

# FIVE ESTUARIES OFFSHORE WIND FARM

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A	Mar 2024	Environmental Statement	SLR/MacArthur Green	GoBe	VEOWFL

# FIVE ESTUARIES OFFSHORE WIND FARM

Bat Survey Report: Additional Trees South of A120

Prepared for: GoBe Consultants (on behalf of Five Estuaries Offshore Wind Ltd)



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#### 1.0 Introduction

Five Estuaries Offshore Wind Farm (VE OWF) is a Nationally Significant Infrastructure Project (NSIP). An Environmental Impact Assessment (EIA) is being undertaken, the findings of which will be presented within an Environmental Statement (ES), which will accompany a Development Consent Order (DCO) application under the Planning Act 2008.

SLR Consulting was commissioned by GoBe Consultants, on behalf of Five Estuaries Offshore Wind Ltd, to undertake a bat survey, comprising a preliminary roost assessment (PRA) and potential roost feature (PRF) assessment of specific trees that had not previously been surveyed and that may be affected by the construction and operation of the onshore aspects of the VE OWF project south of the A120.

This report presents the findings of the bat surveys undertaken in June 2023.

#### 1.1 Survey Area

The bat survey area comprised previously un-surveyed trees within the Red Line Boundary (RLB) and outside of exclusion areas (see below) available at the time of survey, as indicated on Figure 1. Access permission was sought for all trees indicated, but was only granted in respect of fifteen trees.

Exclusion Areas: prior to the commencement of surveys, the VE design team were able to identify certain areas that would not be subject to direct impact as a result of the scheme. These areas were therefore included for PRA survey, but excluded from detailed follow on survey.

#### 1.2 Purpose of this Report

This report presents the findings of the 2023 bat surveys south of the A120. The report seeks to establish baseline conditions and identify trees that may be important for bat species; it is intended to be read in conjunction with the other bat survey reports for the area. The assessment of impacts resulting from VE is beyond the scope of this report, however, they will be considered in the Onshore Biodiversity and Nature Conservation chapter of the ES.

The main objectives of the study was to assess the suitability of selected trees for roosting bats.

#### 1.3 Evidence of Technical Competence and Experience

#### 1.3.1 Survey Team

The table below provides details of the staff who undertook bat survey related work.

Table 1-1 Survey Staff

Name & Position	Professional Memberships and Bat licence details	Years Experience of bat survey	Task(s) conducted
Emma Clarke,	Qualifying member of CIEEM	4 years	Preliminary Roost



Name & Position	Professional Memberships and Bat licence details	Years Experience of bat survey	Task(s) conducted
Senior Field Ecologist	NE bat licence - 2023-10986-CL18-BAT		Assessment (PRA) Presence/Absence Survey – PRF Inspection
Emily Drinkwater Associate Ecologist	Associate member of CIEEM  NE bat licence - 2016-23168-CLS-CLS	11 years	Preliminary Roost Assessment (PRA) Presence/Absence Survey – PRF Inspection

#### 1.3.2 Reporting

This report has been authored by Jess Colebrook, a Principal Ecologist at SLR Consulting with over 20 years' experience as a professional ecologist. She is a Chartered Environmentalist (CEnv) and a full member of CIEEM (MCIEEM). Jess is leading the onshore ecological work necessary to inform the EIA for the project.

This report has been subject to review as part of SLR's Quality Assurance policies by Andy Law. Andy is a Principal Ecologist within SLRs Ecology and Biodiversity team. He is a Chartered Ecologist and Environmentalist and a full member of CIEEM. Andy has over thirty years' experience as a consultant ecologist. Andy is a Natural England licenced bat, dormouse and great crested newt surveyor.



# 2.0 Methodology

The methods used during each survey are in accordance with the Bat Conservation Trust (2016) Bat Survey for Professional Ecologists Good Practice Guidelines (3rd Edition)<sup>1</sup> unless stated otherwise.

#### 2.1 Baseline Data Collection

#### 2.1.1 Field Surveys: Roost Assessment

Refer to Drawing 1 for tree locations, full details in respect of survey dates, surveyors and limitations are included in the detailed tabulated results at section Error! Reference source not found..

A summary of the surveys undertaken is provided below.

#### Preliminary Roost Assessment (PRA)

All accessible trees were subject to a Preliminary Roost Assessment (PRA) by a licensed batworker. The inspection involved using binoculars and torches to seek Potential Roost Features (PRF), such as lifted bark, dense ivy, woodpecker hole and/or other cavities. Trees were then assessed as having negligible, low, moderate or high potential to support bats as follows (in accordance with BCT (2016)):

- Negligible: Negligible habitat features likely to be used by roosting bats;
- Low: A tree of sufficient size and age to contain PRFs but with none seen or features seen with only very limited roosting potential;
- Moderate: A tree with one or more PRFs 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; and
- High: A tree with one or more PRFs 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.

The location of trees with negligible or low potential to support bats was noted and is shown on Drawing 1; no further notes were gathered for these categories of trees. For moderate or high potential trees, descriptive details for the tree and potential roost features (PRF) were gathered.

Trees with moderate or high potential were immediately subject to a presence/absence survey as detailed below.

<sup>1</sup> Collin, J (ed)(2016) Bat Surveys for Professional Ecologists: Good Practice Guidelines (3<sup>rd</sup> edn). The Bat Conservation Trust, London.

#### Presence/Absence Survey

#### Potential Roost Feature Inspection

Trees which could potentially be lost or damaged or disturbed by the project and assessed with moderate or high potential to support bats during the PRA were subject to an at-height PRF inspection (where safe to do so) during the active season (May – September) to better determine the roost potential and gather evidence of roosting bats (if present).

The detailed survey of PRFs involved a search for signs such as droppings, feeding remains, urine staining and bark smoothing, as well as for bats themselves. All safely accessible PRFs were closely inspected using high powered torches (1M candle power), endoscopes, close focus binoculars and bat detectors as appropriate. Evidence of bat use and details of individual PRFs was recorded by surveyors and used to refine the assessment of the likelihood that an individual feature would be used by bats. Any bat droppings were retained and sent for DNA analysis to determine bat species.

If full survey was possible during the PRF inspection, and given that all such inspections were undertaken in the summer period, the survey was deemed to count as a presence/absence survey. If full survey access was not possible (due to complicated features or lack of safe access) then the PRF inspection was not counted as a complete presence/absence survey.

#### 2.2 Limitations

An active owl nest was present in one tree that prevented full inspection. No other significant constraints were encountered at accessible trees, and therefore no limitations to the survey noted.



## 3.0 Results

No evidence of roosting bats was recorded at any of the trees surveyed. Refer to Table 3-1 and Table 3-2 for full details of each tree surveyed



Table 3-1
Preliminary Roost Assessment Results

Tree #	Latitude	Longitude	Survey date (2023)	Surveyor	Tree species	Diameter (m)	Height (m)	PRF types_present	Preliminary tree category
171	51.85851	1.1787797 9	28.06	EC	Oak	1.4	16	Rot hole	M
336	51.87222	1.1473796 6	28.06	ED	Oak	0.7	6.5	Branch end cavity/cracks, crack/split, rot hole	M
336. 1	51.87223	1.1472805 1	28.06	ED	Oak	0.9	12	Branch end cavity/cracks	N
357	51.87225	1.1464918 3	28.06	EC	Oak	0.65	11	Large hollow, rot hole	Н
358	51.87238	1.1457348 8	28.06	ED	Oak	0.6	11	Branch end cavity/cracks	L
358. 1	51.87239	1.1456500 6	28.06	ED	Oak	0.55	10.5	none	N
359	51.87237	1.1453880 7	28.06	EC	Oak	0.6	10	Branch end cavity/cracks, rot hole	М
516	51.83438	1.1902600 7	28.06	EC	Oak	0.45	9	none	N
517	51.83423	1.1900961 8	28.06	ED	Oak	0.7	11	Crack/split, rot hole	M
517. 1	51.83419	1.1900100 4	28.06	EC	Oak	0.35	8	Light ivy	L
518	51.83431	1.1902277 5	28.06	ED	Oak	0.5	9	Rot hole	М
6406	51.85313	1.1957893 4	28.06	EC	Oak	1.2	12	Branch end cavity/cracks, dense ivy	L
6800	51.9015	1.0957910	28.06	ED	Oak	0.6	9	none	N



Tree #	Latitude	Longitude	Survey date (2023)	Surveyor	Tree species	Diameter (m)	Height (m)	PRF types_present	Preliminary tree category
		7							
6800 .1	51.90147	1.0957947 7	28.06	EC	Oak	0.62	10	none	N
2009	51.85635	1.1889275 7	28.06	EC	Oak	1	10	Branch end cavity/cracks, crack/split, rot hole	M



Table 3-2
Potential Roost Feature Inspection Results

Tree #	Date (2023)	Surveyor	Tree species	PRF #	PRF Type	PRF height (m), aspect (NSEW), trunk or branch (t/b)	PRF dimensions and description	PRF category	Tree category	Full inspection possible?
171	28.06	ED	Oak	1	Rot hole	6, SE, b	Superficial depth 2cm max	N	N	yes
			2	Rot hole	7.5, SE, b	Superficial depth of 1-2cm.	N			
				3	Branch end cavity/cracks	6, NE, b	Sheltered from above, cracks below, 4xcm wide 6cm wide entrance, quite open, very unlikely.	N		
336	28.06	ED	Oak	1	Crack/split, lifted bark, rot hole	2.5, S, t	Collection of three rot holes, didn't inspect as juvenile owl in nest discovered (see below).	M	M	no
				2	Crack/split, large hollow	1-4, S, tb	Split starting at trunk then going up along branch, owl found inside no further inspection.	M		
				3	Crack/split, large hollow, lifted bark, rot hole	2-4.5, tb	Rot holes, splits and hollow, not inspected fully as owl found in nest (see above).	M		
357	28.06	EC	Oak	1	Large hollow	4, N, t	10x8cm entrance, smaller entrance 2.5x4cm Location of old tear outs/rotting wood. There is a hollow in the trunk from the entrance depth towards the back is 30cm, no downward extension. Cavities extending	Н	Н	yes



Tree #	Date (2023)	Surveyor	Tree species	PRF #	PRF Type	PRF height (m), aspect (NSEW), trunk or branch (t/b)	PRF dimensions and description	PRF category	Tree category	Full inspection possible?
							upwards towards the back between gnarled deadwood 50cm from entrance. Room for several bats			
358	28.06	ED	Oak	1	Branch end cavity/cracks	4.5, N & S, b	Less than a 1cm slit, to small. Too small for bats.	N	N	yes
359	28.06	EC	Oak	1	Rot hole	6, S, b	Dead wood in back, no upward or downward extension	N	N	yes
				2	Branch end cavity/cracks	7, S, b	Crack branch but with no sheltered cavity	N		
517	28.06	ED	Oak	1	Rot hole	6.5, S, b	Superficial, depth 1-2cm not suitable	N	М	yes
				2	Crack/split, rot hole	6.3, SE, b	Entrance, 4x6cm, goes in horizontally and slightly upwards. 12cm. Dry. Space for up to 3 bats.	M		
				3	Rot hole	5.7, NW, b	4x6cm, goes in horizontally 8cm. (On back side of branch in photo, cannot be seen from the ground. Room for one bat.	М		
518	28.06	ED	Oak	1	Rot hole	5.2, NE, b	2x2cm, depth upwards 3cm, very shallow	N	N	yes
2009	28.06	ED	D Oak	1	Crack/split, rot hole	7, W, b	Filled with wood, superficial cavity depth of 2cm max.	N	N	yes
				2	Rot hole	7.5, SE, b	Superficial 1cm depth	N	N	yes
				3	Rot hole	4.5, NE, b	Superficial, 1cm depth at	N	N	yes



SLR Ref No: 404.V05356.00010 October 2023

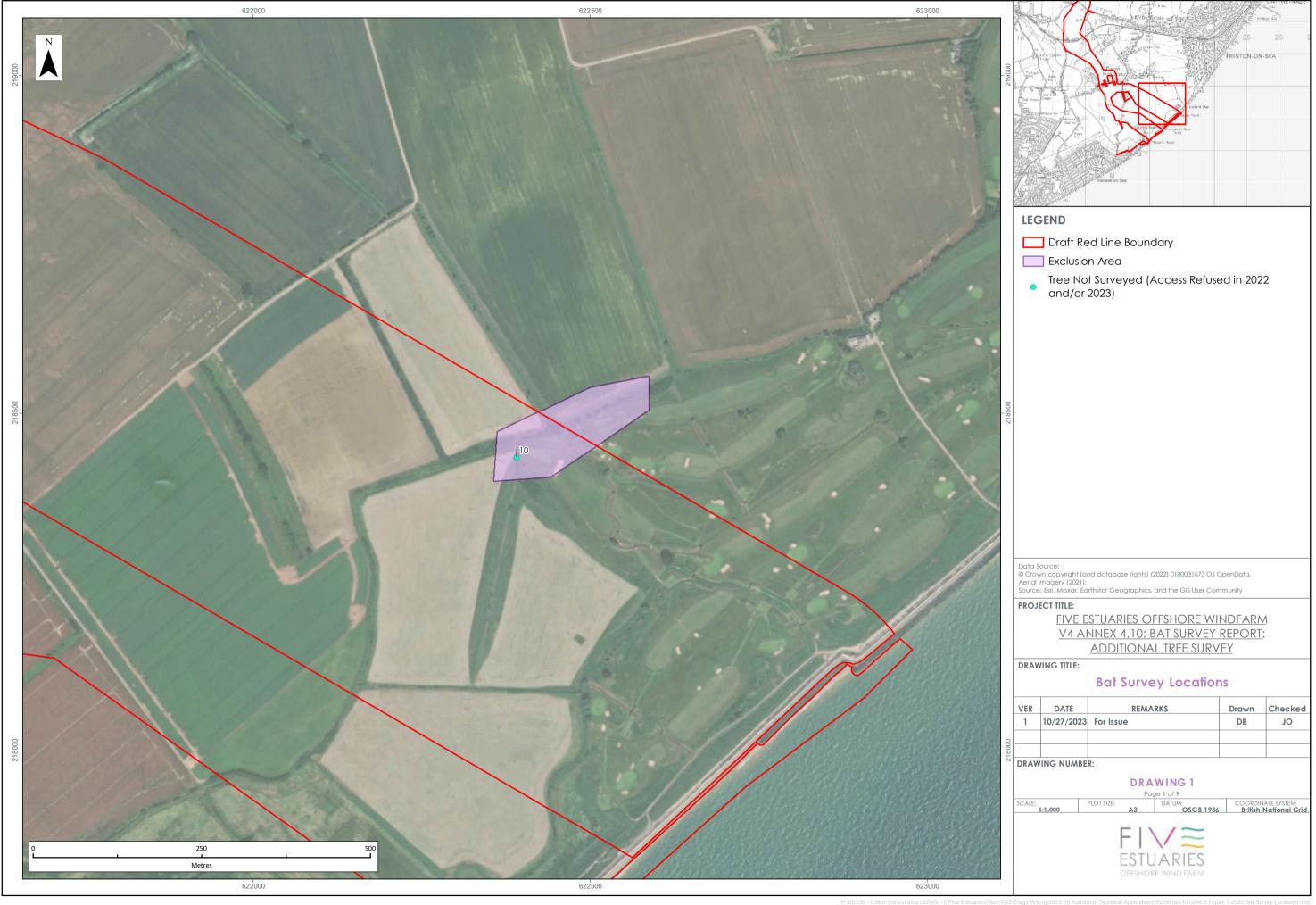
Tree	e # Date (2023)	Surveyor	Tree species	PRF #	PRF Type	PRF height (m), aspect (NSEW), trunk or branch (t/b)	PRF dimensions and description	PRF category	Tree category	Full inspection possible?
							base			

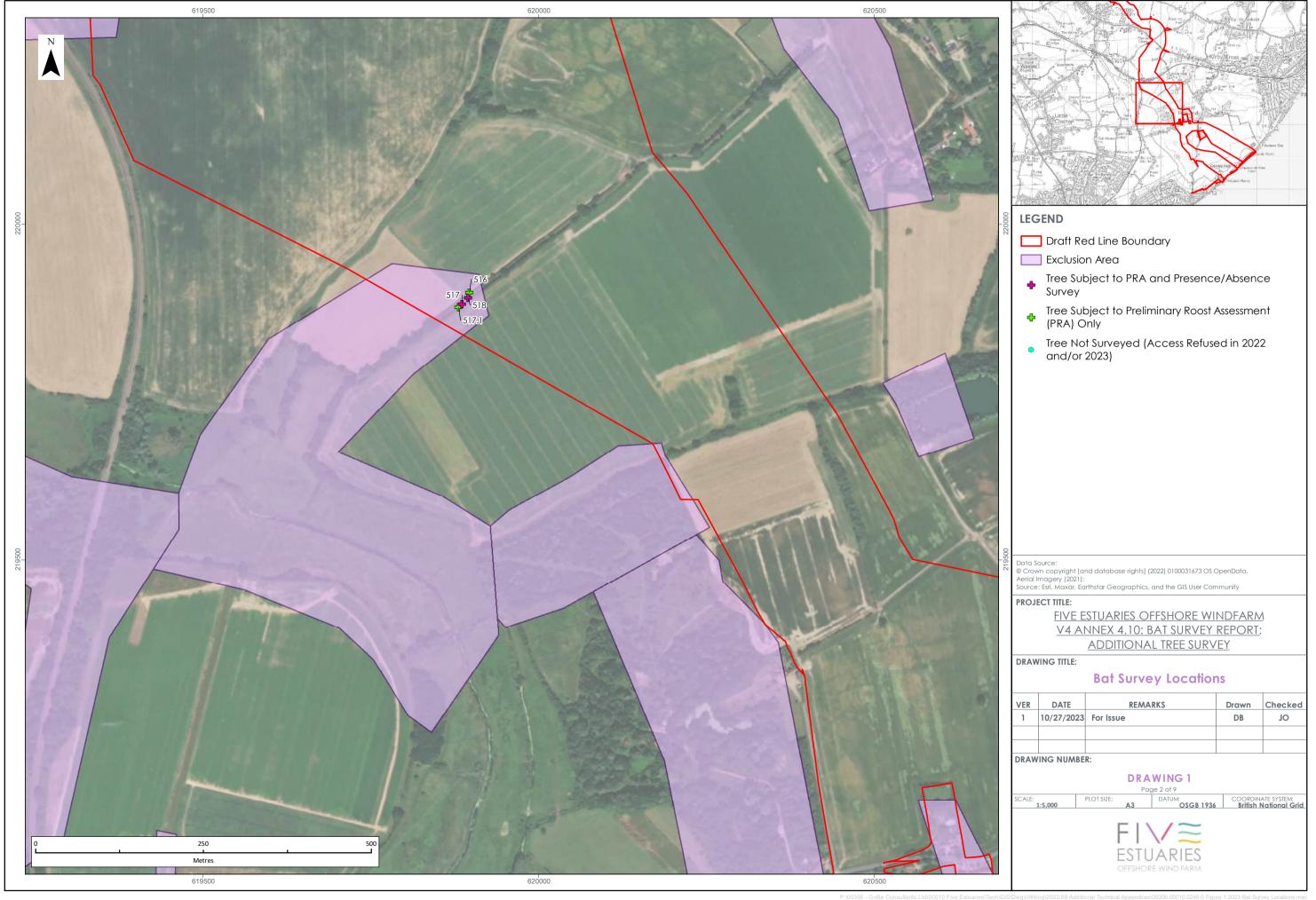


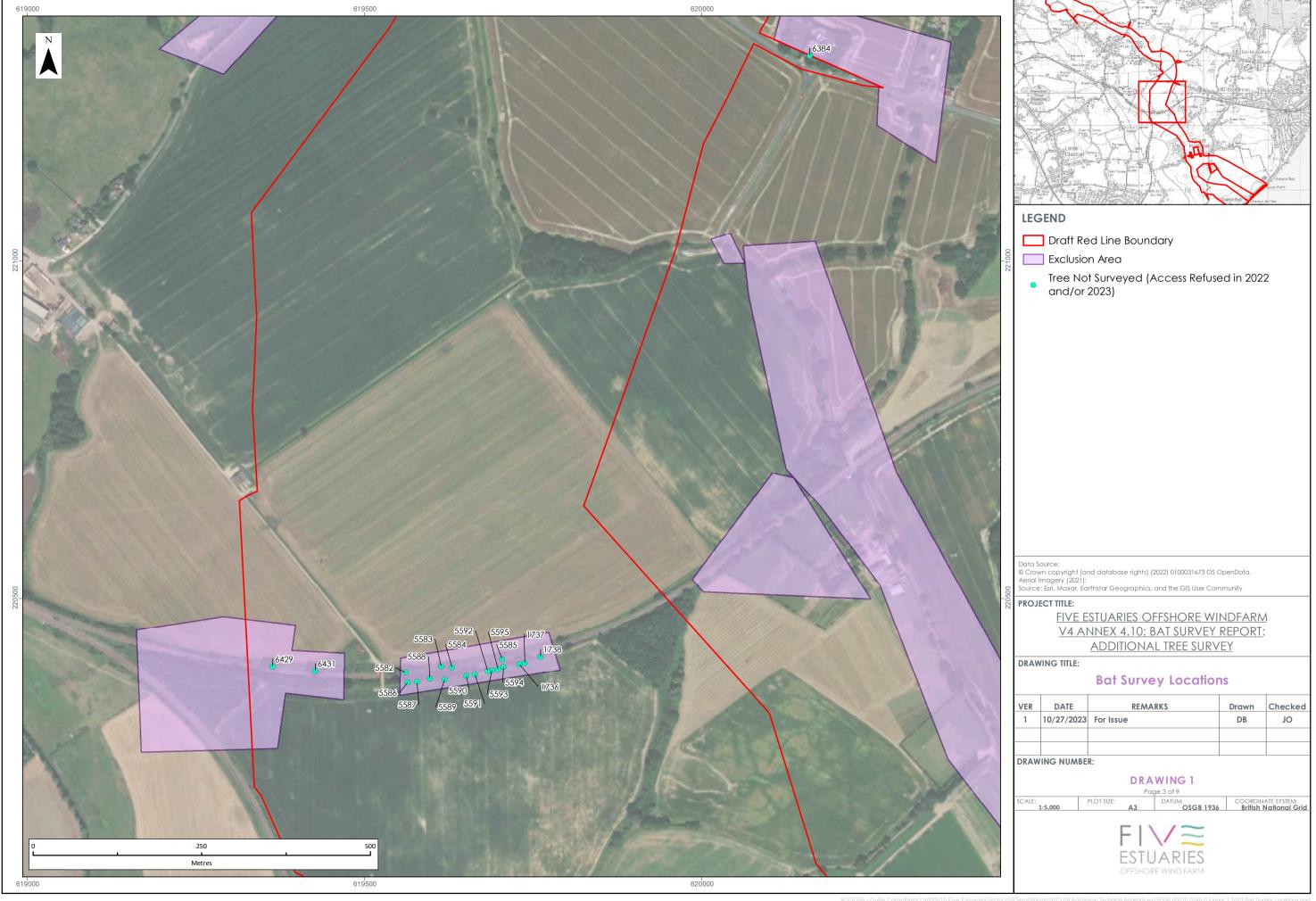
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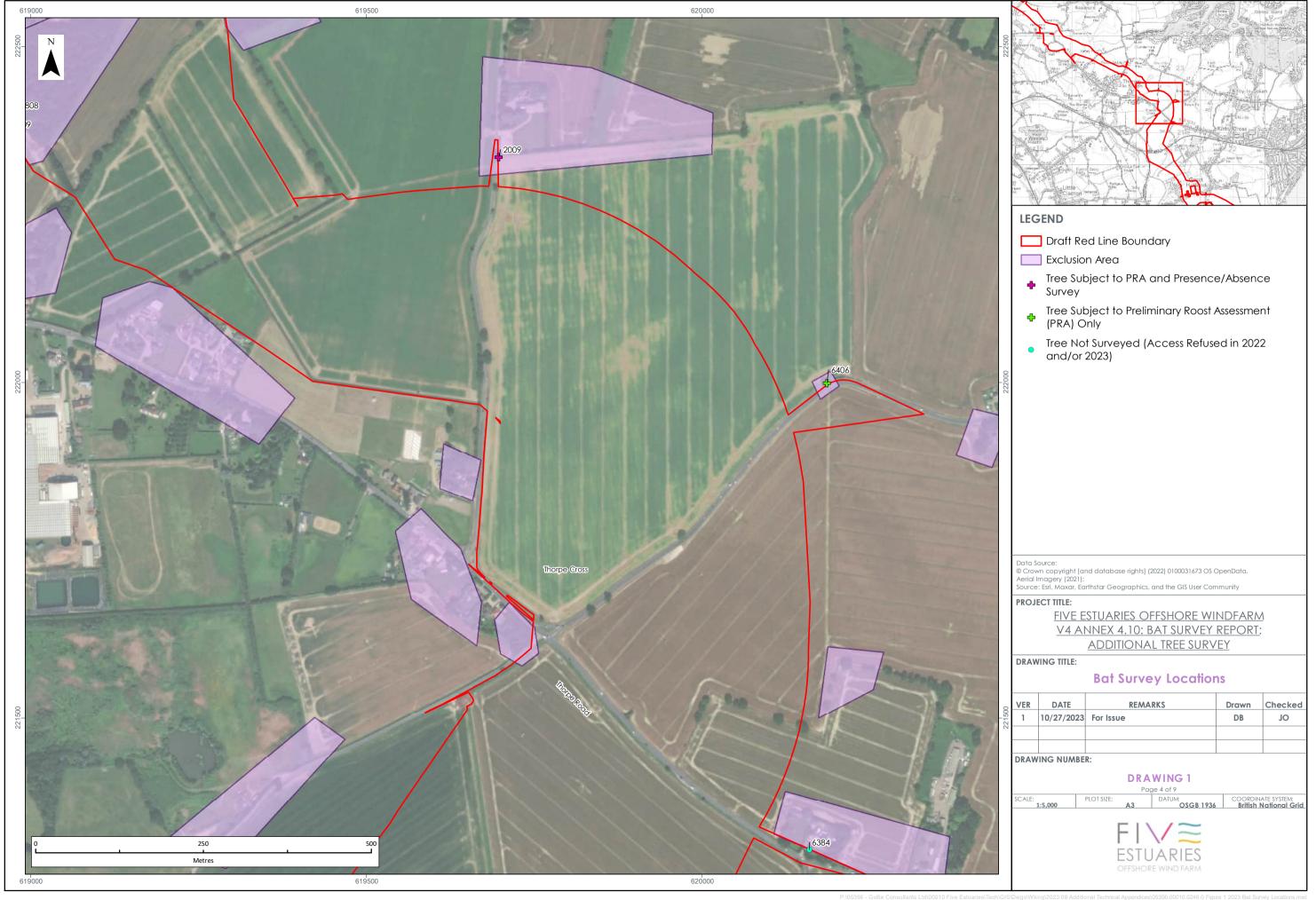
**Bat Survey Locations** 

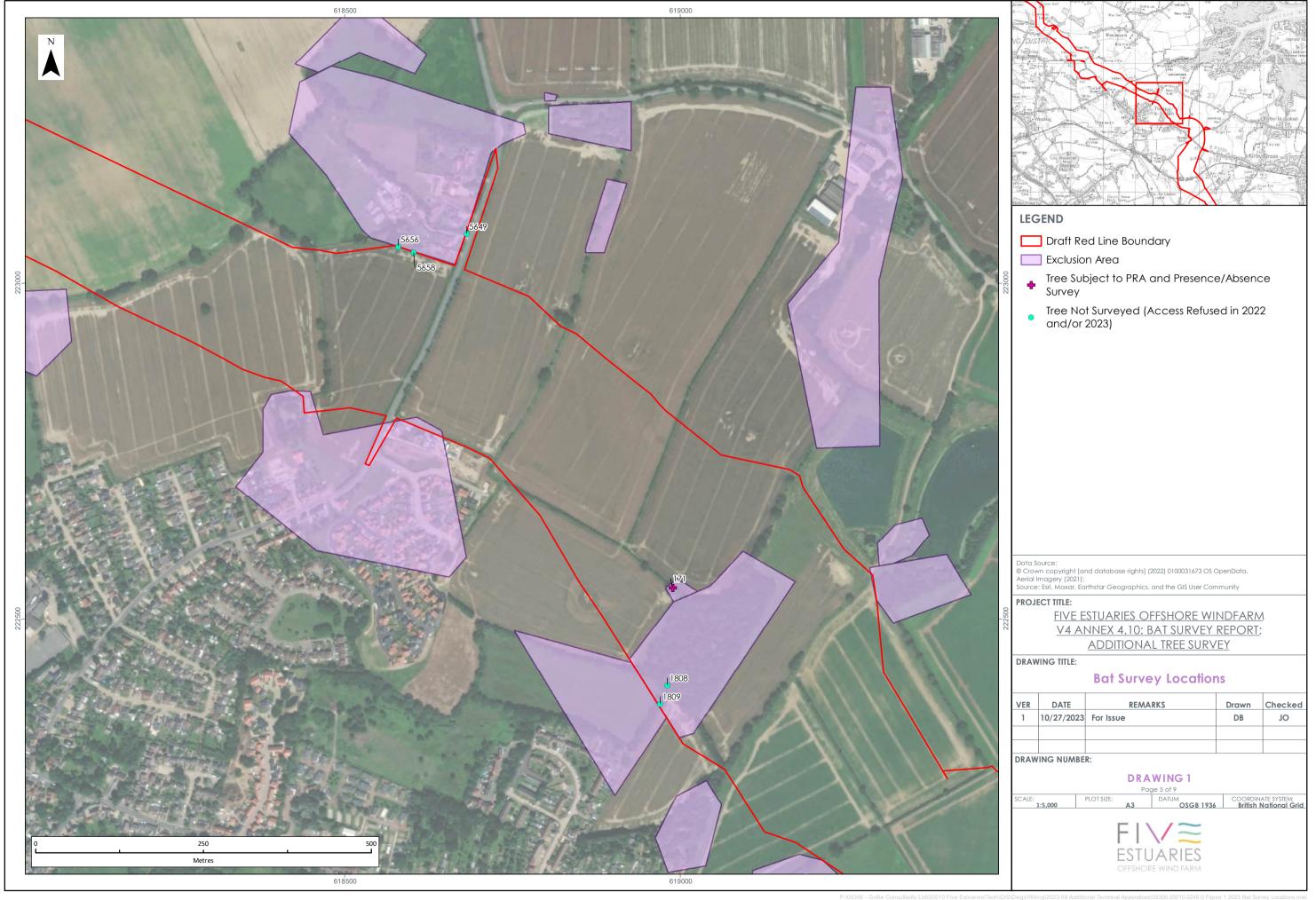


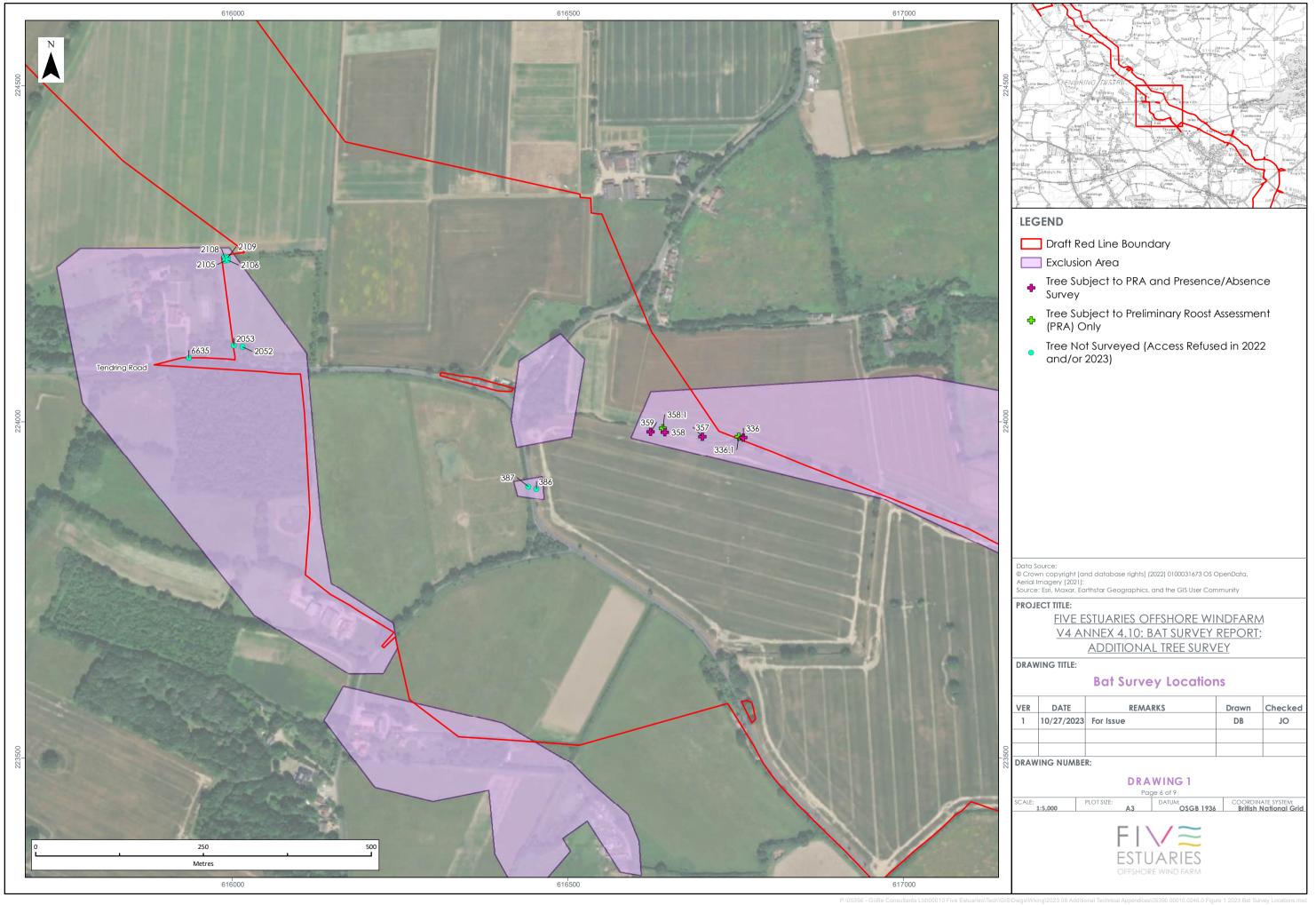




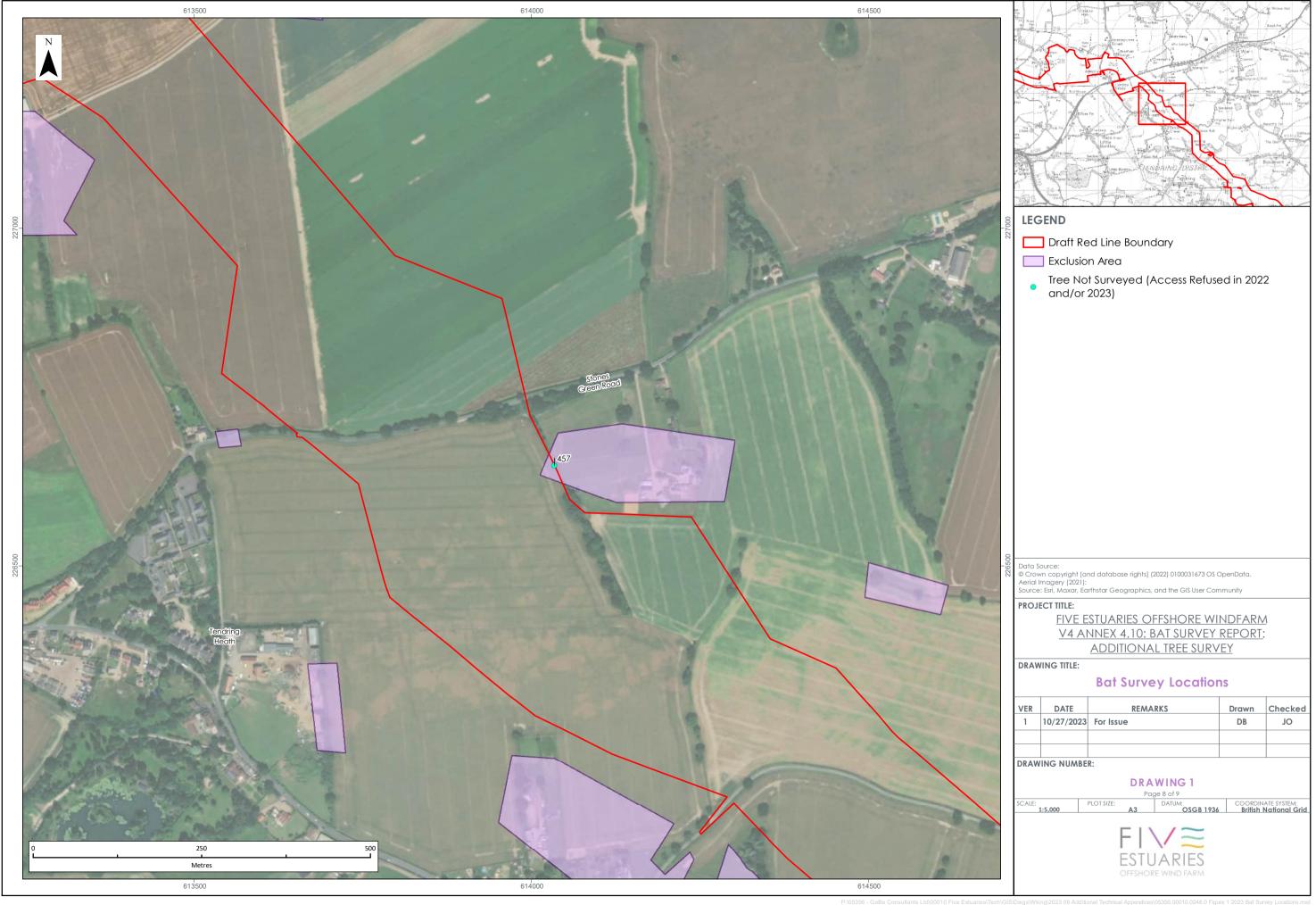


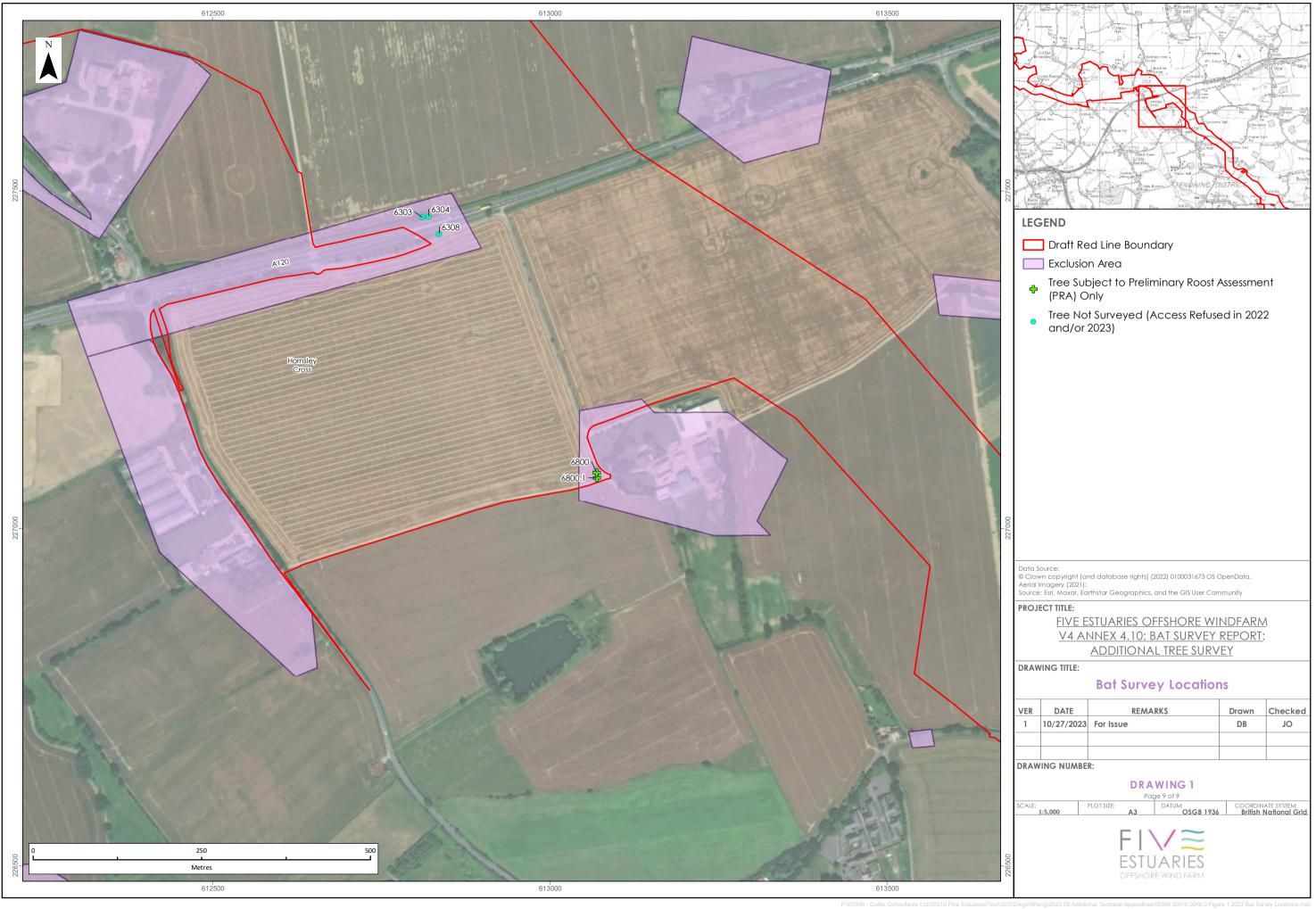








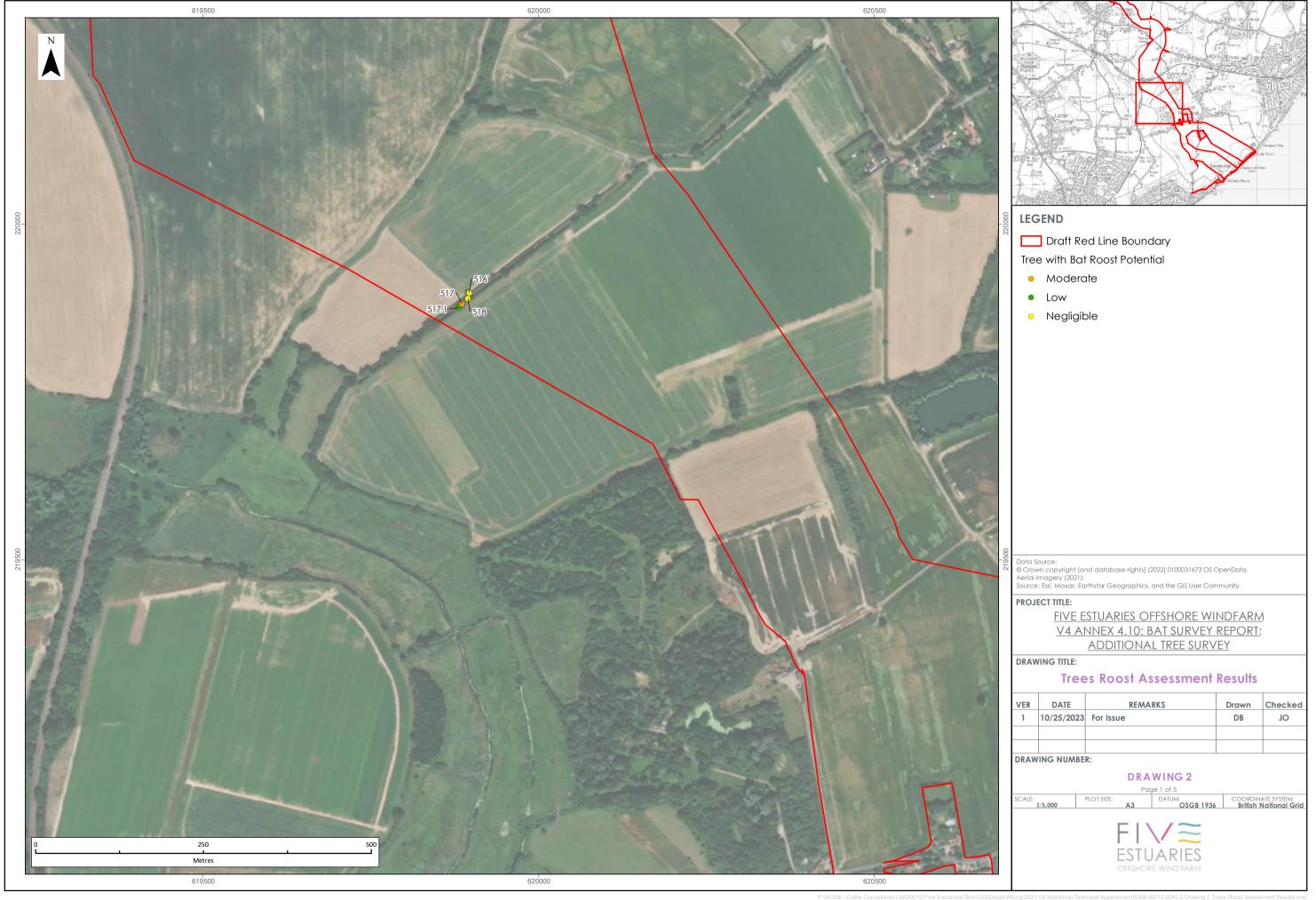


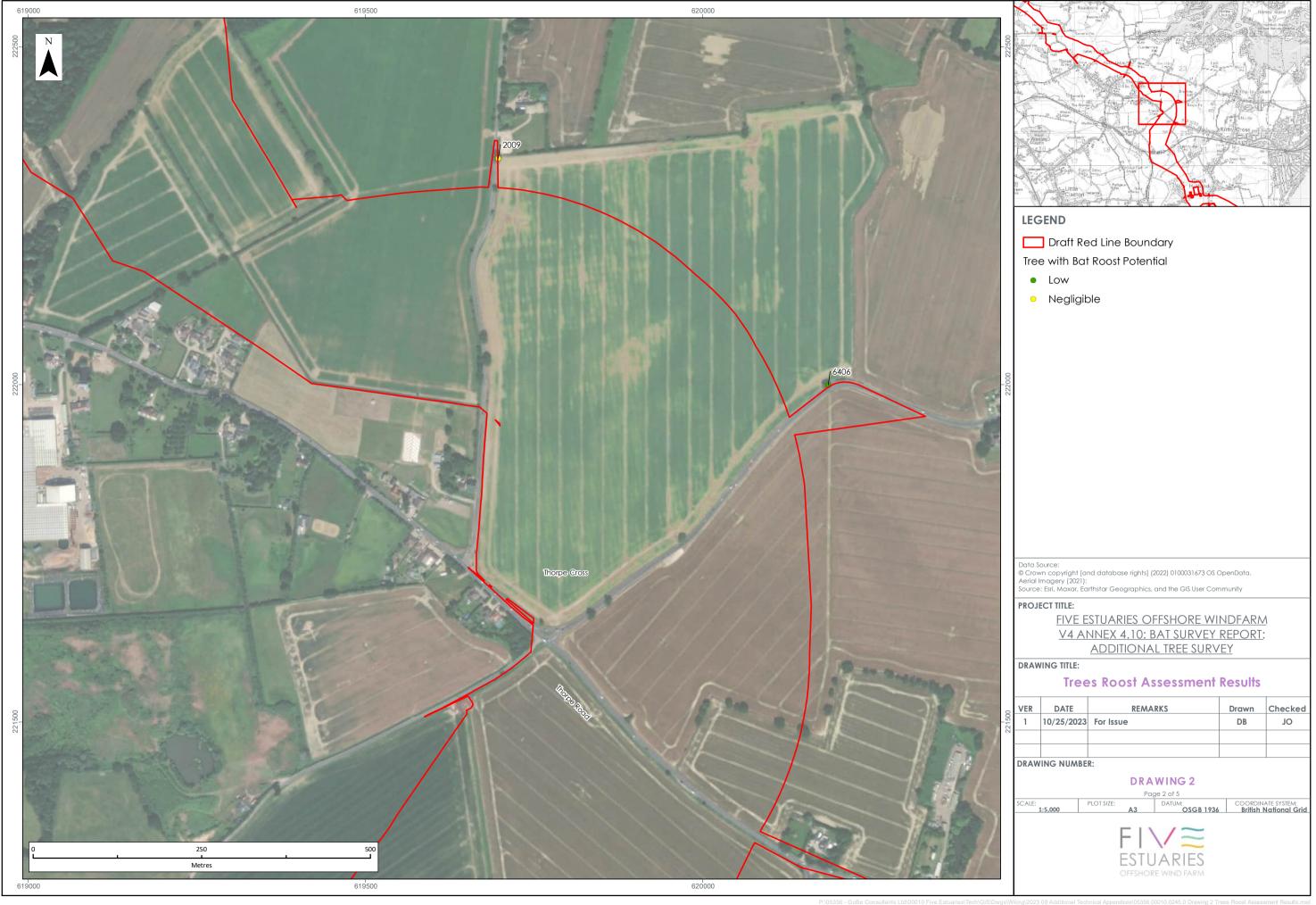


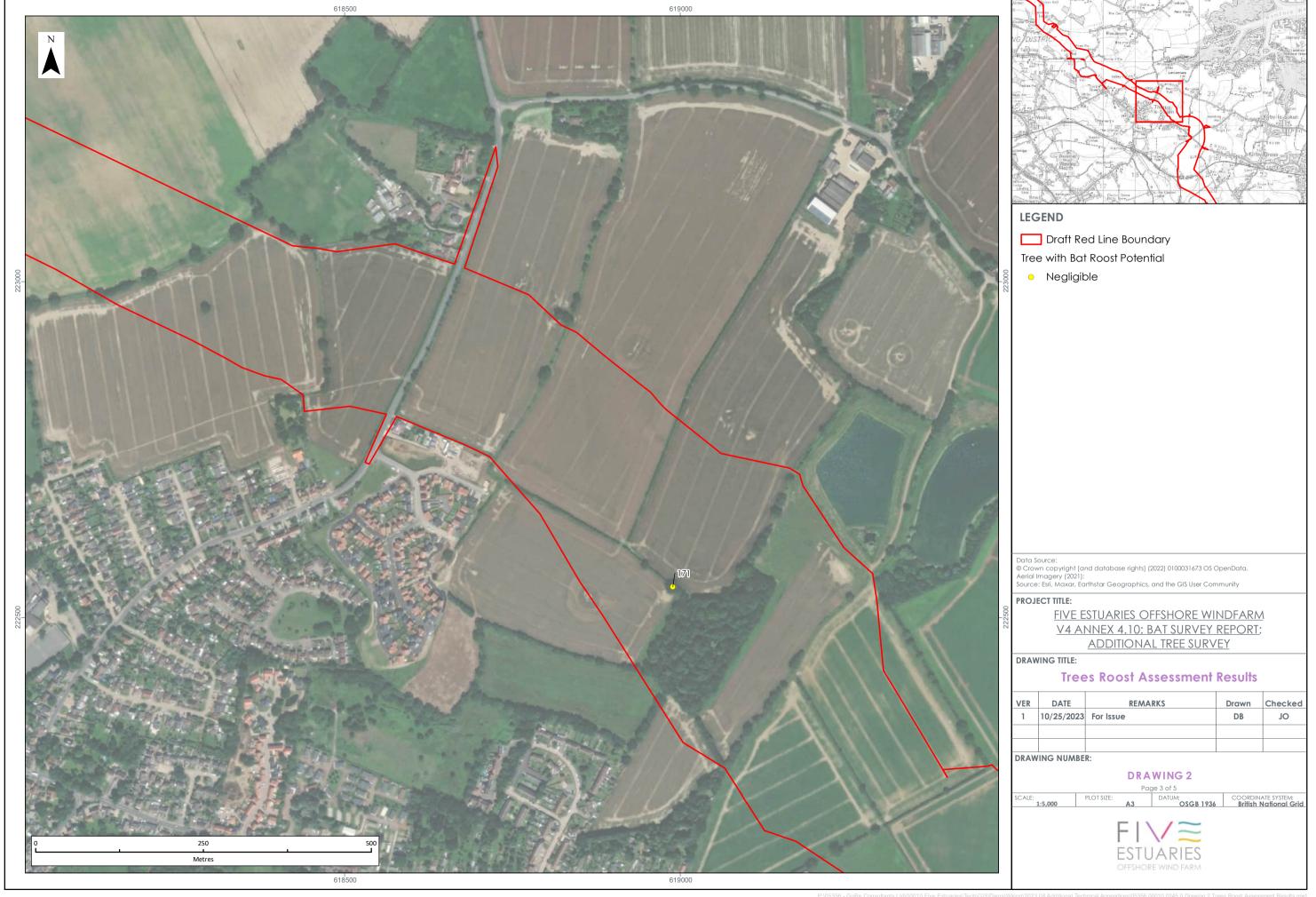
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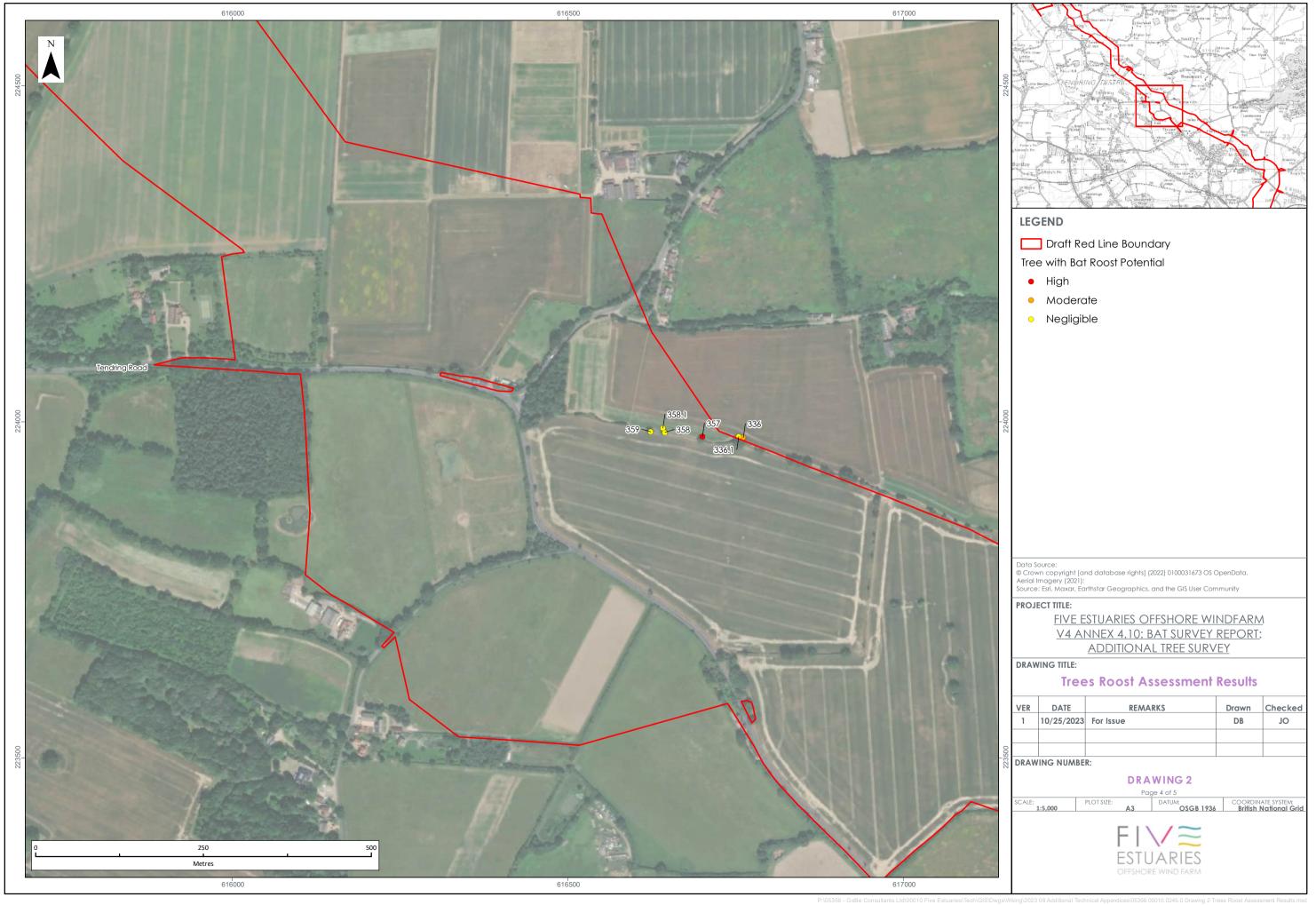
Tree Roost Assessment Results

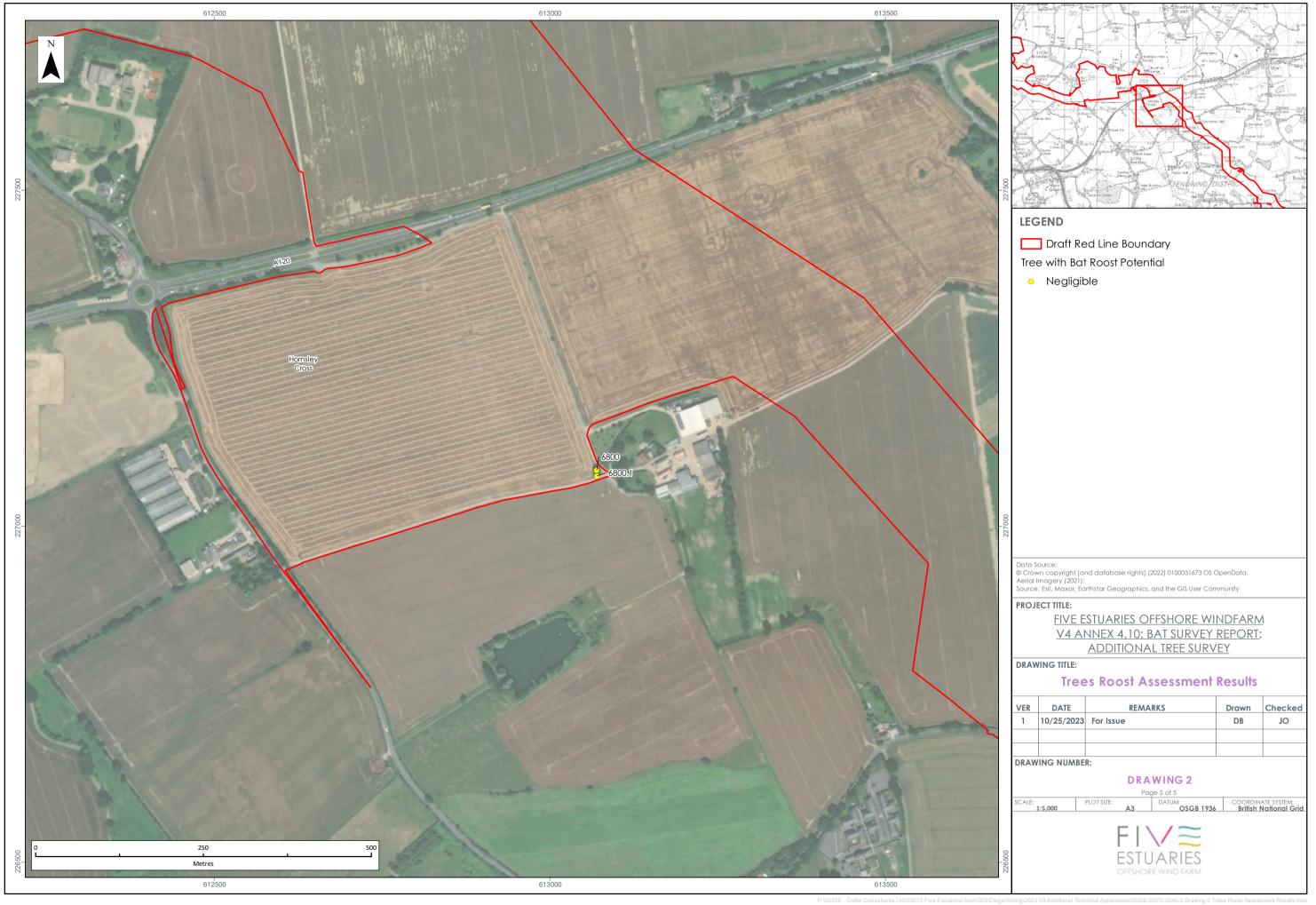












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