

# **Preliminary Environmental Information Report Volume 2**

## **Appendix 8.13 Baseline Report - Wintering Bird Survey 2023-2024**

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**LionLink**

National Grid LionLink Ltd

## LionLink

### Wintering Bird Survey Report 2023/2024

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# 1. Introduction

Ove Arup & Partners Ltd (Arup) was commissioned by National Grid LionLink Limited (NGLL) to carry out a suite of wintering bird surveys (undertaken between October 2023 and March 2024, inclusive) to provide information to inform the design and environmental assessment of the proposed LionLink scheme (the ‘scheme’).

The Project comprises a multi-purpose interconnector (MPI) providing a High Voltage Direct Current (HVDC) electricity link with a capacity of up to 1.8 gigawatts (GW) between the National Transmission Systems of Great Britain and the Netherlands and offshore wind farms located in Dutch waters.

## 1.1 Site Context

Four discrete sites were surveyed (the ‘study area’) (Figure 1), through the completion of a wintering bird walkover survey, comprising:

- Two potential landfall locations (at Southwold and Walberswick) and associated potential cable corridors heading inland;
- One potential converter station location (at Friston); and
- An area of marsh/river just west of Blythburgh, incorporating a potential cable crossing of the River Blyth.

In addition, six hours of View Point (VP) survey, and surveys of beach areas, were completed each month from and around the potential landfall locations at Southwold and Walberswick to assess avian use of inshore/intertidal areas in these locations.

The entirety of the study area was either within or near to internationally/nationally designated coastal/wetland sites, notified for their ornithological interest (Section 3.1.1).

## 1.2 Legislative and Policy Context

### 1.2.1 Protected Site Designations

A network of nationally designated sites has been established through the designation of Sites of Special Scientific Interest (SSSI) under the Wildlife and Countryside Act 1981 (as amended) (WCA). Sites are designated if they are of special interest by reason of their flora, fauna (e.g. birds), or geological/physiographical features. The protection afforded by the WCA means it is an offence to carry out or permit to be carried out any operation listed within the notification without the consent of the Statutory Nature Conservation Organisation (SNCO) (Natural England (NE) in this case).

Some bird species are listed as features of European designated sites, notably Special Protection Areas (SPAs) and Ramsar sites. SPAs are classified in accordance with Article 4 of the EC Birds Directive (2009/147/EC). The provisions of the Birds Directive are implemented and transposed to UK legislation through the WCA and the Conservation of Habitats and Species Regulations 2017. The Conservation of Habitats and Species Regulations 2017 transposes EC Habitats Directive (92/43/EEC) on the conservation of natural habitats and of wild fauna and flora into UK national law.

Ramsar sites are also afforded protection under the Ramsar Convention 1971.

These designations are applied to areas that support nationally (SSSIs) or internationally (SPAs and Ramsar sites) important numbers of birds, the conservation of which is necessary for the maintenance of the range of that species across Europe. A site may be designated as an SPA based on its importance to breeding, wintering, or migratory birds. In the UK, SPA designations are underpinned by national legislation which identifies them as SSSIs.

## 1.2.2 Protection of Bird Species

All wild birds (defined as species which are resident or are visitors to the United Kingdom (UK), but generally not game birds) are protected by the WCA. As far as development is concerned, it is an offence to kill, injure or take any wild bird.

Annex 1 of the Birds Directive and Schedule 1 of the WCA list species that are protected because of their rarity and nature conservation value. Annex 1 species are the subject of special conservation measures concerning their habitat, receiving protection through the designation of SPAs in order to ensure their survival and reproduction in their area of distribution. Schedule 1 species are protected by special provisions because of their rarity as breeding species in Britain, and it would constitute an offence to disturb them while nesting (which includes nest building). It is also an offence to disturb dependent young of a Schedule 1 bird.

Species of concern in England may also be identified on a list of species and habitats where Priority Action is required. This list is published under The Natural Environment and Rural Communities (NERC) Act 2006, which came into force on 1<sup>st</sup> October 2006. Section 41 (S41) of the Act requires the Secretary of State for England to publish a list of habitats and species which are of principal importance for the conservation of biodiversity in England. These are known as Priority Habitats and Priority Species. The list has been drawn up in consultation with NE, as required by the NERC Act. The S41 list is used to guide decision makers such as public bodies, including local and regional authorities, in implementing their duty under Section 40 of the Act, to have regard to the conservation of biodiversity in England, when carrying out their normal functions.

Additionally, conservation importance is ascribed to certain species by their presence on the Red List and Amber List of Birds of Conservation Concern (BoCC5<sup>1</sup>) in the UK. Under BoCC5 birds are classified into three lists as follows:

- **Red List:** species that are globally threatened, whose population or range has declined severely (>50%) in recent years or the longer term, and those whose populations have declined historically and not exhibited any signs of recovery;
- **Amber List:** species that are threatened in Europe, whose population or range has declined moderately (>25% to <50%) in recent years or the longer term, species that show a historical decline but whose populations have shown a substantial increase, species that are rare, species with localised populations and those species of international importance with UK populations;
- **Green List:** All regularly occurring native species that do not qualify under any of the Red or Amber criteria are green listed. The Green list also includes those species listed as recovering from historical decline in the last review that have continued to recover and do not qualify under any of the other criteria.

Although the BoCC lists confer no legal status in themselves, they are useful in evaluating the importance of bird species and assemblages.

## 1.3 Objectives

The wintering bird surveys detailed within this report were conducted with three objectives:

- 1) To provide baseline data on the assemblages, numbers and distribution of wintering birds within the study area;
- 2) To provide data on the use of the study area by qualifying species of the nearby European designated sites: Outer Thames Estuary SPA, Minsmere-Walberswick SPA and Ramsar site, Alde-Ore Estuary SPA and Ramsar site and Benacre to Easton Bavents SPA during the winter period; and
- 3) To highlight the presence of any wintering species/aggregations of value that may influence the design of the scheme.

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<sup>1</sup> Stanbury, A., Eaton, M., Aebischer, N., Balmer, D., Brown, A., Douse, A., Lindley, P., McCulloch, N., Noble, D. and Win, I. (2021) *The Status of our bird populations: the fifth Birds of Conservation Concern in the United Kingdom, Channel Islands and Isle of Man and second IUCN Red List assessment of extinction risk for Great Britain*. British Birds 114, December 2021, 723-747.

## 2. Methodology

### 2.1 Desk Study

#### 2.1.1 Designated Sites

The MAGIC (Multi-Agency Geographic Information for the Countryside) website<sup>2</sup> was used to identify statutory designated sites within the vicinity of the site. Search radii of 10km and 2km (from the approximate centre of the study area) were employed for European and nationally designated sites, respectively.

The Joint Nature Conservation Committee (JNCC) website<sup>3</sup> and NE designated sites website<sup>4</sup> provided details and descriptions of protected sites, with cross-reference to maps and citations.

### 2.2 Survey Methods

The survey methods employed comprised a suite of wintering bird walkover surveys, inshore bird surveys and beach surveys; full details are provided in the following sections.

#### 2.2.1 Wintering Bird Walkover Survey

The strategy for ornithological surveys was designed to enable the mapping of qualifying ornithological features associated with the Outer Thames Estuary SPA, Minsmere-Walberswick SPA/Ramsar site, Alde-Ore Estuary SPA/Ramsar site and Benacre to Easton Bavents SPA (henceforth termed ‘target species’).

The survey methods were derived from current best practice as described in Bibby *et al.* (2000)<sup>5</sup>, Gilbert *et al.* (1998)<sup>6</sup> and Bird Survey & Assessment Steering Group (2022)<sup>7</sup> with bespoke survey methods for viewpoint and beach surveys (detailed subsequently).

A series of surveys was employed to determine the assemblage, numbers and distribution of target species across the study area<sup>8</sup>.

Target species recorded during the surveys were restricted to:

- qualifying features of Minsmere-Walberswick SPA and Ramsar, Outer Thames Estuary SPA, Alde-Ore Estuary SPA and Ramsar and Benacre to Easton Bavents SPA;
- all waterbirds, regardless of whether they were listed in the citations;
- red and amber listed BoCC species, S41 species, Schedule 1 species; and
- noteworthy aggregations of other species were also recorded.

All areas within the survey area boundaries were surveyed by foot/car. Target species just outside of study area were also recorded.

#### 2.2.2 Inshore Bird Surveys

VP surveys from landfall locations at Southwold and Walberswick comprised six hours of ‘seawatching’ each month focussed on a 2km 180° viewarc looking out to sea. Surveyors remained stationary throughout, scanning the viewarc with binoculars and telescopes and recording all target and secondary species (defined subsequently). The main focus was to record the distribution of birds on the water, and all records of such

<sup>2</sup> Defra website. *MAGIC, for maps of statutory nature conservation sites and Section 41 NERC Act habitats of principal importance*. Available at: <https://magic.defra.gov.uk/> [Accessed 28/01/2025]

<sup>3</sup> Joint Nature Conservation Committee. *UK Protected Areas*. Available at: <https://jncc.gov.uk/our-work/uk-protected-areas/> [Accessed 28/01/2025]

<sup>4</sup> Natural England. *Designated Sites View*. Available at: <https://designatedsites.naturalengland.org.uk/> [Accessed 28/01/2025]

<sup>5</sup> Bibby, C.J., Burgess, N.D., Hill, D.A. & Mustoe, S.H. (2000) *Bird Census Techniques* (2<sup>nd</sup> ed.). Academic Press, London.

<sup>6</sup> Gilbert, G., Gibbons, D.W. & Evans, J. (1998) *Bird Monitoring Methods*. RSPB, Sandy.

<sup>7</sup> Bird Survey & Assessment Steering Group (2022) *Bird Survey Guidelines for assessing ecological impacts, v.1.0.0. Breeding bird survey methodology*. <https://birdsurveyguidelines.org/methods/survey-method/>.

<sup>8</sup> Friston substation location shown on Figure 2.8.

were mapped. Birds passing through the viewarc in flight only were also recorded, but not mapped. The six hours of seawatching were generally undertaken on the same day, with a gap of at least 20 minutes between 3-hour sessions in order to reduce the potential for observer fatigue. Surveys were completed across varying tidal states.

The locations of VPs, and viewarcs are shown on Figures 2.4 and 2.5.

**Target species:** Target species during the inshore bird surveys included all relevant SPA qualifying features. Secondary species included other birds of conservation interest including all seabirds, waders and wildfowl. Target species summarised as follows with primary targets in bold.

- All divers (particular focus on **red-throated diver** *Gavia stellata*)
- All grebes
- Gannet *Morus bassanus*, cormorant *Phalacrocorax carbo* and shag *Phalacrocorax aristotelis*
- All shearwaters
- All petrels (including fulmar *Fulmaris glacialis*)
- All swans, geese and ducks (with a focus on foraging seaduck)
- All waders
- All auks
- Gulls
- All skuas
- All terns (particular focus on **little tern** *Sternula albifrons* and **common tern** *Sterna hirundo*)<sup>9</sup>

### 2.2.3 Beach Surveys

In addition to the inshore surveys, the survey programme considered target species that may roost/loaf on the beach and associated structures (e.g. groynes), including roosting/foraging waders on structures and aggregations of gulls. These surveys involved an ornithologist inspecting the beach habitat 1km either side of the VP location (which was situated at the proposed landing points) (Figures 2.6 and 2.7). Surveys were completed each month at varied tidal states to aid detection of transient features, such as temporary roosts on groynes or resting aggregations of terns (noting this survey type is continuing through the 2024 breeding season when tern presence is more likely).

The surveys were completed monthly over six visits between October 2023 and March 2024 (inclusive).

During fieldwork two surveyors (at least one a consultant ornithologist experienced in undertaking bird survey work) recorded all target species (and other species as appropriate) on maps using standard British Trust for Ornithology (BTO) coding. Details of weather, species present, numbers of individuals and the birds' behaviour were all recorded.

Weather conditions on all visits were considered suitable. Survey metadata, including dates, times and weather conditions, are shown in **Appendix C**.

### 2.2.4 Search Area Locations and Habitat Descriptions

An overview of search area locations is provided as **Figure 1** and each survey area is shown individually in **Figure 2**. The search areas and habitats were divided and summarised as follows.

#### Walberswick Corridor (Figure 2.1)

Marshes at the eastern end with agricultural land (predominantly arable) dominating the rest of this area. A single farm reservoir was also present in the west of the survey area.

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<sup>9</sup> These VP surveys are set to continue for a 12 month period when summer migrants like terns will have returned.

### **River Blyth Crossing (Figure 2.2)**

Generally reedbed with flooded fields at the northeastern end of the search area early in the survey period (later drying), pasture along the northern side and mixed agricultural land in the southwest.

### **Southwold Corridor (Figure 2.3)**

Grazing marshes/dykes around the potential landfall site at Southwold, with agricultural land (predominantly arable) dominating the remainder of the area

### **Southwold Vantage Point and Inshore Area (Figures 2.4 and 2.6)**

Stone and concrete sea defences, sandy beach with areas of shingle and groynes, urban developments including a pier.

### **Walberswick Vantage Point and Inshore Area (Figures 2.5 and 2.7)**

Shingle beach with limited sandy areas and a low shingle ridge stabilised by marram grass *Ammophila arenaria*, reedbed and brackish pools inland.

### **Friston Substation (Figure 2.8)**

A relatively small area dominated by arable fields (ploughed bare earth throughout the survey period).

#### **2.2.5 Surveyors**

Surveys were managed and completed by lead surveyor Richard Moores MCIEEM. Richard is a highly experienced ornithologist, based in Norfolk with over 20 years' professional bird survey experience.

Health and safety support was provided by William Moores and Meg Cotterrell.

### **2.3 Limitations and Assumptions**

The findings of this report represent those at the time of survey and reporting, and data collected from available sources. Ecological surveys are limited by factors which affect the presence of species, such as weather conditions, migration patterns and behaviour.

In summary, survey effort/coverage is considered sufficiently robust to identify areas favoured by target species, and the species and numbers present, to inform the design and environmental assessment of the scheme.

Weather conditions on almost all visits were considered suitable, across survey types. Instances of relatively high winds or limited visibility were very rare, and are not considered to compromise the overall conclusions of this report given the level of survey effort employed.

### 3. Results

#### 3.1 Desk Study

##### 3.1.1 Designated Sites

Six internationally statutory designated sites with bird interest were identified within 10km of the study area (Table 1), and nine other statutory designated sites with bird interest were identified within 2km (Table 2).

Table 1: European designated sites for waterbirds within 10km

Site Name	Reason for designation	Distance, connectivity and orientation from study area
Minsmere-Walberswick Ramsar site <sup>10</sup>	Designated as a Wetland of International Importance, Minsmere-Walberswick supports internationally important populations of breeding, wintering and passage birds. The site comprises a complex mosaic of habitats, including areas of marsh dykes, extensive reedbeds, intertidal mudflats, saline lagoons, shingle, woodland and areas of lowland heath. The site supports the largest continuous stand of reed in England and Wales and demonstrates the nationally rare transition in grazing marsh ditch plants from brackish to fresh water. The habitats create exceptional areas which support nationally-scarce plants, British Red Data Book invertebrates, and notable assemblages of breeding and wintering wetland birds. The criteria for designation include an important assemblage of rare breeding birds associated with marshland and reedbeds (including bittern <i>Botaurus stellaris</i> , gadwall <i>Mareca strepera</i> , teal <i>Anas crecca</i> , shoveler <i>Spatula clypeata</i> , marsh harrier <i>Circus aeruginosus</i> , avocet <i>Recurvirostra avosetta</i> and bearded tit <i>Panurus biarmicus</i> ).	Within, connected floodplain.
Minsmere-Walberswick Special Protection Area (SPA) <sup>11</sup>	An area of 1997.67 hectares of the Minsmere to Walberswick area is designated as SPA. The Minsmere-Walberswick SPA is designated for its significant waterbird assemblages. The SPA extends from the intertidal mudflats of the River Blyth near the town of Blythburgh to the mouth of the estuary between the coastal towns of Southwold and Walberswick. The SPA also includes the Minsmere RSPB reserve and all the areas of grazing marshes, reedbeds and areas of lowland heath and woodland which lie between the reserve and the River Blyth.  The range of habitats of the estuary support a variety of wintering, passage and breeding birds, including internationally important populations of a number of species. Qualifying features include populations of breeding avocet, bittern, gadwall, little tern <i>Sterna albifrons</i> , marsh harrier, nightjar <i>Caprimulgus europaeus</i> , shoveler and teal. The site also qualifies for its non-breeding populations of gadwall, European white-fronted goose <i>Anser albifrons albifrons</i> , hen harrier <i>Circus cyaneus</i> and shoveler.	Within, connected floodplain.
Alde-Ore Estuary Ramsar site <sup>12</sup>	Designated as a Wetland of International Importance, the Alde-Ore Estuary supports internationally important populations of breeding and wintering birds. The site comprises the estuary complex of the rivers Alde, Butley and Ore, including Havergate Island and Orfordness. There are a variety of habitats, including intertidal mudflats, saltmarsh, vegetated shingle (including the second-largest and best-preserved area in Britain at Orfordness), saline lagoons and grazing marsh. The Orfordness/Shingle Street landform is unique within Britain in combining a shingle spit with a cuspatate foreland. The site supports nationally-scarce plants, British Red Data Book invertebrates, and notable assemblages of breeding and wintering wetland birds. The qualifying features include the breeding bird assemblage and an internationally important breeding population of lesser black-backed gull <i>Larus fuscus</i> , as well as the winter bird assemblage and internationally important populations of wintering (pied) avocet and (common) redshank <i>Tringa totanus</i> .	1.68km/S of the study area

<sup>10</sup> <https://rsis.ramsar.org/rsis/75> [accessed 28/01/2025]

<sup>11</sup> <https://jncc.gov.uk/jncc-assets/SPA-N2K/UK9009101.pdf> [accessed 28/01/2025]

<sup>12</sup> <https://jncc.gov.uk/jncc-assets/RIS/UK11002.pdf> [accessed 28/01/2025]

Site Name	Reason for designation	Distance, connectivity and orientation from study area
Alde-Ore Estuary SPA <sup>13</sup>	An area of 2403.63 hectares of the Alde-Ore Estuary is designated as SPA. The Alde-Ore Estuary SPA is designated for its significant waterbird assemblages. The SPA lies partly within Suffolk Coast and Heaths Area of Outstanding Natural Beauty (AONB), extending from the intertidal mudflats near the town of Snape, which lies approximately 7.3km inland, and follows the River Alde, along the coast, down to the mouth of the estuary near the coastal town of Shingle Street and beyond to Bawdsey. The range of habitats of the estuary support a variety of wintering, passage and breeding birds, including internationally important populations of a number of species. Qualifying features include its breeding populations of avocet, lesser back-backed gull, little tern, marsh harrier and Sandwich tern <i>Thalasseus sandvicensis</i> , and its wintering populations of ruff <i>Calidris pugnax</i> , avocet and redshank.	1.68km/S of the study area
Outer Thames Estuary SPA <sup>14</sup>	The Outer Thames Estuary SPA is classified for the protection of the largest aggregation of wintering red-throated diver ( <i>Gavia stellata</i> ) in the UK, an estimated population of 6,466 individuals, which is 38% of the wintering population of Great Britain. It also protects foraging areas for common tern ( <i>Sterna hirundo</i> ) and little tern ( <i>Sternula albifrons</i> ) during the breeding season.	Within
Benacre to Easton Bavents SPA <sup>15</sup>	Benacre to Easton Bavents, comprising two sites with a combined total area of 470.61 hectares, is designated as a SPA. The range of habitats support a variety of wintering, passage and breeding birds. Qualifying features are its populations of breeding marsh harrier, bittern and little tern.	0.2km/N of the study area

**Table 2: Other national statutory designated sites for birds within 2km**

Site Name	Reason for designation	Distance, connectivity and orientation from the proposed site boundary
The Haven, Aldeburgh Local Nature Reserve (LNR)	This site, located north of Aldeburgh, comprises of shingle, shallow lagoons and large reedbeds.	Within, connected floodplain.
Westleton Heath National Nature Reserve (NNR)	The Westleton Heath NNR is part of the best remaining tract of heathland in Suffolk and can be found within the Minsmere-Walberswick SPA and Ramsar site. The open heath and light scrub of the site are home to tree pipit <i>Anthus trivialis</i> , Dartford warbler <i>Sylvia undata</i> , stonechat <i>Saxicola rubicola</i> and nightjar <i>Caprimulgus europaeus</i> while the woodland supports nightingale <i>Luscinia megarhynchos</i> and woodcock <i>Scolopax rusticola</i> .	Within, connected floodplain, to the west of the site.
Suffolk Coast NNR	This NNR is made up of three reserves: Walberswick, Hen Reedbed and Dingle Marshes. The reserve has a rich beach flora, wetland flora and heath habitats. The site host over 280 species of birds including bittern, marsh harrier, bearded tit <i>Panurus biarmicus</i> , woodlark <i>Lullula arborea</i> and nightjar.	Within, connected floodplain
Sizewell Marshes Site of Special Scientific Interest (SSSI)	The Sizewell Marshes are important for their large area of lowland, unimproved wet meadows which support outstanding assemblages of invertebrates and breeding birds. The breeding bird assemblage is of national significance with many species typical of wet grassland such as shoveler, gadwall, teal, snipe <i>Gallinago gallinago</i> and lapwing <i>Vanellus vanellus</i> .	Within, connected floodplain

<sup>13</sup> <https://jncc.gov.uk/jncc-assets/SPA-N2K/UK9009112.pdf> [accessed 28/01/2025]

<sup>14</sup> <https://jncc.gov.uk/jncc-assets/SPA-N2K/UK9020309.pdf> [accessed 28/01/2025]

<sup>15</sup> <https://jncc.gov.uk/jncc-assets/SPA-N2K/UK9009291.pdf> [accessed 28/01/2025]

Site Name	Reason for designation	Distance, connectivity and orientation from the proposed site boundary
Leiston-Aldeburgh SSSI	<p>This SSSI includes part of the RSPB and Suffolk Wildlife Trust reserves and includes a mosaic of habitats including acid grassland, heath, scrub, woodland, fen, open water and shingle. This range of habitat support a diverse and abundant community of breeding and wintering birds.</p> <p>Breeding bird species found in the dry grassland and heath include nightjar, woodlark and skylark <i>Alauda arvensis</i>; the scrub and woodland support tree pipit, turtle dove <i>Streptopelia turtur</i>, bullfinch <i>Pyrrhula pyrrhula</i> and nightingale; the marshes support water rail <i>Rallus aquaticus</i>, marsh harrier, gadwall and grasshopper warbler <i>Locustella naevia</i>.</p> <p>Wintering bird species found at this site include Bewick's swan, bittern, European white-fronted goose, gadwall and teal.</p>	Within, connected floodplain
Minsmere-Walberswick Heaths and Marshes SSSI	<p>The site is part of the Minsmere-Walberswick SPA and Ramsar site and is designated as SSSI for its series of habitats which include mudflats, shingle beach, reedbeds, heathland and grazing marsh. The mudflats of the River Blyth estuary are feeding grounds for wigeon, shelduck, redshank and dunlin.</p> <p>The reedbeds present at this site are important habitats for reed warbler and bearded tit but also marsh harrier, bittern, Cetti's warbler, garganey <i>Anas querquedula</i> and water rail.</p> <p>The shallow lagoons and islands at Minsmere host breeding colonies of avocets but also shoveler, gadwall, teal and shelduck.</p> <p>The grazing marshes also offer good habitat for snipe, redshank, gadwall, shoveler and black-tailed godwit.</p> <p>The heathland present are home to nationally decreasing birds; nightjar and woodlark.</p>	Within, connected floodplain
Pakefield to Easton Bavents SSSI	<p>The site is designated as SSSI for its vegetated shingle features, saline lagoons, flood-plain fens, nationally rare and scarce plant species and breeding bird species and assemblages and wintering birds.</p> <p>The site includes important breeding populations of bittern, marsh harrier, little tern, water rail and bearded tit.</p> <p>It also supports the following breeding bird assemblages; of lowland open waters: bittern, gadwall, marsh harrier; lowland heath: hobby <i>Falco subbuteo</i>, quail <i>Coturnix coturnix</i> and woodlark; scrub: cuckoo <i>Cuculus canorus</i>, nightingale and grasshopper warbler; woodland: sparrowhawk <i>Accipiter nisus</i>, willow tit <i>Parus montanus</i> and nuthatch <i>Sitta europea</i>.</p>	Within the study area
Alde-Ore Estuary SSSI	<p>This site, part of the SPA and Ramsar under the same name, stretches along the coast from Bawdsey to Aldeburgh and inland to Snape.</p> <p>It is designated as SSSI for its diverse habitats comprising of mudflats, saltmarsh, shingle and coastal lagoons which are all of ornithological value.</p> <p>Havergate Island holds the largest colony of avocets in Britain and they also use the Hazelwood Marshes and Alde mudflats to feed. While other species found on the Island include: gadwall, shoveler, oystercatcher <i>Haematopus ostralegus</i>, ringed plover <i>Charadrius hiaticula</i>, common tern <i>Sterna hirundo</i>, Arctic tern <i>Sterna paradisaea</i>, Sandwich tern <i>Thalasseus sandvicensis</i>, little tern, common gull <i>Larus canus</i>, short-eared owl <i>Asio flammeus</i>, wheatear <i>Oenanthe oenanthe</i> and marsh harrier.</p> <p>On Orfordness there are large breeding colonies of black-headed gull <i>Chroicocephalus ridibundus</i>, lesser black-backed gull <i>Larus fuscus</i> and herring gull.</p> <p>In winter and during migration the site is visited by nationally important numbers of Bewick's swan, shelduck, teal, wigeon, redshank and avocet.</p>	1.68km/S of the study area
Benacre NNR	<p>This site includes the reedbeds and lagoons of Benacre, Covehithe and Easton Broads with the woodlands and heathlands on the higher grounds between them.</p> <p>Over 100 breeding bird species use the reserve including marsh harrier, bearded tits, water rail, ducks and bittern.</p> <p>Little terns are known to be summer visitors and the heathlands host woodlark, wheatear and hobby.</p>	0.2km/N from the study area

## 3.2 Field Surveys

Survey data collected are summarised within Tables 3a-d, with the results for walkover surveys mapped on **Figures 3.1-3.36** and the results from Vantage Point Surveys mapped on **Figures 3.37-3.60**. Further details provided in the following sections.

**Appendix B** includes survey timings and weather details recorded during the surveys.

### 3.2.1 River Blyth Crossing - Wintering Bird Walkover Survey

#### Summary of Target and Secondary Species Recorded

Reedbed hosting strong populations of water rail, bearded tit and marsh harrier. Grassland areas on marsh margins and arable land in south of survey area supported foraging curlew (peaking at 96 on the ground in February) and small numbers of lapwing (peaking at 30 on the ground in January, with larger flocks just outside of study area to west and south in February after a spell of colder weather on the near continent).

**Table 3a. Non-breeding bird survey results – River Blyth crossing (Appendix A, Figures 3.1-3.6)**

Species	Counts (peak counts across survey period emboldened)					
	Visit 1 October 2023	Visit 2 November 2023	Visit 3 December 2023	Visit 4 January 2024	Visit 5 February 2024	Visit 6 March 2024
<b>Minsmere-Walberswick SPA and Ramsar, Alde-Ore Estuary SPA and Ramsar and Easton Bavents-Pakefield SPA Qualifying Features</b>						
Gadwall <i>Mareca strepera</i>	4	-	-	-	<b>12</b>	4
Redshank <i>Tringa totanus</i>	-	1	2	1	<b>9</b>	1
<b>Minsmere-Walberswick SPA and Ramsar, Alde-Ore Estuary SPA and Ramsar and Easton Bavents-Pakefield SPA Assemblage Features and other species</b>						
Canada goose <i>Branta canadensis</i>	<b>2</b>	-	-	-	-	<b>2</b>
Greylag goose <i>Anser anser</i>	-	-	-	-	-	<b>10</b>
Mute swan <i>Cygnus olor</i>	<b>8</b>	1	3	3	5	2
Egyptian goose <i>Alopochen aegyptiaca</i>	<b>1</b>	-	-	-	-	-
Shelduck <i>Tadorna tadorna</i>	-	-	-	-	2	<b>9</b>
Wigeon <i>Mareca penelope</i>	<b>22</b>	-	-	-	-	-
Mallard <i>Anas platyrhynchos</i>	<b>59</b>	-	10	-	8	4
Teal <i>Anas crecca</i>	-	-	-	<b>1</b>	-	-
Water rail <i>Rallus aquaticus</i>	<b>10</b>	-	-	-	-	-
Moorhen <i>Gallinula chloropus</i>	<b>1</b>	-	-	-	-	<b>1</b>
Little grebe <i>Tachybaptus ruficollis</i>	1	-	-	<b>5</b>	-	-
Oystercatcher <i>Haematopus ostralegus</i>	-	-	-	-	-	<b>2</b>
Lapwing <i>Vanellus vanellus</i>	-	-	6	35	<b>474</b>	-
Curlew <i>Numenius arquata</i>	26	1	20	10	<b>114</b>	64
Black-tailed godwit <i>Limosa limosa</i>	-	-	-	-	<b>1</b>	-
Woodcock <i>Scolopax rusticola</i>	-	-	<b>1</b>	-	-	-
Snipe <i>Gallinago gallinago</i>	3	1	2	<b>8</b>	-	-
Green sandpiper <i>Tringa ochropus</i>	<b>2</b>	-	-	-	-	-
Black-headed gull <i>Chroicocephalus ridibundus</i>	<b>122</b>	-	4	-	89	6
Common gull <i>Larus canus</i>	1	-	-	2	<b>3</b>	1
Herring gull <i>Larus argentatus</i>	-	3	2	1	<b>4</b>	2
Grey heron <i>Ardea cinerea</i>	<b>6</b>	1	1	1	2	3
Great white egret <i>Ardea alba</i>	<b>1</b>	-	-	-	-	-
Little egret <i>Egretta garzetta</i>	2	2	-	1	<b>5</b>	1
Marsh harrier <i>Circus aeruginosus</i>	<b>2</b>	-	1	-	<b>2</b>	-
Red kite <i>Milvus milvus</i>	-	<b>1</b>	-	-	-	<b>1</b>
Kingfisher <i>Alcedo atthis</i>	<b>1</b>	<b>1</b>	-	<b>1</b>	-	-
Peregrine Falcon <i>Falco peregrinus</i>	<b>1</b>	-	-	-	-	-

### 3.2.2 Southwold Corridor - Wintering Bird Walkover Survey

#### Summary of Target and Secondary Species Recorded

The main ornithological interest was focused on the grazing marshes adjacent to the potential landfall site. This area held relatively large numbers of loafing/roosting gulls particularly at higher tidal states. Small numbers of wildfowl (including gadwall, mallard, teal, greylag goose, and on one occasion, feral barnacle goose<sup>16</sup>, when 540 were noted in December) and waders (redshank, lapwing and curlew). Flocks of curlew (peaking at 56 individuals across two discrete flocks in January) were recorded feeding in arable and pasture at the northeast end of the site, with flocks of 50+ lapwing recorded in arable fields at the east and west ends of the study area respectively, also in January.

Relatively large numbers of loafing/roosting gulls were also noted at times in several arable fields in the west of this section but the majority of the site to the west of Reydon was largely devoid of target/secondary species.

**Table 3b. Non-breeding bird survey results – Southwold corridor (Appendix A, Figures 3.7-3.24)**

Species	Counts (peak counts across survey period emboldened)					
	Visit 1 October 2023	Visit 2 November 2023	Visit 3 December 2023	Visit 4 January 2024	Visit 5 February 2024	Visit 6 March 2024
<b>Minsmere-Walberswick SPA and Ramsar, Alde-Ore Estuary SPA and Ramsar and Easton Bavents-Pakefield SPA Qualifying Features</b>						
Shoveler <i>Anas clypeata</i>	-	-	6	<b>17</b>	12	-
Gadwall <i>Mareca strepera</i>	-	-	-	2	<b>11</b>	4
Redshank <i>Tringa totanus</i>	-	-	2	2	2	-
<b>Minsmere-Walberswick SPA and Ramsar, Alde-Ore Estuary SPA and Ramsar and Easton Bavents-Pakefield SPA Assemblage Features and other species</b>						
Barnacle goose <i>Branta leucopsis</i>	-	-	<b>540</b>	-	-	-
Greylag goose <i>Anser anser</i>	-	-	2	2	1	<b>5</b>
Mute swan <i>Cygnus olor</i>	3	2	<b>3</b>	2	1	1
Mallard <i>Anas platyrhynchos</i>	15	22	<b>52</b>	<b>60</b>	31	11
Teal <i>Anas crecca</i>	-	5	26	19	<b>34</b>	-
Water rail <i>Rallus aquaticus</i>	-	-	<b>2</b>	1	1	-
Great crested grebe <i>Podiceps cristatus</i>	-	-	-	-	<b>1</b>	-
Oystercatcher <i>Haematopus ostralegus</i>	-	-	-	-	-	<b>4</b>
Lapwing	-	-	-	<b>149</b>	1	-
Curlew <i>Numenius arquata</i>	25	-	-	<b>56</b>	27	-
Turnstone <i>Arenaria interpres</i>	-	-	-	<b>15</b>	-	-
Dunlin <i>Calidris alpina</i>	-	-	-	<b>2</b>	-	-
Black-headed gull <i>Chroicocephalus ridibundus</i>	261	253	265	<b>1111</b>	685	626
Mediterranean gull <i>Ichthyaetus melanocephalus</i>	1	-	-	<b>4</b>	-	-
Common gull <i>Larus canus</i>	35	20	8	481	<b>839</b>	176
Great black-backed gull <i>Larus marinus</i>	2	-	-	<b>7</b>	-	-
Herring gull <i>Larus argentatus</i>	<b>442</b>	92	161	294	86	172
Caspian gull <i>Larus cachinnans</i>	-	-	<b>1</b>	-	-	-
Lesser black-backed gull <i>Larus fuscus</i>	<b>77</b>	5	1	2	-	8
Grey heron <i>Ardea cinerea</i>	1	-	<b>2</b>	-	1	-
Little egret <i>Egretta garzetta</i>	<b>1</b>	<b>1</b>	<b>1</b>	-	-	-
Marsh harrier <i>Circus aeruginosus</i>	<b>1</b>	-	-	-	-	<b>1</b>

### 3.2.3 Walberswick Corridor - Wintering Bird Walkover Survey

#### Summary of Target and Secondary Species Recorded

Foraging curlew (80) and lapwing (582) flocks in arable fields towards the west end of the site peaked in November and February, respectively. The west end of this section - predominantly arable, attracted few other species of interest with a flock of 375 feral barnacle geese in October, small numbers of gulls throughout the survey period and two dunlin on a flooded area of an arable field in October. The farm

<sup>16</sup> 2019 Suffolk Birds (vol. 69). Mason. N (eds.)

reservoir attracted relatively large numbers of gulls and ducks at times, including shoveler, tufted duck, gadwall and mallard.

The pools within the marshes around the potential landfall location at the east end of the survey area attracted flocks of teal throughout and small numbers of wigeon on occasion, with low numbers of other wildfowl and waders including shelduck, redshank, and spotted redshank.

**Table 3c. Non-breeding bird survey results – Walberswick corridor (Appendix A, Figures 3.25-3.36)**

Species	Counts (peak counts across survey period emboldened)					
	Visit 1 October 2023	Visit 2 November 2023	Visit 3 December 2023	Visit 4 January 2024	Visit 5 February 2024	Visit 6 March 2024
<b>Minsmere-Walberswick SPA and Ramsar, Alde-Ore Estuary SPA and Ramsar and Easton Bavents-Pakefield SPA Qualifying Features</b>						
Shoveler <i>Anas clypeata</i>	250	40	-	-	6	8
Gadwall <i>Mareca strepera</i>	102	50	-	2	10	23
Redshank <i>Tringa totanus</i>	-	7	1	2	2	2
<b>Minsmere-Walberswick SPA and Ramsar, Alde-Ore Estuary SPA and Ramsar and Easton Bavents-Pakefield SPA Assemblage Features and other species</b>						
Brent goose <i>Branta bernicla</i>	8	-	-	-	-	-
Canada goose <i>Branta canadensis</i>	-	-	-	-	2	-
Barnacle goose <i>Branta leucopsis</i>	375	2	9	-	-	-
Greylag goose <i>Anser anser</i>	-	-	-	-	-	2
Mute swan <i>Cygnus olor</i>	3	4	4	-	2	3
Shelduck <i>Tadorna tadorna</i>	-	10	4	5	4	4
Wigeon <i>Anas penelope</i>	-	2	-	10	2	-
Mallard <i>Anas platyrhynchos</i>	82	25	5	27	6	8
Teal <i>Anas crecca</i>	3	102	60	26	94	66
Pochard <i>Aythya ferina</i>	-	1	-	-	-	-
Tufted duck <i>Aythya fuligula</i>	3	7	17	13	6	8
Goldeneye <i>Bucephala clangula</i>	-	-	2	-	-	-
Little grebe <i>Tachybaptus ruficollis</i>	4	3	-	-	2	-
Water rail <i>Rallus aquaticus</i>	-	-	-	-	2	1
Oystercatcher <i>Haematopus ostralegus</i>	-	-	-	-	4	2
Lapwing <i>Vanellus vanellus</i>	61	100	153	222	582	1
Curlew <i>Numenius arquata</i>	52	80	76	52	14	61
Turnstone <i>Arenaria interpres</i>	-	-	7	-	-	-
Dunlin <i>Calidris alpina</i>	2	1	-	-	-	-
Woodcock <i>Scolopax rusticola</i>	1	-	-	-	-	-
Snipe <i>Gallinago gallinago</i>	-	-	-	1	-	-
Spotted redshank <i>Tringa erythropus</i>	-	-	1	-	-	-
Black-headed gull <i>Chroicocephalus ridibundus</i>	-	45	82	1	3	403
Common gull <i>Larus canus</i>	-	-	25	2	-	5
Great black-backed gull <i>Larus marinus</i>	36	20	-	-	1	-
Herring gull <i>Larus argentatus</i>	58	10	5	-	-	3
Lesser black-backed gull <i>Larus fuscus</i>	30	-	2	-	-	-
Yellow-legged gull <i>Larus michahellis</i>	-	1	-	-	-	-
Cormorant <i>Phalacrocorax carbo</i>	1	-	-	2	-	-
Little egret <i>Egretta garzetta</i>	2	-	-	-	1	1
Marsh harrier <i>Circus aeruginosus</i>	-	-	-	1	-	2

### 3.2.4 Friston Sub-station - Wintering Bird Walkover Survey

#### Summary of Target and Secondary Species Recorded

Up to five black-headed gulls recorded in October and December (only) was the only ornithological interest in this survey area.

**Table 3d. Non-breeding bird survey results – Friston substation area**

Species	Counts (peak counts across survey period emboldened)					
	Visit 1 October 2023	Visit 2 November 2023	Visit 3 December 2023	Visit 4 January 2024	Visit 5 February 2024	Visit 6 March 2024
<b>Minsmere-Walberswick SPA and Ramsar, Alde-Ore Estuary SPA and Ramsar and Easton Bavents-Pakefield SPA Assemblage Features and other species</b>						
Black-headed gull <i>Chroicocephalus ridibundus</i>	<b>5</b>	-	4	-	-	-

### 3.2.5 Southwold Inshore Survey

#### 18<sup>th</sup> October 2023

07.20-10.20 (Figure 3.37, Appendix A): 143 flights logged of a wide diversity of species (Table 3e). No birds were observed resting or feeding on the sea.

**Table 3e: Southwold Inshore Survey Results**

Species	Number of flights	Flock size (range)	Distance from shore (range; km)
Brent goose	23	1-50	0.02-2.0
Shelduck	1	2	0.05
Wigeon	2	1	0.2-1.4
Mallard	1	3	0.7
Teal	3	3-6	0.18-0.5
Eider <i>Somateria mollissima</i>	1	2	0.2
Common scoter <i>Melanitta nigra</i>	7	1-6	1.2-2.0
Curlew	1	1	0.15
Turnstone	3	1-7	0.005
Dunlin	1	3	1.0
Kittiwake <i>Rissa tridactyla</i>	4	1-3	0.2-1.5
Black-headed gull	15	3-50	0.1-0.2
Mediterranean gull	1	1	0.2
Common gull	14	1-9	0.05-0.5
Great black-backed gull	20	1-2	0.15-2.0
Herring gull	4	1-12	0.1-0.7
Pomarine skua <i>Stercorarius pomarinus</i>	1	1	0.25
Arctic skua <i>Stercorarius parasiticus</i>	3	1	0.8-2.0
Razorbill <i>Alca torda</i>	1	1	1.4
Red-throated diver <i>Gavia stellata</i>	6	1-2	1.6-2.0
Gannet	17	1-3	0.4-2.0
Cormorant	14	1-7	0.005-1.6

10.50-13.50 (Figure 3.38, Appendix A): 150 flights of a wide diversity of species (Table 3f). Single guillemot noted on water briefly, close to shore.

**Table 3f: Southwold Inshore Survey Results**

Species	Number of flights	Flock size (range)	Distance from shore (range; km)
Brent goose	35	1-27	0.005-1.8
Shelduck	4	1-4	0.1-0.5

Species	Number of flights	Flock size (range)	Distance from shore (range; km)
Gadwall	3	1-2	0.1-0.5
Wigeon	17	1-30	0.1-1.6
Pintail <i>Anas acuta</i>	11	1-9	0.1-1.8
Teal	3	1-5	0.2-0.7
Common scoter	1	4	1.3
Curlew	1	1	0.05
Kittiwake	3	1-3	1.7-2.0
Black-headed gull	9	1-7	0.1-1.9
Common gull	26	1-10	0.005-1.2
Great black-backed gull	15	1-2	0.005-2
Herring gull	9	1-4	0.05-0.7
Lesser black-backed gull	1	2	0.005
Pomarine skua	1	1	0.2
Arctic skua	2	1	0.6-1.5
Red-throated diver	1	1	1.6
Gannet	2	1-2	0.8-2
Cormorant	5	1-3	0.05-0.7

## 20<sup>th</sup> November 2023

07.50-10.50 (Figure 3.39, Appendix A): 163 flights logged of a wide variety of species (Table 3g). 17 records of birds on sea comprising gulls, cormorants, four red-throated divers, and great crested grebes, all in small numbers.

Table 3g: Southwold Inshore Survey Results

Species	Number of flights	Flock size (range)	Distance from shore (range; km)
Brent goose	7	1-14	0.3-2.0
Pink-footed goose <i>Anser brachyrhynchus</i>	1	17	2.0
Mute swan	1	2	0.3
Egyptian goose	1	1	0.2
Shelduck	3	1-3	0.8-1.5
Shoveler	2	8-9	1.0
Gadwall	2	1-3	1.1-2.0
Wigeon	6	3-22	0.8-1.5
Teal	13	1-40	0.5-2.0
Common scoter	10	1-12	0.5-2.0
Goosander <i>Mergus merganser</i>	1	1	0.2
Great crested grebe <i>Podiceps cristatus</i>	3	1-7	0.8-1.5
Dunlin	1	12	0.5
Purple sandpiper <i>Calidris maritima</i>	1	4	0.01
Redshank	1	1	0.1
Black-headed gull	1	1	1.2
Mediterranean gull	1	1	0.7
Common gull	7	2-3	0.4-2.0

Species	Number of flights	Flock size (range)	Distance from shore (range; km)
Great black-backed gull	27	1-12	0.4-2.0
Herring gull	12	2-7	0.1-1.5
Sandwich tern <i>Thalasseus sandvicensis</i>	2	1	0.01-0.4
Razorbill	3	1	2.0
Red-throated diver	25	1-18	1.6-2.0
Gannet	14	2-9	1.8-2.0
Cormorant	24	1-37	0.1-2.0

11.30.14.30 (**Figure 3.40, Appendix A**): 114 flights logged (**Table 3h**). Eleven records of birds on sea comprising small numbers of gulls, cormorants, 13 red-throated divers (peak count of eight individuals, always at edge of viewarc), wigeon (pair, briefly), mallard and great crested grebes.

**Table 3h: Southwold Inshore Survey Results**

Species	Number of flights	Flock size (range)	Distance from shore (range; km)
Brent goose	6	1-5	0.5-1.2
Shelduck	1	1	1.3
Wigeon	5	1-10	1.1-2
Mallard	3	2	0.5-1.2
Pintail	1	1	2.0
Teal	3	5-12	1.0-2.0
Pochard	1	1	1.4
Eider	3	1-20	1.8
Common scoter	4	2-20	1.0-2.0
Kittiwake	2	1	1.0-2.0
Black-headed gull	3	1-8	0.2-1.0
Common gull	4	1-2	0.8-1.6
Great black-backed gull	19	2-6	0.3-2.0
Herring gull	9	1-15	0.2-1.8
Great skua <i>Stercorarius skua</i>	1	2	2.0
Razorbill	5	2-14	1.2-2.0
Red-throated diver	11	2-6	1.6-2.0
Gannet	14	1-5	1.2-2.0
Cormorant	11	1-3	1.5-2.0

### 13<sup>th</sup> December 2023

08.15-11.15 (**Figure 3.41, Appendix A**): 61 flights logged of a diversity of species (**Table 3i**). Twenty-one records of birds sat on sea including a build-up of 450 common scoter, 20 wigeon, and small numbers of great crested grebes, gulls, and cormorants.

**Table 3i: Southwold Inshore Survey Results**

Species	Number of flights	Flock size (range)	Distance from shore (range; km)
Brent goose	1	1	0.8
Wigeon	4	2-7	1.5-2.0
Teal	2	1	1.0-2.0
Velvet scoter <i>Melanitta fusca</i>	3	1-12	1.2-1.8

Species	Number of flights	Flock size (range)	Distance from shore (range; km)
Common scoter	10	1-23	1.0-2.0
Red-breasted merganser <i>Mergus serrator</i>	1	1	1.0
Kittiwake	1	2	0.7
Black-headed gull	6	3-55	0.3-1.4
Common gull	4	3-8	1.2-1.5
Great black-backed gull	2	3-5	0.3-1.0
Herring gull	10	2-20	0.2-1.5
Pomarine skua	1	1	2.0
Red-throated diver	3	1-4	0.4-1.8
Gannet	3	1-3	2.0
Cormorant	10	1-5	0.2-2.0

11.45.14.45 (Figure 3.42, Appendix A): 56 flights logged of a diversity of species (Table 3j). Fourteen records of birds sat on sea including build-up of roosting gulls of various common species towards the end of the survey, 13 red-throated divers, great crested grebes, and various other gulls. A flock of 200 common scoter that were on the edge of the survey area at the start of survey slowly drifted northeast out of the survey area.

**Table 3j: Southwold Inshore Survey Results**

Species	Number of flights	Flock size (range)	Distance from shore (range; km)
Brent goose	1	2	1.0
Shoveler	1	15	2.0
Common scoter	3	1-8	1.8-2.0
Red-breasted merganser	1	1	0.6
Great crested grebe	2	1-3	1.6-1.8
Black-headed gull	10	4-90	0.1-1.4
Common gull	6	2-8	0.4-1.8
Great black-backed gull	3	3-5	0.2-1.8
Herring gull	9	6-25	0.2-0.5
Razorbill	1	1	2.0
Red-throated diver	14	1-17	1.0-2.0
Gannet	2	1-2	1.5-2.0
Cormorant	2	1	1.0-1.6

#### 24<sup>th</sup> January 2024

0800-1100 (Figure 3.43, Appendix A): 76 flights logged (Table 3k) with seven records of birds on sea including 150 common scoter that took off from the water and flew south shortly after the commencement of the survey and then with smaller numbers appearing later, and small numbers of cormorants.

**Table 3k: Southwold Inshore Survey Results**

Species	Number of flights	Flock size (range)	Distance from shore (range; km)
Brent goose	1	1	1.0
Shoveler	1	8	1.5
Gadwall	1	3	0.1
Wigeon	1	2	1.5

Species	Number of flights	Flock size (range)	Distance from shore (range; km)
Mallard	1	3	1.5
Pintail	1	4	1.5
Common scoter	6	1-16	1.2-2.0
Black-headed gull	12	2-9	0.2-1.8
Common gull	6	1-4	0.7-1.5
Great black-backed gull	4	1-2	0.1-2.0
Herring gull	21	1-8	0.1-2.0
Red-throated diver	2	1-2	1.8-2.0
Gannet	1	1	2.0
Cormorant	15	1-5	0.1-2.0
Shag	1	1	1.2

1200-1500 (**Figure 3.44, Appendix A**): 72 flights logged (**Table 3l**) with seven records of birds on sea comprising small numbers of gulls and cormorants only.

**Table 3l: Southwold Inshore Survey Results**

Species	Number of flights	Flock size (range)	Distance from shore (range; km)
Brent goose	1	1	1.0
Common scoter	1	1	2.0
Dunlin	1	1	0.1
Purple sandpiper	1	2	0.1
Black-headed gull	19	3-9	0.2-1.8
Common gull	7	1-3	1.0-1.9
Great black-backed gull	4	1-2	0.5-0.7
Herring gull	20	2-9	0.1-2.0
Red-throated diver	4	1	2.0
Cormorant	13	1-3	0.2-2.0

#### 14<sup>th</sup> February 2024

11.40-14.40 (**Figure 3.45, Appendix A**): 46 flights logged (**Table 3m**) (dominated by gulls) and 12 records of birds on sea comprising small numbers of gulls, cormorants, great crested grebes.

**Table 3m: Southwold Inshore Survey Results**

Species	Number of flights	Flock size (range)	Distance from shore (range; km)
Shelduck	1	2	1.4
Common scoter	2	2-3	0.9-2.0
Great crested grebe	1	1	1.0
Black-headed gull	4	1-3	0.1-0.4
Common gull	1	1	0.1
Great black-backed gull	9	1-4	0.8-2.0
Herring gull	19	1-7	0.1-2.0
Red-throated diver	1	1	1.1
Cormorant	9	1-8	-

0805-1105 (**Figure 3.46, Appendix A**): 80 flights logged (**Table 3n**) and ten records of birds on sea comprising small numbers of gulls, cormorants, great crested grebes. Passing birds dominated by gulls with a single fulmar also logged.

**Table 3n: Southwold Inshore Survey Results**

Species	Number of flights	Flock size (range)	Distance from shore (range; km)
Shelduck	1	1	1.0
Teal	2	2	1.0-1.2
Common scoter	9	1-12	0.3-2.0
Oystercatcher	1	1	0.8
Black-headed gull	1	1	0.7
Common gull	2	1	0.1-0.4
Great black-backed gull	13	2-7	-
Herring gull	20	3-18	0.1-2.0
Lesser black-backed gull	1	1	1.1
Red-throated diver	7	1-3	1.6-2.0
Fulmar	1	1	0.1
Gannet	5	1-5	1.6-2.0
Cormorant	15	1-5	0.6-2.0

### 1<sup>st</sup> and 4<sup>th</sup> March

01/03/24 0720-1020 (**Figure 3.47, Appendix A**): 57 flights logged (**Table 3o**); predominantly gulls, occasional gannets, ducks, cormorants, red-throated divers. Very rough sea conditions resulted in only three records of birds on sea comprising two records of red-throated divers (of one and two birds respectively) and two teal. This is considered to be representative of the actual number of birds on the water, as opposed to the conditions precluding recording birds on the water.

**Table 3o: Southwold Inshore Survey Results**

Species	Number of flights	Flock size (range)	Distance from shore (range; km)
Brent goose	1	1	0.3
Common scoter	3	2-18	0.7-1.7
Dunlin	1	3	0.3
Purple sandpiper	1	2	0.1
Kittiwake	1	1	0.1
Great black-backed gull	3	2-4	1.5-1.8
Herring gull	19	2-25	0.1-2.0
Lesser black-backed gull	1	1	1.0
Razorbill	1	1	1.8
Red-throated diver	6	1-12	1.0-2.0
Gannet	8	6-16	1.4-2.0
Cormorant	11	1-8	0.4-2.0

04/03/24 0850-1150 (**Figure 3.48, Appendix A**): 69 flights logged (**Table 3p**) (dominated by gulls, cormorants and very occasional ducks) and 17 records of birds on sea including highest counts of red-throated divers across the winter (due to flat sea conditions most likely (though majority still very distant from shore)). Peak counts on sea of 29 red-throated divers, 37 cormorant, 17 common scoter and relatively high numbers of gulls at times.

**Table 3p: Southwold Inshore Survey Results**

Species	Number of flights	Flock size (range)	Distance from shore (range; km)
Brent goose	1	1	1.4
Pintail	1	4	1.0
Teal	1	2	1.0
Common scoter	5	1-8	0.7-1.9
Dunlin	1	3	1.6
Purple sandpiper	1	2	0.8
Black-headed gull	3	1-3	0.8-1.1
Common gull	2	1	1.0
Great black-backed gull	4	1-3	0.1-2.0
Herring gull	17	1-9	0.2-1.2
Red-throated diver	17	1-15	1.0-2.0
Gannet	1	2	1.5
Cormorant	13	1-22	0.1-2.0

### 3.2.6 Walberswick Inshore Survey

These results of each inshore bird survey are summarised below.

#### 31<sup>st</sup> October 2023

07.55-10.55 (**Figure 3.49, Appendix A**): 70 flights logged (**Table 3q**) and 11 records of small numbers of birds on the sea comprising four records of great black-backed gull, three records of herring gull, three records of black-headed gull, and one record of great crested grebe.

**Table 3q: Walberswick Inshore Survey Results**

Species	Number of flights	Flock size (range)	Distance from shore (range; km)
Shoveler	2	1-3	1.2-1.8
Gadwall	1	2	0.001
Wigeon	1	1	0.2
Mallard	1	2	1.2
Teal	2	2-40	0.2-1.6
Common scoter	4	4-18	1.0-2.0
Goldeneye	1	1	1.8
Turnstone	2	1-3	0.001-0.04
Ruff <i>Calidris pugnax</i>	1	2	0.05
Sanderling <i>Calidris alba</i>	1	7	0.02
Redshank	1	1	0.07
Black-headed gull	8	2-4	0.15-1.2
Mediterranean gull	1	1	0.1
Common gull	2	1-2	0.35-0.8
Great black-backed gull	17	1-8	0.1-2.0
Herring gull	20	1-8	0.05-1.5
Cormorant	6	1-5	0.5-2.0

11.55-14.55 (**Figure 3.50, Appendix A**): 45 flights logged (**Table 3r**) and five records of birds sat on sea comprised of three records of great black-backed gull, one record of herring gull, two records of common

scoter (20 individuals and an individual respectively), one record of little auk *Alle alle* (single) and one record of red-throated diver (single).

**Table 3r: Walberswick Inshore Survey Results**

Species	Number of flights	Flock size (range)	Distance from shore (range; km)
Brent goose	1	2	1.0
Shelduck	4	1-2	0.5-1.8
Common scoter	1	7	1.5
Kittiwake	1	1	1.2
Black-headed gull	2	1-2	0.4-1.0
Common gull	2	2	0.7-0.8
Great black-backed gull	14	1-6	0.4-1.0
Herring gull	13	1-16	0.1-1.4
Lesser black-backed gull	1	1	0.7
Cormorant	6	1-8	0.6-2.0

## 22<sup>nd</sup> November 2023

0840-1140 (**Figure 3.51, Appendix A**): 50 flights of a wide diversity of species (**Table 3s**). Nine records of birds on sea; 300 strong common scoter flock >1km from shore for entirety of survey attracting small numbers of teal, shoveler and wigeon dropping in and a Slavonian grebe *Podiceps auritus* throughout. Flock drifted/took small flights south during survey.

A single velvet scoter was on the sea throughout survey, relatively close in. Other species on the water included small numbers of common species of gull at times, great crested grebes, and two red-throated divers.

**Table 3s: Walberswick Inshore Survey Results**

Species	Number of flights	Flock size (range)	Distance from shore (range; km)
Brent goose	1	1	0.4
Whooper swan	1	1	1.4
Shoveler	1	11	1.8
Wigeon	1	10	1.6
Teal	3	6-14	1.5-2.0
Great crested grebe	1	1	1.2
Lapwing	1	10	1.1
Dunlin	3	2-3	1.1-1.8
Black-headed gull	3	2-3	0.15-0.5
Common gull	3	1-2	0.1-0.7
Great black-backed gull	12	1-3	0.3-1.8
Herring gull	3	1-2	0.6
Red-throated diver	3	1-2	1.8-2.0
Gannet	4	1-4	1-1.2
Cormorant	5	1-14	0.4-2.0

12.40-15.40 (**Figure 3.52, Appendix A**): 65 flights of diversity of species (**Table 3t**). Ten records of birds sat on sea comprising gulls and cormorants, in small numbers, and also two (of 200 and 60) common scoter flocks on sea >1km out for the entirety of the survey with 28 wigeon and eight teal associating. A single velvet scoter was on the sea throughout survey, relatively close in.

**Table 3t: Walberswick Inshore Survey Results**

Species	Number of flights	Flock size (range)	Distance from shore (range; km)
Brent goose	2	1-6	0.5-0.8
Canada goose	1	2	0.1
Wigeon	1	1	1.8
Common scoter	2	3-4	2.0
Great crested grebe	1	3	1.8
Oystercatcher	1	1	0.4
Lapwing	1	6	0.1
Curlew	1	1	0.3
Turnstone	1	1	0.5
Dunlin	3	1-2	0.1-1.5
Black-headed gull	5	1-4	0.2-1.0
Common gull	7	1-3	0.1-1.0
Great black-backed gull	13	2-6	0.6-2.0
Herring gull	13	2-7	0.2-1.5
Great skua	1	1	1.8
Razorbill	1	4	2.0
Red-throated diver	1	3	2.0
Gannet	3	2	2.0
Cormorant	7	1-5	1.4-2.0

**12<sup>th</sup> December 2023**

0830-1130 (**Figure 3.53, Appendix A**): 60 flights of a wide diversity of species (**Table 3u**). Seven records of birds on sea with only small numbers of gulls and wildfowl.

**Table 3u: Walberswick Inshore Survey Results**

Species	Number of flights	Flock size (range)	Distance from shore (range; km)
White-fronted goose	1	2	0.2
Shoveler	1	3	1.9
Wigeon	1	8	2.0
Pintail	1	5	2.0
Common scoter	2	4-180	1.8-2.0
Goldeneye	1	1	0.3
Turnstone	2	5-9	0.01-0.05
Black-headed gull	11	2-20	0.05-1.8
Common gull	3	1-2	0.1-1.8
Great black-backed gull	2	2-3	0.4-1.5
Herring gull	19	2-18	0.1-1.6
Red-throated diver	4	1-4	1.6-1.9
Cormorant	12	1-3	0.6-1.8

12.30-15.30 (**Figure 3.54, Appendix A**): 49 flights of diversity of species (**Table 3v**). Eighteen records of birds sat on sea including 110 black-headed gulls and smaller numbers of herring gulls roosting close inshore towards dusk, up to 210 common scoter with six velvet scoter >1.5km out, two long-tailed ducks with a small group of common scoter closer to shore, a single flock of 18 great crested grebes, small numbers of great black-backed gull, a single red-throated diver and other gulls.

**Table 3v: Walberswick Inshore Survey Results**

Species	Number of flights	Flock size (range)	Distance from shore (range; km)
Velvet scoter	1	1	2.0
Common scoter	3	1-14	1.4-2.0
Black-headed gull	8	3-12	0.1-1.2
Common gull	2	2	0.3-1.0
Great black-backed gull	8	2-6	0.3-1.4
Herring gull	14	2-11	0.1-1.4
Red-throated diver	1	1	1.9
Cormorant	2	1-2	0.1-1.5

**17<sup>th</sup> January 2024**

08.35-11.05 (**Figure 3.55, Appendix A**): 32 flights logged (**Table 3w**) with ten records of birds on sea including up to 24 pintail, 14 wigeon, up to 300 common scoter at the edge of the survey area throughout, great crested grebe and gulls.

**Table 3w: Walberswick Inshore Survey Results**

Species	Number of flights	Flock size (range)	Distance from shore (range; km)
Mute Swan	1	4	2.2
Shoveler	1	15	1.7
Wigeon	4	1-21	0.1-1.6
Mallard	1	2	2.0
Pintail	4	1-44	0.3-2.0
Common scoter	1	2	1.3
Dunlin	2	1-2	0.1
Great black-backed gull	3	1	0.1-0.2
Herring gull	8	2-8	0.3-1.0
Razorbill	1	1	1.6
Black-throated diver <i>Gavia arctica</i>	1	1	0.1
Cormorant	3	1	1.0-1.2

12.05-15.05 (**Figure 3.56, Appendix A**): 21 flights logged (**Table 3x**) with five records of birds on sea comprising a raft of up to 400 common scoter at the outer edge of the survey area and smaller numbers closer along with small numbers of gulls.

**Table 3x: Walberswick Inshore Survey Results**

Species	Number of flights	Flock size (range)	Distance from shore (range; km)
Shoveler	1	24	2.0
Wigeon	1	38	2.0
Ringed Plover	1	1	0.1
Dunlin	1	1	0.3
Snipe	1	1	0.2
Common gull	1	6	0.2
Great black-backed gull	5	1-2	0.2-1.9
Herring gull	7	2-6	0.1-1.2
Razorbill	1	9	2.0

Species	Number of flights	Flock size (range)	Distance from shore (range; km)
Red-throated diver	1	3	2.0

### 15<sup>th</sup> February 2024

0850-1150 (**Figure 3.57, Appendix A**): 57 flights logged (**Table 3y**) and three records of birds on sea comprising flocks of 23 and five common scoter throughout the survey and some herring gulls.

Passing birds dominated by gulls, cormorants and very occasional ducks.

**Table 3y: Walberswick Inshore Survey Results**

Species	Number of flights	Flock size (range)	Distance from shore (range; km)
White-fronted goose	1	9	1.8
Shelduck	2	1-2	1.4-1.5
Shoveler	1	3	0.4
Wigeon	2	1-2	0.1-0.4
Mallard	1	3	0.8
Pintail	1	2	1.8
Common scoter	3	1-7	-
Black-headed gull	2	1-2	0.1-0.3
Common gull	2	1	0.2-0.6
Great black-backed gull	4	1-3	1.1-1.8
Herring gull	19	1-4	0.1-2.0
Lesser black-backed gull	1	1	0.3
Red-throated diver	3	1	2.0
Cormorant	10	1-3	0.4-2.0

11.40-14.40 (**Figure 3.58, Appendix A**): 50 flights logged (**Table 3z**) and eight records of birds on sea comprising small numbers of gulls, a flock of 40 common scoter, infrequent (distant) red-throated diver and cormorant. Single long-tailed duck with scoter flock briefly.

Passing birds dominated by gulls, cormorants and very occasional ducks.

**Table 3z: Walberswick Inshore Survey Results**

Species	Number of flights	Flock size (range)	Distance from shore (range; km)
Brent goose	1	1	0.2
Shelduck	1	3	0.8
Common scoter	1	3	2.0
Oystercatcher	1	1	1.3
Black-headed gull	3	1-3	0.3-1.8
Great black-backed gull	11	1-4	0.1-2.0
Herring gull	14	1-8	0.1-2.0
Red-throated diver	3	1	2.0
Gannet	1	4	2.0
Cormorant	13	1-10	1.1-2.0
Marsh harrier	1	1	0.7

6<sup>th</sup> March 2024

0820-1120 (**Figure 3.59, Appendix A**): 52 flights logged (**Table 3aa**) and 15 records of birds on sea including a flock of 40 common scoter throughout, up to 22 red-throated divers, small numbers of gulls and cormorants.

Passing birds dominated by gulls, cormorants and very occasional ducks.

**Table 3aa: Walberswick Inshore Survey Results**

Species	Number of flights	Flock size (range)	Distance from shore (range; km)
Oystercatcher	1	1	0.2
Black-headed gull	3	1	0.2-1.1
Herring gull	32	1-4	0.1-1.6
Gannet	1	1	2.0
Cormorant	14	1-9	1.1-2.0

1220-1520 (**Figure 3.60, Appendix A**): 34 flights (**Table 3bb**) and 19 records of birds on sea including same flock of 40 common scoter as above that gradually drifted east outside of survey area, small numbers of gulls, 6 red-throated divers and single long-tailed duck.

**Table 3bb: Walberswick Inshore Survey Results**

Species	Number of flights	Flock size (range)	Distance from shore (range; km)
Shelduck	1	1	1.8
Common scoter	3	1-15	1.3-1.9
Black-headed gull	1	1	1.0
Common gull	1	1	1.4
Great black-backed gull	2	1-2	0.1-0.6
Herring gull	16	1-3	0.1-1.8
Red-throated diver	3	1	1.9-2.0
Cormorant	7	1-4	0.1-2.0

### 3.2.7 Summary of red-throated diver foraging data

During consultation with Natural England to date for the project, it has been highlighted that the presence of red-throated diver is a key consideration for the project. This species is a key feature of the Outer Thames Estuary SPA. The table below summarises the counts of birds visible during VP watches on the sea at the two survey locations:

**Table 3bc: Foraging Red-throated Diver Counts**

Visit	Number of Foraging Birds	Largest Flock
<b>Southwold Vantage Point</b>		
18/10/2023 (10.50-13.50)	0	0
18/10/2023 (14.30-17.30)	0	0
20/11/2023 (07.50-10.50)	4	2
20/11/2023 (11.30-14.30)	13	8
13/12/2023 (08.15-11.15)	5	5
13/12/2023 (11.45-14.45)	13	6
24/01/2024 (08.00-11.00)	0	0
20/01/2024 (12.00-15.00)	0	0

Visit	Number of Foraging Birds	Largest Flock
14/02/2024 (08.05-11.05)	0	0
14/02/2024 (11.40-14.40)	0	0
01/03/2024 (07.20-10.20)	2	2
04/03/2024 (08.00-11.00)	44	29
<b>Walberswick Vantage Point</b>		
31/10/2023 (07.55-10.55)	0	0
31/10/2023 (11.55-14.55)	1	1
22/11/2023 (08.40-11.40)	1	1
22/11/2023 (12.40-14.40)	0	0
12/12/2023 (08.30-11.30)	1	1
12/12/2023 (12.30-15.30)	3	2
17/01/2024 (08.35-11.35)	0	0
17/01/2024 (12.05-15.05)	0	0
15/02/2024 (08.50-11.50)	0	0
15/02/2024 (12.10-15.10)	1	1
06/03/2024 (08.20-11.20)	66	22
06/03/2024 (12.20-15.20)	6	3

### 3.2.8 Walberswick Beach Survey

Table 4a details the results from the Walberswick beach surveys (October 2023-March 2024 inclusive). The beach is shingle, and heavily disturbed by walkers and dogs at all times, resulting in few observations during the surveys, namely occasional small groups of turnstones, black-headed and herring gulls. The turnstones exclusively used the northern part of the survey area whilst the gulls were recorded along the entire length of the survey area but mainly in the northern section.

**Table 4a: Walberswick Beach Survey Results**

Date/Time	Tidal State	Results
31/10/2023/ 14.55-15.55	High Tide: 11.39 Low Tides: 05.26 and 17.51 Rising Tide	Four turnstones and occasional black-headed gulls dropping onto beach briefly.
22/11/2023 07.40-08.40	High Tides: 04.51 and 18.48 Low Tide: 11.51 Mid Tide	Four turnstones and occasional black-headed gulls dropping onto beach briefly
12/12/2023 07.30-08.30	High Tides: 09.33 and 22.07 Low Tides: 03.20 and 15.30 Rising Tide	None
17/01/2024 15.05-16.06	High Tides: 02.08 and 15.09 Low Tides: 08.42 and 20.41 High Tide	None
15/02/2024 15.10-16.10	High Tides: 01.45 and 14.31 Low Tides: 08.18 and 20.09 Dropping Tide	Three turnstones and occasional black-headed gulls and herring gulls dropping onto beach briefly
06/03/2024 07.20-08.20	High Tides: 06.56 and 19.10 Low Tides: 00.15 and 12.55 High but dropping	Two turnstones and occasional black-headed and herring gulls dropping onto beach briefly

### 3.2.9 Southwold Beach Survey

**Table 4b** details the results from the Southwold beach surveys (October 2023-March 2024 inclusive).

The shore area south to the pier and north for ca. 200m is dominated by flood defence infrastructure (namely large boulders, groynes and the seawall) with little exposed sand on the beach at lower tides. Beyond these areas, sandy beach predominates but this is heavily disturbed south beyond the pier.

A small wintering flock of purple sandpipers and regular turnstones (in small numbers) were present throughout the winter period, using the boulders to the north of the pier to feed and roost. No other birds were noted during the surveys.

**Table 4b: Southwold Beach Survey Results**

Date/Time	Tidal State	Results
18/10/2023 13.50-14.50	High Tides: 01.09 and 13.20 Low Tides: 07.00 and 19.22 High but dropping tide	None
20/11/2023 14.30-15.30	High Tides: 03.45 and 17.09 Low Tides: 10.21 and 22.22 Rising Tide	Three purple sandpipers
13/12/2023 14.45-15.45	High Tides: 10.19 and 22.45 Low Tides: 04.05 and 16.21 Rising Tide	Three purple sandpipers and two turnstones
24/01/2024 15.00-16.00	High Tides: 09.56 and 21.57 Low Tides: 03.27 and 15.42 Low Tide	Four purple sandpipers and two turnstones
14/02/2024 14.40-15.40	High Tides: 01.02 and 13.47 Low Tides: 07.35 and 19.27 High but dropping	Four purple sandpipers and four turnstones
01/03/2024 10.20-11.20	High Tides: 01.31 and 13.57 Low Tides: 07.37 and 19.36 Mid Tide (rising)	Three purple sandpipers and three turnstones

## 4. Summary and Conclusions

### 4.1 Potential Landfall Locations

#### 4.1.1 Walberswick

The bay off Walberswick appears to be the main wintering area of a flock of common scoter (with up to 400 individuals) that appears to range along the Suffolk coast with rafts recorded during each survey, mainly at the edge of the 2km survey area, occasionally closer in. These rafts attracted other species of wildfowl at times with up to six velvet scoter, and also smaller numbers of pintail, shoveler, wigeon, mallard, teal, long-tailed duck, and a Slavonian grebe.

Small numbers of red-throated diver were recorded during the surveys, mainly at the edge of the survey area when they took short flights and became visible. Larger numbers are considered likely to be present further out to sea.

The pools within the marshes around the potential landfall location at the east end of the study area attracted flocks of teal throughout and small numbers of wigeon on occasion, with low numbers of other wildfowl and waders including shelduck, redshank and spotted redshank.

#### 4.1.2 Southwold

The inshore area off Southwold supports far fewer foraging birds than off Walberswick. Rafts of common scoter were recorded on the sea only in December (450), January (raft of up to 150 on edge of 2km survey area) and March (raft of 17 birds). A build-up of roosting gulls was noted on the sea just offshore before dusk in December. Red-throated divers were noted distantly during each survey, mainly too distant in often choppy conditions, but a relatively flat sea on 4<sup>th</sup> March allowed a loose flock of 29 individuals to be counted. Otherwise, only occasional other ducks, great crested grebes and cormorants (up to 37 on sea at any one time (in March).

The marshes inland held relatively large numbers of loafing/roosting gulls particularly at higher tidal states. Small numbers of wildfowl (including gadwall, mallard, teal, greylag goose, and on one occasion, feral barnacle geese, when 540 were noted in December), and waders (redshank, lapwing and curlew).

### 4.2 Potential Sub-station Location - Friston

Up to five black-headed gulls recorded in October and December was the only ornithological interest at this site.

### 4.3 Potential Cable Corridors

#### 4.3.1 River Blyth Crossing

This reedbed-dominated site held strong populations of water rail, bearded tit and marsh harrier. Grassland areas on marsh margins and arable land in south of survey area held foraging curlew (peaking at 96 in February) and small numbers of lapwing (with larger flocks just outside of study area to west and south in February).

#### 4.3.2 Southwold Corridor

The main ornithological interest was focused on the grazing marshes adjacent to the potential landfall site. Flocks of curlew (peaking at 56 individuals across two flocks in January) were recorded foraging in arable and grass fields at the northeast end of the site, with flocks of 50+ lapwing recorded in arable fields at the east and west ends of the site respectively, also in January.

#### 4.3.3 Walberswick Corridor

Foraging curlew and lapwing flocks in arable fields towards the west end of the site peaked at 80 in November and 582 (including single flock of 520) in February, respectively. This predominantly arable part of the survey area attracted few other species of interest with a flock of 375 feral barnacle geese in October, small numbers of gulls throughout and two dunlin on a flooded area of an arable field in October. The farm reservoir attracted relatively large numbers of gulls and ducks at times, including shoveler, tufted duck, gadwall and mallard.

# Appendix A

## Figures

**Figure 1** Survey Area

**Figure 2.1** Walberswick Corridor

**Figure 2.2** River Blyth Crossing

**Figure 2.3** Southwold Corridor

**Figure 2.4** Southwold VP

**Figure 2.5** Walberswick VP

**Figure 2.6** Southwold Beach Survey area

**Figure 2.7** Walberswick Beach Survey area

**Figure 2.8** Friston Sub-station

**Figure 3.1** River Blyth Crossing October 2023

**Figure 3.2** River Blyth Crossing November 2023

**Figure 3.3** River Blyth Crossing December 2023

**Figure 3.4** River Blyth Crossing January 2024

**Figure 3.5** River Blyth Crossing February 2024

**Figure 3.6** River Blyth Crossing March 2024

**Figure 3.7** Southwold Corridor (west) October 2023

**Figure 3.8** Southwold Corridor (west) November 2023

**Figure 3.9** Southwold Corridor (west) December 2023

**Figure 3.10** Southwold Corridor (west) January 2024

**Figure 3.11** Southwold Corridor (west) February 2024

**Figure 3.12** Southwold Corridor (west) March 2024

**Figure 3.13** Southwold Corridor (west) October 2023

**Figure 3.14** Southwold Corridor (west) November 2023

**Figure 3.15** Southwold Corridor (west) December 2023

**Figure 3.16** Southwold Corridor (west) January 2024

**Figure 3.17** Southwold Corridor (west) February 2024

**Figure 3.18** Southwold Corridor (west) March 2024

**Figure 3.19** Southwold Corridor (south) October 2023

**Figure 3.20** Southwold Corridor (south) November 2023

**Figure 3.21** Southwold Corridor (south) December 2023

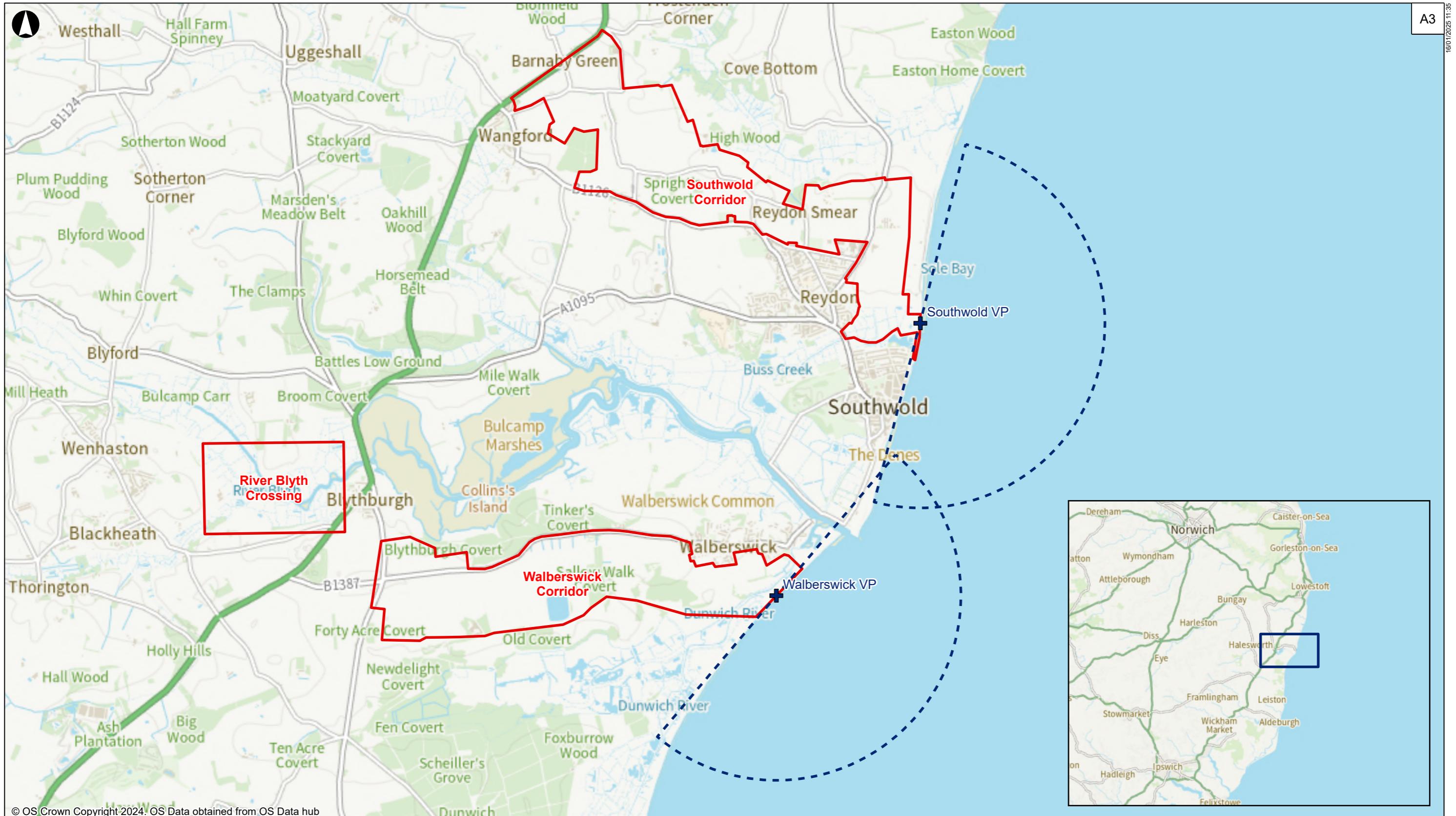
**Figure 3.22** Southwold Corridor (south) January 2024

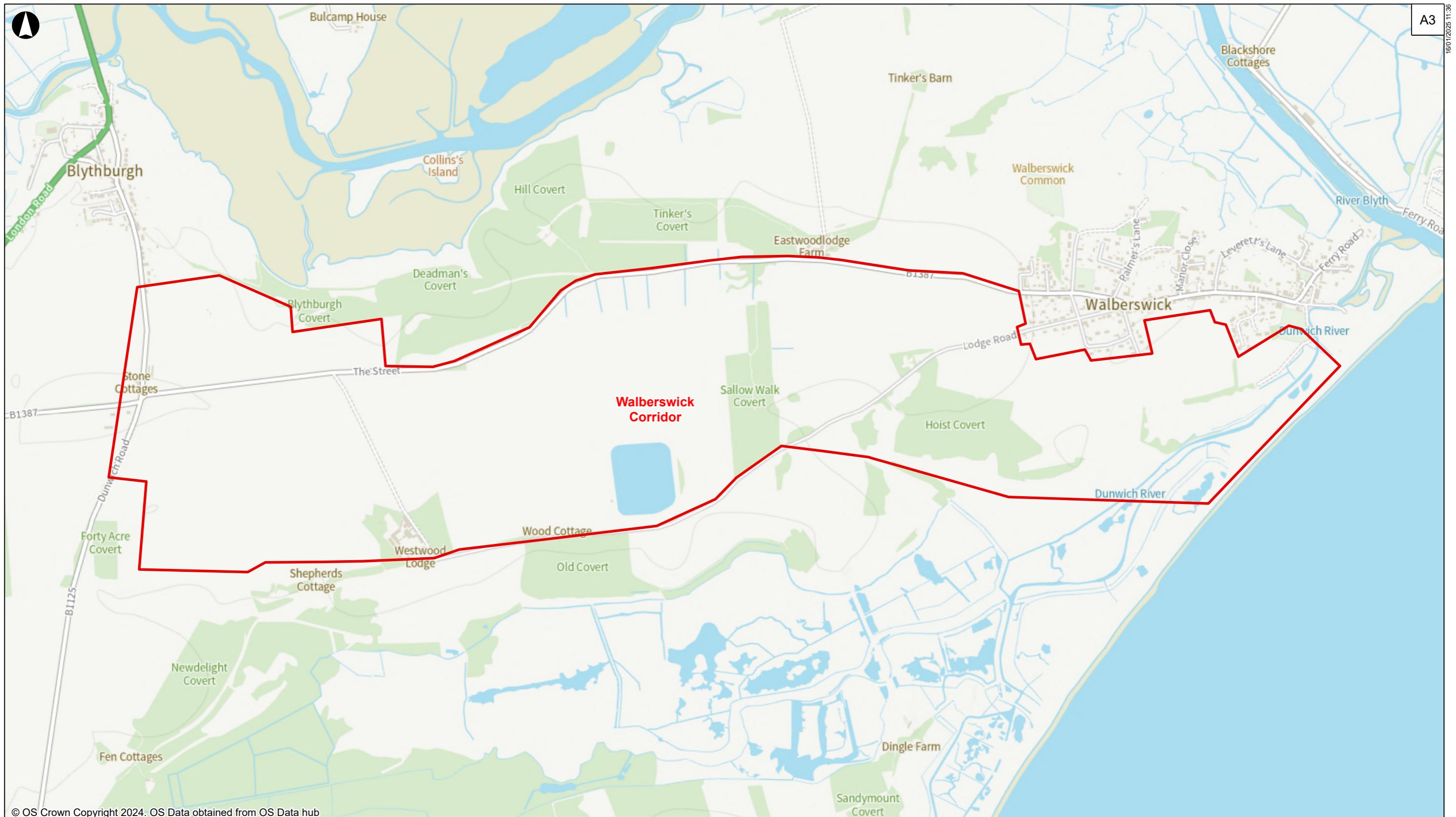
**Figure 3.23** Southwold Corridor (south) February 2024

**Figure 3.24** Southwold Corridor (south) March 2024  
**Figure 3.25** Walberswick Corridor (west) October 2023  
**Figure 3.26** Walberswick Corridor (west) November 2023  
**Figure 3.27** Walberswick Corridor (west) December 2023  
**Figure 3.28** Walberswick Corridor (west) January 2024  
**Figure 3.29** Walberswick Corridor (west) February 2024  
**Figure 3.30** Walberswick Corridor (west) March 2024  
**Figure 3.31** Walberswick Corridor (east) October 2023  
**Figure 3.32** Walberswick Corridor (east) November 2023  
**Figure 3.33** Walberswick Corridor (east) December 2023  
**Figure 3.34** Walberswick Corridor (east) January 2024  
**Figure 3.35** Walberswick Corridor (east) February 2024  
**Figure 3.36** Walberswick Corridor (east) March 2024  
**Figure 3.37** Southwold VP 18/10/2023 (10.50-13.50)  
**Figure 3.38** Southwold VP 18/10/2023 (14.30-17.30)  
**Figure 3.39** Southwold VP 20/11/2023 (07.50-10.50)  
**Figure 3.40** Southwold VP 20/11/2023 (11.30-14.30)  
**Figure 3.41** Southwold VP 13/12/2023 (08.15-11.15)  
**Figure 3.42** Southwold VP 13/12/2023 (11.45-14.45)  
**Figure 3.43** Southwold VP 24/01/2024 (08.00-11.00)  
**Figure 3.44** Southwold VP 20/01/2024 (12.00-15.00)  
**Figure 3.45** Southwold VP 14/02/2024 (08.05-11.05)  
**Figure 3.46** Southwold VP 14/02/2024 (11.40-14.40)  
**Figure 3.47** Southwold VP 01/03/2024 (07.20-10.20)  
**Figure 3.48** Southwold VP 04/03/2024 (08.00-11.00)  
**Figure 3.49** Walberswick VP 31/10/2023 (07.55-10.55)  
**Figure 3.50** Walberswick VP 31/10/2023 (11.55-14.55)  
**Figure 3.51** Walberswick VP 22/11/2023 (08.40-11.40)  
**Figure 3.52** Walberswick VP 22/11/2023 (12.40-14.40)  
**Figure 3.53** Walberswick VP 12/12/2023 (08.30-11.30)  
**Figure 3.54** Walberswick VP 12/12/2023 (12.30-15.30)  
**Figure 3.55** Walberswick VP 17/01/2024 (08.35-11.35)  
**Figure 3.56** Walberswick VP 17/01/2024 (12.05-15.05)  
**Figure 3.57** Walberswick VP 15/02/2024 (08.50-11.50)  
**Figure 3.58** Walberswick VP 15/02/2024 (12.10-15.10)

**Figure 3.59** Walberswick VP 06/03/2024 (08.20-11.20)

**Figure 3.60** Walberswick VP 06/03/2024 (12.20-15.20)





  Survey Area

Metres  
0 100 200 400 600

Coordinate System: British National Grid

1	16/01/2025	JG	DB	RM	AC
Rev	Date	By	Chkd	Appd	Authd

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**LIONLINK**

**Wintering Bird Survey 2023/2024**

Drawing Title

**Walberswick Corridor**

Scale at A3

**1:14,000**

Role

**Ecology**

Suitability

**For Information**

Project Number

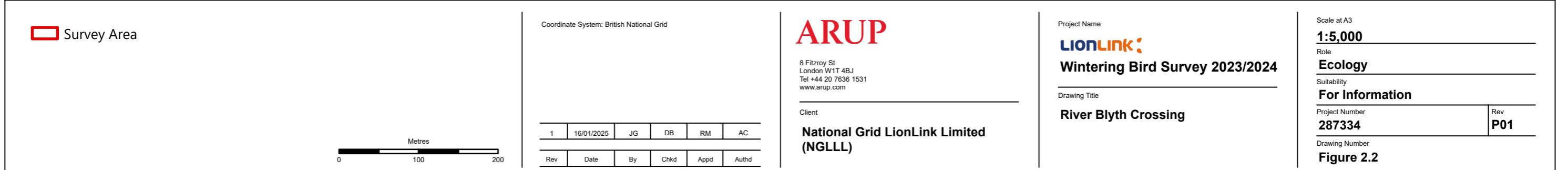
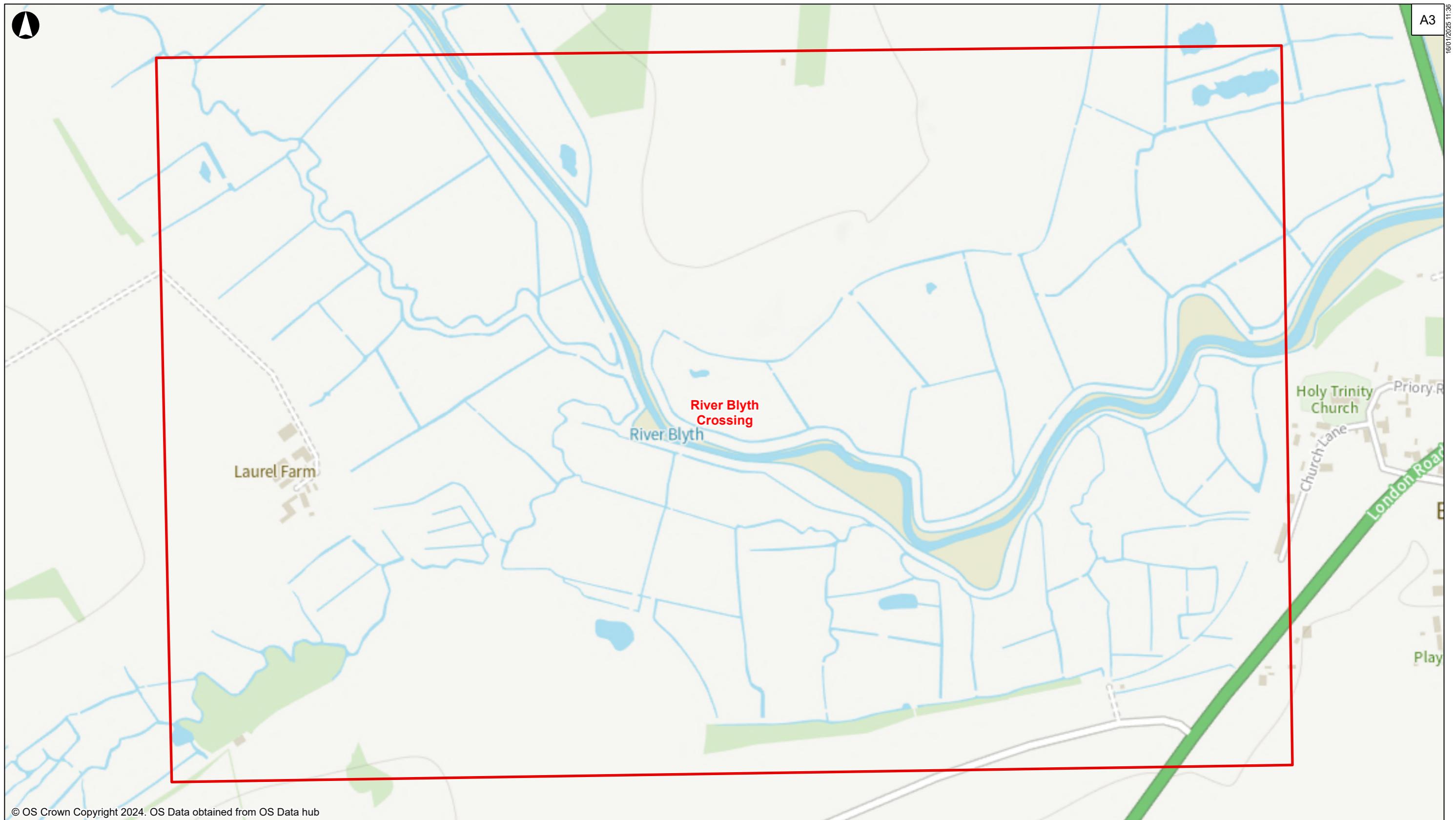
**287334**

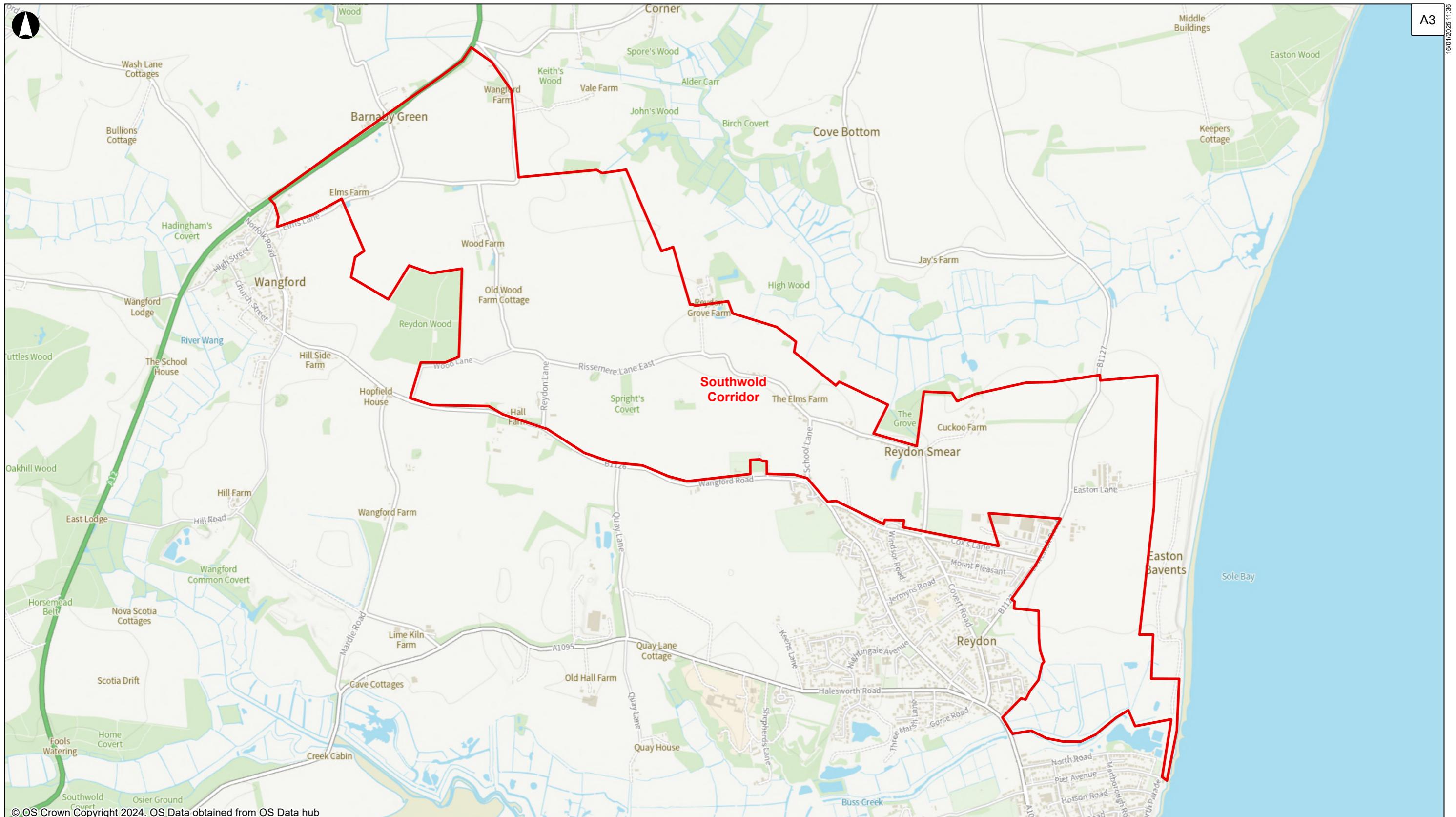
Rev

**P01**

Drawing Number

**Figure 2.1**





  Survey Area

Metres  
0 100 200 400 600 800

Coordinate System: British National Grid

1	16/01/2025	JG	DB	RM	AC
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Drawing Title

**Southwold Corridor**

Scale at A3

**1:18,000**

Role

**Ecology**

Suitability

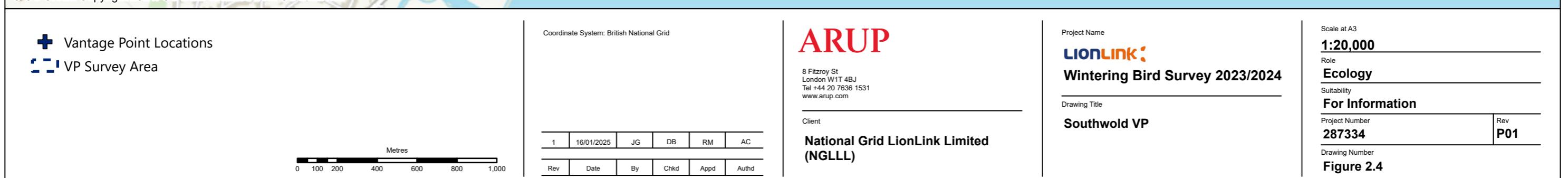
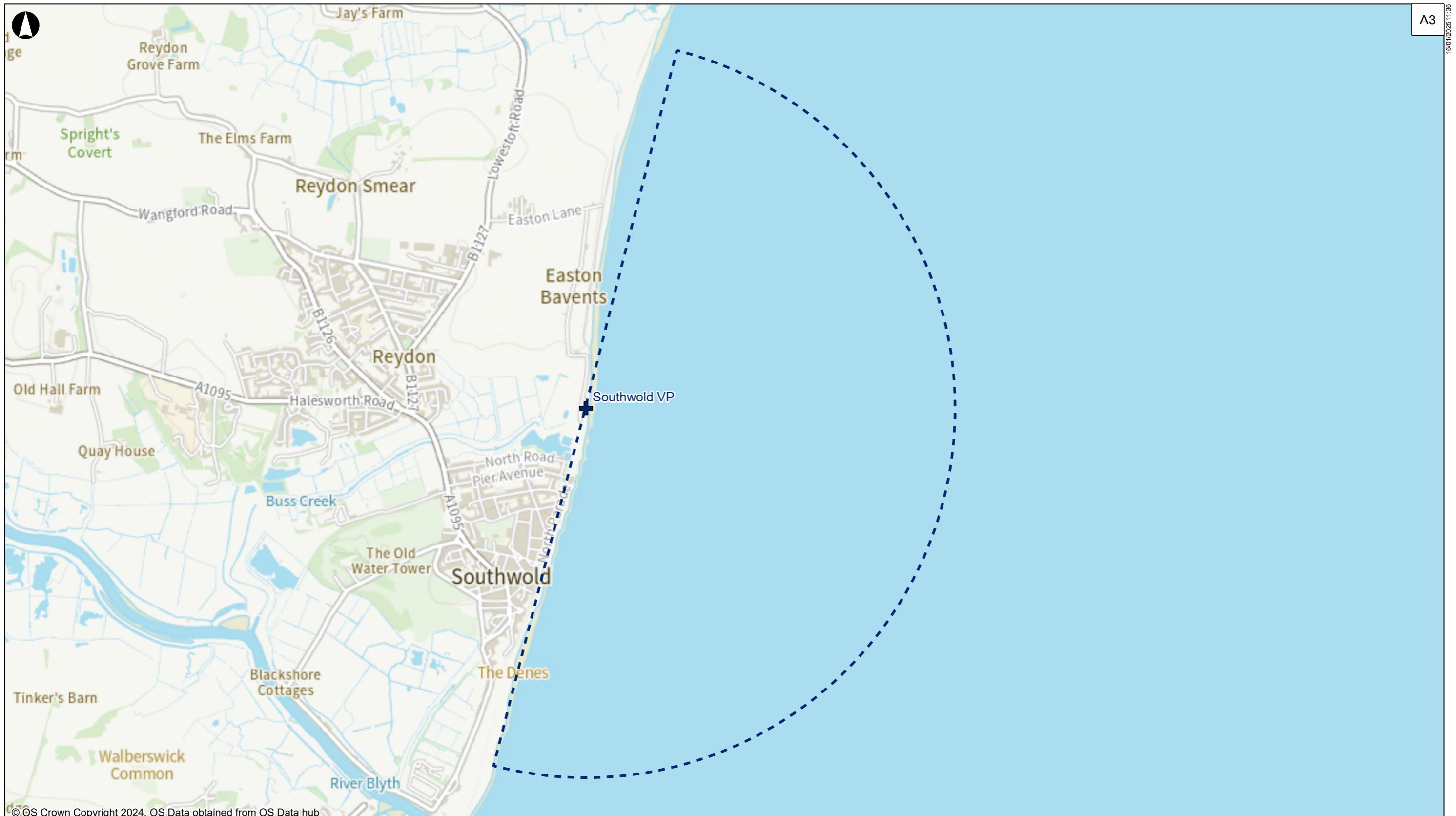
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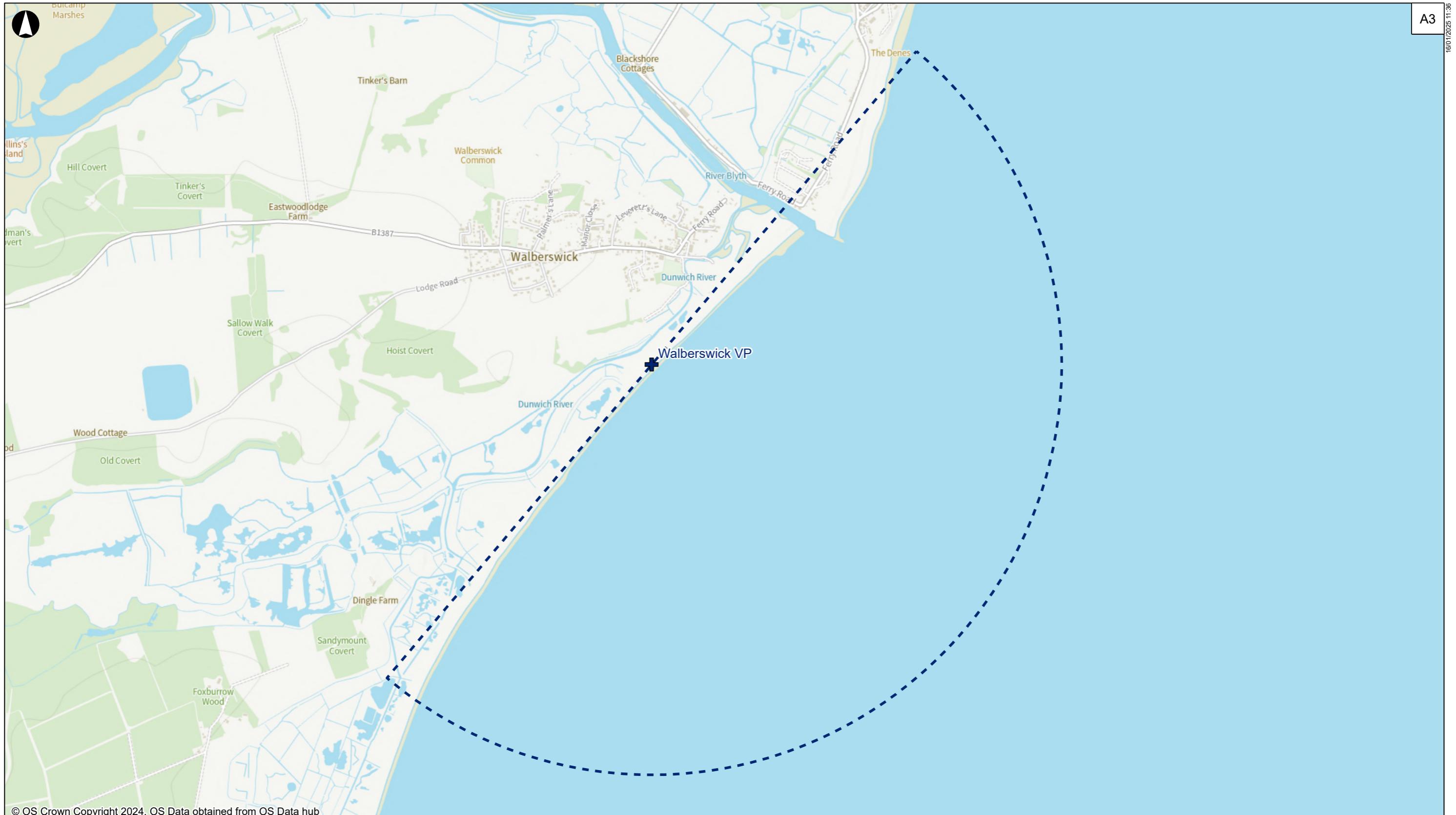
Project Number

**287334**

A3

16/01/2025 11:38





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## Vantage Point Locations

## VP Survey Area

A scale bar at the top of the page, labeled "Mètres" above a horizontal line. Below the line are numerical markings at 0, 100, 200, 400, 600, and 800.

### Coordinate System: British National Grid

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**Drawing Title**

## Walberswick VP

scale at A3

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110,000

## Ecology

39

### For Information

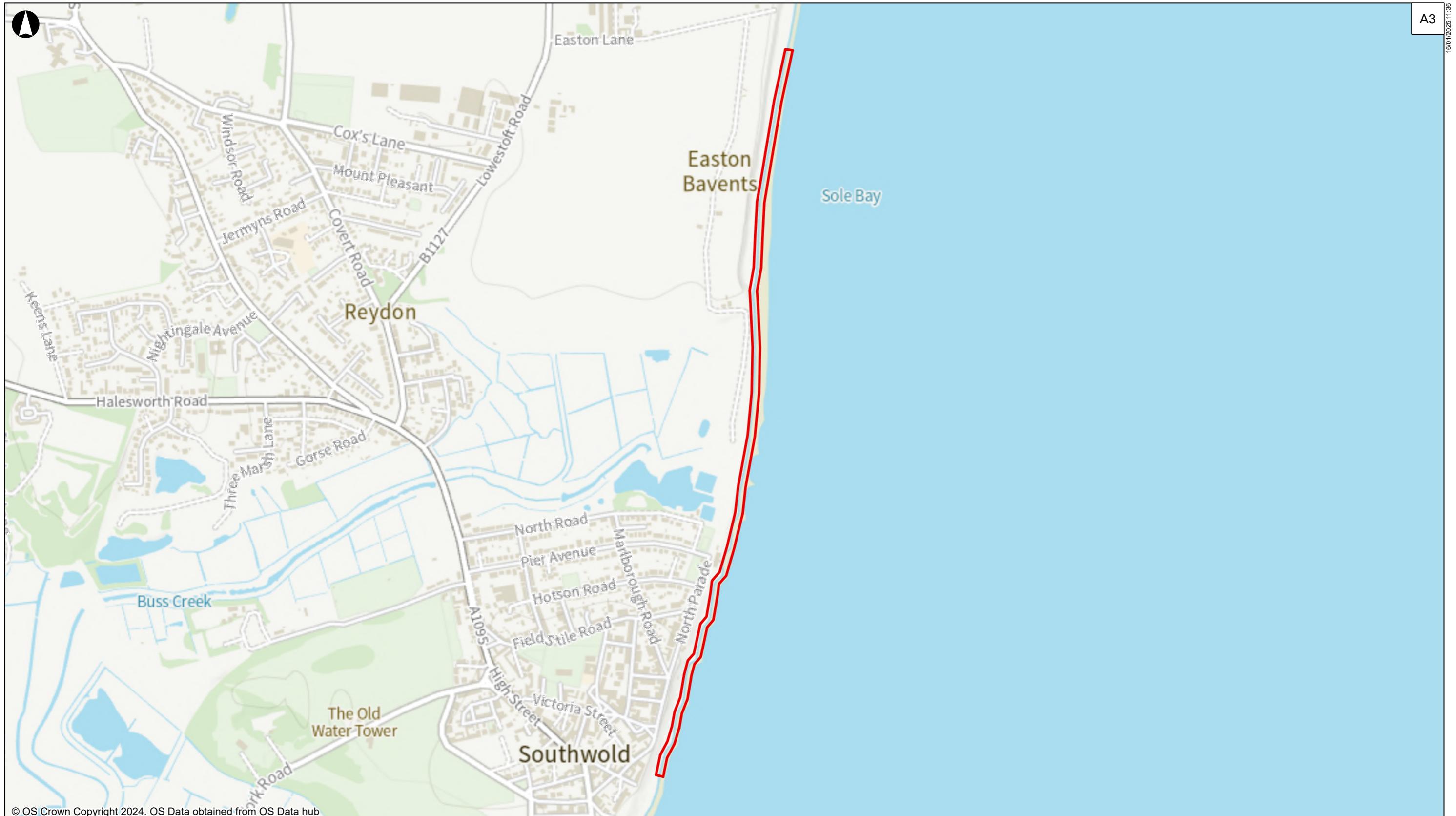
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**Subject Number:**

Object Number

207334

### Figure 2.5



  Survey Area

Metres  
0 100 200 400

Coordinate System: British National Grid

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Drawing Title

**Southwold Beach Survey Area**

Scale at A3

**1:10,000**

Role

**Ecology**

Suitability

**For Information**

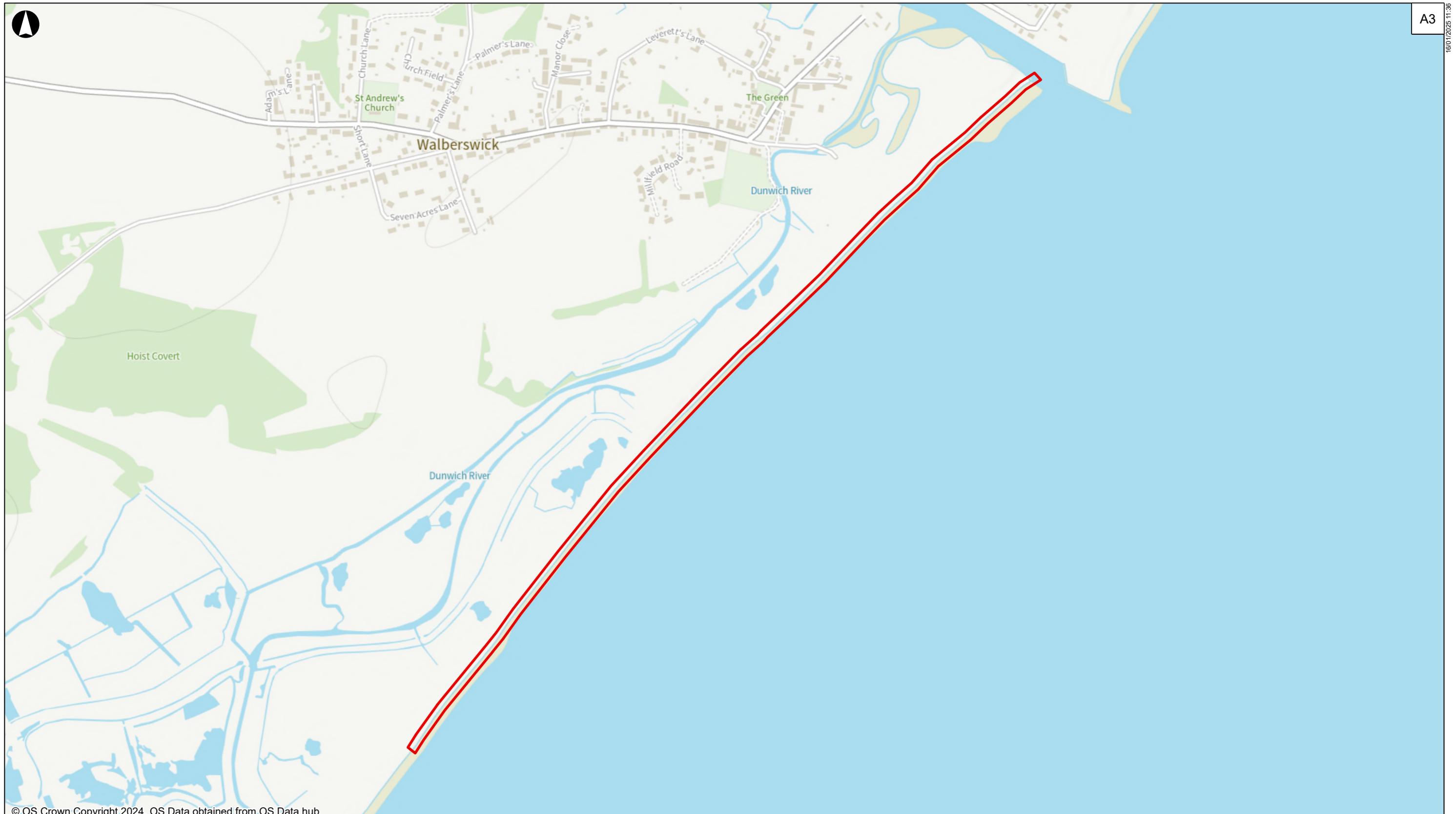
Project Number

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Drawing Number

**Figure 2.6**



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## Survey Area

Metres

0 100 200

Coordinate System: British National Grid

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Drawing Title

### Walberswick Beach Survey Area

Scale at A3

1:8,000

### Role

## Ecology

## Suitability

### For Inform

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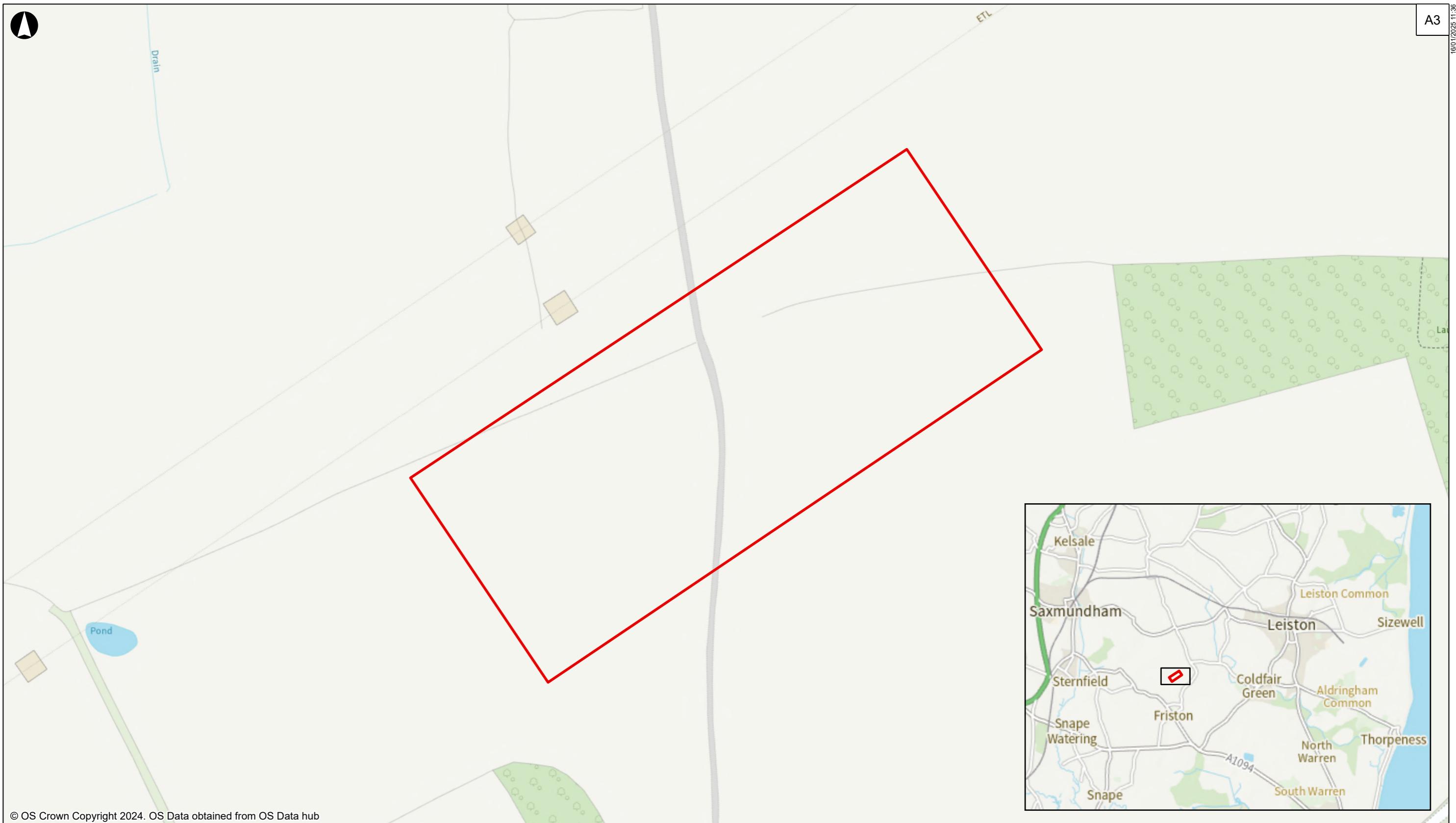
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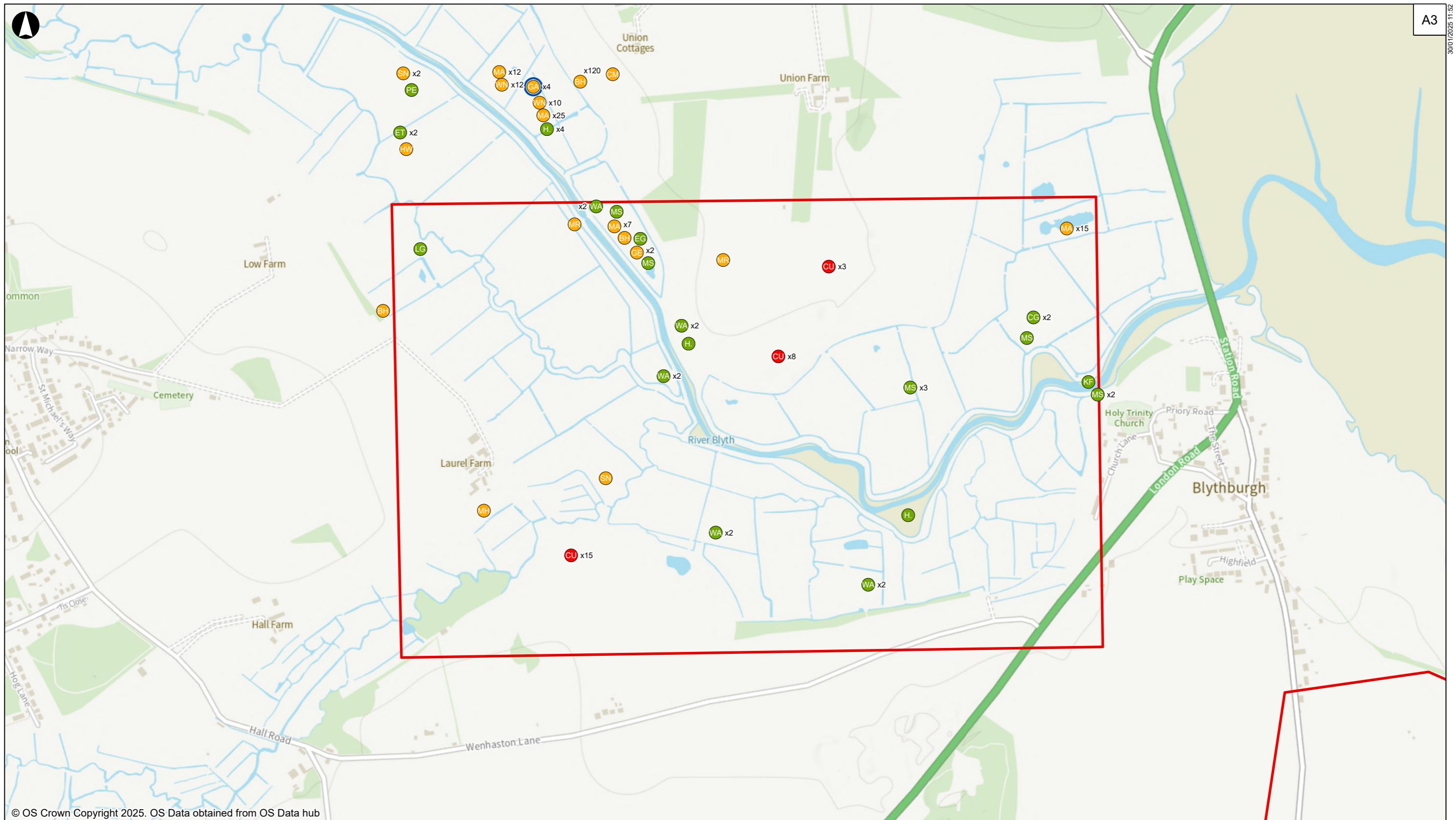
287334

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**Drawing Number**

**Figure 27**





**Birds of Conservation Concern**

- Red
- Amber
- Green
- Not Assessed

**Ramsar and SPA Designated Species**

**Survey Areas**

Metres

0 100 200 300 400

Coordinate System: British National Grid

**BTO Codes**

- BH - Black-headed Gull
- ET - Little Egret
- CG - Canada Goose
- CM - Common Gull
- CU - Curlew
- H. - Grey Heron
- EG - Egyptian Goose
- GA - Gadwall
- GE - Green Sandpiper
- HN - Moorhen
- LG - Little Grebe
- MA - Mallard
- MR - Marsh Harrier
- PE - Peregrine
- SN - Snipe
- WA - Water Rail
- WN - Wigeon

1	30/01/2025	JG	DB	RM	AC
Rev	Date	By	Chkd	Appd	Authd

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**Wintering Bird Survey 2023/2024**

**Drawing Title**  
**River Blyth Crossing October 2023**

**Scale at A3**  
**1:8,000**

**Role**  
**Ecology**

**Suitability**  
**For Information**

**Project Number**  
**287334**

**Rev**  
**P01**

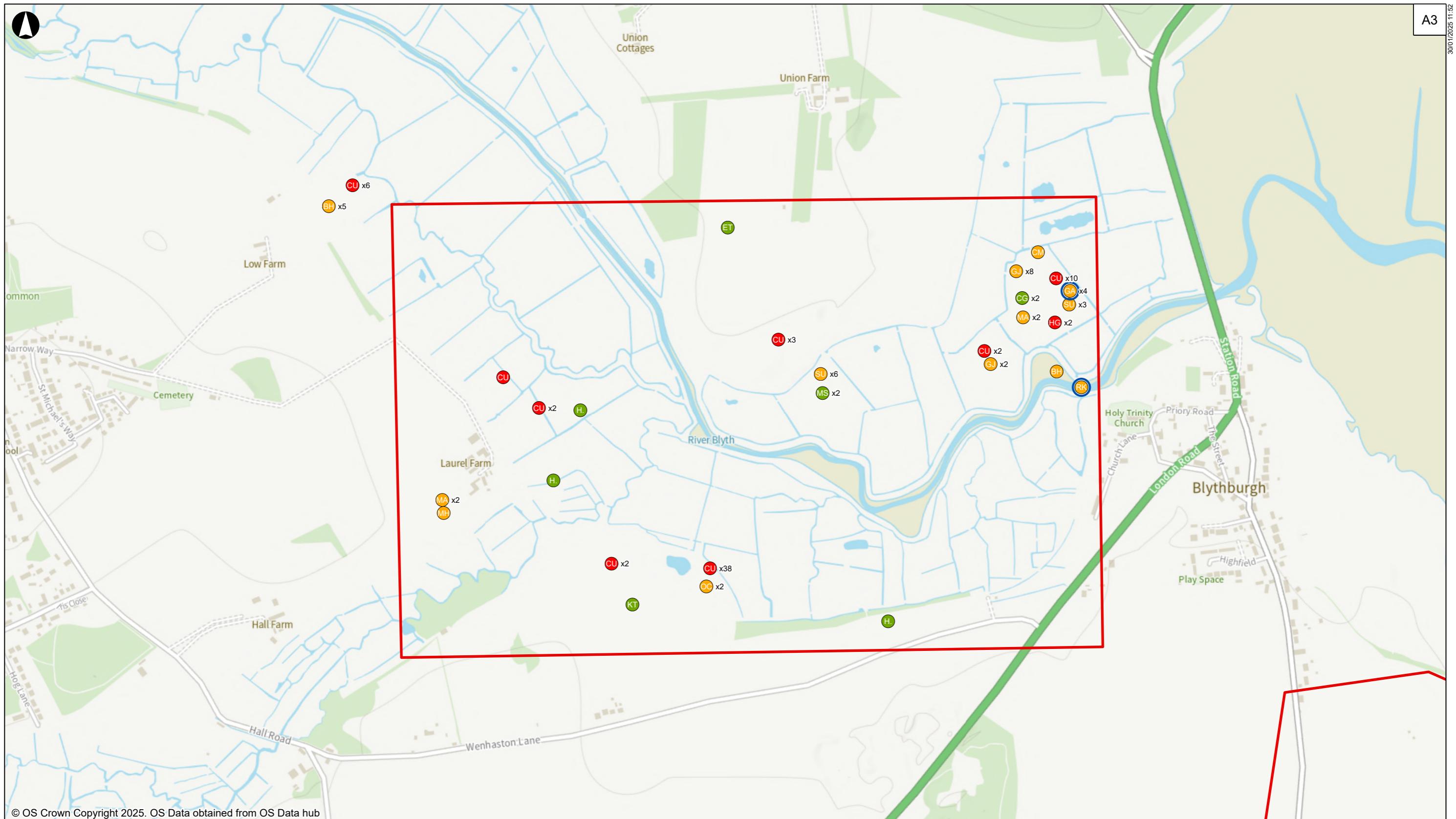
**Drawing Number**  
**Figure 3.1**











Birds of Conservation Concern

- Red
- Amber
- Green
- Not Assessed
- Ramsar and SPA Designated Species
- Survey Areas

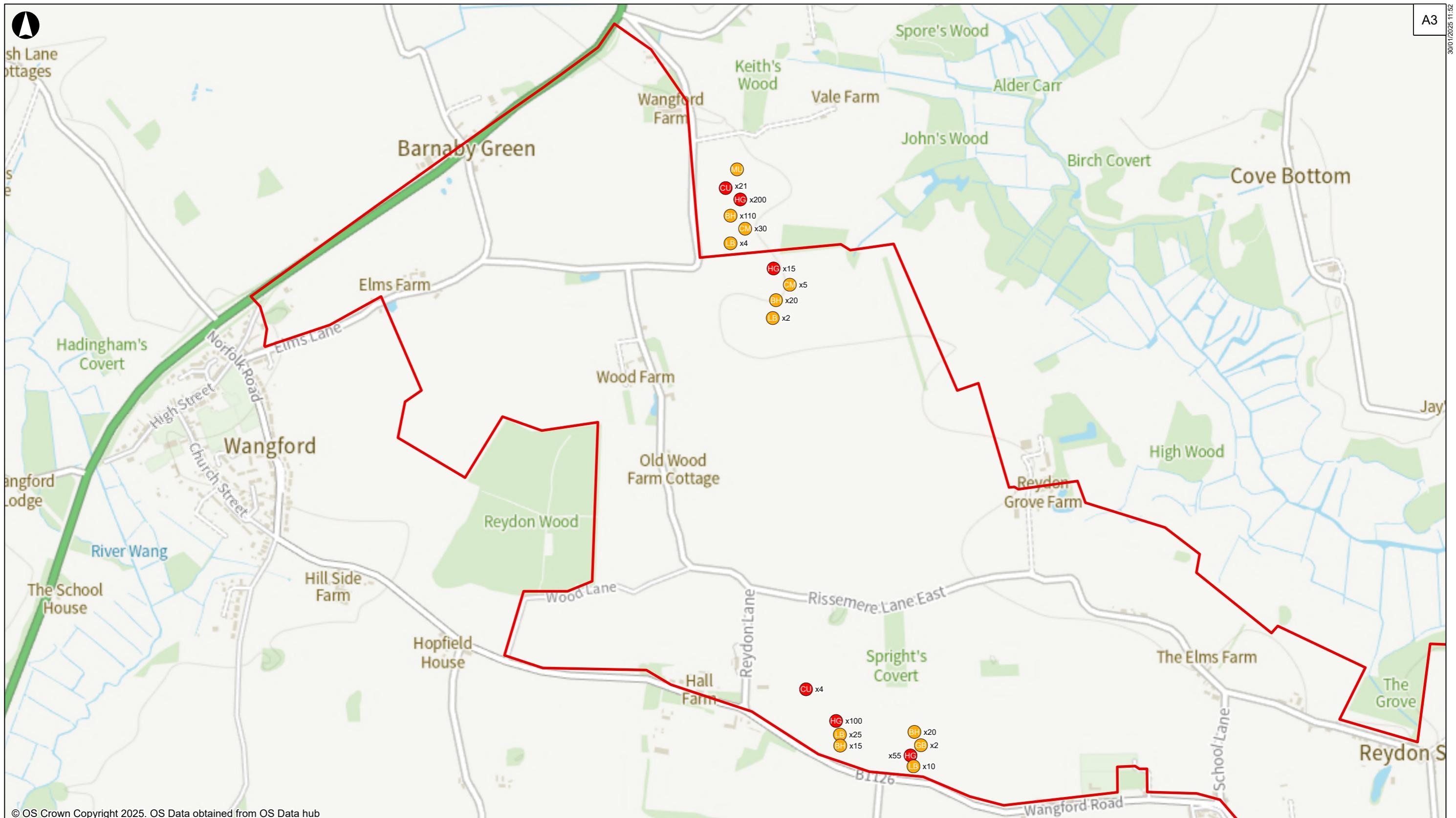
BTO Codes

BH - Black-headed Gull	ET - Little Egret	KT - Red Kite	RK - Redshank
CG - Canada Goose	GA - Gadwall	MA - Mallard	SU - Shelduck
CM - Common Gull	GJ - Greylag Goose	MH - Moorhen	
CU - Curlew	H. - Grey Heron	MS - Mute Swan	
	HG - Herring Gull	OC - Oystercatcher	

Metres

0 100 200 300 400

Coordinate System: British National Grid



#### Birds of Conservation Concern

- Red
- Amber
- Green
- Not Assessed
- Ramsar and SPA Designated Species
- Survey Areas

BTO Codes  
 BH - Black-headed Gull  
 CM - Common Gull  
 CU - Curlew

GB - Great Black-backed Gull  
 HG - Herring Gull  
 LB - Lesser Black-backed Gull  
 MU - Mediterranean Gull

0 100 200 400  
 Metres  
 Coordinate System: British National Grid

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Drawing Title

Southwold Corridor (West) October  
 2023

Scale at A3

**1:10,000**

Role

**Ecology**

Suitability

**For Information**

Project Number

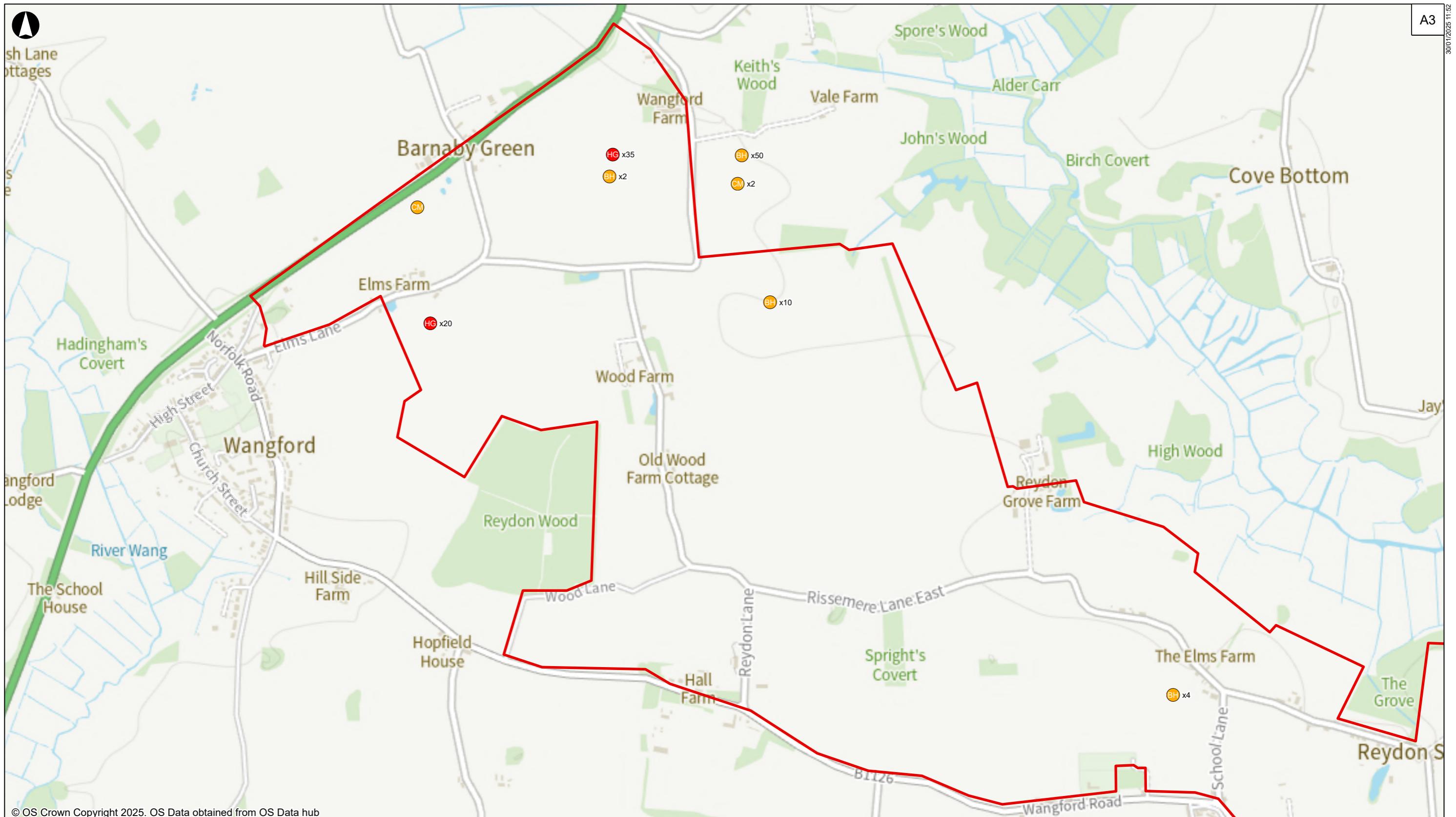
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Rev

**P01**

Drawing Number

**Figure 3.7**



#### Birds of Conservation Concern

- Red
- Amber
- Green
- Not Assessed
- Ramsar and SPA Designated Species
- Survey Areas

0 100 200 400  
Metres  
Coordinate System: British National Grid

BTO Codes  
BH - Black-headed Gull  
CM - Common Gull  
HG - Herring Gull

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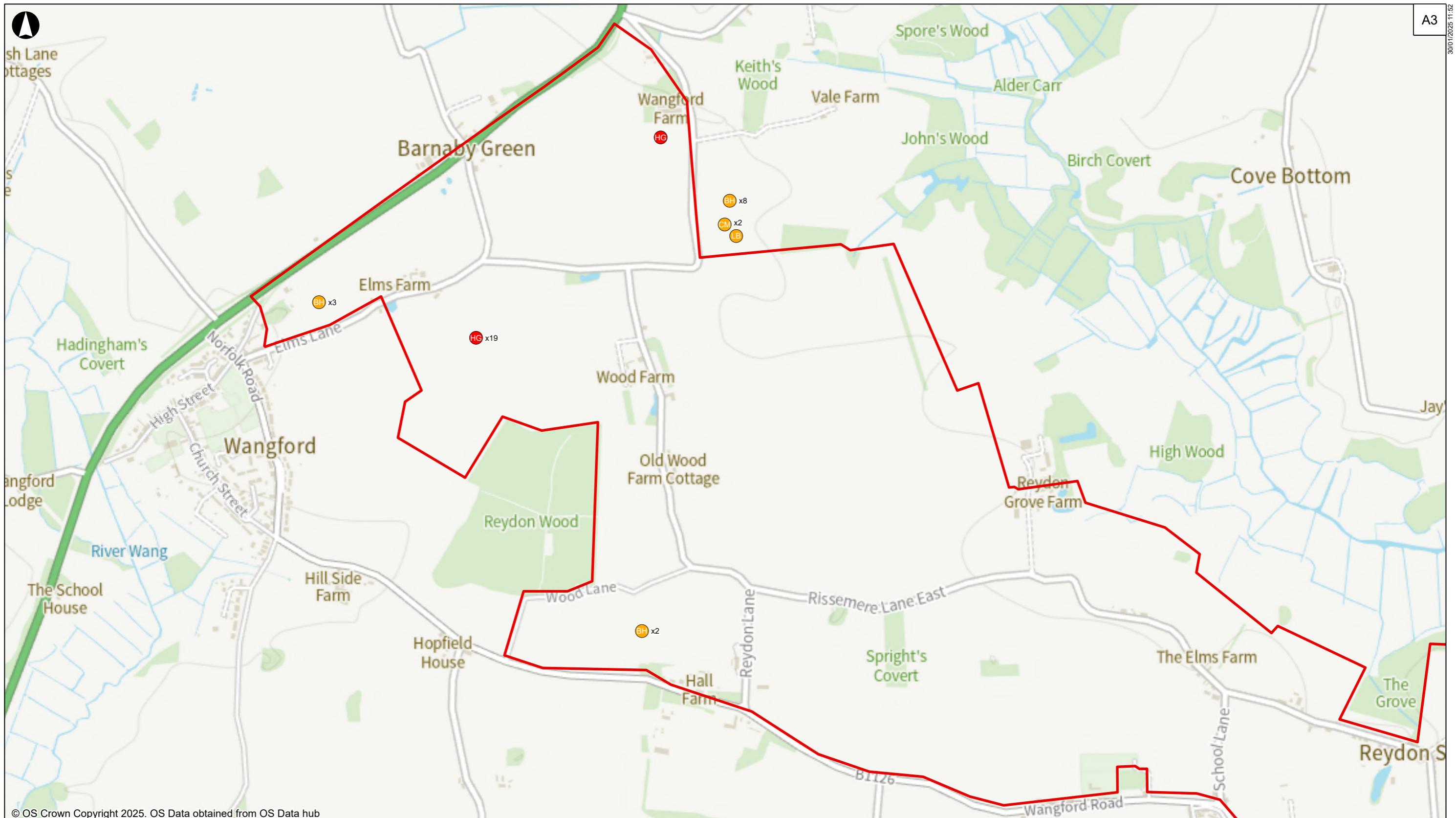
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Project Name  
**LIONLINK**  
Wintering Bird Survey 2023/2024

Drawing Title

Southwold Corridor (West)  
November 2023

Scale at A3  
**1:10,000**  
Role  
**Ecology**  
Suitability  
**For Information**  
Project Number  
**287334**  
Rev  
**P01**  
Drawing Number  
**Figure 3.8**



**Birds of Conservation Concern**

- Red
- Amber
- Green
- Not Assessed

**Ramsar and SPA Designated Species**

**Survey Areas**

0 100 200 400 Metres

Coordinate System: British National Grid

**BTO Codes**

- BH - Black-headed Gull
- CM - Common Gull
- HG - Herring Gull
- LB - Lesser Black-backed Gull

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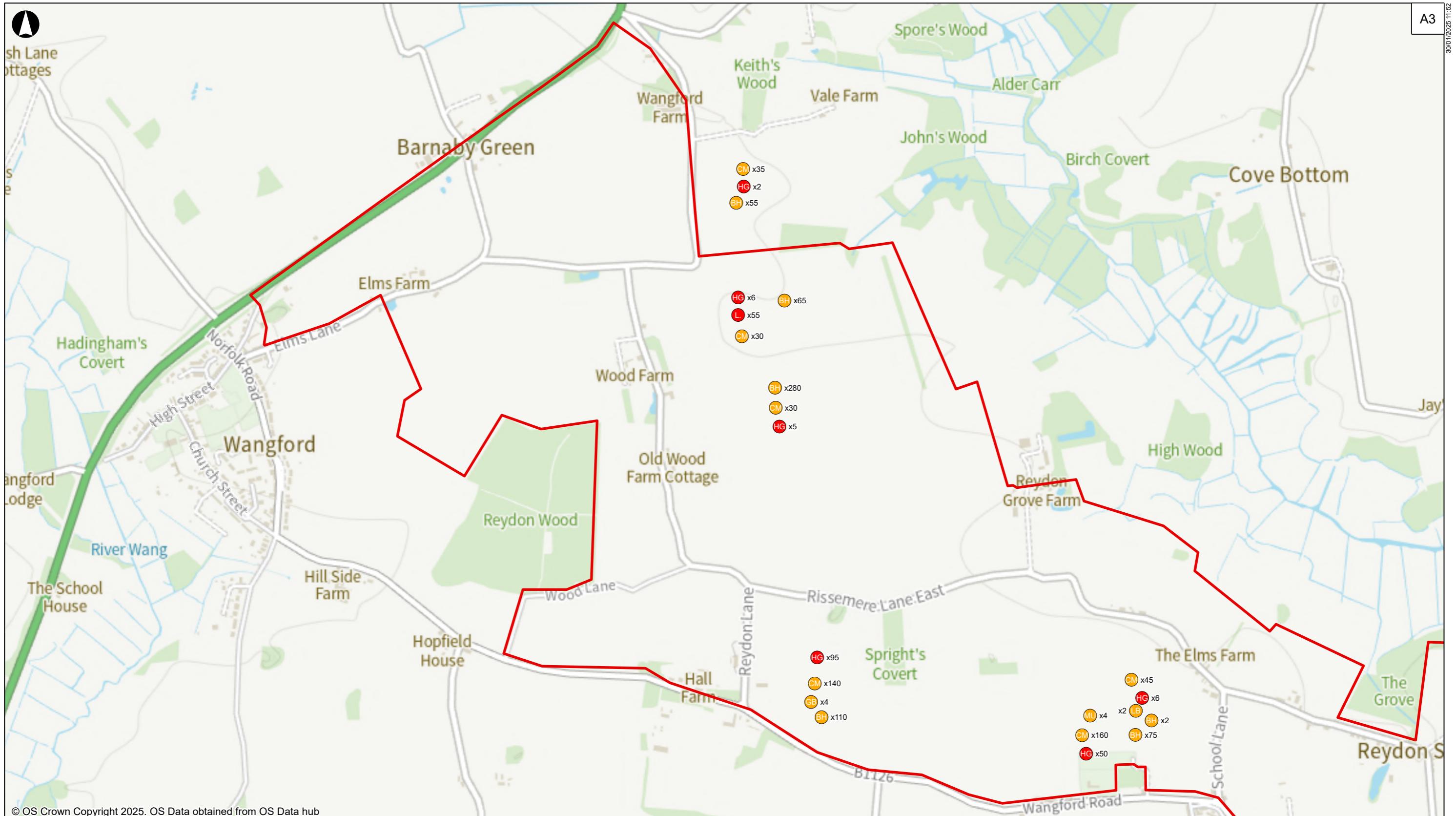
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Project Name  
**LIONLINK**  
Wintering Bird Survey 2023/2024

Drawing Title

Southwold Corridor (West)  
December 2023

Scale at A3  
**1:10,000**  
Role  
**Ecology**  
Suitability  
**For Information**  
Project Number  
**287334** Rev  
Drawing Number  
**P01**  
**Figure 3.9**



**Birds of Conservation Concern**

- Red
- Amber
- Green
- Not Assessed
- Ramsar and SPA Designated Species

**Survey Areas**

0 100 200 300 400 Metres

Coordinate System: British National Grid

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**LIONLINK**  
**Wintering Bird Survey 2023/2024**

**Drawing Title**  
**Southwold Corridor (West) January 2024**

**Scale at A3**  
**1:10,000**

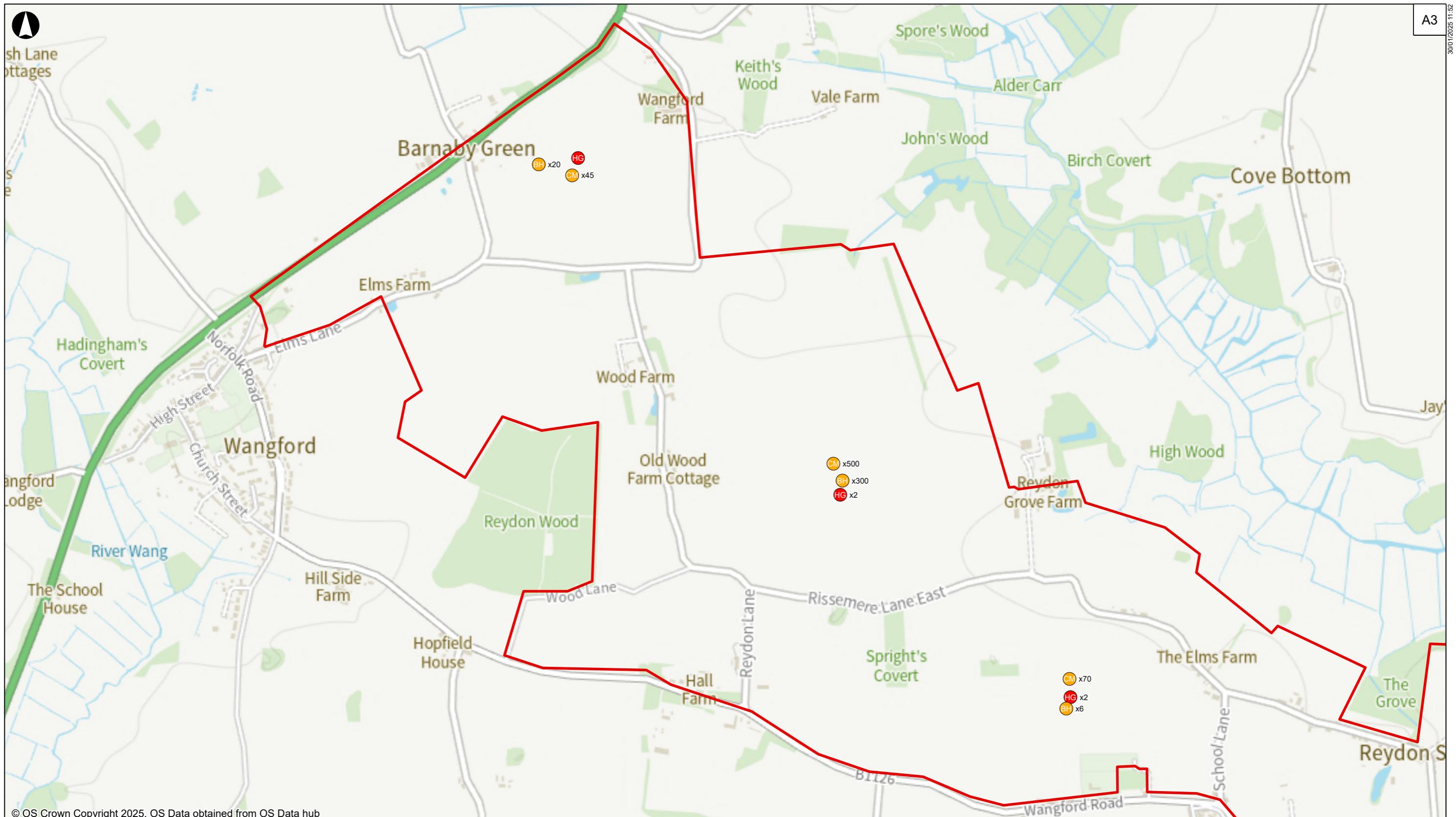
**Role**  
**Ecology**

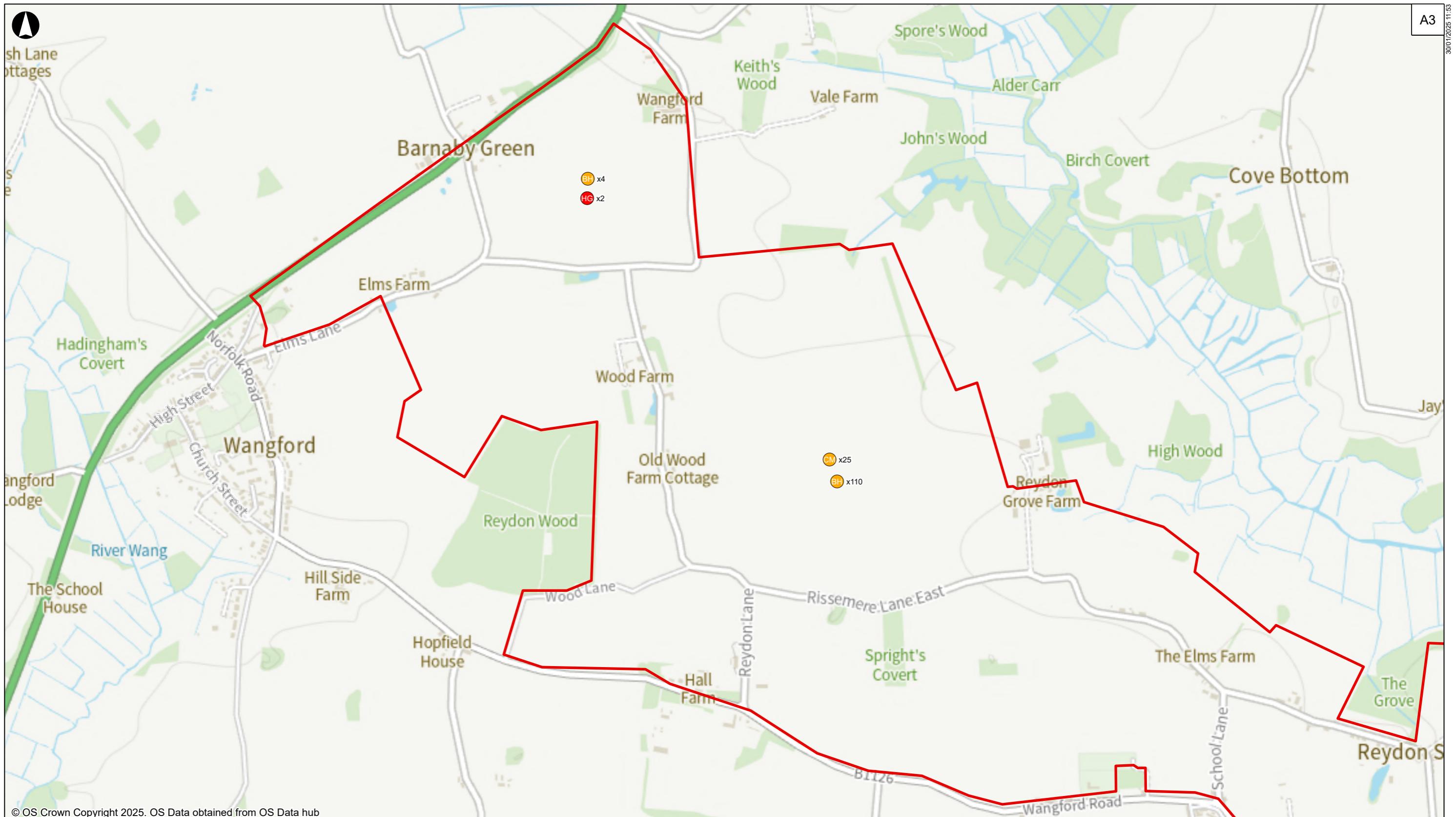
**Suitability**  
**For Information**

**Project Number**  
**287334**

**Rev**  
**P01**

**Drawing Number**  
**Figure 3.10**





#### Birds of Conservation Concern

- Red
- Amber
- Green
- Not Assessed
- Ramsar and SPA Designated Species
- Survey Areas

0 100 200 400  
Metres  
Coordinate System: British National Grid

BTO Codes  
BH - Black-headed Gull  
CM - Common Gull  
HG - Herring Gull

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Drawing Title

Southwold Corridor (West) March  
2024

Scale at A3

**1:10,000**

Role

**Ecology**

Suitability

**For Information**

Project Number

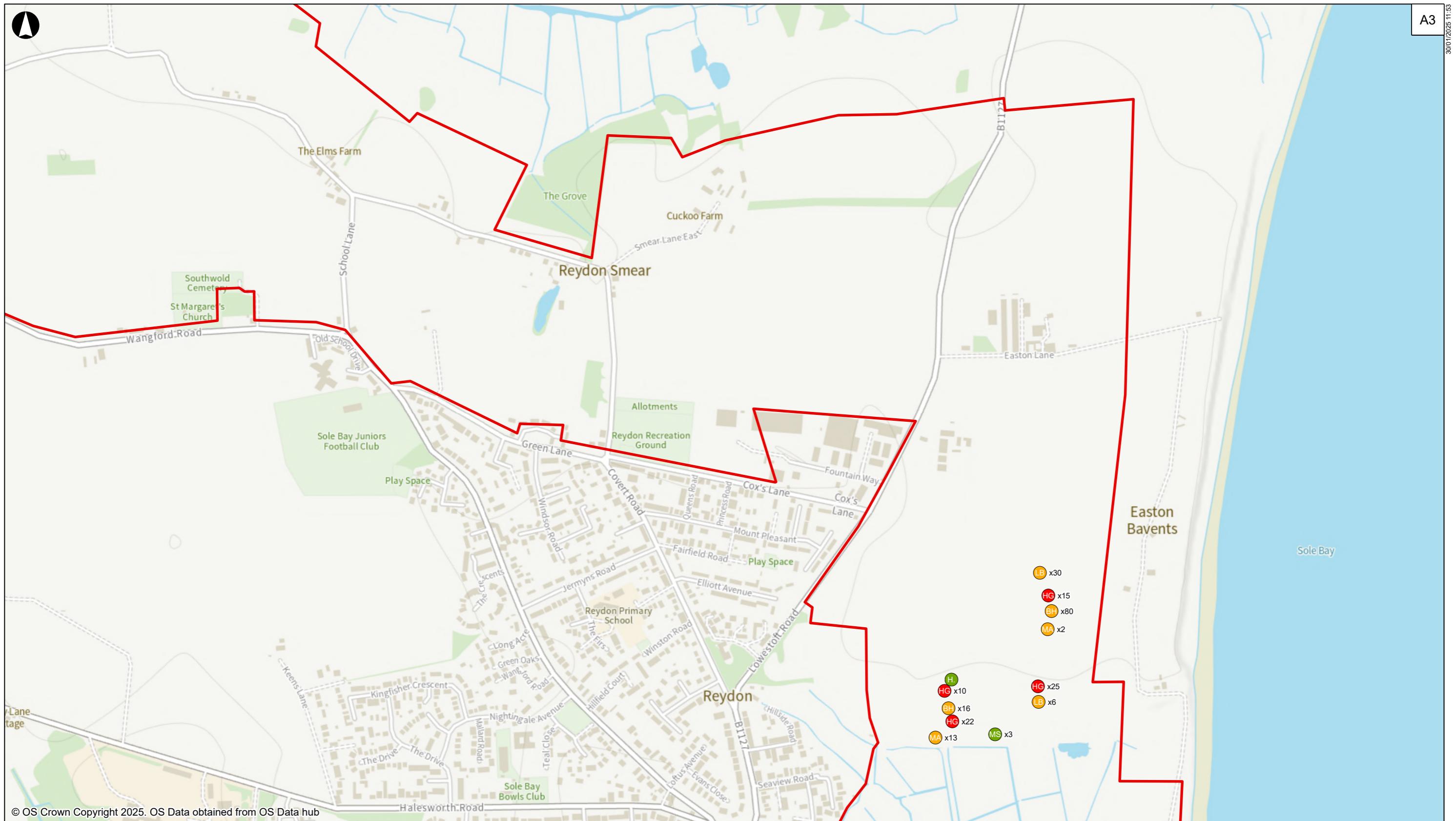
**287334**

Rev

**P01**

Drawing Number

**Figure 3.12**



#### Birds of Conservation Concern

- Red
- Amber
- Green
- Not Assessed
- Ramsar and SPA Designated Species
- Survey Areas

BTO Codes  
 BH - Black-headed Gull  
 H - Grey Heron  
 HG - Herring Gull  
 LB - Lesser Black-backed Gull  
 MA - Mallard  
 MS - Mute Swan

Metres  
 0 100 200 300 400

Coordinate System: British National Grid

#### BTO Codes

- BH - Black-headed Gull
- H - Grey Heron
- HG - Herring Gull
- LB - Lesser Black-backed Gull
- MA - Mallard
- MS - Mute Swan

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Drawing Title

Southwold Corridor (East) October  
 2023

Scale at A3

**1:8,000**

Role

**Ecology**

Suitability

**For Information**

Project Number

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Rev

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Drawing Number

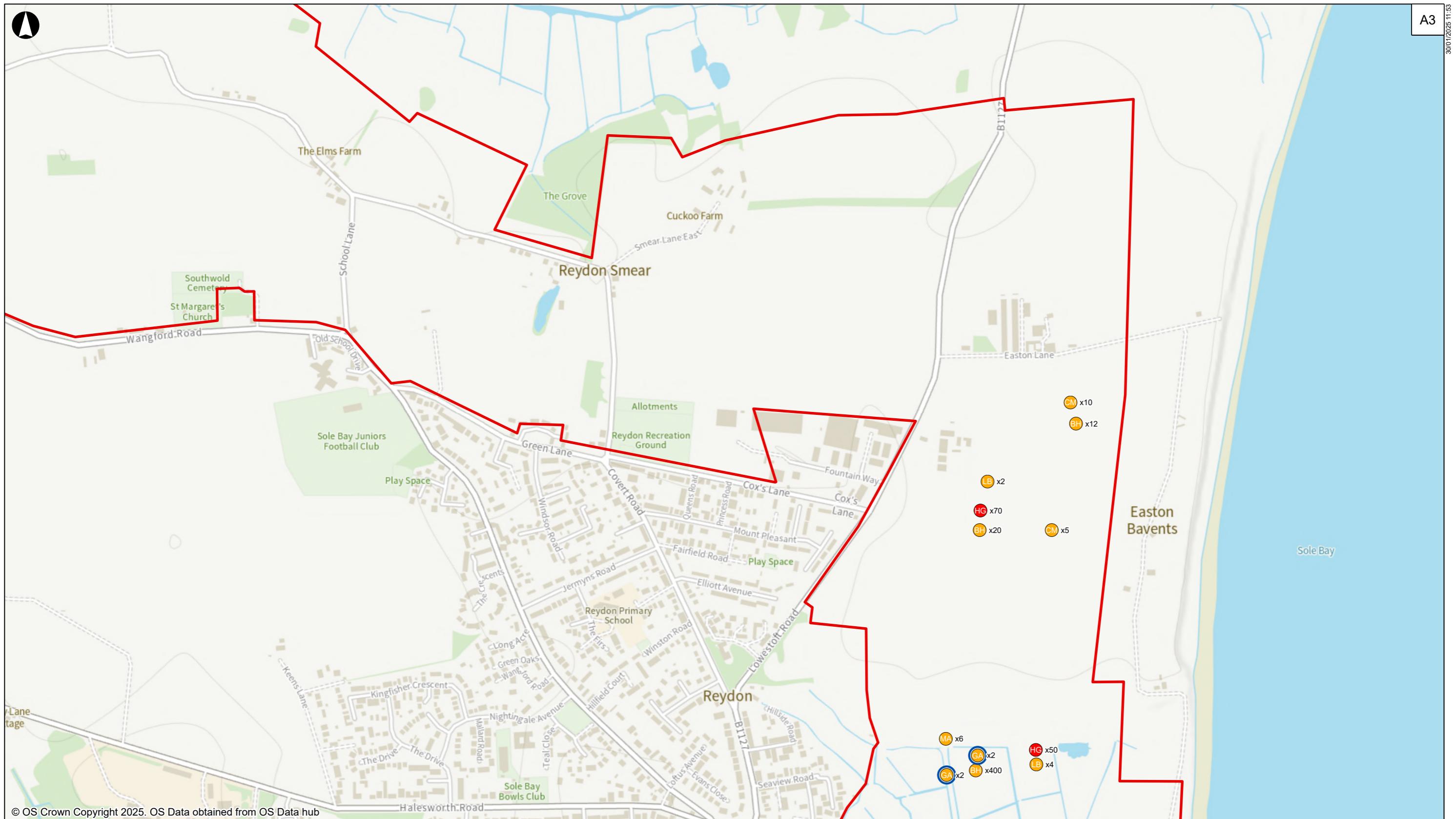
**Figure 3.13**











#### Birds of Conservation Concern

- Red
- Amber
- Green
- Not Assessed
- Ramsar and SPA Designated Species
- Survey Areas

BTO Codes  
 BH - Black-headed Gull  
 CM - Common Gull  
 GA - Gadwall  
 HG - Herring Gull  
 LB - Lesser Black-backed Gull  
 MA - Mallard

Metres  
 0 100 200 300 400

Coordinate System: British National Grid

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Drawing Title

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 2024

Scale at A3

**1:8,000**

Role

**Ecology**

Suitability

**For Information**

Project Number

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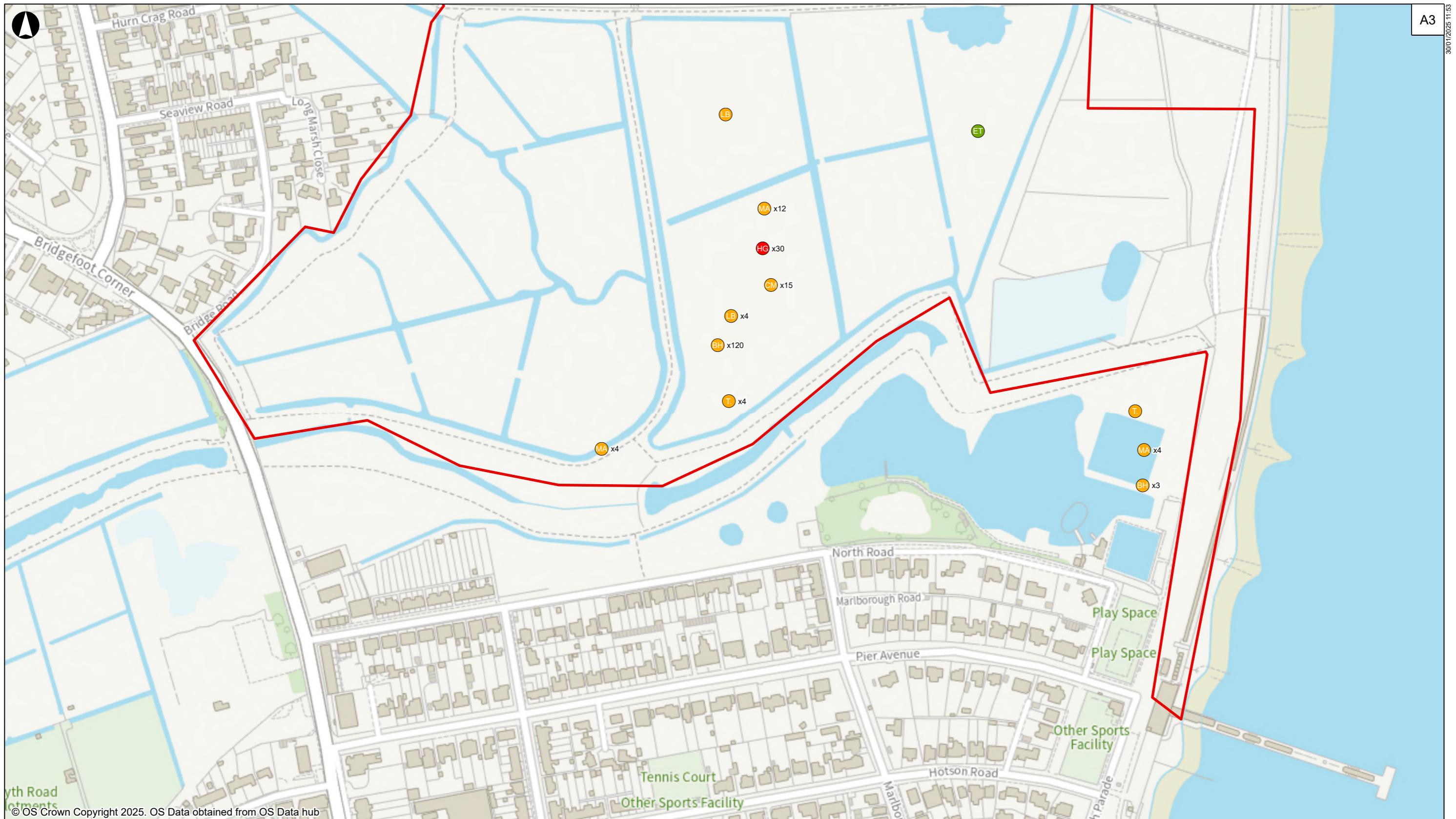
Rev

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Drawing Number

**Figure 3.18**





#### Birds of Conservation Concern

Red

Amber

Green

Not Assessed

Ramsar and SPA Designated Species

Survey Areas

Metres  
0 100 200  
Coordinate System: British National Grid

BTO Codes  
HG - Herring Gull  
BH - Black-headed Gull  
LB - Lesser Black-backed Gull  
CM - Common Gull  
MA - Mallard  
ET - Little Egret

HG - Herring Gull  
LB - Lesser Black-backed Gull  
MA - Mallard  
T. - Teal

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Drawing Title

Southwold Corridor (South)  
November 2023

Scale at A3

**1:3,000**

Role

**Ecology**

Suitability

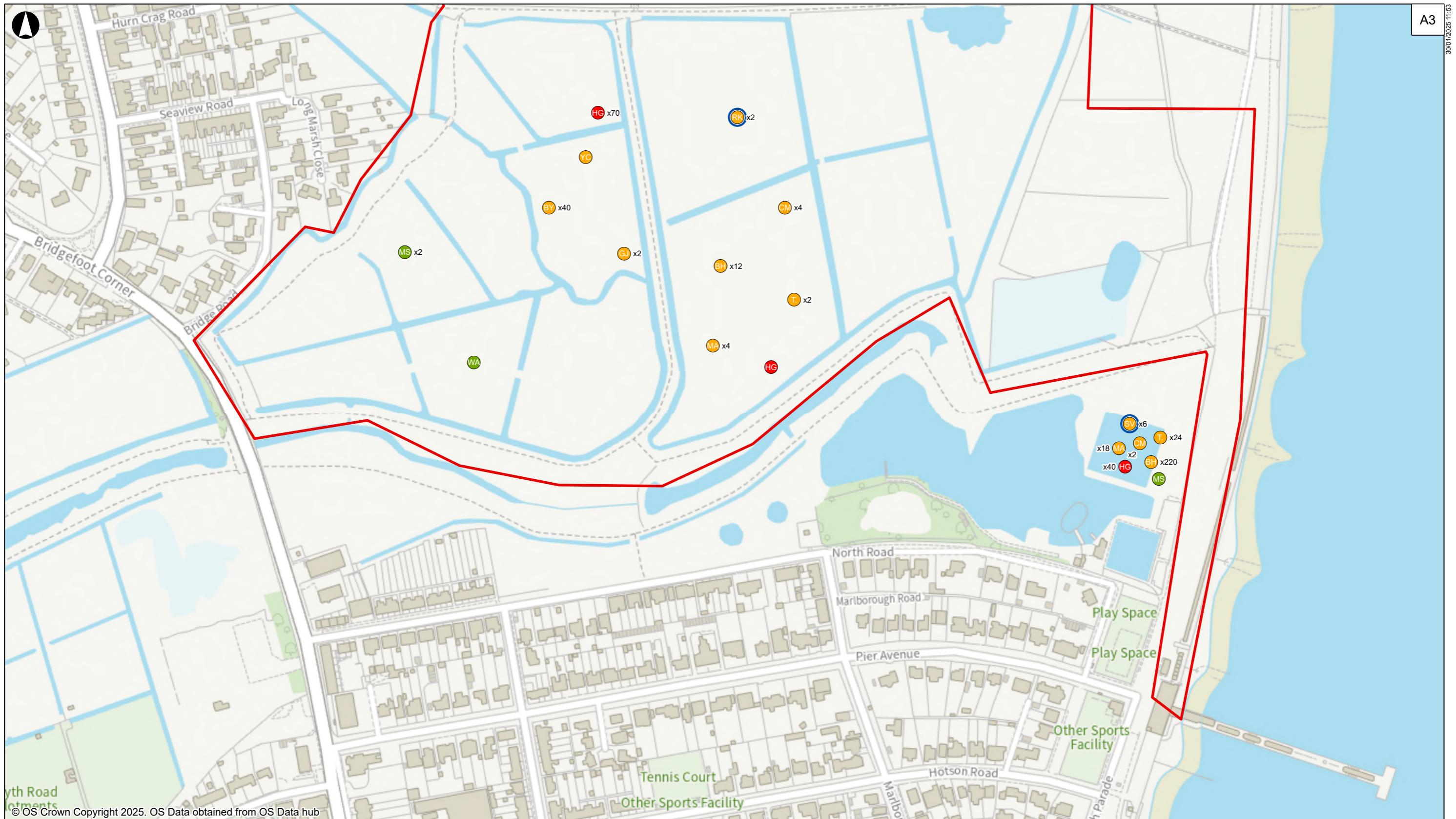
**For Information**

Project Number

**287334**

Drawing Number

**Figure 3.20**



#### Birds of Conservation Concern

- Red
- Amber
- Green
- Not Assessed
- Ramsar and SPA Designated Species
- Survey Areas

#### BTO Codes

- BH - Black-headed Gull
- BY - Barnacle Goose
- CM - Common Gull
- GJ - Greylag Goose
- HG - Herring Gull
- MA - Mallard
- MS - Mute Swan
- YC - Caspian Gull

#### HG - Herring Gull

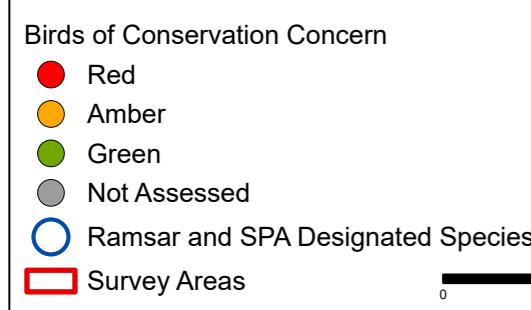
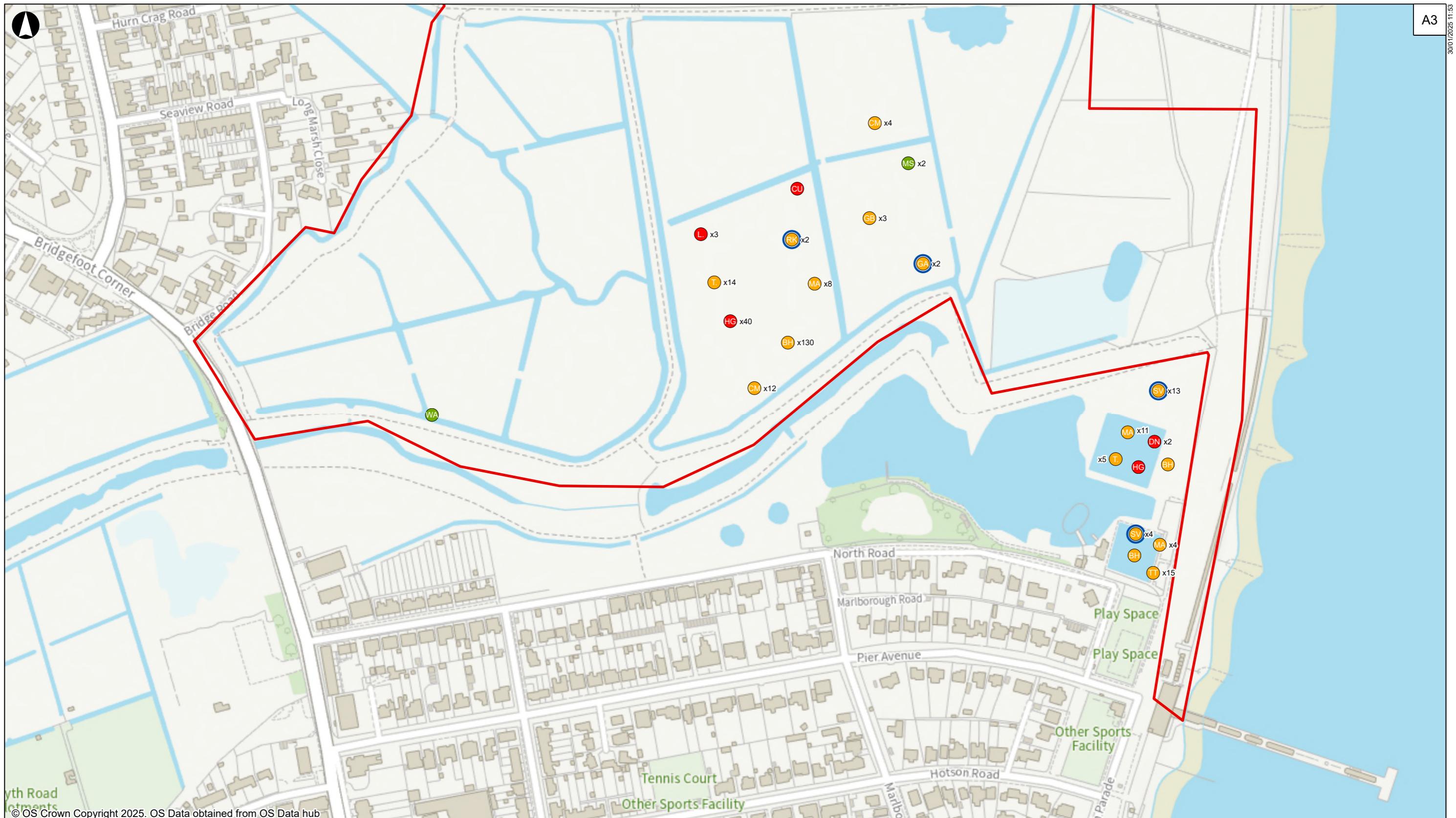
- T - Teal
- WA - Water Rail
- Y - Caspian Gull

#### T - Teal

- WA - Water Rail
- Y - Caspian Gull

#### WA - Water Rail

#### Y - Caspian Gull



**BTO Codes**

- GB - Great Black-backed Gull
- BH - Black-headed Gull
- CM - Common Gull
- CU - Curlew
- DN - Dunlin
- GA - Gadwall
- L - Lapwing
- MA - Mallard
- MS - Mute Swan
- RK - Redshank
- T - Teal
- TT - Turnstone
- WA - Water Rail

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Rev	Date	By	Chkd	Appd	Authd

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Drawing Title  
**Southwold Corridor (South) January 2024**

Scale at A3  
**1:3,000**

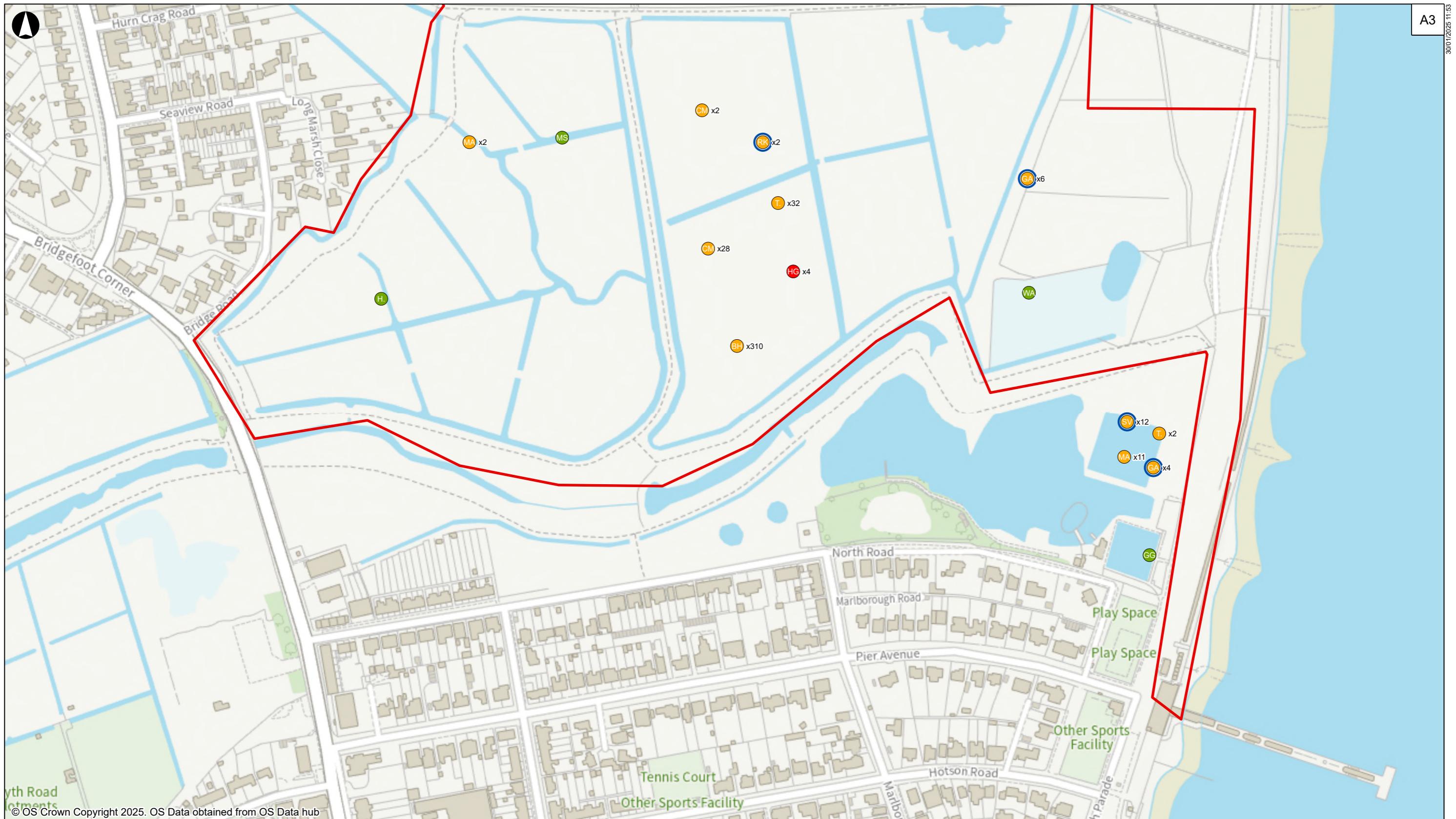
Role  
**Ecology**

Suitability  
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**Figure 3.22**



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#### Birds of Conservation Concern

- Red
- Amber
- Green
- Not Assessed
- Ramsar and SPA Designated Species
- Survey Areas

**BTO Codes**  
 BH - Black-headed Gull  
 CM - Common Gull  
 GA - Gadwall  
 GG - Great Crested Grebe

H. - Grey Heron  
 HG - Herring Gull  
 MA - Mallard  
 MS - Mute Swan

SV - Shoveler  
 T. - Teal  
 WA - Water Rail

RK - Redshank

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Project Name

**LIONLINK**

Wintering Bird Survey 2023/2024

Drawing Title

Southwold Corridor (South)  
 February 2024

Scale at A3

**1:3,000**

Role

**Ecology**

Suitability

**For Information**

Project Number

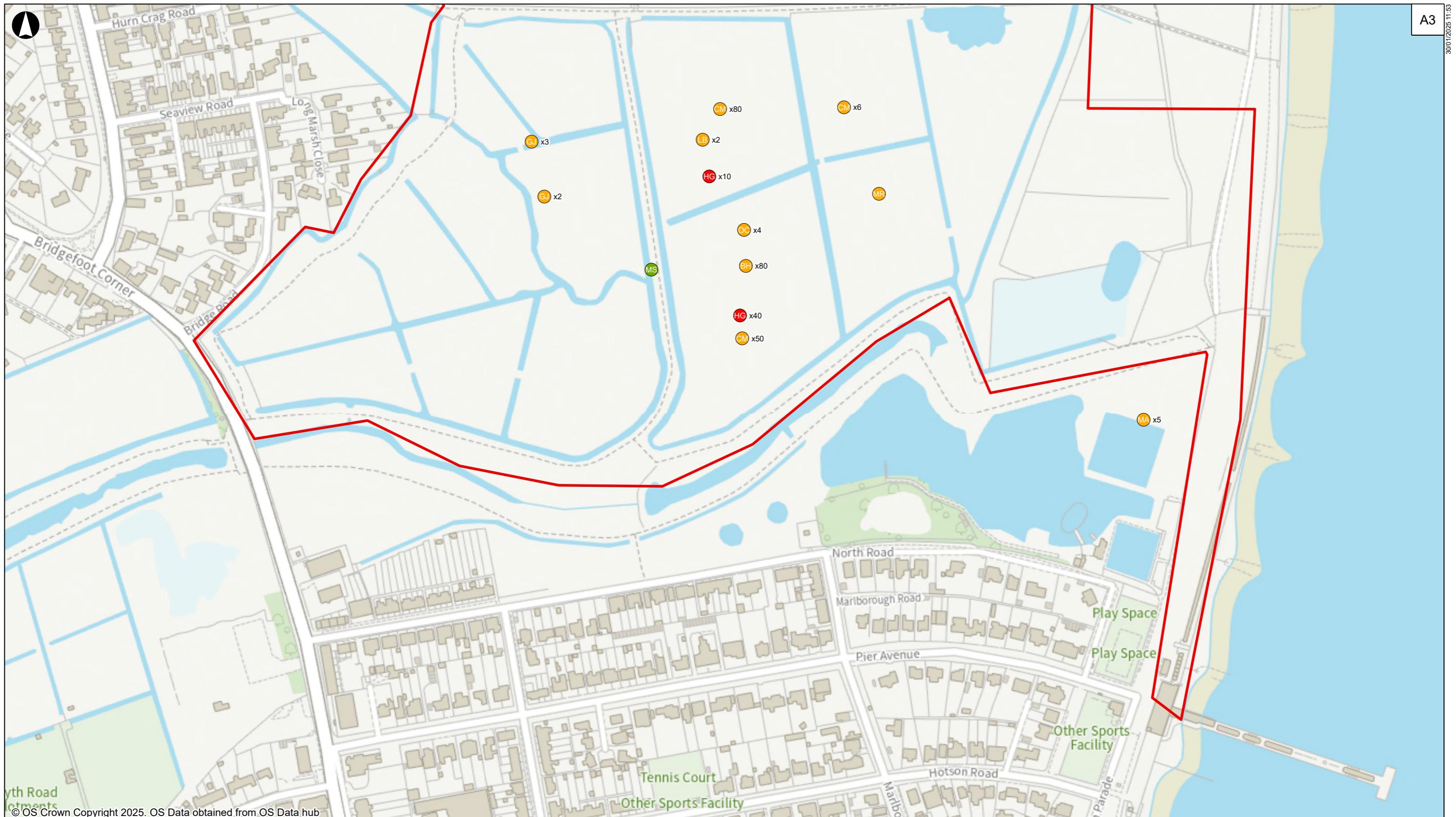
**287334**

Rev

**P01**

Drawing Number

**Figure 3.23**



Birds of Conservation Concern

Red

Amber

Green

Not Assessed

Ramsar and SPA Designated Species

Survey Areas

BTO Codes

BH - Black-headed Gull

CM - Common Gull

GJ - Greylag Goose

HG - Herring Gull

LB - Lesser Black-backed Gull

MA - Mallard

MR - Marsh Harrier

MS - Mute Swan

OC - Oystercatcher

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Wintering Bird Survey 2023/2024

Drawing Title

Southwold Corridor (South) March  
2024

Scale at A3

**1:3,000**

Role

**Ecology**

Suitability

**For Information**

Project Number

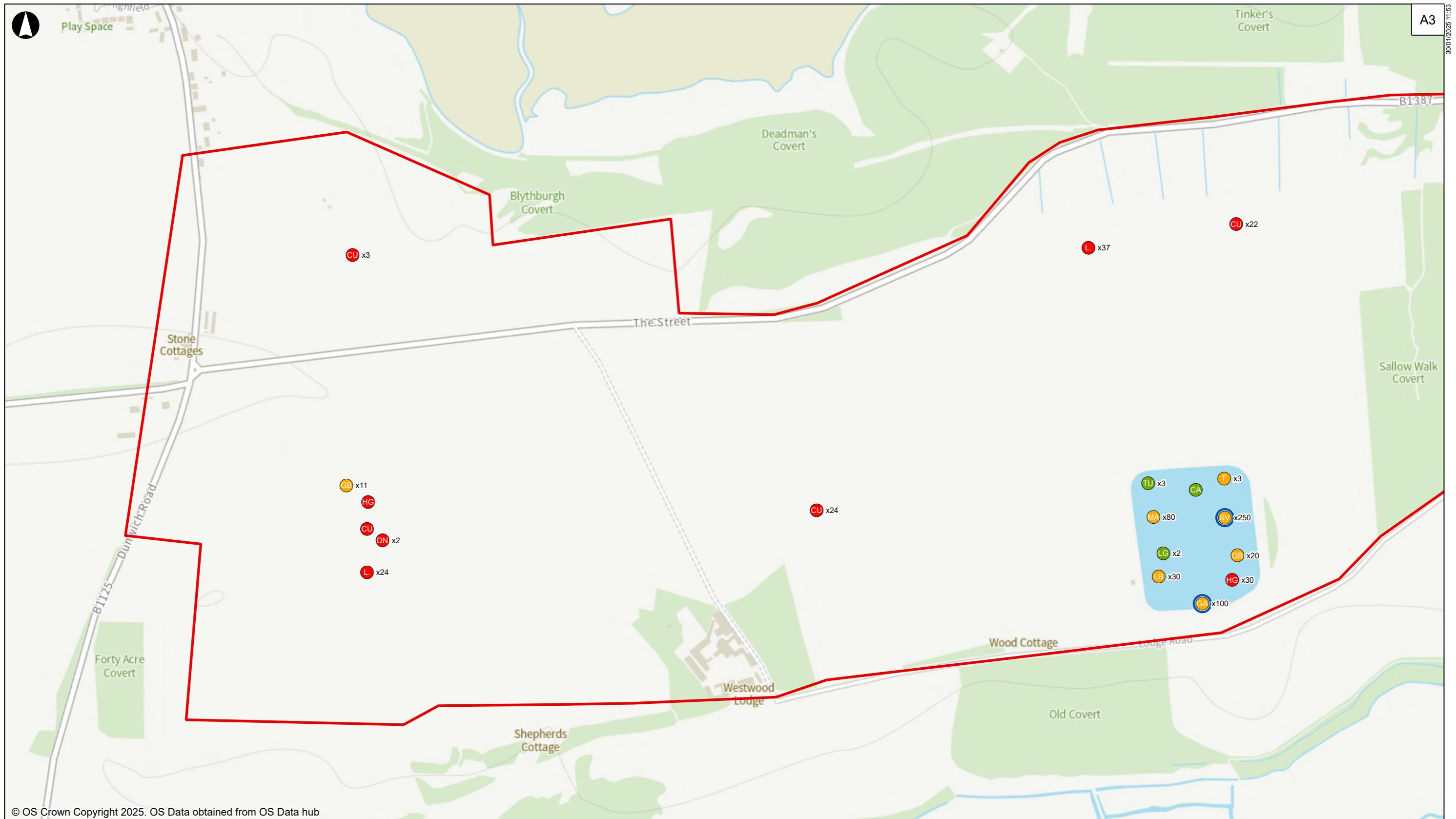
**287334**

Rev

**P01**

Drawing Number

**Figure 3.24**



**Birds of Conservation Concern**

- Red
- Amber
- Green
- Not Assessed
- Ramsar and SPA Designated Species

**Survey Areas**

Metres: 0, 100, 200

Coordinate System: British National Grid

**BTO Codes**

- GB - Great Black-backed Gull
- CA - Cormorant
- HG - Herring Gull
- CU - Curlew
- L - Lapwing
- DN - Dunlin
- GA - Gadwall

**Other Species**

- MA - Mallard
- SV - Shoveler
- T - Teal
- LB - Lesser Black-backed Gull
- TU - Tufted Duck
- LG - Little Grebe

1 30/01/2025 JG DB RM AC  
Rev Date By Chkd Appd Authd

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**LIONLINK**  
**Wintering Bird Survey 2023/2024**

**Drawing Title**  
**Walberswick Corridor (West)**  
**October 2023**

**Scale at A3**  
**1:7,000**

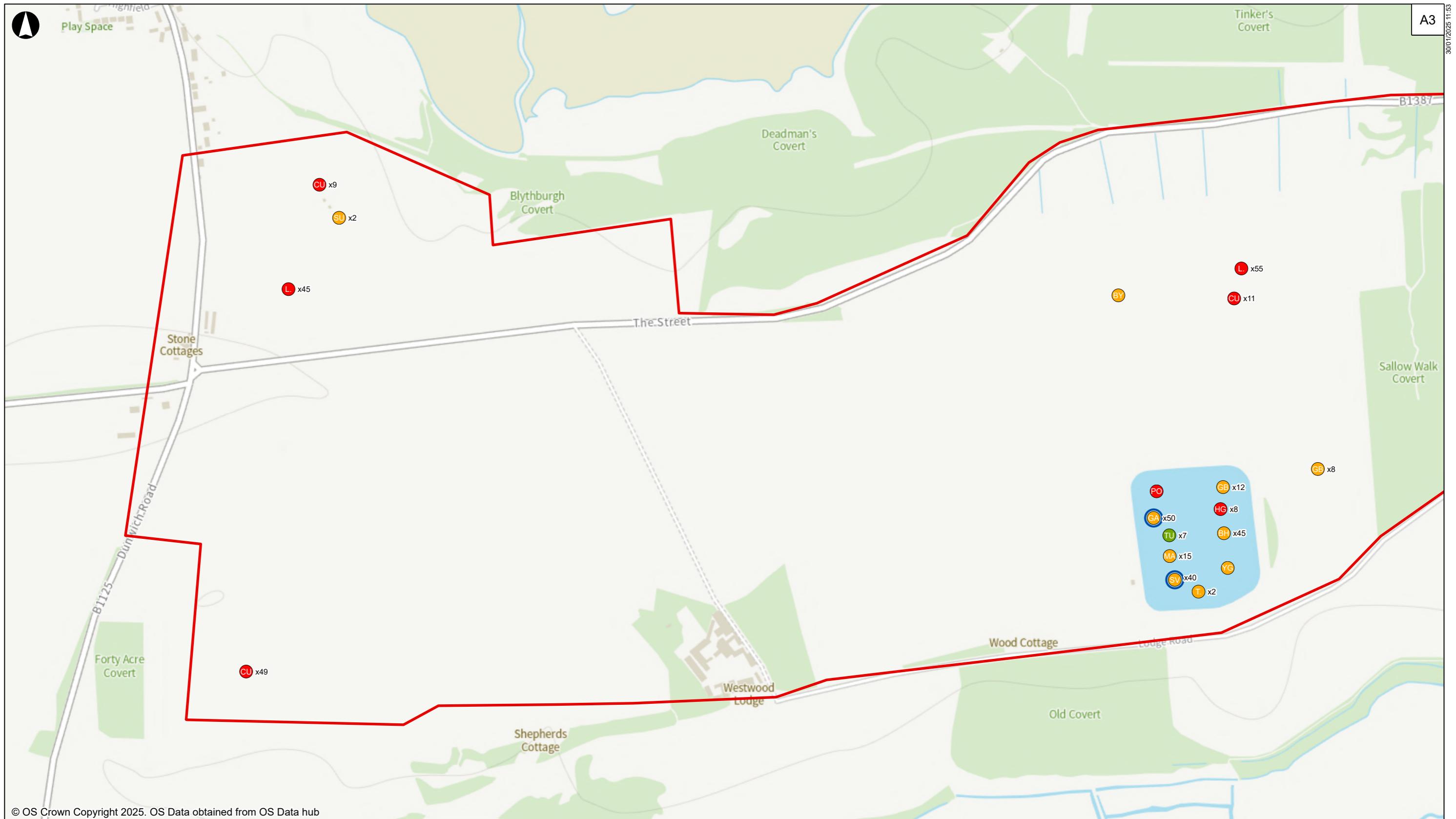
**Role**  
**Ecology**

**Suitability**  
**For Information**

**Project Number**  
**287334**

**Rev**  
**P01**

**Drawing Number**  
**Figure 3.25**



**Birds of Conservation Concern**

- Red
- Amber
- Green
- Not Assessed
- Ramsar and SPA Designated Species
- Survey Areas

**BTO Codes**

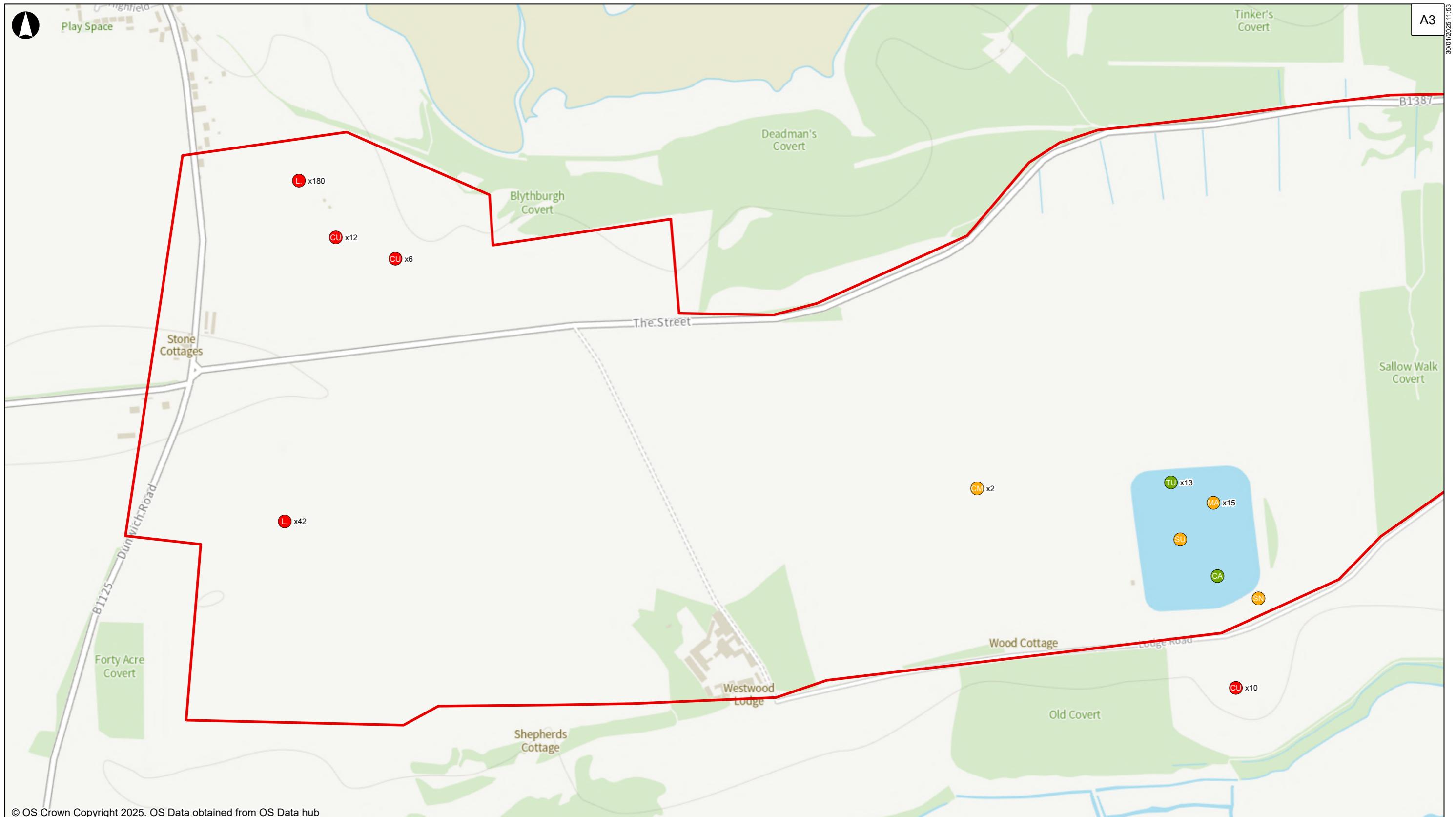
GB - Great Black-backed Gull	SU - Shelduck
BH - Black-headed Gull	HG - Herring Gull
BY - Barnacle Goose	L. - Lapwing
CU - Curlew	MA - Mallard
GA - Gadwall	PO - Pochard

**Metres**

0 100 200

Coordinate System: British National Grid





#### Birds of Conservation Concern

- Red
- Amber
- Green
- Not Assessed
- Ramsar and SPA Designated Species
- Survey Areas

BTO Codes  
 CU - Curlew  
 CA - Cormorant  
 CM - Common Gull  
 L - Lapwing  
 SU - Shelduck  
 TU - Tufted Duck

SN - Snipe  
 MA - Mallard

Metres  
 0 100 200  
 Coordinate System: British National Grid

1	30/01/2025	JG	DB	RM	AC
Rev	Date	By	Chkd	Appd	Authd

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Wintering Bird Survey 2023/2024

Drawing Title

Walberswick Corridor (West)  
 January 2024

Scale at A3

**1:7,000**

Role

**Ecology**

Suitability

**For Information**

Project Number

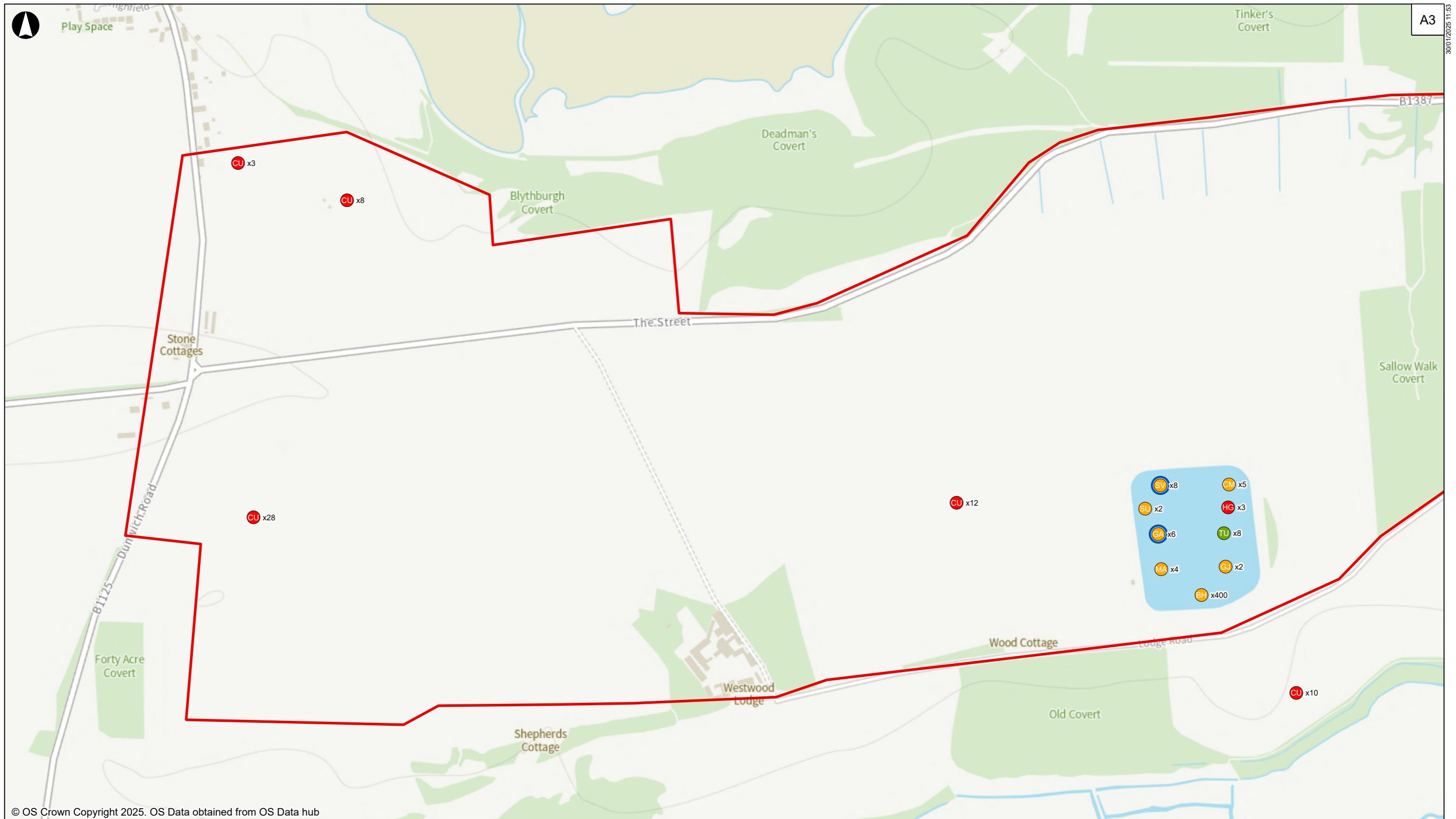
**287334**

Drawing Number

**Figure 3.28**

Rev **P01**





#### Birds of Conservation Concern

- Red
- Amber
- Green
- Not Assessed
- Ramsar and SPA Designated Species
- Survey Areas

#### BTO Codes

GA - Gadwall	GJ - Greylag Goose	SU - Shelduck
BH - Black-headed Gull	HG - Herring Gull	SV - Shoveler
CM - Common Gull	MA - Mallard	TU - Tufted Duck
CU - Curlew		

Metres  
0 100 200  
Coordinate System: British National Grid

1	30/01/2025	JG	DB	RM	AC
Rev	Date	By	Chkd	Appd	Authd

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Drawing Title

Walberswick Corridor (West) March  
2024

Scale at A3

**1:7,000**

Role

**Ecology**

Suitability

**For Information**

Project Number

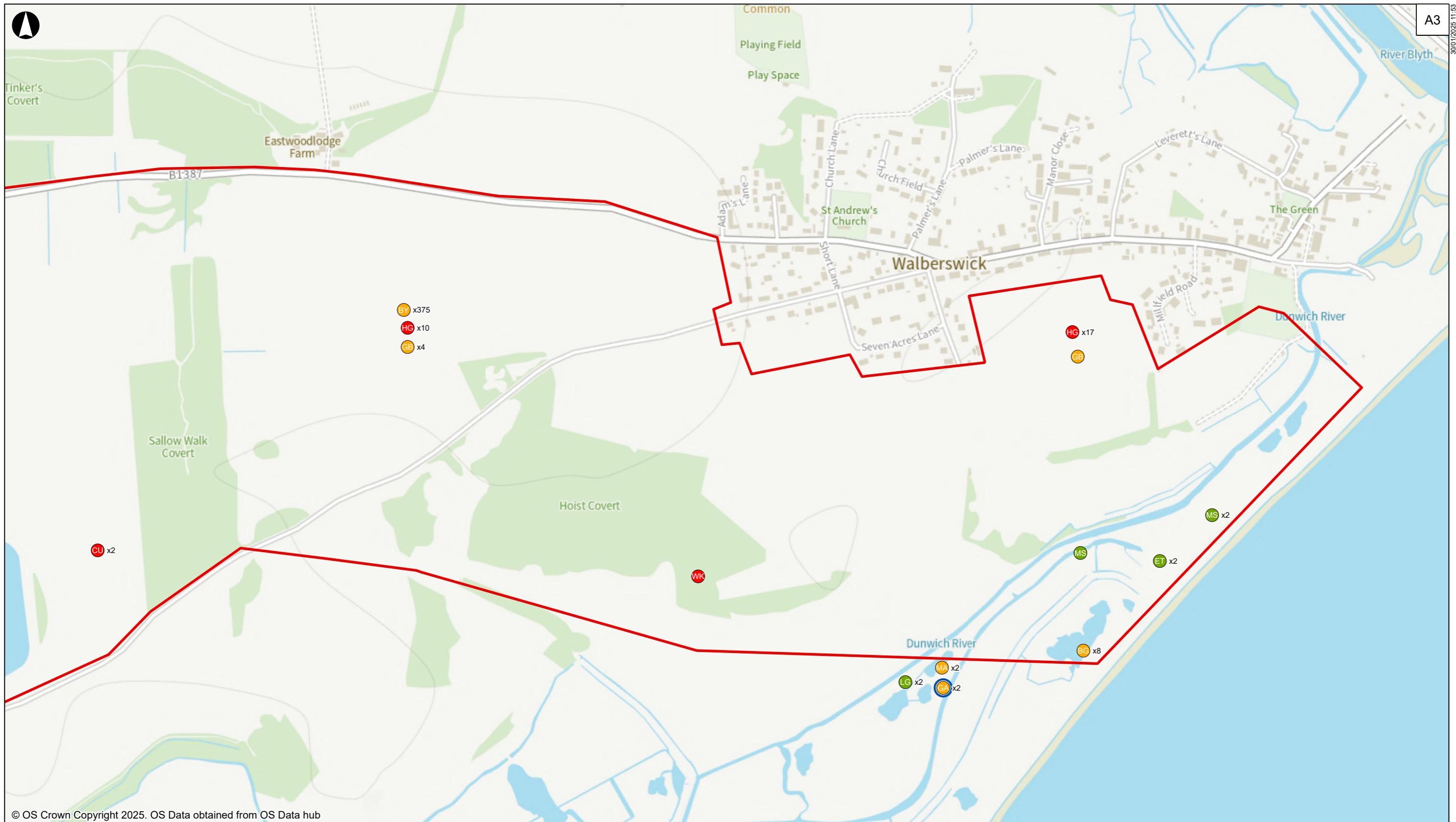
**287334**

Rev

**P01**

Drawing Number

**Figure 3.30**



**Birds of Conservation Concern**

- Red
- Amber
- Green
- Not Assessed
- Ramsar and SPA Designated Species

**Survey Areas**

Metres: 0, 100, 200

Coordinate System: British National Grid

**BTO Codes**

- BG - Brent Goose
- BY - Barnacle Goose
- CU - Curlew
- ET - Little Egret
- GA - Gadwall
- GB - Great Black-backed Gull
- HG - Herring Gull
- LG - Little Grebe
- MA - Mallard
- MS - Mute Swan
- WK - Woodcock

Project Name

**ARUP**  
**LIONLINK**  
**Wintering Bird Survey 2023/2024**

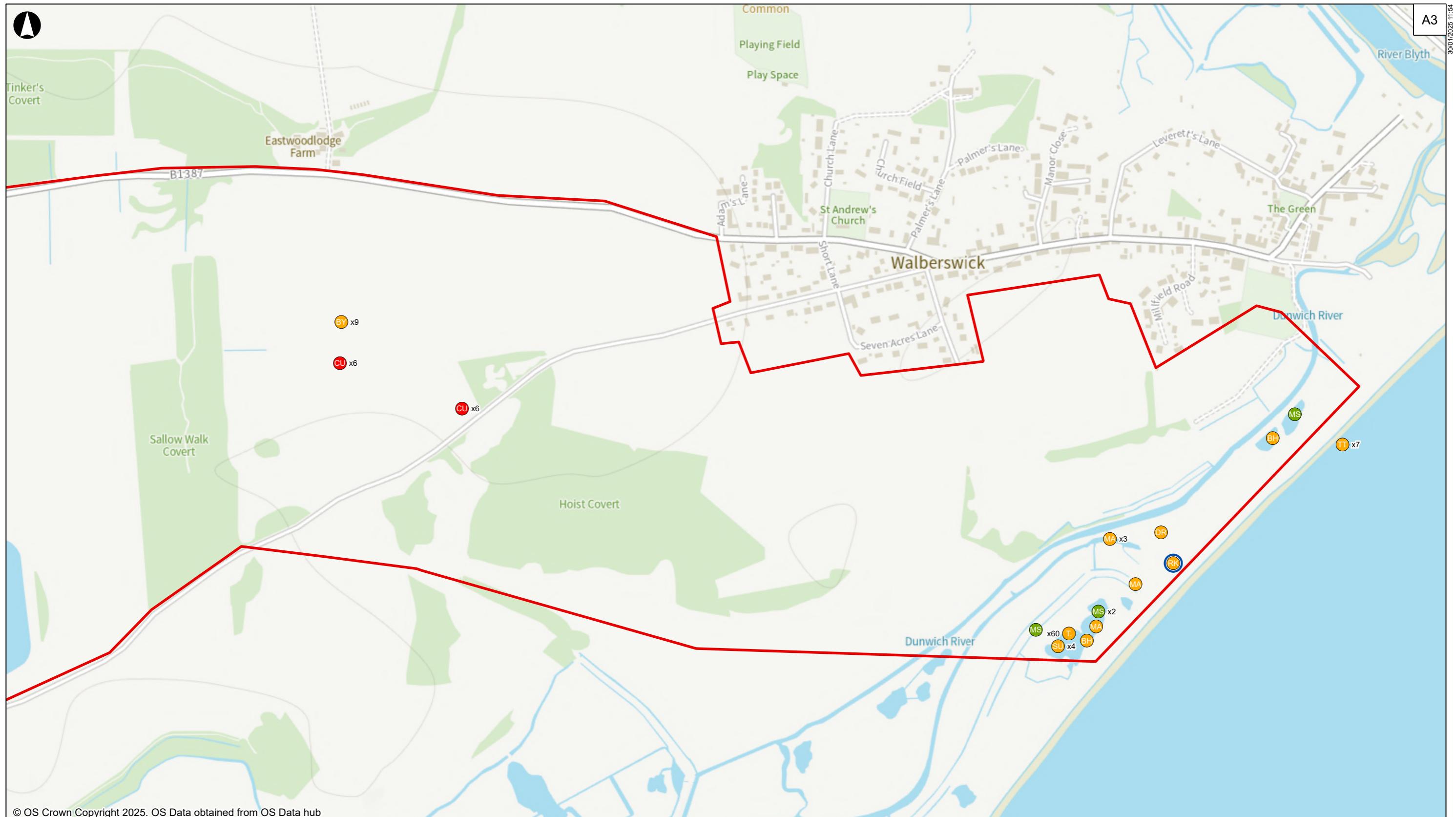
Drawing Title

**Walberswick Corridor (East)**  
**October 2023**

**National Grid LionLink Limited (NGLL)**

Scale at A3  
**1:7,000**  
Role  
**Ecology**  
Suitability  
**For Information**  
Project Number  
**287334**  
Rev  
**P01**  
Drawing Number  
**Figure 3.31**





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## Birds of Conservation Concern

Red

● Amber

● Green

### Not Assessed

© Ramsar and SP

BTO Codes	DR - Spotted Redshank	SU - Shelduck
BH - Black-headed Gull	MA - Mallard	T - Teal
BY - Barnacle Goose	MS - Mute Swan	TT - Turnstone
CU - Curlew	RK - Redshank	

Metres

0 100 200

Coordinate System: British National Grid

1	30/01/2025	JG	DB	RM	AC
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## National Grid LionLink Limited (NGLL)

B. L. M.

LIONLINK

Wintering Bird Survey 2023/2024

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**Drawing Title**

## Walberswick Corridor (East) December 2023

Scale at A3

1:7,000

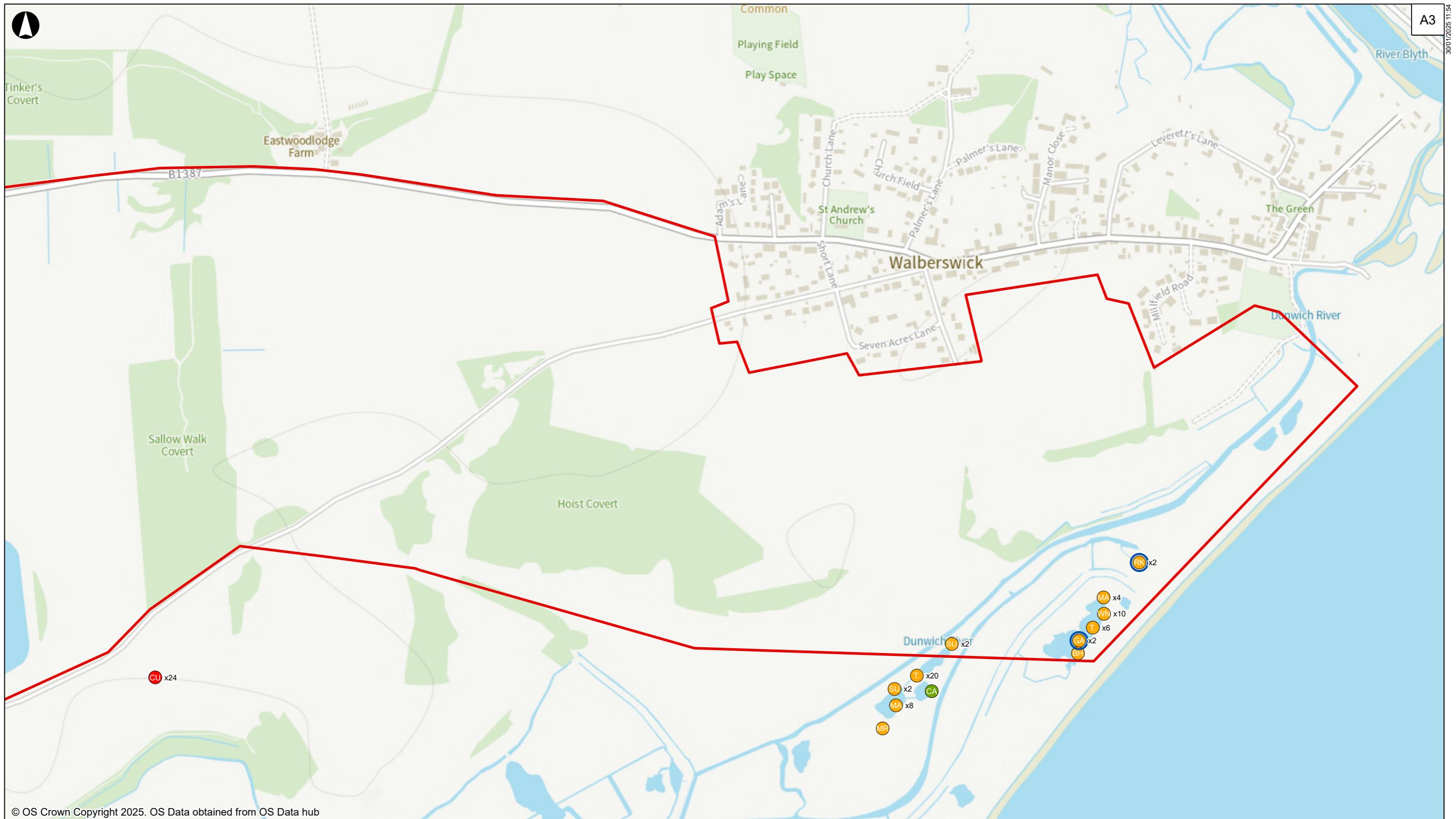
## Role

## Ecology

## Suitability For Inform

Project Number

287334



**Birds of Conservation Concern**

- Red
- Amber
- Green
- Not Assessed
- Ramsar and SPA Designated Species

**Survey Areas**

**BTO Codes**

CU - Curlew	GA - Gadwall	SU - Shelduck
BH - Black-headed Gull	MA - Mallard	T. - Teal
CA - Cormorant	MR - Marsh Harrier	WN - Wigeon
RK - Redshank		

**Metres**

0 100 200

Coordinate System: British National Grid

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**Wintering Bird Survey 2023/2024**

**Drawing Title**  
**Walberswick Corridor (East)**

**Scale at A3**  
**1:7,000**

**Role**  
**Ecology**

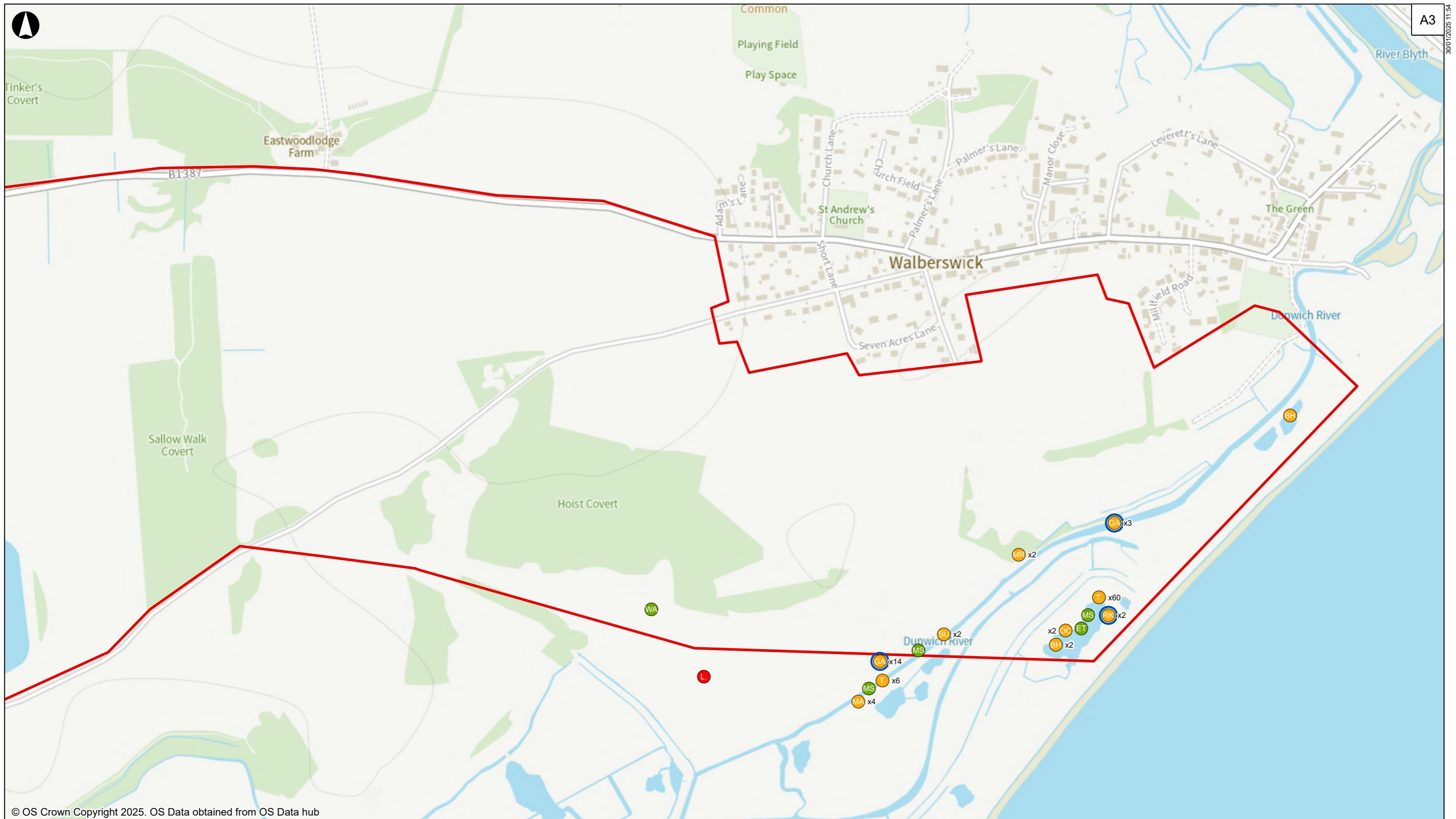
**Suitability**  
**For Information**

**Project Number**  
**287334**

**Rev**  
**P01**

**Drawing Number**  
**Figure 3.34**





#### Birds of Conservation Concern

- Red
- Amber
- Green
- Not Assessed
- Ramsar and SPA Designated Species
- Survey Areas

BTO Codes	MA - Mallard	SU - Shelduck
BH - Black-headed Gull	MR - Marsh Harrier	T - Teal
ET - Little Egret	MS - Mute Swan	WA - Water Rail
GA - Gadwall	OC - Oystercatcher	
L - Lapwing	RK - Redshank	

Metres  
0 100 200  
Coordinate System: British National Grid

1	30/01/2025	JG	DB	RM	AC
Rev	Date	By	Chkd	Appd	Authd

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Drawing Title

Walberswick Corridor (East) March  
2024

Scale at A3

**1:7,000**

Role

**Ecology**

Suitability

**For Information**

Project Number

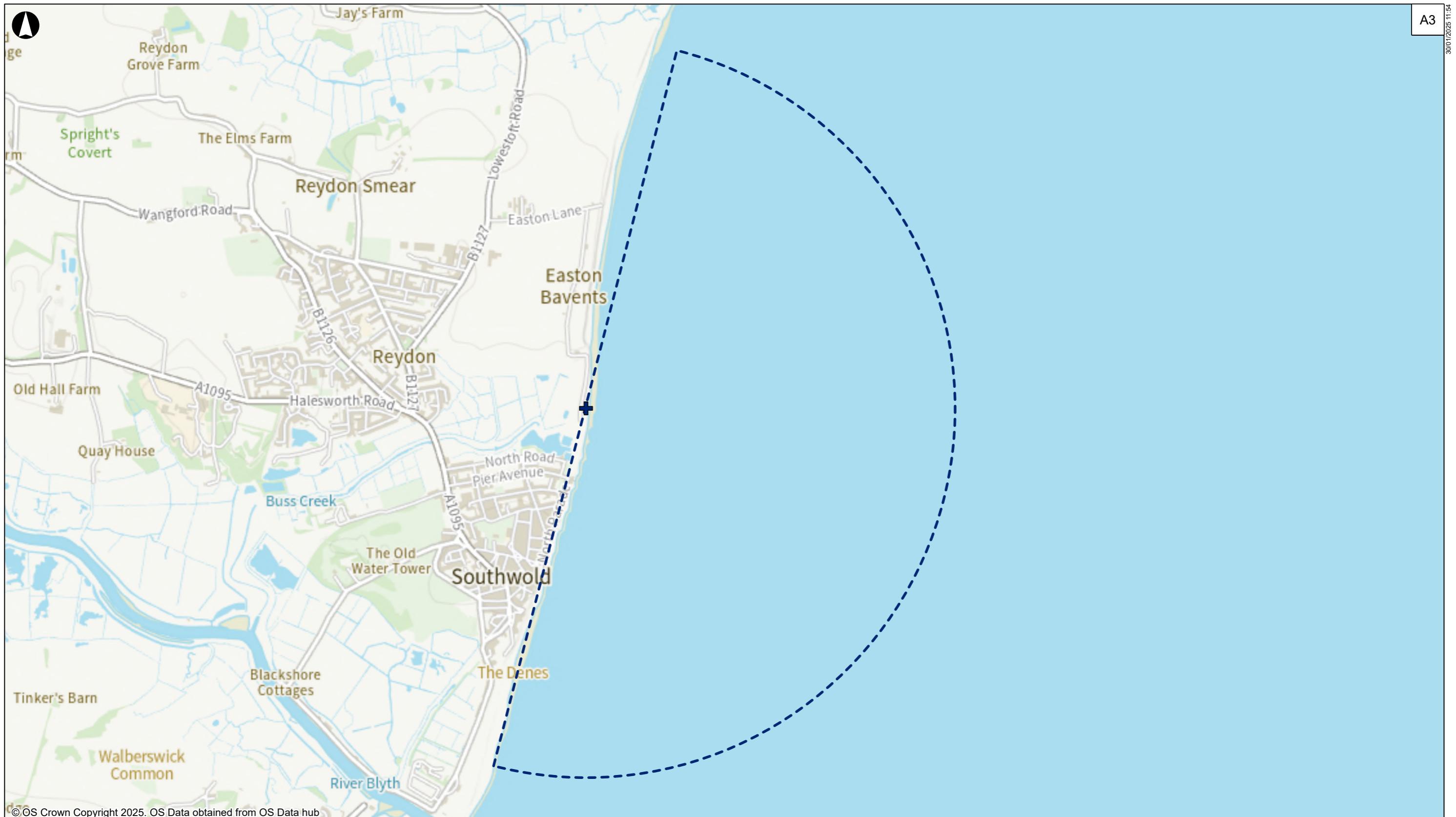
**287334**

Rev

**P01**

Drawing Number

**Figure 3.36**



#### Birds of Conservation Concern

- Red
- Amber
- Green
- Not Assessed
- VP Locations
- Survey Area

Metres  
0 100 200 400 600 800 1,000  
Coordinate System: British National Grid

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Rev	Date	By	Chkd	Appd	Authd

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Wintering Bird Survey 2023/2024

Drawing Title

Southwold VP 18/10/2023  
(07.20-10.20)

Scale at A3

**1:20,000**

Role

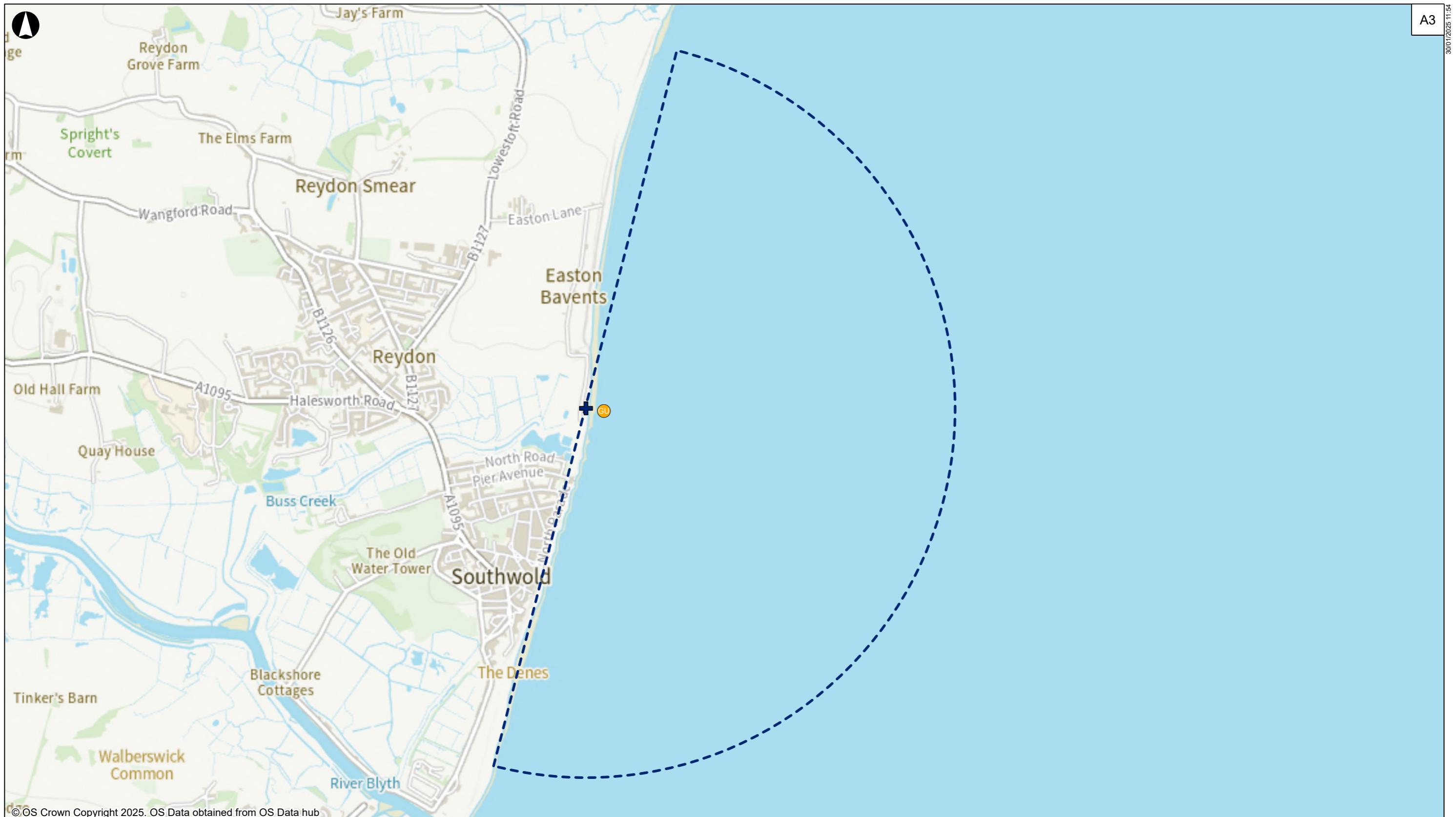
**Ecology**

Suitability

**For Information**

Project Number

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Birds of Conservation Concern

- Red
- Amber
- Green
- Not Assessed
- VP Locations
- Survey Area

BTO Codes  
GU - Guillemot

Metres  
0 100 200 400 600 800 1,000  
Coordinate System: British National Grid

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Project Name

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Wintering Bird Survey 2023/2024

Drawing Title

Southwold VP 18/10/2023  
(10:50-13:50)

Scale at A3

**1:20,000**

Role

**Ecology**

Suitability

**For Information**

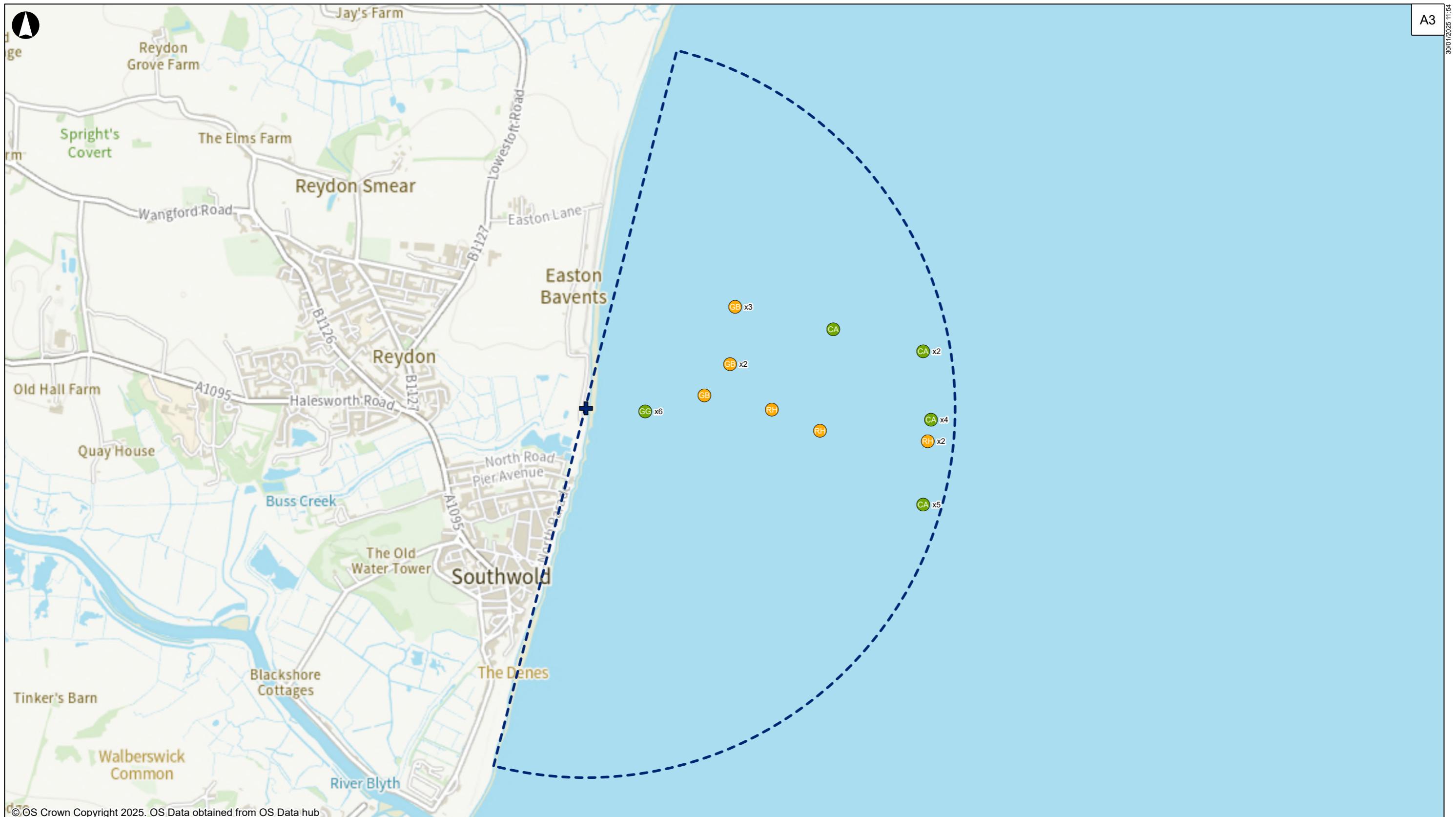
Project Number

**287334**

Rev  
**P01**

Drawing Number

**Figure 3.38**



#### Birds of Conservation Concern

- Red
- Amber
- Green
- Not Assessed
- VP Locations
- Survey Area

#### BTO Codes

- CA - Cormorant
- GB - Great Black-backed Gull
- GG - Great Crested Grebe
- RH - Red-throated Diver

Metres  
0 100 200 400 600 800 1,000  
Coordinate System: British National Grid

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Wintering Bird Survey 2023/2024

Drawing Title

Southwold VP 20/11/2023  
(07:50-10:50)

Scale at A3

**1:20,000**

Role

**Ecology**

Suitability

**For Information**

Project Number

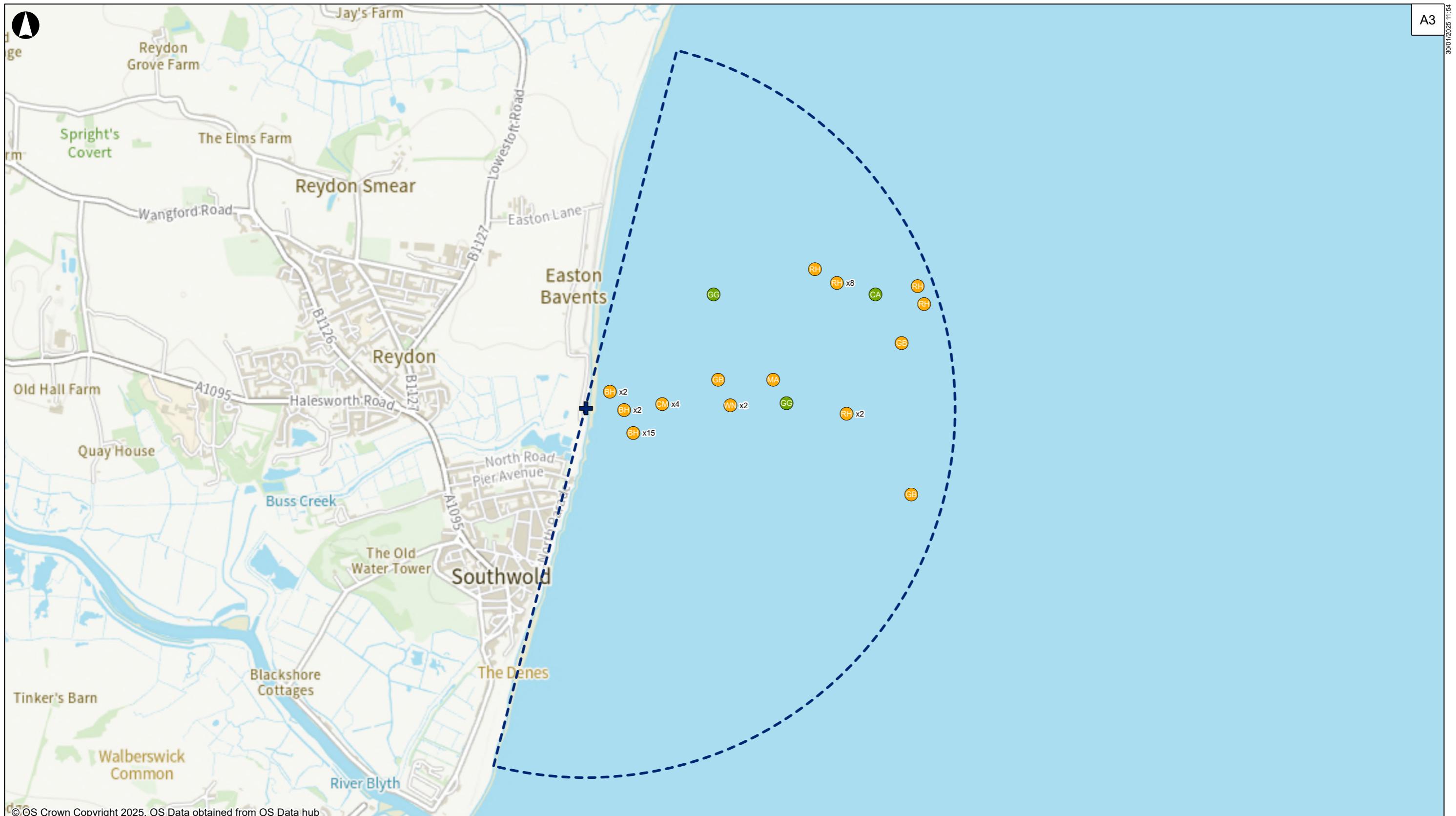
**287334**

Rev

**P01**

Drawing Number

**Figure 3.39**



#### Birds of Conservation Concern

- Red
- Amber
- Green
- Not Assessed
- ✚ VP Locations
- ▣ Survey Area

#### BTO Codes

BH - Black-headed Gull  
CA - Cormorant

#### CM - Common Gull

GB - Great Black-backed Gull  
GG - Great Crested Grebe

#### MA - Mallard

RH - Red-throated Diver  
WN - Wigeon

Metres  
0 100 200 400 600 800 1,000  
Coordinate System: British National Grid

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Wintering Bird Survey 2023/2024

Drawing Title

Southwold VP 20/11/2023  
(11:30-14:30)

Scale at A3

**1:20,000**

Role

**Ecology**

Suitability

**For Information**

Project Number

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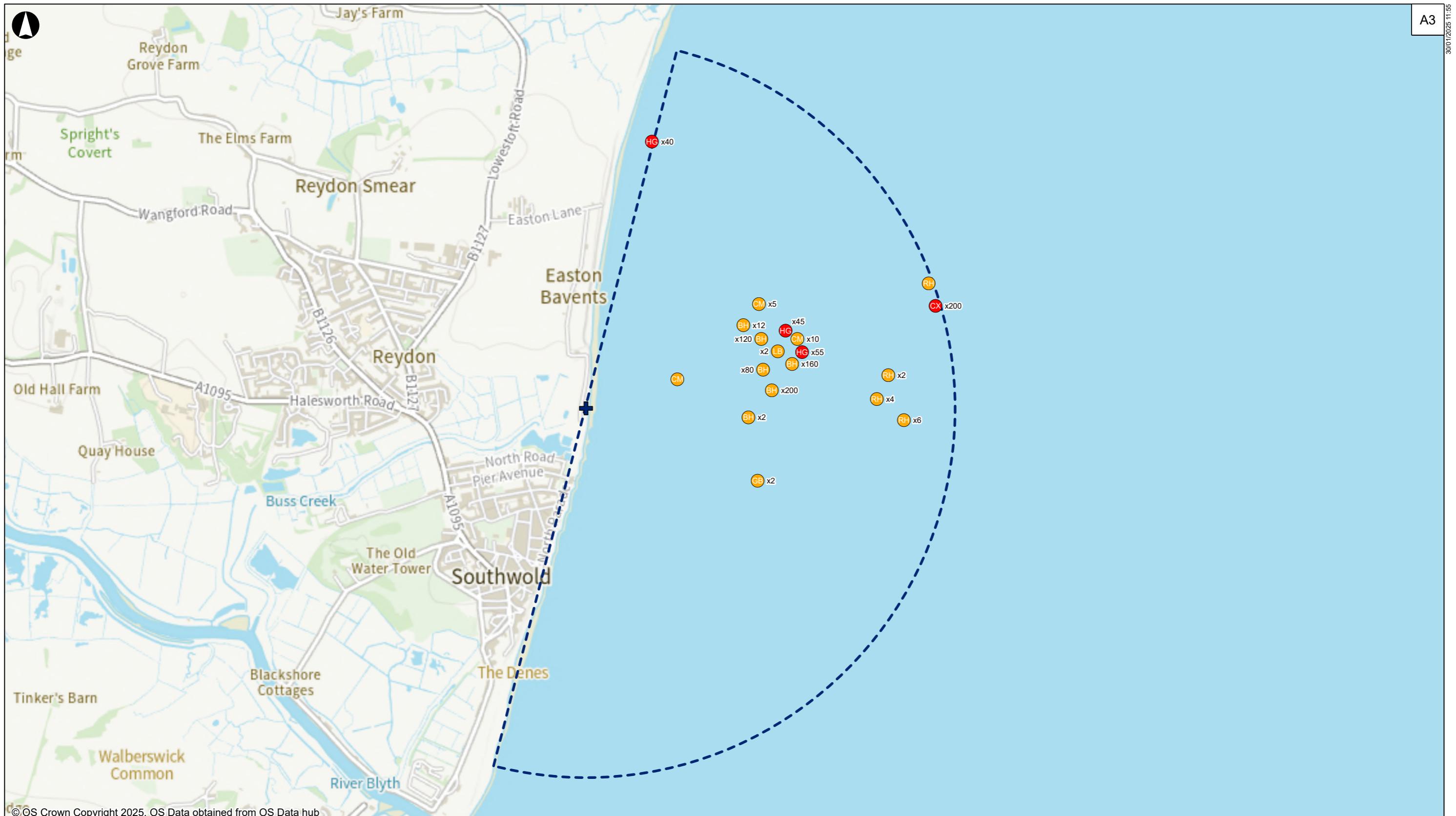
Rev

**P01**

Drawing Number

**Figure 3.40**





<b>Birds of Conservation Concern</b>	<b>BTO Codes</b>	<b>GB</b> - Great Black-backed Gull
		<b>BH</b> - Black-headed Gull
		<b>CM</b> - Common Gull
		<b>CX</b> - Common Scoter
		<b>HG</b> - Herring Gull
		<b>LB</b> - Lesser Black-backed Gull
		<b>RH</b> - Red-throated Diver

1	30/01/2025	JG	DB	RM	AC
Rev	Date	By	Chkd	Appd	Authd

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Wintering Bird Survey 2023/2024

Drawing Title  
**Southwold VP 13/12/2023 (11:45-14:45)**

Scale at A3  
**1:20,000**

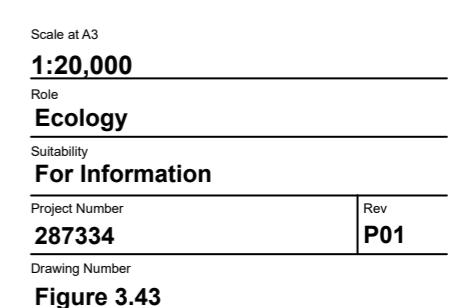
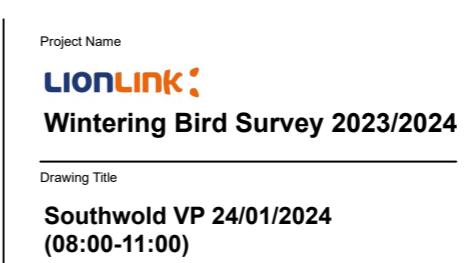
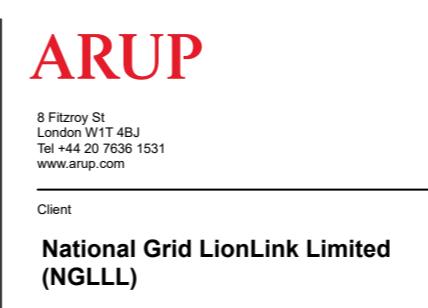
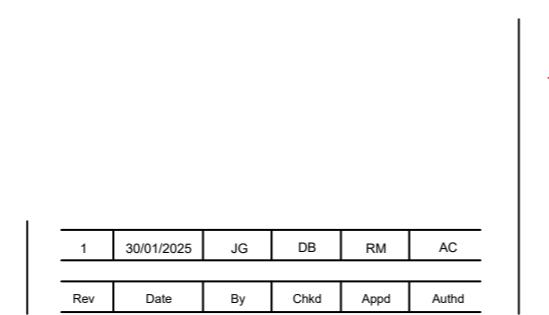
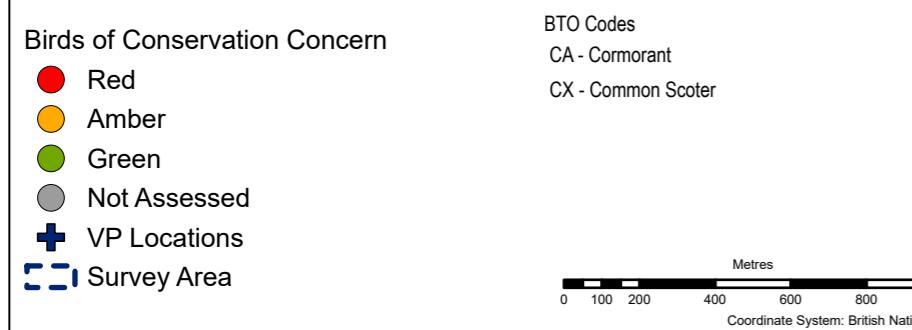
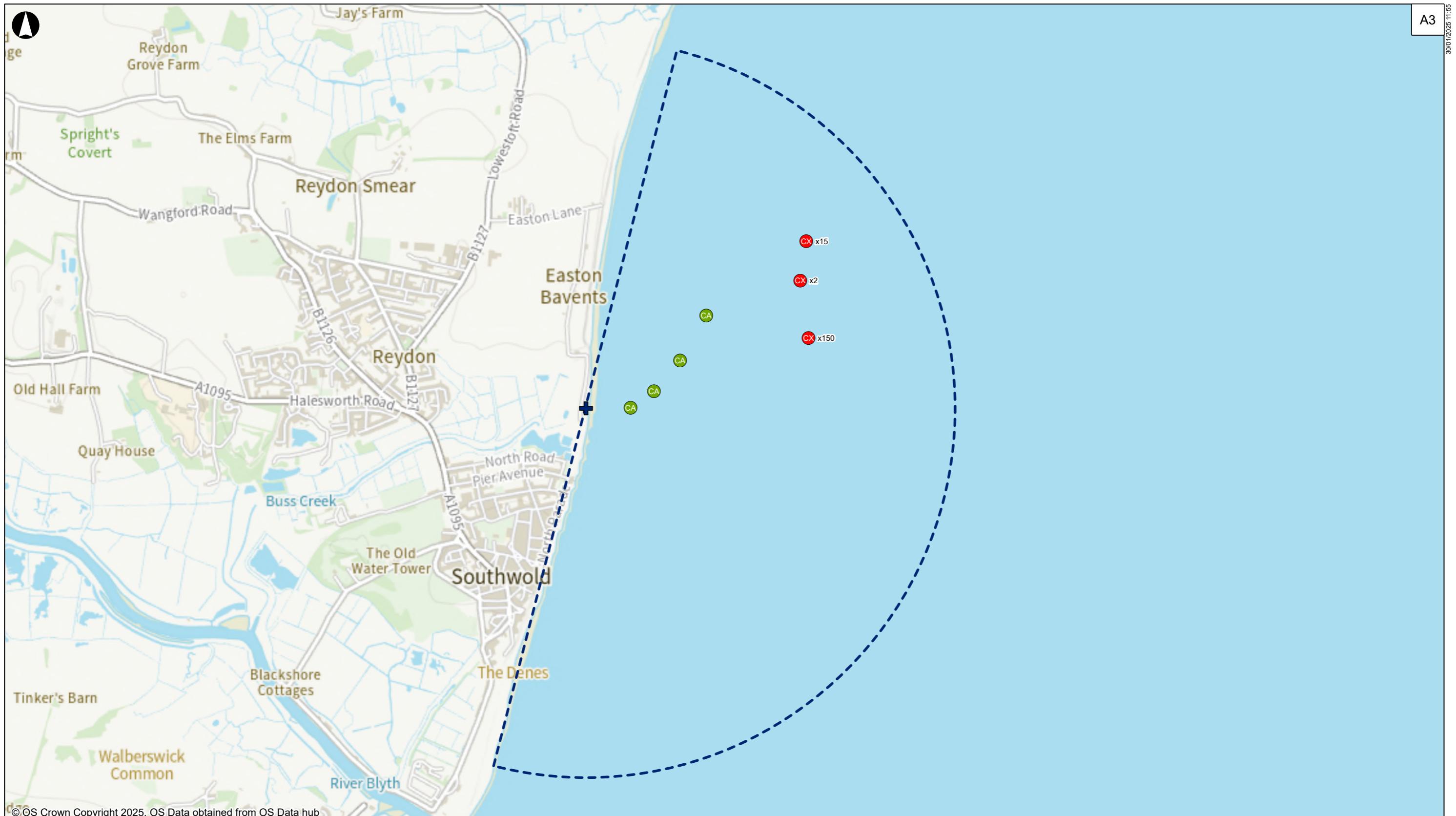
Role  
**Ecology**

Suitability  
**For Information**

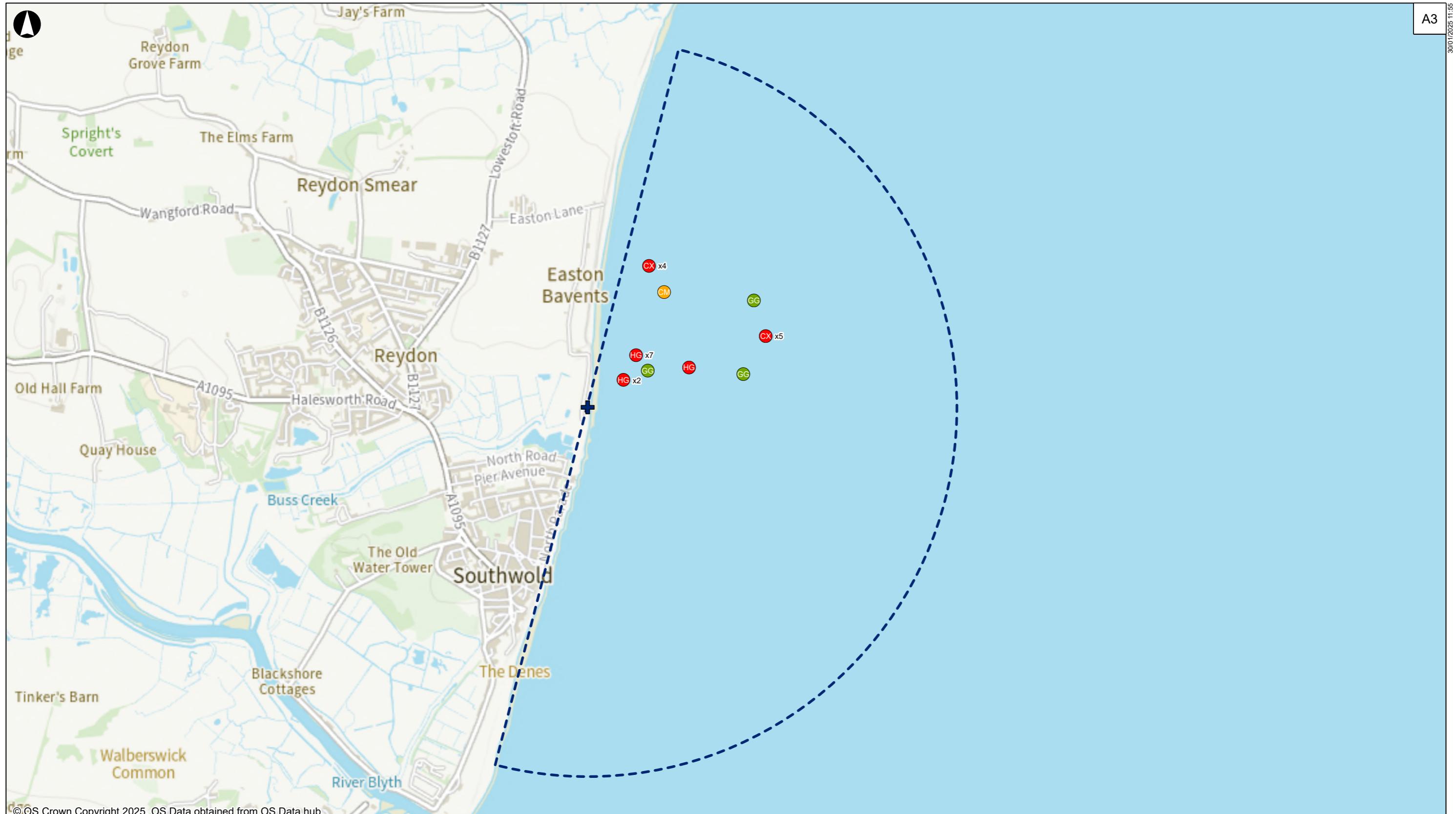
Project Number  
**287334**

Rev  
**P01**

Drawing Number  
**Figure 3.42**







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## Birds of Conservation Concern

- Red
- Amber
- Green
- Not Assessed
- + VP Locations
- Survey Area

BTO Codes  
CM - Common Gull  
CX - Common Scoter  
GG - Great Crested Grebe  
HG - Herring Gull

A scale bar and coordinate system information for a map. The scale bar is labeled 'Metres' and shows distances of 0, 100, 200, 400, 600, 800, and 1 Kilometre. The coordinate system is labeled 'Coordinate System: British National Grid'.

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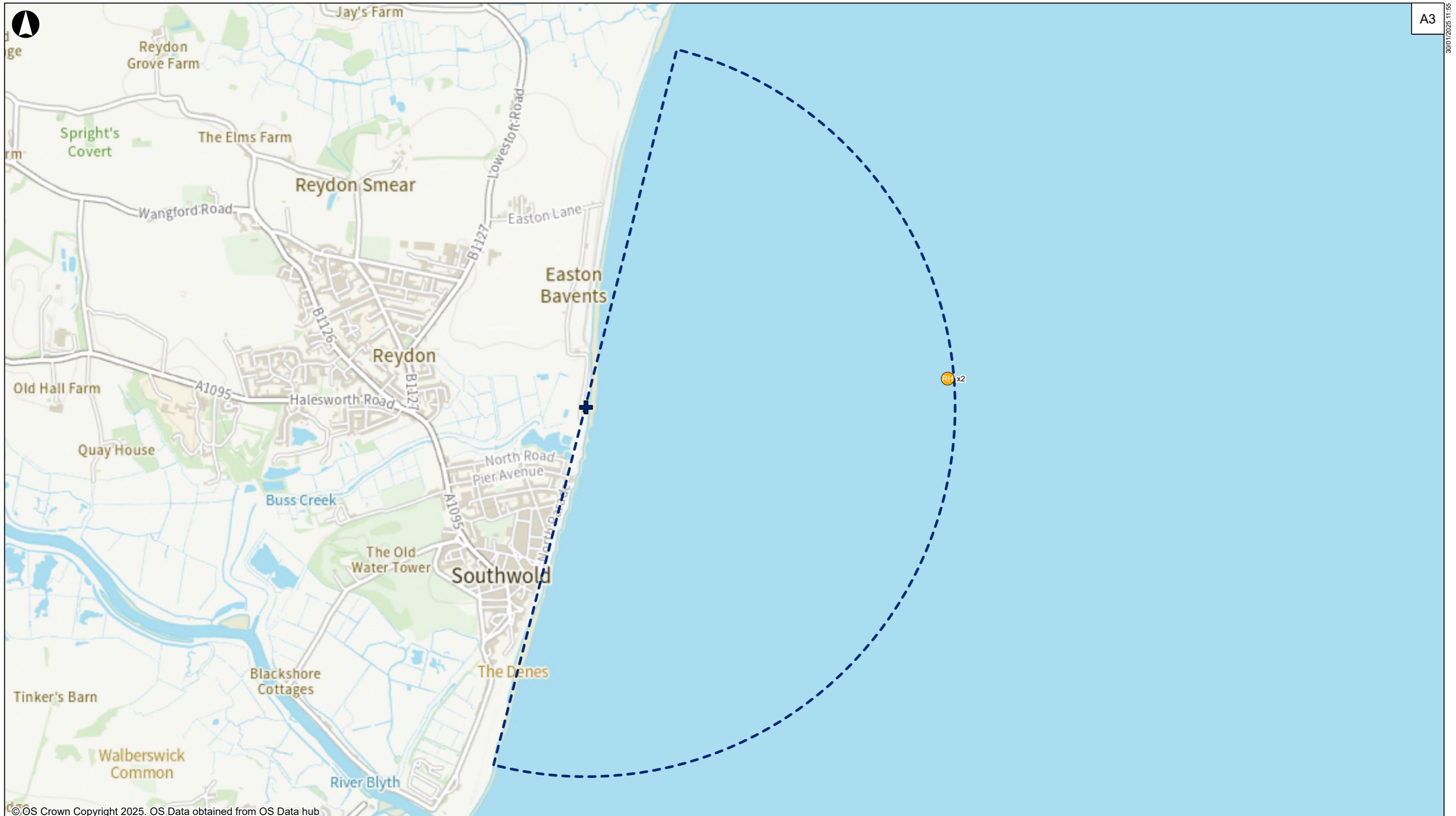
Project Name  
**LIONLINK**  
**Wintering Bird Survey 2023/2024**

---

Drawing Title

scale at A3	
<b>:20,000</b>	
scale	
<b>Ecology</b>	
uitability	
<b>For Information</b>	
Project Number	Rev
<b>287334</b>	<b>P01</b>
Drawing Number	





#### Birds of Conservation Concern

- Red
- Amber
- Green
- Not Assessed
- VP Locations
- Survey Area

#### BTO Codes

RH - Red-throated Diver

Metres  
0 100 200 400 600 800 1,000  
Coordinate System: British National Grid

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Drawing Title

Southwold VP 01/03/2024  
(07:20-10:20)

Scale at A3

**1:20,000**

Role

**Ecology**

Suitability

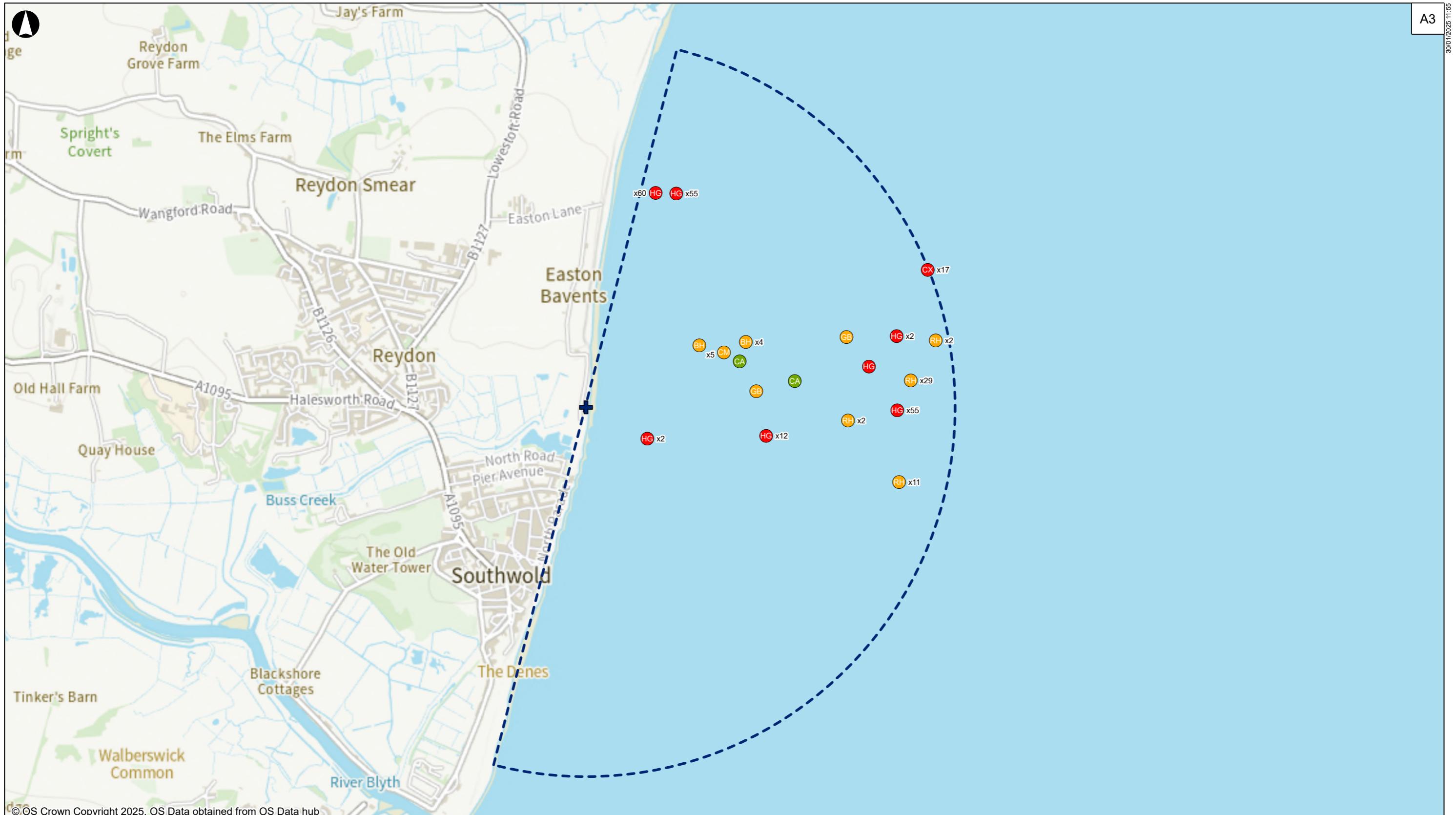
**For Information**

Project Number

**287334**

Drawing Number

**Figure 3.47**



#### Birds of Conservation Concern

- Red
- Amber
- Green
- Not Assessed
- ✚ VP Locations
- [-] Survey Area

#### BTO Codes

- BH - Black-headed Gull
- CA - Cormorant
- CM - Common Gull
- CX - Common Scoter
- GB - Great Black-backed Gull
- HG - Herring Gull
- RH - Red-throated Diver

Metres  
0 100 200 400 600 800 1,000  
Coordinate System: British National Grid

1	30/01/2025	JG	DB	RM	AC
Rev	Date	By	Chkd	Appd	Authd

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Client

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(NGLL)

Project Name

**LIONLINK**

Wintering Bird Survey 2023/2024

Drawing Title

Southwold VP 04/03/2024  
(08:00-11:00)

Scale at A3

**1:20,000**

Role

**Ecology**

Suitability

**For Information**

Project Number

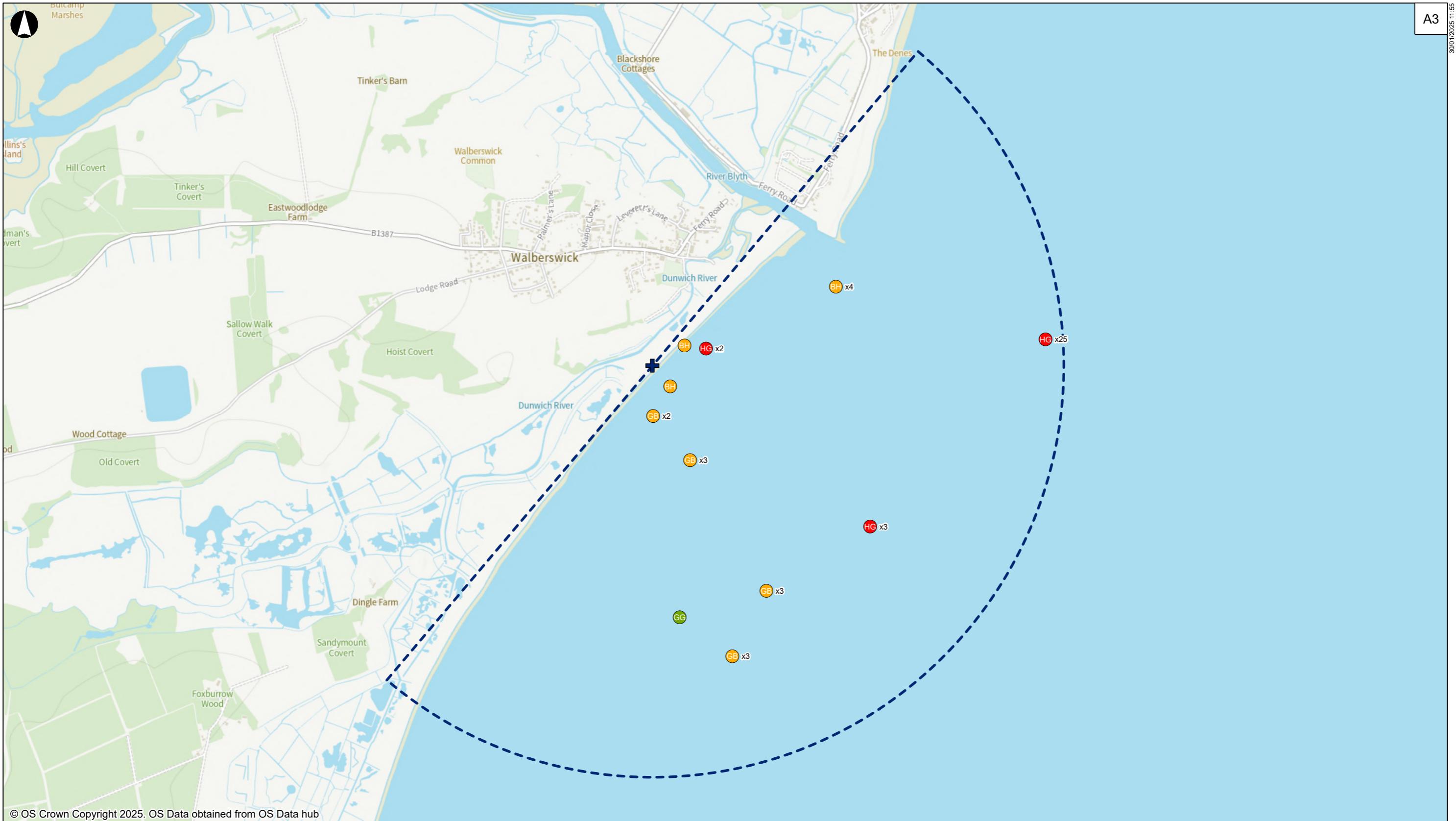
**287334**

Drawing Number

**Figure 3.48**

Rev

**P01**



#### Birds of Conservation Concern

- Red
- Amber
- Green
- Not Assessed
- VP Locations
- Survey Area

#### BTO Codes

- BH - Black-headed Gull
- GB - Great Black-backed Gull
- GG - Great Crested Grebe
- HG - Herring Gull

Metres  
0 100 200 400 600 800  
Coordinate System: British National Grid

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Client

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Project Name

**LIONLINK**

Wintering Bird Survey 2023/2024

Drawing Title

Walberswick VP 31/10/2023  
(07.55-10.55)

Scale at A3

**1:18,000**

Role

**Ecology**

Suitability

**For Information**

Project Number

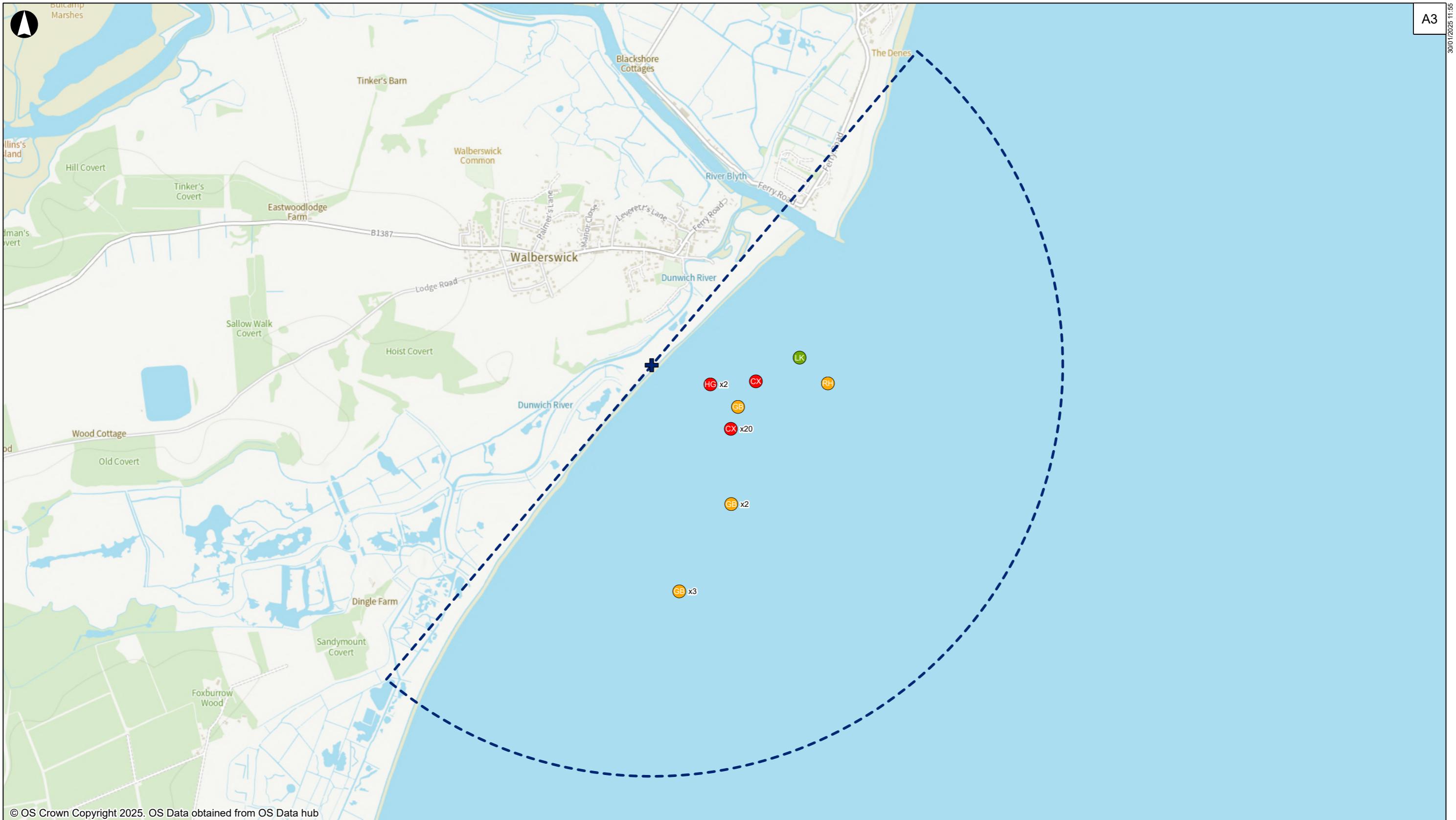
**287334**

Rev

**P01**

Drawing Number

**Figure 3.49**



#### Birds of Conservation Concern

- Red
- Amber
- Green
- Not Assessed
- VP Locations
- Survey Area

#### BTO Codes

- CX - Common Scoter
- GB - Great Black-backed Gull
- HG - Herring Gull
- LK - Little Auk
- RH - Red-throated Diver

Metres  
0 100 200 400 600 800  
Coordinate System: British National Grid

1	30/01/2025	JG	DB	RM	AC
Rev	Date	By	Chkd	Appd	Authd

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Project Name

**LIONLINK**

Wintering Bird Survey 2023/2024

Drawing Title

Walberswick VP 31/10/2023  
(11.55-14.55)

Scale at A3

**1:18,000**

Role

**Ecology**

Suitability

**For Information**

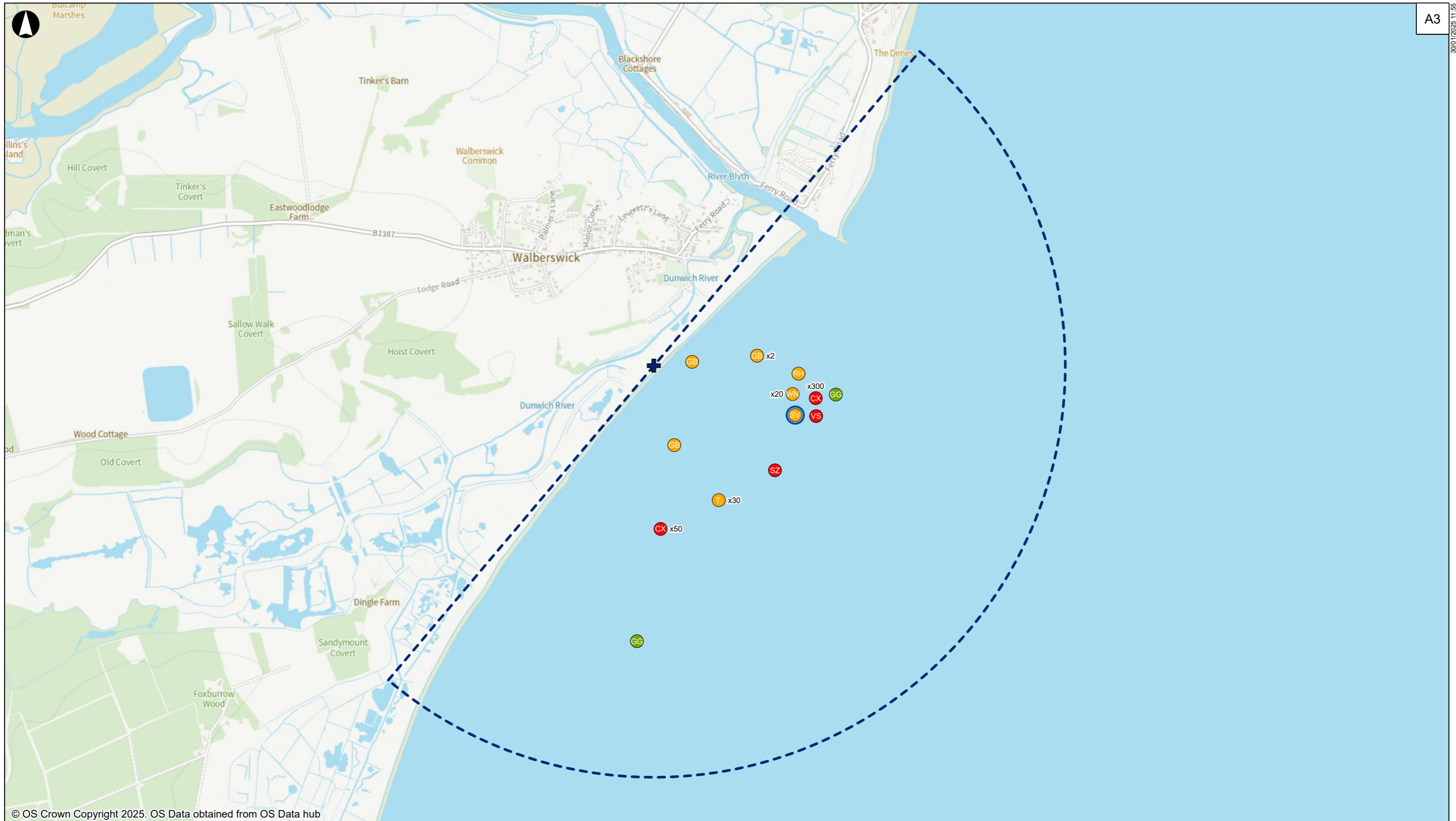
Project Number

**287334**

Rev  
**P01**

Drawing Number

**Figure 3.50**



#### Birds of Conservation Concern

- Red
- Amber
- Green
- Not Assessed
- Ramsar and SPA Designated Species
- VP Locations
- Survey Area

#### BTO Codes

CX - Common Scoter

GB - Great Black-backed Gull

GG - Great Crested Grebe

RH - Red-throated Diver

SV - Shoveler

SZ - Slavonian Grebe

WN - Wigeon

T. - Teal

VS - Velvet Scoter

Metres  
0 100 200 400 600 800  
Coordinate System: British National Grid

1	30/01/2025	JG	DB	RM	AC
Rev	Date	By	Chkd	Appd	Authd

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Client

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(NGLL)

Project Name

**LIONLINK**

Wintering Bird Survey 2023/2024

Drawing Title

Walberswick VP 22/11/2023  
(08.40-11.40)

Scale at A3

**1:18,000**

Role

**Ecology**

Suitability

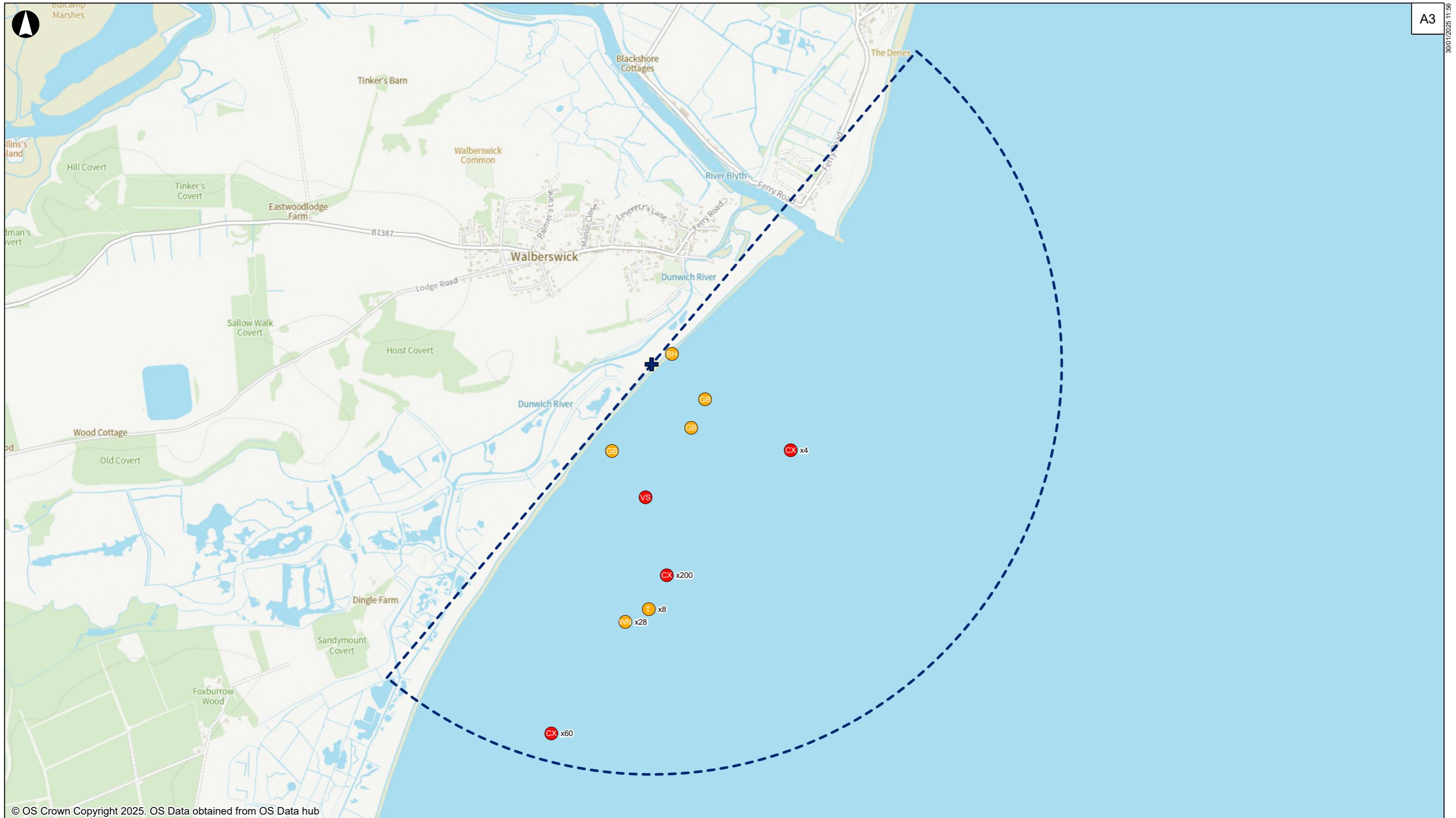
**For Information**

Project Number

**287334**

Drawing Number

**Figure 3.51**



#### Birds of Conservation Concern

- Red
- Amber
- Green
- Not Assessed
- VP Locations
- Survey Area

#### BTO Codes

- BH - Black-headed Gull
- VS - Velvet Scoter
- CX - Common Scoter
- WN - Wigeon
- GB - Great Black-backed Gull

T. - Teal

Metres  
0 100 200 400 600 800  
Coordinate System: British National Grid

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Project Name

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Wintering Bird Survey 2023/2024

Drawing Title

Walberswick VP 22/11/2023  
(12.40-14.40)

Scale at A3

**1:18,000**

Role

**Ecology**

Suitability

**For Information**

Project Number

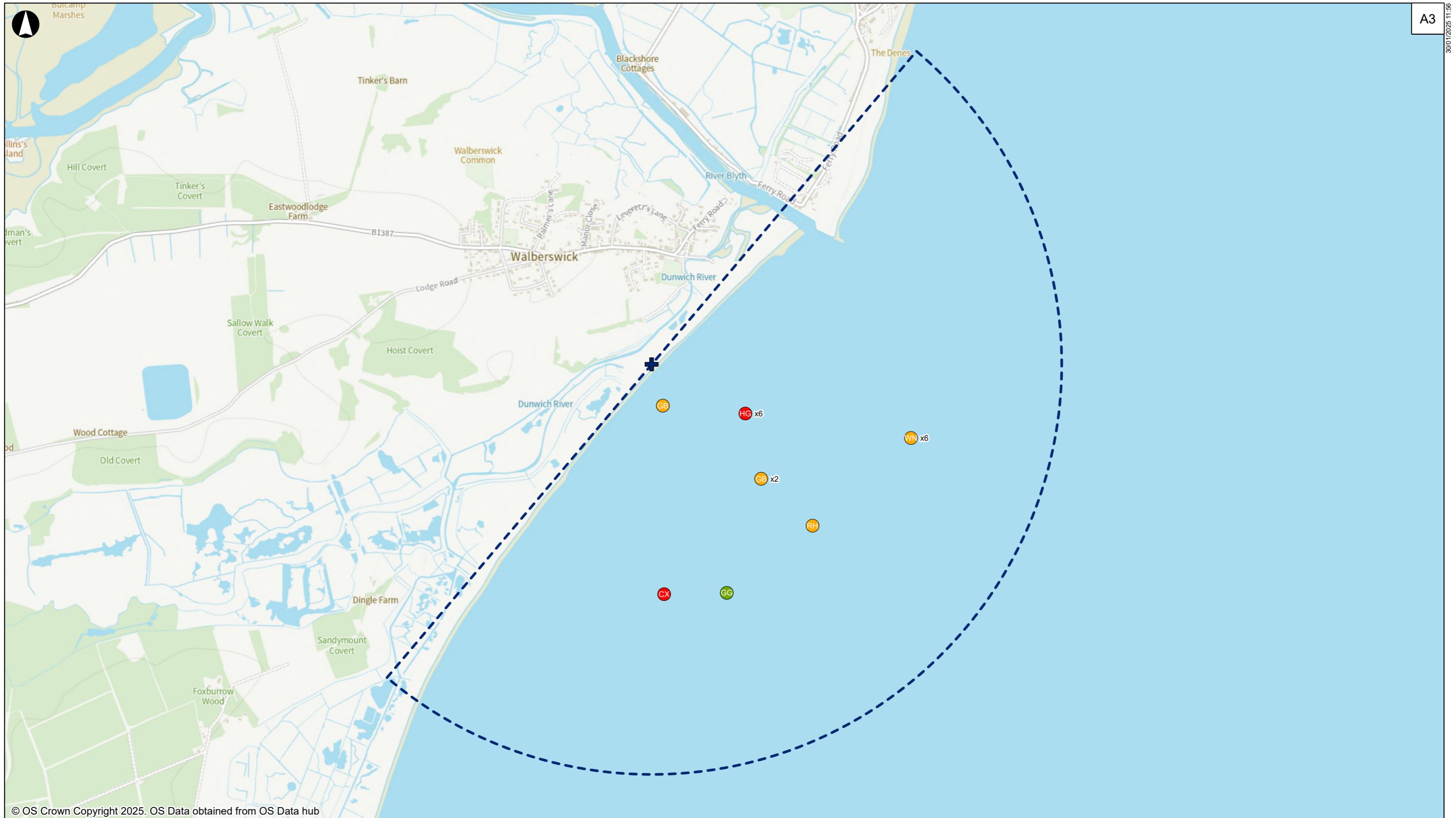
**287334**

Rev

**P01**

Drawing Number

**Figure 3.52**



#### Birds of Conservation Concern

- Red
- Amber
- Green
- Not Assessed
- VP Locations
- Survey Area

#### BTO Codes

- CX - Common Scoter
- GB - Great Black-backed Gull
- GG - Great Crested Grebe
- HG - Herring Gull
- RH - Red-throated Diver
- WN - Wigeon

Metres  
0 100 200 400 600 800  
Coordinate System: British National Grid

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(NGLL)

Project Name

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Wintering Bird Survey 2023/2024

Drawing Title

Walberswick VP 12/12/2023  
(08.30-11.30)

Scale at A3

**1:18,000**

Role

**Ecology**

Suitability

**For Information**

Project Number

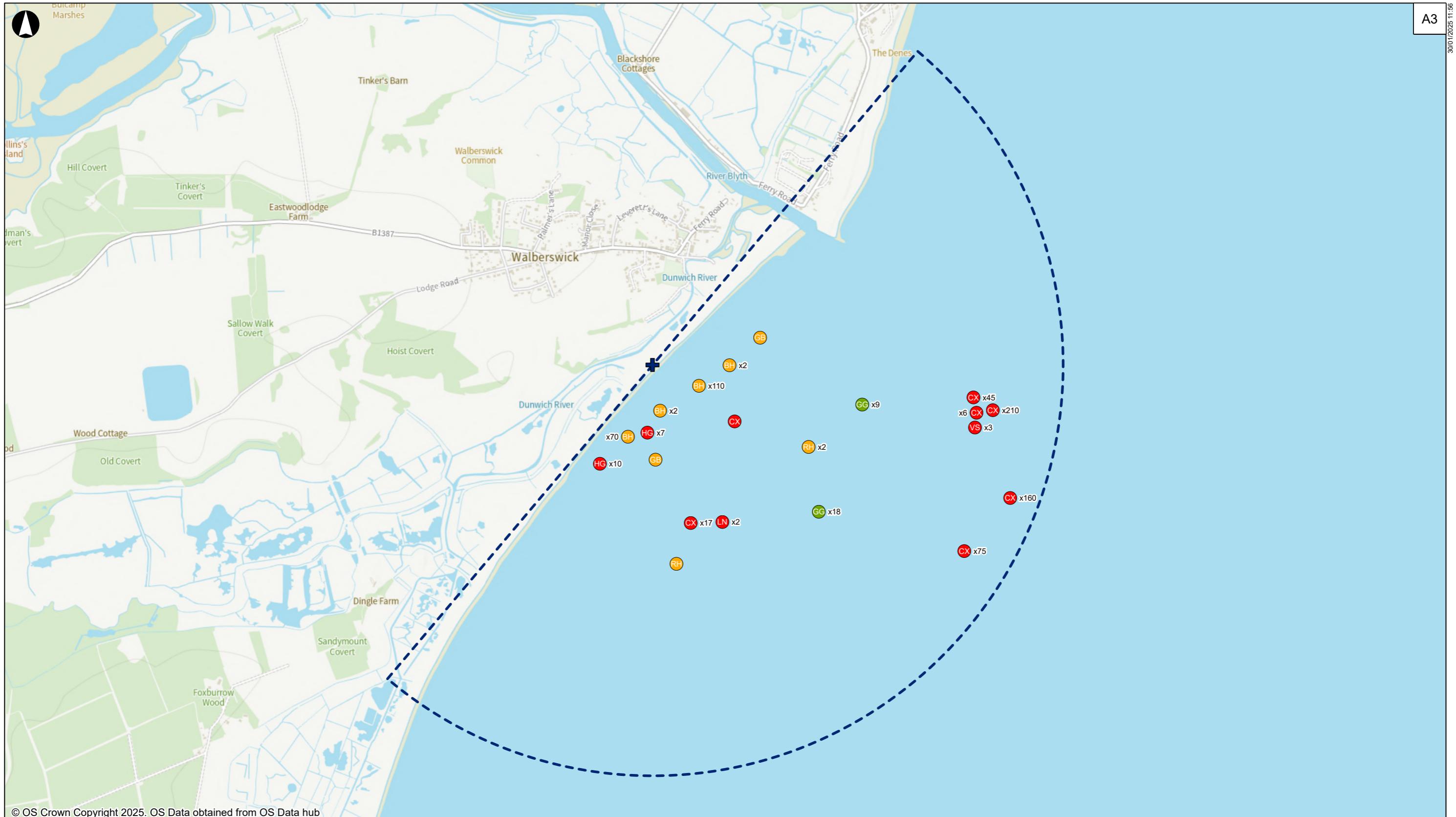
**287334**

Rev

**P01**

Drawing Number

**Figure 3.53**



#### Birds of Conservation Concern

- Red
- Amber
- Green
- Not Assessed
- VP Locations
- Survey Area

#### BTO Codes

- GB - Great Black-backed Gull
- BH - Black-headed Gull
- CX - Common Scoter

- LN - Long-tailed Duck
- GG - Great Crested Grebe
- RH - Red-throated Diver
- HG - Herring Gull
- VS - Velvet Scoter

Metres  
0 100 200 400 600 800  
Coordinate System: British National Grid

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Drawing Title

Walberswick VP 12/12/2023  
(12.30-15.30)

Scale at A3

**1:18,000**

Role

**Ecology**

Suitability

**For Information**

Project Number

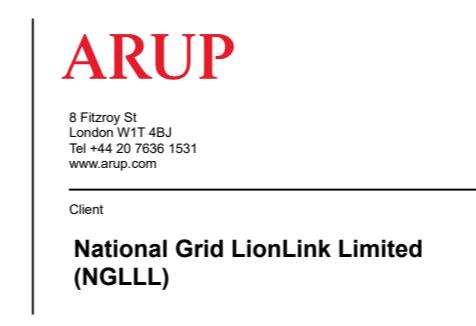
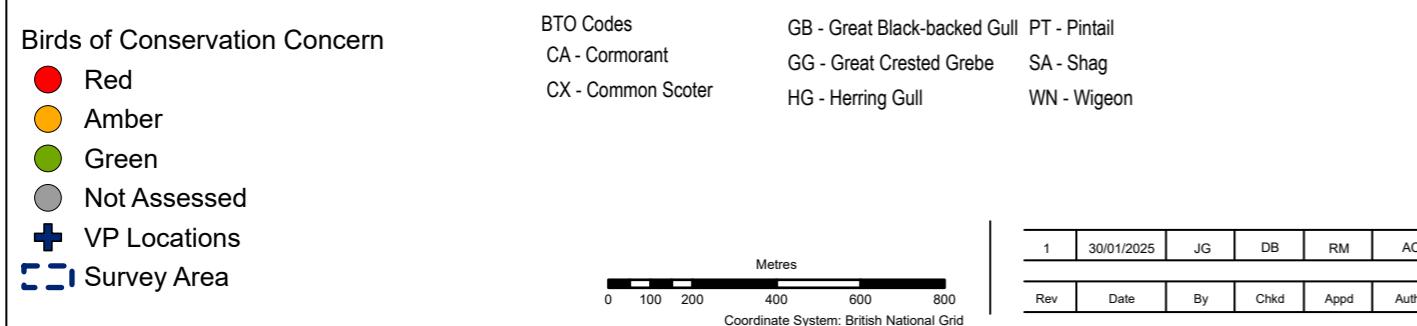
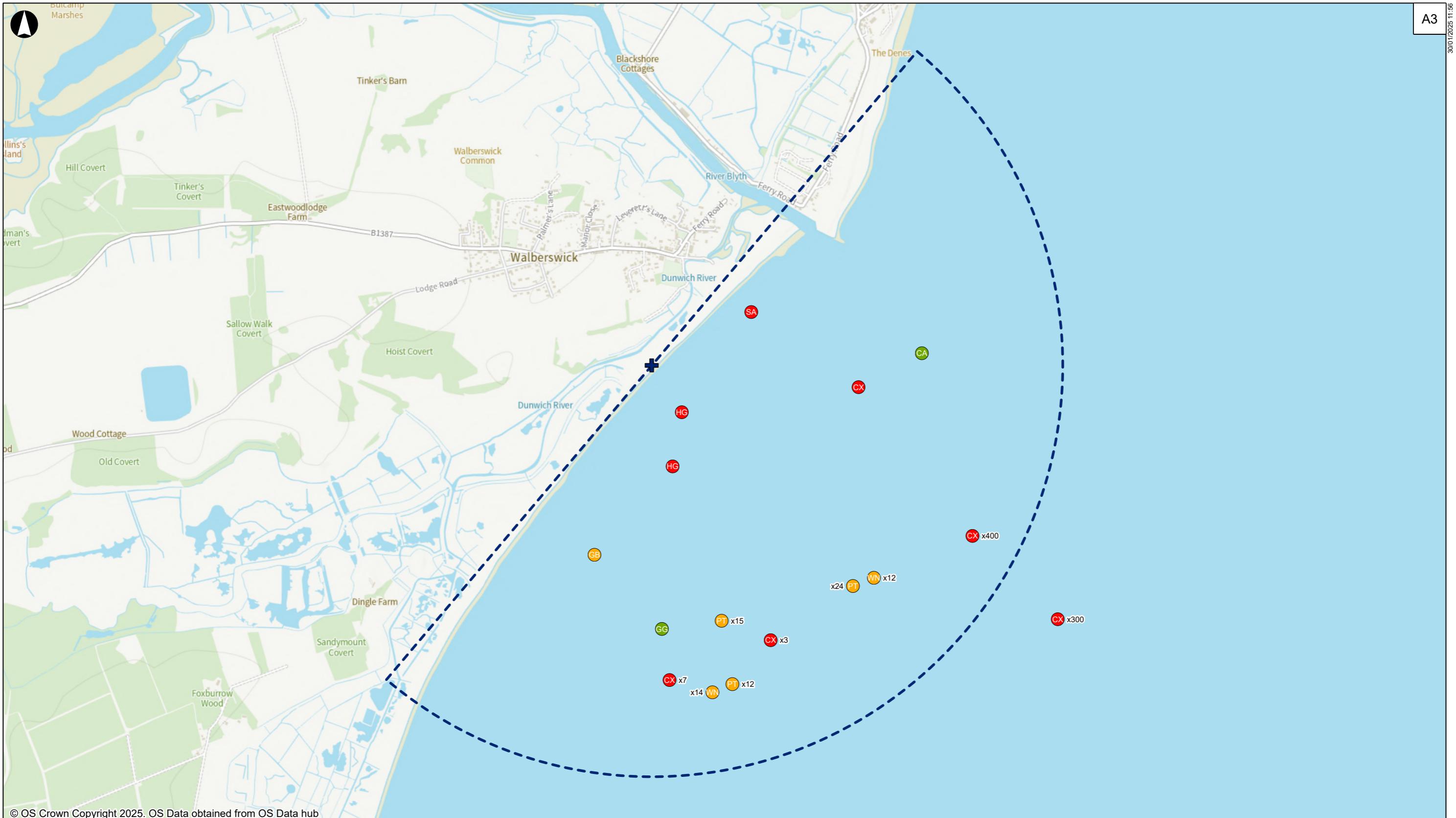
**287334**

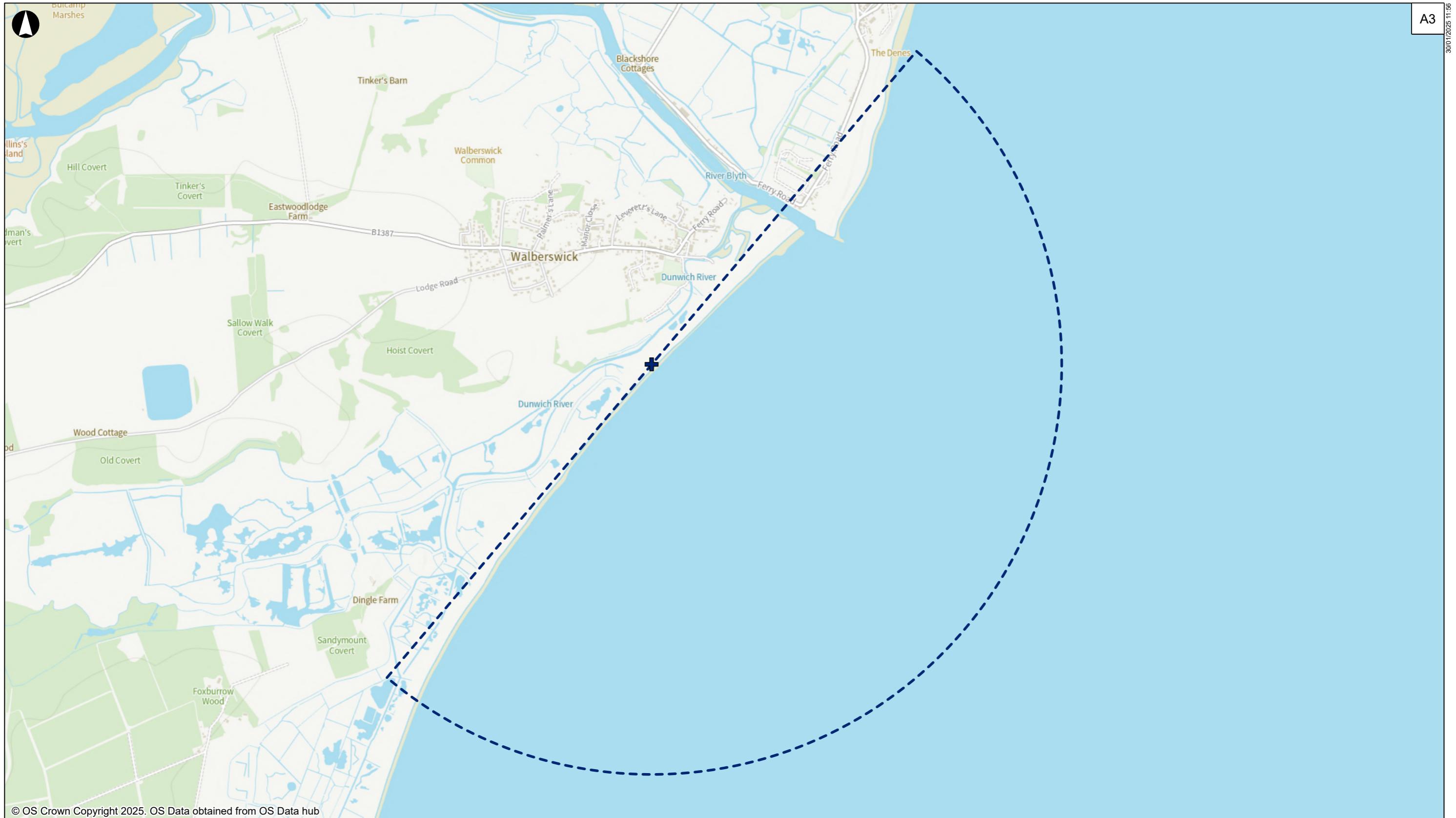
Rev

**P01**

Drawing Number

**Figure 3.54**





#### Birds of Conservation Concern

- Red
- Amber
- Green
- Not Assessed
- VP Locations
- Survey Area

Metres  
0 100 200 400 600 800  
Coordinate System: British National Grid

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(NGLL)

Project Name

**LIONLINK**

Wintering Bird Survey 2023/2024

Drawing Title

Walberswick VP 17/01/2024  
(12.05-15.50)

Scale at A3

**1:18,000**

Role

**Ecology**

Suitability

**For Information**

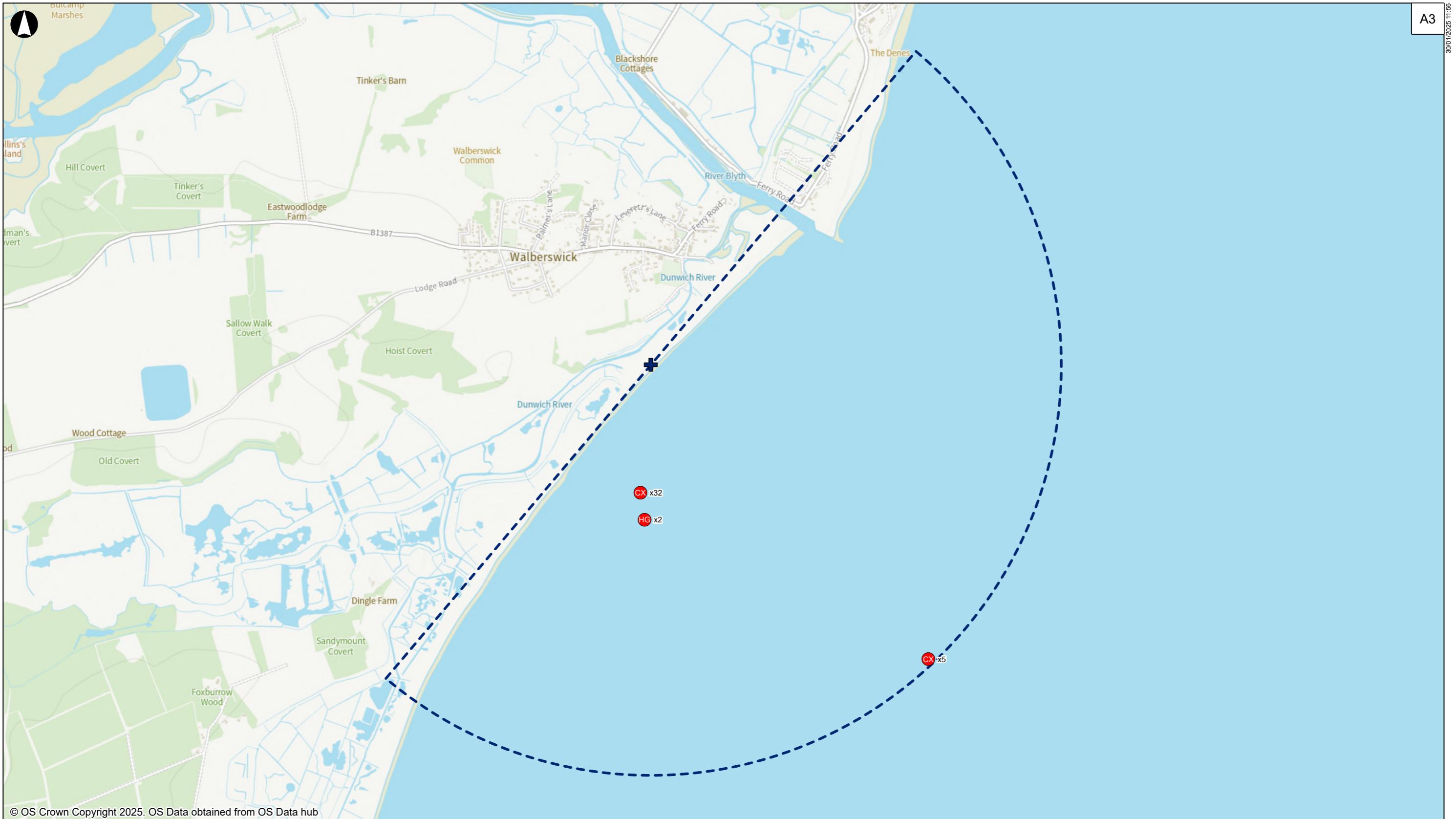
Project Number

**287334**

Rev  
**P01**

Drawing Number

**Figure 3.56**



#### Birds of Conservation Concern

- Red
- Amber
- Green
- Not Assessed
- VP Locations
- Survey Area

BTO Codes  
CX - Common Scoter  
HG - Herring Gull

Metres  
0 100 200 400 600 800  
Coordinate System: British National Grid

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Project Name

**LIONLINK**

Wintering Bird Survey 2023/2024

Drawing Title

Walberswick VP 15/02/2024  
(08.50-11.50)

Scale at A3

**1:18,000**

Role

**Ecology**

Suitability

**For Information**

Project Number

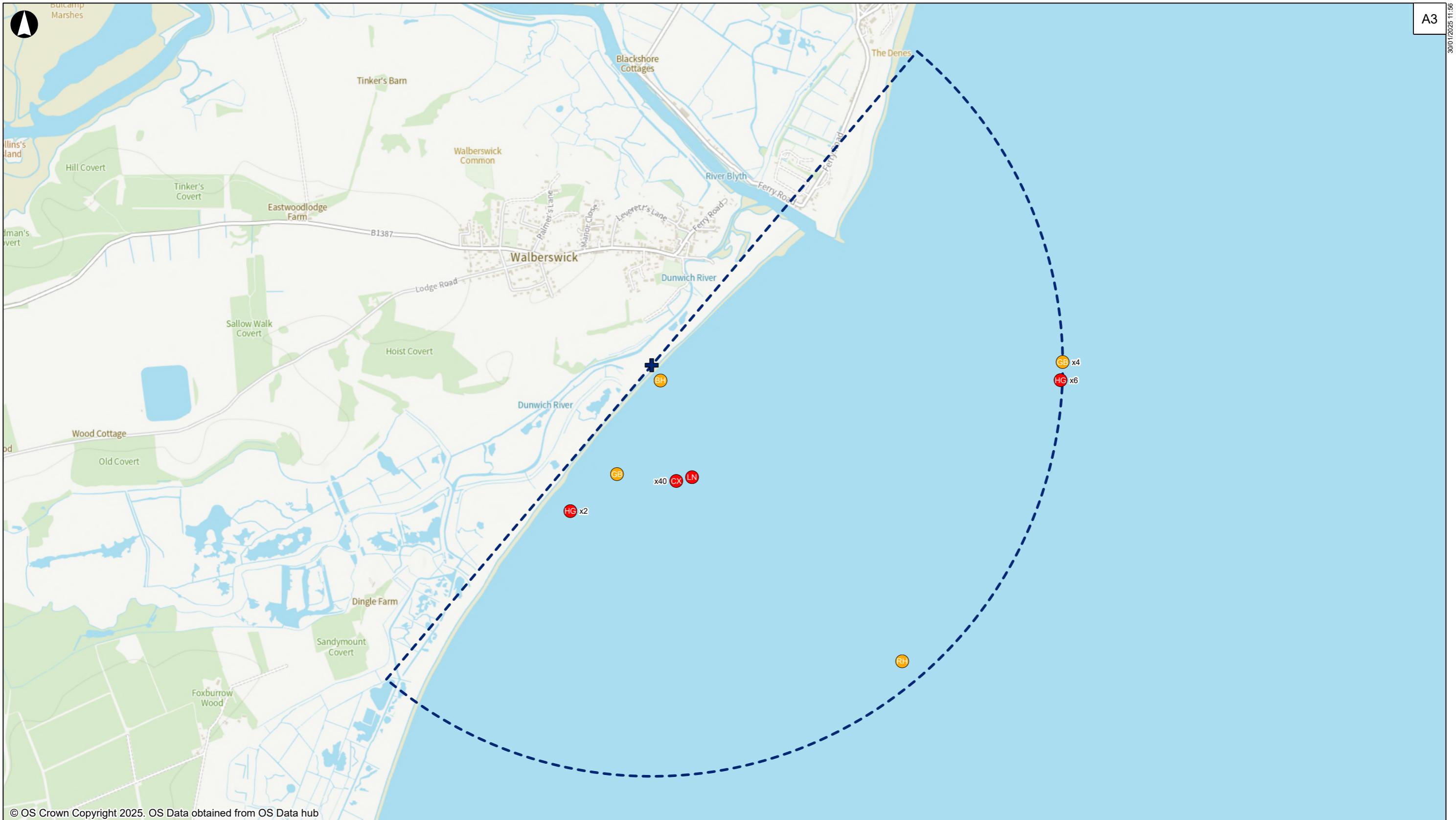
**287334**

Rev

**P01**

Drawing Number

**Figure 3.57**



#### Birds of Conservation Concern

- Red
- Amber
- Green
- Not Assessed
- VP Locations
- Survey Area

**BTO Codes**

- BH - Black-headed Gull
- HG - Herring Gull
- CX - Common Scoter
- LN - Long-tailed Duck
- GB - Great Black-backed Gull
- RH - Red-throated Diver

Metres

Coordinate System: British National Grid

0 100 200 400 600 800

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**National Grid LionLink Limited (NGLL)**

Project Name

**LIONLINK**

**Wintering Bird Survey 2023/2024**

Drawing Title

**Walberswick VP 15/02/2024  
(12.10-15.10)**

Scale at A3

**1:18,000**

Role

**Ecology**

Suitability

**For Information**

Project Number

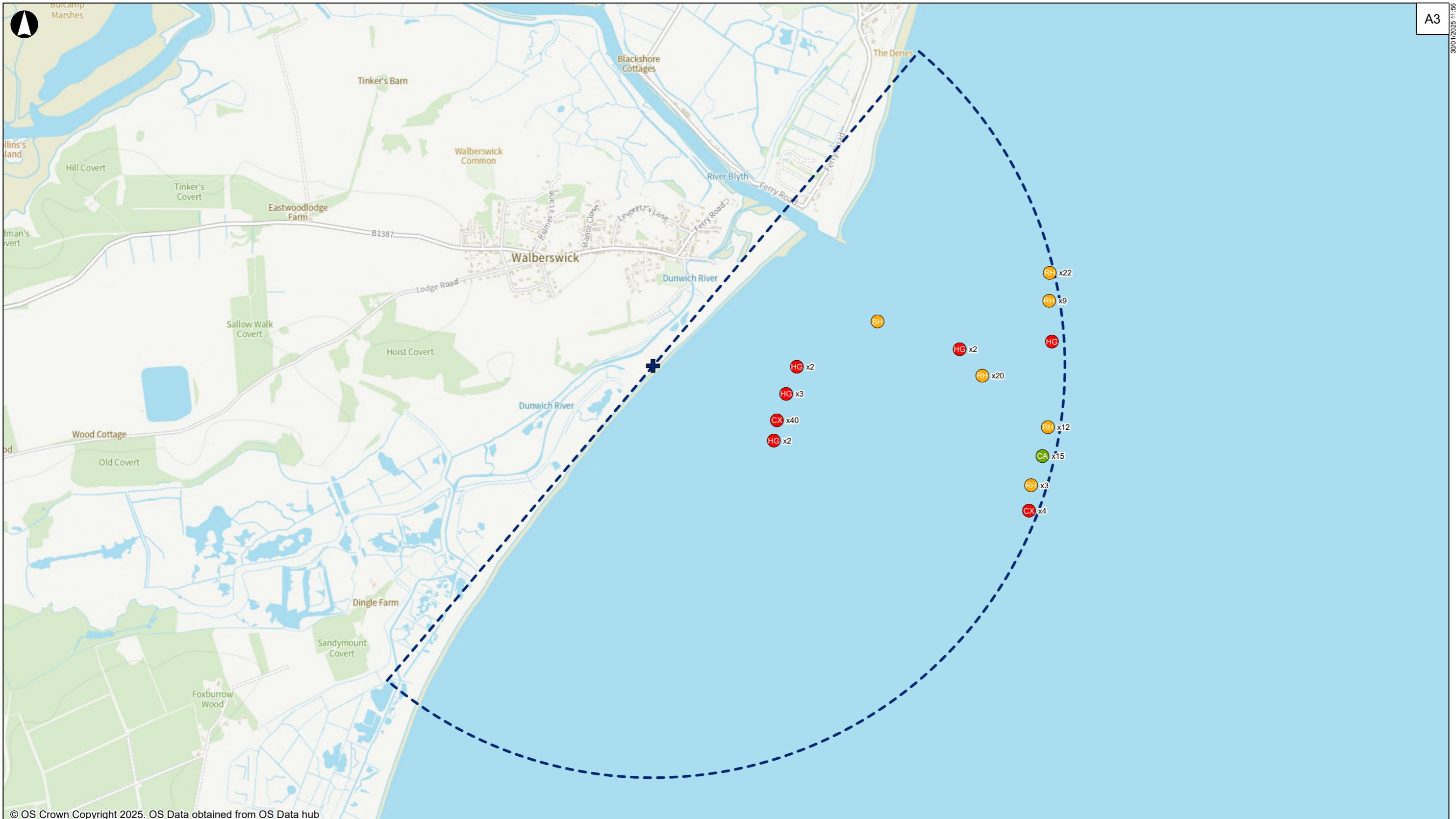
**287334**

Rev

**P01**

Drawing Number

**Figure 3.58**



#### Birds of Conservation Concern

- Red
- Amber
- Green
- Not Assessed
- VP Locations
- Survey Area

#### BTO Codes

- BH - Black-headed Gull
- CA - Cormorant
- CX - Common Scoter
- HG - Herring Gull
- RH - Red-throated Diver

Metres  
0 100 200 400 600 800  
Coordinate System: British National Grid

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Project Name

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Wintering Bird Survey 2023/2024

Drawing Title

Walberswick VP 06/03/2024  
(08.20-11.20)

Scale at A3

**1:18,000**

Role

**Ecology**

Suitability

**For Information**

Project Number

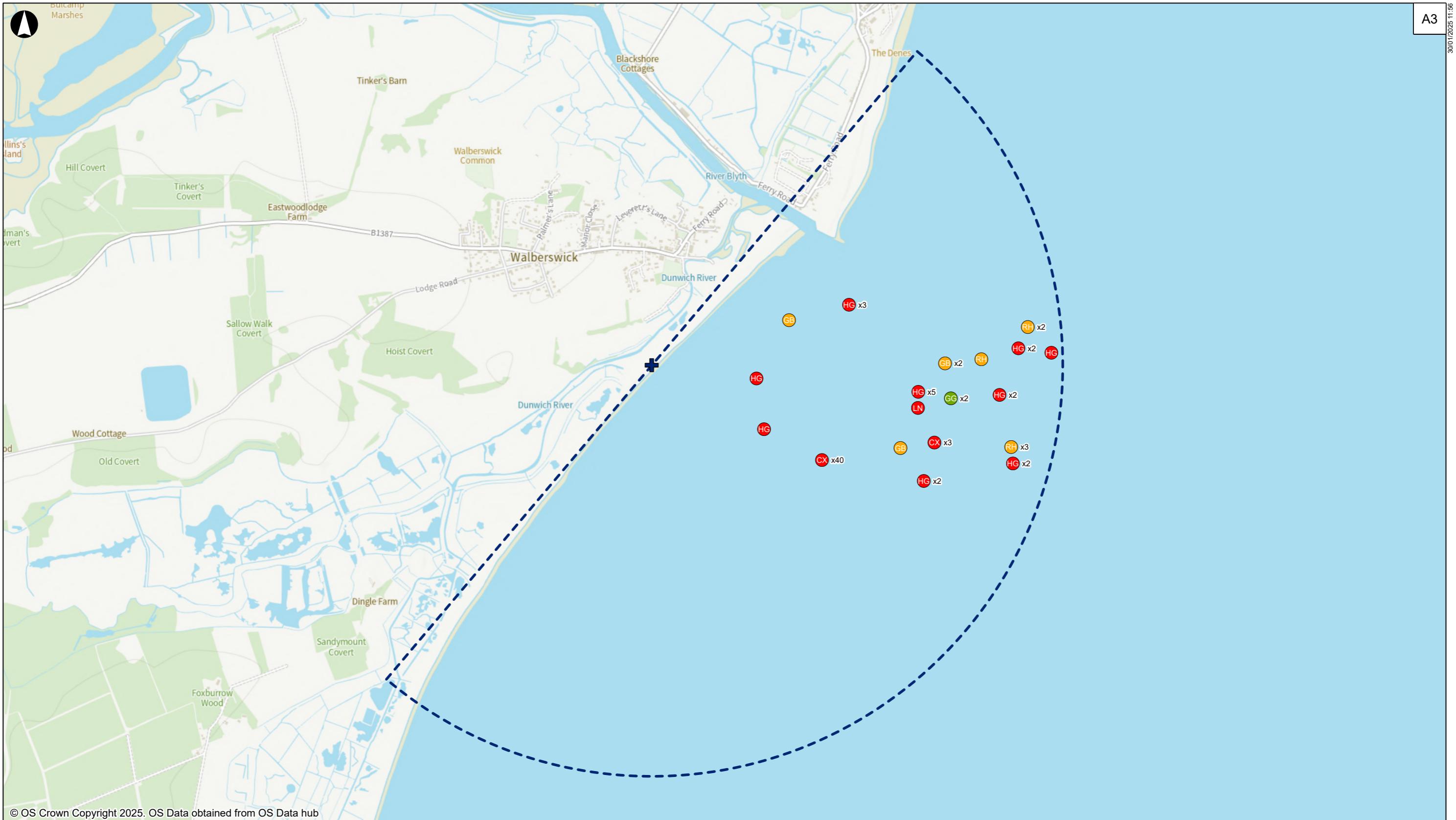
**287334**

Rev

**P01**

Drawing Number

**Figure 3.59**



#### Birds of Conservation Concern

- Red
- Amber
- Green
- Not Assessed
- VP Locations
- Survey Area

**BTO Codes**

- HG - Herring Gull
- CX - Common Scoter
- LN - Long-tailed Duck
- GB - Great Black-backed Gull
- RH - Red-throated Diver
- GG - Great Crested Grebe

Metres

Coordinate System: British National Grid

0 100 200 400 600 800

1	30/01/2025	JG	DB	RM	AC
Rev	Date	By	Chkd	Appd	Authd

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Client

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(NGLL)

Project Name  
**LIONLINK**  
Wintering Bird Survey 2023/2024

Drawing Title

Walberswick VP 06/03/2024  
(12.20-15.20)

Scale at A3

**1:18,000**

Role

**Ecology**

Suitability

**For Information**

Project Number

**287334**

Rev

**P01**

Drawing Number

**Figure 3.60**

# Appendix B

## Survey Details

### Weather data

Transect Ref	Date	Start Time	End Time	High Tide	Low Tide	Wind Speed (Beaufort Scale)	Wind Direction	Precipitation (0 - none to 4 - heavy rain/snow)	Cloud cover (oktas)	Cloud Height (0 - <150m, 1 - 150-500m, 2 - >500m)	Visibility (0 - <1km, 1 - 1-3km, 2 - >3km)	Lying Snow (0 - none, 1 - on site, 2 - on higher ground)	Frost (0 - none, 1 - ground, 2 - all day)	Temp (°C)
<b>Visit 1 (October 2023)</b>														
Walberswick corridor	26/10/2023	08:00	12:30	-	-	3-4	SE	0-2	8	2	2	0	0	12-13
Southwold corridor	23/10/2023	08:45	13:30	-	-	2-3	SE	0	7-8	2	2	0	0	7-15
Blyburgh marshes	25/10/2023	09:46	13:40	-	-	1	N/NE	0	7-8	2	2	0	0	9-13
Friston substation area	26/10/2023	13:15	15:00	-	-	2	SE	2	8	2	2	0	0	13
Southwold seawatch view point	18/10/2023	07:20	10:20	01:09	07:00	4-6	ESE	0	5-8	2	3	0	0	12-14
	18/10/2023	10:50	13:50	13:20	19:22	4-5	ESE	0	4-5	2	3	0	0	15-16
Walberswick seawatch view point	31/10/2023	07:55	10:55	11:39	05:26	0-1	SW	0	5-7	2	3	0	0	8-12
	31/10/2023	11:55	14:55	11:39	17:51	2-3	S/SW	0	7	2	3	0	0	13-14
<b>Visit 2 (November 2023)</b>														
Walberswick corridor	23/11/2023	07:30		-	-	3	W	0	3	2	2	0	0	11
Southwold corridor	21/11/2023	08:00	14:00	-	-	3	N	0-2	5-8	2	2	0	0	10-11
Blyburgh marshes	24/11/2023	08:00	12:00	-	-	2	SW	0	8	2	2	0	0	7
Friston substation area	24/11/2023			-	-									
Southwold seawatch view point	20/11/2023	07:50	10:50	02:45	09:21	3	N	0	8	2	3	0	0	10-11
	20/11/2023	11:30	14:30	16:09	21:22	3	N	0	4-7	2	3	0	0	10-11
	22/11/2023	08:40	11:40	04:51	11:51	2-3	WSW	0	8	2	3	0	0	7

Transect Ref	Date	Start Time	End Time	High Tide	Low Tide	Wind Speed (Beaufort Scale)	Wind Direction	Precipitation (0 - none to 4 - heavy rain/snow)	Cloud cover (oktas)	Cloud Height (0 - <150m, 1 - 150-500m, 2 - >500m)	Visibility (0 - <1km, 1 - 1-3km, 2 - >3km)	Lying Snow (0 - none, 1 - on site, 2 - on higher ground)	Frost (0 - none, 1 - ground, 2 - all day)	Temp (°C)
Walberswick seawatch view point		12:40	15:40	18:48	11:51	2-3	W	0	7-8	2	3	0	0	7-8
<b>Visit 3 (December 2023)</b>														
Walberswick corridor	14/12/2023	08:00		-	-	2	W	0	6	2	2	0	0	3-6
Southwold corridor	11/12/2023	11:20	17:25	-	-	2	W	0	6	2	2	0	0	10-11
Blythburgh marshes	11/12/2023	08:00	11:00	-	-	3	W	0	5	2	2	0	0	9
Friston substation area	15/12/2023			-	-									
Southwold seawatch view point	13/12/2023	08:15	11:15	10:19	04:05	3	NWN	0	7-8	2	3	0	0	8
	13/12/2023	11:45	14:45	22:45	16:21	3	N/NNW	0-1	7-8	2	3	0	0	8-10
Walberswick seawatch view point	12/12/2023	08:30	11:30	09:33	03:20	3	SSW	0-2	6-8	2	3	0	0	9-10
	12/12/2023	12:30	15:30	22:07	15:39	2-3	S/SW	0	3-7	2	3	0	0	10
<b>Visit 4 (January 2024)</b>														
Walberswick corridor	26/01/2024	08:20	13:00	-	-	5	W	0	1	2	2	0	0	8
Southwold corridor	22/01/2024	08:00		-	-	4-5	SW	0	0	2	2	0	0	9
Blythburgh marshes	19/01/2024			-	-									
Friston substation area	19/01/2024			-	-									
Southwold seawatch view point	24/01/2024	08:00	11:00	09:56	03:27	4-5	W	0	4-5	2	3	0	0	9-10
	24/01/2024	12:00	15:00	21:57	15:42	4	W	0	6-8	2	3	0	0	10-11
Walberswick seawatch view point	17/01/2024	08:35	11:35	02:08	08:42	2	N/NW	0	8	2	3	0	0	1-2
	17/01/2024	12:05	15:05	15:09	20:41	2	N	0	8	2	3	0	0	1-2
<b>Visit 5 (February 2024)</b>														
Walberswick corridor	16/02/2024	08:55	13:30	-	-	2	W	0	5	2	2	0	0	11

Transect Ref	Date	Start Time	End Time	High Tide	Low Tide	Wind Speed (Beaufort Scale)	Wind Direction	Precipitation (0 - none to 4 - heavy rain/snow)	Cloud cover (oktas)	Cloud Height (0 - <150m, 1 - 150-500m, 2 - >500m)	Visibility (0 - <1km, 1 - 1-3km, 2 - >3km)	Lying Snow (0 - none, 1 - on site, 2 - on higher ground)	Frost (0 - none, 1 - ground, 2 - all day)	Temp (°C)
Southwold corridor	12/02/2024	11:30	15:20	-	-	3	W	0	1	2	2	0	0	7
Blyburgh marshes	13/02/2024	11:15	14:25	-	-	3	SW	0	7	2	2	0	0	8-9
Friston substation area	16/02/2024			-	-									
Southwold seawatch view point	14/02/2024	08:05	11:05	01:02	07:35	3	SW	0-1	7-8	2	3	0	0	11
	14/02/2024	11:40	14:40	13:47	19:27	3	SW	0-1	7-8	2	3	0	0	10-13
Walberswick seawatch view point	15/02/2024	08:50	11:50	01:45	08:18	3	S/SSW	0	6-8	2	3	0	0	11-13
	15/02/2024	12:10	15:10	14:31	20:09	2-3	S	0	5-7	2	3	0	0	12-13
<b>Visit 6 (March 2024)</b>														
Walberswick corridor	05/03/2024	10:00	14:10	-	-	1	SE	1	8	2	2	0	0	7
Southwold corridor	04/03/2024	11:00	14:50	-	-	2	SE	0	2	2	2	0	0	
Blyburgh marshes	07/03/2024	10:00	13:30	-	-	2	WSW	0	6	2	2	0	0	10
Friston substation area	07/03/2024			-	-									
Southwold seawatch view point	01/03/2024	07:20	10:20	01:31	07:37	4-6	SSE	0-1	4-8	2	3	0	0	6-7
				13:57	19:36									
Walberswick seawatch view point	04/03/2024	08:00	11:00	03:49	09:50	1-2	SE	0	0	2	3	0	0	4-8
				16:30	22:20									
Walberswick seawatch view point	06/03/2024	08:20	11:20	06:56	00:15	0-1	NE/E/SE	0	0-4	2	3	0	0	7-10
Walberswick seawatch view point	06/03/2024	12:20	15:20	19:10	12:55	1	SE/ESE	0	0	2	3	0	0	10-11

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