

Outer Dowsing Offshore Wind Preliminary Environmental Information Report

Volume 2, Appendix 21.1: Onshore Ecology Desk Study

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**OUTER DOWSING OFFSHORE
WIND**

**PRELIMINARY
ENVIRONMENTAL
INFORMATION REPORT**

**VOLUME 2, APPENDIX 21.1:
ONSHORE ECOLOGY DESK
STUDY**

SLR Ref: 410.V05356.00013
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CONTENTS

1.0	DESK STUDY	2
1.1	Introduction	2
1.2	Onshore Export Cable Corridor (ECC) Options	2
1.3	Methodology.....	3
1.3.1	Changes in Response to Scoping Opinion	3
1.3.2	Study Areas and Desk Study Sources.....	4
1.3.3	Limitations.....	6
1.4	Results.....	6
1.4.1	Designated Sites	6
1.4.2	Habitats	55
1.4.3	Species	67
1.5	Summary.....	91
2.0	REFERENCES	92

DOCUMENT REFERENCES

TABLES

Table 1-1:	Segments in relation to route options	2
Table 1-2:	Local Wildlife Sites for Lincolnshire Node	14
Table 1-3:	Statutory Designated Sites for Weston Marsh via south of the A52 and Weston Marsh via north of the A52.....	23
Table 1-4:	Non-statutory Sites for Weston Marsh via south of the A52 and Weston Marsh via north of the A52	33
Table 1-5:	Priority Habitats for Lincolnshire Node	58
Table 1-6:	Priority Habitats for Weston Marsh via south of the A52 and Weston Marsh via north of the A52.....	60
Table 1-7:	Records of Important Plants within Designated Sites for Lincolnshire Node	67
Table 1-8:	Records for Amphibians within the Lincolnshire Node study area	69
Table 1-9:	Records for Roosting Bats within the 5km study area for Lincolnshire Node.....	71
Table 1-10:	Records of Important Plants within Designated Sites for Weston Marsh, via south of the A52 and Weston Marsh, via north of the A52	74
Table 1-11:	Records of important invertebrates within Designated Sites for Weston Marsh.....	76
Table 1-12:	Records for Amphibians within the study area for Weston Marsh, via south of the A52 and Weston Marsh, via north of the A52	77
Table 1-13:	Records of GCN Class Licence Surveys within 2km for Weston Marsh	79

Table 1-14: Records for Reptiles within the Weston Marsh study area Weston Marsh, via south of the A52 and Weston Marsh, via north of the A52	80
Table 1-15: Records for Bats within the Weston Marsh study area - Weston Marsh via south of the A52 and Weston Marsh via north of the A52	82
Table 1-16: Records for Roosting Bats within the 5km study area for Weston Marsh - Weston Marsh via south of the A52 and Weston Marsh via north of the A52	86
Table 1-17: Records for Otter and Water Voles within the Weston Marsh via south of the A52 and Weston Marsh via north of the A52 study areas.....	89

FIGURES

Figure 21.1.1: Lincolnshire Node - Internationally and Nationally Designated Sites	94
Figure 21.1.2: Lincolnshire Node - Locally Designated Sites and Priority Habitats	95
Figure 21.1.3: Weston Marsh - Internationally and Nationally Designated Sites	96
Figure 21.1.4: Weston Marsh - Locally Designated Sites and Priority Habitats	97
Figure 21.1.5: Lincolnshire Node - Important Sites and Habitats	98
Figure 21.1.6: Weston Marsh - Important Sites and Habitats.....	99
Figure 21.1.7: Lincolnshire Node - Protected and Notable Species Records - Amphibians	100
Figure 21.1.8: Lincolnshire Node - Protected and Notable Species Records – Reptiles	101
Figure 21.1.9: Lincolnshire Node - Protected and Notable Species Records - Terrestrial Mammals (Bats)	102
Figure 21.1.10: Lincolnshire Node - Protected and Notable Species Records - Terrestrial Mammals (Bat Roosts).....	103
Figure 21.1.11: Lincolnshire Node - Protected and Notable Species Records - Riparian Mammals	104
Figure 21.1.12: Weston Marsh - Protected and Notable Species Records – Plants.....	105
Figure 21.1.13: Weston Marsh - Protected and Notable Species Records – Amphibians	106
Figure 21.1.14: Weston Marsh - Protected and Notable Species Records – Reptiles.....	107
Figure 21.1.15: Weston Marsh - Protected and Notable Species Records - Terrestrial Mammals (Bats)	108
Figure 21.1.16: Weston Marsh - Protected and Notable Species Records - Terrestrial Mammals (Bats)	109
Figure 21.1.17: Weston Marsh - Protected and Notable Species Records - Riparian Mammals.....	110
Figure 21.1.18: Weston Marsh - Protected and Notable Species Records - Terrestrial Mammals (Other)	111

ANNEXES

Annex A	Local Wildlife Site Citations
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1.0 Desk Study

1.1 Introduction

This appendix presents the results of the desk study undertaken to inform the Preliminary Environmental Information Report (PEIR) for Outer Dowsing Offshore Wind (ODOW) (the Project), with a specific focus on onshore ecological features.

The aim of the desk study was to identify important ecological features¹ such as designated sites, habitats, and species populations within the zone of influence² of the Project, and to gather information on such features, contributing to an understanding of the ecological baseline.

This appendix does not present desk study data relating to onshore ornithology, which is presented separately with Volume 1, Chapter 22: Onshore Ornithology and its related appendices.

1.2 Onshore Export Cable Corridor (ECC) Options

- At the time of writing three onshore ECC route options are being considered as shown on Figure 3.1 on Volume 1, Chapter 3: Project Description
- Lincolnshire Node;
- Weston Marsh, via north of the A52; and
- Weston Marsh, via south of the A52.

Both onshore ECC options for Weston Marsh follow largely the same direction, except for in the approximate centre, where there are two options bifurcate and then run approximately parallel to one another; Weston Marsh, via north of the A52 and Weston Marsh, via south of the A52 The two options then converge and continue to the south along the same ECC.

Due to the large size of the Project, the study area for some receptors is very large, therefore, to assist with interpretation and explanation of the large volume of associated data, the route options have been split into the segments. The extent of segments has been aligned with easily recognisable geographical features such as roads or rivers which cross the routes.

The segments for each route option are shown in Table 1-1 below.

Table 1-1: Segments in relation to route options

Segment Name	Lincolnshire Node	Weston Marsh, via south of the A52	Weston Marsh, via north of the A52
LN1 - LN1 - Landfall to A52 – Mumby	Y	/	/
LN2 - A52 – Mumby to Lincolnshire Node	Y	/	/

¹ Identified with reference to *Chapter 4: Important Ecological Features* of CIEEM (2018) Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater, Coastal and Marine version 1.2. Chartered Institute of Ecology and Environmental Management, Winchester.

² Selected with reference to *Section 2.20-2.24 Establishing Zones of Influence* of Guidelines for Ecological Impact Assessment (CIEEM, 2018)

Segment Name	Lincolnshire Node	Weston Marsh, via south of the A52	Weston Marsh, via north of the A52
WM1 - WM1 - WM1 - Landfall to A52 – Hogsthorpe	/	Y	Y
WM2 - A52 – Hogsthorpe to Marsh Lane	/	Y	Y
WM3 - Marsh Lane to A158 - Skegness Road	/	Y	Y
WM4 - A158 – Skegness Road to Low Road	/	Y	Y
WM5 - Low Road to Steeping River	/	Y	/
WM6 - Steeping River to Ivy House Farm/Marsh Yard	/	Y	/
WM7 - Ivy House Farm/Marsh Yard to Staples Farm	/	Y	/
WM8 - Staples Farm to Crowhall Lane	/	Y	/
WM9 - Crowhall Lane to Church End Lane	/	Y	/
A1 – Low Road to Steeping River	/	/	Y
A2 – Steeping River to Fodder Dike Bank/Fen Bank	/	/	Y
A3 - Fodder Dike Bank/Fen Bank to Broadgate	/	/	Y
A4 - Broadgate to Ings Drove	/	/	Y
A5 - Ings Drove to Church End Lane	/	/	Y
WM10 - Church End Lane to The Haven	/	Y	Y
WM11 - The Haven to Marsh Road	/	Y	Y
WM12 - Marsh Road to Fosdyke Bridge	/	Y	Y
WM13 - Fosdyke Bridge to Weston Marsh Substation North	/	Y	Y

1.3 Methodology

1.3.1 Changes in Response to Scoping Opinion

A Scoping Report (ODOW, 2022a) was prepared and submitted to The Planning Inspectorate (the Inspectorate) in July 2022, in accordance with Regulation 10 of the Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 and Regulation 6 of the Marine Works (Environmental Impact Assessment) Regulations 2007. Within the Scoping Report, the methods for, and results of, an initial desk study were presented. In addition, the Scoping Report set out a proposed approach for further collation of biological records and local wildlife site data to be presented in the Environmental Statement (ES).

The Scoping Opinion (Case Reference EN010130, The Inspectorate 2022) provided by the Inspectorate in response to the Scoping Report, contained comments from Natural England in relation to the study areas adopted for certain receptors.

In response to these comments, and related further discussions with the Onshore Ecology Expert Topic Group (ETG), the scoping methodology for the desk study was modified to that presented in this appendix. Modifications include:

- The extension of the study area for bats in response to advice from Natural England Point 133 and Point 137 (in relation to bats) in the Scoping Opinion; and
- Expansion of the data requested to include Local Wildlife Sites (LWS) and candidate LWS, as per Point 136 of Natural England response presented in the Scoping Opinion.

In addition, with regard to ‘transmission assets’ (taken to mean the onshore elements of the Project), Natural England specifically advised (p.8 of Natural England’s email Scoping Response as provided in Appendix 2 of the Inspectorate Scoping Opinion (Case Reference EN010130, 2022) that the ES should include a full impact assessment for the following sites, which have therefore been included in the desk study:

- Flamborough Head Site of Special Scientific Interest (SSSI);
- The Wash SSSI;
- Gibraltar Point SSSI;
- Chapel Point –Wolla Bank SSSI;
- Saltfleetby –Theddlethorpe Dunes SSSI;
- Humber Estuary SSSI; and
- Sea Bank Clay Pits SSSI.

It should be noted that desk study data relating to Special Areas of Protection (SPAs) and RAMSAR sites, and ornithological species are presented separately in Volume 1, Chapter 22: Onshore Ornithology.

1.3.2 Study Areas and Desk Study Sources

Table 1-2 lists the data sources, the type of data requested and the study area for each ecological feature.

Table 1-2: Summary of Data Sources Relating to Ecology

Source	Summary	Spatial Coverage of study area
Joint Nature Conservation Committee (JNCC)	Special Area of Conservation (SAC) details including qualifying interest features, conservation objectives, standard data forms.	PEIR Boundary plus 15km buffer.
Multi-agency Geographic Information Centre (MAGIC) website and Natural England’s datasets at data.gov.uk	SACs, possible SACs, and Impact Risk Zones (IRZs) for component SSSIs, spatial extent and citation.	PEIR Boundary plus 2km buffer.
	SSSIs and National Nature Reserves (NNR) and IRZs, spatial extent, and citation.	
	Local Nature Reserves (LNR), spatial extent.	
	Ancient Woodland Inventory, spatial extent.	
	Priority Habitat Inventory for coastal grazing marsh, mudflat, reedbed, wetland, woodland and other habitats, type, and spatial extent.	
	Great Crested Newt (GCN) Pond Surveys 2017 – 2019, location of GCN breeding ponds.	
	GCN Survey Licence Returns, location of GCN breeding ponds.	
	Granted European Protected Species Licenses, location, and species.	
Priority species layers.		
Greater Lincolnshire Nature Partnership (GNLP)	Protected and Notable Species Records location and date, and locally designated sites, location, and citation.	PEIR Boundary plus 2km buffer, extended to 5km for bat records.
Lincolnshire Wildlife Trust: Nature conservation from the Humber to the Wash (LWT)	Designated site and LNR details, including qualifying interest features. LNR and LWS sites and site information.	PEIR Boundary plus 2km buffer.
Gov.uk: Natural England	Designated site and LNR details, including qualifying interest features.	PEIR Boundary plus 2km buffer.
Bat Conservation Trust (BCT)	Bat distribution map and records.	PEIR Boundary plus 5km buffer.
	Core Sustenance Zones.	
John Russ – Bat Calls of Britain and Europe	Bat distributions within the UK.	
Woodland Trust Ancient Tree Inventory	Details of ancient and veteran trees, location, species, size.	PEIR Boundary plus 2km buffer.
Lincolnshire Biodiversity Action Plan (BAP)	UK and local BAP habitats and species and their distribution within Lincolnshire	PEIR Boundary plus 2km buffer.

1.3.3 Limitations

A data set was obtained from the GNLP, and in order to meaningfully analyse the data, records at the same grid reference are provided as a single point within the figures.

Due to the low resolution of some records, for example those that were provided for 1km², where such records overlapped the study area boundary it was not possible to determine if they originated from within or without the study area. In such instances, professional opinion has been applied to determine if suitable habitat is present within the PEIR Boundary. For example, there is a record of grey seal (*Halichoerus grypus*) within inland fields inside the PEIR Boundary, however the grid reference given only has a 1km² accuracy which includes the coastline and so the record was more feasibly made at the coastline and therefore outside of the onshore PEIR Boundary.

The existing Ancient Woodland Inventory, from the 1980s, only includes areas of ancient woodland at least 0.5ha in area. The GNLP is contributing to the Ancient Woodland Inventory Update Project which will provide more up to date information and include pockets of ancient woodland smaller than 0.5ha. This will account for strips of ancient woodland along field margins. The Ancient Woodland Inventory Update Project is anticipated to be completed in 2024. Until that time, the existing Ancient Woodland Inventory will be relied upon, although habitat surveys will identify small areas of ancient and semi-natural ancient woodland, if present, during future field surveys.

Desk study data are unlikely to be exhaustive, especially in respect of species, and are intended mainly to set a context for the study. It is therefore possible that important habitats or protected species not identified during the data search do in fact occur within the study area. Interpretation of maps and aerial photography has been conducted in good faith, using recent imagery, but it has not been possible to verify the accuracy of any statements relating to land use and habitat context outside of the areas that were subject to field survey.

1.4 Results

1.4.1 Designated Sites

Lincolnshire Node

Statutory Designations

There are three SACs, 14 SSSIs (excluding those designated for geological interest) and two NNRs within the onshore study area. Table 1-3 provides a summary of the location and interest of these sites.

Figure 21.1.1 illustrates the locations of the statutory designations.

Table 1-3: Statutory Designated Sites for Lincolnshire Node

Site Name and Designation	Distance from the PEIR Boundary (km)	Nearest Segment	Compass Direction	Area of Designation (ha)	Reason for Notification/Designation
The Wash (and North Norfolk Coast) SAC	13.4	LN1 - Landfall to A52 - Mumby	SSE	107,720	<p><u>SAC</u>: Important habitats include marine areas, sea inlets, tidal rivers, estuaries, mudflats, sand flats, lagoons (including saltwork basins), saltmarshes, salt pastures and salt steppes. Annex 1 habitat that are the primary reason for designation:</p> <ul style="list-style-type: none"> ▪ sandbanks which are slightly covered by sea water all the time ▪ mudflats and sandflats not covered by seawater at low tide ▪ large shallow inlets and bays ▪ reefs ▪ glasswort (<i>Salicornia</i> sp.) and other annuals colonising mud and sand ▪ Atlantic salt meadows (<i>Glauco-puccinellietalia maritimae</i>) ▪ Mediterranean and Frutico-Atlantic halophilous scrubs (<i>Sarcocornetea fruticosi</i>) ▪ Coastal lagoons (a qualifying features though not a primary reason for designation) <p>The SAC is also designated for Annex II species common seal (<i>Phoca vitulina</i>), with otter (<i>Lutra lutra</i>) also listed as a qualifying feature, but not the primary reason for designation.</p>
Saltfleetby - Theddlethorpe Dunes and Gibraltar Point SAC	9.6	LN2 - A52 - Mumby to Lincolnshire Node	N	968	<p><u>SAC</u>: Important habitats include saltmarshes, salt pastures, salt steppes, coastal sand dunes, sand beaches, machair, bogs, marshes, water fringed vegetation and fens. Annex 1 habitat that are the primary reason for designation include:</p> <ul style="list-style-type: none"> ▪ Fixed coastal dunes with herbaceous vegetation ▪ Dunes with sea berry (<i>Hippopha rhamnoides</i>) ▪ Humid dune slacks <p>Embryonic shifting dunes (a qualifying features though not a primary reason for designation).</p>
Humber Estuary SAC	16.0	LN2 - A52 - Mumby to Lincolnshire Node	NW	37,630	<p><u>SAC</u>: A large, macro tidal estuary with tidal rivers, mud and sand flats and lagoons (including saltwork basins). Annex 1 habitat that are the primary reason for designation include:</p> <ul style="list-style-type: none"> • estuaries • mudflats and sandflats not covered by seawater at low tide <p>Annex I habitats present as a qualifying feature, but not a primary reason for designation include:</p> <ul style="list-style-type: none"> • sandbanks which are slightly covered by sea water all the time • coastal lagoons • Glasswort and other annuals colonizing mud and sand

Site Name and Designation	Distance from the PEIR Boundary (km)	Nearest Segment	Compass Direction	Area of Designation (ha)	Reason for Notification/Designation
					<ul style="list-style-type: none"> • Atlantic salt meadows • Embryonic shifting dunes • Shifting dunes along the shoreline with marram grass (<i>Ammophila aernaria</i>) • Fixed coastal dunes with herbaceous vegetation • Dunes with seaberry Annex II species present as qualifying features, but not a primary reason for site selection: <ul style="list-style-type: none"> • Sea lamprey (<i>Petromyzon marinus</i>) • River lamprey (<i>Lampetra fluviatilis</i>) • Grey seal
Sea Bank Clay Pits SSSI	0	LN1 - Landfall to A52 - Mumby	ESE	17	<p><u>SSSI</u>: A series of isolated flooded clay workings of varying size, depth and topography which now support uncommon aquatic plant community's characteristic of the slightly brackish, eutrophic (nutrient-rich) water in addition to extensive reedbeds and a rich marginal wetland flora. The pits are important for breeding, wintering and passage birds and support a rich aquatic invertebrate fauna, notably beetles, including several nationally scarce species and others new to the County. The water plant communities of the pits are characterised by fennel pondweed (<i>Potamogeton pectinatus</i>), lesser pondweed (<i>P. pusillus</i>), horned pondweed (<i>Zannichellia palustris</i>), spiked water milfoil (<i>Myriophyllum spicatum</i>), algae of the genus Enteromorpha and two nationally scarce species: brackish water crowfoot (<i>Ranunculus baudotii</i>) and soft hornwort (<i>Ceratophyllum submersum</i>). Large colonies of common spotted orchid (<i>Dactylorhiza fuchsia</i>) occur at Wolla Bank in marshy ground.</p>
Willoughby Meadow SSSI	4.5	LN2 - A52 - Mumby to Lincolnshire Node	SSW	0.52	<p><u>SSSI</u>: This meadow is the best example of the permanent, unimproved neutral grassland once common over Lincolnshire Middle Marsh boulder clay. Well over one hundred species have been recorded from its small acreage. Surrounded by hedgerows, this field is still managed by the traditional means of taking a hay crop followed by grazing. Two small ponds are located at the field's edge.</p>
Hoplands Wood SSSI	5.1	LN2 - A52 - Mumby to Lincolnshire Node	SW	14.4	<p><u>SSSI</u>: Situated on the northern side of a shallow valley on the poorly draining boulder clay of the Lincolnshire Middle Marsh, Hoplands Wood is one of the best remaining examples of oak (<i>Quercus robur</i>)/ ash (<i>Fraxinus excelsior</i>) ancient woodland in north Lincolnshire. It is characterised by a local abundance of alder (<i>Alnus glutinosa</i>) and a mosaic of tree species perpetuated by a long history of woodland management promoting both high forest and coppice-with-standards. This favours a rich and varied ground flora and breeding bird community.</p>

Site Name and Designation	Distance from the PEIR Boundary (km)	Nearest Segment	Compass Direction	Area of Designation (ha)	Reason for Notification/Designation
Willoughby Wood SSSI	5.3	LN2 - A52 – Mumby to Lincolnshire Node	SW	23.4	<u>SSSI</u> : A representative of the series of ancient woodlands found on the middle Marsh Boulder Clay on the edge of the Lincolnshire Wolds. It is predominantly oak-ash and hazel (<i>Corylus avellana</i>), managed as coppice with standards. This supports a characteristic and rich ground flora. The site is notable for its breeding birds.
Skendleby Psalter Banks SSSI	6.5	LN2 - A52 – Mumby to Lincolnshire Node	SW	1.0	<u>SSSI</u> : The species-rich, unimproved grasslands of Skendleby Psalter Banks represent one of the best examples of a habitat now rare and fragmented in Lincolnshire. The abundance of plants restricted to the steep north-facing slopes of a dry valley cut into the eastern Wolds by glacial meltwaters is maintained by traditional management of sheep grazing.
Candlesby Hill SSSI	7.7	LN2 - A52 – Mumby to Lincolnshire Node	SSW	1.81	<u>SSSI</u> : One of the best remnants of the once extensive chalk grasslands of the South-east Lincolnshire Wolds. Together with surrounding scrub and broad-leaved woodland, the site provides an excellent example of the sequence of change to a mature system.
Calceby Marsh SSSI	8.7	LN2 - A52 – Mumby to Lincolnshire Node	W	10.8	<u>SSSI</u> : Calceby Marsh is of national importance as an outstanding example of a base-rich marsh. This habitat type typically follows the distribution of calcareous spring lines and streams, in this case Calceby Beck, a Lincolnshire Wolds chalk stream. Such areas of base-rich marsh are becoming increasingly scarce in the county, as elsewhere in England, through the effects of drainage and other agricultural improvements. The site consists of three areas of marshland, each differing slightly in its species composition, surrounded by tussocky neutral grassland which is of value to breeding snipe (<i>Gallinago gallinago</i>) and lapwing (<i>Vanellus vanellus</i>). The site is one of the few stations in the county, outside the Cambridgeshire Fens, where the marsh moth (<i>Athetis pallustris</i>) occurs.
Swaby Village SSSI	9.4	LN2 - A52 – Mumby to Lincolnshire Node	W	3.5	<u>SSSI</u> : A glacial overflow valley supporting two habitats now scarce in Lincolnshire - floristically diverse, lime-rich marsh and unimproved chalk turf. The marsh borders a stream bisecting the valley floor and the interest of the grassland is increased by the terraced nature of the slopes. The wet conditions favour orchids and the marsh arrowgrass (<i>Triglochin palustris</i>). The sheltered conditions on the site attract 15 species of butterfly.

Site Name and Designation	Distance from the PEIR Boundary (km)	Nearest Segment	Compass Direction	Area of Designation (ha)	Reason for Notification/Designation
Saltfleetby-Theddlethorpe Dunes SSSI (and NNR)	9.7	LN2 - A52 – Mumby to Lincolnshire Node	N	972	<p>SSSI: This nationally important site includes flats, dunes, salt, and freshwater marsh which together support an exceptionally rich flora and fauna. There are outstanding assemblages of vascular plants, invertebrates and breeding birds and it is the most north-easterly breeding site in Britain for the natterjack toad. The rapid accretion of dunes and saltmarsh make this an important site for research into the processes of coastal development.</p> <p>The intertidal sands and muds provide extensive feeding and roosting grounds for wildfowl and waders including brent geese (<i>Branta bernicla</i>), shelduck (<i>Tadorna tadorna</i>) and dunlin (<i>Calidris alpina</i>). Yellow wagtails (<i>Motacilla flava</i>) breed on the saltmarsh and there is a small colony of little tern (<i>Sternula albifrons</i>) on the shingle bank. Diverse and successional saltmarsh and rich fen communities, supporting a colony of orchids including southern and early marsh orchids (<i>Dactylorhiza praetermissa</i> and <i>D. incarnata</i>), pyramidal and bee orchids (<i>Anacamptis pyramidalis</i> and <i>Ophrys apifera</i>) and rare plants such as needle spike rush (<i>Eleocharis acicularis</i>), divided sedge (<i>Carex divisa</i>), marsh pea (<i>Lathyrus palustris</i>) and greater water-parsnip (<i>Sium latifolium</i>). Invertebrates recorded include several notable moths and nationally rare species from the moth and beetle families. There are outstanding breeding densities of birds in the dune scrub, with whitethroat (<i>Sylvia communis</i>) a major constituent. Also present are lesser whitethroat (<i>Sylvia curruca</i>) and long eared owl (<i>Asio otus</i>). The oldest areas of scrub now contain breeding blackcap (<i>Sylvia atricapilla</i>), garden warbler (<i>Sylvia borin</i>) and nightingale (<i>Luscinia megarhynchos</i>).</p> <p>Part of the site is also designated as Theddlethorpe Dunes and Gibraltar Point SAC.</p>
Bratoft Meadows SSSI	10.9	LN2 - A52 – Mumby to Lincolnshire Node	S	2.2	<p>SSSI: The best example of species rich neutral grassland in North Lincolnshire. One of the remaining areas of permanent grassland not dominated by plants associated with chalk and limestone. Two adjacent fields which border the Cowcroft drain are divided by a high hedge of hawthorn (<i>Crataegus monogyna</i>) with fine specimens of pollarded crack willow (<i>Salix fragilis</i>). Both are managed as hay meadows and are grazed after cutting. They are dominated by sweet vernal grass (<i>Anthoxanthum odoratum</i>), red fescue (<i>Festuca rubra</i>), meadow fescue (<i>Festuca pratensis</i>) and creeping bent (<i>Agrostis stolonifera</i>) and a rich sward includes betony (<i>Stachys officinalis</i>), dyer's greenweed (<i>Genista tinctoria</i>), cowslip (<i>Primula veris</i>), adder's tongue fern (<i>Ophioglossum vulgatum</i>) and saw-wort (<i>Serratula tinctoria</i>). Wetter areas have cuckooflower (<i>Cardamine pratensis</i>) and ragged robin (<i>Lychnis flos-cuculi</i>). The southern field has abundant green-winged orchid (<i>Anacamptis morio</i>). A third field separated from the others by a narrow strip of improved pasture is</p>

Site Name and Designation	Distance from the PEIR Boundary (km)	Nearest Segment	Compass Direction	Area of Designation (ha)	Reason for Notification/Designation
					<p>dominated by the same grasses as the other meadows and, like them includes yellow rattle (<i>Rhinanthus minor</i>), great burnet (<i>Sanguisorba officinalis</i>) and devil's-bit scabious (<i>Succisa pratensis</i>). It is cut for hay.</p> <p>The site as a whole attracts large numbers of butterflies, and 18 species of terrestrial mollusc are recorded.</p>
Muckton Wood SSSI	11.1	LN2 - A52 – Mumby to Lincolnshire Node	WNW	16.7	<p><u>SSSI</u>: Muckton Wood is a fine example of primary woodland on boulder clay at the eastern edge of the Lincolnshire Wolds. Alder is an unusual feature which replaces the typical oak/ ash canopy with hazel understorey in areas where there is sub-surface water movement towards Muckton Beck. The area is managed as hazel coppice-with-standards. A well-developed shrub layer includes hawthorn, holly (<i>Ilex aquifolium</i>) and blackthorn (<i>Prunus spinosa</i>). Wood margins have abundant field maple (<i>Acer campestre</i>) with aspen (<i>Populus tremula</i>). Brambles (<i>Rubus</i> spp.) dominate part of the ground flora but do not exclude herbs, including those indicative of ancient woodland. Herb Paris (<i>Paris quadrifolia</i>) is abundant in one area. Wood anemone (<i>Anemone nemorosa</i>), early purple orchid (<i>Orchis mascula</i>), wood sorrel (<i>Oxalis acetosella</i>), woodruff (<i>Galium odoratum</i>) and moschatel (<i>Adoxa moschatellina</i>) are found throughout, while bluebell (<i>Hyacinthoides non-scripta</i>) is almost confined to the massive wood bank along the western edge.</p> <p>The site supports one of the largest heronries in the county with over 30 breeding pairs. Other breeding birds including greater spotted woodpecker (<i>Dendrocopos major</i>), treecreeper (<i>Certhia</i> sp.) and an abundance of warblers (<i>Passeri</i> sp.).</p>
Gibraltar Point SSSI (and NNR)	11.8	LN1 - Landfall to A52 – Mumby	E	414	<p><u>SSSI</u>: An actively accreting sand-dune system, saltmarsh, and extensive intertidal flats as well as small areas of freshwater marsh and open water supporting at least 20,000 waterfowl. Qualifying populations of European importance include breeding little tern, overwintering bar-tailed godwit (<i>Limosa lapponica</i>), and oystercatcher (<i>Haematopus ostralegus</i>). The site also supports populations of overwintering migratory species: grey plover (<i>Pluvialis squatarola</i>) and knot (<i>Calidris canutus</i>). The site is also designated as Gibraltar Point NNR. The SSSI is managed by the Lincolnshire and South Humberside Trust for Nature Conservation. Designated for its sand dunes, saltmarsh, freshwater marsh, and associated fauna. Invertebrates include Lepidoptera, Diptera and Coleoptera, including 12 species which are nationally rare. Breeding birds include mallard (<i>Anas platyrhynchos</i>), shelduck, ringed plover, little tern, oystercatcher, and redshank (<i>Tringa totanus</i>). Passage and wintering birds of internationally important numbers include oystercatcher, grey plover, knot, sanderling (<i>Calidris alba</i>) and bar-tailed godwit and the area is of national importance for its numbers of little ringed plover (<i>Charadrius dubius</i>).</p>

Site Name and Designation	Distance from the PEIR Boundary (km)	Nearest Segment	Compass Direction	Area of Designation (ha)	Reason for Notification/Designation
Mavis Enderby Valley SSSI	15.0	LN2 - A52 – Mumby to Lincolnshire Node	WSW	15.4	<p><u>SSSI</u>: Species-rich unimproved grassland maintained by sheep grazing. The poorly draining valley floor to the south has developed as a marsh alongside the beck. In the north, associated with the spring-line, is a series of alder carrs each with a different species composition.</p> <p>A series of woods along the stream are wet valley alder with acid valley alder on the higher slopes. Sand Hill Covert has an open canopy with sycamore (<i>Acer pseudoplatanus</i>) co-dominant with coppiced alder.</p> <p>The close juxtaposition of a number of habitats makes the site valuable for a wide range of fauna, small mammals, lepidoptera and dragonflies in particular. It is of County importance for its breeding birds, especially summer migrants and those associated with the woods – sparrowhawk (<i>Accipiter nisus</i>), kestrel (<i>Falco tinnunculus</i>), woodcock (<i>Scolopax rusticola</i>), turtle dove (<i>Streptopelia turtur</i>), tawny owl (<i>Atrix aluco</i>), greater and lesser spotted woodpeckers (<i>Dendrocopos major</i> and <i>Dryobates minor</i>) and tree pipit (<i>Anthus trivialis</i>).</p>
The Wash SSSI (and NNR)	16.3	LN1 - Landfall to A52 – Mumby	SSE	62,044	<p><u>SSSI</u>: An area of international biological interest. The intertidal mudflats and saltmarshes represent one of Britain’s most important winter-feeding areas for waders and wildfowl outside of the breeding season. Enormous numbers of migrant birds, of international significance, are dependent on the rich supply of invertebrate food. The saltmarsh and shingle communities are of considerable botanical interest and the mature saltmarsh is a valuable bird breeding zone. In addition, the Wash is also very important as a breeding ground for common seals.</p>
Gibraltar Point NNR	13.3	LN1 - Landfall to A52 - Mumby	S	429	<p><u>NNR</u>: Site which forms a small part of Saltfleetby-Theddlethorpe Dunes and Gibraltar Point SAC and SSSI. Habitats include sand dunes, saltmarsh, marshes, and meadows.</p>
Saltfleetby-Theddlethorpe Dunes NNR	9.8	LN2 - A52 – Mumby to Lincolnshire Node	N	619	<p><u>NNR</u>: Site forms part of the Saltfleetby-Theddlethorpe Dunes SSSI, as well as part of the Humber Estuary SAC. It is an important reserve containing tidal sand and mudflats, salt and freshwater marshes and sand dunes. On the foreshore, accreting mud and silt flats and saltmarsh in the north give way to a narrower sandy beach at the southern end.</p>

Non-Statutory Designations

There are 12 LWS and six LWT reserves within the study area. Some sites are designated as both a LWS and a LWT reserve, for example Chapel Six Marshes, Spendluffe Meadow and Chapel, although it should be noted that the surface area of each site does vary slightly between the two types of designation. The locations and extent of these sites is presented in Figure 21.1.2.

Table 1-2 below provides an overview of each non-statutory designation and, where available, the full citations for each designation are provided at Annex A – Local Wildlife Site Citations.

There are no Important Plant Areas (IPA) within the study area. The nearest is North Norfolk Coast and The Wash IPA, 11.9km south-southeast.

There are no areas of ancient, semi-natural or ancient replanted woodland within the study area. The nearest ancient woodland is Hoplands Wood, located 5.14km to the southwest, however there is no ecological connectivity between land within the PEIR Boundary and this site.

Table 1-2: Local Wildlife Sites for Lincolnshire Node

Site Name	Distance from the PEIR Boundary (km)	Nearest Segment	Compass Direction	Area of Designation (ha)	Description
Local Wildlife Sites					
Anderby Creek Sand Dunes	0	LN1 - Landfall to A52 – Mumby	ENE	11.9	<p><u>Main Habitats:</u> Coarse or rank grassland, sand dune, scrub, and ditch.</p> <p>A 1.1km long stretch of coast on the seaward side of Anderby Marsh and Wolla Bank Reedbed nature reserves. Due to lack of management, most places support coarse and weedy vegetation, with substantial cover of scrub and trees. Good, open dune is very limited in extent.</p>
Chapel Six Marshes	0	LN1 - Landfall to A52 – Mumby	ESE	12.9	<p><u>Main Habitats:</u> Coarse or rank grassland, lake, reedbed, scrub - scattered/dense (also ditch, marsh/ fen, non-native plantation - on ancient/ new habitat, pond).</p> <p>A 750m stretch of coast, with a 2.2ha area managed as Chapel Six Marshes LWT Reserve. Wetland plants typical of brackish water include parsley water-dropwort (<i>Oenanthe lachenalia</i>), sea-milkwort (<i>Glaux maritima</i>), probable brackish water-crowfoot (<i>Ranunculus baudotii</i>), saltmarsh rush (<i>Juncus gerardii</i>) and distant sedge (<i>Carex distans</i>). Growing with these are ivy-leaved duckweed (<i>Lemna trisulca</i>), common fleabane (<i>Pulicaria dysenterica</i>), angelica (<i>Angelica</i> sp.), creeping bent, toad rush (<i>Juncus bufnoius</i>) and false fox-sedge (<i>Carex otrubae</i>). On the dune ridge and adjacent landward slope are sand sedge (<i>Carex arenaria</i>), sand couch (<i>Elymus farctus</i>), red fescue, marram, lyme-grass (<i>Leymus arenarius</i>), common bird’s-foot-trefoil (<i>Lotus corniculatus</i>), meadow vetchling (<i>Lathyrus pratensis</i>), cat’s-ear (<i>Hypochaeris radicata</i>), tufted vetch (<i>Vicia cracca</i>), black medick (<i>Medicago lupulina</i>) and dewberry (<i>Rubus caesius</i>). Trees and shrubs include grey sallow (<i>Salix cinerea</i>), sycamore, hawthorn, elder (<i>Sambucus nigra</i>), sea-buckthorn (<i>Hippophae rhamnoides</i>), bramble, dog-rose (<i>Rosa canina</i>).</p> <p>The remainder of the site is managed by Lincolnshire County Council (LCC) and is publicly accessible. Major works have been carried out in 2014/ 2015 to enhance the value of the site for wetland flora and fauna, involving creation of winding water channels on land to north and south of the entrance road. Habitats present over the site, as a whole are bare sand and short vegetation in car parking areas, coarse grassland, a little open water, much reedbed, and varying cover of trees and scrub. The resulting flora is diverse and interesting.</p>

Site Name	Distance from the PEIR Boundary (km)	Nearest Segment	Compass Direction	Area of Designation (ha)	Description
					Fauna recorded includes moorhen (<i>Gallinula chloropus</i>), migrating whimbrel (<i>Numenius phaeopus</i>), wood pigeon (<i>Columba palumbus</i>), green-veined white (<i>Pieris napi</i>), small tortoiseshell (<i>Algaia urticae</i>) and common darter (<i>Sympetrum striolatum</i>).
Marsh Yard to Anderby Creek Dunes	0	LN1 - Landfall to A52 – Mumby	NNE	16.8	<p><u>Main Habitat:</u> coarse or rank grassland, scrub – scattered/ dense (also semi-improved, neutral grassland, non-native plantation, reedbed).</p> <p>A 1.75km stretch of coast comprising bare sand on the upper beach with some young dunes; a line of low, fixed dunes supporting much coarse grassland, which widens in the south and supports plentiful woody vegetation, including garden escapes; and a range of habitats inland of the dunes, particularly planted and naturally occurring trees and scrub on both dry and damp land, grassland, sparsely vegetated car parking areas, a track and a little bare sand.</p> <p>To the north is a huge population of scarce strawberry clover (<i>Trifolium fragiferum</i>) along the car park and species rich neutral grassland. Many parts of the dune ridge are dominated by coarse vegetation, such as marram, lyme-grass, sea couch (<i>Elytrigia atherica</i>), sand couch, common reed (<i>Phragmites australis</i>) and dewberry. A wide range of woody species includes sycamore, horse chestnut (<i>Aesculus hippocastanum</i>), white poplar (<i>Populus alba</i>), hybrid black poplar (<i>P. x canadensis</i>), pine (<i>Pinus</i> sp.), ash, buckthorn (<i>Rhamnus</i> sp.), sea-buckthorn, buddleia (<i>Buddleia davidii</i>), wild and garden privet (<i>Ligustrum vulgare</i> and <i>L. sp.</i>), elder, hawthorn and ivy (<i>Helix hedera</i>). Damp areas, particularly inland in the north, support osier (<i>Salix viminalis</i>), grey sallow, woody nightshade (<i>Solanum dulcarnara</i>), comfrey (<i>Symphytum officinale</i>), amphibious bistort (<i>Persicaria Amphibia</i>) and silverweed (<i>Potentilla anserina</i>).</p> <p>Birds and invertebrates seen during the survey included migrating whimbrel, reed bunting (<i>Emberiza schoeniclus</i>), house martin (<i>Delichon urbicum</i>), common blue (<i>Polyommatus icarus</i>), brown argus (<i>Aricia agestis</i>), meadow brown (<i>Maniola jurtina</i>), gatekeeper (<i>Pyronia Tithonus</i>), peacock (<i>Pavo cristatus</i>) and common darter.</p>
Wolla Bank South	0	LN1 - Landfall to A52 – Mumby	ESE	5	<p><u>Main Habitat:</u> Coarse or rank grassland, semi-improved, neutral grassland, reedbed (also drain and pond).</p> <p>Coastline comprising bare sand on the upper beach; a line of low fixed dunes grading into wetland; and an old embankment beside the road. As a result of recent landscaping works, much of the site is now far wetter than previously, with substantial areas of open water and reedbed, as well as coarse grassland in the central island and on the embankment. The wetland and dunes support a rich flora and fauna.</p>

Site Name	Distance from the PEIR Boundary (km)	Nearest Segment	Compass Direction	Area of Designation (ha)	Description
					A wide range of birds and invertebrates were noted during the survey, including coot (<i>Fulica atra</i>), sedge and reed warbler (<i>Acrocephalus schoenobaenus</i> and <i>A. scirpaceus</i>), swift (<i>Apus apus</i>), common whitethroat, common blue, ringlet (<i>Aphantopus hyperantus</i>), small skipper (<i>Thymelicus sylvestris</i>), shaded broad-bar (<i>Scotopteryx chenopodiata</i>), common blue damselfly (<i>Enallagma cyathigerum</i>) and blue-tailed damselfly (<i>Ischnura elegans</i>), darter, and four-spotted chaser (<i>Libellula quadrimaculata</i>).
Spendluffe Meadows	0	LN2 - A52 – Mumby to Lincolnshire Node	SE	4.7	<p><u>Main Habitats:</u> Lowland meadow, semi-improved grassland.</p> <p>The site is surrounded by large hedges on a gently sloping site with boulder clay soils, typical of the Middle Marsh. The first (southern) field is used primarily as pasture; the main field is managed as a hay meadow. Cattle graze the pasture from late spring to maintain a relatively short grass sward throughout the growing season. After the hay meadow is cut, the cattle are used to graze the aftermath.</p> <p>The meadows are rich in wildflowers including meadowsweet (<i>Filipendula ulmaria</i>), green-winged orchid, cowslip, yellow rattle (<i>Rhinanthus minor</i>), great burnet, devil's-bit scabious and betony.</p>
Anderby Gravity Outfall	0.06	LN1 - Landfall to A52 – Mumby	NE	0.6	<p><u>Main Habitats:</u> Drain, semi-improved neutral and coarse grassland.</p> <p>The canalised downstream end of Main Drain and its steep banks on the southern edge of Anderby Creek. Adjacent to both Anderby Creek Sand Dunes and Anderby Marsh LWT nature reserve. The drain is maintained, limiting the brackish floral community present. Sea club-rush (<i>Bolboschoenus maritimus</i>) and common reed are abundant on both of the steep lower banks, as is typical of brackish drains. Few aquatic species can survive the saline conditions, but any that do are kept under control by regular management. The very steep banks prevented comprehensive study of water plants, but at the more accessible landward end there is much fennel pondweed and some bulrush.</p> <p>Good assemblage of birds (reed and sedge warbler, common whitethroat, wren (<i>Troglodytes troglodytes</i>), swallow (<i>Hirundo rustica</i>), swift, house martin, damselflies, and common frog (<i>Rana temporaria</i>).</p>
Chapel Point Dunes, North	0.3	LN1 - Landfall to A52 – Mumby	NNE	3.4	<p><u>Main Habitats:</u> Coarse or rank grassland, sand dune, scrub – scattered/ dense.</p> <p>A 0.62km stretch of coastline. In the east is the upper part of a shallow sloping sandy beach, which is within Chapel Point to Wolla Bank geological Site of Special Scientific Interest. Elsewhere, in central and southern parts, there are heavily scrubbed-up fixed dunes, which also support some coarse grassland. Plants of good quality dunes are few in number, but include marram, lyme-grass, sea and sand couch, hound's-tongue</p>

Site Name	Distance from the PEIR Boundary (km)	Nearest Segment	Compass Direction	Area of Designation (ha)	Description
					<i>(Cynoglossum officinale)</i> , sea bindweed (<i>Calystegia soldanella</i>), prickly saltwort (<i>Kali trugida</i>) and sand sedge. Invertebrates recorded include common blue, ruddy darter (<i>Sympetrum sanguineum</i>) and common darter.
Chapel Pit Nature Reserve (non-SSSI)	0.3	LN1 - Landfall to A52 – Mumby	SE	0.3	<p><u>Main Habitats:</u> Scrub, rough grassland, ditch, and hedgerow.</p> <p>This site comprises two small unmanaged parts of Chapel Pit nature reserve, all the rest of which is part of Sea Bank Clay Pits Site of Special Scientific Interest. This LWS includes two small areas of the larger Chapel Pit LWT Reserve designation. The smaller element is a very small spur of land in the south-eastern corner of the reserve, supporting much scrub and a little remnant grassland. The remainder of the site lies on the northern edge of the reserve, immediately adjacent to an east-west orientated track within the SSSI. In the west there is a triangular area of rough grassland and scrub. East of this is a ditch and overgrown hedgerow.</p>
Chapel Point Dunes, South	1.0	LN1 - Landfall to A52 – Mumby	SE	7.7	<p><u>Main Habitat:</u> Sand dune</p> <p>A north-south aligned strip of coastal land, 1.6km long and varying in width between 25m and 75m. The site comprises developing low sand dunes on the upper beach, between un-vegetated sand to the east and the concrete promenade in the west. The generally sparse sward includes a diverse sand dune flora.</p> <p>Much of the area is characterised by a mixture of bare sand and marram, but few other plants. However, both sea holly (<i>Eryngium maritimum</i>) and sea spurge (<i>Euphorbia paralias</i>) are not uncommon in this habitat in the north. Places that are better vegetated support short species associated with open, sandy grassland, such as thyme-leaved sandwort (<i>Arenaria serpyllifolia</i>), common whitlowgrass (<i>Draba verna</i>), little mouse-ear (<i>Cerastium semidecandrum</i>), lesser chickweed (<i>Stellaria neglecta</i>), wall speedwell (<i>Veronica arvensis</i>), early forget-me-not (<i>Myosotis ramosissima</i>), smooth meadow-grass (<i>Poa pratensis</i>) and sand sedge. Other more robust species include lyme-grass, sea couch, common reed, hound’s-tongue, evening-primrose (<i>Oenothera biennis</i>), great mullein (<i>Verbascum Thapsus</i>), great lettuce (<i>Lactuca virosa</i>), horse-radish (<i>Armoracia rusticana</i>) and hogweed (<i>Heracleum mantegazzianum</i>).</p> <p>Amongst the birds and invertebrates encountered during the survey were swallow, house martin, dunnock, goldfinch (<i>Carduelis carduelis</i>), cinnabar (<i>Tyria jacobaeae</i>), brown-tail moth (<i>Euproctis chrysoorrhoea</i>), orange tip (<i>Anthocharis cardamines</i>), and most notably several green hairstreaks (<i>Callophrys rubi</i>).</p>

Site Name	Distance from the PEIR Boundary (km)	Nearest Segment	Compass Direction	Area of Designation (ha)	Description
Moggs Eye Sea Bank Ponds	1.2	LN1 - Landfall to A52 – Mumby	N	2.9	<p>Main Habitat: Standing water, reedbed</p> <p>A long, thin area of standing water, possibly formed by excavation of the earth sea wall. To the north, the site is almost 100% common reed with the road embankment supporting wooded patches of crack willow, alder, and sycamore. Few aquatic species noted, although some wet edges support sea club-rush, mare’s-tail (<i>Equisetum arvense</i>), common duckweed (<i>Lemna minor</i>), least duckweed (<i>Lemna minuta</i>) and the invasive non-native New Zealand pigmyweed (<i>Crassula helmsii</i>). The southern end of the site is used by anglers.</p> <p>Marshy edges of the site are botanically diverse. Species present include brookweed (<i>Samolus valerandi</i>), saltmarsh rush, jointed rush (<i>Juncus articulatus</i>), clustered dock (<i>Rumex conglomeratus</i>), hoary willowherb (<i>Epilobium parviflorum</i>) and false fox-sedge. The slightly drier conditions nearby provided a chance sighting of adder’s-tongue, a fern that is usually very inconspicuous in late summer. Other grassland species include crested dog’s-tail (<i>Cynosurus cristatus</i>), red fescue, common bent, meadow buttercup (<i>Ranunculus acris</i>), meadow vetchling and lesser hawkbit (<i>Leontodon taraxacoides</i>).</p>
Huttoft Carr Terrace to Marsh Dunes	1.4	LN1 - Landfall to A52 – Mumby	N	10.4	<p>Main Habitat: Coarse or rank grassland, sand dune, scrub – scattered/dense (also native plantation).</p> <p>A 1.2km stretch of coast comprising bare sand on the upper beach with some botanically-poor foredunes; a concrete pathway and linear car parking area at the top of the beach; a line of low, fixed dunes and flatter ground inland, supporting much unmanaged vegetation, dominated by dense scrub and trees in central and northern parts, with larger amounts of grassland further south; and a gravel car parking area inland of the dunes at the southern end of the site, characterised by a short, open sward.</p> <p>Woody vegetation on the fixed dunes includes pine, sycamore, sea-buckthorn, elder, hawthorn, woody nightshade, bramble, and dewberry. Other robust or weedy plants here are marram, lyme-grass, common reed, sea couch, false oat-grass (<i>Arrhenatherum elatius</i>), creeping thistle (<i>Cirsium arvense</i>), spear thistle (<i>Cirsium vulgare</i>), hedge bindweed (<i>Calystegia sepium</i>), large bindweed (<i>Calystegia sylvatica</i>), curled dock (<i>Rumex crispus</i>) and amphibious bistort. Species found in less vegetated sandy areas include prickly saltwort, sand couch, hound’s-tongue, procumbent pearlwort (<i>Sagina procumbens</i>), sea fern-grass (<i>Azolla filiculoides</i>) and sand sedge.</p> <p>The most interesting flora is typical of neutral soils. It is largely restricted to the vicinity of the southern car park and along a track that extends northwards. Present here are hare’s-foot (<i>Davallia canariensis</i>) & strawberry clover, lesser trefoil (<i>Trifolium dubium</i>) & hop trefoil (<i>Trifolium campestre</i>), buck’s-horn plantain</p>

Site Name	Distance from the PEIR Boundary (km)	Nearest Segment	Compass Direction	Area of Designation (ha)	Description
					<p>(<i>Plantago coronopus</i>), common bird’s-foot-trefoil, tufted vetch, meadow vetchling, yarrow (<i>Achillea millefolium</i>), smooth hawk’s-beard (<i>Crepis capllaris</i>), autumn hawkbit (<i>Scorzoneroides autumnalis</i>), cat’s-ear (<i>Hypochaeris radicata</i>), black medick, silverweed, and smooth meadow-grass. Damper habitat west of the car park supports dense willow scrub, while further north of that there is much common reed.</p> <p>Birds, butterflies, and moths seen during the survey included common whitethroat, reed bunting, swallow, Sandwich tern (<i>Thalasseus sandvicensis</i>), Essex skipper (<i>Thymelicus lineola</i>), painted lady (<i>Vanessa cardui</i>), red admiral (<i>V. atalanta</i>) and cinnabar.</p>
Hogsthorpe Pit	1.8	LN1 - Landfall to A52 – Mumby	NNE	1.4	<p><u>Main Habitat:</u> Standing water, willow carr, grassland.</p> <p>Around the pond is diverse wetland vegetation and some drier grassland and scrub. Lesser bulrush (<i>Typha angustifolia</i>) and common reed are abundant at the water’s edge. Also present are water dock (<i>Rumex hydrolapathum</i>), branched bur-reed (<i>Sparganium androcladum</i>), water mint (<i>Mentha aquatica</i>), purple loosestrife (<i>Lythrum salicaria</i>), greater pond-sedge (<i>Carex riparia</i>) and yellow iris (<i>Iris pseudacorus</i>). Marshy areas, particularly to the east of the pond, support further species, such as marsh bedstraw (<i>Galium palustre</i>), hoary willowherb, tufted forget-me-not (<i>Myosotis lax</i>), water-cress (<i>Rorippa nasturtium-aquaticum</i>), meadowsweet and jointed rush. Of most note is a sizeable patch of brookweed amongst tall fen vegetation beside an angler’s path. Mature and younger specimens of various willows dominate the remainder of the site, with a restricted range of common ground flora plants beneath. Some sycamore is also present.</p> <p>Botanically-rich grassland is restricted to small areas of dry bank on the southern and northern margins of the pond. Species present include autumn hawkbit, tufted vetch, yarrow, lady’s bedstraw (<i>Galium verum</i>) and meadow vetchling. A larger patch of coarser grassland is used as a car park (in the north-west corner of the site). This supports much common knapweed (<i>Centaurea nigra</i>), together with bird’s-foot-trefoil, common sorrel (<i>Rumex acetosa</i>), red clover (<i>Trifolium pratense</i>), red fescue, tall fescue (<i>Festuca arundinacea</i>) and tufted hair-grass (<i>Deschampsia cespitosa</i>). Adjacent to this is neglected former grassland that is now dominated by species such as field bindweed (<i>Convolvulus arvensis</i>), creeping thistle, bramble, cow parsley (<i>Anthriscus sylvestris</i>), upright hedge-parsley (<i>Torilis japonica</i>), field horsetail (<i>Equisetum arvense</i>) and false oat-grass. Scrub species include hawthorn, elder, blackthorn and some dogwood (<i>Cornus sanguinea</i>) that appears to be non-native.</p> <p>Coot, moorhen, and common dragonflies were recorded.</p>

Site Name	Distance from the PEIR Boundary (km)	Nearest Segment	Compass Direction	Area of Designation (ha)	Description
Lincolnshire Wildlife Trust Sites					
Anderby Marsh	0	LN1 - Landfall to A52 - Mumby	ENE	24	<p>Main Habitat: Traditional coastal grazing marsh. Managed to support a range of conservation priority birds including lapwing, curlew (<i>Numenius arquata</i>), redshank, snipe, barn owl (<i>Tyto alba</i>), starling (<i>Sturnus vulgaris</i>) and reed bunting. The adjacent reedbed fringes attract numerous reed, sedge, and Cetti's warblers (<i>Cettia cetti</i>). Marsh harrier (<i>Circus aeruginosus</i>) is a regular sight in the summer as is cuckoo (<i>Cuculus canorus</i>).</p> <p>The southern section of the Reserve is also designated as Anderby Creek Sand Dunes LWS.</p>
Chapel Six Marshes	0	LN1 - Landfall to A52 - Mumby	ESE	2.2	<p>Main Habitat: coarse or rank grassland, lake, reedbed, scrub – scattered/ dense. A 750m stretch of coast forming part of the wider Chapel Six Marshes LWS designation. The northern, smaller area forms part of the Chapel Six Marshes LWS, while the remainder has visitor facilities much used by the public, owned, and managed by LCC. Features common to both, from east to west, are: bare sand on the upper beach; a line of low fixed dunes succeeded westwards by flatter dry habitat; and finally an old embankment beside the road. The upper beach is within Chapel Point to Wolla Bank geological SSSI.</p>
Wolla Bank Pit	0	LN1 - Landfall to A52 - Mumby	ESE	4	<p>Main Habitat: Flooded clay pits, reed bed, chalk grassland. Extensive reedbeds and sea club-rush, with great reedmace (<i>Typha latifolia L.</i>), fennel pondweed, wild celery (<i>Apium graveolens</i>), sea arrowgrass (<i>Triglochin maritima</i>) and water-crowfoot. Colonies of common spotted orchid. Winter birds include snipe, fieldfare (<i>Turdus pilaris</i>), redwing (<i>Turdus iliacus</i>) and song thrush (<i>Turdus philomelos</i>), with bittern (<i>Botaurus stellaris</i>) and bearded tit (<i>Panurus biarmicus</i>) occasionally visiting. Also important for breeding populations of reed and sedge warblers, reed bunting and little grebe (<i>Tachybaptus ruficollis</i>). Invertebrates include many species of lepidoptera and odonata.</p> <p>The Reserve has no other designation but is adjacent to Wolla Bank South LWS.</p>
Wolla Bank Reedbed	0	LN1 - Landfall to A52 - Mumby	E	3	<p>Main Habitats: Small pools, grassland with sea club-rush and sea couch. Water rail (<i>Rallus aquaticus</i>), reed warbler, sedge warbler, cetti's warbler, grasshopper warbler (<i>Locustella naevia</i>), reed bunting and whitethroat all nest. Marsh harrier and hobby (<i>Falco Subbuteo</i>) occur regularly in the summer and short-eared owls (<i>Asio flammeus</i>) can be present in winter. Bearded tit is a regular visitor in the winter. Starling murmurations can sometimes be present in the winter months.</p>

Site Name	Distance from the PEIR Boundary (km)	Nearest Segment	Compass Direction	Area of Designation (ha)	Description
					The Reserve has no other designation but lies between Anderby Creek Sand Dunes LWS to the north and Wolla Bank South LWS to the south.
Spendluffe Meadows	0	LN2 - A52 – Mumby to Lincolnshire Node	SE	4.7	The first (southern) field is used primarily as pasture, the main field is managed as a hay meadow. Cattle graze the pasture from late spring to maintain a relatively short grass sward throughout the growing season. The hay meadow is cut between 15th July and 15th August, depending on weather. The cattle are then used to graze the aftermath until late autumn. The meadows are in the Higher-Level Scheme of Environmental Stewardship. They are rich in wildflowers including meadowsweet, green-winged orchid, cowslip, yellow rattle, great burnet, devil’s-bit scabious, and betony. It is an example of a rare and fragile habitat of great conservation value.
Chapel Pit	0.3	LN1 - Landfall to A52 - Mumby	SE	3	Excavated for clay for the repair of the sea banks following the floods of 1953, the flooded pit has marginal reedbeds and aquatic plants, such as water-crowfoot and great reedmace. Fifteen species of duck have been recorded, mainly winter visitors. Bearded tit and bittern are recorded occasionally. In summer breeding species include reed and sedge warblers, lesser whitethroat and little grebes can also be seen. In August and September thousands of migrating swallows and house martins roost in the reedbeds. Screens of willows round the banks of the pits have been planted in order to reduce disturbance to birds. A 0.3ha area of this LWT is also designated as Chapel Pit LWS.

Weston Marsh, via south of the A52 and Weston Marsh, via north of the A52

Statutory Designations

There are three SACs, 15 SSSIs (excluding geological designations), three NNRs and one LNR within the onshore study areas for both Weston Marsh, via south of the A52 and Weston Marsh, via north of the A52. Table 1-3 provides a summary of the location and interest of these sites.

Figure 21.1.3 illustrates the locations of the statutory designations.

Table 1-3: Statutory Designated Sites for Weston Marsh via south of the A52 and Weston Marsh via north of the A52

Site Name	Distance from the PEIR Boundary (km)	Nearest Segment	Compass Direction	Area of Designation (ha)	Description
The Wash (and North Norfolk Coast) SAC	0.01	WM11 - The Haven to Marsh Road (both ECCs)	E	107,720	<p><u>SAC:</u> Important habitats include marine areas, sea inlets, tidal rivers, estuaries, mudflats, sand flats, lagoons (including saltwork basins), saltmarshes, salt pastures and salt steppes. Annex 1 habitat that are the primary reason for designation:</p> <ul style="list-style-type: none"> ▪ sandbanks which are slightly covered by sea water all the time ▪ mudflats and sandflats not covered by seawater at low tide ▪ large shallow inlets and bays ▪ reefs ▪ Glasswort and other annuals colonising mud and sand ▪ Atlantic salt meadows ▪ Mediterranean and rutico-Atlantic halophilous scrubs (<i>Sarcocornetea ruticose</i>) ▪ Coastal lagoons (a qualifying features though not a primary reason for designation). <p>The SAC is also designated for Annex II species common seal, with otter also listed as a qualifying feature but not the primary reason for designation.</p>
Saltfleetby - Theddlethorpe Dunes and Gibraltar Point SAC	2.3 (Weston Marsh via south of the A52)	WM6 - Steeping River to Ivy House Farm/Marsh Yard	ENE	968	<p>Important habitats include saltmarshes, salt pastures, salt steppes, coastal sand dunes, sand beaches, machair, bogs, marshes, water fringed vegetation and fens. Annex 1 habitat that are the primary reason for designation include:</p> <ul style="list-style-type: none"> ▪ Fixed coastal dunes with herbaceous vegetation ▪ Dunes with sea buckthorn ▪ Humid dune slacks ▪ Embryonic shifting dunes (a qualifying features though not a primary reason for designation).
	3.7 (Weston Marsh via north of the A52)	WM5 - Low Road to Steeping River	ESE		

Site Name	Distance from the PEIR Boundary (km)	Nearest Segment	Compass Direction	Area of Designation (ha)	Description
Humber Estuary SAC	18.5	WM1 - Landfall to A52 – Hogsthorpe (both ECCs)	NW	37,630	<p>A large, macro tidal estuary with tidal rivers, mud and sand flats and lagoons (including saltwork basins). <u>SAC:</u> Annex 1 habitat that are the primary reason for designation include:</p> <ul style="list-style-type: none"> • estuaries • mudflats and sandflats not covered by seawater at low tide <p>Annex I habitats present as a qualifying feature, but not a primary reason for designation include:</p> <ul style="list-style-type: none"> • sandbanks which are slightly covered by sea water all the time • coastal lagoons • glasswort and other annuals colonizing mud and sand • Atlantic salt meadows • Embryonic shifting dunes • Shifting dunes along the shoreline with European marram grass • Fixed coastal dunes with herbaceous vegetation • Dunes with sea buckthorn <p>Annex II species present as qualifying features, but not a primary reason for site selection:</p> <ul style="list-style-type: none"> • Sea lamprey • River lamprey • Grey seal
Sea Bank Clay Pits SSSI	0	WM1 - Landfall to A52 – Hogsthorpe (both ECCs)	ENE	17	<p><u>SSSI:</u> A series of isolated flooded clay workings of varying size, depth and topography which now support uncommon aquatic plant community's characteristic of the slightly brackish, eutrophic (nutrient-rich) water in addition to extensive reedbeds and a rich marginal wetland flora. The pits are important for breeding, wintering and passage birds and support a rich aquatic invertebrate fauna, notably beetles, including several nationally scarce species and others new to the County. The water plant communities of the pits are characterised by fennel pondweed, lesser pondweed, horned pondweed, spiked water milfoil, algae of the genus Enteromorpha and two nationally scarce species: brackish water crowfoot and soft hornwort. Large colonies of common spotted orchid occur at Wolla Bank in marshy ground.</p>
The Wash SSSI	0.01	WM11 - The Haven to	E	62,044	<p><u>SSSI:</u> Covers the same area and footprint as the SPA and Ramsar. An area of international biological interest. The intertidal mudflats and saltmarshes represent one of Britain's most important winter-feeding areas for waders and wildfowl outside of the breeding season. Enormous numbers of migrant birds, of</p>

Site Name	Distance from the PEIR Boundary (km)	Nearest Segment	Compass Direction	Area of Designation (ha)	Description
		Marsh Road (both ECCs)			international significance, are dependent on the rich supply of invertebrate food. The saltmarsh and shingle communities are of considerable botanical interest and the mature saltmarsh is a valuable bird breeding zone. In addition, the Wash is also very important as a breeding ground for common seals.
Gibraltar Point SSSI	2.3 (Weston Marsh via south of the A52)	WM6 - Steeping River to Ivy House Farm/Marsh Yard	E	581	<p><u>SSSI</u>: The SSSI is managed by the Lincolnshire and South Humberside Trust for Nature Conservation. Designated for its sand dunes, saltmarsh, freshwater marsh, and associated fauna. Invertebrates include Lepidoptera, Diptera and Coleoptera, including 12 species which are nationally rare. Breeding birds include mallard, shelduck, ringed plover, little tern, oystercatcher, and redshank. Passage and wintering birds of internationally important numbers include oystercatcher, grey plover, knot, sanderling and bar-tailed godwit and the area is of national importance for its numbers of little ringed plover.</p>
	3.7 (Weston Marsh via north of the A52)	WM5 - Low Road to Steeping River			
Bratoft Meadows SSSI	3.1	WM4 - A158 – Skegness Road to Low Road;(both ECC options)	WNW	2.2	<p><u>SSSI</u>: The best example of species rich neutral grassland in North Lincolnshire. One of the remaining areas of permanent grassland not dominated by plants associated with chalk and limestone. Two adjacent fields which border the Cowcroft drain are divided by a high hedge of hawthorn with fine specimens of pollarded crack willow. Both are managed as hay meadows and are grazed after cutting. They are dominated by sweet vernal grass, red fescue, meadow fescue and creeping bent, and a rich sward includes betony, dyer’s greenweed, cowslip, adder’s tongue fern and saw-wort. Wetter areas have cuckooflower and ragged robin. The southern field has abundant green-winged orchid. A third field separated from the others by a narrow strip of improved pasture is dominated by the same grasses as the other meadows and, like them includes yellow rattle, great burnet and devil’s-bit scabious. It is cut for hay.</p> <p>The site as a whole attracts large numbers of butterflies, and 18 species of terrestrial mollusc are recorded.</p>
Surfleet Lows SSSI	3.5	WM14 - Fosdyke Bridge to	WSW	3.8	Surfleet Lows is one of the few remaining wet alluvial meadows in Lincolnshire which has not been subjected to agricultural improvement. Meadows of this type are now rare throughout lowland Britain. A

Site Name	Distance from the PEIR Boundary (km)	Nearest Segment	Compass Direction	Area of Designation (ha)	Description
		Weston Marsh Substation South (both ECC options)			<p>typical range of meadow plants is present as well as a number of species more characteristic of coastal locations.</p> <p>The meadow occupies a hollow formed by an old coastal creek system and its residual high salinity explains the presence of brackish marsh plants. The grassland is dominated by marsh foxtail (<i>Alopecurus geniculatus</i>) and floating sweet-grass (<i>Glyceria fluitans</i>), together with hammer sedge (<i>Carex hirta</i>), tubular water-dropwort (<i>Oenanthe fistulosa</i>), celery-leaved buttercup (<i>Ranunculus sceleratus</i>), hairy buttercup (<i>R. sardous</i>), strawberry clover, sea milkwort and other brackish and neutral grassland plants. Areas of marsh are characterised by common reed, false fox-sedge, sea club-rush, common spike-rush (<i>Eleocharis palustris</i>), distant sedge and grey clubrush (<i>Schoenoplectus tabernaemontani</i>). Additional interest is provided by wet fen woodland, pools, and tall fen vegetation.</p> <p>Winter flooding of the meadow attracts ducks such as mallard, teal (<i>Anas crecca</i>) and wigeon (<i>Anas penelope</i>), and good numbers of snipe. Reedwarblers breed here, and at least 50 other species of bird have been recorded.</p>
Willoughby Meadow SSSI	5.5	WM2 - A52 – Hogsthorpe to Marsh Lane (both ECC options)	W	0.52	This meadow is the best example of the permanent unimproved neutral grassland once common over Lincolnshire Middle Marsh boulder clay. Well over one hundred species have been recorded from its small acreage. Surrounded by hedgerows, this field is still managed by the traditional means of taking a hay crop followed by grazing. Two small ponds are located at the field's edge.
Willoughby Wood SSSI	6.3	WM2 - A52 – Hogsthorpe to Marsh Lane (both	W	23.4	A representative of the series of ancient woodlands found on the middle Marsh Boulder Clay on the edge of the Lincolnshire Wolds. It is predominantly oak-ash and hazel, managed as coppice with standards. This supports a characteristic and rich ground flora. The site is notable for its breeding birds.

Site Name	Distance from the PEIR Boundary (km)	Nearest Segment	Compass Direction	Area of Designation (ha)	Description
		ECC options)			
Candlesby Hill SSSI	6.5	WM3 - Marsh Lane to A158 – Skegness Road (both ECC options)	WNW	1.81	One of the best remnants of the once extensive chalk grasslands of the South-east Lincolnshire Wolds. Together with surrounding scrub and broad-leaved woodland, the site provides an excellent example of the sequence of change to a mature system.
Hoplands Wood SSSI	6.6	WM2 - A52 – Hogsthorpe to Marsh Lane (both ECC options)	W	14.4	Situated on the northern side of a shallow valley on the poorly draining boulder clay of the Lincolnshire Middle Marsh, Hoplands Wood is one of the best remaining examples of oak/ash ancient woodland in north Lincolnshire. It is characterised by a local abundance of alder and a mosaic of tree species perpetuated by a long history of woodland management promoting both high forest and coppice-with-standards. This favours a rich and varied ground flora and breeding bird community.
Skendleby Psalter Banks SSSI	8.5	WM2 - A52 – Hogsthorpe to Marsh Lane (both ECC options)	W	1.0	The species-rich unimproved grasslands of Skendleby Psalter Banks represent one of the best examples of a habitat now rare and fragmented in Lincolnshire. The abundance of plants restricted to these steep north-facing slopes of a dry valley cut into the eastern Wolds by glacial meltwaters is maintained by traditional management of sheep grazing.
Jenkins Carr SSSI	12.3 (Weston Marsh)	WM4 - A158 – Skegness	W	3.6	

Site Name	Distance from the PEIR Boundary (km)	Nearest Segment	Compass Direction	Area of Designation (ha)	Description
	south of the A52)	Road to Low Road;			A species rich example of alder carr, a habitat now rare in the area, with stream and swamp communities of regional importance. Stands of alder, and mixed woodland dominated by willows <i>Salix</i> spp., but also has ash (<i>Fraxinus excelsior</i>) and alder.
	10.0 (Weston Marsh north of the A52)	A2 – Steeping River to Fodder Dike Bank/Fen Bank	NW		The area of open water/ swamp in the east and the stream sides have wetland species including water-plantain (<i>Alisma plantago-aquatica</i>), wild celery and lesser water parsnip (<i>Berula erecta</i>). In different areas along the stream bushgrass (<i>Calamagrostis epigejos</i>), reedmace and reed sweet-grass (<i>Glyceria maxima</i>) dominate. The wet areas contain a variety of sedges with patches of hempagrimony (<i>Eupatorium cannabinum</i>), water figwort (<i>Scrophularia aquatica</i>) and wild iris (<i>Iris pseudacorus</i>).
Saltfleetby-Theddlethorpe Dunes SSSI	12.1	WM1 - Landfall to A52 – Hogsthorpe (both ECC options)	NNW	972	<p>This nationally important site includes flats, dunes, salt, and freshwater marsh which together support an exceptionally rich flora and fauna. There are outstanding assemblages of vascular wall, invertebrates and breeding birds and it is the most north-easterly breeding site in Britain for the Natterjack Toad. The rapid accretion of dunes and saltmarsh make this an important site for research into the processes of coastal development.</p> <p>The intertidal sands and muds provide extensive feeding and roosting grounds for wildfowl and waders including brent geese, shelduck and dunlin. Yellow wagtails breed on the saltmarsh and there is a small colony of little tern on the shingle bank. Diverse and successional saltmarsh and rich fen communities, supporting a colony of orchids including southern and early marsh orchids (<i>Dactylorhiza praetermissa</i> and <i>D. incarnata</i>), pyramidal and bee orchids and rare plants such as needle spike rush (<i>Eleocharis acicularis</i>), divided sedge, marsh pea and greater water-parsnip. Invertebrates recorded include several notable moths and nationally rare species from the moth and beetle families. There are outstanding breeding densities of birds in the dune scrub, with whitethroat a major constituent. Also present are lesser whitethroat and long eared owl. The oldest areas of scrub now contain breeding blackcap (<i>Sylvia atricapilla</i>), garden warbler and nightingale.</p> <p>Part of the site is also designated as Theddlethorpe Dunes and Gibraltar Point SAC.</p>
Keal Carr SSSI	13.0 (Weston	WM4 - A158 – Skegness	WNW	23	An example of a base-rich springline alder woodland, especially characteristic of the southern Lincolnshire Wolds. The wood supports a rich flora typical of flushed ground and is one of the best sites in the county

Site Name	Distance from the PEIR Boundary (km)	Nearest Segment	Compass Direction	Area of Designation (ha)	Description
	Marsh via south of the A52)	Road to Low Road			for the alternate-leaved golden saxifrage (<i>Chrysosplenium alternifolium</i>). Woodlands dominated by alder are rather rare nationally, as many such stands have been lost through drainage. The bottom of the valley is a mosaic of tall herbs in open areas and woodland, with shaded marsh vegetation under the tree canopy. The woodland below the springline is dominated by old, coppiced alder with some scattered coppiced ash and a shrub layer of willows <i>Salix</i> spp. At the northern end of the site an area of open water provides additional interest as it is much used by duck. Keal Carr is a habitat for a number of breeding birds, including all three species of woodpecker, willow tit (<i>Poecile montanus</i>) and garden warbler. In winter the area is used as a feeding ground by siskin (<i>Spinus spinus</i>). Above the springline, the steep dry sandy slopes have a similar mosaic of woodland and open areas, the latter dominated by bracken (<i>Pteridium aquilinum</i>).
	10.5 (Weston Marsh via north of the A52)	A2 – Steeping River to Fodder Dike Bank/Fen Bank	NW		
Calceby Marsh SSSI	13.4	WM1 – Landfall to A52 – Hogsthorpe (both ECC options)	W	10.8	Calceby Marsh is of national importance as an outstanding example of a base-rich marsh. This habitat type typically follows the distribution of calcareous springlines, and streams, in this case Calceby Beck, a Lincolnshire Wolds chalk stream. Such areas of base-rich marsh are becoming increasingly scarce in the county, as elsewhere in England, through the effects of drainage and other agricultural improvements. The site consists of 3 areas of marshland, each differing slightly in its species composition, surrounded by tussocky neutral grassland which is of value to breeding snipe and lapwing. The site is one of the few stations in the county, outside the Cambridgeshire Fens, where the marsh moth occurs.
Swaby Valley SSSI	14.1	Wm1 – Landfall to A52 – Hogsthorpe (both ECC options)	WNW	3.5	A glacial overflow valley supporting two habitats now scarce in Lincolnshire - floristically diverse, lime-rich marsh and unimproved chalk turf. The marsh borders a stream bisecting the valley floor and the interest of the grassland is increased by the terraced nature of the slopes. The wet conditions favour orchids and the marsh arrowgrass (<i>Triglochin palustris</i>). The sheltered conditions on the site attract 15 species of butterfly.

Site Name	Distance from the PEIR Boundary (km)	Nearest Segment	Compass Direction	Area of Designation (ha)	Description
The Wash NNR	0.5	WM12 - Marsh Road to Fosdyke Bridge (both ECC options)	ENE	8777	<u>NNR</u> : Site of mixed of open deep water, permanent shallow water, mudflats and saltmarsh, representing one of Britain's most important winter-feeding areas for waders and wildfowl (Natural England via Lincolnshire's National Nature Reserves Webpage). It comprises Kirton Marsh, Terrington St Clement Marsh, Point Green, and the North Wootton Marsh. It's a valuable breeding zone for birds such as redshank and supports one of the largest common seal populations in England.
Gibraltar Point NNR	2.5(Weston Marsh south of the A52)	WM6 - Steeping River to Ivy House Farm/Marsh Yard	E	429	<u>NNR</u> : Site which forms a small part of Saltfleetby-Theddlethorpe Dunes and Gibraltar Point SAC and SSSI. Habitats include sand dunes, saltmarsh, marshes, and meadows.
	3.9 (Weston Marsh north of the A52)	WM5 - Low Road to Steeping River	ESE		
Saltfleetby-Theddlethorpe Dunes NNR	12.3	WM1 - Landfall to A52 - Hogsthorpe (both ECC options)	NNW	619	<u>NNR</u> : Site forms part of the Saltfleetby-Theddlethorpe Dunes SSSI, as well as part of the Humber Estuary SAC. It is an important reserve containing tidal sand and mudflats, salt and freshwater marshes and sand dunes. On the foreshore, accreting mud and silt flats and saltmarsh in the north give way to a narrower sandy beach at the southern end.
Havenside Country Park LNR	0	WM10 - Church End Lane to The Haven (both	/	19	<u>LNR</u> : Site supports a mix of rough grassland with scrub and brambles, cattle grazed meadows, shallow seasonal ponds, estuary, and mud flat. Also designated as an LWS.

Site Name	Distance from the PEIR Boundary (km)	Nearest Segment	Compass Direction	Area of Designation (ha)	Description
		ECC options)			

Non-statutory Designations - Local Wildlife Sites

A total of 34 non-statutory LWS occur within the study area for Weston Marsh, via south of the A52, and a total of 37 non-statutory LWS occur within the study area for Weston Marsh, via north of the A52. For both options, 12 of these sites fall within/ partially fall within the PEIR Boundary.

Table 1-4 provides summary details for each designation, along with their distance from the nearest segment of the Weston Marsh PEIR Boundary. The descriptions are extracted from each LWS citation. Where available, the full citations for each designation are provided at Annex A – Local Wildlife Site Citations.

Non-statutory Designations - Lincolnshire Wildlife Trust Reserves

There are seven LWT Reserves within the 2km study area and five within /partially within the PEIR Boundary for both options.

Table 1-4 provides summary details for each designation, along with their distance from the nearest segment of the Weston Marsh PEIR Boundary. Where available, the full citations for each designation are provided at Annex A – Local Wildlife Site Citations.

Figure 21.1.4 illustrates the locations of these local designations.

Table 1-4: Non-statutory Sites for Weston Marsh via south of the A52 and Weston Marsh via north of the A52

Site Name	Distance from the PEIR Boundary (km)	Nearest Segment of the ECC	Compass Direction	Area/Length of Site (ha/km)	Description
Local Wildlife Sites					
Anderby Creek Sand Dunes	0	WM1 - Landfall to A52 – Hogsthorpe (both ECC options)	NNE	11.9 ha	<p><u>Main Habitats:</u> Coarse or rank grassland, sand dune, scrub and ditch.</p> <p>A 1.1km long stretch of coast on the seaward side of Anderby Marsh and Wolla Bank Reedbed nature reserves. Due to lack of management, most places support coarse and weedy vegetation, with substantial cover of scrub and trees. Good, open dune is very limited in extent.</p>
Chapel Six Marshes	0	WM1 - Landfall to A52 – Hogsthorpe (both ECC options)	E	12.9ha	<p><u>Main Habitats:</u> Coarse or rank grassland, lake, reedbed, scrub - scattered/dense (also ditch, marsh/fen, non-native plantation - on ancient/new, pond, scrub - scattered/dense)</p> <p>A 750m stretch of coast and is partly a LWT Reserve.</p> <p>Within the small area of reserve managed by LWT, wetland plants typical of brackish water include parsley water-dropwort, sea-milkwort, probable brackish water-crowfoot, saltmarsh rush and distant sedge. Growing with these are ivy-leaved duckweed, common fleabane, angelica, creeping bent, toad rush and false fox-sedge. On the dune ridge and adjacent landward slope are sand sedge, sand couch, red fescue, marram, lyme-grass, common bird's-foot-trefoil, meadow vetchling, cat's-ear, tufted vetch, black medick, and dewberry. Trees and shrubs include grey willow, sycamore, hawthorn, elder, sea-buckthorn, bramble, dog-rose.</p> <p>The remainder of the site is managed by LCC and is publicly accessible. Major works have been carried out in 2014/2015 to enhance the value of the site for wetland flora and fauna, involving creation of winding water channels on land to north and south of the entrance road. Habitats present over the site as a whole are bare sand and short vegetation in car parking areas, coarse grassland, a little open water, much reedbed, and varying cover of trees and scrub. The resulting flora is diverse and interesting.</p> <p>Fauna recorded includes moorhen, migrating whimbrel, wood pigeon, green-veined white, small tortoiseshell, and common darter.</p>

Site Name	Distance from the PEIR Boundary (km)	Nearest Segment of the ECC	Compass Direction	Area/Length of Site (ha/km)	Description
Hogsthorpe Pit	0	WM1 - Landfall to A52 - Hogsthorpe (both ECC options)	SW	1.4ha	<p><u>Main Habitat:</u> Standing water, willow carr, grassland</p> <p>Around the pond is diverse wetland vegetation and some drier grassland and scrub. Lesser bulrush and common reed are abundant at the water's edge. Also present are water dock, branched bur-reed, water mint, purple loosestrife, greater pond-sedge, and yellow iris. Marshy areas, particularly to the east of the pond, support further species, such as marsh bedstraw, hoary willowherb, tufted forget-me-not, water-cress, meadowsweet and jointed rush. Of most note is a sizeable patch of brookweed amongst tall fen vegetation beside an angler's path. Mature and younger specimens of various willows dominate the remainder of the site, with a restricted range of common ground flora plants beneath. Some sycamore is also present.</p> <p>Botanically-rich grassland is restricted to small areas of dry bank on the southern and northern margins of the pond. Species present include autumn hawkbit, tufted vetch, yarrow, lady's bedstraw and meadow vetchling. A larger patch of coarser grassland is used as a car park (in the north-west corner of the site). This supports much common knapweed, together with bird's-foot-trefoil, common sorrel, red clover, red fescue, tall fescue and tufted hair-grass. Adjacent to this is neglected former grassland that is now dominated by species such as field bindweed, creeping thistle, bramble, cow parsley, upright hedge-parsley (<i>Torilis arvensis</i>), field horsetail and false oat-grass. Scrub species include hawthorn, elder, blackthorn and some dogwood that appears to be non-native.</p> <p>Coot, moorhen, and common dragonflies were recorded.</p>
Marsh Yard to Anderby Creek Dunes	0	WM1 - Landfall to A52 - Hogsthorpe (both ECC options)	N	16.8ha	<p><u>Main Habitat:</u> coarse or rank grassland, scrub – scattered/ dense (also semi-improved, neutral grassland, non-native plantation, reedbed)</p> <p>A 1.75km stretch of coast comprising bare sand on the upper beach with some young dunes; a line of low, fixed dunes supporting much coarse grassland, which widens in the south and supports plentiful woody vegetation, including garden escapes; and a range of habitats inland of the dunes, particularly planted and naturally occurring trees and scrub on both dry and damp land, grassland, sparsely vegetated car parking areas, a track and a little bare sand.</p>

Site Name	Distance from the PEIR Boundary (km)	Nearest Segment of the ECC	Compass Direction	Area/Length of Site (ha/km)	Description
					<p>To the north is a huge population of scarce strawberry clover along the car park and species rich neutral grassland. Many parts of the dune ridge are dominated by coarse vegetation, such as marram, lyme-grass, sea and sand couch, common reed, and dewberry. A wide range of woody species includes sycamore, horse chestnut, white poplar, hybrid black poplar, pine, ash, buckthorn, sea-buckthorn, buddleia, wild & garden privet, elder, hawthorn and ivy. Damp areas, particularly inland in the north, support osier, grey willow, woody nightshade, comfrey, amphibious bistort, and silverweed.</p> <p>Birds and invertebrates seen during the survey included migrating whimbrel, reed bunting, house martin, common blue, brown argus, meadow brown, gatekeeper, peacock, and common darter.</p>
Wolla Bank South	0	WM1 - Landfall to A52 - Hogsthorpe (both ECC options)	ENE	5ha	<p><u>Main Habitat:</u> Coarse or rank grassland, semi-improved, neutral grassland, reedbed (also drain and pond).</p> <p>Coastline comprising bare sand on the upper beach; a line of low fixed dunes grading into wetland; and an old embankment beside the road. As a result of recent landscaping works, much of the site is now far wetter than previously, with substantial areas of open water and reedbed, as well as coarse grassland in the central island and on the embankment. The wetland and dunes support a rich flora and fauna.</p> <p>A wide range of birds and invertebrates were noted during the survey, including coot, sedge & reed warbler, swift, common whitethroat, common blue, ringlet, small skipper, shaded broad-bar, common blue & blue-tailed damselfly, darter, and four-spotted chaser.</p>
Shore Road Drain	0 (Weston Marsh south of the A52)	WM9 - Crowhall Lane to Church End Lane	SSW	0.6km	<p><u>Main Habitat:</u> Drain with grassland</p> <p>Drain with the nationally scarce marsh-mallow (<i>Althaea officinalis</i>).</p>
	0 (Weston Marsh)	A5 - Ings Drove to	SSE		

Site Name	Distance from the PEIR Boundary (km)	Nearest Segment of the ECC	Compass Direction	Area/Length of Site (ha/km)	Description
	north of the A52)	Church End Lane			
Havenside	0	WM10 - Church End Lane to The Haven (both ECC options)	W	33.1ha	<p><u>Main Habitat:</u> Coarse or rank grassland (also new-native plantation, scrub, semi-improved neutral grassland, improved grassland, ditch, pond, coastal grazing marsh, marsh, reedbed).</p> <p>A long man-made sea bank dating from 1880s. The component areas are:</p> <ul style="list-style-type: none"> • A raised bank of plantation and meadow at the western end • Triangular area of rough grassland and newly planted trees • Grazed grassland with drainage ditches and ponds • Older sea bank with dense scrub • An amenity area centred on the Pilgrim Fathers memorial with amenity grassland, two small ponds and wet grassland. <p>The mosaic of woodland, grassland and wetland is very valuable in the local context and of significant value to local bird, mammal, and invertebrate populations. The linear nature of the site provides a good wildlife corridor through Boston.</p>
Hobhole Bank	0	WM10 - Church End Lane to The Haven (both ECC options)	SSW	3.7ha	<p><u>Main Habitat:</u> Scrub, semi-improved neutral grassland, semi-improved calcareous grassland (also coarse or rank grassland).</p> <p>Man made, raised earth bank associated with a large drain (Hobhole Drain). The dominant communities on the bank top are rough neutral grassland, with areas of finer more calcareous grassland also present; and also dense scrub along the banksides. The calcareous nature of the grassland is likely to have arisen as a result of material brought in to form the banks.</p>

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					<p>The site is a Lincolnshire Wildlife Trust Reserve and is actively managed in order to try and maintain the finer grassland sward on the bank top. Scrub invasion from the bank slopes is a threat to the floristic diversity of this site.</p> <p>It supports a good bird assemblage and is known locally for the long-eared owls which over winter on site.</p>
Hobhole Drain, Baker's Bridge South	0	WM10 - Church End Lane to The Haven (both ECC options)	NNW	6.1km	<p><u>Main Habitat:</u> Scrub, semi-improved neutral grassland, semi-improved calcareous grassland, coarse or rank grassland, ditch.</p> <p>A man-made drain providing the main drainage for the East Fen north of Boston and discharging into The Haven. The eastern bank comprises neutral rough grassland and calcareous grassland (which is particularly species rich towards the southern end) – the bank is kept clear to assist dredging operations. The western bank supports more dense and scattered scrub – hawthorn, ash, blackthorn, willow species, elder, bramble, dog-rose, field maple and oak occur.</p> <p>The bankside flora is good whilst the aquatic habitat is relatively poor in comparison. Past surveys indicate that this has always been the case and the bankside flora has always been the notable feature of this site. The calcareous nature of the vegetation is likely to have arisen as a result of material imported when the banks were created. The site provides a valuable wildlife corridor due to the near continuous line of scrub and trees on the banksides.</p>
Risegate Eau	0	WM13 - Fosdyke Bridge to Weston Marsh North (both ECC options)	W	9km	<p><u>Main Habitat:</u> Coarse or rank grassland, drain, linear reedbed, scrub.</p> <p>A central 9km of a 15km long watercourse extending from South Forty Foot Drain in the west to River Welland in the east. Channel size varies from one to about six metres wide. Banks along the 65m of drain that is west of Allen's Bridge have been managed and studied by local resident Leslie Hebdon since the late 1980s, during which time a selection of nectar-rich and pollen-rich plants have been introduced to encourage insect populations. Population of the locally and nationally rare Deptford pink (<i>Dianthus armeria</i>). A very small patch of adjacent woodland planted in 1990 comprises native trees and shrubs such as pedunculate oak, alder, goat willow (<i>Salix caprea</i>), field maple, alder buckthorn, hazel, guelder-rose (<i>Viburnum opulus</i>) and hawthorn.</p>

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					<p>A good diversity of insects include: Essex skipper, common blue, gatekeeper, shaded broad bar, blood vein (<i>Timandra comae</i>), silver Y (<i>Autographa gamma</i>), Roesel's bush-cricket (<i>Metrioptera roeselii</i>), common carder bee (<i>Bombus pascuorum</i>), brown hawkler (<i>Aeshna grandis</i>) and common darter. Other fauna recorded were reed warbler, kingfisher (<i>Alcedo atthis</i>), common snipe, grey heron (<i>Ardea cinerea</i>), moorhen, green sandpiper (<i>Tringa ochropus</i>) and common frog. Water voles (<i>Arvicola amphibius</i>) were present near Allen's Bridge in 2013 and have been known to occur there for many years.</p> <p>Records show that there is an excellent selection of bees, wasps, and other insects west of Allen's Bridge. One of these, the large garden bumblebee (or ruderal bumblebee) (<i>Bombus ruderatus</i>), is a nationally notable UK BAP species, while the nationally rare tawny longhorn beetle (<i>Paracorymbia fulva</i>) is listed as RDB3. The abundance of dandelion (<i>Taraxacum officinale</i>) and white dead-nettle (<i>Lamium album</i>) is important in providing food for bees immediately after they emerge from hibernation.</p>
Moulton Marsh	0	WM14 - Fosdyke Bridge to Weston Marsh South (both ECC options)	NE	28.3ha	<p><u>Main Habitat</u>: native plantation, reedbed, saltmarsh, saline lagoon (also coarse grassland, drain)</p> <p>An area of dense planted woodland (including aspen, alder, field maple, with some pine, rowan (<i>Sorbus aucuparia</i>), birch (<i>Betula</i> sp.), hawthorn, and dogwood), and very coarse grassland with a variety of shrubs including large amounts of sea buckthorn.</p> <p>Frequently flooded, saltmarsh. Two, large saline ponds with little aquatic or marginal vegetation but some important invertebrate species typical of saline lagoons of SSSI quality. This is a wetter area enclosed on all sides by high banks with a mixture of reedbed (c.70%), areas of saltmarsh vegetation with the occasional pool, and drier areas of coarse grassland. A c.10-20m wide strip of trees has been planted along the southeast edge.</p> <p>The saltmarsh vegetation occurs at the wetter edges of the reedbed and includes glasswort (<i>Salicornia europaea</i>), lesser sea-spurrey (<i>Spergularia marina</i>) and a small unidentified rush (<i>Juncus</i> sp.). The more negotiable areas on higher, drier ground have large amounts of saltmarsh rush, clumps of distant sedge, sea aster (<i>Tripolium pannonicum</i>), brookweed, common fleabane, sea-milkwort, and sea couch.</p> <p>Fennel pondweed was found in some of the small pools that were present, and wood small-reed (<i>Calamagrostis epidejos</i>) occurred in patches throughout.</p>

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Dove's Lane Drain	0 (Weston Marsh south of the A52)	WM9 - Crowhall Lane to Church End Lane	SW	0.6km	<u>Main Habitat:</u> Drain Drain with the nationally scarce marsh mallow.
	0 (Weston Marsh north of the A52)	A5 - Ings Drove to Church End Lane	SSE		
South Bank Fosdyke	0.05	WM13 - Fosdyke Bridge to Weston Marsh North (both ECC options)	NNE	1.9km	<u>Main Habitat:</u> Coarse or rank grassland, saltmarsh (also scattered scrub, unimproved neutral grassland, mudflat). A man-made raised floodbank with wide berm along the southern side of the River Welland. The grassland is a mixture of rough neutral grassland dominated by sea couch, with areas of more calcareous finer grassland, particularly on the south facing bank. The banks are cut for hay and a loose management regime is in place. Abundant snail, grasshopper and butterfly species observed.
Anderby Gravity Outfall	0.06	WM1 - Landfall to A52 - Hogsthorpe	N	0.6ha	<u>Main Habitats:</u> Drain, semi-improved neutral and coarse grassland The canalised downstream end of Main Drain and its steep banks on the southern edge of Anderby Creek. Adjacent to both Anderby Creek Sand Dunes and Anderby Marsh LWT nature reserve. The drain is maintained, limiting the brackish floral community present. Sea club-rush and common reed are abundant

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		(both ECC options)			<p>on both of the steep lower banks, as is typical of brackish drains. Few aquatic species can survive the saline conditions, but any that do are kept under control by regular management. The very steep banks prevented comprehensive study of water plants, but at the more accessible landward end there is much fennel pondweed and some bulrush.</p> <p>Good assemblage of birds (reed and sedge warbler, common whitethroat, wren, swallow, swift, house martin), damselflies and common frog.</p>
Middlemarsh Farm	0.1	WM4 - A158 – Skegness Road to Low Road; (both ECC options)	ESE	73.5ha	<p><u>Main Habitat:</u> Grazing marsh, standing water</p> <p>Around 7 fields surrounded by ditches and some hedges. In the mid-2000s, the area was transformed from arable land into a topographically-varied wetland where breeding, passage and wintering birds typical of the Lincolnshire coastal grazing marshes could flourish.</p> <p>Aquatic and waterside plants of great interest have arrived naturally, while a neutral grassland sward has been established through sowing of appropriate native grasses, plus small amounts of cowslip, ragged-robin, and other meadow species. Cattle graze throughout at low intensity for much of the year.</p> <p>The impressive list of breeding birds since 2008 includes lapwing, redshank, snipe, avocet (<i>Recurvirostra avosetta</i>), yellow wagtail, reed and sedge warbler, reed bunting, skylark (<i>Alauda arvensis</i>), shoveler (<i>Anas clypeata</i>), mallard and mute swan (<i>Cygnus olor</i>). Wigeon, lapwing, curlew and other birds use the area in winter. Amongst the wetland plants present are horned pondweed, water-crowfoot, pink water-speedwell (<i>Veronica catenate</i>), branched bur-reed, common reed, and saltmarsh rush, plus the scarce orange foxtail (<i>Alopecurus aequalis</i>).</p>
Hobhole Drain, Benington Bridge to Baker's Bridge	0.1 (Weston Marsh north of the A52)	A5 - Ings Drove to Church End Lane	NNW	4.6km	<p><u>Main Habitats:</u> Scrub, semi-improved neutral grassland, coarse or rank grassland, and drain.</p> <p>The LWS provides a valuable corridor for wildlife due to the near continuous lining of scrub and trees along the banksides which provides important areas for local and migrant bird populations. The site also has high potential to support water vole and kingfisher.</p> <p>Scrub vegetation predominantly consists of elder, hawthorn, blackthorn, sycamore, bramble and dog-rose. Bankside flora is dominated by rough grassland with species including creeping buttercup (<i>Ranunculus</i></p>

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					<i>repens</i>), common reed, lesser pond sedge (<i>Carex acutiformis</i>), great willowherb (<i>Epilobium hirsutum</i>), angelica, black knapweed (<i>Centaurea nigra</i>), vetch species, fleabane, hemlock (<i>Conium maculatum</i>), hogweed, cleavers (<i>Galium aparine</i>), bristly ox-tongue (<i>Helminthotheca echioides</i>), cow parsley and nettle with patches of lower sward species rich areas with red clover, bird's foot trefoil, fleabane, ox-eye daisy (<i>Leucanthemum vulgare</i>), glaucous sedge, (<i>Carex flacca</i>), tare species (<i>Vicia sativa</i>), meadow vetchling, wild carrot (<i>Daucus carota</i>), common mouse-ear (<i>Cerastium fontanum</i>), and lady's bedstraw.
Wrangle Brick Pits	1.5 (Weston Marsh south of the A52)	WM7 - Ivy House Farm/Marsh Yard to Staples Farm	W	15.1ha	<u>Main Habitat</u> : New native plantation, semi-improved neutral grassland, pit (also scrub, coarse or rank grassland, ditch and reedbed). A mosaic of waterbodies, grassland, semi-mature planted trees, broad-leaved woodland, cattle-grazed semi-improved grassland, and broad-leaved plantation woodland. The two main pits are used for fishing, but the north-eastern pond has been created for wildlife. The site is managed for nature conservation by the owner.
	0.2 (Weston Marsh north of the A52)	A3 - Fodder Dike Bank/Fen Bank to Broadgate	SSW		Water vole feeding signs and latrines found around the margins of the southern pond.
Frampton Hall	0.3	WM11 - The Haven to Marsh Road (both ECC options)	WNW	21.3ha	<u>Main Habitat</u> : Parkland (including a mosaic of semi-natural woodland, scrub, semi-improved neutral grassland, semi-improved calcareous grassland, improved grassland, coarse or rank grassland, ditch, pond) Veteran trees are abundant and include horse chestnut, pedunculate oak and walnut (<i>Juglans regia</i>). Some mature exotic species as well. The ponds are generally very shaded with rigid hornwort (<i>Ceratophyllum demersum</i>), reed sweet grass, common reed, yellow iris, algae, common duckweed, false fox sedge and bittersweet. The ditches are dry/seasonally wet and have fool's watercress (<i>Helosciadium nodiflorum</i>), celery leaved buttercup, floating sweet grass (<i>Glyceria fluitans</i>), creeping bent, watercress, reed sweet grass, reed canary grass (<i>Phalaris arundinacea</i>), common reed and creeping bent.

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					The site is likely to be a valuable foraging/roosting area for local bat populations. The abundant mature/veteran parkland trees with holes, cracks and fissures have a very high bat roost potential. The mature parkland trees are one of the most significant features of this site.
Chapel Point Dunes, North	0.3	WM1 - Landfall to A52 - Hogsthorpe (both ECC options)	ESE	3.4ha	<u>Main Habitats:</u> Coarse or rank grassland, sand dune, scrub – scattered/ dense A 0.62km stretch of coastline. In the east is the upper part of a shallow sloping sandy beach, which is within Chapel Point to Wolla Bank geological Site of Special Scientific Interest. Elsewhere, in central and southern parts, there are heavily scrubbed-up fixed dunes, which also support some coarse grassland. Plants of good quality dunes are few in number, but include marram, lyme-grass, sea and sand couch, hound's-tongue, sea bindweed, prickly saltwort and sand sedge. Invertebrates recorded include common blue, ruddy darter and common darter.
Chapel Pit Nature Reserve (non-SSSI)	0.3	WM1 - Landfall to A52 - Hogsthorpe (both ECC options)	ESE	0.3ha	<u>Main Habitats:</u> Scrub, rough grassland, ditch, and hedgerow This site comprises two small unmanaged parts of Chapel Pit nature reserve, all the rest of which is part of Sea Bank Clay Pits Site of Special Scientific Interest. The smaller element is a very small spur of land in the south-eastern corner of the reserve, supporting much scrub and a little remnant grassland. The remainder of the site lies on the northern edge of the reserve, immediately adjacent to an east-west orientated track within the SSSI. In the west there is a triangular area of rough grassland and scrub. East of this is a ditch and overgrown hedgerow.
Moulton River	0.4	WM14 - Fosdyke Bridge to Weston Marsh South (both ECC options)	ENE	5.4km	<u>Main Habitats:</u> Course or rank grassland, drain, and reedbed Site comprises stretch of canalised drain and associated banks, travels northeast towards Holbeach River but very low flow and shallow leading to algal growth, although water quality good with diverse aquatic flora. Bankside flora comprises ruderals and neutral grassland species with scrub/ trees scarce. Site surveys have recorded a range of invertebrates, red list birds, and common toad (<i>Bufo bufo</i>).

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Surfleet Bank	0.5	WM13 - Fosdyke Bridge to Weston Marsh North (both ECC options)	SW	0.8km	<p><u>Main Habitat:</u> Neutral grassland (also scrub, coarse or rank grassland, semi-improved calcareous grassland)</p> <p>A 540m long strip of sandy embankment and adjacent flat pasture on the north-western side of the tidal River Welland.</p> <p>One of only two localities in Lincolnshire where the autumn lady's tresses orchid (<i>Spiranthes spiralis</i>) has been seen in the last 20 years. Previously recorded in 1994 where the grassland flora includes lady's bedstraw, fairy flax (<i>Linum catharticum</i>), common bird's-foot-trefoil, yellow oat-grass (<i>Trisetum flavescens</i>), quaking-grass (<i>Briza media</i>), and good quantities of the uncommon prickly sedge (<i>Carex vulpina</i>). Now subject to high level of rabbit occupation.</p> <p>Good quality neutral grassland, especially on the north-west facing slope, supporting a selection of butterflies and day flying moths, as well as many soil mounds created by black ants (<i>Lasius niger</i>). Amongst the plants present are cat's-ear, bulbous buttercup (<i>Ranunculus bulbosus</i>), meadow vetchling, lady's bedstraw, crested dog's-tail, sweet vernal-grass, quaking-grass and over 30 flowering spikes of pyramidal orchid. In addition, the south-east facing slope supports plentiful knotted hedge-parsley, a rather uncommon plant of barish places near the sea. Below this, some fairly coarse vegetation grades into saltmarsh.</p>
Surfleet Seas End Saltmarsh	0.7	WM14 - Fosdyke Bridge to Weston Marsh South (both ECC options)	WSW	1.7km	<p><u>Main Habitat:</u> River, marsh, calcareous grassland (also saltmarsh, mudflat, anthills, steep slopes, seasonally wet/ damp areas).</p> <p>This site is adjacent to the tidal River Welland and forms the part of the flood plain for this river. some of the flat is inundated daily but most is only flooded at Spring tide. There are three main habitats: patches of tidal mud flat, tidal salt marsh and calcareous grassland higher up the bank and on the bank top. The Vernatt's Drain runs the length of the site on the other side of the bank.</p> <p>Although the species count for the site, it is one of very few accessible salt marshes in this area with a public footpath through part of the site and the entire length on the adjacent bank. Few birds were observed on the day, but this stretch of river is known to be valuable for birds with regular visits from waders of all sorts, birds of prey, sand martins (<i>Riparia riparia</i>) and many others.</p>

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Sloothby Low Lane	0.7	WM2 - A52 – Hogsthorpe to Marsh Lane (both ECC options)	WNW	4.6km	<p><u>Main Habitat:</u> Neutral grassland (also damp grassland, standing water, seasonally wet areas, undulating ground, deep ditches, species-poor hedgerows)</p> <p>This wide green lane is an area of neutral grassland occasionally grazed by cattle. Good flora occurs in small patches, particularly at the edges of the site. Occasional species present include yarrow, common knapweed, sorrel, cowslip, selfheal (<i>Prunella vulgaris</i>), meadow buttercup, and strawberry clover. The dominant grasses over the majority of the site are cocksfoot (<i>Dactylis glomerata</i>) and perennial ryegrass (<i>Lolium perenne</i>) with areas of crested dogstail, meadow fescue, Timothy grass (<i>Phleum pratense</i>) and smooth meadow-grass.</p> <p>Damper areas are poached by cattle; the hollows are filled with water. These areas support scattered hard rush (<i>Juncus inflexus</i>), water crowfoot and water starwort. Creeping bent is frequent in these areas.</p> <p>The site appears to be good for grassland fungi; species recorded include parrot waxcap (<i>Riparia riparia</i>), dung roundhead (<i>Stropharia semiglobata</i>), field mushroom (<i>Agaricus campestris</i>), <i>Hygrocybe virginea</i>, <i>Panaeolus sphinctrinus</i>, <i>Volvariella murinella</i> and <i>Vascellum pratense</i>. The slime mould <i>Mucilago crustacean</i> has also been recorded.</p> <p>The deep bordering ditches appear to be permanently wet and support a few species of note including abundant water horsetail (<i>Equisetum fluviatile</i>) and common spike-rush. Spiked water milfoil, broad-leaved pondweed (<i>Potamogeton natans</i>), greater pond-sedge (<i>Carex riparia</i>) and water starwort are frequent. Water plantain and jointed rush occur scattered around the site. The dominant subaquatic species appears to be opposite-leaved pondweed (<i>Groenlandia densa</i>). Common reed is beginning to establish. Maretail is rare - one small patch being present in the northern ditch around TF 156 709. The steep banks support many of the meadow species including locally abundant cowslips plus scrub/ruderal species such as bramble and great willowherb.</p> <p>The bordering hedges are mainly of hawthorn with bramble and field rose (<i>Rosa arvensis</i>). Elder and wild plum (<i>Prunus domestica</i>) are occasional. Crack willow is rare (two trees).</p> <p>Evidence of badgers (<i>Meles meles</i>) noted and short-eared owl (<i>Asio flammeus</i>) observed. An owl box has been constructed at the end of the central branch of the site. Other species include Brown hare (<i>Lepus europaeus</i>), roe deer (<i>Capreolus capreolus</i>), redwing, moorhen, mute swan, wood pigeon, heron, magpie</p>

Site Name	Distance from the PEIR Boundary (km)	Nearest Segment of the ECC	Compass Direction	Area/Length of Site (ha/km)	Description
					<i>(Pica pica)</i> , pheasant (<i>Phasianus colchicus</i>), long-tailed tit (<i>Aegithalos caudatus</i>), blackbird (<i>Turdus merula</i>), skylark, carrion crow (<i>Corvus corone</i>), linnet (<i>Linaria cannabina</i>) and small tortoiseshell.
Middlemarsh Meadows	0.7	WM4 - A158 – Skegness Road to Low Road; (both ECC options)	NNE	4.7ha	<p><u>Main Habitat:</u> Unimproved neutral grassland, coarse grassland (also semi-improved neutral grassland, hedgerows, drain)</p> <p>Four contiguous hay meadows, each one adjacent to the north-eastern edge of Middlemarsh Farm LWS. The two eastern fields are very rich in plants typical of high-quality neutral grassland, whereas the sward in the two western fields is less rich. Boundary ditches, hedges, scrub, and a farm track are included, because they are not cut for hay and support some extra plants and good invertebrate habitat. It is not known if there is any aftermath grazing. The southern boundary of the western field holds a lot of mature shrubs that vaguely enclose a narrow strip of un-managed, coarse grassland and wetter vegetation. Growing here are hawthorn, blackthorn, dog-rose, bramble, yellow iris, tufted hair-grass, reed canary-grass and common reed.</p> <p>Fauna noted during survey were sedge and reed warbler, chaffinch (<i>Fringilla coelebs</i>), wren, blue tit (<i>Cyanistes caeruleus</i>), starling, wood pigeon, small copper (<i>Lycaena phlaeas</i>), meadow brown, common blue and common frog.</p>
Vernatt's Drain	0.7	WM14 - Fosdyke Bridge to Weston Marsh South (both ECC options)	SW	10.7km	<p><u>Main Habitat:</u> Drain, calcareous grassland, neutral grassland, reedbed, coarse grassland (also scattered non-planted trees, tussocky vegetation, steep slopes. South-facing slopes, earthworks/ hummocky ground)</p> <p>Vernatt's Drain is a large man-made watercourse resulting from the amalgamation of Counter Drain, North Drove Drain and South Drove Drain at Pode Hole.</p> <p>Substantial stretches with a rich grassland flora. Species often found in good quality neutral grassland include yellow rattle, common knapweed, lady's bedstraw, pignut (<i>Conopodium majus</i>), southern marsh-orchid, tufted vetch, meadow vetchling, crested dog's-tail and sweet vernal-grass. Plants typical of calcareous soils are also present.</p> <p>Common reed dominates much of the water's edge, but there are sections where a rich mixture of other wetland vegetation occurs. Some of the waterside plants in these places are flowering-rush (<i>Butomus umbellatus</i>), yellow iris, water dock, common club-rush, branched bur-reed, fool's-water-cress, lesser water-</p>

Site Name	Distance from the PEIR Boundary (km)	Nearest Segment of the ECC	Compass Direction	Area/Length of Site (ha/km)	Description
					<p>parsnip, water-cress, reed canary-grass and reed sweet-grass. Species characteristic of marshy areas include meadowsweet, marsh-marigold (<i>Caltha palustris</i>), angelica, common fleabane, brooklime (<i>Veronica beccabunga</i>), water mint, common spike-rush, and common and jointed rush. In addition, the presence of sea club-rush, sea-purslane (<i>Halimione portulacoides</i>), sea couch and reflexed saltmarsh grass (<i>Puccinellia distans subsp. Distans</i>) suggests that the drain water includes a slightly saline element.</p> <p>Amongst the many aquatic plants recorded in the period 2009-11 are five pondweeds, namely curled pondweed (<i>Potamogeton crispus</i>), hairlike pondweed (<i>Potamogeton trichoides</i>), fennel pondweed, flat-stalked pondweed (<i>Potamogeton friesii</i>) and perfoliate pondweed (<i>Potamogeton perfoliatus</i>). The aquatic flora also includes arrowhead (<i>Sagittaria latifolia</i>), spiked water-milfoil, mare's-tail, water-violet (<i>Hottonia palustris</i>), rigid hornwort (<i>Ceratophyllum demersum</i>), fan-leaved water-crowfoot (<i>Ranunculus circinatus</i>), fat duckweed (<i>Lemna gibba</i>), unbranched bur-reed (<i>Sparganium emersum</i>) and the national rarity ribbon-leaved water-plantain (<i>Alisma gramineum</i>).</p> <p>The site supports a good range of fauna, including breeding populations of reed and sedge warblers, reed bunting and sand martin. Amongst the invertebrates present are small skipper, small heath (<i>Coenonympha pamphilus</i>), ringlet, meadow brown, gatekeeper, smoky wainscot moth (<i>Mythimna impure</i>), common blue damselfly and Roesel's bush-cricket. An otter spraint was also found.</p>
River Glen Corridor	1.0	WM14 - Fosdyke Bridge to Weston Marsh South (both ECC options)	WSW	21.6km	<p><u>Main Habitat:</u> River, coarse or rank grassland, semi-improved neutral grassland (also scrub, linear reedbed, scattered non-planted trees, steep slopes, ROW, south-facing slopes.</p> <p>This is a botanically rich 20km stretch of the River Glen between Baston and Thurlby Fens Site of Special Scientific Interest and a sluice near the confluence with the River Welland. The 10-25m wide channel and both banks are included, as well as a strip of adjacent grassland within Willow Tree Fen nature reserve. The Macmillan Way long distance footpath is beside the river throughout.</p> <p>A wide range of aquatic plants in the river includes fennel and perfoliate pondweed, yellow water-lily (<i>Nuphar lutea</i>), whorled water-milfoil (<i>Myriophyllum verticillatum</i>), common, fat and ivy-leaved duckweed, water starwort (<i>Callitriche stagnalis</i>), unbranched bur-reed, arrowhead, rigid hornwort, water-crowfoot and <i>Riccia fluitans</i> (an aquatic liverwort). Amongst the diverse waterside flora are blue water-speedwell</p>

Site Name	Distance from the PEIR Boundary (km)	Nearest Segment of the ECC	Compass Direction	Area/Length of Site (ha/km)	Description
					<p>(<i>Veronica persica</i>), water-cress, brooklime, marsh woundwort (<i>Stachys palustris</i>), water forget-me-not (<i>Myosotis scorpioides</i>), common fleabane, yellow iris, water dock, reed sweet-grass, reed canary-grass, common reed, greater pond-sedge and tufted-sedge (<i>Eriophorum angustifolium</i>).</p> <p>Coarse grassland dominates drier habitats, but species typical of good neutral grassland are also present, such as common bird's-foot-trefoil, lady's bedstraw, yellow rattle, pignut (<i>Conopodium majus</i>), common knapweed, meadow vetchling, crested dog's-tail, yellow oat-grass, tor-grass (<i>Bromus madritensis</i>) and glaucous sedge. A few parts are quite well wooded, but typically the banks only support a scatter of woody plants, including grey willow (<i>Salix cinerea</i>), goat willow, white willow (<i>Salix alba</i>) and crack willow, hawthorn, elder, sycamore and bramble.</p>
Steeping Marsh	1.0	WM6 - Steeping River to Ivy House Farm/Marsh Yard	ENE	22.1ha	<p><u>Main Habitat:</u> Coarse or rank grassland, saltmarsh, river, drain, ditch (also scrub, saline lagoon, reedbed, ruderal)</p> <p>This is a 70-190m wide and 1.5km long 'island' of several interesting habitats surrounded by low-lying arable land.</p> <p>Growing on the riverbanks are typical saltmarsh plants such as spear-leaved orache (<i>Atriplex prostrata</i>), sea club-rush, reed canary-grass, sea couch and common cord-grass (<i>Spartina Anglica</i>). Flatter areas nearby hold both temporary and permanent saline pools amongst saltmarsh. These salt-rich habitats support sea plantain, sea-purslane, sea aster (<i>Aster tripolium</i>), sea milkwort, sea arrowgrass, annual sea-blite (<i>Suaeda maritima</i>), greater sea-spurrey (<i>Spergularia media</i>), common scurvygrass (<i>Cochlearia officinalis</i>), glasswort and toad rush. One area of disturbed ground is favoured by grass-leaved orache.</p> <p>The Relief Channel is at least 30m wide. There is a varied selection of freshwater species along the margins, including common reed, angelica, marsh bedstraw, meadowsweet, yellow iris, amphibious bistort, bulrush, branched bur-reed, and false fox-sedge. Some saltiness is indicated by the presence of sea club-rush, while the few bankside trees and shrubs include grey and crack willow.</p> <p>Woody species present are hawthorn, sea buckthorn, wild privet and elder, with some sycamore further north. The boundary drain flora includes common reed, reed sweet-grass, angelica, water mint, common fleabane, and common duckweed. Amongst the grassland species on the adjacent embankment are meadow</p>
	2.3 (Weston Marsh via north of the A52)	WM5 - Low Road to Steeping River	ESE		

Site Name	Distance from the PEIR Boundary (km)	Nearest Segment of the ECC	Compass Direction	Area/Length of Site (ha/km)	Description
					vetchling, tufted vetch, smooth hawk's-beard, yarrow, common mouse-ear, upright hedge-parsley, and red fescue.
Chapel Point Dunes, South	1.0	WM1 - Landfall to A52 - Hogsthorpe (both ECC options)	SE	7.7ha	<p><u>Main Habitat:</u> Sand dune</p> <p>A north-south aligned strip of coastal land, 1.6km long and varying in width between 25m and 75m. The site comprises developing low sand dunes on the upper beach, between un-vegetated sand to the east and the concrete promenade in the west. The generally sparse sward includes a diverse sand dune flora.</p> <p>Much of the area is characterised by a mixture of bare sand and marram, but few other plants. However, both sea-holly and sea spurge are not uncommon in this habitat in the north. Places that are better vegetated support short species associated with open, sandy grassland, such as thyme-leaved sandwort, common whitlowgrass, little mouse-ear, lesser chickweed, wall speedwell, early forget-me-not, smooth meadow-grass, and sand sedge. Other more robust species include lyme-grass, sea couch, common reed, hound's-tongue, evening-primrose, great mullein, great lettuce, horse-radish, and hogweed.</p> <p>Amongst the birds and invertebrates encountered during the survey were swallow, house martin, dunnock (<i>Prunella modularis</i>), goldfinch, cinnabar, brown-tail moth, orange tip, and most notably several green hairstreaks.</p>
A16 verges North of the River Glen	1.0	WM13 - Fosdyke Bridge to Weston Marsh North (both ECC options)	SW	0.9km	<p><u>Main Habitat:</u> Coarse or rank grassland (also scattered scrub, ditch)</p> <p>Neutral grassland of moderate quality and includes soil mounds created by black ants. A few plants of interest here are common bird's-foot-trefoil, hop trefoil, meadow vetchling, tufted vetch, common knapweed, cat's-ear, yarrow, glaucous sedge, and red fescue. Other species reflect the lack of management, and include bristly oxtongue, colt's-foot, field bindweed, hogweed, mugwort, horseradish, common nettle and false oat-grass. Damp habitat in or near the ditch is characterised by common fleabane, amphibious bistort, yellow loosestrife, water figwort, bulrush, common reed, and jointed rush. Vegetation on the road edge includes salt-tolerant plants such as buck's-horn plantain, grass-leaved orache and reflexed saltmarsh-grass. Woody species are a minor element of the flora, but include sycamore, willow, hawthorn, dog-rose, and bramble.</p>

Site Name	Distance from the PEIR Boundary (km)	Nearest Segment of the ECC	Compass Direction	Area/Length of Site (ha/km)	Description
The Lymn	1.2 Weston Marsh north of the A52	WM5 - Low Road to Steeping River	WNW	3.2km	<u>Main Habitat:</u> River and linear reedbed (also coarse grassland, semi-improved neutral grassland, and scattered scrub). Botanical diversity varies along areas of the Lymn with many aquatic plants recorded such as five pondweed species, yellow water-lily, ivy-leaved duckweed, water starwort and rigid hornwort. Wetland species also include common reed, reed canary-grass, reed sweet-grass and water dock whilst the flat road.
Blue Gowt Drain, North	1.2	WM14 - Fosdyke Bridge to Weston Marsh South (both ECC options)	WSW	1.1km	<u>Main Habitat:</u> Drain, coarse or rank grassland (also scattered scrub, linear reedbed) Measuring 1.1km long and 6-10m wide, this stretch of watercourse is of national significance due to the presence of a population of ribbon-leaved water-plantain, a species also occurring naturally in the nearby Counter Drain/Vernatt's Drain complex, but only in two other places in Britain. Consequently, the plant is protected under Schedule 8 of the Wildlife and Countryside Act (1981), is considered Critically Endangered, and is the subject of a Biodiversity Action Plan. It appears that ribbon-leaved water-plantain only grows and sets seed in Blue Gowt Drain in the years immediately following de-silting. The last record here was in 2007, when an estimated 50 plants produced 36 fruiting heads, as reported by Richard Lansdown. Other aquatic plants seen in 2012 were spiked water-milfoil, perfoliate and fennel pondweed, duckweed and the non-native Nuttall's waterweed (<i>Elodea nuttallii</i>). Waterside species include yellow iris, water figwort, meadowsweet, amphibious bistort, great willowherb, reed sweet-grass, reed canary-grass, common reed, and greater pond-sedge. Drier bankside habitat is mostly dominated by coarse grassland, as well as some hawthorn and elder bushes. Some of the more interesting plants here are tufted vetch, meadow vetchling, lesser trefoil, and red fescue.
Moggs Eye Sea Bank Ponds	1.2	WM1 - Landfall to A52 - Hogsthorpe (both ECC options)	N	2.9ha	<u>Main Habitat:</u> Standing water, reedbed A long, thin area of standing water, possibly formed by excavation of the earth sea wall. To the north, the site is almost 100% common reed with the road embankment supporting wooded patches of crack willow, alder and sycamore. Few aquatic species noted, although some wet edges support sea club-rush, mare's-tail, common duckweed, least duckweed and the invasive non-native New Zealand pigmyweed. The southern end of the site is used by anglers.

Site Name	Distance from the PEIR Boundary (km)	Nearest Segment of the ECC	Compass Direction	Area/Length of Site (ha/km)	Description
					Marshy edges of the site are botanically diverse. Species present include brookweed, saltmarsh and jointed rushes, clustered dock, hoary willowherb and false fox-sedge. The slightly drier conditions nearby provided a chance sighting of adder's-tongue, a fern that is usually very inconspicuous in late summer. Other grassland species include crested dog's-tail, red fescue, common bent, meadow buttercup, meadow vetchling and lesser hawkbit.
Hobhole Drain, Simmon House Bridge to Benington Bridge	1.4 (Weston Marsh north of the A52)	A4 Broadgate to Ings Drove	- W	2.8km	<p><u>Main Habitat:</u> Drain, coarse grassland</p> <p>The channel is approximately 15m wide. No submerged or floating aquatic species were found. The southern stretch has much more emergent marginal vegetation than the north, although there are large patches of common reed near the pumping station in the north.</p> <p>The more diverse community of marshy species recorded at the edges of the drain towards the south included gypsywort (<i>Lycopus europaeus</i>), common fleabane, water mint, wild angelica and marsh woundwort in addition to the ubiquitous common reed, reed canary-grass and reed sweet-grass.</p> <p>The bridges along the drain have numerous species growing on them, particularly in the south. Species include black spleenwort (<i>Asplenium adiantum-nigrum</i>), maidenhair spleenwort (<i>Asplenium trichomanes</i>), hart's-tongue (<i>Asplenium scolopendrium</i>), and smooth meadow-grass.</p> <p>Large trees have been planted almost all the way along the drain on the eastern side.</p>
Huttoft Carr Terrace to Marsh Yard Dunes	1.4	WM1 Landfall to A52 - Hogsthorpe (both ECC options)	- N	10.4ha	<p><u>Main Habitat:</u> Coarse or rank grassland, sand dune, scrub – scattered/dense (also native plantation)</p> <p>A 1.2km stretch of coast comprising bare sand on the upper beach with some botanically-poor foredunes; a concrete pathway and linear car parking area at the top of the beach; a line of low, fixed dunes and flatter ground inland, supporting much unmanaged vegetation, dominated by dense scrub and trees in central and northern parts, with larger amounts of grassland further south; and a gravel car parking area inland of the dunes at the southern end of the site, characterised by a short, open sward.</p> <p>Woody vegetation on the fixed dunes includes pine, sycamore, sea-buckthorn, elder, hawthorn, woody nightshade, bramble, and dewberry. Other robust or weedy plants here are marram, lyme-grass, common reed, sea couch, false oat-grass, creeping & spear thistle, hedge & large bindweed, curled dock and</p>

Site Name	Distance from the PEIR Boundary (km)	Nearest Segment of the ECC	Compass Direction	Area/Length of Site (ha/km)	Description
					<p>amphibious bistort. Species found in less vegetated sandy areas include prickly saltwort, sand couch, hound's-tongue, procumbent pearlwort (<i>Sagina procumbens</i>), sea fern-grass and sand sedge.</p> <p>The most interesting flora is typical of neutral soils. It is largely restricted to the vicinity of the southern car park and along a track that extends northwards. Present here are hare's-foot & strawberry clover, lesser & hop trefoil, buck's-horn plantain, common bird's-foot-trefoil, tufted vetch, meadow vetchling, yarrow, smooth hawk's-beard, autumn hawkbit, cat's-ear, black medick, silverweed, and smooth meadow-grass. Damper habitat west of the car park supports dense willow scrub, while further north of that there is much common reed.</p> <p>Birds, butterflies, and moths seen during the survey included common whitethroat, reed bunting, swallow, Sandwich tern, Essex skipper, painted lady, red admiral, and cinnabar.</p>
Pinchbeck Marsh	1.5	WM14 Fosdyke Bridge to Weston Marsh South (both ECC options)	- SW	2.3km	<p><u>Main Habitat</u>: Calcareous grassland (also river, reedbed)</p> <p>The original SNCI here is now a large area of arable land between the Vernatt's Drain and the River Welland. Two crops were being grown there at the time of survey, wheat, and potatoes. The potato crop had recently been sprayed with acid.</p> <p>The southern end of this site is formed by the bank of the A16 Spalding Bypass and was also once the bank on the old Spalding to Boston Railway. When the road was completed in the early 1990s the verge was landscaped, and some planting took place on this bank.</p> <p>The Welland bank is more open and true grassland. On the river side of the bank there are patches of rank vegetation, but most is grassland, cut once a year by the EA. Some areas on the field side have been closed off and used to graze cattle.</p> <p>This stretch of the Welland is tidal. Incidental bird sightings included 35 mallard, a grey heron and a shag (<i>Gulosus aristotelis</i>) on or by the water.</p>

Site Name	Distance from the PEIR Boundary (km)	Nearest Segment of the ECC	Compass Direction	Area/Length of Site (ha/km)	Description
Slippery Gowt Sea Bank	1.5	WM10 - Church End Lane to The Haven (both ECC options)	W	1.2ha	<p><u>Main Habitat:</u> Coarse or rank grassland (also semi-improved neutral grassland, scattered scrub)</p> <p>A rough grassland bank, landside only, adjacent to the Haven and associated tracts of saltmarsh. The site mainly comprises a rough grassland bank between the bank top and footpath and the drain which occurs between the waste site and the bank. The area supports Boston horsetail (<i>Equisetum ramosissimum</i>) which occurs (or has occurred in the past) all the way along the landward bank, including the area that was stripped in 2006-07.</p> <p>This is the only site for this species in Greater Lincolnshire.</p>
Lincolnshire Wildlife Trust Reserves					
Anderby Marsh	0	WM1 - Landfall to A52 - Hogsthorpe (both ECC options)	NNE	24ha	<p><u>Main Habitat:</u> Traditional coastal grazing marsh</p> <p>Managed to support a range of conservation priority birds including lapwing, curlew, redshank, snipe, barn owl, starling, and reed bunting. The adjacent reedbed fringes attract numerous reed, sedge, and Cetti's warblers. Marsh harrier is a regular sight in the summer as is cuckoo.</p> <p>The southern section of the Reserve is also designated as Anderby Creek Sand Dunes LWS.</p>
Chapel Six Marshes	0	WM1 - Landfall to A52 - Hogsthorpe (both ECC options)	E	2.2ha	<p><u>Main Habitat:</u> coarse or rank grassland, lake, reedbed, scrub – scattered/ dense</p> <p>A 750m stretch of coast forming part of the wider Chaper Six Marshes LWS designation. The northern, smaller area forms part of the Chapel Six Marshes LWS, while the remainder has visitor facilities much used by the public, owned, and managed by Lincolnshire County Council (LCC). Features common to both, from east to west, are bare sand on the upper beach; a line of low fixed dunes succeeded westwards by flatter dry habitat; and finally an old embankment beside the road. The upper beach is within Chapel Point to Wolla Bank geological SSSI.</p>
Wolla Bank Pit	0	WM1 - Landfall to A52 - Hogsthorpe	ENE	4ha	<p><u>Main Habitat:</u> Flooded clay pits, reed bed, chalk grassland.</p> <p>Extensive reedbeds and sea club-rush, with great reedmace, fennel pondweed, wild celery, sea arrowgrass and water-crowfoot. Colonies of common spotted orchid. Winter birds include snipe, fieldfare, redwing, and song thrush, with bittern and bearded tit occasionally visiting. Also important for breeding populations of</p>

Site Name	Distance from the PEIR Boundary (km)	Nearest Segment of the ECC	Compass Direction	Area/Length of Site (ha/km)	Description
		(both ECC options)			reed and sedge warblers, reed bunting and little grebe. Invertebrates include many species of lepidoptera and odonata. The Reserve has no other designation but is adjacent to Wolla Bank South LWS.
Wolla Bank Reedbed	0	WM1 - Landfall to A52 - Hogsthorpe (both ECC options)	NE	3ha	<u>Main Habitats:</u> Small pools, grassland with sea club-rush and sea couch. Water rail, reed warbler, sedge warbler, Cetti's warbler, grasshopper warbler, reed bunting and whitethroat all nest. Marsh harrier and hobby occur regularly in the summer and short-eared owls can be present in winter. Bearded tit is a regular visitor in the winter. Starling murmurations can sometimes be present in the winter months. The Reserve has no other designation but lies between Anderby Creek Sand Dunes LWS to the north and Wolla Bank South LWS to the south.
Moulton Marsh	0	WM14 - Fosdyke Bridge to Weston Marsh South (both ECC options)	NE	36ha	<u>Main Habitat:</u> Broad-leaved woodland, scrub, saline lagoons, shallow tidal scrapes, grassland, saltmarsh. Young, planted broad-leaved woodland (6ha), two large saline lagoons with islands, river with shall tidal scrapes, and saltmarsh totalling 6.5ha in area. This reserve also includes the 26.3ha Moulton Marsh LWS. The woodland and scrub habitats support a good population of tits, finches, whitethroats, and buntings. The lagoons are an important wintering area for little grebe and water rail. Redshank and little egret are regularly seen on the scrapes. The flood protection bank alongside the reserve has a variety of wildflowers, including pyramidal orchid, and attracts butterflies and other insects. Strawberry clover and sea-milkwort occur on the reserve.
Chapel Pit	0.3	WM1 - Landfall to A52 - Hogsthorpe (both ECC options)	ESE	3ha	<u>Main Habitat:</u> Open water and reedbeds Excavated for clay for the repair of the sea banks following the floods of 1953, the flooded pit has marginal reedbeds and aquatic plants, such as water-crowfoot and great reedmace. Fifteen species of duck have been recorded, mainly winter visitors. Bearded tit and bittern are recorded occasionally. In summer breeding species include reed and sedge warblers, lesser whitethroat and little grebes can also be seen. In August and September thousands of migrating swallows and house martins roost in the reedbeds. Screens of willows

Site Name	Distance from the PEIR Boundary (km)	Nearest Segment of the ECC	Compass Direction	Area/Length of Site (ha/km)	Description
					round the banks of the pits have been planted in order to reduce disturbance to birds. A 0.3ha area of this LWT is also designated as Chapel Pit LWS.
Frampton Marsh	0.7	WM11 - The Haven to Marsh Road (both ECC options)	E	172ha	<p><u>Main Habitat:</u> Saltmarsh</p> <p>The reserve is part of the most mature saltmarsh in The Wash and is exceptionally rich in plants, birds, and invertebrates. The upper levels, which have extensive zones of sea-lavender, sea aster and sea-purslane, are intersected by large creeks, one of which was the old course of the River Witham before the new cut was made in 1880.</p> <p>The area supports regular breeders such as redshank, oystercatcher, reed bunting, meadow pipit and skylark. In winter the saltings attract wigeon, mallard, shelduck, teal and brent geese, with large flocks of finches and buntings, notably linnet and twite (<i>Linaria flavirostris</i>) and birds of prey such as hen harrier and merlin (<i>Falco columbarius</i>). The tidal mudflats form part of the wader feeding grounds, which give the Wash its international status. Large flocks of dunlin occur, as well as considerable numbers of grey plover, whimbrel, curlew, bar-tailed godwit, and greenshank.</p> <p>The Trust's reserve is grazed together with the RSPB's reserve to the south.</p>

Important Plant Areas

North Norfolk Coast and The Wash IPA is situated 146m east of WM11 - The Haven to Marsh Road segment of the Weston Marsh onshore ECC. The IPA has been identified for the vascular plant species richness of coastal habitats. *'The saltmarshes hold four species of sea-lavender (including matted sea-lavender (Limonium bellidifolium), a species now confined to Norfolk within the British Isles). Present are marsh-mallow, shrubby sea-blite (Suaeda vera), sea purslane, salt meadow sedge, sharp sea rush or sea aster. There are also several species of glasswort also known as 'samphire' and collected for the kitchen. The dunes and shingle spits hold sea-holly, sea-heath (Frankenia pauciflora), hoary mullein (Verbascum Thapsus), the bright sea-pea and yellow-horned poppy (Glaucium flavum), as well as bee and pyramidal orchids, and in a few places, the dune slacks are home to marsh helleborines (Epipactis palustris) and southern marsh orchids'* (Plantlife Website).

Ancient Woodland

There are no areas of ancient, semi-natural or ancient replanted woodland within the study area.

1.4.2 Habitats

Lincolnshire Node

Section 41 Priority Habitats and Lincolnshire BAP Habitats

The definitions for each of the UK and Lincolnshire BAP Habitats identified within the study area are provided below. Definitions have been taken from the Lincolnshire BAP (unless stated otherwise) as it provides more localised and relevant descriptions to attribute habitat features to. The exception to this is Mudflats which are a Section 41 Priority Habitat but are excluded from the Lincolnshire BAP as *'they are already well addressed through the management of the Humber and Wash European Marine Sites* (Lincolnshire Biodiversity Action Plan – 2011-2020).

The majority of data presented has been obtained from the MAGIC Website with total areas measured inhouse.

The three Lincolnshire BAP habitats; hedgerows, rivers, canals and drains, and ponds, lakes and reservoirs, were recorded during the Initial Habitat Survey, and are described further in Volume 2, Appendix 21.2: Initial Habitat Study.

Lincolnshire BAP and Priority Habitats within the study area are summarised in Table 1-5 for each segment, except for Ponds, Lakes, and Reservoirs, for which numbers are provided in the text. Volume 1, Chapter 23, Figure 21.1.5 illustrates the location and extent of the Lincolnshire BAP and Priority Habitats.

Coastal and Floodplain Grazing Marsh/ Grazing Marsh

Grazing marsh is defined within the Lincolnshire BAP as *'periodically inundated, or wet, grassland with a high water table; usually bounded by brackish or freshwater ditches that frequently support diverse plant and invertebrate communities. Traditional grazing marsh can also include areas used for hay production with aftermath grazing. The habitat is most usefully considered as a complex with many elements including grassland, drainage ditches, fen and reedbed: water-filled hollows and permanent ponds with emergent swamp communities are often a feature of the habitat. Grazing marsh also includes washlands (areas of deliberately flooded pasture or meadow) and can be found in natural river floodplains, both large and small, as well as along the coast.'*

There is no coastal and floodplain grazing marsh within the PEIR Boundary, but this habitat is present in the wider study area.

Coastal Sand Dunes

The Lincolnshire BAP states that coastal sand dunes develop where there *'is an adequate supply of sand in the intertidal zone and where onshore winds are prevalent. A sufficiently wide beach, the surface of which dries*

out between high tides, is also important. Dry sand is blown inland and deposited above the high-water mark, where it is trapped by strandline plants and dune-building grasses such as sand couch, marram and lyme grass.'

Coastal sand dunes total 6.74ha within the PEIR Boundary located predominantly at Anderby Creek Sand Dunes LWS, and at Anderby Marsh LWT, Annex 1 habitats include shifting dunes with marram (H2120) and dune grassland (H2130). Within the wider study area, Chapel Point Dunes South LWS is also designated for this priority habitat.

Lowland Mixed Deciduous Woodland

Within the Lincolnshire BAP '*Lowland mixed deciduous woodland... includes woodland growing on the full range of soil conditions from very acidic to base-rich and takes in most semi-natural woodland in southern and eastern England*'.

This habitat is relatively scarce within the PEIR Boundary, with only one linear woodland of 0.01ha in area separating residential properties from the beach at Moggs Eye.

Lowland Meadows

Within the Lincolnshire BAP, lowland meadows are defined '*as permanent grassland occurring on neutral soils and retaining elements of semi-natural swards through less-intensive agricultural management. It covers grassland that is normally grazed (pasture) and sites where hay is still cut, and the sward grazed before winter (meadow). This action plan only refers to species-rich examples of grassland of high nature conservation importance or areas that are restorable to such habitat. In non-agricultural settings, examples may be found on roadside verges, and in amenity areas or churchyards. Grasslands in such areas that do not fit this definition are covered in other plans for example churchyards and cemeteries, and parks and open spaces.*'

There are no lowland meadows with the PEIR Boundary, but this habitat is present in the wider study area.

Intertidal Mudflats

Intertidal mudflats which are defined as '*sedimentary intertidal habitats created by deposition in low energy coastal environments, particularly estuaries and other sheltered areas. Their sediment consists mostly of silts and clays with a high organic content... Mudflats are characterised by high biological productivity and abundance of organisms, but low diversity with few rare species. The mudflat biota reflects the prevailing physical conditions.*³ (JNCC, 2016a)

There are 2.51ha of mudflat within the intertidal area of the PEIR Boundary.

Reedbeds/ Reedbeds and Bittern

Within the Lincolnshire BAP reedbeds which are defined as '*wetland habitats dominated by stands of common reed Phragmites australis, where the water table is at or above ground level for most of the year. Often occurring in association with other wetland habitats (for example wet woodland, ponds and lakes, rivers and drains, fens and marshes, and saline lagoons), they are of immense conservation value, supporting a range of species*'.

There is 3.05ha of this habitat within the PEIR Boundary at Sea Bank Clay Pits SSSI and Chapel Pit LWT Reserve.

Traditional Orchard

Within the Lincolnshire BAP traditional orchards are defined as '*groups of fruit or nut trees planted on vigorous rootstocks at low densities in permanent grassland and managed in a low intensity way. This means little or no use of chemicals; relatively long-lived trees allowed to reach the veteran stage; and a permanent grass sward that is usually grazed by cattle or sheep or cut for hay. The minimum size of a traditional orchard is*

³ <https://data.jncc.gov.uk/data/ca179c55-3e9d-4e95-abd9-4edb2347c3b6/ukbap-baphabitats-17-hedgerows.pdf>

defined as five trees, with crown edges less than 20m apart (planting density will depend on the species of tree)'.

There are no traditional orchards within the PEIR Boundary, but this habitat is present in the wider study area.

Other Priority Habitats

In addition to those habitats identified during the desk study and listed above, the following habitats were identified during the Initial Habitat Survey which encompassed all accessible areas within the PEIR Boundary and a buffer of 100m. These include:

- Hedgerows and hedgerow trees;
- Rivers, Canals and Drains; and,
- Ponds, Lakes and Reservoirs.

Full descriptions along with total counts and lengths for each of these habitat types are provided in Appendix 21.2 *Habitat Survey Report*. A summary of these habitats is provided below.

Hedgerows and hedgerow trees

The Lincolnshire BAP defines hedgerows as *'linear strips of shrubs and trees often associated with features such as ditches, banks, and grass verges. They resemble woodland edge and scrub habitats and may contain relics of ancient woodland vegetation.'*

Further, a hedgerow is defined as *'any boundary line of trees or shrubs over 20m long and less than 5m wide, and where any gaps between the trees or shrub species are less than 20m wide... Any bank, wall, ditch, or tree within 2m of the centre of the hedgerow is considered to be part of the hedgerow habitat, as is the herbaceous vegetation within 2m of the centre of the hedgerow. All hedgerows consisting predominantly (i.e., 80% or more cover) of at least one woody UK native species are covered by this priority habitat.'*⁴ (JNCC, 2016b).

The habitat surveys recorded 7.4km of this habitat within the PEIR Boundary.

Rivers, Canals and Drains

The definition for UK BAP-quality rivers⁵ (JNCC, 2016c) is restricted to natural and near-natural running waters, headwaters, and those that support designated species. However, the Lincolnshire BAP covers all of Lincolnshire's watercourses including natural, modified, and man-made. The extensive network of drainage ditches that dominate arable field margins across the area are therefore covered under the BAP.

The habitat surveys recorded 22.8km of these linear habitats within the PEIR Boundary.

Ponds, Lakes and Reservoirs

Ponds, lakes and artificial still-waters, including reservoirs and fishing ponds amongst others, are included within the Lincolnshire BAP. Within this document a pond is defined as a *'small body of water – between 1m² and 2ha in area – which holds water for more than four months in a year. Anything larger than 2ha is defined as a lake.'*

The Lincolnshire BAP states that this habitat category aligns with the two UK Priority Habitats eutrophic standing waters and ponds.

Within the PEIR Boundary, 18 water bodies have been identified.

⁴ <https://data.jncc.gov.uk/data/ca179c55-3e9d-4e95-abd9-4edb2347c3b6/ukbap-baphabitats-17-hedgerows.pdf>

⁵ <https://data.jncc.gov.uk/data/01d6ab5b-6805-4c4c-8d84-16bfebe95d31/ukbap-baphabitats-45-rivers-2011.pdf>

Table 1-5: Priority Habitats for Lincolnshire Node

Priority Habitat	Total within PEIR Boundary	Total for Habitat survey area (100m buffer)	Total for desk study area (2km buffer)
LN1 - Landfall to A52 – Mumby			
Coastal and floodplain grazing marsh (ha)	0	N/A	34.44
Coastal sand dunes (ha)	6.74	N/A	25.97
Lowland mixed deciduous woodland (ha)	0	N/A	3.42
Mudflats (ha)	2.51	N/A	3.94
Reedbeds (ha)	3.05	N/A	3.15
Total Area (ha)	12.30	N/A	70.92
Hedgerows (km)	2.49	4.52	N/A
Rivers, Canals and Drains (km)	15.37	20.95	N/A
LN2 - A52 – Mumby to Lincolnshire Node			
Coastal and floodplain grazing marsh (ha)	0	N/A	14.81
Lowland mixed deciduous woodland (ha)	0.01	N/A	2.89
Lowland meadows (ha)	0	N/A	3.35
Traditional orchard (ha)	0	N/A	0.52
Total Area (ha)	0.01	N/A	21.56
Hedgerows (km)	4.95	8.69	N/A
Rivers, Canals and Drains (km)	7.52	11.38	N/A

Weston Marsh, via south of the A52 and Weston Marsh, via north of the A52

Section 41 Priority Habitats and Lincolnshire BAP Habitats

Where not previously described above for the Lincolnshire Node, definitions for UK and Lincolnshire BAP Habitats have been taken from the Lincolnshire BAP.

The majority of data presented has been obtained from the MAGIC Website with total areas measured inhouse.

The three Lincolnshire BAP habitats; hedgerows, rivers, canals and drains, and ponds, lakes, and reservoirs, were recorded during the Initial Habitat Survey, and are described further in Volume, Appendix 21.2: Initial Habitat Survey.

Lincolnshire BAP and Priority Habitats within the study area are summarised in Table 1-6 for each segment, except for Ponds, Lakes, and Reservoirs, for which numbers are provided in the text. Figure 21.1.6 illustrates the location and extent of the Lincolnshire BAP and Priority Habitats.

Coastal and Floodplain Grazing Marsh/ Grazing Marsh

Within the PEIR Boundary for Weston Marsh, via south of the A52 and Weston Marsh, via north of the A52 there are 17.49ha and 29.95ha of this habitat respectively. Table 1-6 presents data on the total area of this habitat recorded within each segment.

Coastal Saltmarsh

The Lincolnshire BAP states that coastal saltmarsh ‘occurs in the transitional zone between intertidal flats and terrestrial habitats. It develops in situations where sufficient shelter from strong wave action allows a net deposition of silt to occur. A limited number of salt tolerant plants colonise the deposited silts, between the mean high water of neap tides and the mean high water of spring tides, producing saltmarsh. Saltmarsh is an important resource for wading birds and wildfowl. It provides a hightide refuge for birds feeding on adjacent mudflats in winter and on passage in autumn/spring. Saltmarsh also provides sheltered nursery sites for several species of fish and can export nutrients to nourish neighbouring mudflats. Saltmarshes are important habitats for many rare invertebrates. It is also an excellent carbon sink; saltmarsh soils store 210g C m⁻² yr⁻¹, which is a substantial rate’.

Within the PEIR Boundary for both Weston Marsh, via south of the A52 and Weston Marsh, via north of the A52 there are 8.50ha of this habitat. Table 1-6 presents data on the total area of this habitat recorded within each segment.

Coastal Sand Dunes

Within the PEIR Boundary for both Weston Marsh, via south of the A52 and Weston Marsh, via north of the A52 there are 6.70ha of this habitat. Table 1-6 presents data on the total area of this habitat recorded within each segment.

Lowland Mixed Deciduous Woodland

Within the PEIR Boundary for Weston Marsh, via south of the A52 and Weston Marsh, via north of the A52 there are 2.56ha and 2.79ha of this habitat respectively. Table 1-6 presents data on the total area of this habitat recorded within each segment.

Traditional Orchard

There are no traditional orchards within the PEIR Boundaries for either Weston Marsh, via south of the A52 and Weston Marsh, via north of the A52, but this habitat is present in the wider study areas.

Lowland Calcareous Grassland

The Lincolnshire BAP states that ‘In the UK calcareous grasslands develop on shallow, lime-rich soils derived from limestone and chalk strata. These grasslands are now largely found on topographic features such as escarpments or dry valley slopes, on road verges and disused quarries. They are typically managed as components of pastoral or mixed-farming systems. The very rich flora of characteristic lime-loving plants makes the habitat important for a large range of invertebrates and a number of scarce and declining birds. Calcareous grassland is part of a mosaic of different habitats: scrub has always been part of this habitat, and its presence in small quantities is important in providing shelter and breeding sites for many species, but a balance must be achieved’.

There are no lowland calcareous grasslands within the PEIR Boundaries for either Weston Marsh, via south of the A52 and Weston Marsh, via north of the A52, but this habitat is present in the wider study areas.

Mudflats

Within the PEIR Boundaries for both Weston Marsh, via south of the A52 and Weston Marsh, via north of the A52 there are 5.98ha of this habitat. Table 1-6 presents data on the total area of this habitat recorded within each segment.

Reedbeds/ Reedbeds and Bittern

There is a total of 3.05ha of this habitat within the PEIR Boundary for Weston Marsh, via south of the A52 and 3.15ha for Weston Marsh, via north of the A52. Table 1-6 presents data on the total area of this habitat recorded within each segment.

Saline Lagoons

The Lincolnshire BAP includes ‘coastal lagoons and saline ditches, which are virtually tideless, natural or man-made bodies of saline (salty), hyper-saline (very salty) or brackish (slightly salty) water wholly or partially separated from the sea, but with some influx of sea water. They are usually shallow and warm and can contain a variety of substrata, often soft sediments which in turn may support tasselweeds (*Ruppia* spp.) and stoneworts (*Charales* spp.) as well as filamentous green and brown algae. In addition, lagoons contain invertebrates rarely found elsewhere: they also provide important habitat for a range of water birds’.

There are no saline lagoons within the PEIR Boundaries for either Weston Marsh, via south of the A52 and Weston Marsh, via north of the A52 but this habitat is present in the wider study areas.

Other Priority Habitats

In addition to those habitats identified during the desk study and list above, the following habitats were identified during the Initial Habitat Survey. These include:

- Hedgerow and Trees;
- Rivers, Canals and Drains; and,
- Ponds, Lakes and Reservoirs.

Descriptions of these habitat types are provided in Volume 2, Appendix 21.2: Initial Habitat Survey. Lengths for the linear habitats are presented for each segment in Table 1-6 below.

Within the PEIR Boundaries, 25 water bodies have been identified for Weston Marsh, via south of the A52 and 27 for Weston Marsh, via north of the A52.

Table 1-6: Priority Habitats for Weston Marsh via south of the A52 and Weston Marsh via north of the A52

Priority Habitat	Total within PEIR Boundary	Total for Habitat survey area (100m buffer)	Total for desk study area (2km buffer)
WM1 - Landfall to A52 – Hogsthorpe (Weston Marsh, via south of the A52 and Weston Marsh, via north of the A52)			
Coastal and floodplain grazing marsh (ha)	0	N/A	18.48
Coastal sand dunes (ha)	6.70	N/A	25.97
Lowland mixed deciduous woodland (ha)	0	N/A	3.71
Mudflats (ha)	2.50	N/A	3.94
Reedbeds (ha)	3.05	N/A	3.15
Traditional orchard (ha)	0	N/A	0.15

Priority Habitat	Total within PEIR Boundary	Total for Habitat survey area (100m buffer)	Total for desk study area (2km buffer)
Total Area	17.50	N/A	66.66
Hedgerows(km)	2.55	4.81	N/A
Rivers, Canals and Drains (km)	14.36	22.97	N/A
WM2 - A52 - Hogsthorpe to Marsh Lane (Weston Marsh, via south of the A52 and Weston Marsh, via north of the A52)			
Coastal and floodplain grazing marsh (ha)	6.77	N/A	128.07
Lowland mixed deciduous woodland (ha)	0	N/A	0.65
Traditional orchard (ha)	0	N/A	0.52
Total Area	6.77	N/A	129.24
Hedgerows(km)	2.53	4.74	N/A
Rivers, Canals and Drains (km)	13.60	21.66	N/A
WM3 - Marsh Lane to A158 - Skegness Road (Weston Marsh, via south of the A52 and Weston Marsh, via north of the A52)			
Coastal and floodplain grazing marsh (ha)	3.07	N/A	189.76
Lowland mixed deciduous woodland (ha)	0	N/A	1.02
Traditional orchard (ha)	0	N/A	0.12
Total Area	3.07	N/A	191.96
Hedgerows(km)	0.80	1.87	N/A
Rivers, Canals and Drains (km)	5.52	10.49	N/A
WM4 - A158 – Skegness Road to Low Road (Weston Marsh, via south of the A52 and Weston Marsh, via north of the A52)			
Coastal and floodplain grazing marsh (ha)	3.02	N/A	284.23
Lowland mixed deciduous woodland (ha)	0	N/A	9.49
Traditional orchard (ha)	0	N/A	0.21

Priority Habitat	Total within PEIR Boundary	Total for Habitat survey area (100m buffer)	Total for desk study area (2km buffer)
Total Area	3.07	N/A	302.67
Hedgerows(km)	0.14	0.74	N/A
Rivers, Canals and Drains (km)	7.60	13.07	N/A
WM5 – Low Road to Steeping River (Weston Marsh, via south of the A52)			
Coastal and floodplain grazing marsh (ha)	3.13	N/A	132.05
Deciduous woodland (ha)	0	N/A	3.57
Traditional orchard (ha)	0	N/A	0.21
Total Area	3.13	N/A	135.83
Hedgerows(km)	0.88	2.07	N/A
Rivers, Canals and Drains (km)	7.14	11.80	N/A
WM6 - Steeping River to Ivy House Farm/Marsh Yard (Weston Marsh, via south of the A52)			
Coastal and floodplain grazing marsh (ha)	0	N/A	37.05
Coastal saltmarsh (ha)	0	N/A	55.87
Lowland mixed deciduous woodland (ha)	0	N/A	5.34
Total Area	0	N/A	107.43
Hedgerows(km)	0	0.25	N/A
Rivers, Canals and Drains (km)	7.46	15.83	N/A
WM7 - Ivy House Farm/Marsh Yard to Staples Farm (Weston Marsh, via south of the A52)			
Coastal and floodplain grazing marsh (ha)	0	N/A	40.35
Coastal saltmarsh (ha)	0	N/A	367.52
Lowland mixed deciduous woodland (ha)	0	N/A	1.56
Saline lagoons (ha)	0	N/A	7.10
Total Area	0	N/A	602.06
Hedgerows(km)	1.02	1.87	N/A

Priority Habitat	Total within PEIR Boundary	Total for Habitat survey area (100m buffer)	Total for desk study area (2km buffer)
Rivers, Canals and Drains (km)	6.46	12.81	N/A
WM8 - Staples Farm to Crowhall Lane (Weston Marsh, via south of the A52)			
Coastal and floodplain grazing marsh (ha)	0.48	N/A	32.68
Coastal saltmarsh (ha)	0	N/A	287.30
Lowland mixed deciduous woodland (ha)	0.20	N/A	4.46
Traditional orchard (ha)	0	N/A	1.85
Total Area	0.72	N/A	634.00
Hedgerows(km)	0.08	1.45	N/A
Rivers, Canals and Drains (km)	13.01	22.68	N/A
WM9 - Crowhall Lane to Church End Lane (Weston Marsh, via south of the A52)			
Coastal and floodplain grazing marsh (ha)	0	N/A	20.56
Coastal saltmarsh (ha)	0	N/A	72.88
Lowland mixed deciduous woodland (ha)	0	N/A	2.13
Total Area	0	N/A	99.47
Hedgerows(km)	0.20	1.34	N/A
Rivers, Canals and Drains (km)	4.63	7.87	N/A
A1 - Low Road to Steeping River (Weston Marsh, via north of the A52)			
Coastal and floodplain grazing marsh (ha)	14.37	N/A	352.99
Deciduous woodland (ha)	0.43	N/A	10.07
Traditional orchard (ha)	0	N/A	0.21
Total Area	14.80	N/A	363.90
Hedgerows (km)	0	3.66	N/A
Rivers, Canals and Drains (km)	0	50.04	N/A
A2 – Steeping River to Fodder Dike Bank/Fen Bank (Weston Marsh, via north of the A52)			

Priority Habitat	Total within PEIR Boundary	Total for Habitat survey area (100m buffer)	Total for desk study area (2km buffer)
Coastal and floodplain grazing marsh (ha)	1.54	N/A	20.75
Deciduous woodland (ha)	0	N/A	12.14
Total Area	1.54	N/A	32.89
Hedgerows (km)	0	1.21	N/A
Rivers, Canals and Drains (km)	0	30.22	N/A
A3 – Fodder Dike Bank/Fen Bank to Broadgate (Weston Marsh, via north of the A52)			
Coastal and floodplain grazing marsh (ha)	0	N/A	8.22
Deciduous woodland (ha)	0	N/A	5.60
Traditional orchard (ha)	0	N/A	2.96
Total Area	0	N/A	16.78
Hedgerows (km)	0	1.95	N/A
Rivers, Canals and Drains (km)	0	38.30	N/A
A4 – Broadgate to Ings Drove (Weston Marsh, via north of the A52)			
Coastal and floodplain grazing marsh (ha)	0.16	N/A	24.85
Deciduous woodland (ha)	0	N/A	1.91
Traditional orchard (ha)	0	N/A	1.96
Total Area	0.16	N/A	28.72
Hedgerows (km)	0	3.07	N/A
Rivers, Canals and Drains (km)	0	51.07	N/A
A5 – Ings Drove to Church End Lane (Weston Marsh, via north of the A52)			
Coastal floodplain grazing marsh (ha)	0	N/A	20.76
Coastal saltmarsh (ha)	0	N/A	1.96
Deciduous woodland (ha)	0	N/A	1.70
Traditional orchard (ha)	0	N/A	0.20
Total Area	0	N/A	24.62

Priority Habitat	Total within PEIR Boundary	Total for Habitat survey area (100m buffer)	Total for desk study area (2km buffer)
Hedgerows(km)	0	3.90	N/A
Rivers, Canals and Drains (km)	0	31.57	N/A
WM10 - Church End Lane to The Haven (Weston Marsh, via south of the A52 and Weston Marsh, via north of the A52)			
Coastal and floodplain grazing marsh (ha)	0	N/A	20.33
Coastal saltmarsh (ha)	0	N/A	12.03
Lowland mixed deciduous woodland (ha)	2.36	N/A	6.44
Mudflats (ha)	0.77	N/A	10.88
Total Area	3.13	N/A	50.09
Hedgerows(km)	0.74	1.53	N/A
Rivers, Canals and Drains (km)	6.79	11.84	N/A
WM11 - The Haven to Marsh Road (Weston Marsh, via south of the A52 and Weston Marsh, via north of the A52)			
Coastal and floodplain grazing marsh (ha)	1.60	N/A	134.07
Coastal saltmarsh (ha)	0	N/A	245.28
Lowland mixed deciduous woodland (ha)	0.01	N/A	8.93
Mudflats (ha)	0.90	N/A	18.50
Saline lagoons (ha)	0	N/A	1.01
Traditional orchard (ha)	0	N/A	0.89
Total Area	2.51	N/A	412.60
Hedgerows(km)	0.63	1.52	N/A
Rivers, Canals and Drains (km)	7.79	15.57	N/A
WM12 - Marsh Road to Fosdyke Bridge (Weston Marsh, via south of the A52 and Weston Marsh, via north of the A52)			
Coastal and floodplain grazing marsh (ha)	0.79	N/A	7.89

Priority Habitat	Total within PEIR Boundary	Total for Habitat survey area (100m buffer)	Total for desk study area (2km buffer)
Coastal saltmarsh (ha)	2.07	N/A	144.44
Lowland mixed deciduous woodland (ha)	0	N/A	2.21
Mudflats (ha)	1.06	N/A	11.32
Saline lagoons (ha)	0	N/A	0.44
Traditional orchard (ha)	0	N/A	0.18
Total Area	3.92	N/A	170.92
Hedgerows(km)	0.55	1.38	N/A
Rivers, Canals and Drains (km)	10.15	15.61	N/A
WM13 - Fosdyke Bridge to Weston Marsh Substation North (Weston Marsh, via south of the A52 and Weston Marsh, via north of the A52)			
Coastal and floodplain grazing marsh (ha)	0	N/A	16.18
Coastal saltmarsh (ha)	0	N/A	2.20
Lowland mixed deciduous woodland (ha)	0	N/A	1.48
Mudflats (ha)	0	N/A	3.02
Traditional orchard (ha)	0	N/A	0.54
Total Area	1.19	N/A	25.42
Hedgerows(km)	0.53	0.90	N/A
Rivers, Canals and Drains (km)	9.41	14.72	N/A
WM14 - Fosdyke Bridge to Weston Marsh Substation South (Weston Marsh, via south of the A52 and Weston Marsh, via north of the A52)			
Coastal and floodplain grazing marsh (ha)	0	N/A	44.10
Coastal saltmarsh (ha)	3.46	N/A	37.79
Lowland mixed deciduous woodland (ha)	0.53	N/A	11.78
Lowland calcareous grassland (ha)	4.14	N/A	5.05

Priority Habitat	Total within PEIR Boundary	Total for Habitat survey area (100m buffer)	Total for desk study area (2km buffer)
Mudflats (ha)	2.02	N/A	12.26
Traditional orchard (ha)	0	N/A	0.16
Total Area	11.52	N/A	143.99
Hedgerows(km)	1.56	3.92	N/A
Rivers, Canals and Drains (km)	12.35	21.38	N/A

1.4.3 Species

Lincolnshire Node

A total of 924 records of protected or notable species were returned from GNLP for the Lincolnshire Node study area.

Plants

The GLNP returned no records for plants, however many of the designated sites within the study area support populations of important species.

Important plant records have been extracted from the citations for statutory and non-statutory sites and presented in Table 1-7. The conservation status of each plant is taken from the Botanical Society of Britain and Ireland (BSBI) rare plant registers (BSBI Website) which includes the Red Data List, and the plant list for North Lincolnshire (Kirby, 2017) which include Red Listed plants and those rarest plants to Lincolnshire. No species list was available for South Lincolnshire.

Table 1-7: Records of Important Plants within Designated Sites for Lincolnshire Node

Species	Importance	Designated Site	Nearest segment	Distance from PEIR Boundary (m)
Brackish water crowfoot	Red Data List species. Nationally rare and locally scarce	Sea Bank Clay Pits SSSI	LN1 – Landfall to A52 - Mumby	0
		Chapel Six Marshes LWS (probable)	LN1 – Landfall to A52 - Mumby	0
Green-winged orchid	Red Data List: Near threatened.	Spendluffe Meadow LWS and LWT	LN2 - A52 - Mumby to Lincolnshire Node	2
Soft hornwort	Red Data List species: Least concern. Nationally rare, locally very rare.	Sea Bank Clay Pits SSSI	LN1 – Landfall to A52 - Mumby	0

Invertebrates

The GLNP returned no records for invertebrates, however many of the designated sites within the study area support diverse assemblages and some important species.

One record of important invertebrate species within a designated site was returned for Lincolnshire Node, which has been extracted from citations and is detailed below;

'Gibraltar Point has an appreciable assemblage and number of rare wetland invertebrate species, representing an important habitat of a number of Red Data Book invertebrates, four of which are listed as endangered including; (Gymnacyla canella) and (Rhymosia connexa) and eight species listed as rare including (Athetis pallustris) and (Eupithecia extensaria). Gibraltar point supports a notable number of dragonfly species with up to 13 being recorded notably (Brachytron pratense).'

Fish

No records for species of fish were returned during the desk-based study.

At the time of writing a desk-based search of Environment Agency online records is underway and will be reported within the ES.

Amphibians

GCN are protected through inclusion in Schedule 5 of the Wildlife and Countryside Act 1981 (as amended) and Schedule 2 of the Conservation of Habitats and Species Regulations 2017 (as amended), and as a Species of Principal Importance under Section 41 of the Natural Environment Research Council (NERC) Act (2006). Smooth newt, common toad and common frog are protected under subsections 9(1) and 9(5) of the Wildlife and Countryside Act 1981 (as amended) which prohibit intentional killing and injuring.

GNLP records were returned four species of amphibian. These are:

- GCN (*Triturus cristatus*);
- Smooth newt (*Lissotriton vulgaris*);
- Common toad; and,
- Common frog.

The locations of records for amphibians are illustrated in Figure 21.1.7. There are no records of GCN within the PEIR Boundary and also relatively low numbers of common frog, common toad and smooth newt. Table 1-8 provides a summary of the number of records for each species with the PEIR Boundary and within the 2km study area beyond.

Table 1-8: Records for Amphibians within the Lincolnshire Node study area

Total Number of Records								
Route Section	Great crested newt		Smooth newt		Common toad		Common frog	
	Within PEIR Boundary	Beyond PEIR Boundary	Within PEIR Boundary	Beyond PEIR Boundary	Within PEIR Boundary	Beyond PEIR Boundary	Within PEIR Boundary	Beyond PEIR Boundary
LN1 - Landfall to A52 - Mumby	0	6	1	0	3	14	2	24
A52 – Mumby to Linc Node Substation	0	0	0	0	0	0	0	1
Lincolnshire Node (Total)	0	6	1	0	3	14	2	25

A search for Class Licence Survey Returns on the MAGIC website returned a single licence return within the study area, located approximately 1.2km east of the PEIR Boundary near Huttoft dating from 2015. Surveys to support the return had recorded GCN on two separate visits.

Reptiles

Both common lizard (*Zootoca vivipara*) and grass snake (*Natrix natrix*) are protected from intentional killing, injuring and sale under Schedule 5 of the Wildlife and Countryside Act 1981 (as amended) and are listed as a Species of Principal Importance under Section 41 of the NERC Act⁶.

GMLP returned records of nine common lizard and nine grass snake from within the study area but outside the PEIR Boundary. The nearest segment is LN1 – Landfall to A52- Mumby. Records are shown on Figure 21.1.8.

Bats

All bat species, their breeding sites and resting places are protected in the UK through inclusion in Schedule 5 of the Wildlife and Countryside Act 1981 (as amended) and in Schedule 2 of the Conservation of Habitats and Species Regulations 2017 (as amended) and are listed as Species of Principal Importance under Section 41 of the NERC Act.

GMLP returned records of roosts for up to eight species of bat within the Lincolnshire Node study area. These are:

- Brown long-eared bat (*Plecotus auritus*);
- Common pipistrelle (*Pipistrellus pipistrellus*);
- Soprano pipistrelle (*Pipistrellus pygmaeus*);
- Nathusius' pipistrelle (*Pipistrellus nathusii*);
- Noctule bat (*Nyctalus noctula*);
- Myotis species (*Myotis* sp.); and,
- Whiskered/ Brandt's Bat (*Myotis mystacinus/Myotis brandtii*).

Only one roost record was returned from within the PEIR Boundary, and that was of a common pipistrelle roost.

Table 1-9 provides the records for bat roosts within the 5km study area. Data for 'bats' refer to records where species level of identification was not provided and have been included to provide context on bat presence. Those records for 'pipistrelle' and 'Myotis' were available to genus level only.

There are other (non-roost) records for brown long-eared, common pipistrelle, soprano pipistrelle, Nathusius' pipistrelle (*Pipistrellus* sp.), Myotis bat, Whiskered/Brandt's, and Noctule from within the study area. The locations of records for bats are illustrated in Figure 21.1.9 with records for bat roost locations given in Figure 21.1.10.

6

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1120525/Section_41_of_the_Natural_Environment_and_Rural_Communities_NERC_Act_2006_habitats_and_species_of_principal_importance_in_England.ods

Table 1-9: Records for Roosting Bats within the 5km study area for Lincolnshire Node

Total Number of Records												
Route Section	Bat		Brown Long-eared Bat		Pipistrelle Species		Common Pipistrelle		Soprano Pipistrelle		Natterer's Bat	
	Inside PEIR Boundary	Beyond PEIR Boundary	Inside PEIR Boundary	Beyond PEIR Boundary	Inside PEIR Boundary	Beyond PEIR Boundary	Inside PEIR Boundary	Beyond PEIR Boundary	Inside PEIR Boundary	Beyond PEIR Boundary	Inside PEIR Boundary	Beyond PEIR Boundary
LN1 – Landfall to A52 – Mumby	0	0	0	1	0	1		0	0	0	1	0
A52 – Mumby to Lincolnshire Node Substation	0	6	0	13	0	8		0	6	0	13	0
Lincolnshire Node (Total)	0	6	0	14	0	9		0	6	0	14	0

Badger

Badgers are legally protected under the Protection of Badgers Act 1992 which makes it illegal to kill, injure or take a badger or to intentionally or recklessly interfere with a badger sett. Sett interference includes disturbing badgers whilst they are occupying a sett or obstructing access to it.

GNLP returned 207 records of badger from within the study area, 27 of which were recorded within the PEIR Boundary. Details of badger records are presented separately in the confidential Volume 2, Appendix 21.3 Confidential Badger Surveys.

Otter

Otter are protected fully protected under Schedule 5 of the Wildlife and Countryside Act 1981 (as amended) and the Schedule 2 of The Conservation of Habitats and Species Regulations 2017, and are listed as a Species of Principal Importance under Section 41 of the NERC Act.

GNLP returned 18 records for otter from within the study area. These included two records from within the PEIR Boundary, one in each segment.

Figure 21.1.11 illustrates the locations of these records.

Water Vole

Water vole are fully protected through their inclusion in Schedule 5 of the Wildlife and Countryside Act 1981 (as amended), and are listed as a Species of Principal Importance under Section 41 of the NERC Act.

GNLP returned 466 records for water vole from within the study area, with 36 records from within the PEIR Boundary, 26 from within the segment LN1 – Landfall to A52 – Mumby, and 10 within the segment LN2 – A52 – Mumby to Lincolnshire Node.

Figure 21.1.11 illustrates the locations of these records.

Other Terrestrial Mammals

No records were returned for any other species of terrestrial mammals within the Lincolnshire Node study area.

Invasive Species

GNLP did not return any records of invasive species.

The invasive, non-native species (INNS) New Zealand pigmyweed has been recorded at Mogg's Eye Sea Bank LWS.

Weston Marsh, via south of the A52 and Weston Marsh, via north of the A52

Plants

There are no records of important plants within the PEIR Boundary for either Weston Marsh, via south of the A52 and Weston Marsh, via north of the A52.

GLNP returned records for two important plant species from within the study area: bluebell and Deptford pink which are both protected under the Wildlife and Countryside Act 1981 (as amended). Deptford pink is also classified as endangered on the Vascular Plant Red Data List for Great Britain (Cheffings, C.M. *et al.*, 2015). The locations of important plant records returned from GLNP are provided in Figure 21.1.12.

Important plant records have also been extracted from the citations for statutory and non-statutory sites and are presented in Table 1-10. The conservation status of each plant is taken from the BSBI Website and the Lincolnshire Naturalist Union Website. No species list was available for South Lincolnshire.

A single record for Boston horsetail exists on the banks of The Haven, upstream of the onshore ECC. In England, Boston horsetail is known only to occur near Boston and in North Somerset. In 2019, the Environment Agency propagated and introduced Boston Horsetail at The Haven as part of management and maintenance work at Boston Barrier (Environment Agency, 2019).

Table 1-10: Records of Important Plants within Designated Sites for Weston Marsh, via south of the A52 and Weston Marsh, via north of the A52

Species	Importance	Designated Site	Nearest segment	Distance from PEIR Boundary (km)
Autumn ladies' tresses orchid	Red Data List: Nationally threatened. Locally very rare.	Surfleet Bank LWS	WM13 - Fosdyke Bridge to Weston Marsh Substation North (both onshore ECC options)	0.5
Bluebell	Protected under Schedule 8 of the WCA 1981 (as amended).	Recorded at Graves Farm, near Fosdyke.	WM12 - Marsh Road to Fosdyke Bridge (both routes)	0.5
Boston (or branched) Horsetail	Protected under Schedule 8 of the WCA 1981 (as amended). Red Data List: Vulnerable. Nationally scarce; only present near Boston and in North Somerset.	Slippery Gowt Sea Bank LWS	WM10 - Church End Lane to The Haven (both onshore ECC options)	1.5
Brackish water crowfoot	Red Data List species: Endangered. Nationally rare and locally scarce.	Sea Bank Clay Pits SSSI	WM1 - Landfall to A52 – Hogsthorpe (both onshore ECC options)	0
		Chapel Six Marshes LWS	WM1 - Landfall to A52 – Hogsthorpe (both onshore ECC options)	0
Deptford pink	Protected under Schedule 8 of the WCA 1981 (as amended). Red Data List: Nationally endangered. JNCC Species Status Assessment: nationally scarce. Priority Species; NERC Section 41 species. Recorded as locally extinct.	Risegate Eau LWS	WM13 - Fosdyke Bridge to Weston Marsh Substation North (both onshore ECC options)	0

Species	Importance	Designated Site	Nearest segment	Distance from Boundary (km)	PEIR
Glasswort species	Many are nationally scarce and locally rare or scarce.	Chapel Six Marshes LWS (probable)	WM1 - Landfall to A52 – Hogsthorpe (both onshore ECC options)	0	
		Steeping Marsh LWS	WM6 - Steeping River to Ivy House Farm/Marsh Yard (Weston Marsh, via south of the A52)	1.0	
Marsh-mallow	Red Data List species: Least concern. Nationally scarce; locally scarce.	Shore Drain Road LWS	WM9 - Crowhall Lane to Church End Lane (Weston Marsh, via south of the A52)	0	
		Dove's Drain LWS	WM9 - Crowhall Lane to Church End Lane (Weston Marsh, via south of the A52)	0	
Ribbon-leaved water-plantain	Red Data List: critically endangered. Schedule 8 of the WCA 1981 (as amended). NERC Section 41 species.	Vernatt's Drain LWS	WM14 - Fosdyke Bridge to Weston Marsh Substation South (both onshore ECC options)	0.7	
Soft hornwort	Red Data List species: Least concern. Nationally rare, locally very rare.	Sea Bank Clay Pits SSSI	WM1 - Landfall to A52 – Hogsthorpe (both onshore ECC options)	0	

Invertebrates

The GLNP returned no records for invertebrates. Records for important invertebrate species within the 2km study area have instead been extracted from LWS citations and are provided in Table 1-11.

Table 1-11: Records of important invertebrates within Designated Sites for Weston Marsh

Designation	Notes on Invertebrates
Within the PEIR Boundary	
Sea Bank Clay Pits SSSI	Supports a rich aquatic invertebrate fauna, notably beetles, including several nationally scarce species and others new to the County.
Havenside LWS	Significant Value to invertebrates.
Risegate Eau	Leslie Hebdon’s records show that there is an excellent selection of bees, wasps, and other insects west of Allen’s Bridge. One of these, the large garden bumblebee (or ruderal bumblebee), is a nationally notable UK BAP species, while the nationally rare tawny longhorn beetle is listed as RDB3. The abundance of dandelion and white dead-nettle here is important in providing food for bees immediately after they emerge from hibernation.
Beyond the PEIR Boundary	
Saltfleetby-Theddlethorpe Dunes SSSI (and NNR)	Invertebrates recorded include several notable moths and nationally rare species from the moth and beetle families.
Gibraltar Point SPA, Ramsar, SSSI	Ramsar: Gibraltar Point has an appreciable assemblage and number of rare wetland invertebrate species, representing an important habitat of a number of Red Data Book invertebrates four of which are listed as endangered including, <i>Gymnacyla canella</i> and <i>Rhymosia connexa</i> and eight species listed as rare including <i>Athetis pallustris</i> and <i>Eupithecia extensaria</i> . Gibraltar point supports a notable number of dragonfly species with up to 13 being recorded notably <i>Brachytron pratense</i> . SSSI: Invertebrates include Lepidoptera, Diptera and Coleoptera, including 12 species which are nationally rare.
Calceby Marsh SSSI	The site is one of the few stations in the county, outside the Cambridgeshire Fens, where the marsh moth occurs.
Vernatt’s Drain LWS	Vulnerable small heath, and Roesel’s bush-cricket recorded at this LWS.

Fish

GLNP did not return any records of fish from within the PEIR Boundaries for either Weston Marsh, via south of the A52 and Weston Marsh, via north of the A52.

GLNP returned records of two species from the wider study areas. Three records for river lamprey were returned from the River Welland at the southern end of both onshore ECC options, and one record of burbot (*Lota lota*) from a fishing lake approximately 1.5km west of the PEIR Boundary for Weston Marsh, via north of the A52 near Wainfleet All Saints.

At the time of writing, a desk-based search of Environment Agency online records is underway and will be reported within the ES.

Amphibians

GNLP returned records of four species of amphibian from within the study area. These are:

- GCN;
- Smooth newt;
- Common toad; and,
- Common frog.

No records of GCN were returned from within wither of the PEIR Boundaries with relatively low numbers of records of common frog, common toad and smooth newt returned.

Table 1-12 provides a summary of amphibians records received from GLNP for both Weston Marsh, via south of the A52 and Weston Marsh, via north of the A52. The locations of amphibian records returned from GLNP are provided in Figure 21.1.13.

Table 1-12: Records for Amphibians within the study area for Weston Marsh, via south of the A52 and Weston Marsh, via north of the A52

Segment (and option)	Total Number of Records							
	Great crested newt		Smooth newt		Common toad		Common frog	
	Inside PEIR Boundary	Beyond PEIR Boundary	Inside PEIR Boundary	Beyond PEIR Boundary	Inside PEIR Boundary	Beyond PEIR Boundary	Inside PEIR Boundary	Beyond PEIR Boundary
WM1 - Landfall to A52 – Hogsthorpe (both onshore ECC options)	0	3	1	1	3	14	2	27
WM2 - A52 – Hogsthorpe to Marsh Lane (both onshore ECC options)	0	0	0	0	0	0	0	1
WM3 - Marsh Lane to A158 – Skegness Road (both onshore ECC options)	0	16	0	0	0	0	0	1

Total Number of Records								
WM4 - A158 – Skegness Road – Low Road (both onshore ECC options)	0	5	0	0	0	0	0	1
WM5 – Low Road to Steeping River (both onshore ECC options)	0	0	0	1	0	3	0	5
WM6 – Steeping River – Ivy House Farm/Marsh Yard (both onshore ECC options)	0	1	0	0	0	2	0	1
A2 - Steeping River- Fodder Dyke Bank (Weston Marsh, via north of the A52)	0	7	0	3		1		
WM7 - Ivy House Farm/Marsh Yard – Staples Farm (both onshore ECC options)	0	0	0	0	0	2	0	2
WM8 - Staples Farm – Crowhall Lane (Weston Marsh, via south of the A52)	0	0	0	1	0	2	0	3
WM9 - Crowhall Lane – Church End Lane (Weston Marsh, via south of the A52)	0	0	0	2	0	0	0	1
Church End Lane – The Haven	0	0	0	1	0	0	0	1
WM11 - The Haven – Marsh Road (both onshore ECC options)	0	0	0	0	0	2	0	0
WM12 - Marsh Road – Fosdyke Bridge (both onshore ECC options)	0	0	0	0	0	0	0	0
WM13 - Fosdyke Bridge – Weston Marsh Substation North (both onshore ECC options)	0	0	0	0	1	2	0	0
WM14 - Fosdyke Bridge – Weston Marsh Substation South (both onshore ECC options)	0	0	0	0	1	1	0	0
A3 - Fodder Dike Bank/Fen Bank to Broadgate	0	0	0	0	2	3	2	3
A4 - Broadgate to Ings Drove (Weston Marsh, via north of the A52)	0	0	0	0	0	6	0	0
A5 - Ings Drove to Church End Lane (Weston Marsh, via north of the A52)	0	0	0	0	0	1	0	0

Total Number of Records								
Weston Marsh, via south of the A52 (Total)	0	24	1	6	4	23	2	37
Weston Marsh, via north of the A52 (Total)	0	36	1	14	6	37	4	61

Class Licence Survey Returns published on the MAGIC website include records of GCN presence at four locations within the study area near to the segment WM4 - A158 – Skegness Road – Low Road (both options). Details are provided in Table 1-13.

The record from grid reference TF 520536 appears to be identical to that from TF 520653 and is considered to be an erroneous duplicate.

Table 1-13: Records of GCN Class Licence Surveys within 2km for Weston Marsh

Location	Date	Details
TF 520653 c.0.3km west of PEIR Boundary	26.04.17; 09.05.17; 13.06.17; 21.06.17 and 24.06.17.	Positive result of GCN presence found during every survey.
TF 517651 c.0.5km west of PEIR Boundary	10.05.17; 15.05.17; 25.05.17 and 05.06.17	Positive result of GCN presence found during every survey. A peak count of 9 individuals was made on 25.05.17 and again on 30.05.17.
TF 500565 c.0.6km west of PEIR Boundary	30.05.17	Positive result of GCN presence from single survey.
TF 520536 c.0.3km west of PEIR Boundary	26.04.17; 09.05.17; 13.06.17; 21.06.17 and 24.06.17.	This is a repeat of survey data from a pond at TF 520653. It is presumed to be an error and has been removed from the assessment.

Reptiles

GNLP returned records of three species of reptile from the study area for both options. These are:

- Common lizard;
- Grass snake; and,
- Slow worm (*Anguis fragilis*).

A single record of grass snake was returned from within the PEIR Boundary from the River Welland near segment WM12 - Marsh Road – Fosdyke Bridge (both options).

Table 1-14 provides a summary of the records for each species and Figure 21.1.14 illustrates the locations.

Table 1-14: Records for Reptiles within the Weston Marsh study area Weston Marsh, via south of the A52 and Weston Marsh, via north of the A52

Total Number of Records						
Segment (and option)	Grass snake		Common lizard		Slow worm	
	Inside PEIR Boundary	Beyond PEIR Boundary	Inside PEIR Boundary	Beyond PEIR Boundary	Inside PEIR Boundary	Beyond PEIR Boundary
WM1 - Landfall to A52 – Hogsthorpe (both onshore ECC options)	0	9	0	9	0	1
WM2 - A52 – Hogsthorpe to Marsh Lane (both onshore ECC options)	0	4	0	0	0	0
WM3 - Marsh Lane to A158 – Skegness Road (both onshore ECC options)	0	4	0	0	0	0
WM4 - A158 – Skegness Road – Low Road (both onshore ECC options)	0	2	0	0	0	0
WM5 – Low Road to Steeping River (Weston Marsh, via south of the A52)	0	11	0	0	0	0
WM6 – Steeping River – Ivy House Farm/Marsh Yard (both onshore ECC options) (Weston Marsh, via south of the A52)	0	0	0	0	0	0
WM7 - Ivy House Farm/Marsh Yard – Staples Farm (both onshore ECC options) (Weston Marsh, via south of the A52)	0	1	0	0	0	0
WM8 - Staples Farm – Crowhall Lane (both onshore ECC options)	0	2	0	0	0	0
WM9 - Crowhall Lane – Church End Lane (Weston Marsh, via south of the A52)	0	0	0	0	0	0
A1 - Low Road to Steeping River (Weston Marsh, via north of the A52)	0	7	0	0	0	0
A2 – Steeping River to Fodder Dike Bank/Fen Bank (Weston Marsh, via north of the A52)	0	6	0	0	0	0
A3 - Fodder Dike Bank/Fen Bank to Broadgate (Weston Marsh, via north of the A52)	2	3	0	0	0	0
A4 - Broadgate to Ings Drove (Weston Marsh, via north of the A52)	0	5	0	0	0	0
A5 - Ings Drove to Church End Lane (Weston Marsh, via north of the A52)	0	2	0	0	0	0
WM10 – Church End Lane – The Haven (both onshore ECC options)	0	2	0	0	0	0
WM11 - The Haven – Marsh Road (both onshore ECC options)	0	21	0	0	0	1
WM12 - Marsh Road – Fosdyke Bridge (both onshore ECC options)	0	0	0	0	0	0
WM13 - Fosdyke Bridge – Weston Marsh Substation North (both onshore ECC options)	0	1	0	0	0	0
WM14 - Fosdyke Bridge – Weston Marsh Substation South (both onshore ECC options)	1	1	0	0	0	0
Weston Marsh, via south of the A52 (Total)	1	58	0	9	0	2

Total Number of Records						
Weston Marsh, via north of the A52 (Total)	3	81	0	9	0	2

Bats

Within the PEIR Boundary for Weston Marsh, via south of the A52 and Weston Marsh, via north of the A52 there is one record of a roost for brown long-eared and two records of roosts for pipistrelle bat.

There are other (non-roost) records for both options; brown long-eared, common pipistrelle, soprano pipistrelle, Pipistrellus sp., Daubenton’s (*Myotis daubentonii*), noctule, with additionally Nathusius’ pipistrelle and Nyctalus sp. for Weston Marsh, via south of the A52 and Western barbastelle (*Barbastellus barbastellus*) for Weston Marsh, via north of the A52.

The locations of records for bats are illustrated in Figure 21.1.15 with records for bat roost locations given in Figure 21.1.16.

Table 1-15 provides a summary of the number of records for each species with the 2km study area. Table 1-16 provides the records for bat roosts within the 5km study area. Within the tables, data relating to ‘bats’ refer to records where species level of identification was not provided and have been included to provide context on bat presence within the study area only. Those records for ‘pipistrelle’ and ‘Myotis’ were available to genus level only.

Table 1-15: Records for Bats within the Weston Marsh study area - Weston Marsh via south of the A52 and Weston Marsh via north of the A52

Total Number of Records																						
Segment (and option)	Unidentified Bat		Brown Long-eared Bat		Pipistrelle Species		Common Pipistrelle		Soprano Pipistrelle		Nathusius' Pipistrelle		Noctule Bat		Myotis Species		Daubenton's Bat		Nyctalus Species		Western Barbastelle	
	Inside PEIR Boundary	Beyond PEIR	Inside PEIR Boundary	Beyond PEIR	Inside PEIR Boundary	Beyond PEIR	Inside PEIR Boundary	Beyond PEIR	Inside PEIR Boundary	Beyond PEIR	Inside PEIR Boundary	Beyond PEIR	Inside PEIR Boundary	Beyond PEIR	Inside PEIR Boundary	Beyond PEIR	Inside PEIR Boundary	Beyond PEIR	Inside PEIR Boundary	Beyond PEIR	Inside PEIR Boundary	Beyond PEIR
WM1 - Landfall to A52 – Hogsthorpe (both options)	1	18	0	0	0	0	0	5	0	1	0	1	0	1	0	0	0	0	0	0	0	0
WM2 - A52 – Hogsthorpe to Marsh Lane (both options)	0	5	0	0	2	1	0	7	0	0	0	0	0	3	0	0	0	0	0	0	0	0
WM3 - Marsh Lane to A158 – Skegness Road (both options)	0	7	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
WM4 - A158 – Skegness Road – Low Road (both options)	0	6	0	2	1	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
WM5 – Low Road to Steeping River (Weston Marsh, via south of the A52)	0	4	0	4	0	3	0	5	0	0	0	0	0	0	0	1	0	1	0	0	0	0
WM6 – Steeping River – Ivy House	0	16	0	2	0	6	0	6	0	2	0	0	0	0	0	1	0	0	0	0	0	0

Total Number of Records																							
Farm/Marsh Yard (both options) (Weston Marsh, via south of the A52)																							
WM7 - Ivy House Farm/Marsh Yard – Staples Farm (both options) (Weston Marsh, via south of the A52)	0	25	0	0	0	2	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
WM8 - Staples Farm – Crowhall Lane (Weston Marsh, via south of the A52)	0	25	0	2	0	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
WM9 - Crowhall Lane – Church End Lane (Weston Marsh, via south of the A52)	3	19	0	0	0	11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
A1 - Low Road to Steeping River (Weston Marsh, via north of the A52)	0	23	0	0	0	10	0	7	0	0	0	0	0	1	0	1	0	1	0	0	0	0	
A2 – Steeping River to Fodder Dike Bank/Fen Bank (Weston Marsh, via north of the A52)	0	19	0	0	0	8	0	3	0	1	0	0	0	1	0	0	0	0	0	0	0	2	
A3 - Fodder Dike Bank/Fen Bank to	0	54	0	0	0	9	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	

Total Number of Records																							
Broadgate (Weston Marsh, via north of the A52)																							
A4 - Broadgate to Ings Drove (Weston Marsh, via north of the A52)	0	38	0	0	0	8	0	7	0	1	0	0	0	0	0	0	0	2	0	0	0	0	
A5 - Ings Drove to Church End Lane (Weston Marsh, via north of the A52)	1	51	0	0	0	20	0	6	0	4	0	0	0	0	0	4	1	3	0	0	0	0	
WM10 – Church End Lane – The Haven (both options)	0	28	0	0	0	6	0	5	0	4	0	0	0	0	0	0	0	3	0	0	0	0	
WM11 - The Haven – Marsh Road (both options)	0	10	0	0	0	3	0	2	0	2	0	1	0	5	0	2	0	2	0	1	0	0	
WM12 - Marsh Road – Fosdyke Bridge (both options)	0	15	0	0	0	0	0	9	0	2	0	0	0	2	0	0	0	0	0	0	0	0	
WM13 - Fosdyke Bridge – Weston Marsh Substation North (both options)	0	12	0	0	0	2	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	
WM14 - Fosdyke Bridge – Weston	1	22	1	2	2	2	3	14	1	2	0	0	1	0	2	1	0	7	0	0	0	0	

Total Number of Records																						
Marsh Substation South (both options)																						
Weston Marsh, via south of the A52 (Total)	5	212	2	5	5	51	3	55	1	13	0	2	1	11	2	6	0	13	0	1	0	0
Weston Marsh, via south of the A52 (Total)	6	397	1	5	5	106	3	79	1	19	0	2	1	13	2	7	1	19	0	1	0	2

Table 1-16: Records for Roosting Bats within the 5km study area for Weston Marsh - Weston Marsh via south of the A52 and Weston Marsh via north of the A52

Segment (and option)	Total Number of Records																			
	Unidentified Bat		Brown Long-eared Bat		Pipistrelle Species		Common Pipistrelle		Soprano Pipistrelle		Nathusius' Pipistrelle		Noctule Bat		Myotis Species		Daubenton's Bat		Nyctalus Species	
	Inside PEIR Boundary	Beyond PEIR	Inside PEIR Boundary	Beyond PEIR	Inside PEIR Boundary	Beyond PEIR	Inside PEIR Boundary	Beyond PEIR	Inside PEIR Boundary	Beyond PEIR	Inside PEIR Boundary	Beyond PEIR	Inside PEIR Boundary	Beyond PEIR	Inside PEIR Boundary	Beyond PEIR	Inside PEIR Boundary	Beyond PEIR	Inside PEIR Boundary	Beyond PEIR
WM1 - Landfall to A52 – Hogsthorpe (both options)	0	1	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	2
WM2 - A52 – Hogsthorpe to Marsh Lane (both options)	0	0	0	2	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	2
WM3 - Marsh Lane to A158 – Skegness Road (both options)	0	3	0	1	0	10	0	0	0	0	0	0	0	0	0	0	0	3	0	1
WM4 - A158 – Skegness Road – Low Road (both options)	0	0	0	7	0	47	0	5	0	0	0	0	0	0	0	0	0	0	0	7
WM5 – Low Road to Steeping River (via south of the A52)	0	1	0	4	0	4	0	4	0	0	0	0	0	0	0	0	0	1	0	4
WM6 – Steeping River – Ivy House Farm/Marsh Yard (both	0	4	0	4	0	7	0	2	0	1	0	0	0	0	0	0	0	4	0	4

Total Number of Records																				
options) (via south of the A52)																				
WM7 - Ivy House Farm/Marsh Yard – Staples Farm (both options) (via south of the A52)	0	3	0	1	0	6	0	0	0	0	0	0	0	0	0	0	0	3	0	1
WM8 - Staples Farm – Crowhall Lane (via south of the A52)	0	4	0	3	0	15	0	4	0	1	0	0	0	0	0	1	0	4	0	3
WM9 - Crowhall Lane – Church End Lane (via south of the A52)	0	0	0	3	0	8	0	0	0	0	0	0	0	0	0	0	0	0	0	3
A1 - Low Road to Steeping River (via north of the A52)	0	7	12	0	50	0	9	0	0	0	0	0	0	0	0	0	0	7	12	0
A2 – Steeping River to Fodder Dike Bank/Fen Bank (via north of the A52)	0	0	0	1	0	4	0	2	0	1	0	0	0	0	0	0	0	0	0	1
A3 - Fodder Dike Bank/Fen Bank to Broadgate (via north of the A52)	0	3	0	1	0	4	0	0	0	0	0	0	0	0	0	0	0	3	0	1

Total Number of Records																				
A4 - Broadgate to Ings Drove (via north of the A52)	0	1	0	3	0	9	0	3	0	1	0	0	0	0	0	1	0	1	0	3
A5 - Ings Drove to Church End Lane (via north of the A52)	0	7	0	6	0	20	0	2	0	0	0	0	0	0	0	3	0	7	0	6
WM10 – Church End Lane – The Haven (both options)	0	3	0	3	0	4	0	1	0	0	0	0	0	0	0	3	0	3	0	3
WM11 - The Haven – Marsh Road (both options)	0	8	0	5	0	7	0	2	0	0	0	6	0	0	0	0	0	8	0	5
WM12 - Marsh Road – Fosdyke Bridge (both options)	0	5	0	7	0	6	0	6	0	1	0	0	0	1	0	0	0	5	0	7
WM13 - Fosdyke Bridge – Weston Marsh Substation North (both options)	0	3	0	2	0	6	0	1	0	1	0	0	0	1	0	0	0	3	0	2
WM14 - Fosdyke Bridge – Weston Marsh Substation South (both options)	0	6	1	5	1	8	0	3	0	3	0	0	0	0	0	5	0	6	1	5

Badger

GNLP returned just under 400 records of badger from within the Weston Marsh, via north of the A52 study area and over 500 records of badger within the study area for Weston Marsh, via south of the A52. Of these, only 35 of which are from within the Weston Marsh, via south of the A52 PEIR Boundary, and 37 from within the PEIR Boundary for Weston Marsh, via north of the A52. Details of badger records are presented separately in Volume 2 Appendix 21.3: Confidential Badger Survey.

Otter

GNLP returned 59 records of otter within the study area for Weston Marsh, via south of the A52 and 108 from within the study area for Weston Marsh, via north of the A52. Of these, 12 were from within the PEIR Boundary for Weston Marsh, via south of the A52 and 13 from within the PEIR Boundary for Weston Marsh, via north of the A52.

Table 1-17 presents a summary of the otter records (along with water vole records) and the locations are shown in Figure 21.1.17.

Water Vole

GNLP returned over 2000 records of water voles within the study area for Weston Marsh, via south of the A52 and nearly 3000 for the study area for Weston Marsh, via south of the A52. Of these, 177 were from within the PEIR Boundary for Weston Marsh, via south of the A52 and 215 from within the PEIR Boundary for Weston Marsh, via north of the A52.

Table 1-17 presents a summary of the records, and the locations are shown in Figure 21.1.17.

Table 1-17: Records for Otter and Water Voles within the Weston Marsh via south of the A52 and Weston Marsh via north of the A52 study areas

Segment (and option)	Total Number of Records					
	Otter		Water vole			
	Inside PEIR Boundary	Beyond PEIR Boundary	Inside PEIR Boundary	Beyond PEIR Boundary	Inside PEIR Boundary	Beyond PEIR Boundary
WM1 - Landfall to A52 – Hogsthorpe (both options)	1	16	17		217	
WM2 - A52 – Hogsthorpe to Marsh Lane (both options)	0	7	21		453	
WM3 - Marsh Lane to A158 – Skegness Road (both options)	0	0	21		410	
WM4 - A158 – Skegness Road – Low Road (both options)	0	1	40		333	
WM5 – Low Road to Steeping River (Weston Marsh, via south of the A52)	0	0	18		131	
WM6 – Steeping River – Ivy House Farm/Marsh Yard (both options) (Weston Marsh, via south of the A52)	0	0	16		127	

Total Number of Records				
WM7 - Ivy House Farm/Marsh Yard – Staples Farm (both options) (Weston Marsh, via south of the A52)	0	4	0	5
WM8 - Staples Farm – Crowhall Lane (Weston Marsh, via south of the A52)	0	0	0	3
WM9 - Crowhall Lane – Church End Lane (Weston Marsh, via south of the A52)	0	0	0	1
A1 - Low Road to Steeping River (Weston Marsh, via north of the A52)	1	11	38	579
A2 – Steeping River to Fodder Dike Bank/Fen Bank (Weston Marsh, via north of the A52)	0	20	0	39
A3 - Fodder Dike Bank/Fen Bank to Broadgate (Weston Marsh, via north of the A52)	0	0	0	2
A4 - Broadgate to Ings Drove (Weston Marsh, via north of the A52)	0	8	0	10
A5 - Ings Drove to Church End Lane (Weston Marsh, via north of the A52)	0	9	0	4
WM10 – Church End Lane – The Haven (both options)	0	6	0	3
WM11 - The Haven – Marsh Road (both options)	0	1	0	96
WM12 - Marsh Road – Fosdyke Bridge (both options)	0	0	1	9
WM13 - Fosdyke Bridge – Weston Marsh Substation North (both options)	1	1	0	21
WM14 - Fosdyke Bridge – Weston Marsh Substation South (both options)	10	7	43	154
Weston Marsh, via south of the A52 (Total)	12	47	177	1963
Weston Marsh, via north of the A52 (Total)	1	48	38	634

Other Terrestrial Mammals

A single record for red squirrel (*Sciurus vulgaris*) from 2019 exists at Weston, near Spalding, within the ‘Fosdyke Bridge – Weston Marsh Substation South’ route section (Figure 21.1.18).

1.5 Summary

The desk study returned a large number of records including designated sites supporting priority habitats and red data list species of plant and insects, amphibians including GCN, reptiles, bat roosts, badgers, water voles and otter. These records have been relied upon to inform a description of the baseline within Volume 1, Chapter 21: Onshore Ecology of the PEIR, against which the impacts of the Project have been assessed.

The desk study will be reviewed ahead of the production of the ES and refined and updated as required.

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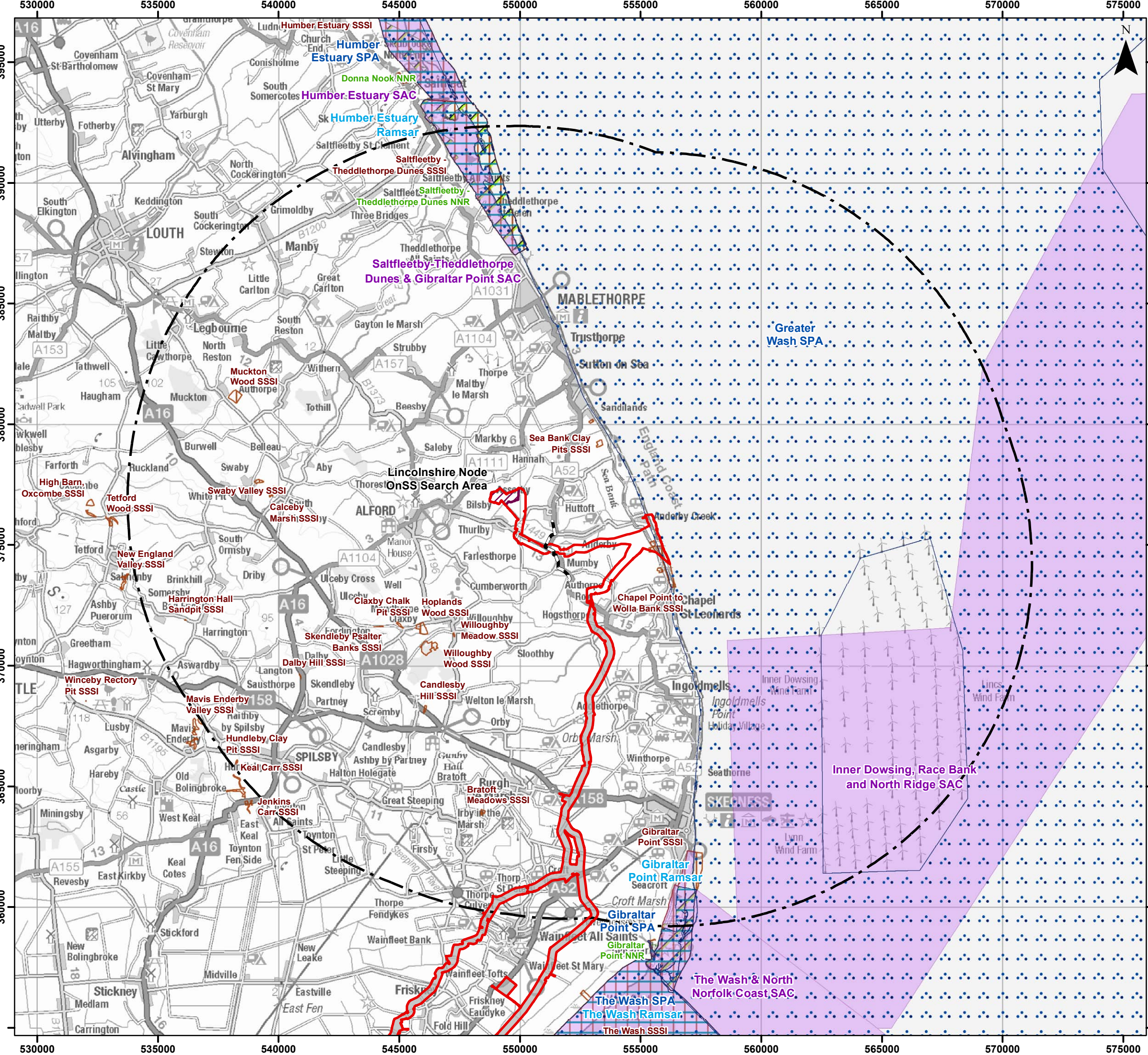
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Legend

- Onshore PEIR Boundary
- Lincolnshire Node OnSS Search
- Onshore Segment Break
- PEIR Boundary Wolla Bank to Lincolnshire Node 15km Buffer
- Special Protection Area
- Ramsar
- Special Area of Conservation
- Site of Special Scientific Interest (SSSI)
- National Nature Reserve (NNR)

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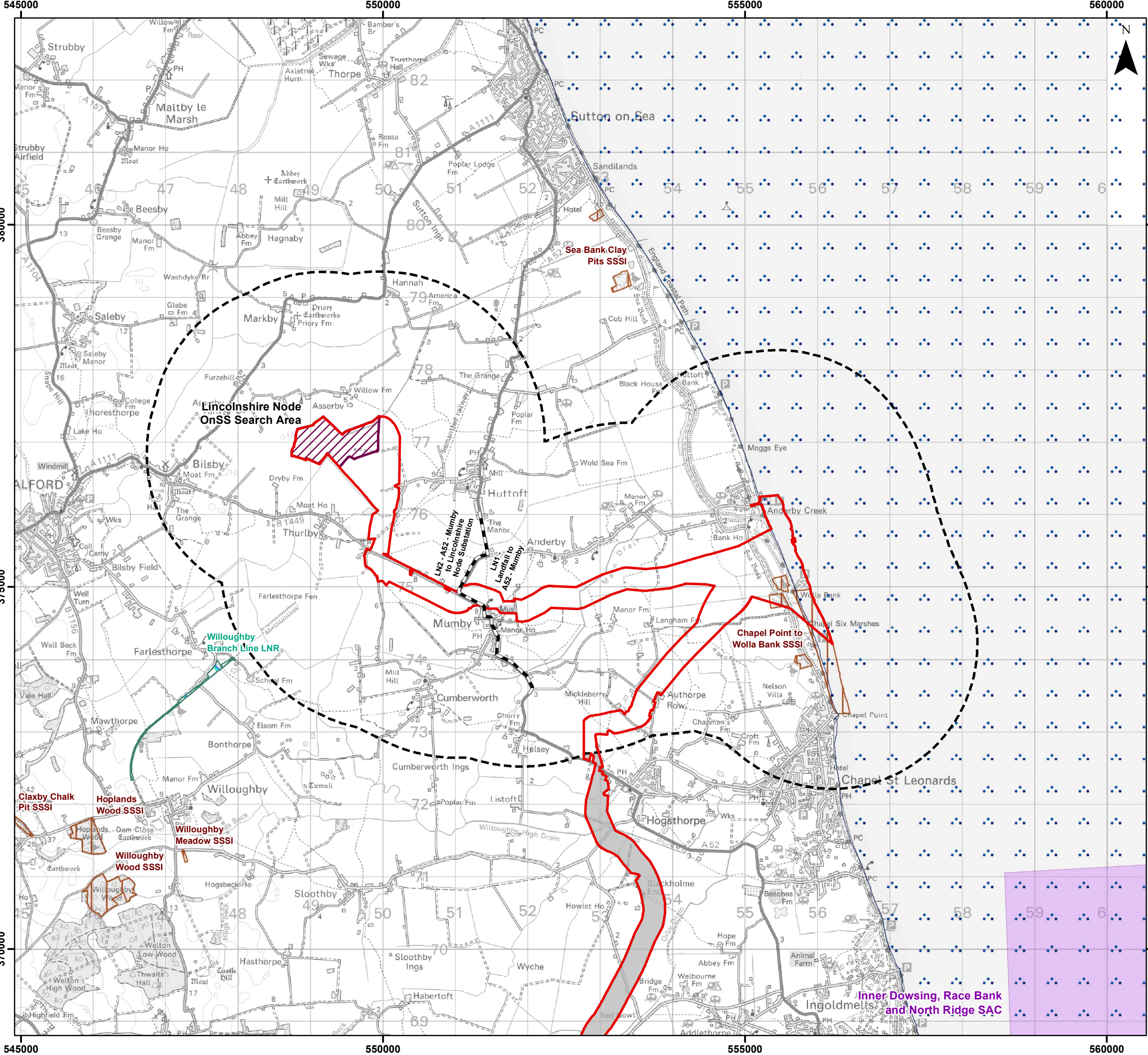
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- ### Legend
- Onshore PEIR Boundary
 - Lincolnshire Node OnSS Search
 - Onshore Segment Break
 - PEIR Boundary Wolla Bank to Lincolnshire Node 2km Buffer
 - Special Protection Area
 - Site of Special Scientific Interest (SSSI)
 - Local Nature Reserve (LNR)
 - Special Area of Conservation

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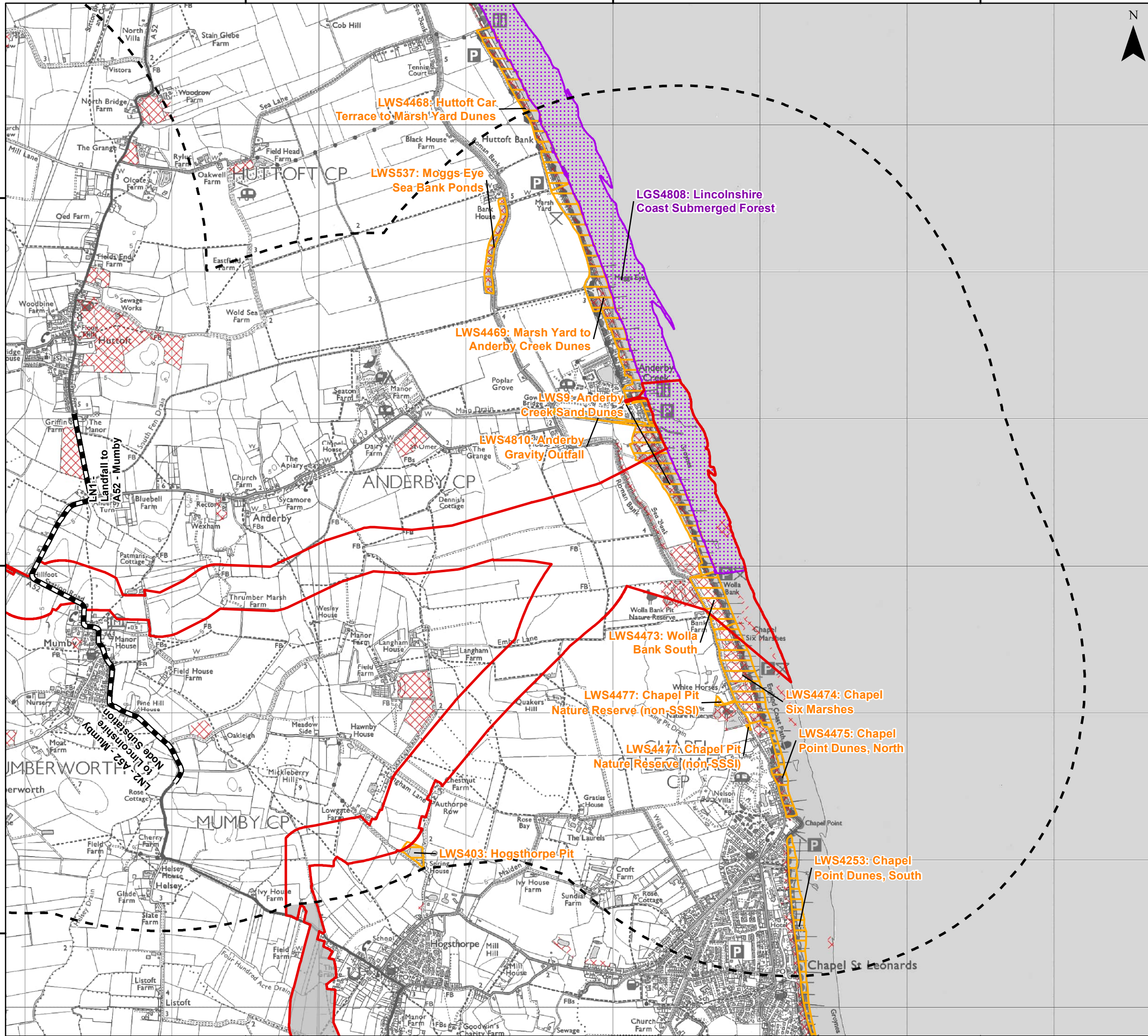
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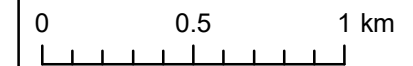
-  Onshore PEIR Boundary
-  Onshore Segment Break
-  Onshore PEIR Boundary 2 km Buffer
-  Local Geological Site
-  Local Wildlife Site
-  Priority Habitat



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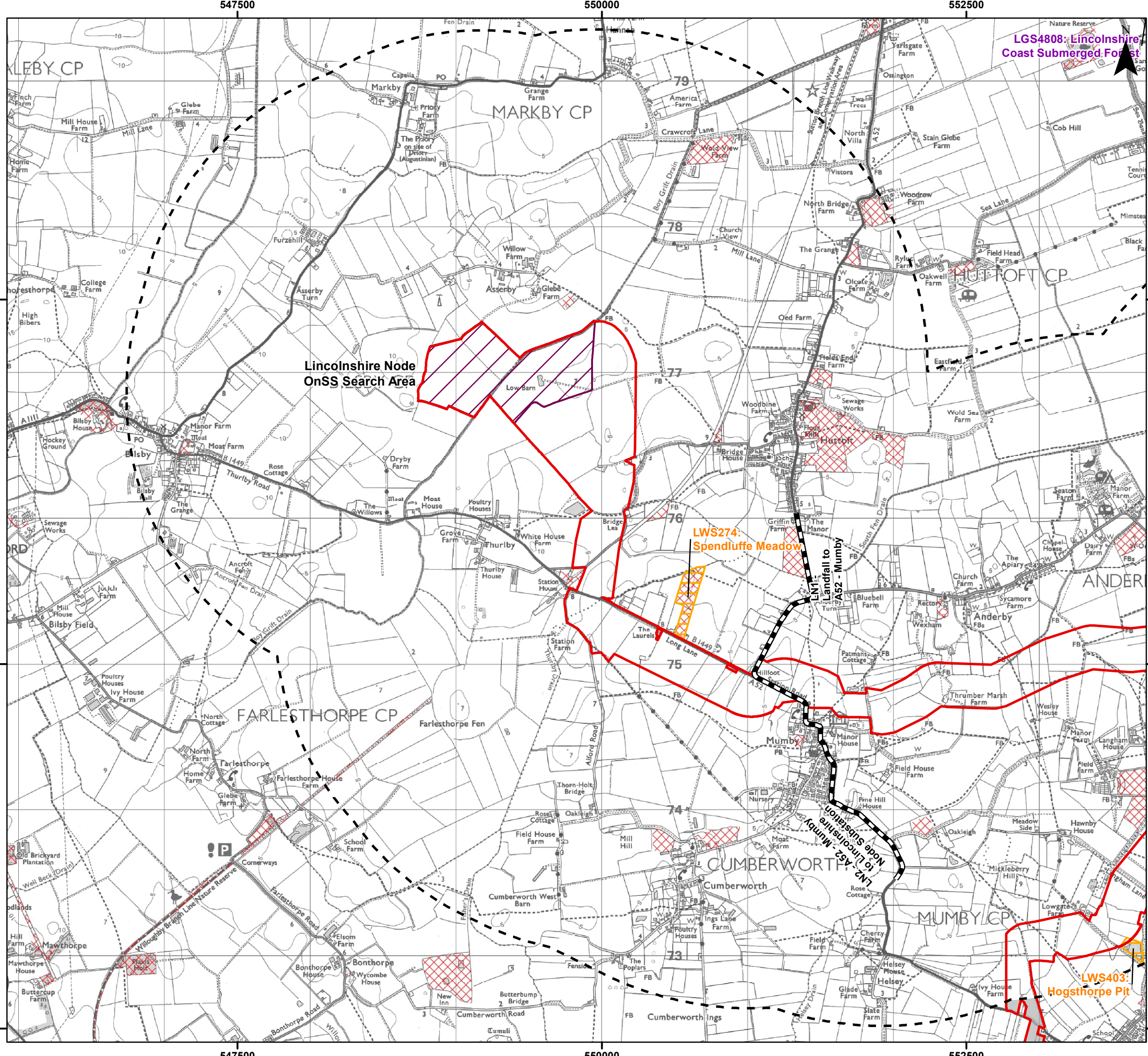
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- ### Legend
- Onshore PEIR Boundary
 - Lincolnshire Node OnSS Search Area
 - Onshore Segment Break
 - Onshore PEIR Boundary 2 km Buffer
 - Local Geological Site
 - Local Wildlife Site
 - Priority Habitat

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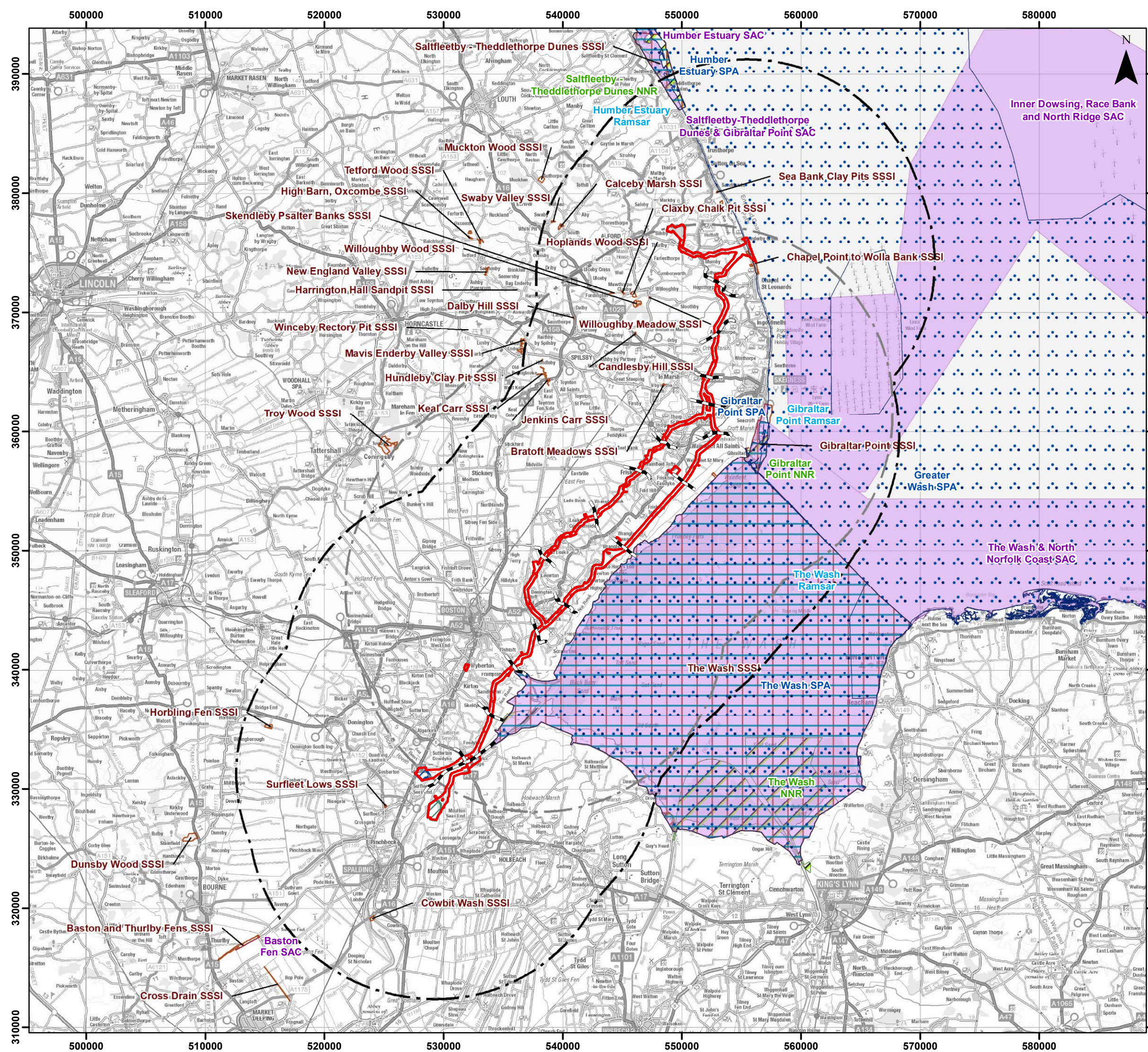


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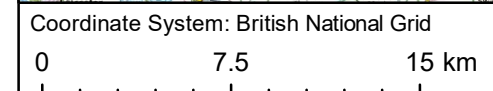
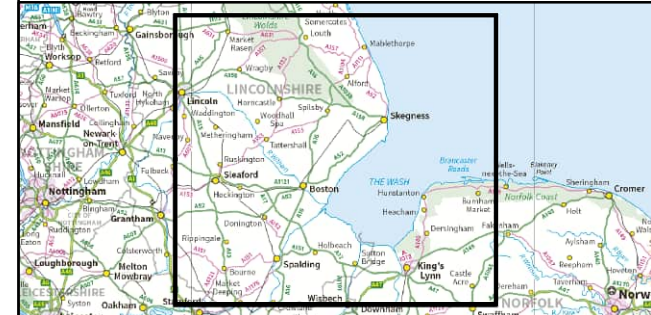
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Legend

- Onshore PEIR Boundary
- Onshore Segment Break
- Weston Marsh North OnSS Search Area
- Weston Marsh South OnSS Search Area
- PEIR Boundary Weston Marsh (via South of the A52) 15km Buffer
- PEIR Boundary Weston Marsh (via North of the A52) 15km Buffer
- Special Protection Area (SPA)
- Ramsar
- Special Area of Conservation (SAC)
- Site of Special Scientific Interest (SSSI)
- National Nature Reserve (NNR)

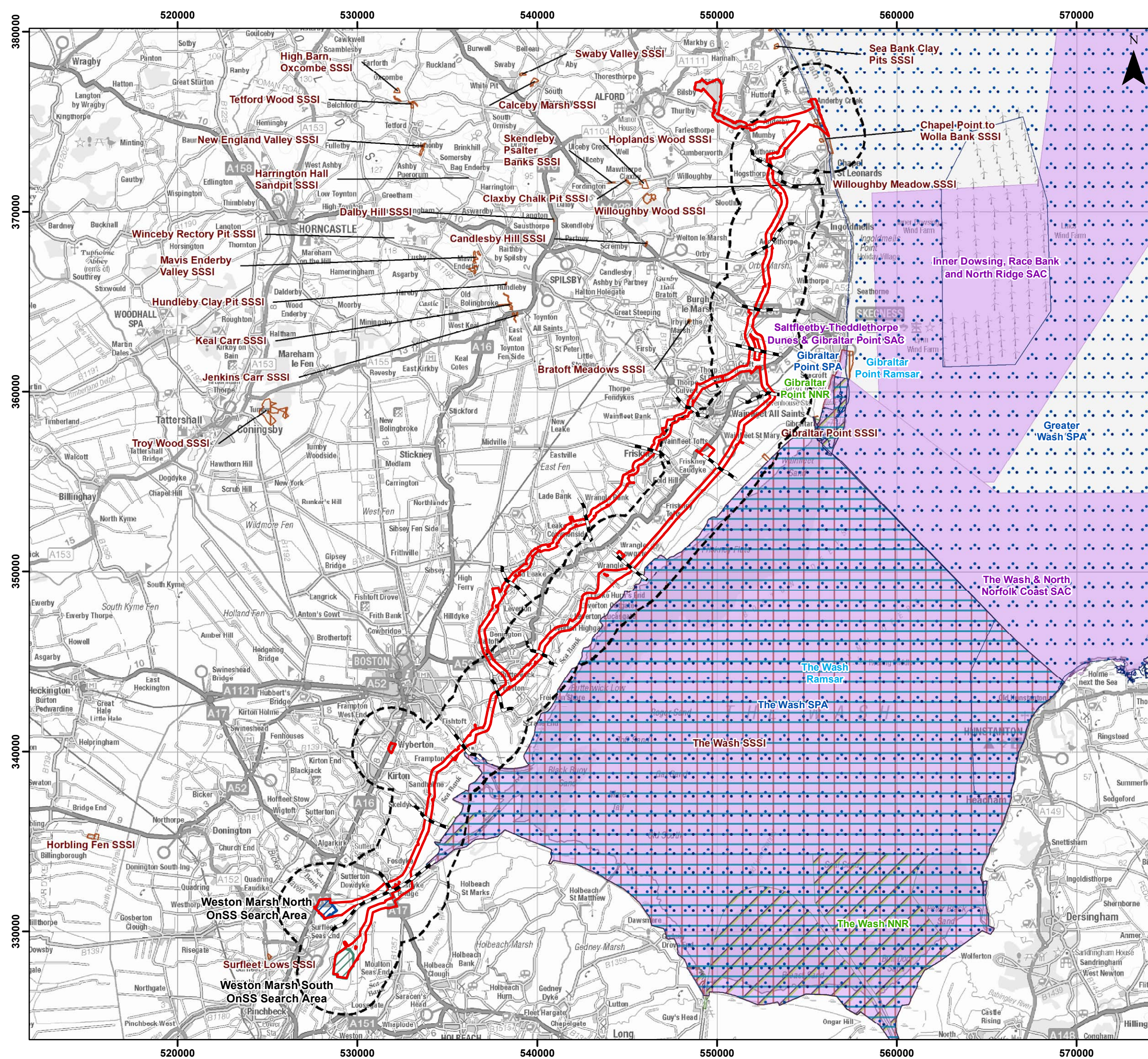
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Legend

- Onshore PEIR Boundary
- Onshore Segment Break
- Weston Marsh North OnSS Search Area
- Weston Marsh South OnSS Search Area
- PEIR Boundary Weston Marsh (via South of the A52) 2km Buffer
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- Ramsar
- Special Area of Conservation (SAC)
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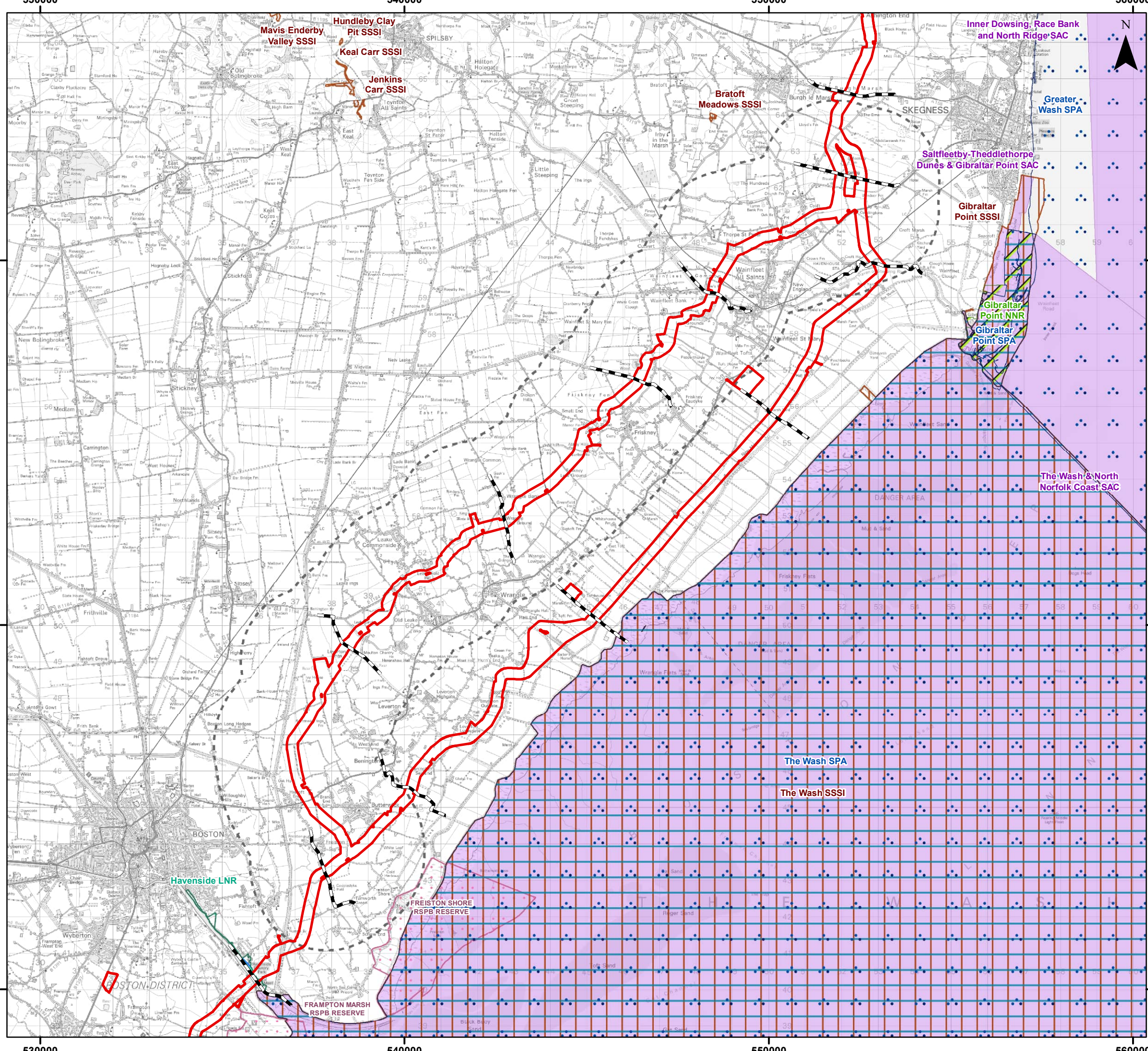
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- Ramsar
- Site of Special Scientific Interest (SSSI)
- Local Nature Reserve (LNR)
- RSPB Reserve
- Special Area of Conservation (SAC)

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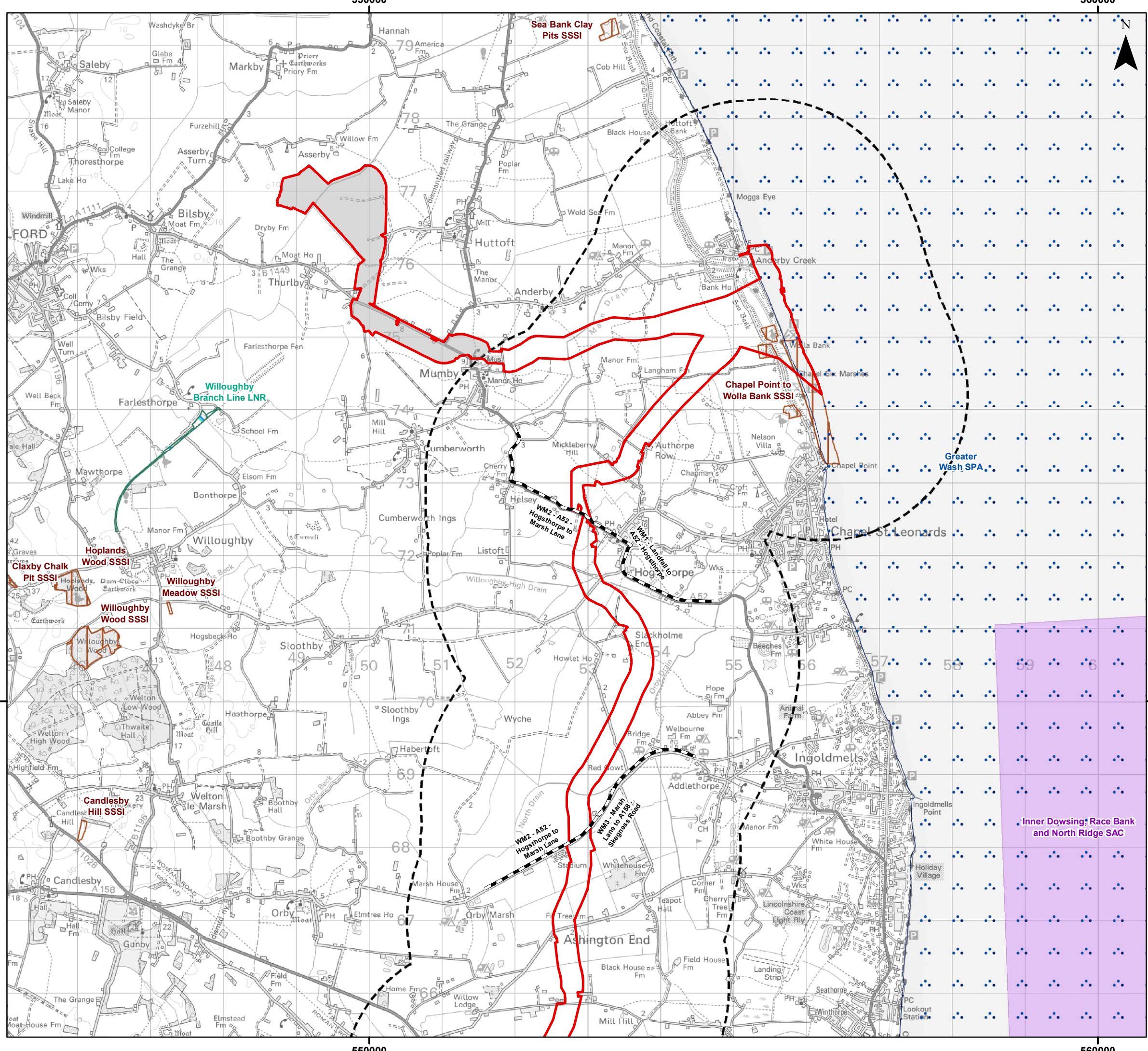




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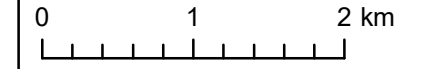
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- Onshore Segment
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- Special Protection Area (SPA)
- Site of Special Scientific Interest (SSSI)
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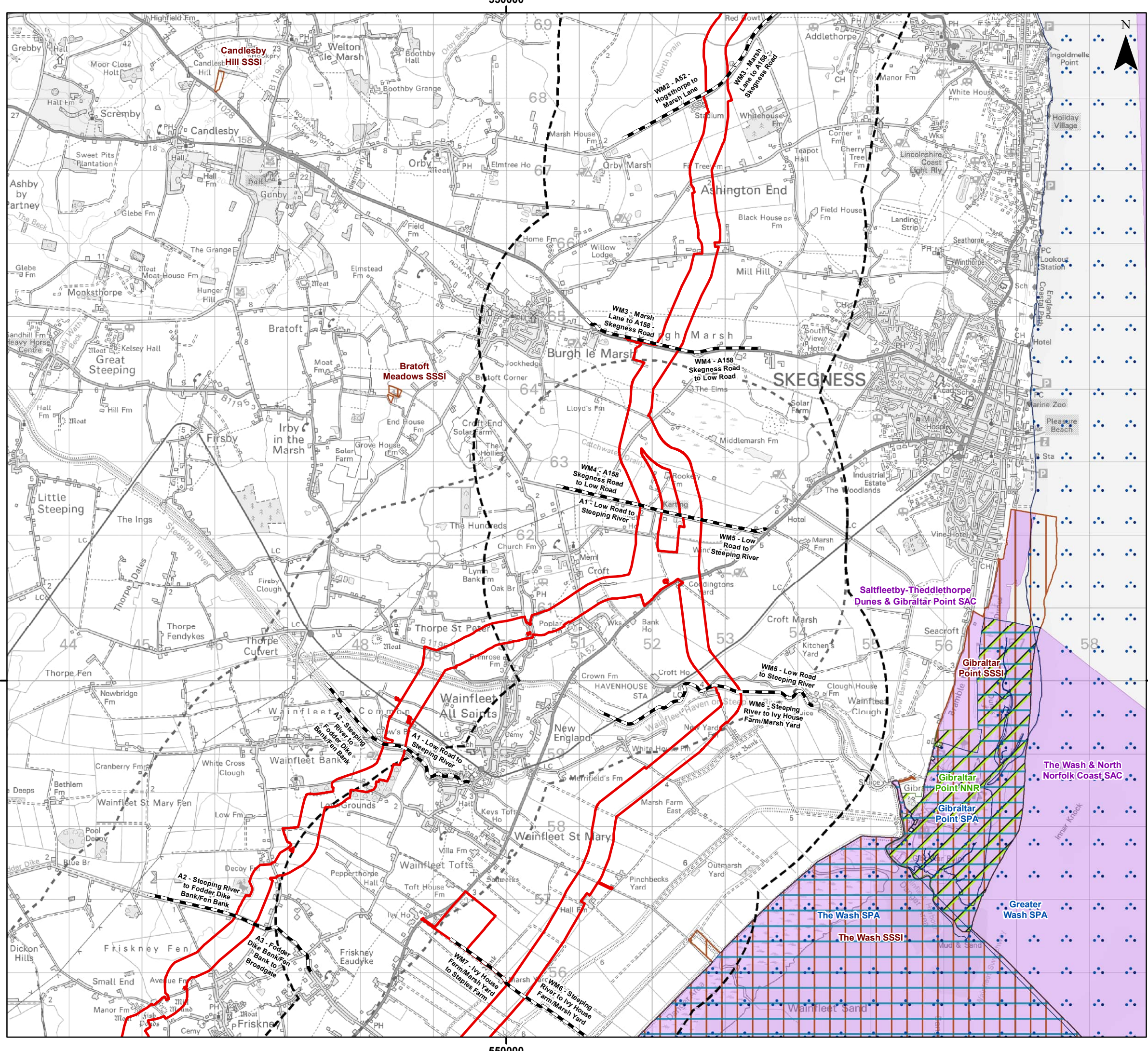


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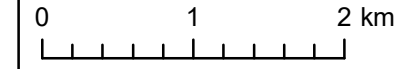


- ### Legend
- Onshore PEIR Boundary
 - Onshore Segment Break
 - PEIR Boundary Weston Marsh (via South of the A52) 2km Buffer
 - PEIR Boundary Weston Marsh (via North of the A52) 2km Buffer
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 - Ramsar
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Figure 21.1.3.5



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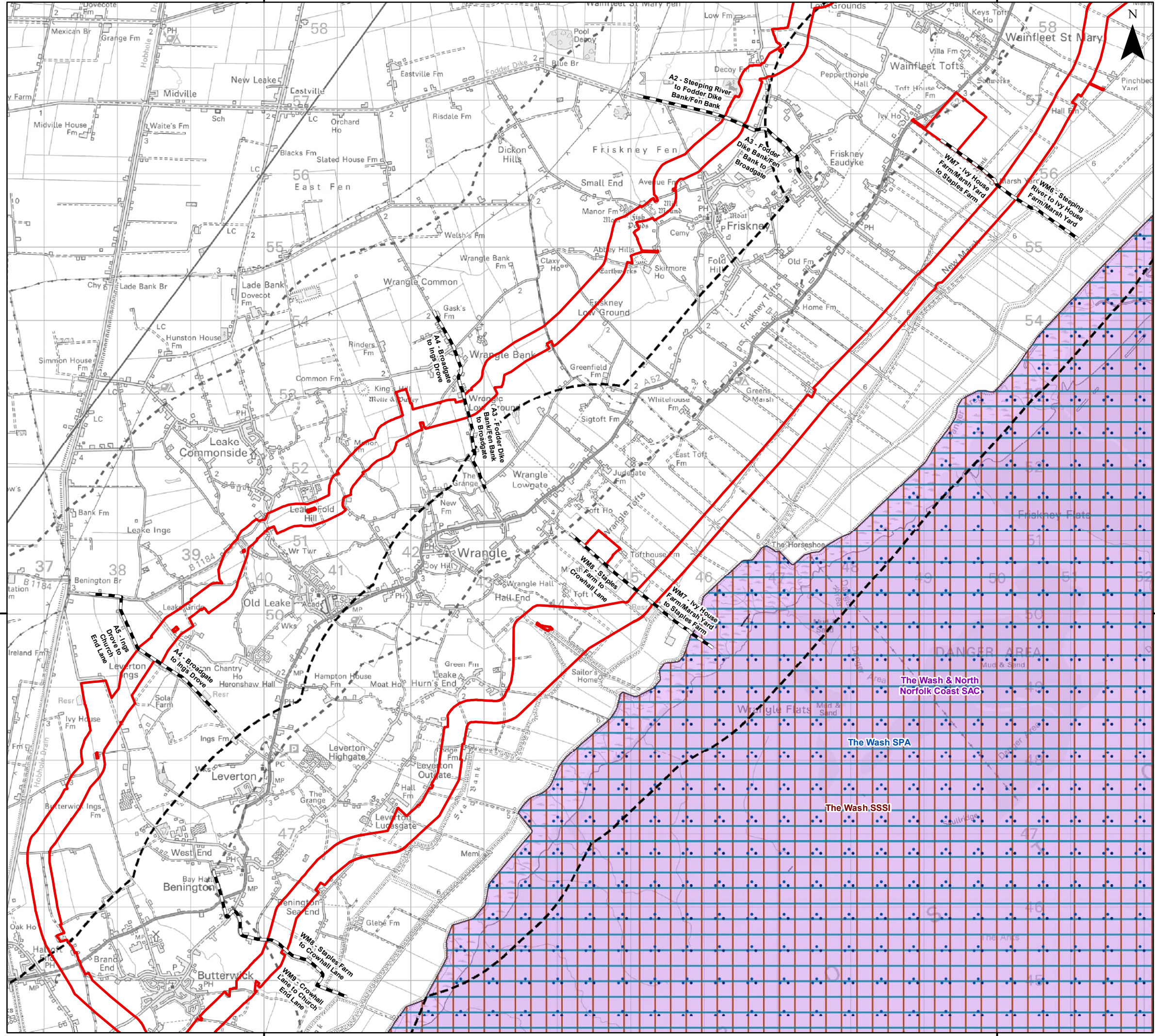


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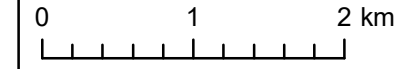
Legend

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- Onshore Segment Break
- PEIR Boundary Weston Marsh (via South of the A52) 2km Buffer
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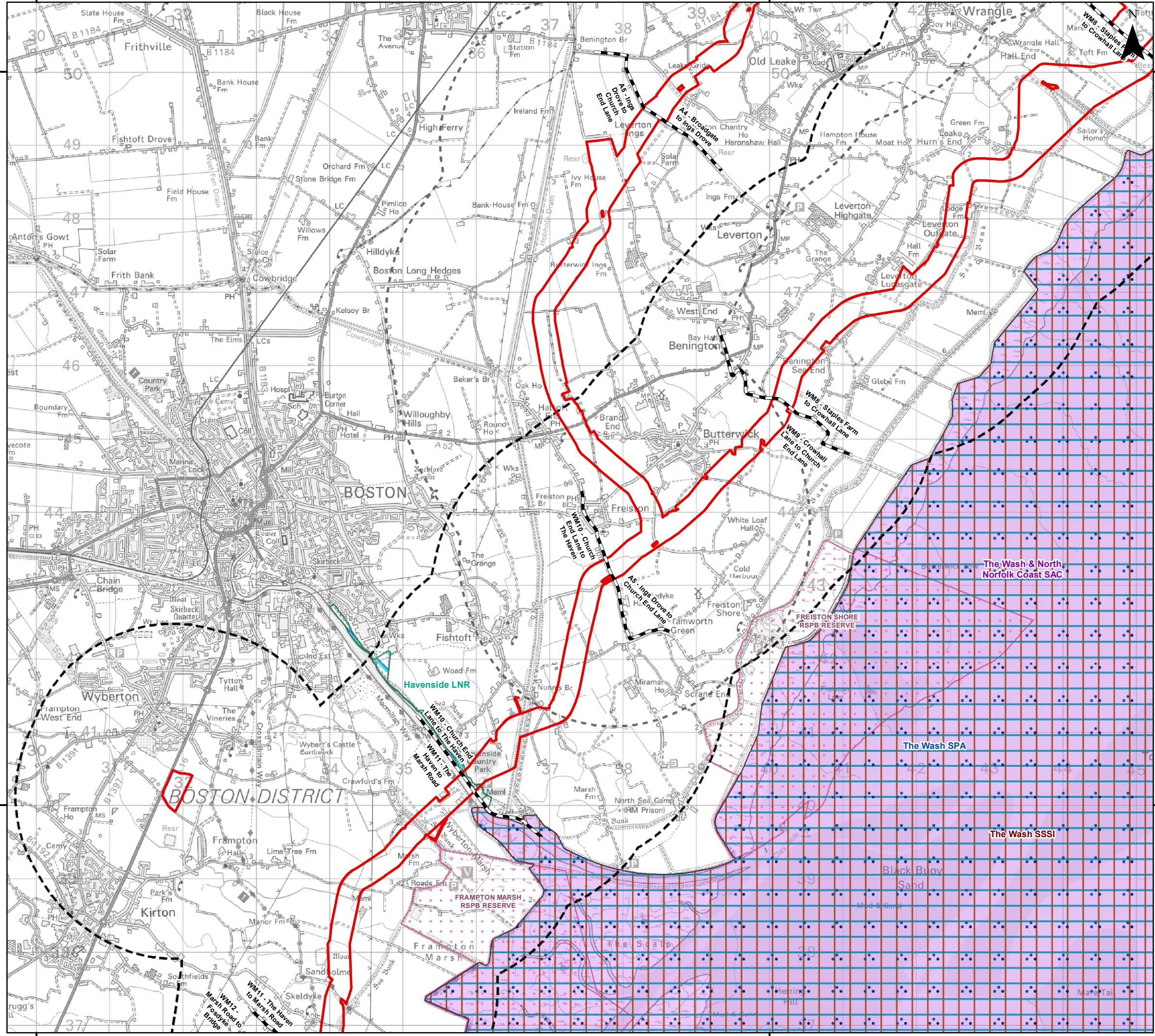
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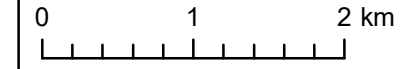


- ### Legend
- Onshore PEIR Boundary
 - Onshore Segment Break
 - PEIR Boundary Weston Marsh (via South of the A52) 2km Buffer
 - PEIR Boundary Weston Marsh (via North of the A52) 2km Buffer
 - Special Protection Area (SPA)
 - Ramsar
 - Site of Special Scientific Interest (SSSI)
 - Local Nature Reserve (LNR)
 - RSPB Reserve
 - Special Area of Conservation (SAC)

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Coordinate System: British National Grid



Scale: 1:50,000

Preliminary Environmental Information Report
 Weston Marsh
 Internationally and Nationally Designated Sites

Figure 21.1.3.7

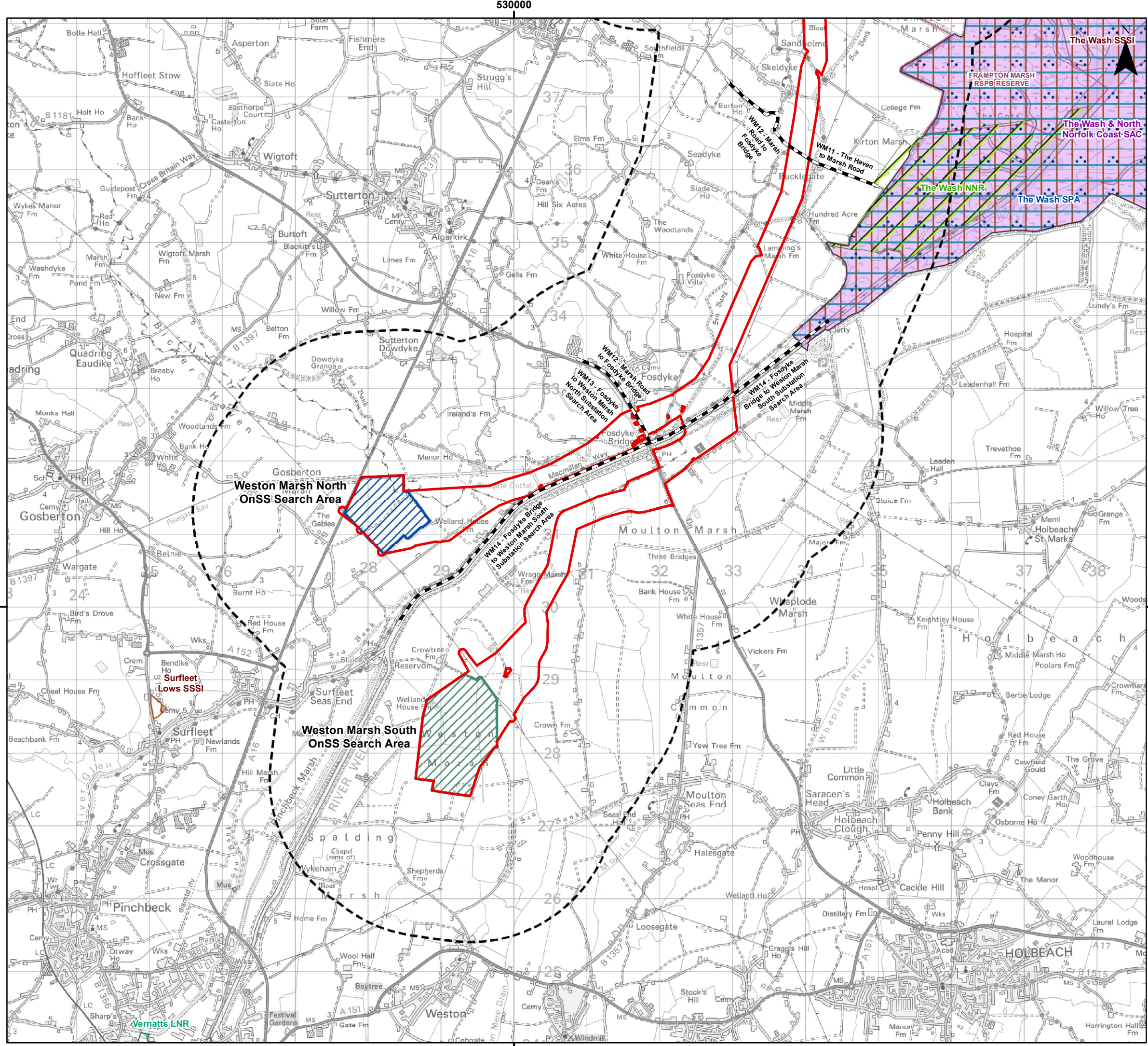


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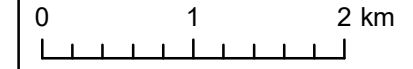


- ### Legend
- Onshore PEIR Boundary
 - Onshore Segment Break
 - Weston Marsh North OnSS Search Area
 - Weston Marsh South OnSS Search Area
 - PEIR Boundary Weston Marsh (via South of the A52) 2km Buffer
 - Special Protection Area (SPA)
 - Ramsar
 - Site of Special Scientific Interest (SSSI)
 - Local Nature Reserve (LNR)
 - RSPB Reserve
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Figure 21.1.3.8



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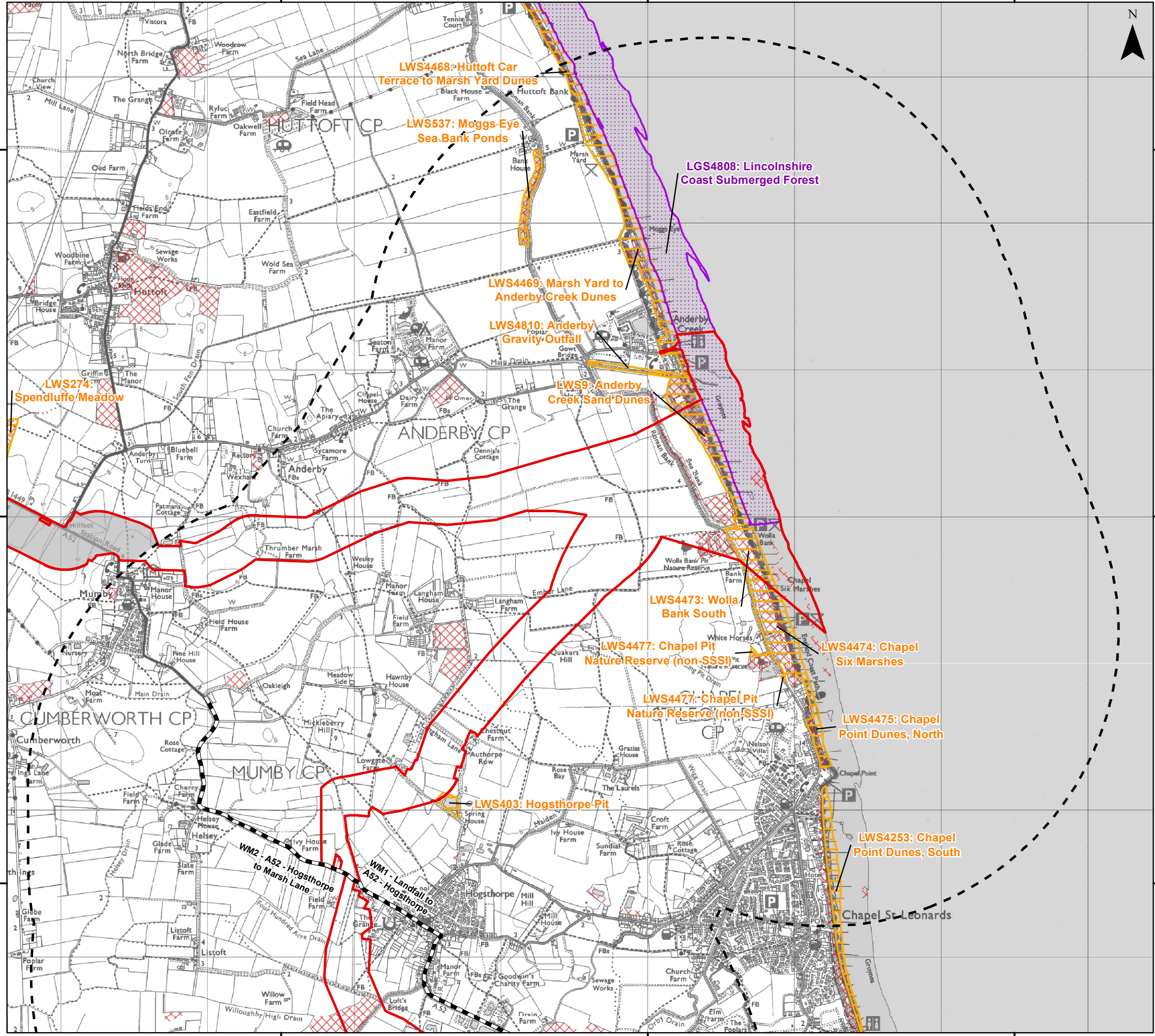
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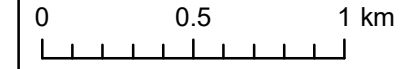
Legend

-  Onshore PEIR Boundary
-  Onshore Segment Break
-  Onshore PEIR Boundary Weston Marsh (via South of the A52) 2 km Buffer
-  Local Geological Site
-  Local Wildlife Site
-  Priority Habitat

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Figure 21.1.4.1



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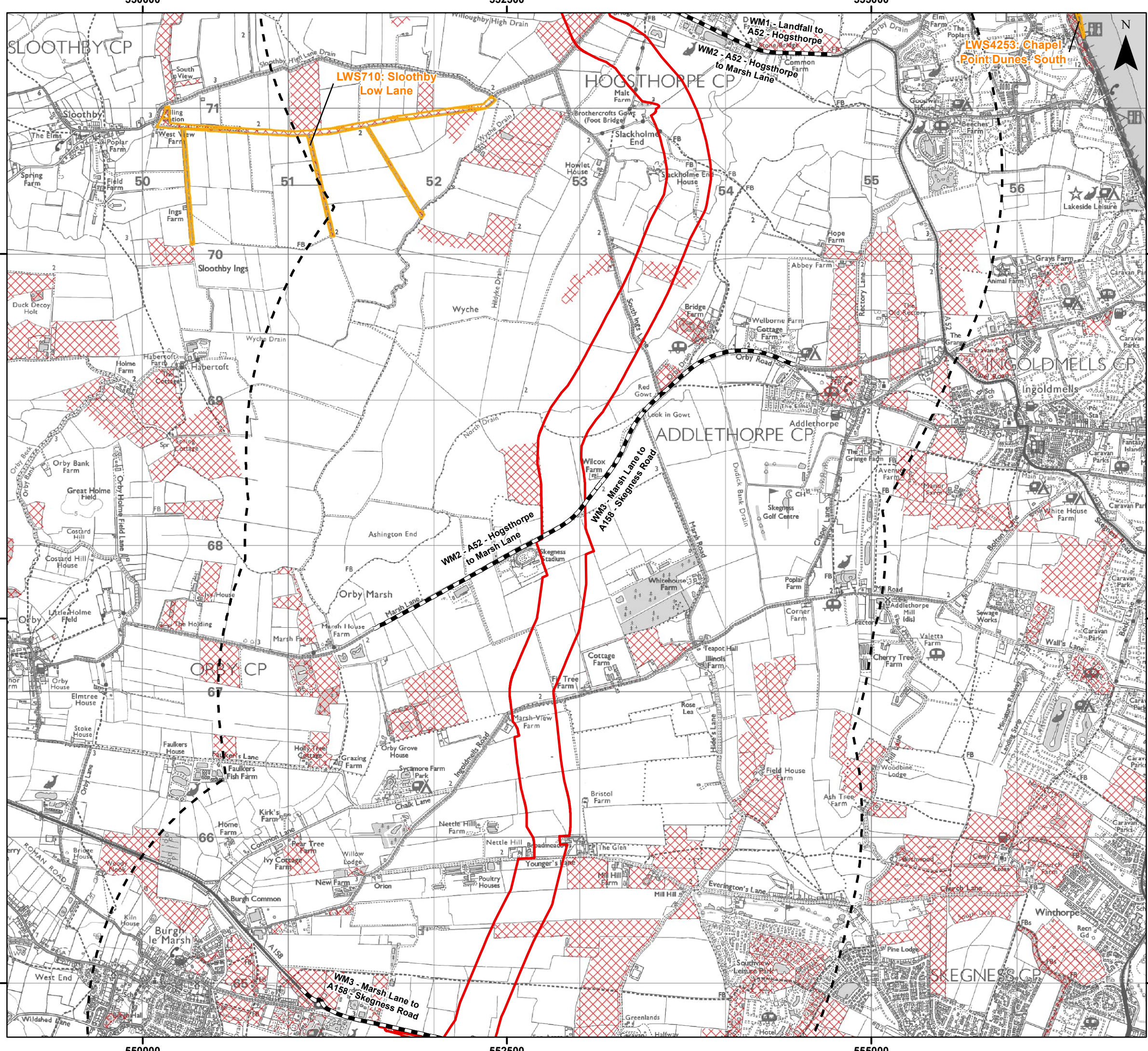
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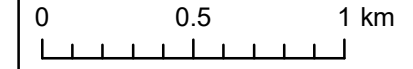
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- Onshore PEIR Boundary
- Onshore Segment Break
- Onshore PEIR Boundary Weston Marsh (via South of the A52) 2 km Buffer
- Local Wildlife Site
- Priority Habitat

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 Weston Marsh
 Locally Designated Sites and Priority Habitats

Figure 21.1.4.2

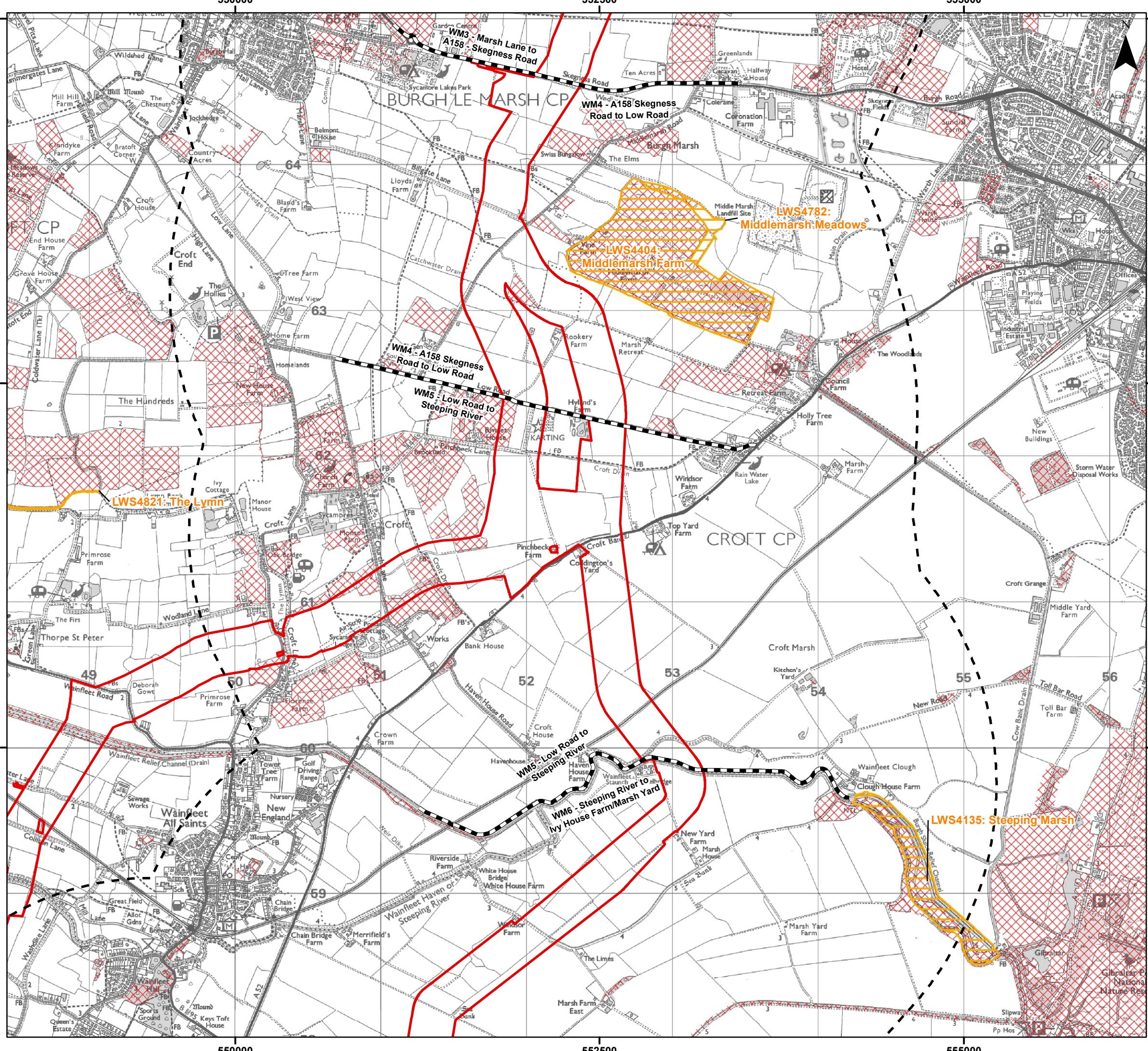


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Legend

- Onshore PEIR Boundary
- Onshore Segment Break
- Onshore PEIR Boundary Weston Marsh (via South of the A52) 2 km Buffer
- Local Wildlife Site
- Priority Habitat

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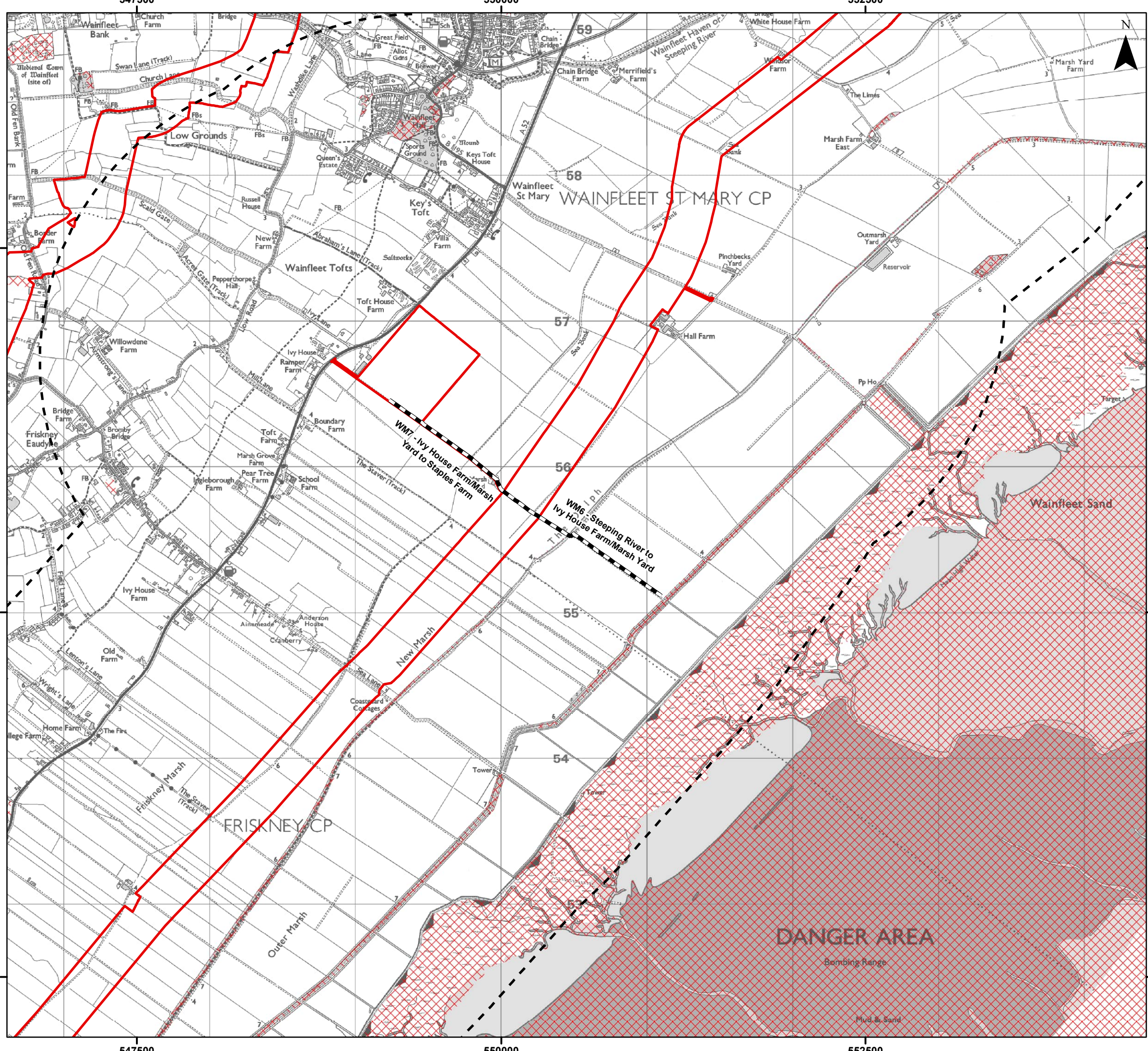
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 Weston Marsh
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Figure 21.1.4.3



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Legend

- Onshore PEIR Boundary
- Onshore Segment Break
- Onshore PEIR Boundary Weston Marsh (via South of the A52) 2 km Buffer
- Priority Habitat

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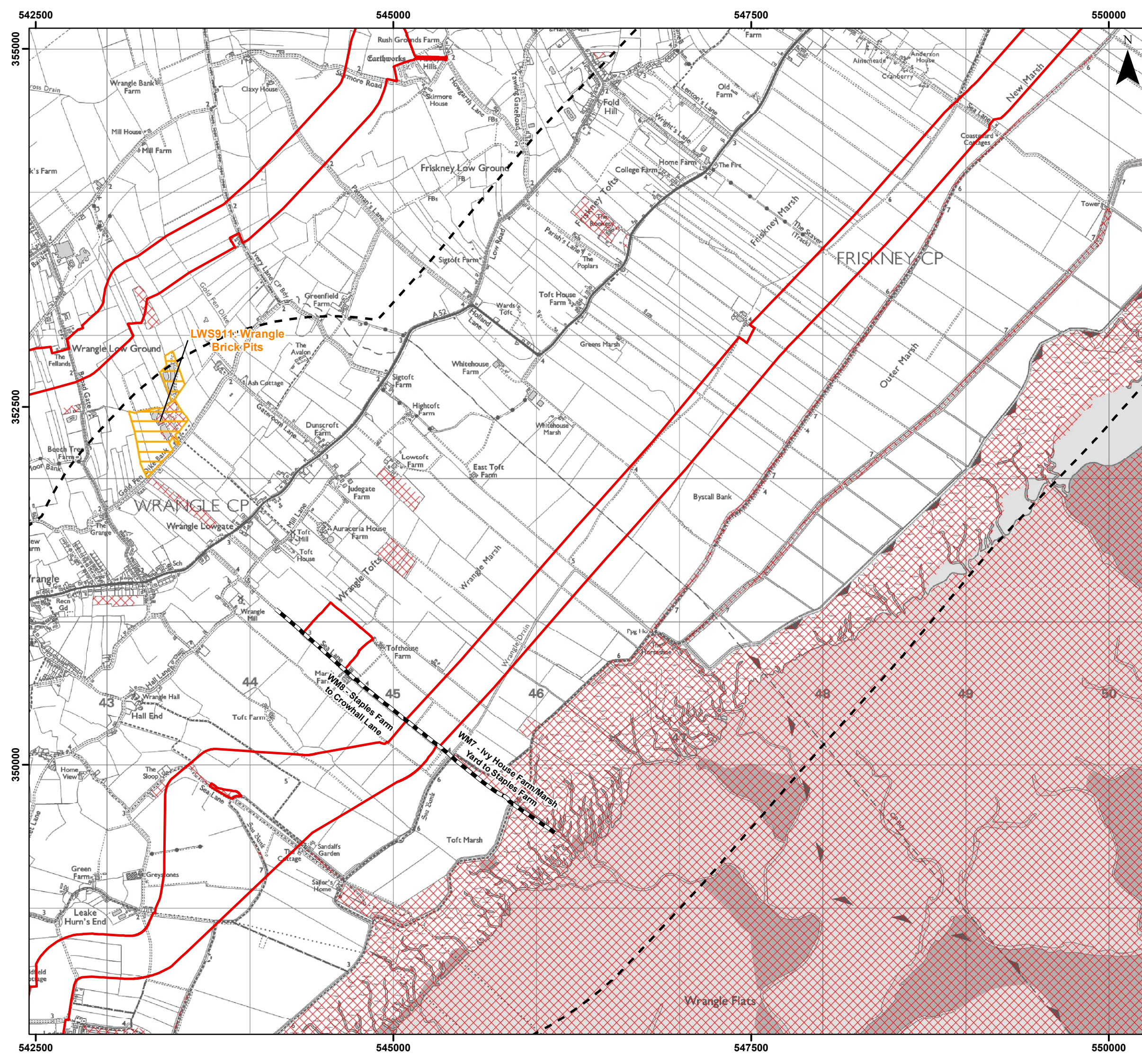
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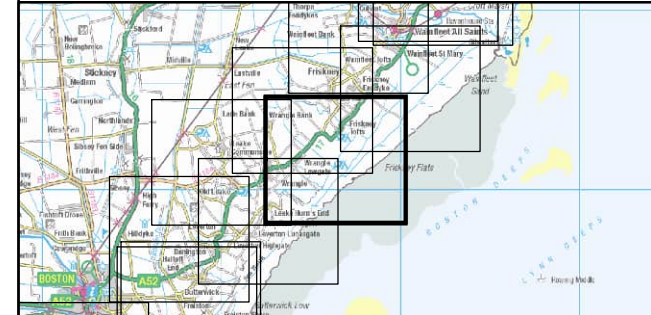
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Legend

- Onshore PEIR Boundary
- Onshore Segment Break
- Onshore PEIR Boundary Weston Marsh (via South of the A52) 2 km Buffer
- Local Wildlife Site
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 Weston Marsh
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 Figure 21.1.4.5

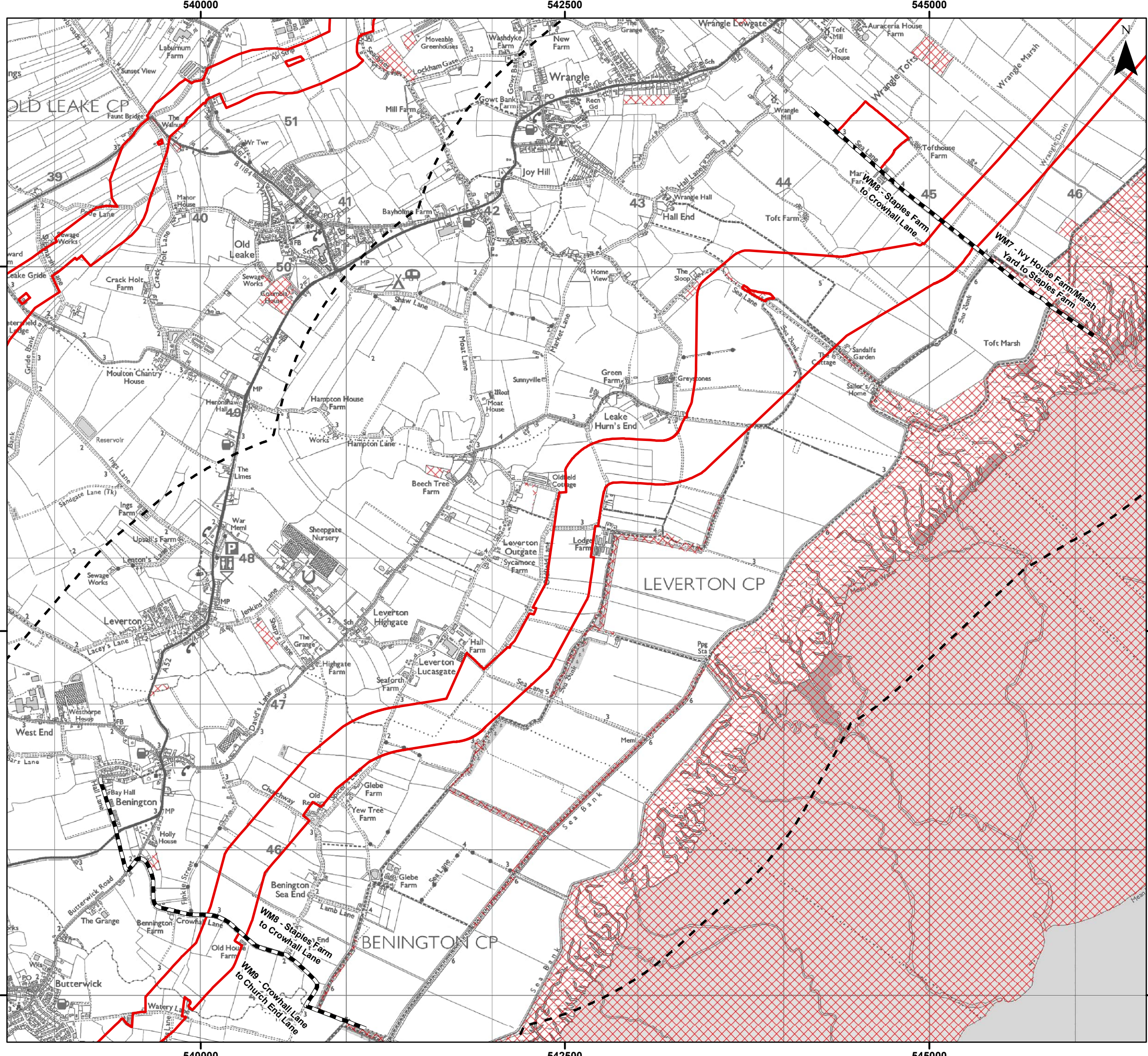


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- Legend**
- Onshore PEIR Boundary
 - Onshore Segment Break
 - Onshore PEIR Boundary Weston Marsh (via South of the A52) 2 km Buffer
 - Priority Habitat

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 Weston Marsh
 Locally Designated Sites and Priority Habitats
 Figure 21.1.4.6

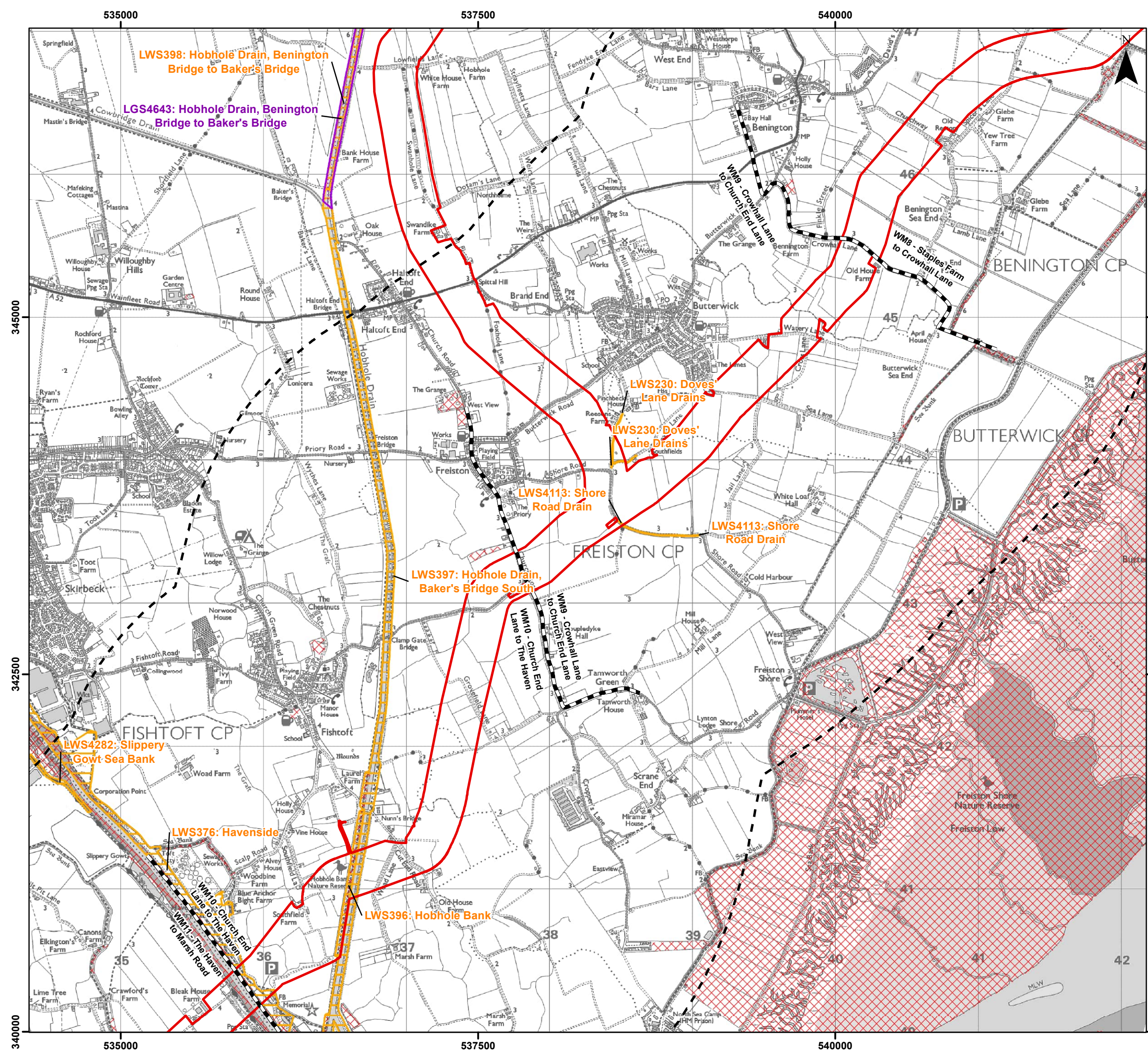


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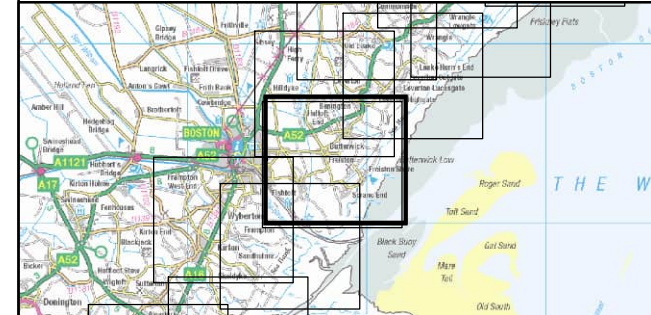
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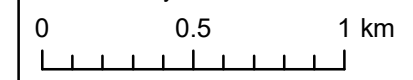
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- Onshore PEIR Boundary
- Onshore Segment Break
- Onshore PEIR Boundary Weston Marsh (via South of the A52) 2 km Buffer
- Local Geological Site
- Local Wildlife Site
- Priority Habitat

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 Weston Marsh
 Locally Designated Sites and Priority Habitats

Figure 21.1.4.7

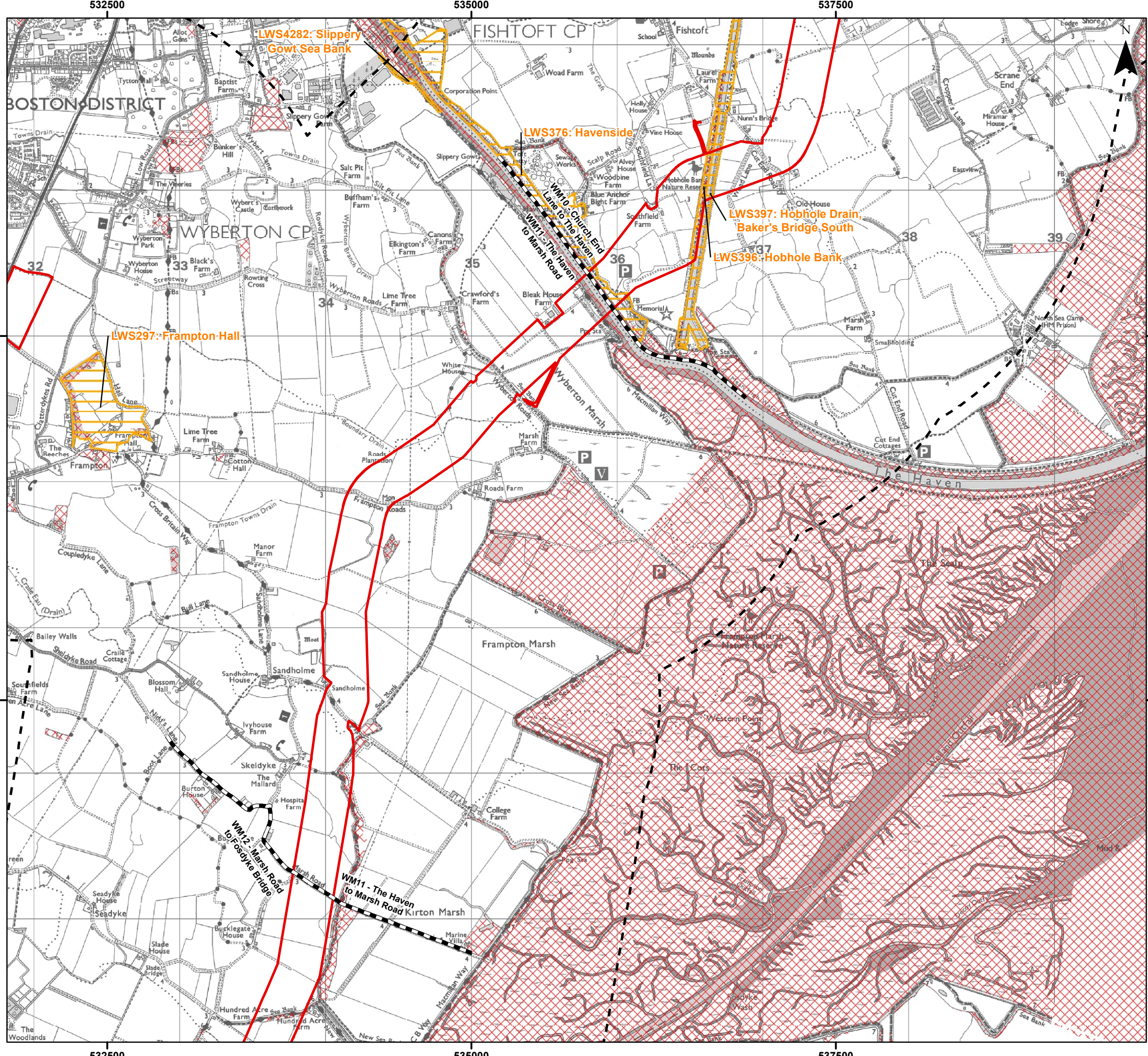


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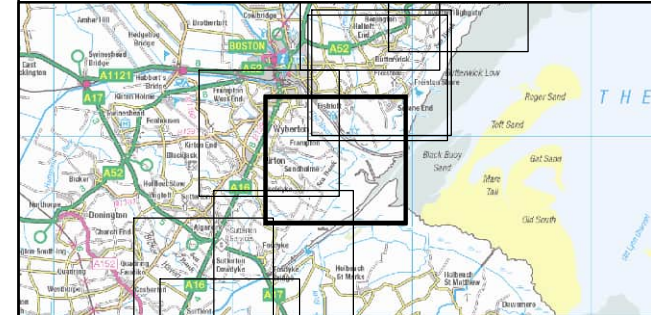
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Legend

- Onshore PEIR Boundary
- Onshore Segment Break
- Onshore PEIR Boundary Weston Marsh (via South of the A52) 2 km Buffer
- Local Wildlife Site
- Priority Habitat

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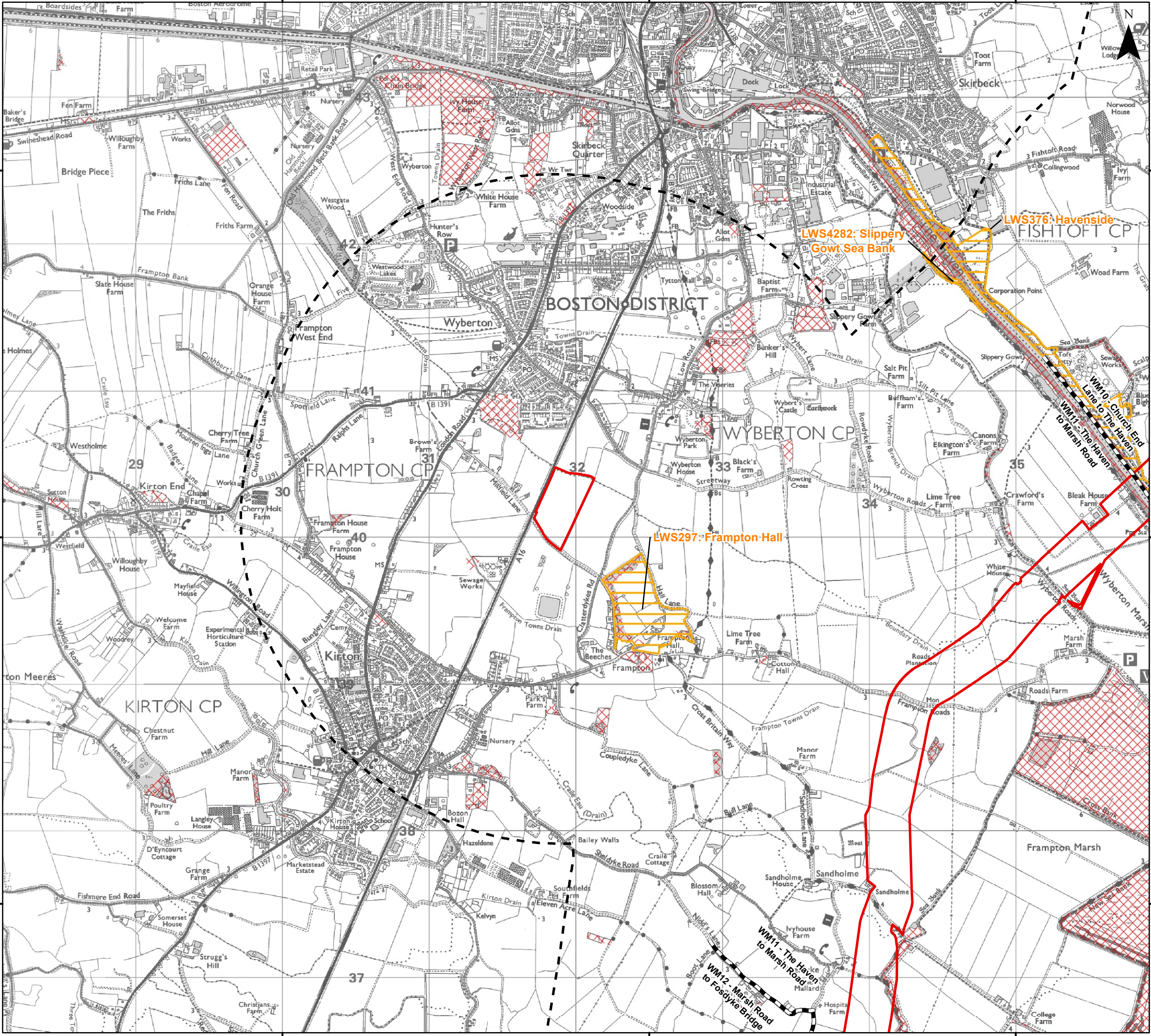
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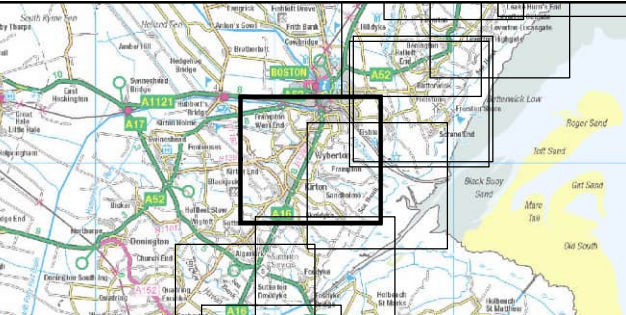
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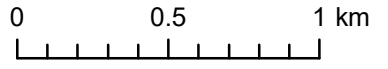
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- Onshore Segment Break
- Onshore PEIR Boundary Weston Marsh (via South of the A52) 2 km Buffer
- Local Wildlife Site
- Priority Habitat



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 Weston Marsh
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Figure 21.1.4.9



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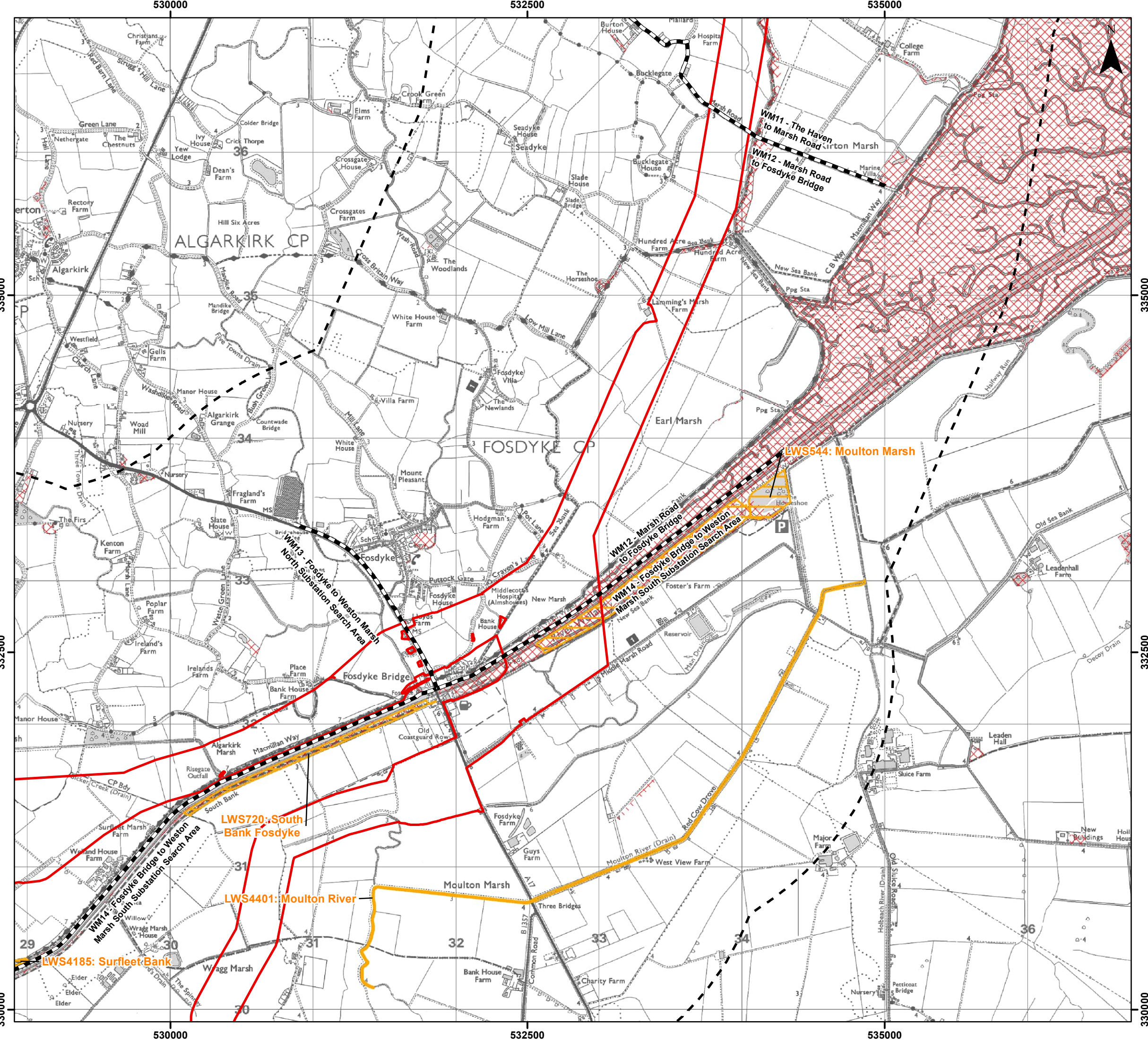
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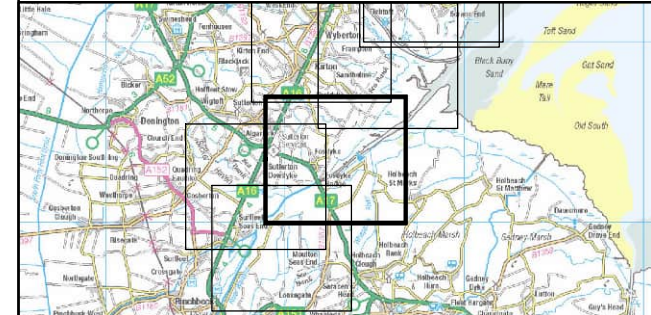
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Legend

- Onshore PEIR Boundary
- Onshore Segment Break
- Onshore PEIR Boundary Weston Marsh (via South of the A52) 2 km Buffer
- Local Wildlife Site
- Priority Habitat

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 Weston Marsh
 Locally Designated Sites and Priority Habitats
 Figure 21.1.4.10

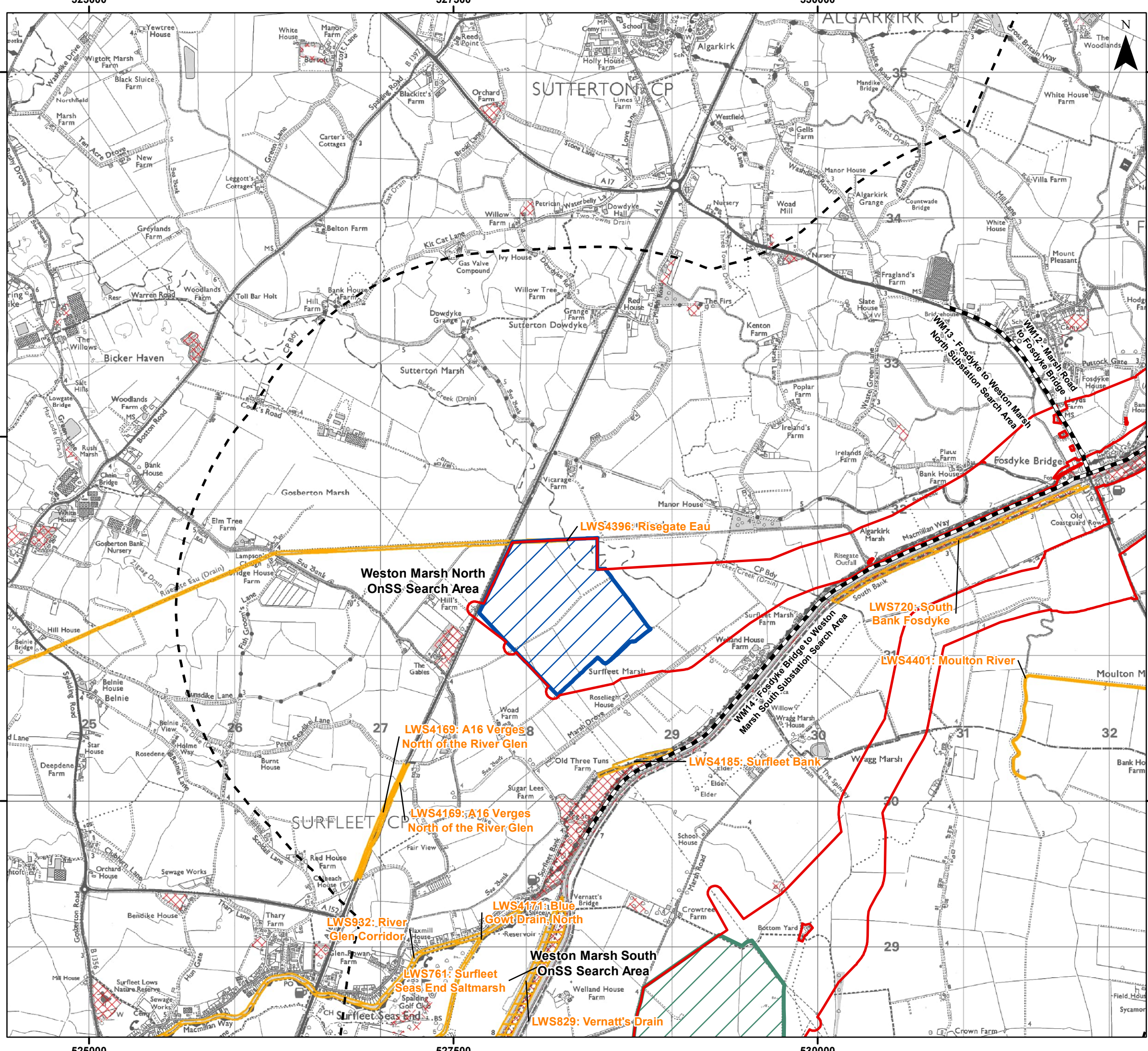


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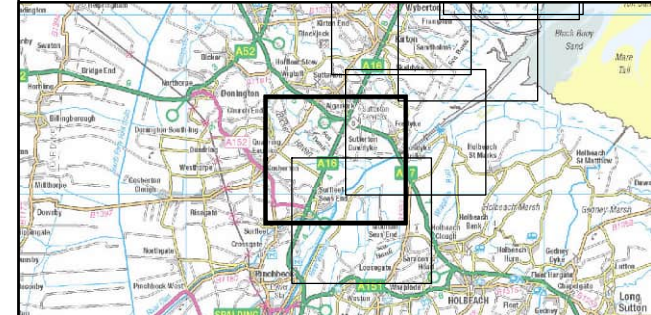
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- ### Legend
- Onshore PEIR Boundary
 - Weston Marsh North OnSS Search Area
 - Weston Marsh South OnSS Search Area
 - Onshore Segment Break
 - Onshore PEIR Boundary Weston Marsh (via South of the A52) 2 km Buffer
 - Local Wildlife Site
 - Priority Habitat

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 Weston Marsh
 Locally Designated Sites and Priority Habitats
 Figure 21.1.4.11

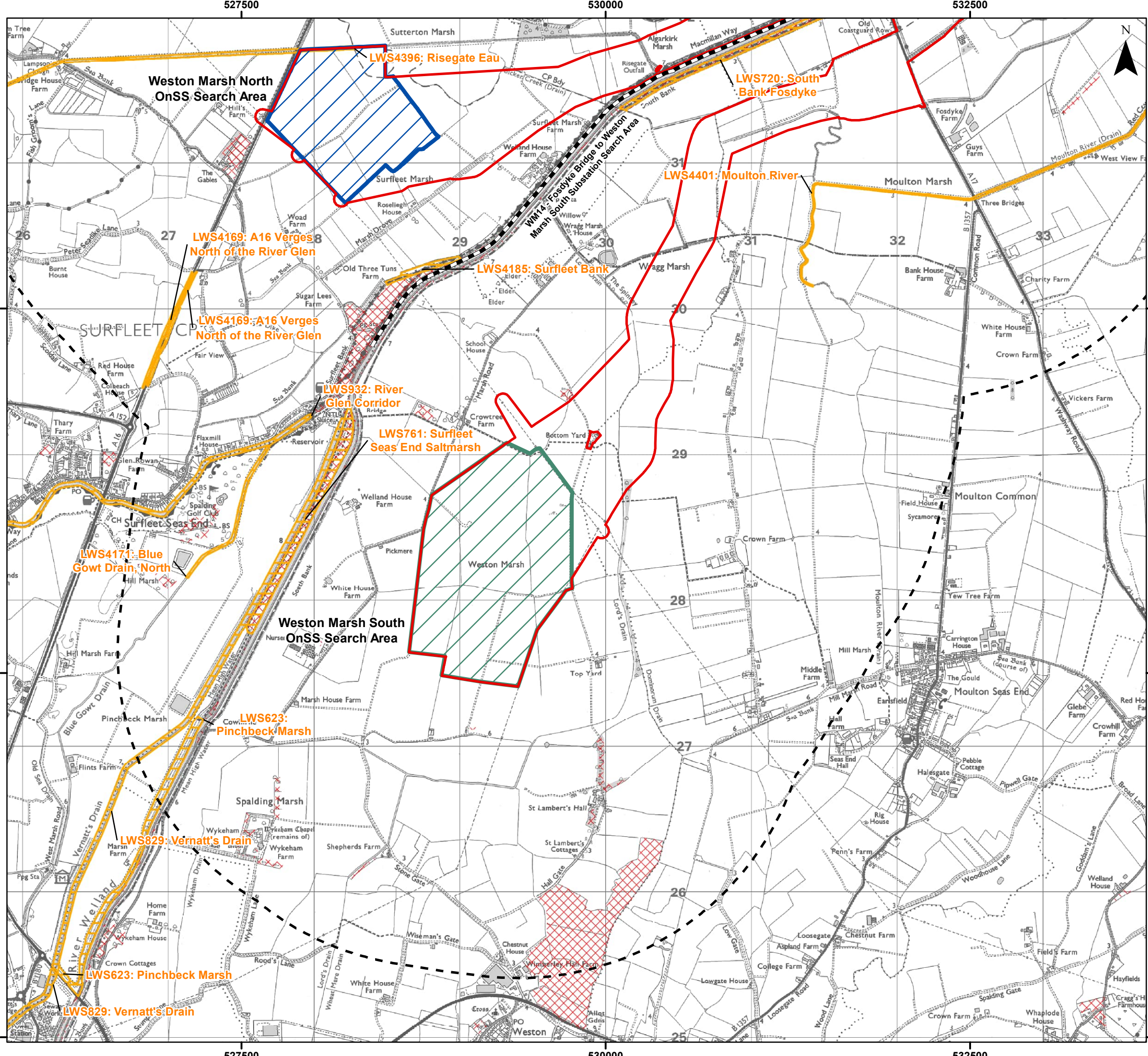


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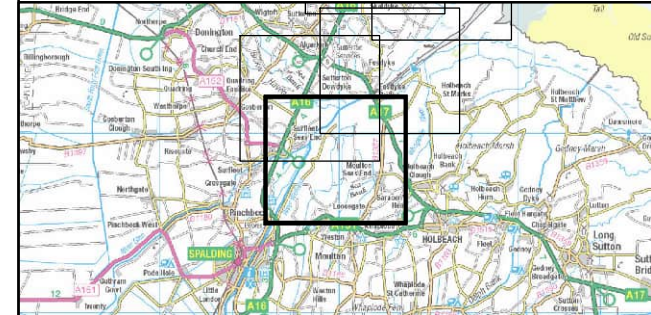
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- ### Legend
- Onshore PEIR Boundary
 - Weston Marsh North OnSS Search Area
 - Weston Marsh South OnSS Search Area
 - Onshore Segment Break
 - Onshore PEIR Boundary Weston Marsh (via South of the A52) 2 km Buffer
 - Local Wildlife Site
 - Priority Habitat

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 Locally Designated Sites and Priority Habitats
 Figure 21.1.4.12

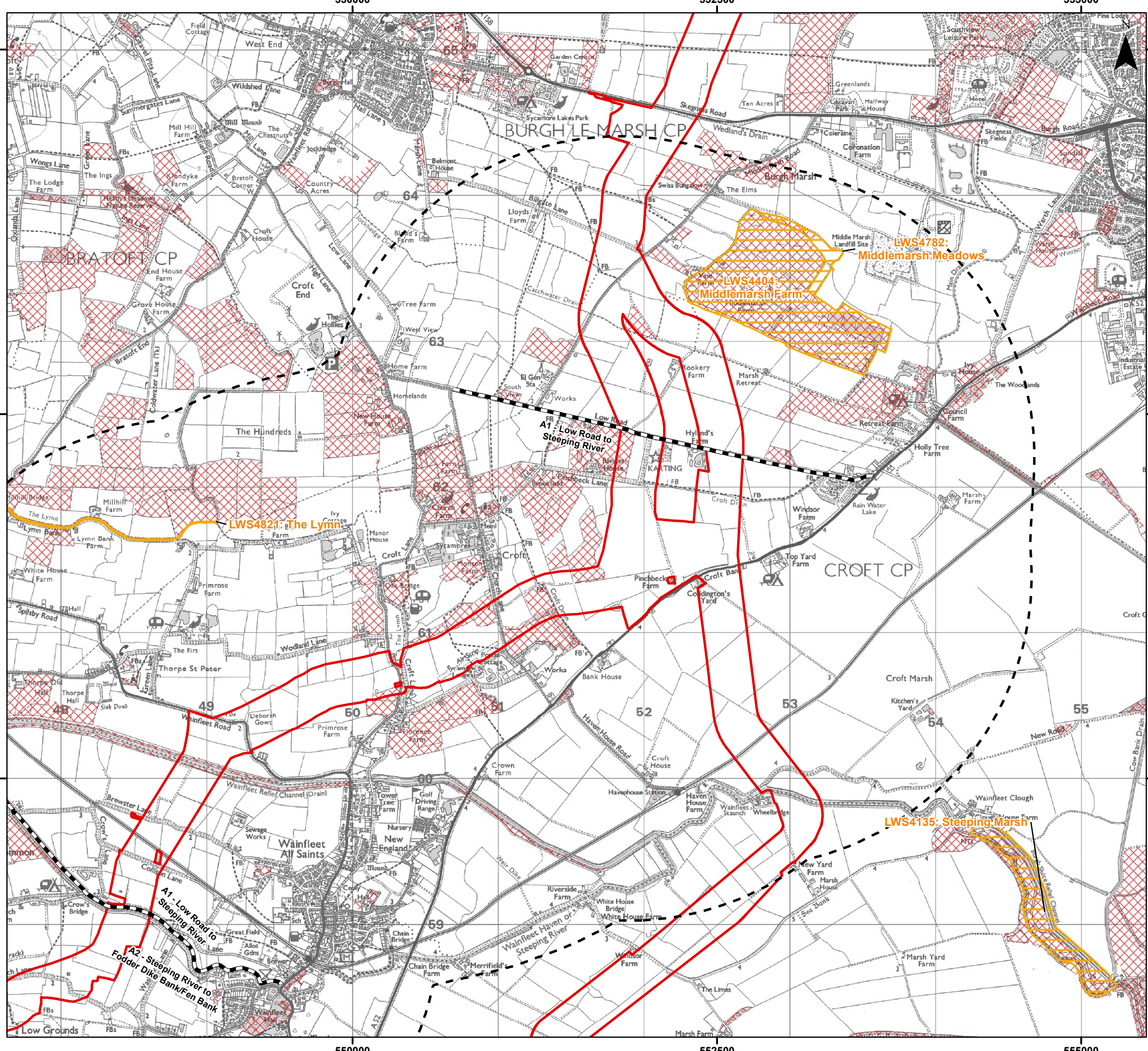


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Legend

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 Figure 21.1.4.13



OUTER DOWING
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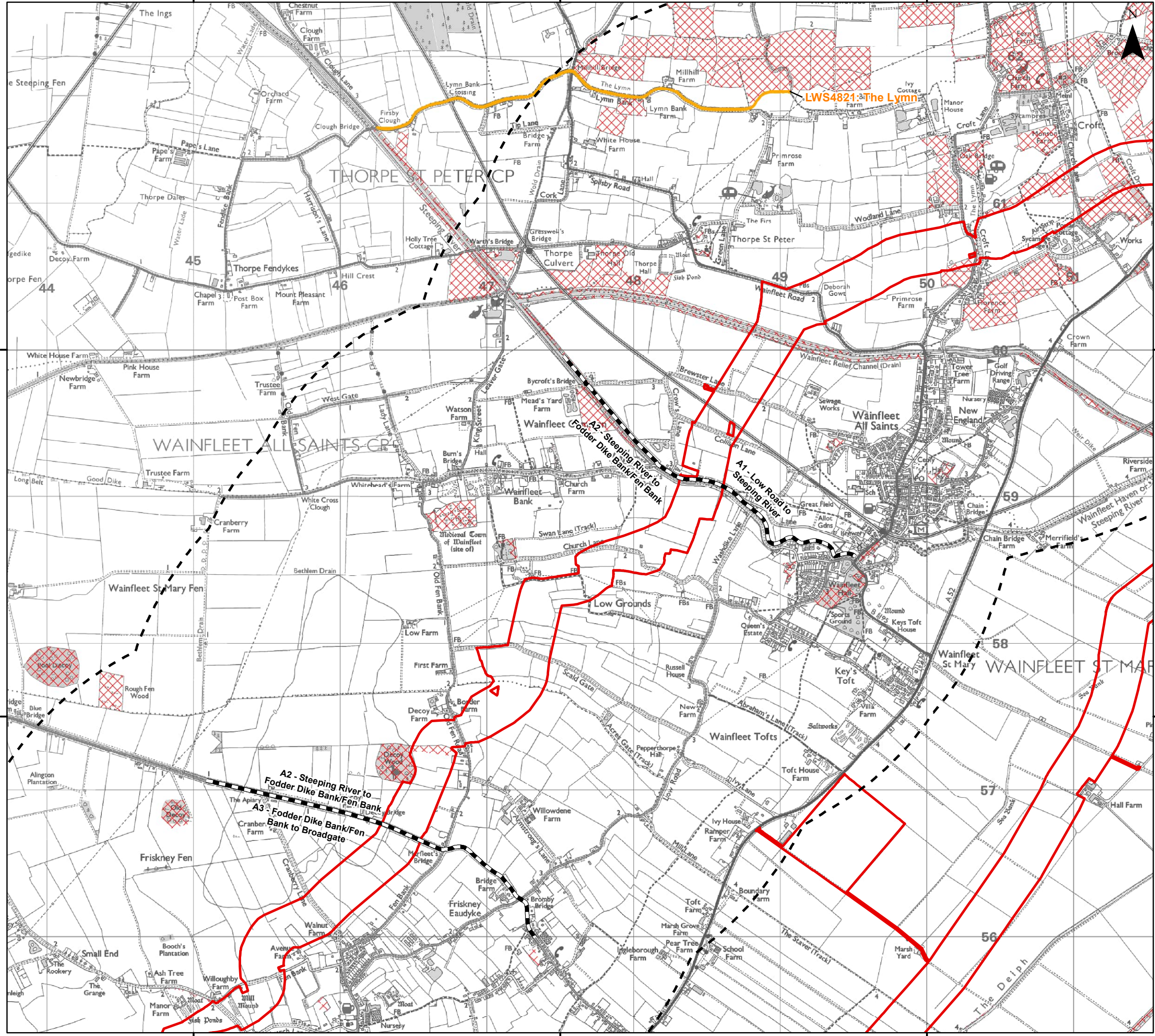
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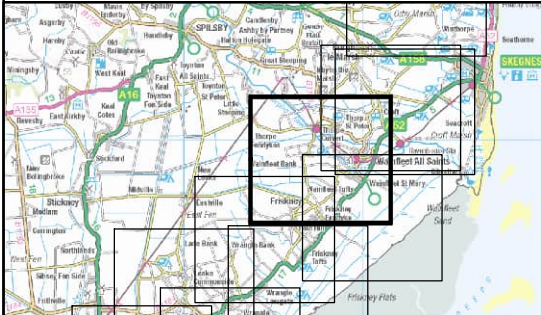
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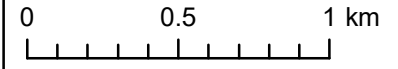
Legend

- Onshore PEIR Boundary
- Onshore Segment Break
- Onshore PEIR Boundary Weston Marsh (via North of the A52) 2 km Buffer
- Local Wildlife Site
- Priority Habitat

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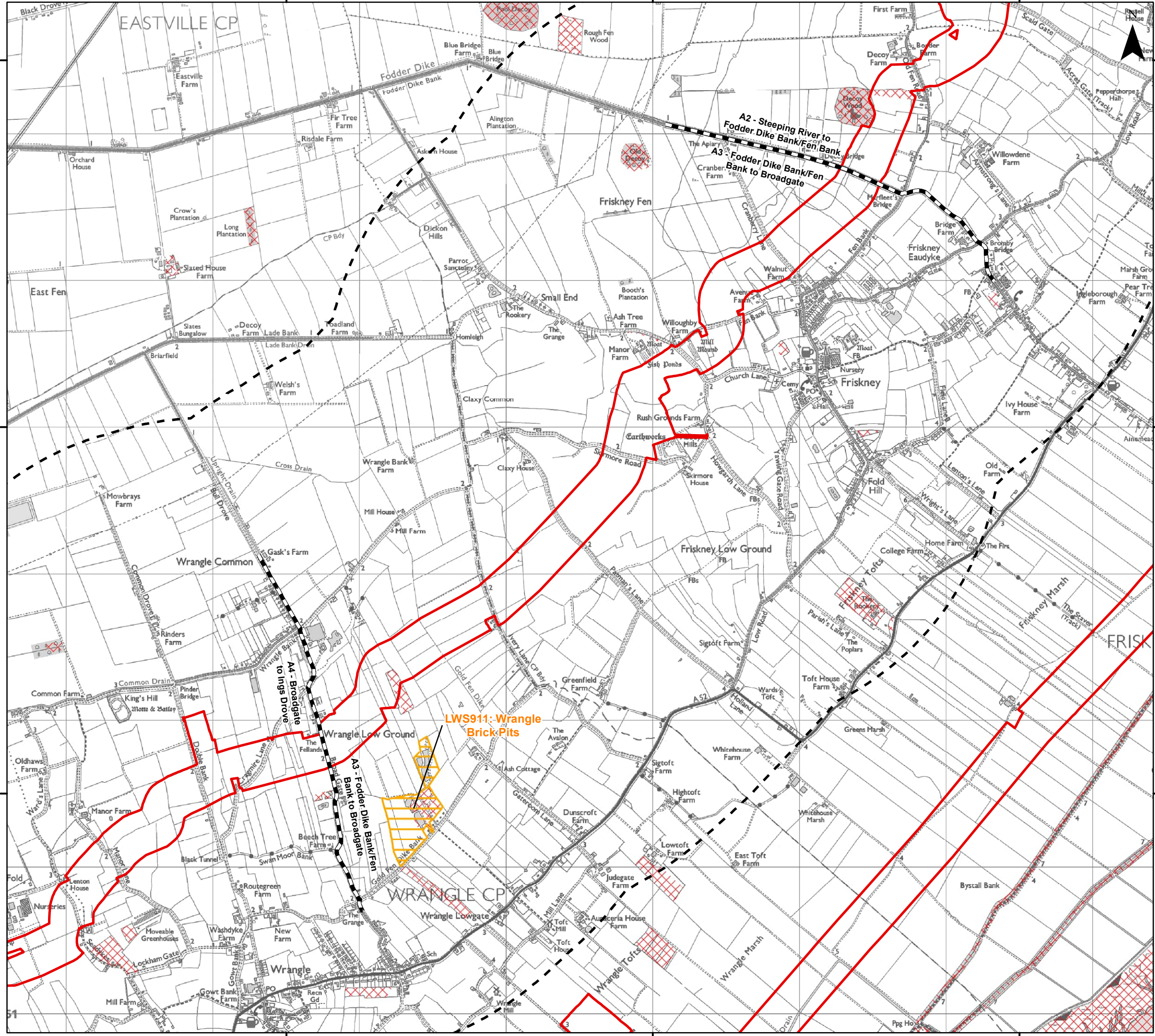
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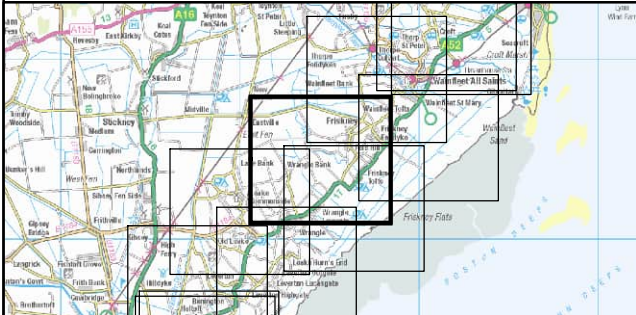
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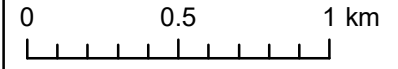
Legend

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- Onshore Segment Break
- Onshore PEIR Boundary Weston Marsh (via North of the A52) 2 km Buffer
- Local Wildlife Site
- Priority Habitat

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Weston Marsh
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Figure 21.1.4.15

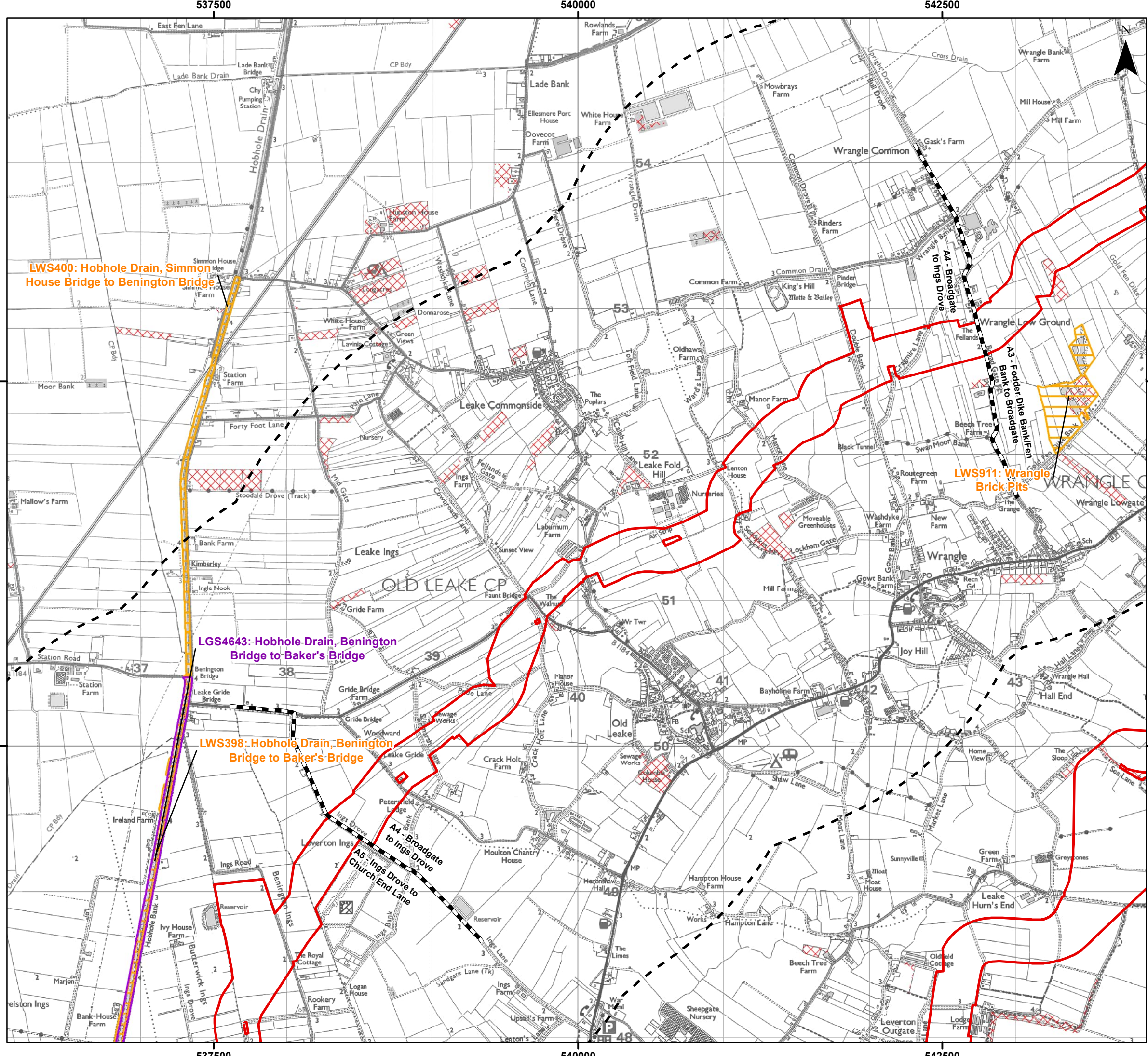


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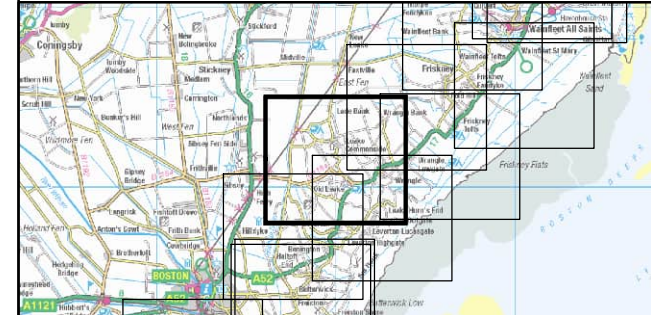
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- ### Legend
- Onshore PEIR Boundary
 - Onshore Segment Break
 - Onshore PEIR Boundary Weston Marsh (via North of the A52) 2 km Buffer
 - Local Geological Site
 - Local Wildlife Site
 - Priority Habitat

Sources:
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 Scale: 1:25,000

Preliminary Environmental Information Report
 Weston Marsh
 Locally Designated Sites and Priority Habitats
 Figure 21.1.4.16

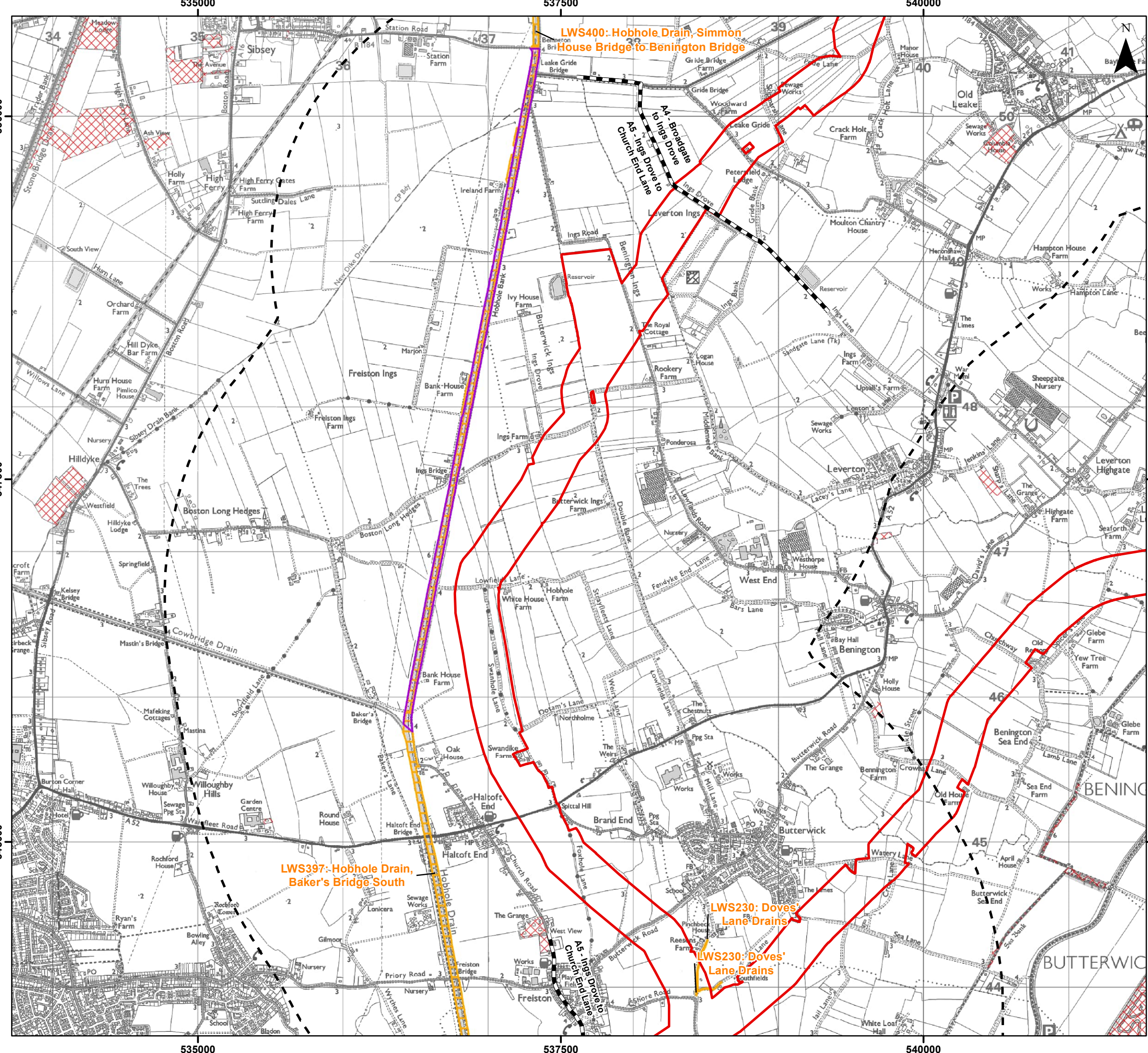


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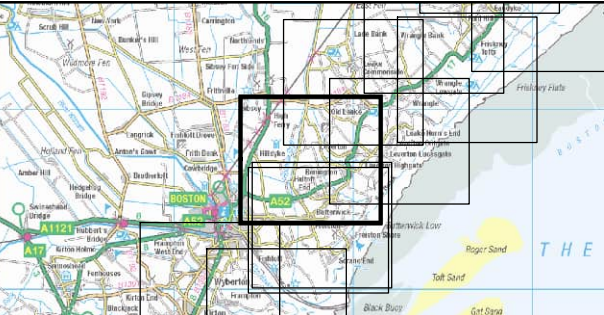
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Legend

- Onshore PEIR Boundary
- Onshore Segment Break
- Onshore PEIR Boundary Weston Marsh (via North of the A52) 2 km Buffer
- Local Geological Site
- Local Wildlife Site
- Priority Habitat

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Scale: 1:25,000

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 Weston Marsh
 Locally Designated Sites and Priority Habitats
 Figure 21.1.4.17

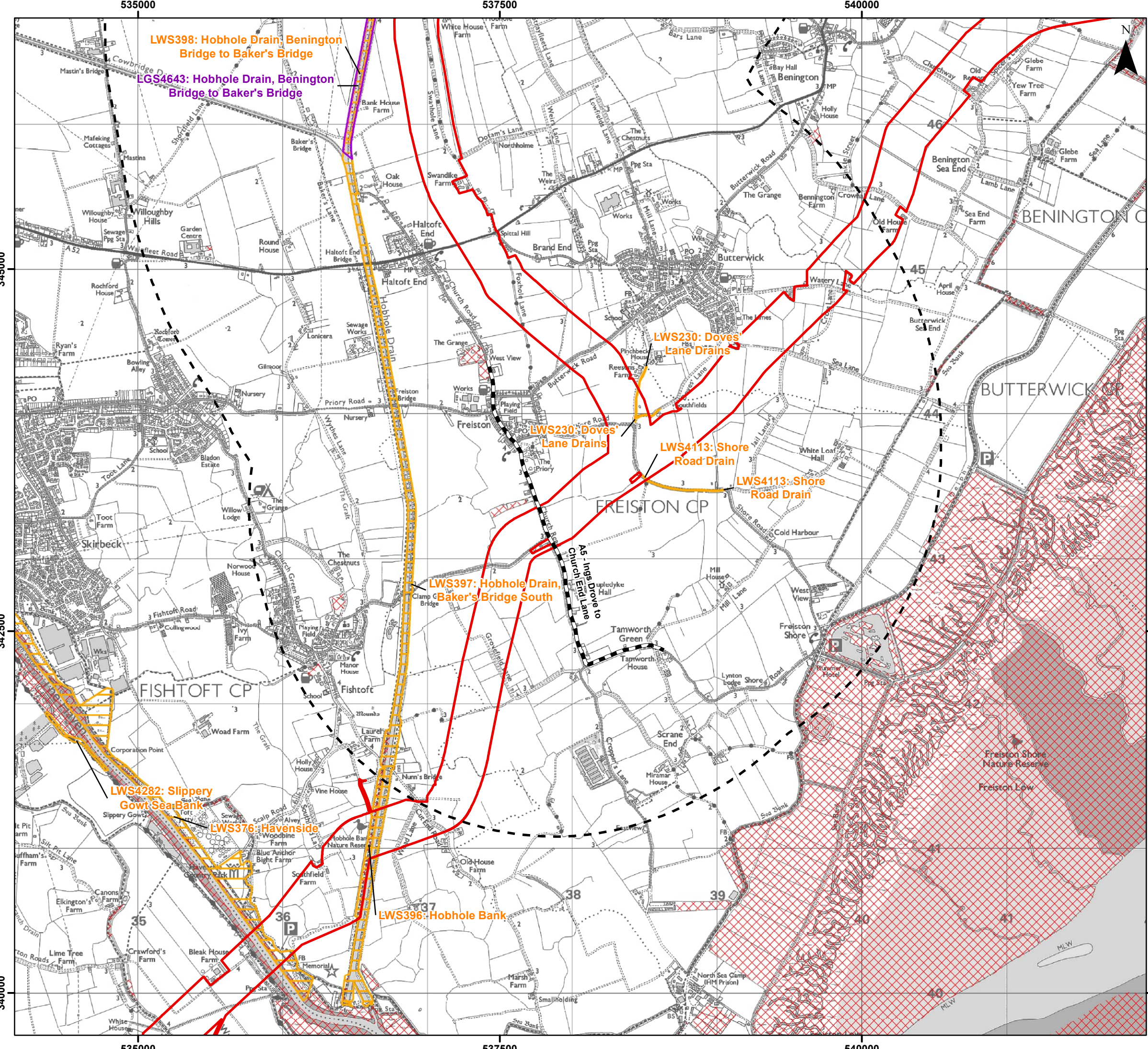


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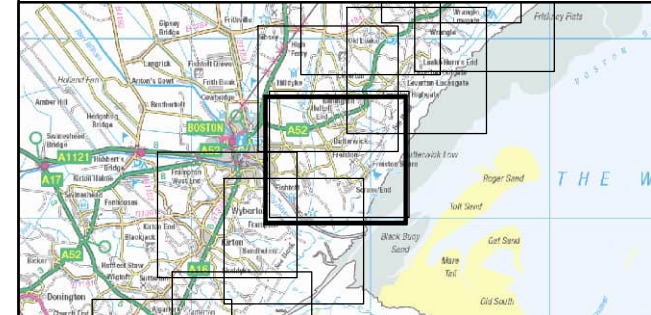
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Legend

- Onshore PEIR Boundary
- Onshore Segment Break
- Onshore PEIR Boundary Weston Marsh (via North of the A52) 2 km Buffer
- Local Geological Site
- Local Wildlife Site
- Priority Habitat

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 Weston Marsh
 Locally Designated Sites and Priority Habitats
 Figure 21.1.4.18

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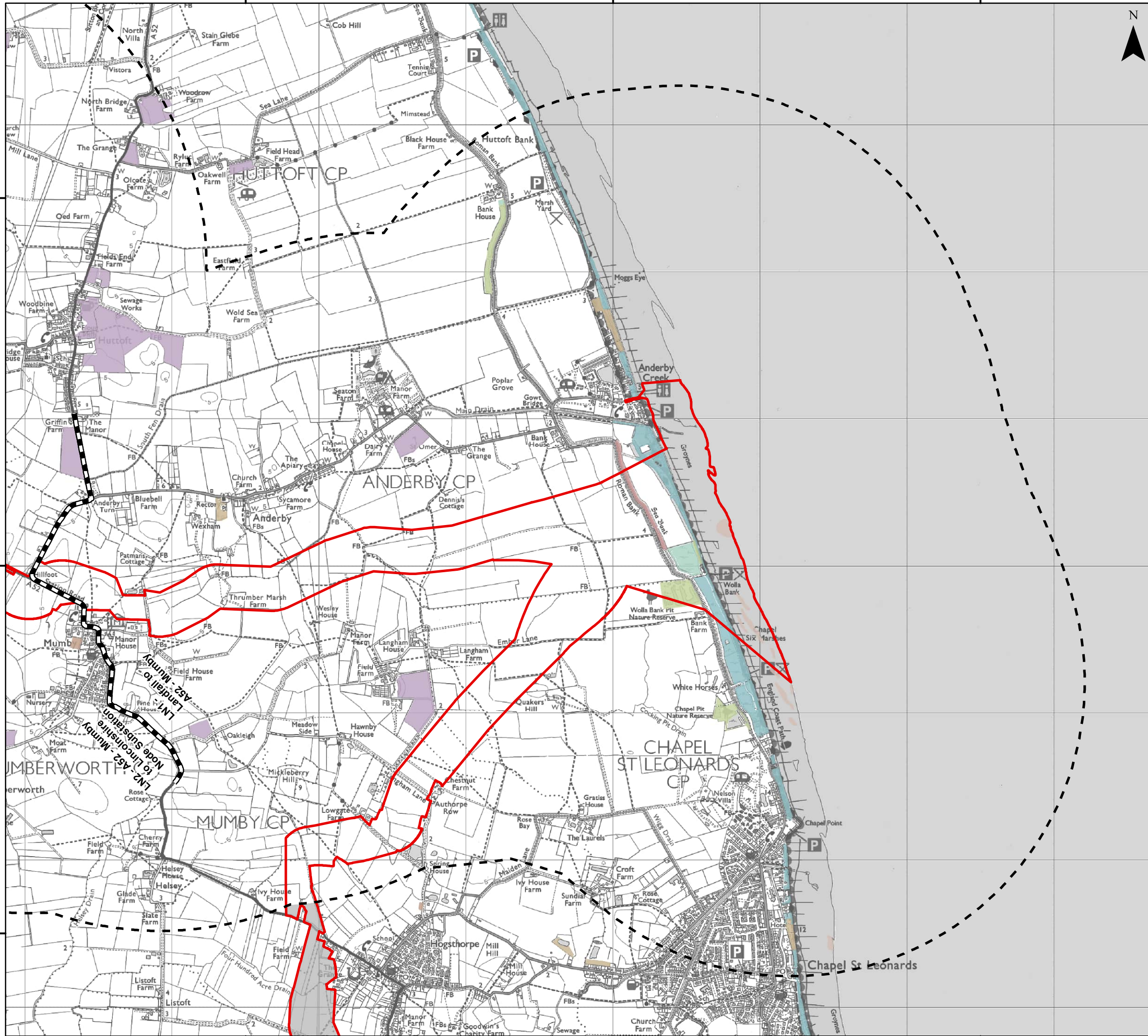
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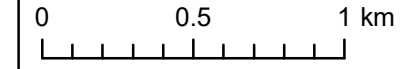
Legend

-  Onshore PEIR Boundary
-  Onshore Segment Break
-  Onshore PEIR Boundary 2 km Buffer
- Priority Habitat**
-  Coastal and Floodplain Grazing Marsh
-  Coastal Sand Dunes
-  Deciduous Woodland
-  Good Quality Semi-improved Grassland
-  Mudflats
-  No Main Habitat but Additional Habitats Present
-  Reedbeds
-  Traditional Orchard

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Lincolnshire Node
Important Sites and Habitats

Figure 21.1.5.1



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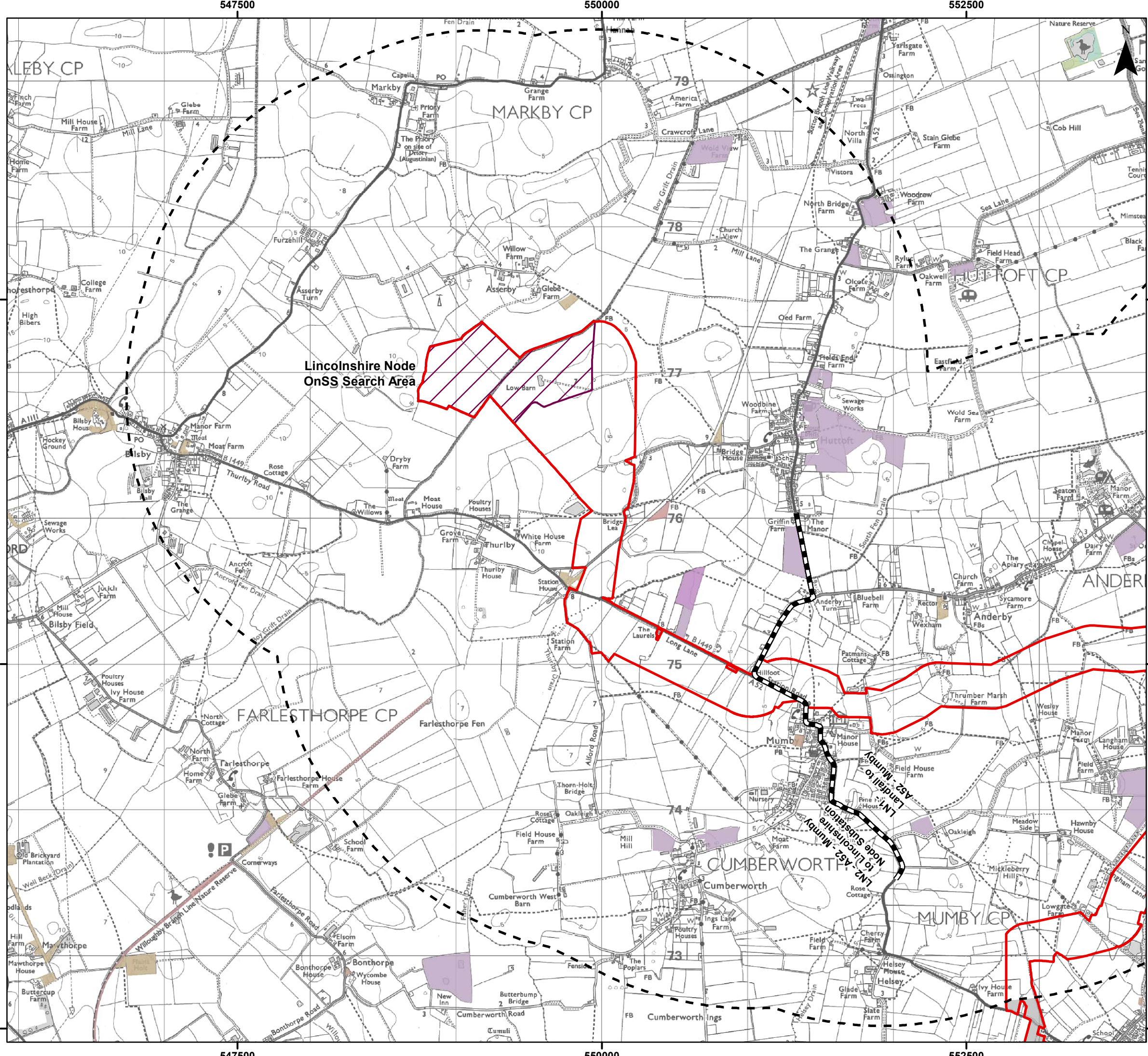
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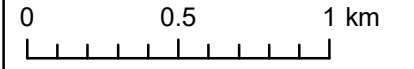
Legend

- Onshore PEIR Boundary
- Lincolnshire Node OnSS Search
- Onshore Segment Break
- Onshore PEIR Boundary 2 km Buffer
- Priority Habitat**
- Coastal and Floodplain Grazing Marsh
- Deciduous Woodland
- Good Quality Semi-improved Grassland
- Lowland Meadows
- No Main Habitat but Additional Habitats Present
- Reedbeds
- Traditional Orchard

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Lincolnshire Node
 Important Sites and Habitats

Figure 21.1.5.2



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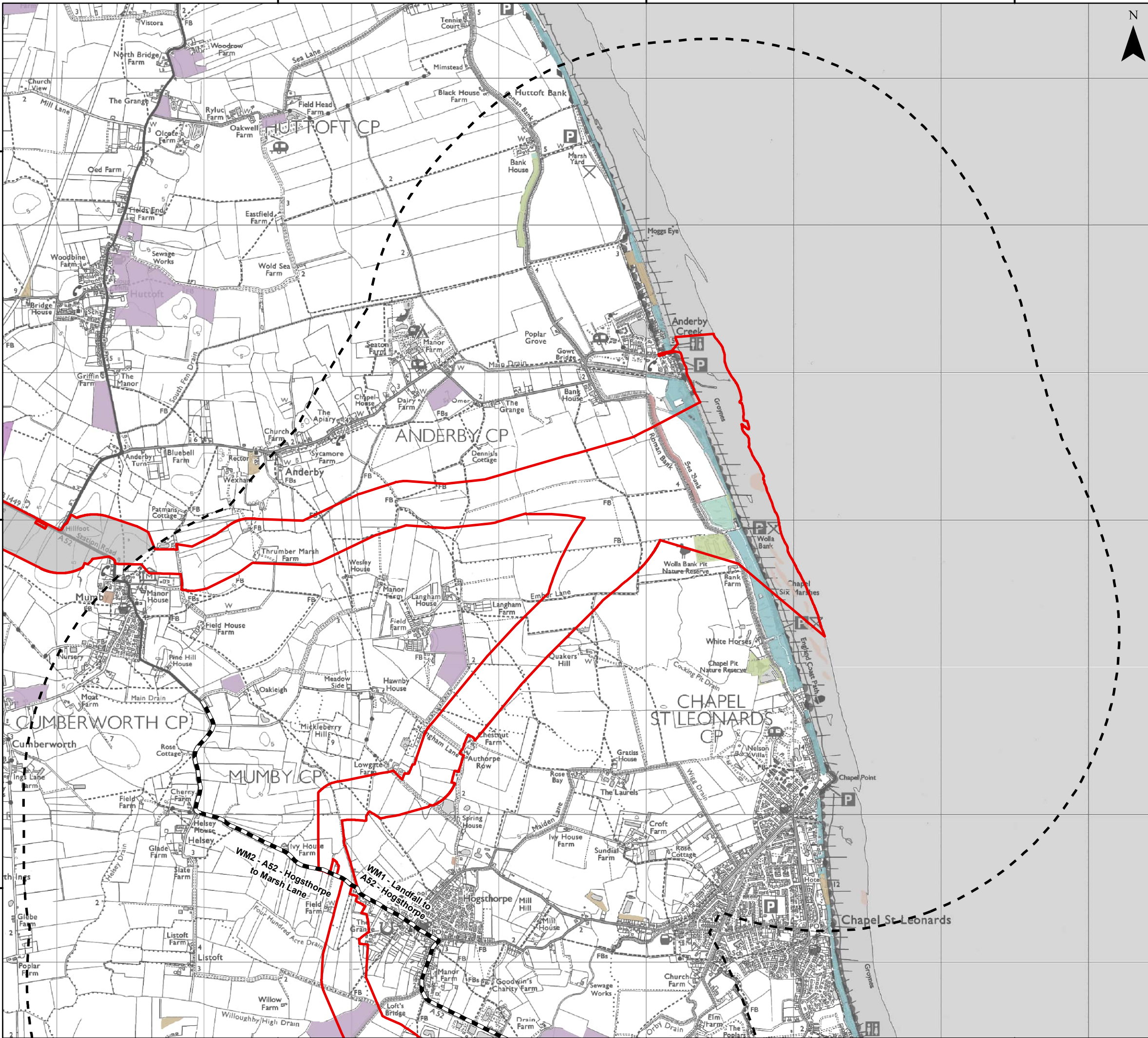
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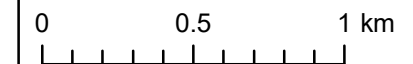
Legend

-  Onshore PEIR Boundary
-  Onshore Segment Break
-  Onshore PEIR Boundary Weston Marsh (via South of the A52) 2 km Buffer
- Priority Habitat**
-  Coastal and Floodplain Grazing Marsh
-  Coastal Sand Dunes
-  Deciduous Woodland
-  Good Quality Semi-improved Grassland
-  Lowland Meadows
-  Mudflats
-  No Main Habitat but Additional Habitats Present
-  Reedbeds
-  Traditional Orchard

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Weston Marsh
Important Sites and Habitats

Figure 21.1.6.1



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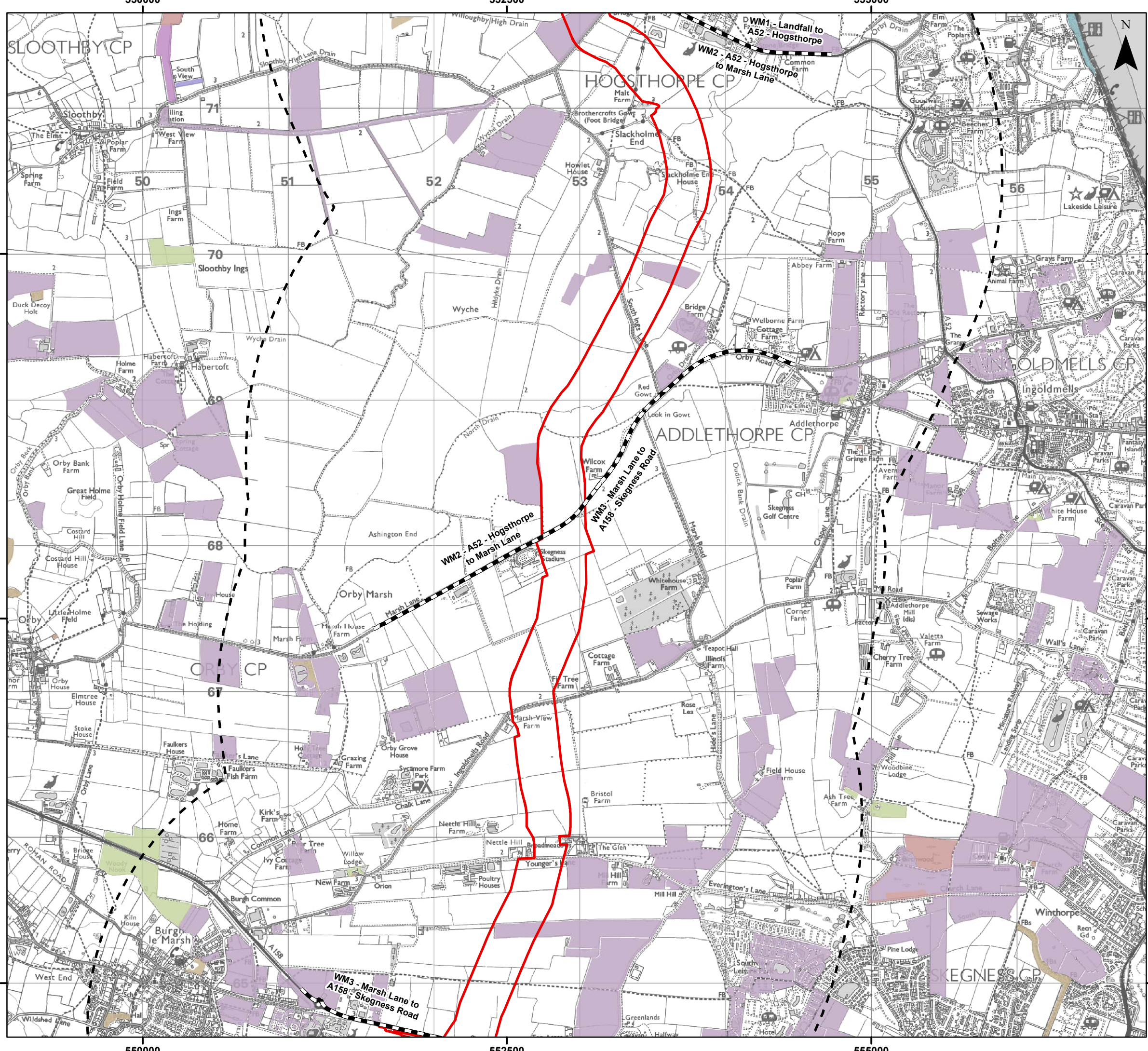
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Legend

- Onshore PEIR Boundary
- Onshore Segment Break
- Onshore PEIR Boundary Weston Marsh (via South of the A52) 2 km Buffer

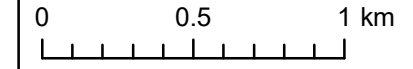
Priority Habitat

- Coastal and Floodplain Grazing Marsh
- Coastal Sand Dunes
- Deciduous Woodland
- Good Quality Semi-improved Grassland
- Lowland Calcareous Grassland
- Lowland Meadows
- No Main Habitat but Additional Habitats Present
- Traditional Orchard

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Weston Marsh
 Important Sites and Habitats

Figure 21.1.6.2

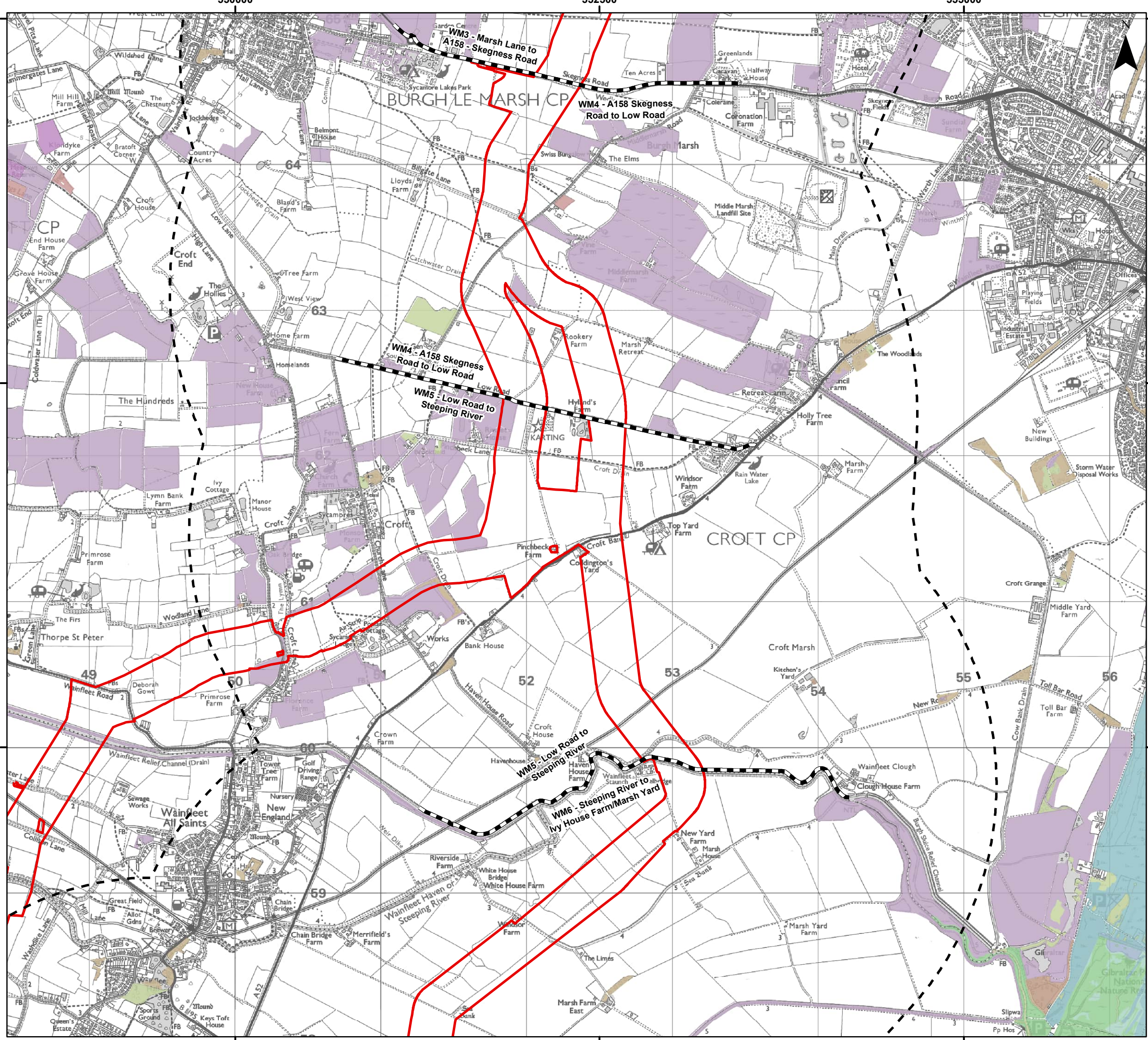


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Legend

- Onshore PEIR Boundary
- Onshore Segment Break
- Onshore PEIR Boundary Weston Marsh (via South of the A52) 2 km Buffer

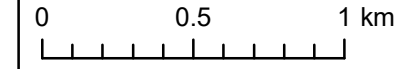
Priority Habitat

- Coastal and Floodplain Grazing Marsh
- Coastal Saltmarsh
- Coastal Sand Dunes
- Deciduous Woodland
- Good Quality Semi-improved Grassland
- Lowland Meadows
- Mudflats
- No Main Habitat but Additional Habitats Present
- Reedbeds
- Saline Lagoons
- Traditional Orchard

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Weston Marsh
Important Sites and Habitats

Figure 21.1.6.3

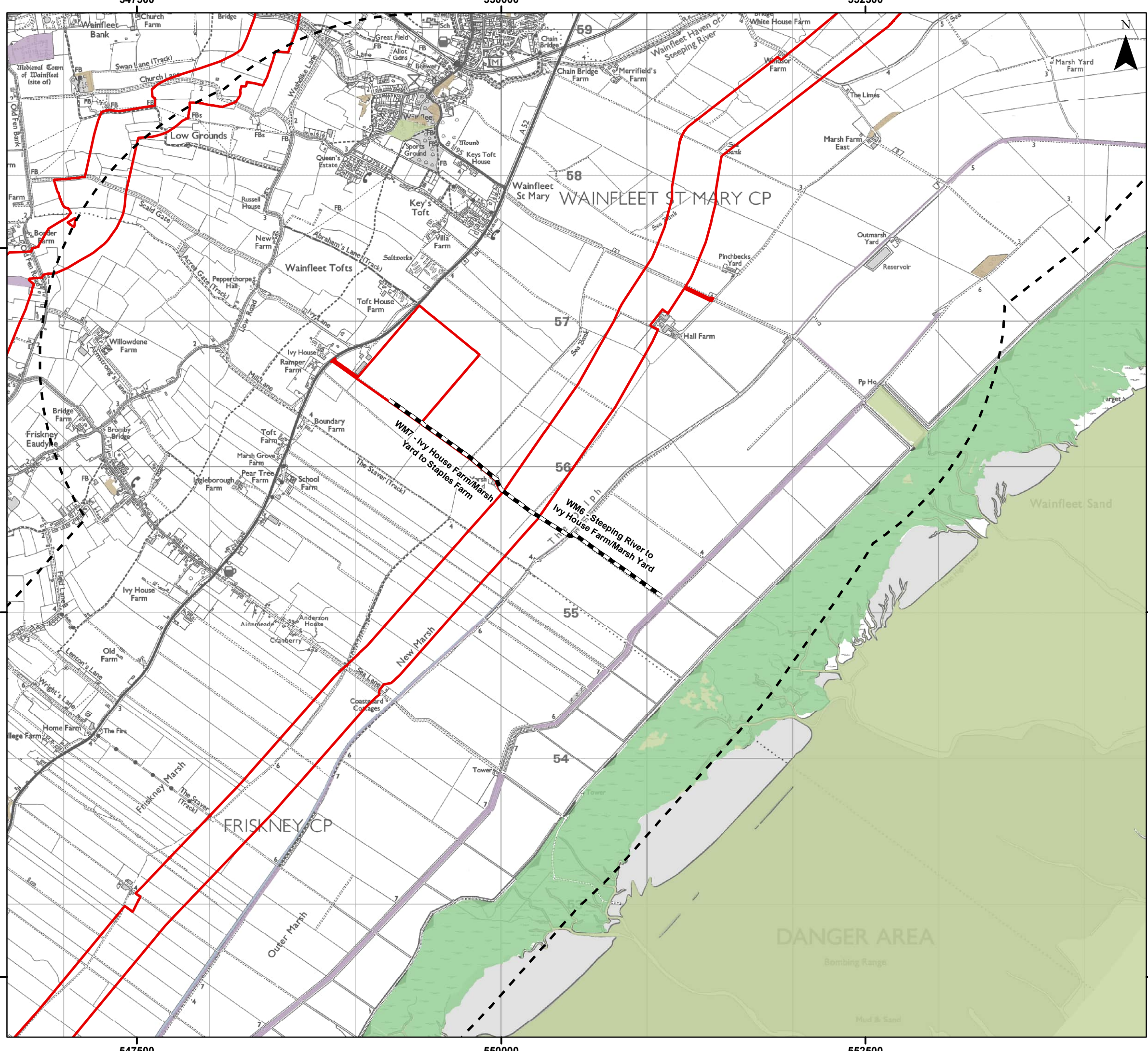


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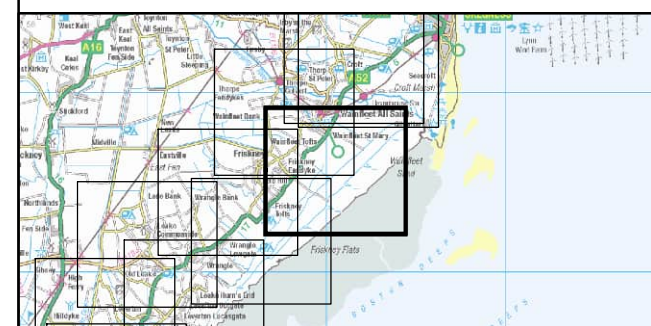
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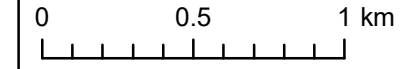
Legend

- Onshore PEIR Boundary
 - Onshore Segment Break
 - Onshore PEIR Boundary Weston Marsh (via South of the A52) 2 km Buffer
- Priority Habitat**
- Coastal and Floodplain Grazing Marsh
 - Coastal Saltmarsh
 - Deciduous Woodland
 - Mudflats
 - No Main Habitat but Additional Habitats Present
 - Saline Lagoons

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Weston Marsh
Important Sites and Habitats

Figure 21.1.6.4

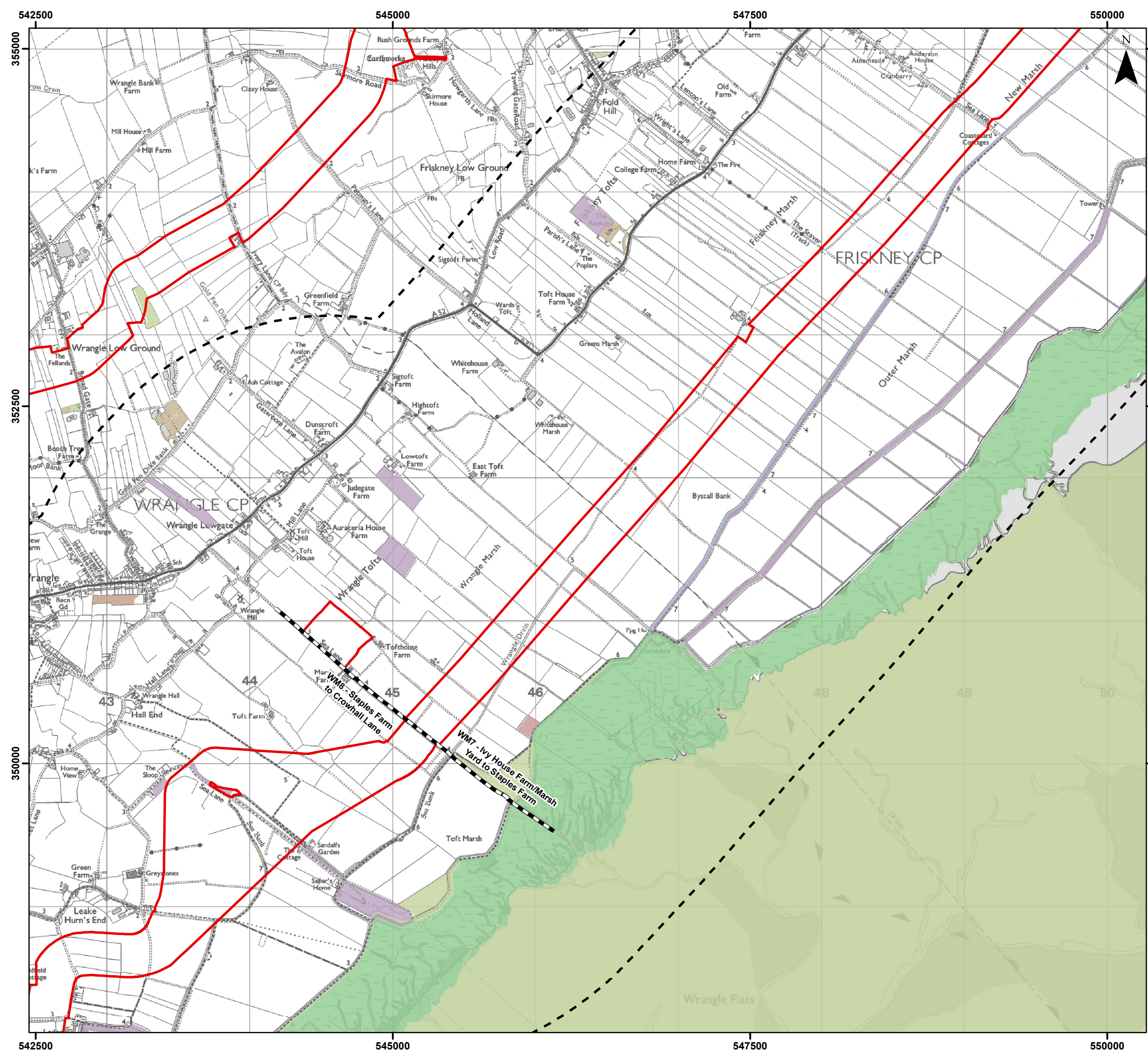


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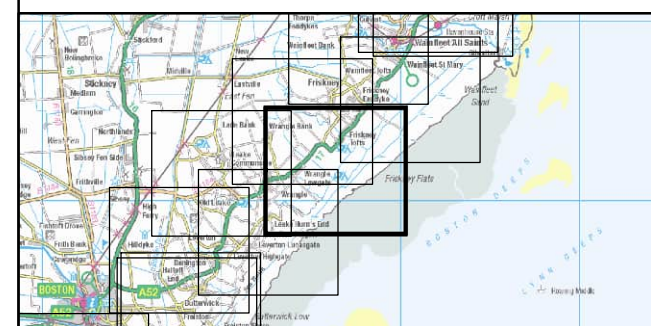
Legend

- Onshore PEIR Boundary
- Onshore Segment Break
- Onshore PEIR Boundary Weston Marsh (via South of the A52) 2 km Buffer

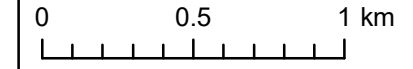
Priority Habitat

- Coastal and Floodplain Grazing Marsh
- Coastal Saltmarsh
- Deciduous Woodland
- Good Quality Semi-improved Grassland
- No Main Habitat but Additional Habitats Present
- Saline Lagoons
- Traditional Orchard

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Weston Marsh
 Important Sites and Habitats

Figure 21.1.6.5

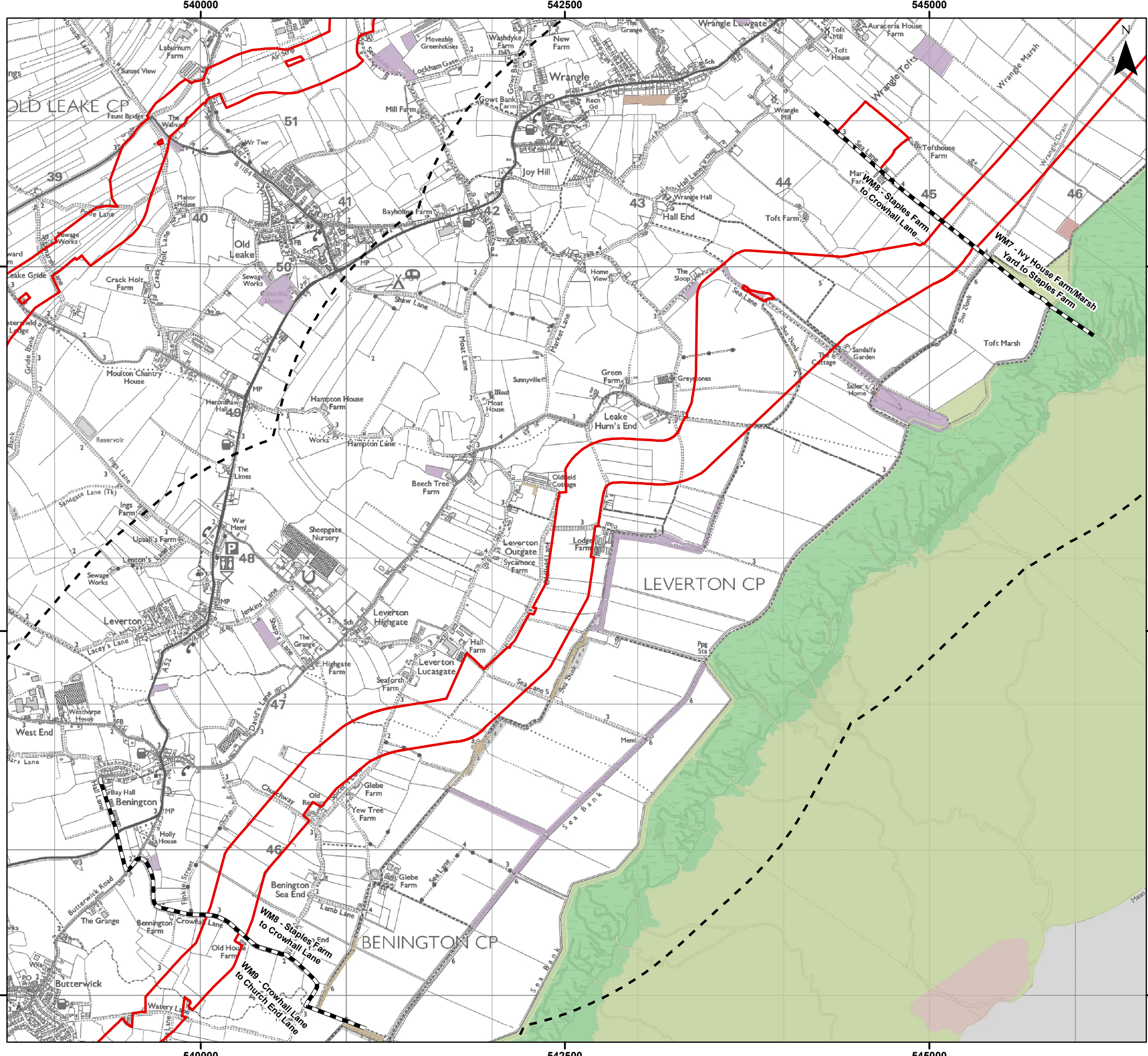


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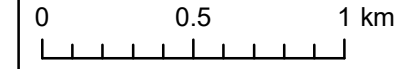
Legend

- Onshore PEIR Boundary
 - Onshore Segment Break
 - Onshore PEIR Boundary Weston Marsh (via South of the A52) 2 km Buffer
- Priority Habitat**
- Coastal and Floodplain Grazing Marsh
 - Coastal Saltmarsh
 - Deciduous Woodland
 - Good Quality Semi-improved Grassland
 - Mudflats
 - No Main Habitat but Additional Habitats Present
 - Traditional Orchard

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Weston Marsh
 Important Sites and Habitats

Figure 21.1.6.6

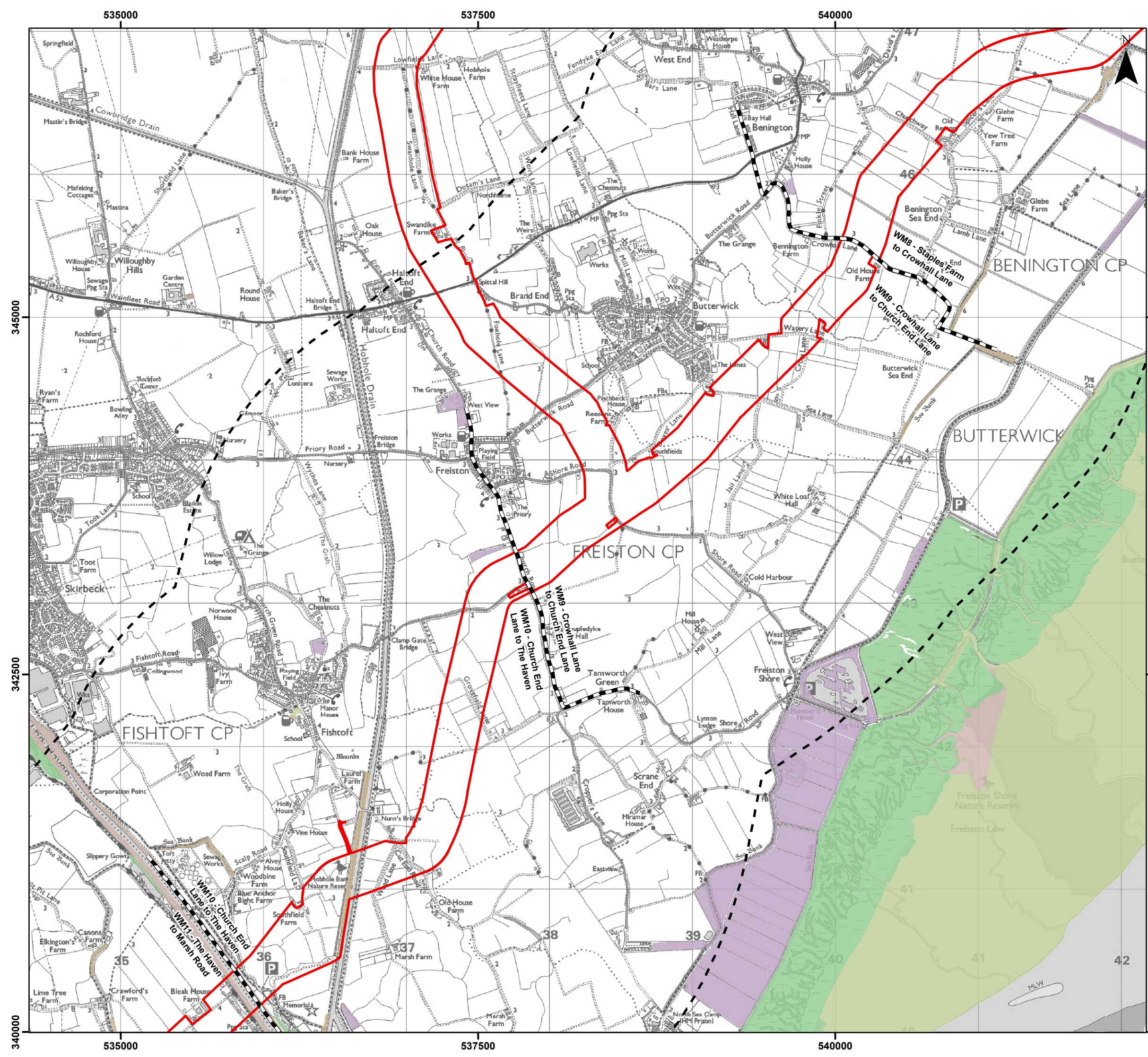


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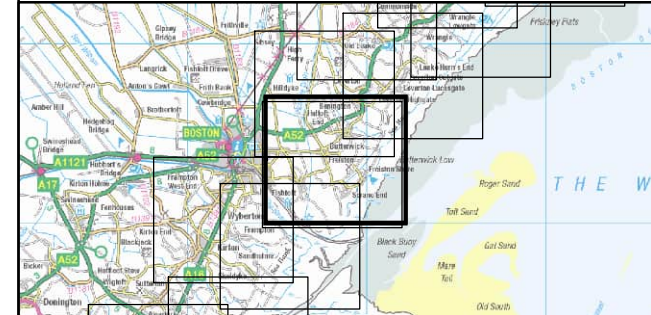
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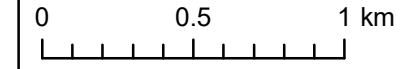
Legend

- Onshore PEIR Boundary
- Onshore Segment Break
- Onshore PEIR Boundary Weston Marsh (via South of the A52) 2 km Buffer
- Priority Habitat**
- Coastal and Floodplain Grazing Marsh
- Coastal Saltmarsh
- Deciduous Woodland
- Mudflats
- No Main Habitat but Additional Habitats Present
- Traditional Orchard

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**Weston Marsh
 Important Sites and Habitats**

Figure 21.1.6.7

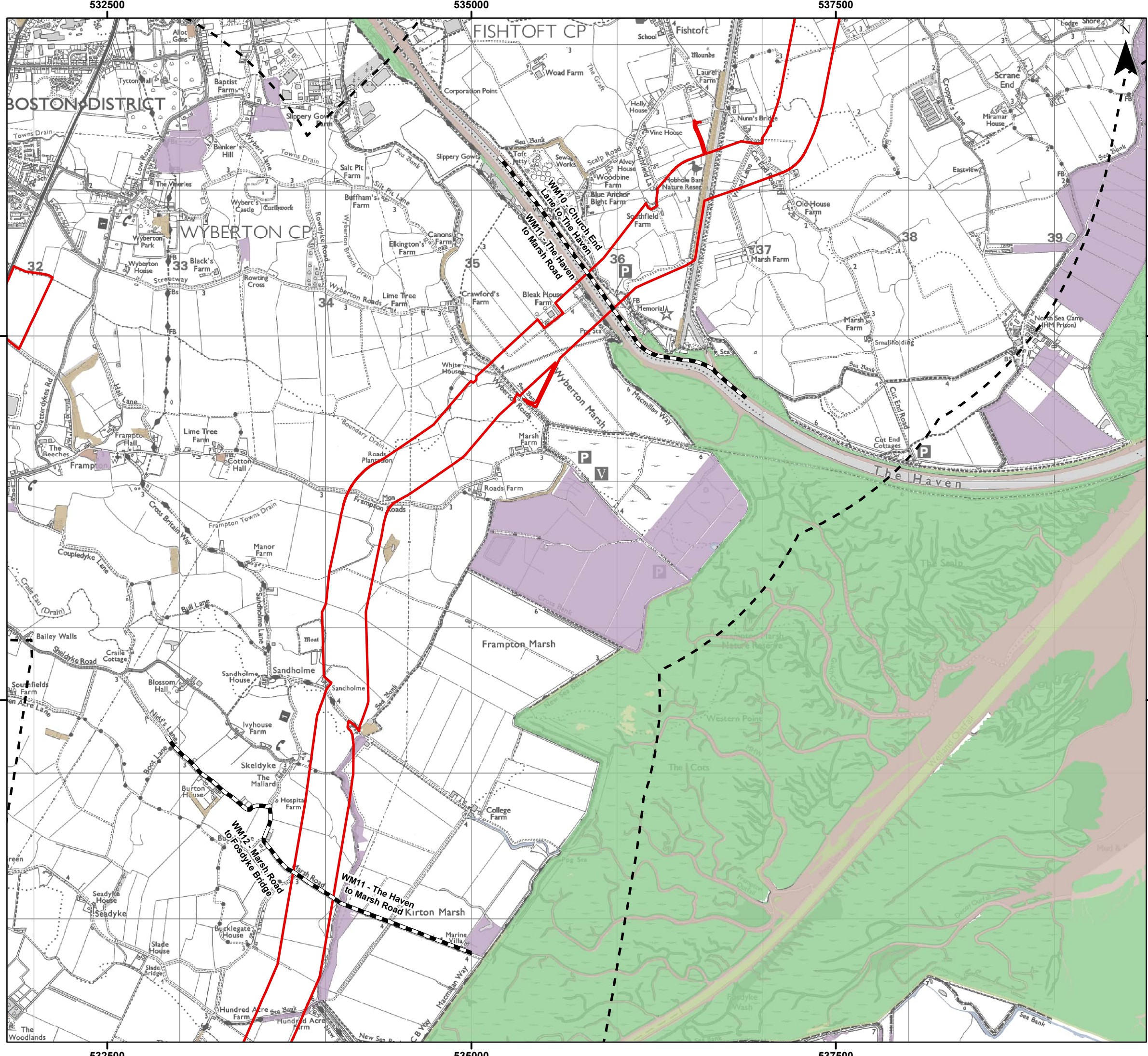


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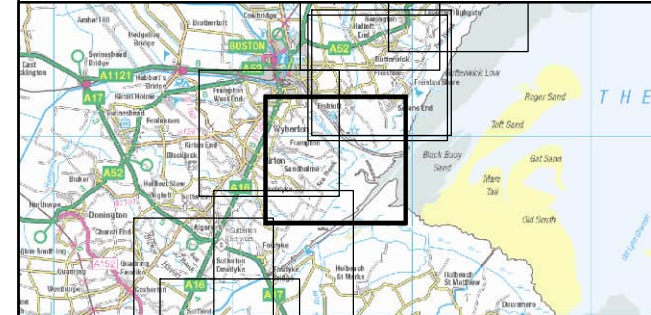
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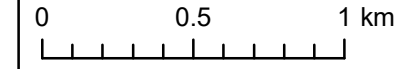
Legend

- Onshore PEIR Boundary
 - Onshore Segment Break
 - Onshore PEIR Boundary Weston Marsh (via South of the A52) 2 km Buffer
- Priority Habitat**
- Coastal and Floodplain Grazing
 - Coastal Saltmarsh
 - Deciduous Woodland
 - Mudflats
 - No Main Habitat but Additional Habitats Present
 - Saline Lagoons
 - Traditional Orchard

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Weston Marsh
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Figure 21.1.6.8



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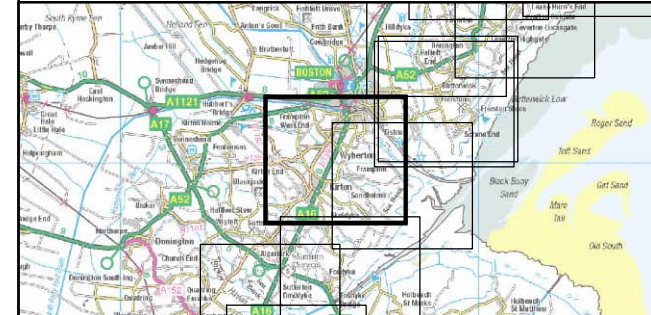
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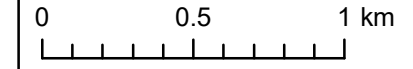
Legend

- Onshore PEIR Boundary
 - Onshore Segment Break
 - Onshore PEIR Boundary Weston Marsh (via South of the A52) 2 km Buffer
- Priority Habitat**
- Coastal and Floodplain Grazing Marsh
 - Coastal Saltmarsh
 - Deciduous Woodland
 - Mudflats
 - No Main Habitat but Additional Habitats Present
 - Saline Lagoons
 - Traditional Orchard

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Weston Marsh
 Important Sites and Habitats

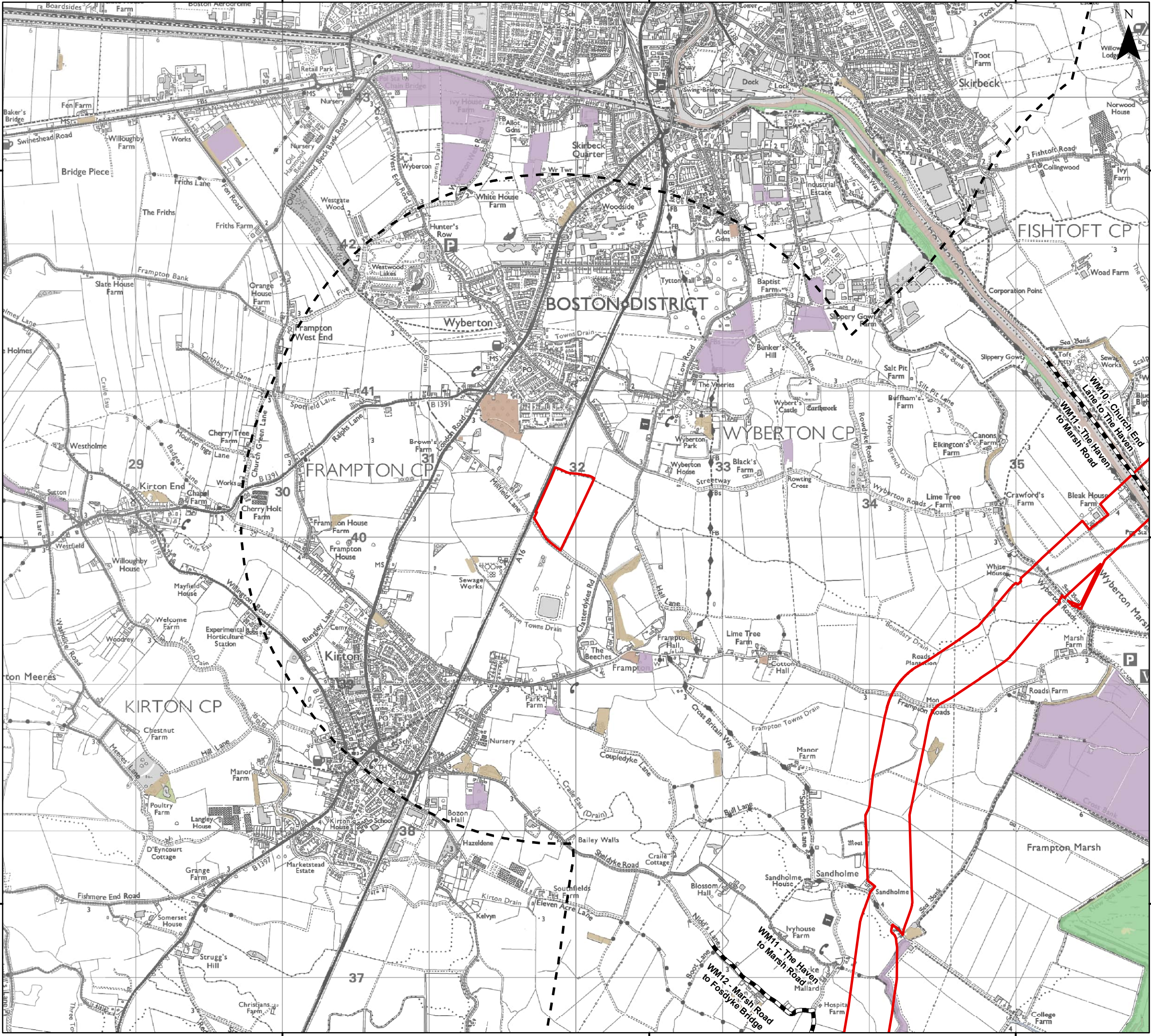
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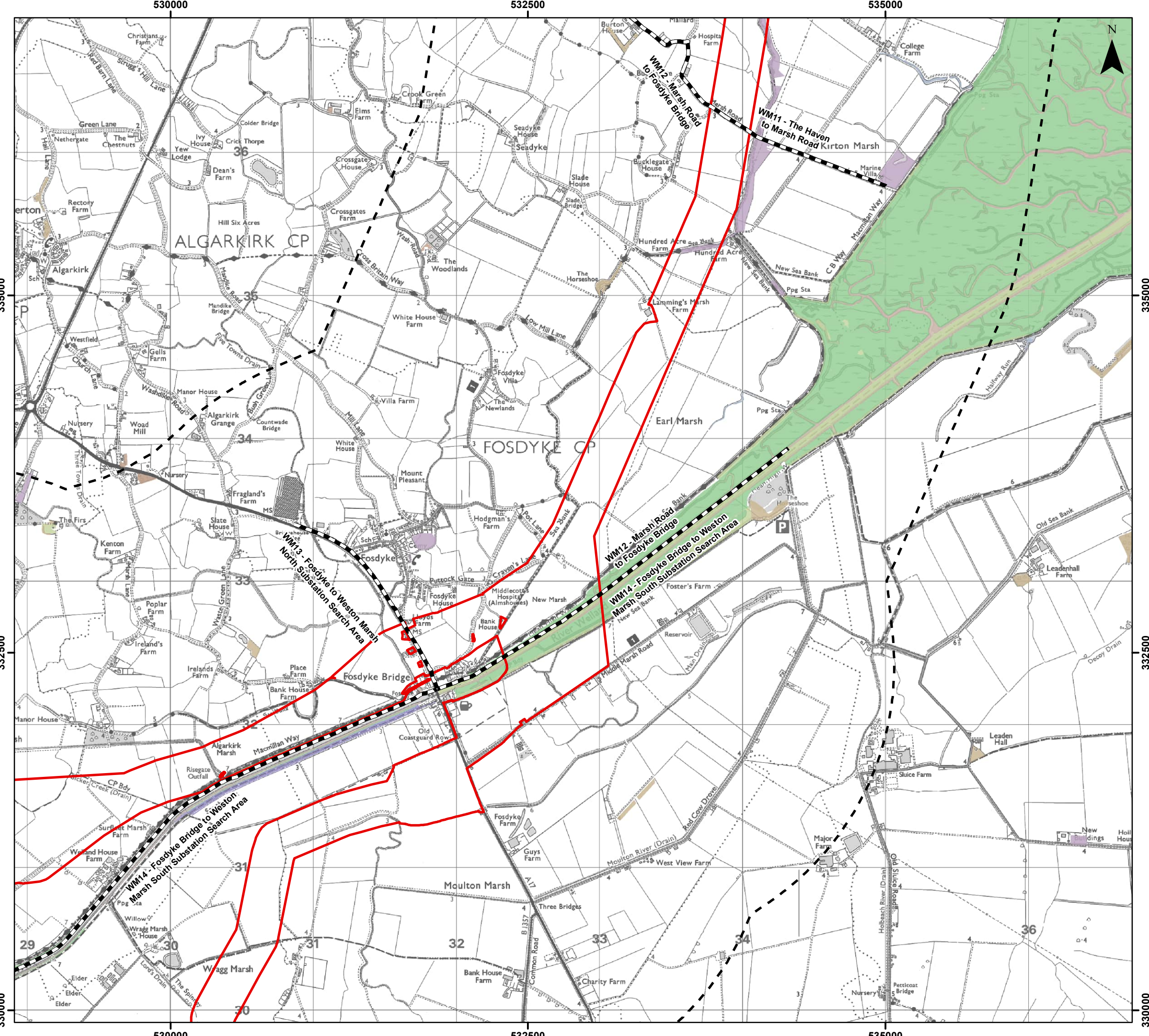
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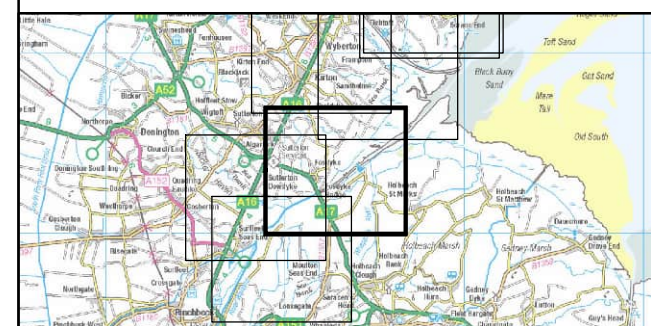
Legend

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- Onshore Segment Break
- Onshore PEIR Boundary Weston Marsh (via South of the A52) 2 km Buffer

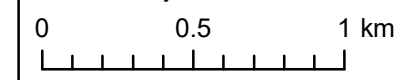
Priority Habitat

- Coastal and Floodplain Grazing Marsh
- Coastal Saltmarsh
- Deciduous Woodland
- Lowland Calcareous Grassland
- Mudflats
- No Main Habitat but Additional Habitats Present
- Saline Lagoons
- Traditional Orchard

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Preliminary Environmental Information Report

Weston Marsh
 Important Sites and Habitats

Figure 21.1.6.10

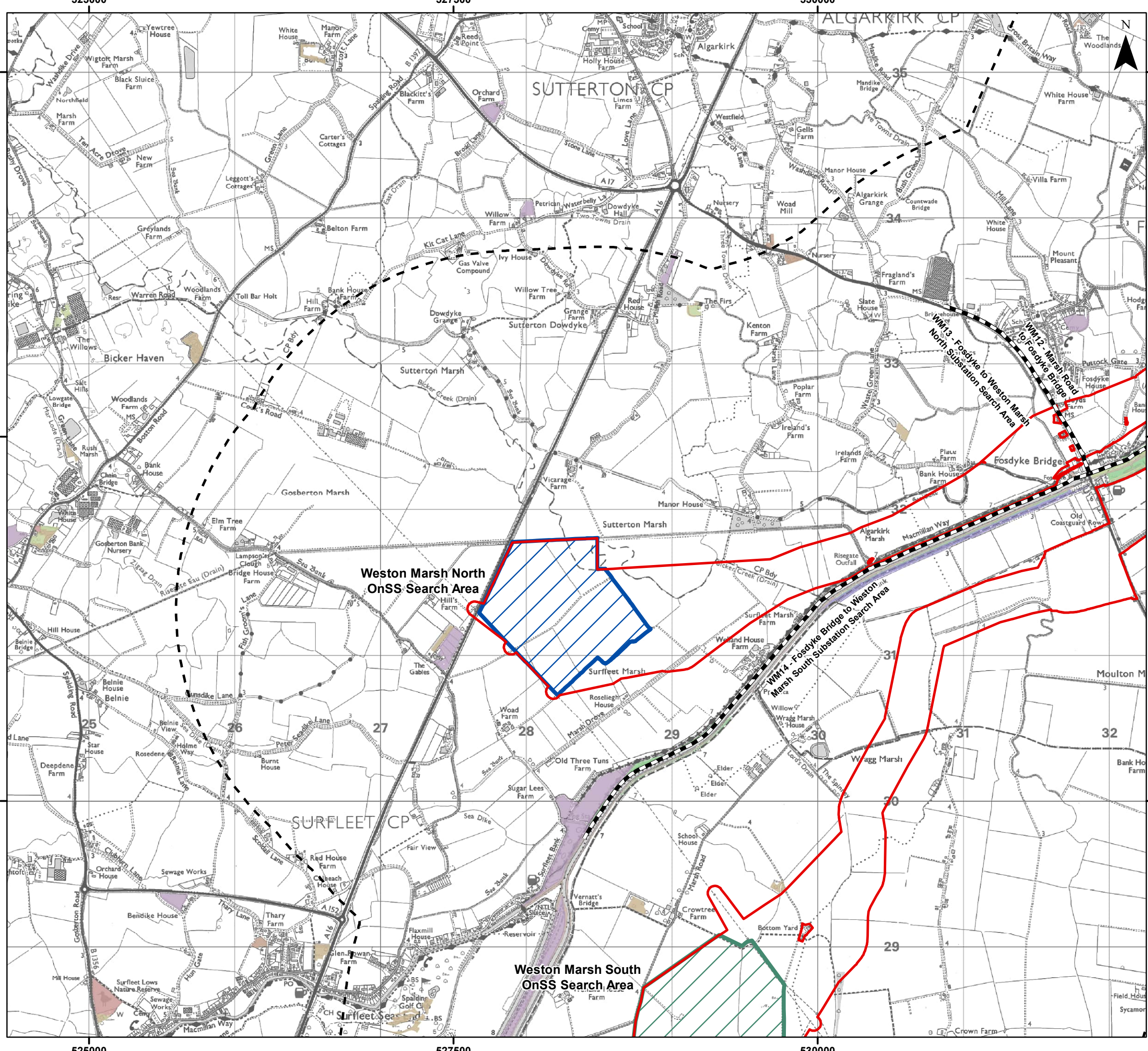


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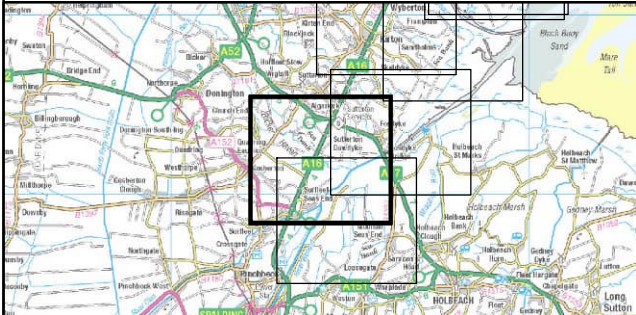
Legend

- Onshore PEIR Boundary
- Weston Marsh North OnSS Search Area
- Weston Marsh South OnSS Search Area
- Onshore Segment Break
- Onshore PEIR Boundary Weston Marsh (via South of the A52) 2 km Buffer

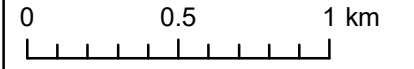
Priority Habitat

- Coastal and Floodplain Grazing Marsh
- Coastal Saltmarsh
- Deciduous Woodland
- Good Quality Semi-improved Grassland
- Lowland Calcareous Grassland
- Mudflats
- No Main Habitat but Additional Habitats Present
- Traditional Orchard

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Weston Marsh
 Important Sites and Habitats

Figure 21.1.6.11

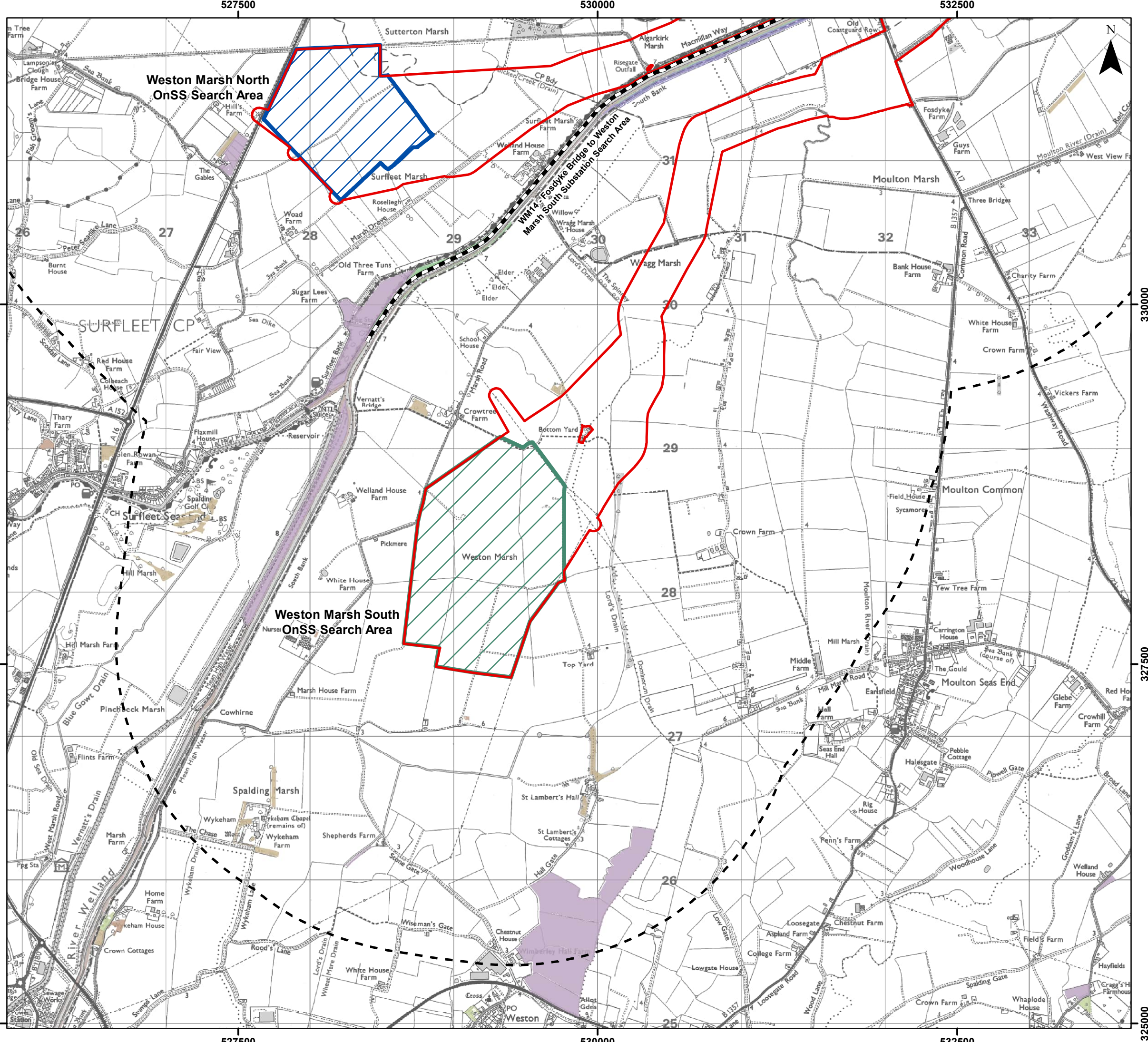


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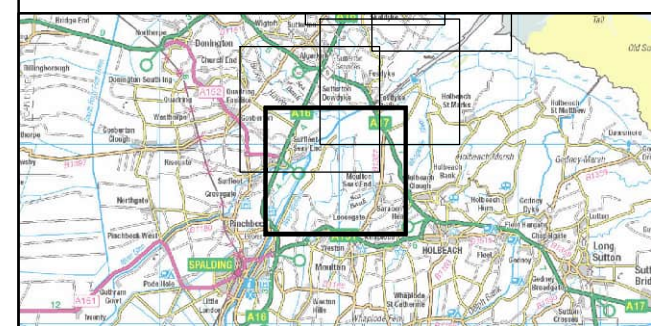
Legend

- ▭ Onshore PEIR Boundary
- ▨ Weston Marsh North OnSS Search Area
- ▨ Weston Marsh South OnSS Search Area
- Onshore Segment Break
- Onshore PEIR Boundary Weston Marsh (via South of the A52) 2 km Buffer

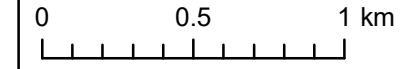
Priority Habitat

- Coastal and Floodplain Grazing Marsh
- Coastal Saltmarsh
- Deciduous Woodland
- Lowland Calcareous Grassland
- Mudflats
- No Main Habitat but Additional Habitats Present
- Traditional Orchard

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Coordinate System: British National Grid



Scale: 1:25,000

Preliminary Environmental Information Report

Weston Marsh
 Important Sites and Habitats

Figure 21.1.6.12

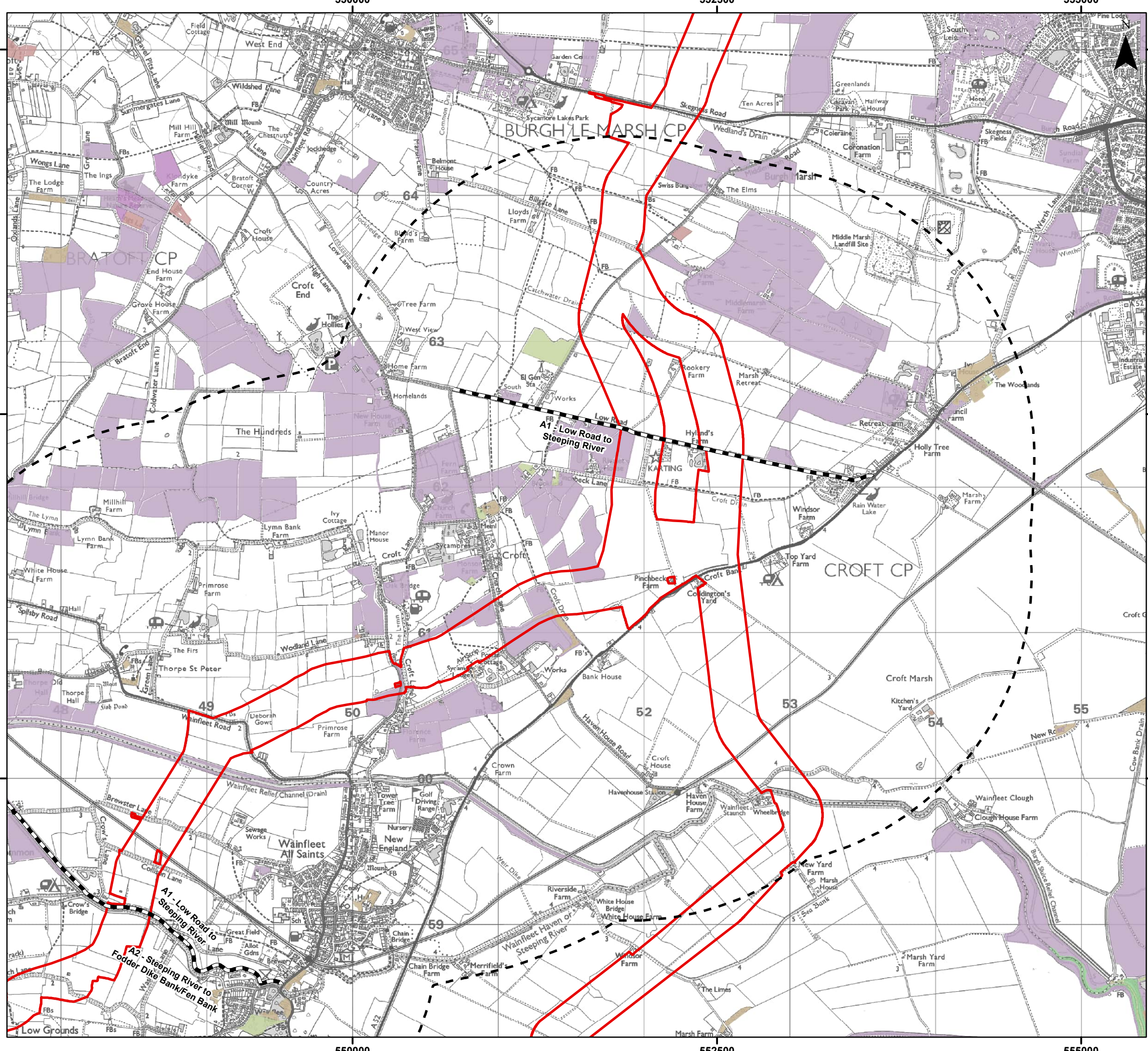


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Legend

- Onshore PEIR Boundary
- Onshore PEIR Boundary Weston Marsh (via North of the A52) 2 km Buffer

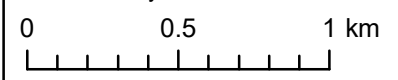
Priority Habitat

- Coastal and Floodplain Grazing Marsh
- Coastal Saltmarsh
- Deciduous Woodland
- Good Quality Semi-improved Grassland
- Lowland Meadows
- Mudflats
- No Main Habitat but Additional Habitats Present
- Traditional Orchard

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Weston Marsh
 Important Sites and Habitats

Figure 21.1.6.13



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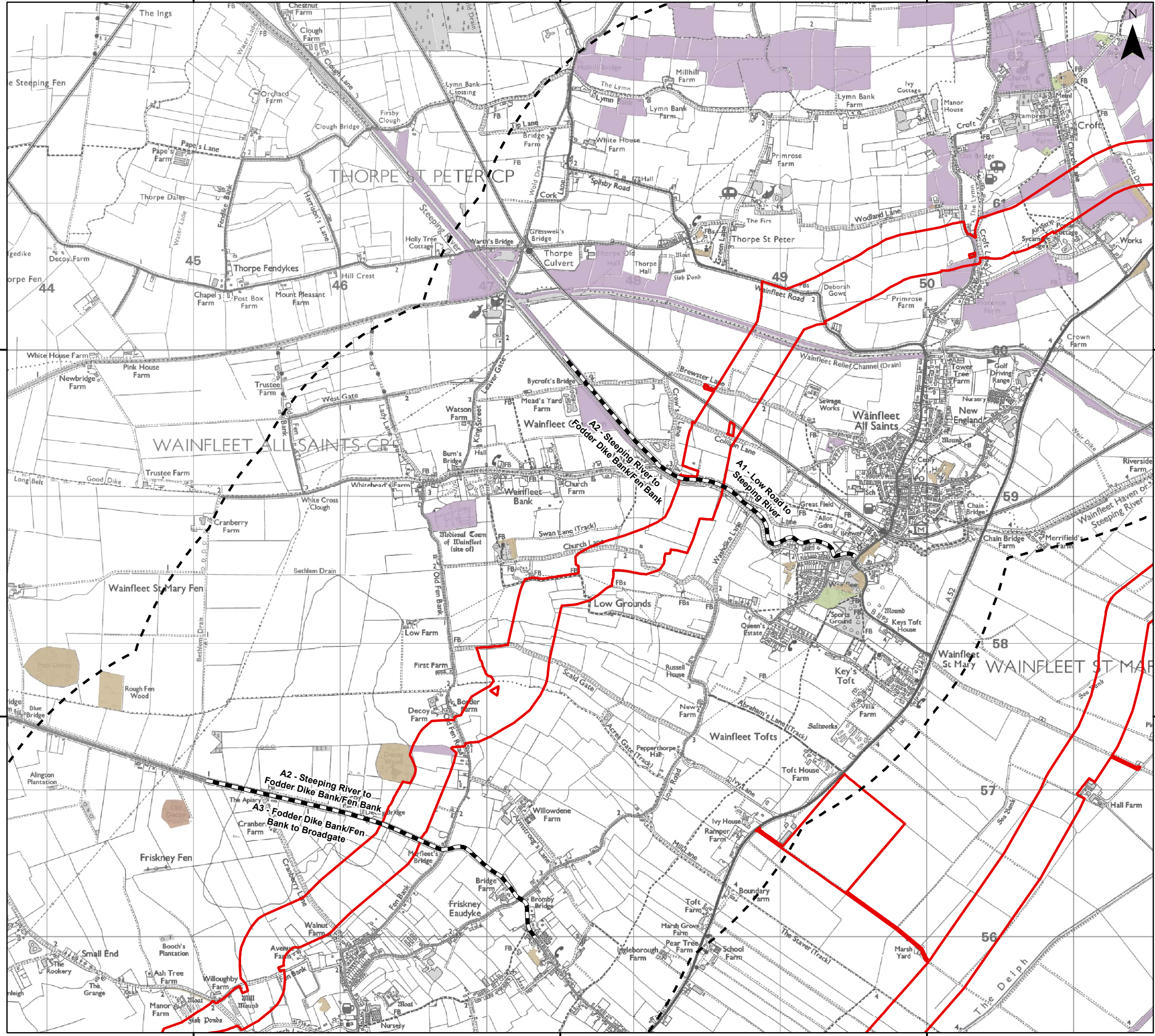
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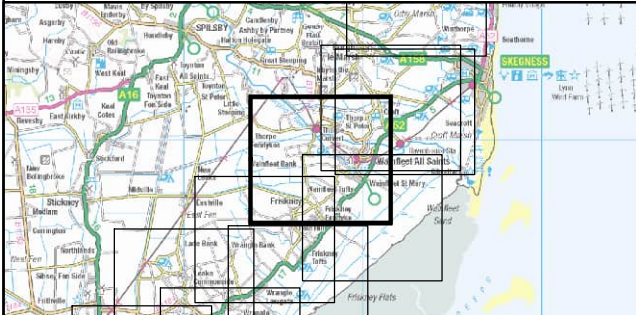
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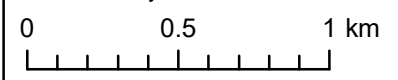
Legend

- Onshore PEIR Boundary
- Onshore PEIR Boundary Weston Marsh (via North of the A52) 2 km Buffer
- Priority Habitat**
- Coastal and Floodplain Grazing Marsh
- Deciduous Woodland
- Good Quality Semi-improved Grassland
- No Main Habitat but Additional Habitats Present
- Traditional Orchard

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Weston Marsh
 Important Sites and Habitats

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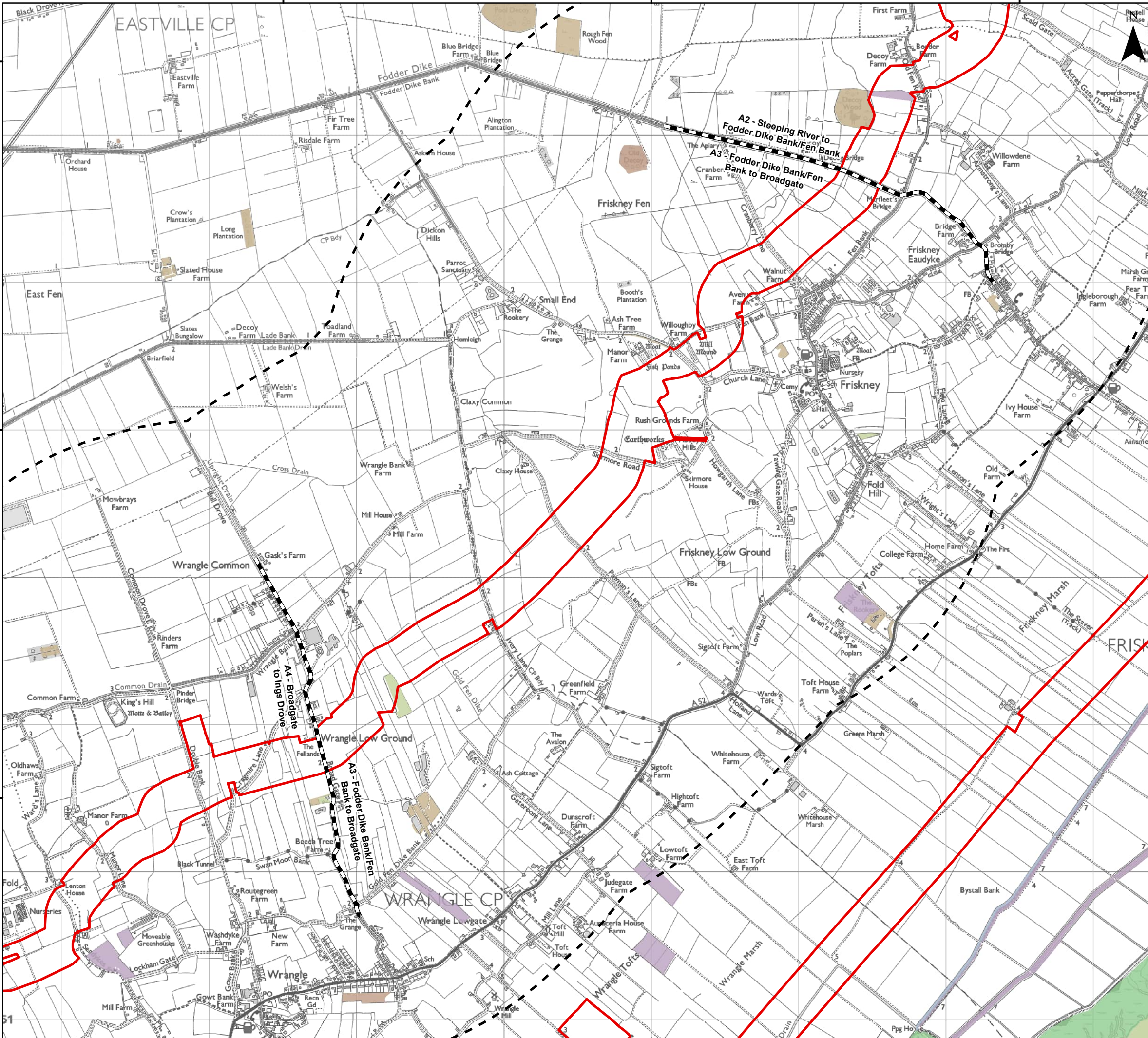
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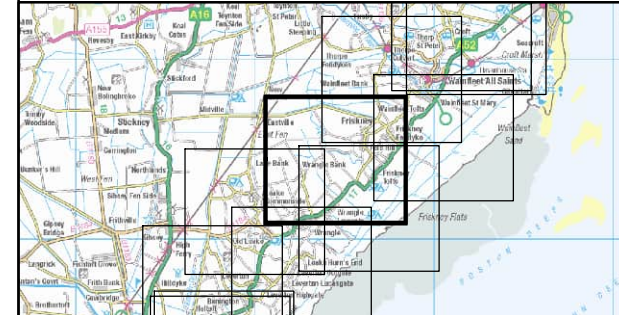
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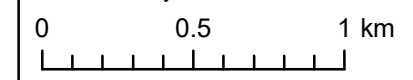
Legend

- Onshore PEIR Boundary
- Onshore PEIR Boundary Weston Marsh (via North of the A52) 2 km Buffer
- Priority Habitat**
- Coastal and Floodplain Grazing Marsh
- Coastal Saltmarsh
- Deciduous Woodland
- No Main Habitat but Additional Habitats Present
- Saline Lagoons
- Traditional Orchard

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Weston Marsh
 Important Sites and Habitats

Figure 21.1.6.15



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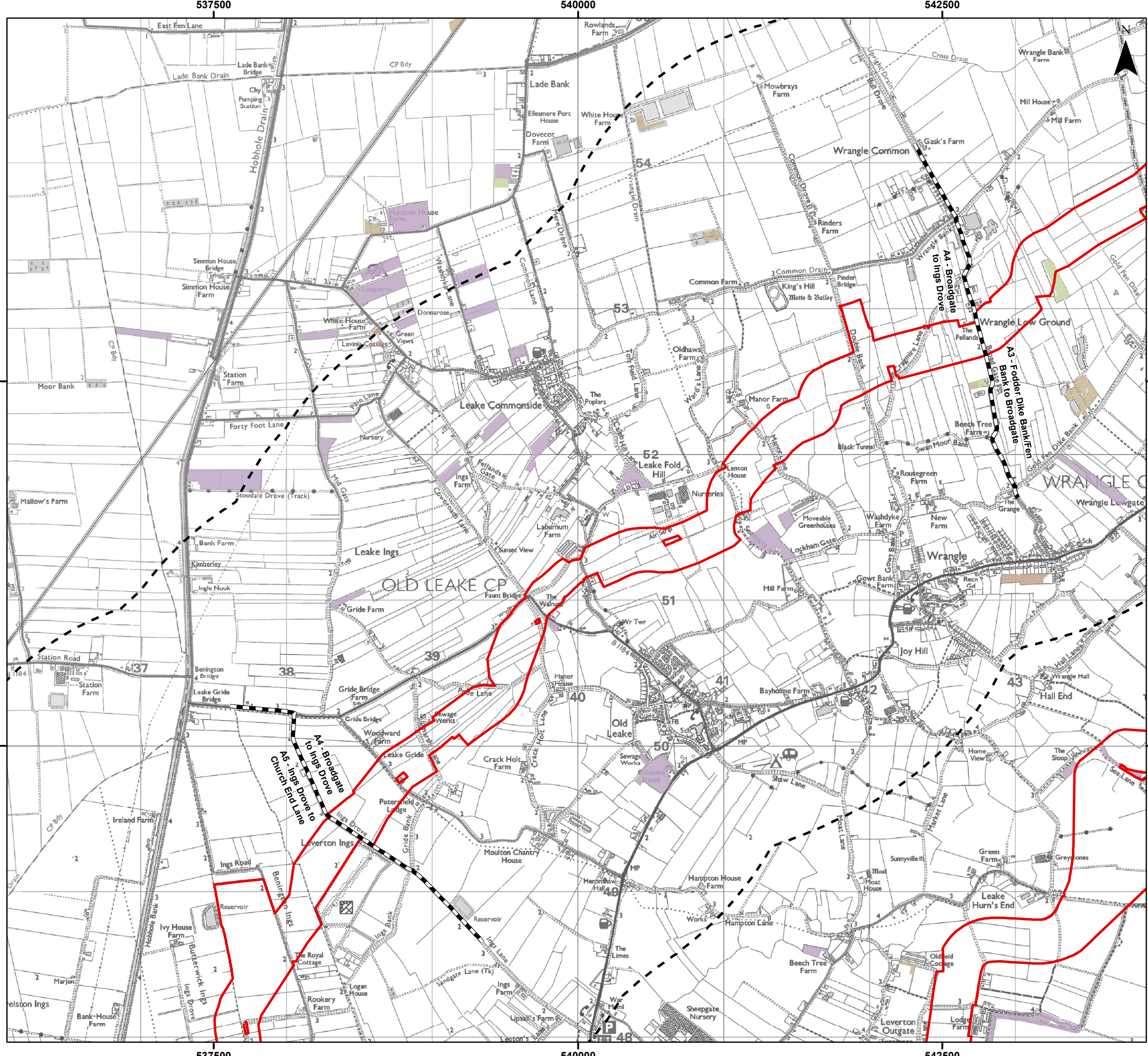
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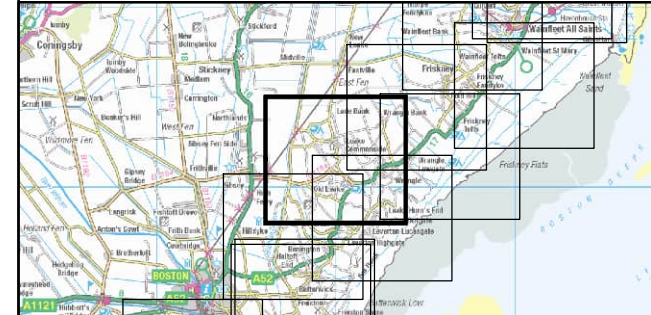
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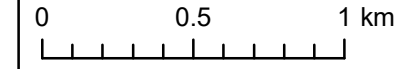
Legend

- Onshore PEIR Boundary
- Onshore PEIR Boundary Weston Marsh (via North of the A52) 2 km Buffer
- Priority Habitat**
- Coastal and Floodplain Grazing Marsh
- Deciduous Woodland
- No Main Habitat but Additional Habitats Present
- Traditional Orchard

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Coordinate System: British National Grid



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Preliminary Environmental Information Report

Weston Marsh
 Important Sites and Habitats

Figure 21.1.6.16

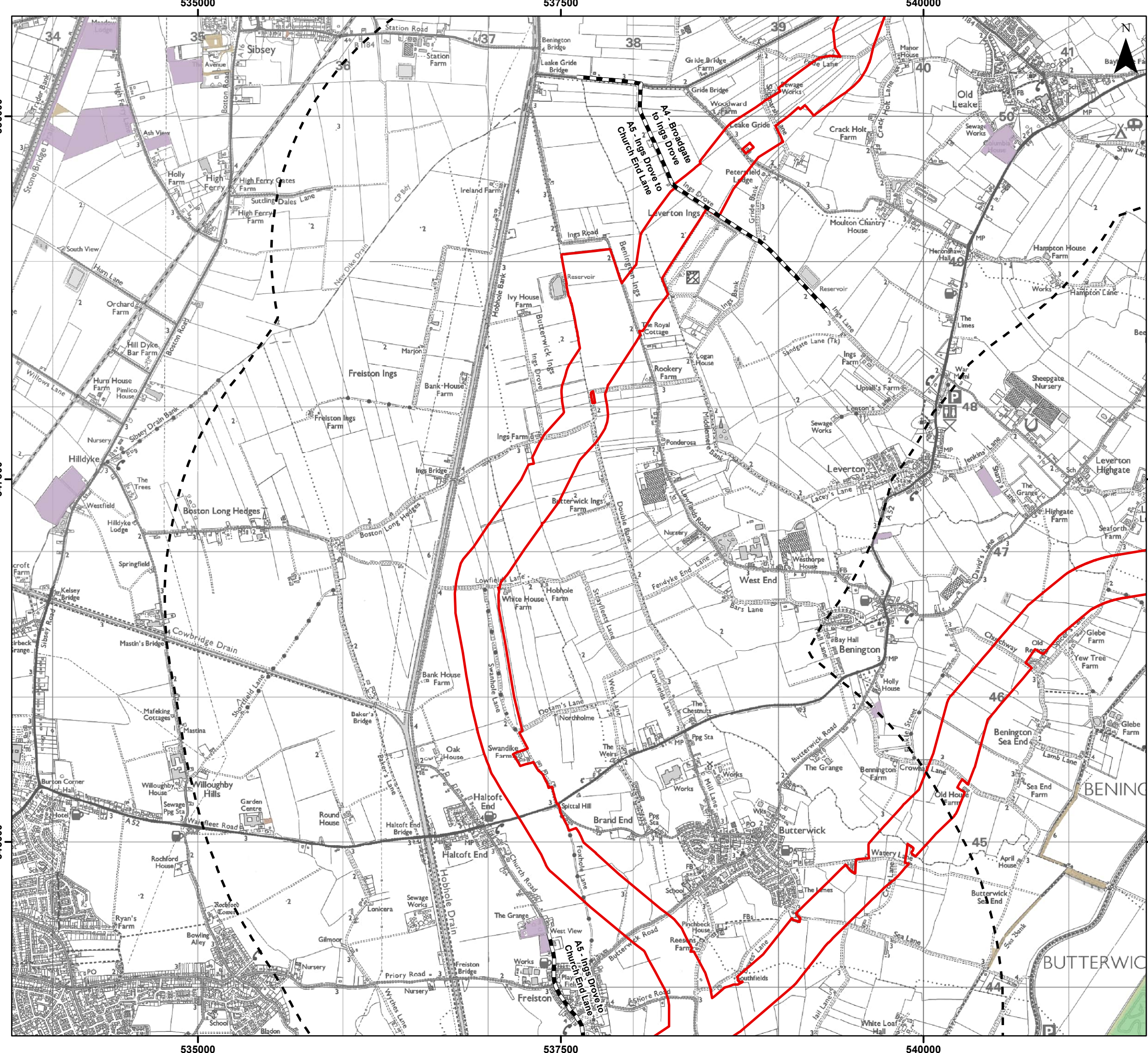


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Legend

- Onshore PEIR Boundary
- Onshore PEIR Boundary Weston Marsh (via North of the A52) 2 km Buffer
- Priority Habitat**
- Coastal and Floodplain Grazing Marsh
- Coastal Saltmarsh
- Deciduous Woodland
- No Main Habitat but Additional Habitats Present
- Traditional Orchard

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 0 0.5 1 km
 Scale: 1:25,000

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 Weston Marsh
 Important Sites and Habitats
 Figure 21.1.6.17

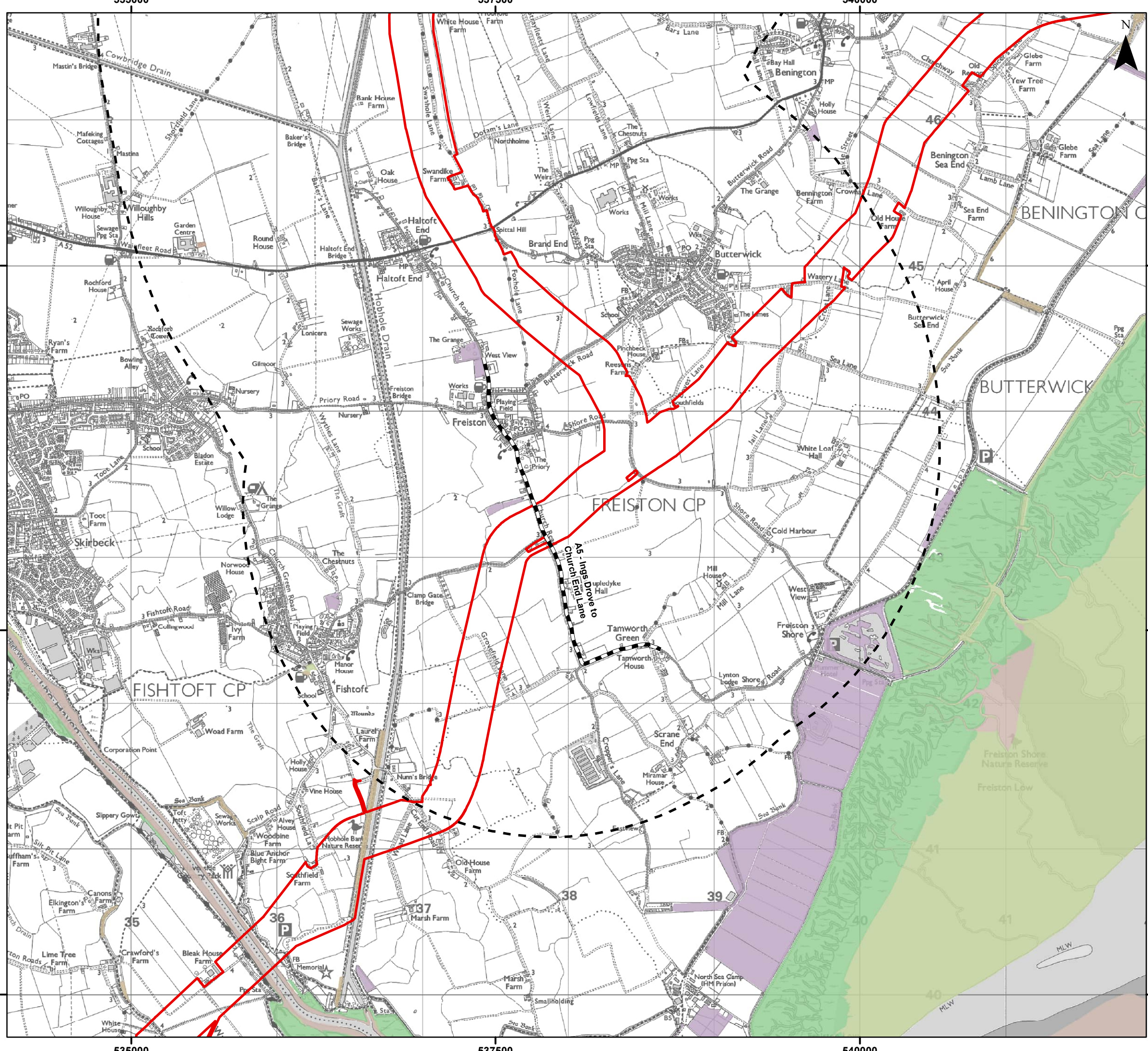


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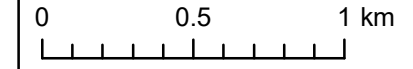
Legend

- Onshore PEIR Boundary
- Onshore PEIR Boundary Weston Marsh (via North of the A52) 2 km Buffer
- Priority Habitat**
- Coastal and Floodplain Grazing Marsh
- Coastal Saltmarsh
- Deciduous Woodland
- Mudflats
- No Main Habitat but Additional Habitats Present
- Traditional Orchard

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**Weston Marsh
 Important Sites and Habitats**

Figure 21.1.6.18



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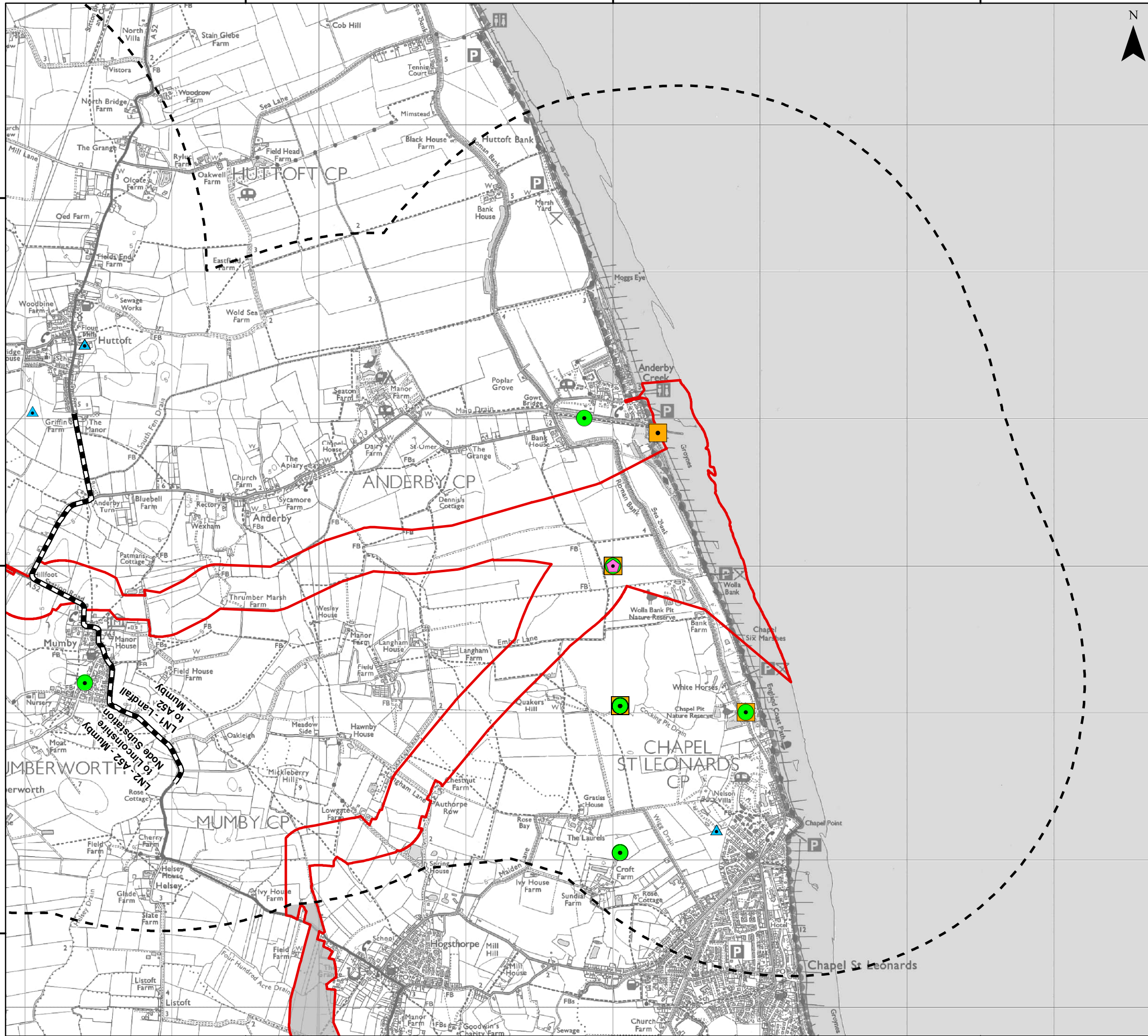
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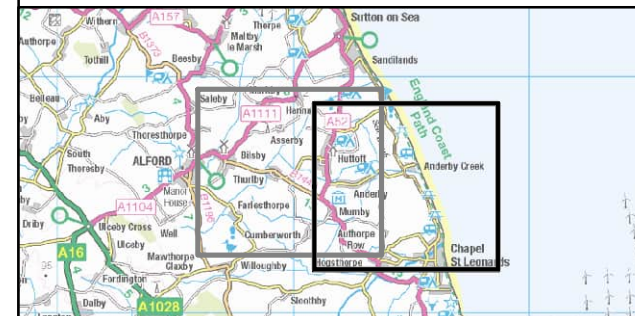
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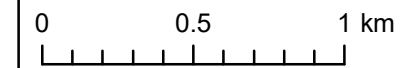
Legend

-  Onshore PEIR Boundary
-  Onshore Segment Break
-  Onshore PEIR Boundary 2 km Buffer
- Local Records: Amphibians**
-  Great Crested Newt
-  Smooth Newt
-  Common Frog
-  Common Toad

Sources:
Local Records derived from data provided by Lincolnshire Environmental Records Centre (October 2022)



Coordinate System: British National Grid



Scale: 1:25,000

Preliminary Environmental Information Report

Lincolnshire Node
Protected and Notable Species Records
Amphibians
Figure 21.1.7.1



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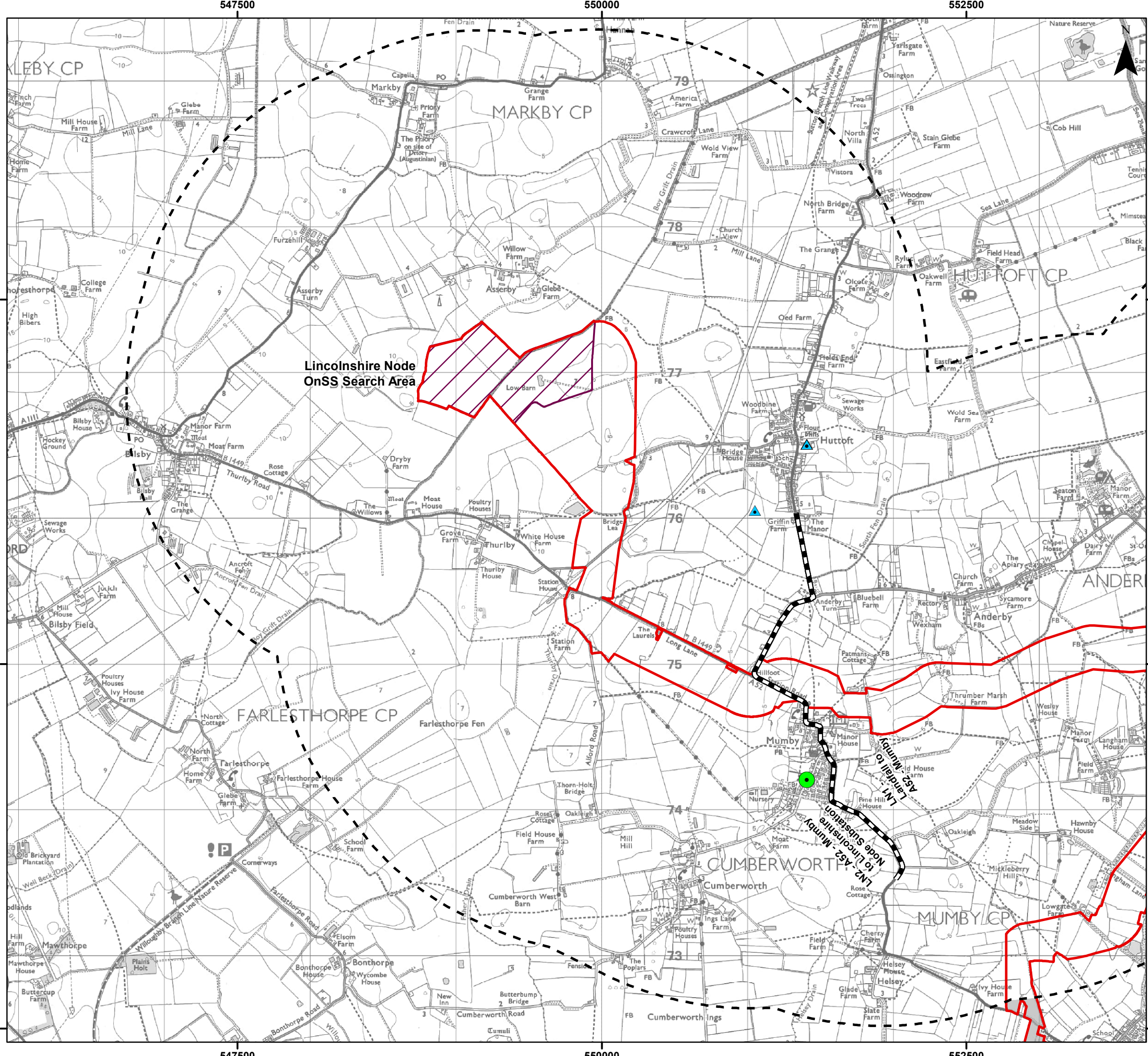
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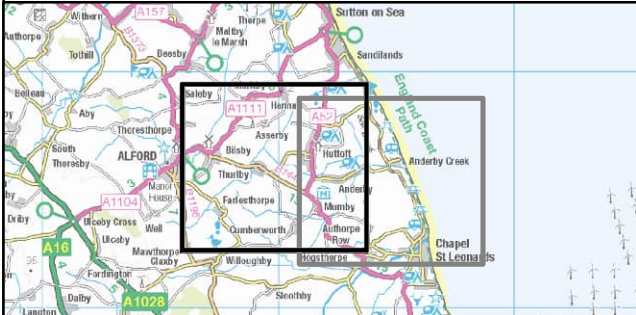
Legend

- Onshore PEIR Boundary
- Lincolnshire Node OnSS Search Area
- Onshore Segment Break
- Onshore PEIR Boundary 2 km Buffer

Local Records: Amphibians

- ▲ Great Crested Newt
- Common Frog

Sources:
Local Records derived from data provided by Lincolnshire Environmental Records Centre (October 2022)



Coordinate System: British National Grid
 0 0.5 1 km
 Scale: 1:25,000

Preliminary Environmental Information Report
 Lincolnshire Node
 Protected and Notable Species Records
 Amphibians
 Figure 21.1.7.2



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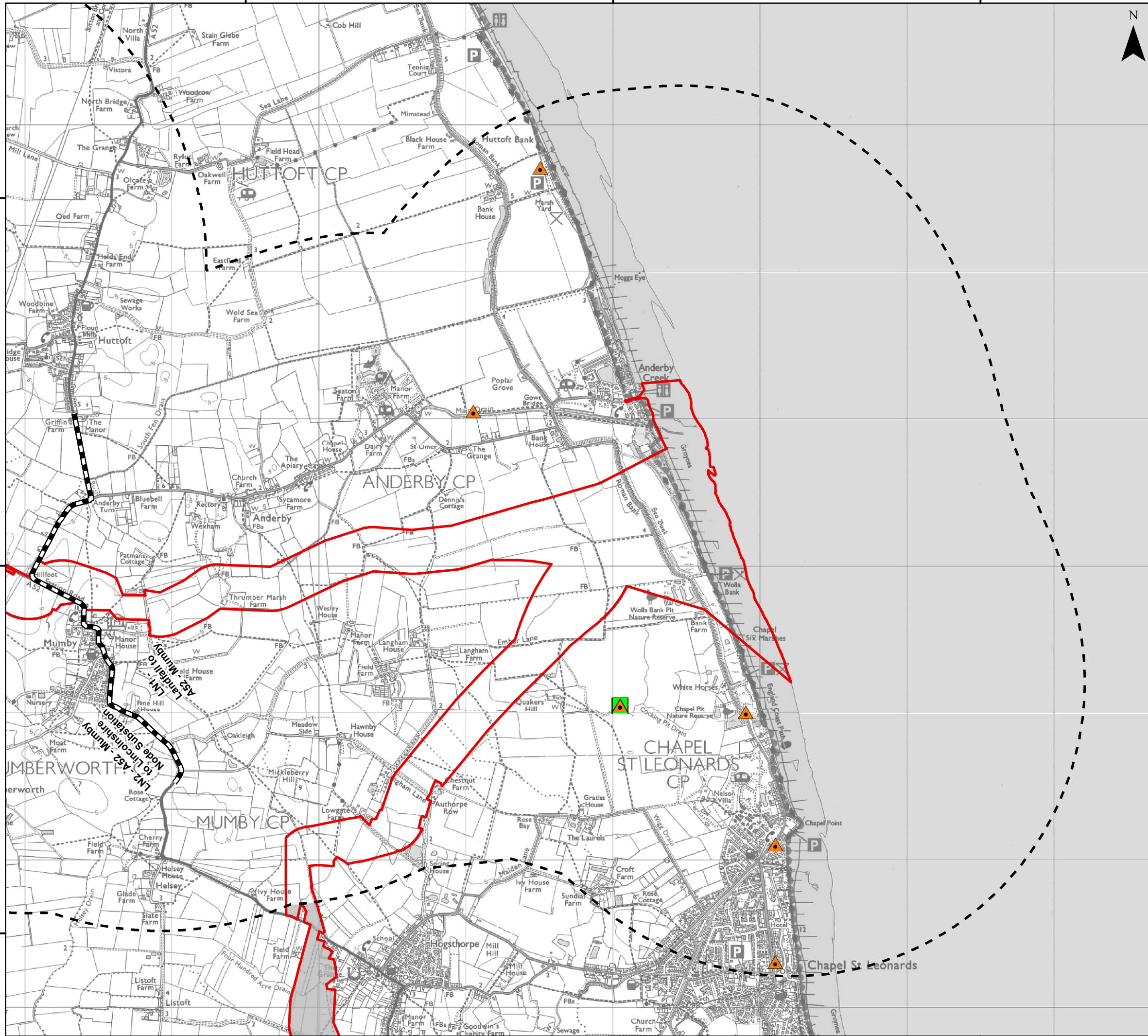
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
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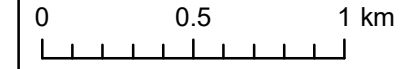
Legend

-  Onshore PEIR Boundary
-  Onshore Segment Break
-  Onshore PEIR Boundary 2 km Buffer
- Local Records: Reptiles**
-  Common Lizard
-  Grass Snake

Sources:
Local Records derived from data provided by Lincolnshire Environmental Records Centre (October 2022)



Coordinate System: British National Grid



Scale: 1:25,000

Preliminary Environmental Information Report

Lincolnshire Node
Protected and Notable Species Records
Reptiles
Figure 21.1.8.1



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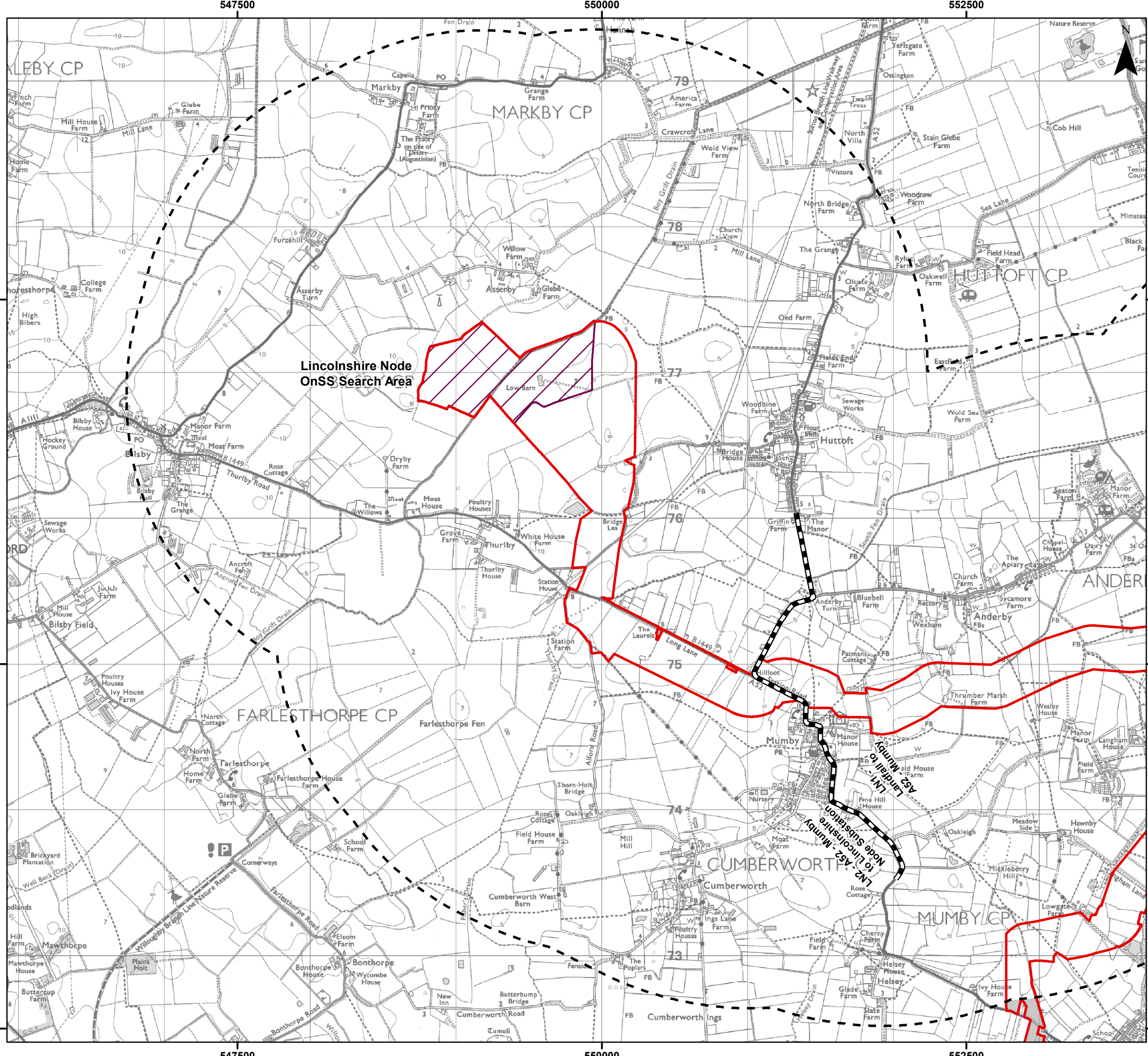
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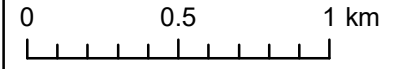


- Legend**
- Onshore PEIR Boundary
 - Lincolnshire Node OnSS Search Area
 - Onshore Segment Break
 - Onshore PEIR Boundary 2 km Buffer

Sources:
Local Records derived from data provided by Lincolnshire Environmental Records Centre (October 2022)



Coordinate System: British National Grid



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Lincolnshire Node
Protected and Notable Species Records
Reptiles
Figure 21.1.8.2



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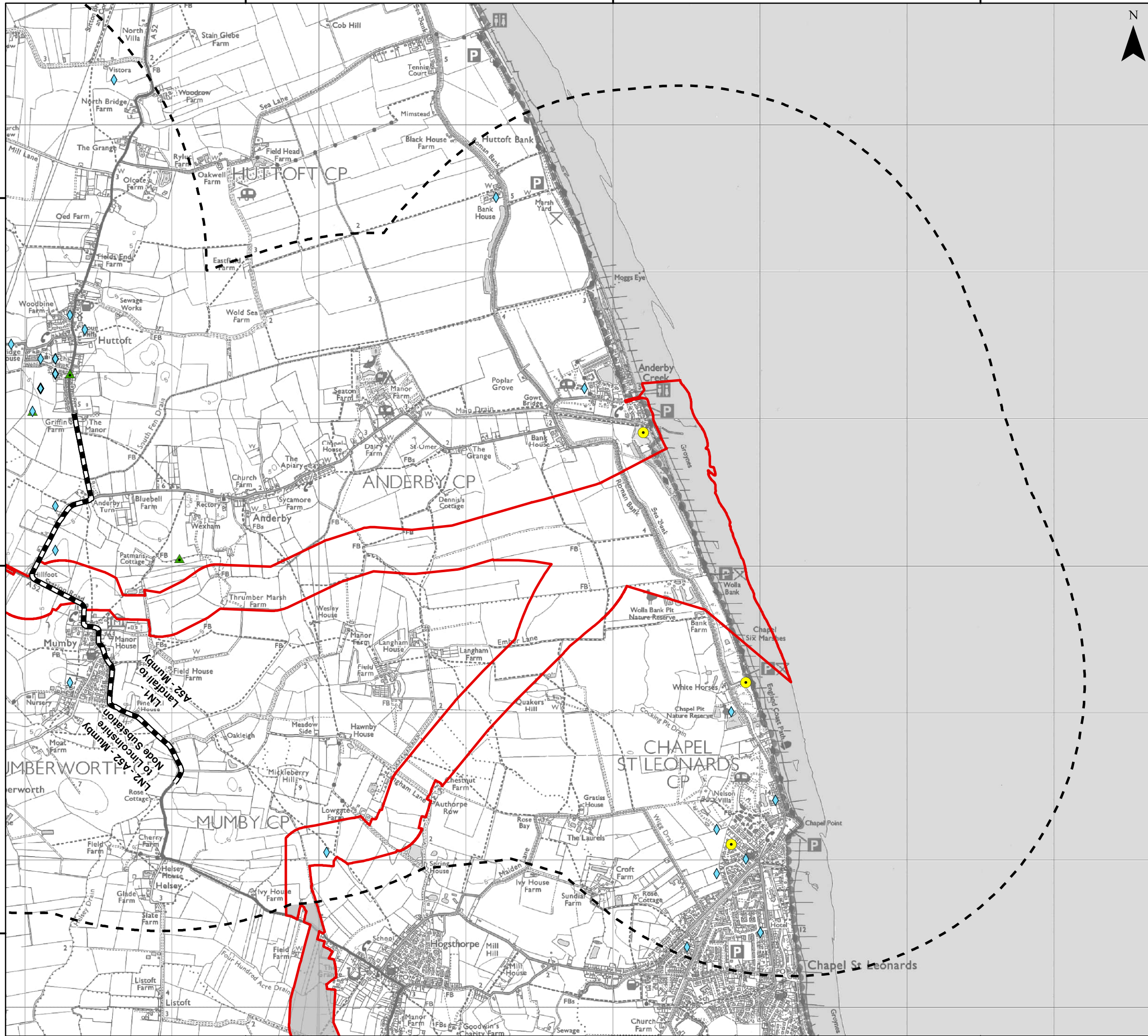
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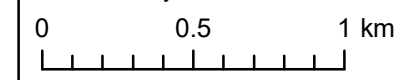
Legend

-  Onshore PEIR Boundary
-  Onshore Segment Break
-  Onshore PEIR Boundary 2 km Buffer
- Local Records: Terrestrial Mammals (Bats)**
-  Bat
-  Brown Long-eared Bat
-  Common Pipistrelle

Sources:
Local Records derived from data provided by Lincolnshire Environmental Records Centre (October 2022)



Coordinate System: British National Grid



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Preliminary Environmental Information Report

Lincolnshire Node
Protected and Notable Species Records
Terrestrial Mammals (Bats)
Figure 21.1.9.1



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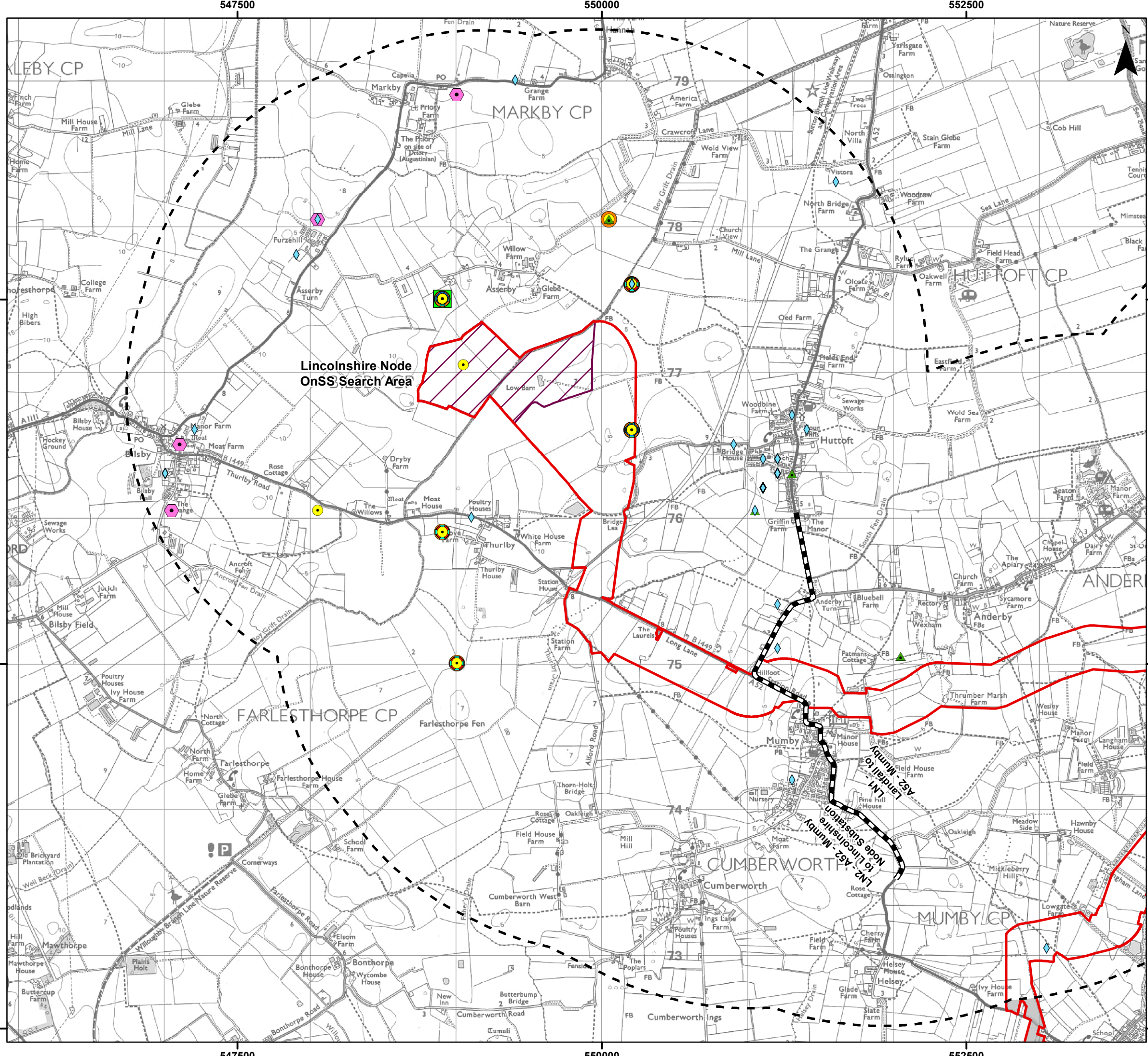
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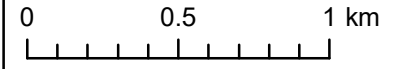
Legend

- Onshore PEIR Boundary
- Lincolnshire Node OnSS Search Area
- Onshore Segment Break
- Onshore PEIR Boundary 2 km Buffer
- Local Records: Terrestrial Mammals (Bats)**
- Bat
- Brown Long-eared Bat
- Common Pipistrelle
- Myotis Bat species
- Nathusius's Pipistrelle
- Noctule Bat
- Pipistrelle Bat species
- Soprano Pipistrelle
- Whiskered/Brandt's Bat

Sources:
Local Records derived from data provided by Lincolnshire Environmental Records Centre (October 2022)



Coordinate System: British National Grid



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Lincolnshire Node
Protected and Notable Species Records
Terrestrial Mammals (Bats)
Figure 21.1.9.2



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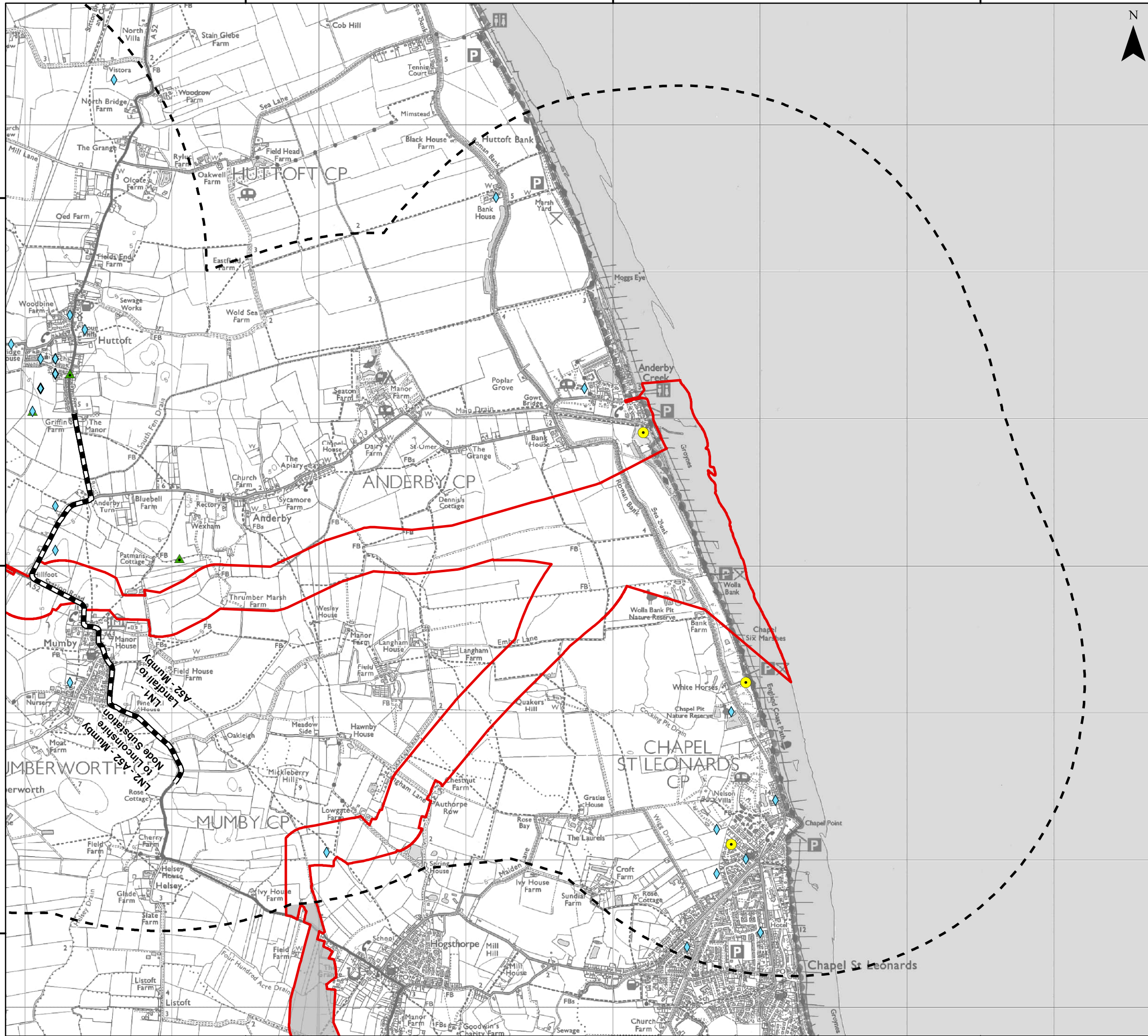
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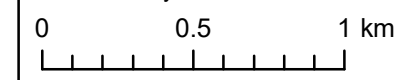
Legend

-  Onshore PEIR Boundary
-  Onshore Segment Break
-  Onshore PEIR Boundary 2 km Buffer
- Local Records: Terrestrial Mammals (Bats)**
-  Bat
-  Brown Long-eared Bat
-  Common Pipistrelle

Sources:
Local Records derived from data provided by Lincolnshire Environmental Records Centre (October 2022)



Coordinate System: British National Grid



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Preliminary Environmental Information Report

Lincolnshire Node
Protected and Notable Species Records
Terrestrial Mammals (Bats)
Figure 21.1.9.1



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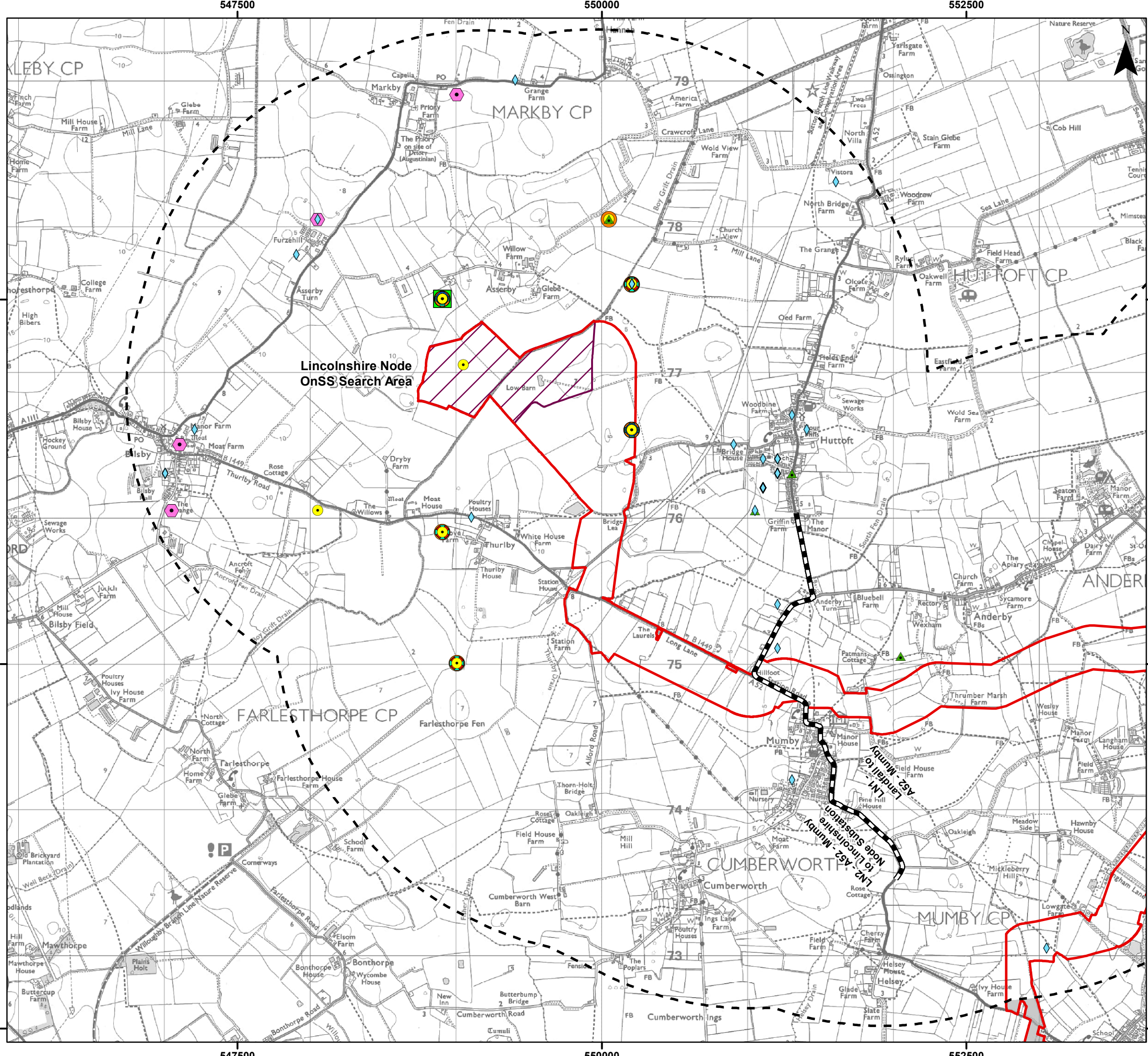
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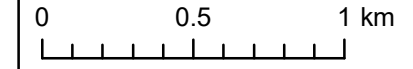
Legend

- Onshore PEIR Boundary
- Lincolnshire Node OnSS Search Area
- Onshore Segment Break
- Onshore PEIR Boundary 2 km Buffer
- Local Records: Terrestrial Mammals (Bats)**
- Bat
- Brown Long-eared Bat
- Common Pipistrelle
- Myotis Bat species
- Nathusius's Pipistrelle
- Noctule Bat
- Pipistrelle Bat species
- Soprano Pipistrelle
- Whiskered/Brandt's Bat

Sources:
Local Records derived from data provided by Lincolnshire Environmental Records Centre (October 2022)



Coordinate System: British National Grid



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Preliminary Environmental Information Report

Lincolnshire Node
Protected and Notable Species Records
Terrestrial Mammals (Bats)
Figure 21.1.9.2



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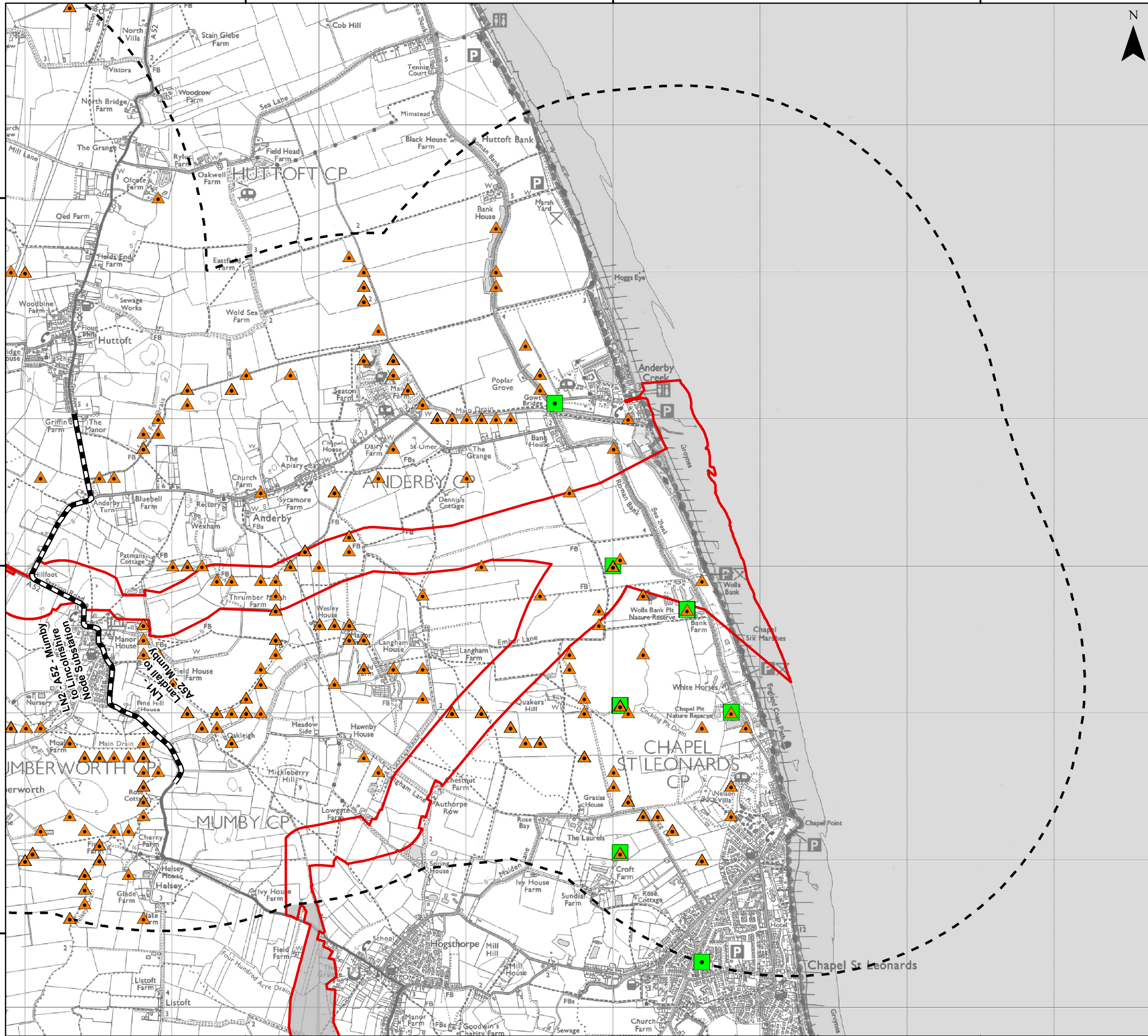
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
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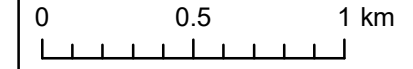
Legend

-  Onshore PEIR Boundary
-  Onshore Segment Break
-  Onshore PEIR Boundary 2 km Buffer
- Local Records: Riparian Mammals**
-  European Water Vole
-  Eurasian Otter

Sources:
Local Records derived from data provided by Lincolnshire Environmental Records Centre (October 2022)



Coordinate System: British National Grid



Scale: 1:25,000

Preliminary Environmental Information Report

Lincolnshire Node
Protected and Notable Species Records
Riparian Mammals
Figure 21.1.11.1



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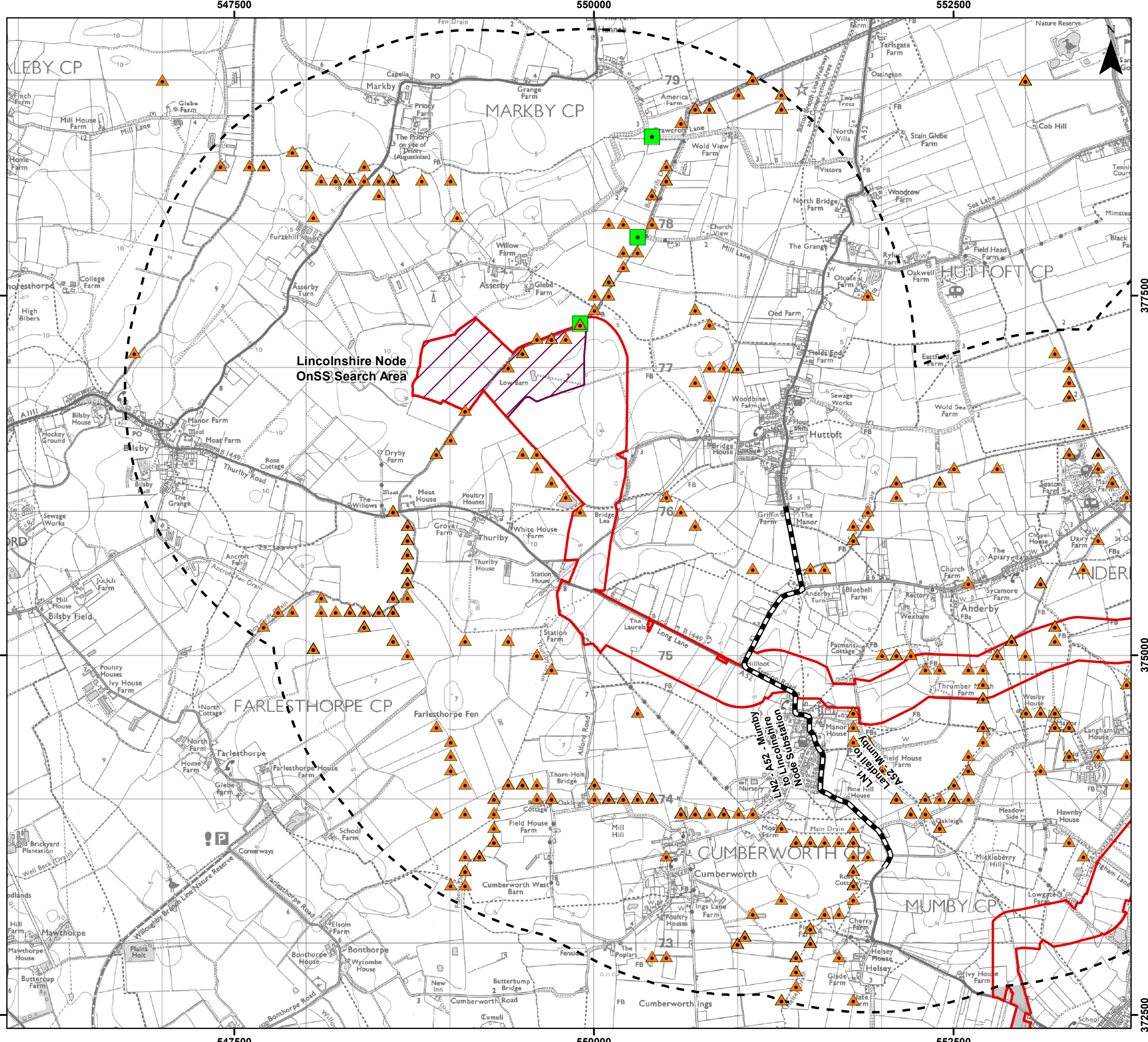
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Legend

- Onshore PEIR Boundary
- Lincolnshire Node OnSS Search Area
- Onshore Segment Break
- Onshore PEIR Boundary 2 km Buffer

Local Records: Riparian Mammals

- ▲ European Water Vole
- Eurasian Otter

Sources:
Local Records derived from data provided by Lincolnshire Environmental Records Centre (October 2022)



Coordinate System: British National Grid
 0 0.5 1 km
 Scale: 1:25,000

Preliminary Environmental Information Report
 Lincolnshire Node
 Protected and Notable Species Records
 Riparian Mammals
 Figure 21.1.11.2



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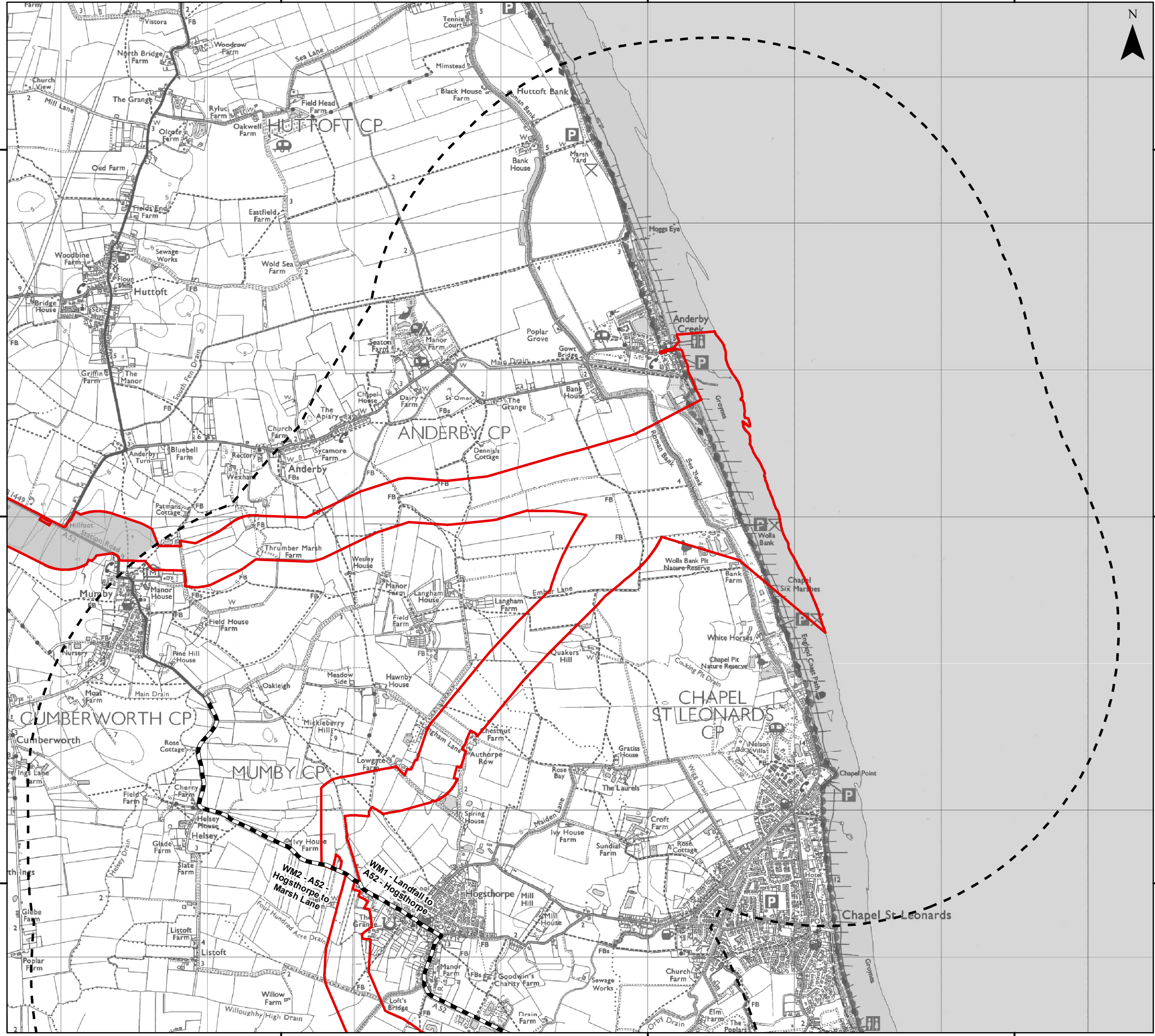
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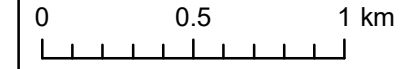
Legend

-  Onshore PEIR Boundary
-  Onshore Segment Break
-  Onshore PEIR Boundary Weston Marsh (via South of the A52) 2 km Buffer

Sources:
Local Records derived from data provided by Lincolnshire Environmental Records Centre (December 2022)



Coordinate System: British National Grid



Scale: 1:25,000

Preliminary Environmental Information Report

Weston Marsh
Protected and Notable Species Records Plants

Figure 21.1.12.1



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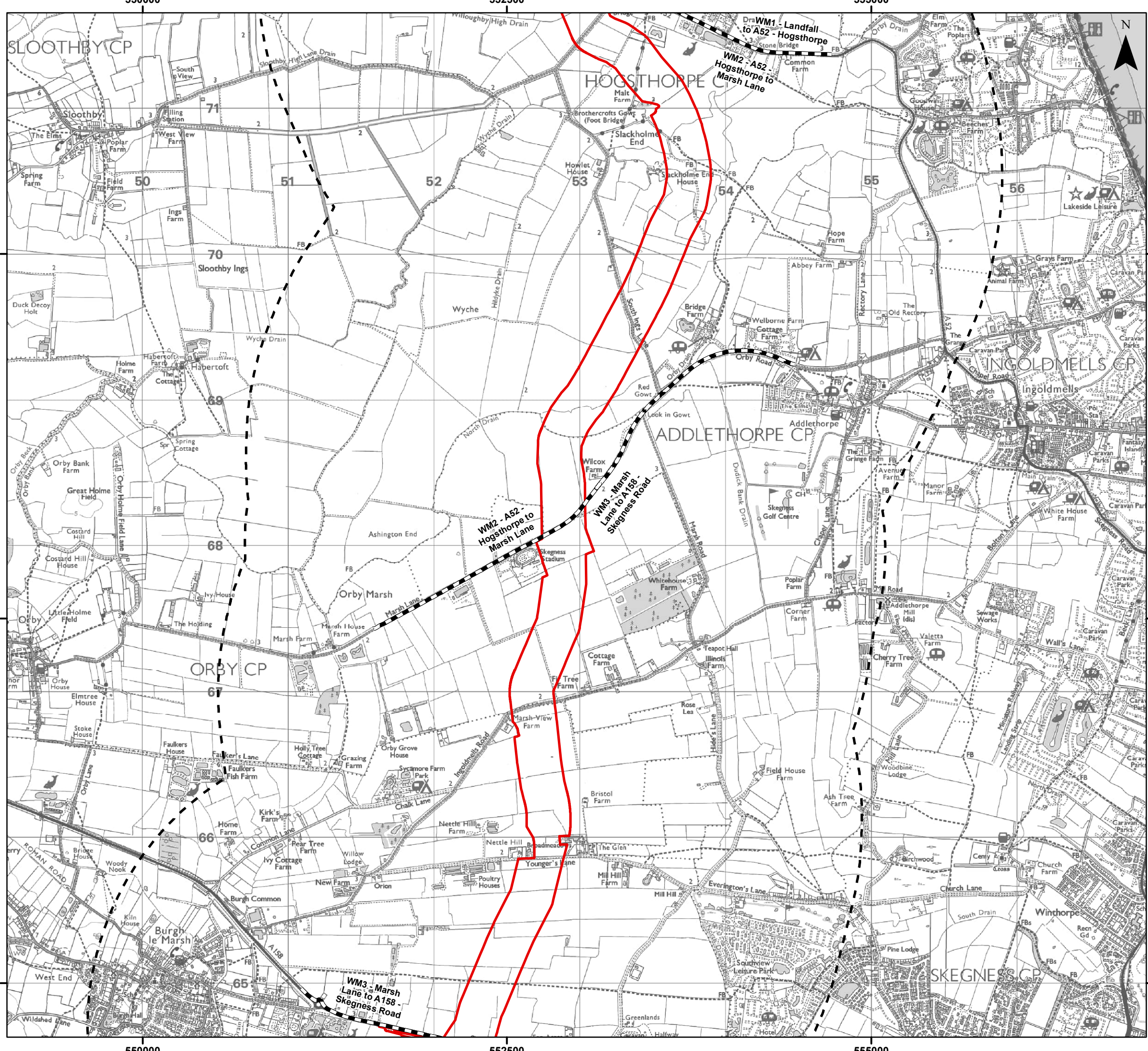
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- Legend**
- Onshore PEIR Boundary
 - Onshore Segment Break
 - Onshore PEIR Boundary Weston Marsh (via South of the A52) 2 km Buffer

Sources:
Local Records derived from data provided by Lincolnshire Environmental Records Centre (December 2022)



Coordinate System: British National Grid
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 Scale: 1:25,000

Preliminary Environmental Information Report
 Weston Marsh
 Protected and Notable Species Records Plants

Figure 21.1.12.2

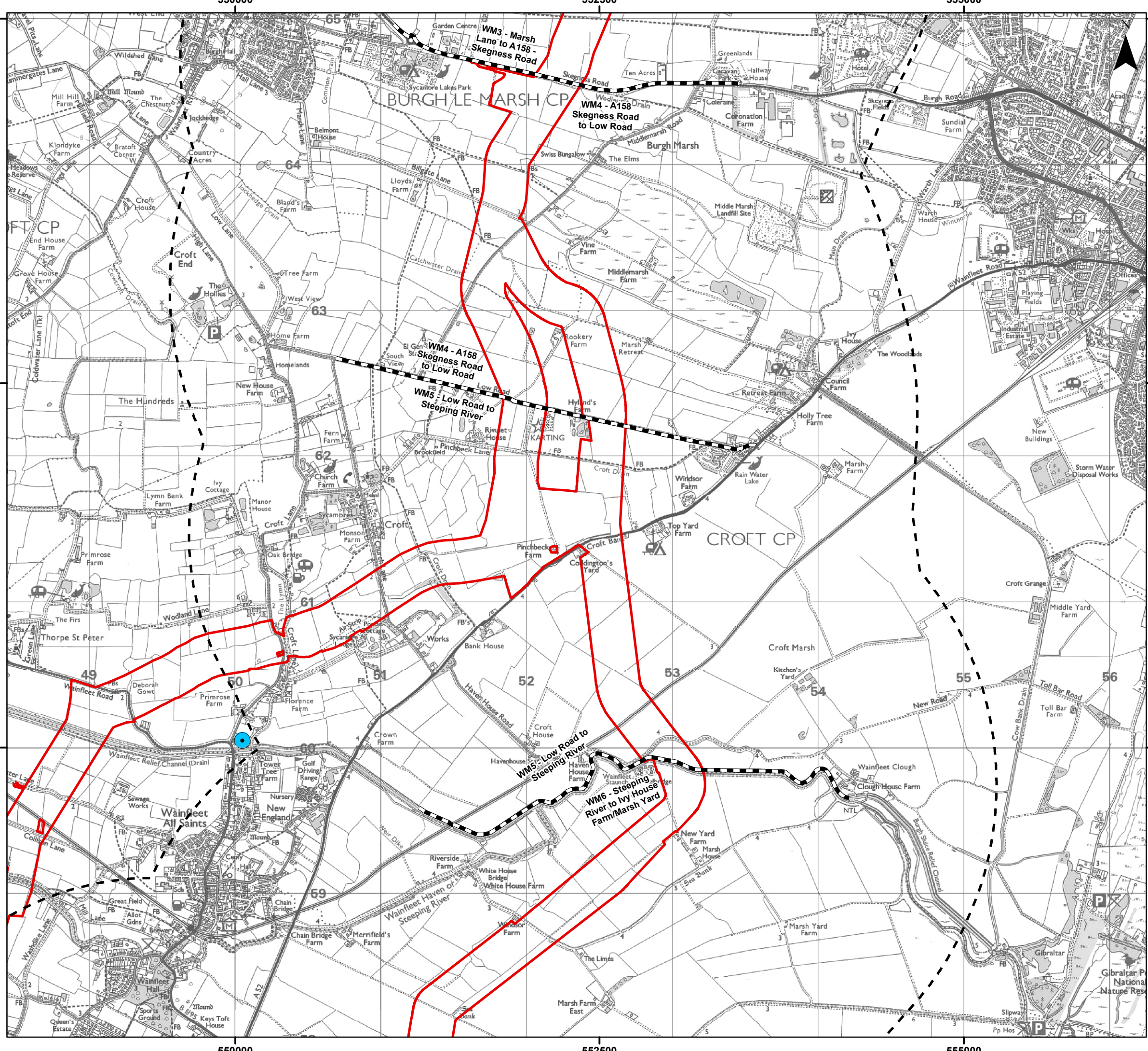


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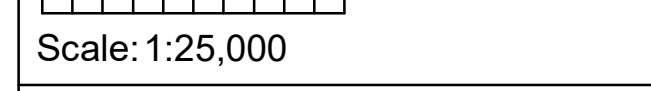
- Legend**
- Onshore PEIR Boundary
 - Onshore Segment Break
 - Onshore PEIR Boundary Weston Marsh (via South of the A52) 2 km Buffer

- Local Records: Plants**
- Bluebell

Sources:
Local Records derived from data provided by Lincolnshire Environmental Records Centre (December 2022)



Coordinate System: British National Grid



Scale: 1:25,000

Preliminary Environmental Information Report

Weston Marsh
Protected and Notable Species Records Plants

Figure 21.1.12.3

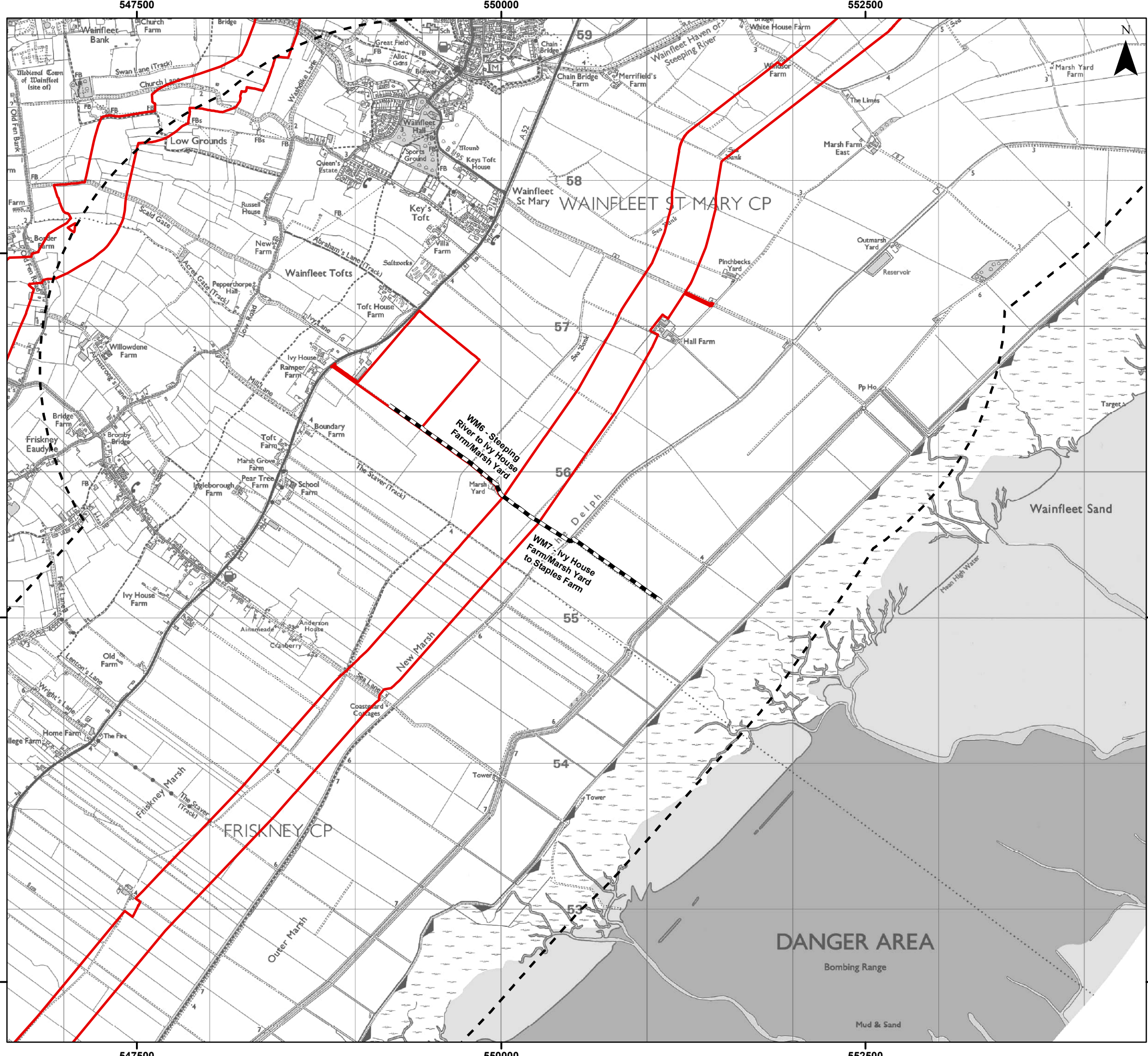


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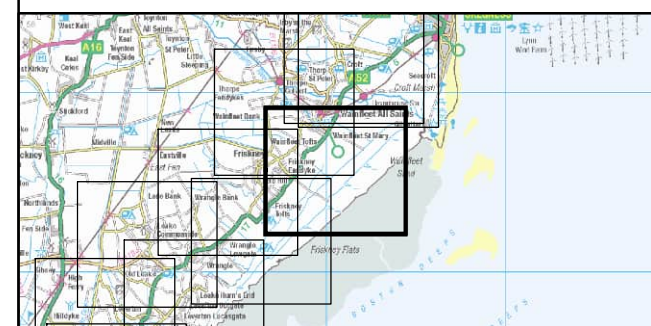
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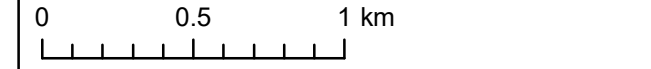
Legend

- Onshore PEIR
- Onshore Segment
- Onshore PEIR Boundary Weston Marsh (via South of the A52) 2 km Buffer

Sources:
Local Records derived from data provided by Lincolnshire Environmental Records Centre (December 2022)



Coordinate System: British National Grid



Scale: 1:25,000

Preliminary Environmental Information Report
Weston Marsh
Protected and Notable Species Records Plants

Figure 21.1.12.4

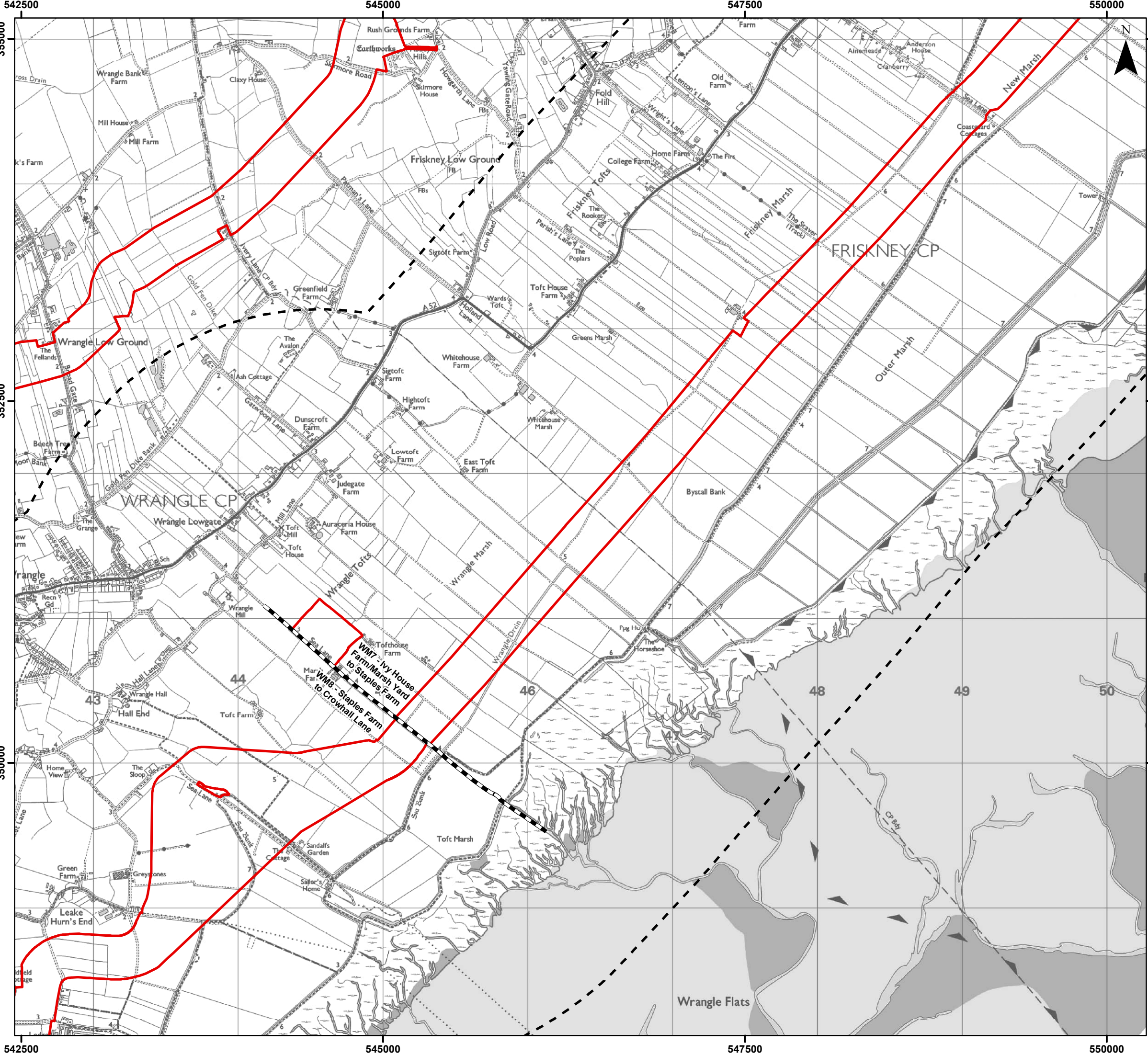


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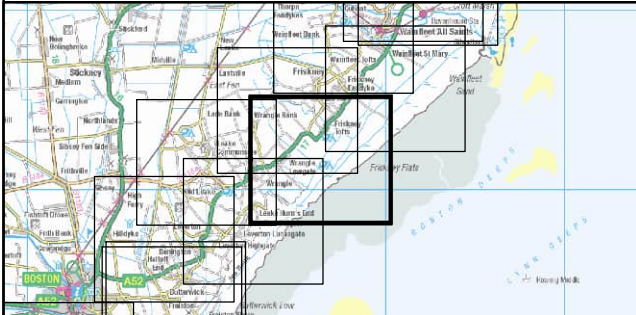
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Legend

- Onshore PEIR Boundary
- Onshore Segment Break
- Onshore PEIR Boundary Weston Marsh (via South of the A52) 2 km Buffer

Sources:
Local Records derived from data provided by Lincolnshire Environmental Records Centre (December 2022)



Coordinate System: British National Grid
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 Scale: 1:25,000

Preliminary Environmental Information Report
 Weston Marsh
 Protected and Notable Species Records Plants

Figure 21.1.12.5

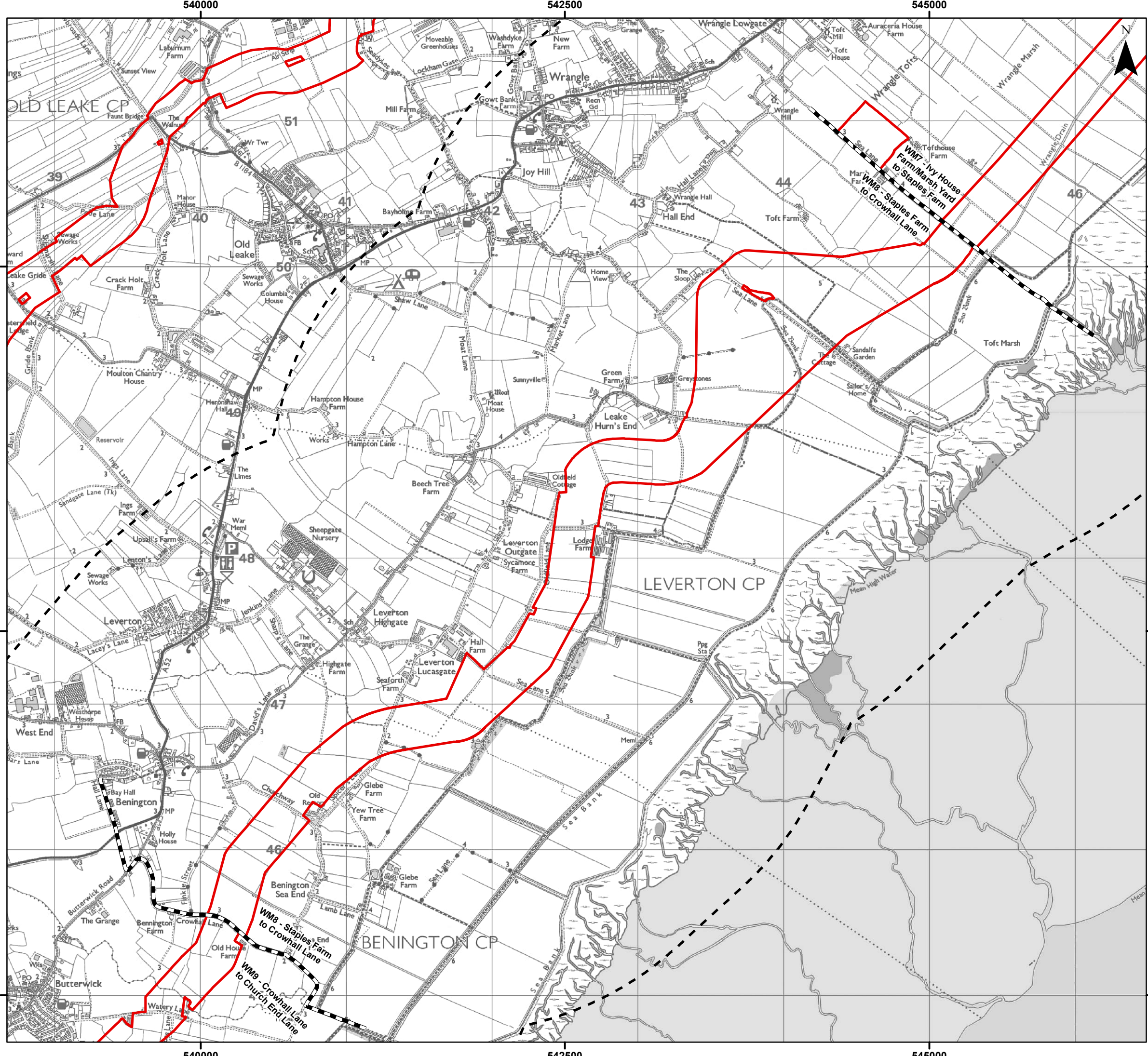


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Legend

- Onshore PEIR Boundary
- Onshore Segment Break
- Onshore PEIR Boundary Weston Marsh (via South of the A52) 2 km Buffer

Sources:
Local Records derived from data provided by Lincolnshire Environmental Records Centre (December 2022)



Coordinate System: British National Grid
 0 0.5 1 km
 Scale: 1:25,000

Preliminary Environmental Information Report
 Weston Marsh
 Protected and Notable Species Records Plants
 Figure 21.1.12.6



OUTER DOWSING
OFFSHORE WIND

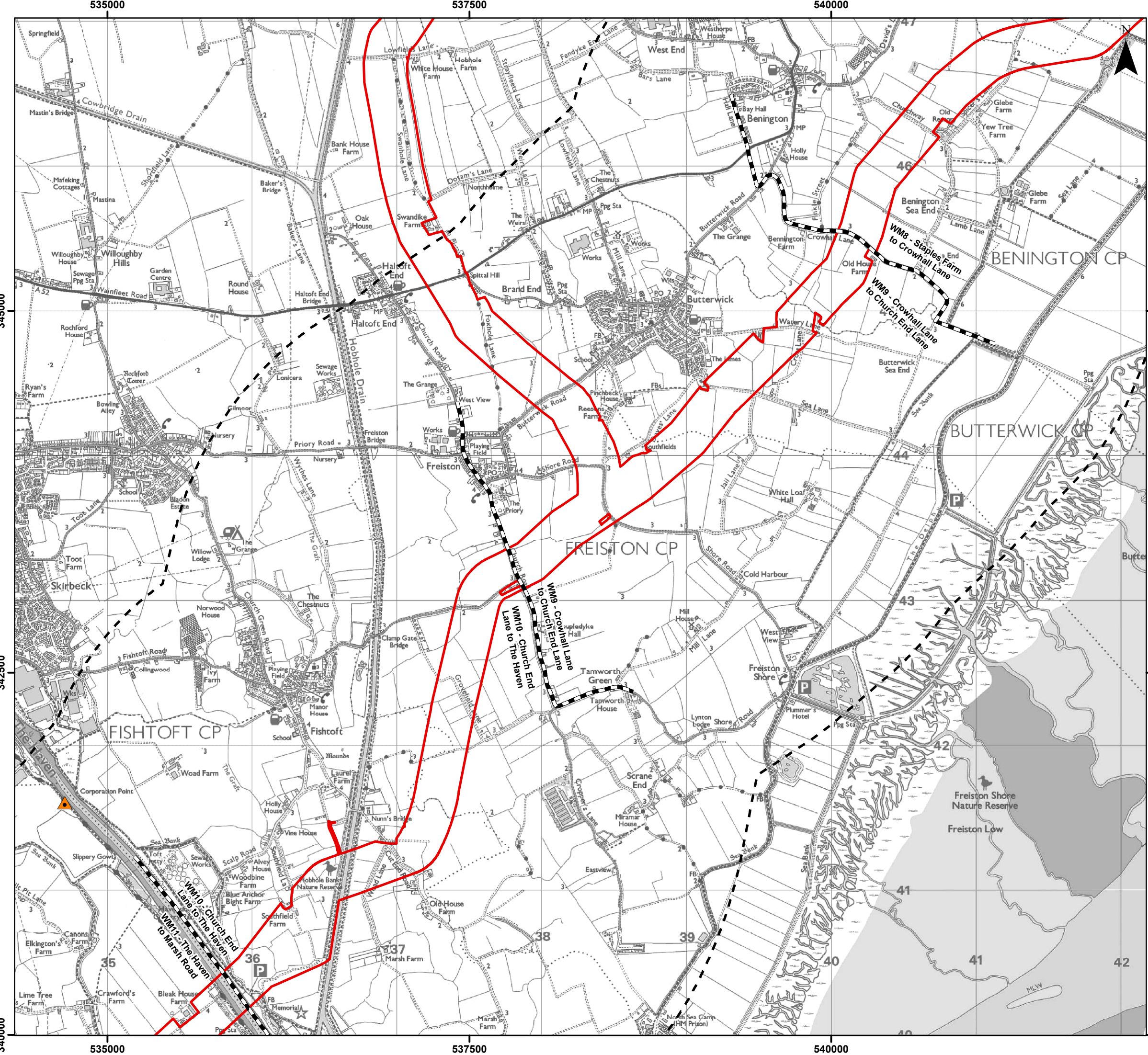


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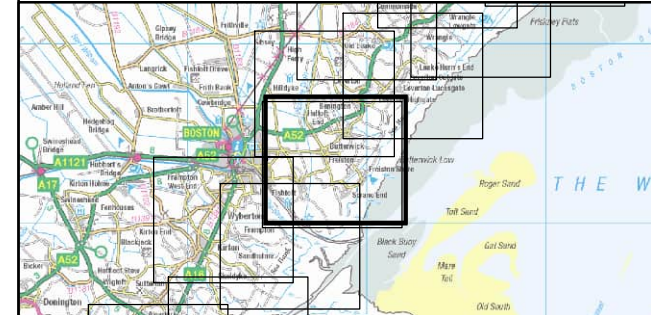
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Legend

- Onshore PEIR Boundary
- Onshore Segment Break
- Onshore PEIR Boundary Weston Marsh (via South of the A52) 2 km Buffer
- Local Records: Plants**
- ▲ Branched Horsetail

Sources:
Local Records derived from data provided by Lincolnshire Environmental Records Centre (December 2022)



Coordinate System: British National Grid
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 Scale: 1:25,000

Preliminary Environmental Information Report
 Weston Marsh
 Protected and Notable Species Records Plants

Figure 21.1.12.7

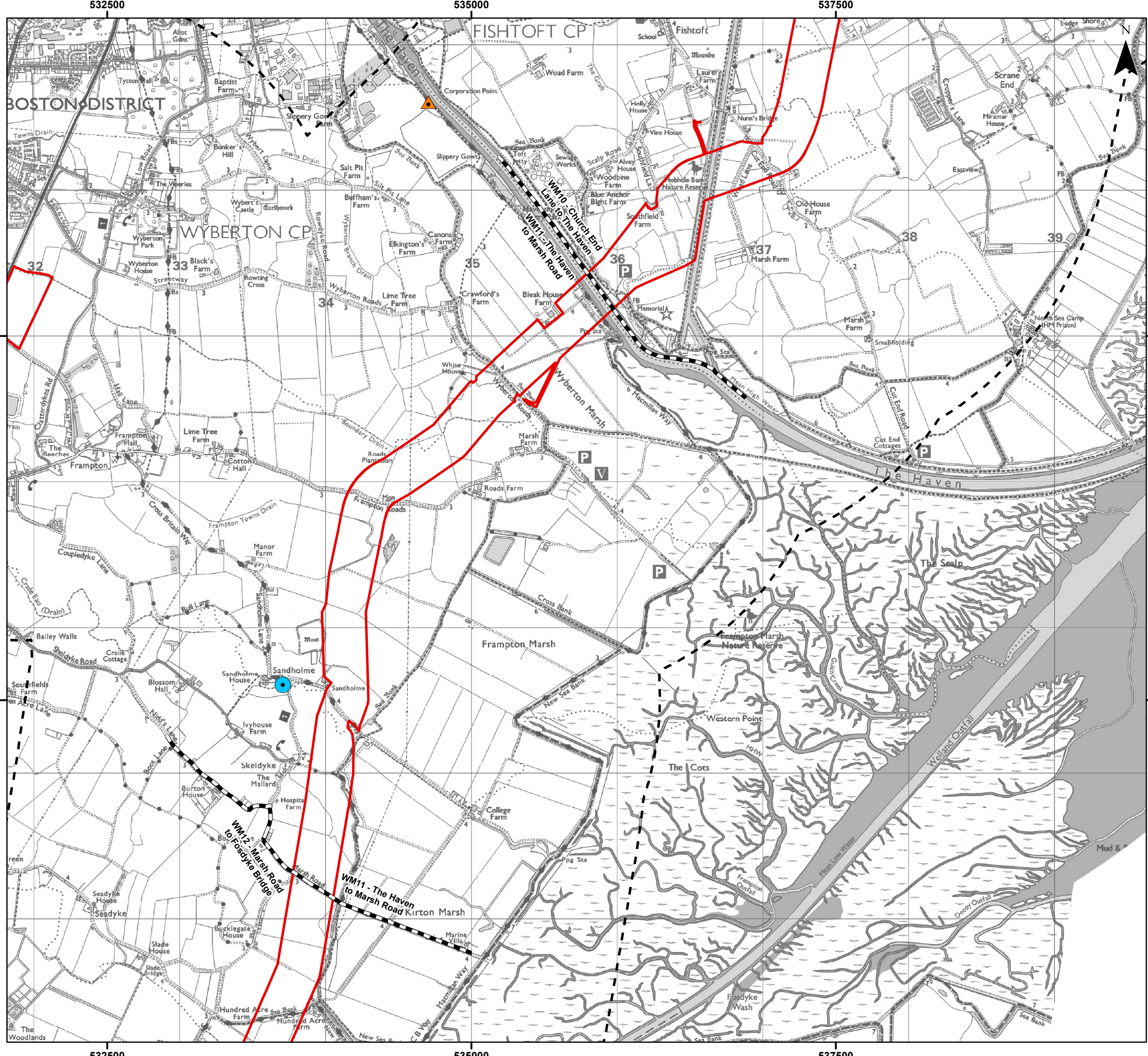


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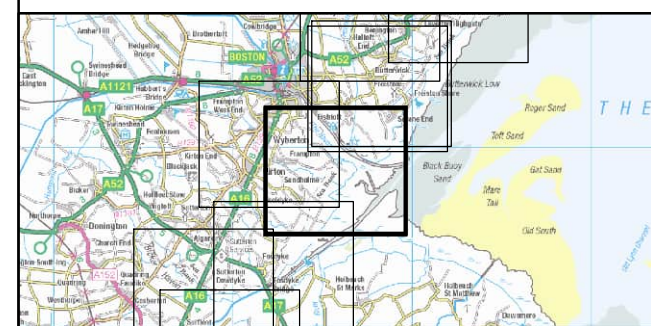
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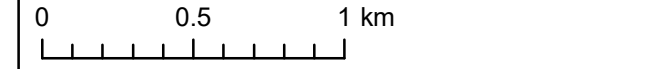
Legend

- Onshore PEIR Boundary
- Onshore Segment Break
- Onshore PEIR Boundary Weston Marsh (via South of the A52) 2 km Buffer
- Local Records: Plants**
- ▲ Branched Horsetail
- Bluebell

Sources:
Local Records derived from data provided by Lincolnshire Environmental Records Centre (December 2022)



Coordinate System: British National Grid



Scale: 1:25,000

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Weston Marsh
Protected and Notable Species Records Plants

Figure 21.1.12.8



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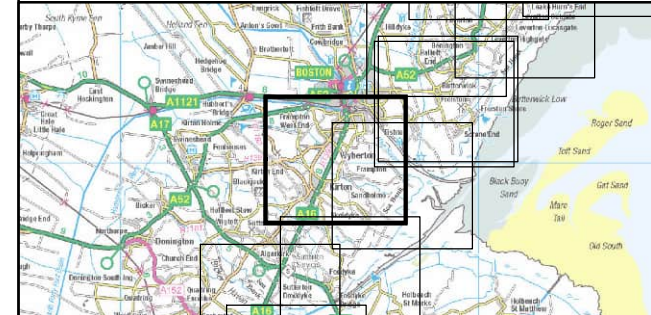
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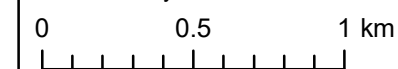
Legend

- Onshore PEIR Boundary
- Onshore Segment Break
- Onshore PEIR Boundary Weston Marsh (via South of the A52) 2 km Buffer
- Local Records: Plants**
- ▲ Branched Horsetail
- Bluebell

Sources:
Local Records derived from data provided by Lincolnshire Environmental Records Centre (December 2022)



Coordinate System: British National Grid



Scale: 1:25,000

Preliminary Environmental Information Report
Weston Marsh
Protected and Notable Species Records Plants

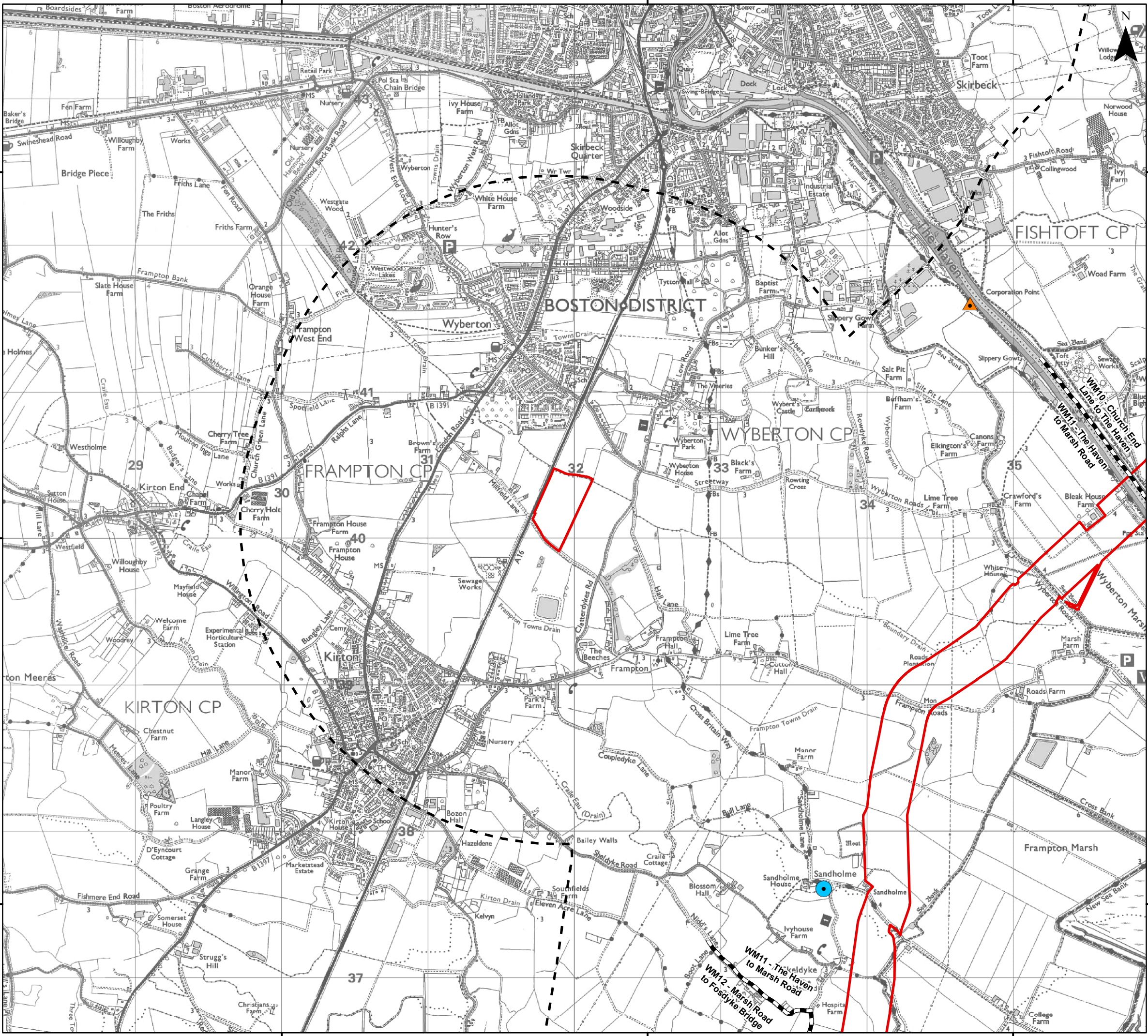
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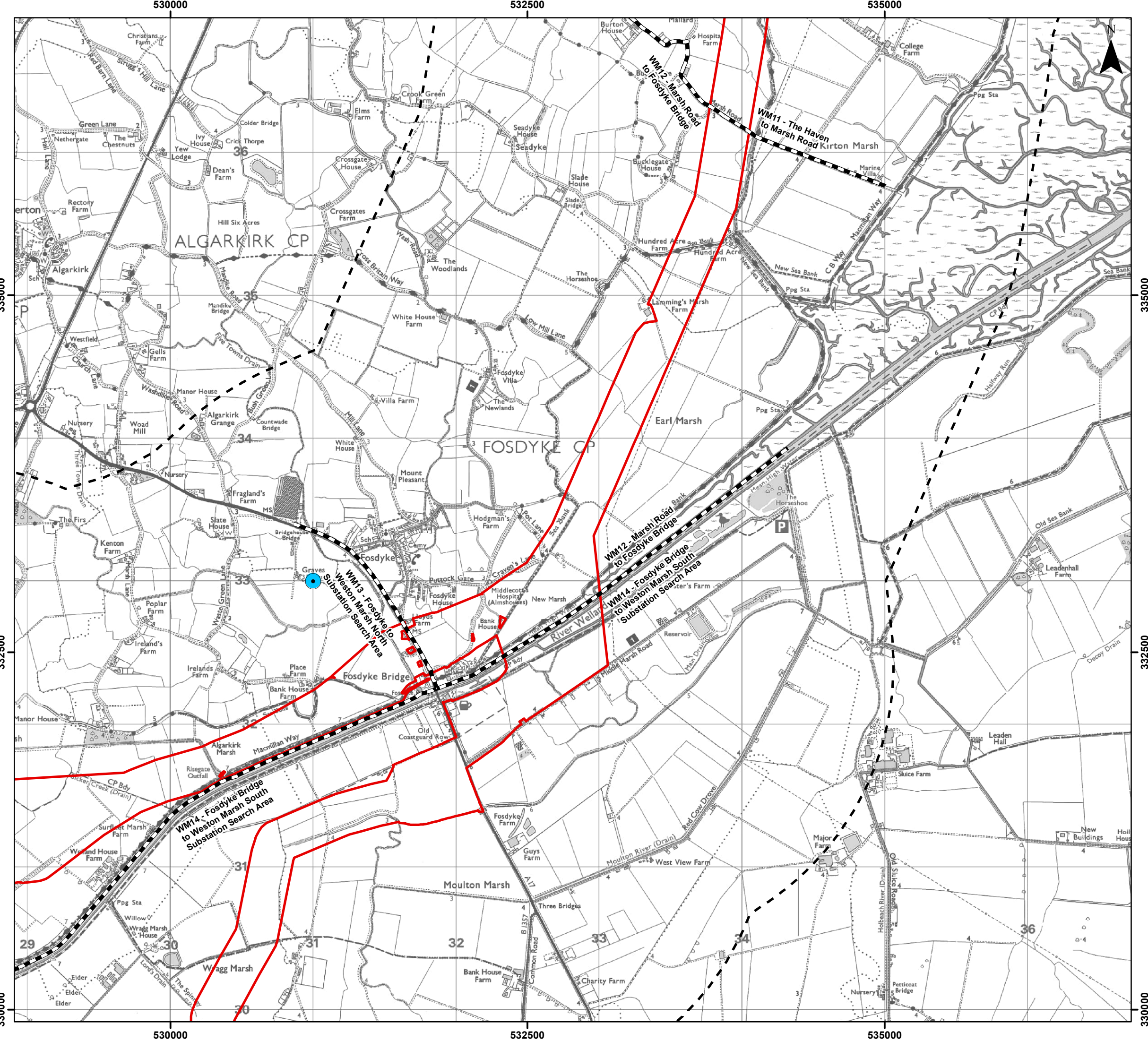
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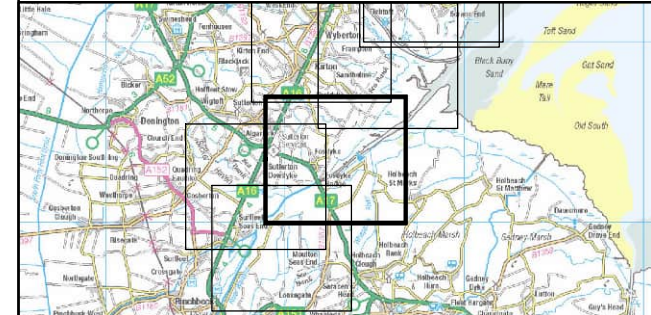
Legend

- Onshore PEIR Boundary
- Onshore Segment Break
- Onshore PEIR Boundary Weston Marsh (via South of the A52) 2 km Buffer

Local Records: Plants

- Bluebell

Sources:
Local Records derived from data provided by Lincolnshire Environmental Records Centre (December 2022)



Coordinate System: British National Grid
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 Scale: 1:25,000

Preliminary Environmental Information Report
 Weston Marsh
 Protected and Notable Species Records Plants

Figure 21.1.12.10

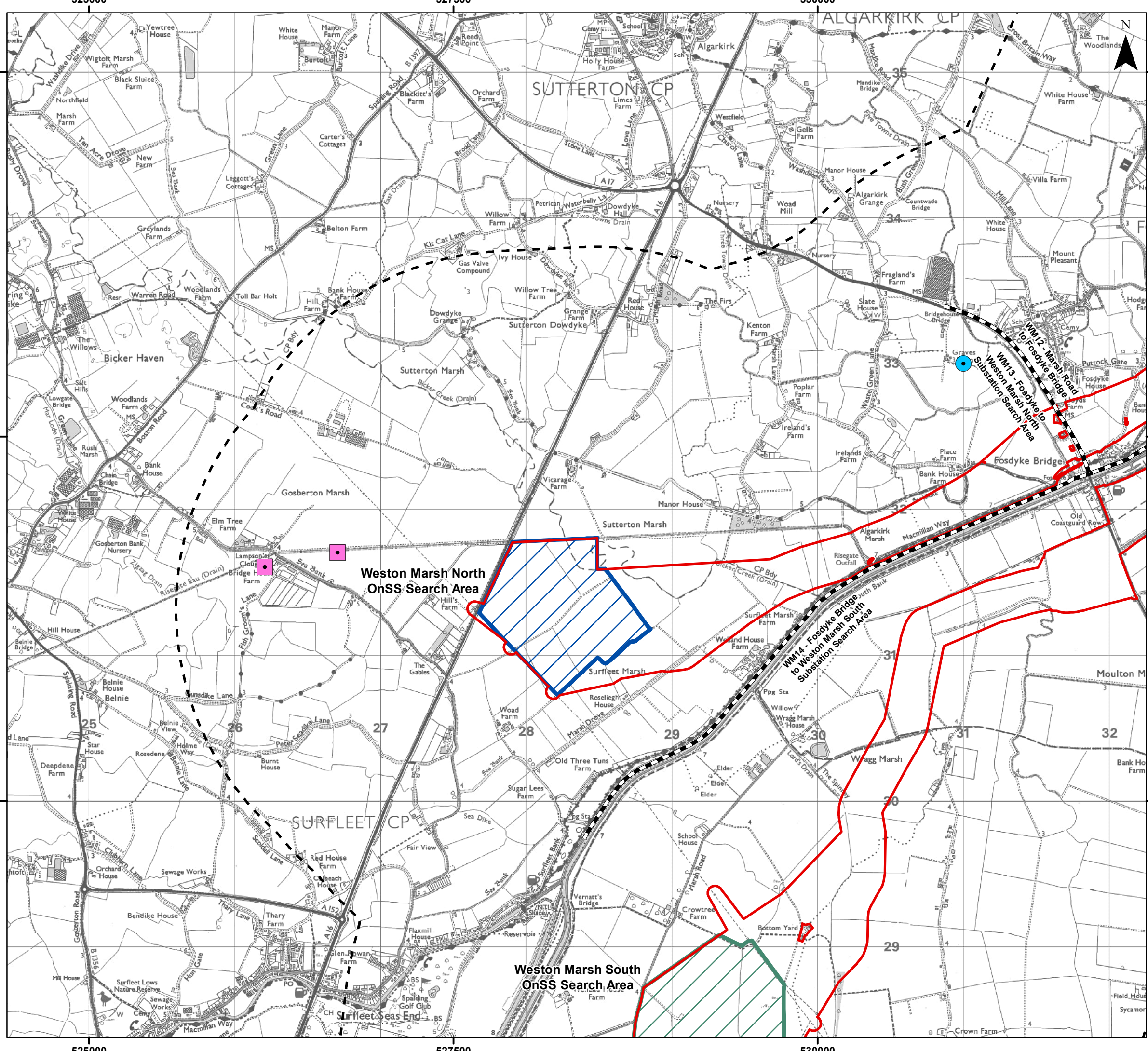


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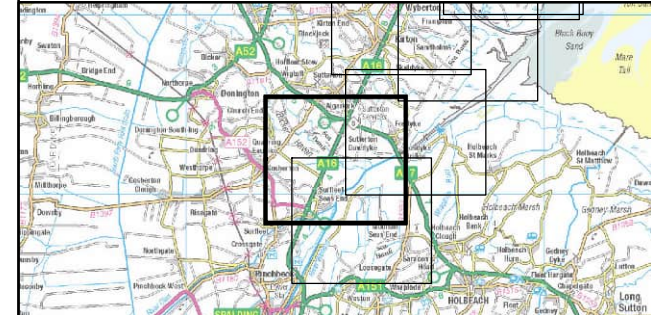
Legend

- Onshore PEIR Boundary
- Onshore Segment Break
- Weston Marsh North OnSS Search Area
- Weston Marsh South OnSS Search Area
- Onshore PEIR Boundary Weston Marsh (via South of the A52) 2 km Buffer

Local Records: Plants

- Deptford Pink
- Bluebell

Sources:
Local Records derived from data provided by Lincolnshire Environmental Records Centre (December 2022)



Coordinate System: British National Grid
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 Scale: 1:25,000

Preliminary Environmental Information Report
 Weston Marsh
 Protected and Notable Species Records Plants
 Figure 21.1.12.11



OUTER DOWING
OFFSHORE WIND

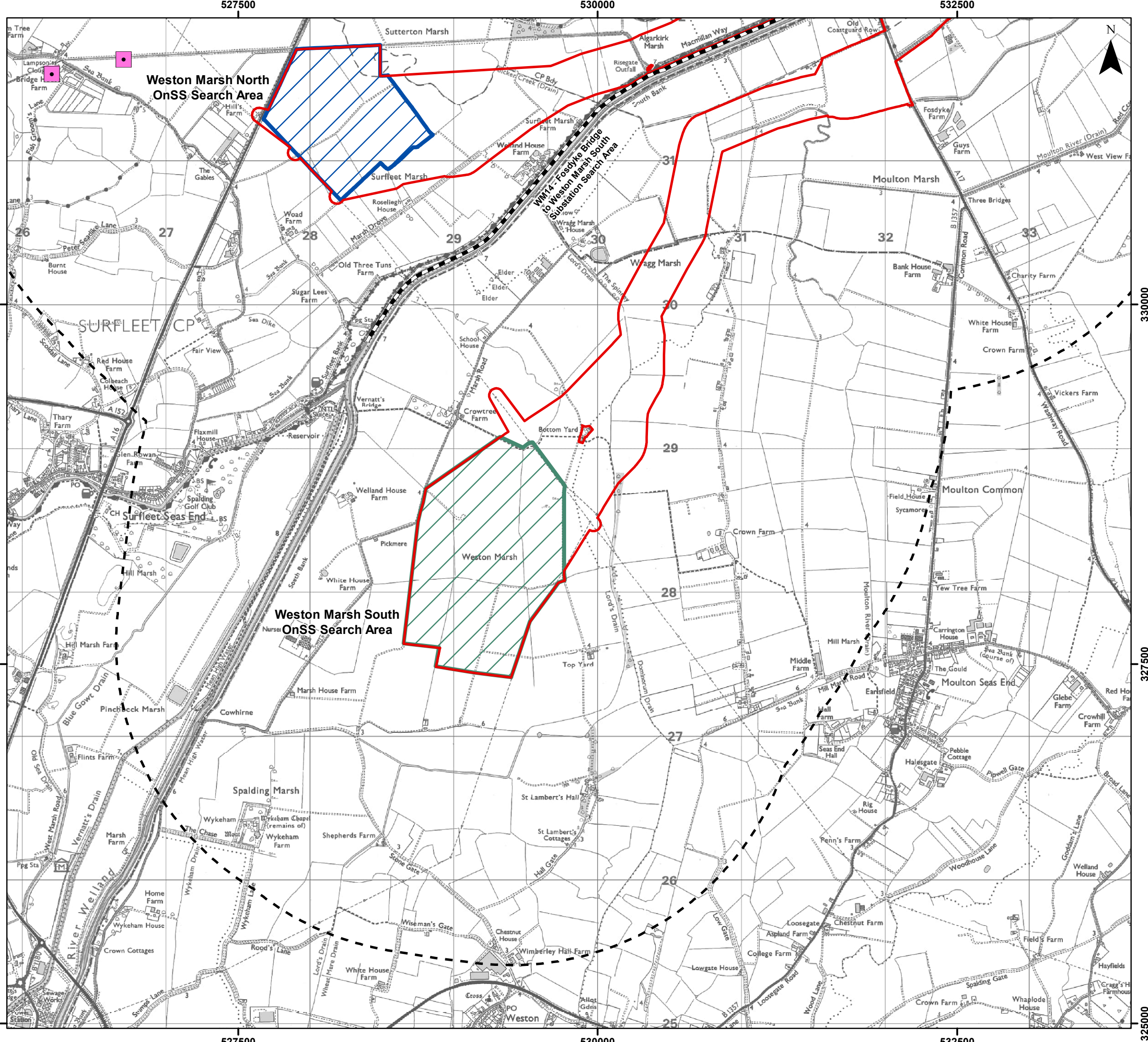


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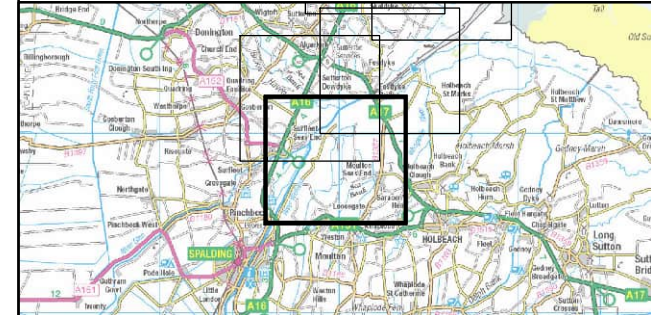


- ### Legend
- ▭ Onshore PEIR Boundary
 - Onshore Segment Break
 - Weston Marsh North OnSS Search Area
 - Weston Marsh South OnSS Search Area
 - Onshore PEIR Boundary Weston Marsh (via South of the A52) 2 km Buffer

Local Records: Plants

- Deptford Pink

Sources:
Local Records derived from data provided by Lincolnshire Environmental Records Centre (December 2022)



Coordinate System: British National Grid
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 Scale: 1:25,000

Preliminary Environmental Information Report
 Weston Marsh
 Protected and Notable Species Records Plants
 Figure 21.1.12.12

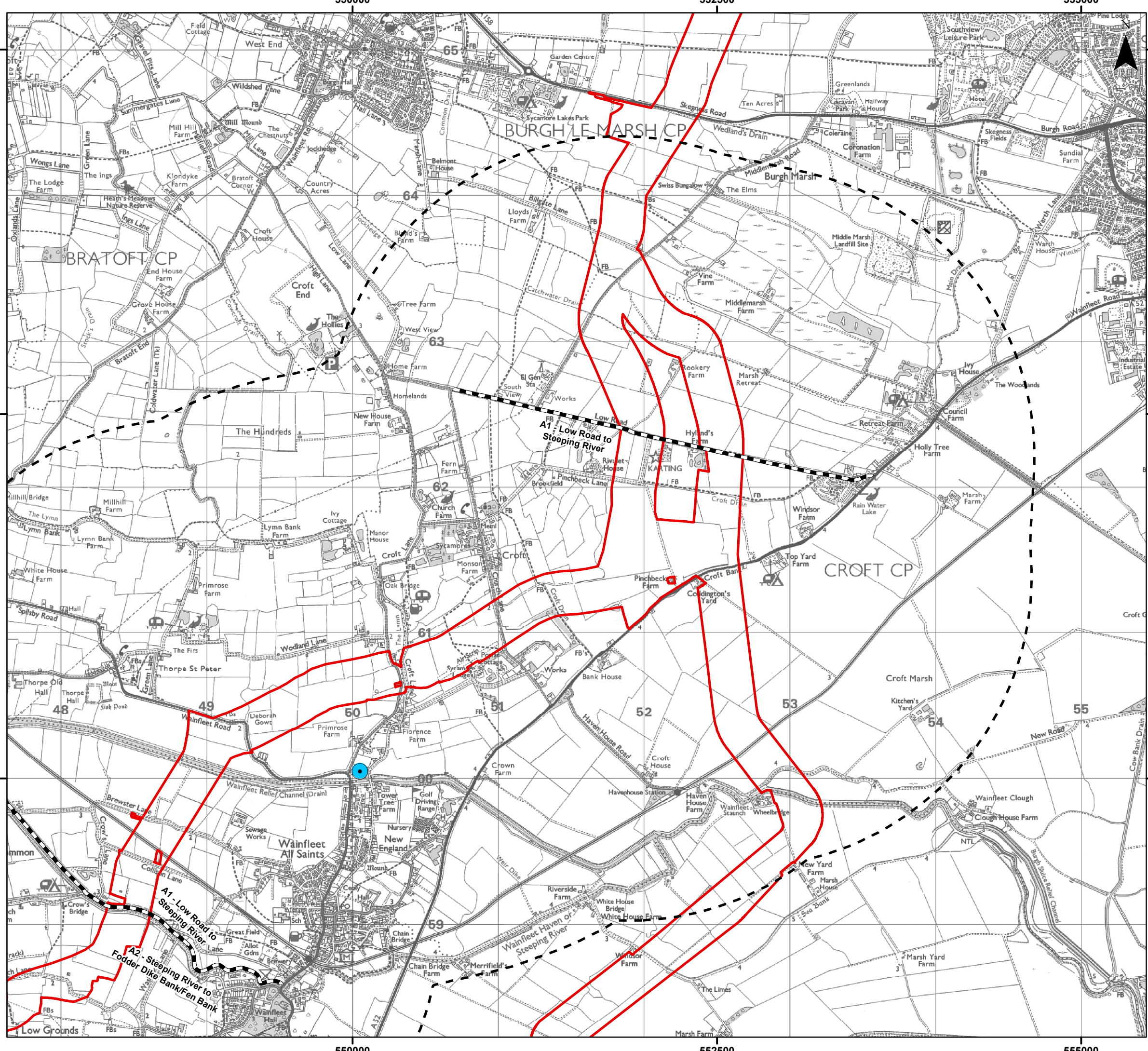


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Legend

- Onshore PEIR Boundary
- Onshore Segment Break
- Onshore PEIR Boundary Weston Marsh (via North of the A52) 2 km Buffer

Local Records: Plants

- Bluebell

Sources:
Local Records derived from data provided by Lincolnshire Environmental Records Centre (December 2022)



Coordinate System: British National Grid

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Scale: 1:25,000

Preliminary Environmental Information Report
Weston Marsh
Protected and Notable Species Records Plants

Figure 21.1.12.13

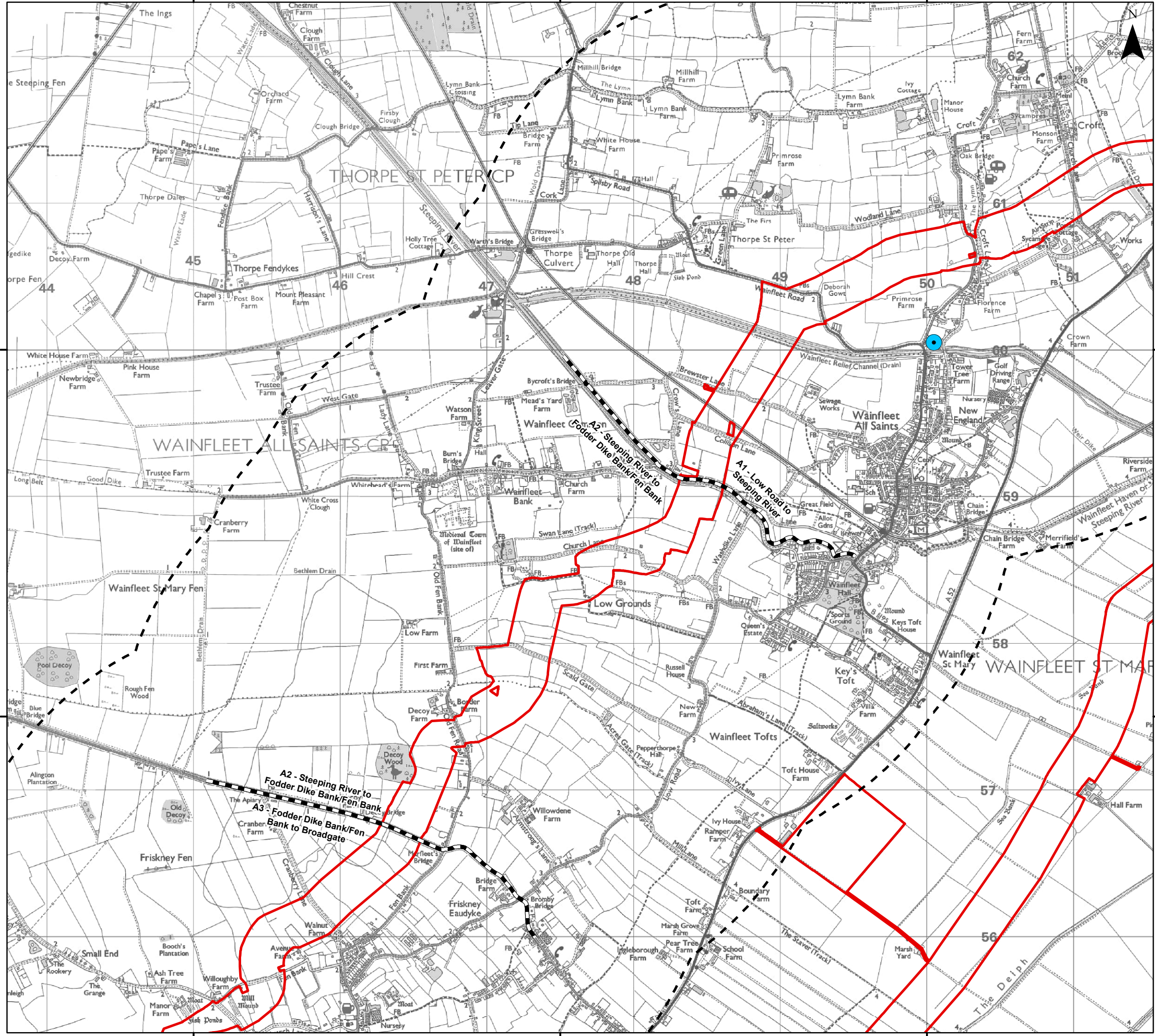


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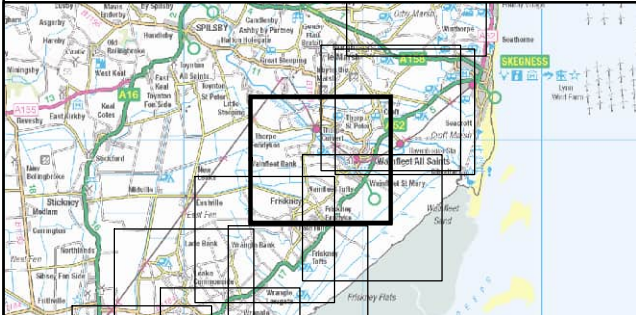
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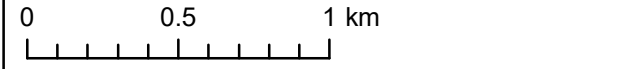
Legend

- Onshore PEIR Boundary
- Onshore Segment Break
- Onshore PEIR Boundary Weston Marsh (via North of the A52) 2 km Buffer
- Local Records: Plants**
- Bluebell

Sources:
Local Records derived from data provided by Lincolnshire Environmental Records Centre (December 2022)



Coordinate System: British National Grid



Scale: 1:25,000

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Weston Marsh
Protected and Notable Species Records Plants

Figure 21.1.12.14



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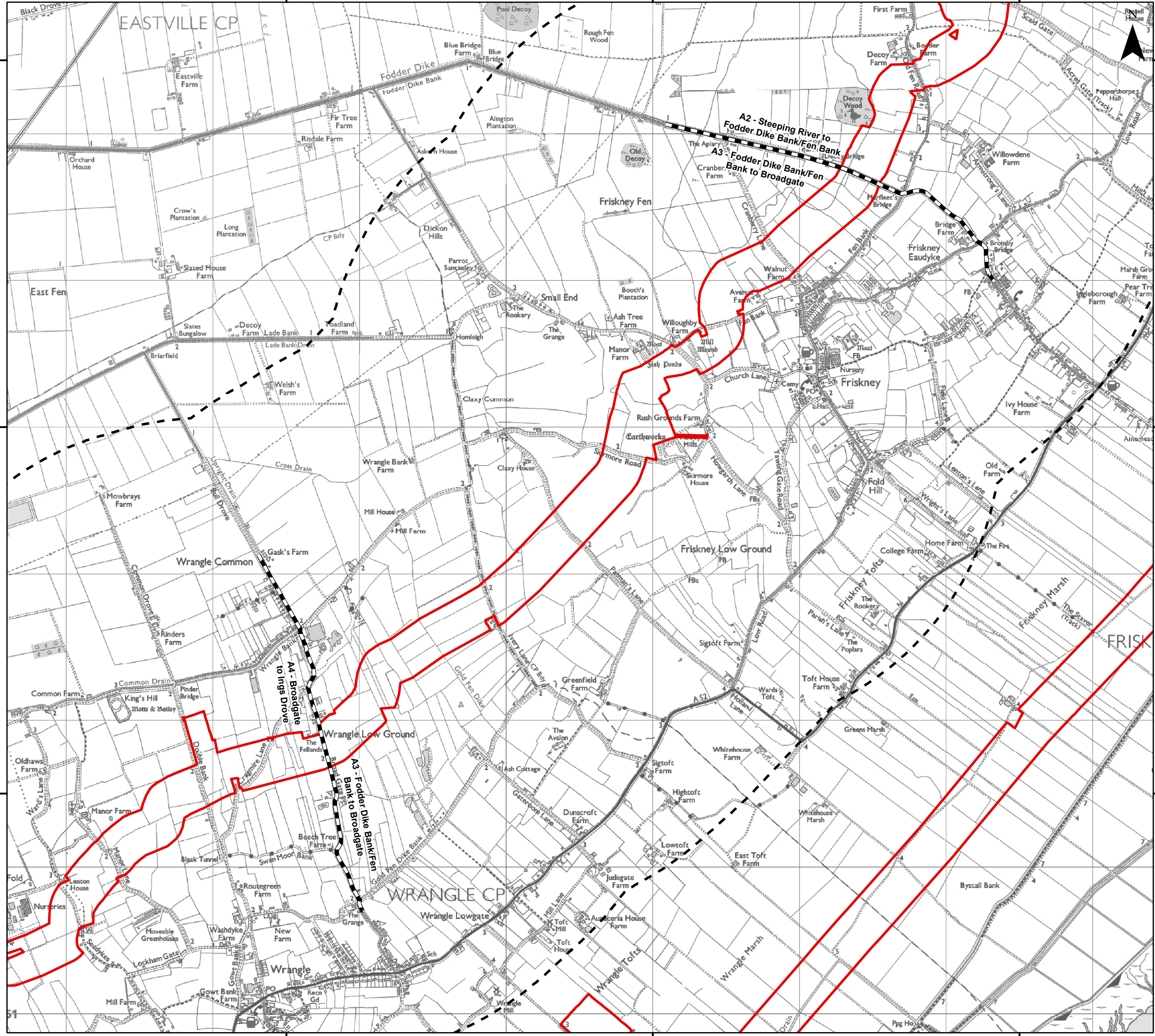
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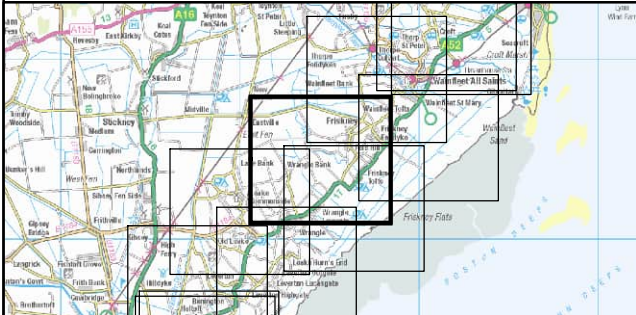
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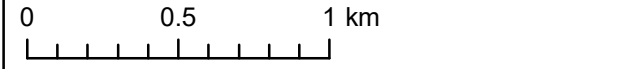
Legend

- Onshore PEIR Boundary
- Onshore Segment Break
- Onshore PEIR Boundary Weston Marsh (via North of the A52) 2 km Buffer

Sources:
Local Records derived from data provided by Lincolnshire Environmental Records Centre (December 2022)



Coordinate System: British National Grid



Scale: 1:25,000

Preliminary Environmental Information Report

Weston Marsh

Protected and Notable Species Records Plants

Figure 21.1.12.15

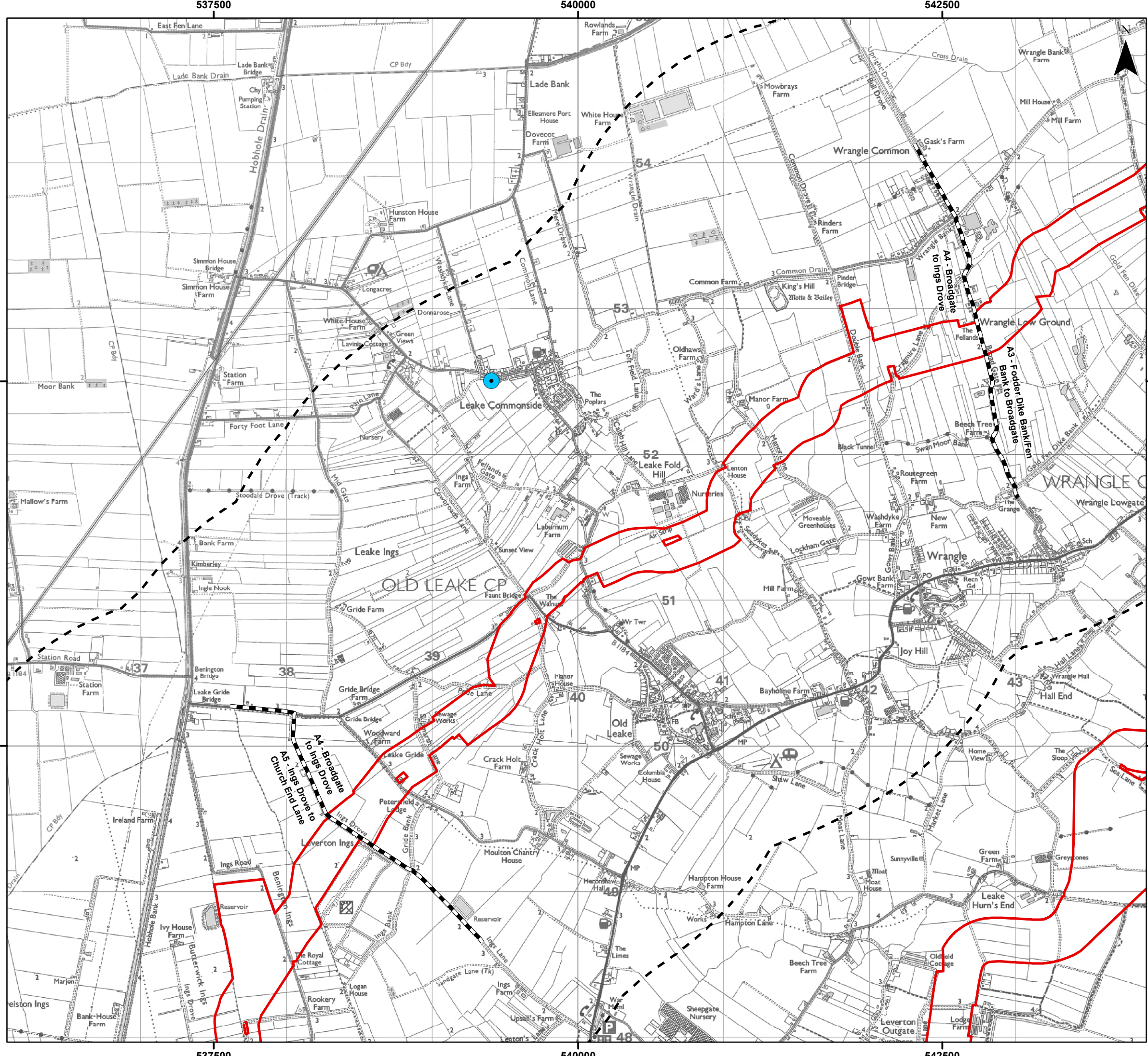


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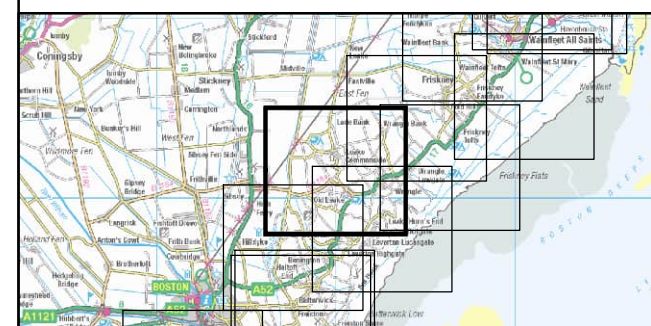
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- Legend**
- Onshore PEIR Boundary
 - Onshore Segment Break
 - Onshore PEIR Boundary Weston Marsh (via North of the A52) 2 km Buffer

- Local Records: Plants**
- Bluebell

Sources:
Local Records derived from data provided by Lincolnshire Environmental Records Centre (December 2022)



Coordinate System: British National Grid
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 Scale: 1:25,000

Preliminary Environmental Information Report
 Weston Marsh
 Protected and Notable Species Records Plants
 Figure 21.1.12.16

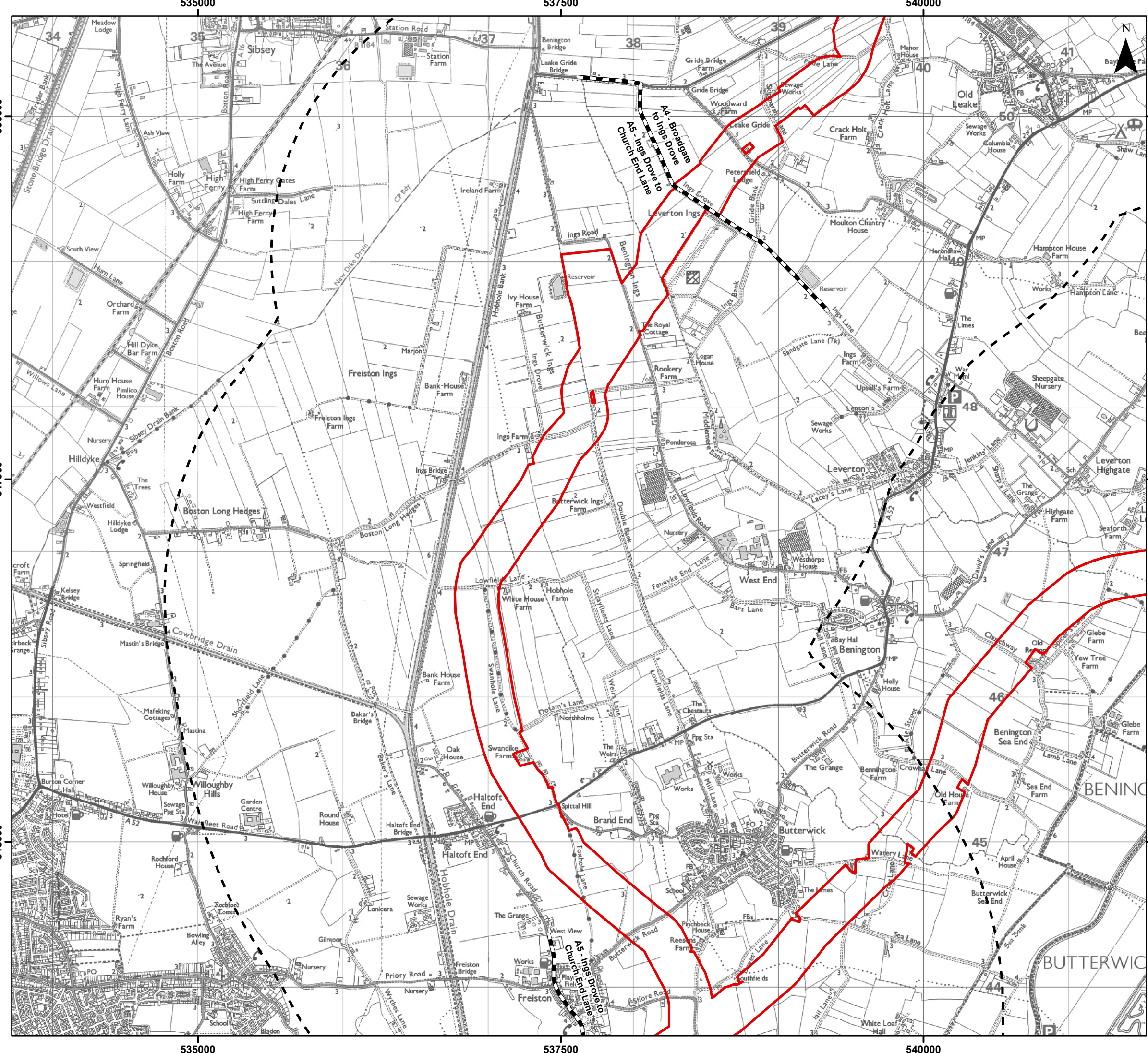


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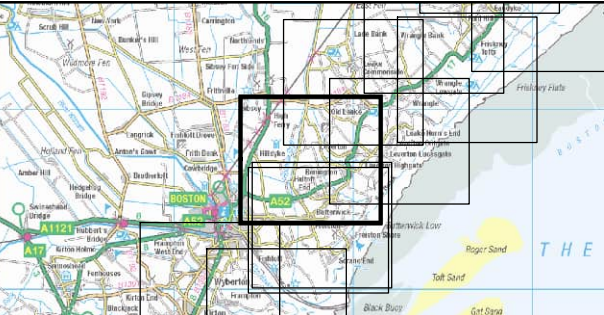
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Legend

- Onshore PEIR Boundary
- Onshore Segment Break
- Onshore PEIR Boundary Weston Marsh (via North of the A52) 2 km Buffer

Sources:
Local Records derived from data provided by Lincolnshire Environmental Records Centre (December 2022)



Coordinate System: British National Grid
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Scale: 1:25,000

Preliminary Environmental Information Report
Weston Marsh
Protected and Notable Species Records Plants

Figure 21.1.12.17

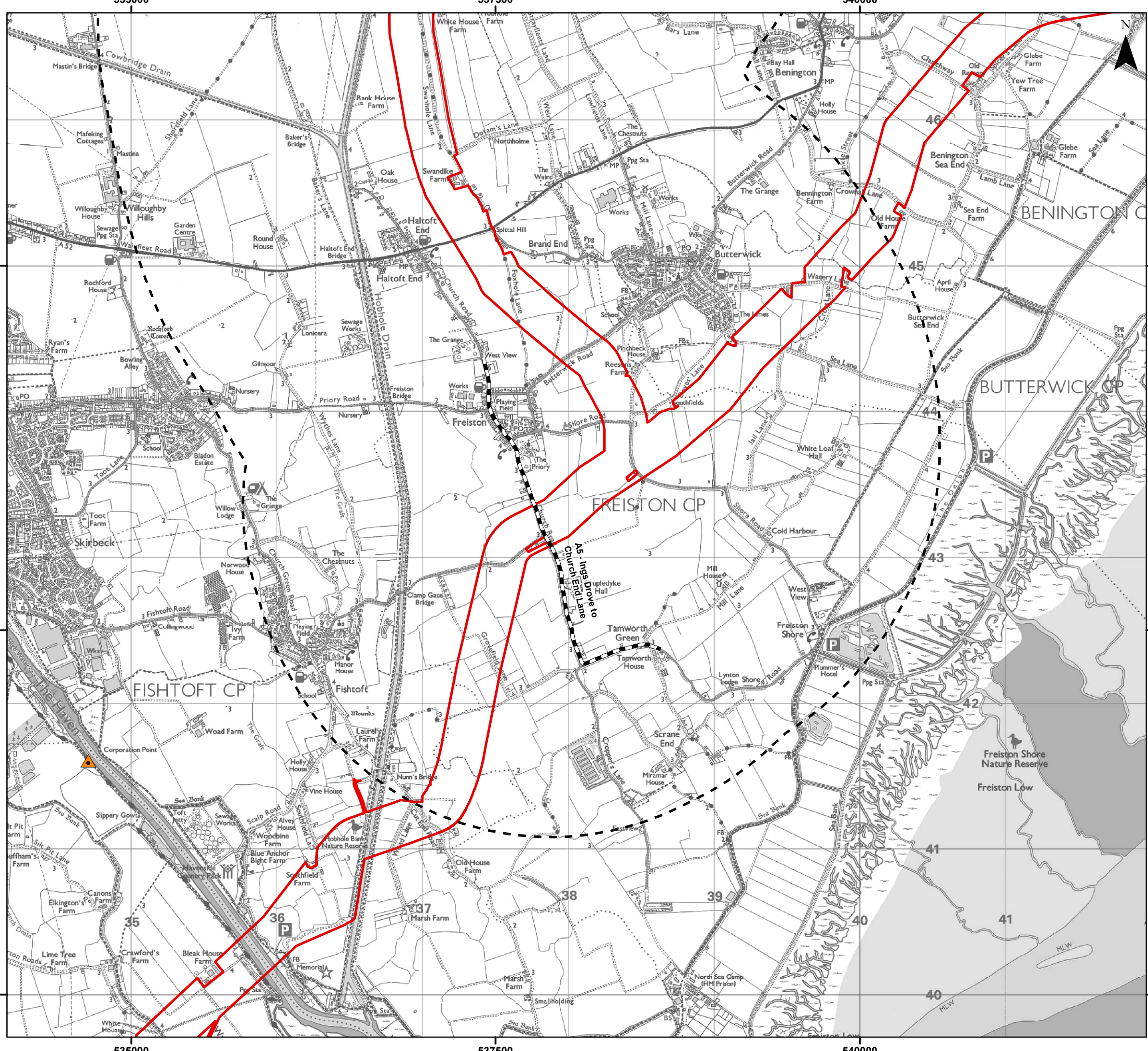


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Legend

- Onshore PEIR Boundary
- Onshore Segment Break
- Onshore PEIR Boundary Weston Marsh (via North of the A52) 2 km Buffer
- Local Records: Plants**
- ▲ Branched Horsetail

Sources:
Local Records derived from data provided by Lincolnshire Environmental Records Centre (December 2022)



Coordinate System: British National Grid
 0 0.5 1 km
 Scale: 1:25,000

Preliminary Environmental Information Report
 Weston Marsh
 Protected and Notable Species Records Plants
 Figure 21.1.12.18



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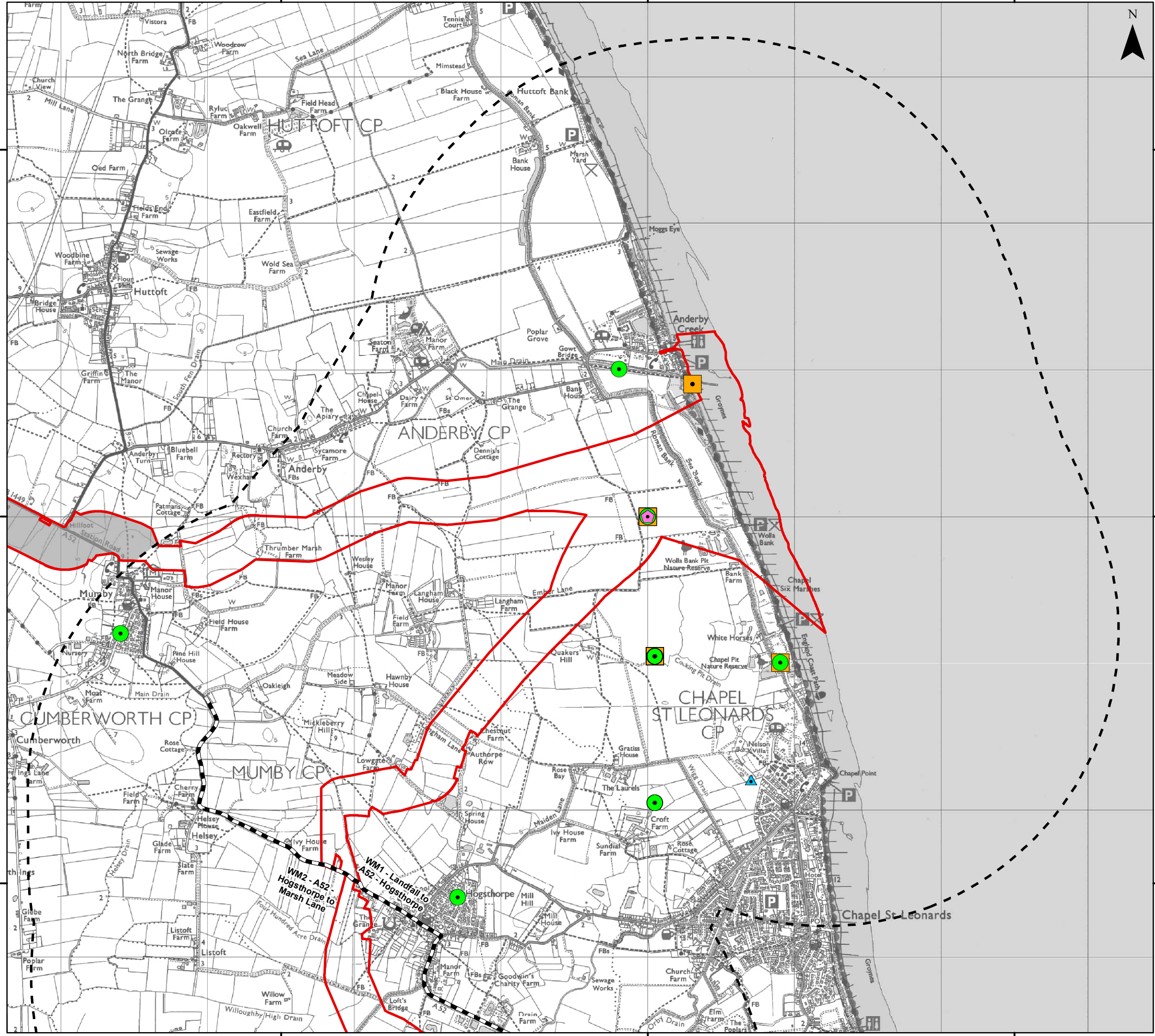
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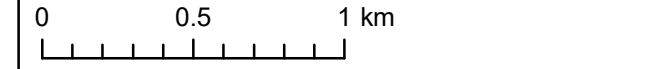
Legend

- Onshore PEIR Boundary
- Onshore Segment Break
- Onshore PEIR Boundary Weston Marsh (via South of the A52) 2 km Buffer
- Local Records: Amphibians**
- Great Crested Newt
- Smooth Newt
- Common Frog
- Common Toad

Sources:
Local Records derived from data provided by Lincolnshire Environmental Records Centre (December 2022)



Coordinate System: British National Grid



Scale: 1:25,000

Preliminary Environmental Information Report

Weston Marsh
Protected and Notable Species Records
Amphibians
Figure 21.1.13.1



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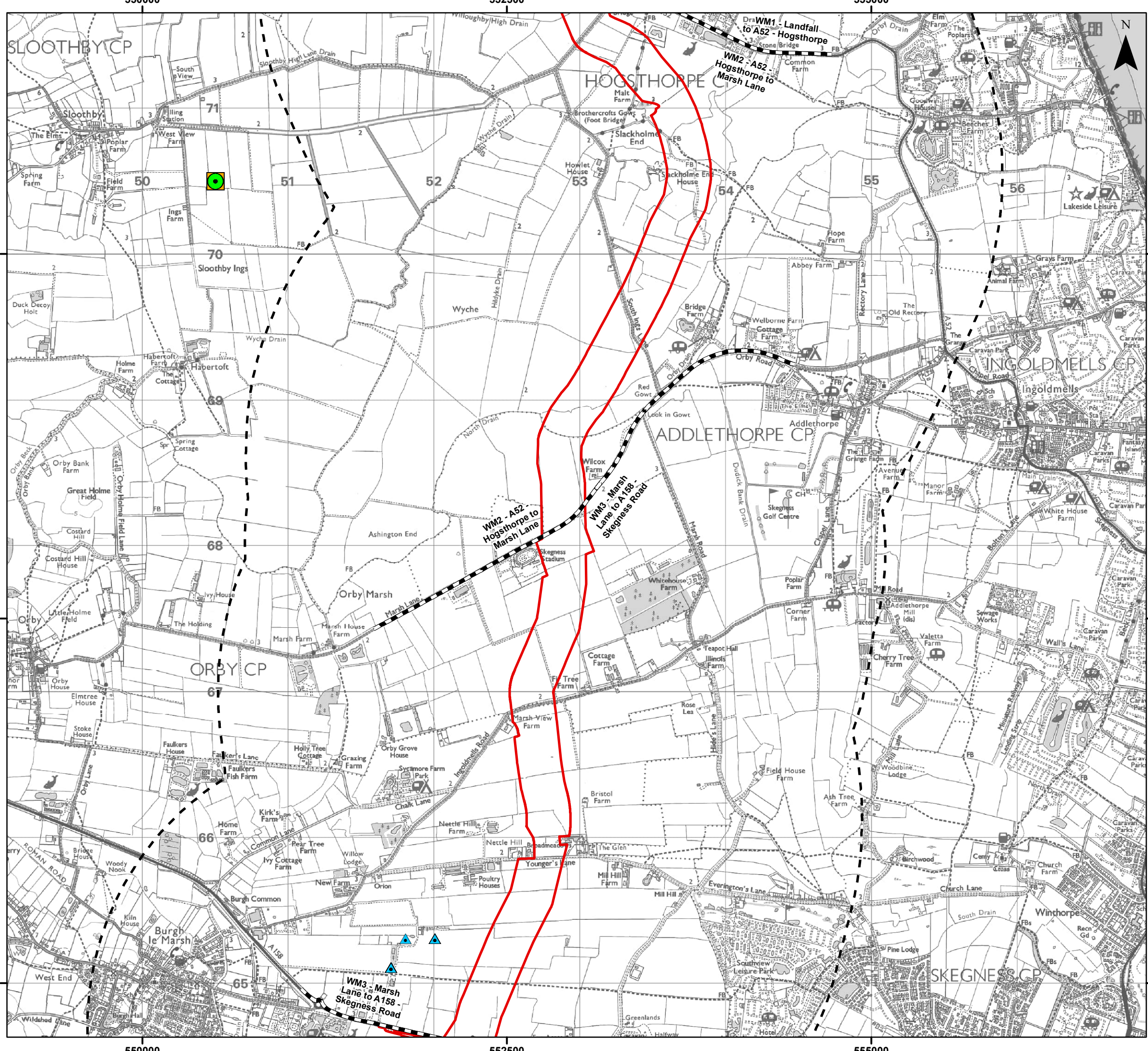
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Legend

- Onshore PEIR Boundary
- Onshore Segment Break
- Onshore PEIR Boundary Weston Marsh (via South of the A52) 2 km Buffer

Local Records: Amphibians

- ▲ Great Crested Newt
- Common Frog
- Common Toad

Sources:
Local Records derived from data provided by Lincolnshire Environmental Records Centre (December 2022)

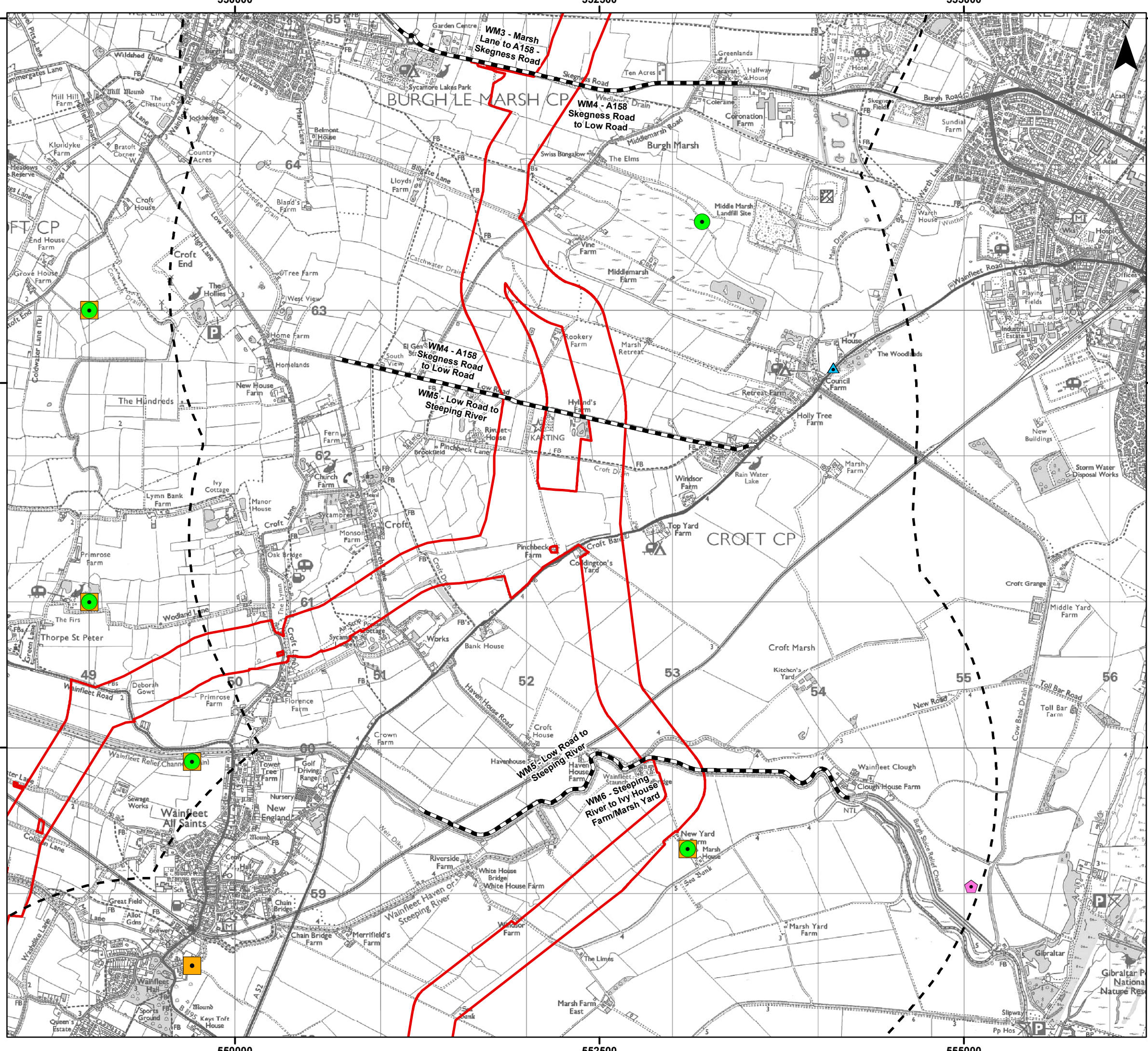


Coordinate System: British National Grid
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 Scale: 1:25,000

Preliminary Environmental Information Report
 Weston Marsh
 Protected and Notable Species Records
 Amphibians
 Figure 21.1.13.2



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Legend

- Onshore PEIR Boundary
- Onshore Segment Break
- Onshore PEIR Boundary Weston Marsh (via South of the A52) 2 km Buffer

Local Records: Amphibians

- ▲ Great Crested Newt
- ⬠ Smooth Newt
- Common Frog
- Common Toad

Sources:
Local Records derived from data provided by Lincolnshire Environmental Records Centre (December 2022)

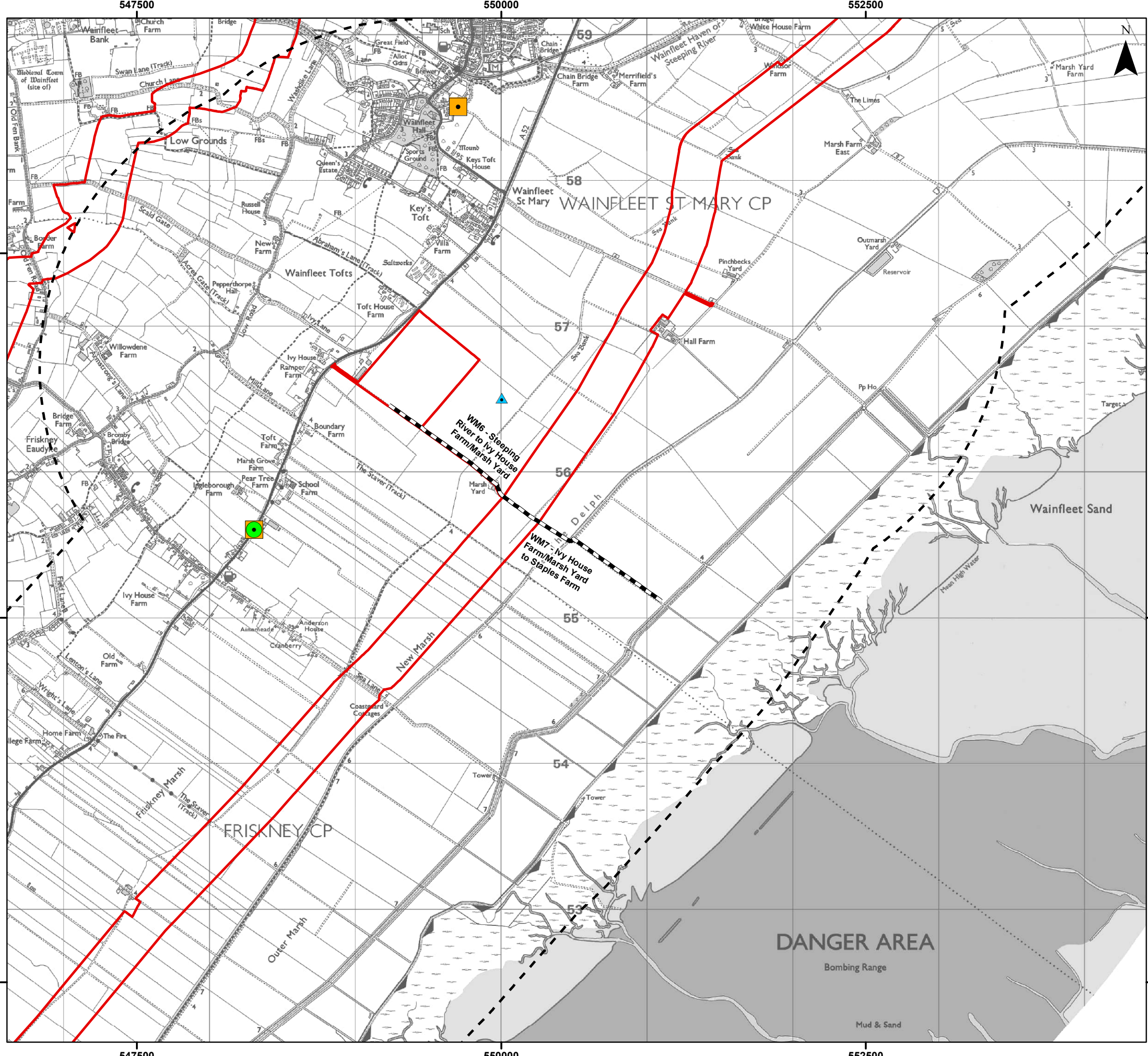


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 Scale: 1:25,000

Preliminary Environmental Information Report
 Weston Marsh
 Protected and Notable Species Records
 Amphibians
 Figure 21.1.13.3



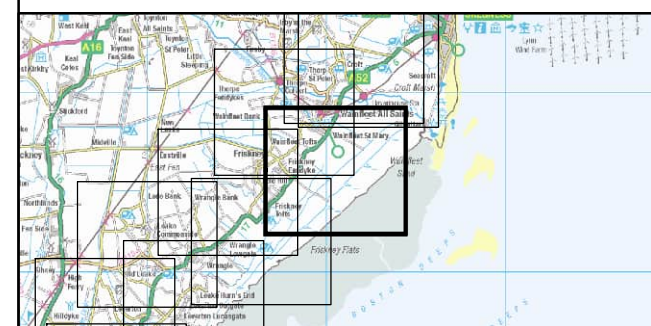
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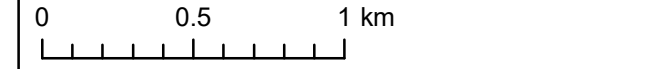
Legend

- Onshore PEIR Boundary
- Onshore Segment Break
- Onshore PEIR Boundary Weston Marsh (via South of the A52) 2 km Buffer
- Local Records: Amphibians**
- ▲ Great Crested Newt
- Common Frog
- Common Toad

Sources:
Local Records derived from data provided by Lincolnshire Environmental Records Centre (December 2022)



Coordinate System: British National Grid



Scale: 1:25,000

Preliminary Environmental Information Report

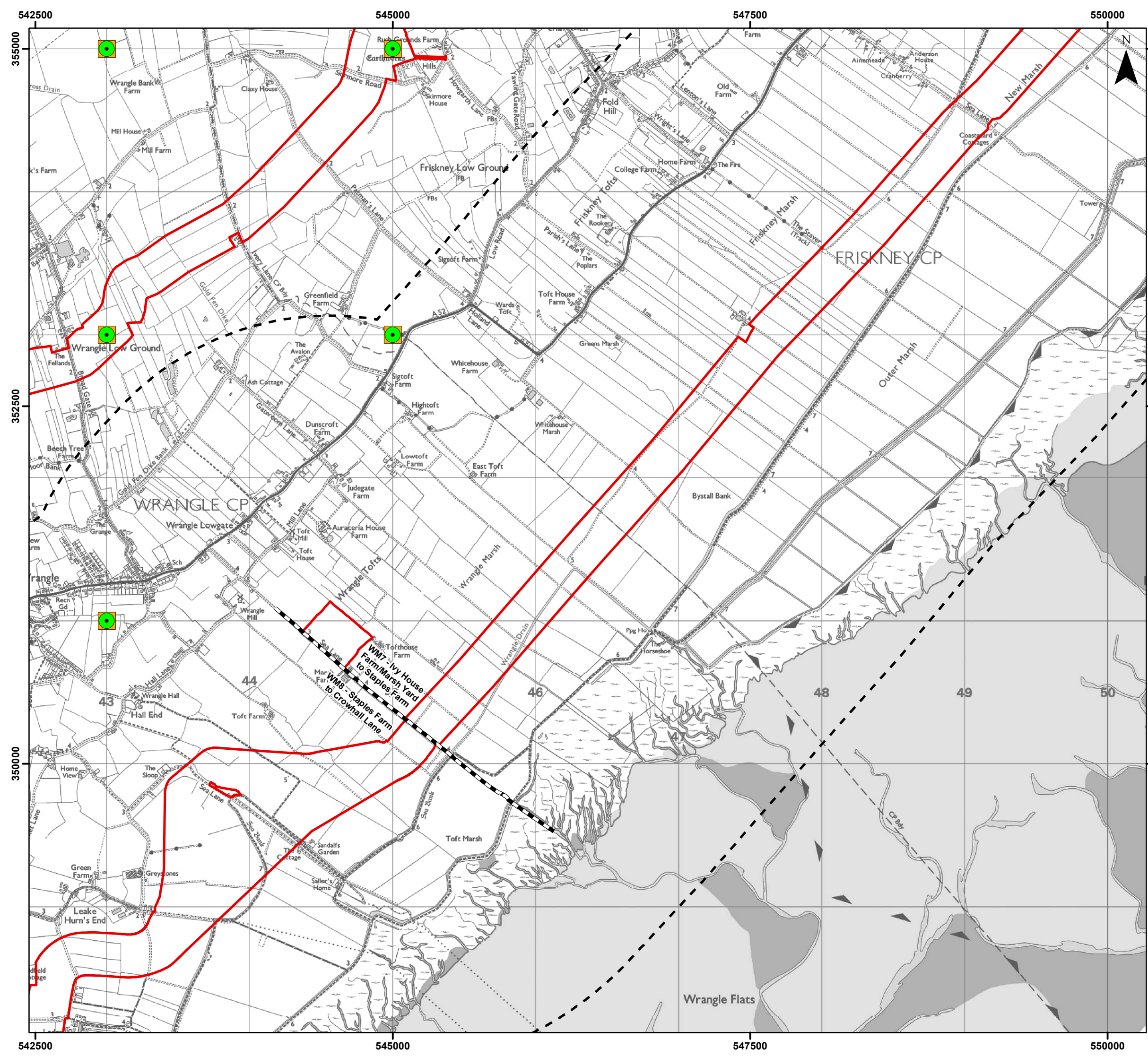
Weston Marsh
Protected and Notable Species Records
Amphibians
Figure 21.1.13.4



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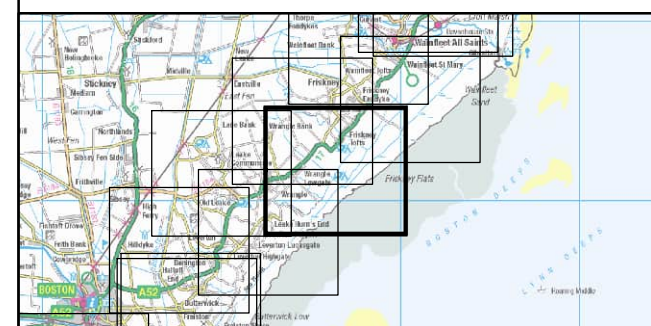
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- Legend**
- Onshore PEIR Boundary
 - Onshore Segment Break
 - Onshore PEIR Boundary Weston Marsh (via South of the A52) 2 km Buffer

- Local Records: Amphibians**
- Common Frog
 - Common Toad

Sources:
Local Records derived from data provided by Lincolnshire Environmental Records Centre (December 2022)



Coordinate System: British National Grid
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Scale: 1:25,000

Preliminary Environmental Information Report
Weston Marsh
Protected and Notable Species Records
Amphibians
Figure 21.1.13.5

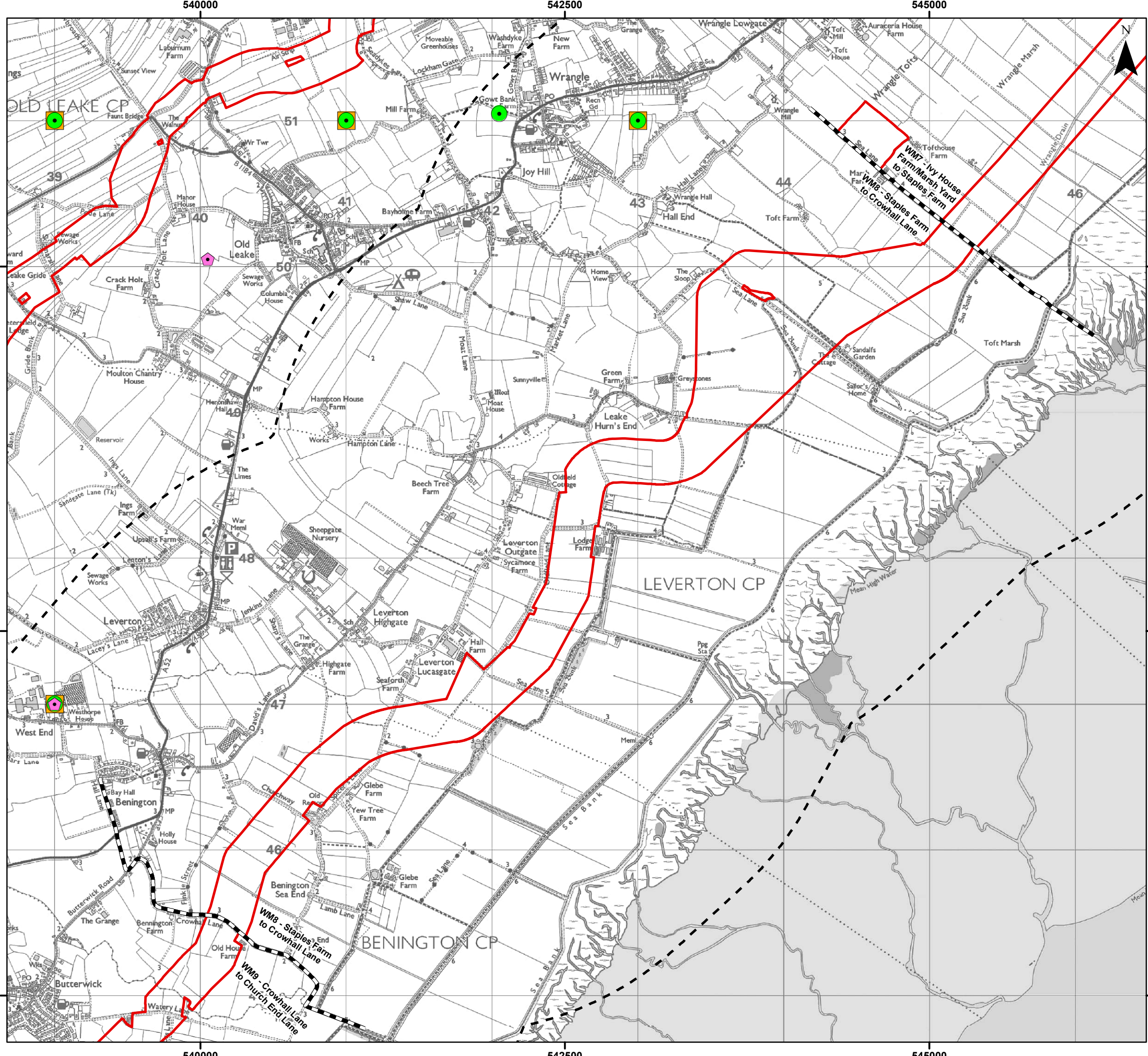


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Legend

- Onshore PEIR Boundary
- Onshore Segment Break
- Onshore PEIR Boundary Weston Marsh (via South of the A52) 2 km Buffer
- Local Records: Amphibians**
- ◆ Smooth Newt
- Common Frog
- Common Toad

Sources:
Local Records derived from data provided by Lincolnshire Environmental Records Centre (December 2022)



Coordinate System: British National Grid
0 0.5 1 km

Scale: 1:25,000

Preliminary Environmental Information Report
Weston Marsh
Protected and Notable Species Records
Amphibians
Figure 21.1.13.6

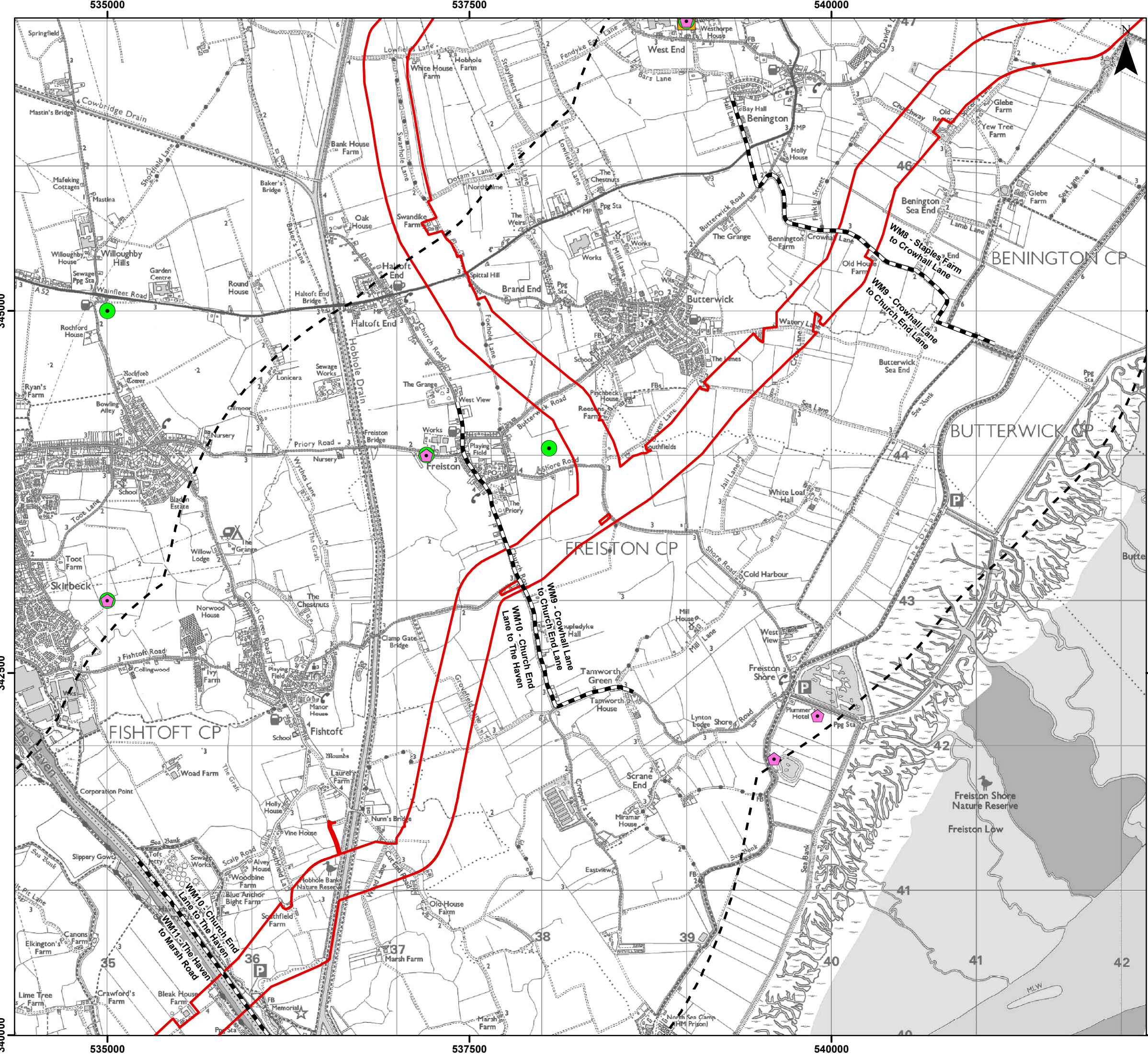


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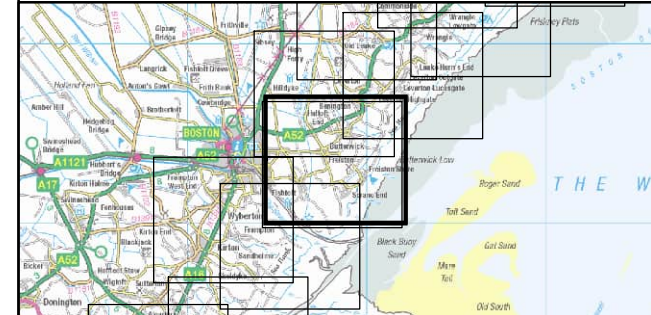
Legend

- Onshore PEIR Boundary
- Onshore Segment Break
- Onshore PEIR Boundary Weston Marsh (via South of the A52) 2 km Buffer

Local Records: Amphibians

- ◆ Smooth Newt
- Common Frog
- Common Toad

Sources:
Local Records derived from data provided by Lincolnshire Environmental Records Centre (December 2022)



Coordinate System: British National Grid
 0 0.5 1 km
 Scale: 1:25,000

Preliminary Environmental Information Report
 Weston Marsh
 Protected and Notable Species Records
 Amphibians
 Figure 21.1.13.7

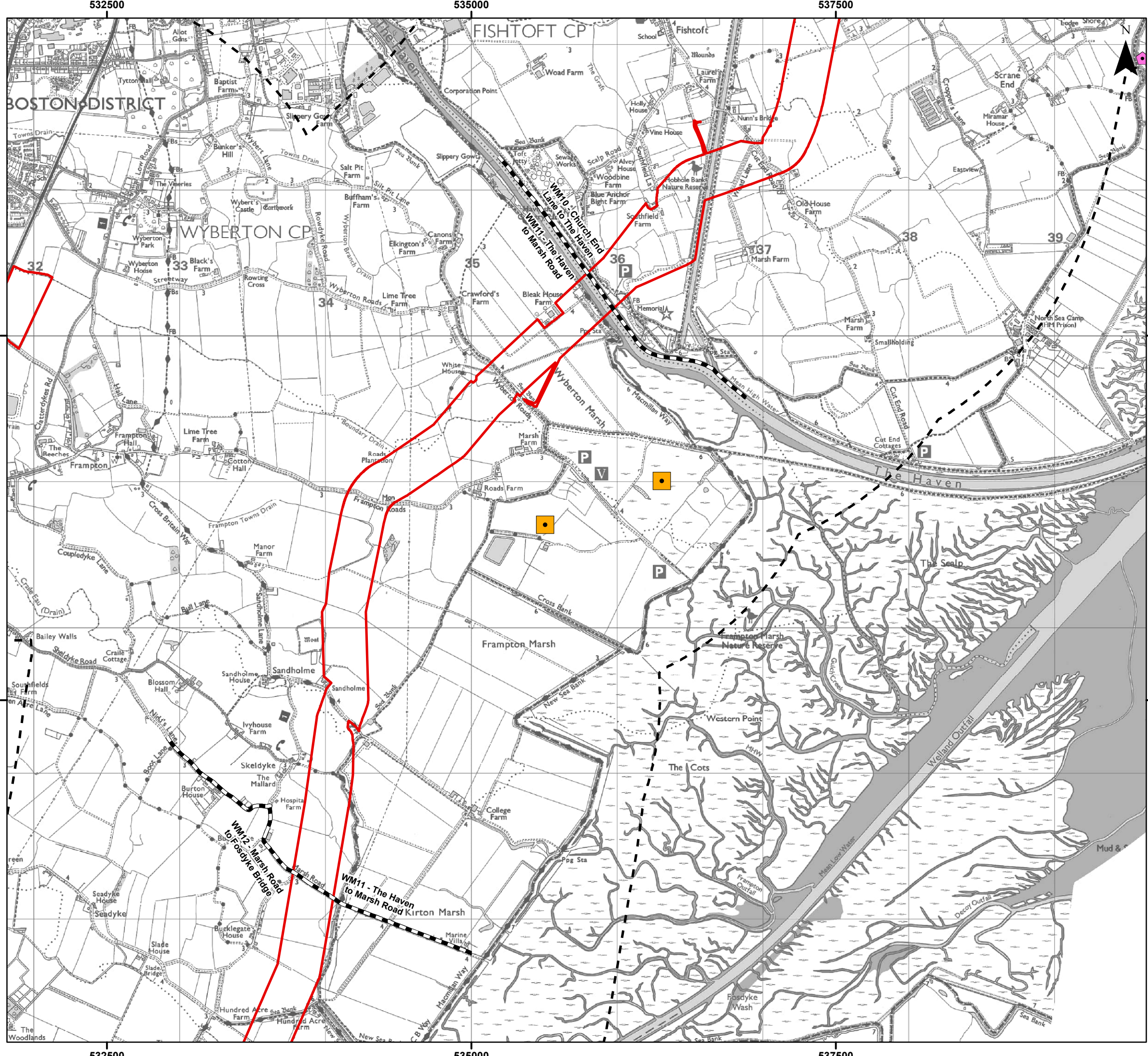




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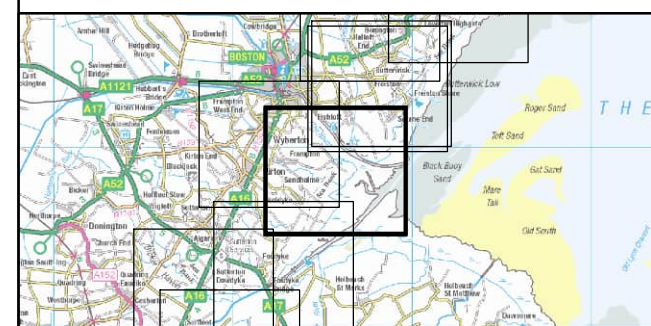
Legend

- Onshore PEIR Boundary
- Onshore Segment Break
- Onshore PEIR Boundary Weston Marsh (via South of the A52) 2 km Buffer

Local Records: Amphibians

- ◆ Smooth Newt
- Common Toad

Sources:
Local Records derived from data provided by Lincolnshire Environmental Records Centre (December 2022)



Coordinate System: British National Grid
 0 0.5 1 km

Scale: 1:25,000

Preliminary Environmental Information Report
 Weston Marsh
 Protected and Notable Species Records
 Amphibians
 Figure 21.1.13.8



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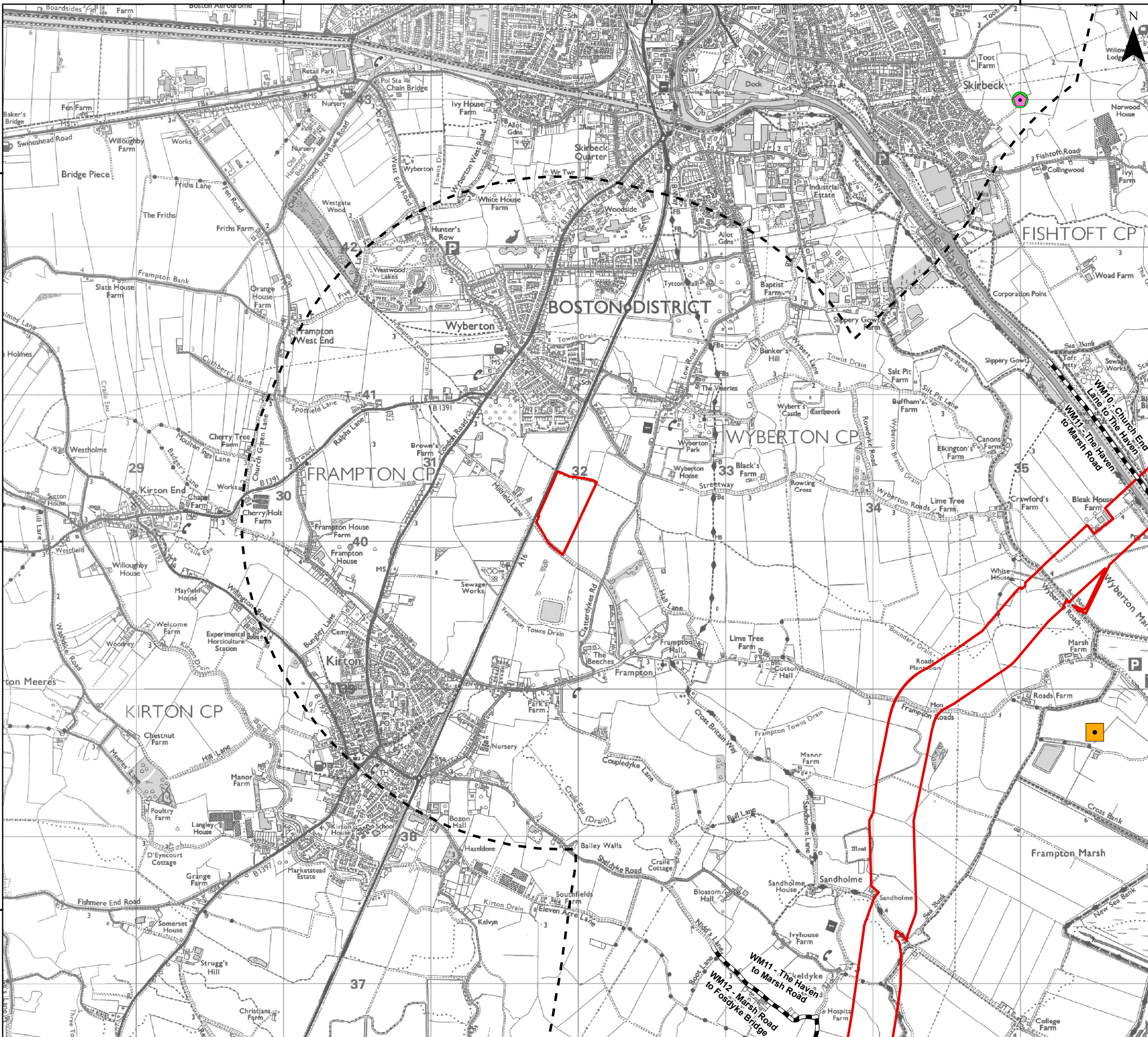
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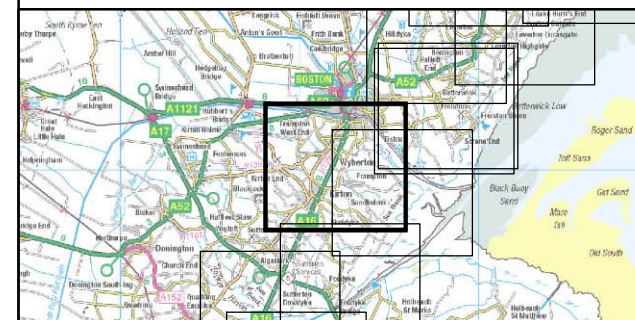
- Onshore PEIR Boundary
- Onshore Segment Break
- Onshore PEIR Boundary Weston Marsh (via South of the A52) 2 km Buffer

Local Records: Amphibians

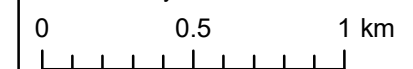
- ◆ Smooth Newt
- Common Frog
- Common Toad



Sources:
Local Records derived from data provided by Lincolnshire Environmental Records Centre (December 2022)



Coordinate System: British National Grid



Scale: 1:25,000

Preliminary Environmental Information Report

Weston Marsh
Protected and Notable Species Records
Amphibians
Figure 21.1.13.9



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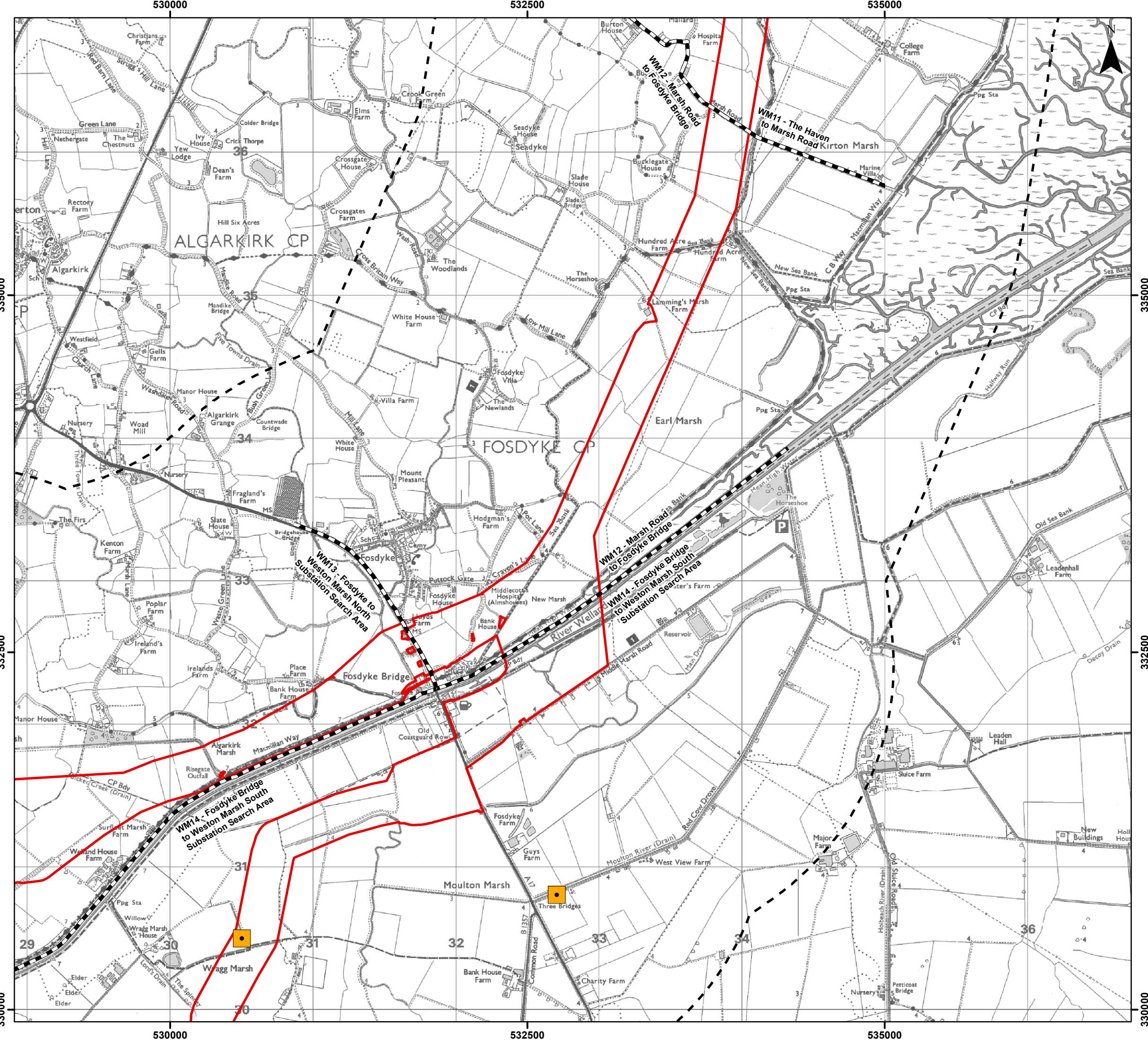
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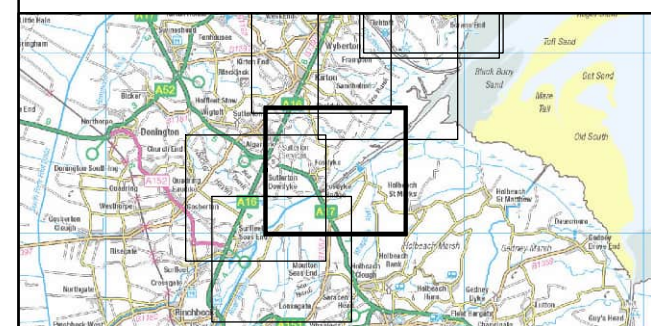
Legend

- Onshore PEIR Boundary
- Onshore Segment Break
- Onshore PEIR Boundary Weston Marsh (via South of the A52) 2 km Buffer

Local Records: Amphibians

- Common Toad

Sources:
Local Records derived from data provided by Lincolnshire Environmental Records Centre (December 2022)



Coordinate System: British National Grid

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Scale: 1:25,000

Preliminary Environmental Information Report

Weston Marsh
Protected and Notable Species Records
Amphibians
Figure 21.1.13.10

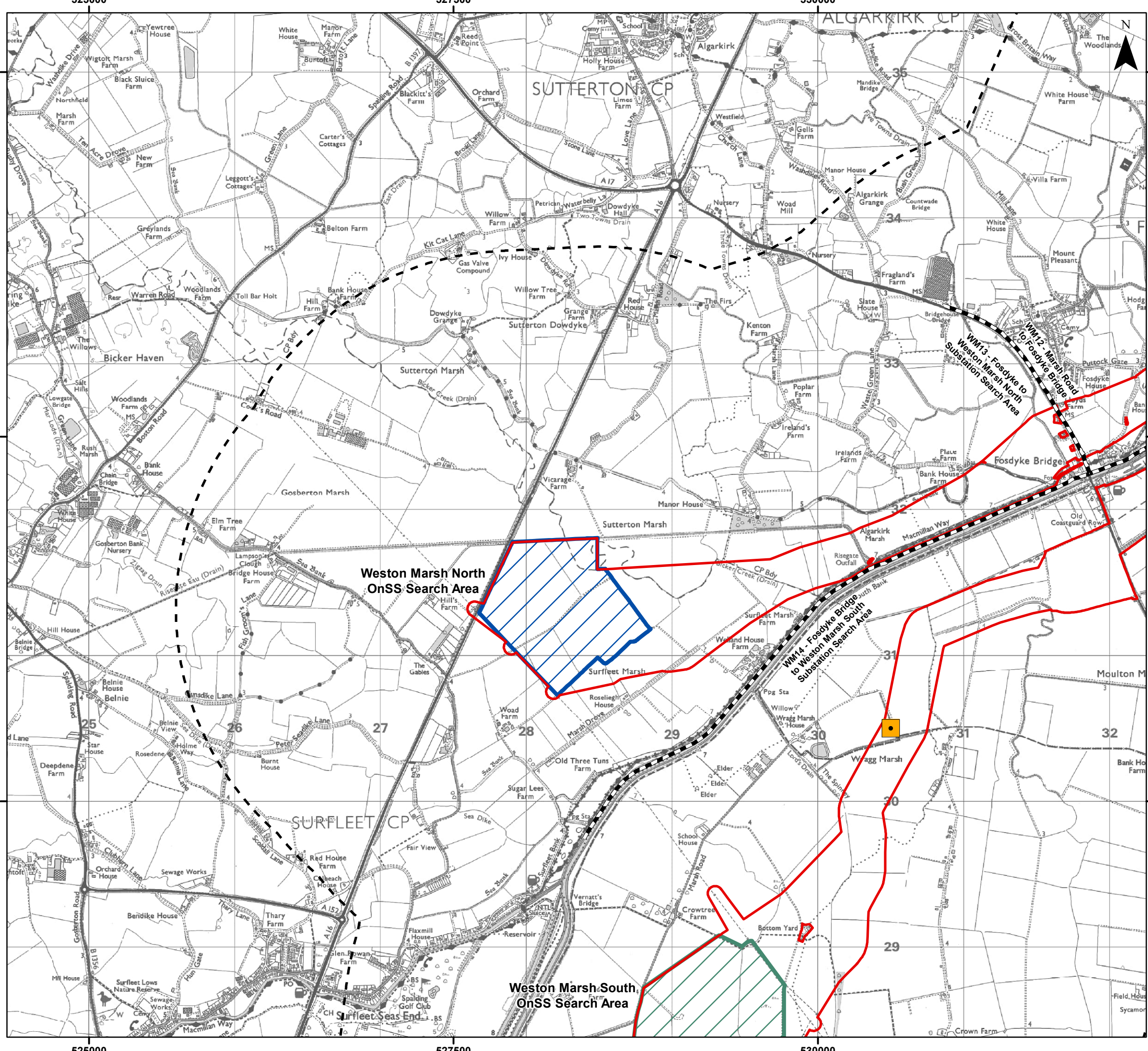




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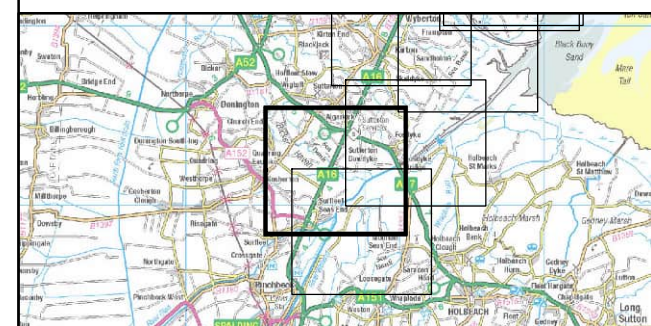
Legend

- Onshore PEIR Boundary
- Onshore Segment Break
- Weston Marsh North OnSS Search Area
- Weston Marsh South OnSS Search Area
- Onshore PEIR Boundary Weston Marsh (via South of the A52) 2 km Buffer

Local Records: Amphibians

- Common Toad

Sources:
Local Records derived from data provided by Lincolnshire Environmental Records Centre (December 2022)



Coordinate System: British National Grid
 0 0.5 1 km
 Scale: 1:25,000

Preliminary Environmental Information Report
 Weston Marsh
 Protected and Notable Species Records
 Amphibians
 Figure 21.1.13.11

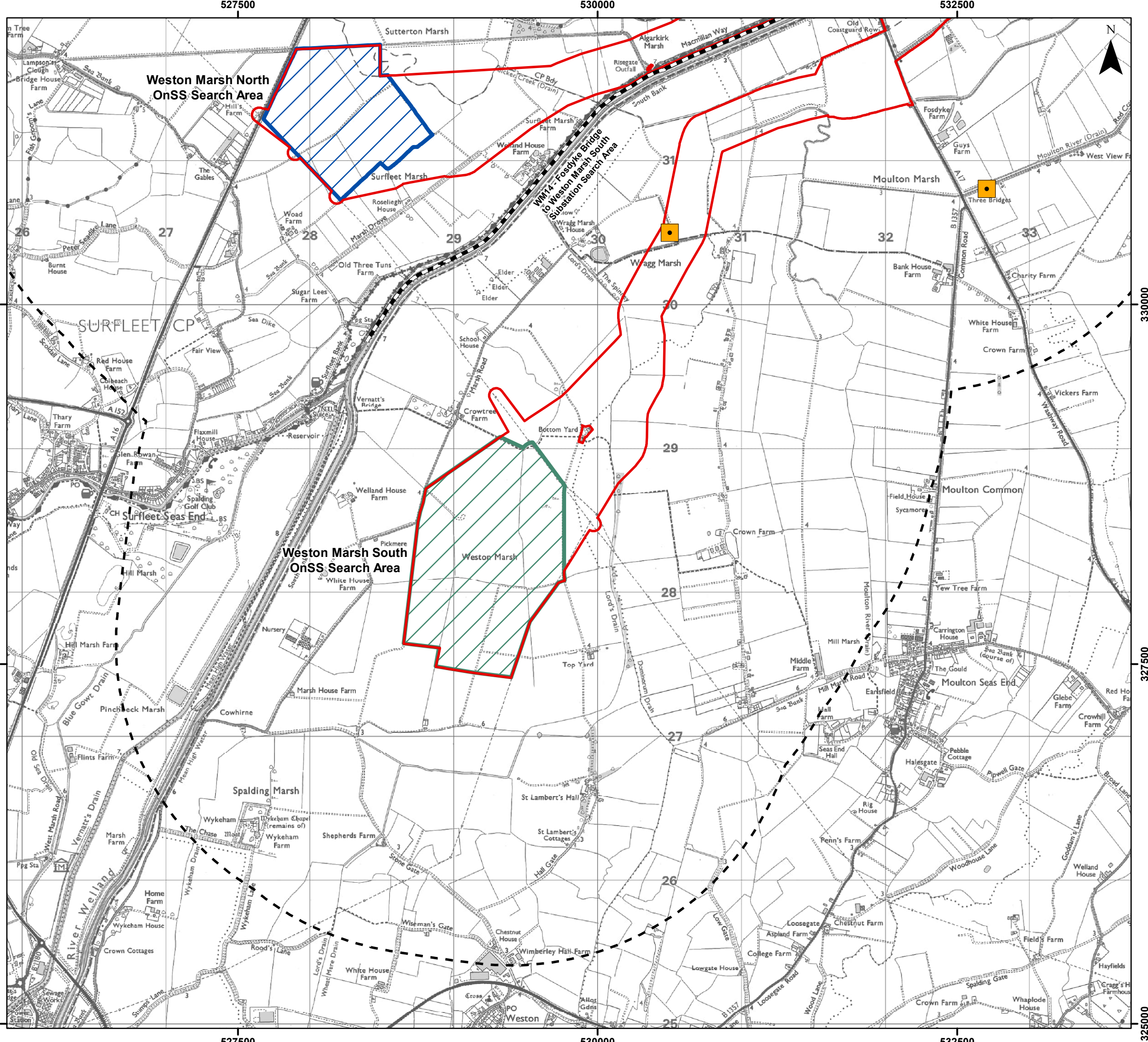


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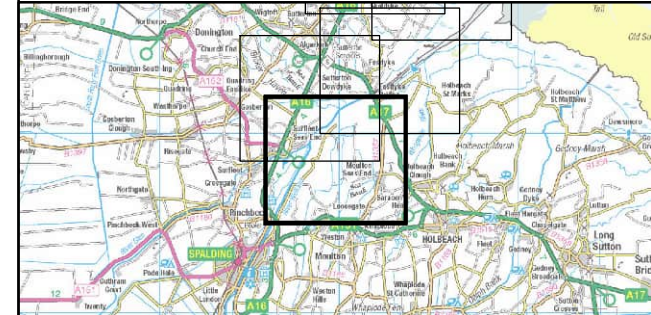
Legend

- Onshore PEIR Boundary
- Onshore Segment Break
- Weston Marsh North OnSS Search Area
- Weston Marsh South OnSS Search Area
- Onshore PEIR Boundary Weston Marsh (via South of the A52) 2 km Buffer

Local Records: Amphibians

- Common Toad

Sources:
Local Records derived from data provided by Lincolnshire Environmental Records Centre (December 2022)



Coordinate System: British National Grid
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 Scale: 1:25,000

Preliminary Environmental Information Report
 Weston Marsh
 Protected and Notable Species Records
 Amphibians
 Figure 21.1.13.12

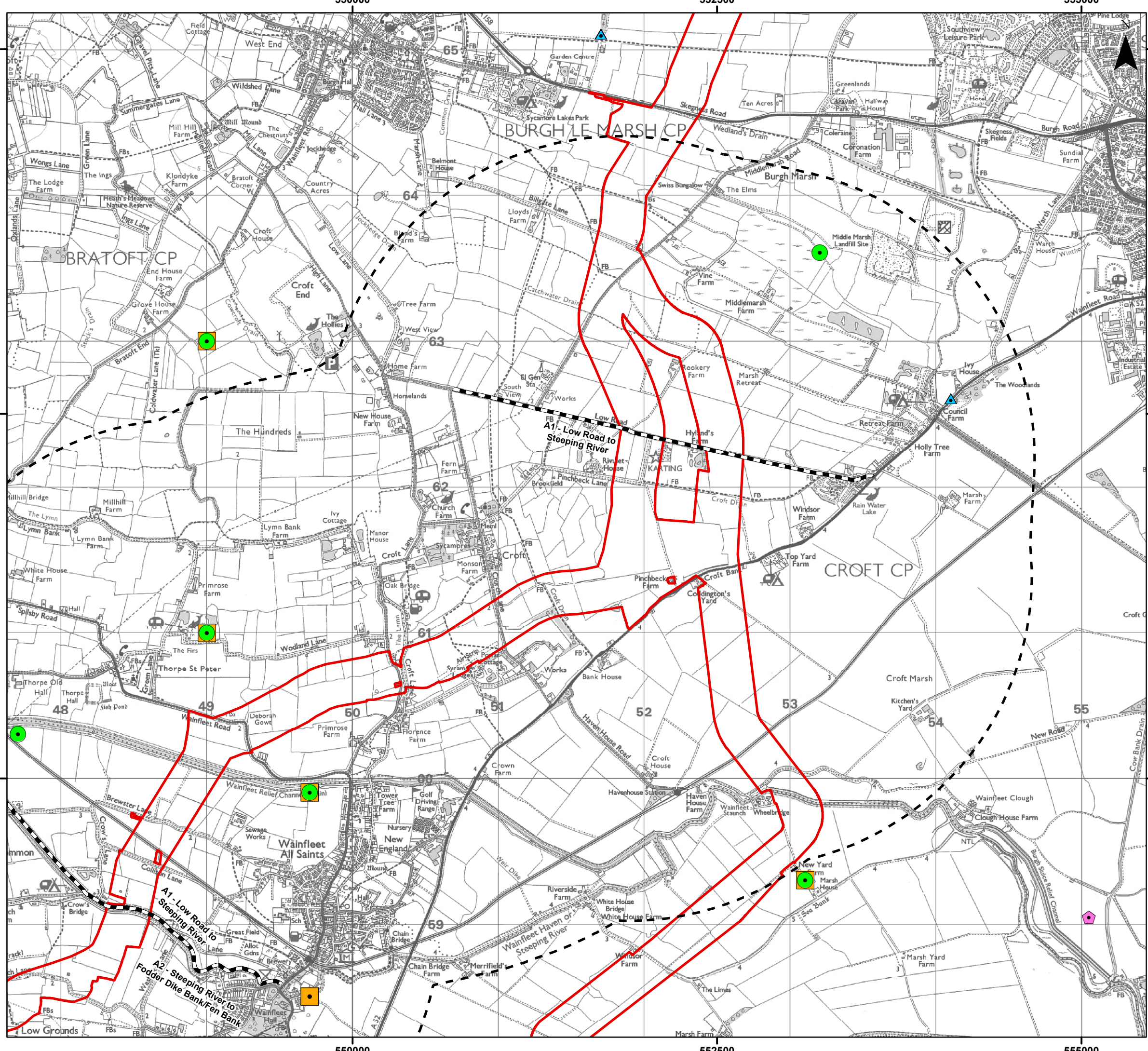


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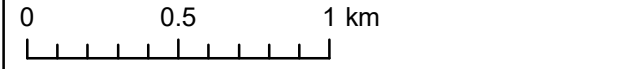
Legend

- Onshore PEIR Boundary
- Onshore Segment Break
- Onshore PEIR Boundary Weston Marsh (via North of the A52) 2 km Buffer
- Local Records: Amphibians**
- ▲ Great Crested Newt
- ⬠ Smooth Newt
- Common Frog
- Common Toad

Sources:
Local Records derived from data provided by Lincolnshire Environmental Records Centre (December 2022)



Coordinate System: British National Grid



Scale: 1:25,000

Preliminary Environmental Information Report

Weston Marsh
Protected and Notable Species Records
Amphibians
Figure 21.1.13.13



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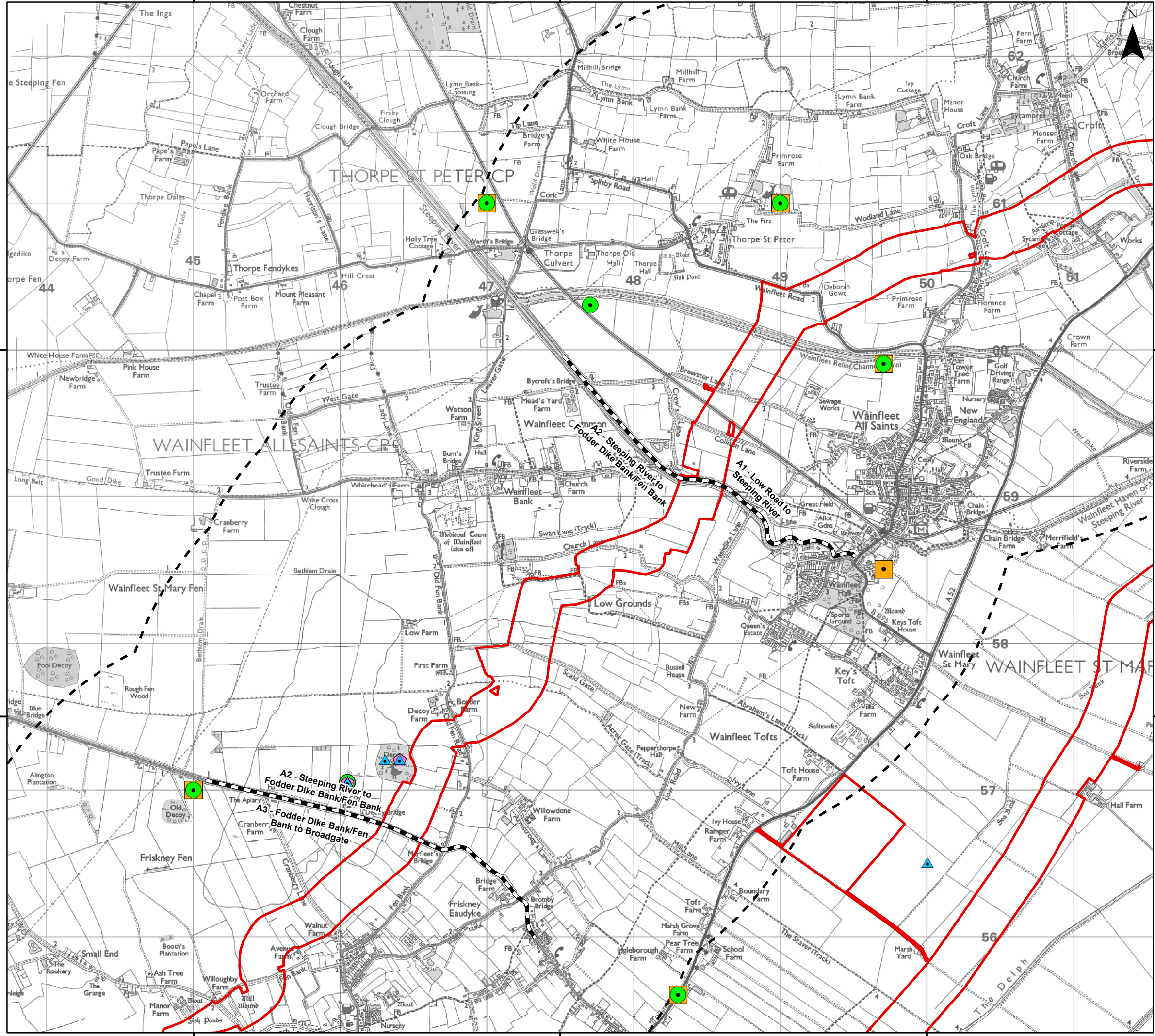


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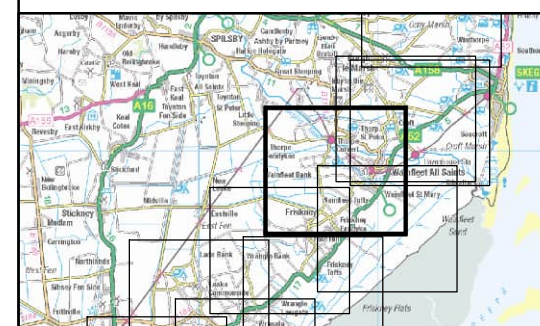
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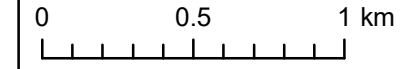
Legend

- Onshore PEIR Boundary
- Onshore Segment Break
- Onshore PEIR Boundary Weston Marsh (via North of the A52) 2 km Buffer
- Local Records: Amphibians**
- ▲ Great Crested Newt
- ⬠ Smooth Newt
- Common Frog
- Common Toad

Sources:
Local Records derived from data provided by Lincolnshire Environmental Records Centre (December 2022)



Coordinate System: British National Grid



Scale: 1:25,000

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Weston Marsh
Protected and Notable Species Records
Amphibians
Figure 21.1.13.14



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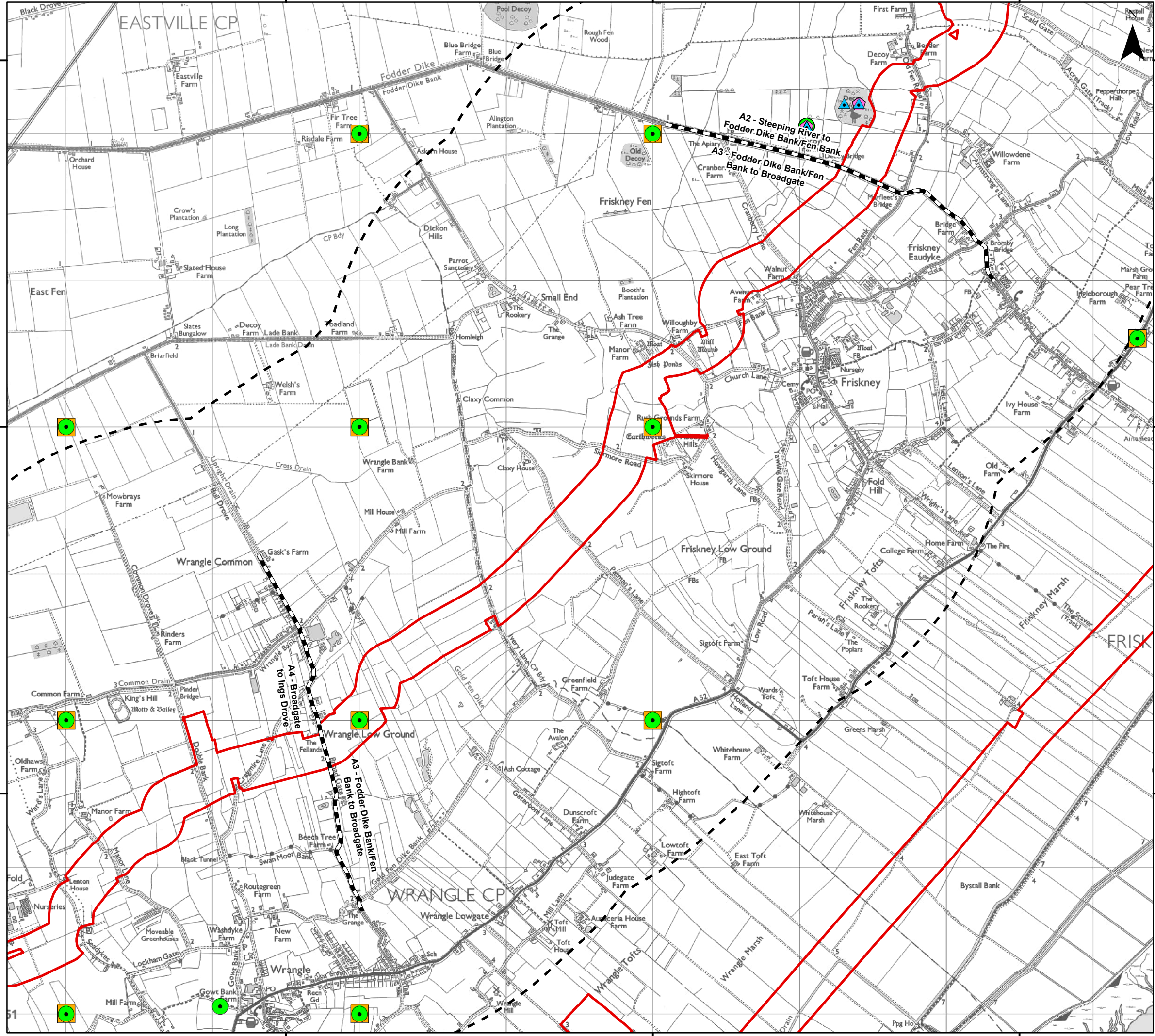
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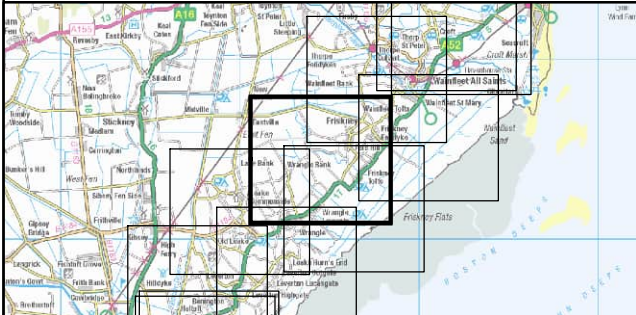
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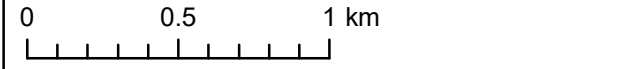
Legend

- Onshore PEIR Boundary
- Onshore Segment Break
- Onshore PEIR Boundary Weston Marsh (via North of the A52) 2 km Buffer
- Local Records: Amphibians**
- ▲ Great Crested Newt
- ◆ Smooth Newt
- Common Frog
- Common Toad

Sources:
Local Records derived from data provided by Lincolnshire Environmental Records Centre (December 2022)



Coordinate System: British National Grid



Scale: 1:25,000

Preliminary Environmental Information Report

Weston Marsh
Protected and Notable Species Records
Amphibians
Figure 21.1.13.15

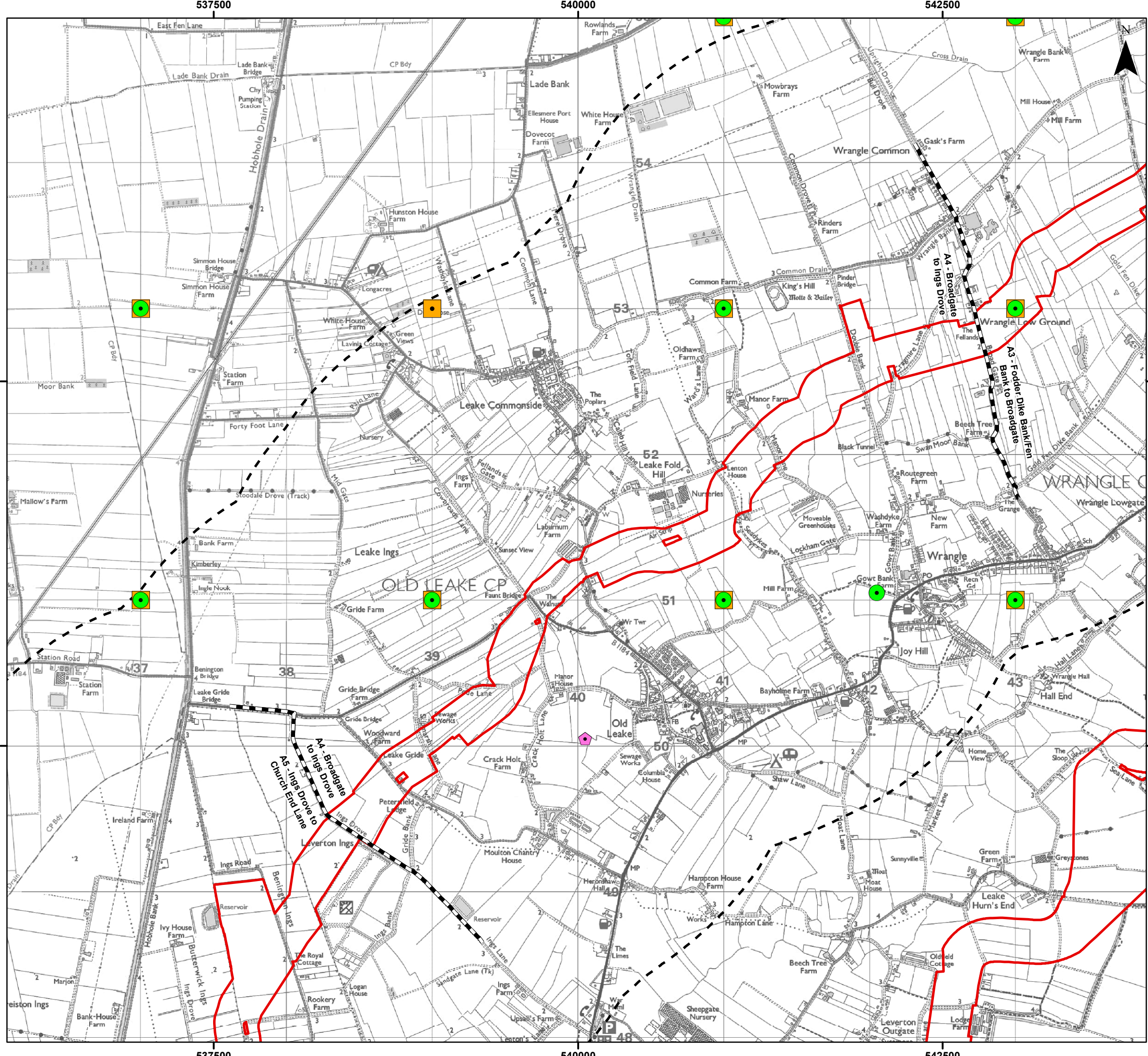


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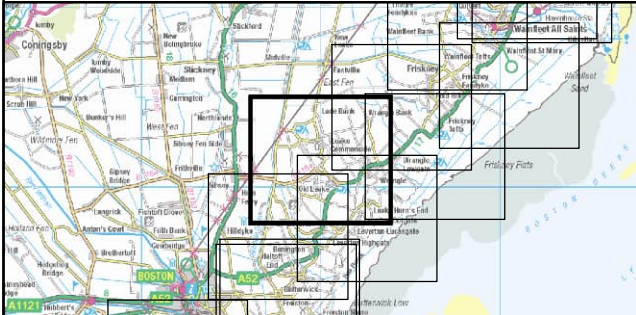
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Legend

- Onshore PEIR Boundary
- Onshore Segment Break
- Onshore PEIR Boundary Weston Marsh (via North of the A52) 2 km Buffer
- Local Records: Amphibians**
- ◆ Smooth Newt
- Common Frog
- Common Toad

Sources:
Local Records derived from data provided by Lincolnshire Environmental Records Centre (December 2022)



Coordinate System: British National Grid
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 Scale: 1:25,000

Preliminary Environmental Information Report
 Weston Marsh
 Protected and Notable Species Records
 Amphibians
 Figure 21.1.13.16

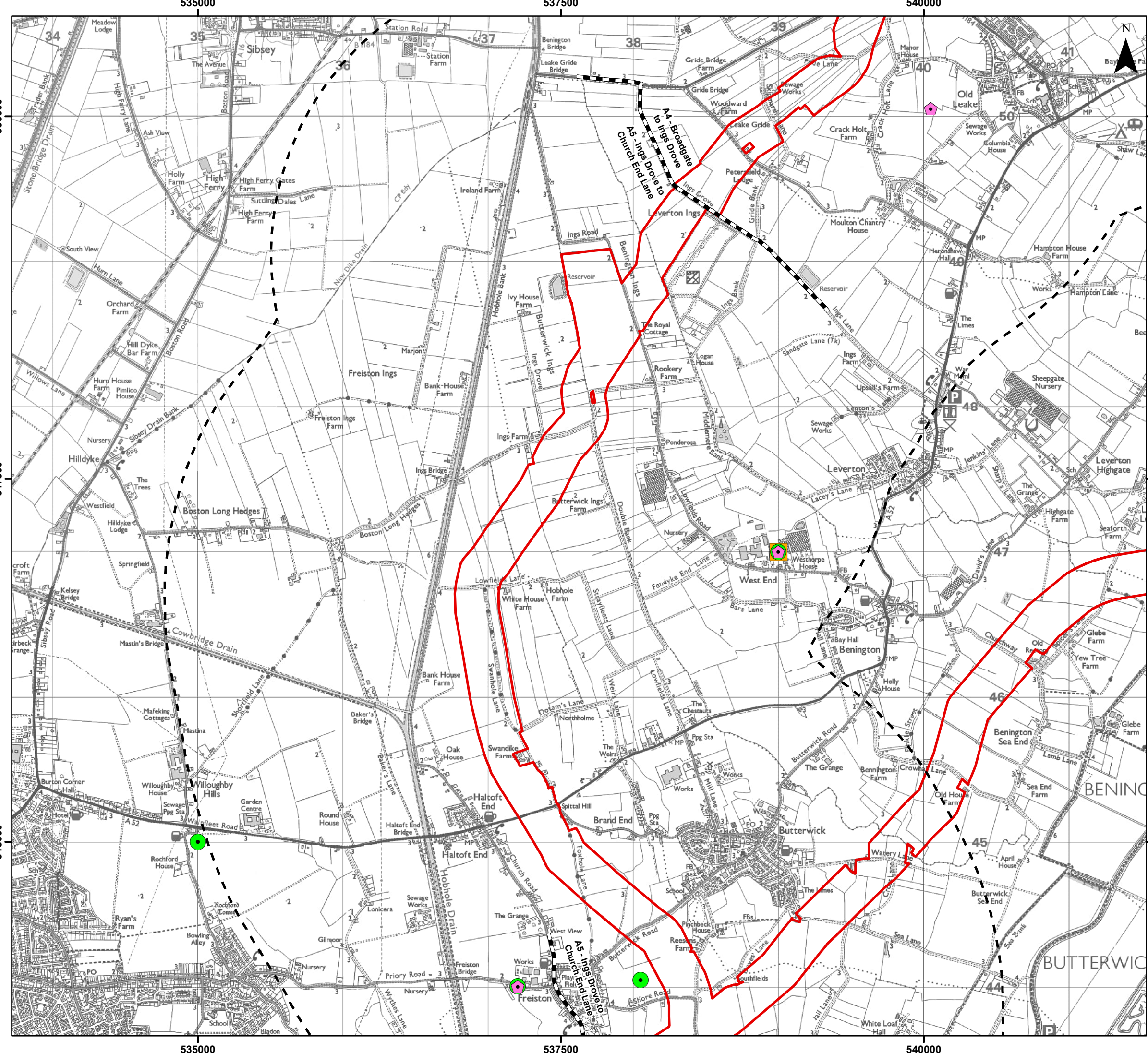


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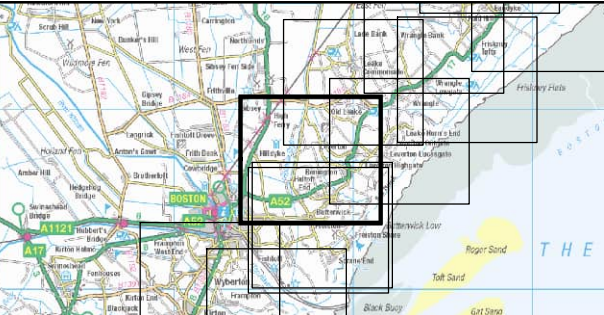
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Legend

- Onshore PEIR Boundary
- Onshore Segment Break
- Onshore PEIR Boundary Weston Marsh (via North of the A52) 2 km Buffer
- Local Records: Amphibians**
- ◆ Smooth Newt
- Common Frog
- Common Toad

Sources:
Local Records derived from data provided by Lincolnshire Environmental Records Centre (December 2022)



Coordinate System: British National Grid
 0 0.5 1 km
 Scale: 1:25,000

Preliminary Environmental Information Report
 Weston Marsh
 Protected and Notable Species Records
 Amphibians
 Figure 21.1.13.17

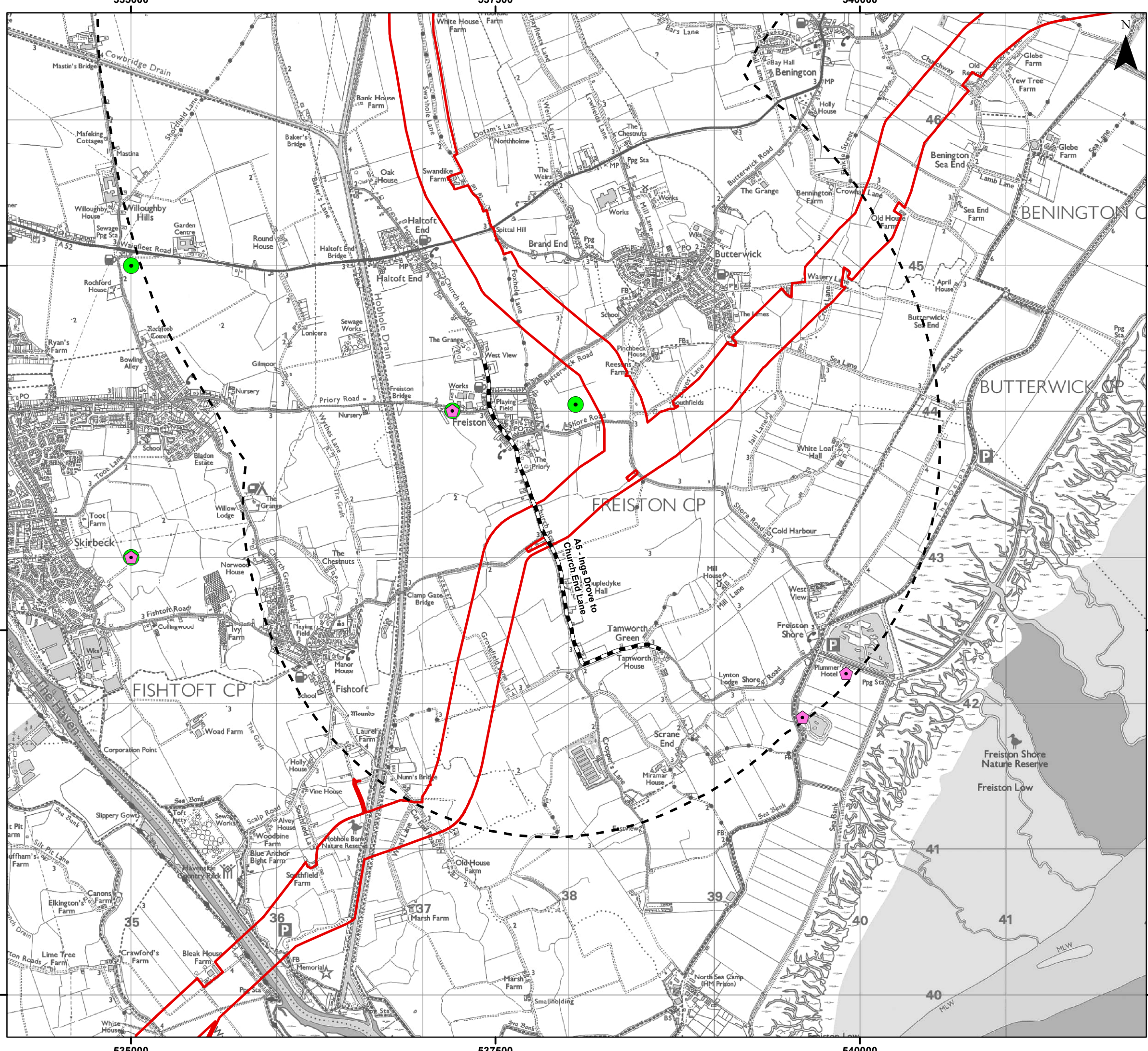


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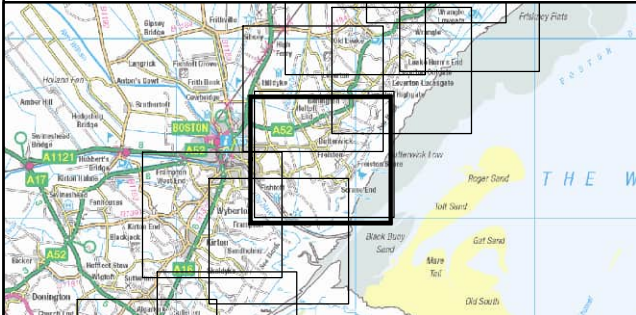
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Legend

- Onshore PEIR Boundary
- Onshore Segment Break
- Onshore PEIR Boundary Weston Marsh (via North of the A52) 2 km Buffer
- Local Records: Amphibians**
- ⬠ Smooth Newt
- Common Frog

Sources:
Local Records derived from data provided by Lincolnshire Environmental Records Centre (December 2022)



Coordinate System: British National Grid
 0 0.5 1 km
 Scale: 1:25,000

Preliminary Environmental Information Report
 Weston Marsh
 Protected and Notable Species Records
 Amphibians
 Figure 21.1.13.18



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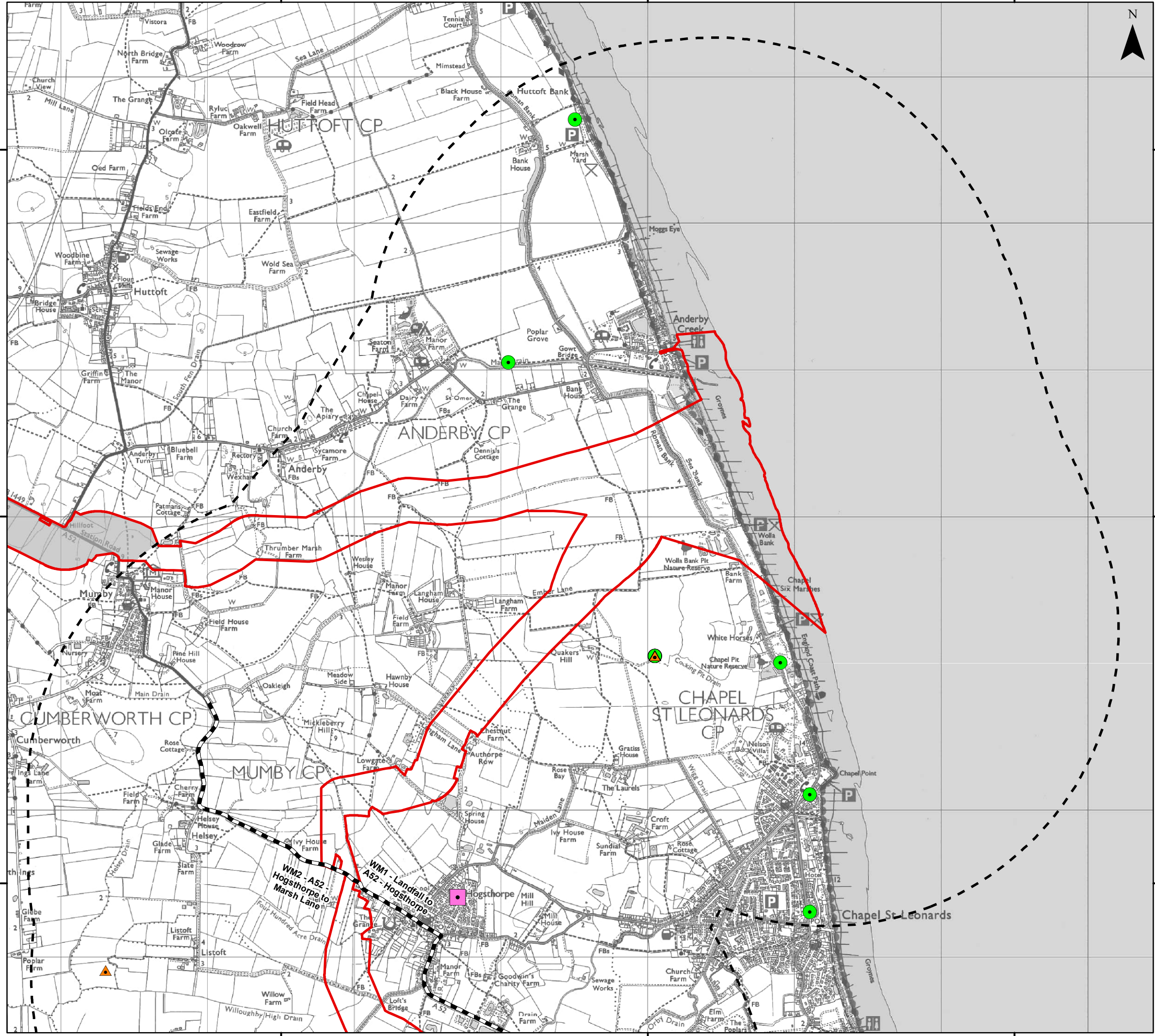


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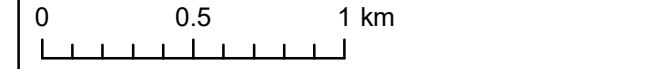
Legend

-  Onshore PEIR Boundary
-  Onshore Segment Break
-  Onshore PEIR Boundary Weston Marsh (via South of the A52) 2 km Buffer
- Local Records: Reptiles**
-  Grass Snake
-  Common Lizard
-  Slow-worm

Sources:
Local Records derived from data provided by Lincolnshire Environmental Records Centre (December 2022)



Coordinate System: British National Grid



Scale: 1:25,000

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Weston Marsh
Protected and Notable Species Records
Reptiles
Figure 21.1.14.1



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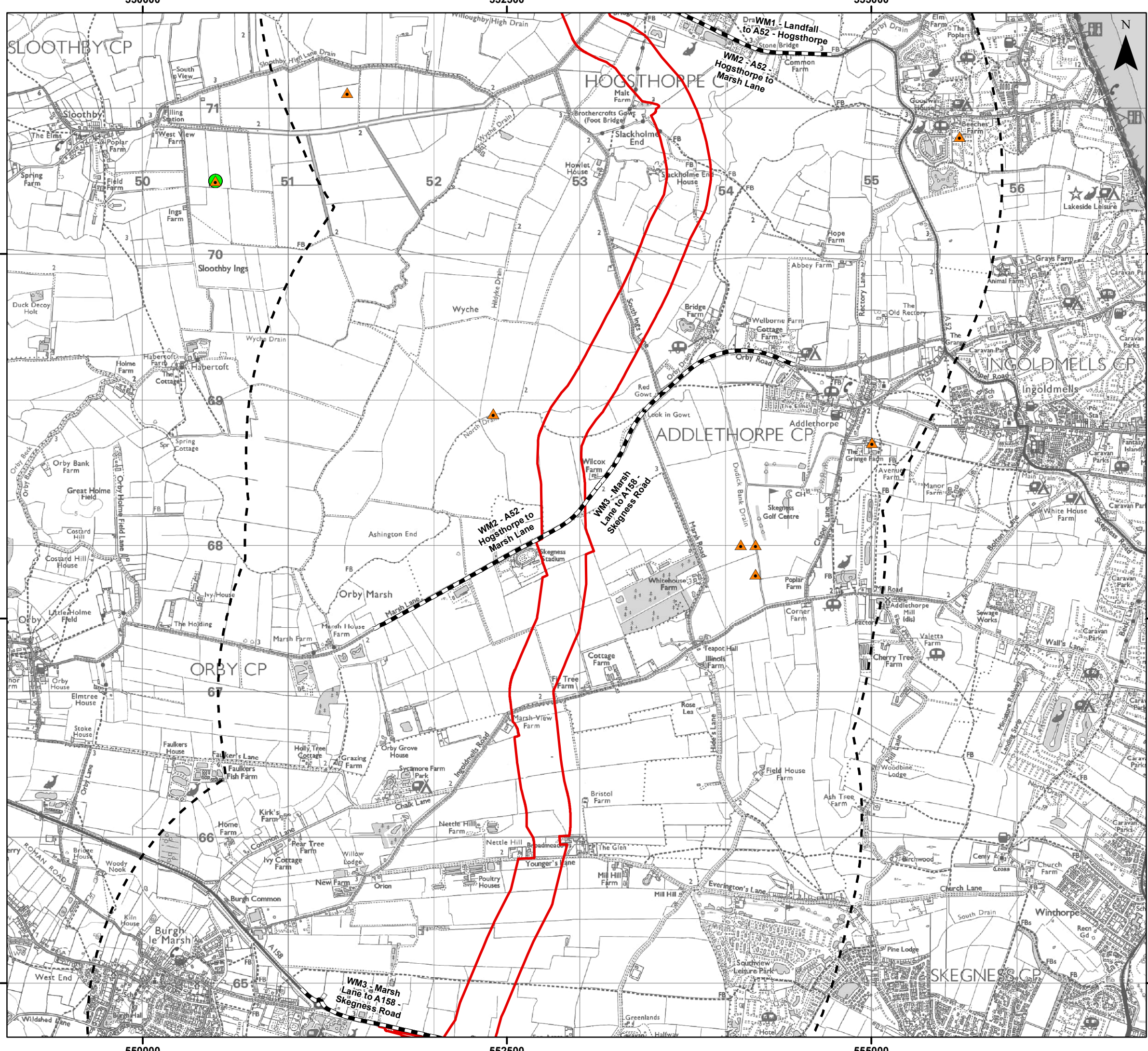
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Legend

- Onshore PEIR
- Onshore Segment
- Onshore PEIR Boundary Weston Marsh (via South of the A52) 2 km Buffer

Local Records:

- ▲ Grass Snake
- Common Lizard

Sources:
Local Records derived from data provided by Lincolnshire Environmental Records Centre (December 2022)



Coordinate System: British National Grid
0 0.5 1 km

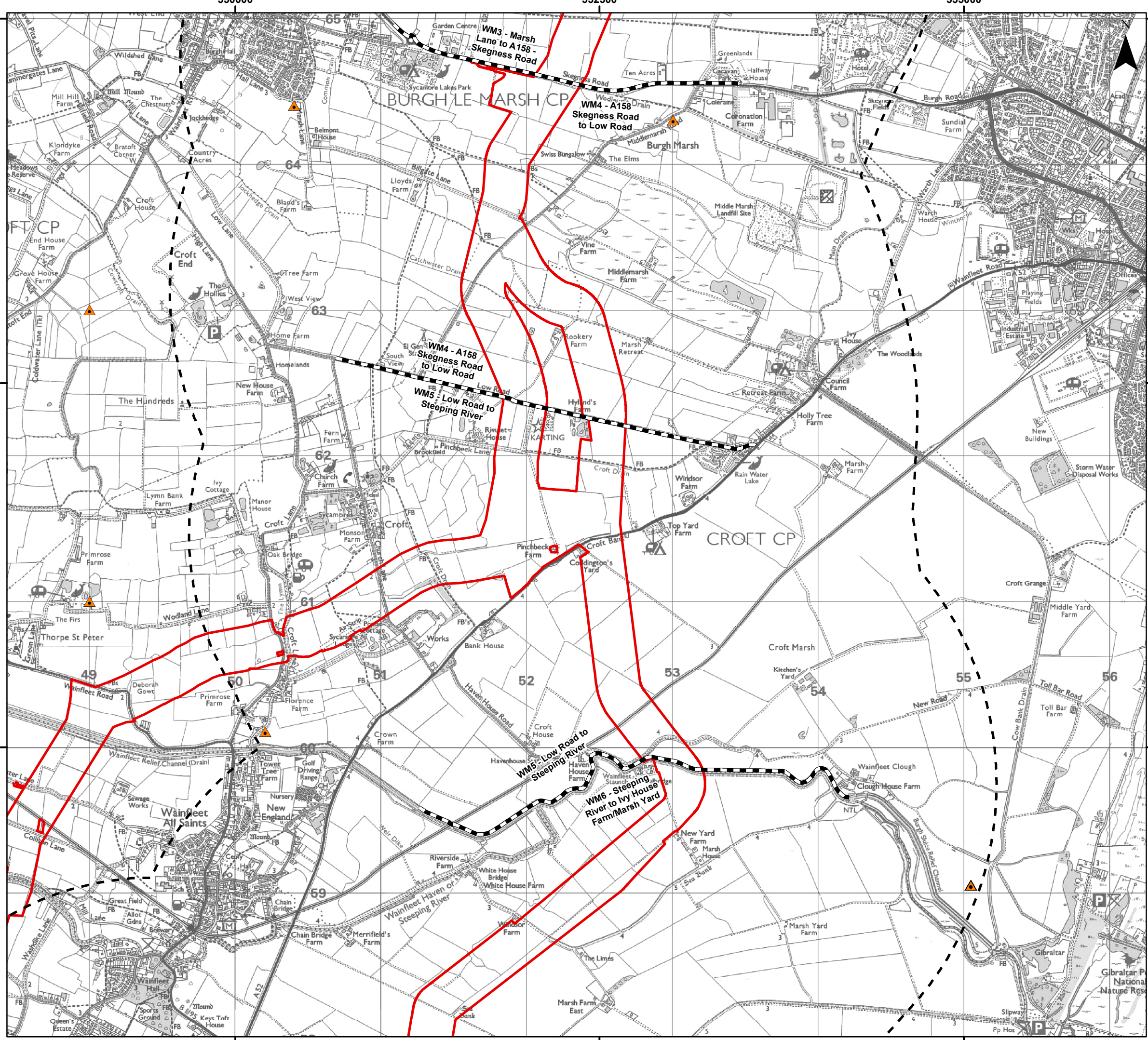
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Preliminary Environmental Information Report
Weston Marsh
Protected and Notable Species Records
Reptiles
Figure 21.1.14.2

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Legend

- Onshore PEIR Boundary
- Onshore Segment Break
- Onshore PEIR Boundary Weston Marsh (via South of the A52) 2 km Buffer

Local Records: Reptiles

- ▲ Grass Snake

Sources:
Local Records derived from data provided by Lincolnshire Environmental Records Centre (December 2022)



Coordinate System: British National Grid
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Scale: 1:25,000

Preliminary Environmental Information Report
Weston Marsh
Protected and Notable Species Records
Reptiles
Figure 21.1.14.3

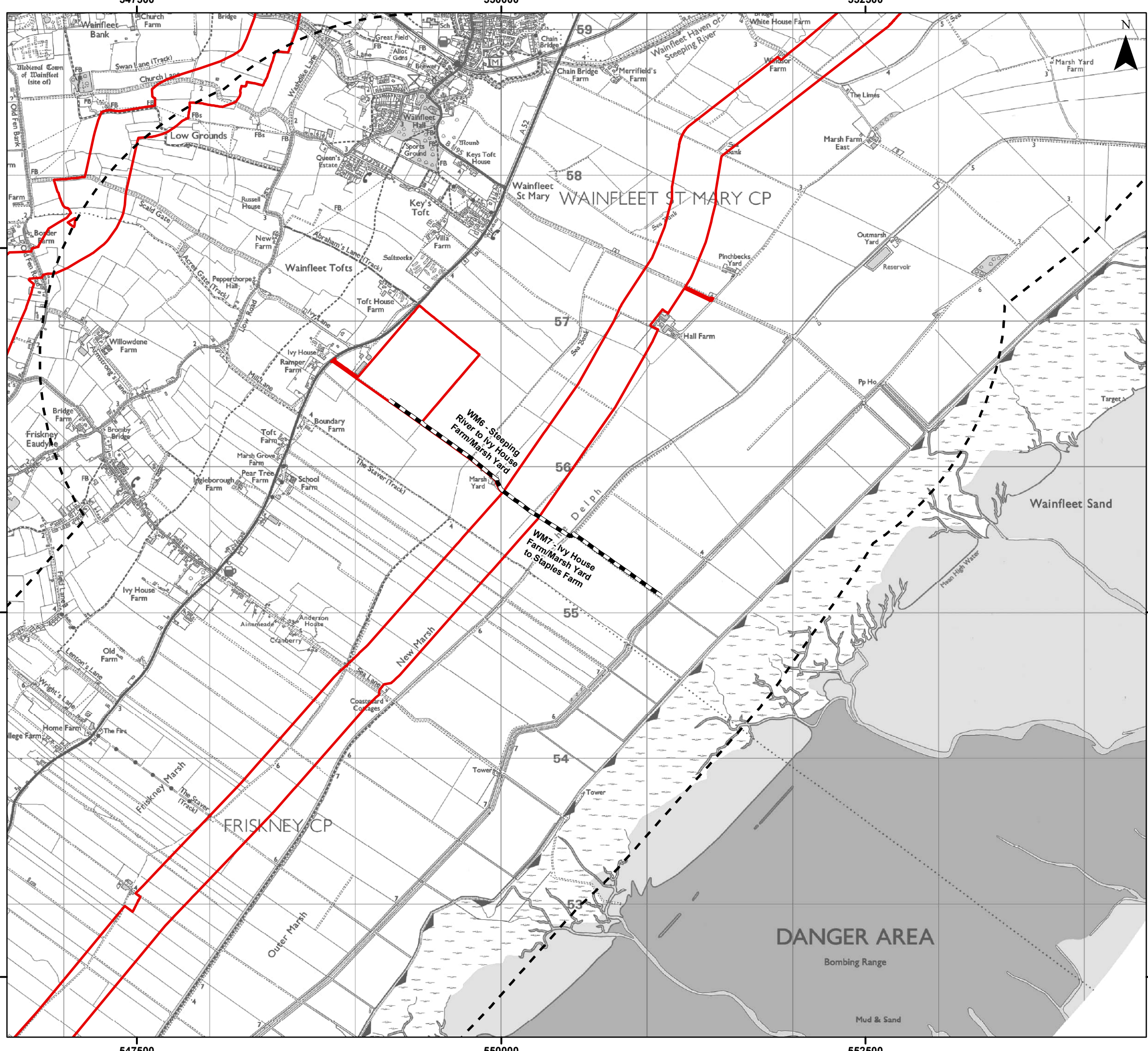


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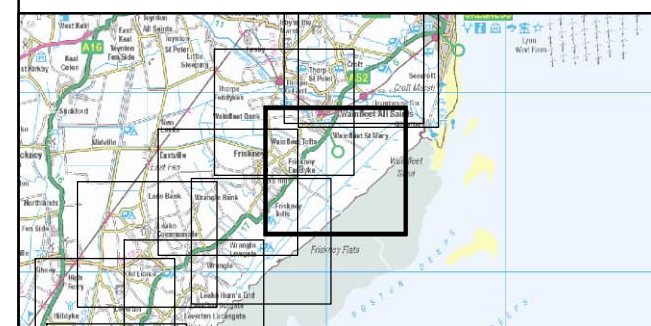
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- Legend**
- Onshore PEIR Boundary
 - Onshore Segment Break
 - Onshore PEIR Boundary Weston Marsh (via South of the A52) 2 km Buffer

Sources:
Local Records derived from data provided by Lincolnshire Environmental Records Centre (December 2022)



Coordinate System: British National Grid
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 Scale: 1:25,000

Preliminary Environmental Information Report
 Weston Marsh
 Protected and Notable Species Records
 Reptiles
 Figure 21.1.14.4

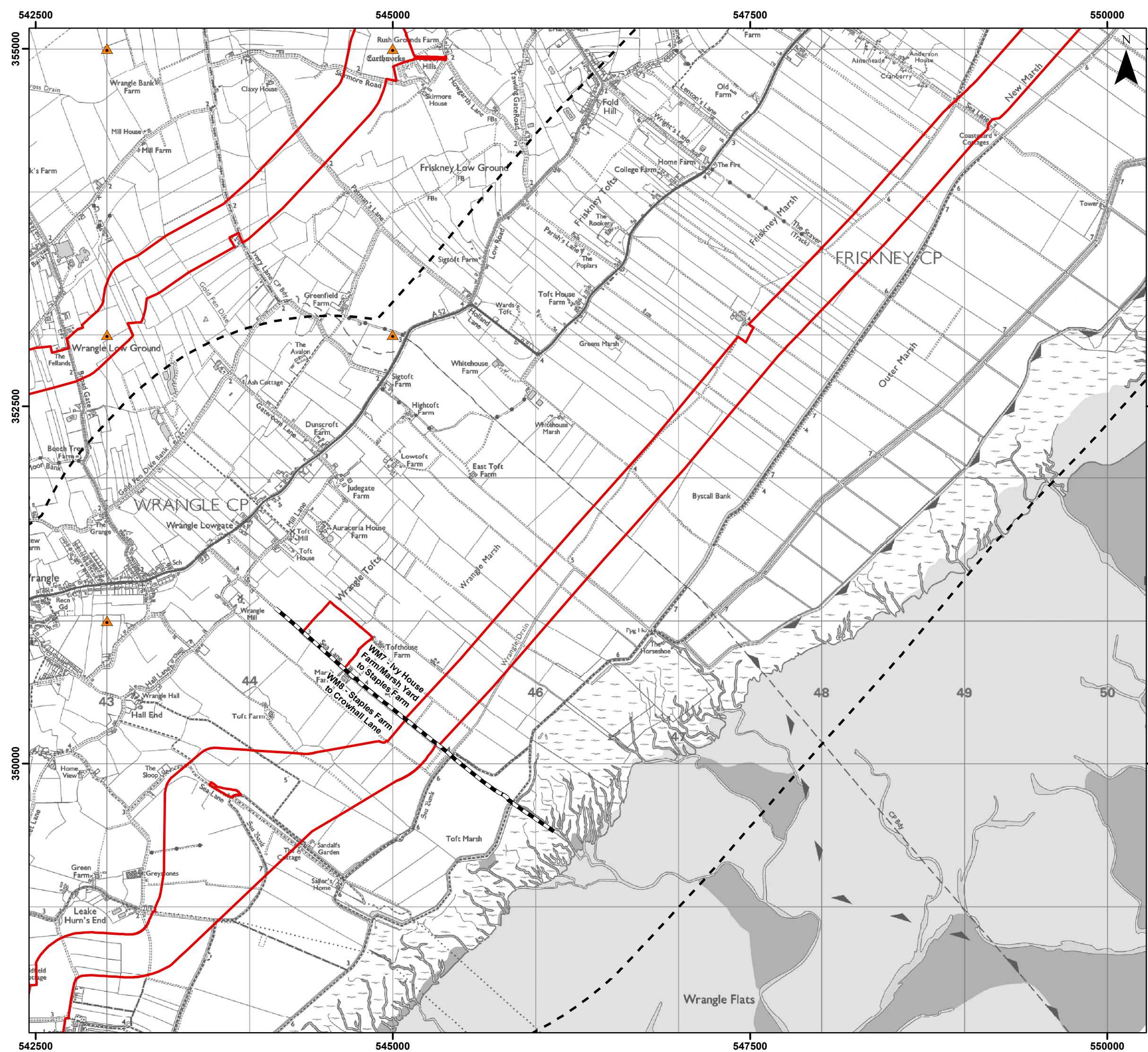


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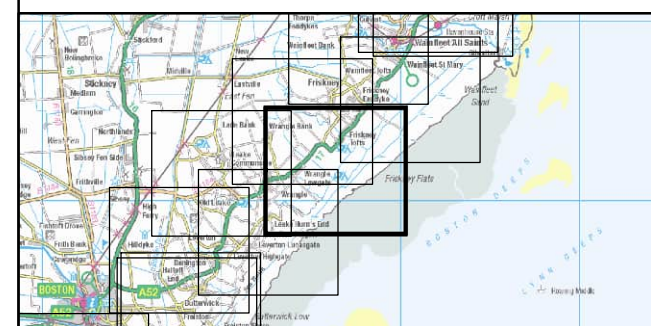
Legend

- Onshore PEIR Boundary
- Onshore Segment Break
- Onshore PEIR Boundary Weston Marsh (via South of the A52) 2 km Buffer

Local Records: Reptiles

- ▲ Grass Snake

Sources:
Local Records derived from data provided by Lincolnshire Environmental Records Centre (December 2022)



Coordinate System: British National Grid
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 Scale: 1:25,000

Preliminary Environmental Information Report
 Weston Marsh
 Protected and Notable Species Records
 Reptiles
 Figure 21.1.14.5

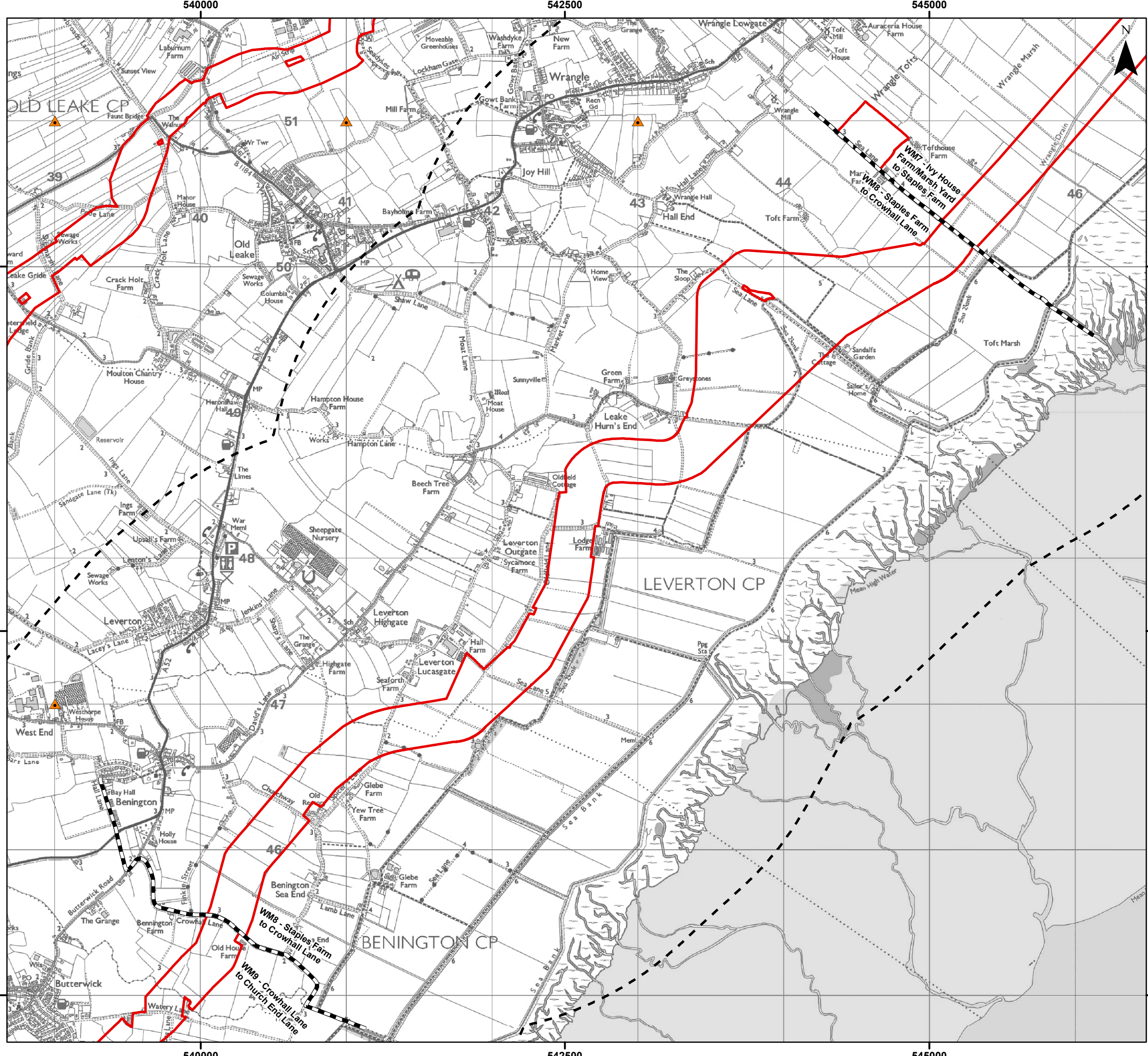


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- Legend**
- Onshore PEIR
 - Onshore Segment
 - Onshore PEIR Boundary Weston Marsh (via South of the A52) 2 km Buffer
- Local Records:**
- ▲ Grass Snake

Sources:
Local Records derived from data provided by Lincolnshire Environmental Records Centre (December 2022)



Coordinate System: British National Grid
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Preliminary Environmental Information Report
 Weston Marsh
 Protected and Notable Species Records
 Reptiles
 Figure 21.1.14.6

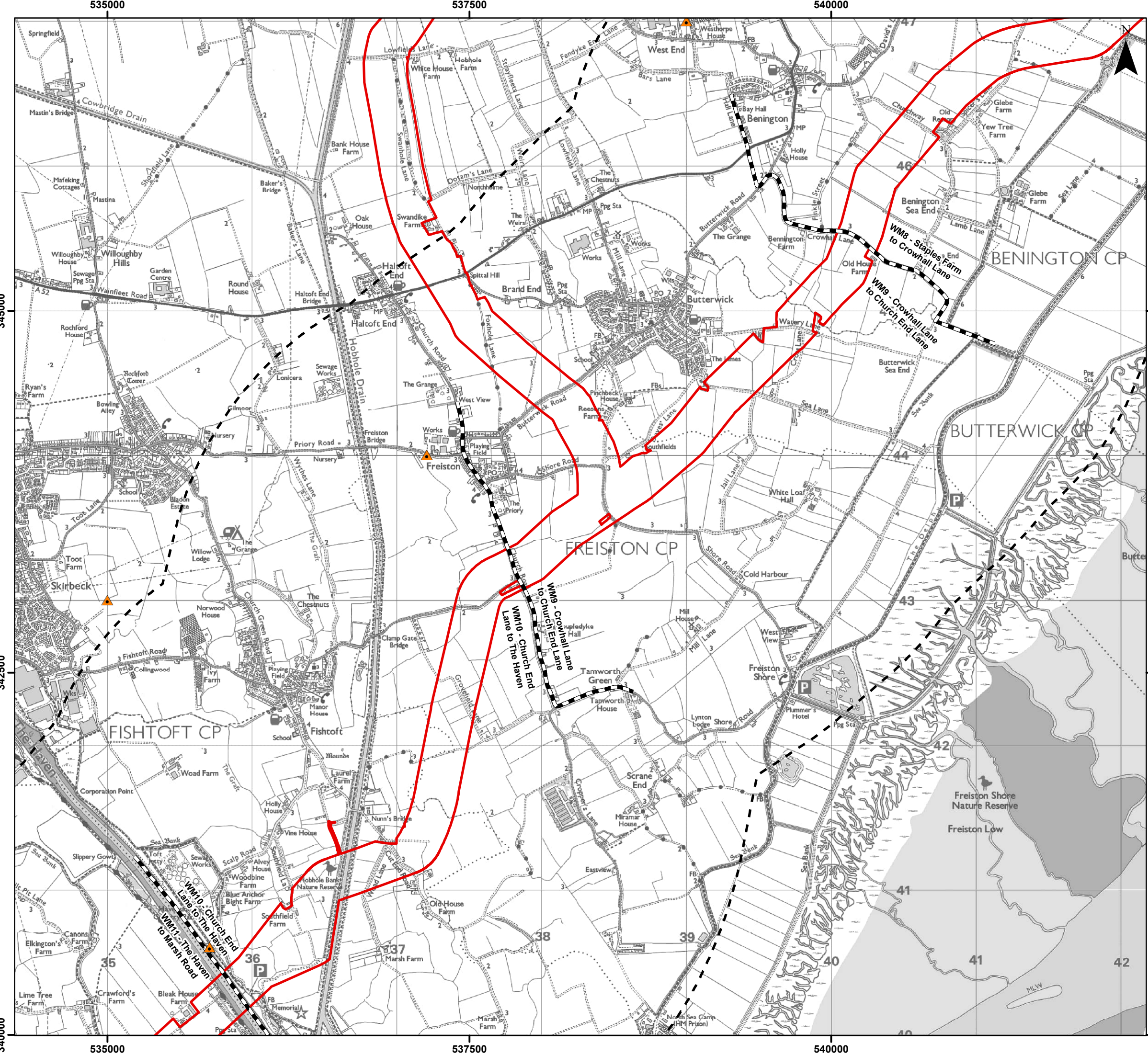




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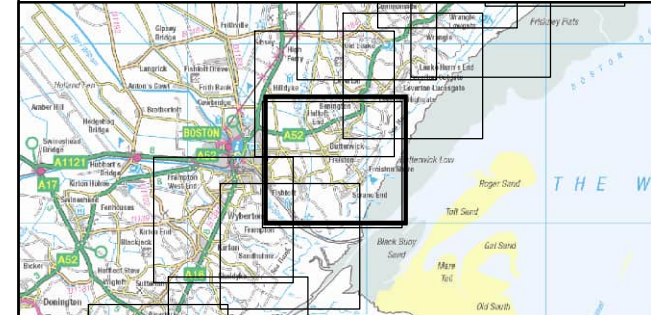
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- Legend**
- Onshore PEIR Boundary
 - Onshore Segment Break
 - Onshore PEIR Boundary Weston Marsh (via South of the A52) 2 km Buffer
- Local Records: Reptiles**
- ▲ Grass Snake

Sources:
Local Records derived from data provided by Lincolnshire Environmental Records Centre (December 2022)



Coordinate System: British National Grid
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 Scale: 1:25,000

Preliminary Environmental Information Report
 Weston Marsh
 Protected and Notable Species Records
 Reptiles
 Figure 21.1.14.7

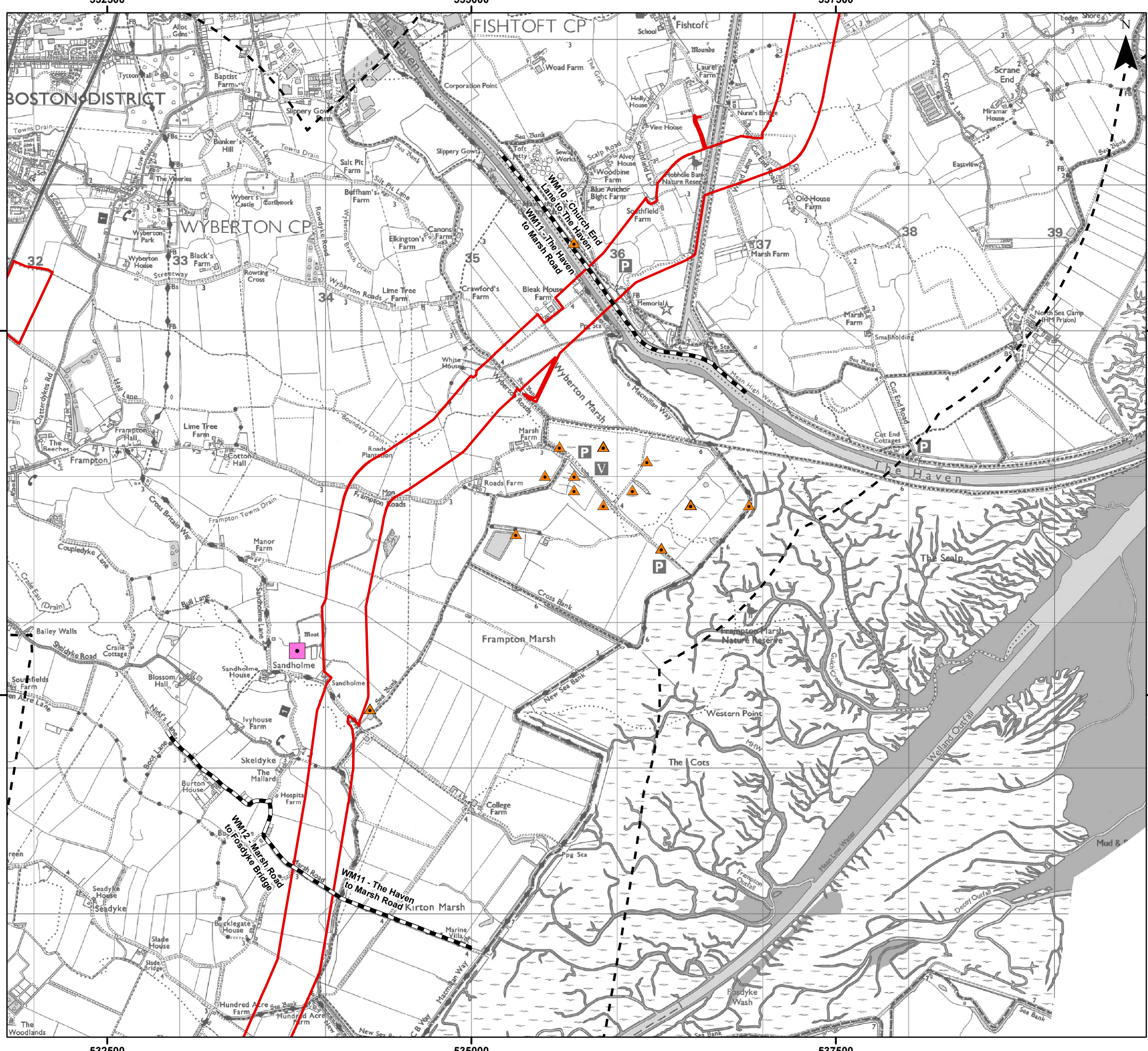


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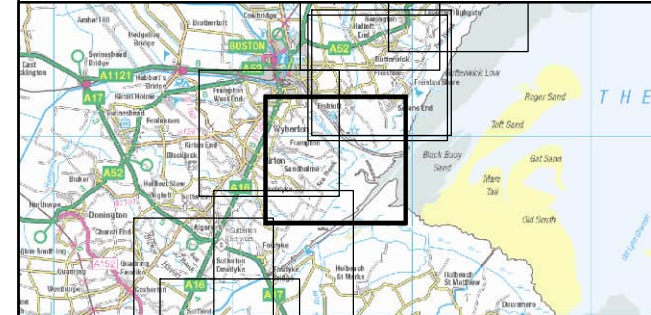
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Legend

- Onshore PEIR Boundary
- Onshore Segment Break
- Onshore PEIR Boundary Weston Marsh (via South of the A52) 2 km Buffer
- Local Records: Reptiles**
- ▲ Grass Snake
- Slow-worm

Sources:
Local Records derived from data provided by Lincolnshire Environmental Records Centre (December 2022)



Coordinate System: British National Grid
 0 0.5 1 km
 Scale: 1:25,000

Preliminary Environmental Information Report
 Weston Marsh
 Protected and Notable Species Records
 Reptiles
 Figure 21.1.14.8



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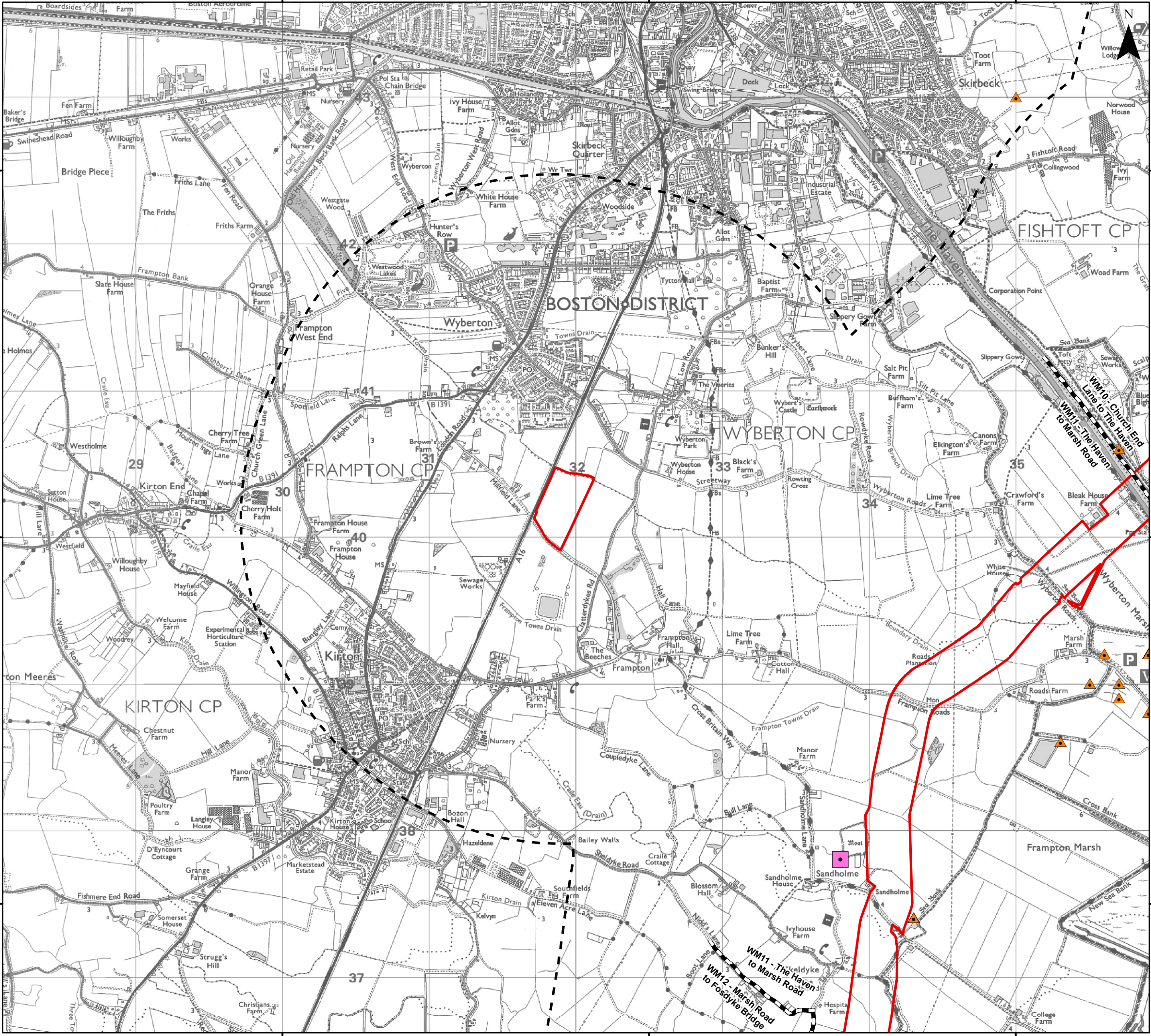
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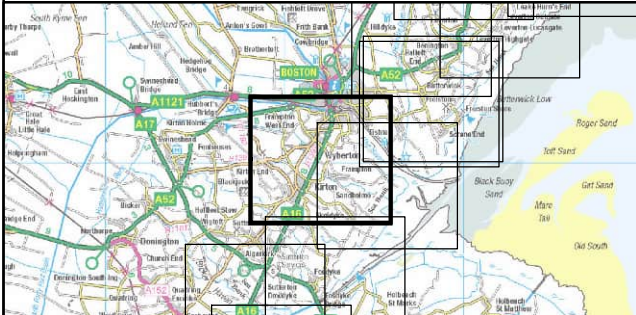
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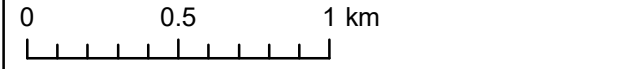
Legend

- Onshore PEIR Boundary
- Onshore Segment Break
- Onshore PEIR Boundary Weston Marsh (via South of the A52) 2 km Buffer
- Local Records: Reptiles**
- ▲ Grass Snake
- Slow-worm

Sources:
Local Records derived from data provided by Lincolnshire Environmental Records Centre (December 2022)



Coordinate System: British National Grid



Scale: 1:25,000

Preliminary Environmental Information Report

Weston Marsh
Protected and Notable Species Records
Reptiles
Figure 21.1.14.9



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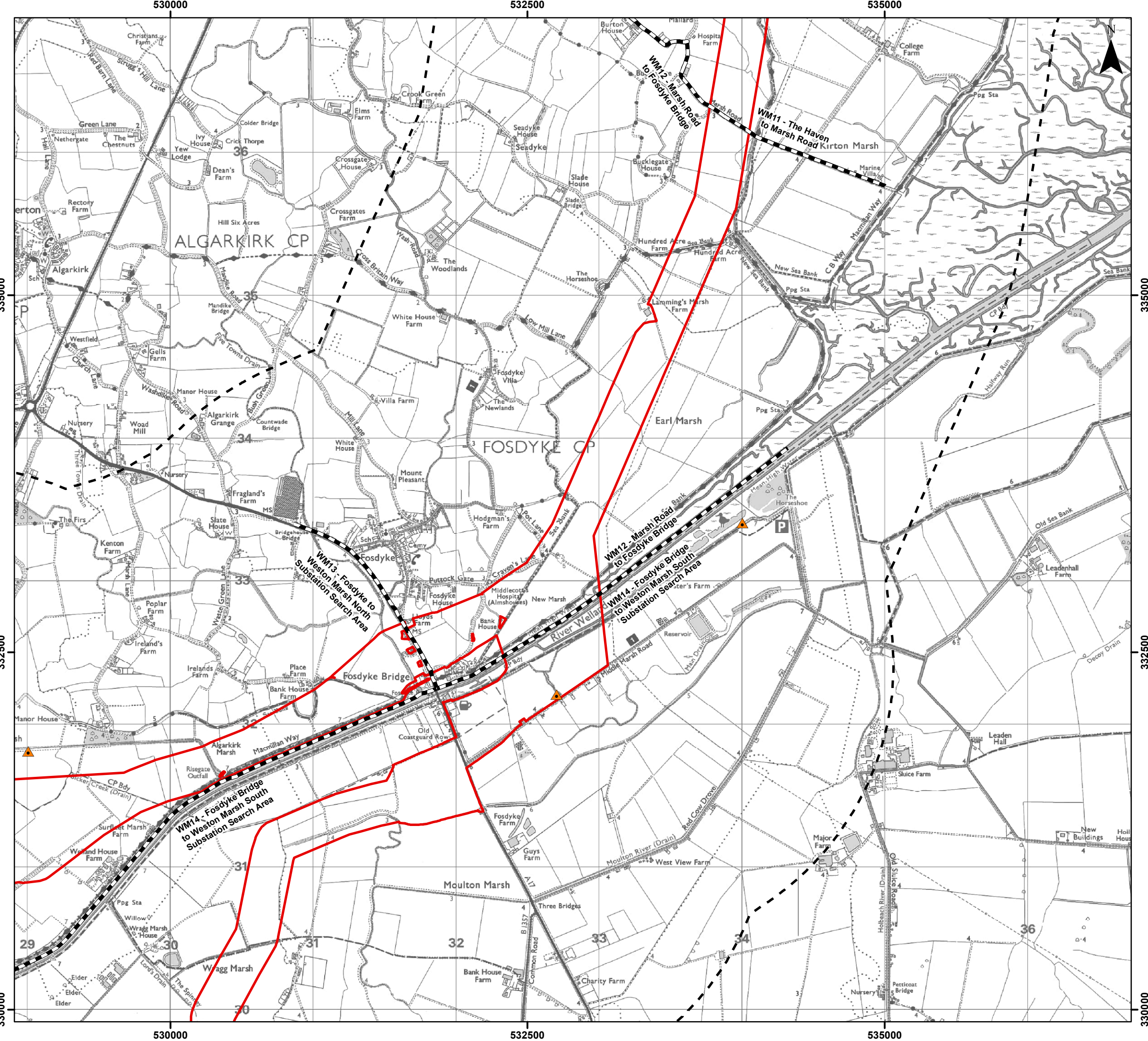
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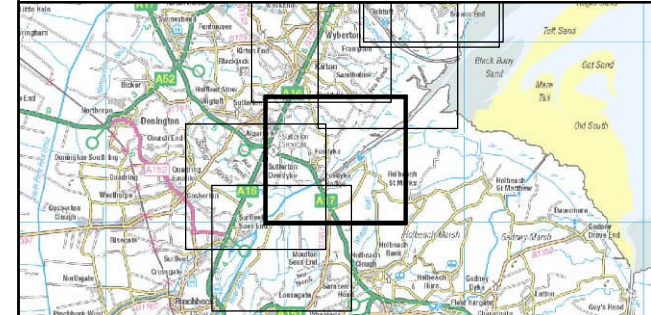
Legend

- Onshore PEIR
- Onshore Segment
- Onshore PEIR Boundary Weston Marsh (via South of the A52) 2 km Buffer

Local Records:

- ▲ Grass Snake

Sources:
Local Records derived from data provided by Lincolnshire Environmental Records Centre (December 2022)



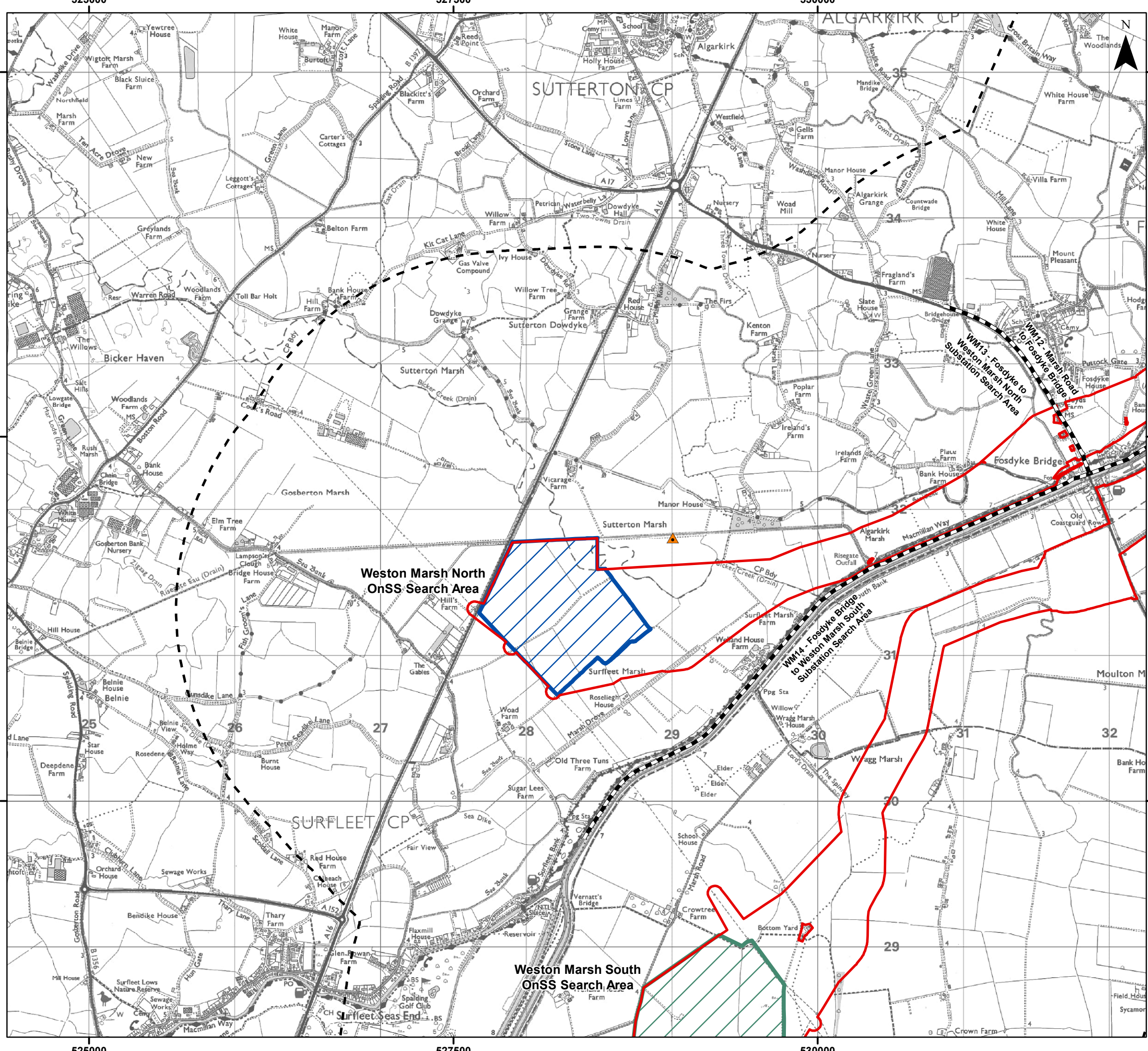
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Preliminary Environmental Information Report
 Weston Marsh
 Protected and Notable Species Records
 Reptiles
 Figure 21.1.14.10

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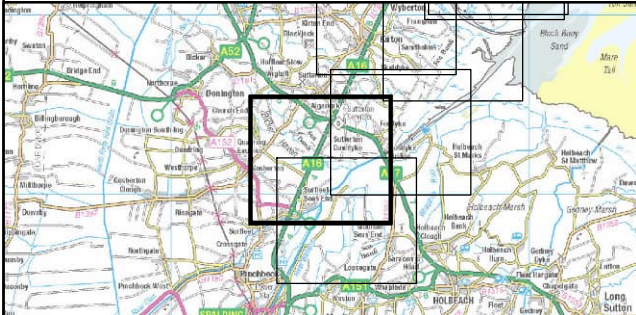
Legend

- Onshore PEIR Boundary
- Onshore Segment Break
- Weston Marsh North OnSS Search Area
- Weston Marsh South OnSS Search Area
- Onshore PEIR Boundary Weston Marsh (via South of the A52) 2 km Buffer

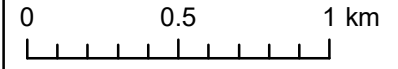
Local Records: Reptiles

- ▲ Grass Snake

Sources:
Local Records derived from data provided by Lincolnshire Environmental Records Centre (December 2022)



Coordinate System: British National Grid



Scale: 1:25,000

Preliminary Environmental Information Report

Weston Marsh
Protected and Notable Species Records
Reptiles
Figure 21.1.14.11

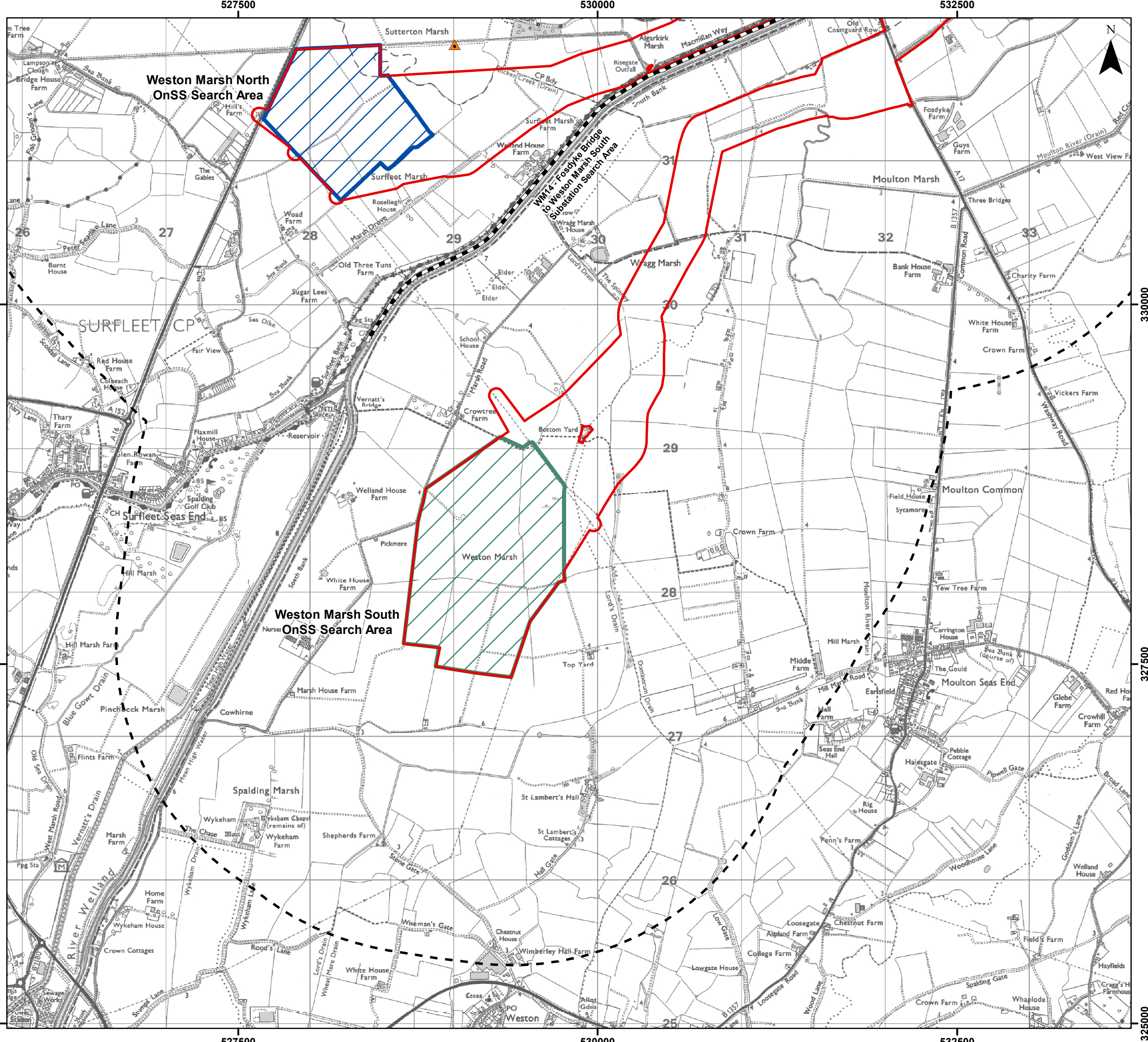


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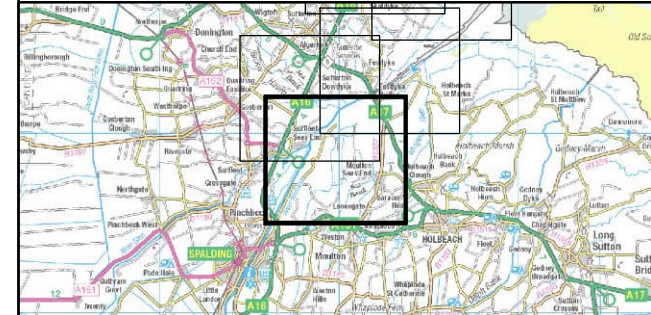
Legend

- Onshore PEIR
- Onshore Segment
- Weston Marsh North OnSS Search Area
- Weston Marsh South OnSS Search Area
- Onshore PEIR Boundary Weston Marsh (via South of the A52) 2 km Buffer

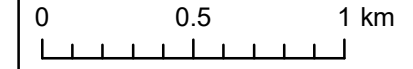
Local Records:

- ▲ Grass Snake

Sources:
Local Records derived from data provided by Lincolnshire Environmental Records Centre (December 2022)



Coordinate System: British National Grid



Scale: 1:25,000

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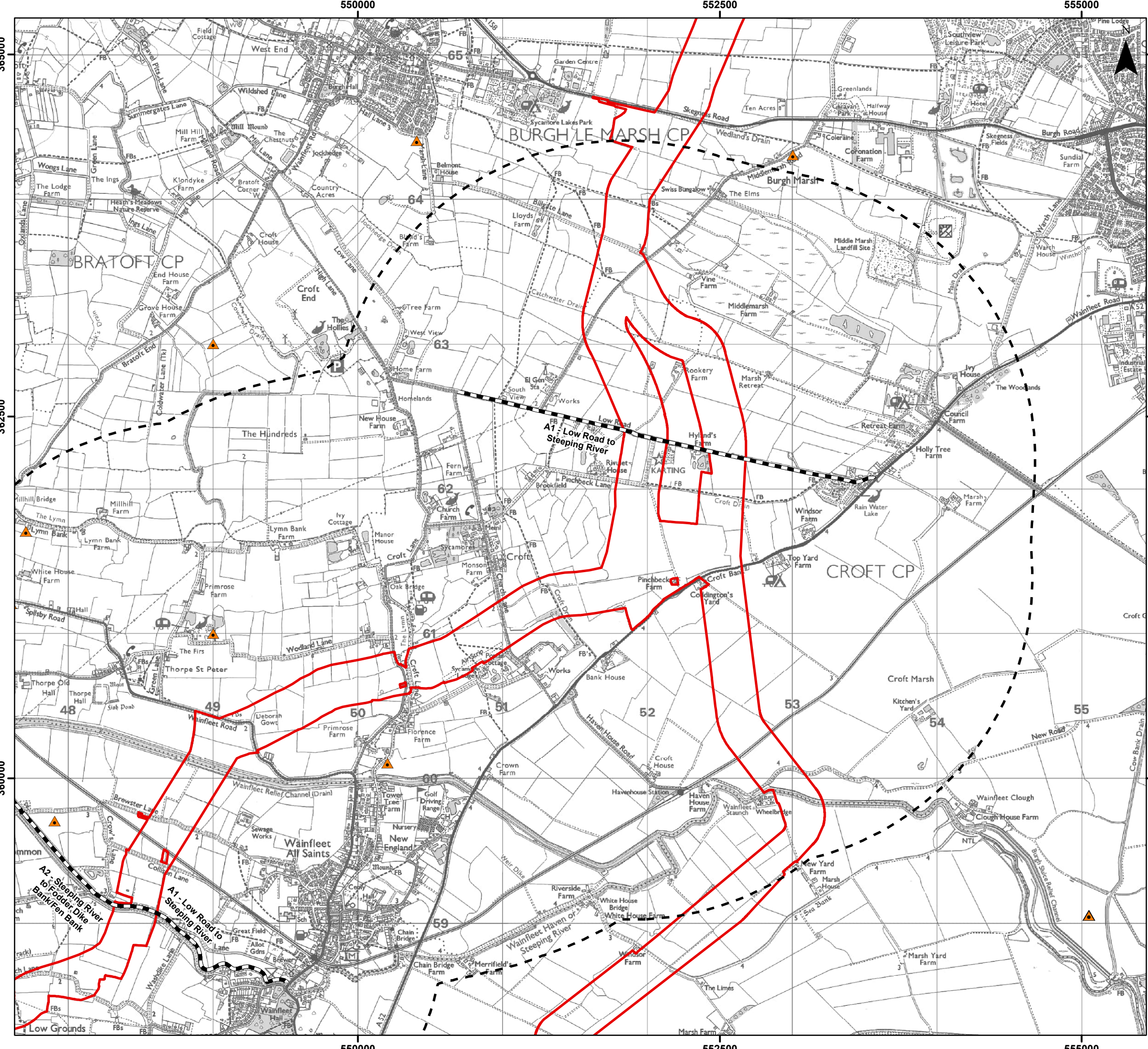
Weston Marsh
Protected and Notable Species Records
Reptiles
Figure 21.1.14.12



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Legend

- Onshore PEIR Boundary
- Onshore Segment Break
- Onshore PEIR Boundary Weston Marsh (via North of the A52) 2 km Buffer

Local Records: Reptiles

- ▲ Grass Snake

Sources:
Local Records derived from data provided by Lincolnshire Environmental Records Centre (December 2022)



Coordinate System: British National Grid
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 Scale: 1:25,000

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 Weston Marsh
 Protected and Notable Species Records
 Reptiles
 Figure 21.1.14.13



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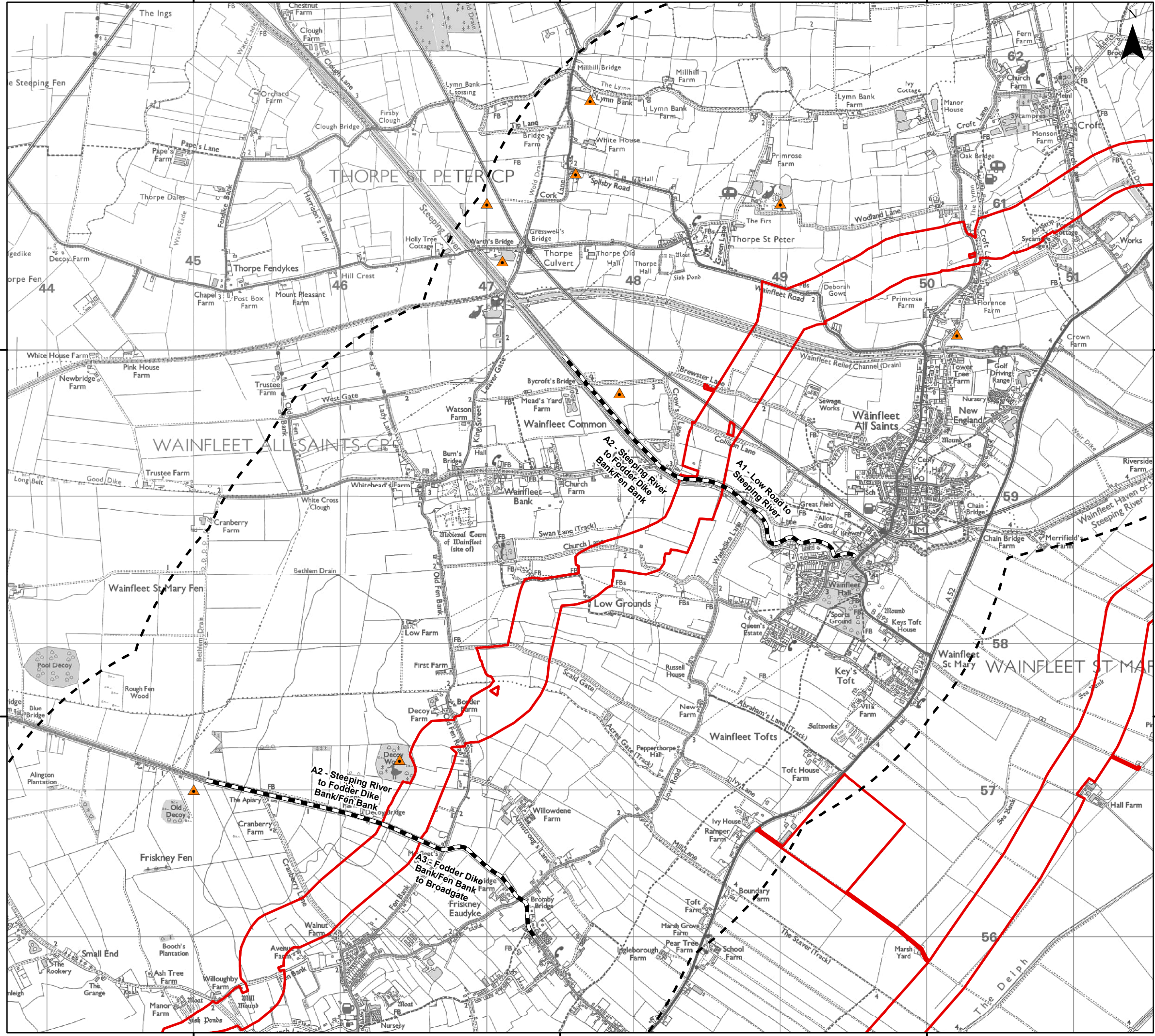
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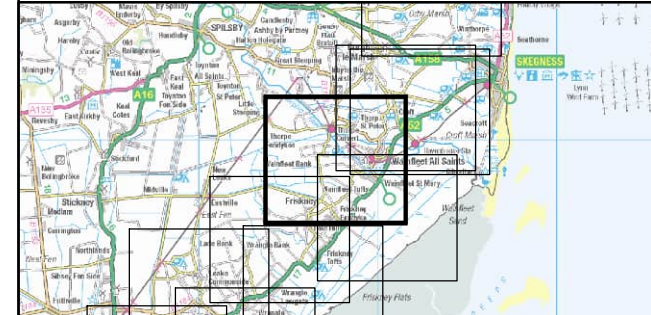
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Legend

- Onshore PEIR Boundary
- Onshore Segment Break
- Onshore PEIR Boundary Weston Marsh (via North of the A52) 2 km Buffer
- Local Records: Reptiles**
- ▲ Grass Snake

Sources:
Local Records derived from data provided by Lincolnshire Environmental Records Centre (December 2022)



Coordinate System: British National Grid



Scale: 1:25,000

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Weston Marsh
Protected and Notable Species Records
Reptiles
Figure 21.1.14.14



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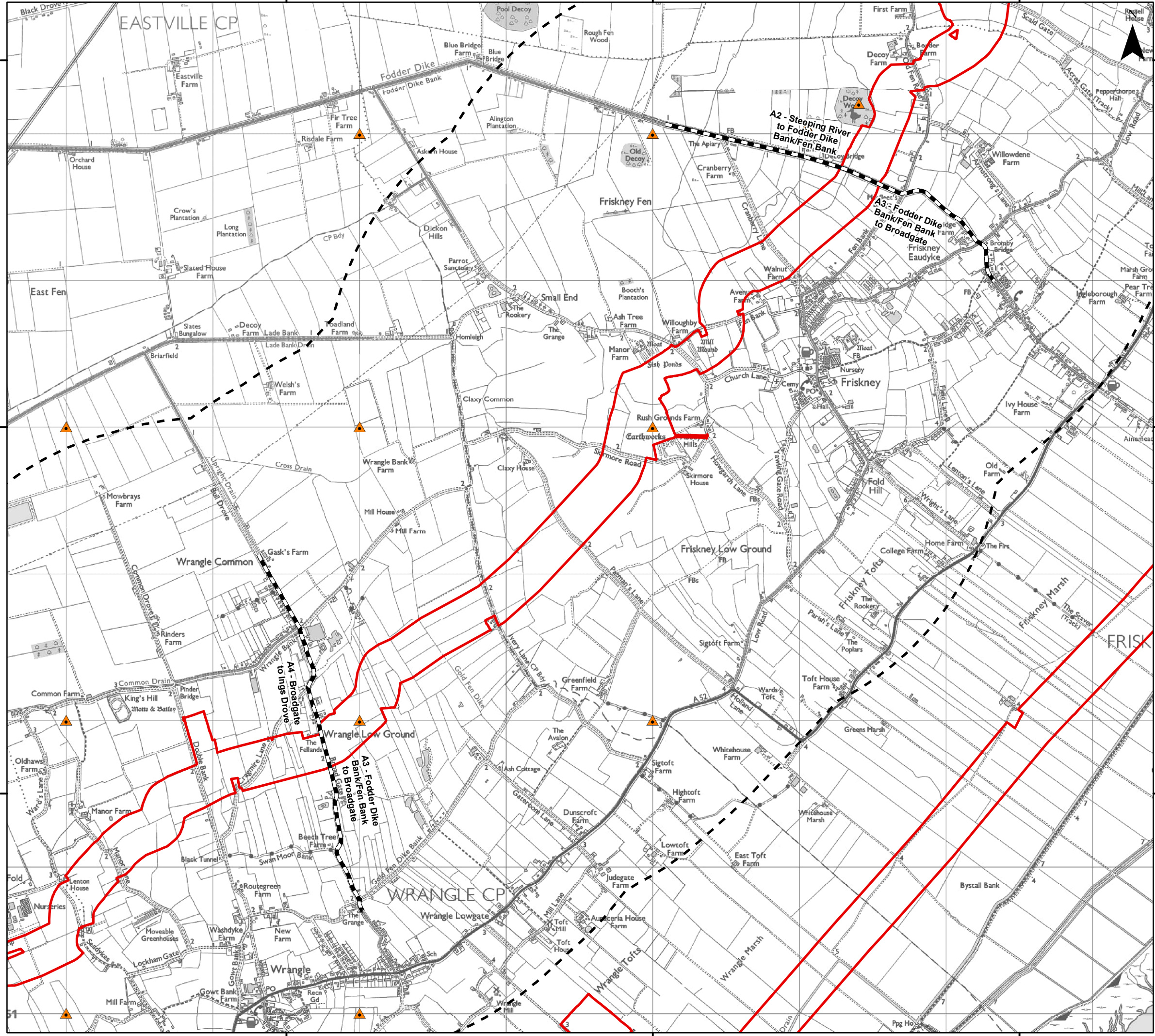
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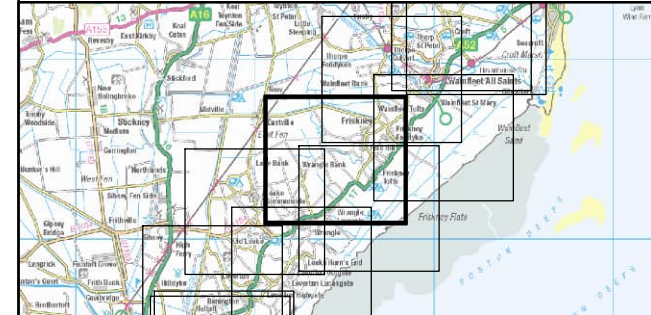
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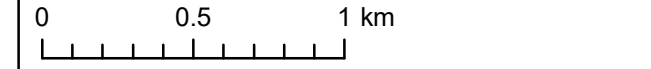
Legend

- Onshore PEIR Boundary
- Onshore Segment Break
- Onshore PEIR Boundary Weston Marsh (via North of the A52) 2 km Buffer
- Local Records: Reptiles**
- ▲ Grass Snake

Sources:
Local Records derived from data provided by Lincolnshire Environmental Records Centre (December 2022)



Coordinate System: British National Grid



Scale: 1:25,000

Preliminary Environmental Information Report

Weston Marsh
Protected and Notable Species Records
Reptiles
Figure 21.1.14.15

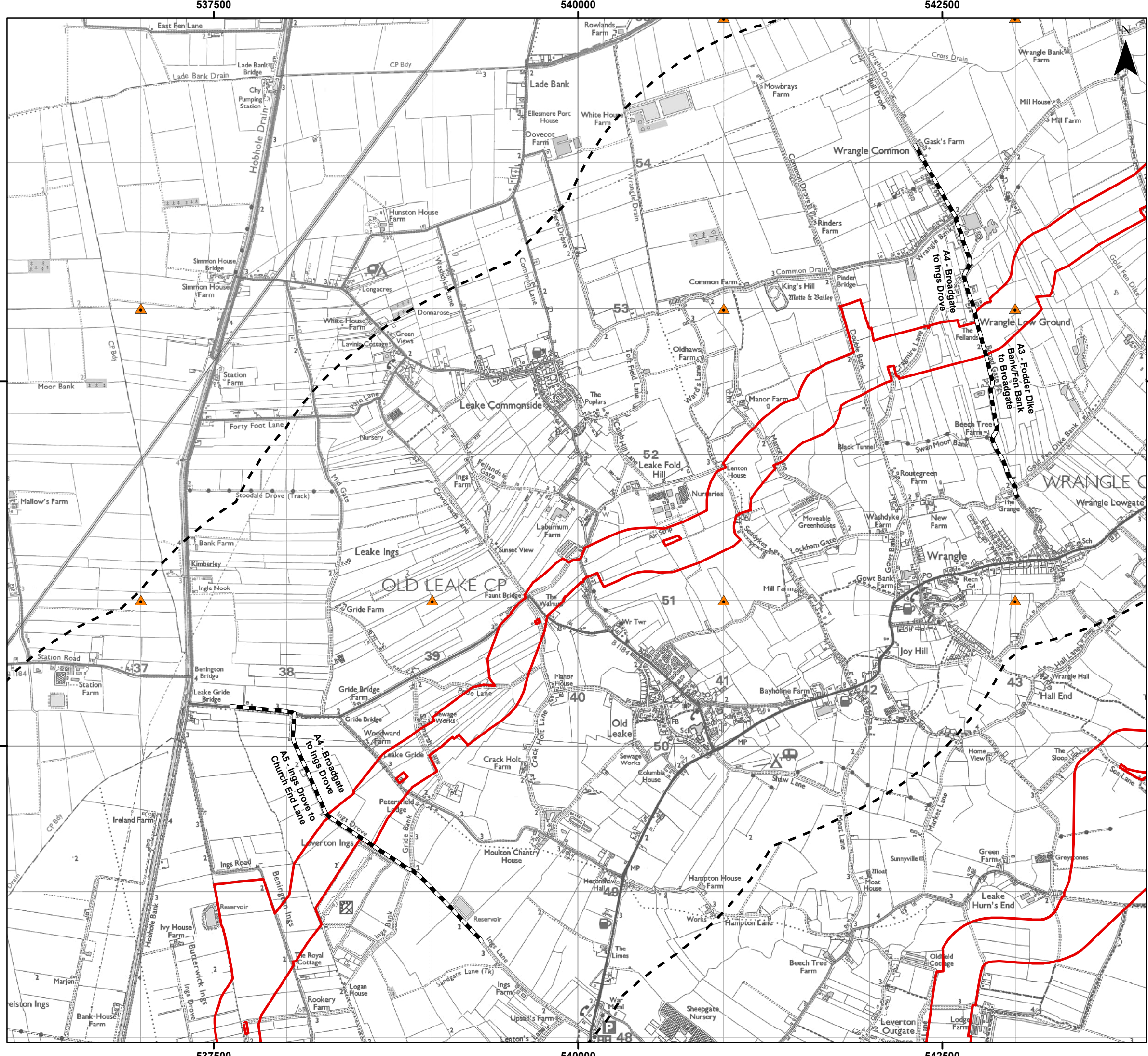


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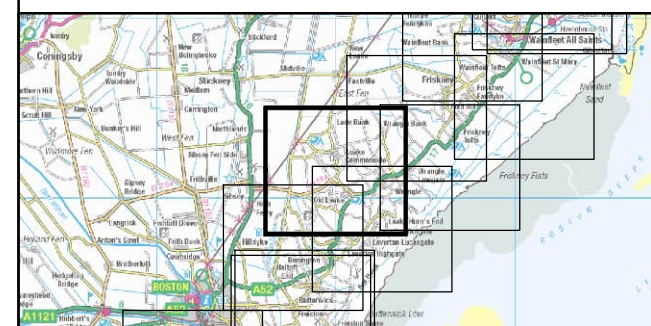
Legend

- Onshore PEIR Boundary
- Onshore Segment Break
- Onshore PEIR Boundary Weston Marsh (via North of the A52) 2 km Buffer

Local Records: Reptiles

- ▲ Grass Snake

Sources:
Local Records derived from data provided by Lincolnshire Environmental Records Centre (December 2022)



Coordinate System: British National Grid
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 Scale: 1:25,000

Preliminary Environmental Information Report
 Weston Marsh
 Protected and Notable Species Records
 Reptiles
 Figure 21.1.14.16

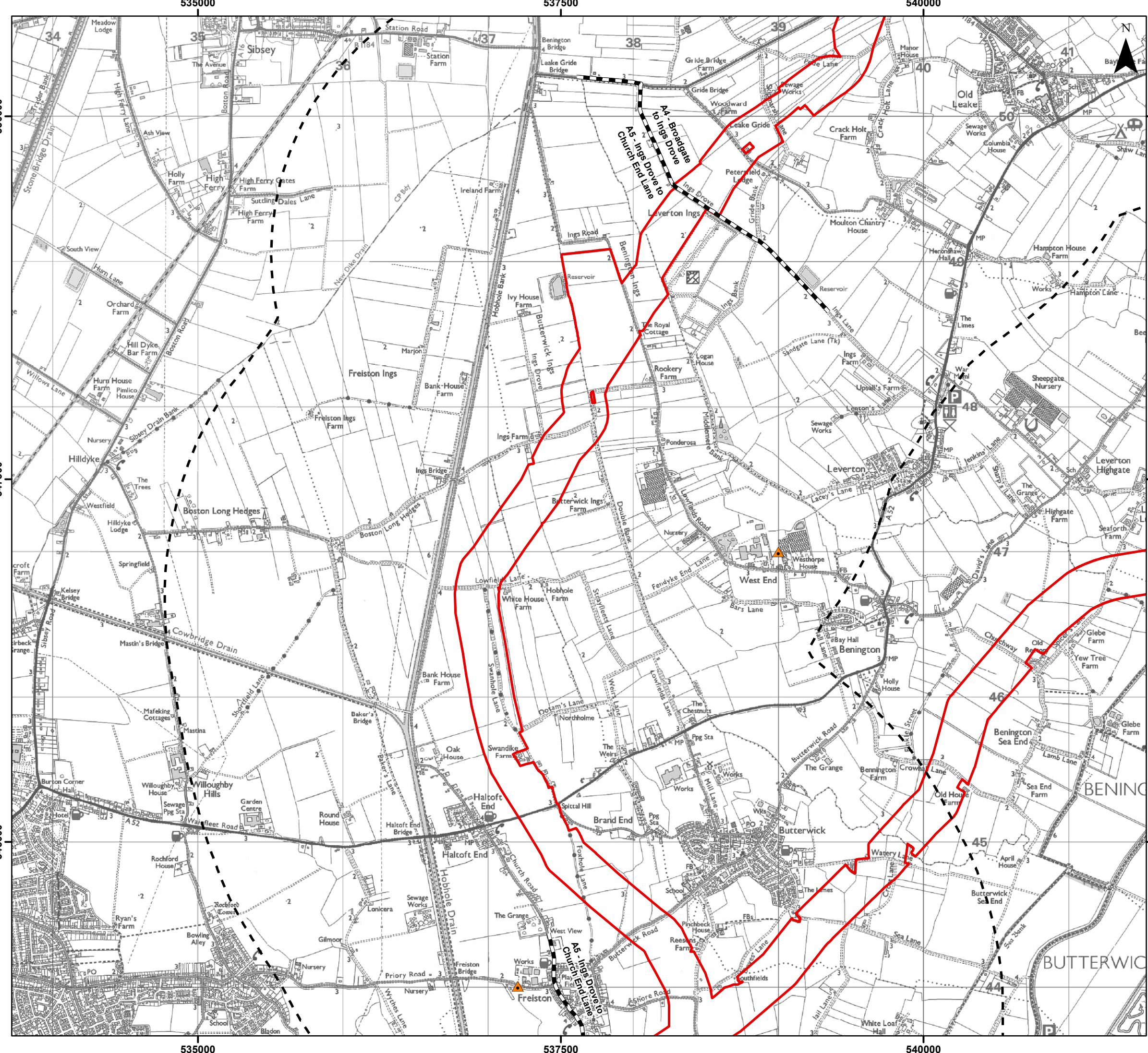


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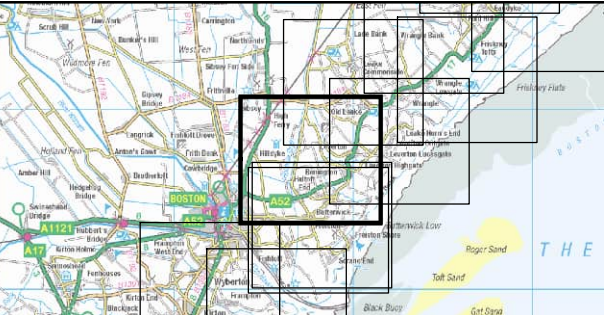
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Legend

- Onshore PEIR Boundary
- Onshore Segment Break
- Onshore PEIR Boundary Weston Marsh (via North of the A52) 2 km Buffer
- Local Records: Reptiles**
- ▲ Grass Snake

Sources:
Local Records derived from data provided by Lincolnshire Environmental Records Centre (December 2022)



Coordinate System: British National Grid
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 Scale: 1:25,000

Preliminary Environmental Information Report
 Weston Marsh
 Protected and Notable Species Records
 Reptiles
 Figure 21.1.14.17

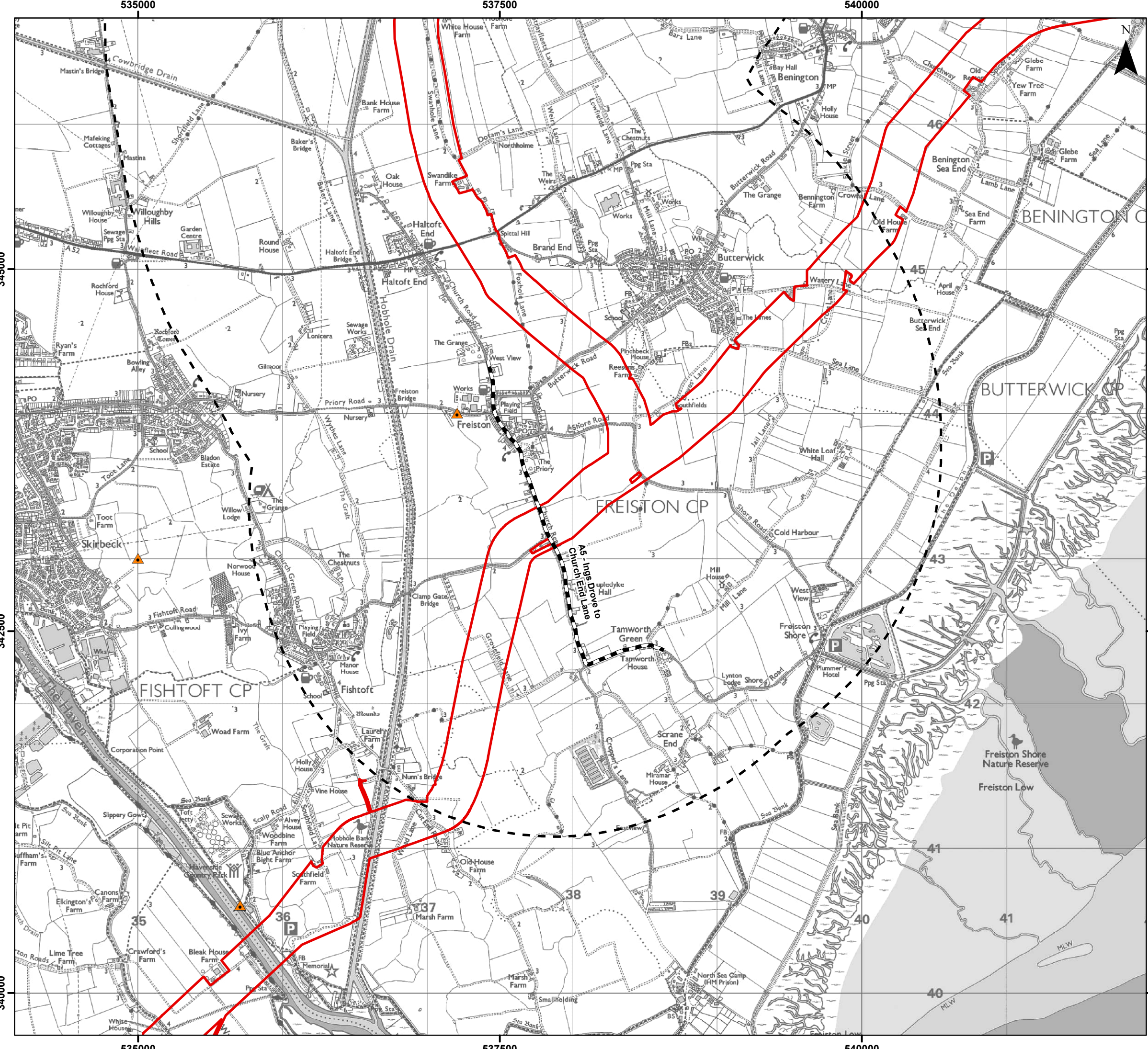


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- Legend**
- Onshore PEIR Boundary
 - Onshore Segment Break
 - Onshore PEIR Boundary Weston Marsh (via North of the A52) 2 km Buffer
- Local Records: Reptiles**
- ▲ Grass Snake

Sources:
Local Records derived from data provided by Lincolnshire Environmental Records Centre (December 2022)



Coordinate System: British National Grid
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 Scale: 1:25,000

Preliminary Environmental Information Report
 Weston Marsh
 Protected and Notable Species Records
 Reptiles
 Figure 21.1.14.18





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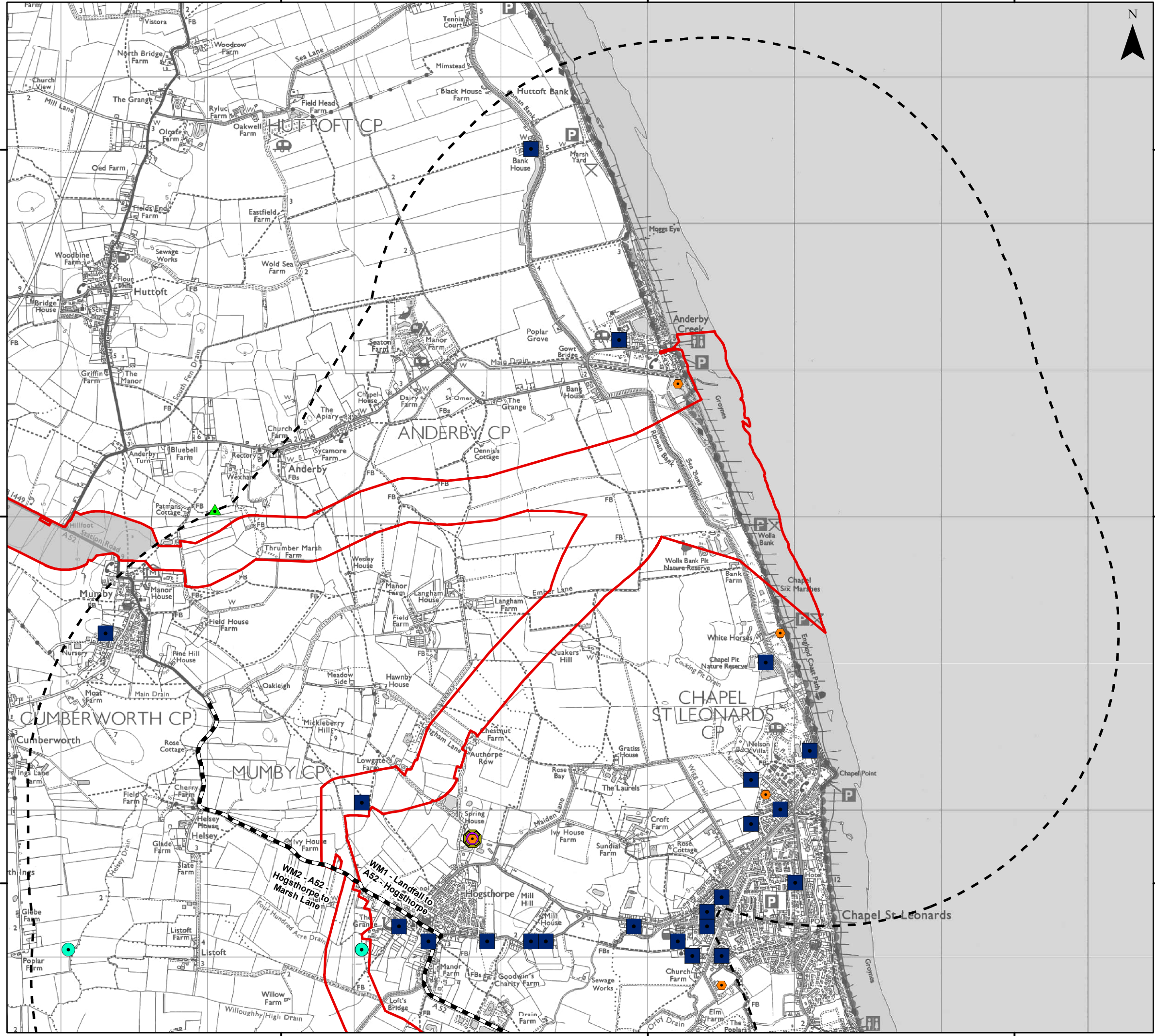
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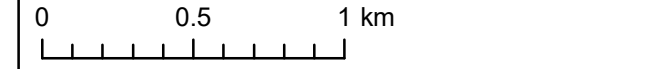
Legend

- Onshore PEIR Boundary
- Onshore Segment Break
- Onshore PEIR Boundary Weston Marsh (via South of the A52) 2 km Buffer
- Local Records: Terrestrial Mammals (Bats)**
- Common Pipistrelle
- Brown Long-eared Bat
- Pipistrelle Bat species
- Nathusius's Pipistrelle
- Bat
- Noctule Bat
- Soprano Pipistrelle

Sources:
Local Records derived from data provided by Lincolnshire Environmental Records Centre (December 2022)



Coordinate System: British National Grid



Scale: 1:25,000

Preliminary Environmental Information Report

Weston Marsh
Protected and Notable Species Records
Terrestrial Mammals - Bats
Figure 21.1.15.1



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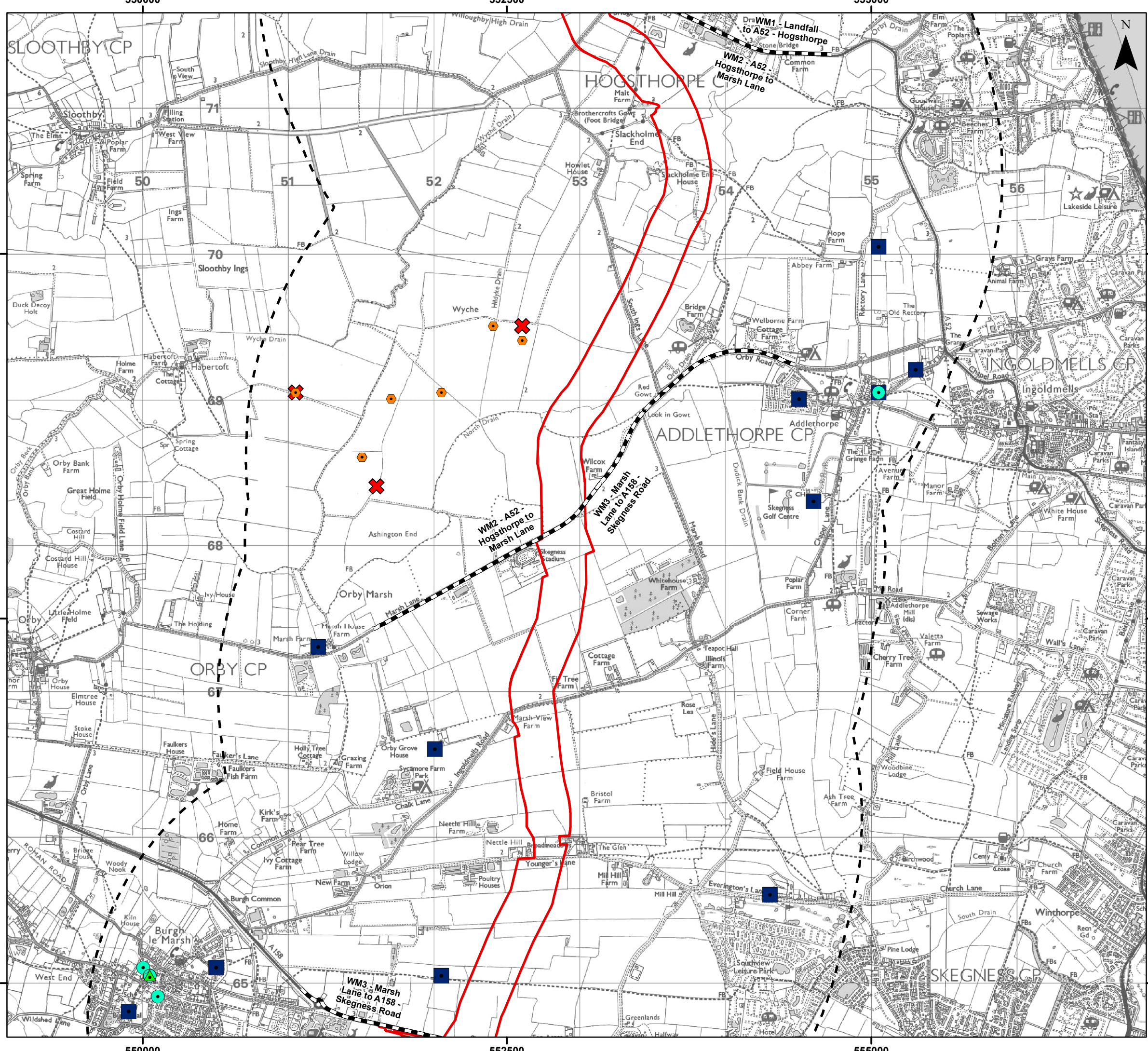
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Legend

- Onshore PEIR Boundary
- Onshore Segment Break
- Onshore PEIR Boundary Weston Marsh (via South of the A52) 2 km Buffer

Local Records: Terrestrial Mammals

- Common Pipistrelle
- ▲ Brown Long-eared Bat
- Pipistrelle Bat species
- Bat
- ✕ Noctule Bat

Sources:
Local Records derived from data provided by Lincolnshire Environmental Records Centre (December 2022)



Coordinate System: British National Grid
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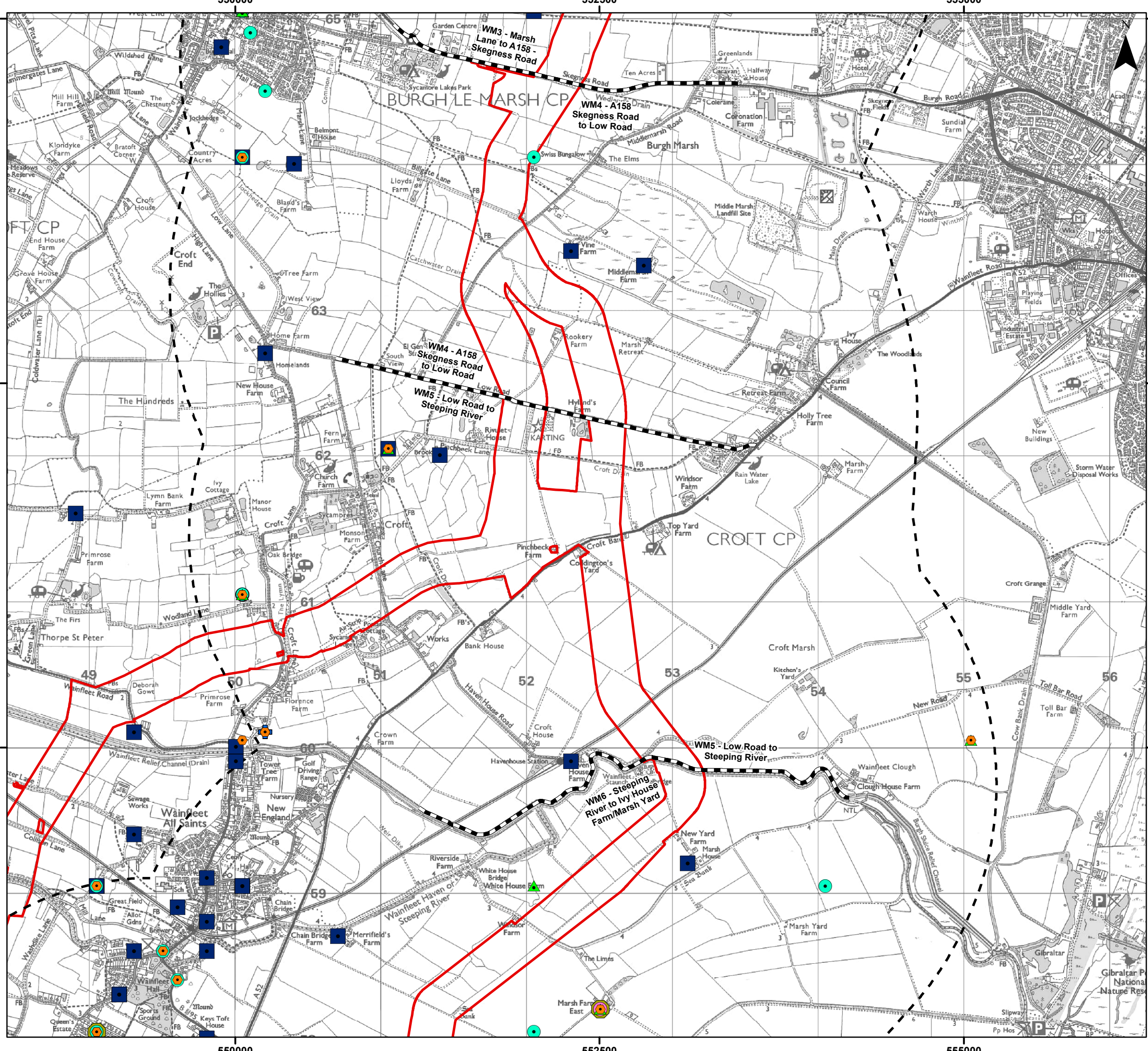
Preliminary Environmental Information Report
 Weston Marsh
 Protected and Notable Species Records
 Terrestrial Mammals - Bats
 Figure 21.1.15.2



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Legend

- Onshore PEIR Boundary
- Onshore Segment Break
- Onshore PEIR Boundary Weston Marsh (via South of the A52) 2 km Buffer

Local Records: Terrestrial Mammals (Bats)

- Common Pipistrelle
- ▲ Brown Long-eared Bat
- + Daubenton's Bat
- Pipistrelle Bat species
- Myotis Bat species
- Bat
- Soprano Pipistrelle

Sources:
Local Records derived from data provided by Lincolnshire Environmental Records Centre (December 2022)



Coordinate System: British National Grid
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Scale: 1:25,000

Preliminary Environmental Information Report
Weston Marsh
Protected and Notable Species Records
Terrestrial Mammals - Bats
Figure 21.1.15.3

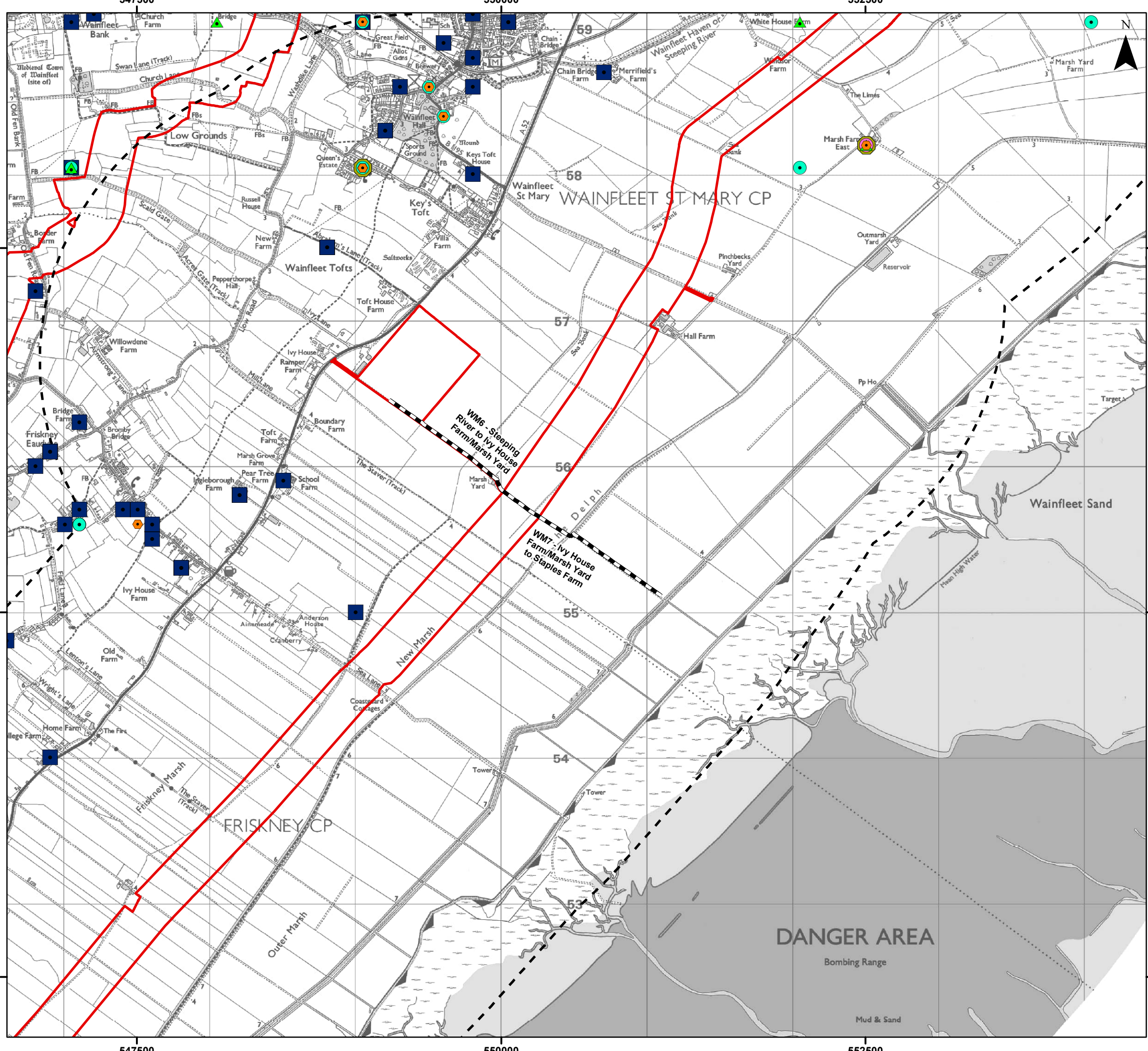


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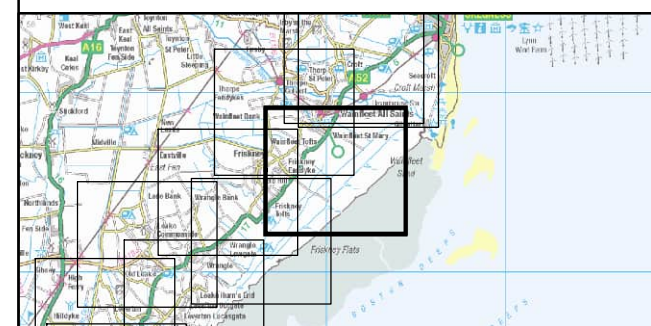
Legend

- Onshore PEIR Boundary
- Onshore Segment Break
- Onshore PEIR Boundary Weston Marsh (via South of the A52) 2 km Buffer

Local Records: Terrestrial Mammals (Bats)

- Common Pipistrelle
- ▲ Brown Long-eared Bat
- Pipistrelle Bat species
- Myotis Bat species
- Bat
- Soprano Pipistrelle

Sources:
Local Records derived from data provided by Lincolnshire Environmental Records Centre (December 2022)



Coordinate System: British National Grid
 0 0.5 1 km
 Scale: 1:25,000

Preliminary Environmental Information Report
 Weston Marsh
 Protected and Notable Species Records
 Terrestrial Mammals - Bats
 Figure 21.1.15.4



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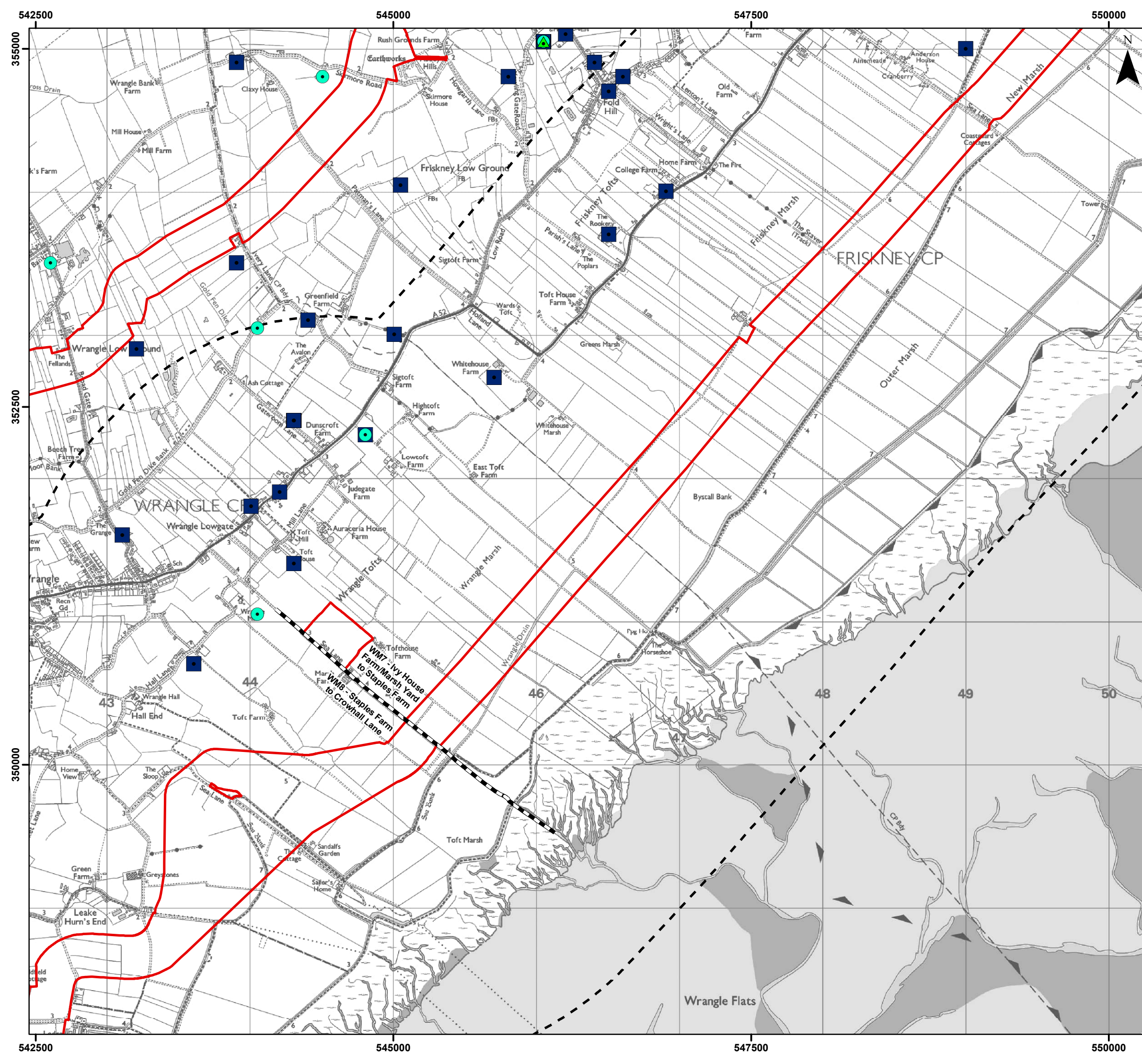


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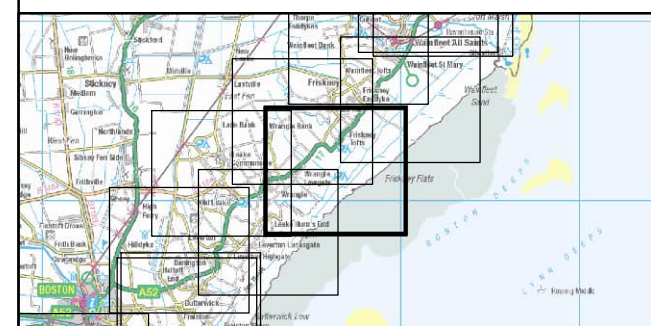
Legend

- Onshore PEIR Boundary
- Onshore Segment Break
- Onshore PEIR Boundary Weston Marsh (via South of the A52) 2 km Buffer

Local Records: Terrestrial Mammals (Bats)

- ▲ Brown Long-eared Bat
- Pipistrelle Bat species
- Bat

Sources:
Local Records derived from data provided by Lincolnshire Environmental Records Centre (December 2022)



Coordinate System: British National Grid
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 Scale: 1:25,000

Preliminary Environmental Information Report
 Weston Marsh
 Protected and Notable Species Records
 Terrestrial Mammals - Bats
 Figure 21.1.15.5

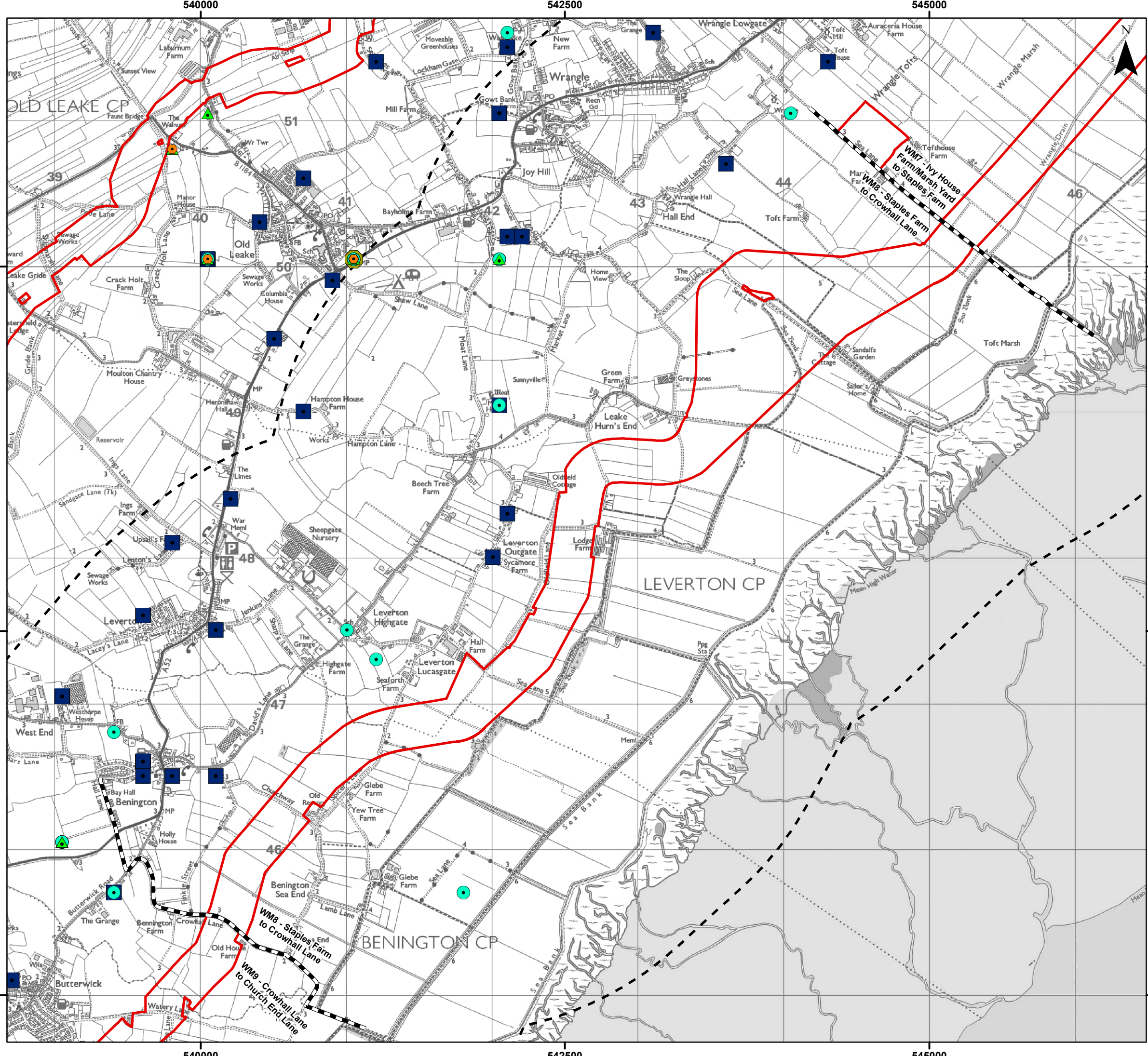


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Legend

- Onshore PEIR Boundary
- Onshore Segment Break
- Onshore PEIR Boundary Weston Marsh (via South of the A52) 2 km Buffer

Local Records: Terrestrial Mammals (Bats)

- Common Pipistrelle
- ▲ Brown Long-eared Bat
- Pipistrelle Bat species
- Bat
- Soprano Pipistrelle

Sources:
Local Records derived from data provided by Lincolnshire Environmental Records Centre (December 2022)



Coordinate System: British National Grid
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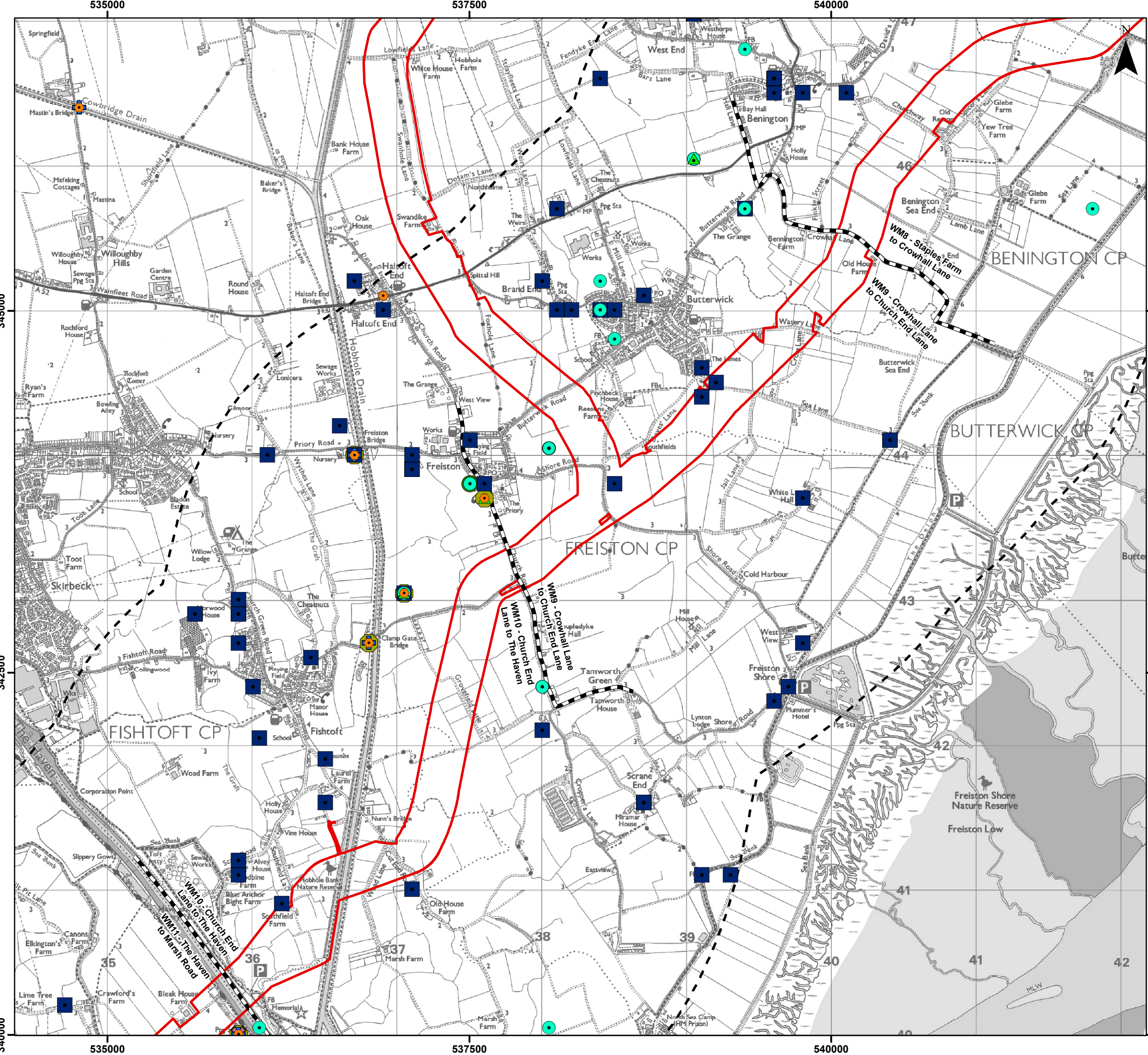
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 Terrestrial Mammals - Bats
 Figure 21.1.15.6



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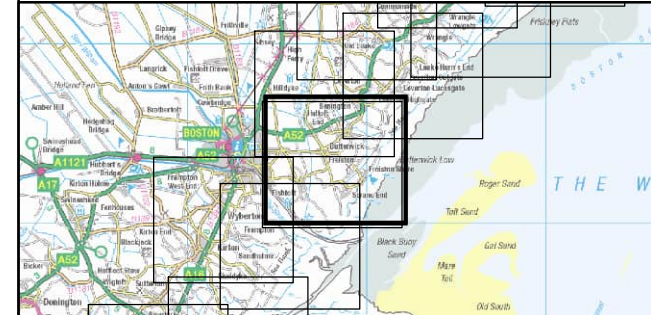
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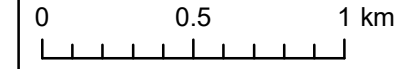
Legend

- Onshore PEIR Boundary
- Onshore Segment Break
- Onshore PEIR Boundary Weston Marsh (via South of the A52) 2 km Buffer
- Local Records: Terrestrial Mammals (Bats)**
- Common Pipistrelle
- ▲ Brown Long-eared Bat
- + Daubenton's Bat
- Pipistrelle Bat species
- Myotis Bat species
- Bat
- Pipistrelle
- × Noctule Bat
- Soprano Pipistrelle

Sources:
Local Records derived from data provided by Lincolnshire Environmental Records Centre (December 2022)



Coordinate System: British National Grid



Scale: 1:25,000

Preliminary Environmental Information Report

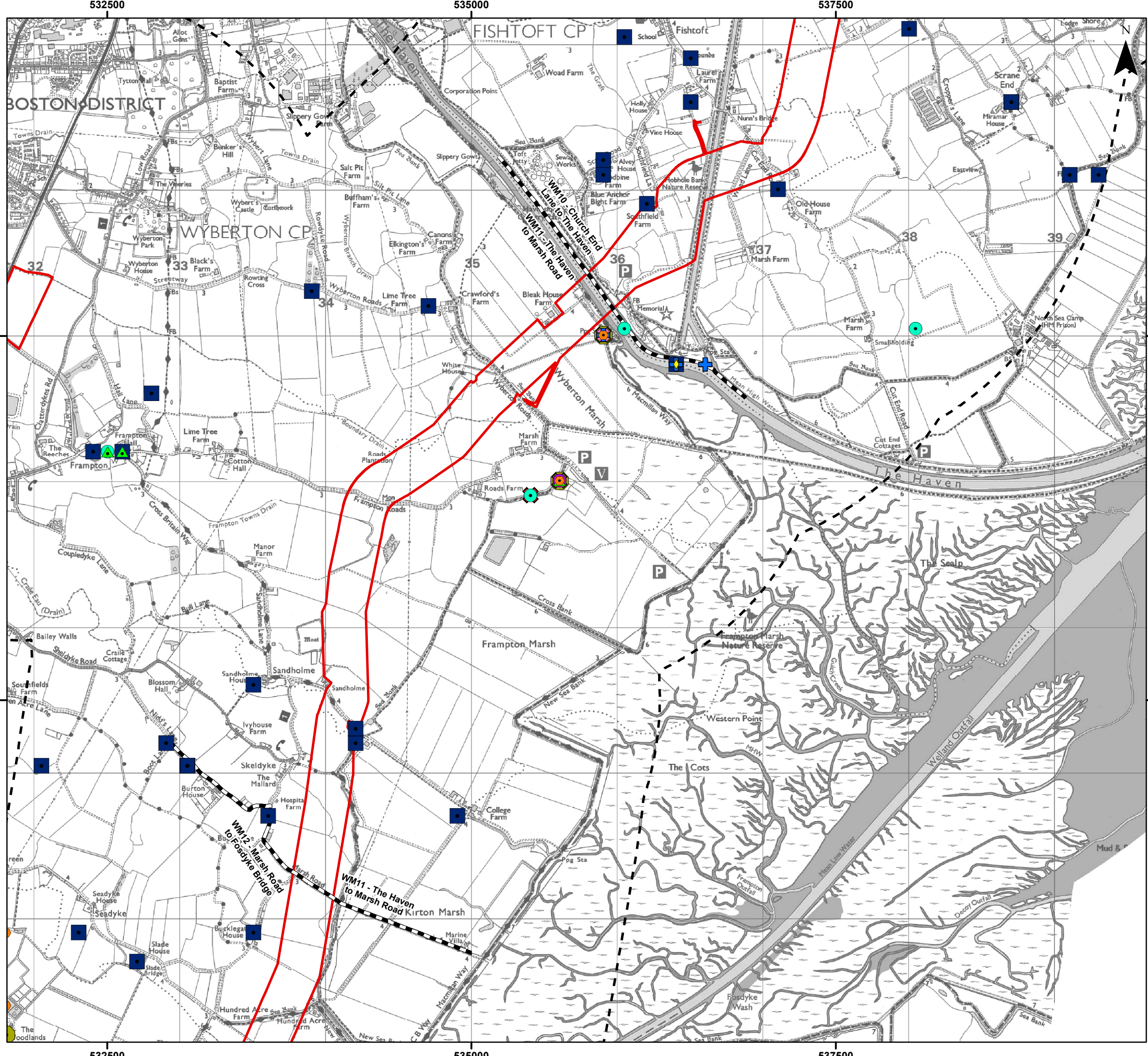
Weston Marsh
Protected and Notable Species Records
Terrestrial Mammals - Bats
Figure 21.1.15.7



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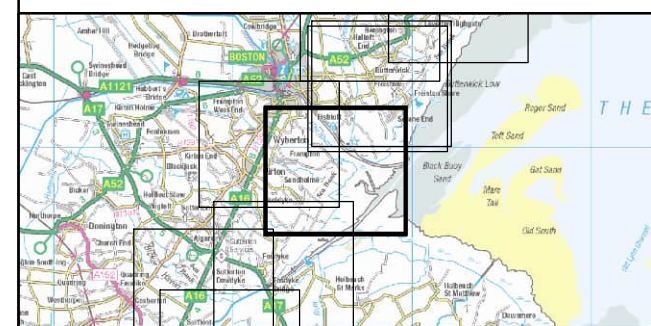
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- Legend**
- Onshore PEIR Boundary
 - Onshore Segment Break
 - Onshore PEIR Boundary Weston Marsh (via South of the A52) 2 km Buffer

- Local Records: Terrestrial Mammals**
- ◆ Nyctalus Bat species
 - Common Pipistrelle
 - ▲ Brown Long-eared Bat
 - + Daubenton's Bat
 - Pipistrelle Bat species
 - Nathusius's Pipistrelle
 - Myotis Bat species
 - Bat
 - × Noctule Bat
 - ⬡ Soprano Pipistrelle

Sources:
Local Records derived from data provided by Lincolnshire Environmental Records Centre (December 2022)



Coordinate System: British National Grid
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 Scale: 1:25,000

Preliminary Environmental Information Report
 Weston Marsh
 Protected and Notable Species Records
 Terrestrial Mammals - Bats
 Figure 21.1.15.8



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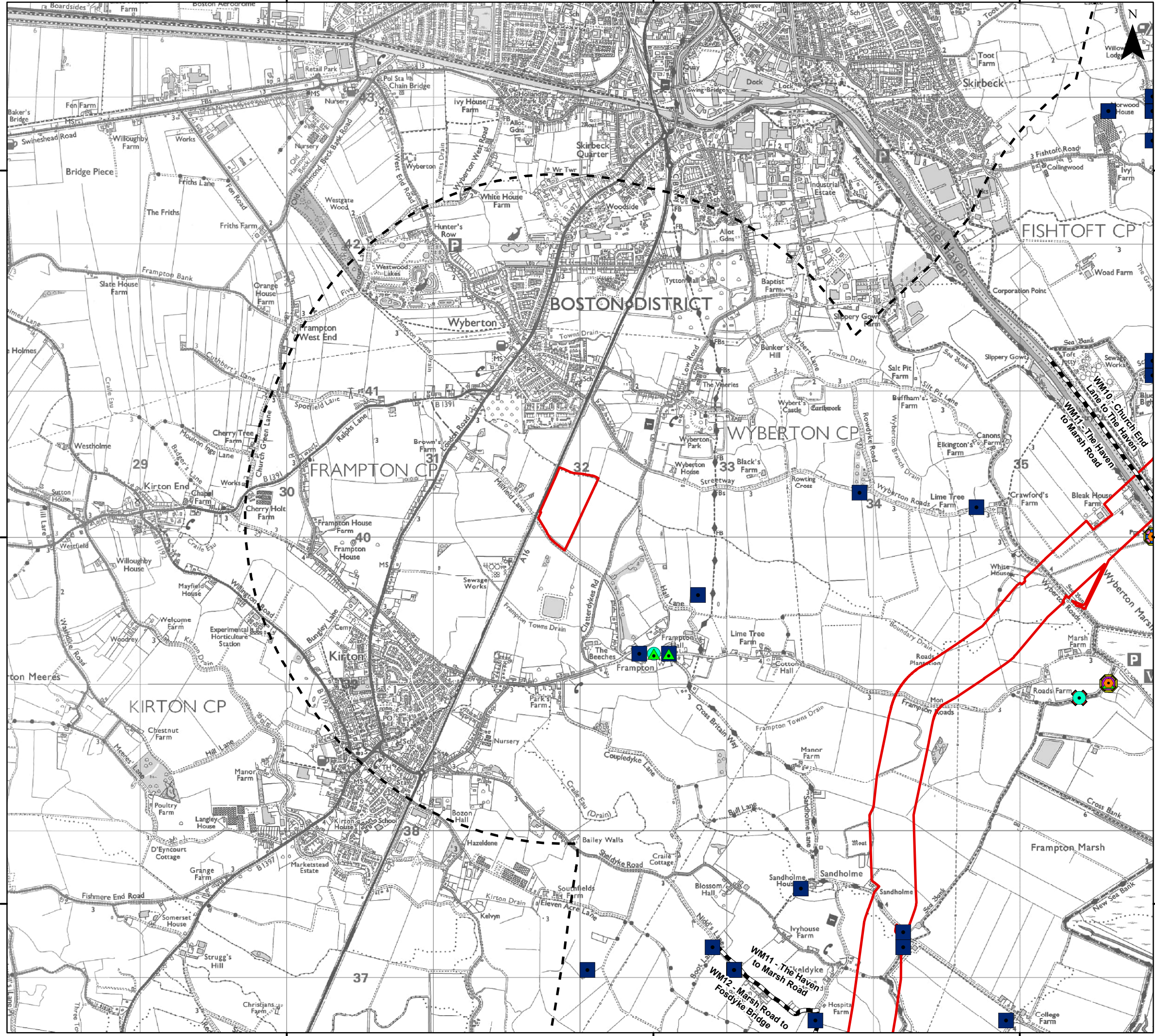
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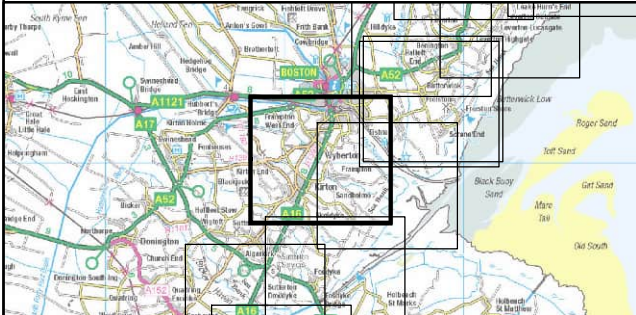
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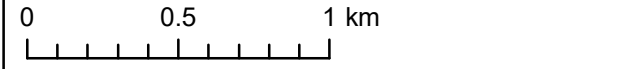
Legend

- Onshore PEIR Boundary
- Onshore Segment Break
- Onshore PEIR Boundary Weston Marsh (via South of the A52) 2 km Buffer
- Local Records: Terrestrial Mammals (Bats)**
- Common Pipistrelle
- ▲ Brown Long-eared Bat
- + Daubenton's Bat
- Pipistrelle Bat species
- Nathusius's Pipistrelle
- Myotis Bat species
- Bat
- ✕ Noctule Bat
- Soprano Pipistrelle

Sources:
Local Records derived from data provided by Lincolnshire Environmental Records Centre (December 2022)



Coordinate System: British National Grid



Scale: 1:25,000

Preliminary Environmental Information Report

Weston Marsh
Protected and Notable Species Records
Terrestrial Mammals - Bats
Figure 21.1.15.9



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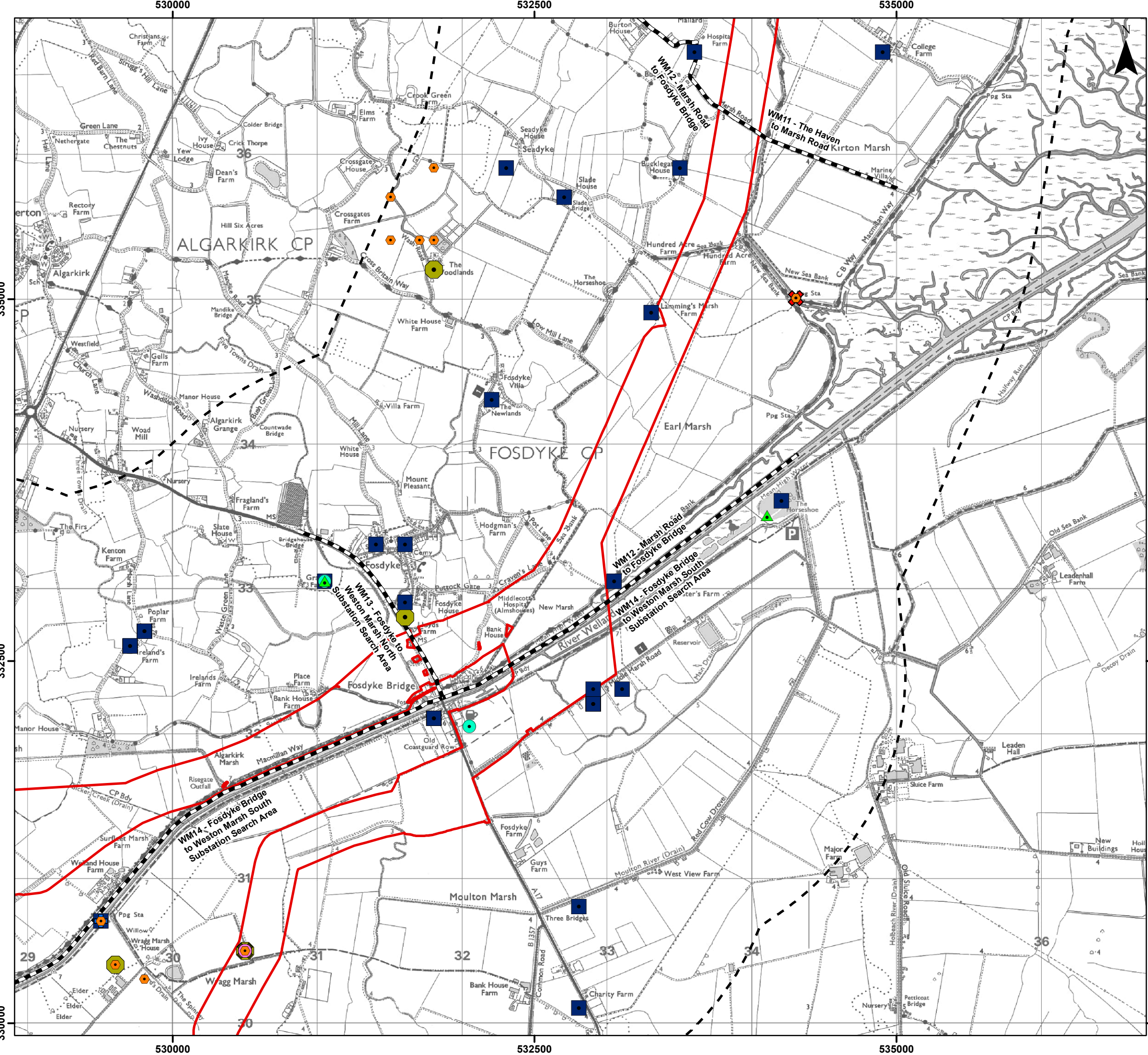
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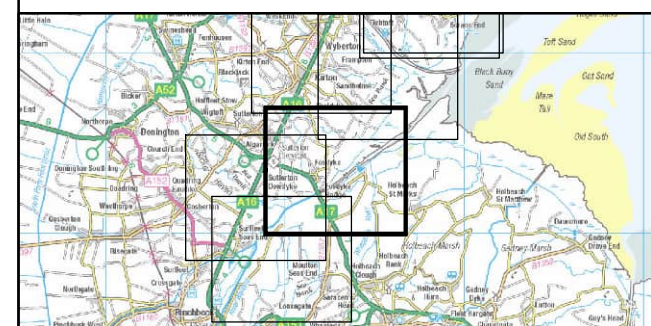
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- Legend**
- Onshore PEIR Boundary
 - Onshore Segment Break
 - Onshore PEIR Boundary Weston Marsh (via South of the A52) 2 km Buffer

- Local Records: Terrestrial Mammals (Bats)**
- Common Pipistrelle
 - ▲ Brown Long-eared Bat
 - + Daubenton's Bat
 - Pipistrelle Bat species
 - Myotis Bat species
 - Bat
 - × Noctule Bat
 - ⬡ Soprano Pipistrelle

Sources:
Local Records derived from data provided by Lincolnshire Environmental Records Centre (December 2022)



Coordinate System: British National Grid
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 Scale: 1:25,000

Preliminary Environmental Information Report
 Weston Marsh
 Protected and Notable Species Records
 Terrestrial Mammals - Bats
 Figure 21.1.15.10

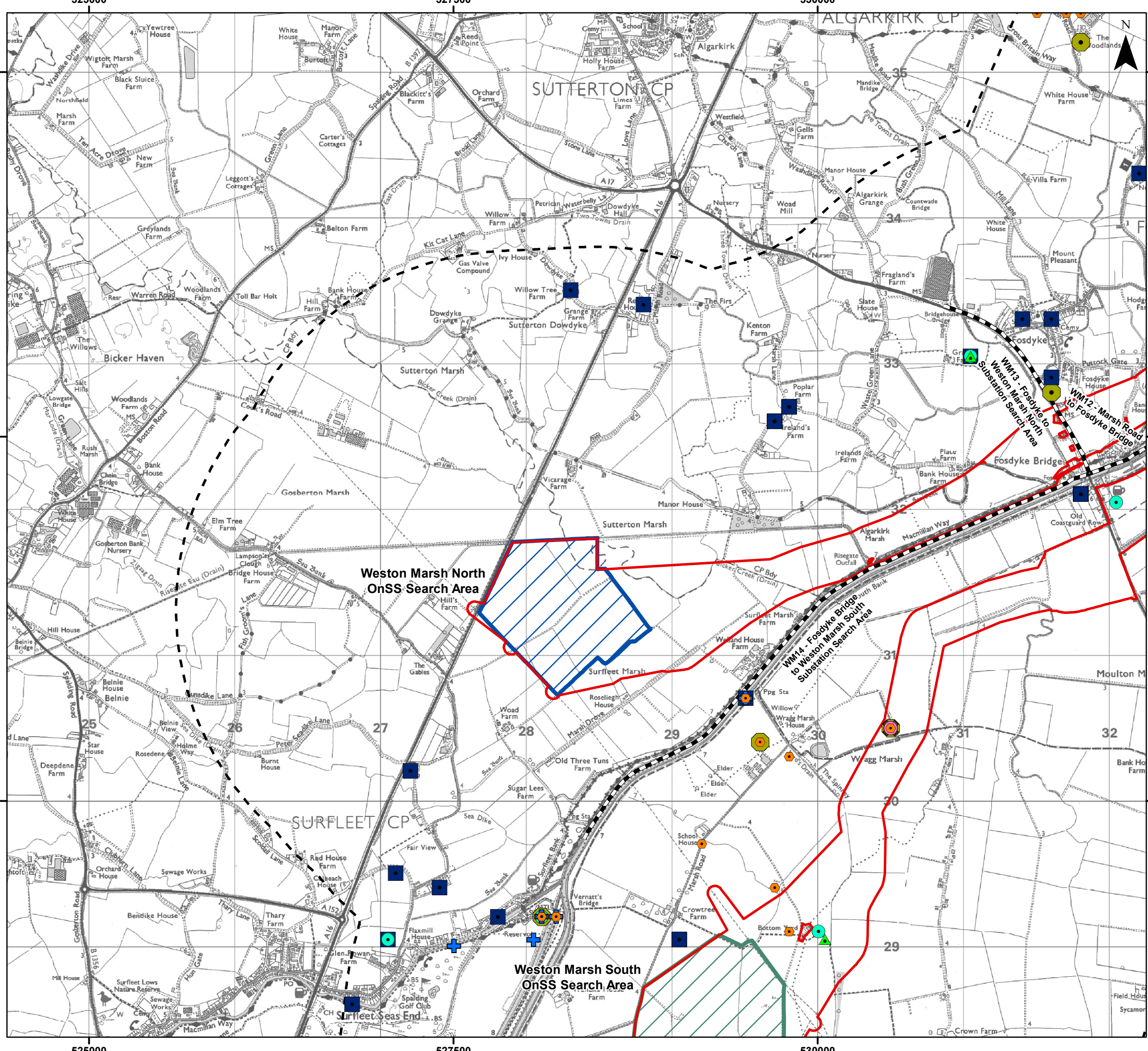


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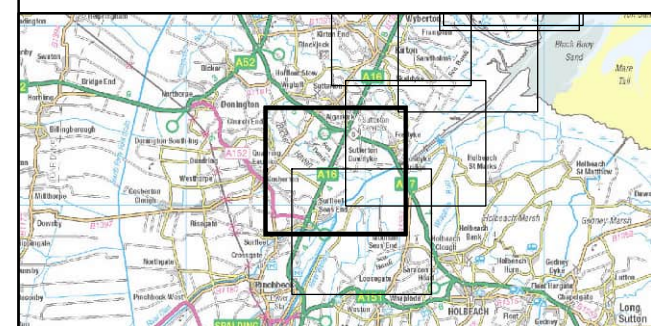
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- Legend**
- Onshore PEIR Boundary
 - Onshore Segment Break
 - Weston Marsh North OnSS Search Area
 - Weston Marsh South OnSS Search Area
 - Onshore PEIR Boundary Weston Marsh (via South of the A52) 2 km Buffer
- Local Records: Terrestrial Mammals (Bats)**
- Common Pipistrelle
 - ▲ Brown Long-eared Bat
 - + Daubenton's Bat
 - Pipistrelle Bat species
 - Myotis Bat species
 - Bat
 - × Noctule Bat
 - Soprano Pipistrelle

Sources:
Local Records derived from data provided by Lincolnshire Environmental Records Centre (December 2022)



Coordinate System: British National Grid
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Preliminary Environmental Information Report
 Weston Marsh
 Protected and Notable Species Records
 Terrestrial Mammals - Bats
 Figure 21.1.15.11

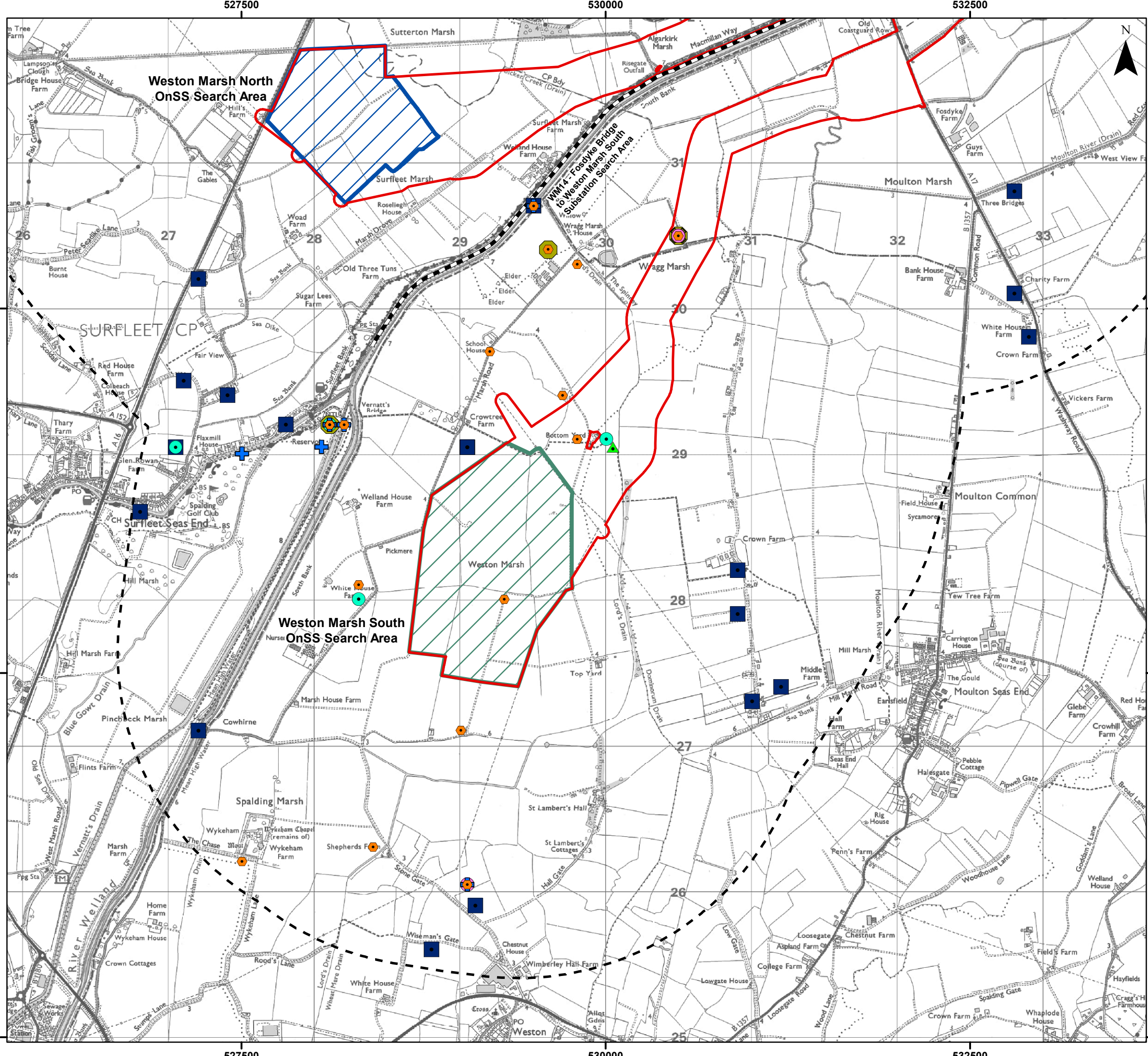


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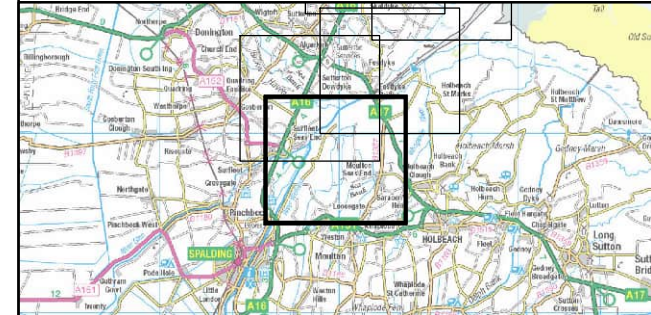
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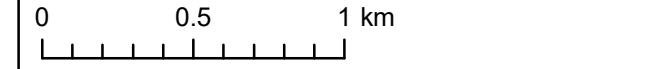
Legend

- Onshore PEIR Boundary
 - Onshore Segment Break
 - Weston Marsh North OnSS Search Area
 - Weston Marsh South OnSS Search Area
 - Onshore PEIR Boundary Weston Marsh (via South of the A52) 2 km Buffer
- Local Records: Terrestrial Mammals**
- Common Pipistrelle
 - ▲ Brown Long-eared Bat
 - + Daubenton's Bat
 - Pipistrelle Bat species
 - Myotis Bat species
 - Bat
 - × Noctule Bat
 - Soprano Pipistrelle

Sources:
Local Records derived from data provided by Lincolnshire Environmental Records Centre (December 2022)



Coordinate System: British National Grid



Scale: 1:25,000

Preliminary Environmental Information Report

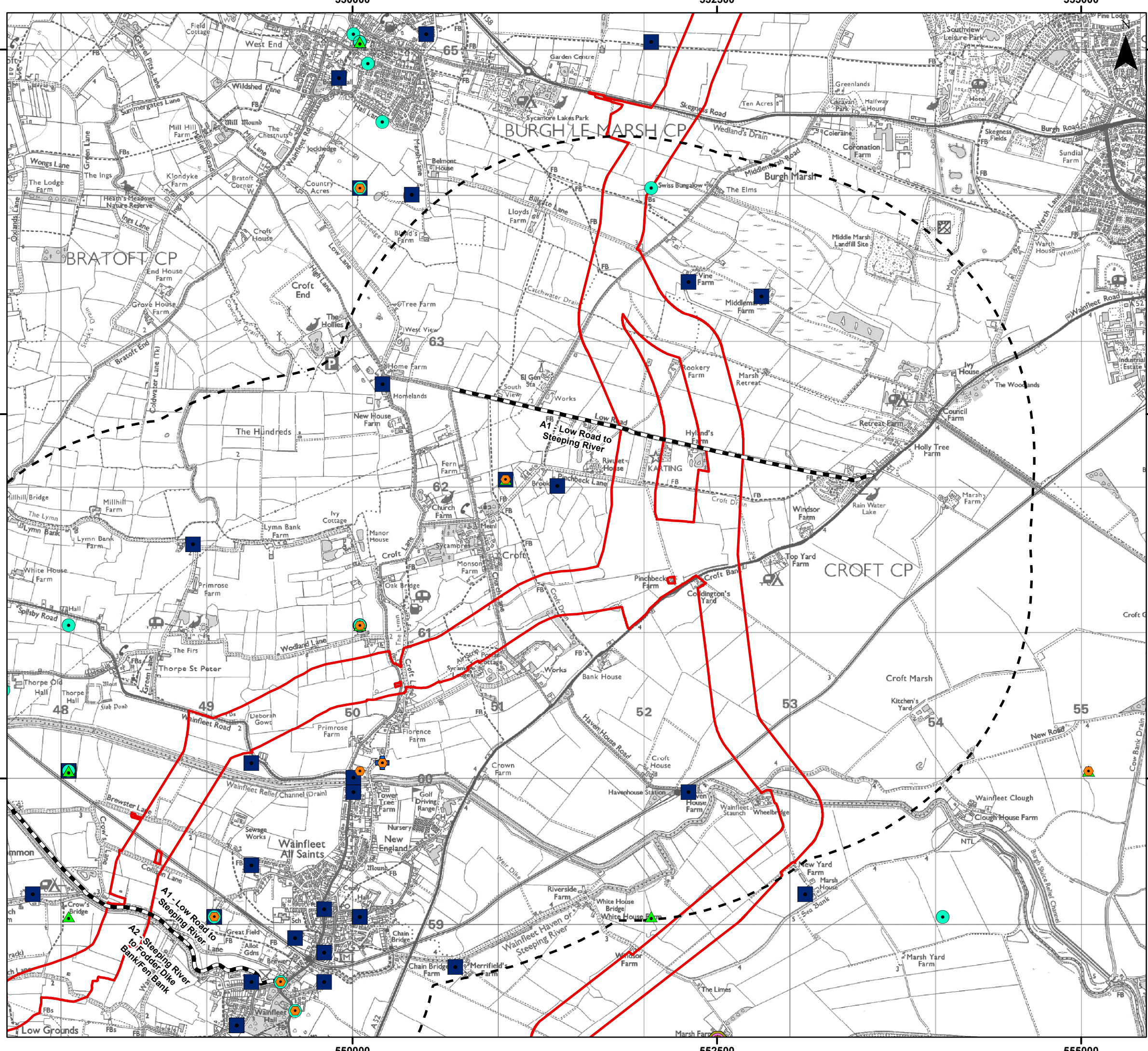
Weston Marsh
Protected and Notable Species Records
Terrestrial Mammals - Bats
Figure 21.1.15.12



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Legend

- Onshore PEIR Boundary
- Onshore Segment Break
- Onshore PEIR Boundary Weston Marsh (via North of the A52) 2 km Buffer

Local Records: Terrestrial Mammals (Bats)

- Common Pipistrelle
- ▲ Brown Long-eared Bat
- + Daubenton's Bat
- Pipistrelle Bat species
- Myotis Bat species
- Bat
- Soprano Pipistrelle

Sources:
Local Records derived from data provided by Lincolnshire Environmental Records Centre (December 2022)



Coordinate System: British National Grid
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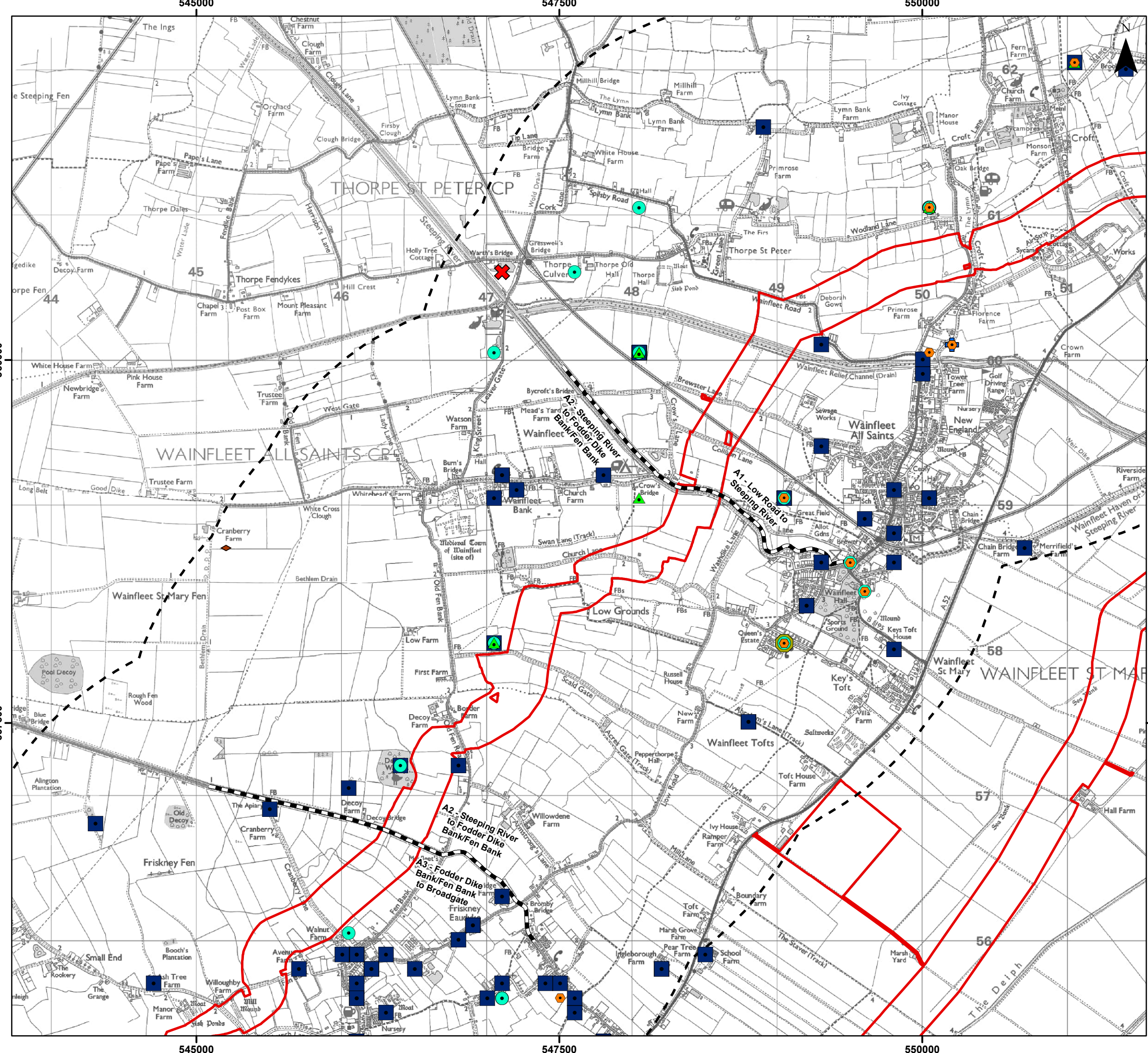
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 Weston Marsh
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 Terrestrial Mammals - Bats
 Figure 21.1.15.13



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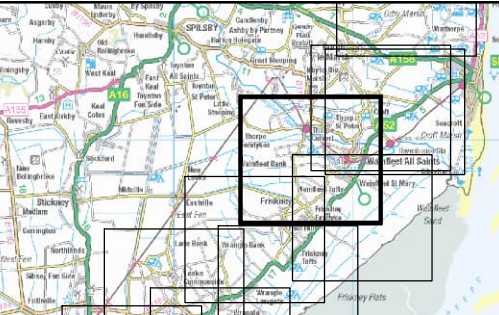
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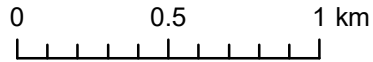
Legend

- Onshore PEIR Boundary
- Onshore Segment Break
- Onshore PEIR Boundary Weston Marsh (via North of the A52) 2 km Buffer
- Local Records: Terrestrial Mammals (Bats)**
- ◆ Western Barbastelle
- Common Pipistrelle
- ▲ Brown Long-eared Bat
- + Daubenton's Bat
- Pipistrelle Bat species
- Myotis Bat species
- Bat
- ✕ Noctule Bat
- ⬡ Soprano Pipistrelle

Sources:
Local Records derived from data provided by Lincolnshire Environmental Records Centre (December 2022)



Coordinate System: British National Grid



Scale: 1:25,000

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Terrestrial Mammals - Bats
Figure 21.1.15.14



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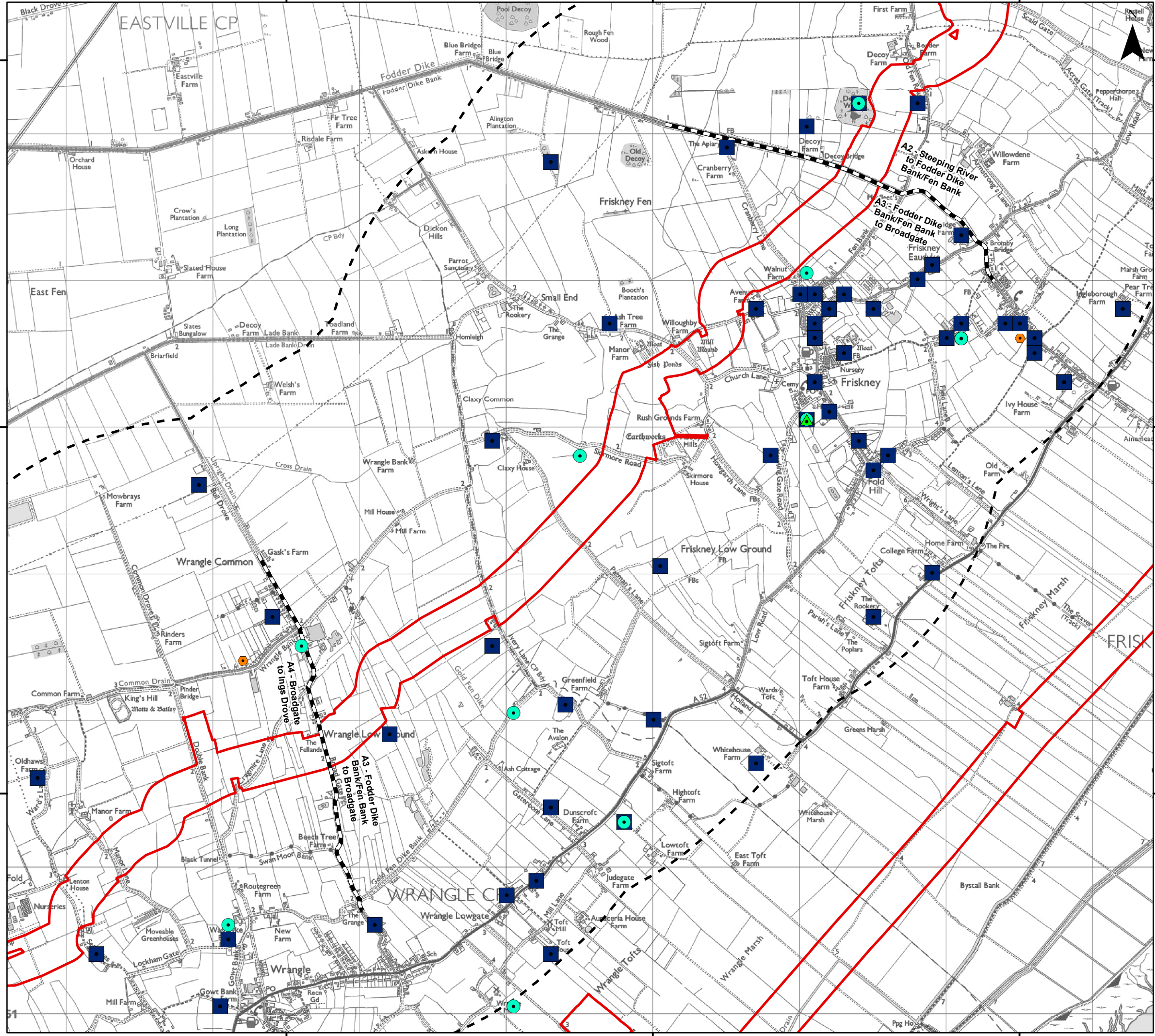
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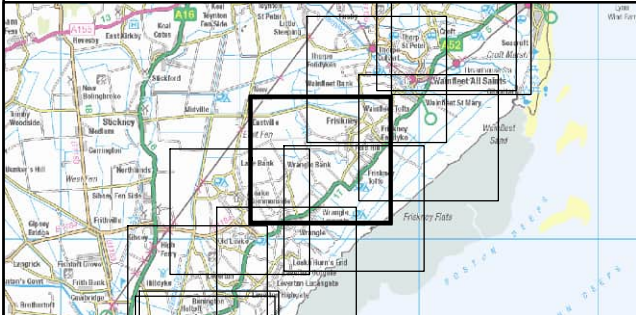
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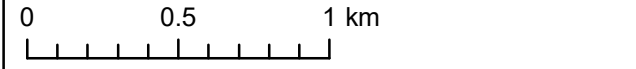
Legend

- Onshore PEIR Boundary
- Onshore Segment Break
- Onshore PEIR Boundary Weston Marsh (via North of the A52) 2 km Buffer
- Local Records: Terrestrial Mammals (Bats)**
- Common Pipistrelle
- ▲ Brown Long-eared Bat
- Pipistrelle Bat species
- Bat
- ✕ Noctule Bat

Sources:
Local Records derived from data provided by Lincolnshire Environmental Records Centre (December 2022)



Coordinate System: British National Grid



Scale: 1:25,000

Preliminary Environmental Information Report

Weston Marsh
Protected and Notable Species Records
Terrestrial Mammals - Bats
Figure 21.1.15.15

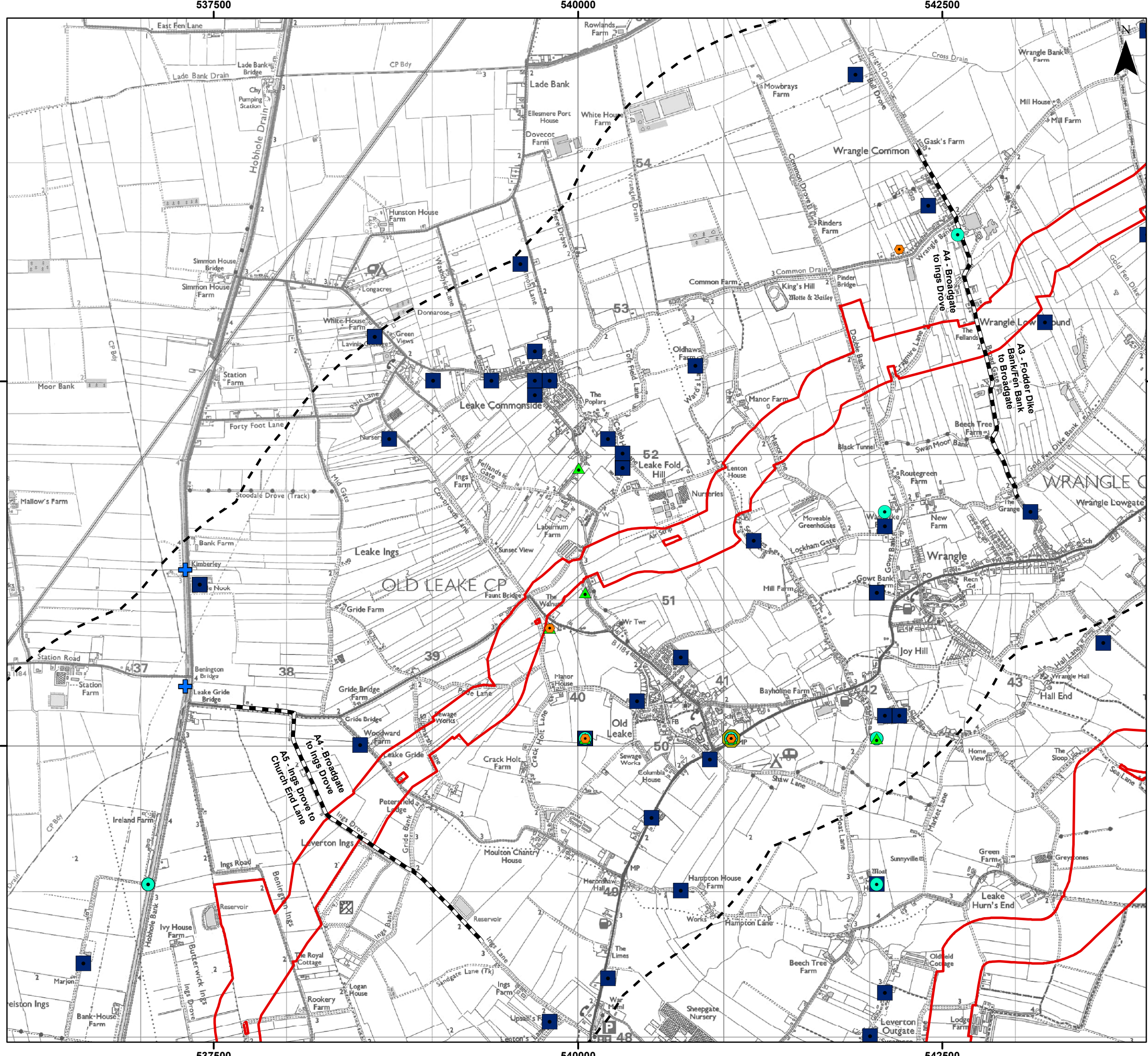


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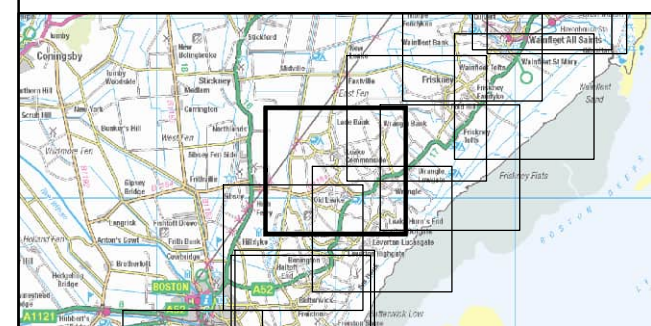
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Legend

- Onshore PEIR Boundary
- Onshore Segment Break
- Onshore PEIR Boundary Weston Marsh (via North of the A52) 2 km Buffer
- Local Records: Terrestrial Mammals (Bats)**
- Common Pipistrelle
- ▲ Brown Long-eared Bat
- + Daubenton's Bat
- Pipistrelle Bat species
- Bat
- ⬡ Soprano Pipistrelle

Sources:
Local Records derived from data provided by Lincolnshire Environmental Records Centre (December 2022)



Coordinate System: British National Grid
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Scale: 1:25,000

Preliminary Environmental Information Report
Weston Marsh
Protected and Notable Species Records
Terrestrial Mammals - Bats
Figure 21.1.15.16

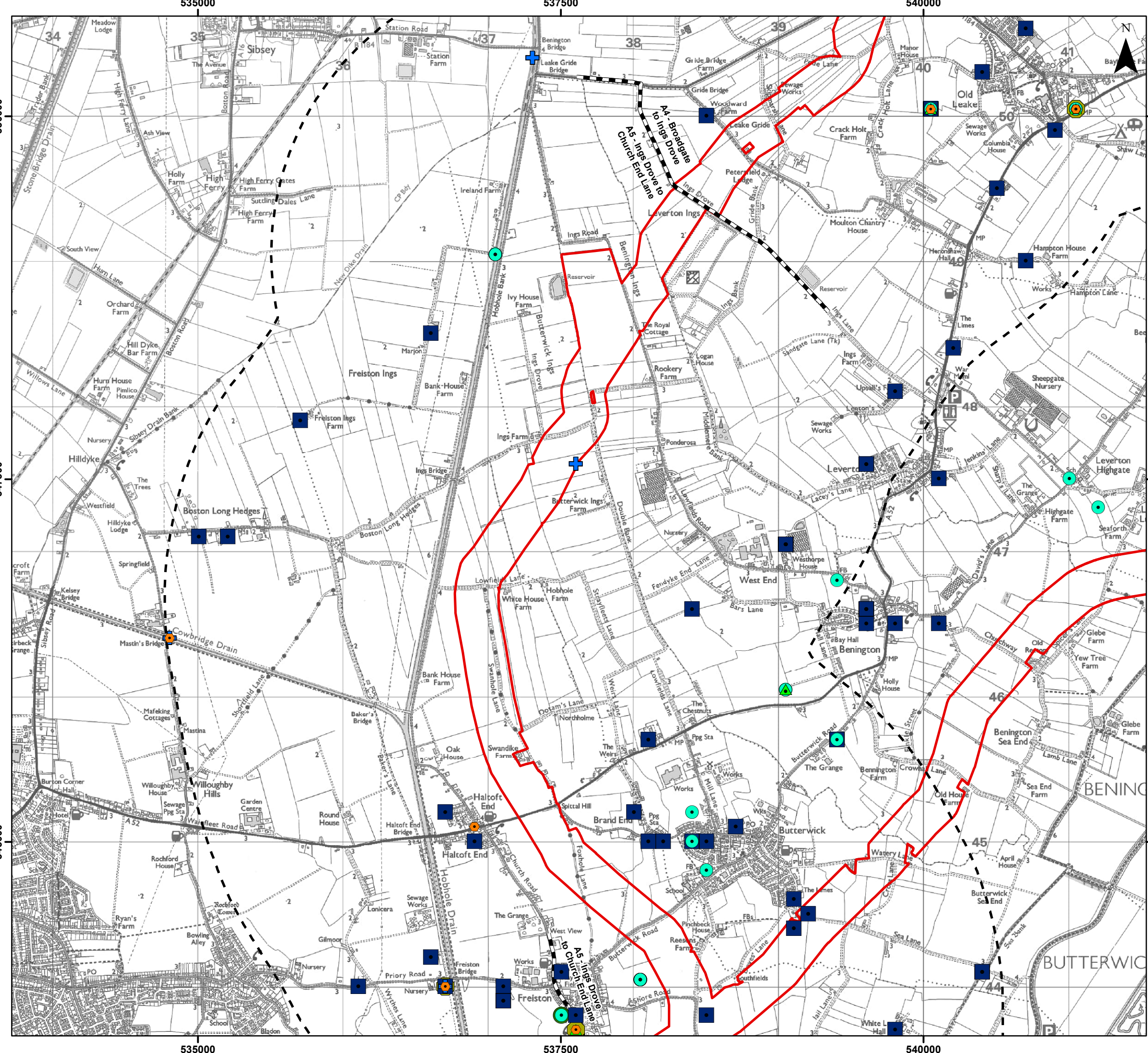


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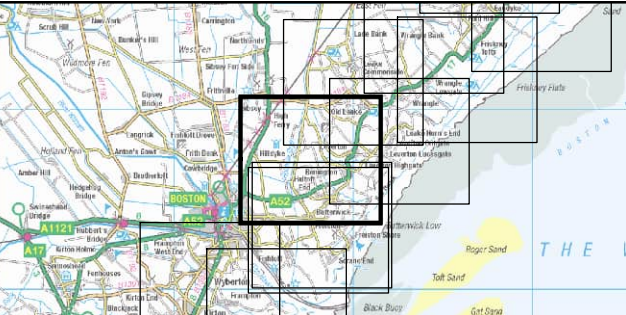
Legend

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- Onshore Segment Break
- Onshore PEIR Boundary Weston Marsh (via North of the A52) 2 km Buffer

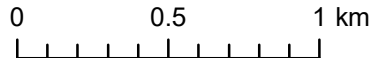
Local Records: Terrestrial Mammals (Bats)

- Common Pipistrelle
- ▲ Brown Long-eared Bat
- + Daubenton's Bat
- Pipistrelle Bat species
- Bat
- Pipistrelle
- Soprano Pipistrelle

Sources:
Local Records derived from data provided by Lincolnshire Environmental Records Centre (December 2022)



Coordinate System: British National Grid



Scale: 1:25,000

Preliminary Environmental Information Report

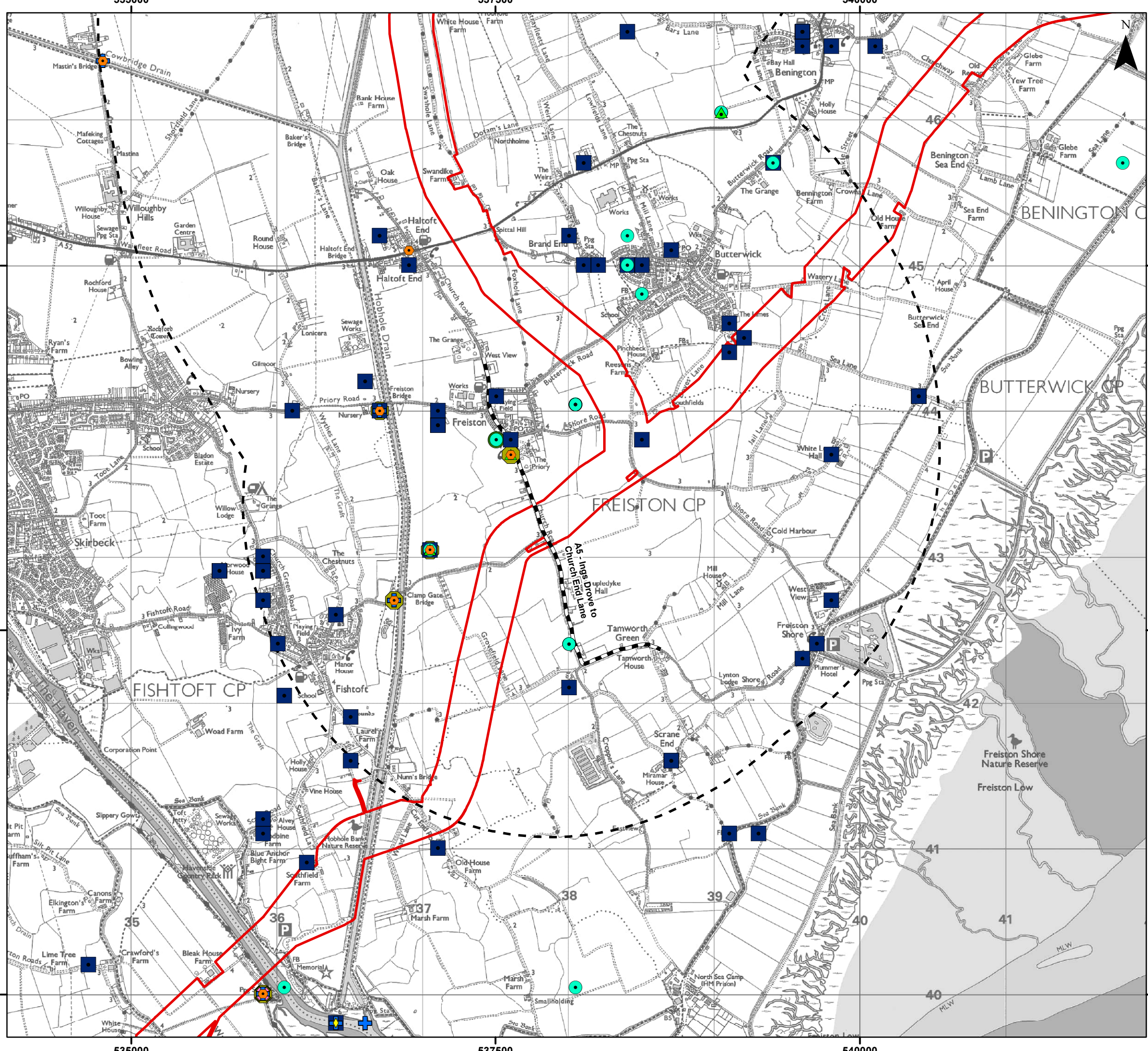
Weston Marsh
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Terrestrial Mammals - Bats
Figure 21.1.15.17



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Legend

- Onshore PEIR
- Onshore Segment
- Onshore PEIR Boundary Weston Marsh (via North of the A52) 2 km Buffer
- Local Records: Terrestrial Mammals**
- ◆ Nyctalus Bat species
- Common Pipistrelle
- ▲ Brown Long-eared Bat
- + Daubenton's Bat
- Pipistrelle Bat species
- Myotis Bat species
- Bat
- Pipistrelle
- ✕ Noctule Bat
- Soprano Pipistrelle

Sources:
Local Records derived from data provided by Lincolnshire Environmental Records Centre (December 2022)



Coordinate System: British National Grid
 0 0.5 1 km
 Scale: 1:25,000

Preliminary Environmental Information Report
 Weston Marsh
 Protected and Notable Species Records
 Terrestrial Mammals - Bats
 Figure 21.1.15.18

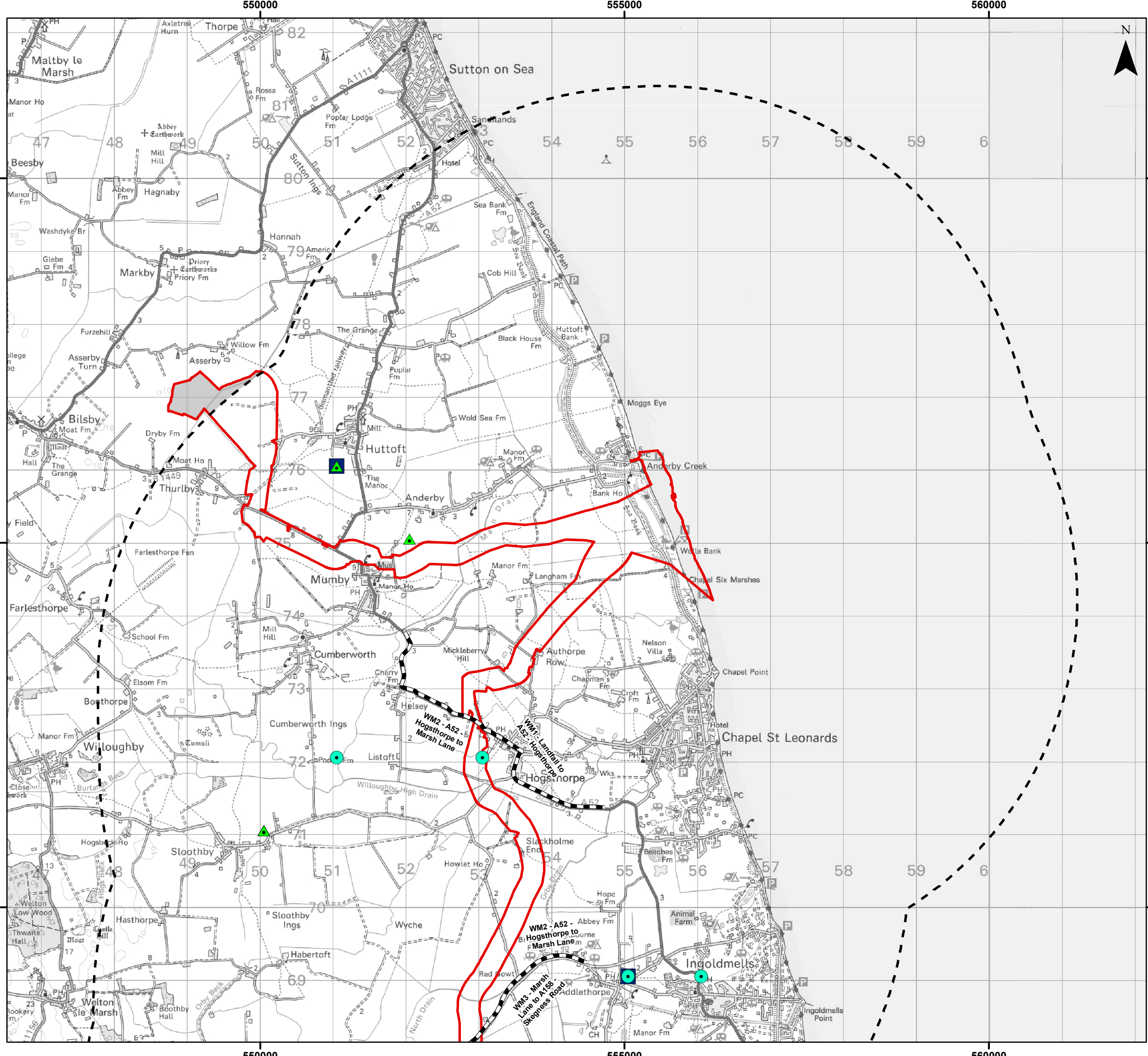


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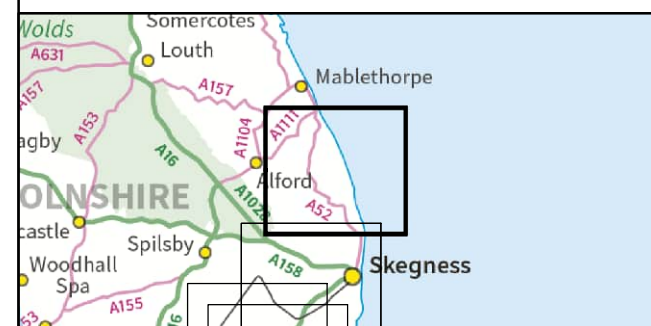
Legend

- Onshore PEIR Boundary
- Onshore Segment Break
- Onshore PEIR Boundary Weston Marsh (via South of the A52) 5 km Buffer

Local Records: Terrestrial Mammals (Bat Roosts)

- ▲ Brown Long-eared Bat Roost
- Pipistrelle Bat species Roost
- Bat Roost

Sources:
Local Records derived from data provided by Lincolnshire Environmental Records Centre (December 2022)



Coordinate System: British National Grid
 0 1 2 km
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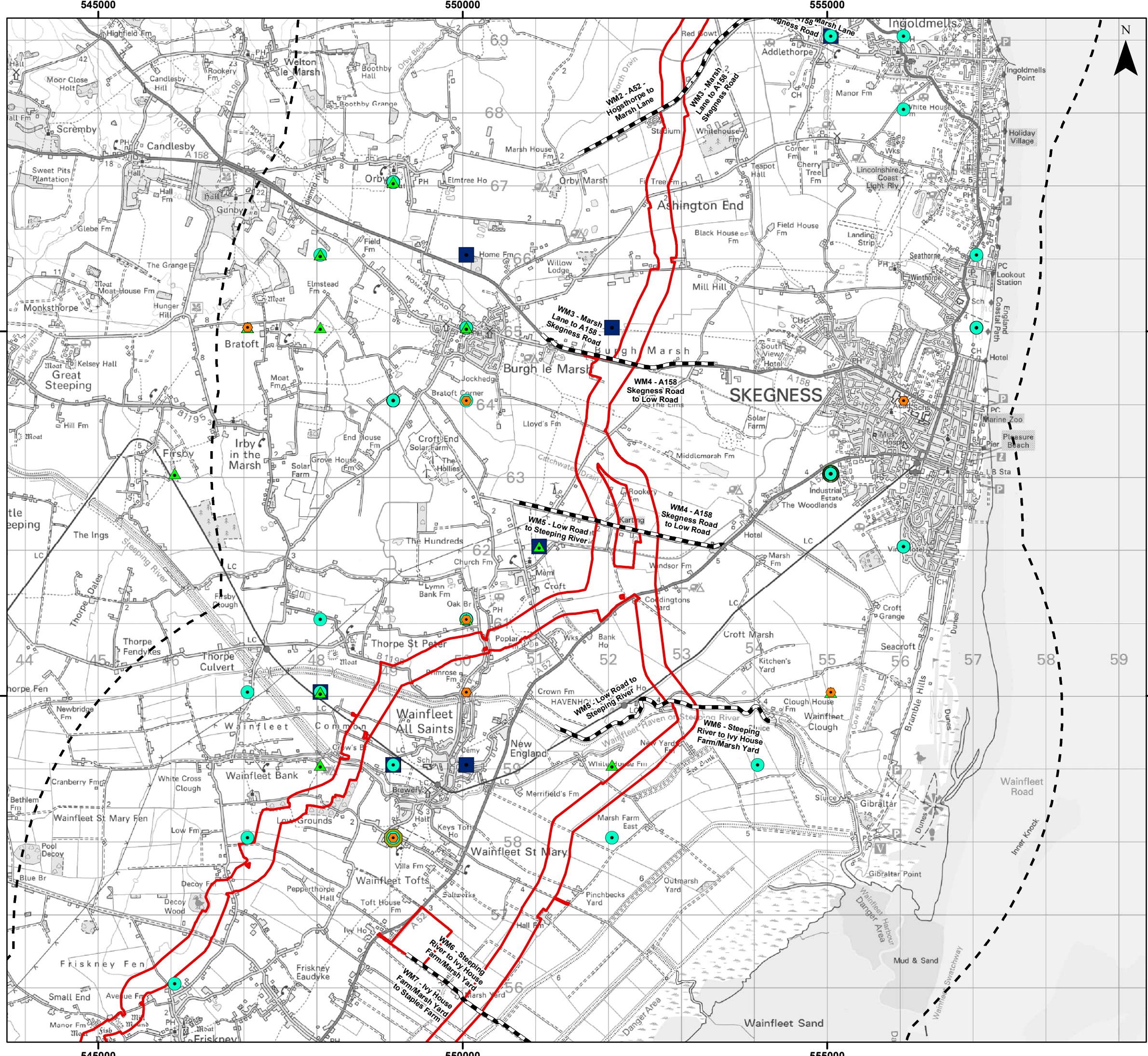
Preliminary Environmental Information Report
 Weston Marsh
 Protected and Notable Species Records
 Terrestrial Mammals - Bat Roosts
 Figure 21.1.16.1



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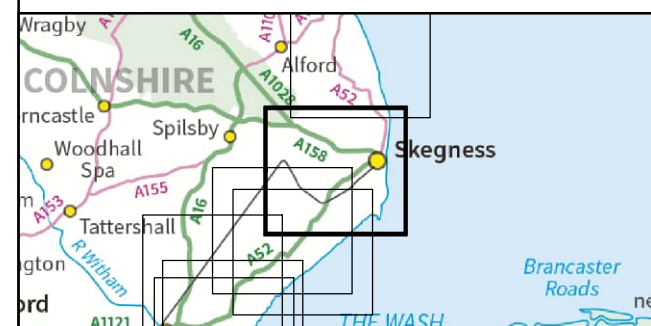
Legend

- Onshore PEIR Boundary
- Onshore Segment Break
- Onshore PEIR Boundary Weston Marsh (via South of the A52) 5 km Buffer

Local Records: Terrestrial Mammals (Bat Roosts)

- Common Pipistrelle Roost
- ▲ Brown Long-eared Bat Roost
- Pipistrelle Bat species Roost
- Bat Roost
- Pipistrelle Roost
- Soprano Pipistrelle Roost

Sources:
Local Records derived from data provided by Lincolnshire Environmental Records Centre (December 2022)



Coordinate System: British National Grid
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 Scale: 1:50,000

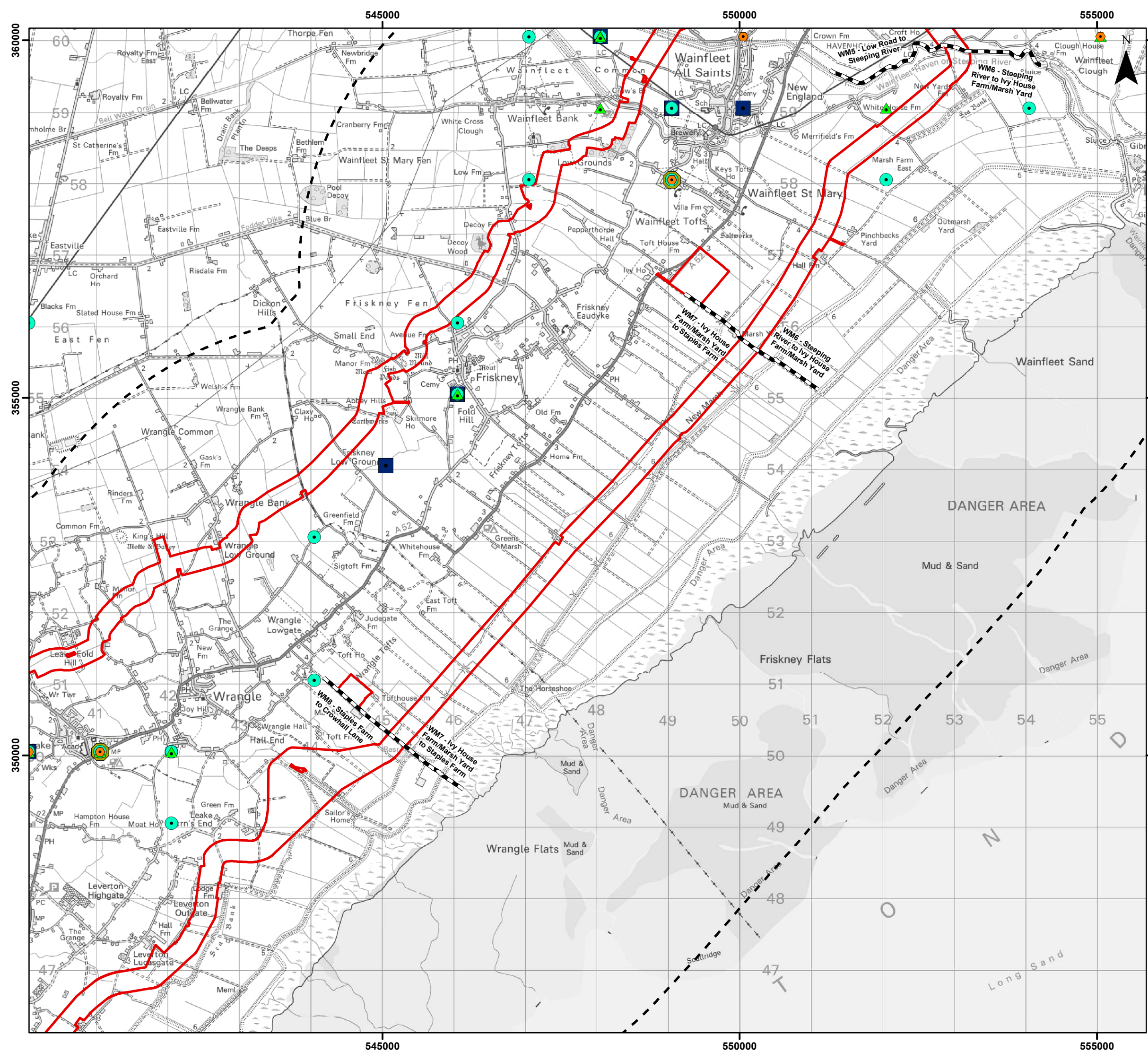
Preliminary Environmental Information Report
 Weston Marsh
 Protected and Notable Species Records
 Terrestrial Mammals - Bat Roosts
 Figure 21.1.16.2



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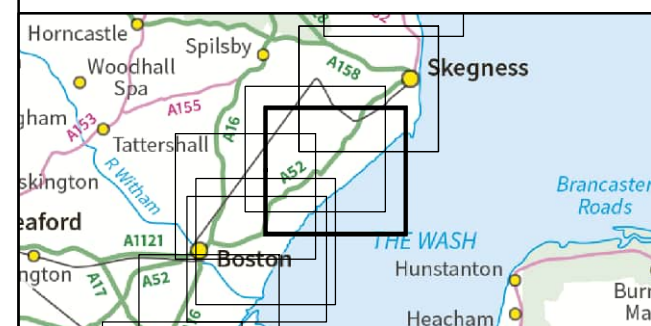
Legend

- Onshore PEIR Boundary
- Onshore Segment Break
- Onshore PEIR Boundary Weston Marsh (via South of the A52) 5 km Buffer

Local Records: Terrestrial Mammals (Bat Roosts)

- Common Pipistrelle Roost
- ▲ Brown Long-eared Bat Roost
- Pipistrelle Bat species Roost
- Bat Roost
- ⬡ Soprano Pipistrelle Roost

Sources:
Local Records derived from data provided by Lincolnshire Environmental Records Centre (December 2022)

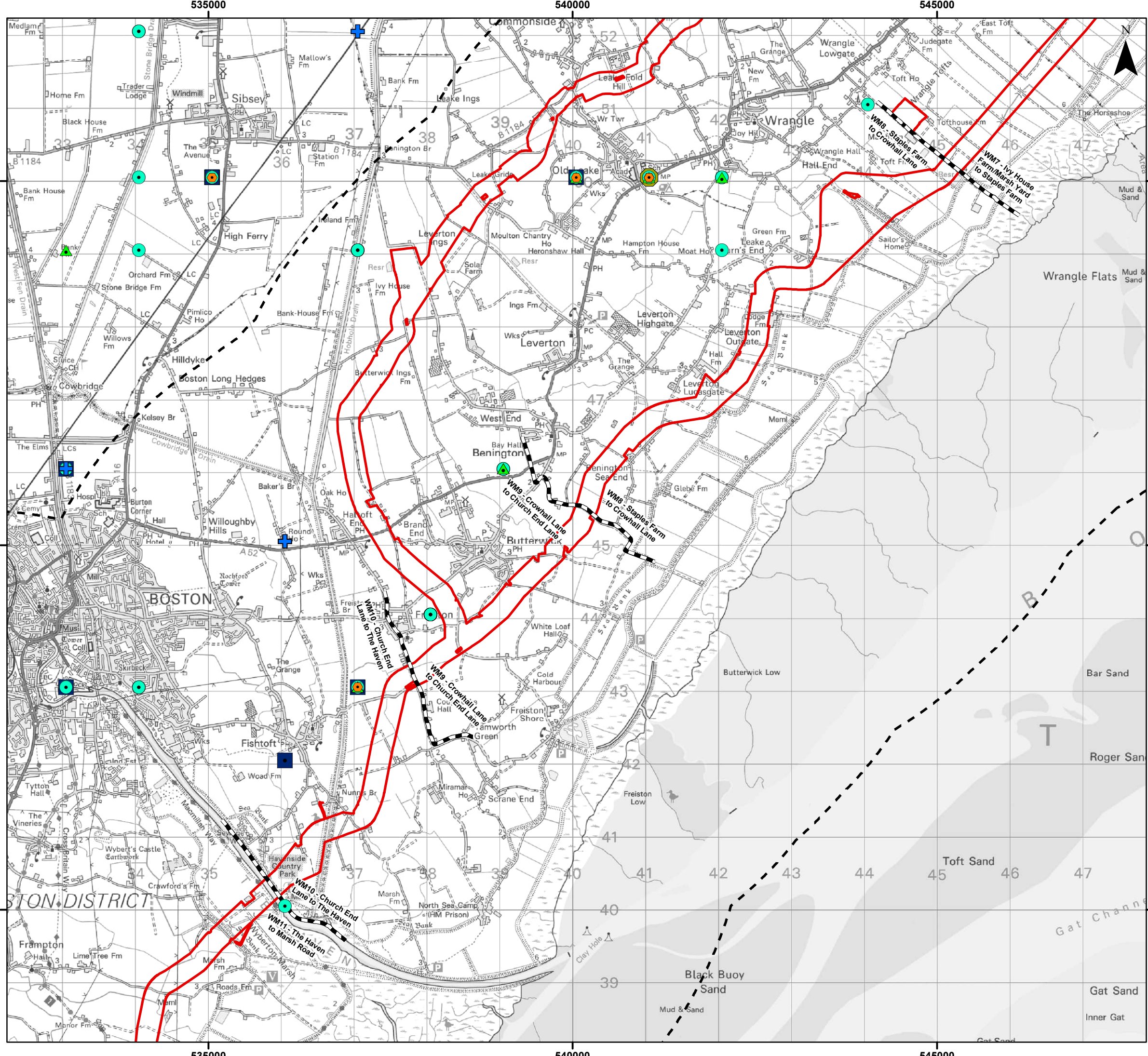


Coordinate System: British National Grid
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Preliminary Environmental Information Report
 Weston Marsh
 Protected and Notable Species Records
 Terrestrial Mammals - Bat Roosts
 Figure 21.1.16.3



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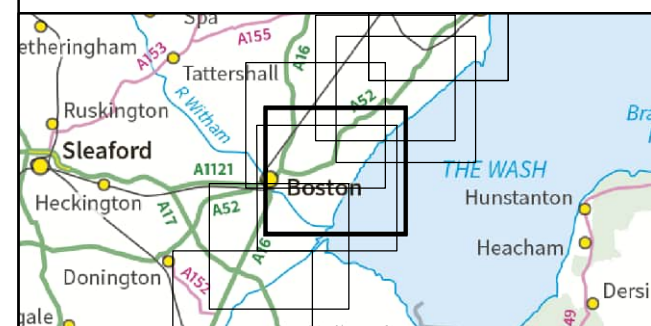
Legend

- Onshore PEIR Boundary
- Onshore Segment Break
- Onshore PEIR Boundary Weston Marsh (via South of the A52) 5 km Buffer

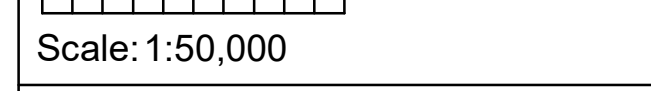
Local Records: Terrestrial Mammals (Bat Roosts)

- Common Pipistrelle Roost
- ▲ Brown Long-eared Bat Roost
- + Daubenton's Bat Roost
- Pipistrelle Bat species Roost
- Bat Roost
- ⬡ Soprano Pipistrelle Roost

Sources:
Local Records derived from data provided by Lincolnshire Environmental Records Centre (December 2022)



Coordinate System: British National Grid



Preliminary Environmental Information Report
Weston Marsh
Protected and Notable Species Records
Terrestrial Mammals - Bat Roosts
Figure 21.1.16.4

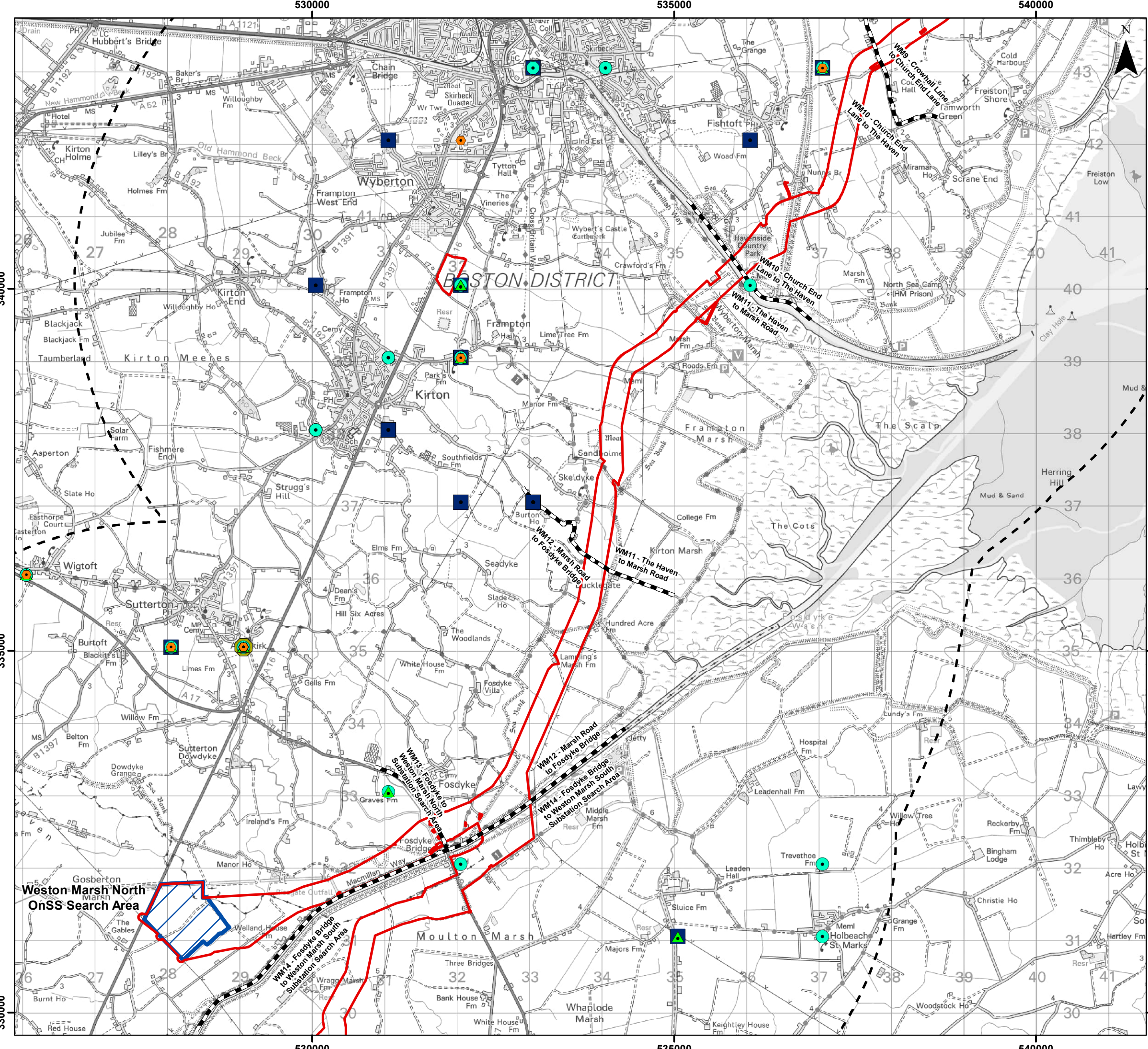


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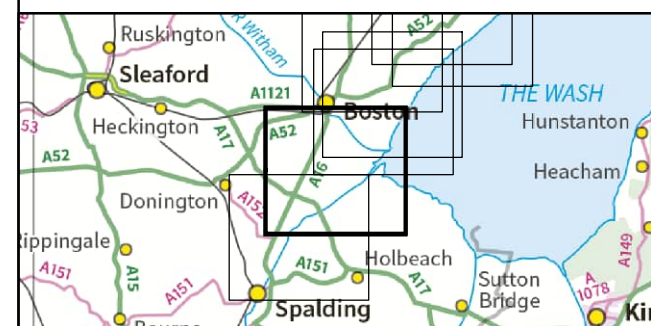
Legend

- Onshore PEIR Boundary
- Onshore Segment Break
- Weston Marsh North OnSS Search Area
- Onshore PEIR Boundary Weston Marsh (via South of the A52) 5 km Buffer

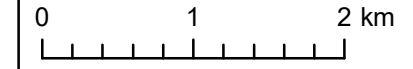
Local Records: Terrestrial Mammals (Bat Roosts)

- Common Pipistrelle Roost
- ▲ Brown Long-eared Bat Roost
- Pipistrelle Bat species Roost
- Bat Roost
- ⬡ Soprano Pipistrelle Roost

Sources:
Local Records derived from data provided by Lincolnshire Environmental Records Centre (December 2022)



Coordinate System: British National Grid



Scale: 1:50,000

Preliminary Environmental Information Report

Weston Marsh
Protected and Notable Species Records
Terrestrial Mammals - Bat Roosts
Figure 21.1.16.5

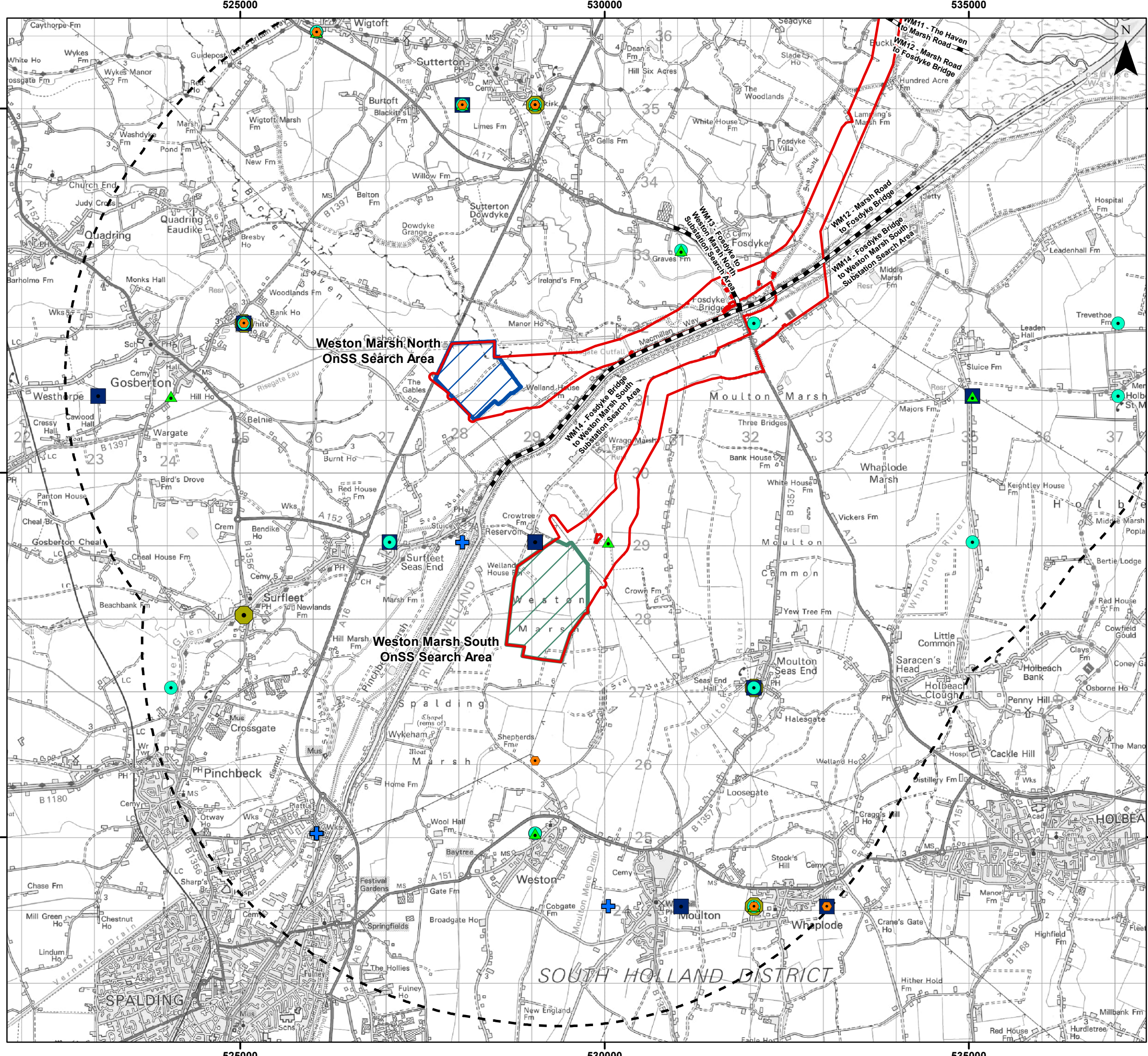


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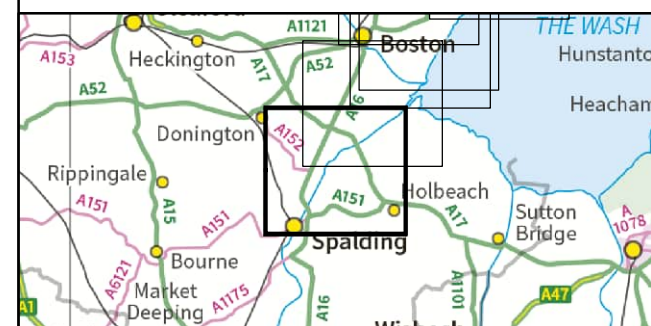
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- Legend**
- Onshore PEIR Boundary
 - Onshore Segment Break
 - Weston Marsh North OnSS Search Area
 - Weston Marsh South OnSS Search Area
 - Onshore PEIR Boundary Weston Marsh (via South of the A52) 5 km Buffer
- Local Records: Terrestrial Mammals (Bat Roosts)**
- Common Pipistrelle Roost
 - ▲ Brown Long-eared Bat Roost
 - + Daubenton's Bat Roost
 - Pipistrelle Bat species Roost
 - Bat Roost
 - Soprano Pipistrelle Roost

Sources:
Local Records derived from data provided by Lincolnshire Environmental Records Centre (December 2022)



Coordinate System: British National Grid
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 Scale: 1:50,000

Preliminary Environmental Information Report
 Weston Marsh
 Protected and Notable Species Records
 Terrestrial Mammals - Bat Roosts
 Figure 21.1.16.6

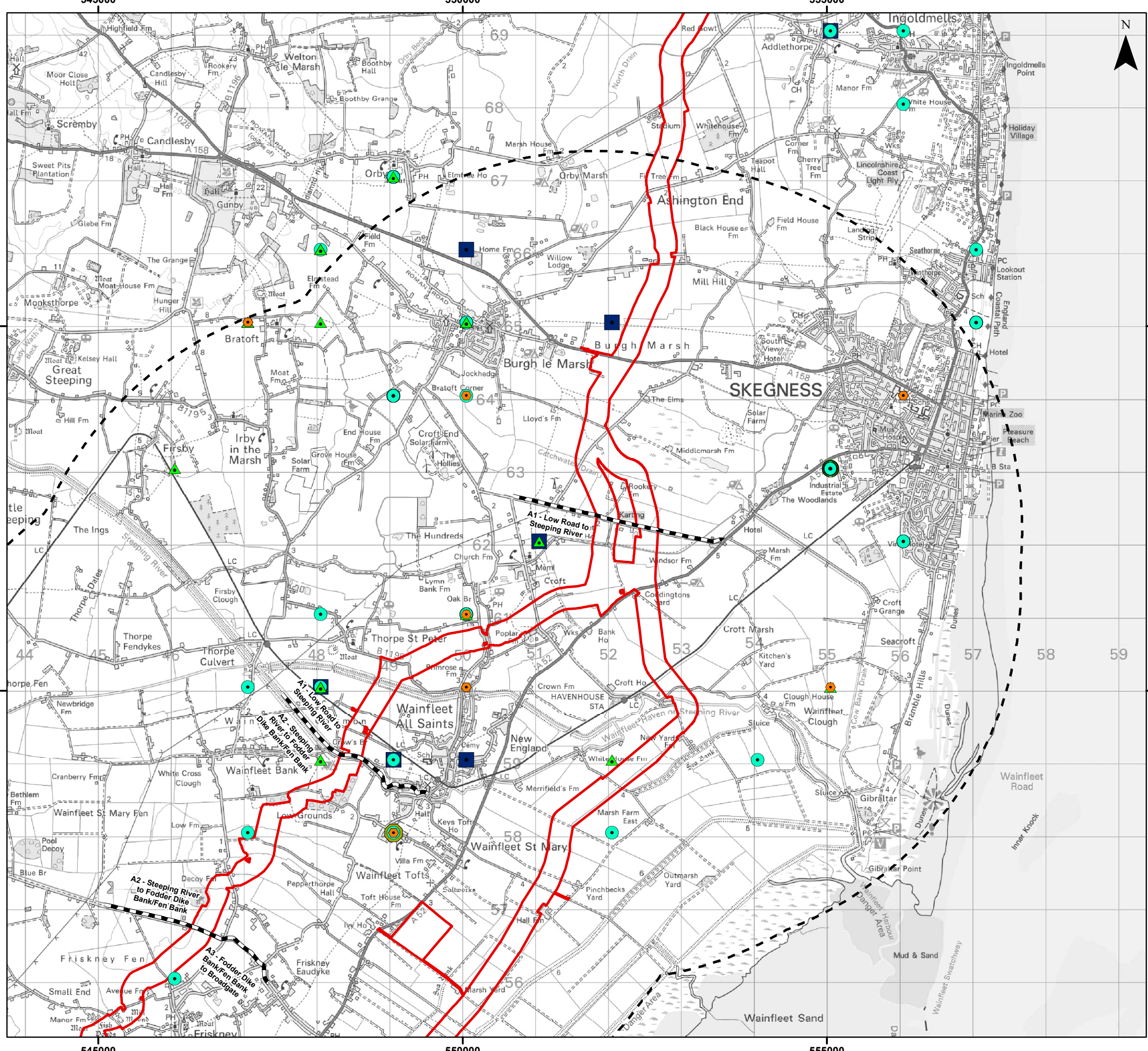


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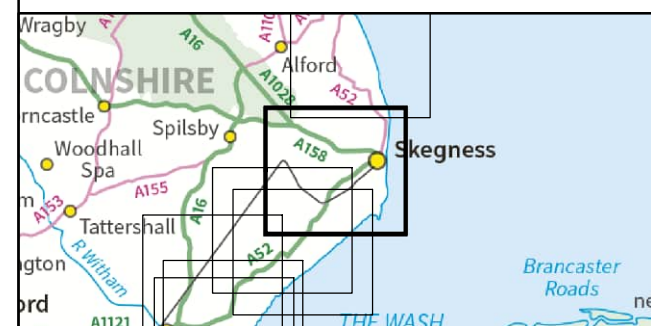
Legend

- Onshore PEIR Boundary
- Onshore Segment Break
- Onshore PEIR Boundary Weston Marsh (via North of the A52) 5 km Buffer

Local Records: Terrestrial Mammals (Bat Roosts)

- Common Pipistrelle Roost
- ▲ Brown Long-eared Bat Roost
- Pipistrelle Bat species Roost
- Bat Roost
- Pipistrelle Roost
- Soprano Pipistrelle Roost

Sources:
Local Records derived from data provided by Lincolnshire Environmental Records Centre (December 2022)



Coordinate System: British National Grid
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 Scale: 1:50,000

Preliminary Environmental Information Report
 Weston Marsh
 Protected and Notable Species Records
 Terrestrial Mammals - Bat Roosts
 Figure 21.1.16.7

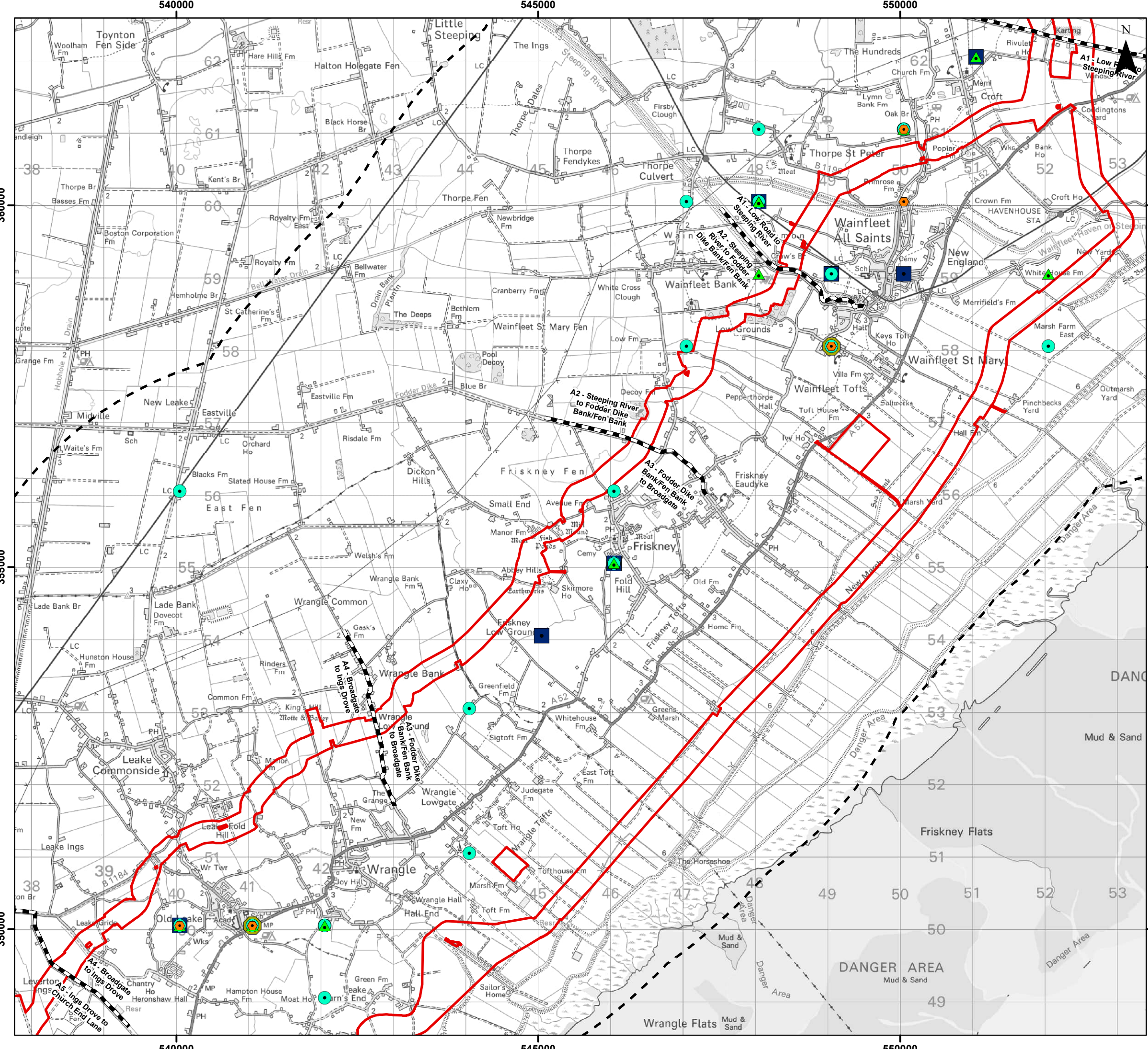


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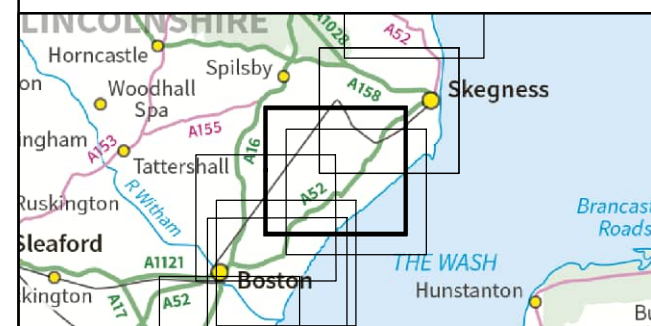
Legend

- Onshore PEIR Boundary
- Onshore Segment Break
- Onshore PEIR Boundary Weston Marsh (via North of the A52) 5 km Buffer

Local Records: Terrestrial Mammals (Bat Roosts)

- Common Pipistrelle Roost
- ▲ Brown Long-eared Bat Roost
- Pipistrelle Bat species Roost
- Bat Roost
- Soprano Pipistrelle Roost

Sources:
Local Records derived from data provided by Lincolnshire Environmental Records Centre (December 2022)



Coordinate System: British National Grid
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 Scale: 1:50,000

Preliminary Environmental Information Report
 Weston Marsh
 Protected and Notable Species Records
 Terrestrial Mammals - Bat Roosts
 Figure 21.1.16.8

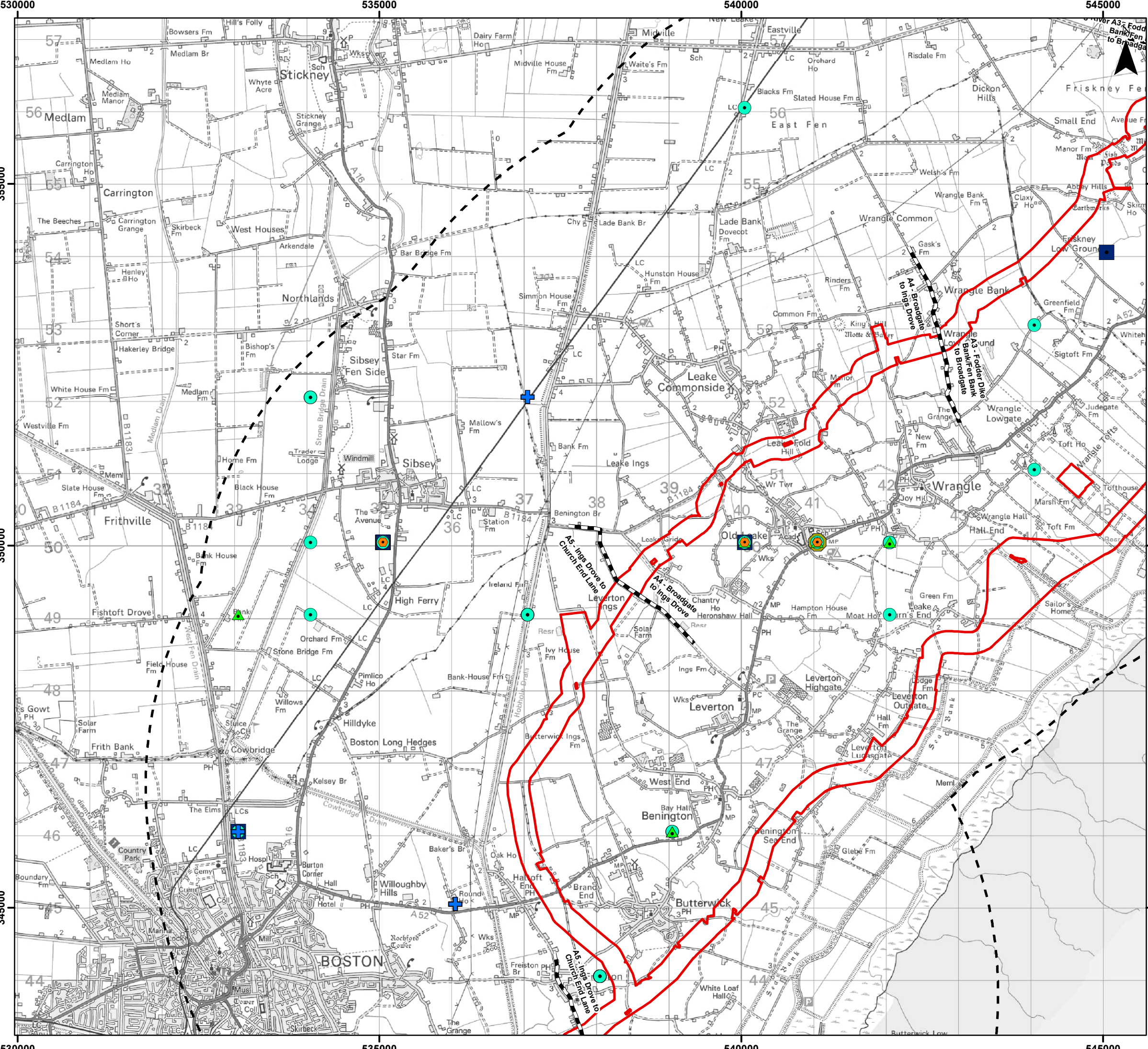




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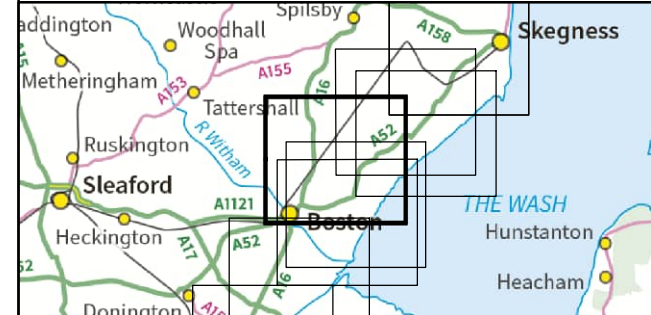
Legend

- Onshore PEIR Boundary
- Onshore Segment Break
- Onshore PEIR Boundary Weston Marsh (via North of the A52) 5 km Buffer

Local Records: Terrestrial Mammals (Bat Roosts)

- Common Pipistrelle Roost
- ▲ Brown Long-eared Bat Roost
- + Daubenton's Bat Roost
- Pipistrelle Bat species Roost
- Bat Roost
- ⬡ Soprano Pipistrelle Roost

Sources:
Local Records derived from data provided by Lincolnshire Environmental Records Centre (December 2022)



Coordinate System: British National Grid
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 Scale: 1:50,000

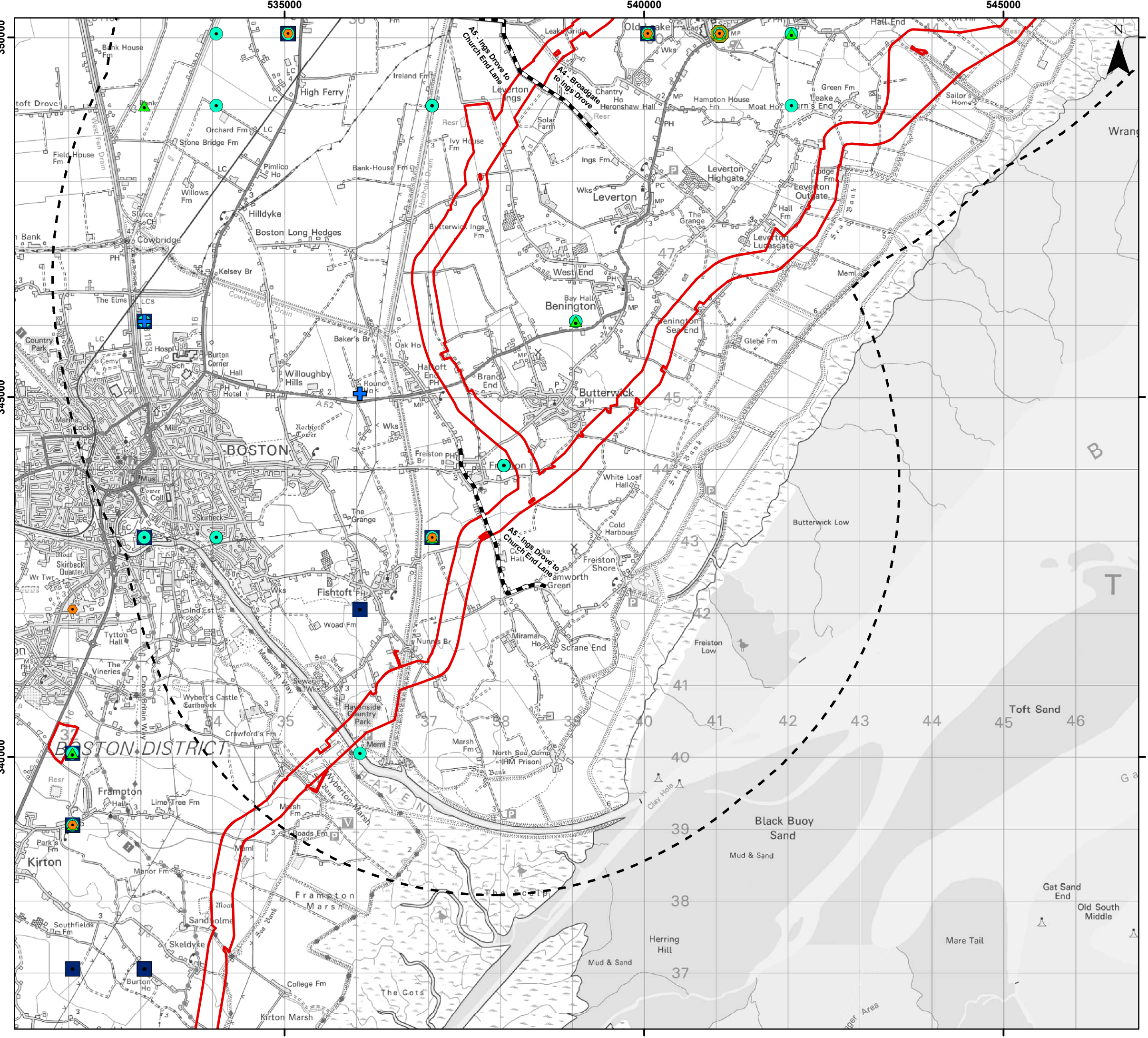
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 Weston Marsh
 Protected and Notable Species Records
 Terrestrial Mammals - Bat Roosts
 Figure 21.1.16.9



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Legend

- Onshore PEIR Boundary
- Onshore Segment Break
- Onshore PEIR Boundary Weston Marsh (via North of the A52) 5 km Buffer

Local Records: Terrestrial Mammals (Bat Roosts)

- Common Pipistrelle Roost
- ▲ Brown Long-eared Bat Roost
- + Daubenton's Bat Roost
- Pipistrelle Bat species Roost
- Bat Roost
- Soprano Pipistrelle Roost

Sources:
Local Records derived from data provided by Lincolnshire Environmental Records Centre (December 2022)



Coordinate System: British National Grid
0 1 2 km

Scale: 1:50,000

Preliminary Environmental Information Report
Weston Marsh
Protected and Notable Species Records
Terrestrial Mammals - Bat Roosts
Figure 21.1.16.10

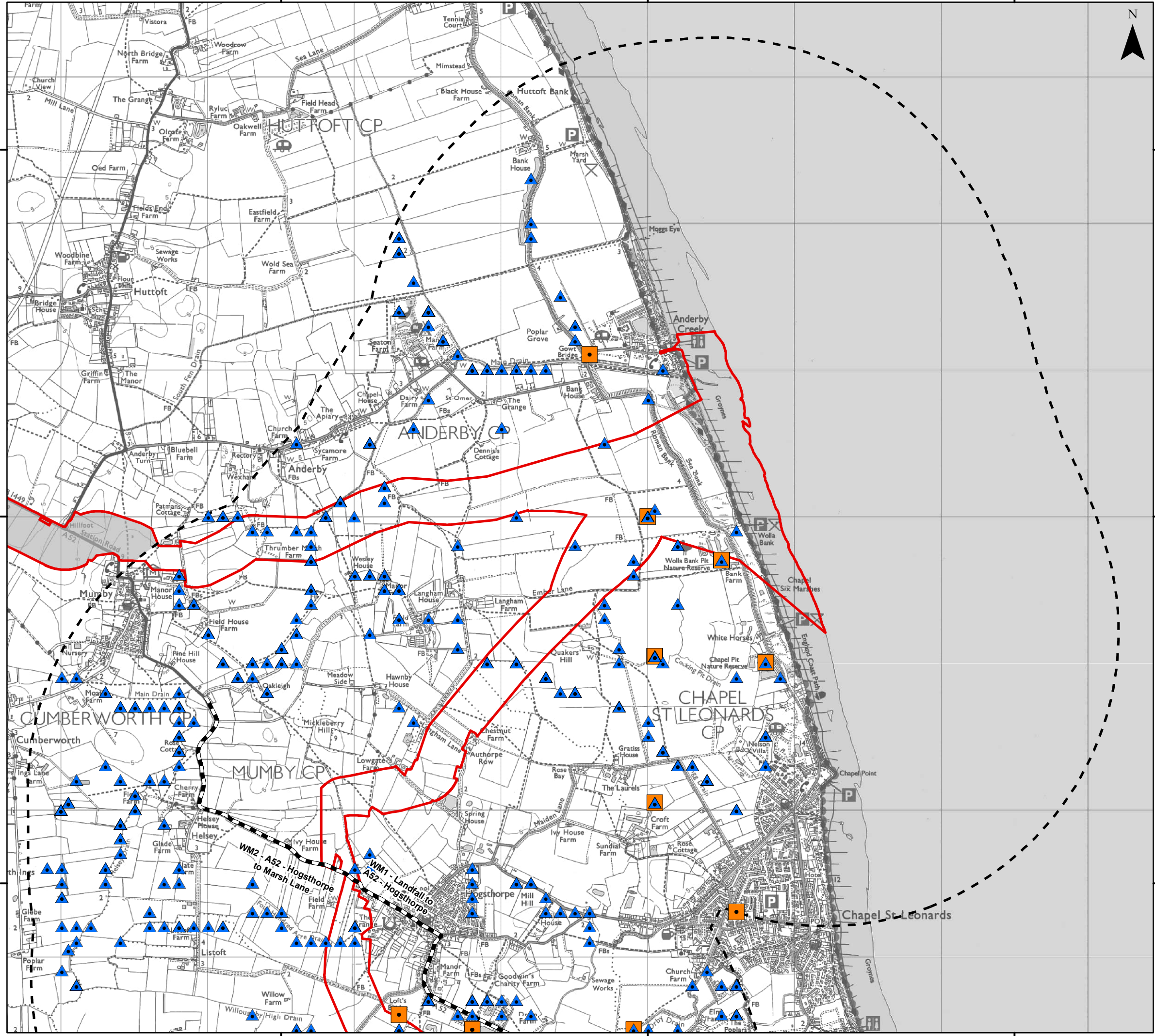


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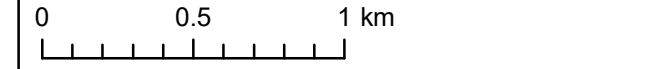
Legend

-  Onshore PEIR Boundary
-  Onshore Segment Break
-  Onshore PEIR Boundary (Weston Marsh via South of the A52) 2 km Buffer
- Local Records: Riparian Mammals**
-  European Water Vole
-  Eurasian Otter

Sources:
Local Records derived from data provided by Lincolnshire Environmental Records Centre (December 2022)



Coordinate System: British National Grid



Scale: 1:25,000

Preliminary Environmental Information Report

Weston Marsh
Protected and Notable Species Records
Riparian Mammals
Figure 21.1.17.1



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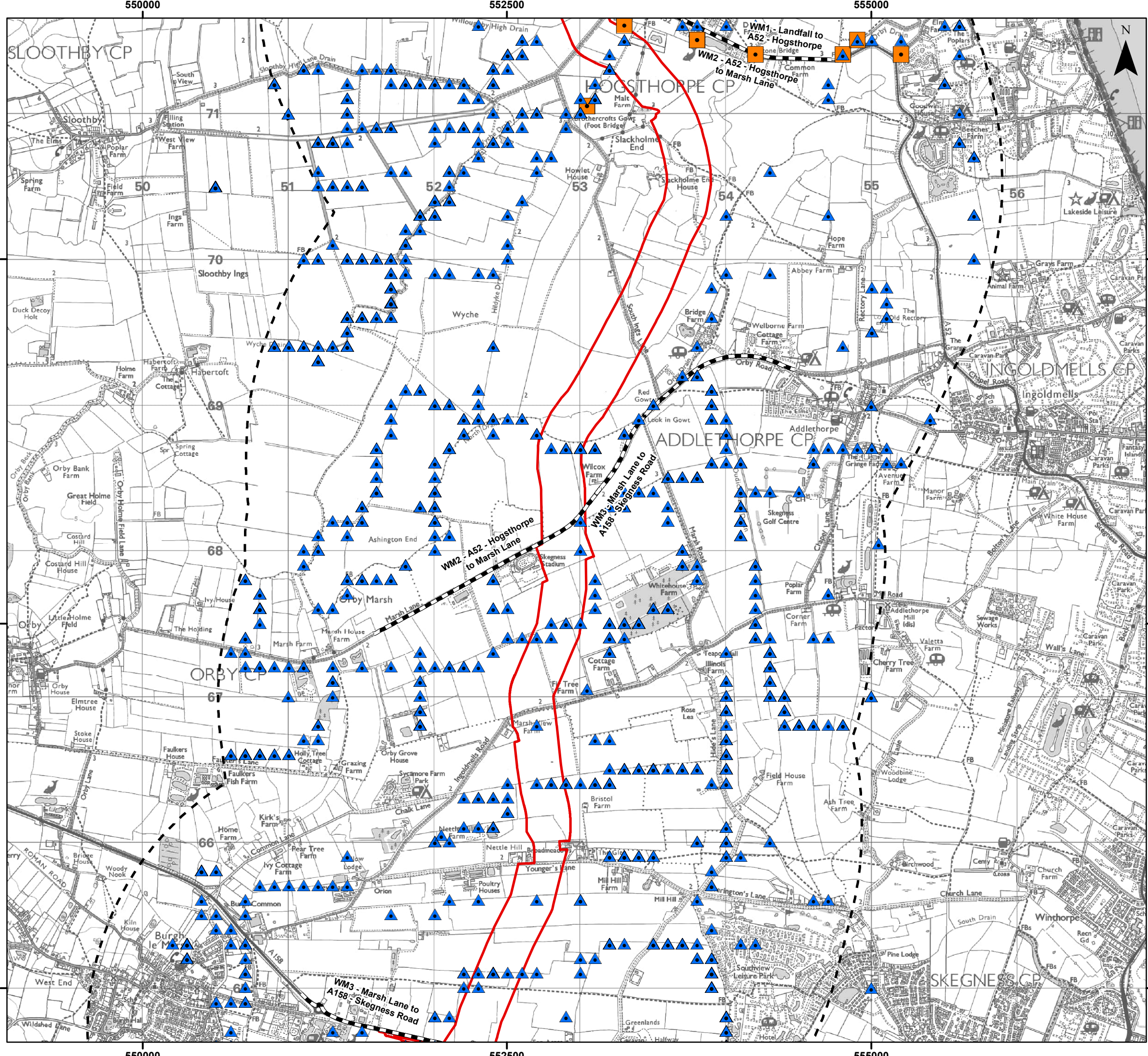
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Legend

- Onshore PEIR Boundary
- Onshore Segment Break
- Onshore PEIR Boundary (Weston Marsh via South of the A52) 2 km Buffer

Local Records: Riparian Mammals

- ▲ European Water Vole
- Eurasian Otter

Sources:
Local Records derived from data provided by Lincolnshire Environmental Records Centre (December 2022)



Coordinate System: British National Grid
 0 0.5 1 km
 Scale: 1:25,000

Preliminary Environmental Information Report
 Weston Marsh
 Protected and Notable Species Records
 Riparian Mammals
 Figure 21.1.17.2

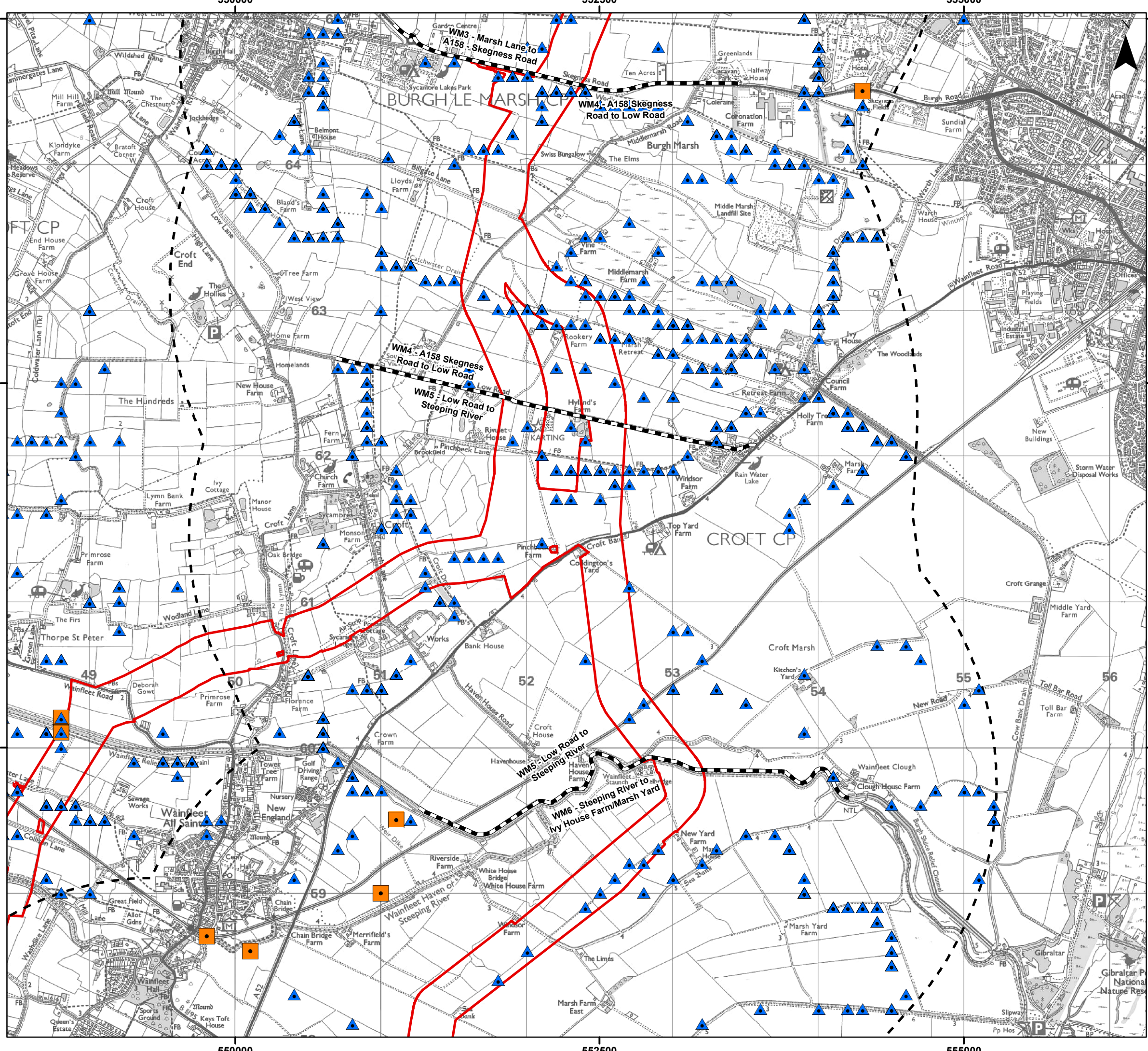


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Legend

- Onshore PEIR Boundary
- Onshore Segment Break
- Onshore PEIR Boundary (Weston Marsh via South of the A52) 2 km Buffer

Local Records: Riparian Mammals

- ▲ European Water Vole
- Eurasian Otter

Sources:
Local Records derived from data provided by Lincolnshire Environmental Records Centre (December 2022)



Coordinate System: British National Grid
0 0.5 1 km

Scale: 1:25,000

Preliminary Environmental Information Report
Weston Marsh
Protected and Notable Species Records
Riparian Mammals
Figure 21.1.17.3

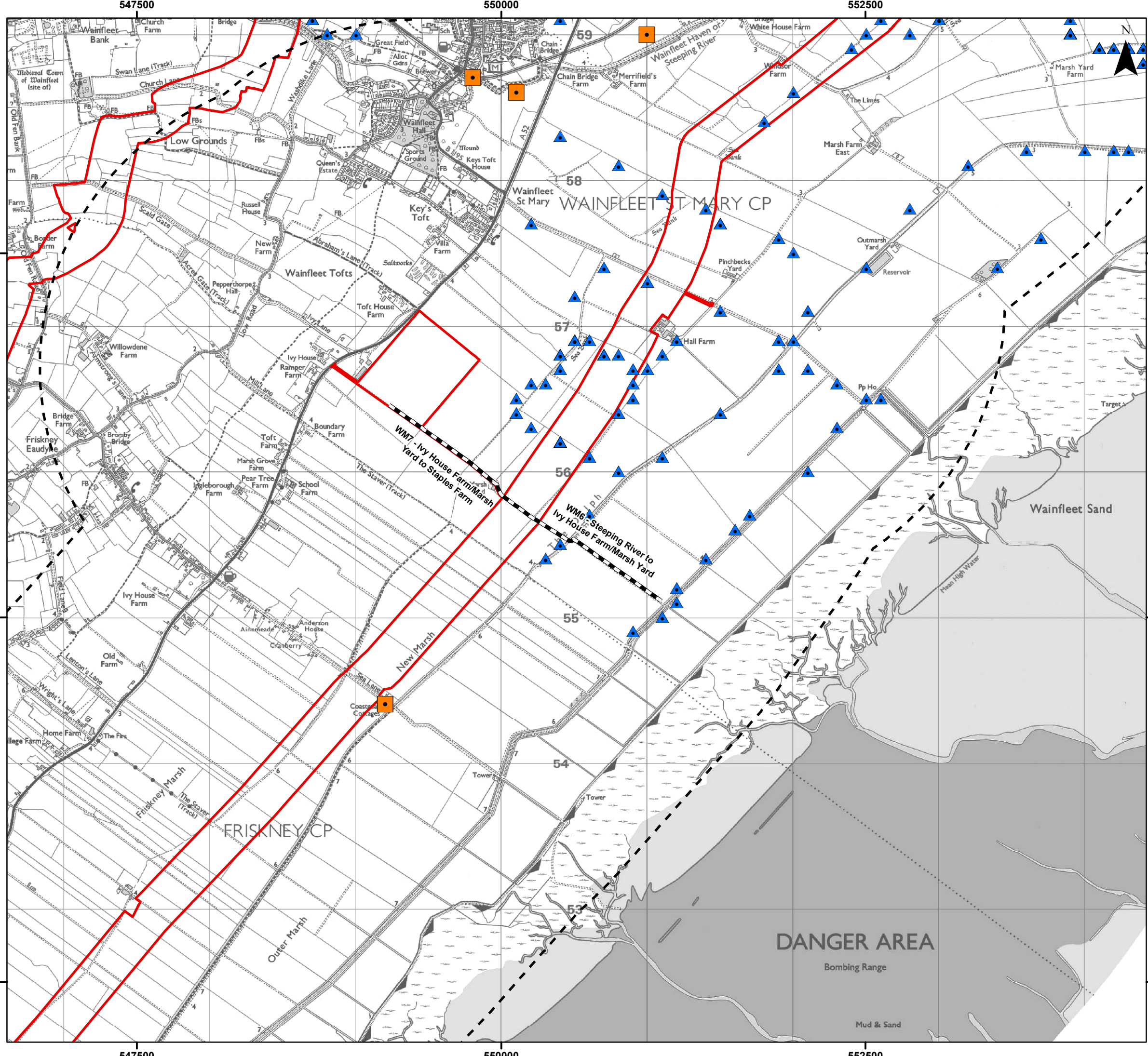


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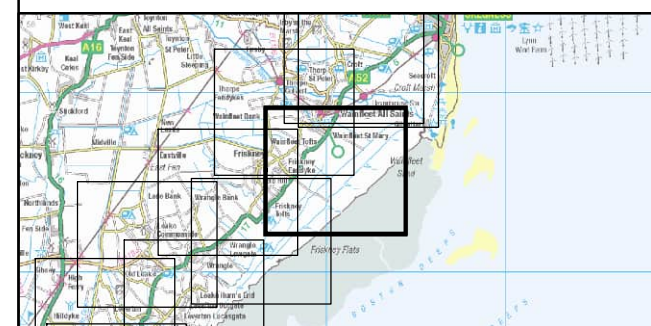
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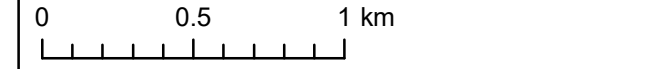
Legend

- Onshore PEIR Boundary
- Onshore Segment Break
- Onshore PEIR Boundary (Weston Marsh via South of the A52) 2 km Buffer
- Local Records: Riparian Mammals**
- ▲ European Water Vole
- Eurasian Otter

Sources:
Local Records derived from data provided by Lincolnshire Environmental Records Centre (December 2022)



Coordinate System: British National Grid



Scale: 1:25,000

Preliminary Environmental Information Report

Weston Marsh
Protected and Notable Species Records
Riparian Mammals
Figure 21.1.17.4

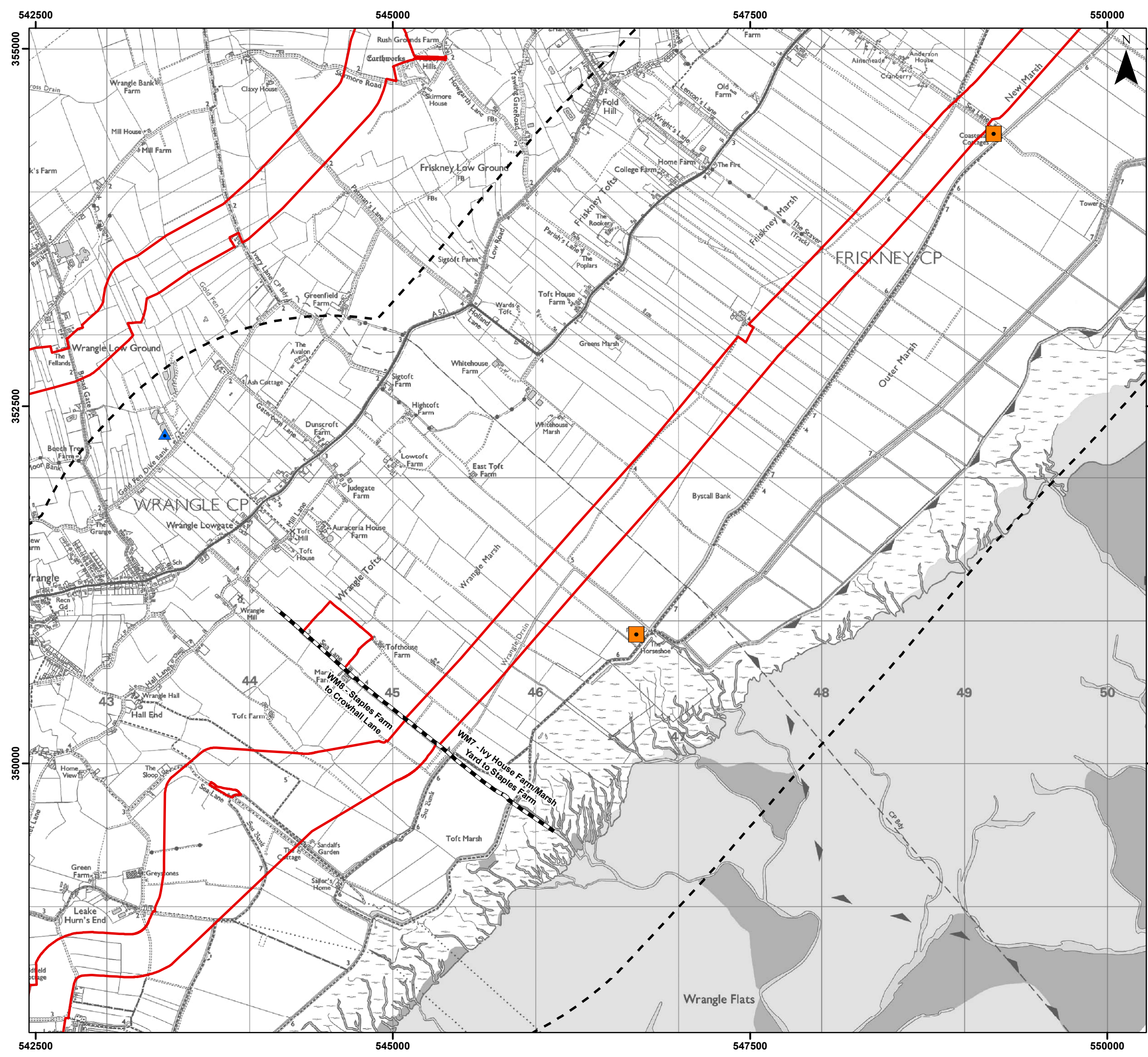


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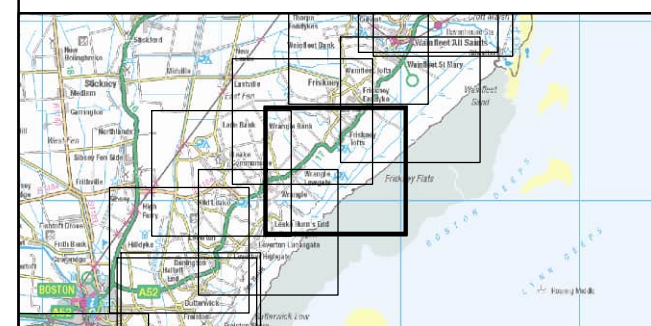
Legend

- Onshore PEIR Boundary
- Onshore Segment Break
- Onshore PEIR Boundary (Weston Marsh via South of the A52) 2 km Buffer

Local Records: Riparian Mammals

- ▲ European Water Vole
- Eurasian Otter

Sources:
Local Records derived from data provided by Lincolnshire Environmental Records Centre (December 2022)



Coordinate System: British National Grid
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 Scale: 1:25,000

Preliminary Environmental Information Report
 Weston Marsh
 Protected and Notable Species Records
 Riparian Mammals
 Figure 21.1.17.5

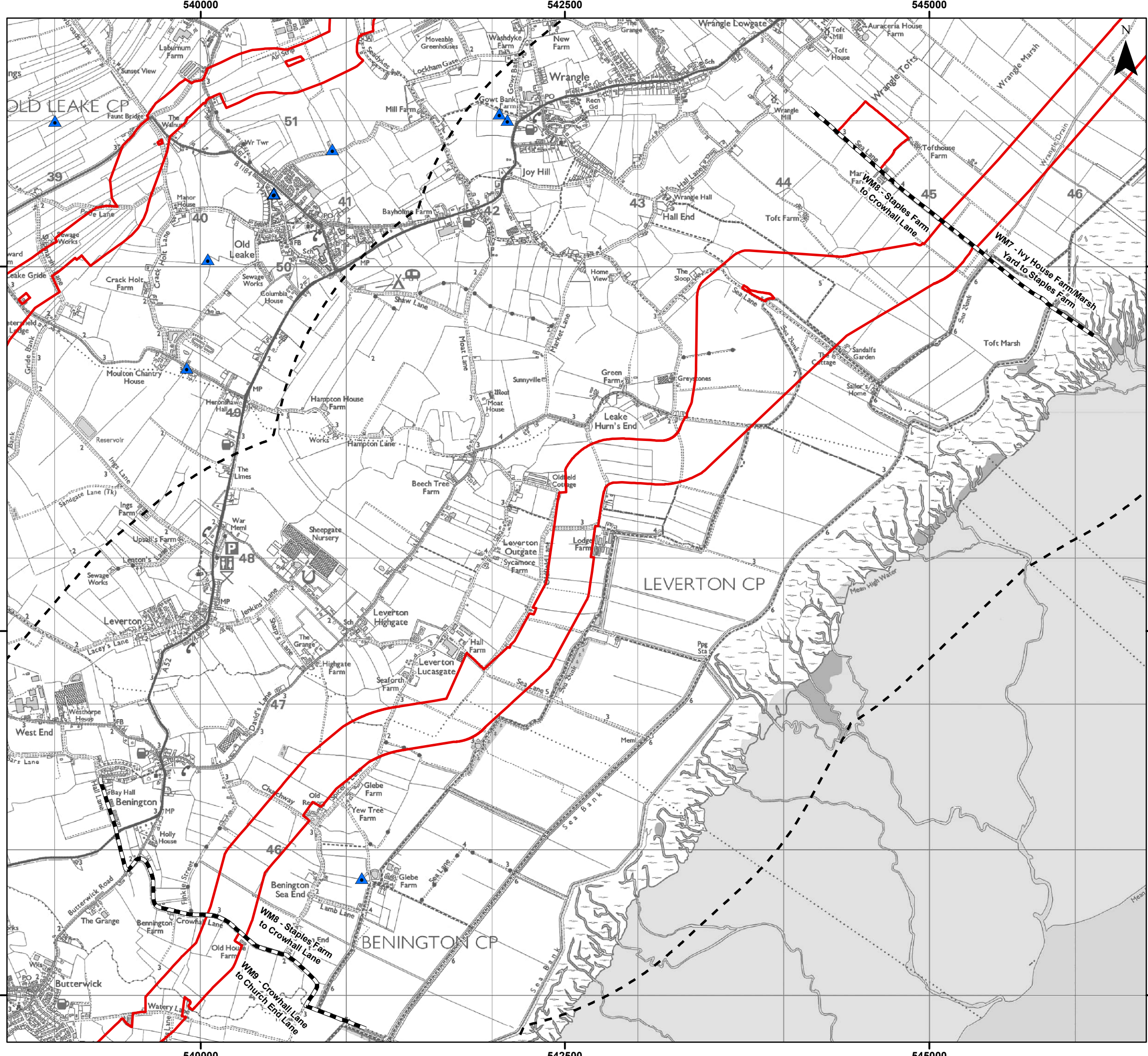


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Legend

- Onshore PEIR Boundary
- Onshore Segment Break
- Onshore PEIR Boundary (Weston Marsh via South of the A52) 2 km Buffer

Local Records: Riparian Mammals

- ▲ European Water Vole

Sources:
Local Records derived from data provided by Lincolnshire Environmental Records Centre (December 2022)



Coordinate System: British National Grid
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 Scale: 1:25,000

Preliminary Environmental Information Report
 Weston Marsh
 Protected and Notable Species Records
 Riparian Mammals
 Figure 21.1.17.6

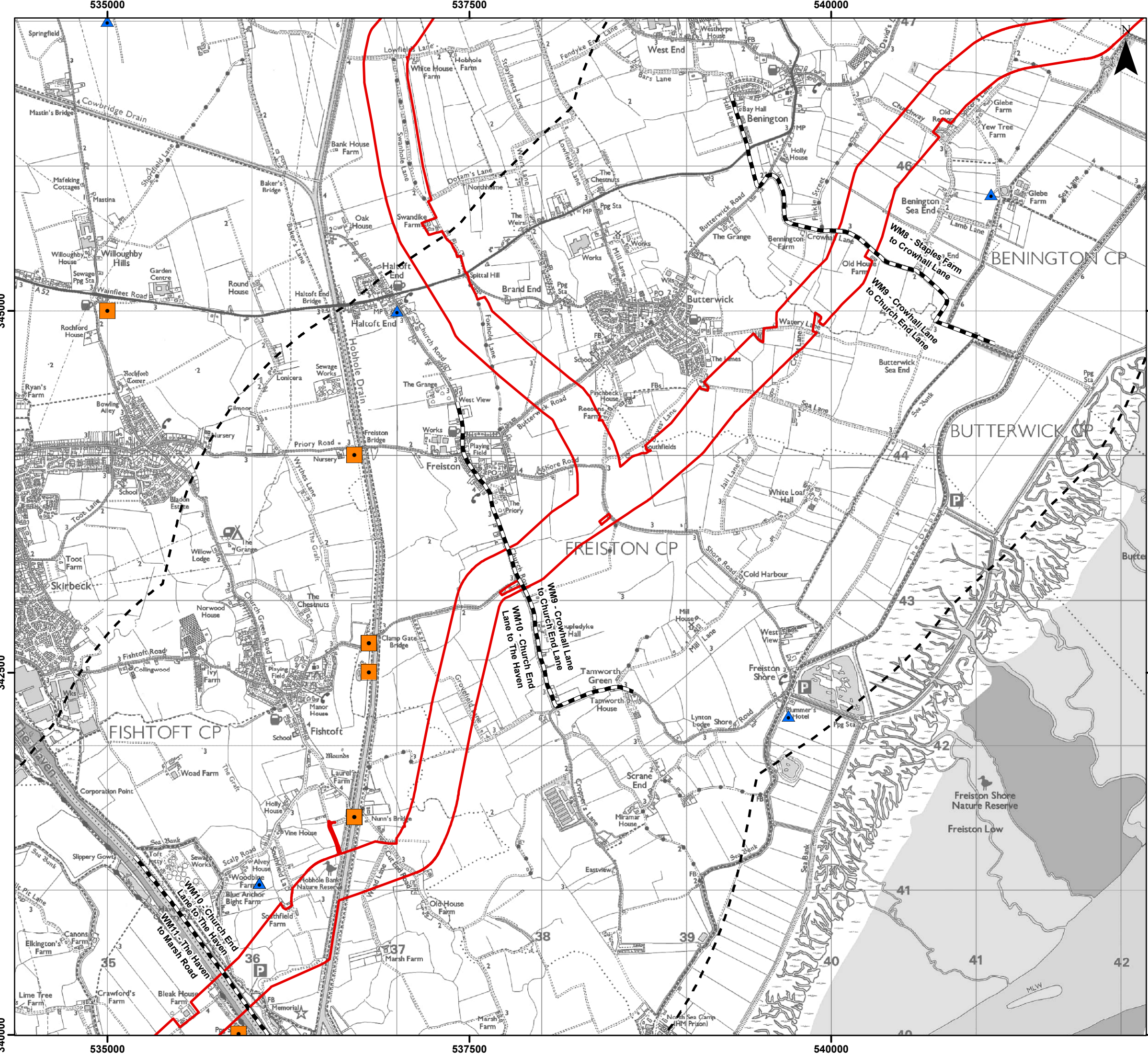


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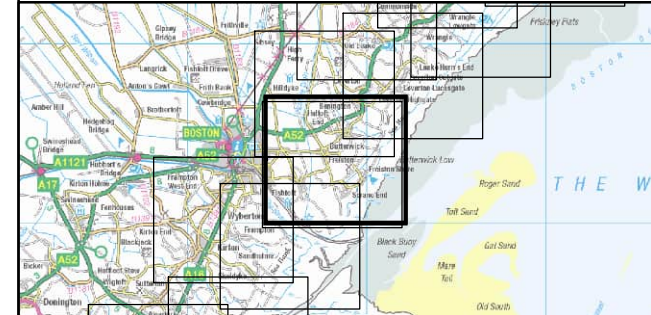
Legend

- Onshore PEIR Boundary
- Onshore Segment Break
- Onshore PEIR Boundary (Weston Marsh via South of the A52) 2 km Buffer

Local Records: Riparian Mammals

- ▲ European Water Vole
- Eurasian Otter

Sources:
Local Records derived from data provided by Lincolnshire Environmental Records Centre (December 2022)



Coordinate System: British National Grid
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 Scale: 1:25,000

Preliminary Environmental Information Report
 Weston Marsh
 Protected and Notable Species Records
 Riparian Mammals
 Figure 21.1.17.7

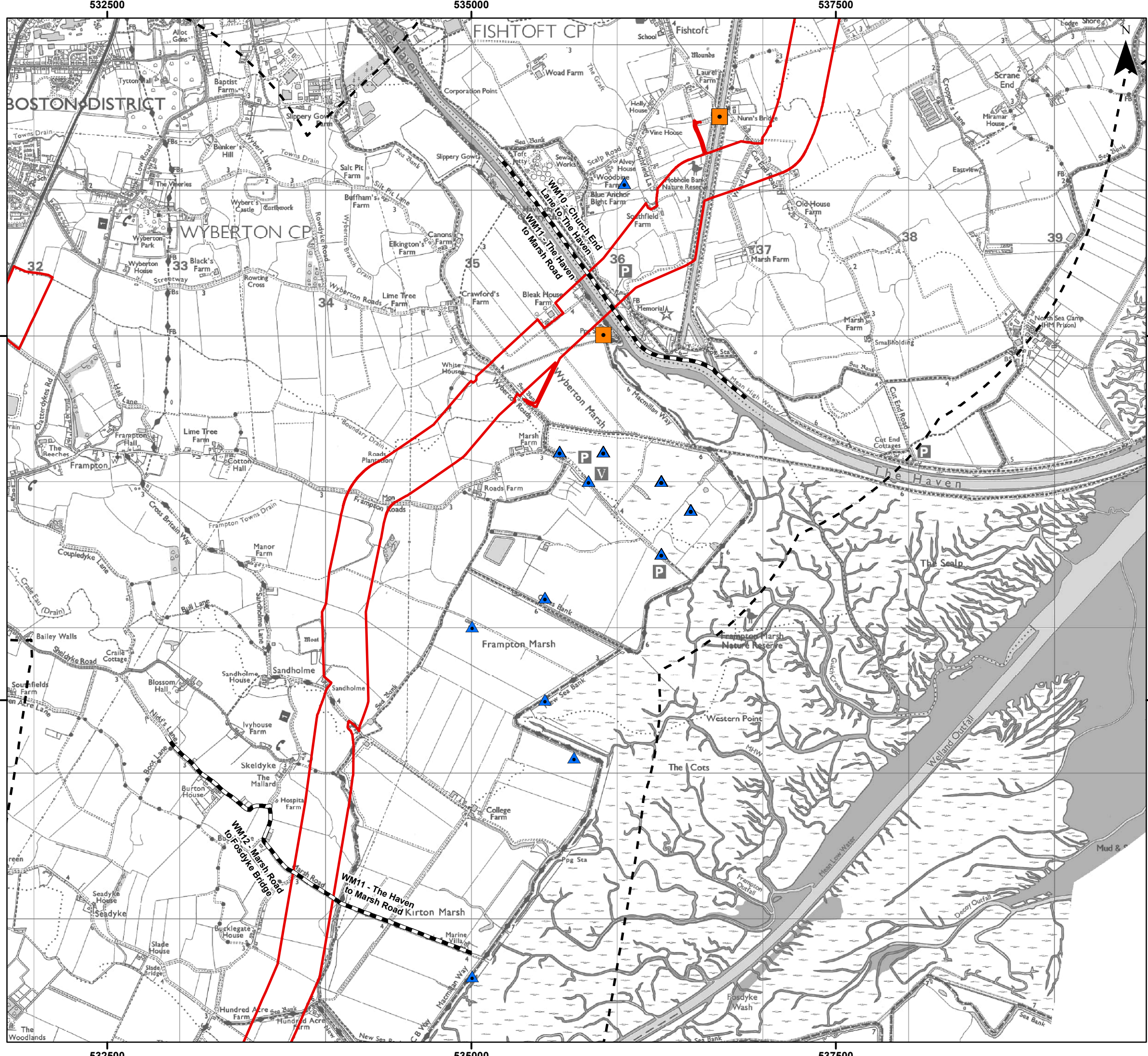


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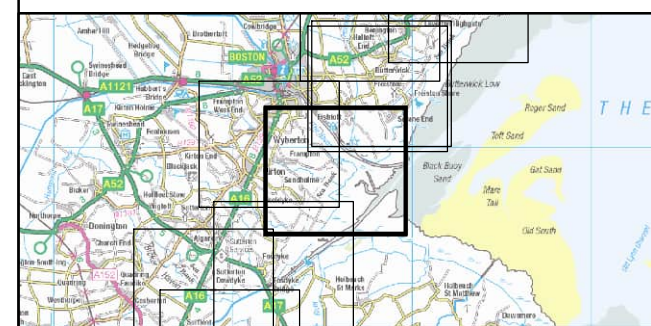
Legend

- Onshore PEIR Boundary
- Onshore Segment Break
- Onshore PEIR Boundary (Weston Marsh via South of the A52) 2 km Buffer

Local Records: Riparian Mammals

- ▲ European Water Vole
- Eurasian Otter

Sources:
Local Records derived from data provided by Lincolnshire Environmental Records Centre (December 2022)



Coordinate System: British National Grid
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Scale: 1:25,000

Preliminary Environmental Information Report
Weston Marsh
Protected and Notable Species Records
Riparian Mammals
Figure 21.1.17.8



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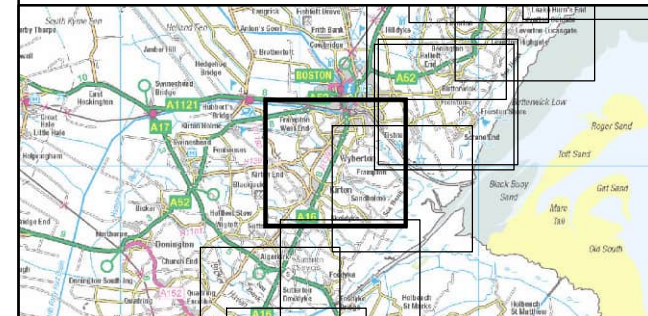
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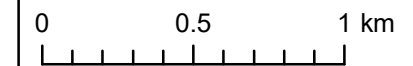
Legend

- Onshore PEIR Boundary
- Onshore Segment Break
- Onshore PEIR Boundary (Weston Marsh via South of the A52) 2 km Buffer
- Local Records: Riparian Mammals**
- ▲ European Water Vole
- Eurasian Otter

Sources:
Local Records derived from data provided by Lincolnshire Environmental Records Centre (December 2022)



Coordinate System: British National Grid



Scale: 1:25,000

Preliminary Environmental Information Report

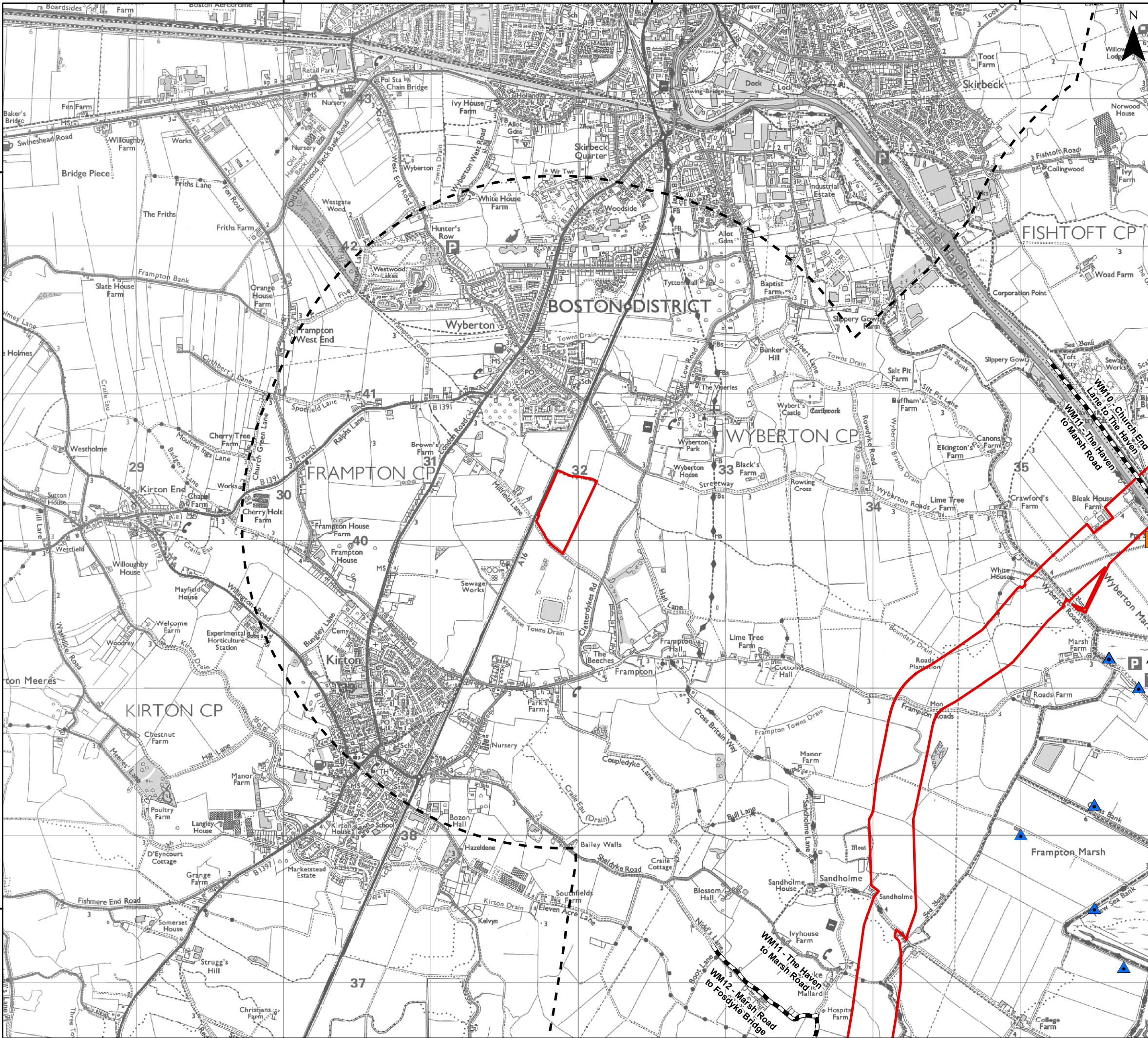
Weston Marsh
Protected and Notable Species Records
Riparian Mammals
Figure 21.1.17.9



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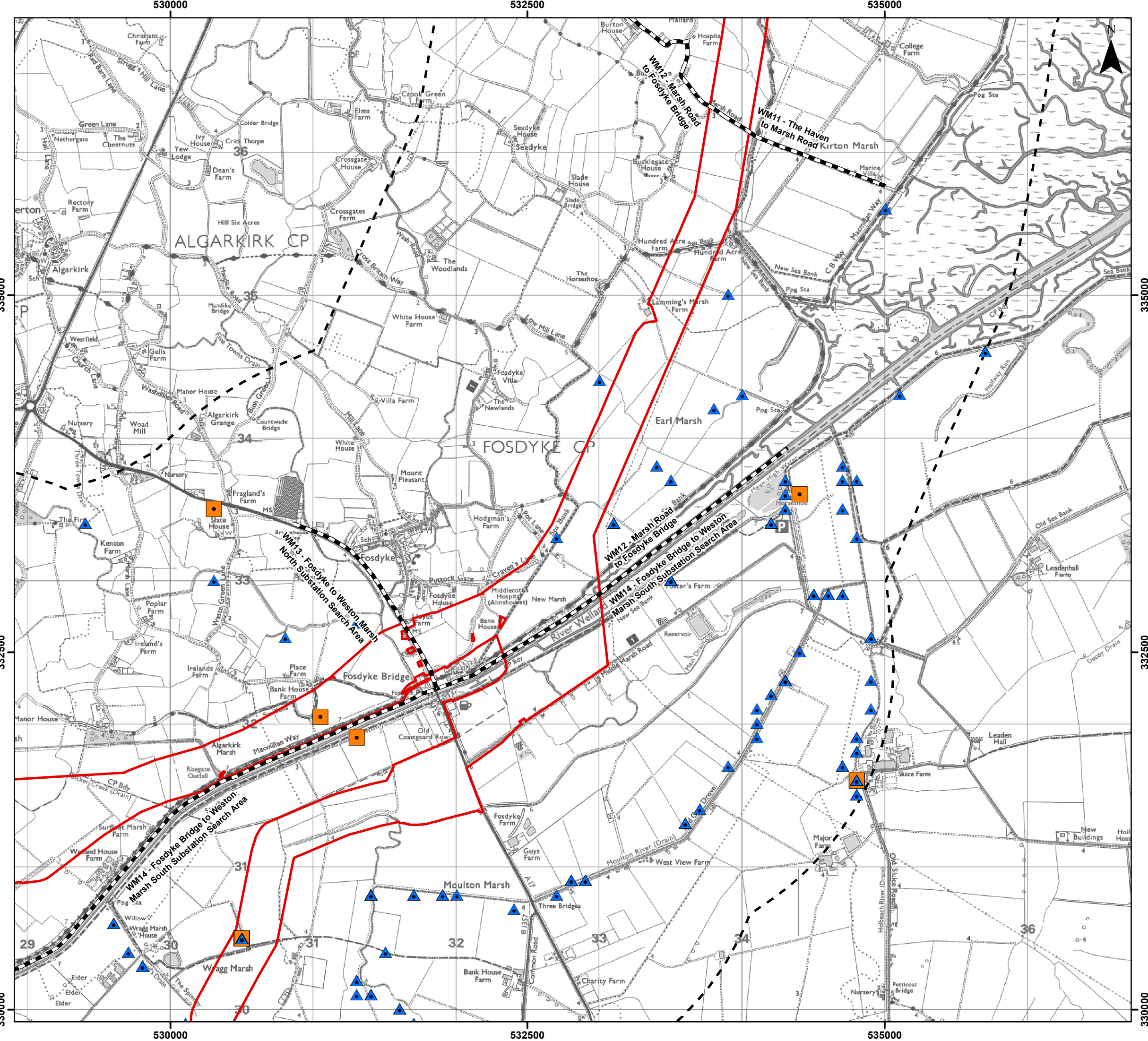


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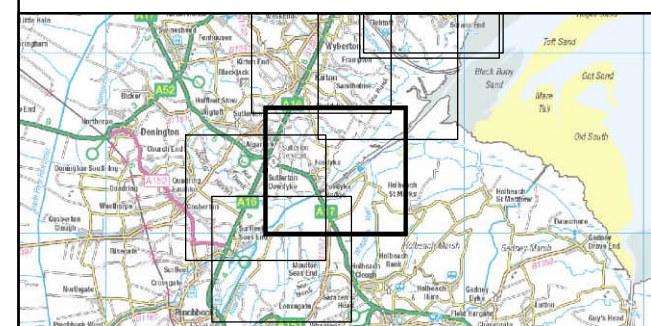
Legend

- Onshore PEIR Boundary
- Onshore Segment Break
- Onshore PEIR Boundary (Weston Marsh via South of the A52) 2 km Buffer

Local Records: Riparian Mammals

- ▲ European Water Vole
- Eurasian Otter

Sources:
Local Records derived from data provided by Lincolnshire Environmental Records Centre (December 2022)



Coordinate System: British National Grid
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 Scale: 1:25,000

Preliminary Environmental Information Report
 Weston Marsh
 Protected and Notable Species Records
 Riparian Mammals
 Figure 21.1.17.10

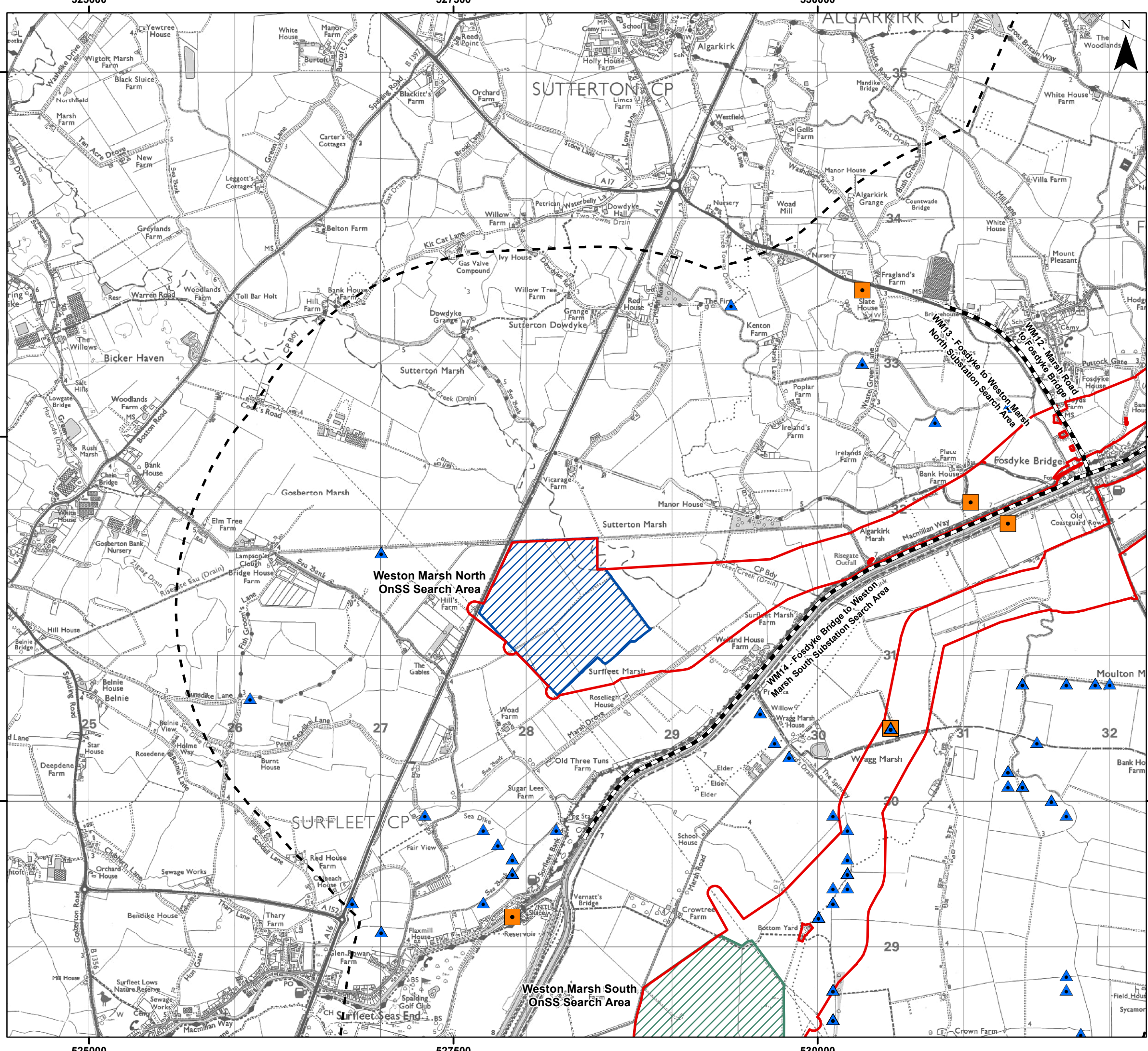


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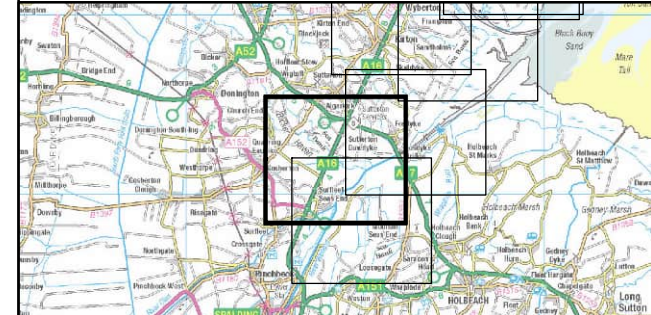
Legend

- Onshore PEIR Boundary
- Onshore Segment Break
- Weston Marsh North OnSS Search Area
- Weston Marsh South OnSS Search Area
- Onshore PEIR Boundary (Weston Marsh via South of the A52) 2 km Buffer

Local Records: Riparian Mammals

- ▲ European Water Vole
- Eurasian Otter

Sources:
 Local Records derived from data provided by Lincolnshire Environmental Records Centre (December 2022)



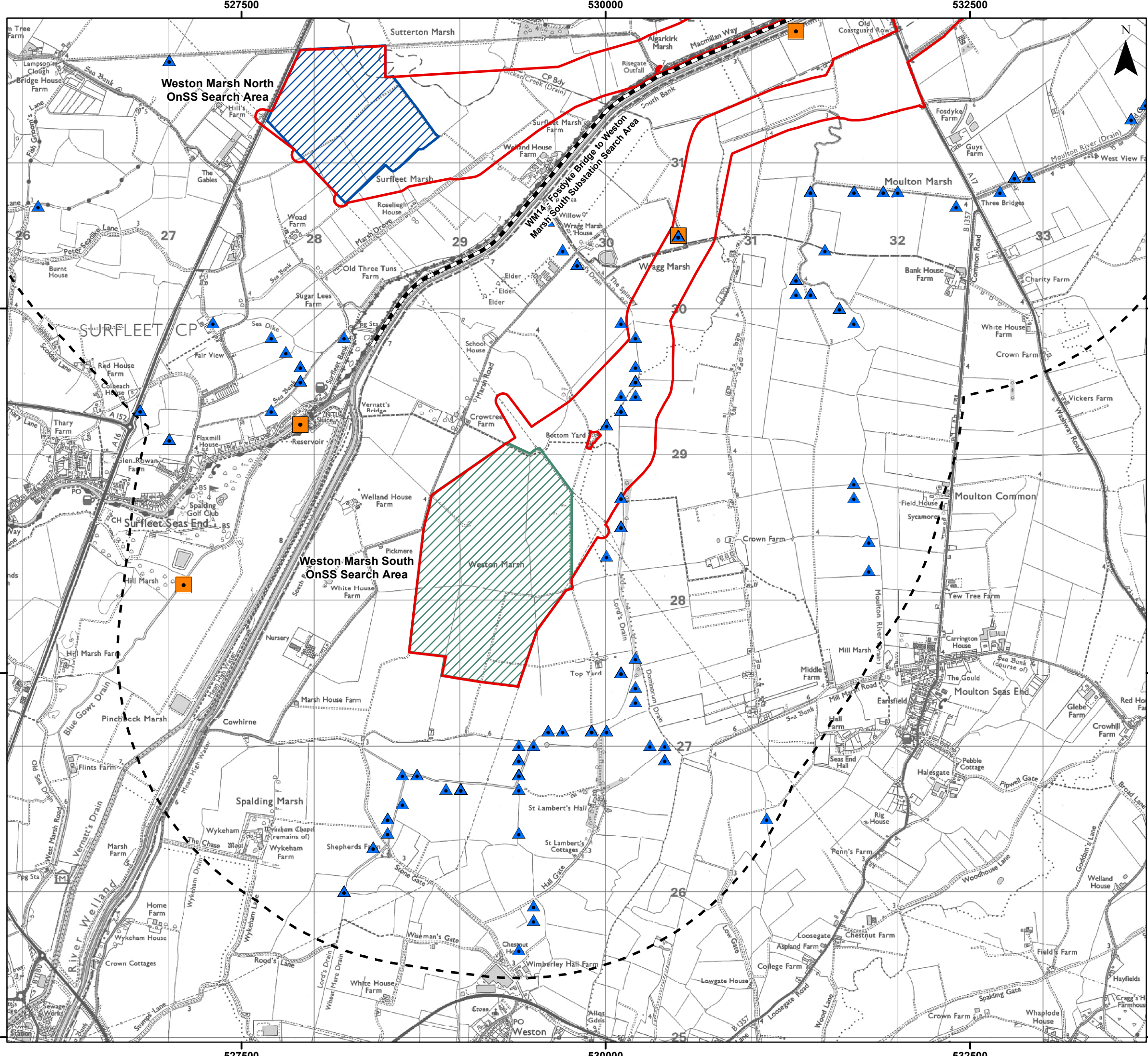
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 Weston Marsh
 Protected and Notable Species Records
 Riparian Mammals
 Figure 21.1.17.11

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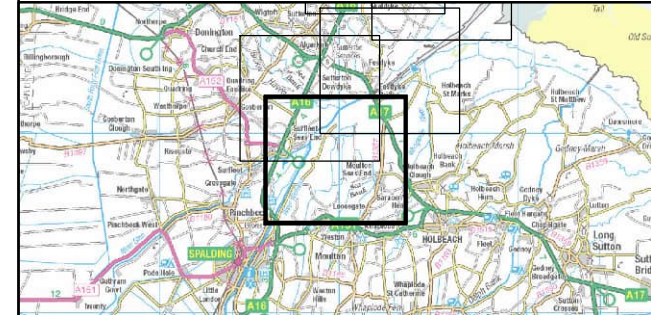
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Legend

- Onshore PEIR Boundary
 - Onshore Segment Break
 - Weston Marsh North OnSS Search Area
 - Weston Marsh South OnSS Search Area
 - Onshore PEIR Boundary (Weston Marsh via South of the A52) 2 km Buffer
- Local Records: Riparian Mammals**
- ▲ European Water Vole
 - Eurasian Otter

Sources:
Local Records derived from data provided by Lincolnshire Environmental Records Centre (December 2022)



Coordinate System: British National Grid
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 Scale: 1:25,000

Preliminary Environmental Information Report
 Weston Marsh
 Protected and Notable Species Records
 Riparian Mammals
 Figure 21.1.17.12

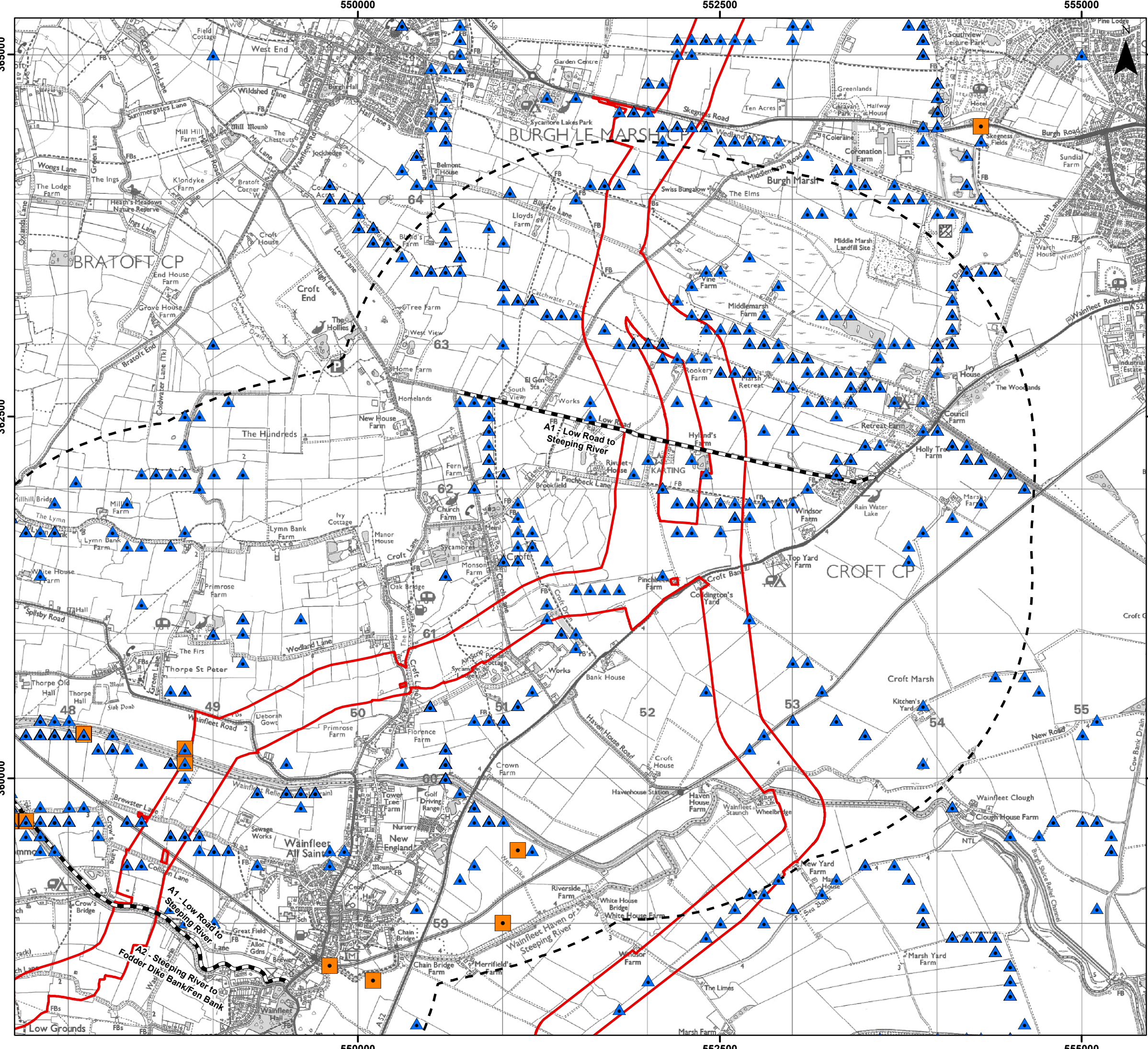


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Legend

- Onshore PEIR Boundary
- Onshore Segment Break
- Onshore PEIR Boundary (Weston Marsh via North of the A52) 2 km Buffer

Local Records: Riparian Mammals

- ▲ European Water Vole
- Eurasian Otter

Sources:
Local Records derived from data provided by Lincolnshire Environmental Records Centre (December 2022)



Coordinate System: British National Grid
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Preliminary Environmental Information Report
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 Protected and Notable Species Records
 Riparian Mammals
 Figure 21.1.17.13



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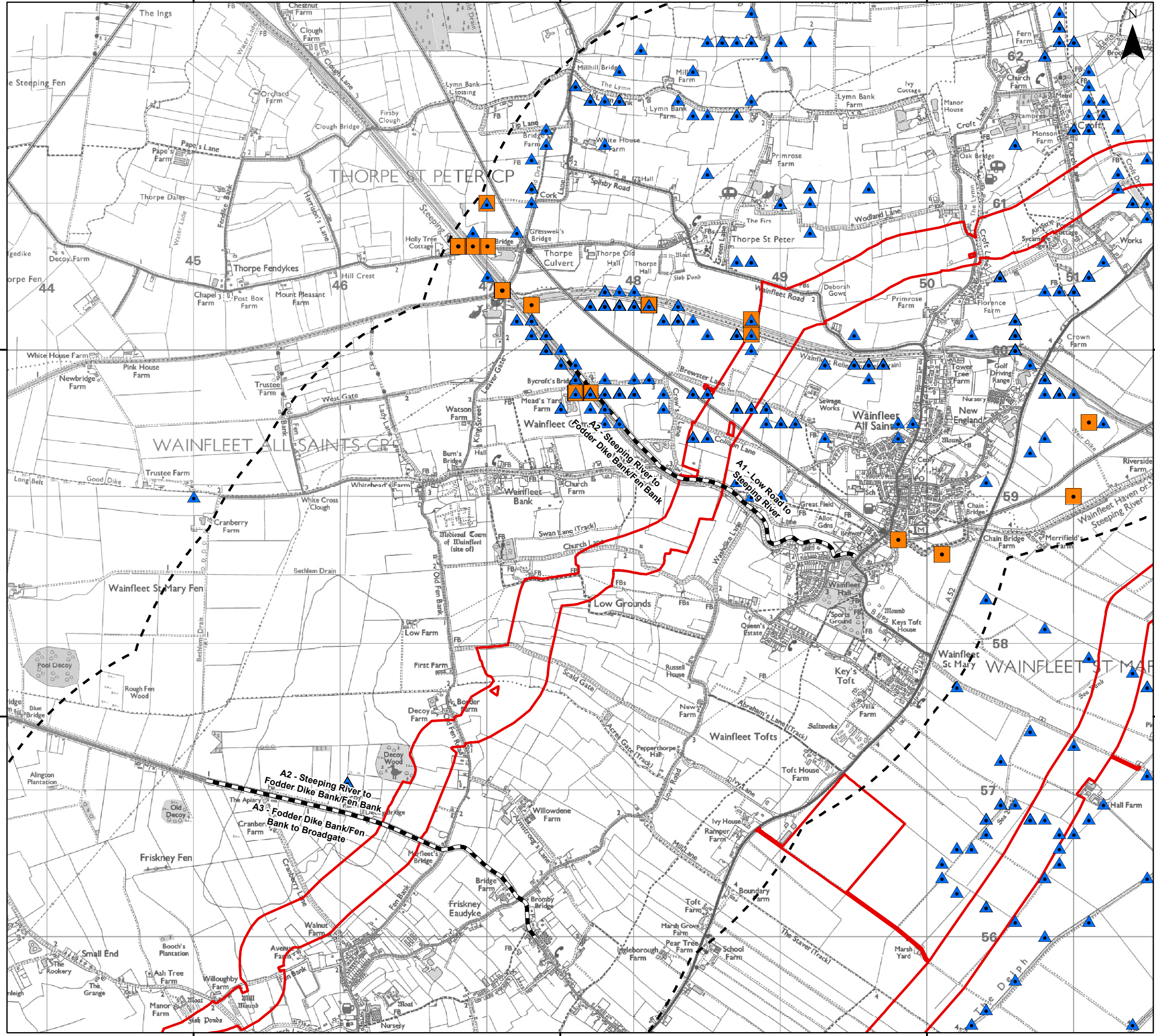
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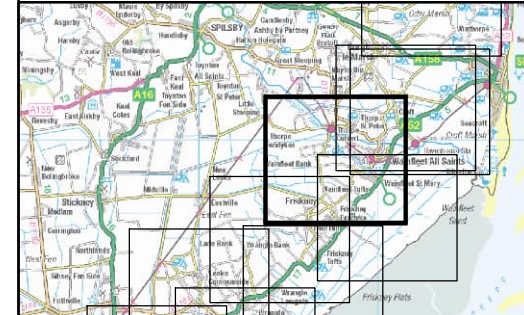
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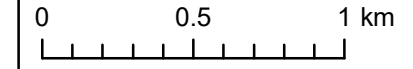
Legend

- Onshore PEIR Boundary
- Onshore Segment Break
- Onshore PEIR Boundary (Weston Marsh via North of the A52) 2 km Buffer
- Local Records: Riparian Mammals**
- ▲ European Water Vole
- Eurasian Otter

Sources:
Local Records derived from data provided by Lincolnshire Environmental Records Centre (December 2022)



Coordinate System: British National Grid



Scale: 1:25,000

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Weston Marsh
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Figure 21.1.17.14



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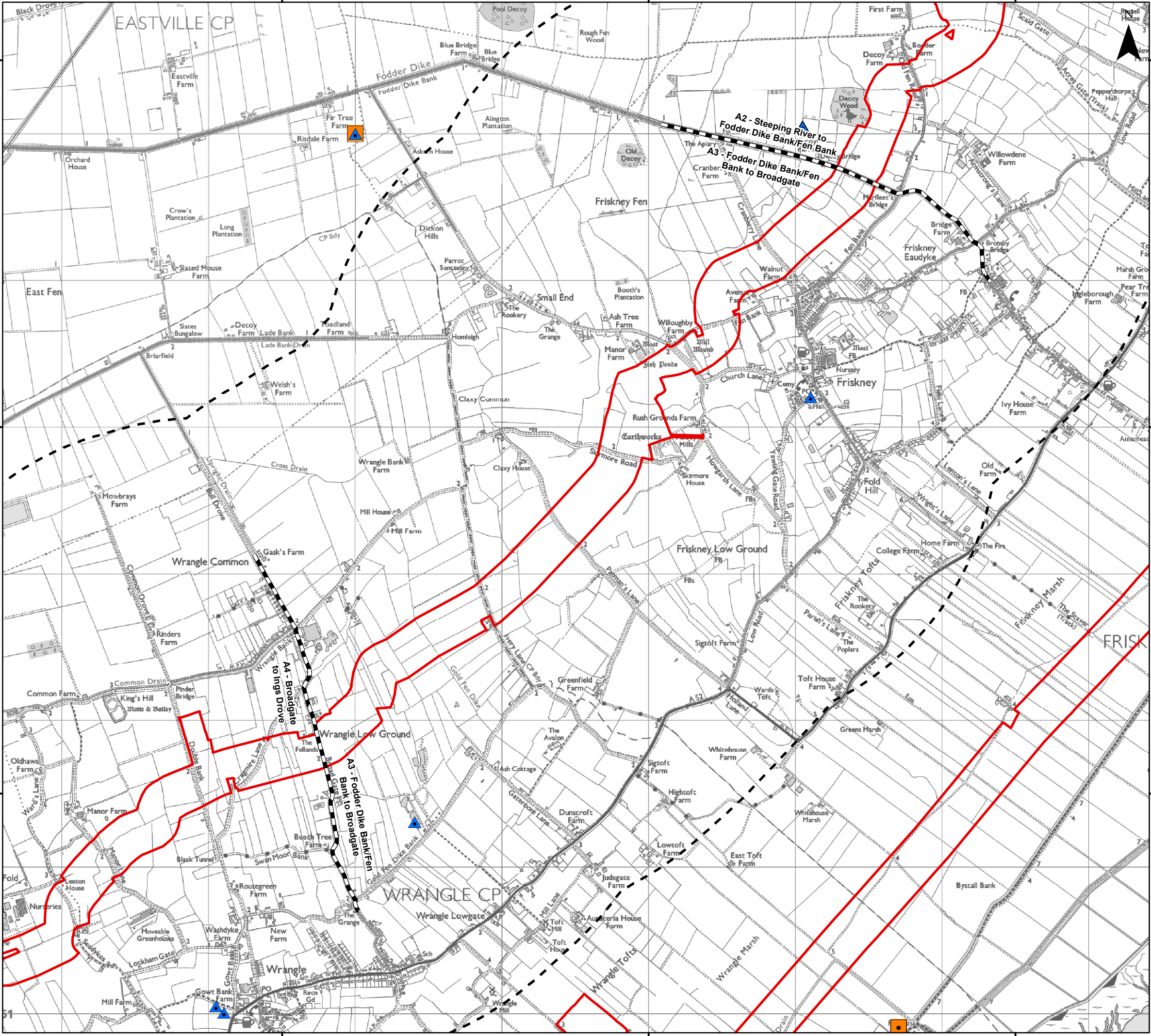
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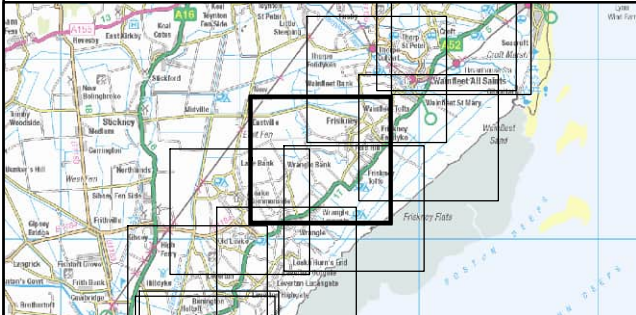
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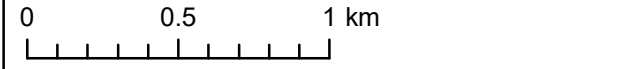
Legend

- Onshore PEIR Boundary
- Onshore Segment Break
- Onshore PEIR Boundary (Weston Marsh via North of the A52) 2 km Buffer
- Local Records: Riparian Mammals**
- ▲ European Water Vole
- Eurasian Otter

Sources:
Local Records derived from data provided by Lincolnshire Environmental Records Centre (December 2022)



Coordinate System: British National Grid



Scale: 1:25,000

Preliminary Environmental Information Report

Weston Marsh
Protected and Notable Species Records
Riparian Mammals
Figure 21.1.17.15

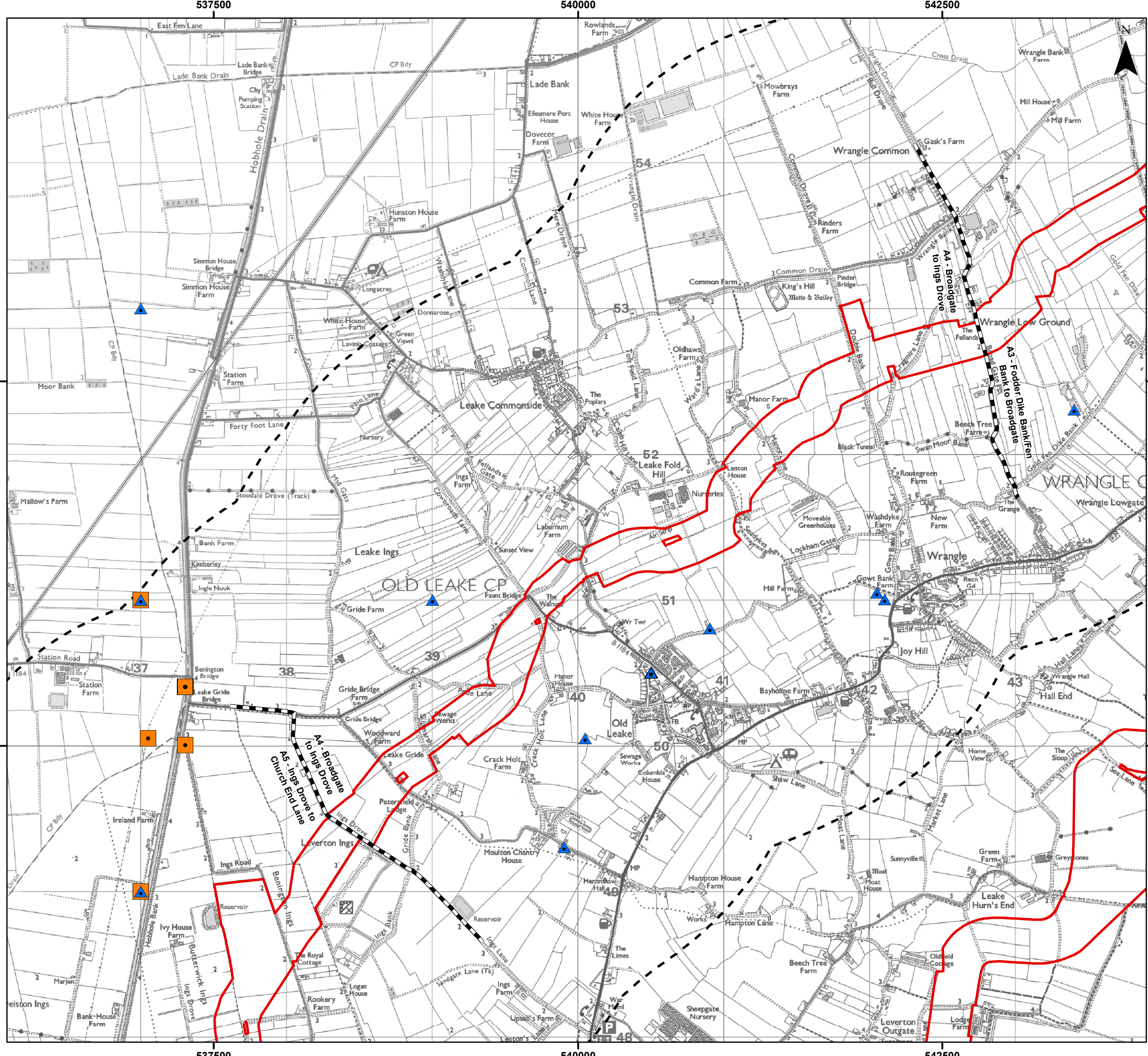


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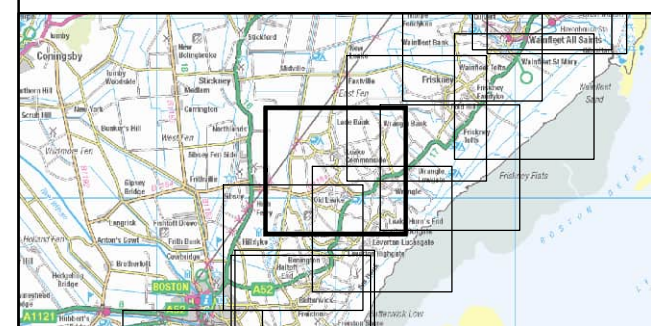
Legend

- Onshore PEIR Boundary
- Onshore Segment Break
- Onshore PEIR Boundary (Weston Marsh via North of the A52) 2 km Buffer

Local Records: Riparian Mammals

- ▲ European Water Vole
- Eurasian Otter

Sources:
Local Records derived from data provided by Lincolnshire Environmental Records Centre (December 2022)



Coordinate System: British National Grid
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 Scale: 1:25,000

Preliminary Environmental Information Report
 Weston Marsh
 Protected and Notable Species Records
 Riparian Mammals
 Figure 21.1.17.16

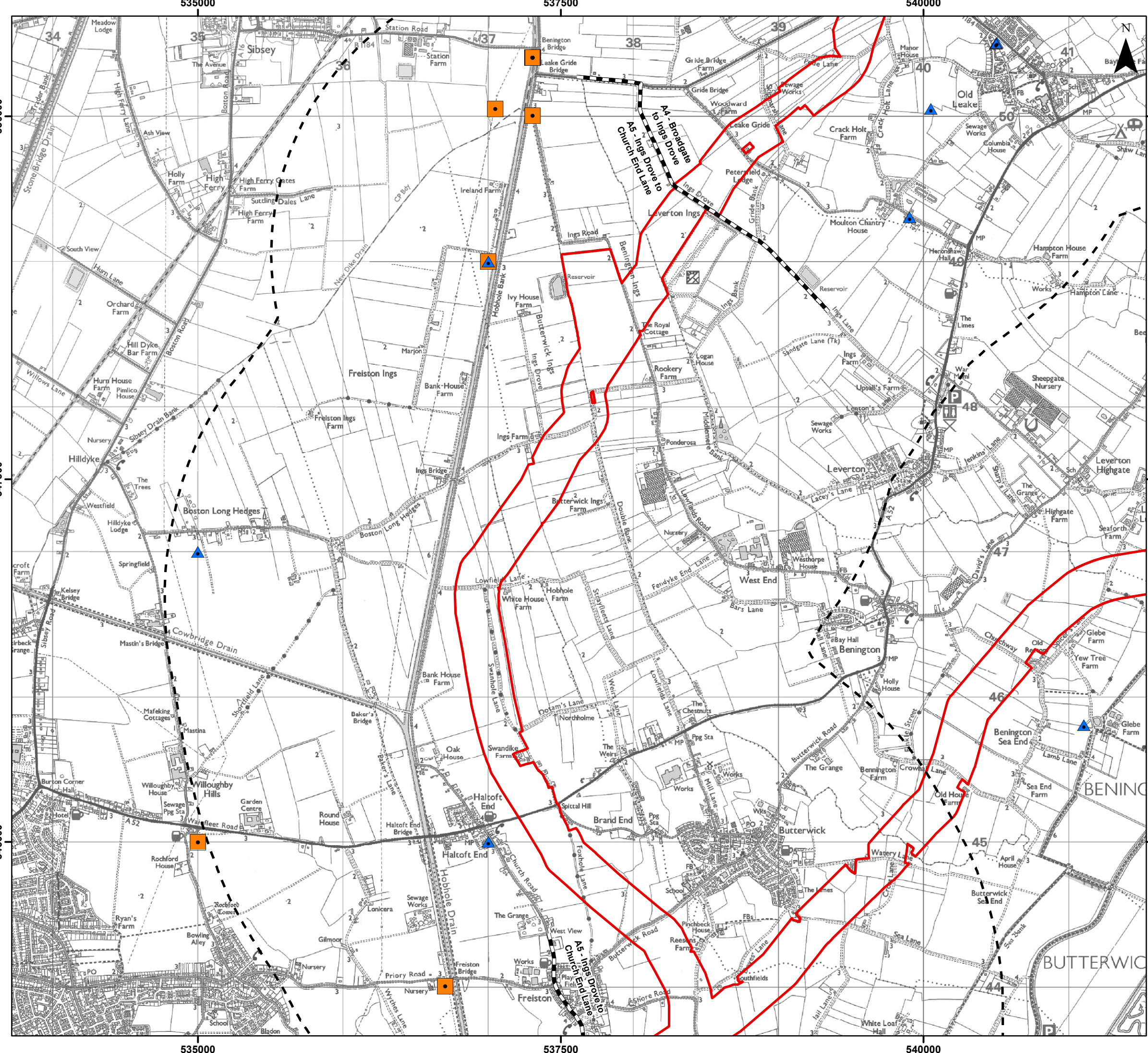


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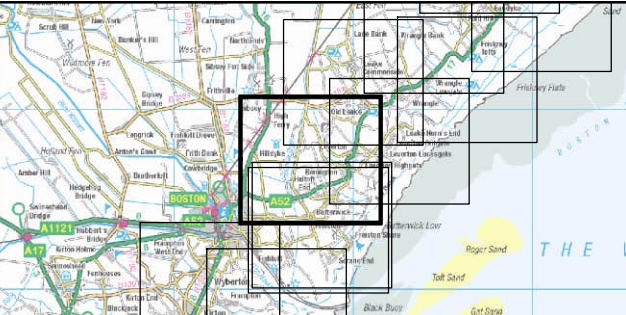
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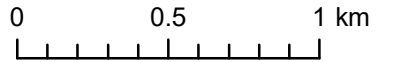
Legend

- Onshore PEIR Boundary
- Onshore Segment Break
- Onshore PEIR Boundary (Weston Marsh via North of the A52) 2 km Buffer
- ▲ Local Records: Riparian Mammals
European Water Vole
- Eurasian Otter

Sources:
Local Records derived from data provided by Lincolnshire Environmental Records Centre (December 2022)



Coordinate System: British National Grid



Scale: 1:25,000

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Weston Marsh
Protected and Notable Species Records
Riparian Mammals
Figure 21.1.17.17

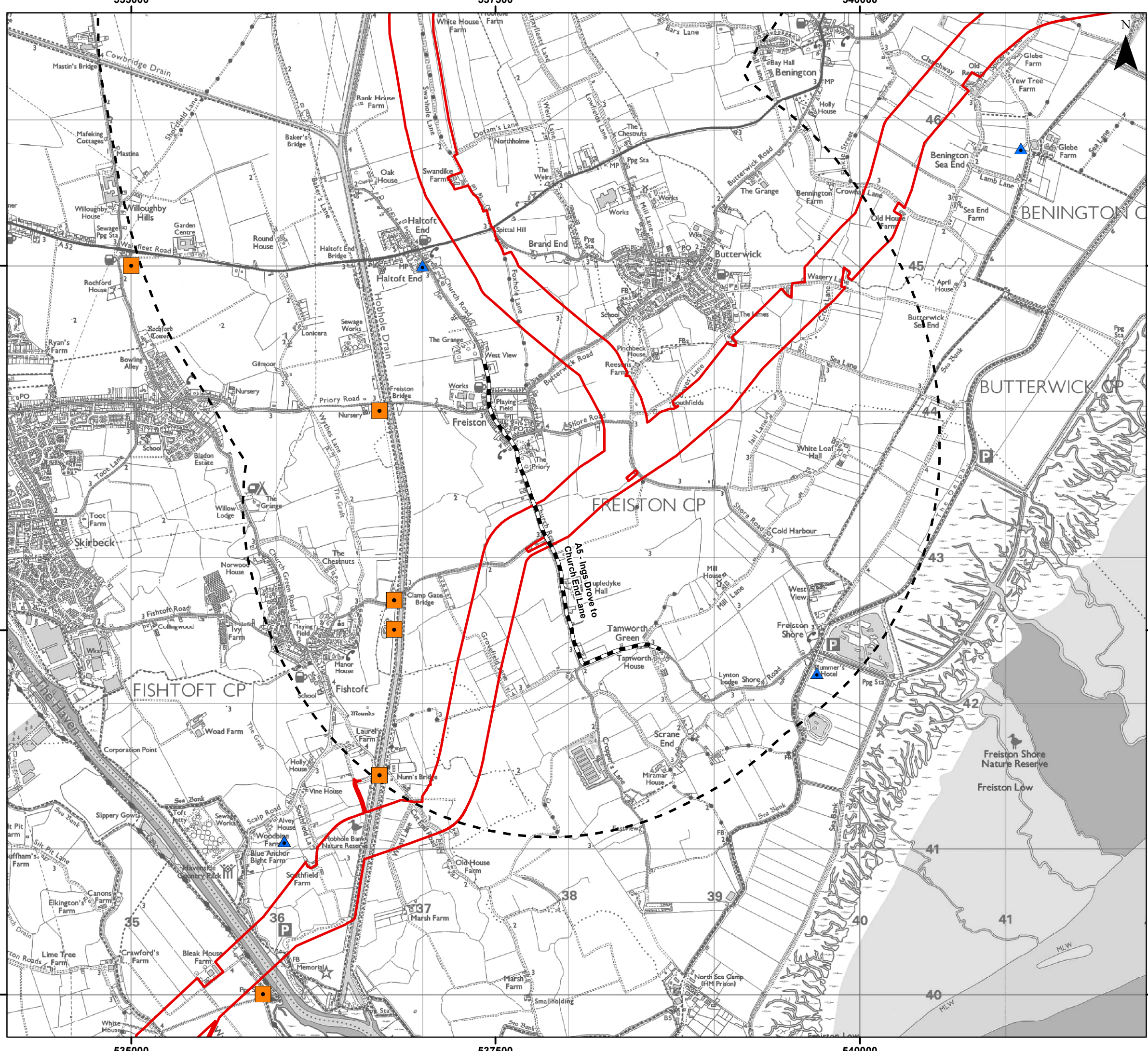


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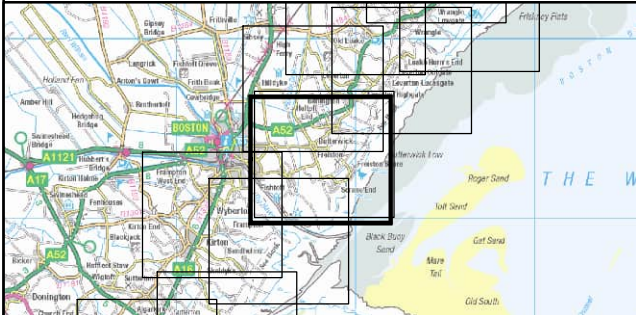
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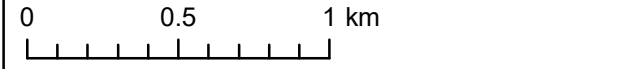
Legend

- Onshore PEIR Boundary
- Onshore Segment Break
- Onshore PEIR Boundary (Weston Marsh via North of the A52) 2 km Buffer
- Local Records: Riparian Mammals**
- ▲ European Water Vole
- Eurasian Otter

Sources:
Local Records derived from data provided by Lincolnshire Environmental Records Centre (December 2022)



Coordinate System: British National Grid



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Weston Marsh
Protected and Notable Species Records
Riparian Mammals
Figure 21.1.17.18



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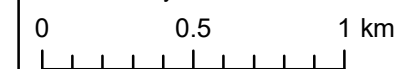
Legend

- Onshore PEIR Boundary
- Onshore Segment Break
- Onshore PEIR Boundary (Weston Marsh via South of the A52) 2 km Buffer

Sources:
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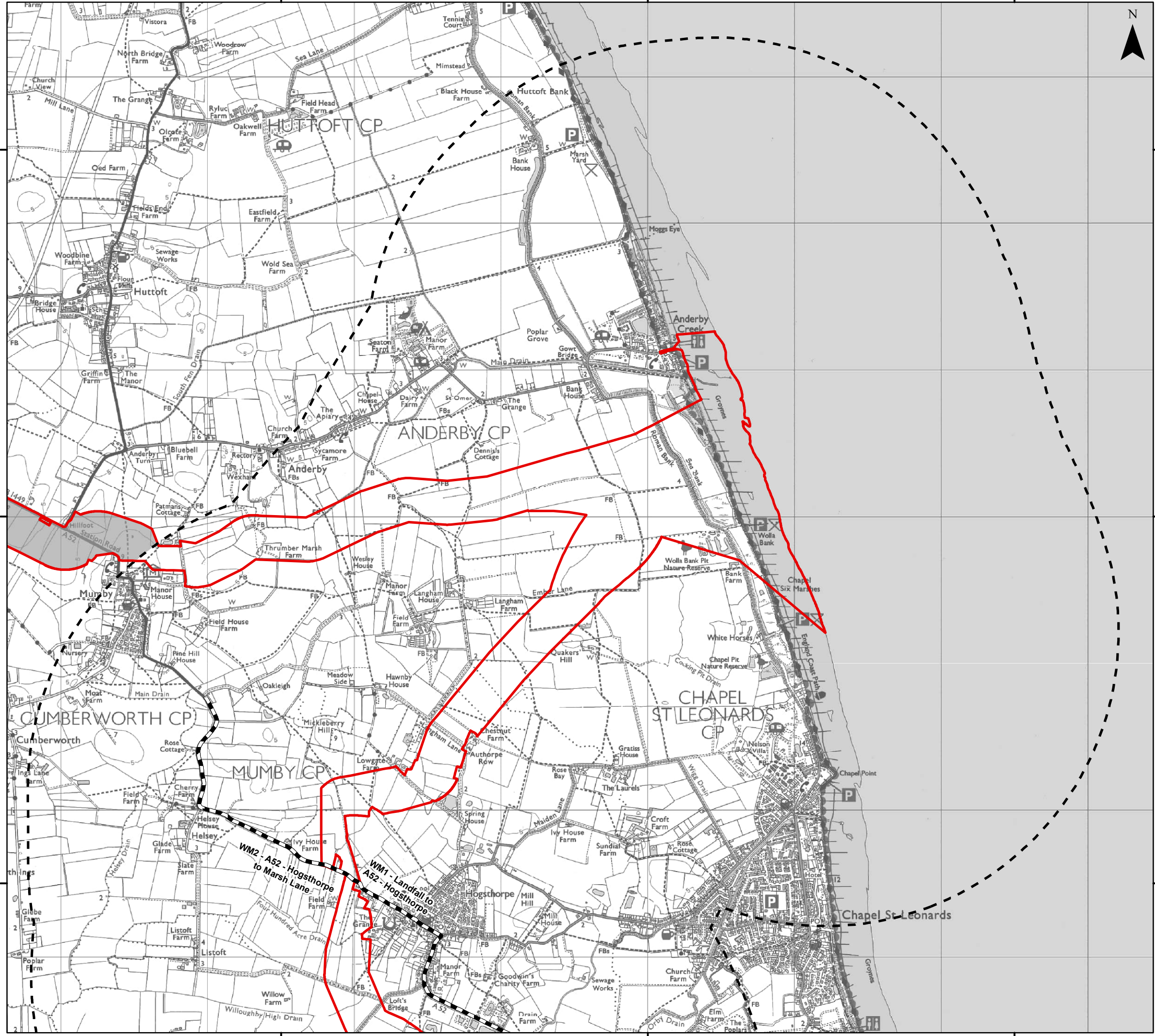
Weston Marsh
Protected and Notable Species Records
Terrestrial Mammals - Other
Figure 21.1.18.1



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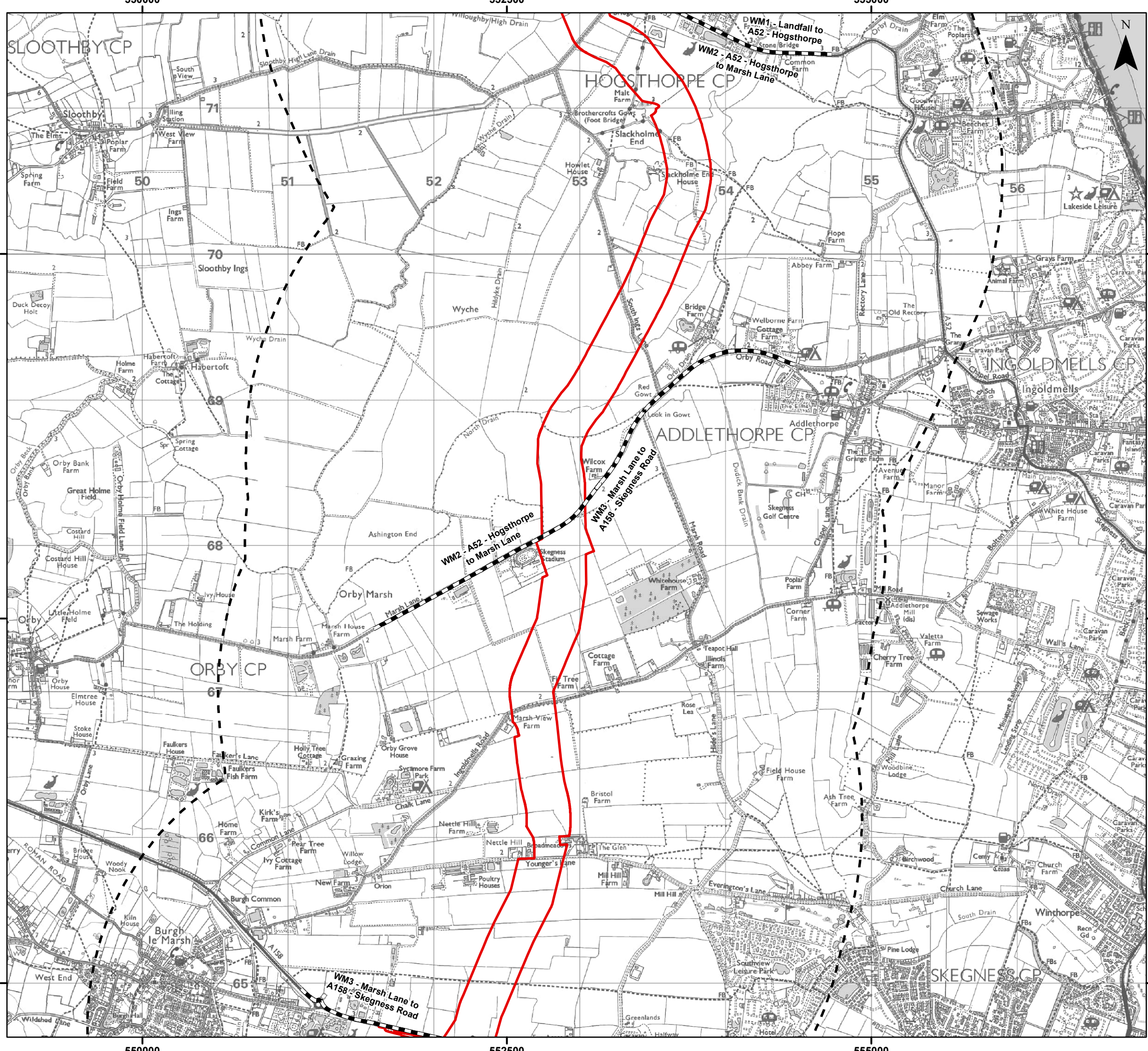
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Legend

- Onshore PEIR Boundary
- Onshore Segment Break
- Onshore PEIR Boundary (Weston Marsh via South of the A52) 2 km Buffer

Sources:
Local Records derived from data provided by Lincolnshire Environmental Records Centre (October 2022)



Coordinate System: British National Grid
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 Scale: 1:25,000

Preliminary Environmental Information Report
 Weston Marsh
 Protected and Notable Species Records
 Terrestrial Mammals - Other
 Figure 21.1.18.2

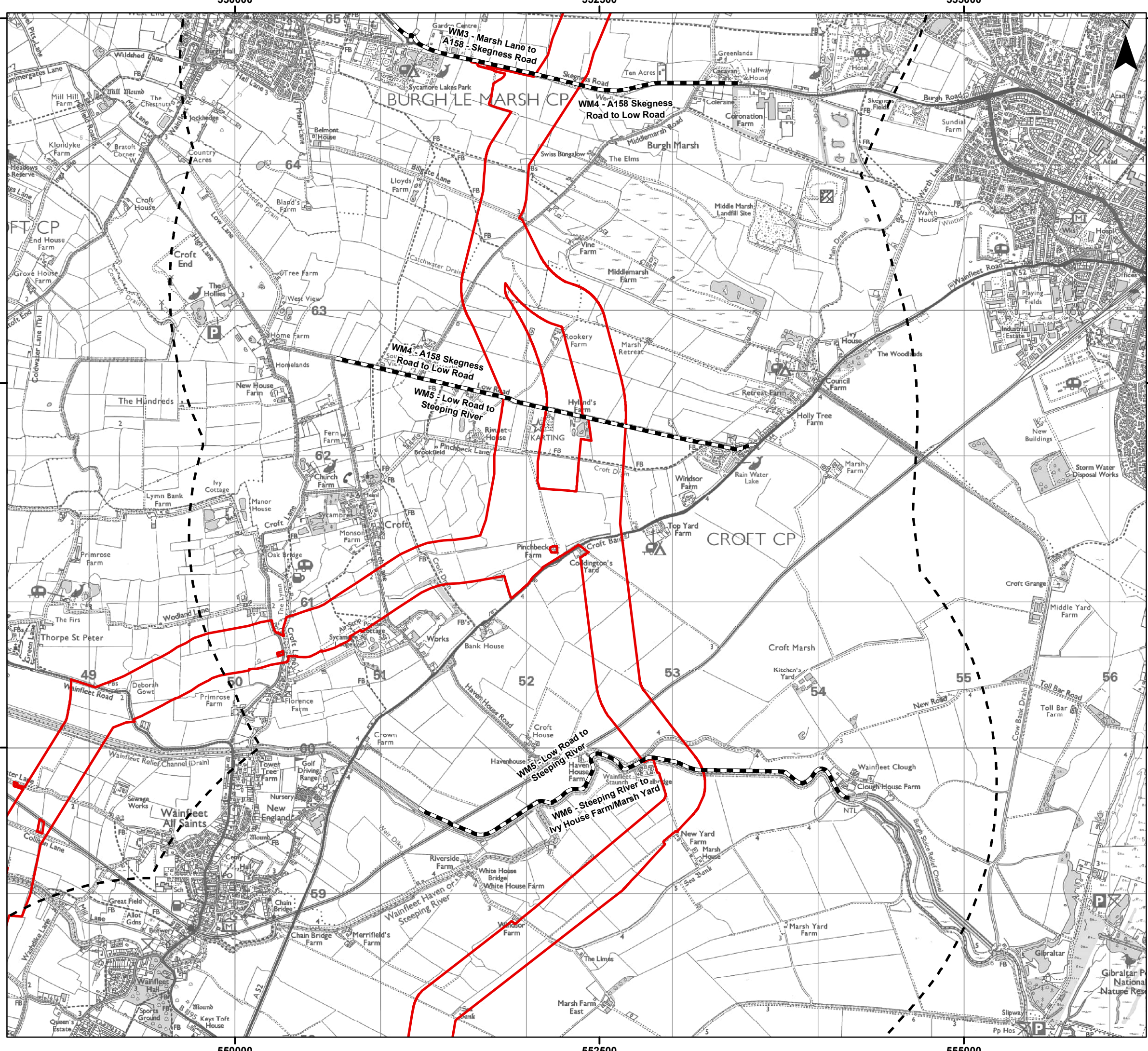


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Legend

- Onshore PEIR Boundary
- Onshore Segment Break
- Onshore PEIR Boundary (Weston Marsh via South of the A52) 2 km Buffer

Sources:
Local Records derived from data provided by Lincolnshire Environmental Records Centre (October 2022)



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Preliminary Environmental Information Report
Weston Marsh
Protected and Notable Species Records
Terrestrial Mammals - Other
Figure 21.1.18.3

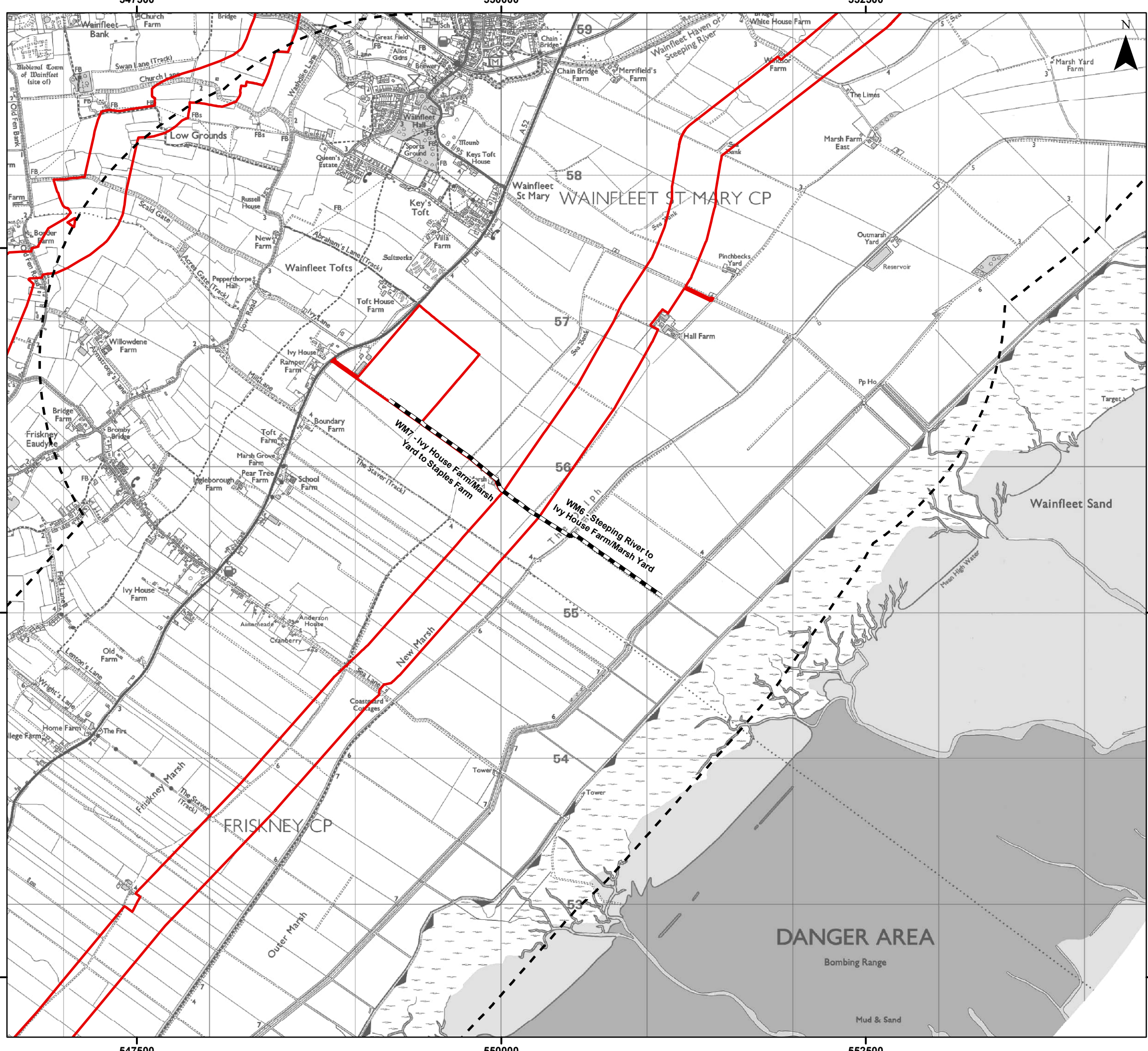


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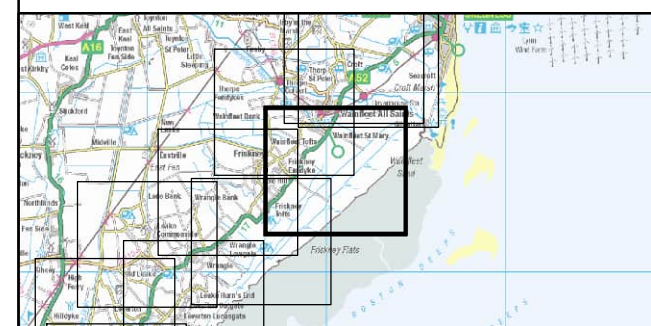
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- Legend**
- Onshore PEIR Boundary
 - Onshore Segment Break
 - Onshore PEIR Boundary (Weston Marsh via South of the A52) 2 km Buffer

Sources:
Local Records derived from data provided by Lincolnshire Environmental Records Centre (October 2022)



Coordinate System: British National Grid
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 Scale: 1:25,000

Preliminary Environmental Information Report
 Weston Marsh
 Protected and Notable Species Records
 Terrestrial Mammals - Other
 Figure 21.1.18.4

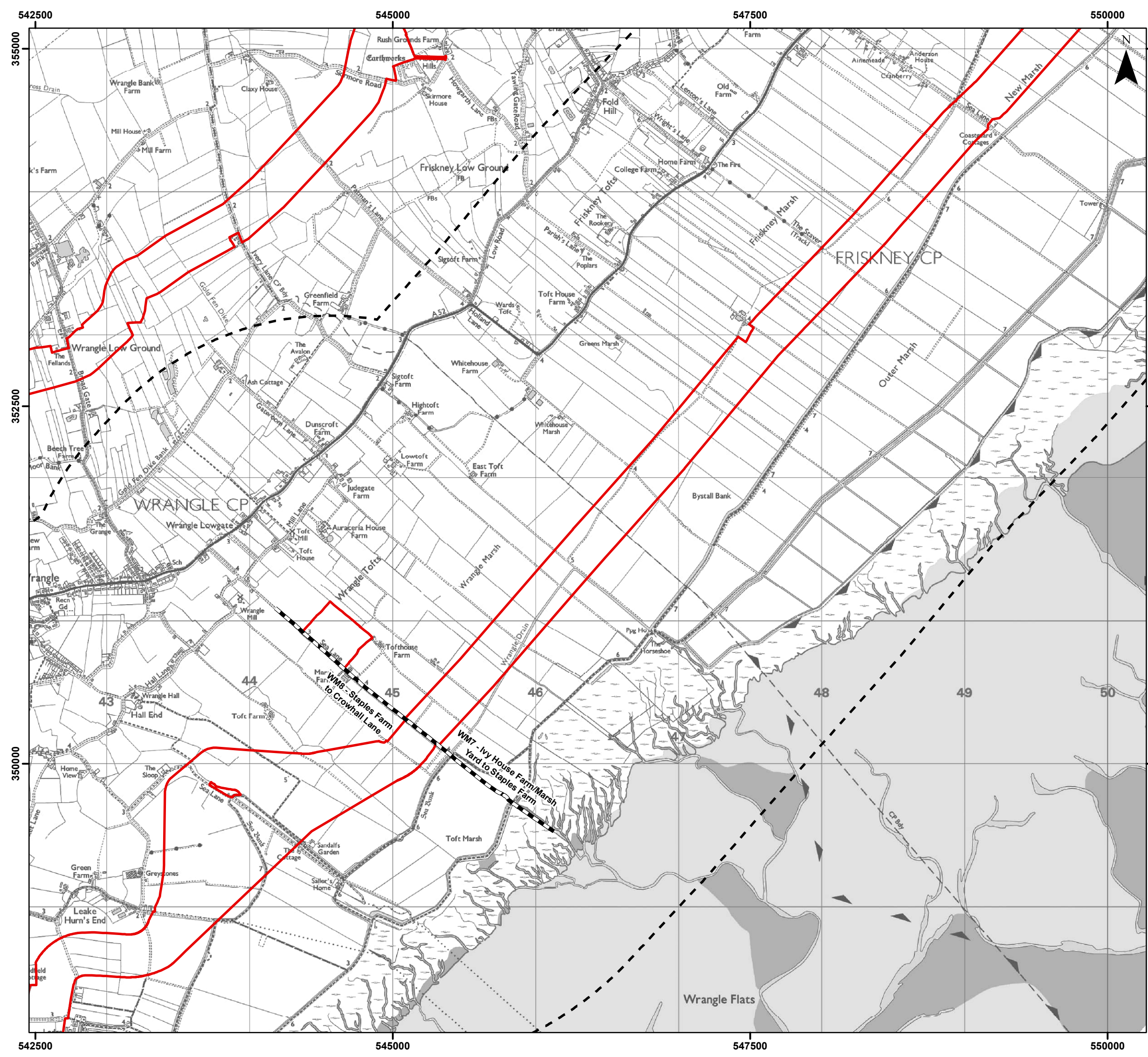


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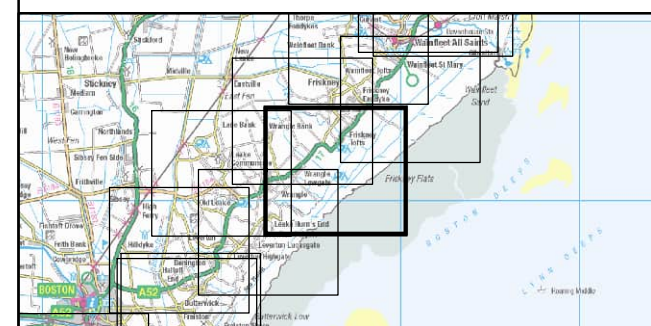
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Legend

- Onshore PEIR Boundary
- Onshore Segment Break
- Onshore PEIR Boundary (Weston Marsh via South of the A52) 2 km Buffer

Sources:
Local Records derived from data provided by Lincolnshire Environmental Records Centre (October 2022)



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Preliminary Environmental Information Report
 Weston Marsh
 Protected and Notable Species Records
 Terrestrial Mammals - Other
 Figure 21.1.18.5

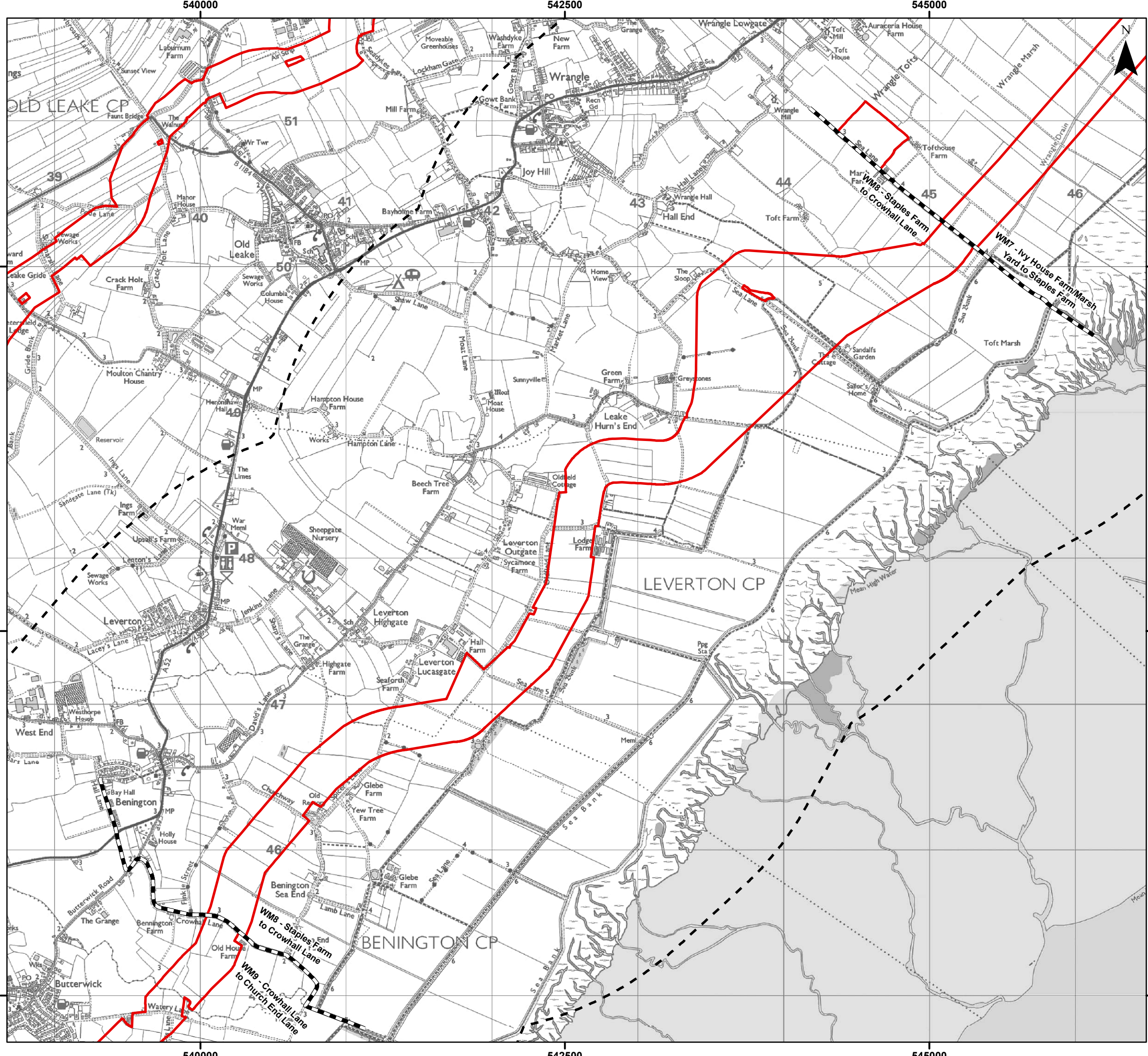


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Legend

- Onshore PEIR Boundary
- Onshore Segment Break
- Onshore PEIR Boundary (Weston Marsh via South of the A52) 2 km Buffer

Sources:
Local Records derived from data provided by Lincolnshire Environmental Records Centre (October 2022)



Coordinate System: British National Grid
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Preliminary Environmental Information Report
 Weston Marsh
 Protected and Notable Species Records
 Terrestrial Mammals - Other
 Figure 21.1.18.6

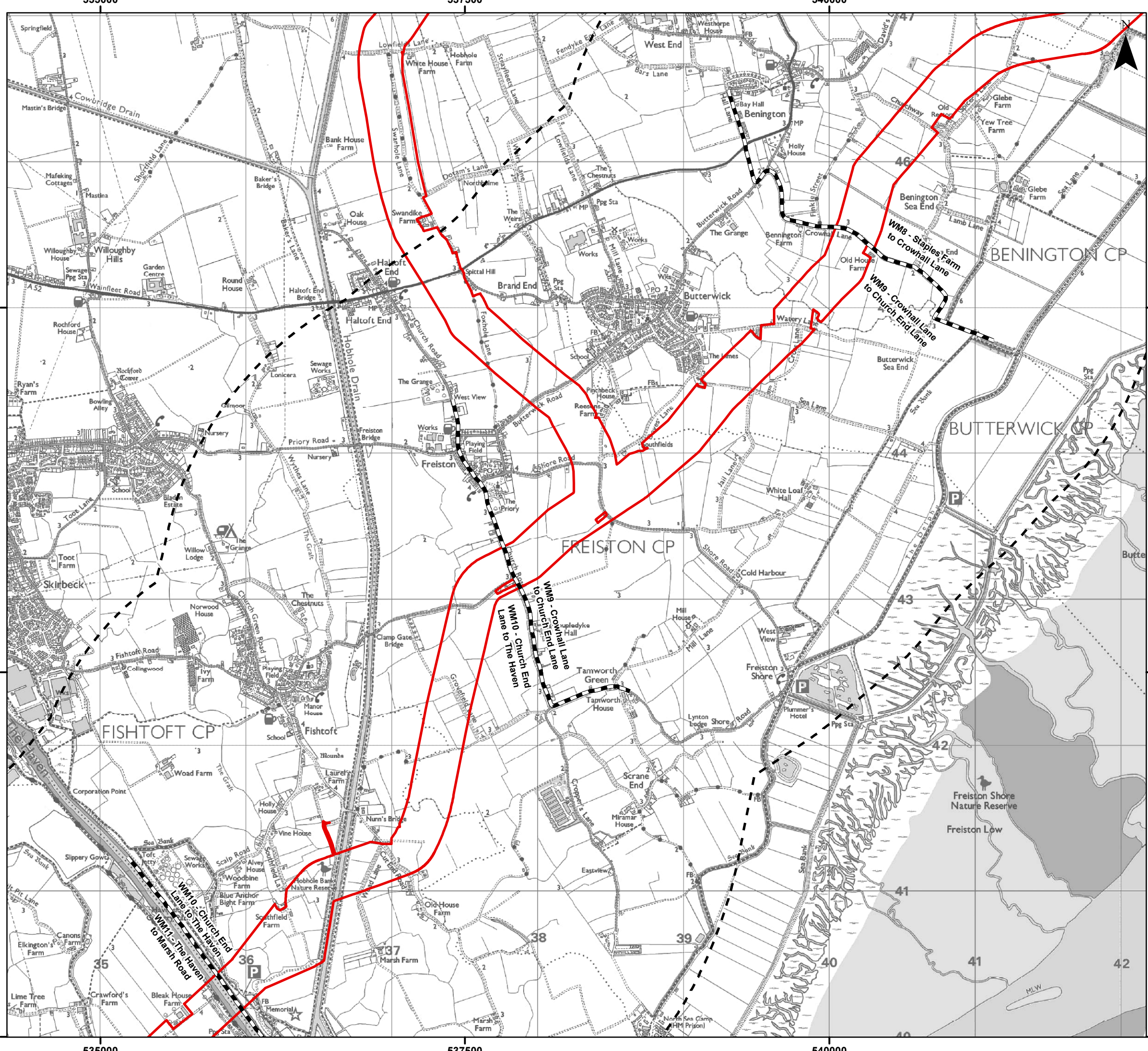


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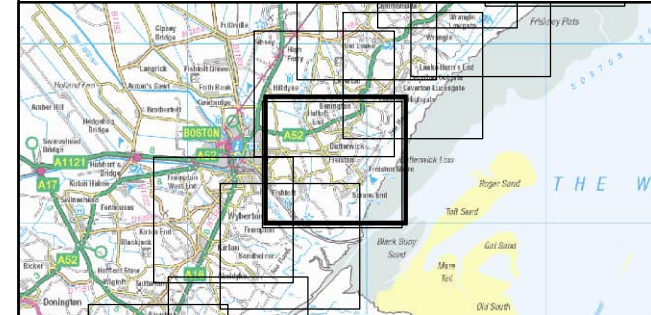
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- ### Legend
- Onshore PEIR Boundary
 - Onshore Segment Break
 - Onshore PEIR Boundary (Weston Marsh via South of the A52) 2 km Buffer

Sources:
Local Records derived from data provided by Lincolnshire Environmental Records Centre (October 2022)



Coordinate System: British National Grid
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 Scale: 1:25,000

Preliminary Environmental Information Report
 Weston Marsh
 Protected and Notable Species Records
 Terrestrial Mammals - Other
 Figure 21.1.18.7

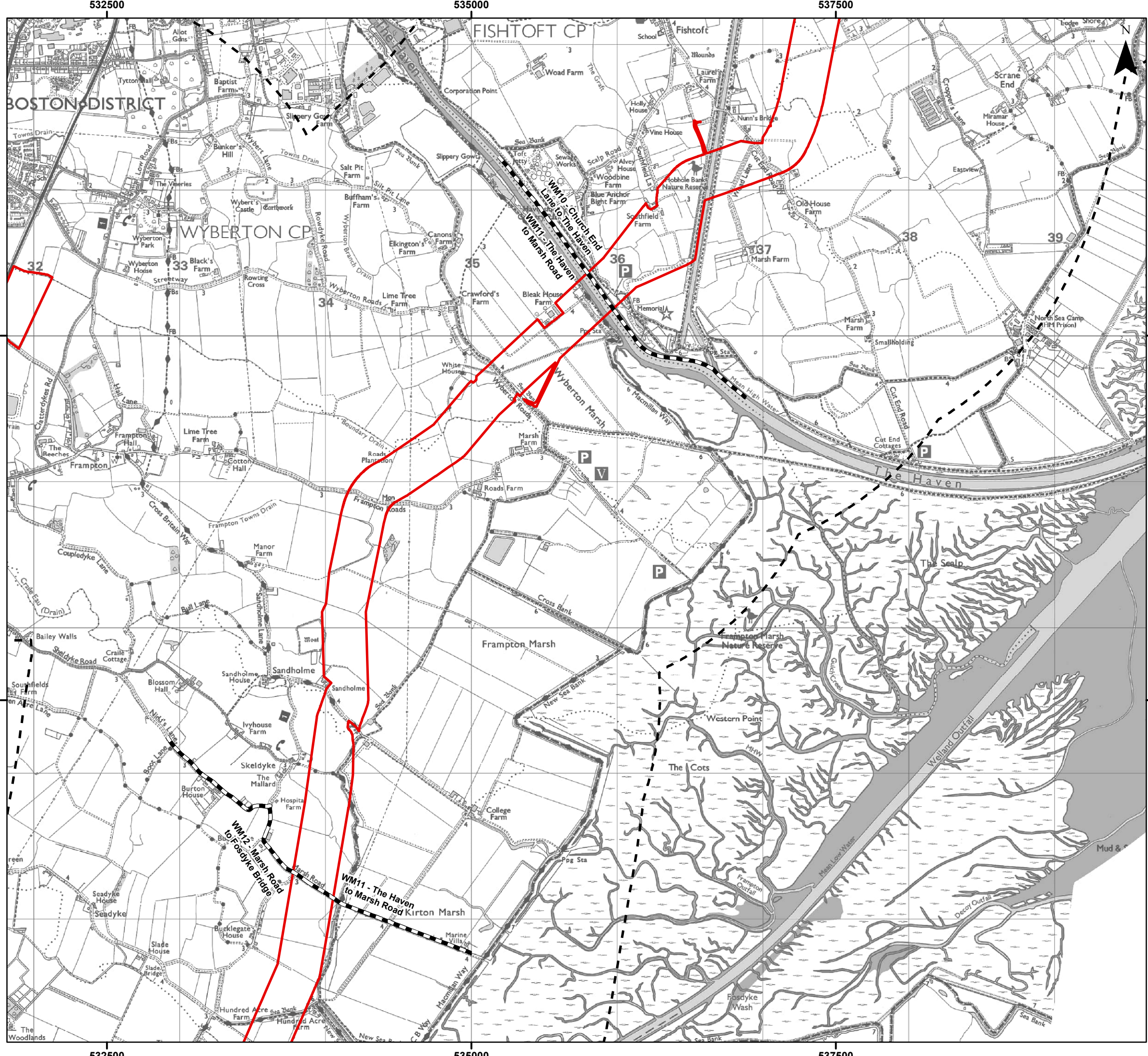


Date: 31/05/2023
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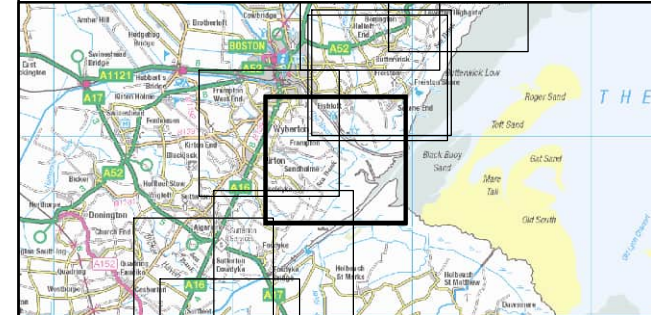
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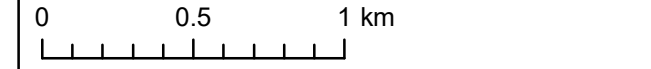
Legend

- Onshore PEIR Boundary
- Onshore Segment Break
- Onshore PEIR Boundary (Weston Marsh via South of the A52) 2 km Buffer

Sources:
Local Records derived from data provided by Lincolnshire Environmental Records Centre (October 2022)



Coordinate System: British National Grid



Scale: 1:25,000

Preliminary Environmental Information Report

Weston Marsh
Protected and Notable Species Records
Terrestrial Mammals - Other
Figure 21.1.18.8



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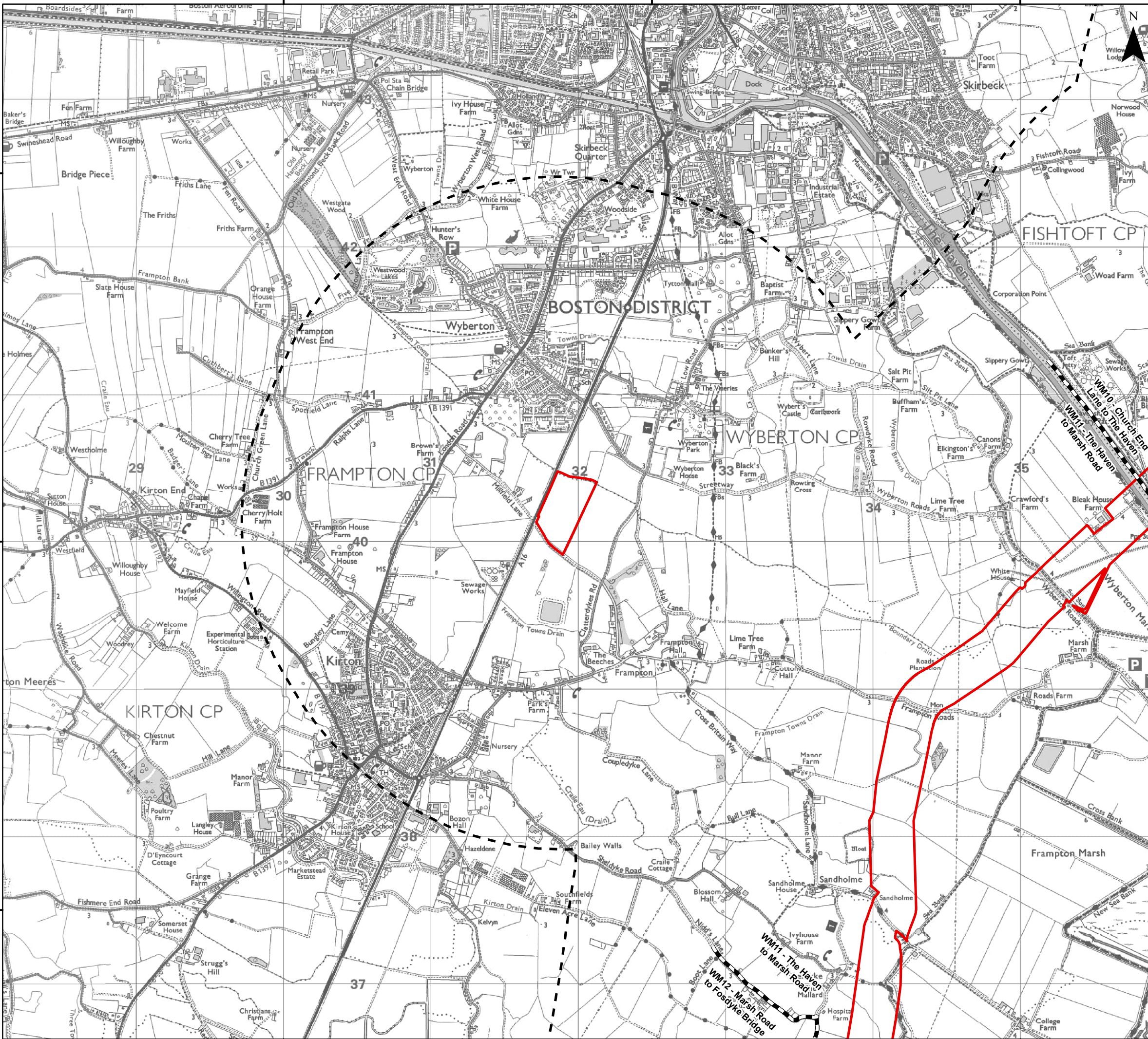
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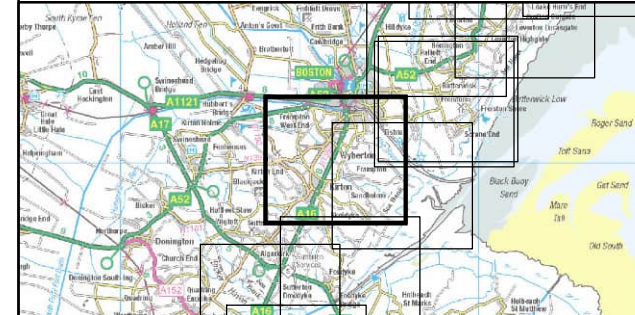
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Legend

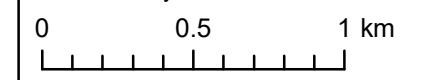
-  Onshore PEIR Boundary
-  Onshore Segment Break
-  Onshore PEIR Boundary (Weston Marsh via South of the A52) 2 km Buffer



Sources:
Local Records derived from data provided by Lincolnshire Environmental Records Centre (October 2022)



Coordinate System: British National Grid



Scale: 1:25,000

Preliminary Environmental Information Report

Weston Marsh
Protected and Notable Species Records
Terrestrial Mammals - Other
Figure 21.1.18.9



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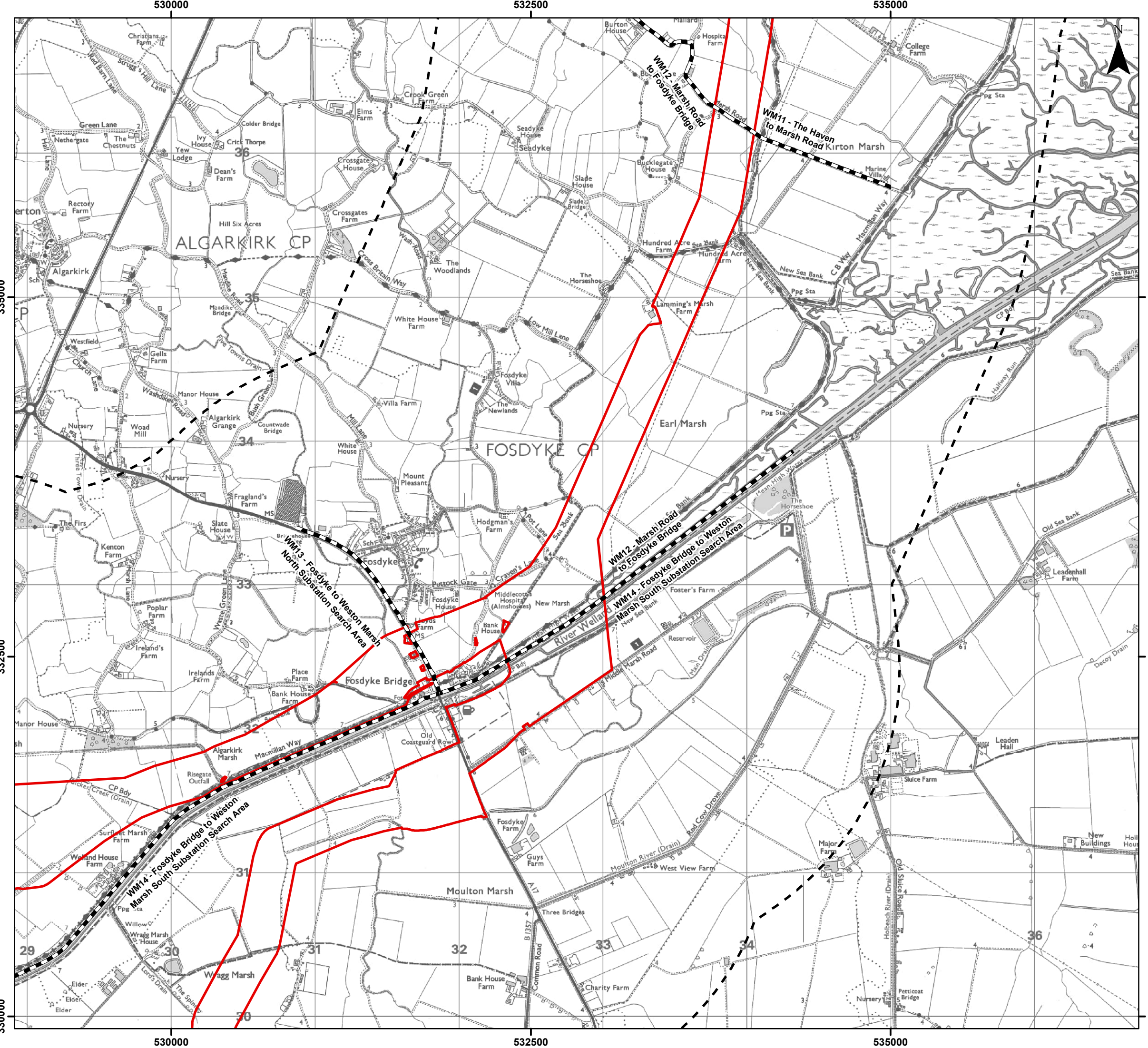
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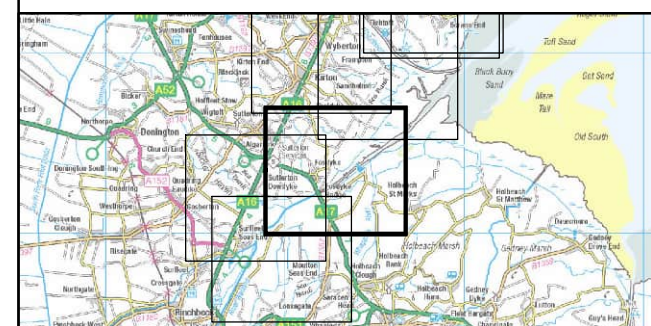
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Legend

- Onshore PEIR Boundary
- Onshore Segment Break
- Onshore PEIR Boundary (Weston Marsh via South of the A52) 2 km Buffer

Sources:
Local Records derived from data provided by Lincolnshire Environmental Records Centre (October 2022)



Coordinate System: British National Grid
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 Scale: 1:25,000

Preliminary Environmental Information Report
 Weston Marsh
 Protected and Notable Species Records
 Terrestrial Mammals - Other
 Figure 21.1.18.10

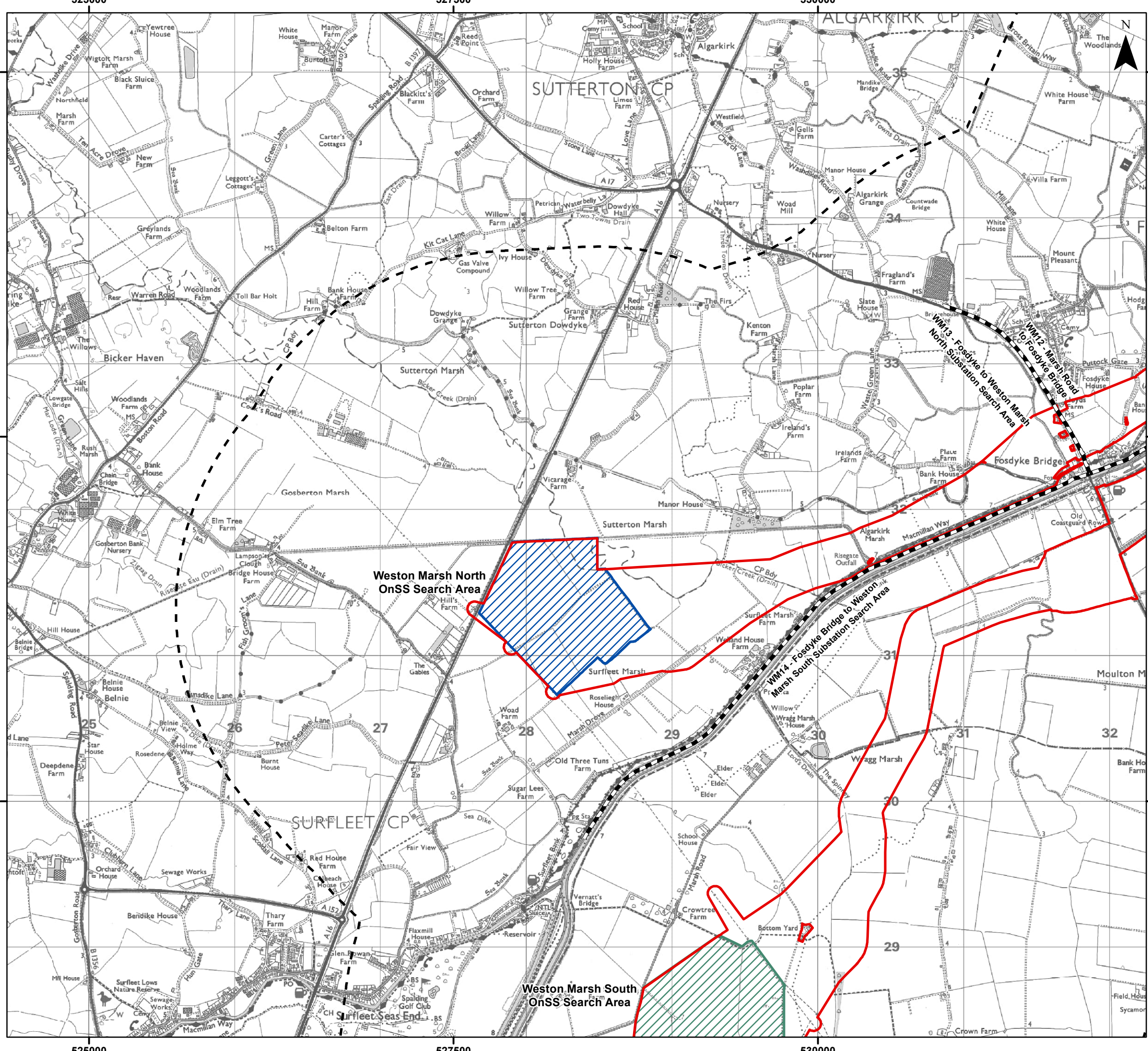


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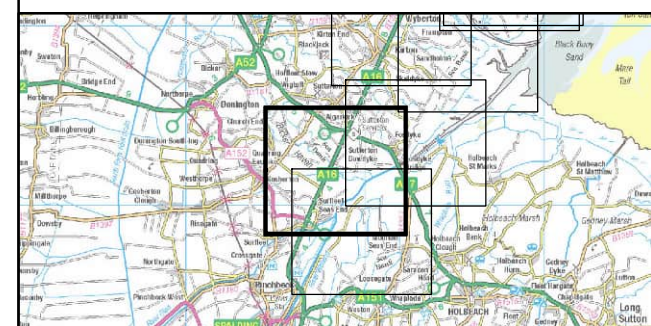
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Legend

- Onshore PEIR Boundary
- Onshore Segment Break
- Weston Marsh North OnSS Search
- Weston Marsh South OnSS Search
- Onshore PEIR Boundary (Weston Marsh via South of the A52) 2 km Buffer

Sources:
Local Records derived from data provided by Lincolnshire Environmental Records Centre (October 2022)



Coordinate System: British National Grid
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 Scale: 1:25,000

Preliminary Environmental Information Report
 Weston Marsh
 Protected and Notable Species Records
 Terrestrial Mammals - Other
 Figure 21.1.18.11

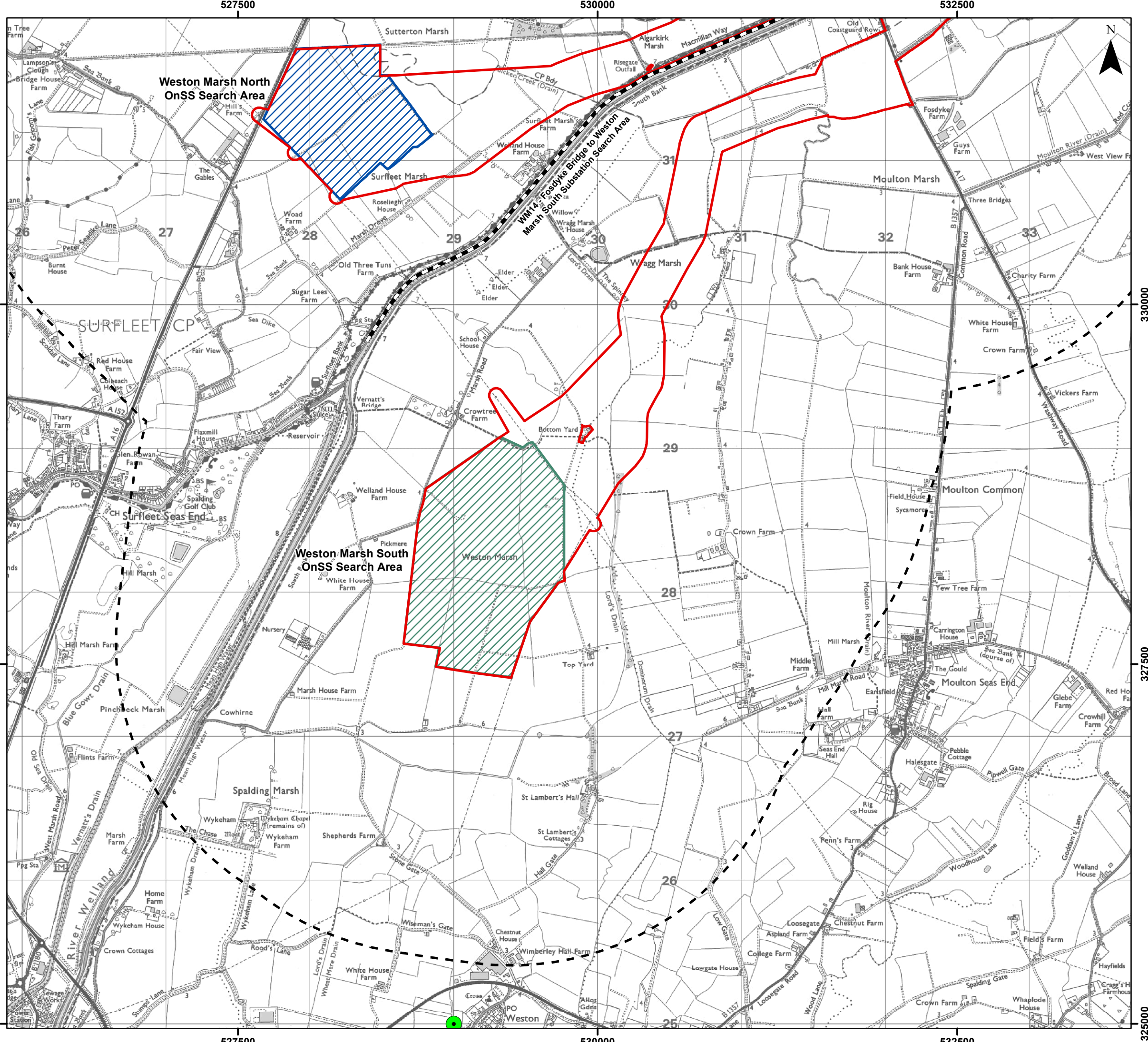


Date: 31/05/2023
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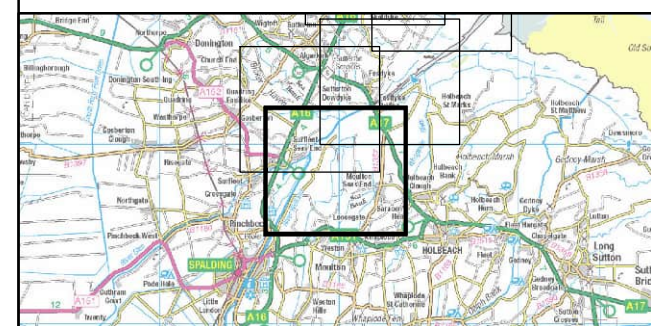
Legend

- Onshore PEIR Boundary
- Onshore Segment Break
- Weston Marsh North OnSS Search
- Weston Marsh South OnSS Search
- Onshore PEIR Boundary (Weston Marsh via Marsh South Substation Search Area)
- Onshore PEIR Boundary (Weston Marsh via South of the A52) 2 km Buffer

Local Records: Terrestrial Mammals (Other)

- Eurasian Red Squirrel

Sources:
Local Records derived from data provided by Lincolnshire Environmental Records Centre (October 2022)



Coordinate System: British National Grid

0 0.5 1 km

Scale: 1:25,000

Preliminary Environmental Information Report

Weston Marsh
Protected and Notable Species Records
Terrestrial Mammals - Other
Figure 21.1.18.12

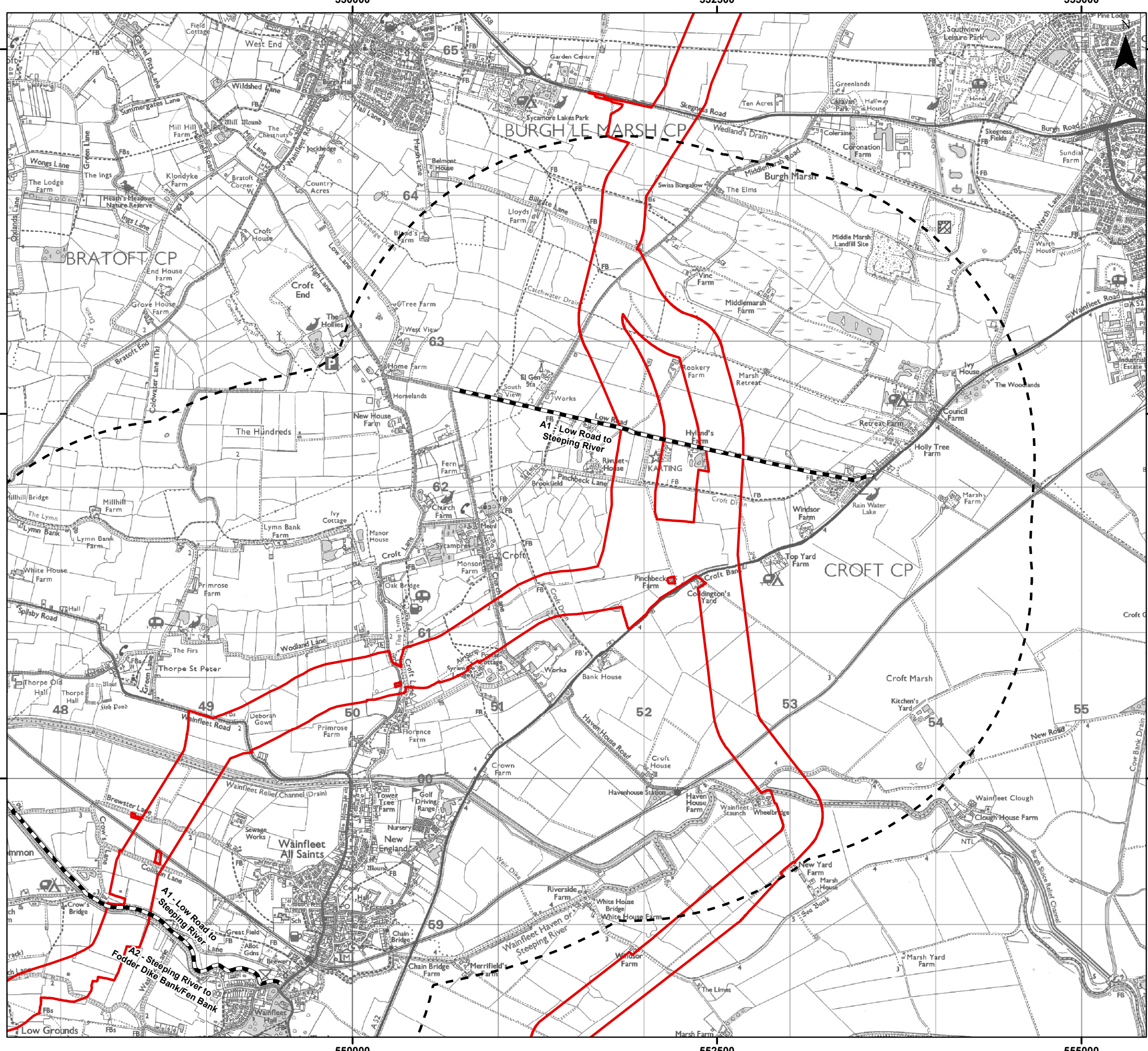


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Legend

- Onshore PEIR Boundary
- Onshore Segment Break
- Onshore PEIR Boundary (Weston Marsh via North of the A52) 2 km Buffer

Sources:
Local Records derived from data provided by Lincolnshire Environmental Records Centre (October 2022)



Coordinate System: British National Grid
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 Scale: 1:25,000

Preliminary Environmental Information Report
 Weston Marsh
 Protected and Notable Species Records
 Terrestrial Mammals - Other
 Figure 21.1.18.13



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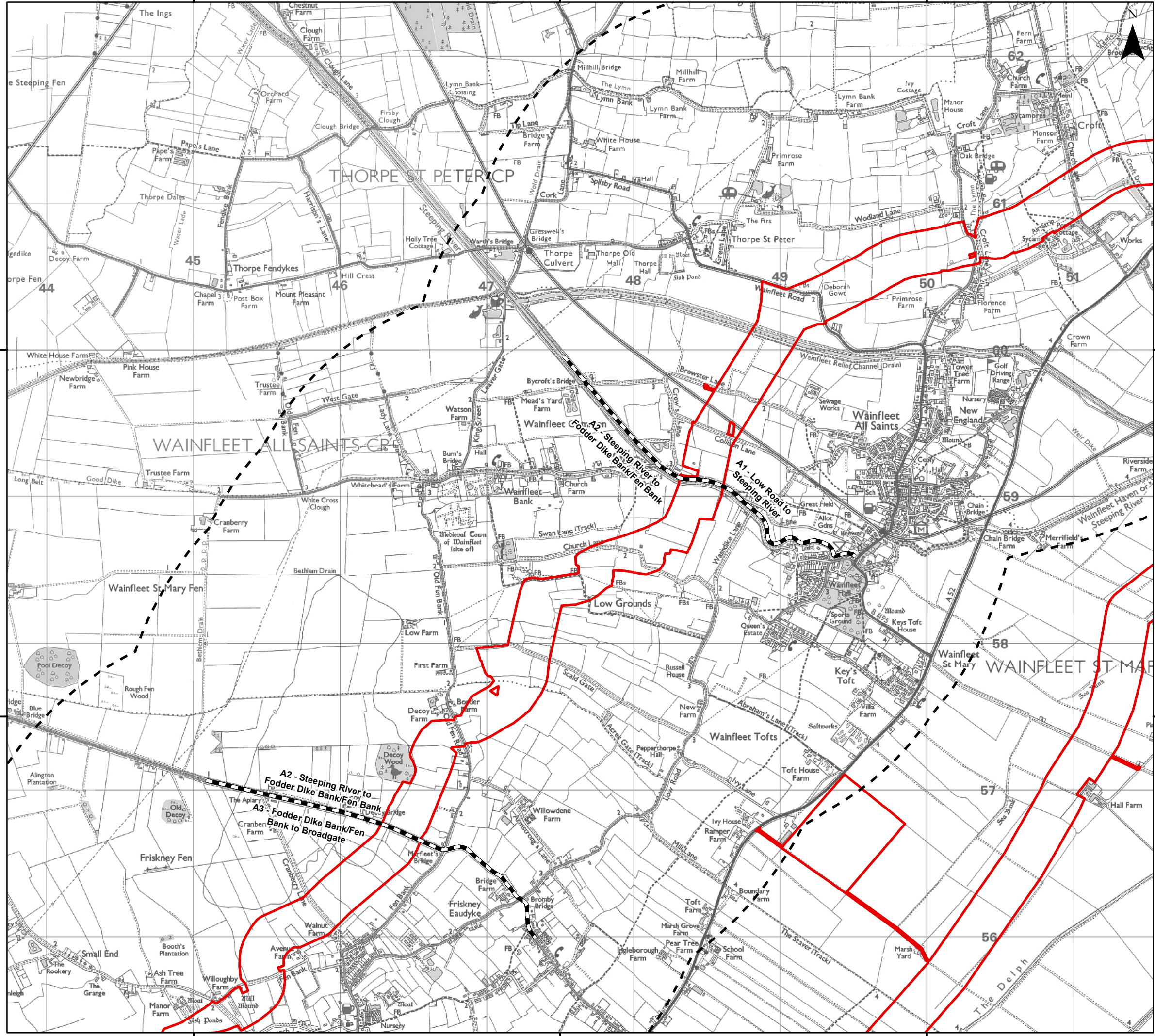
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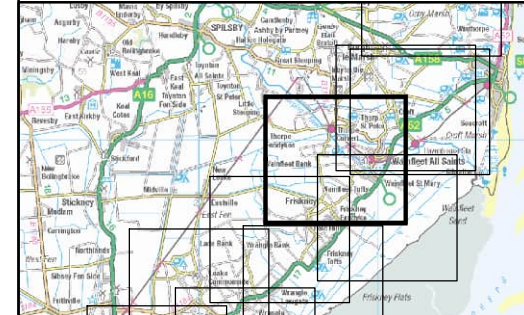
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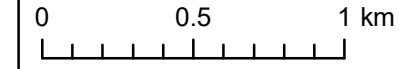
Legend

- Onshore PEIR Boundary
- Onshore Segment Break
- Onshore PEIR Boundary (Weston Marsh via North of the A52) 2 km Buffer

Sources:
Local Records derived from data provided by Lincolnshire Environmental Records Centre (October 2022)



Coordinate System: British National Grid



Scale: 1:25,000

Preliminary Environmental Information Report

Weston Marsh
Protected and Notable Species Records
Terrestrial Mammals - Other
Figure 21.1.18.14



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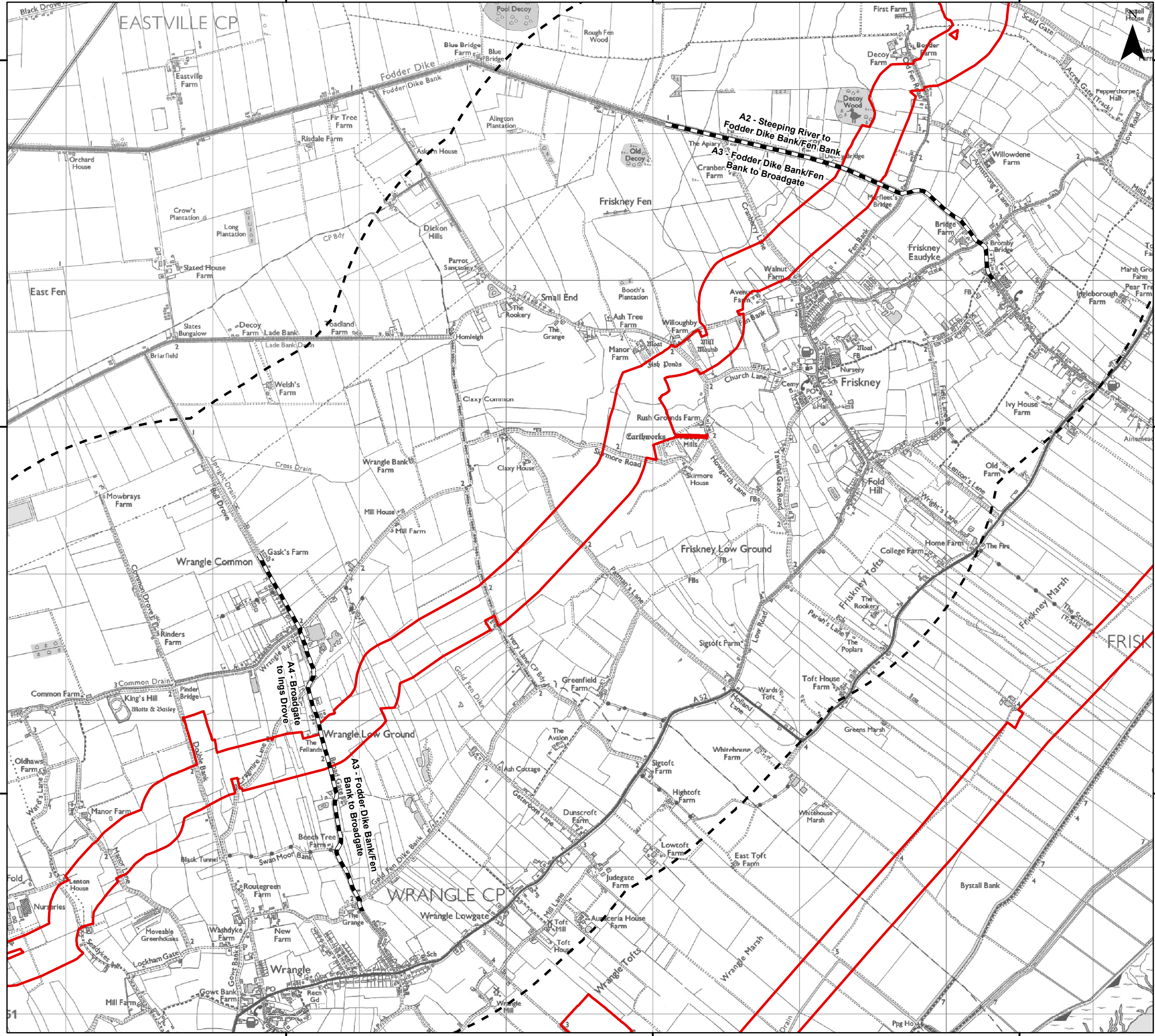
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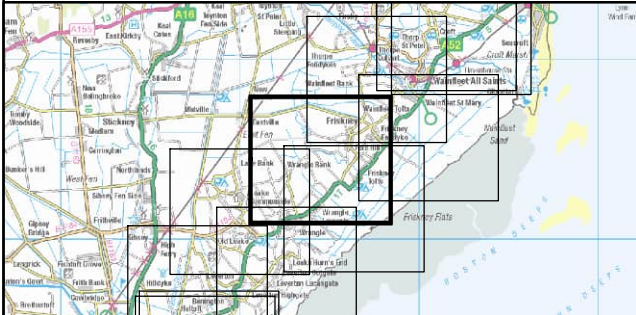
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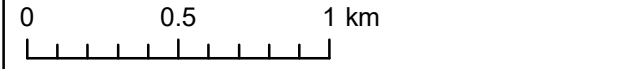
Legend

- Onshore PEIR Boundary
- Onshore Segment Break
- Onshore PEIR Boundary (Weston Marsh via North of the A52) 2 km Buffer

Sources:
Local Records derived from data provided by Lincolnshire Environmental Records Centre (October 2022)



Coordinate System: British National Grid



Scale: 1:25,000

Preliminary Environmental Information Report

Weston Marsh
Protected and Notable Species Records
Terrestrial Mammals - Other
Figure 21.1.18.15

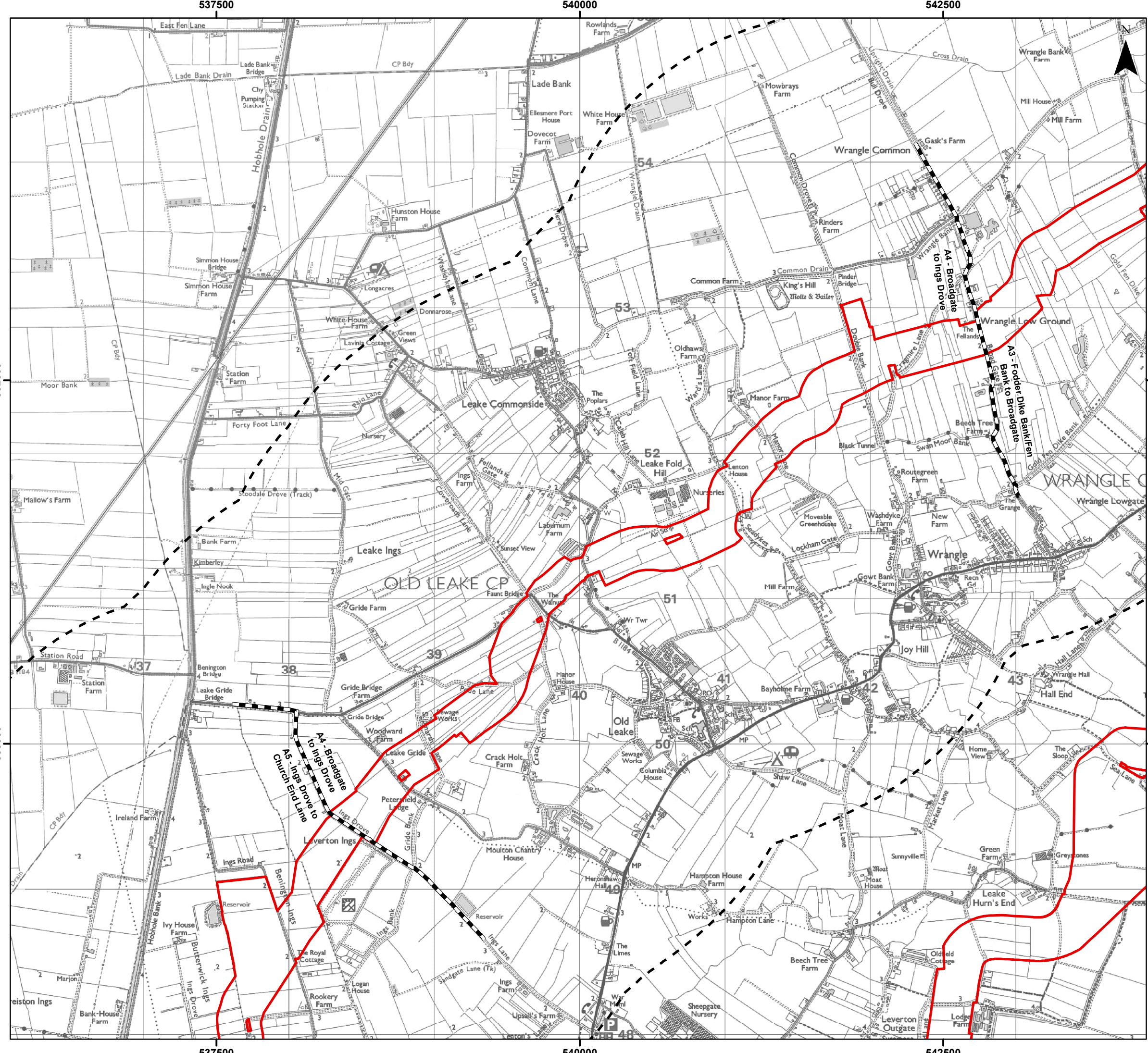


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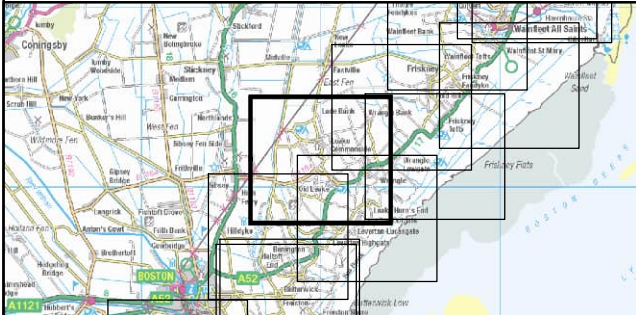
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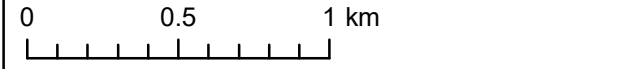
Legend

- Onshore PEIR Boundary
- Onshore Segment Break
- Onshore PEIR Boundary (Weston Marsh via North of the A52) 2 km Buffer

Sources:
Local Records derived from data provided by Lincolnshire Environmental Records Centre (October 2022)



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Preliminary Environmental Information Report

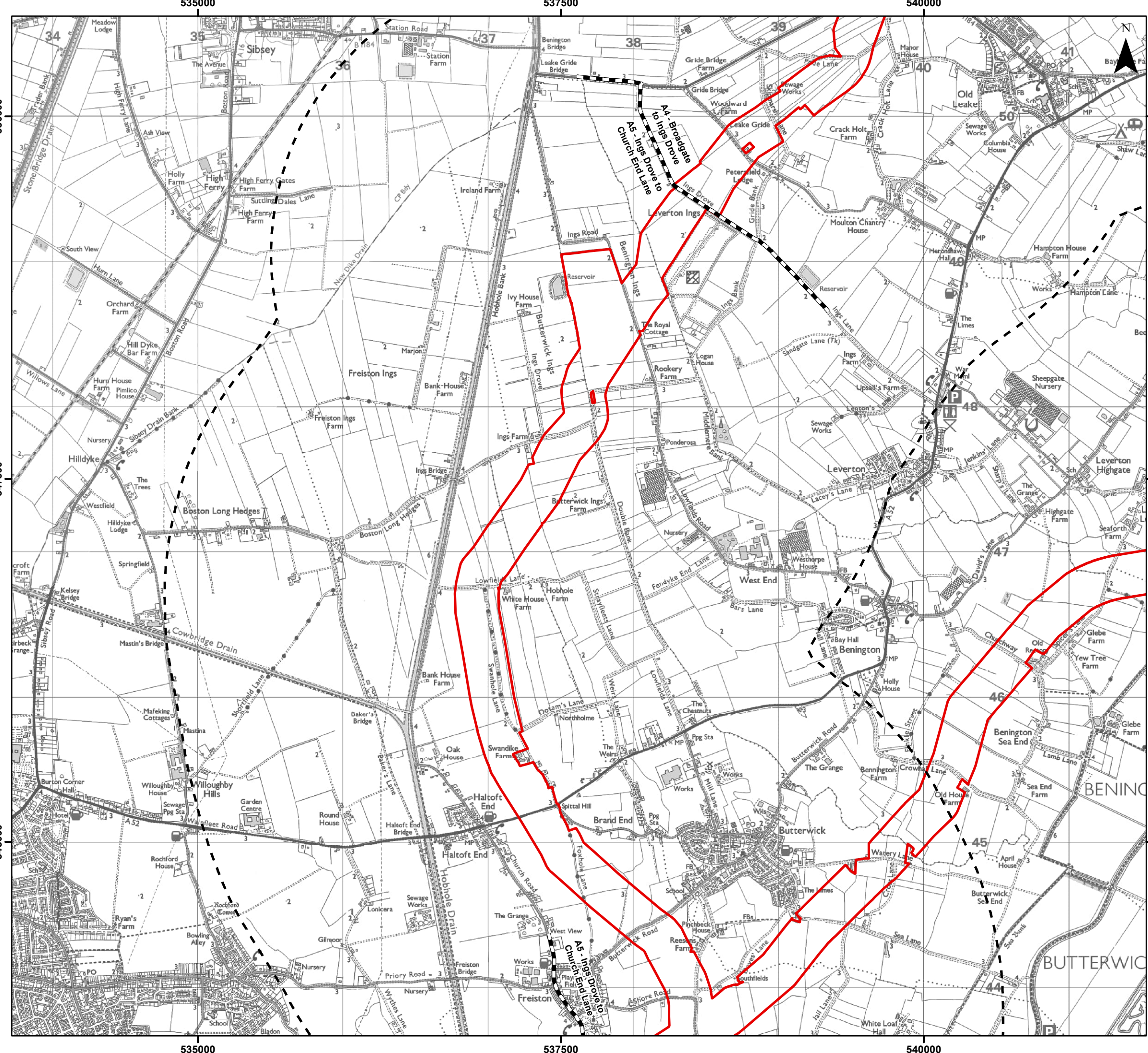
Weston Marsh
Protected and Notable Species Records
Terrestrial Mammals - Other
Figure 21.1.18.16



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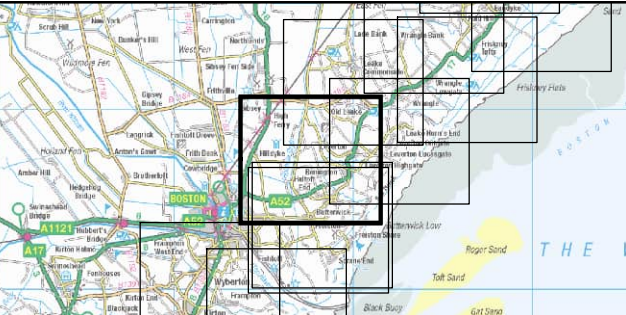
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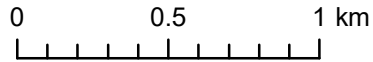
Legend

- Onshore PEIR Boundary
- Onshore Segment Break
- Onshore PEIR Boundary (Weston Marsh via North of the A52) 2 km Buffer

Sources:
Local Records derived from data provided by Lincolnshire Environmental Records Centre (October 2022)



Coordinate System: British National Grid



Scale: 1:25,000

Preliminary Environmental Information Report

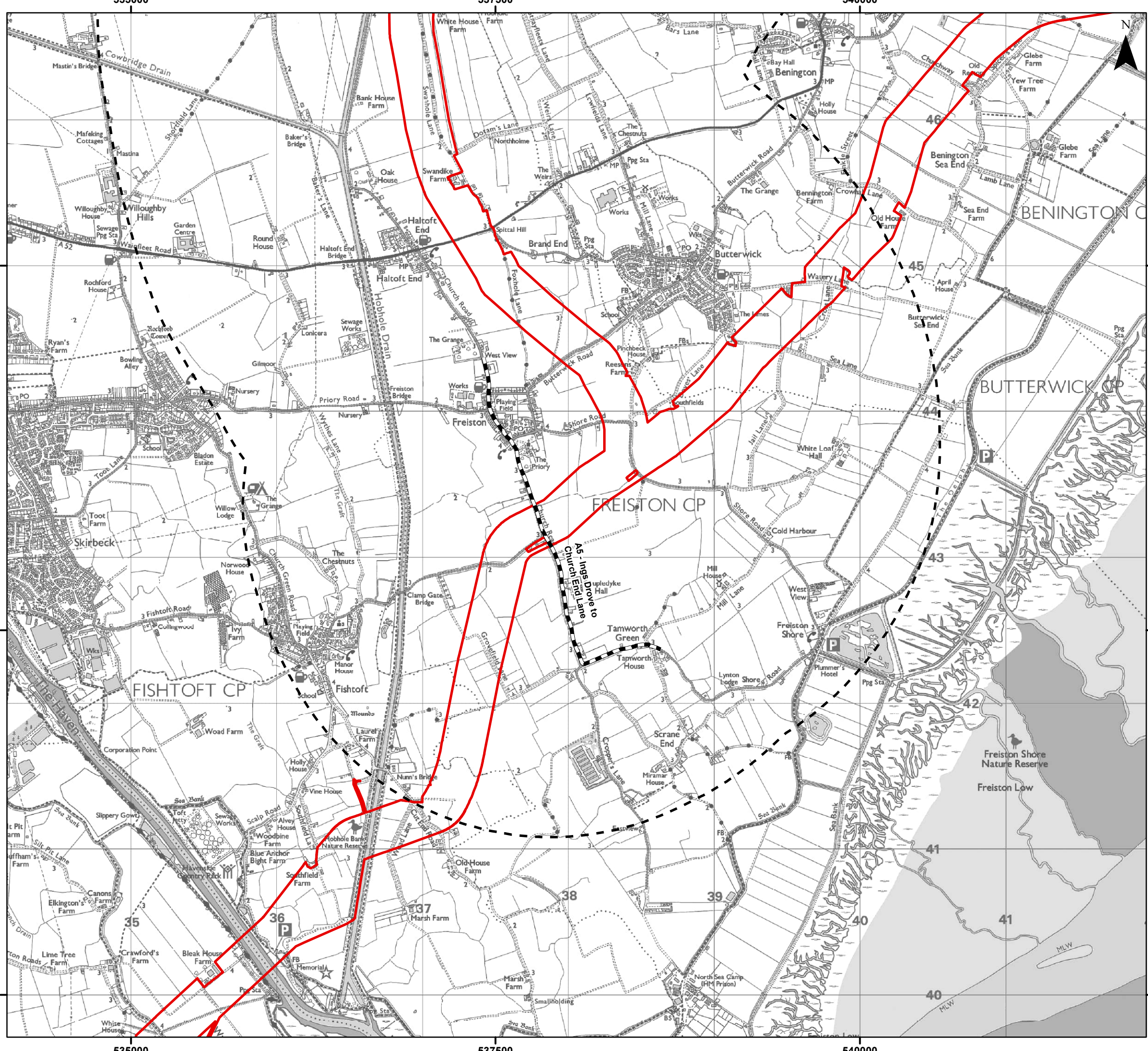
Weston Marsh
Protected and Notable Species Records
Terrestrial Mammals - Other
Figure 21.1.18.17



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- Legend**
- Onshore PEIR Boundary
 - Onshore Segment Break
 - Onshore PEIR Boundary (Weston Marsh via North of the A52) 2 km Buffer

Sources:
Local Records derived from data provided by Lincolnshire Environmental Records Centre (October 2022)



Coordinate System: British National Grid
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 Scale: 1:25,000

Preliminary Environmental Information Report
 Weston Marsh
 Protected and Notable Species Records
 Terrestrial Mammals - Other
 Figure 21.1.18.18



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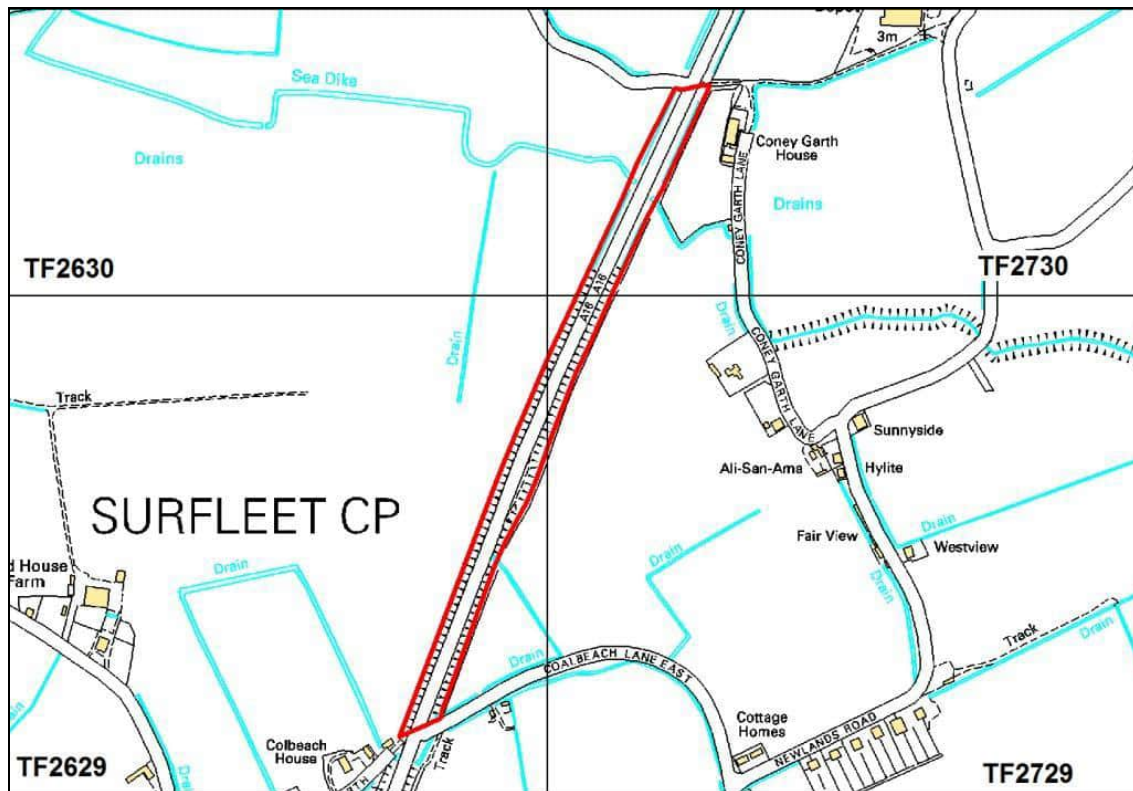


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ANNEX A – LOCAL WILDLIFE SITE CITATIONS

A16 Verges North of the River Glen



OS copyright No. AL100016739, Banovallum House, Manor House Street, Horncastle, Lincolnshire. LN9 5HF

Grid ref: TF268294 – TF271302
Length: 0.9km

Survey: 26 September 2012
Surveyor: J.Fraser

Main habitat: Coarse or rank grassland
Additional habitat: Scattered scrub, Ditch
Additional features: Anthills

West Verge

This is 850m of verge on the western side of the A16 between Colbeach Lane North at the southern end and Peter Seadike Lane at the northern end. Much of the site supports un-managed grassland, although a mostly narrow roadside strip is mown several times a year. An un-managed ditch on the western edge of the verge was dry at the time of survey, but holds a range of wetland plants.

The neutral grassland is of moderate quality, and includes soil mounds created by black ants. A few plants of interest here are common bird's-foot-trefoil, hop trefoil, meadow vetchling, tufted vetch, common knapweed, cat's-ear, yarrow, glaucous sedge and red fescue. Other species reflect the lack of management, and include bristly oxtongue, colt's-foot, field bindweed, hogweed, mugwort, horseradish, common nettle and false oat-grass. Damp habitat in or near the ditch is characterised by common fleabane, amphibious bistort, yellow loosestrife, water figwort, bulrush, common reed and jointed rush. Vegetation on the road edge includes salt-tolerant plants such as buck's-horn plantain, grass-leaved orache and reflexed saltmarsh-grass. Woody species are a minor element of the flora, but include sycamore, willow, hawthorn, dog-rose and bramble.

East Verge

This is 850m of verge on the eastern side of the A16 between Colbeach Lane East at the southern end and Coney Garth House at the northern end. Much of the site supports un-managed grassland, although a mostly narrow roadside strip and a wider area beside a layby are mown several times a year. An un-managed ditch on the eastern edge of the verge was dry

at the time of survey, and is partially shaded by a prominent line of trees and shrubs on adjacent land, but holds a good range of wetland plants.

The neutral grassland is of moderate quality, and includes soil mounds created by black ants. A few plants of interest here are common bird's-foot-trefoil, hop trefoil, meadow vetchling, tufted vetch, common knapweed, cat's-ear, yarrow, glaucous sedge and red fescue. Other species reflect the lack of management, and include bristly oxtongue, colt's-foot, field bindweed, hogweed, mugwort, prickly lettuce, common nettle, wood small-reed and false oat-grass. Damp habitat in or near the ditch is characterised by common fleabane, amphibious bistort, yellow loosestrife and common reed, as well as grey sallow, goat willow and osier. Vegetation on the road edge includes salt-tolerant plants such as buck's-horn plantain, grass-leaved orache and reflexed saltmarsh-grass.

Criterion passed: Mos1(NG1, Sw2)
Selected as a Local Wildlife Site: 18 March 2013

Anderby Creek Sand Dunes



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Grid ref: TF554754

Area: 11.9ha

Survey: 19 August 2014

Surveyor: Jeremy Fraser

Main habitat: Coarse or rank grassland, Sand dune, Scrub - scattered / dense
Additional habitat: Ditch

This is a 1.1km long stretch of coast on the seaward side of Anderby Marsh and Wolla Bank Reedbed nature reserves. It varies in width from 55m to 200m and comprises bare sand on the upper beach; a line of fixed dunes; and substantial gentle slopes inland in the north. Due to lack of management, most places support coarse and weedy vegetation, with substantial cover of scrub and trees. Good open dune is very limited in extent.

Extensive areas of woody vegetation on dry ground include large populations of sea-buckthorn, elder, garden privet, bramble and dewberry, plus sycamore, apple, woody nightshade and wild clematis. Also abundant is common reed, with creeping, spear and welled thistle, prickly, smooth and perennial sow-thistle, common and hoary ragwort, field and hedge bindweed, bristly oxtongue, common nettle, hemlock, weld and soapwort. Other robust typical sand dune plants are sand and sea couch, marram and lyme-grass.

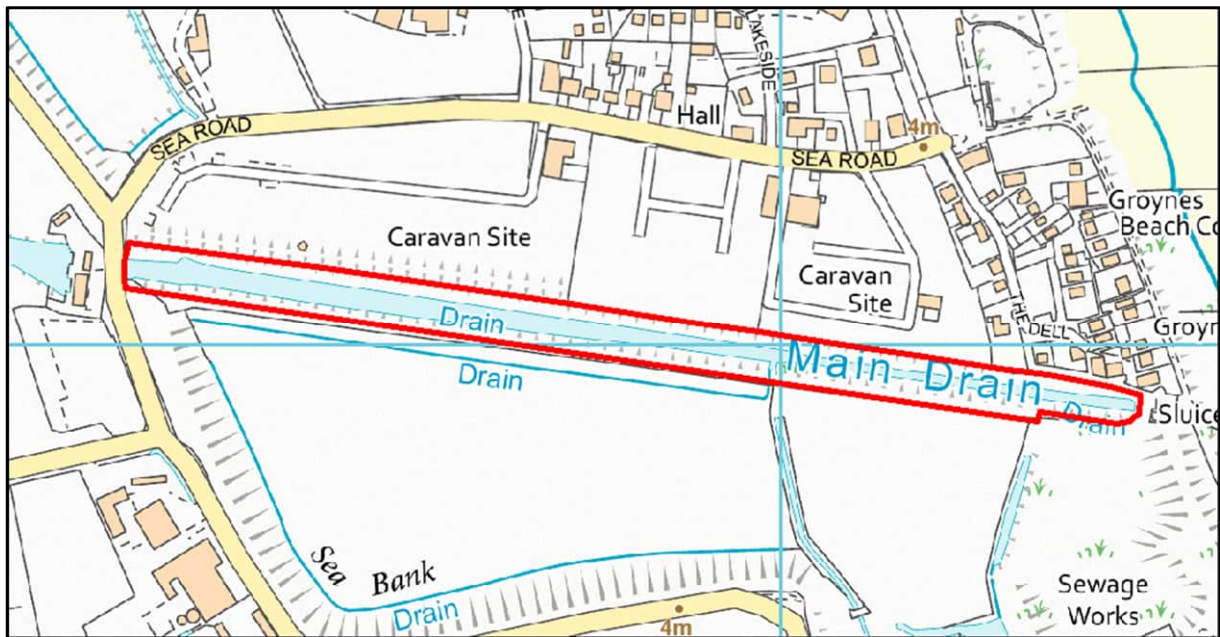
Relatively small areas have much less coarse vegetation, particularly along well-used paths and towards the outer edge of the dunes. This flora includes thyme-leaved sandwort, dove's-foot crane's-bill, oxeye daisy, meadow vetchling, tufted vetch, common bird's-foot-trefoil, cat's-ear, lady's bedstraw, black medick and sand sedge. Damper land is largely restricted to the western edge of the site, which is adjacent to linear water bodies almost throughout. Here can be found common fleabane, angelica, meadowsweet, sea club-rush, false fox-sedge, greater pond-sedge and common reed.

Fauna noted during the survey were reed bunting, reed warbler, swallow, wren, wood pigeon, speckled wood and common darter.

Criteria passed: Co3, NG1

Selected as a Local Wildlife Site: 2 April 2015

Anderby Gravity Outfall



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Grid ref:	TF545760-TF552759	Survey:	11 June 2021
Area:	0.6 km	Surveyor:	J Fraser
Main habitats:	Semi-improved neutral and coarse grassland Drain		
Additional habitats:	Scattered scrub		

This is the canalised downstream end of Main Drain, and its steep banks, on the southern edge of Anderby Creek. Aligned west to east, it lies between Sea Road and the sluice behind the coastal dune ridge. The eastern end abuts Anderby Creek Sand Dunes, while other land immediately to the south is Anderby Marsh LWT nature reserve. Caravan parks and other buildings overlook the whole northern boundary. The annually mown north-facing drain bank comprises a flat, central strip separating steep slopes below and above; the upper slope and flat area support neutral grassland with a good flora that includes some saltmarsh species. Lack of management on the south-facing bank has allowed coarse vegetation to develop there, including some elder, bramble, grey willow and other scrub.

Sea club-rush and common reed are abundant on both of the steep lower banks, as is typical of brackish drains. Few aquatic species can survive the saline conditions, but any that do are kept under control by regular management. The very steep banks prevented comprehensive study of water plants, but at the more accessible landward end there is much fennel pondweed and some bulrush.

Neutral grassland plants on the flat part of the south bank include some that are typical of damp places, such as meadowsweet, cuckooflower, wild angelica, red bartsia, celery-leaved

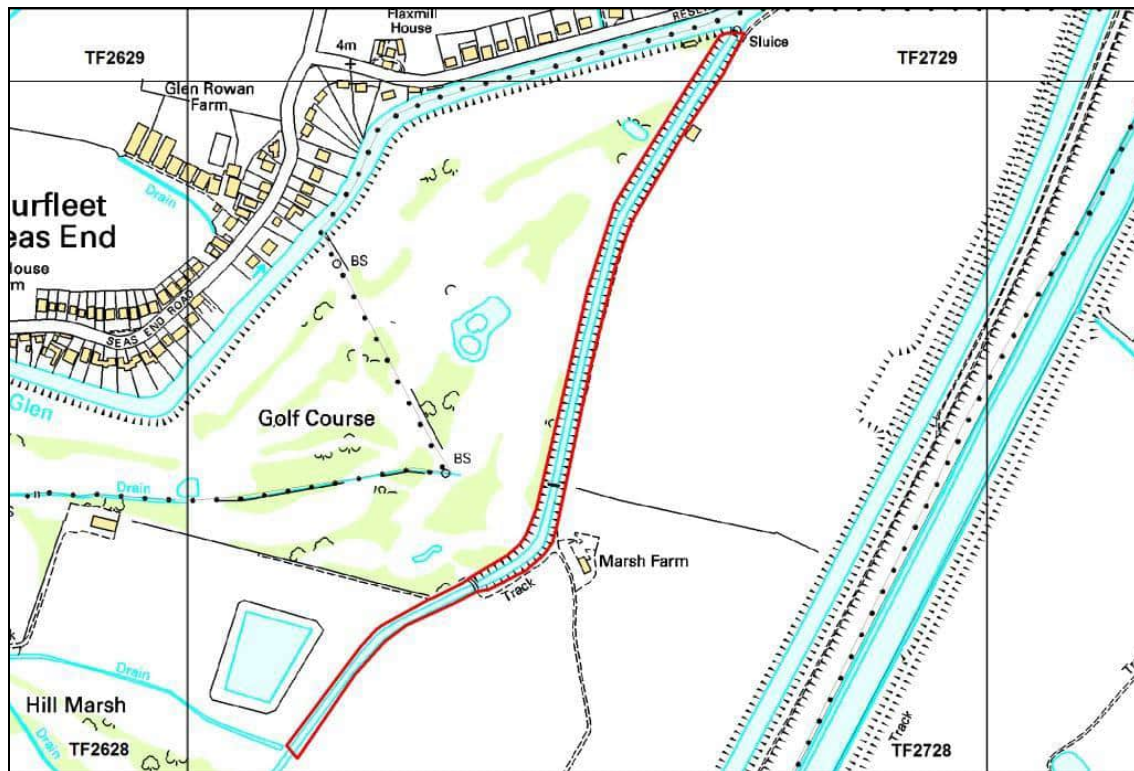
buttercup and false fox-sedge. Amongst these are two saltmarsh species: parsley-leaved water-dropwort and wild celery. The upper slope holds plants more indicative of drier conditions, such as cowslip, meadow vetchling, common bird's-foot-trefoil, tufted vetch, smooth meadow-grass, glaucous sedge, red fescue and crested dog's-tail.

A good number of birds, damselflies and other fauna were noted, including reed and sedge warbler, common whitethroat, wren, swallow, swift, house martin, common blue butterfly, azure, common blue and blue-tailed damselflies, and common frog.

Criteria passed: NG1

Recommended for selection as a Local Wildlife Site: 07 March 2022

Blue Gowt Drain, North



OS copyright No. AL100016739, Banovallum House, Manor House Street, Horncastle, Lincolnshire. LN9 5HF

Grid ref: TF271281 – TF276290 **Survey:** 30 July 2012
Length: 1.1km **Surveyor:** J.Fraser
Main habitat: Drain, Coarse or rank grassland
Additional habitat: Scattered scrub, Linear reedbed
Additional features: Steep slopes

Located between Spalding Golf Course to the west and arable land to the east, this is the downstream end of Blue Gowt Drain and both banks. Measuring 1.1km long and 6-10m wide, the northern end of the site is a sluice at the junction with the River Glen.

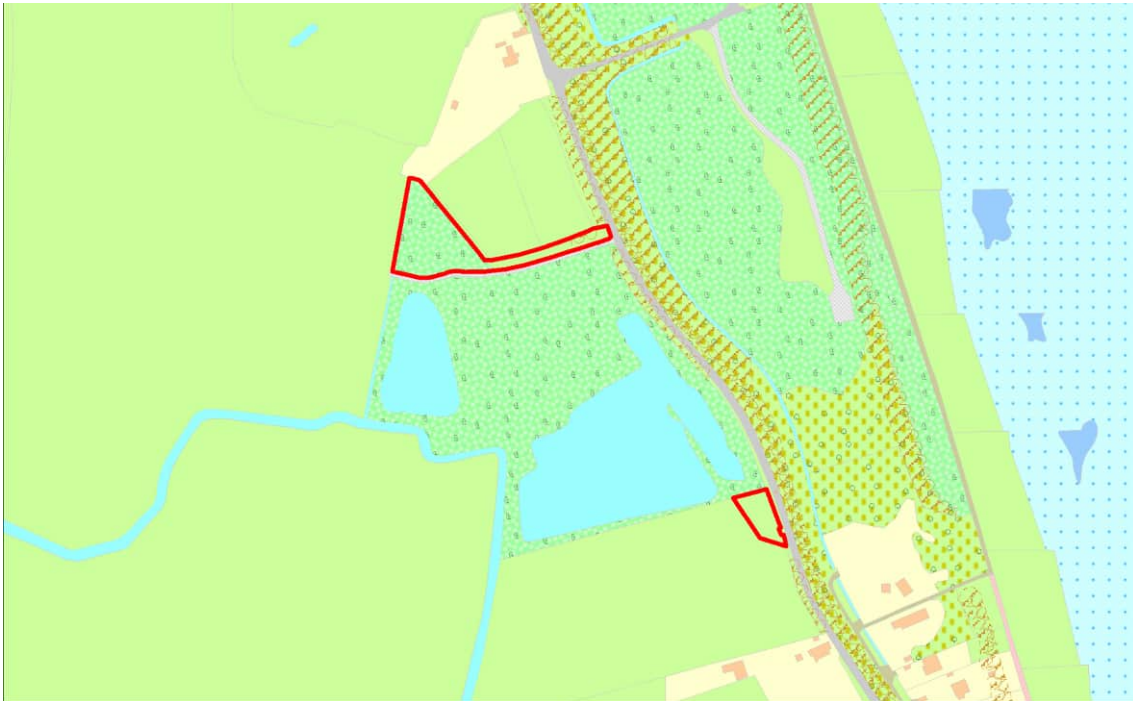
This stretch of watercourse is of national significance due to the presence of a population of ribbon-leaved water-plantain, a species also occurring naturally in the nearby Counter Drain/Vernatt's Drain complex, but only in two other places in Britain. Consequently, the plant is protected under Schedule 8 of the Wildlife and Countryside Act (1981), is considered Critically Endangered, and is the subject of a Biodiversity Action Plan. It appears that ribbon-leaved water-plantain only grows and sets seed in Blue Gowt Drain in the years immediately following de-silting. The last record here was in 2007, when an estimated 50 plants produced 36 fruiting heads, as reported by Richard Lansdown.

Other aquatic plants seen in 2012 were spiked water-milfoil, perfoliate and fennel pondweed, duckweed and the non-native Nuttall's waterweed. Waterside species include yellow iris, water figwort, meadowsweet, amphibious bistort, great willowherb, reed sweet-grass, reed canary-grass, common reed and greater pond-sedge.

Drier bankside habitat is mostly dominated by coarse grassland, as well as some hawthorn and elder bushes. Some of the more interesting plants here are tufted vetch, meadow vetchling, lesser trefoil and red fescue.

Criterion passed: Flo3
Selected as a Local Wildlife Site: 18 March 2013

Chapel Pit Nature Reserve (non-SSSI)



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Grid ref: TF557740

Area: 0.3ha

Survey: 8 September 2014

Surveyor: Jeremy Fraser

This site comprises two small unmanaged parts of Chapel Pit nature reserve, all the rest of which is part of Sea Bank Clay Pits Site of Special Scientific Interest.

The smaller element is a very small spur of land in the south-eastern corner of the reserve, supporting much scrub and a little remnant grassland.

The remainder of the site lies on the northern edge of the reserve, immediately adjacent to an east-west orientated track within the SSSI. In the west there is a triangular area of rough grassland and scrub. East of this is a ditch and overgrown hedgerow.

Criteria passed: Sup2

Selected as a Local Wildlife Site: 2 April 2015

Chapel Point Dunes, North



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Grid ref: TF561735

Area: 3.4ha

Survey: 19 August 2014

Surveyor: Jeremy Fraser

Main habitat: Coarse or rank grassland, Sand dune, Scrub - scattered / dense

This 0.62km long stretch of coastline comprises two elements. In the east is the upper part of a shallowly-sloping sandy beach, which is within Chapel Point to Wolla Bank geological Site of Special Scientific Interest. Elsewhere, in central and southern parts, there are heavily scrubbed-up fixed dunes, which also support some coarse grassland.

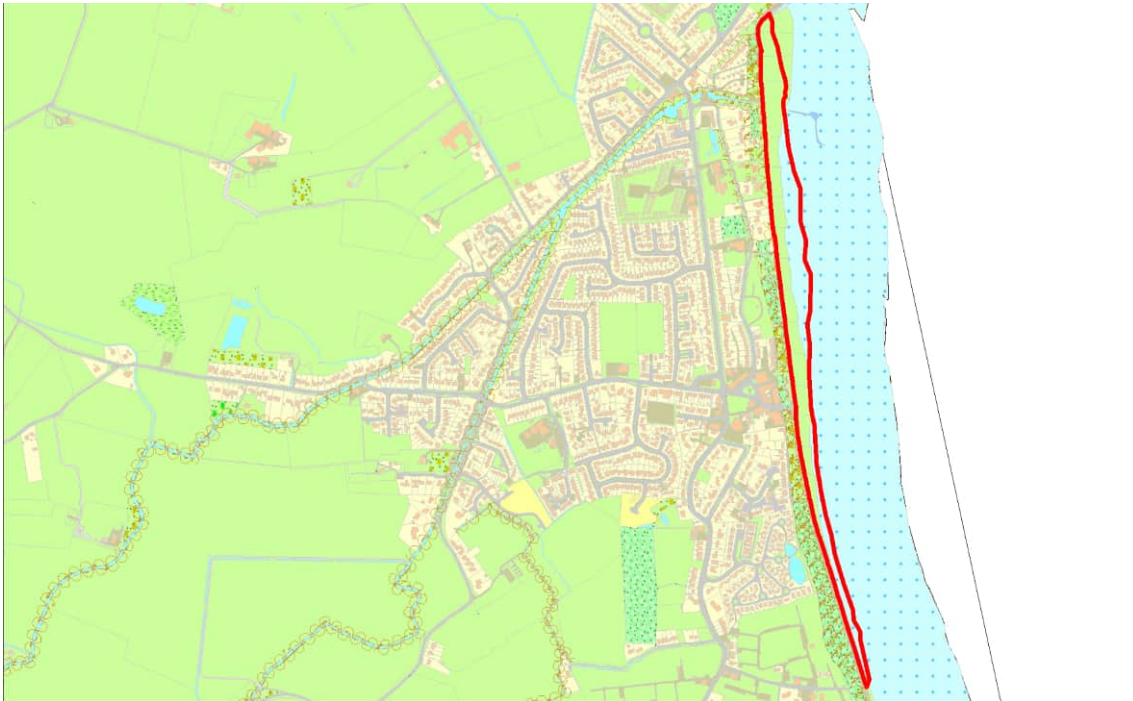
Plants of good quality dunes are few in number, but include marram, lyme-grass, sea and sand couch, hound's-tongue, sea bindweed, prickly saltwort and sand sedge. Neutral grassland species also occur sparsely, and are represented by common bird's-foot-trefoil, autumn hawkbit, lady's bedstraw, meadow vetchling, yarrow, silverweed and black medick. In contrast, plants typical of unmanaged sand dunes near habitation are abundant, such as horse-radish, creeping thistle, hedge bindweed, ground-elder, cow parsley, field horsetail, common ragwort, ivy, Russian-vine, hogweed, amphibious bistort, common reed and false oat-grass. Woody vegetation includes sea-buckthorn, elder, hawthorn, grey sallow, cultivated rose, bramble, dewberry and honeysuckle.

Invertebrates noted during the survey were common blue, ruddy darter and common darter.

Criteria passed: Co3

Selected as a Local Wildlife Site: 2 April 2015

Chapel Point Dunes, South



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Grid ref: TF562723

Area: 7.7ha

Survey: 16 May 2014

Surveyor: Jeremy Fraser

Main habitat: Sand dune

Additional habitat: Acid grassland - unimproved / semi-improved, Scrub – scattered / dense

This north-south aligned strip of coastal land is 1.6km long and varies in width between 25m and 75m. Located to the south of Chapel Point in Chapel St. Leonards, the site comprises developing low sand dunes on the upper beach, between un-vegetated sand to the east and the concrete promenade in the west. The generally sparse sward includes a diverse sand dune flora.

Much of the area is characterised by a mixture of bare sand and marram, but few other plants. However, both sea-holly and sea spurge are not uncommon in this habitat in the north. Places that are better vegetated support short species associated with open, sandy grassland, such as thyme-leaved sandwort, common whitlowgrass, little mouse-ear, lesser chickweed, wall speedwell, early forget-me-not, smooth meadow-grass and sand sedge. Other more robust species include lyme-grass, sea couch, common reed, hound's-tongue, evening-primrose, great mullein, great lettuce, horse-radish and hogweed.

Apart from two patches of dense sea-buckthorn, the dunes have yet to be colonised by significant numbers of trees and shrubs. However, those already present include old man's beard, elder, sycamore, ivy, woody nightshade, and the naturalised Japanese rose, snowberry and Duke of Argyll's teapant.

Amongst the birds and invertebrates encountered during the survey were swallow, house martin, dunnock, goldfinch, cinnabar, brown-tail moth, orange tip, and most notably several green hairstreaks.

Criteria passed: Co3

Selected as a Local Wildlife Site: 2 April 2015

Chapel Six Marshes



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Grid ref: TF558742

Area: 12.9ha

Survey: 19 & 22 August 2014

Surveyor: Jeremy Fraser

Main habitat: Coarse or rank grassland, Lake, Reedbed, Scrub - scattered / dense

Additional habitat: Ditch, Marsh / Fen, Non-native plantation - on ancient / new, Pond, Scrub - scattered / dense

Chapel Six Marshes

This is a 750m stretch of coast north of Chapel St Leonards bounded to the west by Anderby Road. The northern, smaller part is a Lincolnshire Wildlife Trust nature reserve, while the remainder has visitor facilities much used by the public, owned and managed by Lincolnshire County Council (LCC). Features common to both, from east to west, are: bare sand on the upper beach; a line of low fixed dunes succeeded westwards by flatter dry habitat; and finally an old embankment beside the road. The upper beach is within Chapel Point to Wolla Bank geological Site of Special Scientific Interest.

The nature reserve supports a good range of brackish and freshwater wetland plants, associated with a small pond, a north-south ditch, some good quality wet reedbed and a larger, drier area supporting a mixture of reeds and coarse vegetation. The sand dune ridge is dominated by robust and competitive plants, including much scrub, while woody vegetation is also prominent on the old embankment.

Wetland plants typical of brackish water include parsley water-dropwort, sea-milkwort, probable brackish water-crowfoot, saltmarsh rush and distant sedge. Growing with these are ivy-leaved duckweed, common fleabane, angelica, creeping bent, toad rush and false fox-sedge. On the dune ridge and adjacent landward slope are sand sedge, sand couch, red fescue, marram, lyme-grass, common bird's-foot-trefoil, meadow vetchling, cat's-ear, tufted vetch, black medick and dewberry. Trees and shrubs include grey willow, sycamore, hawthorn, elder, sea-buckthorn, bramble, dog-rose. Amongst

many weedy species are perennial sow-thistle, large bindweed, creeping & spear thistle, common nettle, burdock, wild teasel, bristly oxtongue, curled dock, common ragwort, sea couch, tall fescue and false oat-grass. Prominent non-native plants are a cultivated rose, dotted loosestrife and Canadian goldenrod.

Fauna noted during the survey were reed warbler, peacock, small tortoiseshell and blue-tailed damselfly.

The LCC land covers a far greater area than the nature reserve and differs from it in two significant ways. Firstly, there is vehicular access, leading to car parking facilities, a toilet block and a new circular path. Secondly, major works have been carried out recently to enhance the value of the site for wetland flora and fauna, involving creation of winding water channels on land to north and south of the entrance road. Habitats present over the site as a whole are bare sand and short vegetation in car parking areas, coarse grassland, a little open water, much reedbed, and varying cover of trees and scrub. The resulting flora is diverse and interesting.

Dense common reed restricted opportunities to survey the aquatic flora, but spiked water-milfoil, water-crowfoot and duckweed were recorded. Other wetland species typical of brackish conditions are toad & saltmarsh rush, sea club-rush, parsley water-dropwort, wild celery, angelica and common fleabane.

Common reed also occurs on the sand dune ridge, with marram, lyme-grass, sand and sea couch, sand sedge, sea sandwort, dewberry and plentiful sea buckthorn. Woody vegetation is prominent at the southern end of the site, on the embankment along the entire western boundary, and in wetter central areas. Here species include pine, white poplar, goat, white & crack willow, osier, grey sallow, blackthorn, hawthorn, ivy, wild and garden privet, elder, dog-rose, bramble and woody nightshade.

The recent works included creation of a circular path around the southern half of the site. This has provided opportunities for colonisation by grassland plants, although most of the interesting flora is associated with the landward slope of the dune ridge and the open sward in car parking areas. Some of the neutral grassland species in these places are common knapweed, meadow vetchling, tufted vetch, oxeye daisy, autumn hawkbit, meadow buttercup, yarrow, smooth tare and red fescue. Opportunists of open and disturbed ground include buck's-horn plantain, common stork's-bill, small-flowered and dove's-foot crane's-bill, black medick, wild mignonette, sticky groundsel, silverweed and annual meadow-grass. Coarse grassland comprises species such as creeping and spear thistle, hogweed, rosebay and great willowherb, comfrey, cow parsley, hedge and large bindweed, curled dock, Yorkshire-fog, common couch, wood small-reed and false oat-grass.

Fauna noted during the survey were moorhen, migrating whimbrel, wood pigeon, green-veined white, small tortoiseshell and common darter.

Criteria passed: Co3, SL1, We1, Sup2
Selected as a Local Wildlife Site: 2 April 2015

Doves' Lane Drain



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Grid ref: TF385442 – TF386440,
TF384439

Baseline survey: 2008
Monitoring survey: 7 August 2012

Length: 0.6 km

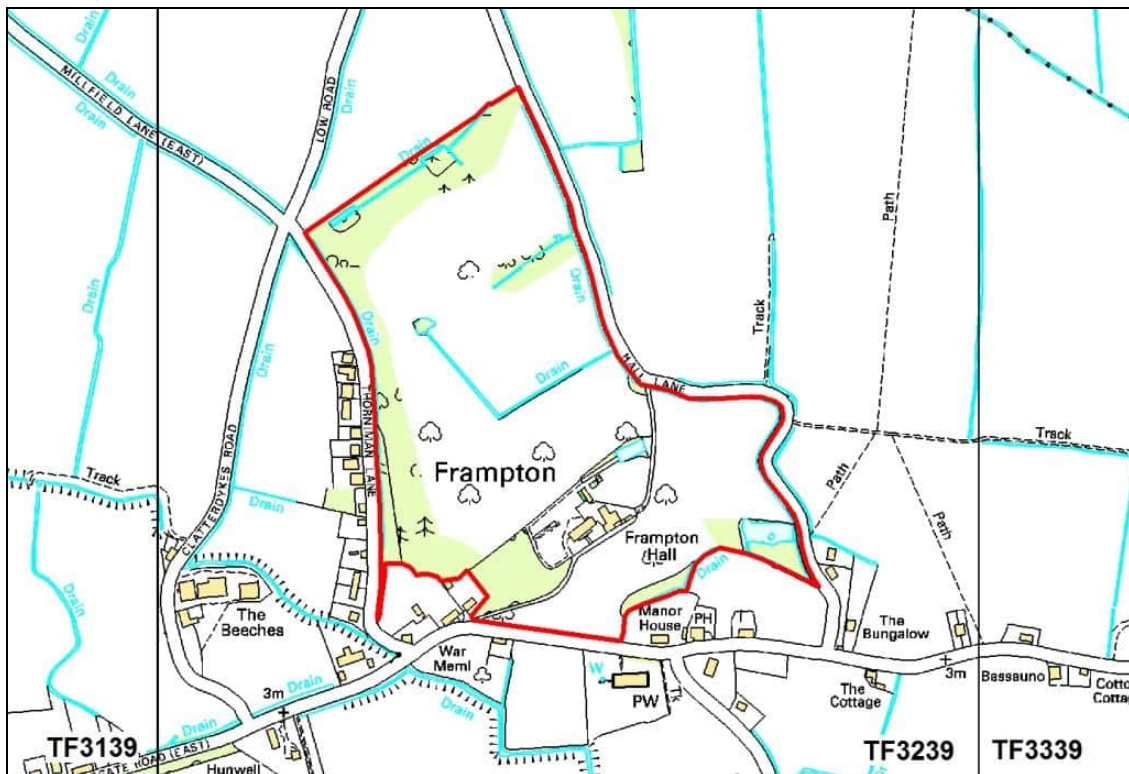
Surveyors: G.Steele, T.Smith

Main habitat: Drain
Additional habitat: Neutral grassland

Drains with the nationally scarce marsh-mallow.

Criterion passed: Mos4(Marsh-mallow)
Selected as a Local Wildlife Site: 24 March 2009

Frampton Hall



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Grid ref: TF324395
Area: 21.3 ha

Baseline survey: 22 August 2007
Monitoring survey: 10 October 2012
Surveyor: H.Scarborough

Main habitat: Parkland
Additional habitat: Semi-natural woodland, Scrub, Semi-improved neutral grassland, Semi-improved calcareous grassland, Improved grassland, Coarse or rank grassland, Ditch, Pond
Additional features: Veteran trees (abundant), Pollarded trees, Planted specimen trees, Shallow dry ditches, Species-poor/patchy hedgerows

A mosaic of plantation woodland (shelter belt), ponds and ditches, mature hedgerows, and neutral grassland with mature/veteran parkland trees.

Scrub, hedgerows and shelterbelt woodland plantation: dominated by hawthorn, sycamore, ash, cherry, horse chestnut, walnut, beech, silver birch, dog-rose, field maple, poplar species, elm, Norway maple, blackthorn, elder, pine species, larch, hornbeam, dog rose, honeysuckle. Occasional mature veteran tree which has been engulfed into the shelter belt plantation. Ground flora includes garlic mustard, herb robert, dog's mercury, bramble, ivy, cow parsley.

Semi-improved species poor grassland within the parkland: species poor cattle grazed grassland dominated by perennial rye-grass, white clover, creeping buttercup, ribwort plantain, Yorkshire fog, cock's-foot, meadow grass species, crested dog's tail, Timothy, dandelion, common nettle with patches of ruderals and rougher grassland including chickweed, knotgrass, groundsel, dock species, sow thistles, common nettle, cleavers, dock species, creeping thistle, cow parsley, greater plantain

Parkland trees: large number of mature parkland trees including horse chestnut, pedunculate oak and walnut. Some mature exotic species as well.

Ditches and ponds within the parkland: ponds are generally very shaded with rigid hornwort, reed sweet grass, common reed, yellow iris, algae, common duckweed, false fox sedge and bittersweet. The ditches are dry/seasonally wet and have fool's watercress, celery leaved buttercup, floating sweet grass, creeping bent, watercress, reed sweet grass, reed canary grass, common reed and creeping bent.

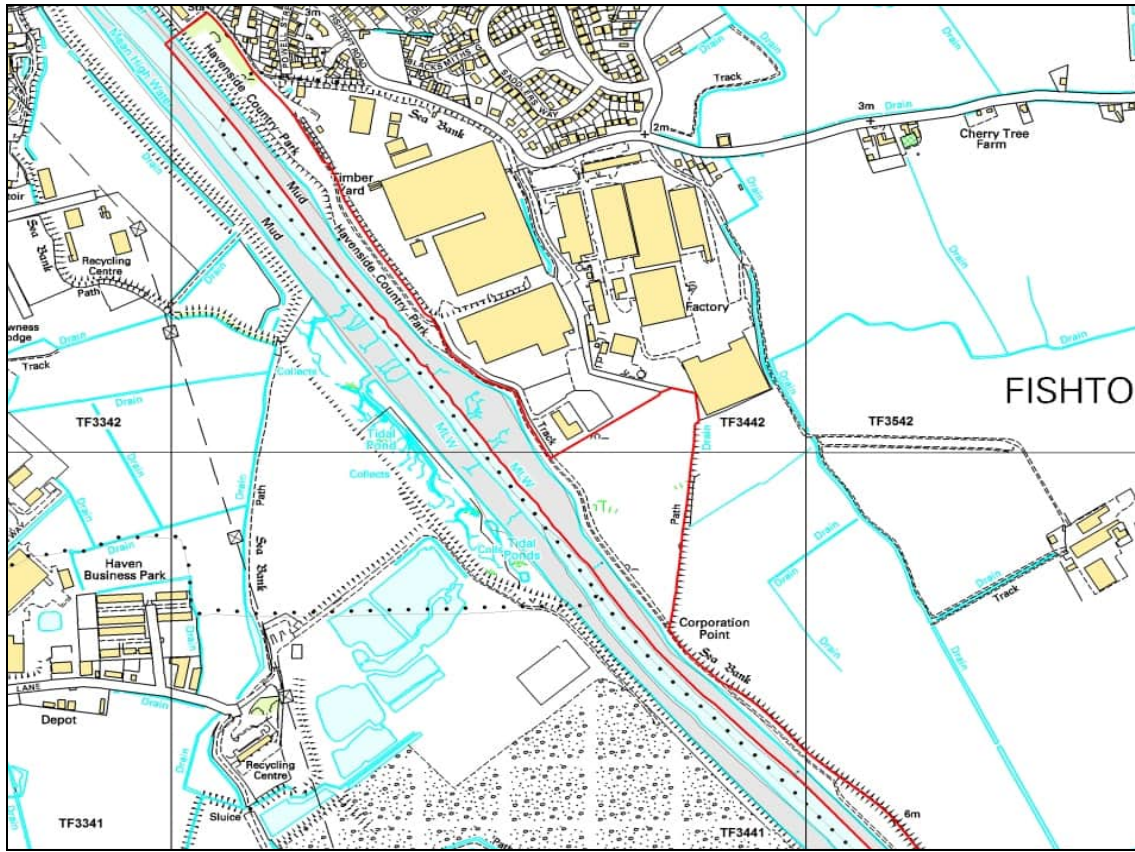
This type of parkland habitat is scarce in the local context and therefore very important. The site also has significant nature conservation value for local bird and invertebrate populations.

The site is likely to be a valuable foraging/roosting area for local bat populations. The abundant mature/veteran parkland trees with holes, cracks and fissures have a very high bat roost potential – the mature parkland trees are one of the most significant features of this site.

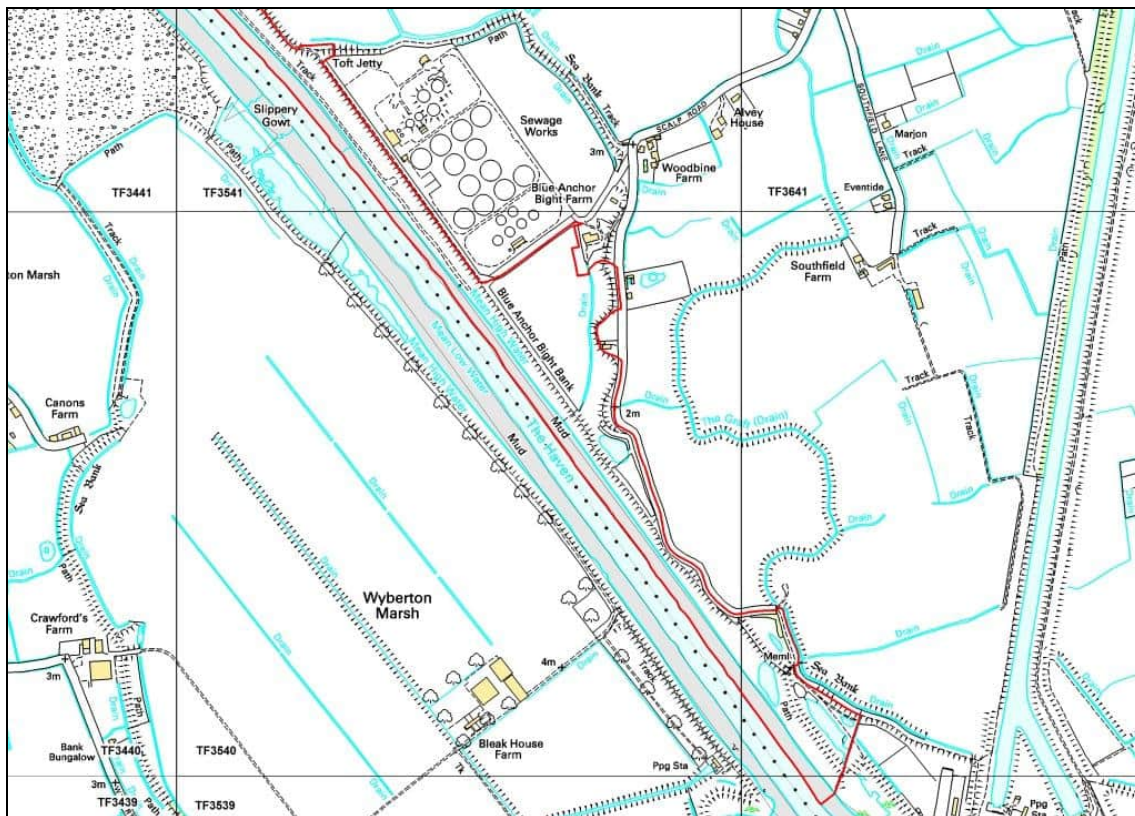
Criteria passed: WD5, SW2

Recommended as a Local Wildlife Site: 22 May 2008

Havenside



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Grid ref: TF340427 – TF361399 **Baseline survey:** 4 July 2007
Area: 33.1 ha **Monitoring survey:** 7 August 2012
Surveyors: G.Steele, T.Smith

Main habitat: Coarse or rank grassland
Additional habitat: New native plantation, Scrub, Semi-improved neutral grassland, Improved grassland, Ditch, Pond, Coastal grazing marsh, Marsh, Reedbed
Additional features: Tussocky vegetation, Seasonally wet/damp areas, Abundant nectar sources, Open access, ROW, Anthills, Steep slopes

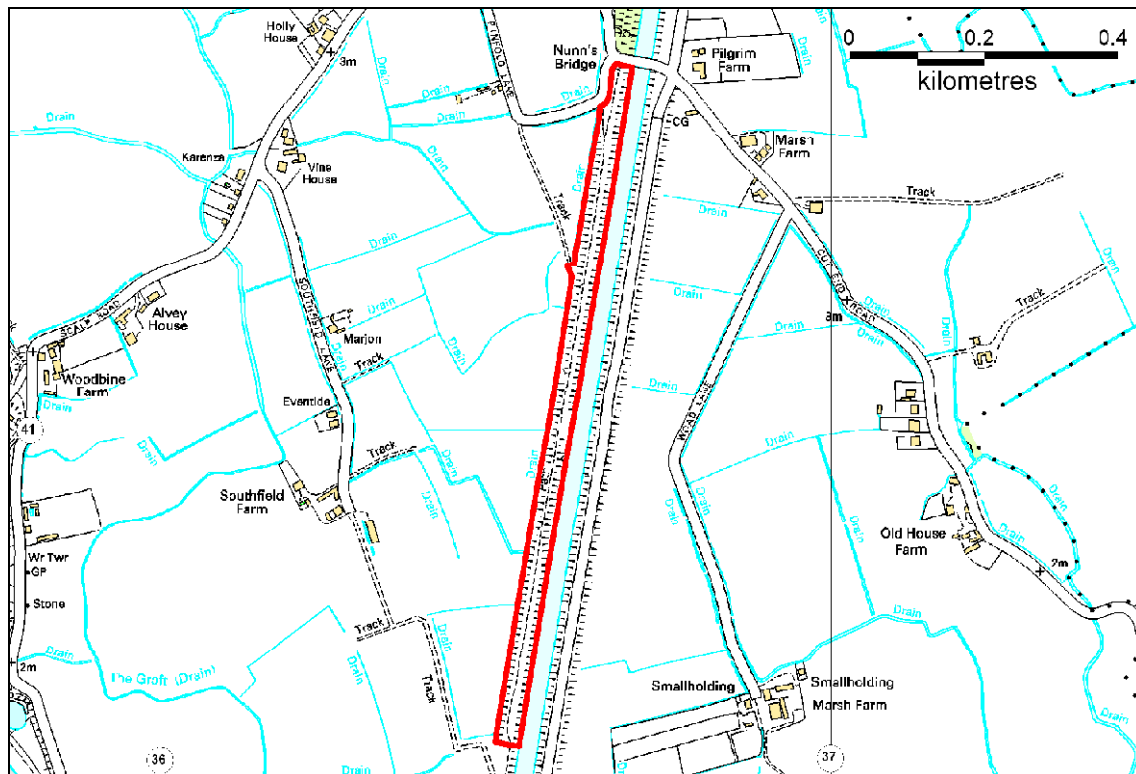
A long man-made sea bank dating from 1880s. The component areas are:

- A raised bank of plantation and meadow at the western end
- Triangular area of rough grassland and newly planted trees
- Grazed grassland with drainage ditches and ponds
- Older sea bank with dense scrub
- An amenity area centred on the Pilgrim Fathers memorial with amenity grassland, two small ponds and wet grassland.

The mosaic of woodland, grassland and wetland is very valuable in the local context and of significant value to local bird, mammal and invertebrate populations. The linear nature of the site provides a good wildlife corridor through Boston.

Criteria passed: NG1, Mos1(CG1, Sw2), Co1
Recommended as a Local Wildlife Site: 22 May 2008

Hobhole Bank



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Grid ref: TF367415 – TF364405
Area: 3.7 ha

Baseline survey: 13 September 2007
Monitoring survey: 19 October 2012
Surveyors: G.Steele, H.Scarborough

Main habitat: Scrub, Semi-improved neutral grassland, Semi-improved calcareous grassland
Additional habitat: Coarse or rank grassland
Additional features: Anthills, Steep slopes

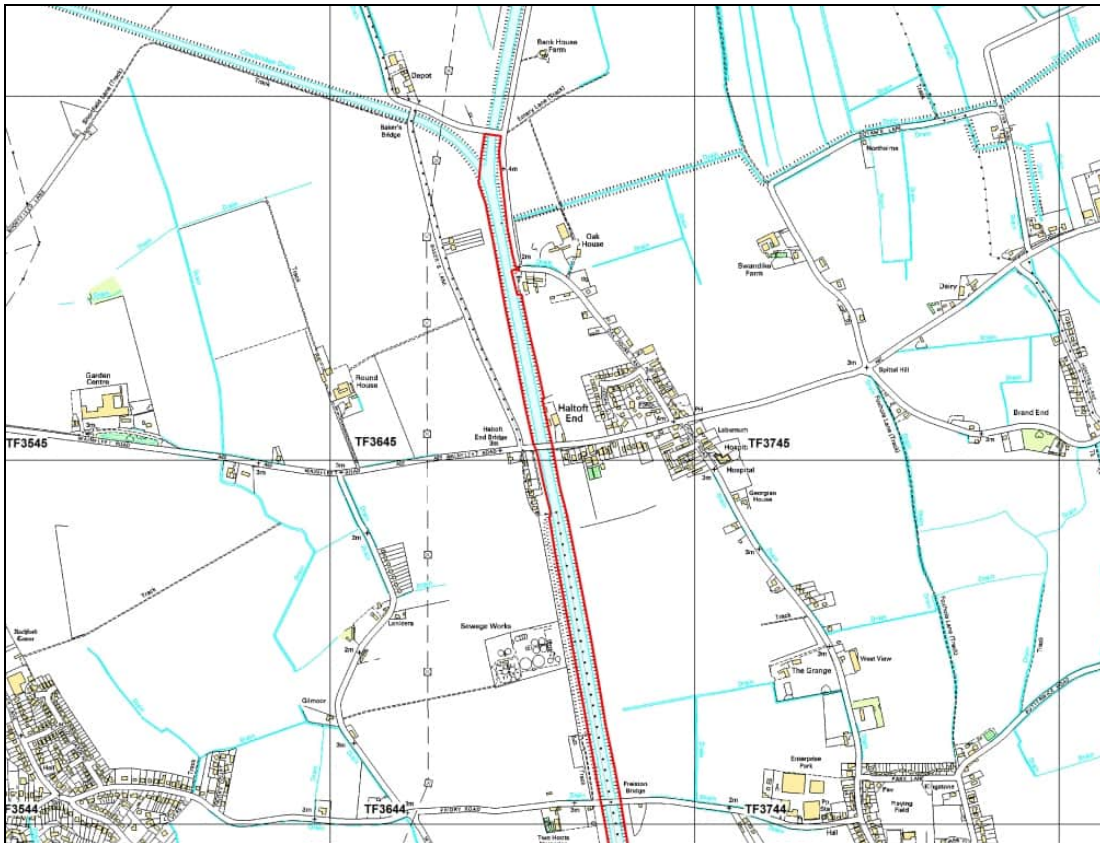
Man made raised earth bank associated with a large drain (Hobhole Drain). The dominant communities on the bank top are rough neutral grassland, with areas of finer more calcareous grassland also present; and also dense scrub along the banksides. The calcareous nature of the grassland is likely to have arisen as a result of material brought in to form the banks.

The site is a Lincolnshire Wildlife Trust Reserve and is actively managed in order to try and maintain the finer grassland sward on the bank top. Scrub invasion from the bank slopes is a threat to the floristic diversity of this site.

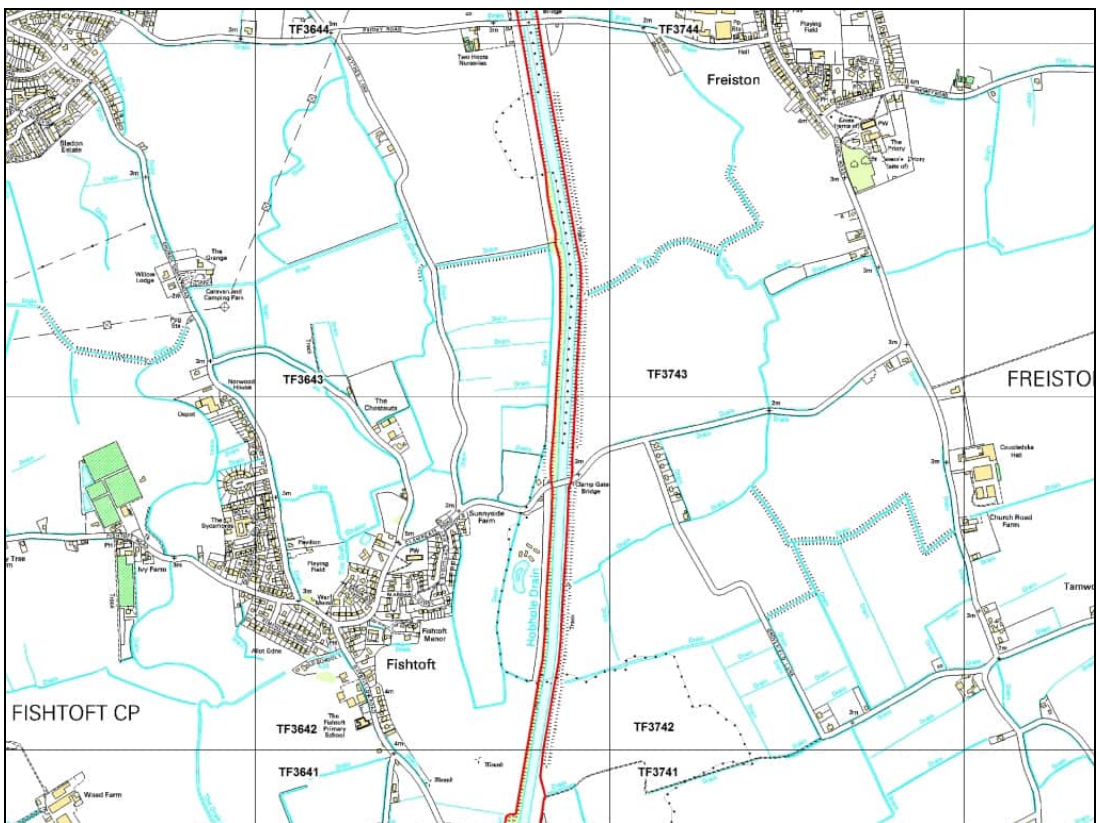
It supports a good bird assemblage and is known locally for the long-eared owls which over winter on site.

Criterion passed: Mos1(NG1, CG1)
Recommended as a Local Wildlife Site: 22 May 2008

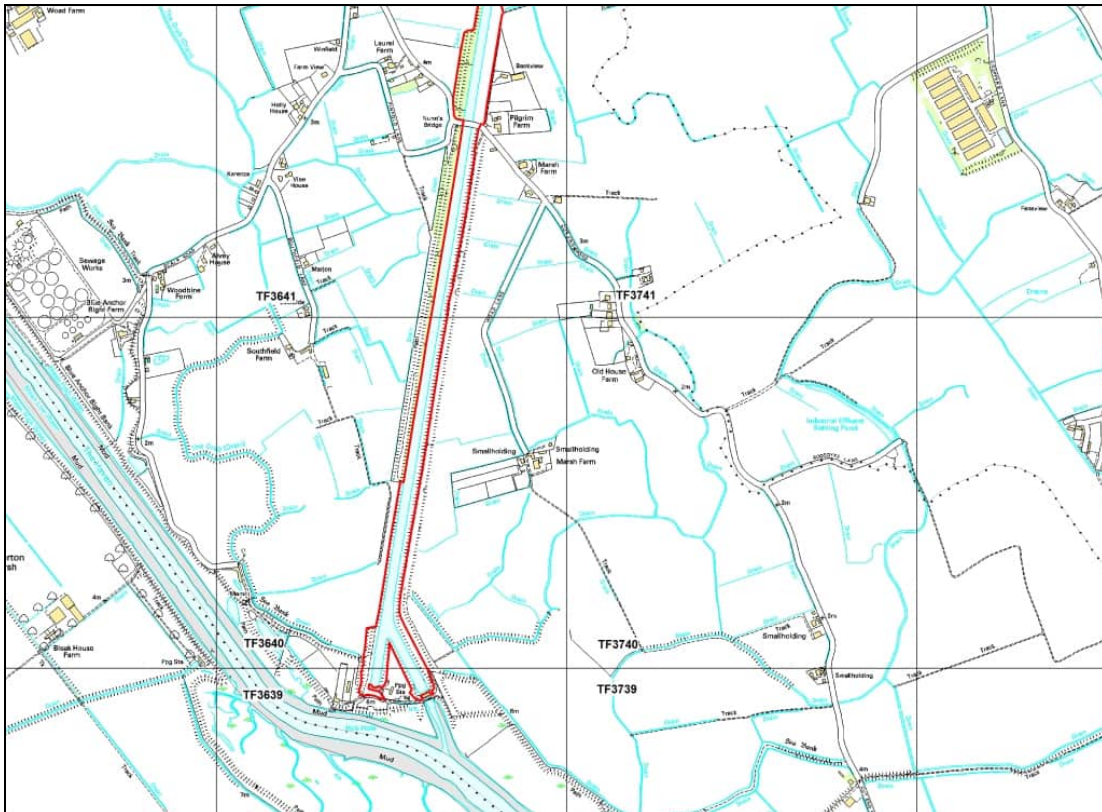
Hobhole Drain, Baker's Bridge South



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Grid ref: TF364459 – TF365399
Length: 6.1 km

Baseline survey: 13 September 2007
Monitoring survey: 15, 21, 28
 October 2012

Surveyors: G.Steele, H.Scarborough

Main habitat: Scrub, Semi-improved neutral grassland, Semi-improved calcareous grassland, Coarse or rank grassland, Ditch

Additional features: Tussocky vegetation, ROW/permissive path, Steep slopes

A man-made drain providing the main drainage for the East Fen north of Boston and discharging into The Haven. The east bank is described in the Hobhole Bank report; the eastern bank comprises neutral rough grassland and calcareous grassland (which is particularly species rich towards the southern end) – the bank is kept clear to assist dredging operations. The western bank supports more dense and scattered scrub – hawthorn, ash, blackthorn, willow species, elder, bramble, dog-rose, field maple and oak occur.

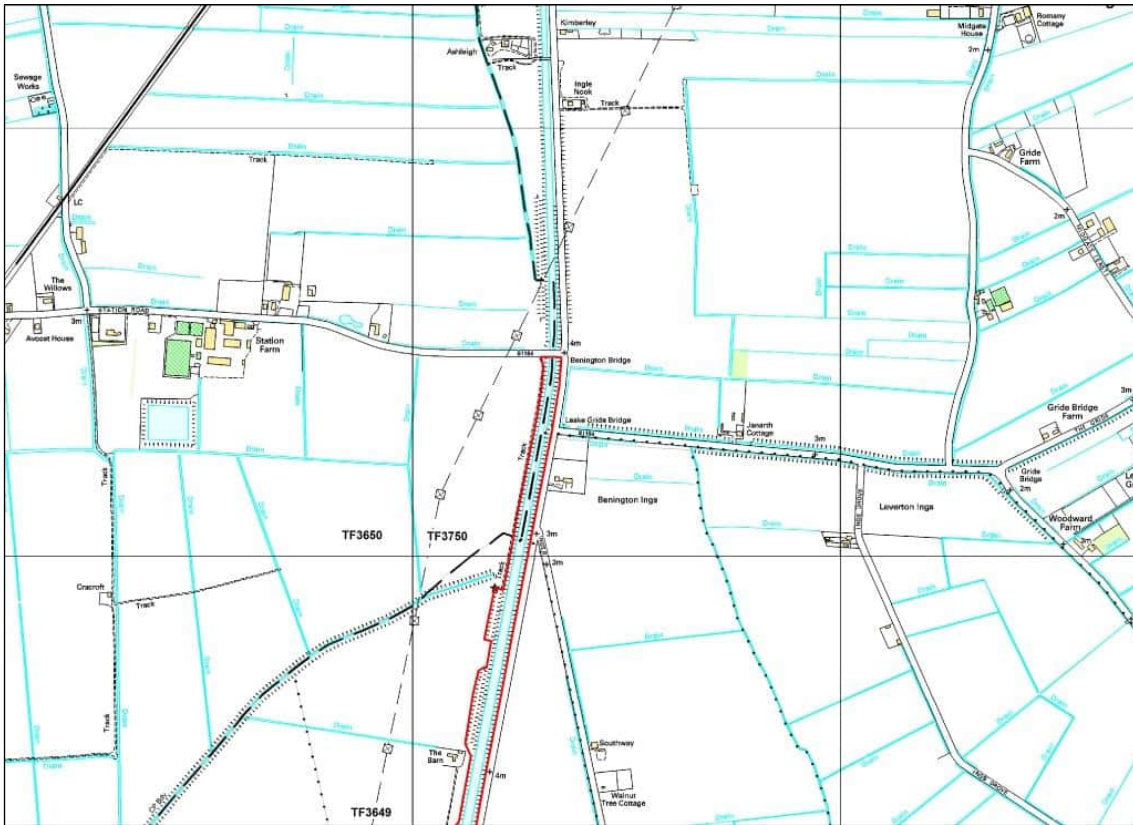
The bankside flora is species rich in places; dominated by creeping buttercup, common reed, angelica, black knapweed, vetch species, fleabane, hemlock, hogweed, cleavers, bristly ox-tongue, cow parsley and nettle with patches of lower sward species rich areas with red clover, bird's foot trefoil, agrimony, fleabane, ox-eye daisy, glaucous sedge, tare species, wild carrot, common mouse-ear, black knapweed and perforate St Johns wort.

The bankside flora is good whilst the aquatic habitat is relatively poor in comparison. Past surveys indicate that this has always been the case and the bankside flora has always been the notable feature of this site. The calcareous nature of the vegetation is likely to have arisen as a result of material imported when the banks were created. The site provides a valuable wildlife corridor due to the near continuous line of scrub and trees on the banksides.

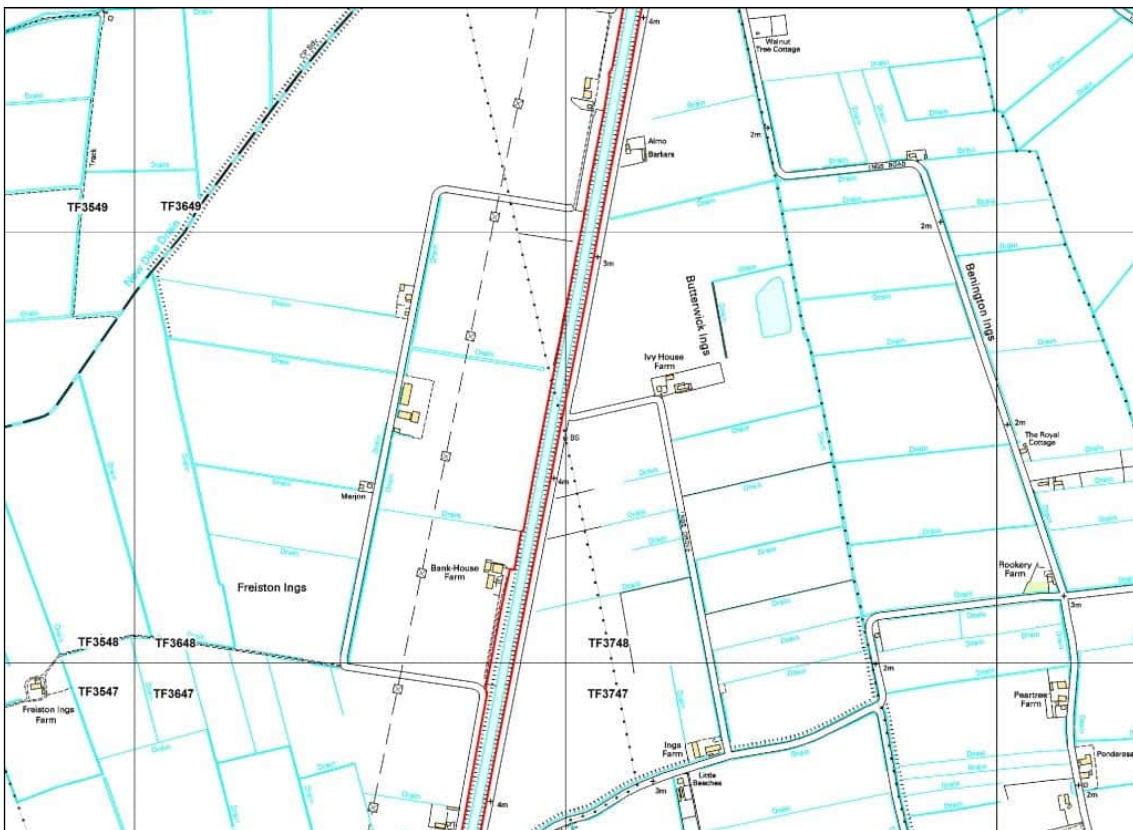
Criteria passed: NG1, Mos1(CG1, Sw2)

Recommended as a Local Wildlife Site: 24 March 2009

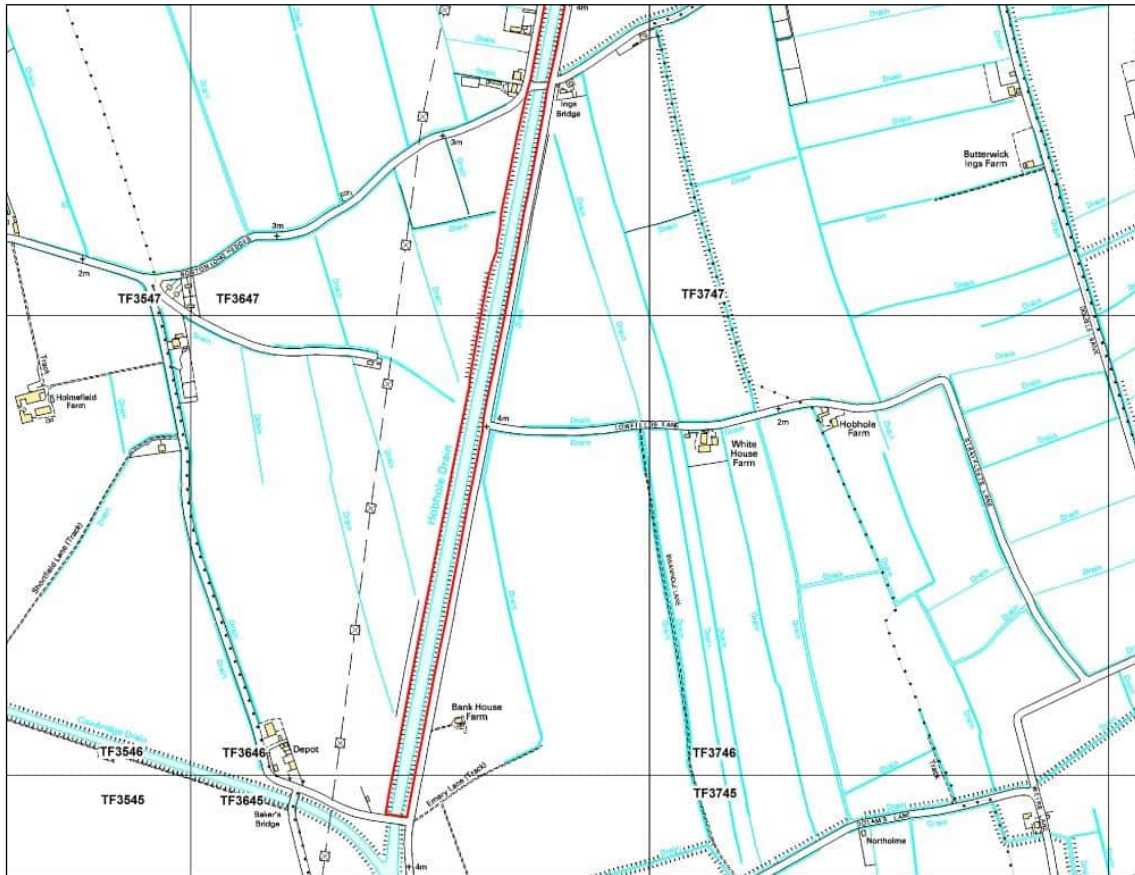
Hobhole Drain, Benington Bridge to Baker's Bridge



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Grid ref: TF373504 – TF364458
Length: 4.6 km

Baseline survey: 30 August 2007
Monitoring survey: 20, 21 October 12
Surveyors: G.Steele, T.Smith

Main habitat: Scrub, Semi-improved neutral grassland, Coarse or rank grassland, Drain
Additional habitat: Semi-improved calcareous grassland, Reedbed
Additional features: ROW/permissive path, steep slopes

A large man-made drain constructed circa 1810, which forms the main drainage channel down the former East Fen. The habitats present are flowing water, dense scrub (eastern bank) and rough grassland on the banksides and tops. Important wildlife corridor in an otherwise intensive arable landscape, mainly due to the continuous line of scrub on the bankside. These areas are important for local and migrant bird populations.

The scrub on the bankside comprises mainly hawthorn, elder, blackthorn, sycamore, dog-rose and bramble.

The bankside flora is dominated by rough grassland which is species rich in places – the banks are very steep generally. They are dominated by creeping buttercup, common reed, lesser pond sedge, great willowherb, angelica, black knapweed, vetch species, fleabane, hemlock, hogweed, cleavers, bristly ox-tongue, cow parsley and nettle with patches of lower sward species rich areas with red clover, bird's foot trefoil, fleabane, ox-eye daisy, glaucous sedge, tare species, meadow vetchling, wild carrot, common mouse-ear, black knapweed and lady's bedstraw.

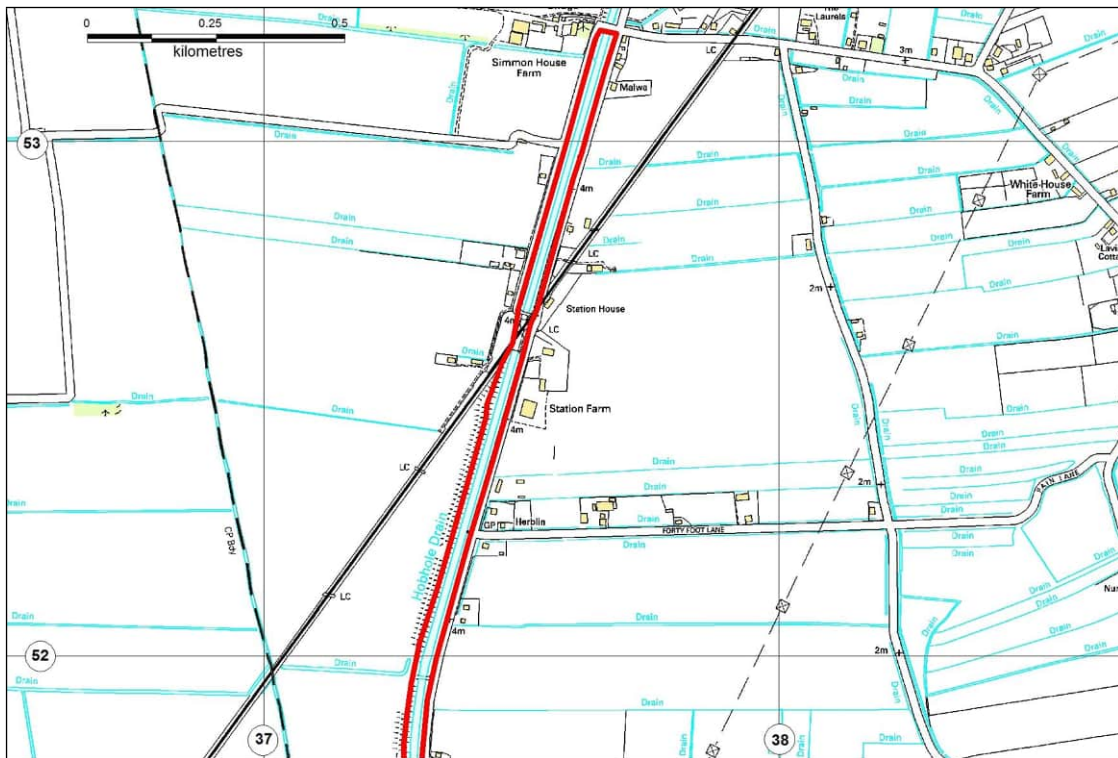
The bankside flora is good, but the aquatic habitat relatively poor in comparison. The site provides a valuable wildlife corridor due to the near continuous line of scrub and trees on the banksides.

This site is particularly valuable as a wildlife corridor in an otherwise intensive arable landscape, mainly due to the continuous line of scrub on the bankside. These areas are important for local and migrant bird populations. The site has high potential to support water vole and kingfisher.

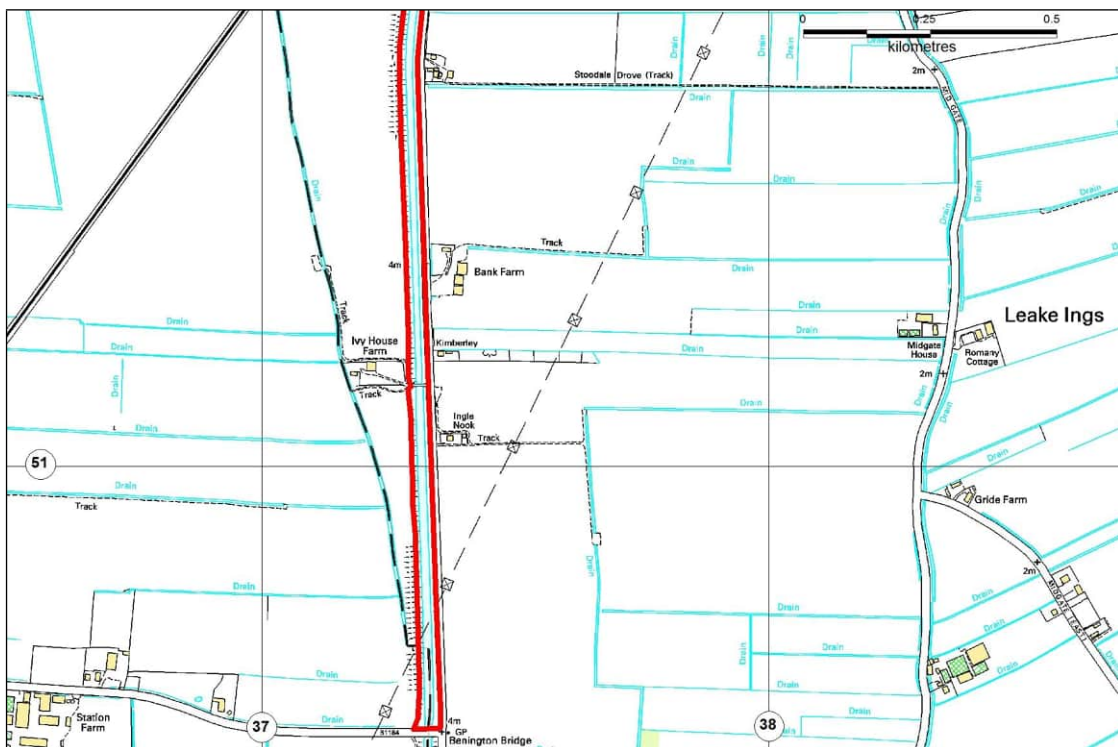
Criteria passed: NG1, Mos1(CG1, Sw2)

Recommended as a Local Wildlife Site: 22 May 2008

Hobhole Drain, Simmon House Bridge to Benington Bridge



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Grid ref: TF376532 – TF373504
Length: 2.8 km

Survey: 23 July, 17 August 2010
Surveyor: J.Poole

Main habitat: Drain, Coarse grassland

Additional features: Scattered non-planted trees, Steep slopes, Planted specimen trees

The channel is approximately 15m across here. The water becomes very cloudy after the IDB pumping station but seems to improve slightly around here as one heads south and the disturbance is reduced. No submerged or floating aquatic species were found at the time of survey, despite several collecting attempts with the grapple.

While there is very little emergent marginal vegetation to the north of the stretch, this increases and improves greatly as one heads south. Larger patches of common reed though were observed nearer the pumping station to the north, but these areas were not very species diverse.

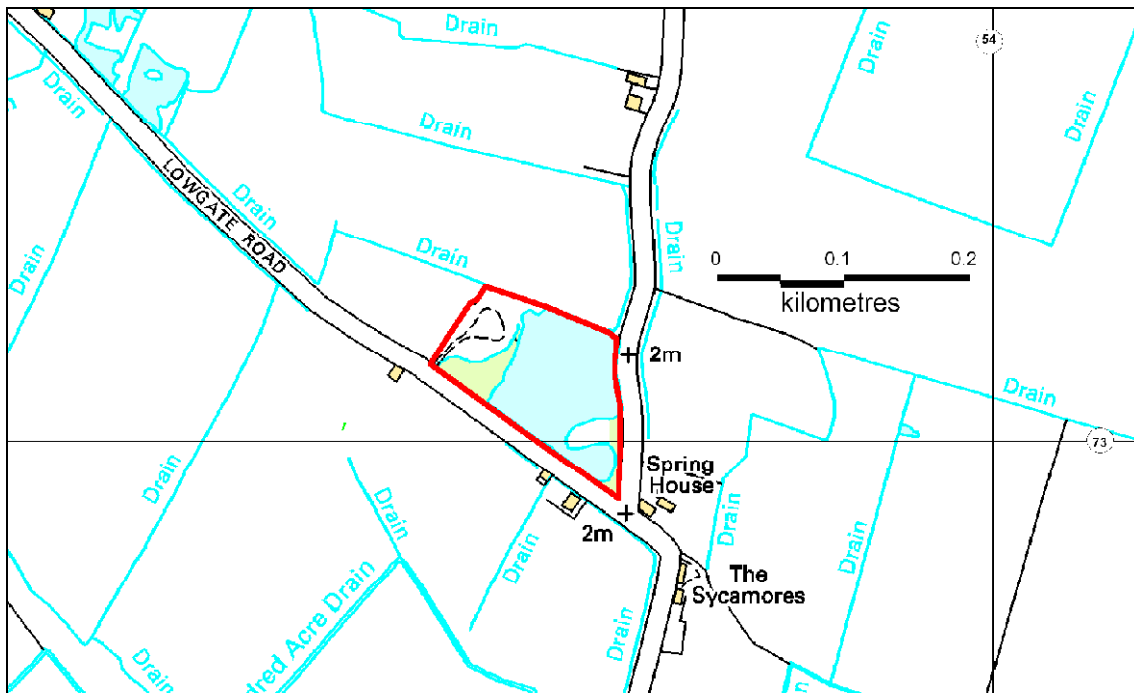
The more diverse community of marshy species that were recorded at the edges of the drain towards the south included gypsywort *Lycopus europaeus*, common fleabane *Pulicaria dysenterica*, water mint *Mentha aquatica*, wild angelica *Angelica sylvestris* and marsh woundwort *Stachys palustris* in addition to the ubiquitous common reed, reed canary-grass and reed sweet-grass.

The bridges all along the drain have a number of quite nice species growing on them, particularly these ones to the south. These species include black spleenwort *Asplenium adiantum-nigrum*, maidenhair spleenwort *Asplenium trichomanes* and hart's-tongue *Asplenium scolopendrium*, and smooth meadow-grass *Poa pratensis*.

Large trees have been planted almost all the way along the drain on the eastern side here, on the wide road verge.

Criteria passed: Sw2, Mos1(NG1, Sw2)
Recommended as a Local Wildlife Site: 1 April 2011

Hogsthorpe Pit



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Grid ref: TF536730
Area: 1.4 ha

Survey: 9 September 2004
Surveyor: J.Fraser

Main habitat: Standing water, willow carr, grassland

Around the pond is diverse wetland vegetation and some drier grassland and scrub. Lesser bulrush and common reed are abundant at the water's edge, but there is no common bulrush. Also present are water dock, branched bur-reed, water mint, purple loosestrife, greater pond-sedge and yellow iris. Marshy areas, particularly to the east of the pond, support further species, such as marsh bedstraw, hoary willowherb, tufted forget-me-not, water-cress, meadowsweet and jointed rush. Of most note is a sizeable patch of brookweed amongst tall fen vegetation beside an anglers path. Mature and younger specimens of various willows dominate the remainder of the site, with a restricted range of common ground flora plants beneath. Some sycamore is also present.

Botanically-rich grassland is restricted to small areas of dry bank on the southern and northern margins of the pond. Species present include autumn hawkbit, tufted vetch, yarrow, lady's bedstraw and meadow vetchling. A larger patch of coarser grassland is used as a car park (in the north-west corner of the site). This supports much common knapweed, together with bird's-foot-trefoil, common sorrel, red clover, red fescue, tall fescue and tufted hair-grass. Adjacent to this is neglected former grassland that is now dominated by species such as field bindweed, creeping thistle, bramble, cow parsley, upright hedge-parsley, field horsetail and false oat-grass. Scrub species include hawthorn, elder, blackthorn and some dogwood that appears to be non-native.

Coot, moorhen and common dragonflies were seen.

Criterion passed: Sta2

Recommended as a Local Wildlife Site: 22 May 2008

Huttoft Car Terrace to Marsh Yard Dunes



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Grid ref: TF543781

Area: 10.4ha

Survey: 14 August 2014

Surveyor: Jeremy Fraser

Main habitat: Coarse or rank grassland, Sand dune, Scrub - scattered / dense

Additional habitat: Native plantation - on ancient / new

This is a 1.2km long stretch of coast to the south of Sandilands Golf Course. It comprises: bare sand on the upper beach with some botanically-poor foredunes; a concrete pathway and linear car parking area at the top of the beach; a line of low, fixed dunes and flatter ground inland, supporting much unmanaged vegetation, dominated by dense scrub and trees in central and northern parts, with larger amounts of grassland further south; and a gravel car parking area inland of the dunes at the southern end of the site, characterised by a short, open sward.

Woody vegetation on the fixed dunes includes pine, sycamore, sea-buckthorn, elder, hawthorn, woody nightshade, bramble and dewberry. Other robust or weedy plants here are marram, lyme-grass, common reed, sea couch, false oat-grass, creeping & spear thistle, hedge & large bindweed, curled dock and amphibious bistort. Species found in less vegetated sandy areas include prickly saltwort, sand couch, hound's-tongue, procumbent pearlwort, sea fern-grass and sand sedge.

The most interesting flora is typical of neutral soils. It is largely restricted to the vicinity of the southern car park and along a track that extends northwards. Present here are hare's-foot & strawberry clover, lesser & hop trefoil, buck's-horn plantain, common bird's-foot-trefoil, tufted vetch, meadow vetchling, yarrow, smooth hawk's-beard, autumn hawkbit, cat's-ear, black medick, silverweed and smooth meadow-grass. Damper habitat west of the car park supports dense willow scrub, while further north of that there is much common reed.

Birds, butterflies and moths seen during the survey included common whitethroat, reed bunting, swallow, Sandwich tern, Essex skipper, painted lady, red admiral and cinnabar.

Criteria passed: Co3

Selected as a Local Wildlife Site: 2 April 2015

Lincolnshire Coast Submerged Forest



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Grid reference: TF519835 – TF559750
Area: 207.6 ha

Survey: 30 September 2019
Surveyors: Lincolnshire Wildlife Trust
 University of York

The submerged landscape of the Lincolnshire coast, once visible for many miles along the foreshore between Mablethorpe and Skegness, is now much reduced in extent and rarely exposed beneath the encroaching sea levels and beach nourishment materials. Despite beach replenishment in 2019, a stretch of in-situ submerged forest deposits was exposed during a period of exceptionally low tide on the foreshore at Anderby Creek and Wolla Bank. Multiple references to the same deposits throughout the last decade indicate long term exposure. In-situ submerged deposits were recorded along the coast between Trusthorpe and Wolla Bank.

A field survey of the intertidal zone during the same period recorded multiple wave deposited submerged forest remains which varied from wood fragments, twigs and branches of oak, pine, willow and alder trees, clumps of silty clay and fragments to very large outcrops of peat sediments. The deposits derive from in-situ submerged forest outcrops located below the low tide line. The abundance of submerged forest materials along the entire coastline (from Mablethorpe to Skegness) signifies the ongoing erosion of the in-situ deposits, and the continued steepening of the coastline.

Palaeoenvironmental analyses of the in-situ submerged forest remains at Anderby Creek and Wolla Bank allowed reconstruction of the landscape changes induced by the first phase of marine inundation in the area, showing a transition from mixed deciduous fen to alder carr with raised peat bog areas as water table levels began to rise, followed by saltmarsh establishment with marine water ingress.

Pollen analysis of the wave deposited peat sampled from elsewhere along the coastline demonstrated that the deposits derived from similar paleoenvironmental horizons. The peat deposits analysed at Ingoldmells and Chapel St Leonards were all shown to derive from an upper alder carr horizon, while the clay deposits recorded between the two areas were likely to derive from an overlying estuarine clay associated with a second phase of marine inundation. The peat deposits analysed at Huttoft Bank were associated with lower alder carr formation, whilst the peat at Sandilands was shown to derive from a raised peat bog and alder carr environment. The sediments analysed at Trusthorpe derived from an earlier sub-boreal horizon, whilst the peat outcrop analysed north of Anderby Creek exhibited similarities with the upper saltmarsh horizon. Identification of in-situ submerged forest and wave deposited wood demonstrated that oak and pine are the dominant tree species of the remaining submerged forest beds between Mablethorpe and Ingoldmells.

Reference

Derrett, S. & Selby, K. (2020) *The Lincolnshire Coast Submerged Landscape: The Current Extent and Composition of the Submerged Forest Deposits from Mablethorpe to Skegness*. Department of Environment and Geography, University of York.

Criteria passed: Fo6

Recommended for selection as a Local Geological Site: 17 March 2021

Marsh Yard to Anderby Creek Dunes



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Grid ref: TF549767

Area: 16.8ha

Survey: 14 August 2014

Surveyor: Jeremy Fraser

Main habitat: Coarse or rank grassland, Scrub - scattered / dense

Additional habitat: Neutral grassland - semi-improved, Non-native plantation - new, Reedbed / Linear reedbed

This is a 1.75km long stretch of coast to the north of the Main Drain in Anderby Creek. It comprises: bare sand on the upper beach with some young dunes; a line of low, fixed dunes supporting much coarse grassland, which widens in the south and supports plentiful woody vegetation, including garden escapes; and a range of habitats inland of the dunes, particularly planted and naturally occurring trees and scrub on both dry and damp land, grassland, sparsely vegetated car parking areas, a track and a little bare sand.

The northern end of the site is notable for supporting a huge population of the rather scarce strawberry clover throughout a linear car park. A track extends south from this to Moggs Eye, where a large patch of open grassland occurs. Few competitive plants grow in these habitats and therefore the flora is rich in species typical of neutral grassland, such as common bird's-foot-trefoil, cat's-ear, lady's bedstraw, dove's-foot and small flowered crane's-bill, black medick and smooth meadow-grass. Sparsely vegetated sandy areas here or on the dunes hold common cudweed, annual pearlwort, common stork's-bill, viper's-bugloss, thyme-leaved sandwort, fern-grass and sand sedge.

Many parts of the dune ridge are dominated by coarse vegetation, such as marram, lyme-grass, sea and sand couch, common reed and dewberry. Other weedy species scattered across the site are hogweed, weld, red valerian, rosebay willowherb, fat hen, large bindweed, creeping and spear thistle, hedge mustard and pineappleweed. A wide range of woody species includes sycamore, horse chestnut, white poplar, hybrid black

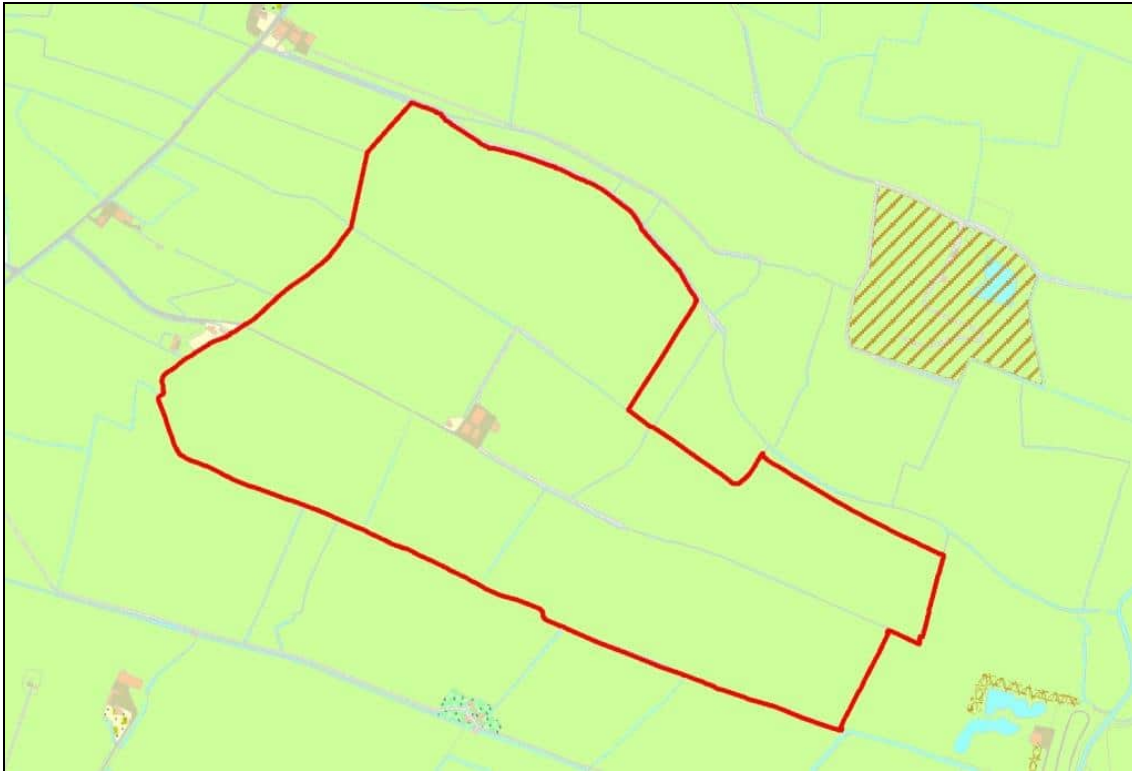
poplar, pine, ash, buckthorn, sea-buckthorn, buddleia, wild & garden privet, elder, hawthorn and ivy. Damp areas, particularly inland in the north, support osier, grey willow, woody nightshade, comfrey, amphibious bistort and silverweed.

Birds and invertebrates seen during the survey included migrating whimbrel, reed bunting, house martin, common blue, brown argus, meadow brown, gatekeeper, peacock and common darter.

Criteria passed: Co3

Selected as a Local Wildlife Site: 2 April 2015

Middlemarsh Farm



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Grid ref: TF529633
Area: 73.5 ha

Survey: 2008-2013
Surveyor: R.Wardle

Main habitat: Grazing marsh, Standing water

This large site between Burgh le Marsh and Skegness comprises about 7 fields surrounded by ditches and some hedges. In the mid-2000s, the area was transformed from arable land into a topographically-varied wetland where breeding, passage and wintering birds typical of the Lincolnshire coastal grazing marshes could flourish.

Formerly flat and well-drained, the carefully designed new landscape includes a few shallow depressions or scrapes, but is dominated by 'ridge-and-furrow' comprising numerous long and narrow strips of water with higher ground between. This arrangement maximises the amount of water's-edge habitat, yet maintains adjacent areas of drier land that can be grazed by cattle. A large reservoir has also been constructed to ensure that water is available during dry times, particularly during spring and early summer. An artificial cliff provides breeding opportunities for sand martins.

Aquatic and waterside plants of great interest have arrived naturally, while a neutral grassland sward has been established through sowing of appropriate native grasses, plus small amounts of cowslip, ragged-robin and other meadow species. Cattle graze throughout at low intensity for much of the year.

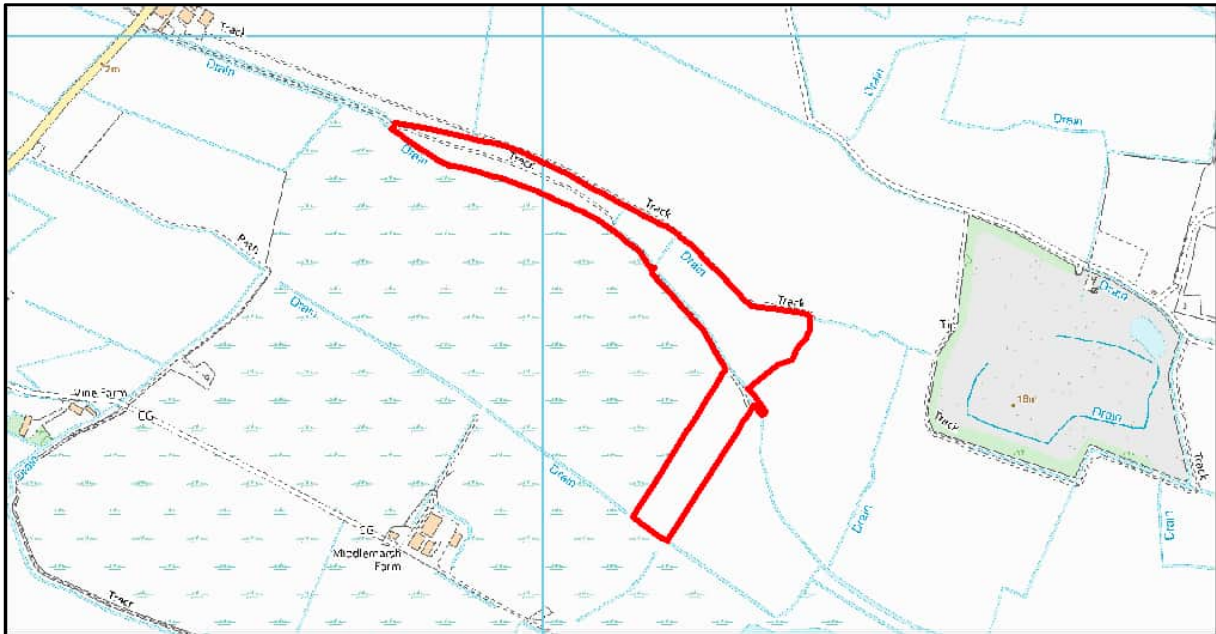
The impressive list of breeding birds since 2008 includes lapwing, redshank, snipe, avocet, yellow wagtail, reed and sedge warbler, reed bunting, skylark, shoveler, mallard and mute swan. Wigeon, lapwing, curlew and other birds use the area in winter. Amongst the wetland plants present are horned pondweed, water-crowfoot,

pink water-speedwell, branched bur-reed, common reed and saltmarsh rush, plus the scarce orange foxtail.

Criteria passed: GM1, GM2

Selected as a Local Wildlife Site: 27 March 2014

Middlemarsh Meadows



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Grid ref:	TF532636	Survey:	5 August 2020
Area:	4.7 ha		8 June 2021
		Surveyor:	J Fraser
Main habitats:	Unimproved neutral grassland Coarse grassland		
Additional habitats:	Semi-improved neutral grassland Hedgerows Drain		

This 4.7 ha site comprises four contiguous hay meadows, each one adjacent to the north-eastern edge of Middlemarsh Farm LWS, which lies to the west of Skegness, not far from Burgh le Marsh. The two eastern fields are very rich in plants typical of high-quality neutral grassland, whereas the sward in the two western fields is less rich. Boundary ditches, hedges, scrub and a farm track are included, because they are not cut for hay and support some extra plants and good invertebrate habitat. It is not known if there is any aftermath grazing.

Colourful species present are common knapweed, meadow vetchling, lady's bedstraw, great burnet, devil's-bit scabious, rough hawkbit, common bird's-foot-trefoil, pignut, sneezewort, meadowsweet, cat's-ear, cowslip, oxeye daisy, tufted vetch, selfheal and common sorrel. Meadow grasses are represented by crested dog's-tail, sweet vernal-grass, meadow foxtail, yellow oat-grass, red, tall and meadow fescue, false-oat-grass, Yorkshire-fog and common bent. The southern boundary of the western field holds a lot of mature shrubs that vaguely enclose a narrow strip of un-managed, coarse grassland and wetter vegetation. Growing

here are hawthorn, blackthorn, dog-rose, bramble, yellow iris, tufted hair-grass, reed canary-grass and common reed.

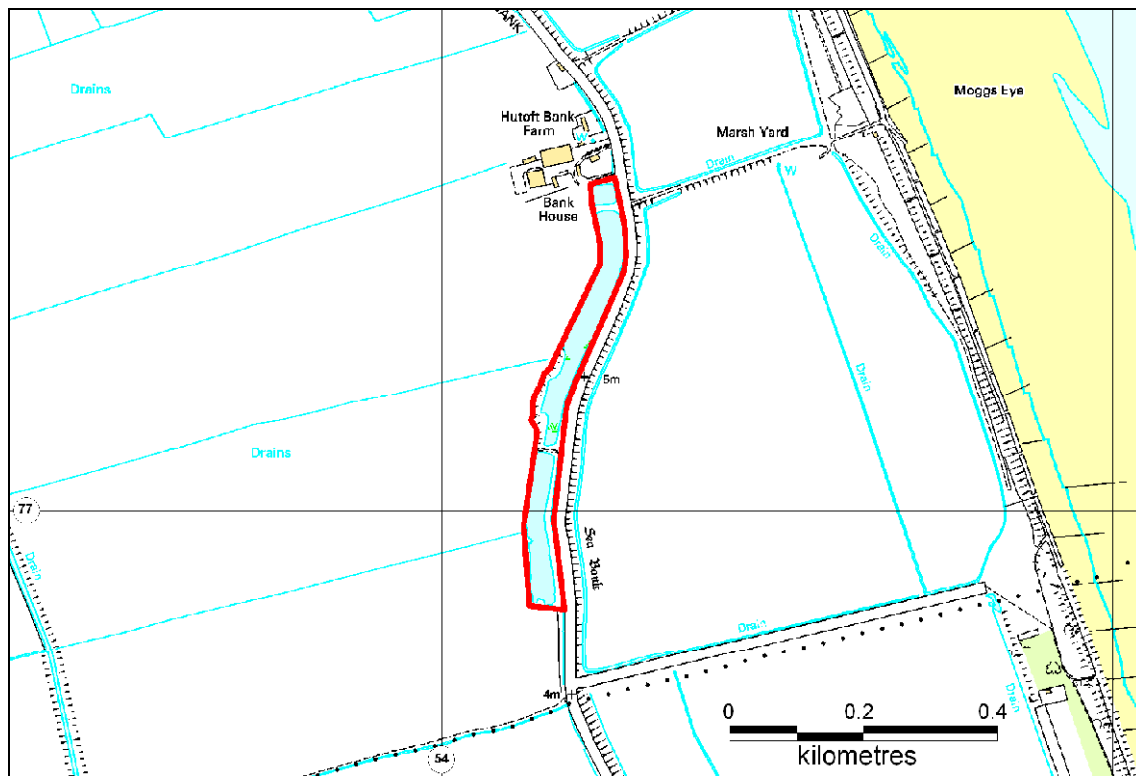
Fauna noted during survey were sedge and reed warbler, chaffinch, wren, blue tit, starling, wood pigeon, small copper, meadow brown, common blue and common frog.

Criteria passed: NG1

Eastern part of site first recommended for selection as a Local Wildlife Site: 17 March 2021

Whole site recommended for selection as a Local Wildlife Site: 07 March 2022

Moggs Eye Sea Bank Ponds



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Grid ref: TF541772
Area: 2.9 ha

Survey: 17, 18 August 2004
Surveyor: J.Fraser

Main habitat: Standing water, reedbed

This is an excellent long, thin site approximately 0.5 km from the coast. It is immediately west of, and a few metres lower than, the north-south aligned coast road. On its inland side there is arable land at an intermediate elevation. An interested local resident explained that the site was formed by excavation for building the embankment (after the 1953 floods?).

The northern end of the site is virtually 100% common reed, but in the centre and at the southern end the reeds surround four areas of open water of varying sizes that are popular with anglers. The anglers help to keep marshy and grassland margins open on the western side of the ponds, and it is here that a diverse and very interesting flora is located.

Much of the northern end of the road embankment is dominated by narrow, continuously wooded patches comprised largely of crack willow, but with a few other species such as alder and sycamore. As one progresses southwards, the gaps between trees and wooded patches become dominant. Within the reedbed a very small number of woody shrubs are present.

It is unusual (but very welcome from a wildlife point of view) that most of the remainder of the site comprises such a monoculture of common reed. Bulrush is scattered within the reedbed, but a few common weedy species are more associated with the drier edges, such as perennial sow-thistle, great willowherb, cleavers, cock's-foot and false oat-grass. The water does not appear to hold many aquatic plants, but some wet edges support sea club-rush, mare's-tail, common duckweed, least duckweed and the invasive non-native New Zealand pigmyweed.

Marshy edges of the site are botanically diverse. Species present include brookweed, saltmarsh and jointed rushes, clustered dock, hoary willowherb and false fox-sedge. The slightly drier conditions nearby provided a chance sighting of adder's-tongue, a fern that is

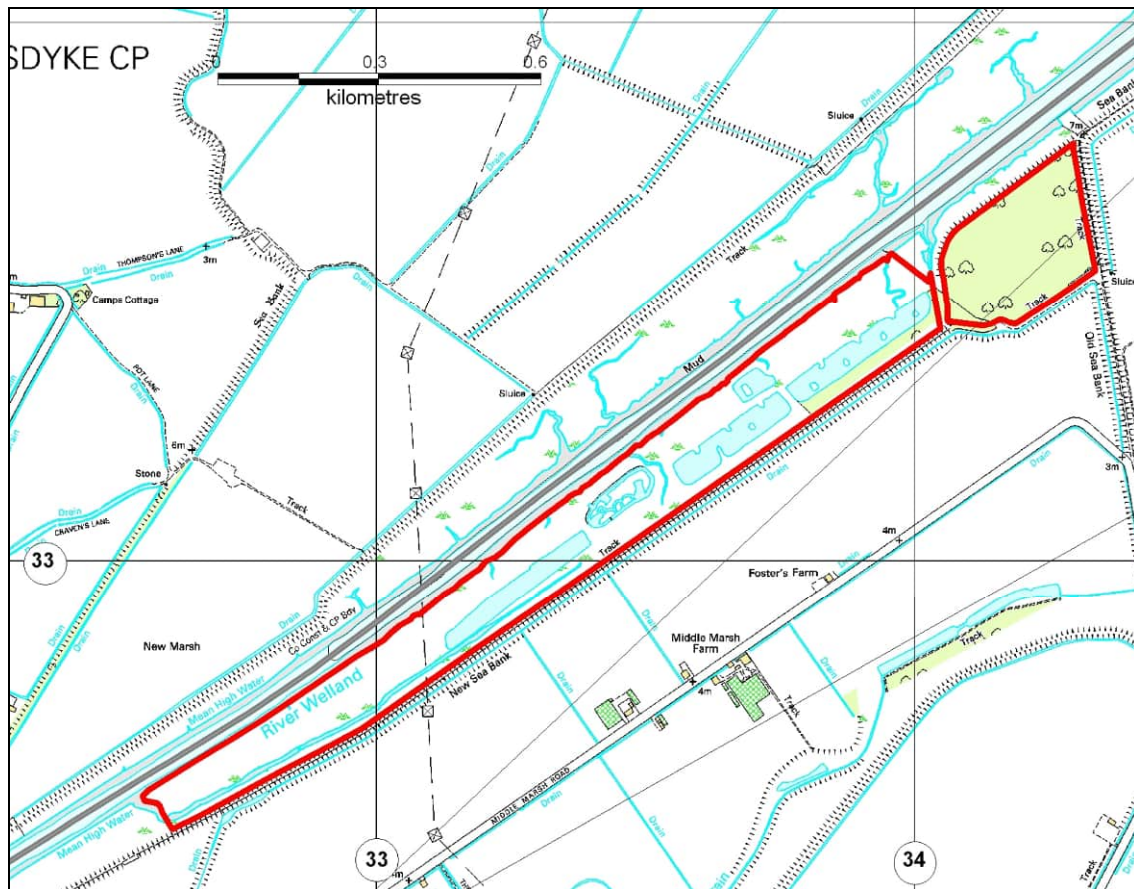
usually very inconspicuous in late summer. Other grassland species include crested dog's-tail, red fescue, common bent, meadow buttercup, meadow vetchling and lesser hawkbit.

The mixture of reeds and water is potentially very good for a range of fauna, including some scarce species. The local resident mentioned that a garganey was present in 2003, and made a reference to the possibility of bitterns visiting. During the survey, the following were recorded: ruddy darter, common frog, silver y moth, and an eel (caught by an angler and returned to the water).

Criterion passed: Sw1

Recommended as a Local Wildlife Site: 9 December 2008

Moulton Marsh



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Grid ref: TF333330
Area: 28.3 ha

Survey: 17 September 2010
Surveyor: J.Poole

Main habitat: Native plantation, Reedbed, Saltmarsh, Saline lagoon
Additional habitat: Coarse grassland, Drain
Additional features: Planted specimen trees, Tussocky vegetation, Anthills, Bare ground, Seasonally wet/damp areas, Areas with frequent/prolonged flooding, Permissive path

Woodland

This is an area of dense planted woodland, and very coarse grassland with a variety of shrubs including large amounts of sea buckthorn *Hippophae rhamnoides*.

The wooded parts are a mix of aspen *Populus tremula*, alder *Alnus glutinosa* and field maple *Acer campestre* with some pine *Pinus* sp., rowan *Sorbus aucuparia*, birch *Betula* sp., hawthorn *Crataegus monogyna* and dogwood *Cornus sanguinea*. There is very little ground flora at all, though a large patch of wood small-reed *Calamagrostis epigejos* was seen in a rare opening in the canopy.

The coarse grassland areas are mostly dense swards of sea couch *Elytrigia atherica*, cock's-foot *Dactylis glomerata*, false oat-grass *Arrhenatherum elatius* and creeping thistle *Cirsium arvense*. There are small scattered patches of common reed *Phragmites australis* and quite a lot of bramble *Rubus fruticosus* around the edges.

Eastern Ponds

This subsite consists of a couple of large saline ponds with high artificial banks all the way around enclosing the narrow peripheral habitat of coarse grassland (mostly sea couch) and planted specimen trees (mostly apple *Malus* sp.). These ponds are very sheltered and have little marginal or aquatic vegetation, though they have been found to have some important invertebrate species that are typical of saline lagoons of SSSI quality.

There are however a couple of small patches of common reed around the edges and also some sea club-rush *Bolboschoenus maritimus* in places. A few small islands in the middle of these water-bodies were home to great willowherb *Epilobium hirsutum* and rosebay willowherb *Chamerion angustifolium*.

Saltmarsh

This area is mostly frequently-flooded, typical saltmarsh habitat with a species list composed of very few plants, all of which are of course very habitat specific and therefore more vulnerable to change in the environment. Other parts of the subsite are higher banks consisting of coarse grassland of mainly sea couch *Elytrigia atherica*, and a few muddy drainage channels scattered throughout.

Species seen throughout the saltmarsh include common saltmarsh-grass *Puccinellia maritima*, grass-leaved and spear-leaved orache *Atriplex littoralis* and *A. prostrata*, English scurvygrass *Cochlearia anglica* and sea-milkwort *Glaux maritima*. In addition, Sea aster *Aster tripolium* and glasswort *Salicornia* sp. were seen on the edges of most muddy drainage channels and small areas of open water, while annual sea-blite *Suaeda maritima* was seen in the lower patches towards the southern tip of the site.

Central Pond

This is a wetter area enclosed on all sides by high banks with a mixture of reedbed (c.70%), areas of saltmarsh vegetation with the occasional pool, and drier areas of coarse grassland. A c.10-20m wide strip of trees has been planted along the southeast edge.

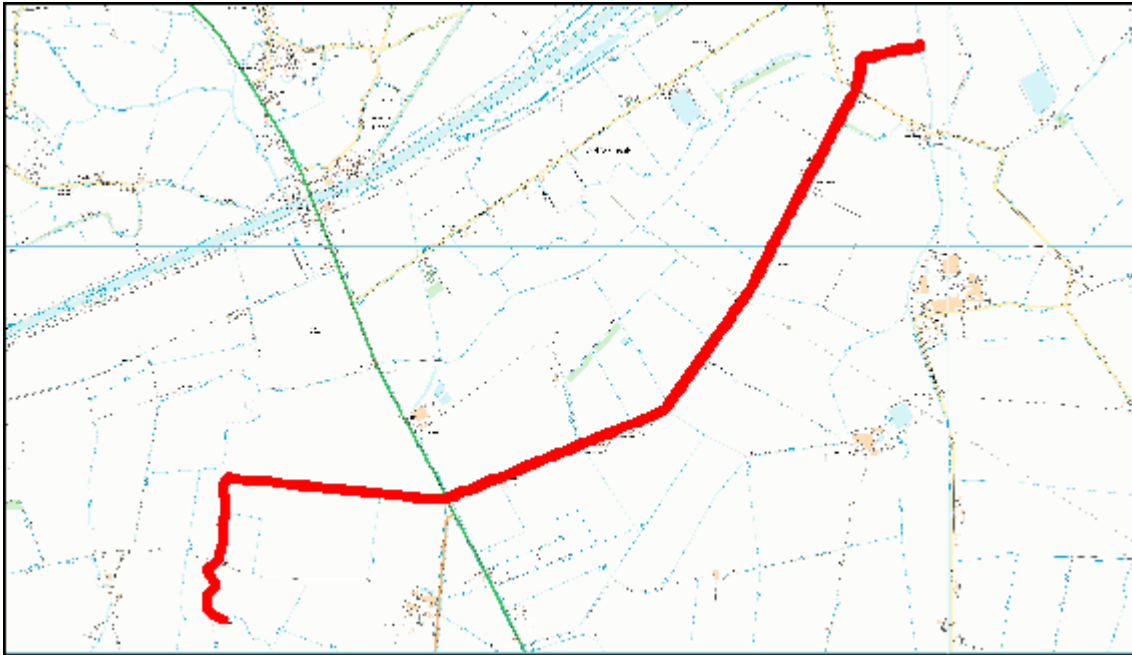
The saltmarsh vegetation occurs at the wetter edges of the reedbed and includes glasswort, lesser sea-spurrey *Spergularia marina* and a small unidentified rush *Juncus* sp. The more negotiable areas on higher, drier ground have large amounts of saltmarsh rush *Juncus gerardii*, clumps of distant sedge *Carex distans*, sea aster, brookweed *Samolus valerandi*, common fleabane *Pulicaria dysenterica*, sea-milkwort and sea couch.

Fennel pondweed *Potamogeton pectinatus* was found in some of the small pools that were present, and wood small-reed occurred in patches throughout.

Criteria passed: Sw1, Co1, SL1, Mos2

Recommended as a Local Wildlife Site: 1 April 2011

Moulton River



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Grid ref: TF348329-TF316308 **Survey:** 30 Sept & 1 Oct 2013
12 June 2014

Length: 5.4km **Surveyor:** J Fraser

Main habitat: Coarse or rank grassland, Drain, Reedbed

This is a 0.5m to 3m wide stretch of canalised drain, plus both banks, which flows 5.4km north-eastwards to its confluence with the northward-flowing Holbeach River. Due to major manipulation of flows further upstream, there is very little flow of water, which is shallow, slow moving and prone to drying up entirely during droughts, particularly at the upstream end. Although there is plentiful algal growth in places, water quality appears to be good and supports an interesting wetland flora.

Common reed and sea club-rush are abundant in many parts of the site. Reed canary-grass is more localised, whereas reed sweet-grass and bulrush are infrequent. The aquatic flora comprises plentiful water crowfoot, water-starwort and horned pondweed, plus smaller populations of common duckweed and fennel pondweed. Other prominent low-growing waterside or shallow water species are pink water-speedwell, water-cress, fool's water-cress, celery-leaved buttercup, clustered dock, floating sweet-grass, marsh foxtail and false fox-sedge.

Bank vegetation is dominated by plants able to cope with minimal management, such as hogweed, charlock, mugwort, prickly, smooth & perennial sowthistle, common nettle, common & hoary ragwort, hedge & field bindweed, curled dock and creeping thistle. Species typical of neutral grassland occur sparsely, and include tufted vetch, meadow vetchling, smooth hawk's-beard, lesser trefoil, goat's-beard, creeping cinquefoil, red fescue and common bent. Scrub and trees are almost entirely absent, but one small area supports naturalised laburnum, as well as rowan, hawthorn, elder and bramble.

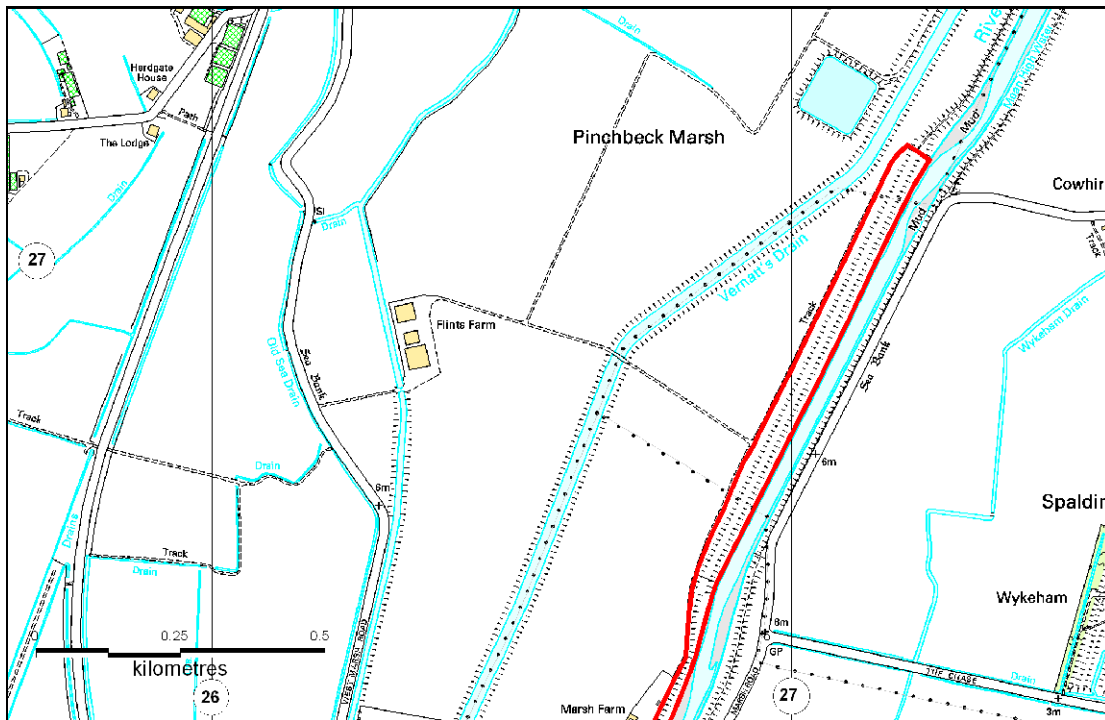
Butterflies and moths observed during the surveys included common blue, large skipper, meadow brown, ringlet, peacock, red admiral, small tortoiseshell, silver-ground carpet, cinnabar, five-spot burnet and silver Y. Other invertebrates seen were azure & blue-tailed damselfly, banded demoiselle, common darter and migrant hawk. Amongst the vertebrates recorded

were common toad, mallard, reed bunting, sedge warbler, common snipe, little egret, swallow, skylark, linnet and the declining corn bunting.

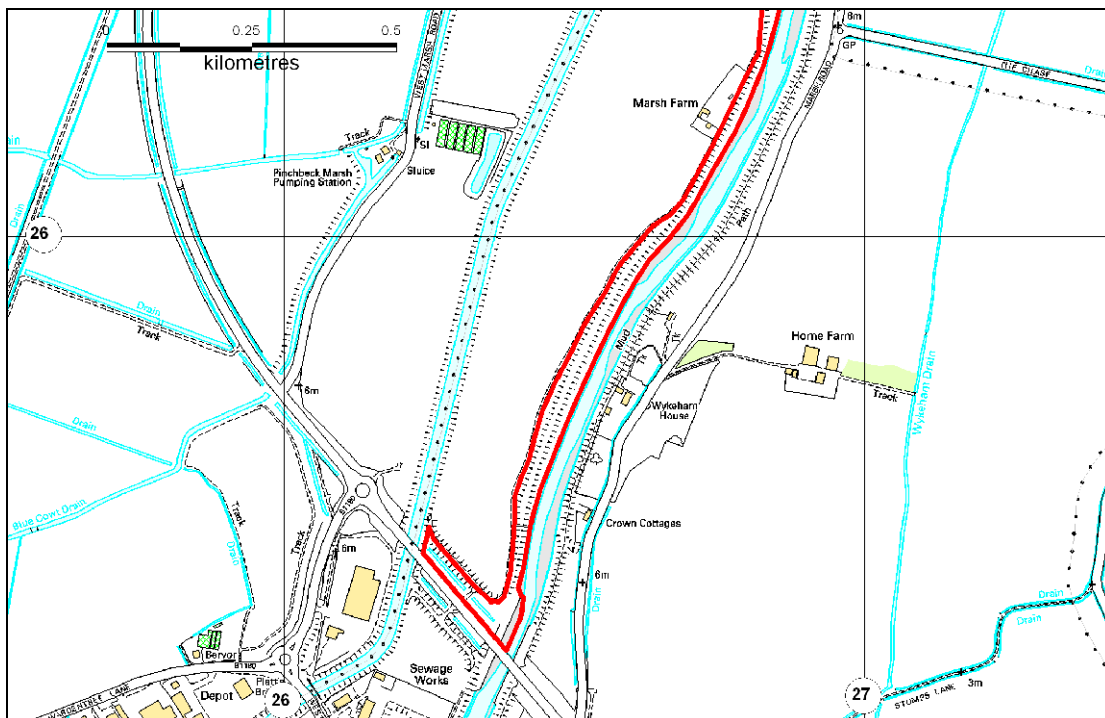
Criteria passed: FW2, Sup3

Selected as a Local Wildlife Site: 2 April 2015

Pinchbeck Marsh



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Grid ref: TF272271 - TF262254
Area: 2.3 km

Survey: 10 September 2010
Surveyor: J.Goodley, D.Fairchild

Main habitat: Calcareous grassland
Additional habitat: River, Reedbed
Additional features: Steep slopes

The original SNCI here is now a large area of arable land between the Vernatt's Drain and the River Welland. Two crops were being grown there at the time of survey, wheat and potatoes. The potato crop had recently been sprayed with acid.

The southern end of this site is formed by the bank of the A16 Spalding Bypass and was also once the bank on the old Spalding to Boston Railway. When the road was completed in the early 1990s the verge was landscaped and some planting took place on this bank.

The Welland bank is more open and true grassland. On the river side of the bank there are patches of rank vegetation, but most is grassland, cut once a year by the EA. Some areas on the field side have been closed off and used to graze cattle.

This stretch of the Welland is tidal. Incidental bird sightings included 35 mallard, a grey heron and a shag on or by the water.

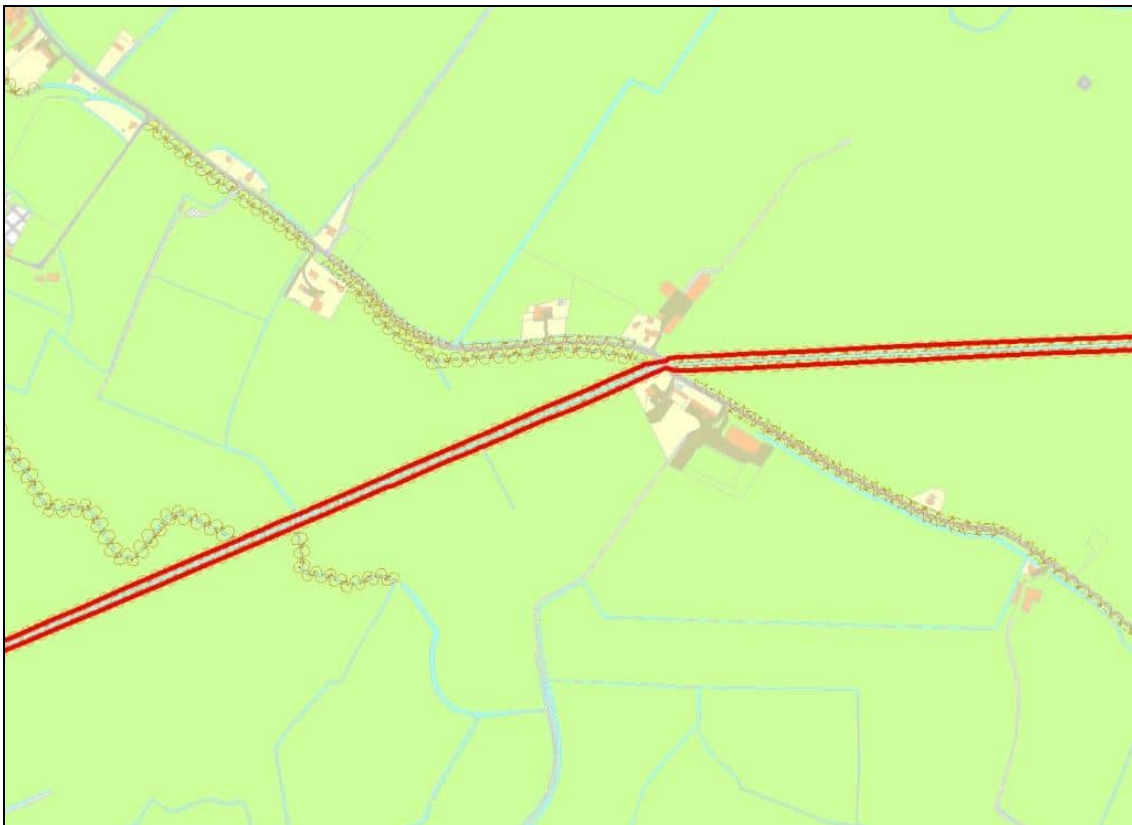
Criterion passed: NG1

Recommended as a Local Wildlife Site: 1 April 2011

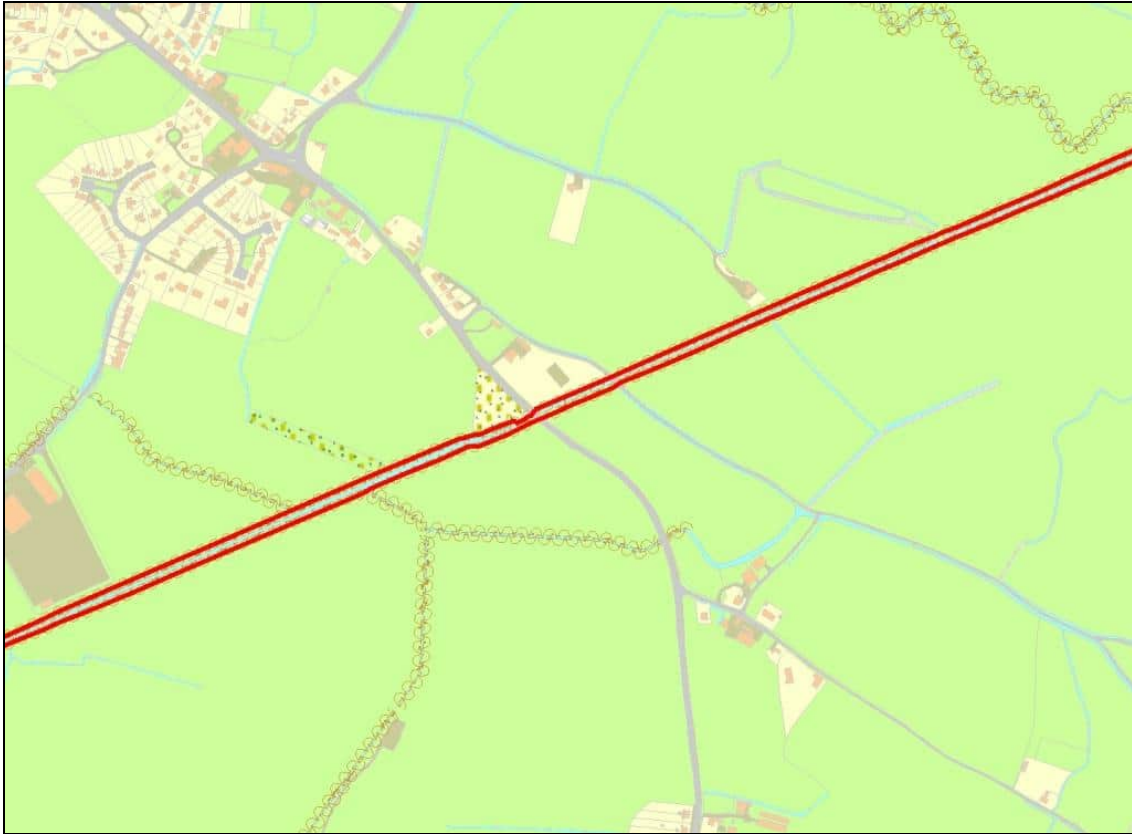
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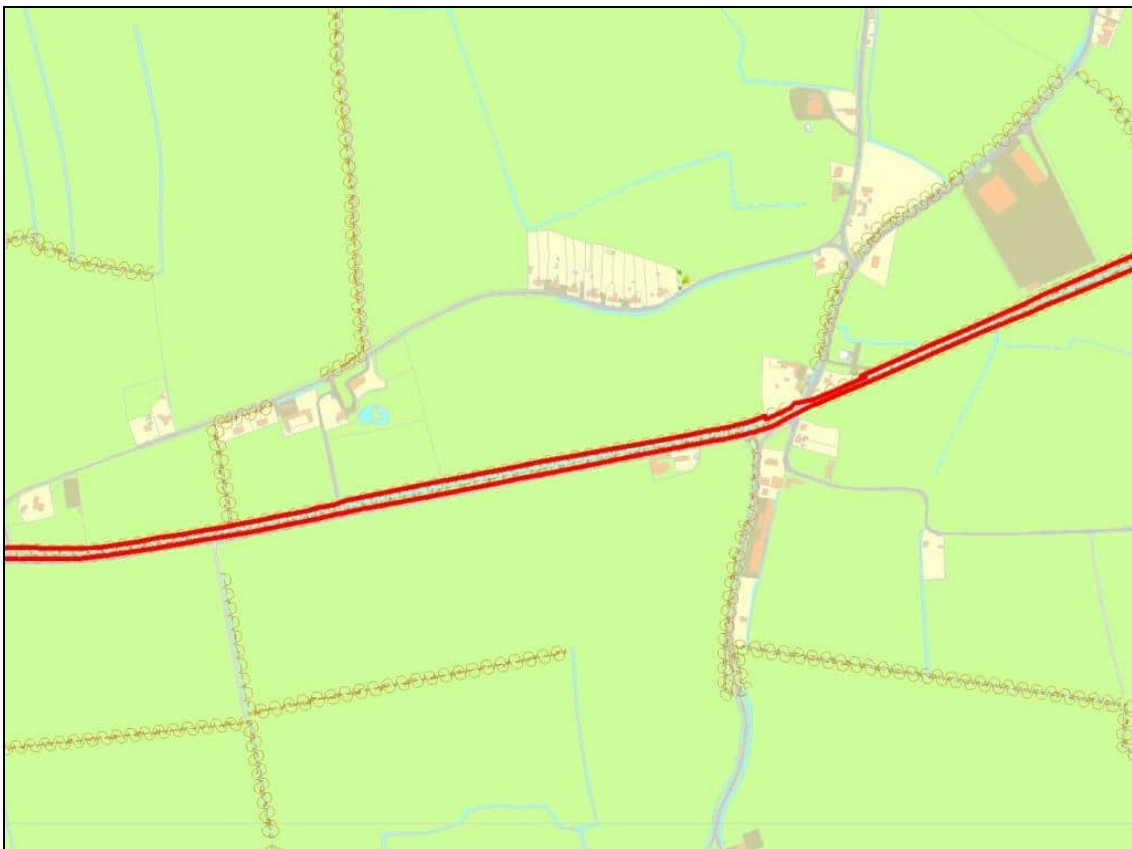
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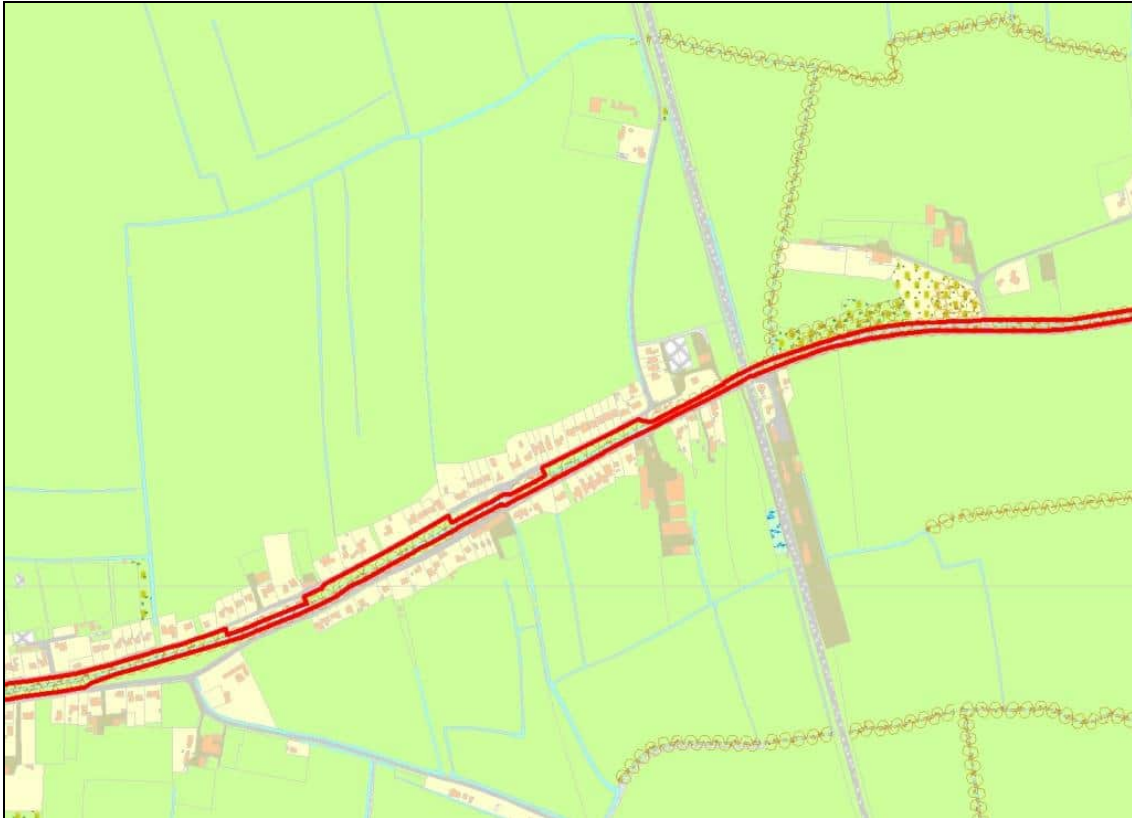
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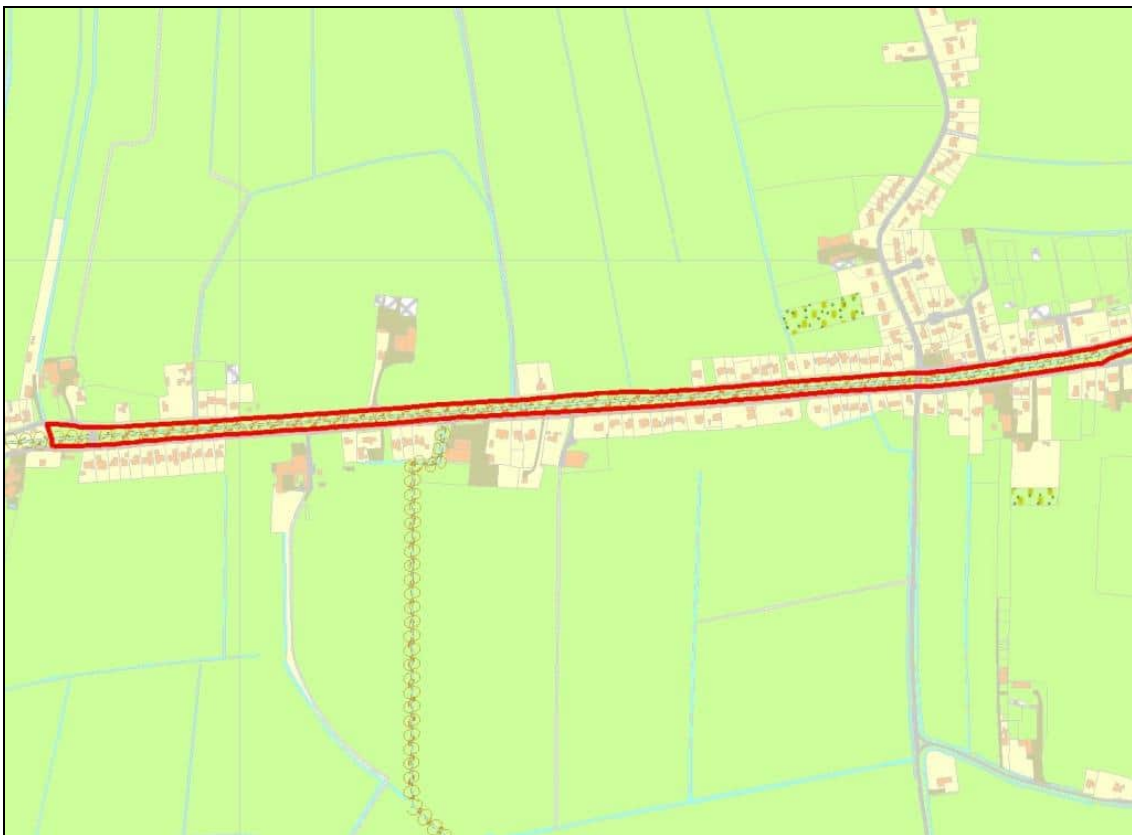
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Grid ref: TF197297-TF282317 **Survey:** 28 August, 20, 25
September 2013
Length: 9 km **Surveyor:** J.Fraser

Main habitat: Coarse or rank grassland, Drain, Linear reedbed, Scrub

This is the central 9km of a 15km long watercourse extending from South Forty Foot Drain in the west to River Welland in the east. Most of the excluded western section is known as Twenty Foot Drain (where permission to visit was not obtained), while the excluded eastern section is in the Borough of Boston. West of Carter's Bridge the watercourse is managed by Black Sluice Internal Drainage Board (IDB) and flows westwards, whereas east of this the watercourse is managed by Welland & Deepings IDB and flows eastwards. Channel size varies from one to about six metres wide. Banks along the 65m of drain that is west of Allen's Bridge have been managed and studied by local resident Leslie Hebdon since the late 1980s, during which time a selection of nectar-rich and pollen-rich plants have been introduced to encourage insect populations.

West of Carter's Bridge, the narrow channel held a little water during the survey, but immediately eastwards only mud was present, as a result of drought. Further east again, the channel holds an increasing volume of water and measures 4-6m across. Management carried out by Welland & Deepings IDB ranges from a single autumn cut in the east, to two cuts in the west, with an intervening stretch cut in two stages – part early and part late. Although of botanical interest throughout, the aquatic and bankside vegetation is generally less diverse at the eastern end, where common reed and fennel pondweed are abundant; one exception to this is a population of the Lincolnshire and national rarity Deptford pink, which was discovered during the survey.

Aquatic plants found widely in deeper sections of the watercourse include spiked water-milfoil, fennel pondweed, water-starwort, water-crowfoot, rigid hornwort, and fat, common & ivy-leaved duckweed. Many other water plants are also widespread, such as water-cress, fool's-water-cress, pink water-speedwell, water-plantain, water dock, yellow iris, branched bur-reed, reed sweet-grass and reed canary-grass. More restricted to shallow water or damp ground are lesser water-parsnip, common spike-rush, creeping-Jenny, cuckooflower, water forget-me-not, marsh bedstraw, mare's-tail and flowering rush.

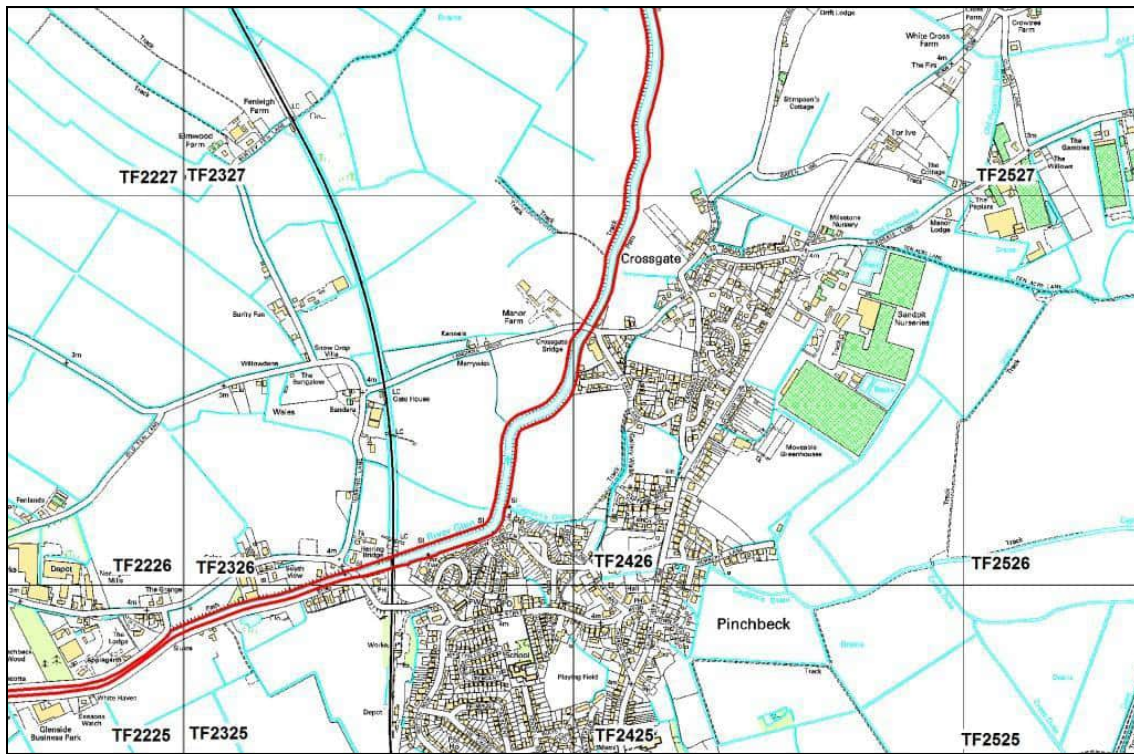
Vegetation of drier habitats is mostly coarse, especially where it is adjacent to arable land in the east. Prominent plants in these areas are bristly ox-tongue, common mallow, field & hedge bindweed, common nettle, teasel, sow-thistle, prickly lettuce, black mustard, cow parsley, horse-radish, and curled & broad-leaved dock. Species of greater botanical interest often occur in the vicinity of bridges and more generally towards the western end of the site, including common bird's-foot-trefoil, common knapweed, autumn hawkbit, oxeye daisy, hedgerow crane's-bill and flattened meadow-grass. Woody vegetation is largely absent in the east, but some dense patches of bankside scrub and trees occur further west, as well as a line of old beech trees on the south bank between Wargate Bridge and Belnie Bridge.

Amongst the wetland plants known to have been introduced to the extreme western end of the site are greater spearwort, yellow iris, purple-loosestrife, gypsywort, marsh woundwort, marsh-Marigold, skullcap and hemp-agrimony. Introduced dry ground species here include elecampane, motherwort, white horehound, chicory, tansy, marjoram, field scabious and restharrow. A very small patch of adjacent woodland planted in 1990 comprises native trees and shrubs such as pedunculate oak, alder, goat willow, field maple, alder buckthorn, hazel, guelder-rose and hawthorn.

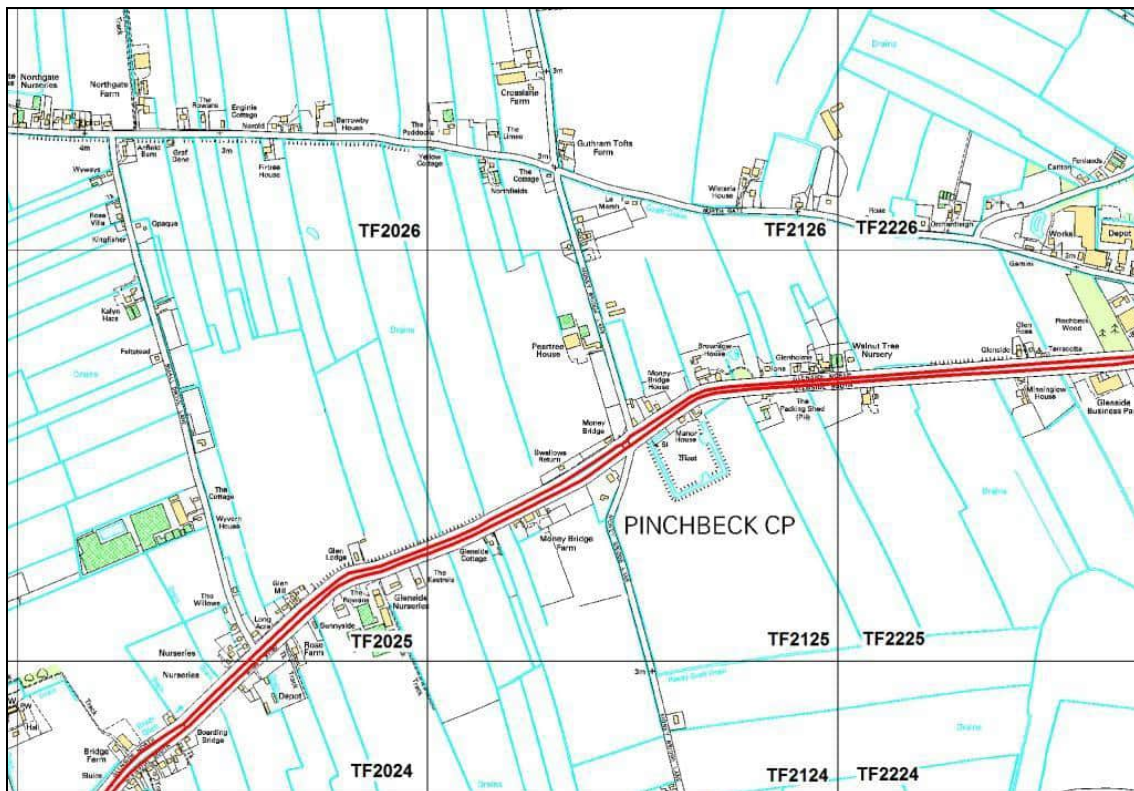
A good selection of insects were encountered during the survey, including Essex skipper, common blue, gatekeeper, shaded broad bar, blood vein, silver Y, Roesel's bush-cricket, common carder bee, brown hawk and common darter. Other fauna recorded were reed warbler, kingfisher, common snipe, grey heron, moorhen, green sandpiper and common frog. Water voles were present near Allen's Bridge in 2013 and have been known to occur there for many years.

Leslie Hebdon's records show that there is an excellent selection of bees, wasps and other insects west of Allen's Bridge. One of these, the large garden bumblebee (or ruderal bumblebee), is a nationally notable UK BAP species, while the nationally rare tawny longhorn beetle is listed as RDB3. The abundance of dandelion and white dead-nettle here is important in providing food for bees immediately after they emerge from hibernation.

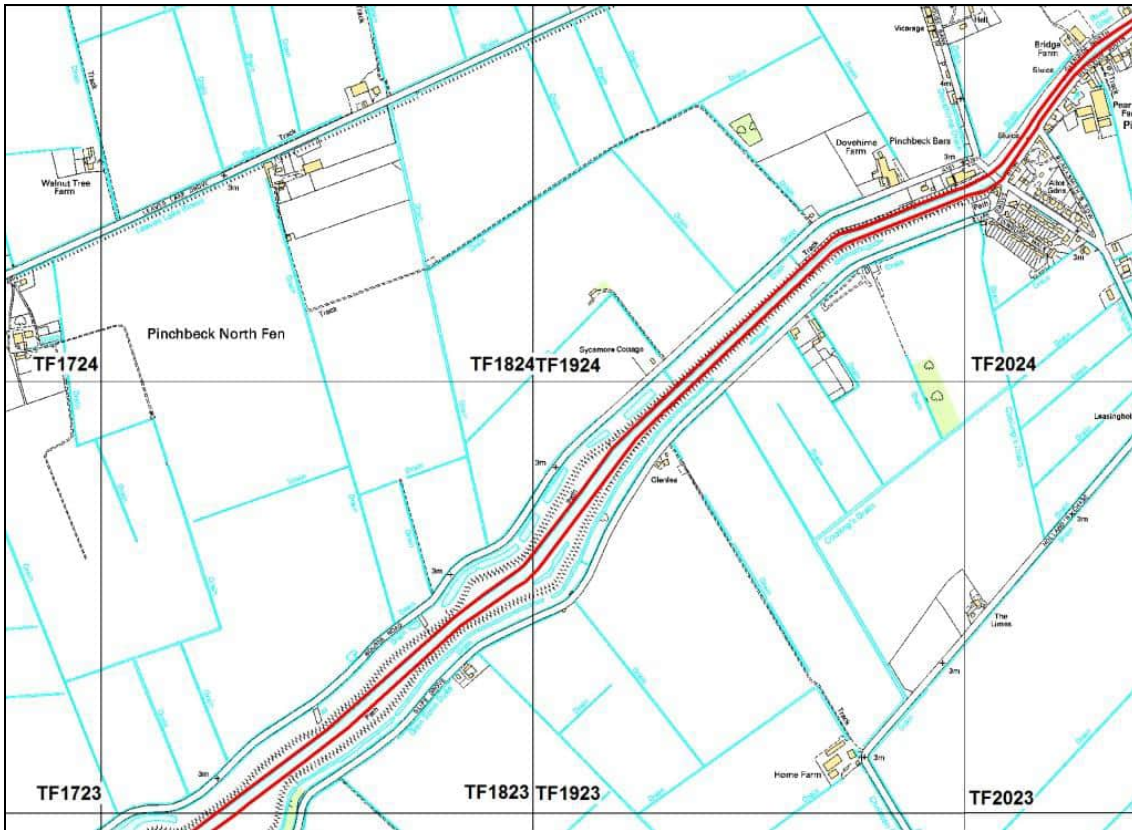
**Criteria passed: FW2, Mos1(FW2, NG1), Sup5 (Deptford pink), We2
Selected as a Local Wildlife Site: 27 March 2014**



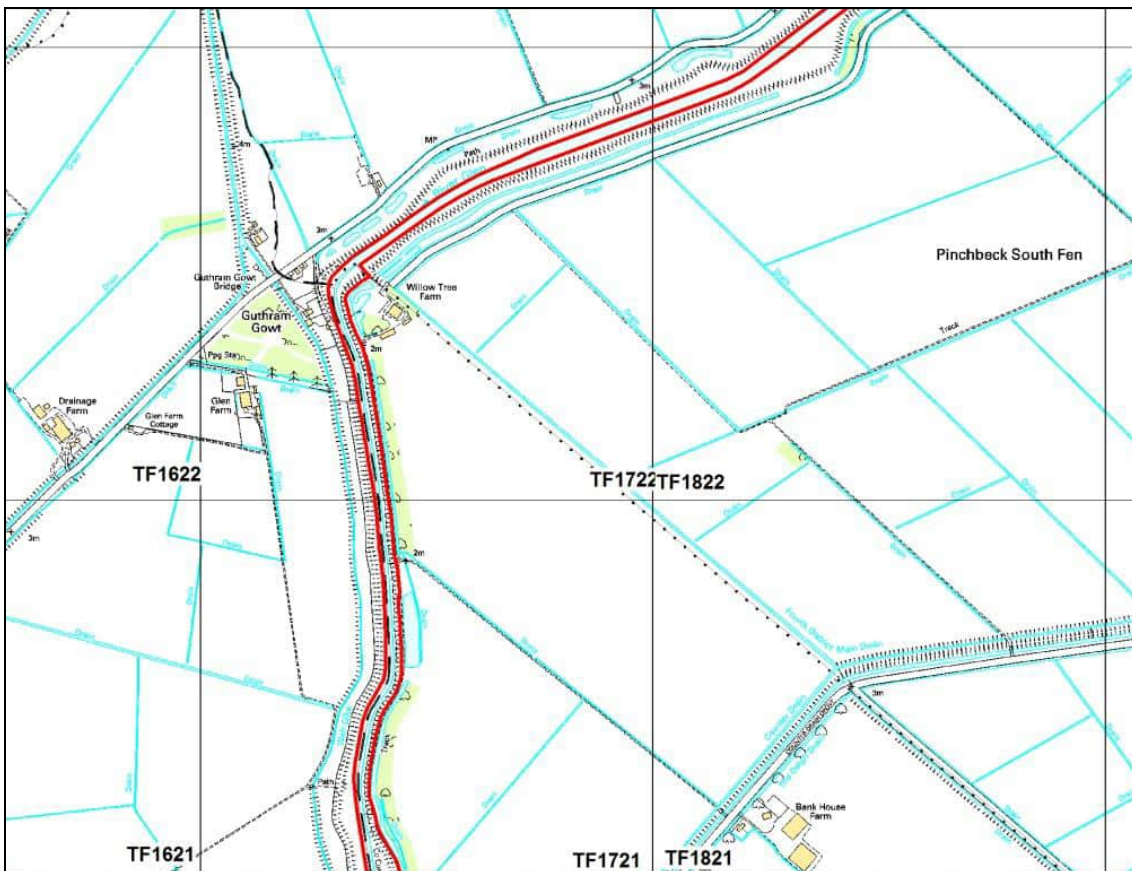
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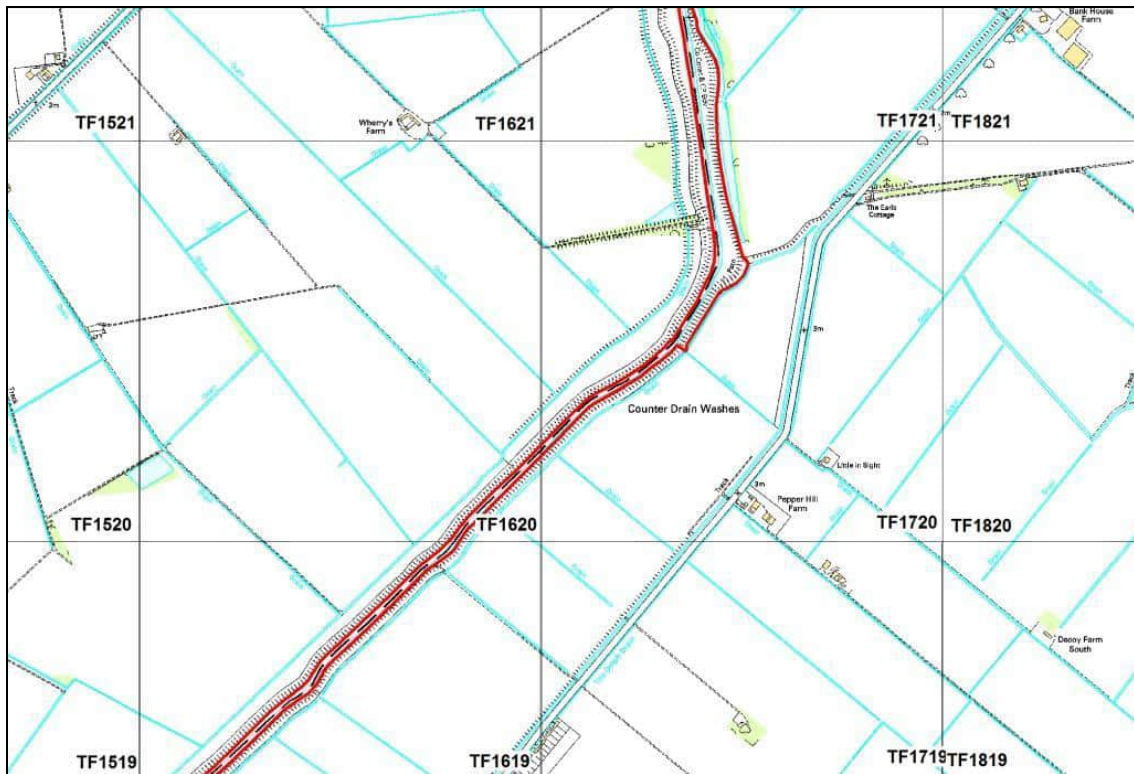
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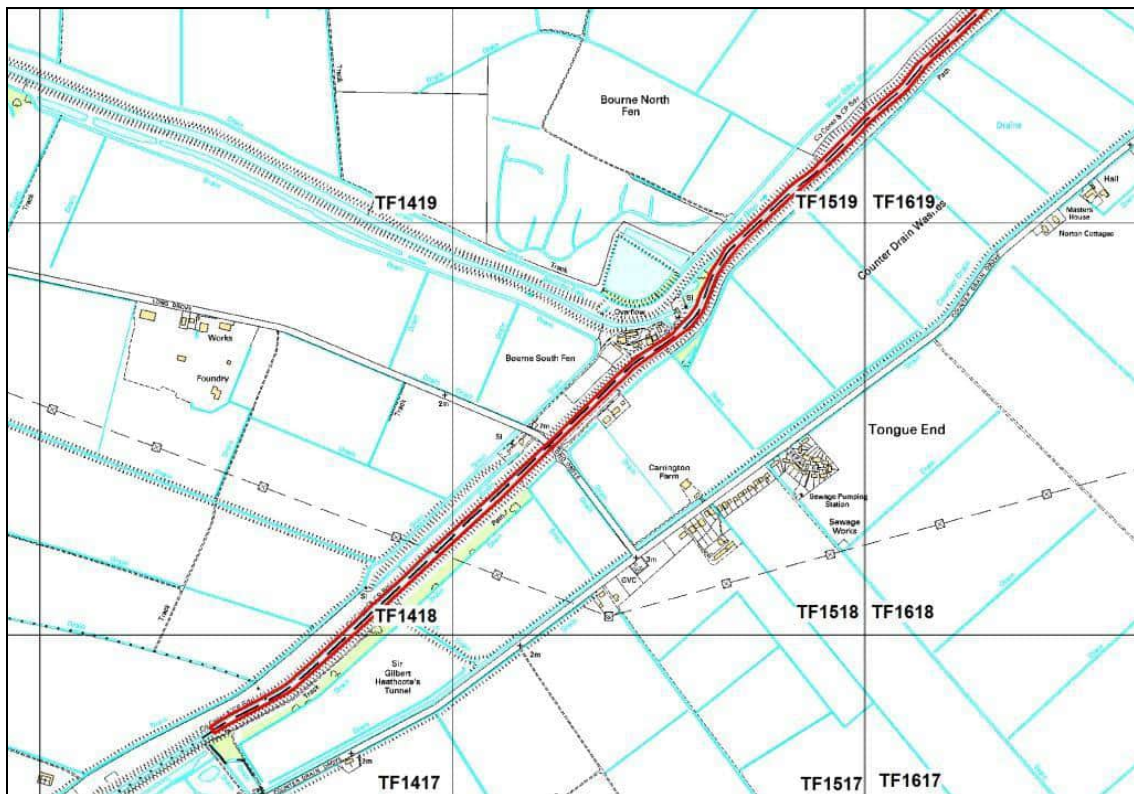
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Grid ref: TF279292 – TF129170

Survey: 8 September 2011,
24, 30 August, 6 September 2012

Length: 21.6km

Surveyor: J.Fraser

Main habitat: River, Coarse or rank grassland, Semi-improved neutral grassland
Additional habitat: Scrub, Linear reedbed
Additional features: Scattered non-planted trees, Steep slopes, ROW, South-facing slopes

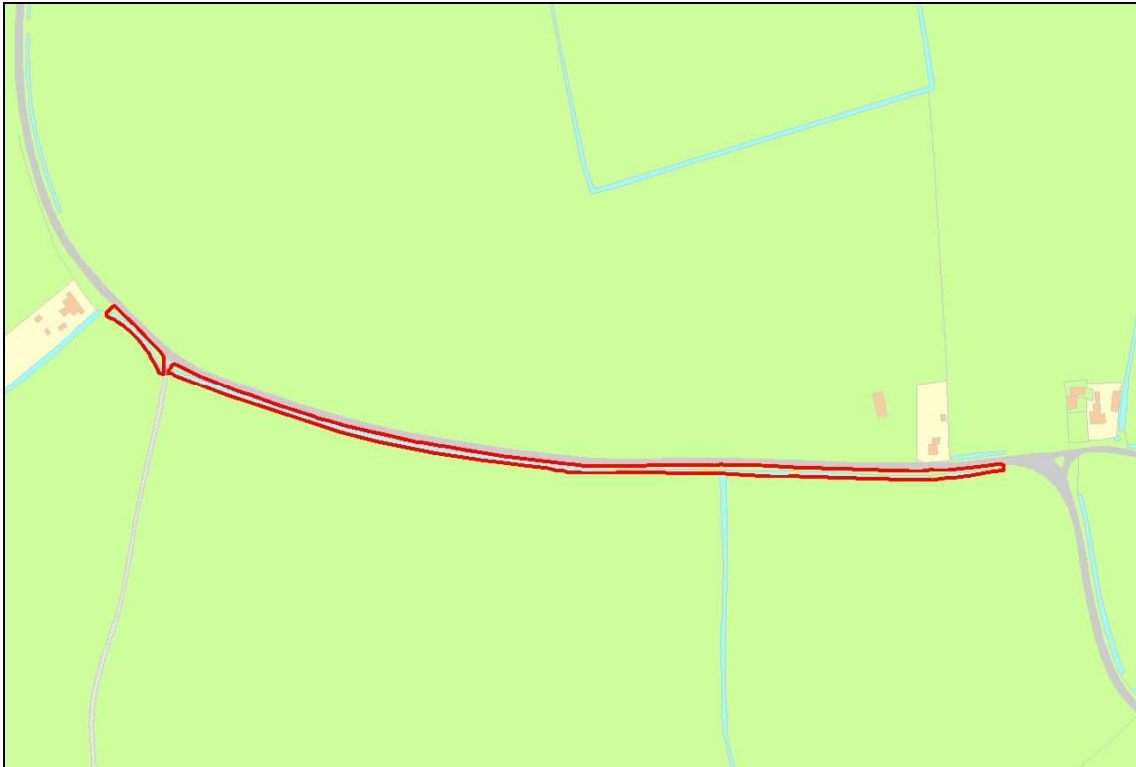
This is a botanically-rich 20km stretch of the River Glen between Baston and Thurlby Fens Site of Special Scientific Interest and a sluice near the confluence with the River Welland. The 10-25m wide channel and both banks are included, as well as a strip of adjacent grassland within Willow Tree Fen nature reserve. The Macmillan Way long distance footpath is beside the river throughout.

A wide range of aquatic plants in the river includes fennel and perfoliate pondweed, yellow water-lily, whorled water-milfoil, common, fat and ivy-leaved duckweed, water starwort, unbranched bur-reed, arrowhead, rigid hornwort, water-crowfoot and *Riccia fluitans* (an aquatic liverwort). Amongst the diverse waterside flora are blue water-speedwell, water-cress, brooklime, marsh woundwort, water forget-me-not, common fleabane, yellow iris, water dock, reed sweet-grass, reed canary-grass, common reed, greater pond-sedge and tufted-sedge.

Coarse grassland dominates drier habitats, but species typical of good neutral grassland are also present, such as common bird's-foot-trefoil, lady's bedstraw, yellow rattle, pignut, common knapweed, meadow vetchling, crested dog's-tail, yellow oat-grass, tor-grass and glaucous sedge. A few parts are quite well wooded, but typically the banks only support a scatter of woody plants, including grey, goat, white and crack willow, hawthorn, elder, sycamore and bramble.

Criteria passed: Flo3, Sw2, Mos1(Flo3, Sw2), Mos2
Recommended as a Local Wildlife Site: 29 March 2012

Shore Road Drain



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Grid ref: TF384435 – TF390434
Length: 0.6 km

Survey: 7 August 2012
Surveyor: T.Smith

Main habitat: Drain
Additional habitat: Grassland

Drain with the nationally scarce marsh-mallow.

Criterion passed: Mos4(Marsh-mallow)
Selected as a Local Wildlife Site: 18 March 2013

Slippery Gowt Sea Bank



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Grid ref: TF345417 **Survey:** 17 June 2013, 10 January 2014
Area: 1.2 ha (0.6km long) **Surveyor:** Scarborough Nixon Associates

Main habitat: Coarse or rank grassland

Additional habitat: Neutral grassland - semi-improved, Scrub - scattered

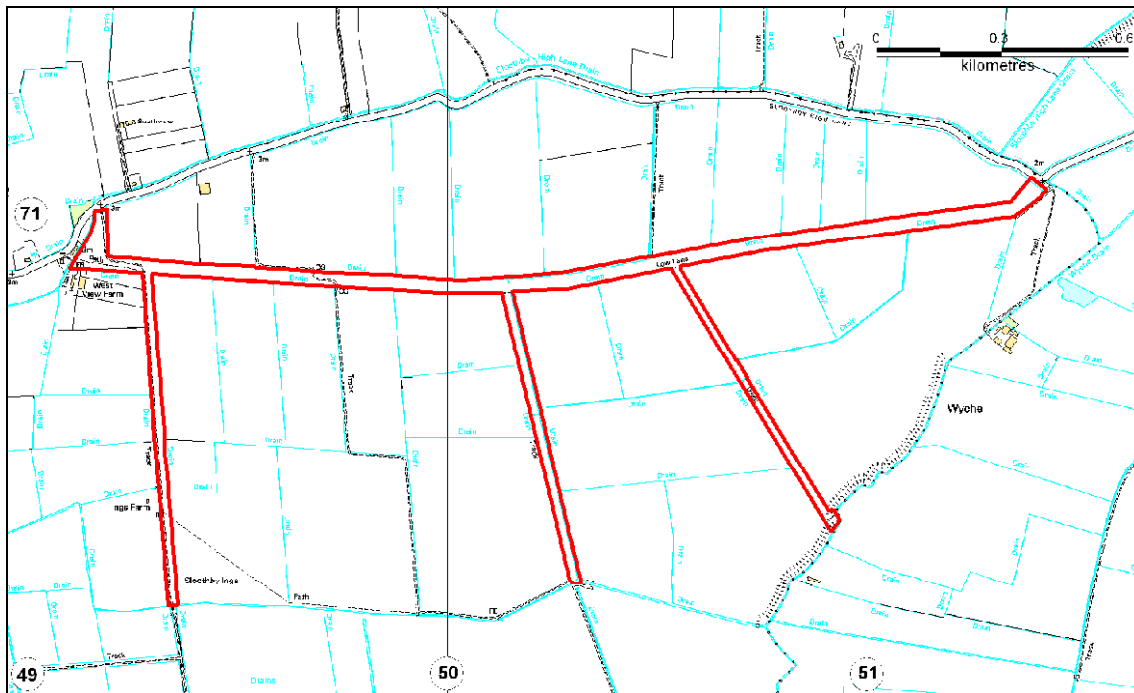
A rough grassland bank, landside only, adjacent to the Haven and associated tracts of saltmarsh. The site mainly comprises a rough grassland bank between the bank top and footpath and the drain which occurs between the waste site and the bank. The area supports Boston horsetail which occurs (or has occurred in the past) all the way along the landward bank, including the area that was stripped in 2006-07.

This is the only site for this species in Greater Lincolnshire. An experimental translocation elsewhere on site has failed, but further translocation sites are being discussed.

Criteria passed: NG1, Sup5 (Boston horsetail)

Selected as a Local Wildlife Site: 27 March 2014

Sloothby Low Lane



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Grid ref: TF503705 **Survey:** 25 September, 17 October 2008
Area: 4.6 km **Surveyor:** A.Prendergast, T.Simpson, C.Hipperson

Main habitat: Neutral grassland
Additional habitat: Damp grassland, Standing water
Additional features: Tussocky vegetation, Structural diversity, Steep slopes, Seasonally wet areas, Earthworks/hummocky ground, Deep ditches, Species-poor hedgerows

This wide green lane is an area of neutral grassland occasionally grazed by cattle. Good flora occurs in small patches, particularly at the edges of the site. Occasional species present include yarrow *Achillea millefolium*, common knapweed *Centaurea nigra*, sorrel *Rumex acetosa*, cowslip *Primula veris*, selfheal *Prunella vulgaris*, meadow buttercup *Ranunculus acris* and strawberry clover *Trifolium fragiferum*. The dominant grasses over the majority of the site are cocksfoot *Dactylis glomerata* and perennial ryegrass *Lolium perenne* with areas of crested dogstail *Cynosurus cristatus*, meadow fescue *Festuca pratensis*, Timothy grass *Phleum pratense* and smooth meadow-grass *Poa pratensis*.

An area at the eastern end (around TF 501 708) appears to be permanently damp and is very hummocky. The westernmost branch of the site has unusual shallow drainage channels running across the width of the field. These damper areas are poached by cattle; the hollows are filled with water. These areas support scattered hard rush *Juncus inflexus*, water crowfoot *Ranunculus aquatilis* and water starwort *Callitriche stagnalis*. Creeping bent *Agrostis stolonifera* is frequent in these areas

The site appears to be good for grassland fungi; species recorded include parrot waxcap *Hygrocybe psittacina*, dung roundhead *Stropharia semiglobata*, field mushroom *Agaricus campestris*, *Hygrocybe virginea*, *Panaeolus sphinctrinus*, *Volvariella murinella* and *Vascellum pratense*. The slime mould *Mucilago crustacean* was also noted.

The deep bordering ditches appear to be permanently wet and support a few species of note including abundant water horsetail *Equisetum fluviatile* and common spike-rush *Eleocharis palustris*. Spiked water milfoil *Myriophyllum spicatum*, broad-leaved pondweed *Potamogeton*

natans, greater pond-sedge *Carex riparia* and water starwort are frequent. Water plantain *Alisma plantago-aquatica* and jointed rush *Juncus articulatus* occur scattered around the site. The dominant subaquatic species appears to be opposite-leaved pondweed *Groenlandia densa*. Common reed *Phragmites australis* is beginning to establish. Marestalk *Hippuris vulgaris* is rare - one small patch being present in the northern ditch around TF 156 709. The steep banks support many of the meadow species including locally abundant cowslips plus scrub/ruderal species such as bramble *Rubus fruticosus* agg. and great willowherb *Epilobium hirsutum*.

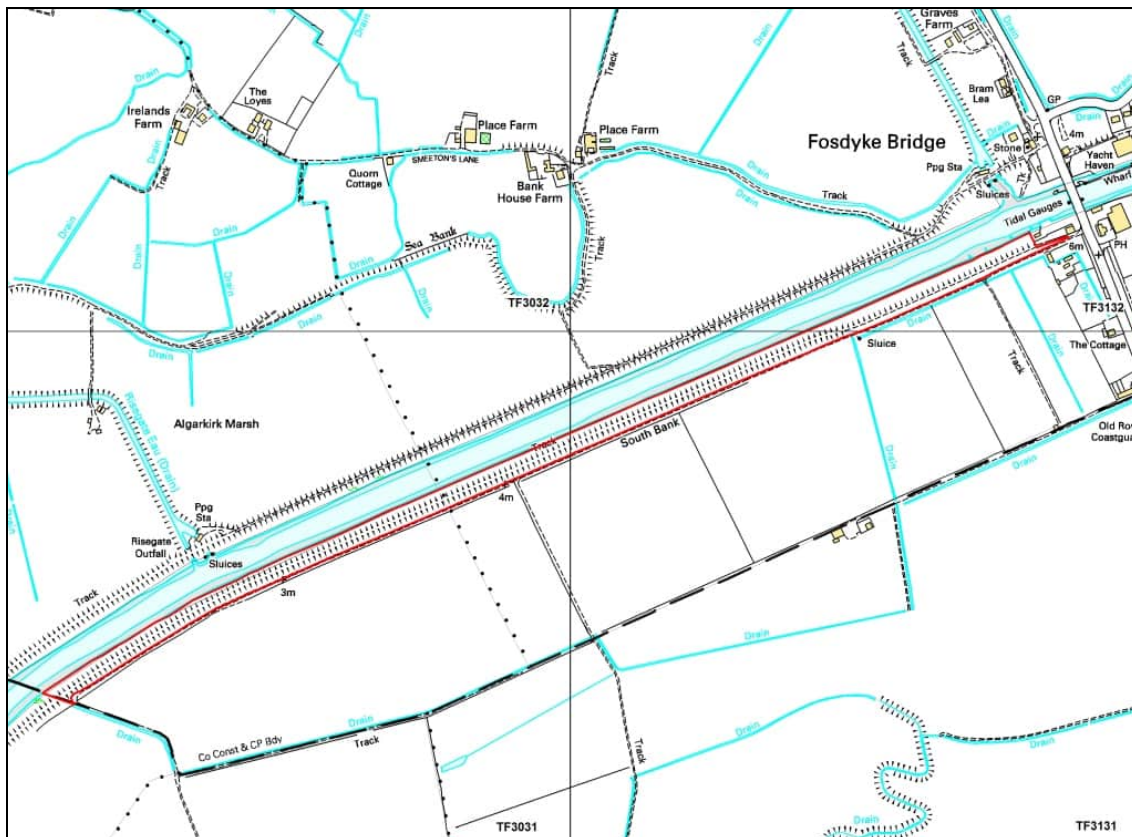
The bordering hedges are mainly of hawthorn *Crataegus monogyna* with bramble and field rose *Rosa arvensis*. Elder *Sambucus nigra* and wild plum *Prunus domestica* are occasional. Crack willow *Salix fragilis* is rare (two trees).

Evidence of badgers *Meles meles* was found near the centre of the site and a short-eared owl *Asio flammeus* was seen frequently throughout both visits; it was hunting over the site and adjacent arable fields and resting in the deep ditches. An owl box has been constructed at the end of the central branch of the site. Brown hare *Lepus europaeus*, roe deer *Capreolus capreolus*, redwing *Turdus iliacus*, moorhen *Gallinula chloropus*, mute swan *Cygnus olor*, woodpigeon *Columba palumbus*, heron *Ardea cinerea*, magpie *Pica pica*, pheasant *Phasianus colchicus*, long-tailed tit *Aegithalos caudatus*, blackbird *Turdus merula*, skylark *Alauda arvensis*, carrion crow *Corvus corone*, linnet *Carduelis cannabina* and small tortoiseshell *Aglais urticae* were also recorded as well as evidence of mole *Talpa europaea*.

Criteria passed: NG1, Sta2, Sw2

Recommended as a Local Wildlife Site: 24 March 2010

South Bank Fosdyke



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Grid ref: TF301313 – TF318321
Length: 1.9 km

Baseline survey: 30 August 2007
Monitoring survey: 10 August 2012
Surveyors: G.Steele, T.Smith

Main habitat: Coarse or rank grassland, Saltmarsh
Additional habitat: Scattered scrub, Unimproved neutral grassland, Mudflat
Additional features: Tussocky vegetation, Abundant nectar sources, ROW, Steep slopes, South-facing slopes, Bare ground, Structural diversity

A man-made raised floodbank with wide berm along the southern side of the River Welland. The grassland is a mixture of rough neutral grassland dominated by sea couch, with areas of more calcareous finer grassland, particularly on the south facing bank. The banks are cut for hay and a loose management regime is in place.

Abundant snail, grasshopper and butterfly species observed.

This is a good example of a Lincolnshire sea/flood bank.

Criteria passed: NG1, CG1
Recommended as a Local Wildlife Site: 22 May 2008

Spendluffe Meadows



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Grid ref: TF505754

Area: 4.7 ha

Main habitats: Lowland meadow
Semi-improved grassland

Survey: 9 September 2004

Surveyor: J Fraser

Survey: 9 June 2020

Surveyor: L Witkowska-Wawer

The site is surrounded by large hedges on a gently sloping site with boulder clay soils, typical of the Middle Marsh. The first (southern) field is used primarily as pasture, the main field is managed as a hay meadow. Cattle graze the pasture from late spring to maintain a relatively short grass sward throughout the growing season. After the hay meadow is cut, the cattle are used to graze the aftermath.

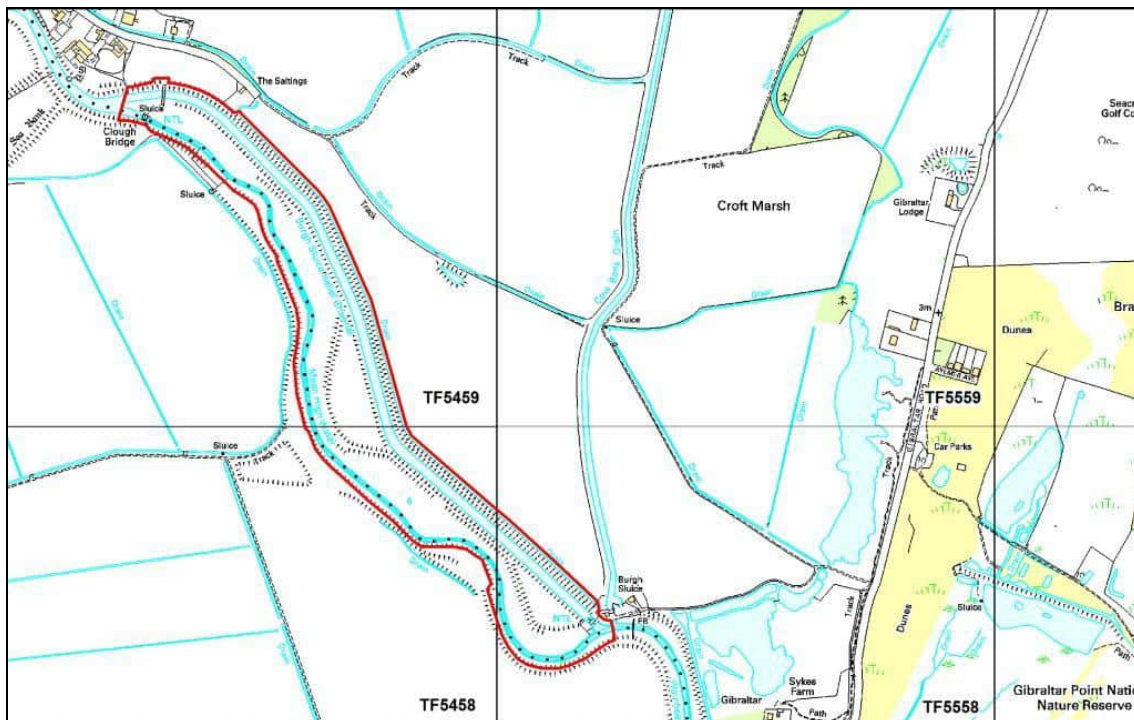
The meadows are rich in wild flowers including meadowsweet, green-winged orchid, cowslip, yellow rattle, great burnet, devil's-bit scabious and betony.

Criteria passed: NG1, Sup2

First recommended for selection as a Local Wildlife Site: 22 May 2008

Recommended for retention as a Local Wildlife Site: 07 March 2022

Steeping Marsh



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Grid ref: TF547591 **Survey:** 23 October 2012
Area: 22.1ha **Surveyor:** J.Fraser

Main habitat: Coarse or rank grassland, Saltmarsh, River, Drain, Ditch
Additional habitat: Scrub, Saline lagoon, Reedbed, Ruderal
Additional features: Scattered non-planted trees, Steep slopes

This is a 70-190m wide and 1.5km long 'island' of several interesting habitats surrounded by low-lying arable land. It features two parallel watercourses flowing south-eastwards towards the nearby coast at Gibraltar Point. An embankment between the watercourses keeps them apart, while two outer embankments provide flood protection for the adjacent fields. The western watercourse is a tidal remnant of Steeping River, upper and middle reaches of which are the River Lymn. The eastern watercourse is a large, freshwater, canalised drain known as Burgh Sluice Relief Channel that splits off from Steeping River at the northern end of the site and re-joins it at the southern end.

Now deprived of much of its natural flow, Steeping River is only a few metres across, bordered in many places by saltmarsh and saline pools on flat or gently rising ground. Growing on the river banks are typical saltmarsh plants such as spear-leaved orache, sea club-rush, reed canary-grass, sea couch and common cord-grass. Flatter areas nearby hold both temporary and permanent saline pools amongst saltmarsh. These salt-rich habitats support sea plantain, sea-purslane, sea aster, sea milkwort, sea arrowgrass, annual sea-blite, greater sea-spurrey, common scurvygrass, glasswort and toad rush. One area of disturbed ground is favoured by grass-leaved orache.

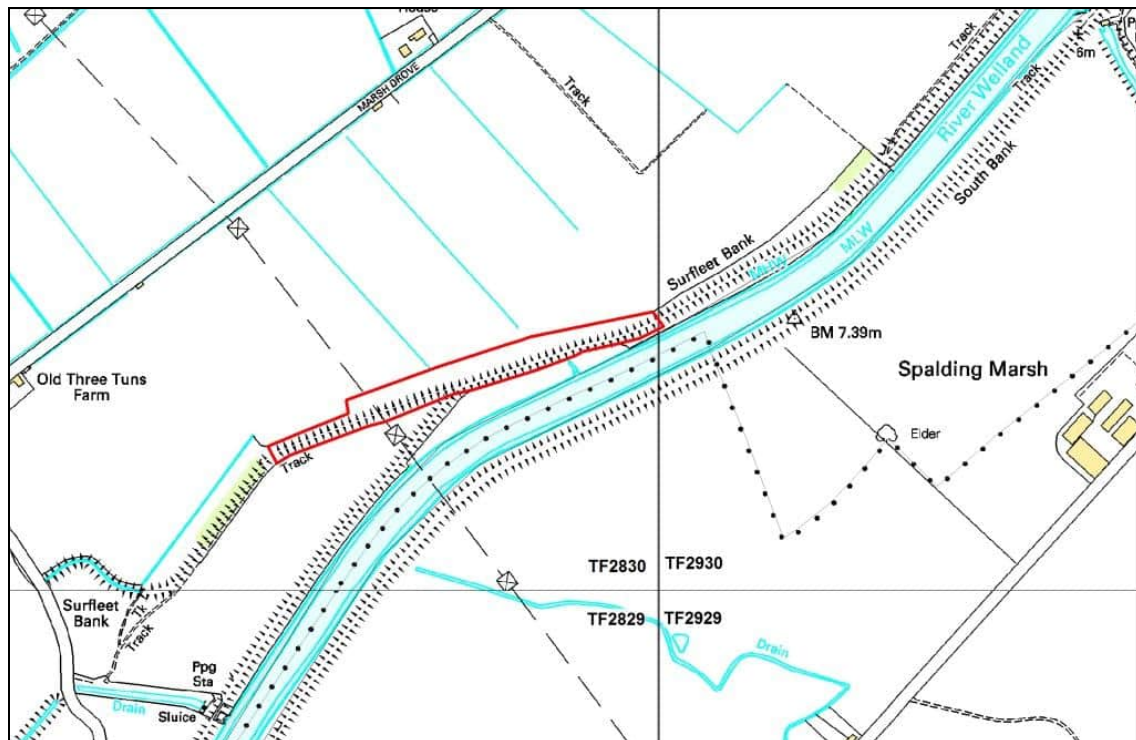
The Relief Channel is at least 30m wide. Although no aquatic plants were visible during the survey, there is a varied selection of freshwater species along the margins, including common reed, angelica, marsh bedstraw, meadowsweet, yellow iris, amphibious bistort, bulrush, branched bur-reed and false fox-sedge. Some saltiness is indicated by the presence of sea club-rush, while the few bankside trees and shrubs include grey and crack willow.

The eastern edge of the site is marked by a small drain, the southern part of which is coincident with a line of mature, heavily-fruited hawthorn bushes that may have originated as a hedge. At the time of survey, the hawthorn berries were attracting hundreds of fieldfares, redwings and blackbirds that had just made landfall from Scandinavia in foggy weather. Other woody species present are sea buckthorn, wild privet and elder, with some sycamore further north. The boundary drain flora includes common reed, reed sweet-grass, angelica, water mint, common fleabane and common duckweed. Amongst the grassland species on the adjacent embankment are meadow vetchling, tufted vetch, smooth hawk's-beard, yarrow, common mouse-ear, upright hedge-parsley and red fescue.

Coarse grassland that occupies much of the site is mostly un-managed, but small areas are grazed by horses. Finer grassland on the embankments appears to be mown a small number of times per year.

Criteria passed: Sw2, Co1, SL1
Selected as a Local Wildlife Site: 18 March 2013

Surfleet Bank



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Grid ref: TF283299 – TF289303
Length: 0.8km

Survey: 3 August 2012
Surveyor: J.Fraser

Main habitat: Neutral grassland
Additional habitat: Scrub, Coarse or rank grassland, Semi-improved calcareous grassland
Additional features: Abundant nectar sources, Earthworks, Anthills, Steep slopes, South-facing slopes, Bare ground

This is one of only two localities in Lincolnshire where the autumn ladies tresses orchid has been seen in the last 20 years.

Surfleet Bank comprises a 540m long strip of sandy embankment and adjacent flat pasture on the north-western side of the tidal River Welland, just downstream from the River Glen confluence. Until recently, the pasture was protected from river flooding by the embankment, but in winter 2011-12 a short section of the latter was removed at the extreme western end of the site, creating a sandy gap that is now beginning to re-vegetate.

Western and eastern ends of the embankment are quite different. In the west, an abundance of rabbits is the reason for plentiful bare sand and weedy vegetation; there is also much scrub, mainly of elder and hawthorn. Autumn ladies tresses was last found here in 1994, near the top of the south-east facing slope, where the grassland flora includes lady's bedstraw, fairy flax, common bird's-foot-trefoil, yellow oat-grass, quaking-grass, and good quantities of the uncommon prickly sedge. A less interesting sward occurs elsewhere on this part of the embankment.

The slightly longer and higher section of embankment to the east is much less affected by rabbit occupation. Here the flora is typical of good quality neutral grassland, especially on the north-west facing slope, supporting a selection of butterflies and day flying moths, as well as many soil mounds created by black ants. Amongst the plants present are cat's-ear, bulbous buttercup, meadow vetchling, lady's bedstraw, crested dog's-tail, sweet vernal-grass, quaking-

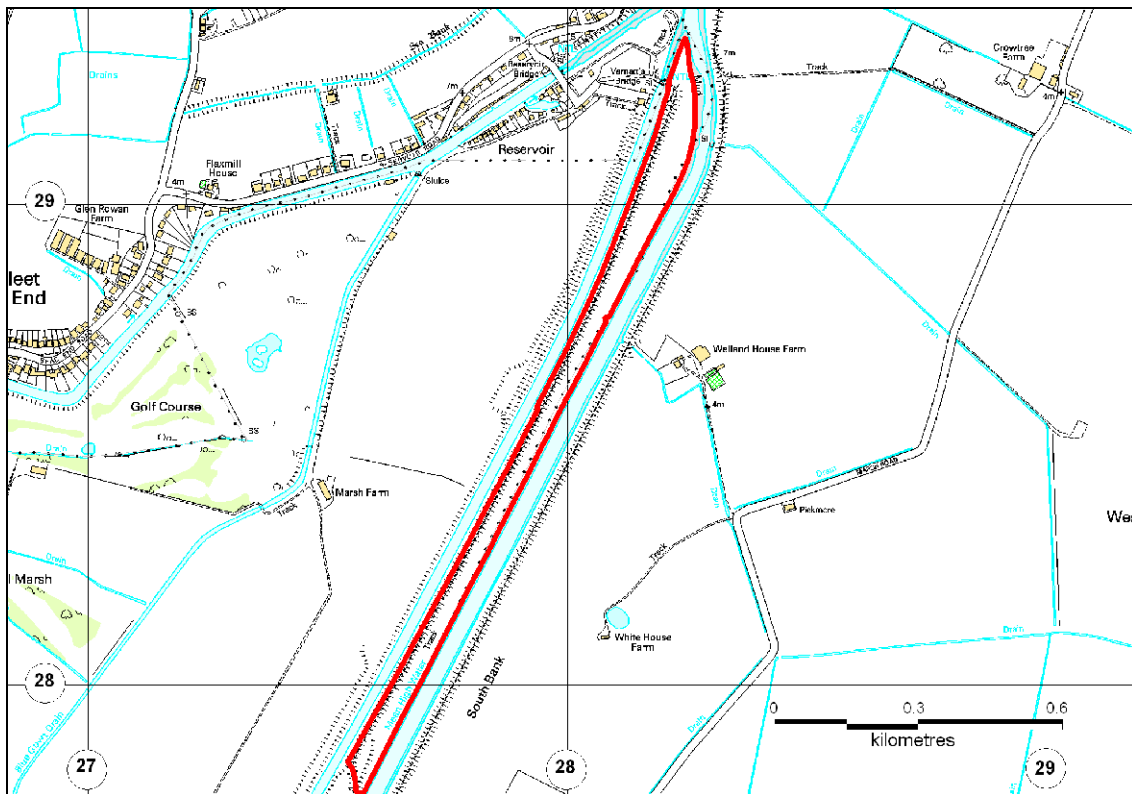
grass and over 30 flowering spikes of pyramidal orchid. In addition, the south-east facing slope supports plentiful knotted hedge-parsley, a rather uncommon plant of barish places near the sea. Below this, some fairly coarse vegetation grades into saltmarsh.

Hawthorn bushes form a fringe around the coarse grassland on the flat land north-west of the embankment. Although this area is not botanically rich, it provides additional habitat value and is a buffer between the embankment and arable land further to the north-west.

Criterion passed: NG1

Selected as a Local Wildlife Site: 18 March 2013

Surfleet Seas End Saltmarsh



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Grid ref: TF282293 – TF275277
Length: 1.7 km

Survey: 22 September 2010
Surveyor: J.Goodley, D.Fairchild

Main habitat: River, Marsh, Calcareous grassland
Additional habitat: Saltmarsh, Mudflat
Additional features: Anthills, Steep slopes, Seasonally wet/damp areas

This site is adjacent to the tidal River Welland and forms the part of the flood plain for this river. Some of the flat is inundated daily but most is only flooded at Spring tide. There are three main habitats; patches of tidal mud flat, tidal salt marsh and calcareous grassland higher up the bank and on the bank top. The Vernatt's Drain runs the length of the site on the other side of the bank.

Although the species count for the site, it is one of very few accessible salt marshes in this area with a public footpath through part of the site and the entire length on the adjacent bank. Few birds were observed on the day but this stretch of river is known to be valuable for birds with regular visits from waders of all sorts, birds of prey, sand martins and many others.

Criterion passed: Co1
Recommended as a Local Wildlife Site: 1 April 2011

The Lymn



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Grid ref:	TF462615 – TF490617	Survey:	5 August 2021
Area:	3.2 km	Surveyor:	J Fraser
Main habitats:	River Linear reedbed		
Additional habitats:	Coarse grassland Semi-improved neutral grassland Scattered scrub		

Most of this 3.2 km stretch of watercourse lies between Lymn Bank road to the south and arable fields to the north. In the west, at Firsby Clough, it is little more than a periodically dry drain, but the channel becomes progressively wider downstream, where it eventually diverges from the road and is then bordered by pasture to the north and arable land to the south. Botanical diversity varies between areas dominated by common reed to other places with more open water that support a wide range of aquatic, emergent and waterside vegetation.

Aquatic plants recorded were small/lesser, broad-leaved, hairlike, shining and curled pondweed, yellow water-lily, ivy-leaved duckweed, fan-leaved water-crowfoot, arrowhead, water horsetail, water-starwort, rigid hornwort and the non-native Nuttall's waterweed. Many wetland species include common reed, reed canary-grass, reed sweet-grass, branched bur-reed, bulrush, water dock, yellow iris, water-plantain, lesser water-parsnip, fool's-water-cress, water forget-me-not, flowering-rush, false fox-sedge, tufted-sedge and greater pond-sedge.

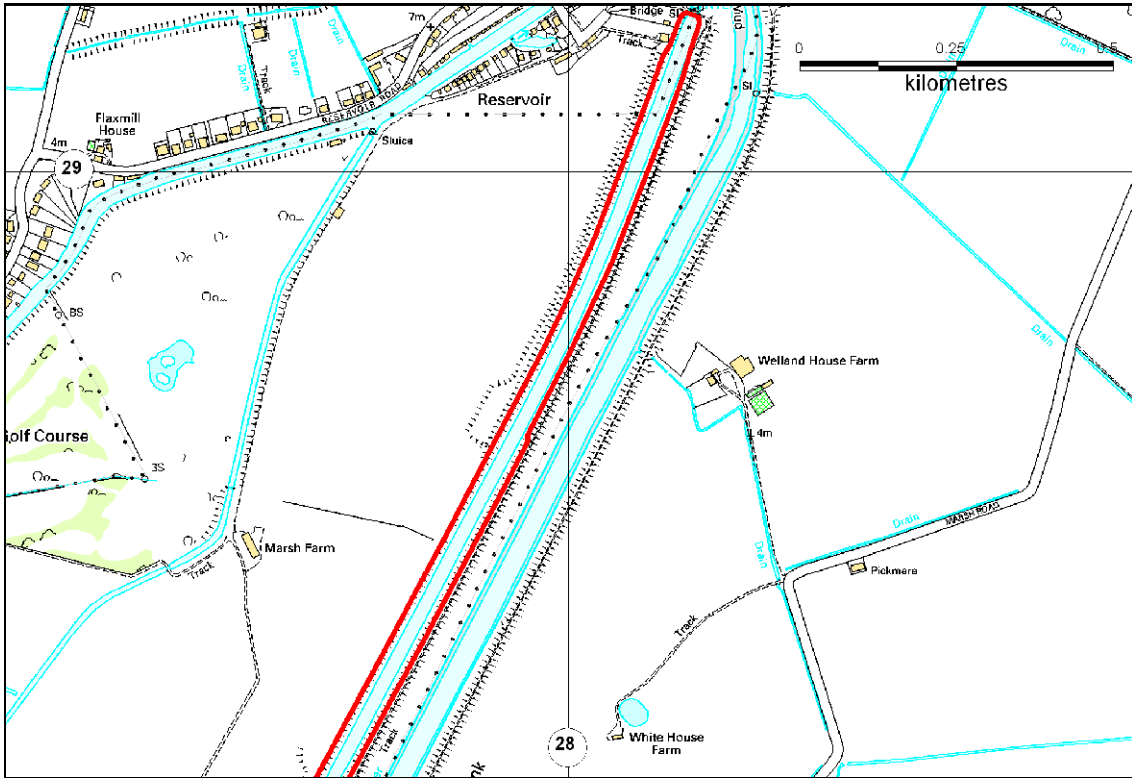
The flat road verge is botanically-poor, but neutral grassland species on the sloping banks include meadow vetchling, yarrow, smooth hawk's-beard, black medick, creeping cinquefoil, meadowsweet, clustered dock, red fescue, meadow and marsh foxtail and creeping bent. Perhaps of most interest, on the north bank at the downstream end, is a population of corn parsley, a plant only encountered occasionally, and usually on well-drained watercourse embankments. Woody vegetation is largely absent, but sycamore, ash, hawthorn, dog-rose and bramble were recorded, together with associated species, such as nipplewort, upright hedge-parsley and wood dock.

Fauna observed during the survey were reed warbler, swallow, mallard, goldfinch, jackdaw, small tortoiseshell, red admiral, meadow brown, gatekeeper, small, large and green-veined white, azure and common blue damselfly, ruddy and common darter and brown hawker.

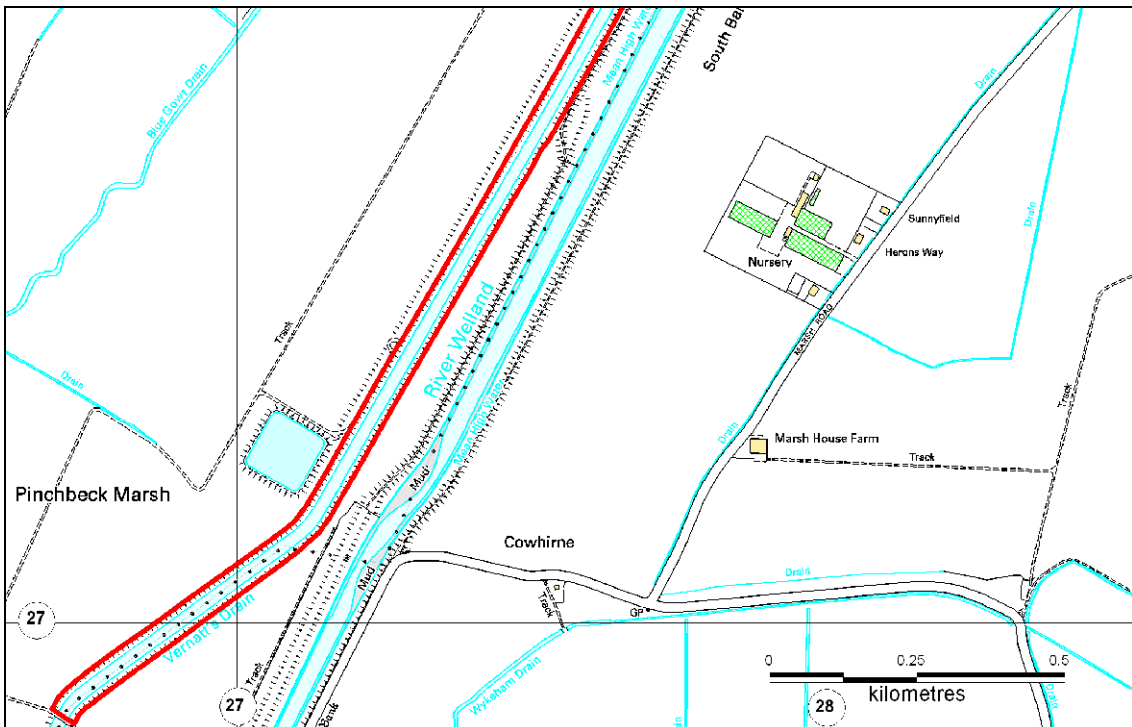
Criteria passed: FW2, Sup2

Recommended for selection as a Local Wildlife Site: 07 March 2022

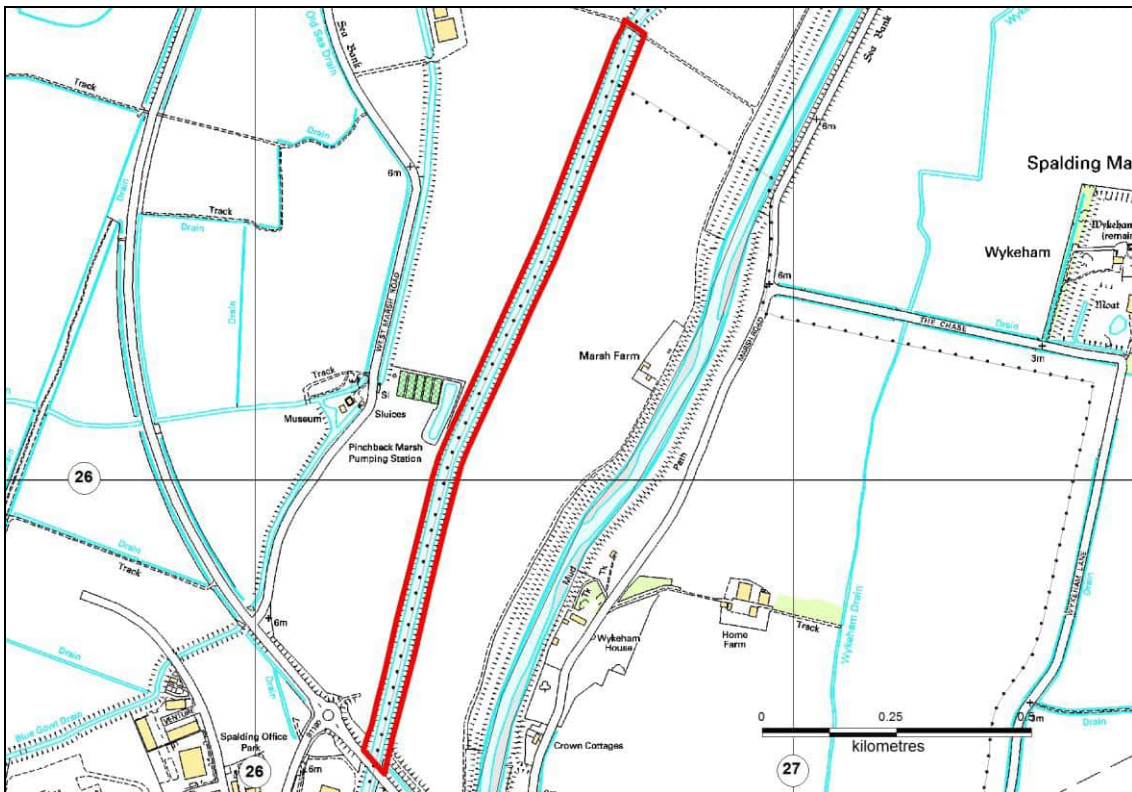
Vernatt's Drain



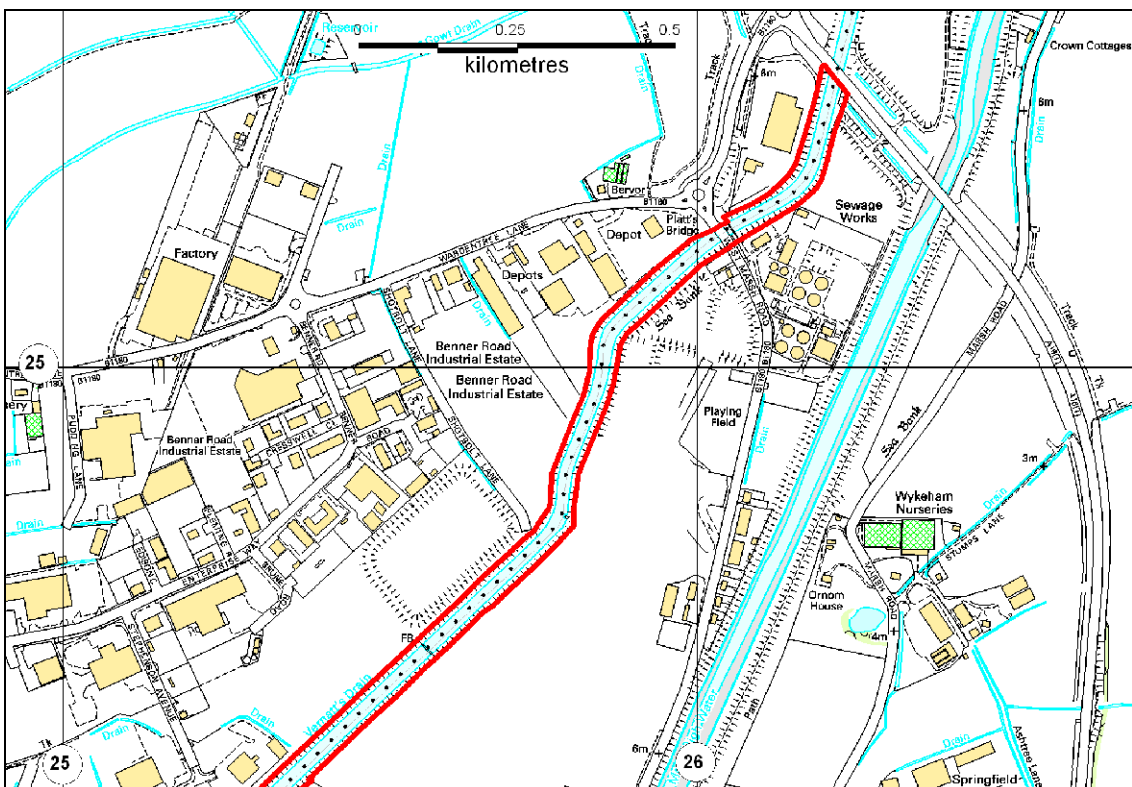
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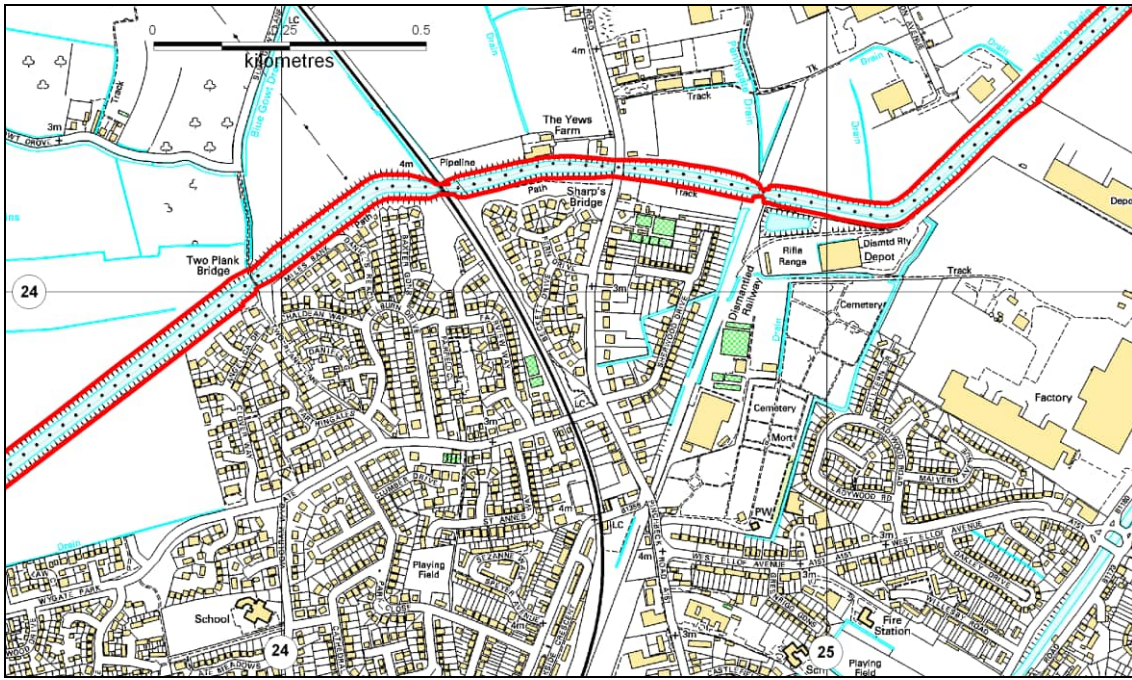
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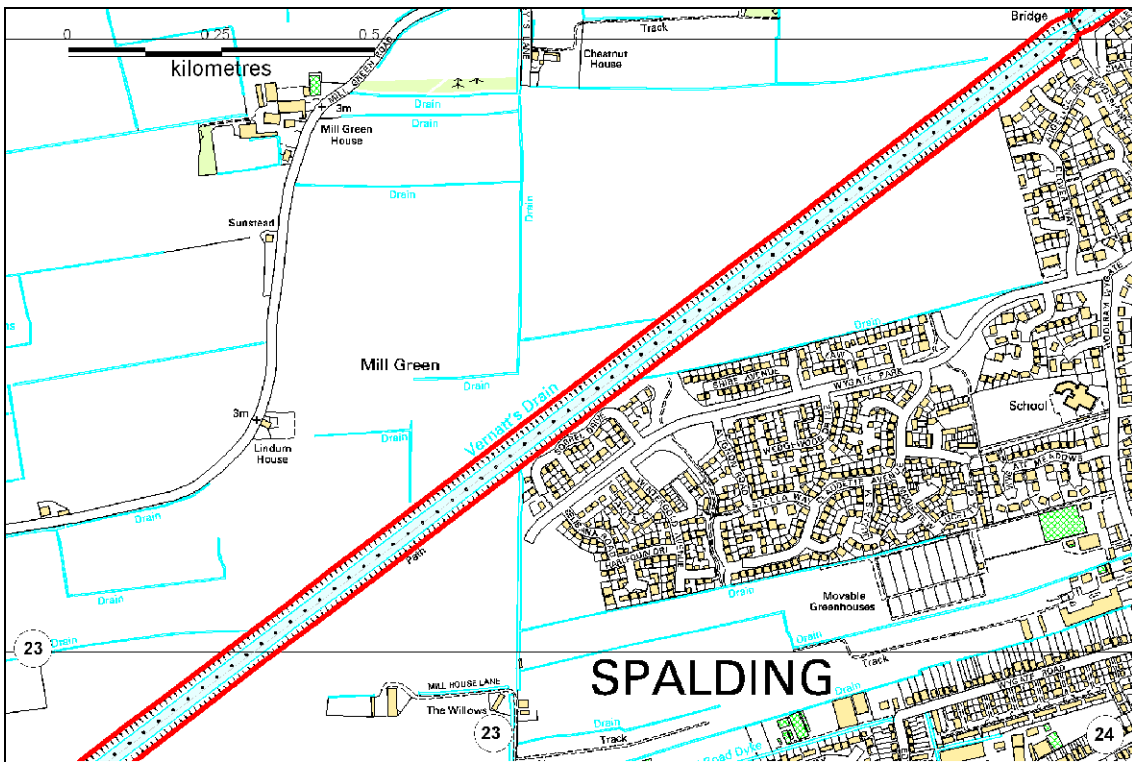
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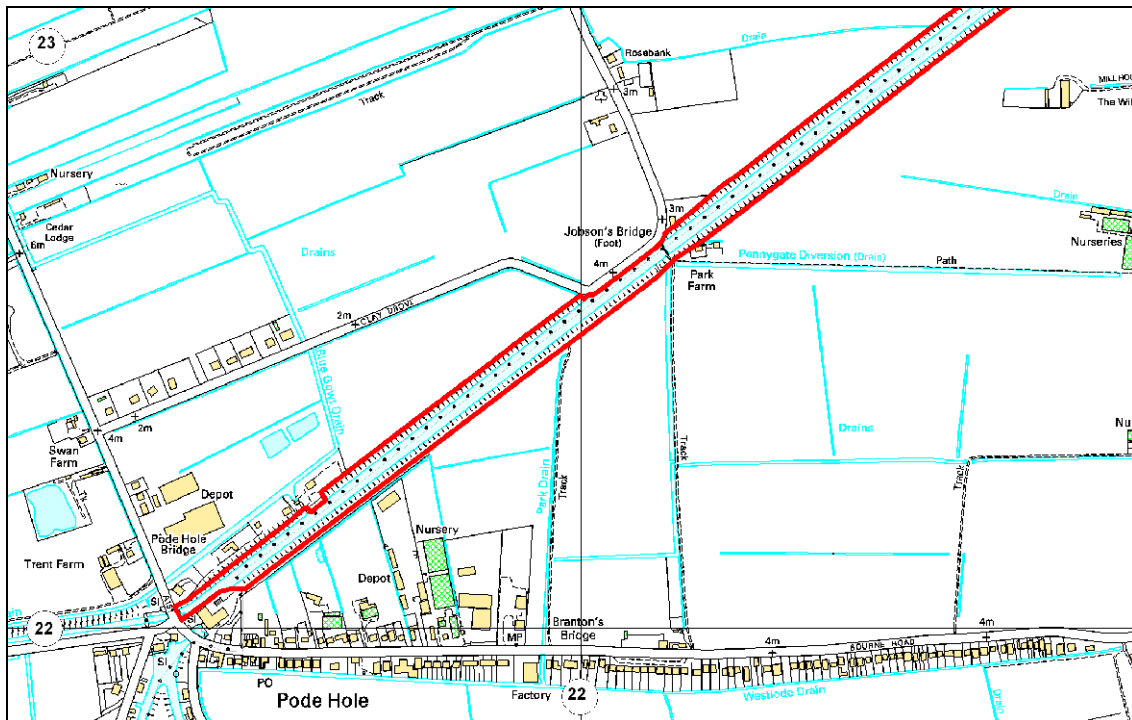
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Grid ref: TF282292 – TF213220 **Survey:** Various, 2010, 2011
Length: 10.7 km **Surveyor:** J.Goodley, D.Fairchild, J.Fraser

Main habitat: Drain, Calcareous grassland, Neutral grassland, Reedbed, Coarse grassland
Additional features: Scattered non-planted trees, Tussocky vegetation, Steep slopes, South-facing slopes, Earthworks/Hummocky ground

Vernatt's Drain is a large man-made watercourse resulting from the amalgamation of Counter Drain, North Drove Drain and South Drove Drain at Podge Hole. It flows north-eastwards for around 11km, past the north-western edge of Spalding to the tidal limit at Surfleet, where it joins the River Welland.

Although many parts of the drain banks are covered in coarse and weedy vegetation, there are substantial stretches with a rich grassland flora. Species often found in good quality neutral grassland include yellow rattle, common knapweed, lady's bedstraw, pignut, southern marsh-orchid, tufted vetch, meadow vetchling, crested dog's-tail and sweet vernal-grass. Plants typical of calcareous soils are also present, such as marjoram, pyramidal orchid, common spotted-orchid, perforate St John's-wort, common bird's-foot-trefoil, quaking-grass and tor-grass. Woody vegetation is largely absent in most places.

Common reed dominates much of the water's edge, but there are sections where a rich mixture of other wetland vegetation occurs. Some of the waterside plants in these places are flowering-rush, yellow iris, water dock, common club-rush, branched bur-reed, fool's-water-cress, lesser water-parsnip, water-cress, reed canary-grass and reed sweet-grass. Species characteristic of marshy areas include meadowsweet, marsh-marigold, angelica, common fleabane, brooklime, water mint, common spike-rush, and common and jointed rush. In addition, the presence of sea club-rush, sea-purslane, sea couch and reflexed saltmarsh grass suggests that the drain water includes a slightly saline element.

Amongst the many aquatic plants recorded in the period 2009-11 are five pondweeds, namely curled, hairlike, fennel, flat-stalked and perfoliate. The aquatic flora also includes arrowhead,

spiked water-milfoil, mare's-tail, water-violet, rigid hornwort, fan-leaved water-crowfoot, fat duckweed, unbranched bur-reed and the national rarity ribbon-leaved water-plantain.

The site supports a good range of fauna, including breeding populations of reed and sedge warblers, reed bunting and sand martin. Amongst the invertebrates present are small skipper, small heath, ringlet, meadow brown, gatekeeper, smoky wainscot moth, common blue damselfly and Roesel's bush-cricket. An otter spraint was also found.

Criteria passed: NG1, CG1, Sw1, Sw2, Flo3, Mos1(NG1, CG1, Flo3, Sw2)
Recommended as a Local Wildlife Site: 1 April 2011, 29 March 2012

Wolla Bank South



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Grid ref: TF556747

Area: 5ha

Survey: 18 July & 22 August 2014

Surveyor: Jeremy Fraser

Main habitat: Coarse or rank grassland, Neutral grassland - semi-improved, Reedbed

Additional habitat: Drain, Pond

This stretch of coastline lies between Wolla Bank Reedbed nature reserve to the north and Chapel Six Marshes nature reserve to the south. From east to west it comprises: bare sand on the upper beach; a line of low fixed dunes grading into wetland; and finally an old embankment beside the road. As a result of recent landscaping works, much of the site is now far wetter than previously, with substantial areas of open water and reedbed, as well as coarse grassland in the central island and on the embankment. The wetland and dunes support a rich flora and fauna.

Aquatic plants already present in the new water bodies are fennel, lesser & horned pondweed, spiked water-milfoil, brackish water-crowfoot and water-starwort. The waterside flora is typical of coastal wetland and includes common reed, sea club-rush, toad & saltmarsh rush, celery-leaved buttercup, lesser centaury, sea-milkwort, brookweed and parsley water-dropwort.

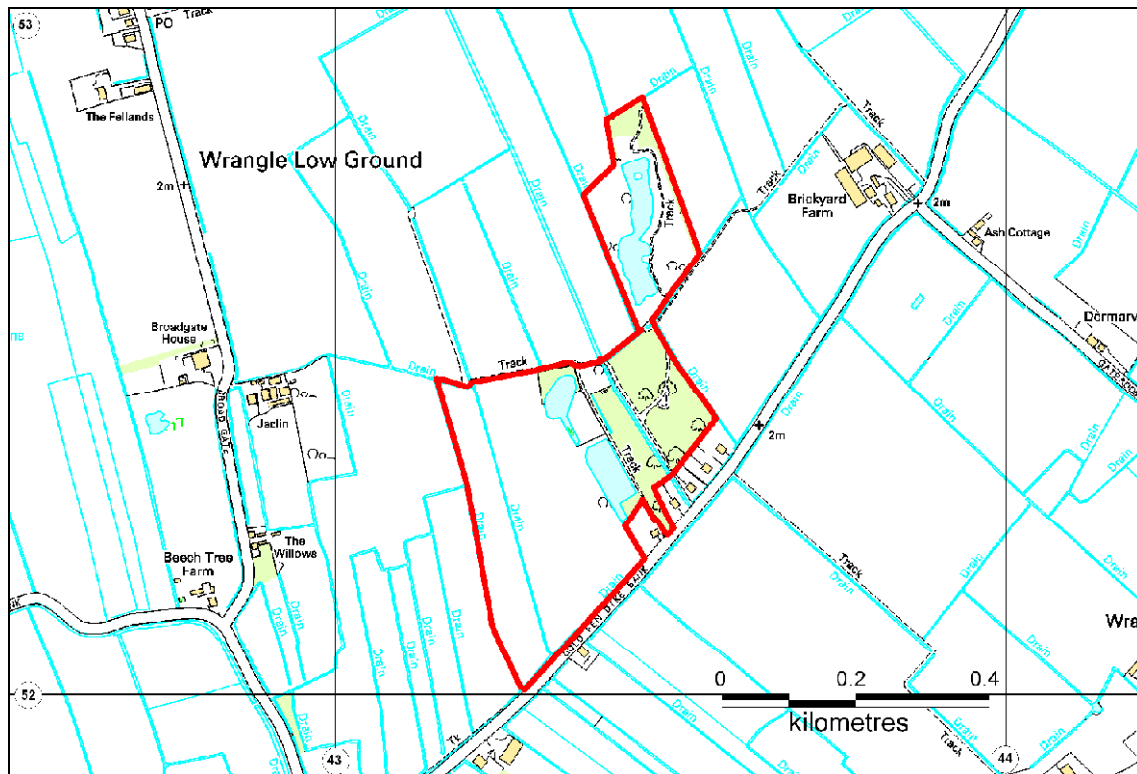
Following landscaping, bare ground near the water's edge was sown with an appropriate neutral grassland seed mix, which has contributed to the development of a botanically-rich sward on the infertile sandy soil. The grazing and digging activity of rabbits has also been beneficial. Amongst the many interesting species present are yellow rattle, cowslip, common bird's-foot-trefoil, meadow vetchling, tufted vetch, common knapweed, lady's bedstraw, oxeye daisy, cat's-ear, procumbent pearlwort, sand sedge, quaking-grass and smaller cat's-tail.

The top of the dune ridge is covered in dense scrub at the northern end, mostly comprising sea-buckthorn, white poplar and elder. Central and southern parts are mostly free of scrub, and here can be found marram, lyme-grass, sea & sand couch, goat's-beard, hound's-tongue and dewberry.

A wide range of birds and invertebrates were noted during the survey, including coot, sedge & reed warbler, swift, common whitethroat, common blue, ringlet, small skipper, shaded broad-bar, common blue & blue-tailed damselfly, darter and four-spotted chaser.

Criteria passed: NG1, We1, SL1, Co3
Selected as a Local Wildlife Site: 2 April 2015

Wrangle Brick Pits



OS copyright No. AL100016739, Banovallum House, Manor House Street, Horncastle, Lincolnshire. LN9 5HF

Grid ref: TF433524 **Baseline survey:** 6 September 2007,
September 2009
Area: 15.1 ha **Monitoring survey:** 14 September,
14 October 2012
Surveyors: G.Steele, H.Scarborough,
T.Smith

Main habitat: New native plantation, Semi-improved neutral grassland, Pit
Additional habitat: Scrub, Coarse or rank grassland, Ditch, Reedbed
Additional features: Planted specimen trees, Shallow dry ditches, Species-poor hedgerows, Steep slopes

A mosaic of waterbodies, grassland, semi-mature planted trees, broad-leaved woodland, cattle-grazed semi-improved grassland, and broad-leaved plantation woodland. The two main pits are used for fishing, but the north-eastern pond has been created for wildlife. The site is managed for nature conservation by the owner.

Water vole feeding signs and latrines found around the margins of the southern pond.

Criteria passed: Flo3/Sta2
Recommended as a Local Wildlife Site: 8 December 2012

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