/08/2014	Field observation	1	1.58 km (Cable Route)
16	Brown Long-eared Bat	TF162474	29/07/2017	Field observation	12 Male; 23 Female	1.15 km (Cable Route)
17	Western Barbastelle	TF162474	07/10/2017	Field observation		1.15 km (Cable Route)
18	Pipistrelle Bat species	TF149426	25/04/2014	Grounded	1 Female	1.76 km (Cable Route)
19	Pipistrelle Bat species	TF122476	24/10/2014	Grounded	1 Female	0.95 km (Access Road)
20	Pipistrelle Bat species	TF162474	2017	Field observation	-	1.15 km (Cable Route)
21	Pipistrelle Bat species	TF115482	2019	Feeding area	-	1.82 km (Access Road)
22	Pipistrelle Bat species	TF1347	30/06/2020	Roost	1	0.02 km (Access Road)
23	Pipistrelle Bat species	TF131477	30/06/2020	Field observation	1 Infant	0.67 km (Access Road)
24	Unidentified bat	TF146427	2013	Field observation	-	2 km (Cable Route)
25	Unidentified bat	TF190444	2013	Field observation	4	1.99 km (Cable Route)
26	Unidentified bat	TF142441	2013	Field observation	1-2	1.86 km (Cable Route)
27	Unidentified bat	TF183448	2013	Field observation	-	1.43 km (Cable Route)
28	Unidentified bat	TF144445	2013	Field observation	2-3	1.58 km (Cable Route)
29	Unidentified bat	TF141444	2014	Field observation	1	1.89 km (Cable Route)

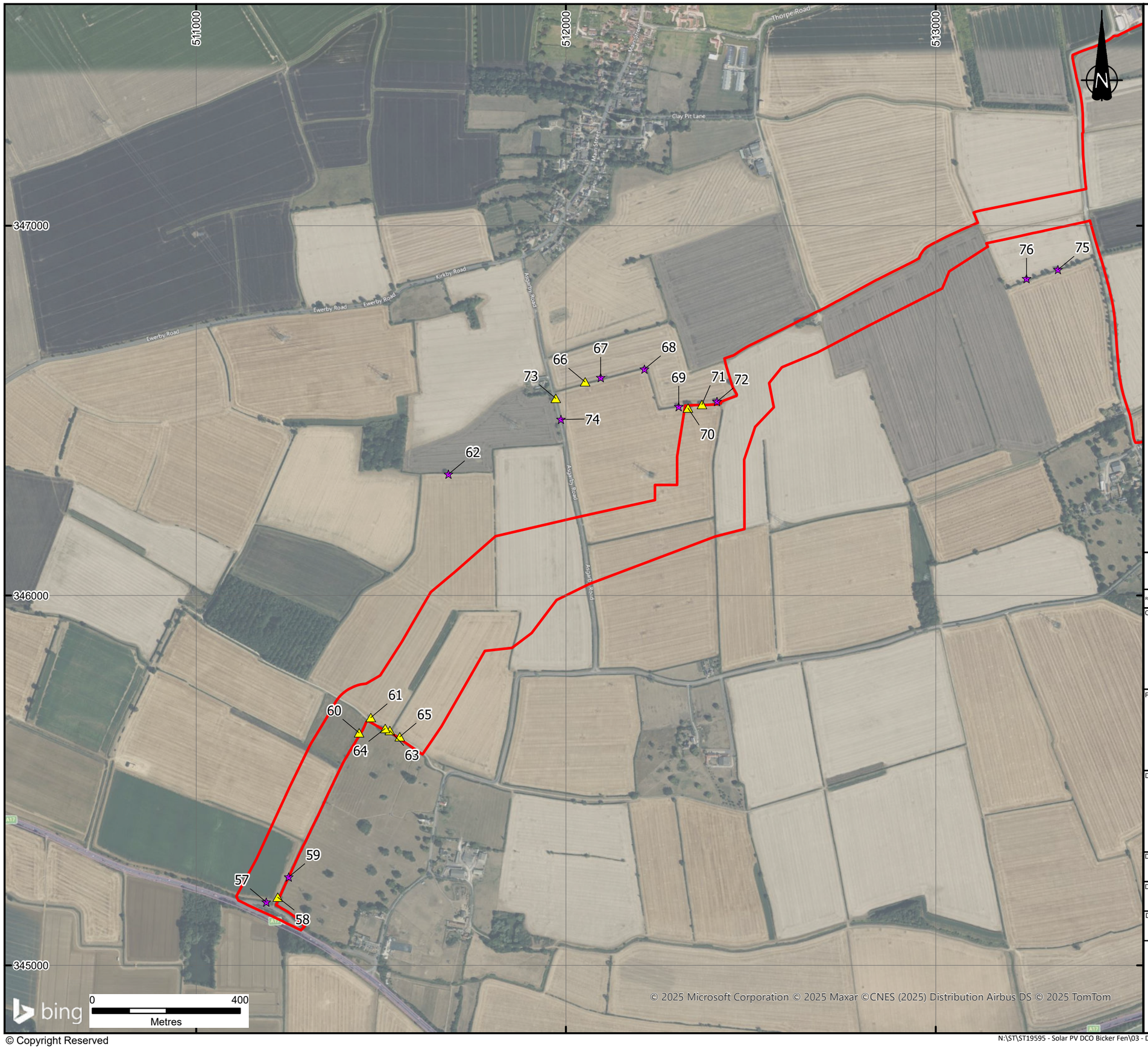
Record	Species	Location	Date	Record type	Number of bats	Distance
30	Unidentified bat	TF146435	2014	Field observation	1-2	1.97 km (Cable Route)
31	Unidentified bat	TF152426	2014	Field observation	-	1.49 km (Cable Route)
32	Unidentified bat	TF146435	2014	Field observation	2	1.97 km (Cable Route)
33	Unidentified bat	TF1346	17/10/2013	Roost	-	0.58 km (Access Road)
34	Unidentified bat	TF136464	2014	Grounded	2 juvenile	1.52 km/0.63 km (Cable Route/Access Road)
35	Unidentified bat	TF147428	2016	Field observation	-	1.9 km (Cable Route)
36	Unidentified bat	TF195367	2017	Field observation	1	1.32 km (Cable Route)
37	Unidentified bat	TF2036	2017	Feeding area	-	2 km (Cable Route)
38	Unidentified bat	TF207385	2017	Field observation	3-4 (Estimate)	0.53 km (Cable Route)
39	Unidentified bat	TF198365	2017	Field observation	-	1.47 km (Cable Route)
40	Unidentified bat	TF149427	2017	Field observation	1	1.79 km (Cable Route)
41	Unidentified bat	TF147443	2017	Field observation	2	1.32 km (Cable Route)
42	Unidentified bat	TF208396	2016	Field observation	3	0.26 km (Cable Route)
43	Unidentified bat	TF147428	2016	Feeding area	-	1.9 km (Cable Route)

Record	Species	Location	Date	Record type	Number of bats	Distance
44	Unidentified bat	TF149439	Unknown	Field observation	-	1.32 km (Cable Route)
45	Unidentified bat	TF145445	2015	Field observation	-	1.48 km (Cable Route)
46	Unidentified bat	TF144443	2015	Field observation	1	1.61 km (Cable Route)
47	Unidentified bat	TF143439	2015	Field observation	2-3 (Estimate)	1.84 km (Cable Route)
48	Unidentified bat	TF180436	2015	Field observation	-	0.93 km (Cable Route)
49	Unidentified bat	TF198367	2015	Field observation	-	1.28 km (Cable Route)
50	Unidentified bat	TF198369	2015	Field observation	3 (minimum)	1.08 km (Cable Route)
51	Unidentified bat	TF1247	17/03/2018	Roost	-	0.55 km (Access Road)
52	Unidentified bat	TF151427	2018	Field observation	-	1.54 km (Cable Route)
53	Unidentified bat	TF146428	2018	Field observation	2	2 km (Cable Route)
54	Unidentified bat	TF141443	2017	Field observation	2	1.91 km (Cable Route)
55	Unidentified bat	TF144438	2018	Field observation	-	1.7 km (Cable Route)
56	Unidentified bat	TF143440	2018	Field observation	1 (Minimum)	1.8 km (Cable Route)
57	Unidentified bat	TF142442	2018	Field observation	1	1.83 km (Cable Route)
58	Unidentified bat	TF142441	2018	Field observation	-	1.86 km (Cable Route)

Record	Species	Location	Date	Record type	Number of bats	Distance
59	Unidentified bat	TF116454	2018	Field observation	-	0.24 km (Access Road)
60	Unidentified bat	TF146433	2019	Field observation	1	1.94 km (Cable Route)
61	Unidentified bat	TF144438	2019	Field observation	1	1.8 km (Cable Route)
62	Unidentified bat	TF147433	2019	Field observation	2	1.84 km (Cable Route)
63	Unidentified bat	TF147434	2019	Field observation	2	1.85 km (Cable Route)
64	Unidentified bat	TF147438	2018	Field observation	2	1.54 km
65	Unidentified bat	TF149428	2019	Field observation	2	1.7 km (Cable Route)
66	Unidentified bat	TF149431	2019	Field observation	2	1.65 km (Cable Route)
67	Unidentified bat	TF121475	2018	Field observation	2	0.91 km (Access Road)
68	Unidentified bat	TF146439	2019	Field observation	1-2 (Estimate)	1.57 km (Cable Route)
69	Unidentified bat	TF148428	2019	Field observation	3-4 (Estimate)	1.8 km (Cable Route)
70	Unidentified bat	TF170432	2019	Field observation	3-4 (Estimate)	(Cable 0.16 km route)
71	Unidentified bat	TF135460	2019	Field observation	-	1.03 km/ 1.8 km (Access Road/Cable Route)
72	Unidentified bat	TF157413	2019	Field observation	-	1.86 km (Cable Route)
73	Unidentified bat	TF161425	2019	Field observation	-	0.72 km (Cable Route)

Record	Species	Location	Date	Record type	Number of bats	Distance
74	Unidentified bat	TF206366	2019	Field observation	-	1.6 km (Cable Route)
75	Unidentified bat	TF142441	25/06/2016	Grounded	-	1.86 km (Cable Route)
76	Unidentified bat	TF145439	21/06/2019	Grounded	-	1.66 km (Cable Route)
77	Unidentified bat	TF144440	01/06/2019	Grounded	-	1.7 km (Cable Route)
78	Unidentified bat	TF1745	2019	Roost	-	0.35 km (Cable Route)

Drawings



KEY

DCO Order Limits

Potential Roost Feature

- PRF-I
- PRF-M

Notes:

Excluding the DCO Order Limits, boundaries shown are indicative. Aerial imagery shown for context purposes only.

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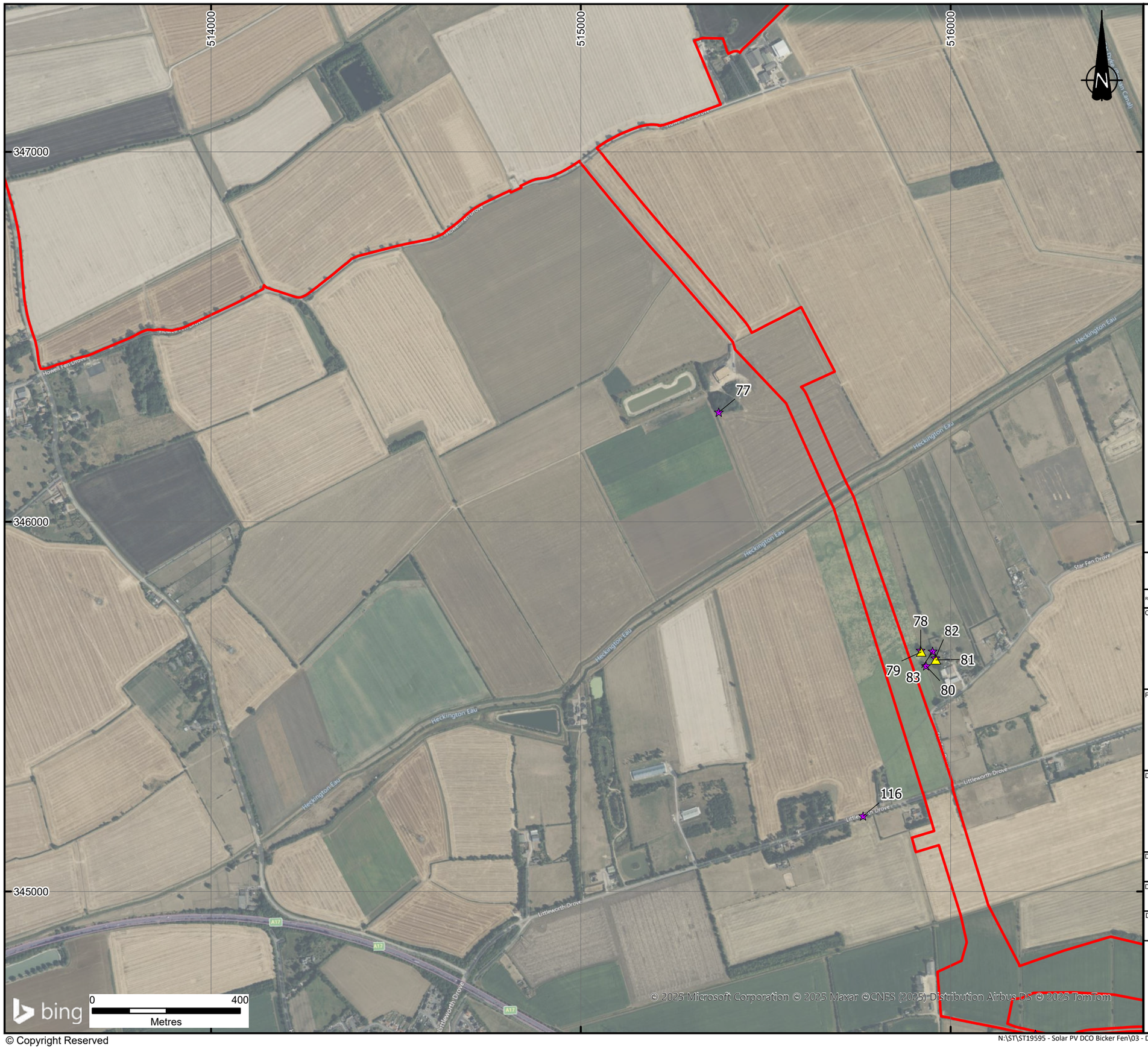

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Potential Roost Feature

- PRF-I
- PRF-M

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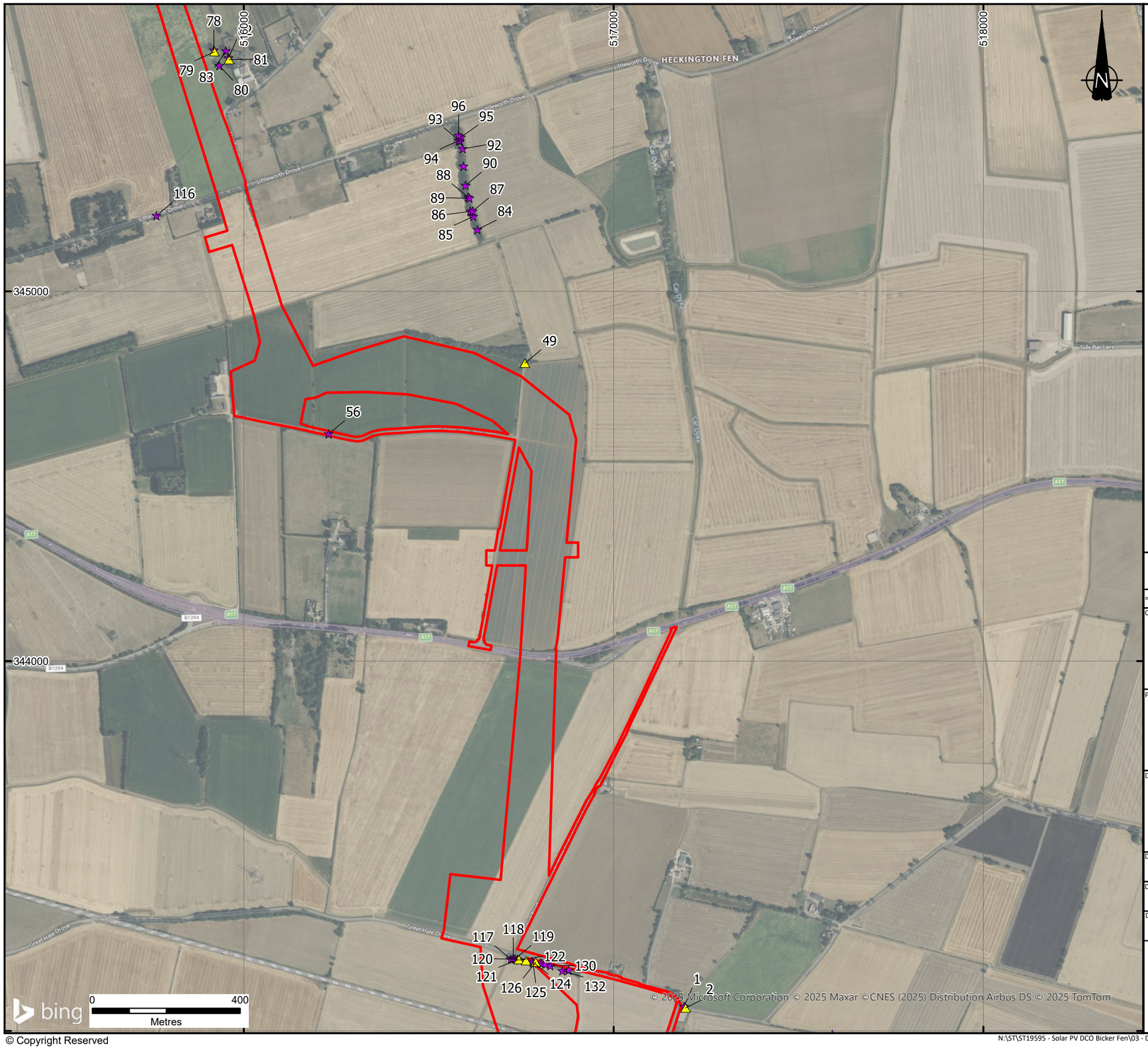

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Potential Roost Feature

PRF-I

PRF-M

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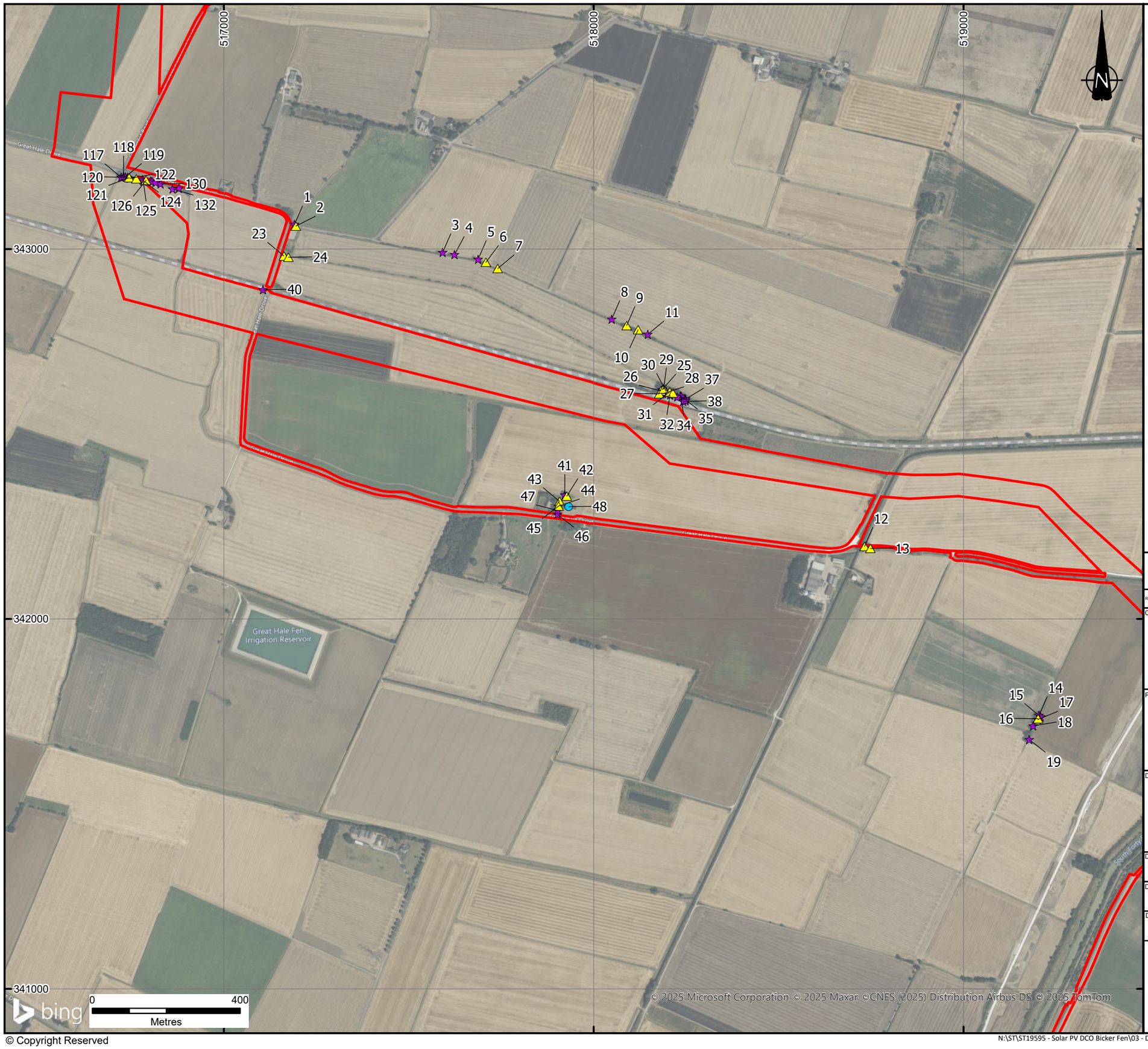

KEY

DCO Order Limits

Bat Roost Potential

- Moderate

Potential Roost Feature

- PRF-I
- PRF-M

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KEY

DCO Order Limits

Potential Roost Feature

- PRF-I
- PRF-M

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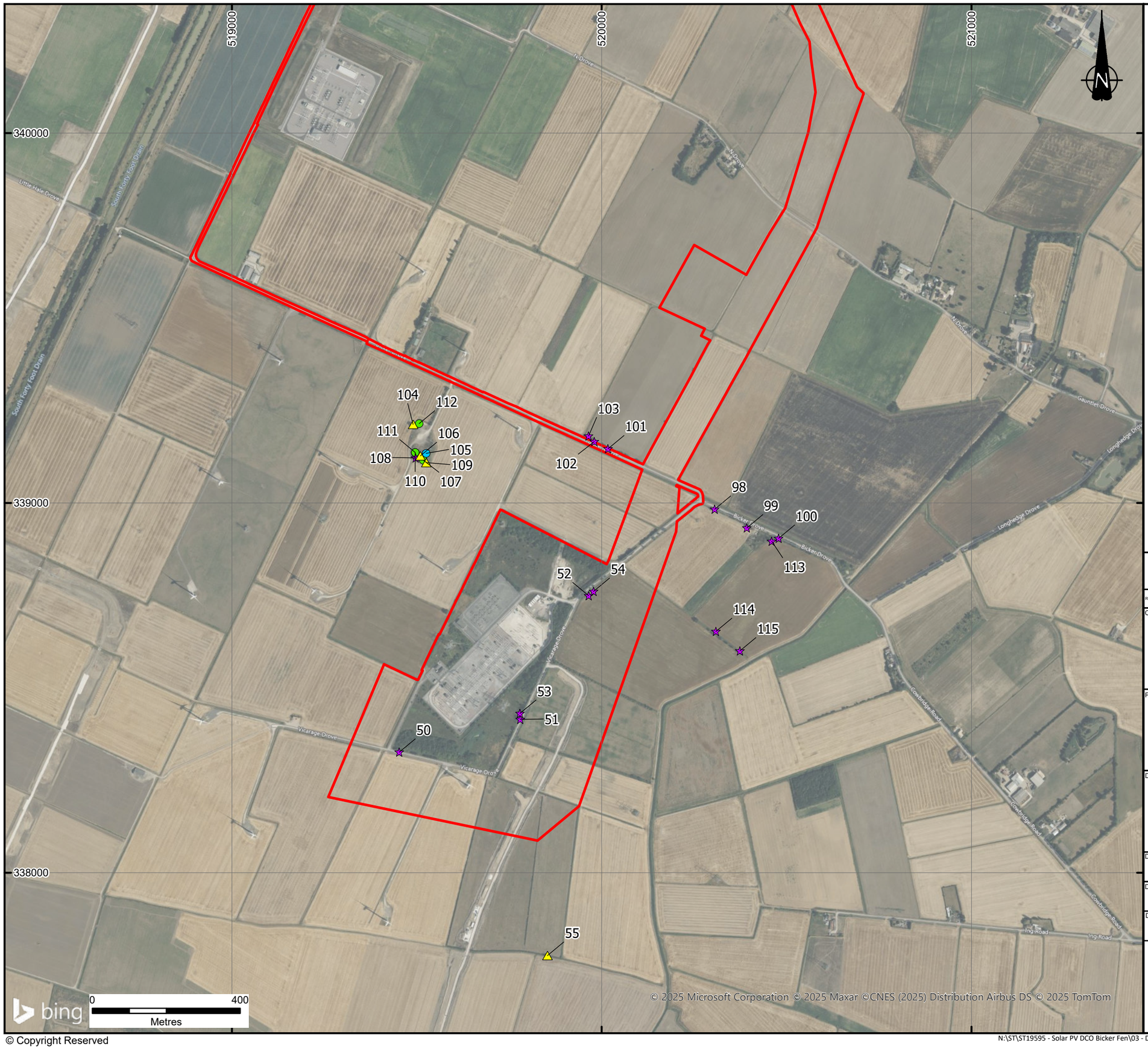

KEY

DCO Order Limits

Bat Roost Potential

- Low
- Moderate

Potential Roost Feature

- PRF-I
- PRF-M

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