



Preliminary Environmental Information Report Volume 2

Appendix 8.15 Baseline Report - Inshore and Beach Breeding Bird Survey 2024

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National Grid LionLink Ltd

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Inshore and Beach Breeding Bird Survey Report 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 breeding bird surveys (undertaken between March 2024 and September 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.

This document only provides information on inshore surveys and beach surveys, which concluded later than the remainder of the 2024 breeding bird survey work; it should only be read in conjunction with the Breeding Bird Survey Report 2024¹. The inshore and beach surveys reported on herein are a continuation of the surveys that commenced in October 2023; the results of these surveys completed between October 2023 and March 2024 (inclusive) have been reported on separately².

1.1 Site Context

Two discrete sites were surveyed (the ‘study area’) (Figure 1), through the completion of inshore bird surveys and beach surveys, at two potential landfall locations (at Southwold and at Walberswick).

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 SSSIs 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 BiOME Consulting Ltd (2025) LionLink; Breeding Bird Survey Report 2024 (Confidential).

² BiOME Consulting Ltd (2025) LionLink; Wintering Bird Survey Report 2023/2024.

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 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 (BoCC5³, BoCC5a⁴) 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 bird surveys detailed within this report were conducted with three objectives:

- 1) To provide baseline data on the assemblages, numbers and distribution of birds within the study area during the breeding season.
- 2) To provide data on the use of the study area by qualifying species of the nearby European designated sites (as defined in Table 1): Outer Thames Estuary SPA, Minsmere-Walberswick SPA and Ramsar site, Alde-Ore Estuary SPA and Ramsar site and Benacre to Easton Bawents SPA, during the breeding period.

³ 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.

⁴ Stanbury, A., Burns, F., Aebischer, N., Baker, H., Balmer, D., Brown, A., Dunn, T., Lindley, P., Murphy, M., Noble, D., Owens, R., Quinn, L. (2024) *The status of UK's breeding seabirds: an addendum to 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 117, September 2024, 471-487.

- 3) To highlight the presence of any species/aggregations of value during the breeding season that may influence the design of the scheme.

2. Methodology

2.1 Desk Study

2.1.1 Designated Sites

The MAGIC (Multi-Agency Geographic Information for the Countryside) website⁵ was used to identify statutory designated sites within the vicinity of the site. Search radii of 10km and 2km (from the study area) were employed for European and nationally designated sites, respectively.

The Joint Nature Conservation Committee (JNCC) website⁶ and NE designated sites website⁷ provided details and descriptions of protected sites, with cross-reference to maps and citations.

2.2 Survey Methods

The survey methods employed comprised inshore bird surveys and beach surveys; full details are provided in the following sections.

2.2.1 Inshore Bird Surveys

View point (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 were mapped. Birds passing through the viewarc in flight only were also recorded, but not mapped. The six hours of seawatching for each location were staggered throughout each month with no more than three hours completed on any date. Surveys were completed across varying tidal states.

The locations of VPs, and viewarcs are shown on **Figure 1**.

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*)

⁵ 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 25/11/2024].

⁶ Joint Nature Conservation Committee. *UK Protected Areas*. Available at: <https://jncc.gov.uk/our-work/uk-protected-areas/> [Accessed 25/11/2024].

⁷ Natural England. *Designated Sites View*. Available at: <https://designatedsites.naturalengland.org.uk/> [Accessed 25/11/2024].

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

2.2.2 Beach Surveys

In addition to the inshore surveys, the survey programme considered target species that may nest/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 locations. Surveys were completed twice each month at varied tidal states to aid detection of transient features, such as temporary roosts on groynes, resting aggregations of terns and groups of foraging shorebirds.

The surveys were completed twice monthly over twelve visits between April 2024 and September 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 B**.

2.2.3 Search Area Locations and Habitat Descriptions

An overview of search area locations is provided as **Figure 1**. The search areas and habitats were divided and summarised as follows.

Southwold View Point and Inshore Area

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

Walberswick View Point and Inshore Area

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

2.2.4 Surveyors

Surveys were managed and completed by lead surveyor Richard Moores MCIEEM, with support from ornithologists David Bratt (qualifying member of CIEEM) and Ollie King (qualifying member of CIEEM).

Richard is a highly experienced ornithologist, based in Norfolk with over 25 years' professional bird survey experience. David is an experienced ornithologist with over 15 years of professional experience conducting bird surveys, primarily working in conservation and monitoring roles. Ollie is an ornithologist with experience spanning 5 years of bird survey work, particularly monitoring migrant passerines and breeding seabirds.

Health and safety support was provided by William Moores, Will Walmsley, Beryl Bratt and Olivia Barnes.

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.

Although the topography around the view points was relatively flat, during surveys it was not possible to ensure complete visibility of the entire viewarc at ground/sea level due to local habitat/infrastructure features.

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

Seven internationally statutory designated sites with bird interest were identified within 10km of the wider 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 birds within 10km

Site Name	Reason for designation	Distance, connectivity and orientation from survey area
Minsmere-Walberswick Ramsar site ⁸	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) ⁹	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.
Outer Thames Estuary SPA ¹⁰	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 during the breeding season, both of which are also qualifying features.	Within

⁸ <https://rsis.ramsar.org/ris/75> [accessed 24/09/2024]

⁹ <https://jncc.gov.uk/jncc-assets/SPA-N2K/UK9009101.pdf> [accessed 25/11/2024]

¹⁰ <https://jncc.gov.uk/jncc-assets/SPA-N2K/UK9020309.pdf> [accessed 25/11/2024]

Site Name	Reason for designation	Distance, connectivity and orientation from survey area
Benacre to Easton Bavents SPA ¹¹	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.	0.1km/N of the survey area
Sandlings SPA ¹²	An area of 3405.72 hectares of heathland, forestry and agricultural land is designated as SPA. Sandlings SPA supports remnant heath, including acid grassland and heath-dominated plant communities and dependant invertebrate and bird communities. It is designated for its significant breeding populations of nightjar and woodlark <i>Lullula arborea</i> .	3km/S of the survey area
Alde-Ore Estuary Ramsar site ¹³	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> .	3km/S of the survey area
Alde-Ore Estuary SPA ¹⁴	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.	3km/S of the survey area

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

Site Name	Reason for designation	Distance, connectivity and orientation from the survey area
The Haven, Aldeburgh Local Nature Reserve (LNR)	This site, located north of Aldeburgh, comprises shingle, shallow lagoons and large reedbeds. It lies within the Leiston-Aldeburgh SSSI.	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 while the woodland supports nightingale <i>Luscinia megarhynchos</i> and woodcock <i>Scolopax rusticola</i> .	Within, connected floodplain, to the west of the site.

¹¹ <https://jncc.gov.uk/jncc-assets/SPA-N2K/UK9009291.pdf> [accessed 25/11/2024]

¹² <https://jncc.gov.uk/jncc-assets/SPA-N2K/UK9020286.pdf> [accessed 25/11/2024]

¹³ <https://jncc.gov.uk/jncc-assets/RIS/UK11002.pdf> [accessed 25/11/2024]

¹⁴ <https://jncc.gov.uk/jncc-assets/SPA-N2K/UK9009112.pdf> [accessed 25/11/2024]

Site Name	Reason for designation	Distance, connectivity and orientation from the survey area
Suffolk Coast NNR	<p>This NNR is made up of three reserves: Walberswick, Hen Reedbed and Dingle Marshes. The NNR has a rich beach flora, wetland flora and heath habitats.</p> <p>The site hosts over 280 species of birds including bittern, marsh harrier, bearded tit, woodlark and nightjar.</p>	Within, connected floodplain
Sizewell Marshes Site of Special Scientific Interest (SSSI) ¹⁵	<p>The Sizewell Marshes are important for their large area of lowland, unimproved wet meadows which support outstanding assemblages of invertebrates and breeding birds.</p> <p>The site's qualifying features include its breeding bird assemblage of lowland damp grasslands. The assemblage is of national significance with many species typical of wet grassland such as shoveler, gadwall, teal, snipe and lapwing <i>Vanellus vanellus</i>.</p>	Within, connected floodplain
Leiston-Aldeburgh SSSI ¹⁶	<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 habitats support a diverse and abundant community of breeding and wintering birds.</p> <p>The site's qualifying features include its variety of breeding bird species, its breeding populations of marsh harrier, woodlark and gadwall, and breeding assemblages of lowland damp grasslands and lowland open waters and their margins. 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 <i>Luscinia megarhynchos</i>; 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 <i>Cygnus columbianus</i>, bittern, European white-fronted goose, gadwall and teal.</p>	Within, connected floodplain
Minsmere-Walberswick Heaths and Marshes SSSI ¹⁷	<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.</p> <p>The mudflats of the River Blyth estuary are feeding grounds for wigeon <i>Mareca penelope</i>, shelduck <i>Tadorna tadorna</i>, redshank and dunlin <i>Calidris alpina</i>. The reedbeds present at this site are important habitats for reed warbler <i>Acrocephalus scirpaceus</i>, bearded tit, marsh harrier, bittern, Cetti's warbler <i>Cettia cetti</i>, garganey <i>Spatula querquedula</i> and water rail.</p> <p>The shallow lagoons and islands at Minsmere host breeding colonies of avocets, shoveler, gadwall, teal and shelduck. The grazing marshes also offer good habitat for snipe <i>Gallinago gallinago</i>, redshank, gadwall, shoveler and black-tailed godwit <i>Limosa limosa</i>. The heathland supports nightjar and woodlark.</p> <p>The site's qualifying features include its assemblage of breeding birds of lowland damp grassland, and breeding populations of avocet, bearded tit, bittern, Cetti's warbler, garganey and marsh harrier</p>	Within, connected floodplain
Pakefield to Easton Bavents SSSI ¹⁸	<p>The site is designated as SSSI for its vegetated shingle features, saline lagoons, flood-plain fens, nationally rare and scarce plant species, breeding bird species and assemblages, and wintering birds.</p> <p>The site's qualifying features include important breeding populations of bittern, marsh harrier, little tern, water rail and bearded tit. It also supports the following qualifying breeding bird assemblages: of lowland open waters and their margins (including bittern, gadwall and marsh harrier); lowland heath (including hobby <i>Falco subbuteo</i>, quail <i>Coturnix coturnix</i> and woodlark); scrub (including cuckoo <i>Cuculus canorus</i>, nightingale and grasshopper warbler); and woodland (including sparrowhawk <i>Accipiter nisus</i>, willow tit <i>Parus montanus</i> and nuthatch <i>Sitta europea</i>).</p>	Within the survey area

¹⁵ <https://designatedsites.naturalengland.org.uk/PDFsForWeb/Citation/1003416.pdf> [accessed 25/11/2024]

¹⁶ <https://designatedsites.naturalengland.org.uk/PDFsForWeb/Citation/2000370.pdf> [accessed 25/11/2024]

¹⁷ <https://designatedsites.naturalengland.org.uk/PDFsForWeb/Citation/1000721.pdf> [accessed 25/11/2024]

¹⁸ <https://designatedsites.naturalengland.org.uk/PDFsForWeb/Citation/2000508.pdf> [accessed 25/11/2024]

Site Name	Reason for designation	Distance, connectivity and orientation from the survey area
Alde-Ore Estuary SSSI ¹⁹	<p>This site, part of the SPA and Ramsar site 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 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. Other species found on the Island include: gadwall, shoveler, oystercatcher <i>Haematopus ostralegus</i>, ringed plover <i>Charadrius hiaticula</i>, common tern, Arctic tern <i>Sterna paradisaea</i>, Sandwich tern, 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 and herring gull <i>Larus argentatus</i>.</p> <p>The site's qualifying features include its assemblage of breeding birds of lowland damp grasslands and breeding populations of avocet, black-headed gull, herring gull, lesser black-backed gull, little tern, marsh harrier, Sandwich tern and shoveler.</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>	3.2km/S of the survey 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>	0.4km/N from the survey area

3.2 Field Surveys

Survey data collected are summarised within Tables 3a-x, with the results mapped on **Figure 2** (sheets 2.01-2.24). Distance from shore is only recorded within the tables for birds in flight, whilst location information for birds on the sea is presented within the figures. Further details are provided in the following sections, including distance from potential landfall locations for SPA/Ramsar qualifying features.

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

3.2.1 Southwold Inshore Survey

15th April 2024

10.30-13.30 (**Figure 2.01, Appendix A**): 71 flights logged of a wide diversity of species (**Table 3a**). Two records of birds on the sea comprising one herring gull *Larus argentatus* and two wigeon *Mareca penelope*.

Table 3a: Southwold Inshore Survey Results

Species	Number of flights	Flock size (range)	Distance from shore (range; km)
Wigeon	1	2	1.8
Mallard <i>Anas platyrhynchos</i>	2	1-3	0.05-0.9
Oystercatcher <i>Haematopus ostralegus</i>	2	1	0.15-0.4
Avocet <i>Recurvirostra avosetta</i>	2	2-3	0.3-1.0
Turnstone <i>Arenaria interpres</i>	1	1	0.01

¹⁹ <https://designatedsites.naturalengland.org.uk/PDFsForWeb/Citation/1003208.pdf> [accessed 25/11/2024]

Species	Number of flights	Flock size (range)	Distance from shore (range; km)
Sanderling <i>Calidris alba</i>	1	7	1.1
Purple sandpiper <i>Calidris maritima</i>	1	2	0.02
Kittiwake <i>Rissa tridactyla</i>	1	1	0.6
Black-headed gull <i>Chroicocephalus ridibundus</i>	7	1-3	0.04-0.8
Common gull <i>Larus canus</i>	3	1-2	0.15-0.25
Great black-backed gull <i>Larus marinus</i>	6	1	0.05-1.9
Herring gull	29	1-4	0.01-1.9
Lesser black-backed gull <i>Larus fuscus</i>	3	1-2	0.06-0.09
Sandwich tern <i>Thalasseus sandvicensis</i>	6	1-2	0.1-2.0
Cormorant <i>Phalacrocorax carbo</i>	4	1-2	0.3-1.0
Little egret <i>Egretta garzetta</i>	1	1	0.1
Kestrel <i>Falco tinnunculus</i>	1	1	0.12

17th April 2024

10.50-13.50 (**Figure 2.02, Appendix A**): 52 flights logged of a wide diversity of species (**Table 3b**). Fifteen records of birds on the sea comprising gulls, two red-throated divers *Gavia stellata*, one cormorant and one kittiwake.

Table 3b: Southwold Inshore Survey Results

Species	Number of flights	Flock size (range)	Distance from shore (range; km)
Anser spp.	1	2	2.0
Oystercatcher	1	1	0.2
Grey plover <i>Pluvialis squatarola</i>	1	1	0.4
Whimbrel <i>Numenius phaeopus</i>	4	1-2	0.7-1.3
Knot <i>Calidris canutus</i>	1	4	0.4
Kittiwake	3	1	2.0
Black-headed gull	3	4	0.15-0.4
Common gull	2	4-5	0.15-0.2
Great black-backed gull	1	3	1.5
Herring gull	10	1-26	0.15-2.0
Lesser black-backed gull	3	2-11	0.6-1.8
Sandwich tern	1	1	1.0
Common tern <i>Sterna hirundo</i>	1	1	1.0
Red-throated diver	2	1	1.5-2.0
Gannet <i>Morus bassanus</i>	7	1-8	1.4-2.0
Cormorant	11	7	0.1-2.0

1st May 2024

09.20-12.20 (**Figure 2.03, Appendix A**): 84 flights logged of a wide diversity of species (**Table 3c**). Ten records of birds on the sea comprising gulls and three tufted ducks *Aythya fuligula*. A hobby *Falco subbuteo* was watched arriving from offshore.

Table 3c: Southwold Inshore Survey Results

Species	Number of flights	Flock size (range)	Distance from shore (range; km)
Wigeon	2	3	0.05-0.5
Common scoter <i>Melanitta nigra</i>	1	1	1.8
Ringed plover <i>Charadrius hiaticula</i>	1	1	0.05
Dunlin <i>Calidris alpina</i>	1	1	0.05
Kittiwake	12	1-6	0.15-2.0
Black-headed gull	6	1-2	0.01-1.2
Mediterranean gull	1	6	0.6
Common gull	4	1-4	0.2-1.7
Great black-backed gull	1	1	0.04
Herring gull	22	1-20	0.05-2.0
Lesser black-backed gull	4	1-3	0.05-0.4
Sandwich tern	23	1-10	0.12-2.0
Little tern <i>Sterna albifrons</i>	2	3-4	1.5
Great skua <i>Stercorarius skua</i>	1	1	0.7
Red-throated diver	1	1	1.2
Gannet	1	1	1.5
Hobby	1	1	-

20th May 2024

09.45-12.45 (Figure 2.04, Appendix A): 84 flights logged of a wide diversity of species (Table 3d). Two records of birds on the sea comprising two guillemots *Uria aalge* and five common scoters.

Table 3d: Southwold Inshore Survey Results

Species	Number of flights	Flock size (range)	Distance from shore (range; km)
Common scoter	3	1-3	0.5-2.0
Oystercatcher	3	1-2	0.01-0.2
Ringed plover	1	1	0.15
Sanderling	1	2	0.15
Dunlin	1	1	0.07
Kittiwake	31	1-9	0.05-2.0
Black-headed gull	1	1	0.1
Common gull	5	1	0.1-0.5
Great black-backed gull	3	1	0.02-1.5
Herring gull	11	1-2	0.005-2.0
Lesser black-backed gull	2	1-2	0.5
Sandwich tern	12	1-8	0.3-0.8
Common tern	1	1	0.3
Guillemot	3	1-2	0.3-1.0
Red-throated diver <i>Gavia stellata</i>	1	1	1.0
Fulmar <i>Fulmarus glacialis</i>	1	1	0.15
Gannet	4	1-5	0.3-2.0

19th June 2024

15.00-18.00 (**Figure 2.05, Appendix A**): 27 flights logged of a range of species (**Table 3d**). Four records of birds on the sea comprising gulls.

Table 3d: Southwold Inshore Survey Results

Species	Number of flights	Flock size (range)	Distance from shore (range; km)
Eider	1	1	0.04
Common scoter	1	4	1.8
Oystercatcher	1	1	0.05
Black-headed gull	4	1-2	0.05-0.5
Herring gull	17	1-19	0.01-1.5
Lesser black-backed gull	1	3	0.4
Sandwich tern	2	2-3	0.04-0.8

20th June 2024

12.00-15.00 (**Figure 2.06, Appendix A**): 42 flights logged of a range of species (**Table 3d**). Six records of birds on the sea comprising gulls.

Table 3d: Southwold Inshore Survey Results

Species	Number of flights	Flock size (range)	Distance from shore (range; km)
Common scoter	2	2-4	0.8-1.8
Curlew	1	1	0.7
Black-headed gull	3	1	0.06-0.07
Great black-backed gull	2	1-2	0.01-1.3
Herring gull	21	1-120	0.01-2.0
Lesser black-backed gull	1	2	2.0
Sandwich tern	7	1-6	0.3-1.2
Common tern	5	1-5	0.09-1.0

11th July 2024

09.00-12.00 (**Figure 2.07, Appendix A**): 31 flights logged of a range of species (**Table 3d**). Three records of birds on sea comprising gulls.

Table 3d: Southwold Inshore Survey Results

Species	Number of flights	Flock size (range)	Distance from shore (range; km)
Common scoter	2	1-6	0.7-1.5
Oystercatcher	1	2	0.2
Black-headed gull	6	1	0.01-0.5
Common gull	1	1	0.3
Great black-backed gull	2	2	0.3-0.9
Herring gull	15	1-7	0.05-1.3
Lesser black-backed gull	1	1	0.4
Sandwich tern	2	1-2	0.3-0.6
Common tern	1	2	0.5

12th July 2024

08.50-11.50 (**Figure 2.08, Appendix A**): 28 flights logged of a range of species (**Table 3d**). No records of birds on the sea.

Table 3d: Southwold Inshore Survey Results

Species	Number of flights	Flock size (range)	Distance from shore (range; km)
Common scoter	1	3	1.0
Mallard	1	2	0.01
Oystercatcher	1	1	0.05
Curlew	5	1-2	0.1-0.8
Common sandpiper <i>Actitis hypoleucus</i>	1	3	0.02
Black-headed gull	1	14	0.1
Great black-backed gull	1	1	1.2
Herring gull	7	1-6	0.01-1.1
Lesser black-backed gull	5	1-2	0.03-1.2
Sandwich tern	3	1-2	0.2-0.7
Common tern	2	2-4	0.2-0.3

19th August 2024

10.00-13.00 (**Figure 2.09, Appendix A**): 17 flights logged of a diversity of species (**Table 3i**). Six records of birds on the sea comprising gulls.

Table 3i: Southwold Inshore Survey Results

Species	Number of flights	Flock size (range)	Distance from shore (range; km)
Teal <i>Anas crecca</i>	1	2	1.2
Oystercatcher	2	1	0.2-0.3
Black-headed gull	1	3	0.2
Herring gull	8	1-14	0.1-0.4
Lesser black-backed gull	3	1-5	0.1-0.2
Sandwich tern	1	2	0.6
Little tern	1	3	0.6

29th August 2024

16.00-19.00 (**Figure 2.10, Appendix A**): 23 flights logged of a range of species (**Table 3j**). Thirteen records of birds on the sea comprising gulls and two mute swan *Cygnus olor*.

Table 3j: Southwold Inshore Survey Results

Species	Number of flights	Flock size (range)	Distance from shore (range; km)
Barnacle goose <i>Branta leucopsis</i>	1	2	0.1
Teal	1	15	0.5
Oystercatcher	1	9	1.6
Great black-backed gull	6	2-9	0.1-1.3
Herring gull	5	1-4	0.1-0.7
Lesser black-backed gull	1	1	0.1
Sandwich tern	4	2-4	0.3-1.0

Species	Number of flights	Flock size (range)	Distance from shore (range; km)
<i>Sterna</i> spp.*	2	18-25	0.8
Cormorant	1	1	0.3
Little egret	1	1	0.1

*Arctic tern *Sterna paradisaea* or common tern.

13th September 2024

09.35-12.35 (Figure 2.11, Appendix A): 20 flights logged of a range of species (Table 3k). Four records of birds on the sea comprising gulls.

Table 3k: Southwold Inshore Survey Results

Species	Number of flights	Flock size (range)	Distance from shore (range; km)
Shelduck <i>Tadorna tadorna</i>	1	4	1.0
Teal	1	6	0.6
Common Scoter	1	1	1.7
Oystercatcher	1	1	0.2
Dunlin	1	5	0.2
Black-headed gull	2	1	0.1
Great black-backed gull	3	1-2	0.2-1.8
Herring gull	6	2-4	0.1-1.5
Diver spp.	1	2	2.0
Gannet	2	2	1.6-1.8
Cormorant	1	10	1.5

19th September 2024

09.05-12.05 (Figure 2.12, Appendix A): 33 flights logged of a range of species (Table 3l). Three records of birds on the sea comprising gulls and a flock of 10 teal.

Table 3l: Southwold Inshore Survey Results

Species	Number of flights	Flock size (range)	Distance from shore (range; km)
Goose sp.	1	1	1.7
Wigeon	5	4-25	0.5-1.8
Teal	8	1-45	0.4-1.8
Common Scoter	1	3	1.4
Black-headed gull	2	3-4	0.4-0.5
Mediterranean gull <i>Ichthyaetus melanocephalus</i>	2	1-2	0.0-0.1
Great black-backed gull	2	1-2	0.1-0.2
Herring gull	5	2-6	0.1-0.3
Gannet	3	1-5	0.8-1.5
Cormorant	2	2	0.71.1

3.2.2 Walberswick Inshore Survey

16th April 2024

10.45-13.45 (Figure 2.13, Appendix A): 28 flights logged of a wide diversity of species (Table 3m). Seven records of birds on the sea comprising gulls, a cormorant, 180 common scoter and a surf scoter *Melanitta perspicillata*.

Table 3m: Walberswick Inshore Survey Results

Species	Number of flights	Flock size (range)	Distance from shore (range; km)
Shelduck	1	2	0.1
Whimbrel	1	1	0.5
Knot	1	16	0.4
Kittiwake	1	2	2.0
Common gull	6	1-9	0.1-1.5
Great black-backed gull	1	1	0.05
Herring gull	6	1-9	0.2-1.0
Lesser black-backed gull	1	2	0.5
Sandwich tern	3	2-3	0.01-1.5
Red-throated diver	1	1	2.0
Gannet	2	1	0.5-1.3
Cormorant	3	1	0.05-1.0
Grey heron <i>Ardea cinerea</i>	1	2	0.1

29th April 2024

12.00-15.00 (Figure 2.14, Appendix A): 52 flights logged of a wide diversity of species (Table 3n). Five records of birds on the sea comprising gulls and eight common scoter.

Table 3n: Walberswick Inshore Survey Results

Species	Number of flights	Flock size (range)	Distance from shore (range; km)
Oystercatcher	1	1	0.05
Kittiwake	5	1	0.2-1.0
Black-headed gull	4	1-5	0.05-0.6
Common gull	8	2-4	0.05-1.0
Great black-backed gull	2	1-2	0.01
Herring gull	26	1-37	0.01-2.0
Lesser black-backed gull	6	1	0.01-2.0
Sandwich tern	3	1-2	0.1-0.2
Arctic skua <i>Stercorarius parasiticus</i>	1	1	2.0
Red-throated diver	1	1	2.0
Gannet	1	2	2.0
Cormorant	1	9	0.45

3rd May 2024

13.10-16.10 (Figure 2.16, Appendix A): 46 flights logged of a wide diversity of species (Table 3p). Nine records of birds on the sea comprising gulls, 281 common scoter and a cormorant.

Table 3p: Walberswick Inshore Survey Results

Species	Number of flights	Flock size (range)	Distance from shore (range; km)
Brent Goose	1	1	1.4
Gadwall <i>Anas strepera</i>	1	1	0.1
Oystercatcher	2	1-3	0.01-0.2
Grey Plover	1	1	1.8
Whimbrel	4	1-6	0.04-1.8
Bar-tailed Godwit	1	1	0.7
Kittiwake	3	1-3	1.0-1.4
Black-headed gull	5	1-8	0.01-1.2
Mediterranean gull	1	1	0.04
Common gull	4	1-7	0.04-0.5
Great black-backed gull	3	2-3	0.07-1.5
Herring gull	7	1-3	0.3-1.5
Lesser black-backed gull	4	1-2	0.01-0.6
Sandwich tern	5	1-6	0.3-1.2
Gannet	3	2-11	1.2-2.0
Cormorant	1	1	0.1

21st May 2024

11.35-14.35 (**Figure 2.15, Appendix A**): 84 flights logged of a wide diversity of species (**Table 3o**). Three records of birds on the sea comprising a black-headed gull, three guillemots and 300 common scoters.

Table 3o: Walberswick Inshore Survey Results

Species	Number of flights	Flock size (range)	Distance from shore (range; km)
Teal	1	1	0.18
Oystercatcher	1	2	0.01
Kittiwake	23	1-7	0.1-1.2
Black-headed gull	11	1-2	0.01-0.04
Mediterranean gull	1	1	0.01
Common gull	8	1-2	0.02-0.06
Herring gull	10	1-8	0.01
Lesser black-backed gull	4	1-2	0.01-1.0
Sandwich tern	5	2-4	0.01-0.5
Little tern	1	2	0.15-0.4
Guillemot	3	1	1.1-1.4

21st June 2024

10.00-13.00 (**Figure 2.17, Appendix A**): 23 flights logged of a range of species (**Table 3q**). One record of a bird on the sea comprising two common gulls.

Table 3q: Southwold Inshore Survey Results

Species	Number of flights	Flock size (range)	Distance from shore (range; km)
Curlew	2	1-2	0.3-1.2
Black-headed gull	4	1-5	0.1-0.6
Great black-backed gull	1	1	1.2

Species	Number of flights	Flock size (range)	Distance from shore (range; km)
Herring gull	5	1-3	0.1-0.8
Sandwich tern	2	1-2	0.15-0.5
Common tern	9	1	0.01-0.2

24th June 2024

17.40-20.40 (**Figure 2.18, Appendix A**): 27 flights logged of a range of species (**Table 3r**). Thirteen records of birds on the sea comprising gulls and 1,857 common scoters. An additional 85 common scoters were also recorded on the sea beyond the 2km survey area.

Table 3r: Walberswick Inshore Survey Results

Species	Number of flights	Flock size (range)	Distance from shore (range; km)
Common scoter	2	3-58	0.8-1.6
Curlew	2	2-6	0.8-1.0
Bar-tailed godwit <i>Limosa lapponica</i>	1	1	1.2
Black-headed gull	4	2-6	0.1-0.7
Great black-backed gull	1	1	1.2
Herring gull	6	1-6	0.2-1.4
Sandwich tern	9	2-8	0.1-1.8
Common tern	2	1	0.02

July 8th 2024

13.30-16.30 (**Figure 2.19, Appendix A**): 25 flights logged of a range of species (**Table 3s**). Three records of birds on the sea comprising gulls and 150 common scoter.

Table 3s: Southwold Inshore Survey Results

Species	Number of flights	Flock size (range)	Distance from shore (range; km)
Common scoter	4	7-90	1.0-2.0
Curlew	4	1-3	0.01-0.7
Black-headed gull	1	1	0.01
Mediterranean gull	2	1	0.1
Great black-backed gull	1	3	1.4
Herring gull	8	2-12	0.1-1.5
Sandwich tern	3	2	0.2-1.6
Common tern	1	4	0.4
Cormorant	1	1	0.1

July 9th 2024

08.30-11.30 (**Figure 2.20, Appendix A**): 18 flights logged of a range of species (**Table 3t**). Five records of birds on the sea comprising gulls and 310 common scoter.

Table 3t: Walberswick Inshore Survey Results

Species	Number of flights	Flock size (range)	Distance from shore (range; km)
Common scoter	1	9	1.8
Ringed plover	1	1	0.4

Species	Number of flights	Flock size (range)	Distance from shore (range; km)
Curlew	2	1-2	1.2-1.4
Bar-tailed godwit	1	1	1.2
Black-headed gull	1	3	0.3
Great black-backed gull	1	1	1.0
Herring gull	10	2-7	0.1-1.2
Common tern	1	1	0.2

22nd August 2024

13.50-16.50 (**Figure 2.21, Appendix A**): 15 flights logged of a diversity of species (**Table 3u**). There were no records of birds on the sea.

Table 3u: Walberswick Inshore Survey Results

Species	Number of flights	Flock size (range)	Distance from shore (range; km)
Common scoter	3	2-15	1.8-1.9
Oystercatcher	1	3	0.2
Ringed plover	1	1	0.01
Great black-backed gull	2	1	1.1-1.9
Herring gull	5	1-6	0.1-1.2
Lesser black-backed gull	2	1	0.4-0.7
Sandwich tern	1	2	1.8

30th August 2024

10.20-13.20 (**Figure 2.22, Appendix A**): 20 flights logged of a range of species (**Table 3v**). Two records of birds on the sea comprising 65 common scoter and a cormorant.

Table 3v: Walberswick Inshore Survey Results

Species	Number of flights	Flock size (range)	Distance from shore (range; km)
Wigeon	1	6	0.2
Teal	1	3	1.3
Oystercatcher	1	1	0.1
<i>Pluvialis</i> spp.*	1	7	1.3
Whimbrel	1	1	1.3
Great black-backed gull	1	1	0.5
Herring gull	8	1-8	0.1-1.2
Sandwich tern	2	2-3	0.1-1.8
<i>Sterna</i> spp.**	1	10	1.5
Gannet	2	1	1.8-1.9
Cormorant	1	2	1.9

*Golden plover *Pluvialis apricaria* or grey plover.

**Arctic tern or common tern.

20th September 2024

08.35-11.35 (**Figure 2.23, Appendix A**): 25 flights logged of a range of species (**Table 3w**). Three records of birds on the sea comprising gulls.

Table 3w: Walberswick Inshore Survey Results

Species	Number of flights	Flock size (range)	Distance from shore (range; km)
Brent goose <i>Branta bernicla</i>	6	1-4	0.3-1.9
Pintail <i>Anas acuta</i>	1	4	1.2
Wigeon	2	21-55	1.4-2.0
Common gull	2	1-4	0.1
Great black-backed gull	2	1	0.2-1.4
Herring gull	6	2-5	0.1-1.0
Sandwich tern	1	1	0.6
Gannet	2	1-4	1.8
Cormorant	3	2-7	0.2-1.0

26th September 2024

08.10-11.10 (Figure 2.24, Appendix A): 21 flights logged of a range of species (Table 3x). Three records of birds on the sea comprising two cormorants and an eider.

Table 3x: Walberswick Inshore Survey Results

Species	Number of flights	Flock size (range)	Distance from shore (range; km)
Brent goose	1	1	1.2
Gadwall <i>Anas strepera</i>	1	4	1.6
Wigeon	1	2	1.6
Teal	3	3-6	1.0-1.8
Common scoter	1	90	2.0
Black-headed gull	2	2-4	0.1-0.2
Great black-backed gull	2	2-3	1.3-1.6
Herring gull	4	2-5	0.1-1.3
Gannet	4	2-5	1.0-2.0
Cormorant	1	5	1.6
Hobby	1	1	0.6

3.2.3 Summary of red-throated diver foraging data

During consultation with Natural England, it had 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. Only two birds were recorded on the sea during the breeding season surveys, both on 17th April from the Southwold view point, 0.5km and 0.75km from the view point location, respectively.

3.2.4 Summary of lesser black-backed gull data

Breeding lesser black-backed gulls are a qualifying feature of the Alde-Ore Estuary SPA and Ramsar designations which lie approximately 3km to the south of the scheme (though the two view points are both more than 15km from this designated site). Lesser black-backed gulls were present throughout the breeding season and recorded on most surveys. Though no evidence of breeding was recorded, loafing, roosting and foraging birds were recorded at both view points, with the vast majority of records pertaining to passage birds in April and early May and post-breeding birds/passage in August.

Presence and flight activity of this species is summarised in Table 4.

Table 4: Lesser black-backed gull presence and location

Visit	Birds on the sea		Flight Activity			
	Southwold View Point	Number present on sea	Distance from Potential Landfall Location (km)	No. of flights	Flock size	Distance from shore (range; km)
15/04/2024 (10:30-13:30)	-	-		3	1-2	0.06-0.09
17/04/2024 (10:50-13:50)	15	0.94-1.62		3	2-11	0.6-1.8
01/05/2024 (09:20-12:20)	25	0.9-1.8		4	1-3	0.05-0.4
20/05/2024 (09:45-12:45)	-	-		2	1-2	0.5
19/06/2024 (15:00-18:00)	-	-		1	3	0.4
20/06/2024 (12:00-15:00)	1	0.36		1	2	2.0
11/07/2024 (09:00-12:00)	2	0.13		1	1	0.4
12/07/2024 (08:50-11:50)	-	-		5	1-2	0.03-1.2
19/08/2024 (10:00-13:00)	210	0.33-0.55		3	1-5	0.1-0.2
29/08/2024 (16:00-19:00)	31	0.24-0.73		1	1	0.1
13/09/2024 (09:35-12:35)	2	0.92		-	-	-
19/09/2024 (09:05-12:05)	-	-		-	-	-
Walberswick View Point	Number present on sea	Distance from Potential Landfall Location (km)	No. of flights	Flock size	Distance from shore (range; km)	
16/04/2024 (10:45-13:45)	-	-	1	2	0.5	
29/04/2024 (12:00-15:00)	1	0.9	6	1	0.01-2.0	
03/05/2024 (13:10-16:10)	34	1.0	4	1-2	0.01-0.6	
21/05/2024 (11:35-14:35)	-	-	4	1-2	0.01-1.0	
21/06/2024 (10:00-13:00)	-	-	-	-	-	
24/06/2024 (17:40-20:40)	-	-	-	-	-	
08/07/2024 (13:30-16:30)	-	-	-	-	-	
09/07/2024 (08:30-11:30)	-	-	-	-	-	
22/08/2024 (13:50-16:50)	-	-	2	1	0.4-0.7	
30/08/2024 (10:20-13:20)	-	-	-	-	-	
20/09/2024 (08:35-11:35)	-	-	-	-	-	
26/09/2024 (08:10-11:10)	-	-	-	-	-	

3.2.5 Summary of Sandwich, little and common tern foraging and passage data

Breeding populations of several tern species are qualifying features of designated sites in the vicinity of the study area including Sandwich tern (Alde-Ore Estuary SPA), little tern (Minsmere-Walberswick SPA, Outer Thames Estuary SPA, Benacre to Easton Bavents SPA, Alde-Ore Estuary SPA) and common tern (Outer Thames Estuary SPA). Despite no evidence of breeding within any of the study area, terns will commute over long distances when provisioning a nest²⁰ and a proportion of the flight activity offshore of the two landfall locations relates to foraging adults from nests in the wider area and flight activity of these three species is summarised in **Table 5**.

²⁰Eglington, S. M., Perrow, M. R. (2014) *Literature review of tern (Sterna and Sternula spp.) foraging ecology*. ECON Ecological Consultancy Ltd, Norwich on behalf of JNCC.

Table 5: Foraging and Passage Sandwich, Little and Common Tern Counts

Visit	Sandwich tern			Little tern			Common tern			
	Southwold View Point	No. of flights	Flock size	Distance from shore (range; km)	No. of flights	Flock size	Distance from shore (range; km)	No. of flights	Flock size	Distance from shore (range; km)
15/04/2024 (10:30-13:30)		6	1-2	0.1-2.0	-	-	-	-	-	-
17/04/2024 (10:50-13:50)		1	1	1.0	-	-	-	1	1	1.0
01/05/2024 (09:20-12:20)		23	1-10	0.12-2.0	2	3-4	1.5	-	-	-
20/05/2024 (09:45-12:45)		12	1-8	0.3-0.8	-	-	-	1	1	0.3
19/06/2024 (15:00-18:00)		2	2-3	0.04-0.8	-	-	-	-	-	-
20/06/2024 (12:00-15:00)		7	1-6	0.3-1.2	-	-	-	5	1-5	0.09-1.0
11/07/2024 (09:00-12:00)		2	1-2	0.3-0.6	-	-	-	1	2	0.5
12/07/2024 (08:50-11:50)		3	1-2	0.2-0.7	-	-	-	2	2-4	0.2-0.3
19/08/2024 (10:00-13:00)		1	2	0.6	1	3	0.6	-	-	-
29/08/2024 (16:00-19:00)		4	2-4	0.3-1.0	-	-	-	2*	18-25	0.8
13/09/2024 (09:35-12:35)		-	-	-	-	-	-	-	-	-
19/09/2024 (09:05-12:05)		-	-	-	-	-	-	-	-	-
Walberswick View Point										
Walberswick View Point	No. of flights	Flock size	Distance from shore (range; km)	No. of flights	Flock size	Distance from shore (range; km)	No. of flights	Flock size	Distance from shore (range; km)	
16/04/2024 (10:45-13:45)		3	2-3	0.01-1.5	-	-	-	-	-	-
29/04/2024 (12:00-15:00)		3	1-2	0.1-0.2	-	-	-	-	-	-
03/05/2024 (13:10-16:10)		5	1-6	0.3-1.2	-	-	-	-	-	-
21/05/2024 (11:35-14:35)		5	2-4	0.01-0.5	1	2	0.15-0.4	-	-	-
21/06/2024 (10:00-13:00)		2	1-2	0.15-0.5	-	-	-	9	1	0.01-0.2
24/06/2024 (17:40-20:40)		9	2-8	0.1-1.8	-	-	-	2	1	0.02
08/07/2024 (13:30-16:30)		3	2	0.2-1.6	-	-	-	1	4	0.4
09/07/2024 (08:30-11:30)		-	-	-	-	-	-	1	1	0.2
22/08/2024 (13:50-16:50)		1	2	1.8	-	-	-	-	-	-
30/08/2024 (10:20-13:20)		2	2-3	0.1-1.8	-	-	-	1**	10	1.5
20/09/2024 (08:35-11:35)		1	1	0.6	-	-	-	-	-	-
26/09/2024 (08:10-11:10)		-	-	-	-	-	-	-	-	-

* May relate to common or Arctic terns

**May relate to common or Arctic terns

3.2.6 Southwold Beach Survey

Table 5a details the results from the Southwold beach surveys (April 2024 - September 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 by beach-users beyond the pier to the south.

Table 5a: Southwold Beach Survey Results

Date/Time	Tidal State	Results
15/04/2024 13.30-14.30	High Tides: 04.18 and 16.07 Low Tides: 09.42 and 22.31 Rising tide	Six herring gulls and one lesser black-backed gull.
17/04/2024 13.50-14.50	High Tides: 07.09 and 18.31 Low Tides: 00.12 and 12.59 Rising tide	Two black-headed gulls and 21 herring gulls.
01/05/2024 12.20-13.20	High Tides: 04.29 and 16.31 Low Tides: 10.01 and 23.06 Mid tide (rising)	Ten turnstones, a common sandpiper, 57 herring gulls, a lesser black-backed gull and two black-headed gulls.
20/05/2024 12.45-13.45	High Tides: 09.59 and 21.24 Low Tides: 03.07 and 15.28 Falling tide	Sixteen herring gulls, 18 lesser black-backed gulls, five black-headed gulls and a common gull.
19/06/2024 14.00-15.00	High Tides: 09.45 and 21.35 Low Tides: 03.02 and 15.25 Falling tide	None.
20/06/2024 15.00-16.00	High Tides: 10.20 and 22.24 Low Tides: 03.42 and 16.08 Low tide	Thirteen herring gulls and three black-headed gulls.
11/07/2024 12.00-13.00	High Tides: 03.01 and 14.43 Low Tides: 08.12 and 21.12 Mid tide (rising)	None.
12/07/2024 11.50-12.50	High Tides: 03.39 and 15.22 Low Tides: 08.46 and 21.50 Mid tide	Three common sandpipers and 35 herring gulls, three lesser black-backed gulls and one greater black-backed gull.
19/08/2024 13.00-14.00	High Tides: 10.50 and 23.37 Low Tides: 04.32 and 17.12 Mid tide	Four turnstones and 2 black-headed gulls.
29/08/2024 15.00-16.00	High Tides: 07.25 and 20.24 Low Tides: 01.07 and 13.40 Mid tide	Seven turnstones and eight herring gulls.
13/09/2024 12.35-13.35	High Tides: 06.28 and 19.39 Low Tides: 12.52 Low tide	Six turnstones, two purples sandpipers, oystercatcher, six herring gulls and one black-headed gull.
19/09/2024 12.05-13.05	High Tides: 11.46 Low Tides: 05.41 and 18.19 High tide	Nine turnstones, 85 herring gulls, four lesser black-backed gulls and 12 black-headed gulls.

3.2.7 Walberswick Beach Survey

Table 5b details the results from the Walberswick beach surveys (April 2024 - September 2024 inclusive). The beach is shingle, and heavily disturbed by walkers and dogs at all times, resulting in few observations during the surveys.

Table 5b: Walberswick Beach Survey Results

Date/Time	Tidal State	Results
16/04/2024 13.45-14.45	High Tides: 05.50 and 17.15 Low Tides: 10.50 Mid tide (rising)	Eleven turnstones, 13 herring gulls, one lesser black-backed gull.
29/04/2024 15.00-16.00	High Tides: 02.29 and 14.43 Low Tides: 08.17 and 20.48 High tide	None.
03/05/2024 12.10-13.10	High Tides: 07.35 and 18.52 Low Tides: 00.36 and 12.58 Low tide	Four turnstones, ten herring gulls, two lesser black-backed gulls and a black-headed gull.
21/05/2024 14.35-15.35	High Tides: 10.27 and 22.07 Low Tide: 03.44 and 16.02 Falling tide	Eleven herring gulls, three lesser black-backed gulls, seven black-headed gulls.
21/06/2024 13.00-14.00	High Tides: 10.55 and 23.11 Low Tides: 04.22 and 16.52 Falling tide	Two herring gulls, one common gull and three black-headed gulls.
24/06/2024 16.40-17.40	High Tides: 00.45 and 12.52 Low Tides: 06.30 and 19.13 Mid tide (falling)	None.
08/07/2024 12.30-13.30	High Tides: 01.01 and 12.53 Low Tides: 06.37 and 19.18 High Tide	None.
09/07/2024 11.30-12.30	High Tides: 01.43 and 13.31 Low Tides: 07.11 and 19.57 Rising tide	None.
22/08/2024 16.50-17.50	High Tides: 00.58 and 12.55 Low Tides: 06.46 and 19.28 Mid tide (falling)	Two black-headed gulls.
30/08/2024 13.20-14.20	High Tides: 08.32 and 21.45 Low Tides: 02.23 and 14.56 Falling tide	None.
20/09/2024 11.35-12.35	High Tides: 00.32 and 12.30 Low Tides: 06.22 and 19.00 High tide	Three herring gulls.
26/09/2024 11.10-12.10	High Tides: 05.29 and 18.57 Low Tides: 11.58 Low tide	Two herring gulls.

4. Summary and Conclusions

4.1 Potential Landfall Locations

4.1.1 Southwold

The inshore area off Southwold supported very few species of foraging birds during the breeding survey period (April to September inclusive). The vast majority of birds recorded on the sea were gulls, including larger aggregations gathering pre-roost in the afternoons on some dates. Two red-throated divers were still present on 17th April and represent the only records of this species on the sea during the breeding survey period. There were five common scoters and two guillemots offshore on 20th May, a single cormorant on 17th April and resting wildfowl were occasionally recorded (two wigeon on 15th April, three tufted duck on 3rd May, two mute swan on 29th August and 10 teal on 19th September).

Sandwich terns were recorded on ten of twelve visits with 61 flights recorded, on passage and foraging offshore. Numbers of little terns passing or foraging offshore were low during the breeding survey period, with flights only noted on 1st May (two groups, of three and four) and 19th August (a group of three). Common terns were seen more frequently with 11 flights on six visits including five flights recorded on 20th June. Larger groups of *Sterna* spp. were recorded in late August, relating to passage common or Arctic terns.

A small flock of wintering turnstones remained early in the survey period during beach surveys and returned in August, using groynes and boulders to the north of the pier to feed and roost, two purple sandpipers were also present in September. Other records included common sandpipers on passage in May and July, foraging and roosting on boulders to the north of the view point, and relatively low numbers of gulls roosting and foraging on areas of sandy beach and coastal infrastructure at times.

4.1.2 Walberswick

The bay off Walberswick hosted groups of common scoter throughout the survey period with birds recorded during eight of the twelve watches; the largest aggregation was on 24th June when 1,942 were recorded – most of which were distant to the south of the view point. Birds were closer to the potential landfall at times and a surf scoter was present on 16th April.

The remaining records related to gulls which were recorded throughout the breeding survey period roosting on the sea and associating with small fishing boats in the area. Single cormorants were recorded occasionally and two were present on 26th September when two eider were also offshore. Three guillemots were recorded on 21st May.

There were 34 flight lines of Sandwich terns during the breeding bird survey period over ten visits. A single flight line of little terns was recorded on 21st May involving two birds and 13 flights of common tern were recorded during the survey period from late June onwards. A single group of *Sterna* spp. was noted on 30th August, relating to passage common or Arctic terns.

A group of turnstones were recorded during early visits roosting to the north of the view point. Gulls were recorded along the entire length of the survey area but mainly in the northern section and included relatively low numbers of roosting black-headed, common, lesser black-backed and herring gulls.

Appendix A

Figures

Figure 1 Study Area

Figure 2.01 Southwold VP 15/04/2024 (10:30-13:30)

Figure 2.02 Southwold VP 17/04/2024 (10:50-13:50)

Figure 2.03 Southwold VP 01/05/2024 (09:20-12:20)

Figure 2.04 Southwold VP 20/05/2024 (09:45-12:45)

Figure 2.05 Southwold VP 19/06/2024 (15:00-18:00)

Figure 2.06 Southwold VP 20/06/2024 (12:00-15:00)

Figure 2.07 Southwold VP 11/07/2024 (09:00-12:00)

Figure 2.08 Southwold VP 12/07/2024 (08:50-11:50)

Figure 2.09 Southwold VP 19/08/2024 (10:00-13:00)

Figure 2.10 Southwold VP 29/08/2024 (16:00-19:00)

Figure 2.11 Southwold VP 13/09/2024 (09:35-12:35)

Figure 2.12 Southwold VP 19/09/2024 (09:05-12:05)

Figure 2.13 Walberswick VP 16/04/2024 (10:45-13:45)

Figure 2.14 Walberswick VP 29/04/2024 (12:00-15:00)

Figure 2.15 Walberswick VP 03/05/2024 (13:10-16:10)

Figure 2.16 Walberswick VP 21/05/2024 (11:35-14:35)

Figure 2.17 Walberswick VP 21/06/2024 (10:00-13:00)

Figure 2.18 Walberswick VP 24/06/2024 (17:40-20:40)

Figure 2.19 Walberswick VP 08/07/2024 (13:30-16:30)

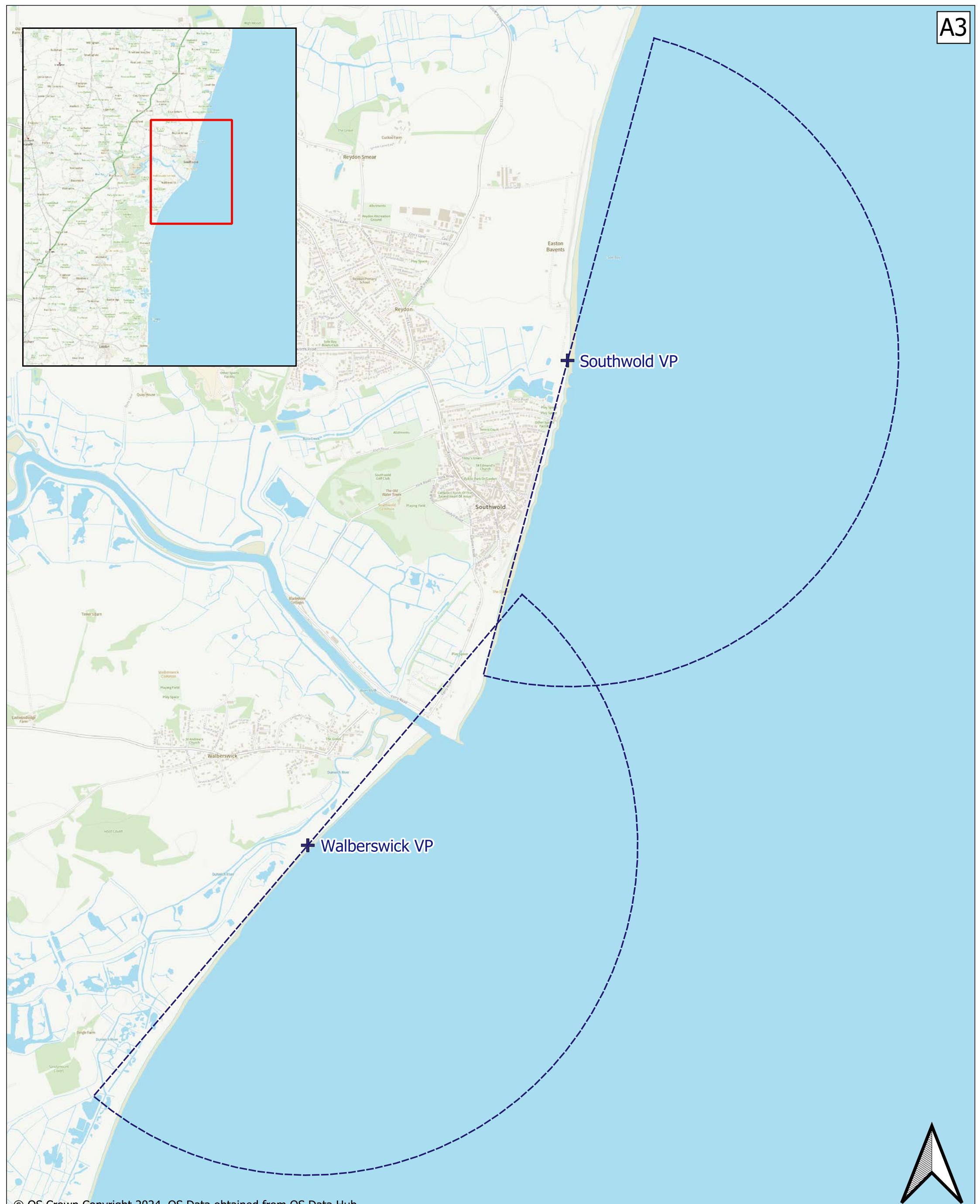
Figure 2.20 Walberswick VP 09/07/2024 (08:30-11:30)

Figure 2.21 Walberswick VP 22/08/2024 (13:50-16:50)

Figure 2.22 Walberswick VP 30/08/2024 (10:20-13:20)

Figure 2.23 Walberswick VP 20/09/2024 (08:35-11:35)

Figure 2.24 Walberswick VP 26/09/2024 (08:10-11:10)



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Figure 1

Study Area

Inshore and Beach Breeding Bird Survey Report 2024

 Survey Area
 VP Location

0 250 500 m



Scale at A3: 1:20,000
 Role: Ecology
 Suitability: For Information
 Project Number: 287334
 Drawing Number: Figure 1

Coordinate System: British National Grid

1	25/11/2024	DB	RM	RM	AC
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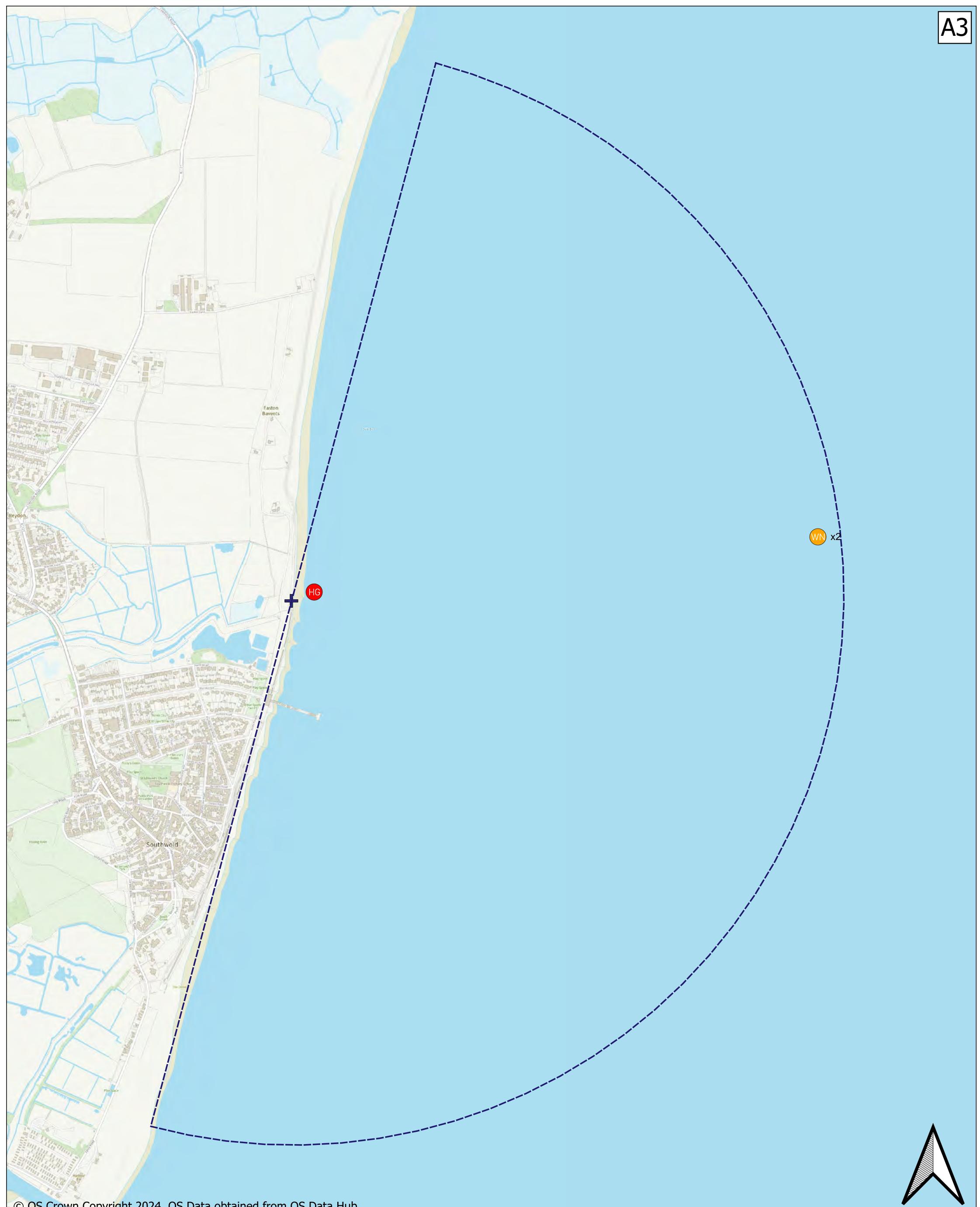
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Figure 2.01

Southwold VP 15/04/2024
(10:30-13:30)

Inshore and Beach Breeding Bird Survey Report 2024

- Red List
- Amber List
- Green List
- Not Assessed
- ✚ VP Location
- ─ VP Survey Area

WN - Wigeon
HG - Herring gull

0 250 500 m

Scale at A3: 1:12,000
Role: Ecology
Suitability: For Information
Project Number: 287334
Drawing Number: Figure 2.01

Coordinate System: British National Grid

1	25/11/2024	DB	RM	RM	AC
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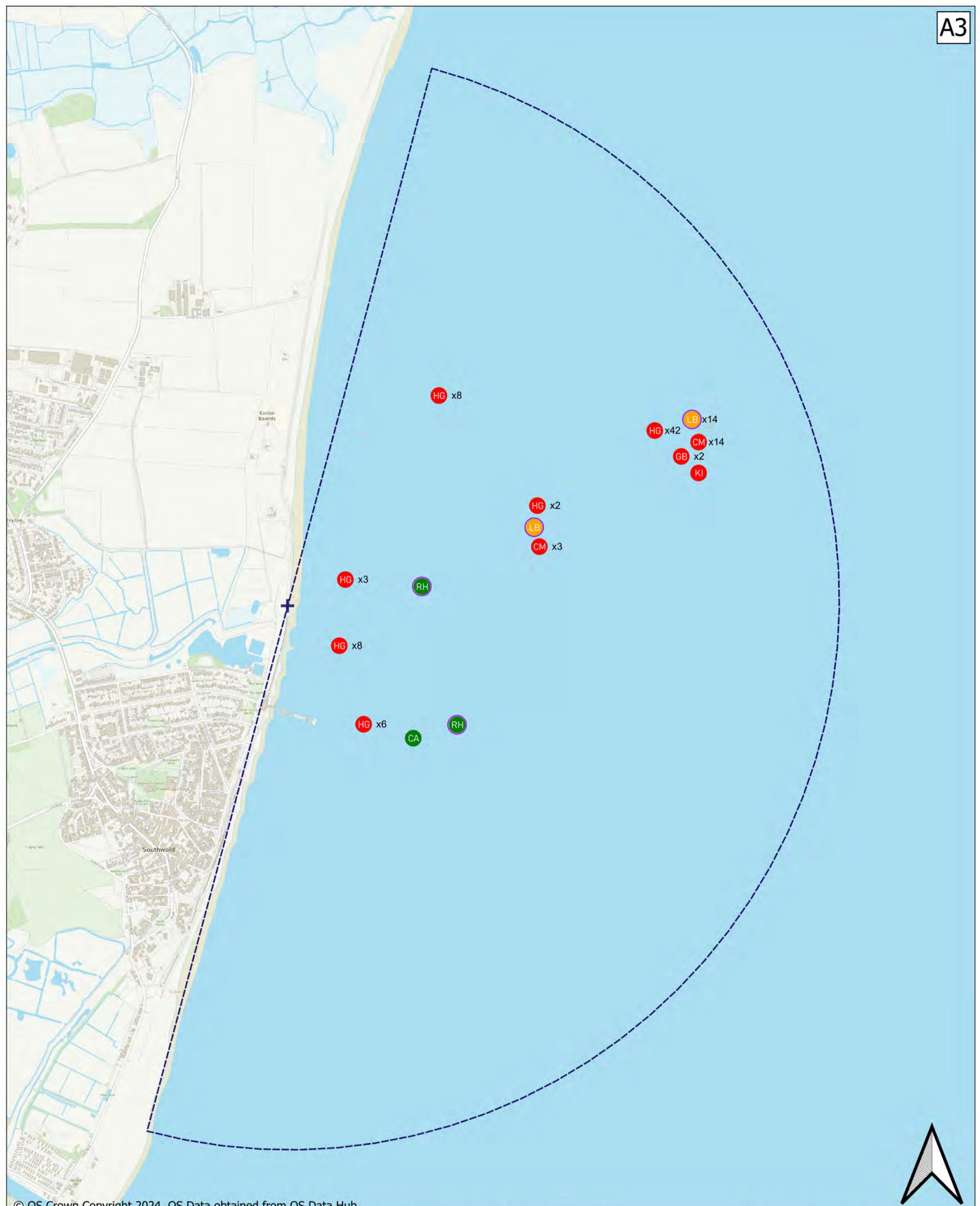
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Figure 2.02

Southwold VP 17/04/2024
(10:50-13:50)

Inshore and Beach Breeding Bird Survey Report 2024

Red List	HG - Herring gull
Amber List	LB - Lesser black-backed gull
Green List	GB - Great black-backed gull
Not Assessed	CM - Common gull
VP Location	RH - Red-throated diver
VP Survey Area	CA - Cormorant
SPA/Ramsar Qualifying Feature	KI - Kittiwake

0 250 500 m

Scale at A3: 1:12,000
Role: Ecology
Suitability: For Information
Project Number: 287334
Drawing Number: Figure 2.02

Coordinate System: British National Grid

1	25/11/2024	DB	RM	RM	AC
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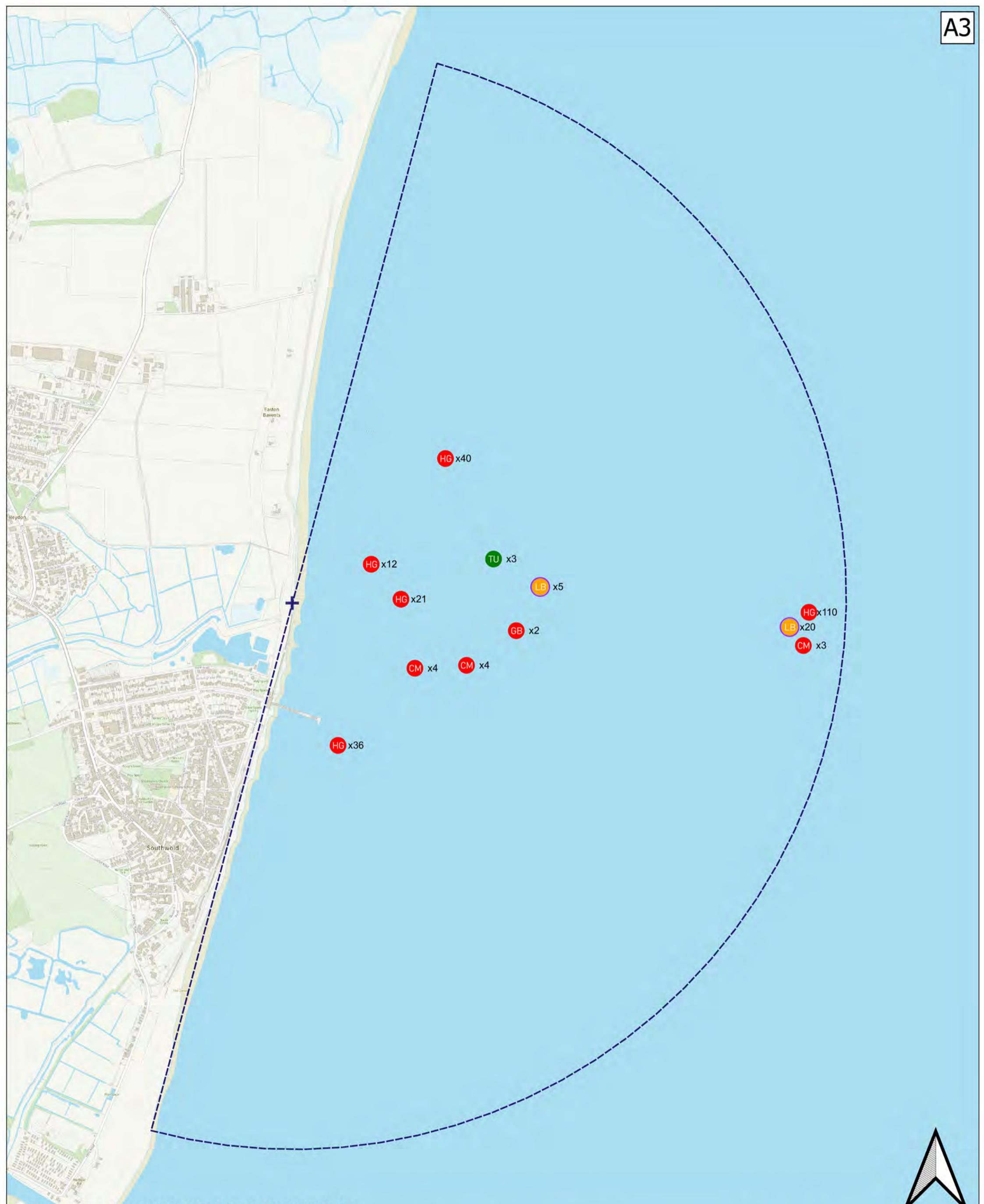
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Figure 2.03

Southwold VP 01/05/2024
(09:20-12:20)

Inshore and Beach Breeding Bird Survey Report 2024

- Red List
- Amber List
- Green List
- Not Assessed
- ✚ VP Location
- ─ SPA/Ramsar
- Qualifying Feature

- TU - Tufted Duck
- HG - Herring Gull
- LB - Lesser Black-backed Gull
- GB - Great Black-backed Gull
- CM - Common Gull

0 250 500 m

Scale at A3: 1:12,000
Role: Ecology
Suitability: For Information
Project Number: 287334
Drawing Number: Figure 2.03

Coordinate System: British National Grid

1	25/11/2024	DB	RM	RM	AC
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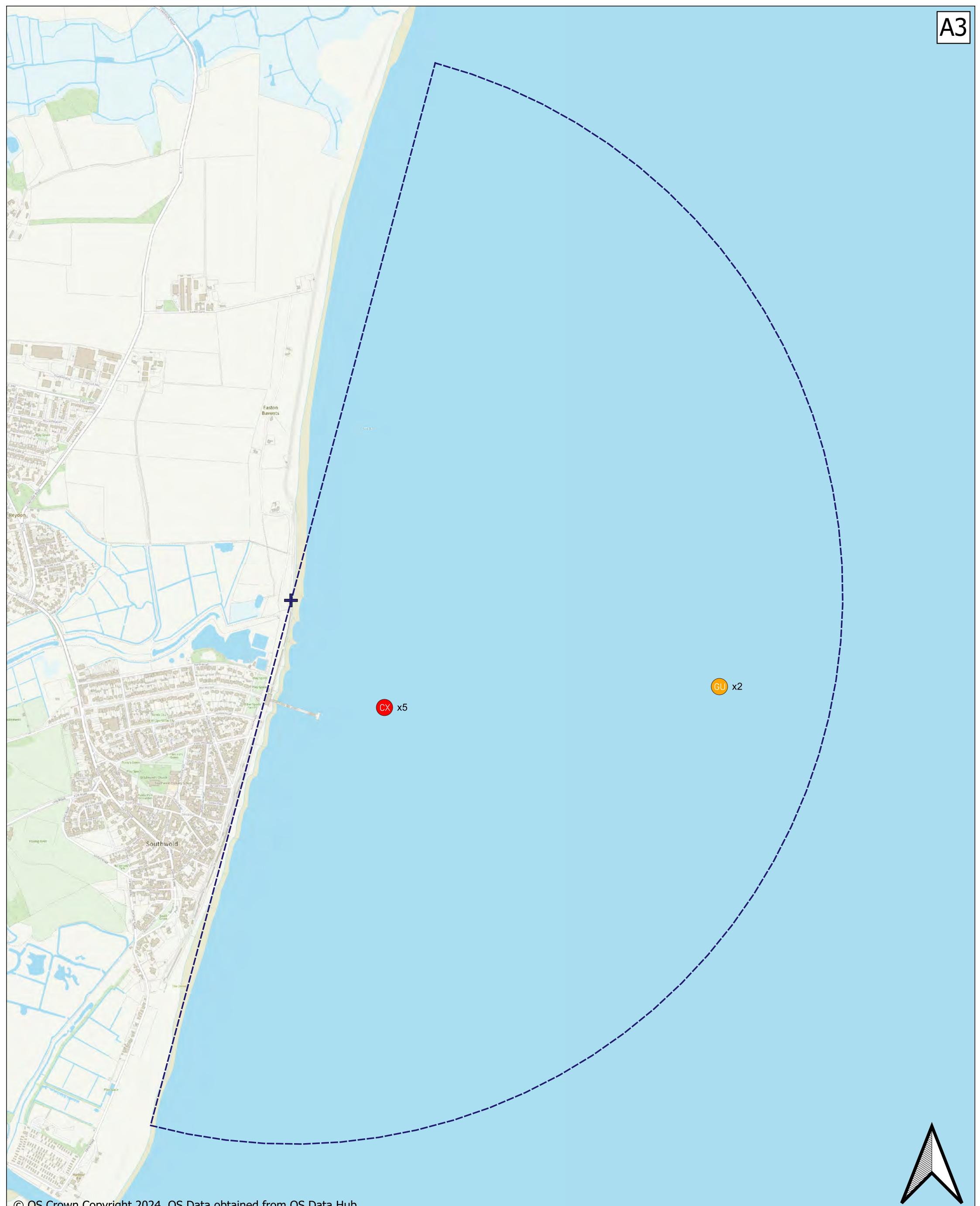
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Figure 2.04

Southwold VP 20/05/2024
(09:45-12:45)

Inshore and Beach Breeding Bird Survey Report 2024

- Red List
- Amber List
- Green List
- Not Assessed
- ✚ VP Location

CX - Common Scoter
GU - Guillemot

Scale at A3: 1:12,000
Role: Ecology
Suitability: For Information
Project Number: 287334
Drawing Number: Figure 204

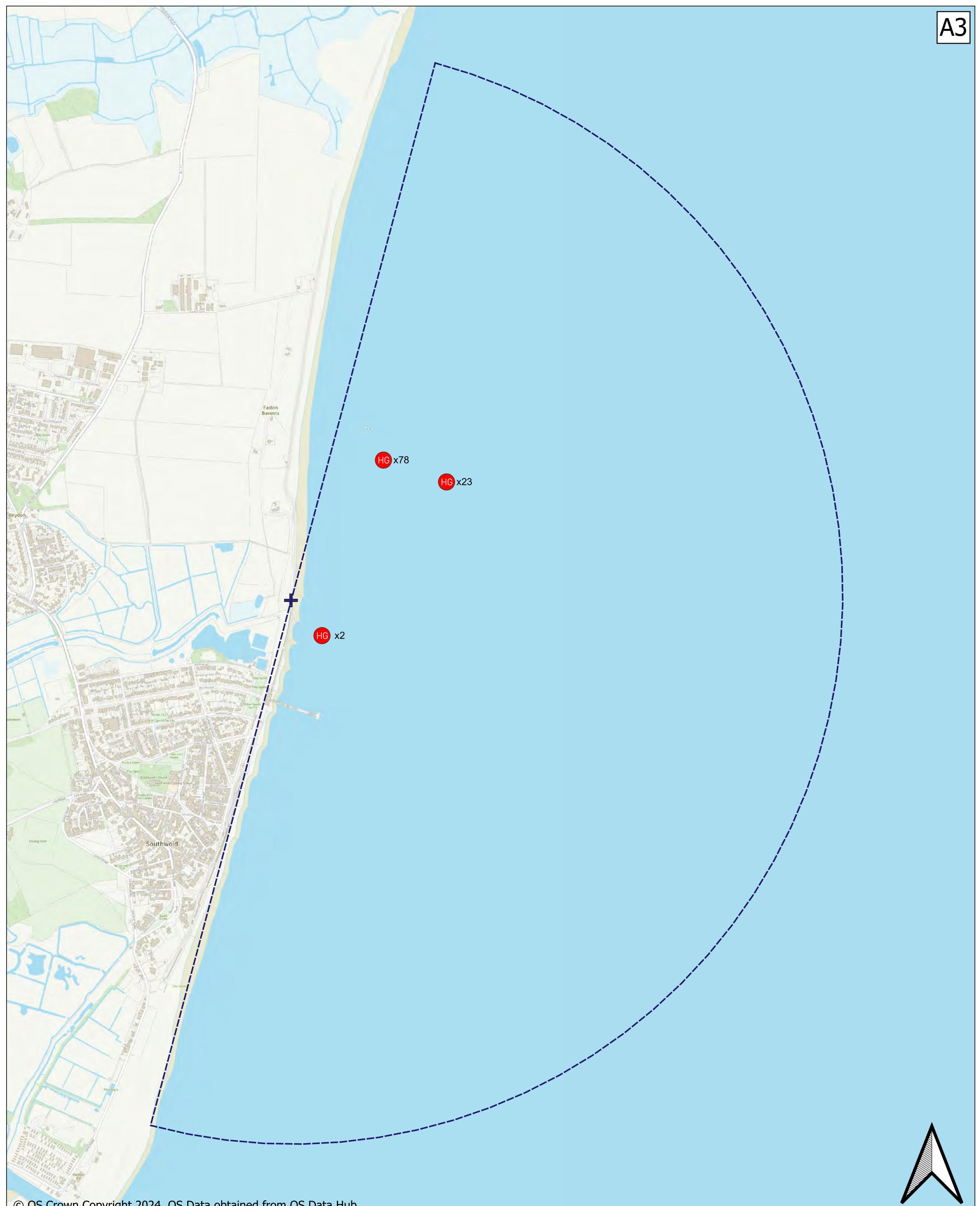
Coordinate System: British National Grid

0 250 500 m

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Figure 2.05

Southwold VP 19/06/2024
(15:00-18:00)

Inshore and Beach Breeding Bird Survey Report 2024

- Red List
- Amber List
- Green List
- Not Assessed
- ✚ VP Location

HG - Herring Gulf

Scale at A3: 1:12,000
Role: Ecology
Suitability: For Information
Project Number: 287334
Drawing Number: Figure 2.05

Coordinate System: British National Grid

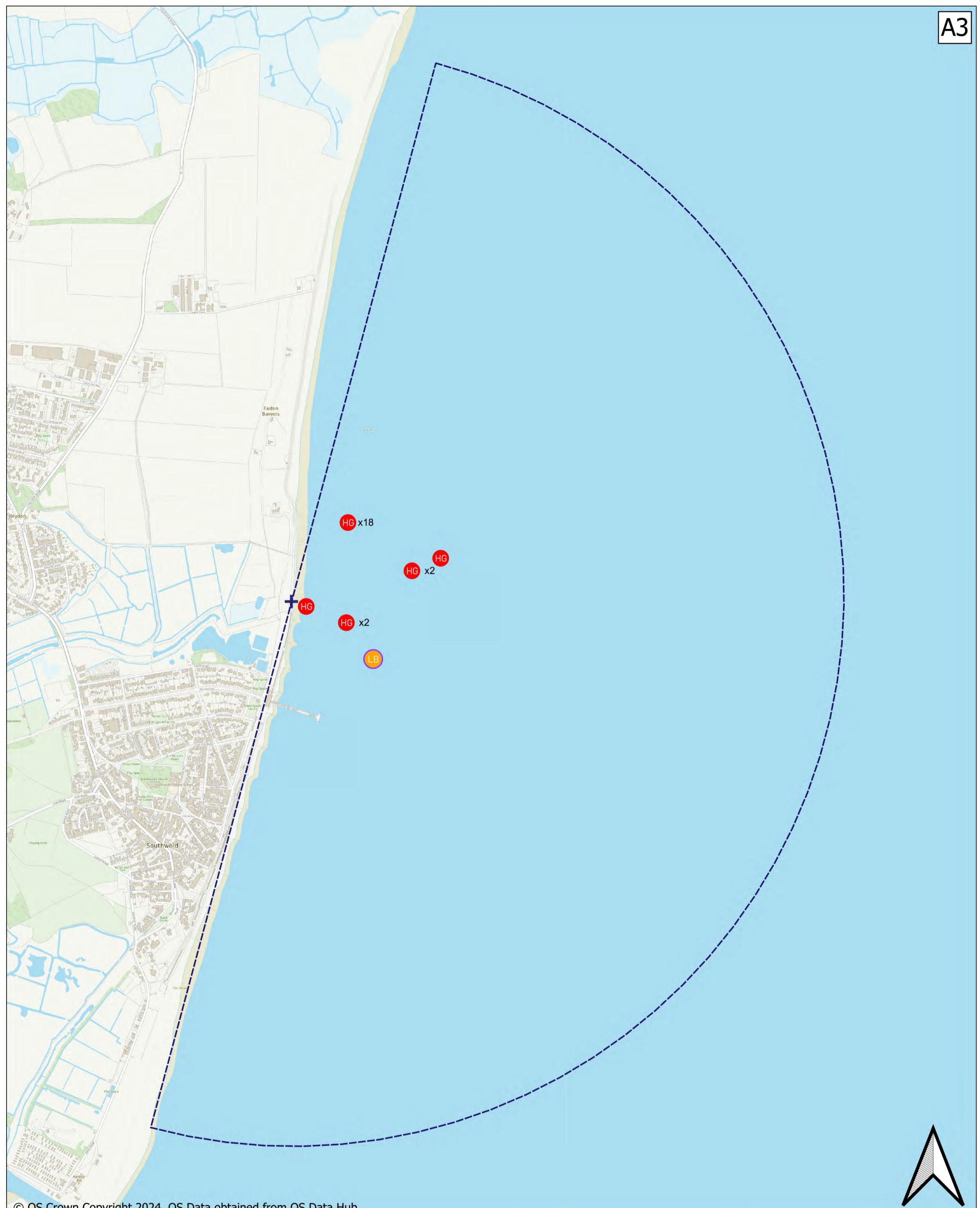
0 250 500 m

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Figure 2.06

Southwold VP 20/06/2024
(12:00-15:00)

Inshore and Beach Breeding Bird Survey Report 2024

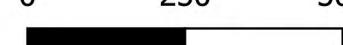
- Red List
- Amber List
- Green List
- Not Assessed
- ✚ VP Location
- ─ VP Survey Area
- SPA/Ramsar Qualifying Feature

HG - Herring Gull
LB - Lesser Black-backed Gull

Scale at A3: 1:12,000
Role: Ecology
Suitability: For Information
Project Number: 287334
Drawing Number: Figure 2.06

Coordinate System: British National Grid

0 250 500 m

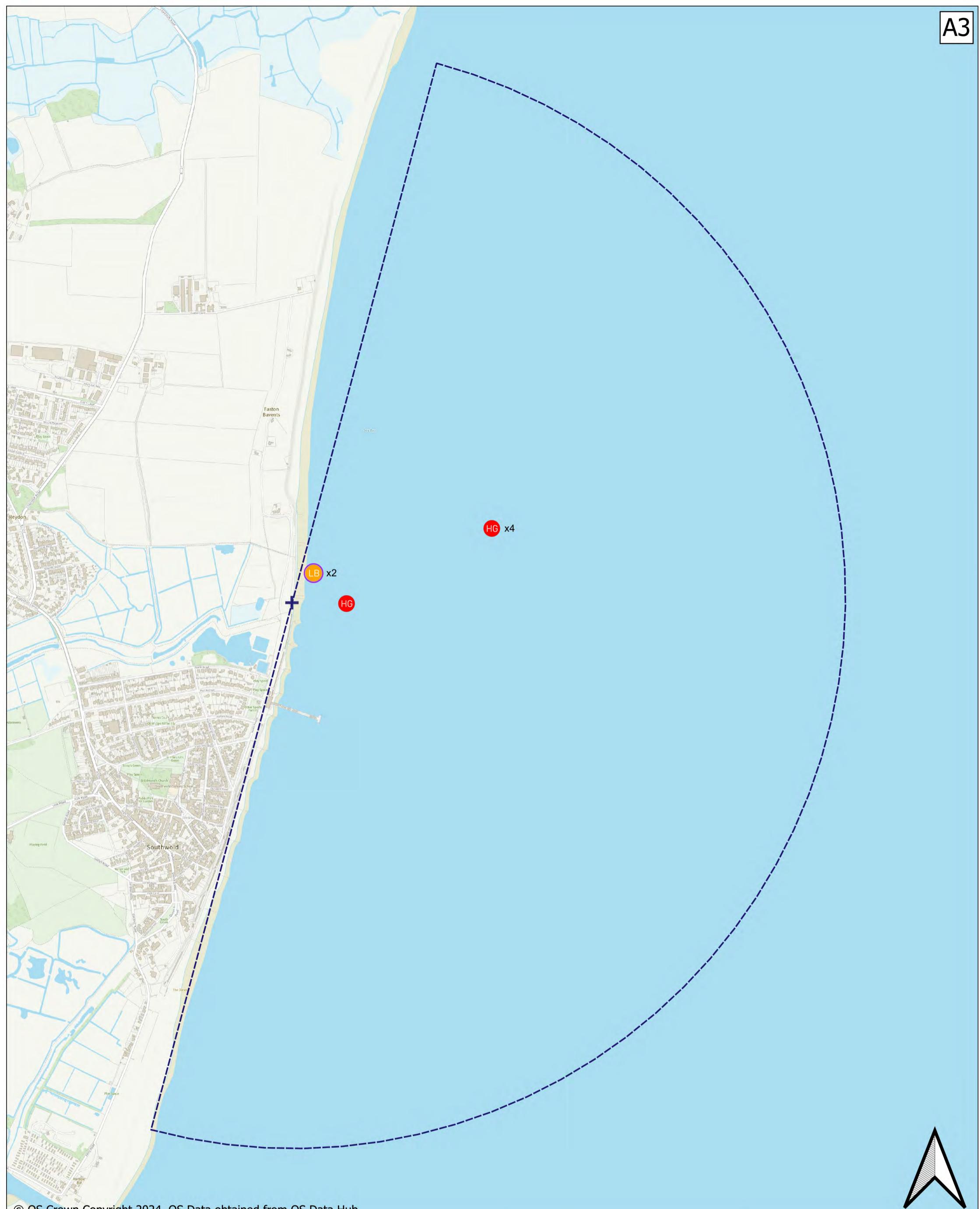


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Figure 2.07

Southwold VP 11/07/2024
(09:00-12:00)

Inshore and Beach Breeding Bird Survey Report 2024

- Red List
- Amber List
- Green List
- Not Assessed
- VP Location
- VP Survey Area
- SPA/Ramsar Qualifying Feature

HG - Herring Gull
LB - Lesser Black-backed Gull

0 250 500 m

Scale at A3: 1:12,000
Role: Ecology
Suitability: For Information
Project Number: 287334
Drawing Number: Figure 2.07

Coordinate System: British National Grid

1	25/11/2024	DB	RM	RM	AC
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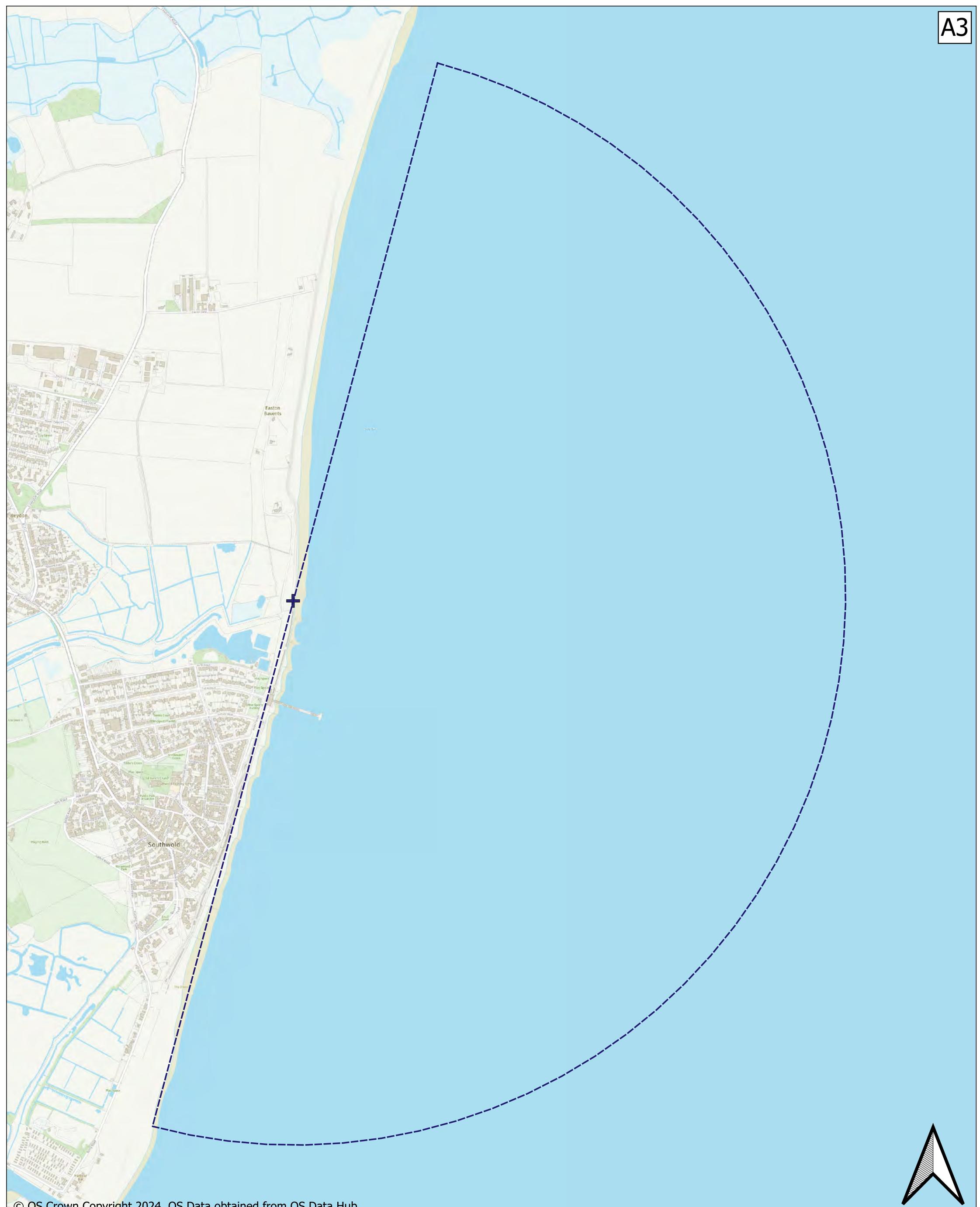
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Figure 2.08

Southwold VP 12/07/2024
(08:50-11:50)

Inshore and Beach Breeding Bird
Survey Report 2024

- Red List
- Amber List
- Green List
- Not Assessed
- VP Location
- VP Survey Area

0 250 500 m

Scale at A3: 1:12,000
Role: Ecology
Suitability: For Information
Project Number: 287334
Drawing Number: Figure 2.08

Coordinate System: British National Grid

1	25/11/2024	DB	RM	RM	AC
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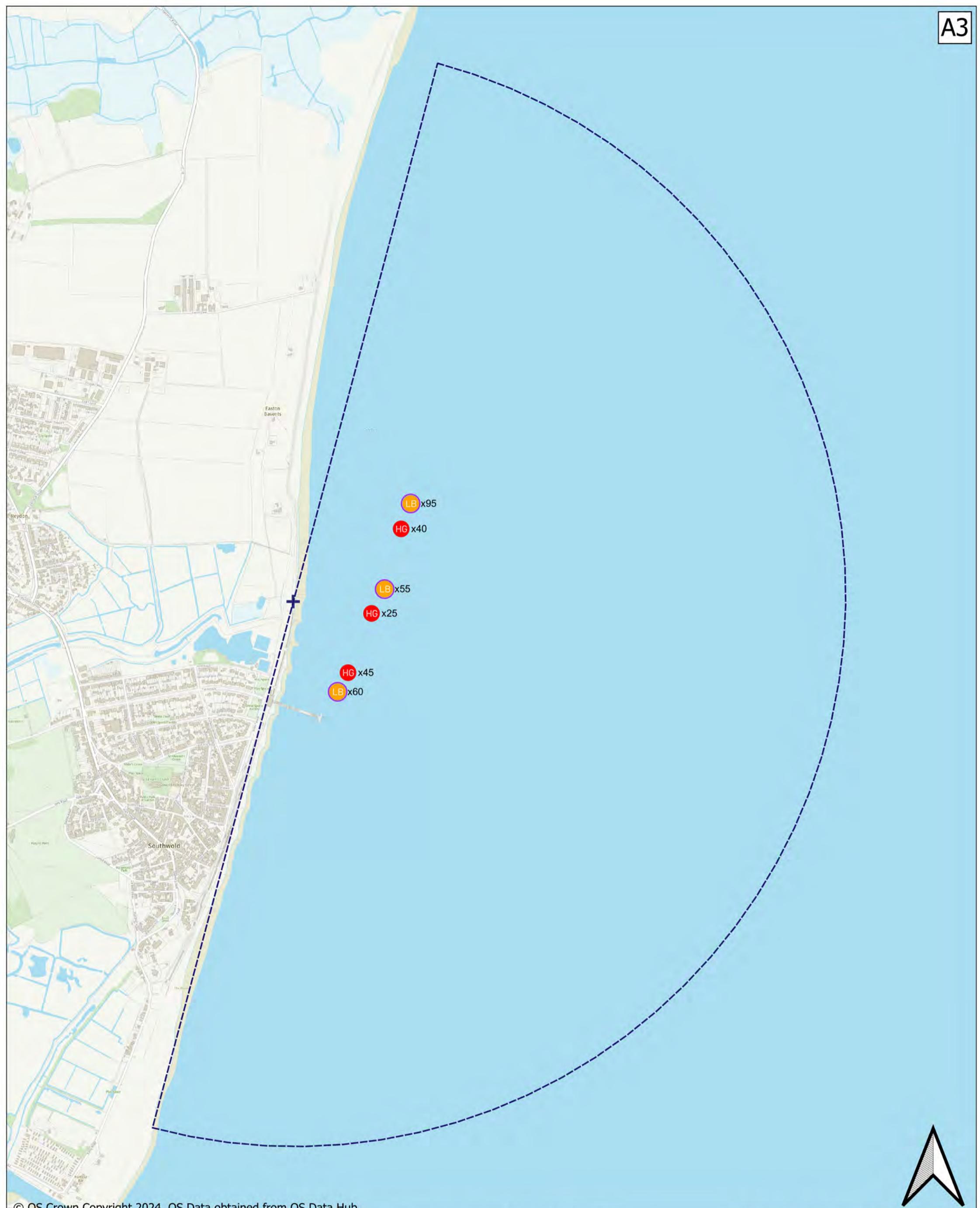


Figure 2.09

Southwold VP 19/08/2024
(10:00-13:00)

Inshore and Beach Breeding Bird Survey Report 2024

- Red List
- Amber List
- Green List
- Not Assessed
- ✚ VP Location
- ─ VP Survey Area
- SPA/Ramsar
- Qualifying Feature

HG - Herring Gull
LB - Lesser Black-backed Gull

0 250 500 m

Scale at A3: 1:12,000
Role: Ecology
Suitability: For Information
Project Number: 287334
Drawing Number: Figure 2.09

Coordinate System: British National Grid

1	25/11/2024	DB	RM	RM	AC
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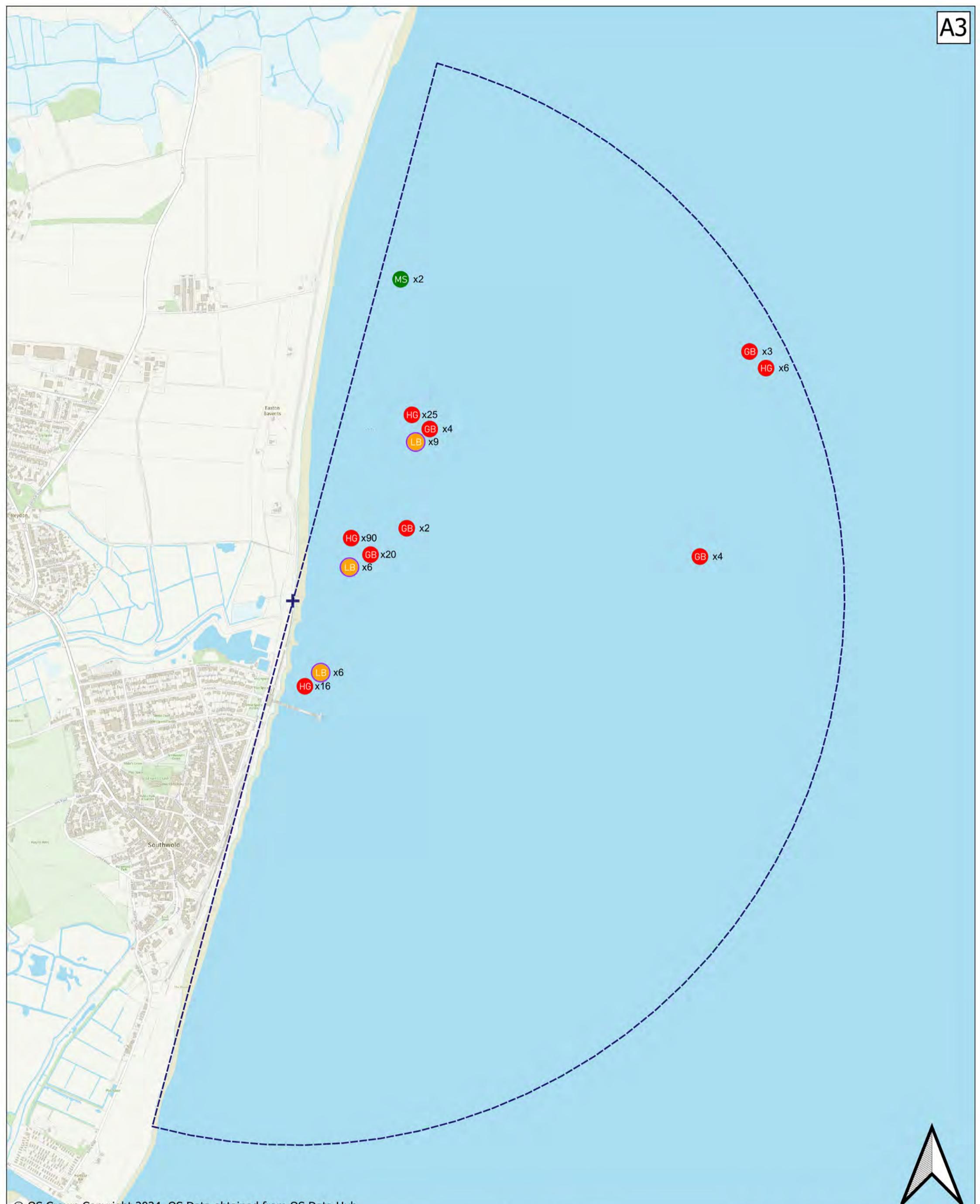
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Figure 2.10

Southwold VP 29/08/2024
(16:00-19:00)

Inshore and Beach Breeding Bird Survey Report 2024

- Red List
- Amber List
- Green List
- Not Assessed
- ✚ VP Location
- ─ VP Survey Area
- SPA/Ramsar Qualifying Feature

MS - Mute Swan
HG - Herring Gull
LB - Lesser Black-backed Gull
GB - Great Black-backed Gull

0 250 500 m

Scale at A3: 1:12,000
Role: Ecology
Suitability: For Information
Project Number: 287334
Drawing Number: Figure 2.10

Coordinate System: British National Grid

1	25/11/2024	DB	RM	RM	AC
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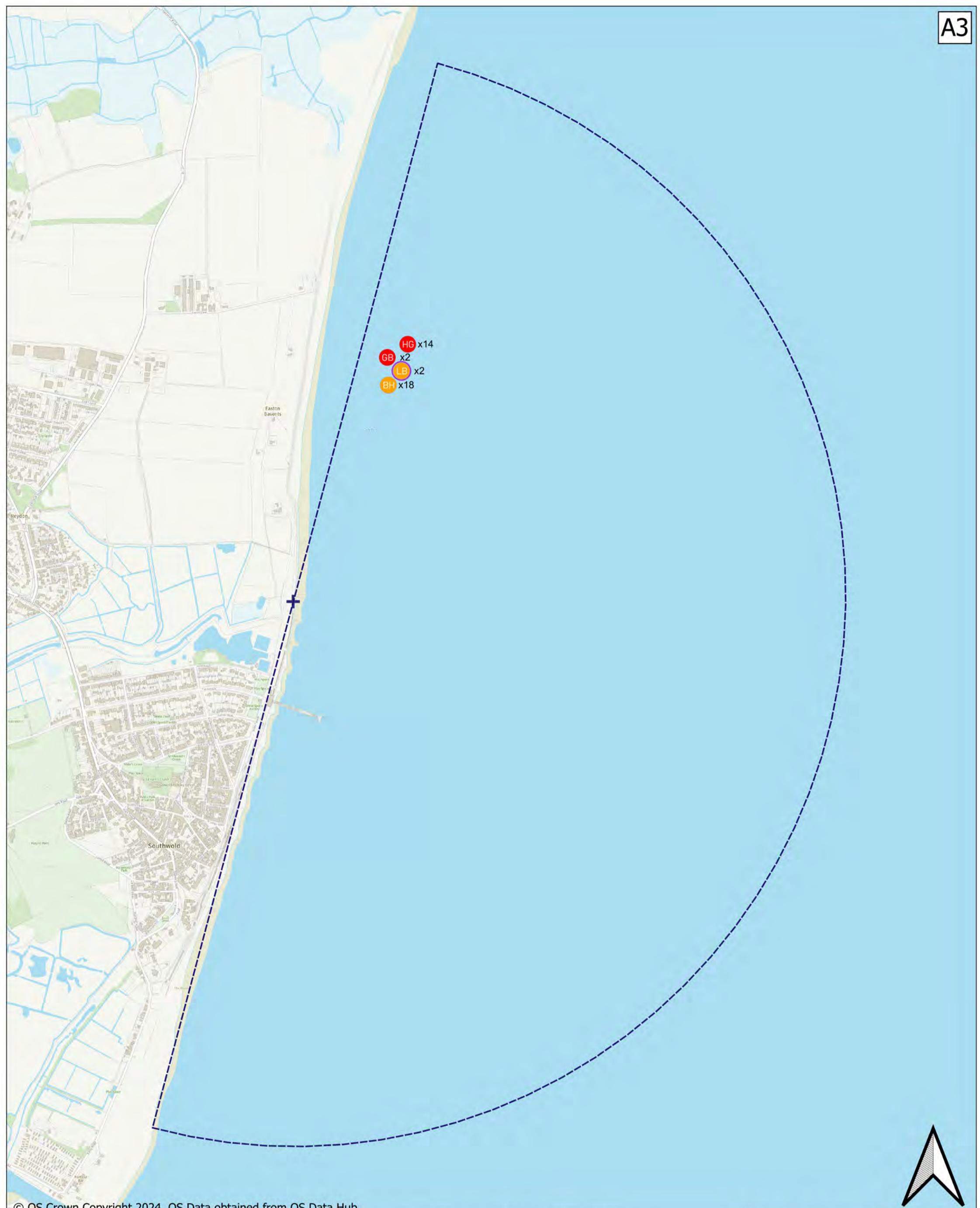
Rev	Date	By	Chkd	Appd	Authd
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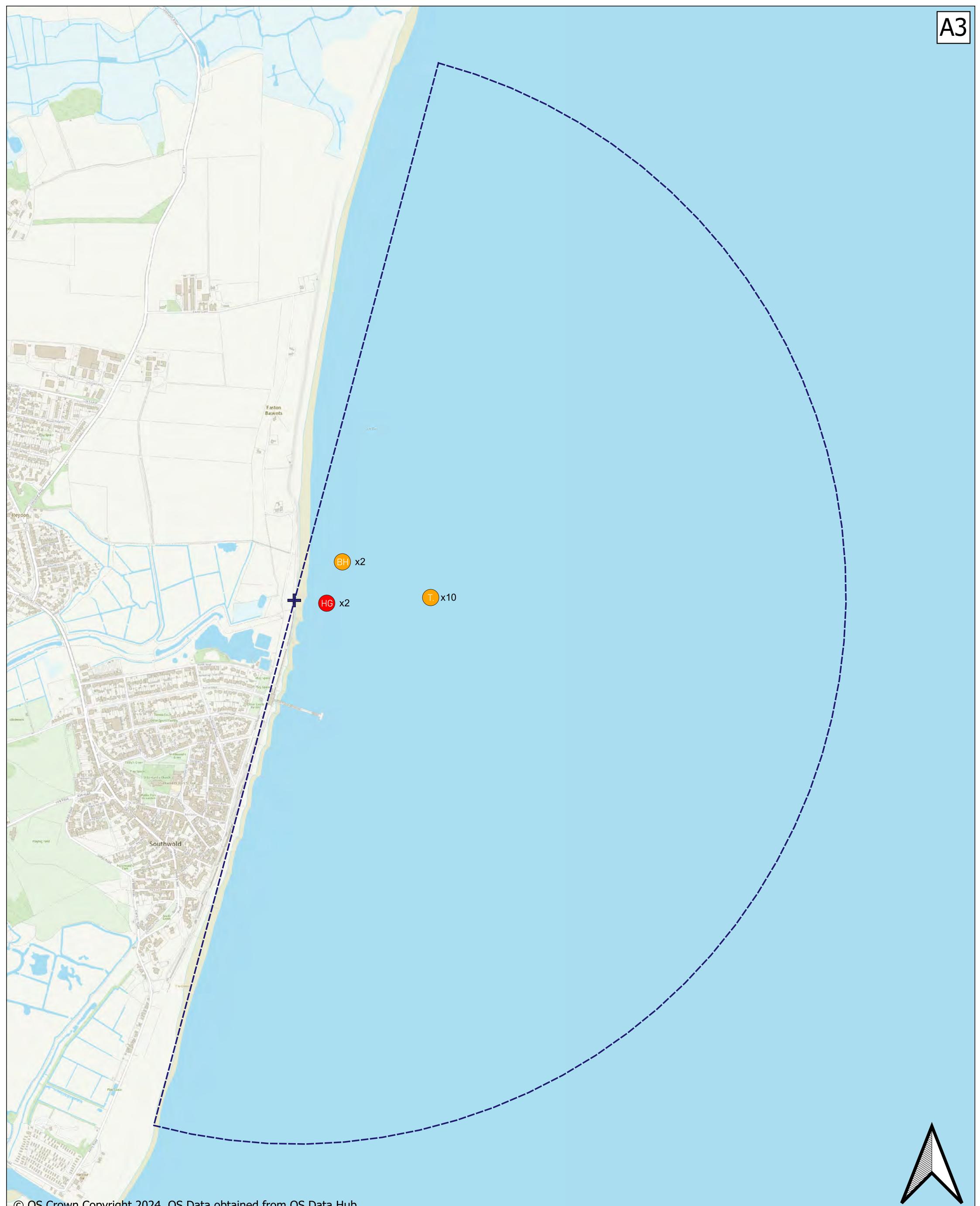


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Figure 2.12

Southwold VP 19/09/2024
(09:05-12:05)

Inshore and Beach Breeding Bird Survey Report 2024

- Red List
- Amber List
- Green List
- Not Assessed
- ✚ VP Location
- ─ No Score

0 250 500 m

Scale at A3: 1:12,000
Role: Ecology
Suitability: For Information
Project Number: 287334
Drawing Number: Figure 2.12

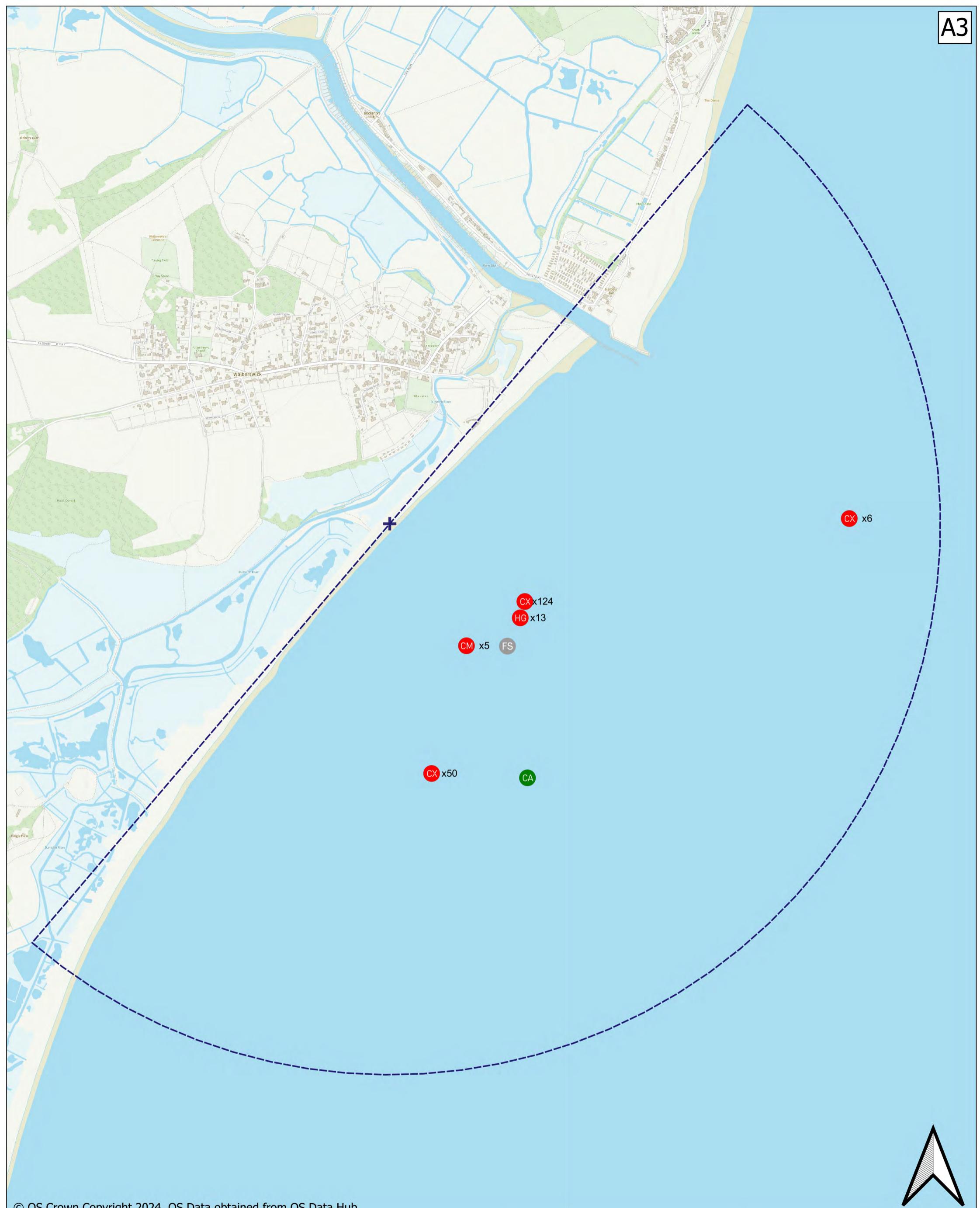
Coordinate System: British National Grid

1	25/11/2024	DB	RM	RM	AC
Rev	Date	By	Chkd	Appd	Authd

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Figure 2.13

Walberswick VP 16/04/2024
(10:45-13:45)

Inshore and Beach Breeding Bird Survey Report 2024

- Red List
- Amber List
- Green List
- Not Assessed
- VP Location
- VP Survey Area

- CX - Common Scoter
- FS - Surf Scoter
- HG - Herring Gull
- CM - Common Gull
- CA - Cormorant

0 250 500 m

Scale at A3: 1:12,000
Role: Ecology
Suitability: For Information
Project Number: 287334
Drawing Number: Figure 2.13

Coordinate System: British National Grid

1	25/11/2024	DB	RM	RM	AC
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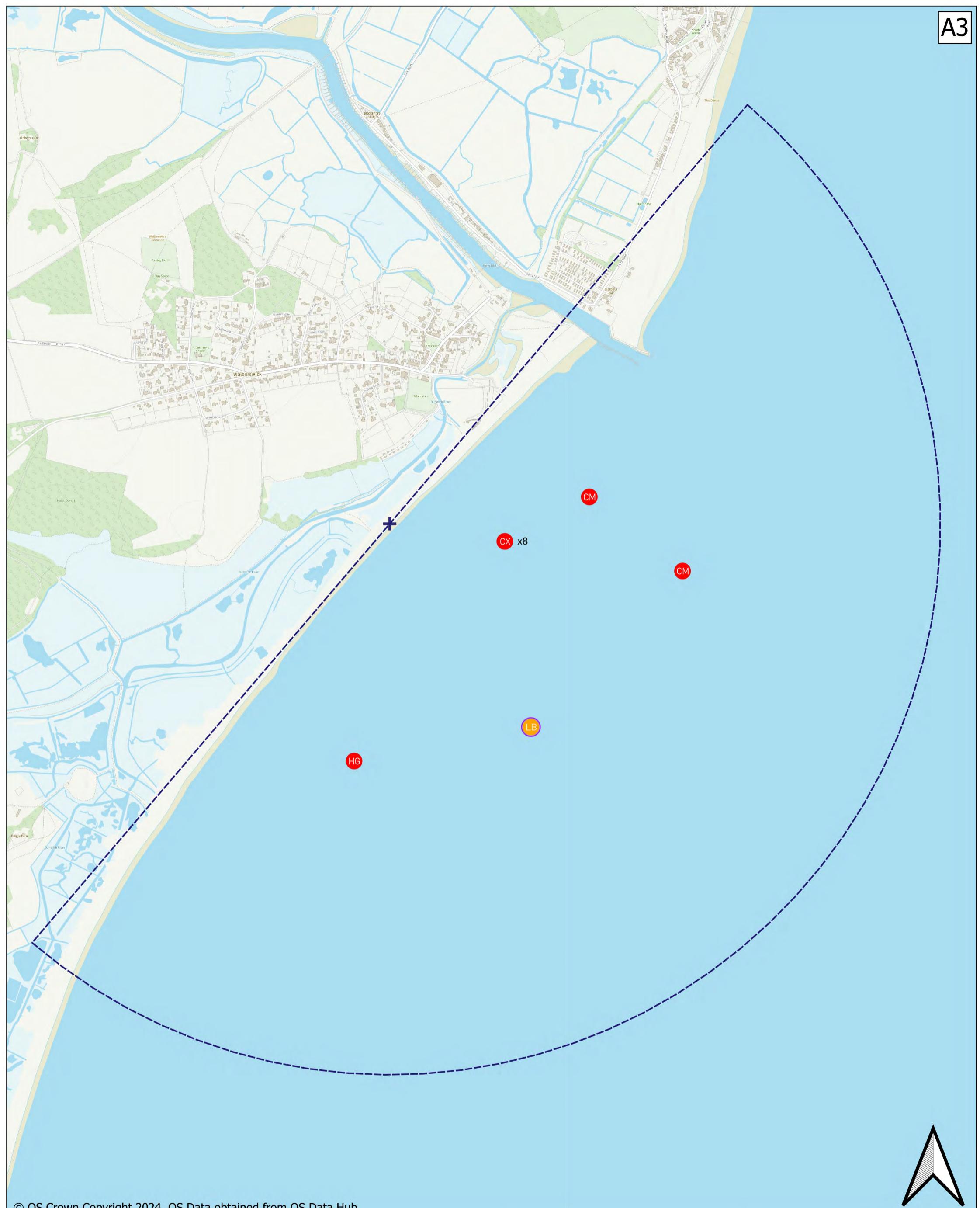
Rev	Date	By	Chkd	Appd	Authd
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Figure 2.14

Walberswick VP 29/04/2024
(12:00-15:00)

Inshore and Beach Breeding Bird Survey Report 2024

- Red List
- Amber List
- Green List
- Not Assessed
- ✚ VP Location
- ─ VP Survey Area
- SPA/Ramsar Qualifying Feature

CX - Common Scoter
HG - Herring Gull
Lesser Black-backed Gull
CM - Common Gull

0 250 500 m

Scale at A3: 1:12,000
Role: Ecology
Suitability: For Information
Project Number: 287334
Drawing Number: Figure 2.14

Coordinate System: British National Grid

1	25/11/2024	DB	RM	RM	AC
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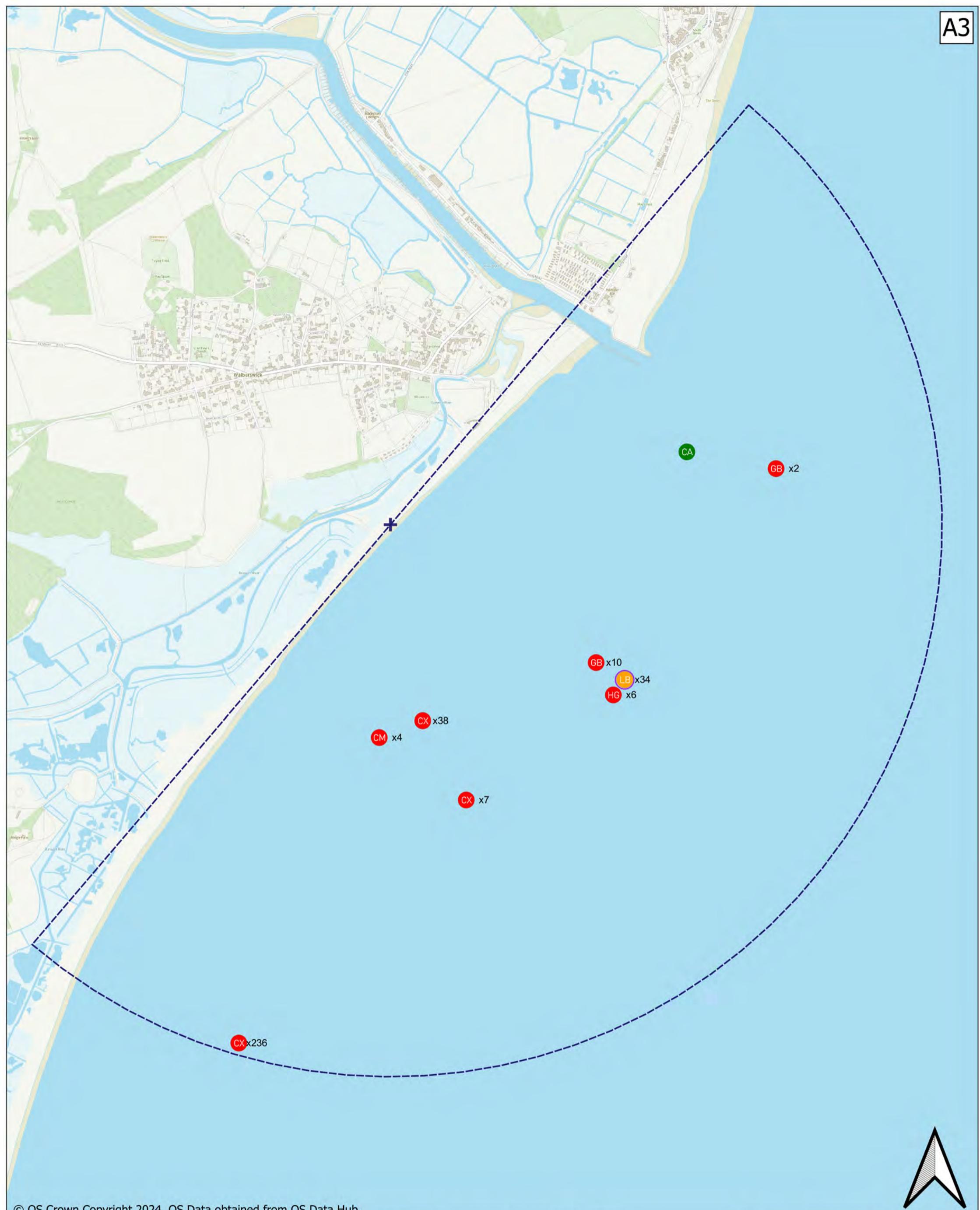
Rev	Date	By	Chkd	Appd	Authd
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Figure 2.15

Walberswick VP 03/05/2024
(13:10-16:10)

Inshore and Beach Breeding Bird Survey Report 2024

- Red List
- Amber List
- Green List
- Not Assessed
- ✚ VP Location
- ─ VP Survey Area
- SPA/Ramsar Qualifying Feature

CX - Common Scoter
HG - Herring Gull
Lesser Black-backed Gull
Great Black-backed Gull
CM - Common Gull
CA - Cormorant

0 250 500 m

Scale at A3: 1:12,000
Role: Ecology
Suitability: For Information
Project Number: 287334
Drawing Number: Figure 2.15

Coordinate System: British National Grid

1	25/11/2024	DB	RM	RM	AC
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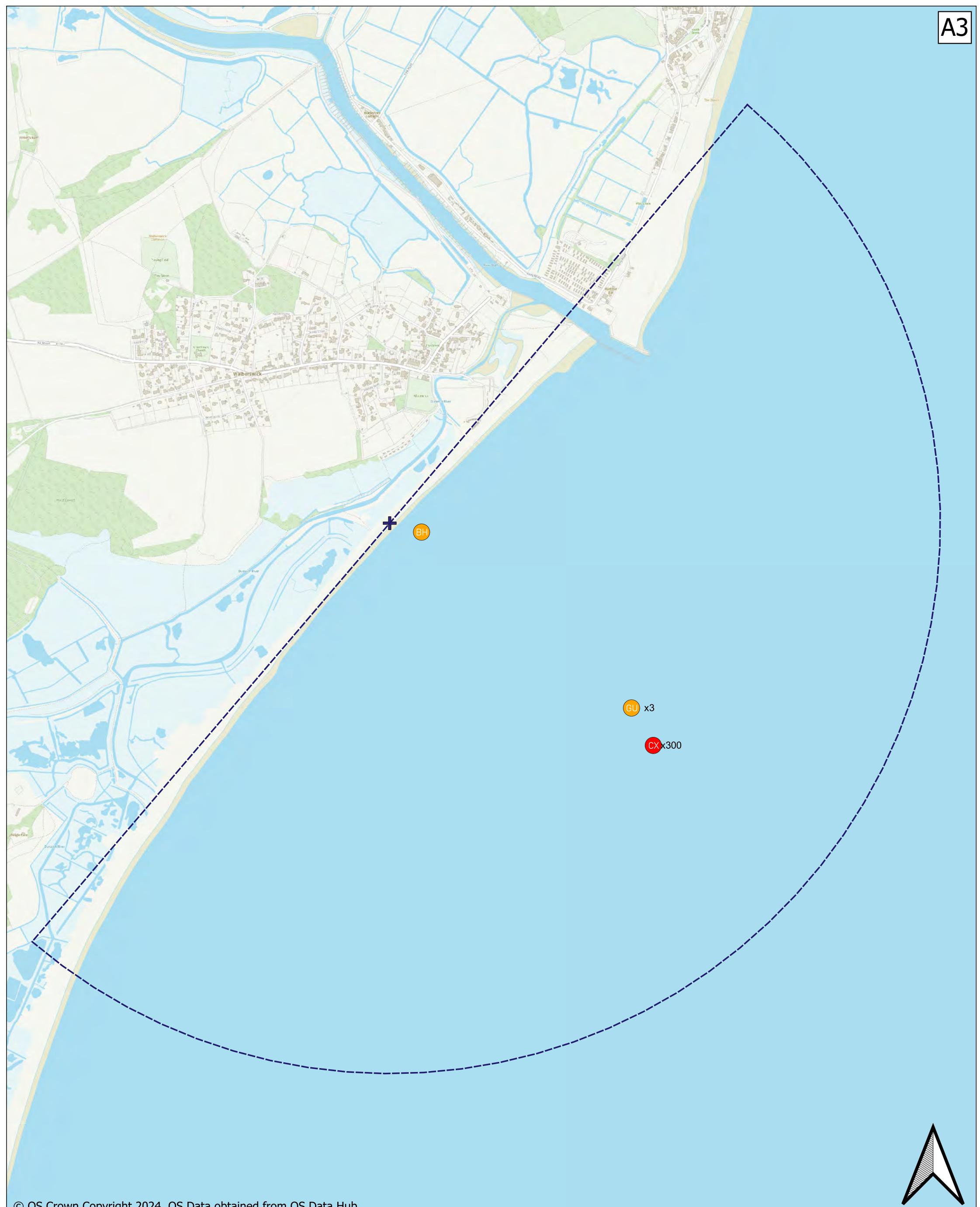
Rev	Date	By	Chkd	Appd	Authd
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Figure 2.16

Walberswick VP 21/05/2024
(11:35-14:35)

Inshore and Beach Breeding Bird
Survey Report 2024

- Red List
- Amber List
- Green List
- Not Assessed
- ✚ VP Location
- ─ VP Survey Area

CX - Common Scoter
BH - Black-headed Gull
GU - Guillemot

0 250 500 m

Scale at A3: 1:12,000
Role: Ecology
Suitability: For Information
Project Number: 287334
Drawing Number: Figure 2.16

Coordinate System: British National Grid

1	25/11/2024	DB	RM	RM	AC
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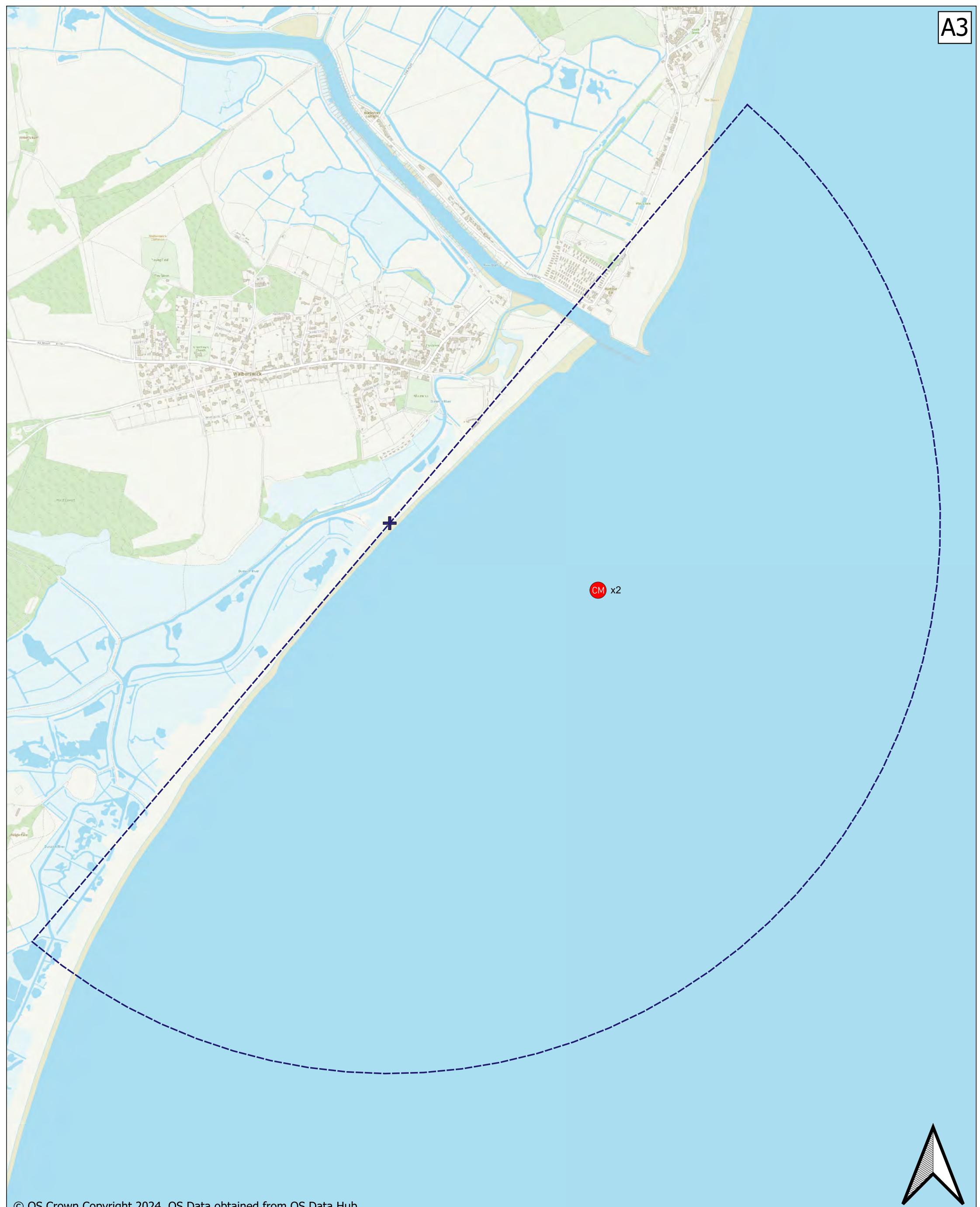
Rev	Date	By	Chkd	Appd	Authd
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Figure 2.17

Walberswick VP 21/06/2024
(10:00-13:00)

Inshore and Beach Breeding Bird
Survey Report 2024

- Red List
- Amber List
- Green List
- Not Assessed
- ✚ VP Location
- ─ VP Survey Area

CM - Common Gull

0 250 500 m

Scale at A3: 1:12,000
Role: Ecology
Suitability: For Information
Project Number: 287334
Drawing Number: Figure 2.17

Coordinate System: British National Grid

1	25/11/2024	DB	RM	RM	AC
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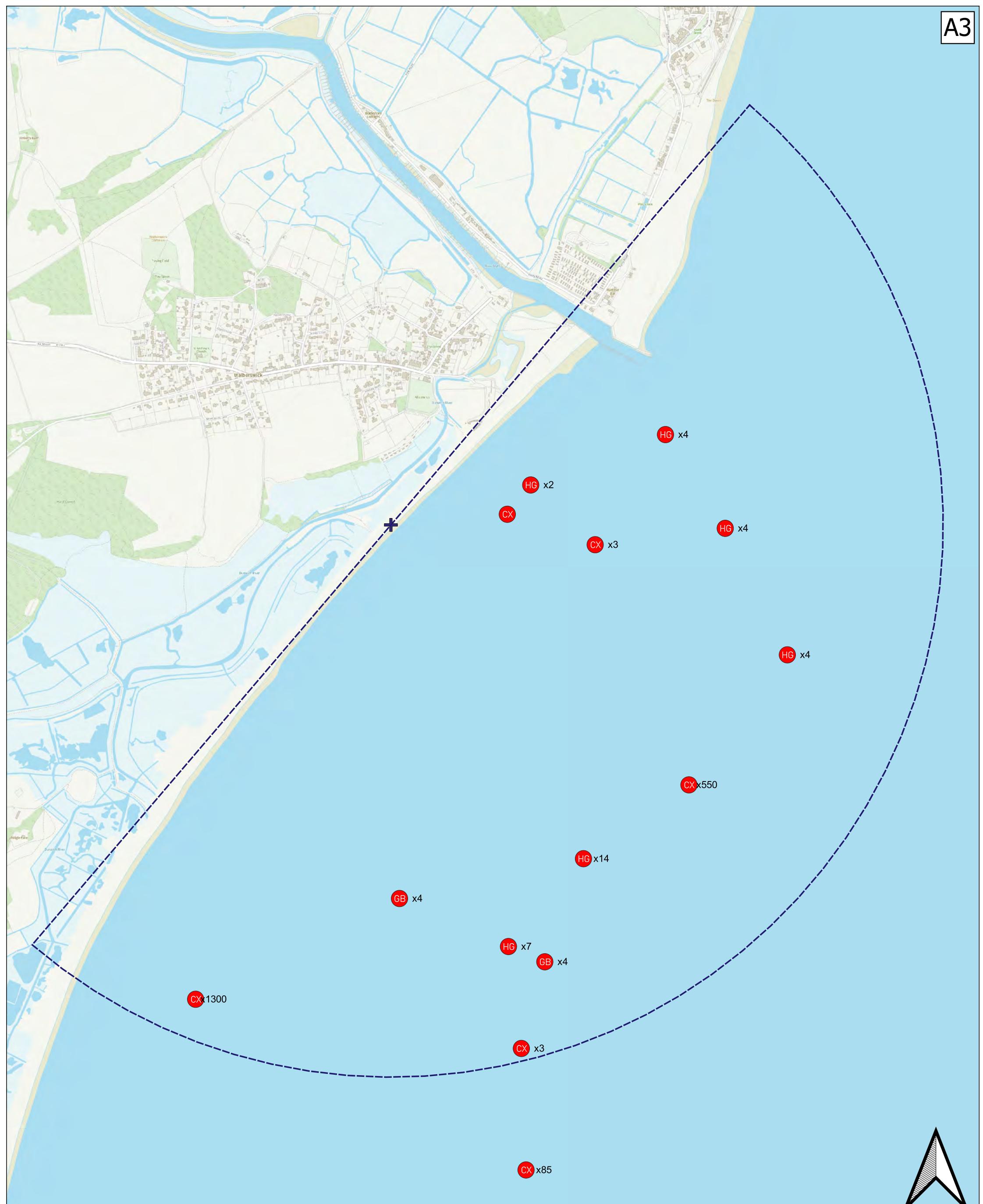
Rev	Date	By	Chkd	Appd	Authd
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Figure 2.18
Walberswick VP 24/06/2024
(17:40-20:40)

Inshore and Beach Breeding Bird Survey Report 2024

- Red List
- Amber List
- Green List
- Not Assessed
- ✚ VP Location
- ─ VP Survey Area

CX - Common Scoter
HG - Herring Gull
GB - Great Black-backed Gull

0 250 500 m

Scale at A3: 1:12,000
Role: Ecology
Suitability: For Information
Project Number: 287334
Drawing Number: Figure 2.18

Coordinate System: British National Grid

1	25/11/2024	DB	RM	RM	AC
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Rev	Date	By	Chkd	Appd	Authd
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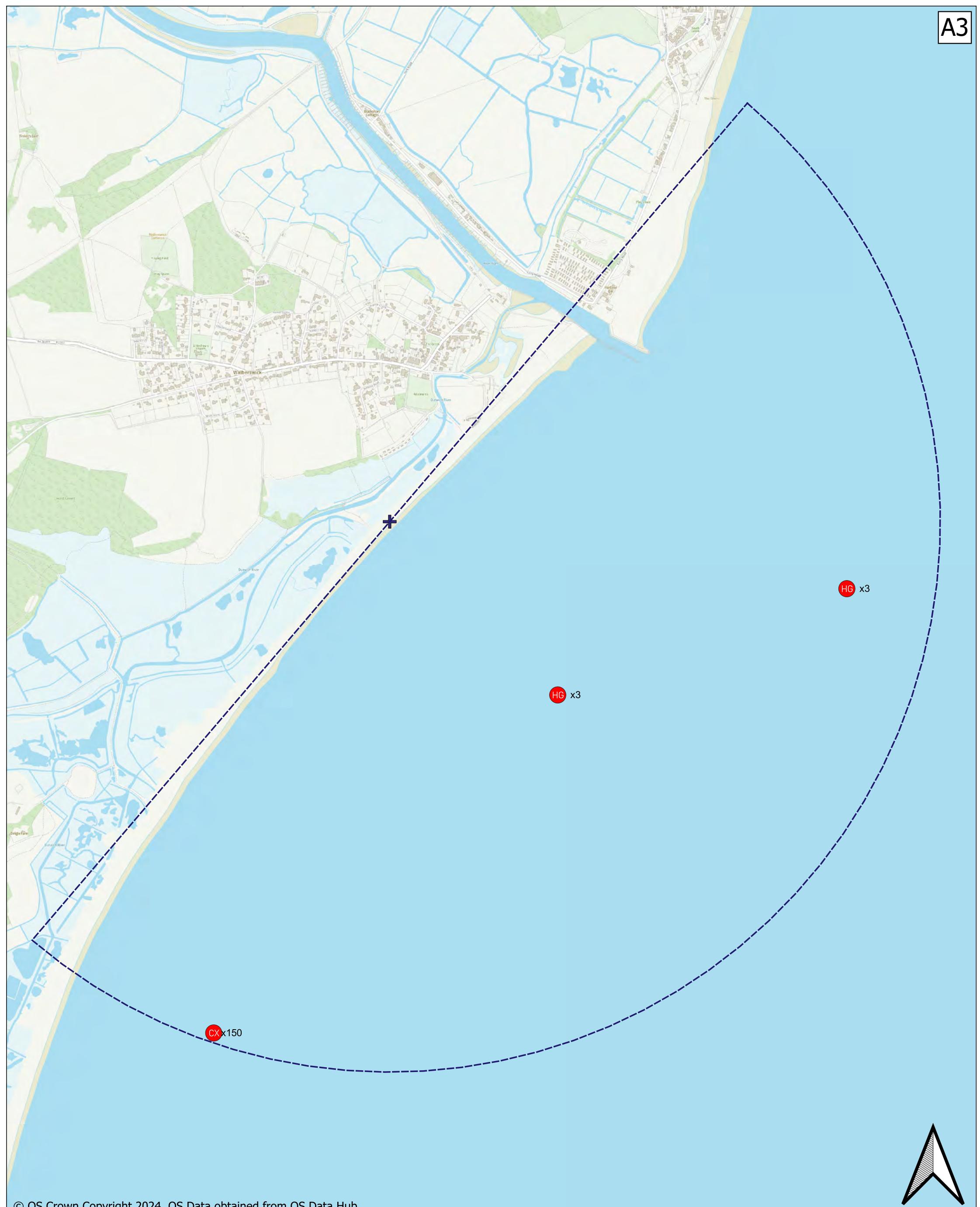


Figure 2.19

Walberswick VP 08/07/2024
(13:30-16:30)

Inshore and Beach Breeding Bird Survey Report 2024

- Red List
- Amber List
- Green List
- Not Assessed
- ✚ VP Location
- ✚ VP Survey Area

CX - Common Scoter
HG - Herring Gull

Scale at A3: 1:12,000
Role: Ecology
Suitability: For Information
Project Number: 287334
Drawing Number: Figure 2 19

Coordinate System: British National Grid

0 250 500 m

Page 1 of 1

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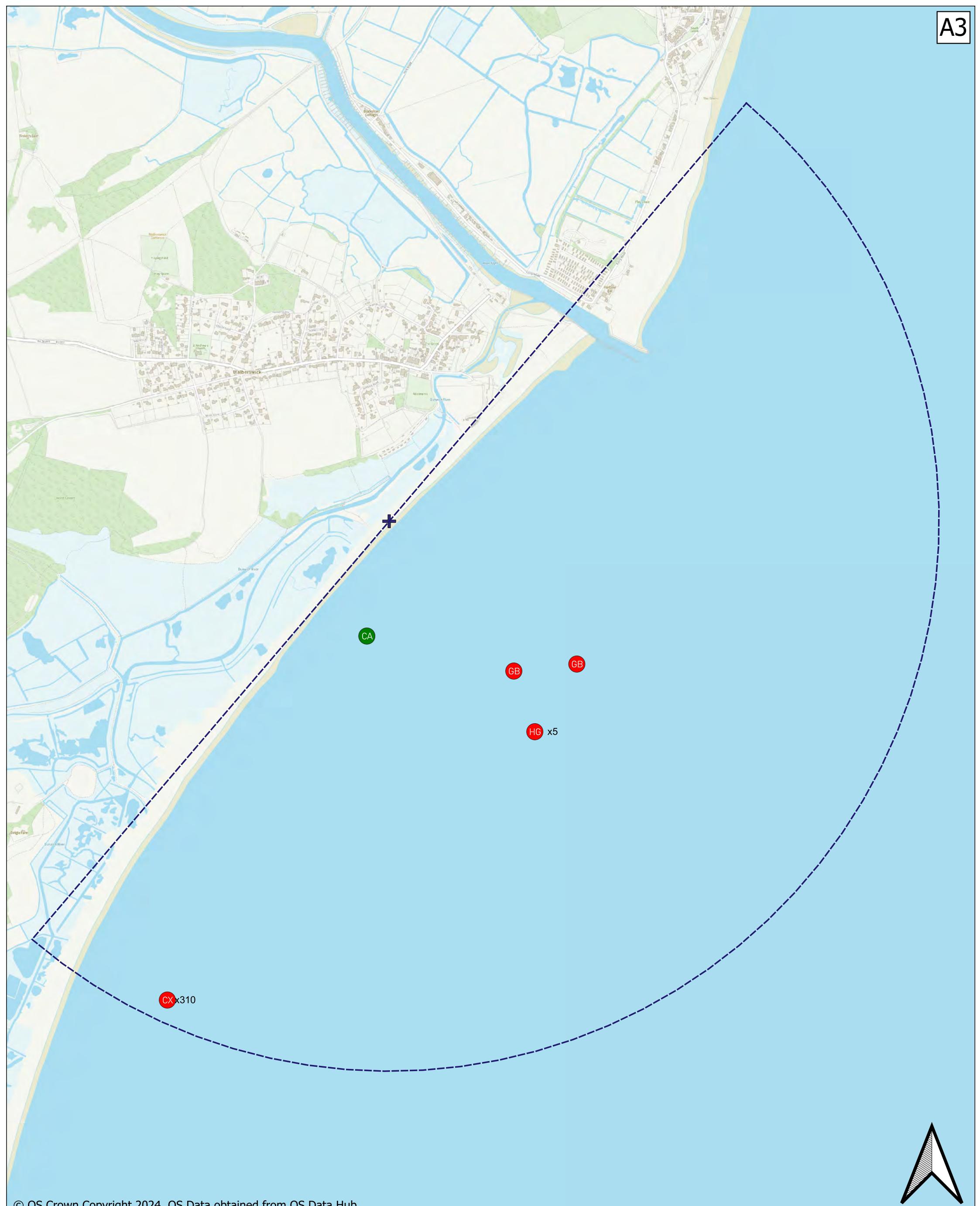


Figure 2.20

Walberswick VP 09/07/2024
(08:30-11:30)

Inshore and Beach Breeding Bird Survey Report 2024

- Red List
- Amber List
- Green List
- Not Assessed
- ✚ VP Location
- ✚ VP Survey Area

CX - Common Scoter
HG - Herring Gull
GB - Great Black-backed Gull
CA - Cormorant

Scale at A3: 1:12,000
Role: Ecology
Suitability: For Information
Project Number: 287334
Drawing Number: Figure 2.20

0 250 500 m

Coordinate System: British National Grid

1	25/11/2024	DB	RM	RM	AC
Rev	Date	By	Chkd	Appd	Authd

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Figure 2.21

Walberswick VP 22/08/2024
(13:50-16:50)

Inshore and Beach Breeding Bird
Survey Report 2024

- Red List
- Amber List
- Green List
- Not Assessed
- VP Location
- VP Survey Area

0 250 500 m

Scale at A3: 1:12,000
Role: Ecology
Suitability: For Information
Project Number: 287334
Drawing Number: Figure 2.21

Coordinate System: British National Grid

1	25/11/2024	DB	RM	RM	AC
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Rev	Date	By	Chkd	Appd	Authd
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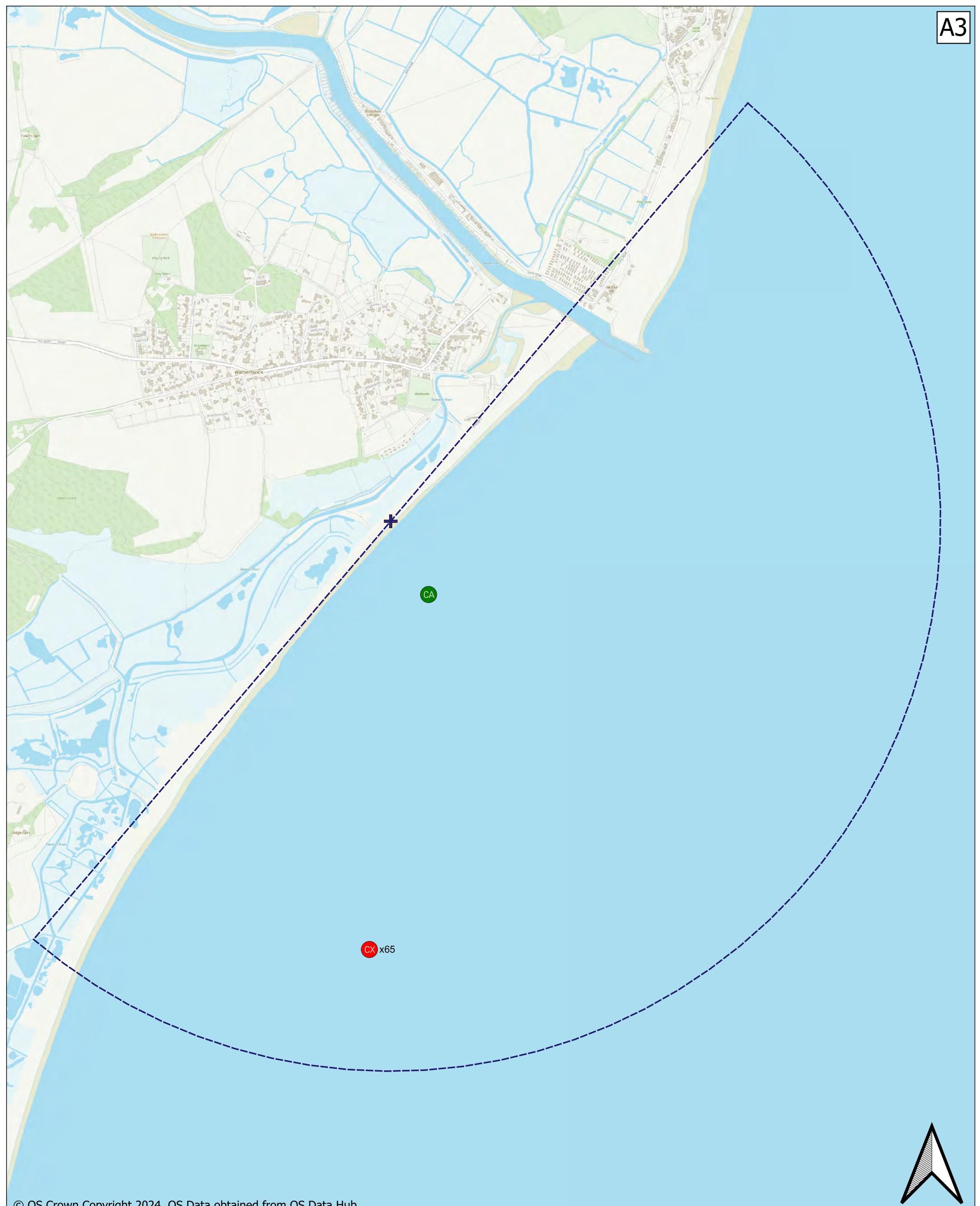


Figure 2.22

Walberswick VP 30/08/2024
(10:20-13:20)

Inshore and Beach Breeding Bird Survey Report 2024

- Red List
- Amber List
- Green List
- Not Assessed
- ✚ VP Location
- ✚ VP Survey Area

CX - Common Scoter
CA - Cormorant

Scale at A3: 1:12,000
Role: Ecology
Suitability: For Information
Project Number: 287334
Drawing Number: Figure 3-22

Coordinate System: British National Grid

0 250 500 m

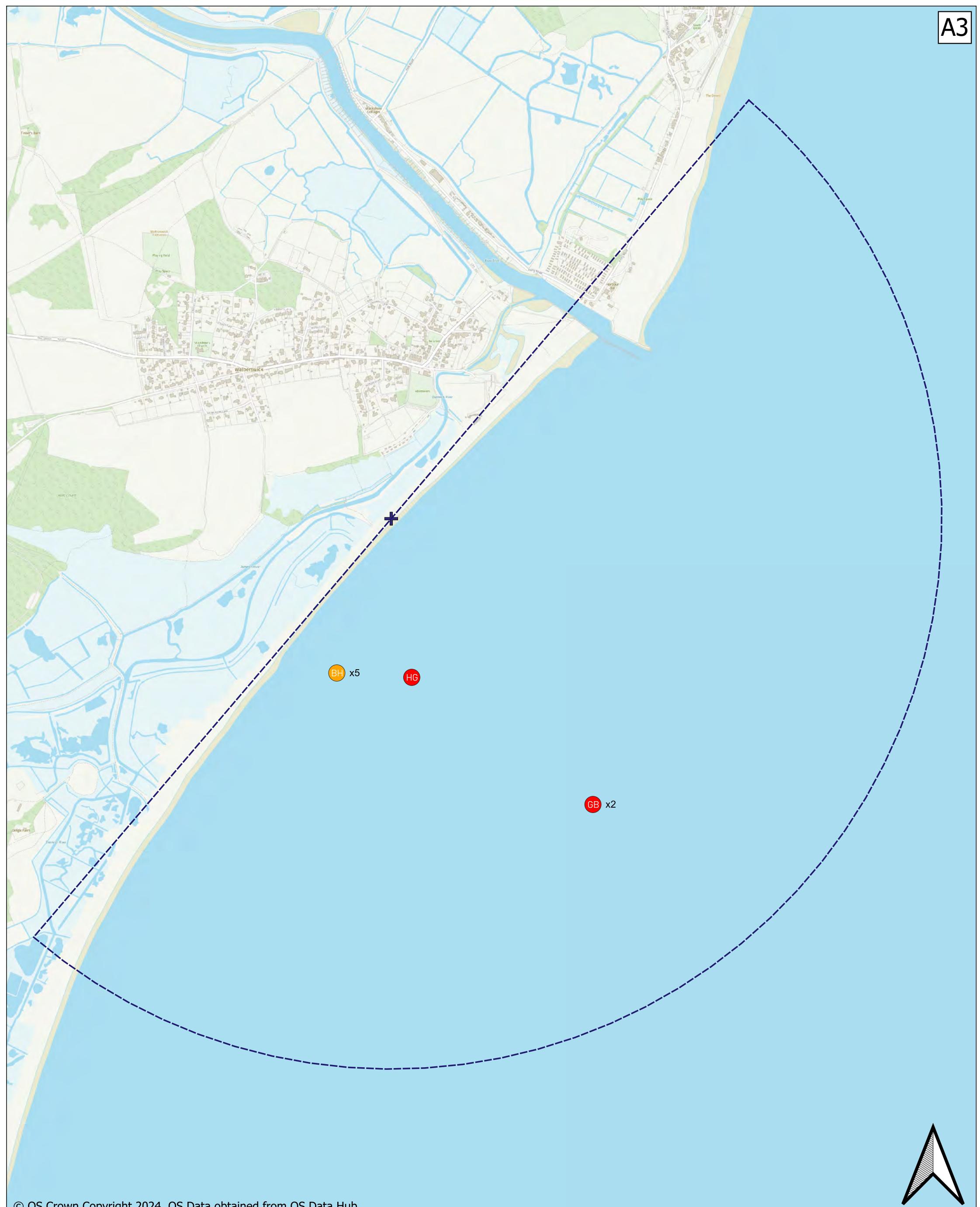
[REDACTED]

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**Figure 2.23**Walberswick VP 20/09/2024
(08:35-11:35)Inshore and Beach Breeding Bird
Survey Report 2024

- Red List
- Amber List
- Green List
- Not Assessed
- ✚ VP Location
- ─ VP Survey Area

HG - Herring Gull
GB - Great Black-backed Gull
BH - Black-headed Gull

0 250 500 m

Scale at A3: 1:12,000
Role: Ecology
Suitability: For Information
Project Number: 287334
Drawing Number: Figure 2.23

Coordinate System: British National Grid

1	25/11/2024	DB	RM	RM	AC
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Rev	Date	By	Chkd	Appd	Authd
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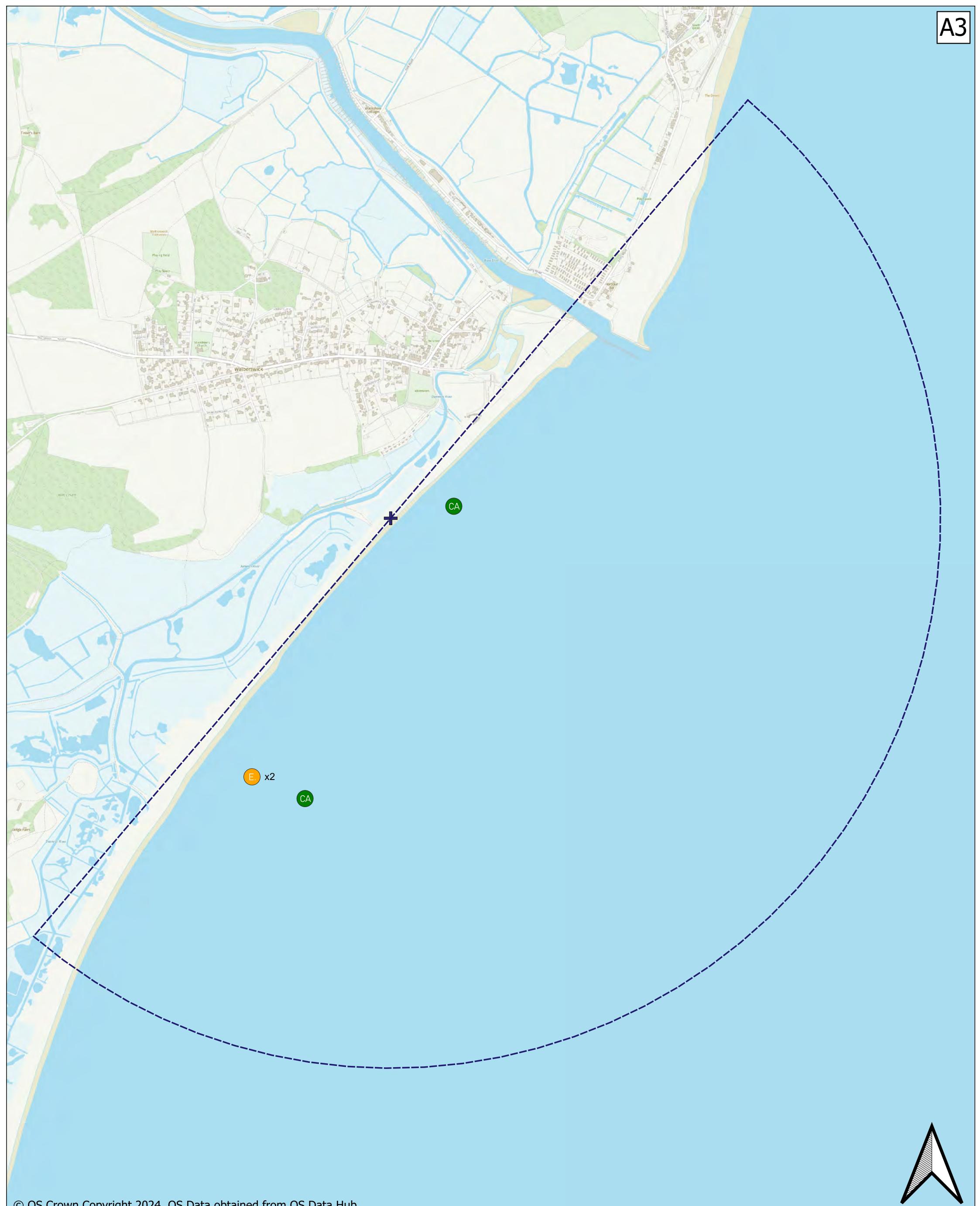


Figure 2.24

Walberswick VP 26/09/2024
(08:10-11:10)

Inshore and Beach Breeding Bird Survey Report 2024

- Red List
- Amber List
- Green List
- Not Assessed
- VP Location
- VP Survey Area

E. - Eider
CA - Cormorant

Scale at A3: 1:12,000
Role: Ecology
Suitability: For Information
Project Number: 287334
Drawing Number: Figure 2.24

Coordinate System: British National Grid

0 250 500 m

100% 0%

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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)
Visit 1 (April 2024)														
Southwold beach survey	15/04/2024	13:30	14:30	16:07	09:42	4	W	0	7	2	2	0	0	10
	17/04/2024	13:50	14:50	07:09	12:59	3	NW	0	4-6	2	2	0	0	10
Walberswick beach survey	16/04/2024	13:45	14:45	17:15	10:50	4	NW	0	7-8	2	2	0	0	8
	29/04/2024	15:00	16:00	14:43	08:17	3	SSE	0	0-2	2	2	0	0	12
Southwold seawatch view point	15/04/2024	10:30	13:30	16:07	09:42	4	W	0	5-7	2	2	0	0	9-10
	17/04/2024	10:50	13:50	07:09	12:59	2-3	NW	0	1-6	2	2	0	0	9-10
Walberswick seawatch view point	16/04/2024	10:45	13:45	17:15	10:50	3-4	NW	0-1	6-8	2	2	0	0	8
	29/04/2024	12:00	15:00	14:43	08:17	4	S-SSE	0	0-3	2	2	0	0	12
Visit 2 (May 2024)														
Southwold beach survey	01/05/2024	12:20	13:20	16:31	10:01	1	ESE	0	3	2	2	0	0	16
	20/05/2024	12:45	13:45	09:59	15:28	3	NNE	0	3	2	2	0	0	15
Walberswick beach survey	03/05/2024	12:10	13:10	07:35	12:58	3	WSW	0	8	2	2	0	0	11
	21/05/2024	14:35	15:35	10:27	16:02	3	NNE	0	7	2	2	0	0	17
Southwold seawatch view point	01/05/2024	09:20	12:20	16:31	10:01	1	ESE	0	2-3	2	2	0	0	12-16
	20/05/2024	09:45	12:45	09:59	15:28	3-4	NNE	0	3-5	2	2	0	0	13-15
Walberswick seawatch view point	03/05/2024	13:10	16:10	07:35	12:58	3	WSW	0-1	8	2	2	0	0	11-12
	21/05/2024	11:35	14:35	10:27	16:02	3	ENE-NNE	0-1	3-8	2	2	0	0	17
Visit 3 (June 2024)														
Southwold beach survey	19/06/2024	14:00	15:00	09:45	15:25	2	NE	0	2	2	2	0	0	17
	20/06/2024	15:00	16:00	10:20	16:08	1	E	0	1	2	2	0	0	19
Walberswick beach survey	21/06/2024	13:00	14:00	10:55	16:52	2	SSE	0	2	2	2	0	0	20
	24/06/24	16:40	17:40	12:52	06:30	2	SE	0	0	2	2	0	0	20
Southwold seawatch view point	19/06/2024	15:00	18:00	09:45	15:25	2	NE	0	2-3	2	2	0	0	15-17
	20/06/2024	12:00	15:00	10:20	16:08	1	E	0	1	2	2	0	0	19-20
Walberswick seawatch view point	21/06/2024	10:00	13:00	10:55	16:52	2	S-SSE	0	1-2	2	2	0	0	17-20
	24/06/24	17:40	20:40	12:52	06:30	1-2	SE	0	0	2	2	0	0	18-20
Visit 4 (July 2024)														
Southwold beach survey	11/07/2024	12:00	13:00	14:43	08:12	2	WSW	0	3	2	2	0	0	18
	12/07/2024	11:50	12:50	15:22	08:46	3	WNW	0	5	2	2	0	0	15
Walberswick beach survey	08/07/2024	12:30	13:30	12:53	06:37	3	S	0	5	2	2	0	0	18
	09/07/2024	11:30	12:30	13:31	07:11	3	SSW	0	4	2	2	0	0	18

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 seawatch view point	11/07/2024	09:00	12:00	14:43	08:12	1-2	W-WSW	0	0-4	2	2	0	0	16-18
	12/07/2024	08:50	11:50	15:22	08:46	3	WNW	0	3-6	2	2	0	0	13-15
Walberswick seawatch view point	08/07/2024	13:30	16:30	12:53	06:37	3	S-SSE	0	5-7	2	2	0	0	18
	09/07/2024	08:30	11:30	13:31	07:11	2-3	SW-S	0	0-5	2	2	0	0	15-18
Visit 5 (August 2024)														
Southwold beach survey	19/08/2024	13:00	14:00	10:50	17:12	3	S	0	2	2	2	0	0	21
	29/08/2024	15:00	16:00	07:25	13:40	1	W	0	5	2	2	0	0	21
Walberswick beach survey	22/08/2024	16:50	17:50	12:55	06:46	4	SSW	0	6	2	2	0	0	18
	30/08/2024	13:20	14:20	08:32	14:56	3	NNE	0	4	2	2	0	0	20
Southwold seawatch view point	19/08/2024	10:00	13:00	10:50	17:12	2-3	S	0	0-2	2	2	0	0	20-21
	29/08/2024	16:00	19:00	07:25	13:40	1	W	0	5	2	2	0	0	19-21
Walberswick seawatch view point	22/08/2024	13:50	16:50	12:55	06:46	4-5	SW-SSW	0	6-8	2	2	0	0	18-19
	30/08/2024	10:20	13:20	08:32	14:56	3	NNE	0	3-4	2	2	0	0	19-20
Visit 6 (September 2024)														
Southwold beach survey	13/09/2024	12:35	13:35	19:39	12:52	3	N	0	3	2	2	0	0	17
	19/09/2024	12:05	13:05	11:46	18:19	4	E	0	5	2	2	0	0	20
Walberswick beach survey	20/09/2024	11:35	12:35	12:30	06:22	3	E	0	5	2	2	0	0	22
	26/09/2024	11:10	12:10	18:57	11:58	3	SW	0	6	2	2	0	0	15
Southwold seawatch view point	13/09/2024	09:35	12:35	19:39	12:52	3	NNE-N	0	1-3	2	2	0	0	14-17
	19/09/2024	09:05	12:05	11:46	18:19	4	E	0	7	2	2	0	0	19-20
Walberswick seawatch view point	20/09/2024	08:35	11:35	12:30	06:22	3-4	ENE-E	0	5-7	2	2	0	0	18-22
	26/09/2024	08:10	11:10	18:57	11:58	3	SW	0	6-7	2	2	0	0	13-15

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