

## Tween Bridge Solar Farm

### Environmental Statement

### Appendix 7.2: Breeding Bird Survey Report

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## **Tween Bridge NSIP Solar Farm**

on behalf of Pegasus Planning Ltd.

### **Technical Appendix 7.2: Breeding Bird Survey Report**



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# 1 INTRODUCTION

## 1.1 Project Background

- 1.1.1 Avian Ecology Limited (AEL) was commissioned by Pegasus Planning Limited in 2022, 2023 and 2025 to undertake a breeding bird survey.
- 1.1.2 The survey was undertaken in relation to 'The Scheme' of a renewable energy generating project; consisting of ground-mounted solar photovoltaic ('PV') arrays, together with on-site energy storage and associated infrastructure. The Scheme is located on land to the east of the town of Thorne and to the west of the town of Crowle (the 'Order Limits') as illustrated on **Figure 1**.
- 1.1.3 This report subsequently provides detailed survey methodology and results of the breeding bird survey undertaken in three survey periods from April 2022 to July 2022, April 2023 to June 2023 and March 2025 to July 2025. This report has been prepared in order to provide baseline breeding bird information to inform an assessment of effects from The Scheme upon breeding ornithological features, as presented within the Ecology and Nature Conservation Chapter 7 of the Environmental Statement<sup>1</sup> (ES).
- 1.1.4 The objectives of this report are to:
- provide baseline information on breeding ornithological features within the Order Limits; and,
  - identify the presence of notable breeding bird species within the Order Limits.
- 1.1.5 The results of breeding bird surveys undertaken in 2022 and 2023 were included in the Preliminary Environmental Information Report (PEIR) for a preliminary Order Limits boundary. Surveys in 2025 comprised land within the Order Limits which were not surveyed in 2022/23.
- 1.1.6 Only common bird species names are referred to within the main text of this Appendix. **Annex 1** provides a summary of all bird species recorded during survey, including both common and species names together with a summary of their conservation status as relevant.

## 1.2 Order Limits Overview

- 1.2.1 The Order Limits encompasses a series of connected agricultural land parcels, predominately composed of arable management. The fields are bounded by a network of watercourses, hedgerows, fences, and tree lines. A broadleaved woodland plantation copse is present within the area, along with several ponds.
- 1.2.2 The Tween Bridge Wind Farm, comprising 22 operational wind turbines, is located within the Order Limits. The Stainforth and Keadby Canal also intersects the centre of the Order Limits, running from west to east.
- 1.2.3 Several internationally and nationally designated sites of ornithological importance lie within proximity to the Order Limits. Within 10 km are key international sites such as the Humber Estuary SPA and Ramsar site, and the Thorne & Hatfield Moors SPA, all of which are designated for their ornithological importance.
- 1.2.4 In the wider context, the Order Limits is surrounded by extensive areas of farmland and areas of woodland, with areas of lowland peat bog (Thorne & Hatfield Moors) located to the north and south of the Order Limits.

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<sup>1</sup> Environmental Statement Chapter 7: Ecology and Nature Conservation Document Reference 6.2.7

- 1.2.5 A small 0.53ha of the Order Limits falls within Thorne Moors Special Area of Conservation (SAC) however, this does not list breeding bird species as qualifying features. However, Thorne & Hatfield Moors Special Protection Area (SPA) and Thorne, Crowle & Goole Moors Site of Special Scientific Interest (SSSI) do fall within the Order Limits and are designated for breeding birds including populations of nightjar.
- 1.2.6 **Table 1.1** below provides a summary of designated sites with breeding ornithological interests located within 5km of the Order Limits boundary, and sites of the National Site Network (European sites) located within 10km of the Order Limits boundary.
- 1.2.7 The Hatfield Moors Important Bird Area (IBA) also corresponds with the boundary of the Thorne and Hatfield Moors SPA, and the wider area also includes Loughton Forest IBA, Humber Estuary IBA and Lower Derwent Valley IBA, which are respectively located 10.12km south-east, 12.30km north-east and 17.05km north of the Order Limits boundary.

**Table 1.1: Ornithological designated sites for nature conservation (breeding qualifying interests).**

*LNR: Local Nature Reserve; NNR: National Nature Reserve; SSSI: Site of Special Scientific Interest; SPA: Special Protection Area.*

Designation	Distance	Ornithological Interests
Thorne, Crowle and Goole Moors SSSI	Partially within the Order Limits boundary	Breeding species include nightjar, nightingale, woodcock and whinchat. Teal, snipe, reed and grasshopper warblers are also associated with the site's heath and fen habitats. The breeding population of nightjars on the Moors is of national importance as its numbers regularly exceed 1% of the total British breeding population.
Thorne and Hatfield Moors SPA	Partially within the Order Limits boundary and 100m south	Breeding qualifying features: <ul style="list-style-type: none"> <li>European nightjar (breeding)</li> </ul>
Humberhead Peatlands NNR	Directly adjacent to the Order Limits boundary and 100m south	Breeding bird assemblage includes nightjar and woodlark. Over 75 species have been recorded breeding.
Hatfield Moors SSSI	95.8m south	The site supports a diverse breeding community of heathland birds, including nightjar. Nightingales also breed and three species of owl have been known to nest.
Buntings Wood Thorne LNR	1.63km west	A large number of breeding bird species.
Humber Estuary Ramsar	5.53km east	Species breeding at levels of national importance: <ul style="list-style-type: none"> <li>Great bittern (breeding);</li> <li>Eurasian marsh harrier (breeding);</li> <li>Pied avocet (breeding); and,</li> <li>Little tern (breeding).</li> </ul>
Humber Estuary SPA/SPA (Marine Components GB)	7.57km north-east	Breeding qualifying features: <ul style="list-style-type: none"> <li>Great bittern (breeding);</li> <li>Eurasian marsh harrier (breeding);</li> <li>Pied avocet (breeding); and,</li> </ul>

Designation	Distance	Ornithological Interests
		<ul style="list-style-type: none"> <li>• Little tern (breeding).</li> </ul>

## 2 METHODOLOGY

### 2022 Breeding Bird Survey

- 2.1.1 A breeding bird survey was undertaken between April 2022 and July 2022, employing an adapted version of the British Trust for Ornithology (BTO) Common Bird Census (CBC) technique (Gilbert *et al.*, 1998<sup>2</sup>). The survey comprised a series of three staggered survey visits undertaken at least seven days apart.
- 2.1.2 The survey area was based on an preliminary Order Limits boundary, which incorporated eight distinct areas within the Order Limits boundary (**Figure 1**), as well as a 100m buffer ('wider survey area') observed from the Order Limits boundary to record the presence of species listed under Schedule 1 of the Wildlife & Countryside Act 1981<sup>3</sup> (as amended).
- 2.1.3 During the surveys, all 'Notable Species' (see below) were recorded on suitably scaled field maps using standard BTO species codes<sup>4</sup> and behaviour notations (such as singing, carrying food, active nest). In line with the survey objectives and the scale of the assessment, a broad territory mapping approach was adopted. This approach treats each observation of a species exhibiting breeding or territorial behaviour such as singing, display, or evidence of breeding activity, as a single territory or breeding pair within the mapped area. Where multiple observations or registrations of the same species occurred in close proximity and likely referred to the same individual (e.g. single singing male holding territory) or pair, these were classed as a single territory to avoid overestimating breeding pairs.
- 2.1.4 Breeding evidence was classified according to standard criteria (see **Table 2.1**), but territory totals represent broad estimates rather than intensive territory mapping, in line with good practice for site-wide breeding bird surveys (broadly following that of the breeding bird survey methods described in Gilbert *et al.*, 1998 ).
- 2.1.5 'Notable Species' relevant to the Scheme that were recorded and mapped during the breeding bird survey comprised Birds of Conservation Concern (BoCC) Amber and Red List Species (Stanbury *et al.*, 2021<sup>5</sup>), birds listed under Section 41 (S41) of the Natural Environment and Rural Communities (NERC) Act 2006<sup>6</sup>, Annex 1<sup>7</sup>/Schedule 1 species and Lincolnshire/Doncaster Local Biodiversity Action Plan (LBAP) species<sup>8,9</sup>.
- 2.1.6 Due to the extent of the survey area, the eight distinct areas (i.e. Areas 1 to 8 as shown on **Figure 1**) were surveyed over a number of consecutive days and analysed independently.
- 2.1.7 Results for all eight areas were then combined to provide a final count of Notable Species breeding within the Order Limits (**Table 3.1**) and wider survey area (**Annex 4**). Only the estimated number of breeding territories for Notable Species is provided, given these are the most relevant species to the design and assessment of development proposals.

<sup>2</sup> Gilbert, G., Gibbons, D.W & Evans, J. (1998) *Bird monitoring methods. A manual of techniques for key UK species*. RSPB, Sandy.

<sup>3</sup> Schedule 1 of the Wildlife and Countryside Act 1981 (as amended). <https://www.legislation.gov.uk/ukpga/1981/69/schedule/1> (Accessed: 21<sup>st</sup> August 2025)

<sup>4</sup> [https://www.bto.org/sites/default/files/u10/downloads/taking-part/species\\_codes.pdf](https://www.bto.org/sites/default/files/u10/downloads/taking-part/species_codes.pdf) (Accessed : 21<sup>st</sup> August 2025)

<sup>5</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**, pp. 723-747. Available online at <https://britishbirds.co.uk/content/status-our-bird-populations> (Accessed: 21st August 2025)

<sup>6</sup> <http://publications.naturalengland.org.uk/publication/4958719460769792> (Accessed: 21st August 2025)

<sup>7</sup> Annex 1 – species listed on Annex 1 of the EC Directive 2009/147/EC of the European Parliament on the conservation of wild birds. [https://ec.europa.eu/environment/nature/conservation/wildbirds/threatened/index\\_en.htm](https://ec.europa.eu/environment/nature/conservation/wildbirds/threatened/index_en.htm) (Accessed: 21st August 2025)

<sup>8</sup> <https://www.nelincs.gov.uk/wp-content/uploads/2016/02/201110-LincolnshireBAP-3rd-edition.pdf> (Accessed: 21st August 2025)

<sup>9</sup> <https://www.doncaster.gov.uk/services/environmental/doncaster-biodiversity-action-plan> (Accessed: 21st August 2025)

- 2.1.8 Presence of common and widespread species that are not classified as Notable Species (i.e. BoCC Green List Species and non-native species), and are hereafter referred to as 'Secondary Species', were also recorded for each survey visit; however, locations and activities were not mapped during the survey effort due to the spatial scale of the Order Limits and priority being given to identify Notable Species.
- 2.1.9 Observations included species potentially breeding in the wider area, even where habitats within the Order Limits were not suitable for those particular species (e.g. foraging gulls within proximity of a known colony). Additionally, non-breeding birds visiting the Order Limits (e.g., gulls feeding in fields) and birds flying over were also recorded.
- 2.1.10 All breeding bird survey visits were undertaken by a suitably competent and experienced ornithologist. All survey visits were carried out from dawn and finished by 11:00hrs in conditions suitable for survey (avoiding heavy rain and strong winds). A summary of survey effort is presented in **Table 2.2** and detailed survey conditions are presented in **Annex 2**.

**Table 2.1: Criteria for Breeding Evidence (adapted from Sharrock, 1974<sup>10</sup>; Gillings et al., 2013<sup>11</sup>).**

Possible	Probable	Confirmed
Observed in suitable nesting habitat. Singing male in suitable breeding habitat	Pair observed in suitable nesting habitat. Permanent territory presumed through registration of territorial behaviour (song etc.) from many individuals on one day. Courtship and display. Visiting probable nest site. Agitated behaviour or calls suggesting probable presence of nest or young nearby. Nest building or excavation.	Distraction display or injury feigning. Used nest or eggshells. Recently fledged young. Adults entering or leaving nest site or adults seen incubating. Adult carrying faecal sac or food for young. Nest containing eggs. Nest with young.

**Table 2.2: Breeding bird survey effort - 2022.**

Survey Visit	Date	Start time (24hrs)	End time (24hrs)	Sunrise (24hrs)
1	26/04/2022 to 10/05/2022	06:00 to 08:40	08:30 to 11:00	05:12 to 05:40
2	17/05/2022 to 30/05/2022	05:00 to 05:15	10:00 to 10:30	04:44 to 05:00
3	07/06/2022 to 07/07/2022	05:00	09:00 to 10:30	04:34 to 04:45

### 2023 Breeding Bird Survey

- 2.1.11 Following the completion of the 2022 breeding bird survey, alterations to the preliminary Order Limits boundary were made to accommodate changes in scheme design.

<sup>10</sup> Sharrock, J.T.R. (1974) 'Minutes of the second meeting of the European Ornithological Atlas Committee', in: Pinowski, J. and Williamson, K. (eds). Proceedings of the Fourth Meeting of the International Bird Census Committee and the Second Meeting of the European Ornithological Atlas Committee, Acta Ornithologica, 14(6), pp. 261–268.

<sup>11</sup> Gillings, S., Balmer, D. E., Caffrey, B. J. and Swann, B. (2013) 'Survey methods and data sources', in: Balmer, D. E., Gillings, S., Caffrey, B. J., Swann, R. L., Downie, I. S. & Fuller, R. J. (eds), Bird Atlas 2007–11: The Breeding and Wintering Birds of Britain and Ireland. Thetford, UK: BTO Books. pp. 34–45.

- 2.1.12 Areas of the Order Limits that were not included in the 2022 survey (i.e. Areas 1a, 2a, 4a, 6a, 7a and 9), as illustrated in **Figures 1 to 10**, were subsequently surveyed between April 2023 and June 2023.
- 2.1.13 Data from 2023 was collected using the same methods as in 2022. All survey visits were carried out by from dawn and finished by 11:00hrs. Surveys were conducted by a competent and experienced ornithologist in conditions suitable for survey (avoiding heavy rain and strong winds). A summary of survey effort is presented in **Table 2.3** and detailed survey conditions are presented in **Annex 2**.
- 2.1.14 Results from 2023 for all additional areas were then combined with the data from 2022 to provide a final count of species breeding within the Order Limits<sup>12</sup> (**Table 3.1**) and wider survey area (**Annex 4**).

**Table 2.3: Breeding bird survey effort - 2023.**

Survey Visit	Date	Start time (24hrs)	End time (24hrs)	Sunrise (24hrs)
1	22/04/2023 to 05/05/2023	06:00 to 06:30	11:00	04:33 to 05:21
2	19/05/2023 to 23/05/2023	06:00 to 06:30	11:00	04:51 to 04:57
3	14/06/2023 to 17/06/2023	06:00 to 06:30	10:45 to 11:00	04:33

#### 2025 Breeding Bird Survey

- 2.1.15 Following the completion of the 2022 and 2023 breeding bird surveys, alterations to the preliminary Order Limits boundary were made to accommodate changes in scheme design.
- 2.1.16 Areas of the Order Limits that were not included in the 2022/23 surveys (i.e. Areas 10 to 15), as illustrated in **Figures 1 to 10**, were subsequently surveyed between March 2025 and July 2025.
- 2.1.17 Data from 2025 was collected using similar methods as in 2022/23, however surveys were based on guidance from Bird Survey & Assessment Steering Group (2023)<sup>13</sup>. The survey comprised a series of six staggered survey visits predominantly undertaken at least seven days apart for each surveyed area.
- 2.1.18 Five survey visits were carried out from 05:00 to 05:30 hrs, with the majority finished by 11:00hrs. One of the six visits was conducted in the evening (i.e. pre and post sunset) to pick up species not readily recorded by conventional surveys early in the morning (e.g. various owl species).
- 2.1.19 All surveys were carried out by competent and experienced ornithologists in conditions suitable for survey (avoiding heavy rain and strong winds). A summary of survey effort is presented in **Table 2.4**, with detailed survey conditions presented in **Annex 3**.
- 2.1.20 Results from 2025 were then combined with the data from 2022 and 2023 to provide a final count of species breeding within the Order Limits (**Table 3.1**) and wider survey area (**Annex 4**).

<sup>12</sup> Previous results included in the Preliminary Environmental Information Report (PEIR) were based on a preliminary Order Limits that are since superseded in **Table 3.1**.

<sup>13</sup> Bird Survey & Assessment Steering Group. (2023). Bird Survey Guidelines for assessing ecological impacts, v.1.1.1. <https://birdsurveyguidelines.org> (Accessed: 21<sup>st</sup> July 2025)

**Table 2.4: Breeding bird survey effort - 2025.**

Survey Visit	Date	Start time (24hrs)	End time (24hrs)	Sunrise / sunset (24hrs)
1	26/03/2025 to 31/03/2025	05:00 to 05:30	11:00	05:46 to 06:38 <sup>14</sup>
2	16/04/2025 to 23/04/2025	05:00 to 05:30	11:00	05:45 to 06:01
3	02/05/2025 to 08/05/2025	05:30 to 05:40	11:00 to 11:50	05:14 to 05:20
4	26/05/2025 to 30/05/2025	18:00	23:00	21:16 to 21:20
5	04/06/2025 to 13/06/2025	05:00 to 05:30	11:00 to 11:30	04:33 to 04:38
6	08/07/2025 to 20/07/2025	05:00 to 05:30	11:00 to 11:15	04:33 to 04:35

## **Limitations**

### 2022/2023 breeding bird surveys

- 2.1.21 Surveys in 2022 and 2023 were based on an adapted version of the BTO CBC technique (Gilbert *et al.*, 1998). Therefore, such surveys only comprised three survey visits, as opposed to six visits in 2025 from which surveys were based on Bird Survey & Assessment Steering Group (2023) guidance. As such, surveys also did not include an evening survey and therefore it is possible that the detection probability for potential crepuscular species may have been reduced. However, it is considered that the survey effort is satisfactory in order to determine the breeding species assemblage present within the survey areas of 2022 and 2023, and that any further potential crepuscular species present would likely be associated with field boundary features that are not proposed to be impacted by the Scheme.
- 2.1.22 A small area of the wider survey area (Area 8a), as illustrated in **Figure 2** was not directly accessed during survey visits. This area comprised a limited section of open, agricultural field, which was considered unlikely to support breeding Schedule 1 species. The survey area adopted provided extensive coverage of adjacent and comparable habitats within the remainder of the Order Limits, within which infrastructure associated with the Scheme is proposed to be sited.
- 2.1.23 The breeding bird assemblage within non-surveyed parts of the Order Limits would reasonably be expected to be very similar to that within the survey area, supporting a small number of additional pairs of species recorded.
- 2.1.24 Following the 2022 and 2023 surveys, updated status assessments for 28 species have also been made for breeding seabirds in the UK (Stanbury *et al.* 2024)<sup>15</sup>. This is not considered to be a constraint to the assessment as such species were not recorded breeding and were already incorporated into the 2025 survey, with the 2022/23 survey results also comprising no additional species since added that could be considered potentially vulnerable to negative impacts from the Scheme.

### 2025 breeding bird survey

<sup>14</sup> Note: hours shift because clocks change forward 1 hour on 30 March 2025.

<sup>15</sup> Stanbury, A.J., Burns, F., Aebischer, N.J., Baker, H., Balmer, D.E., Brown, A., Dunn, T., Lindley, P., Murphy, M., Noble, D.G. and Owens, R. (2024). *The status of the 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, 117:471-487. Available online at <https://britishbirds.co.uk/seabird-bocc5a> (Accessed:8th July 2025)



- 2.1.25 The survey timings for the first two visits were not specifically recorded; however, all commenced between 05:00 and 05:30 and were concluded by 11:00. As all surveys commenced prior to sunrise, this is not considered to be a substantial limitation.
- 2.1.26 The Bird Survey & Assessment Steering Group (2023) suggests that dawn breeding bird surveys should typically commence within 30 minutes of sunrise and end by 11:00. The majority of visits commenced within the recommended start time (or prior to sunrise as stated above for the first two visits), however four days during visit 5 and 6 commenced outside the optimal time period (range: 9 to 27 minutes). Additionally, seven survey days were also concluded after 11:00 (range: 15 to 50 minutes) during visits 3, 5 and 6. With the majority of dawn surveys however fully conducted during optimal survey times, and with the species assemblage for all areas considered to be robustly analysed using data from six visits, it is not considered that the timing of dawn visits will impact the assessment.
- 2.1.27 The six staggered survey visits were predominantly undertaken at least seven days apart for each surveyed area; however, Area 12 was surveyed six days apart between visits 4 and 5. This is not considered to impact the assessment.
- 2.1.28 In summary, none of the limitations encountered are considered to affect the ability to undertake a robust assessment of impacts upon breeding ornithological features.

### 3 RESULTS

- 3.1.1 The combined total breeding bird assemblage recorded within the collective survey area is considered representative of the locale and the agricultural and field boundary habitats present. A total 29 Notable Species recorded breeding within the survey area as summarised in **Table 3.1**.
- 3.1.2 Breeding evidence for 28 Notable Species was recorded within the Order Limits, which included:
- One species listed on Schedule 1 of the Wildlife and Countryside Act 1981 (as amended) (hobby);
  - No species listed on Annex 1 of the Directive 2009/147/EC (Birds Directive);
  - 12 Red List species (grey partridge, cuckoo, lapwing, skylark, mistle thrush, tree sparrow, house sparrow, yellow wagtail, greenfinch, linnet, corn bunting and yellowhammer);
  - 15 Amber List species (greylag goose, mallard, stock dove, woodpigeon, moorhen, kestrel, rook, willow warbler, sedge warbler, whitethroat, wren, song thrush, dunnoek, meadow pipit and reed bunting);
  - 13 listed as rare and most threatened species under S41 of the NERC Act (2006) (grey partridge, cuckoo, lapwing, skylark, song thrush, tree sparrow, house sparrow, dunnoek, yellow wagtail, linnet, corn bunting, yellowhammer and reed bunting);
  - 11 species recorded listed under the Lincolnshire LBAP (grey partridge, lapwing, skylark, song thrush, tree sparrow, house sparrow, yellow wagtail, linnet, corn bunting, yellowhammer and reed bunting); and,
  - Eight species listed under the Doncaster LBAP (grey partridge, skylark, song thrush, tree sparrow, yellow wagtail, linnet, corn bunting and reed bunting).
- 3.1.3 Two species recorded are listed on Schedule 1 of the Wildlife and Countryside Act 1981 (as amended). This comprised hobby (one territory within the Order Limits) and Cetti's warbler (one territory within the wider survey area and one territory outside the survey area that may utilise the wider survey area as part of a broader territory). The location of breeding Schedule 1 species territories are considered sensitive and have been excluded from **Figures 1 to 10**. Confidential breeding locations of Schedule 1 species are presented separately on **Figure 11**; the *Confidential Schedule 1 Species Survey Results* plan.
- 3.1.4 Two barn owl nest boxes were recorded within the wider survey area of Area 6, with individual barn owls recorded foraging within the Order Limits in Area 8 over the course of surveys. Use (or signs of use) of the nest boxes was however, not observed during surveys, but it is possible birds may use the boxes for roosting or breeding in other years. Barn owl is listed under Schedule 1 of the Wildlife and Countryside Act 1981 (as amended) and further listed as a local priority species under the Lincolnshire and Doncaster LBAPs.
- 3.1.5 No species listed on Annex 1 of the Directive 2009/147/EC (Birds Directive) were recorded breeding within the study area.
- 3.1.6 No species comprising qualifying breeding species of above listed (see **Table 1.1**) National Site Network (European sites) or national designated sites were recorded breeding within the study area.
- 3.1.7 Observations of marsh harrier, were made over the course of survey visits, including a pair flying together in April 2023. No further breeding evidence was however recorded within the survey area, and the species did not breed within the Order Limits in either survey year. Breeding pairs may however have been present within suitable habitats within the surrounding wider area, and sporadically using the Order Limits as part of their wider territory e.g., for foraging.

- 3.1.8 Breeding territories of Notable Species were typically associated with vegetation along field boundaries, which principally comprises of field-margins, hedgerows, scrub, tree-lines, ditches, watercourses, ponds and woodland habitats within or directly adjacent to the Order Limits. These species included mallard, cuckoo, stock dove, woodpigeon, moorhen, kestrel, rook, willow warbler, sedge warbler, whitethroat, wren, song thrush, mistle thrush, tree sparrow, house sparrow, dunnoek, greenfinch, linnet, yellowhammer and reed bunting.
- 3.1.9 Ground-nesting Notable Species that breed in open habitats within the Order Limits comprised of greylag goose (1 territory), grey partridge (9 territories), lapwing (20 territories), skylark (269 territories), yellow wagtail (94 territories), meadow pipit (12 territories) and corn bunting (3 territories).
- 3.1.10 With the size of the surveyed Order Limits being 1,831 ha (proposed cable routes excluded), the estimated 269 skylark territories results on average to be 0.15 skylark territories per ha.
- 3.1.11 The cropping regime within the Order Limits comprised winter wheat, maize, spring barley, oilseed rape, potatoes, beans, oats, linseed and sugar beet. Modified grassland pastures were either used for livestock grazing (horse or cattle), or for silage production.
- 3.1.12 Grey partridge and corn bunting were identified breeding principally along arable and grassland field margins, rather than within open agricultural fields themselves. Grey partridge was also located in tall ruderal field corners of cereal crop arable fields and was recorded throughout the survey area, whilst corn bunting was recorded in Area 13 only. Lapwing was identified in Area 1 and 12 which primarily comprises cereal crop arable fields, with a single modified grassland pasture also present in Area 1. Lapwing were also identified in Areas 7a and 9, which comprised of cereal crop and regions not included in habitat surveys. Skylark and yellow wagtail were recorded throughout the Order Limits and comprised of territories primarily within open arable fields that are also likely to utilise any neighbouring associated grassland field margins in their broader home range. Meadow pipit was identified in Areas 4, 6, 6a, 7, 7a, 8 and 9 largely in cereal crop fields and the associated grassland field margins.
- 3.1.13 All breeding Notable Species (or potential breeding species) recorded along with an estimated number of the breeding territories within the Order Limits are detailed within **Table 3.1**. With the exclusion of Schedule 1 species, the indicative locations of the territories of Notable Species are provided in **Figures 1 to 10**. Notable Species recorded within the wider survey area are provided in **Annex 4**.

**Table 3.1: Breeding bird territories recorded within the Order Limits.**

Species	Order Limits Estimated Territories in 2022/23	Order Limits Estimated Territories in 2025	Total Combined Order Limits Estimated Territories (2022/23 and 2025)	Comments
Greylag goose	1	0	1	Confirmed breeding with chicks recorded. Located in open field habitat within Area 6.
Mallard	4	3	7	Confirmed breeding with chicks recorded. Recorded in various pond and wet ditches.
Grey partridge	6	3	9	Confirmed breeding with chicks recorded. Observed throughout field margins and field corners.

Species	Order Limits Estimated Territories in 2022/23	Order Limits Estimated Territories in 2025	Total Combined Order Limits Estimated Territories (2022/23 and 2025)	Comments
Cuckoo	5	0	5	Possible breeding. Recorded in field boundary habitats and woodlands. Note that this species does not 'actively nest' and instead relies on brood parasitism to reproduce.
Stock dove	11	0	11	Probable breeding. Recorded throughout on-Site field boundary habitats and woodland.
Woodpigeon	4	0	4	Probable breeding. Recorded throughout on-Site field boundary habitats and woodland.
Moorhen	1	3	4	Confirmed breeding with chicks recorded. Identified in ditches and ponds.
Lapwing	20	0	20	Probable breeding. Recorded pairs in open arable fields within Area 1, 7a, 9 and 12.
Kestrel	0	1	1	Confirmed breeding with fledged chicks recorded.
Hobby	1	0	1	Confirmed breeding. Nest observed in an oak tree as illustrated on <b>Figure X. Confidential Schedule 1 Species Survey Results.</b>
Rook	1	0	1	Confirmed breeding. Observed nesting in trees in Area 1.
Skylark	246	23	269	Probable breeding. Recorded singing, calling and as pairs throughout open habitats.
Willow warbler	4	0	4	Confirmed breeding with chicks recorded. Identified along field boundary habitats.
Sedge warbler	16	0	16	Confirmed breeding with chicks recorded. Identified singing throughout field boundary habitats, particularly near ponds and ditches.
Whitethroat	68	9	77	Confirmed breeding with chicks recorded. Recorded singing and calling throughout field boundary habitats.
Wren	79	15	94	Probable breeding. Recorded singing and calling throughout field boundary habitats.
Song thrush	5	1	6	Probable breeding. Observed singing in wooded habitats and trees.
Mistle thrush	1	1	2	Confirmed breeding with chicks recorded. Identified in tree lines and woodlands.
Tree sparrow	1	0	1	Confirmed breeding with chicks recorded. Observed in field boundary habitats.

Species	Order Limits Estimated Territories in 2022/23	Order Limits Estimated Territories in 2025	Total Combined Order Limits Estimated Territories (2022/23 and 2025)	Comments
House sparrow	1	2	3	Confirmed breeding with chicks recorded. Observed in field boundary habitats.
Dunnock	16	5	21	Probable breeding. Identified singing and calling in field boundary habitats.
Yellow wagtail	88	6	94	Confirmed breeding with chicks recorded. Ground nesting species recorded singing and calling in open field habitat.
Meadow pipit	12	0	12	Confirmed breeding with food carrying recorded. Ground nesting species recorded signing in open field habitat.
Greenfinch	1	1	2	Probable breeding. Identified singing and calling in field boundary habitats
Linnet	41	15	56	Confirmed breeding with chicks recorded.
Corn bunting	0	3	3	Probable breeding. Ground-nesting species recorded singing and calling primarily in field margin habitat.
Yellowhammer	28	7	35	Probable breeding. Identified singing and calling in field boundary habitats.
Reed bunting	48	4	52	Confirmed breeding with chicks recorded.

3.1.14 Secondary Species recorded potentially breeding<sup>16</sup> within the Order Limits included the following:

- Canada goose;
- Mute swan;
- Pheasant;
- Red-legged partridge;
- Collared dove;
- Coot;
- Buzzard;
- Great spotted woodpecker;
- Jay;
- Magpie;
- Carrion crow;
- Raven;
- Coal tit;
- Blue tit;
- Great tit;
- Swallow;
- Long-tailed tit;
- Chiffchaff;

<sup>16</sup> It should be noted that breeding status for Secondary Species is not provided here, with breeding activity not confirmed due to the survey effort focussing on Notable Species. Secondary Species listed include those which indicated potential signs of breeding behaviour in habitats considered to be suitable; however, territory analysis has not been conducted.

- Reed warbler;
- Blackcap;
- Garden warbler;
- Treecreeper;
- Blackbird;
- Robin;
- Pied wagtail;
- Chaffinch; and,
- Goldfinch.

3.1.15 During survey visits, observations of thirty other species were also made, but for which established breeding evidence was not recorded within the Order Limits. This included:

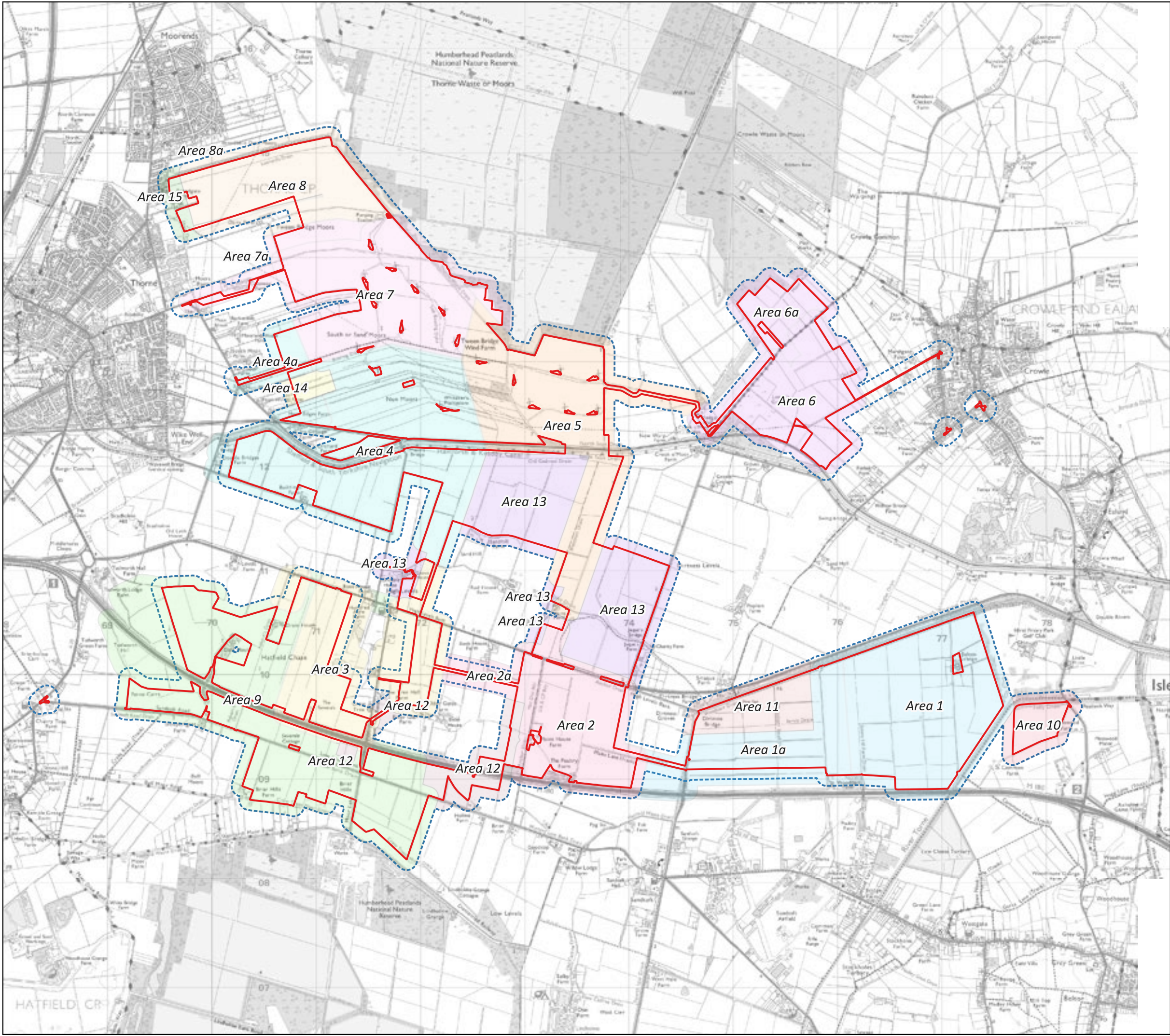
- Pink-footed goose;
- Whooper swan;
- Shelduck;
- Gadwall;
- Teal;
- Tufted duck;
- Swift;
- Turtle dove;
- Crane;
- Little grebe;
- Great crested grebe;
- Oystercatcher;
- Curlew;
- Green sandpiper;
- Black-headed gull;
- Common tern;
- Arctic skua;
- Cormorant;
- Grey heron;
- Little egret;
- Sparrowhawk;
- Marsh harrier;
- Red kite;
- Barn owl;
- Tawny owl;
- Kingfisher;
- Green woodpecker;
- Peregrine;
- Jackdaw;
- Woodlark;
- Sand martin;
- House martin;
- Lesser whitethroat;
- Goldcrest;
- Starling;
- Redwing;
- Fieldfare;
- Ring ouzel;
- Stonechat;
- Wheatear;
- Grey wagtail;
- Tree pipit;

- Bullfinch;
- Crossbill.
- Redpoll; and,

3.1.16 Of these, marsh harrier is listed as a breeding species for the Humber Estuary SPA/SPA (Marine Components GB) and comprises the only species listed as a qualifying species for a European designated site (as listed in **Table 1.1**). Eleven of these non-breeding species are also listed under Schedule 1 of the Wildlife and Countryside Act 1981 (as amended). These six species include whooper swan, green sandpiper, marsh harrier, red kite, peregrine, barn owl, kingfisher, woodlark, redwing, fieldfare and crossbill. A further nine species are listed on Annex 1 of the Directive 2009/147/EC (Birds Directive), including crane, whooper swan, common tern, little egret, marsh harrier, red kite, kingfisher, peregrine and woodlark.

FIGURE 1. BREEDING BIRD SURVEY PLAN (OVERVIEW)





- Order Limits
- 100m Buffer

2023 Survey areas

- Area 1 & 1a
- Area 2 & sa
- Area 3
- Area 4
- Area 5
- Area 6 & 6a
- Area 7 & 7a
- Area 8
- Area 9

2025 Survey areas

- Area 10
- Area 11
- Area 12
- Area 13
- Area 14
- Area 15

TWEEN BRIDGE

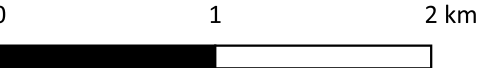
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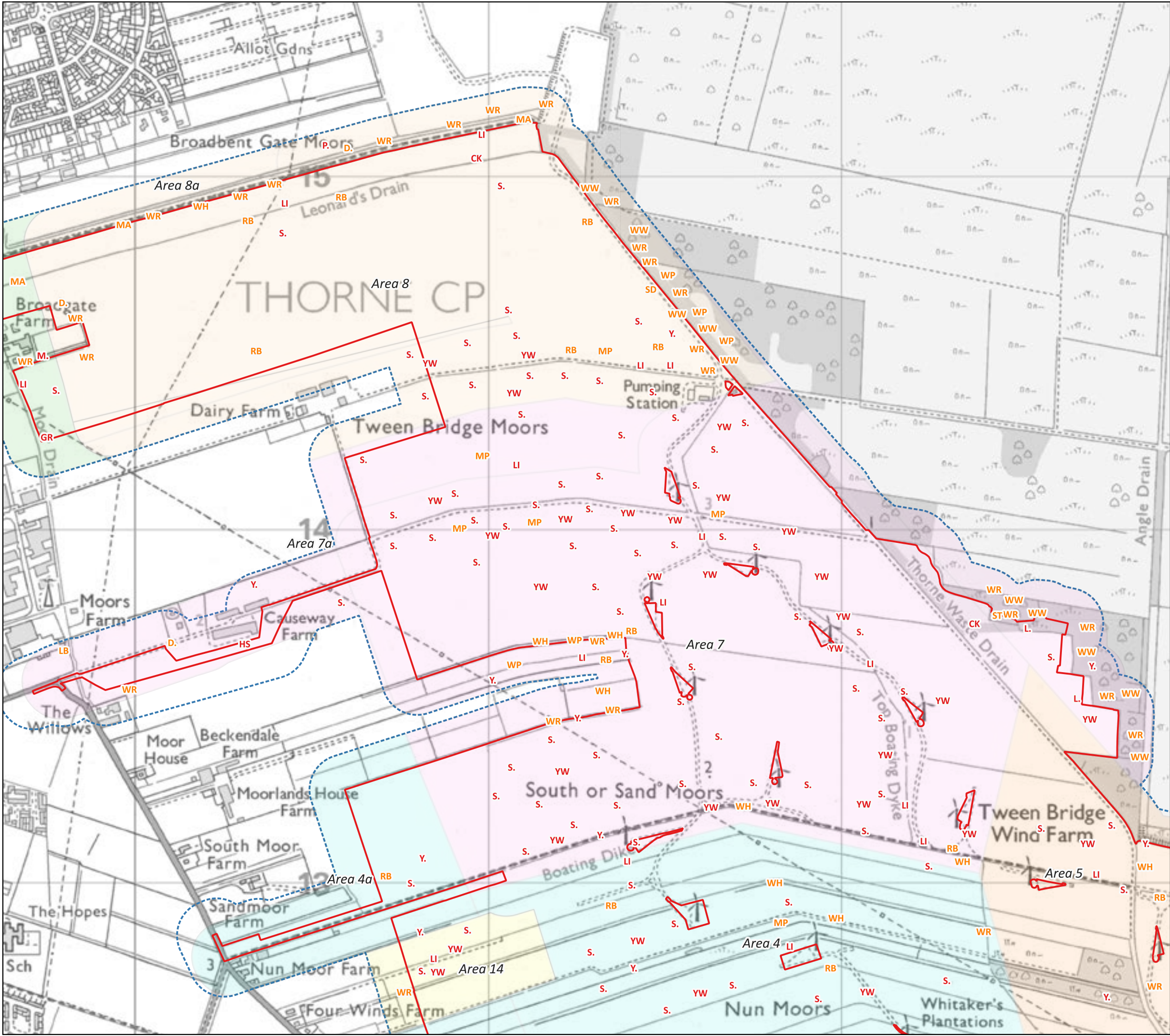


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**FIGURE 2. BREEDING BIRD SURVEY RESULTS – MAP 1**



- Order Limits

100m Buffer

2023 Survey areas

Area 1 & 1a

Area 2 & sa

Area 3

Area 4

Area 5

Area 6 & 6a

Area 7 & 7a

Area 8

Area 9

2025 Survey areas

Area 10

Area 11

Area 12

Area 13

Area 14

Area 15

Amber

D. - Dunnock

GJ - Greylag Goose

K. - Kestrel

LB - Lesser Black

MA - Mallard

MH - Moorhen

MP - Meadow Pipit

RB - Reed Bunting

RO - Rook

SD - Stock Dove

ST - Song Thrush

SW - Sedge Warbler

WH - Whitethroat

WP - Woodpigeon

WR - Wren

WW - Willow Warbler

Red

CB - Corn Bunting

CK - Cuckoo

GR - Greenfinch

HM - House Martin

HS - House Sparrow

L. - Lapwing

LI - Linnet

M. - Mistle Thrush

P. - Grey Partridge

S. - Skylark

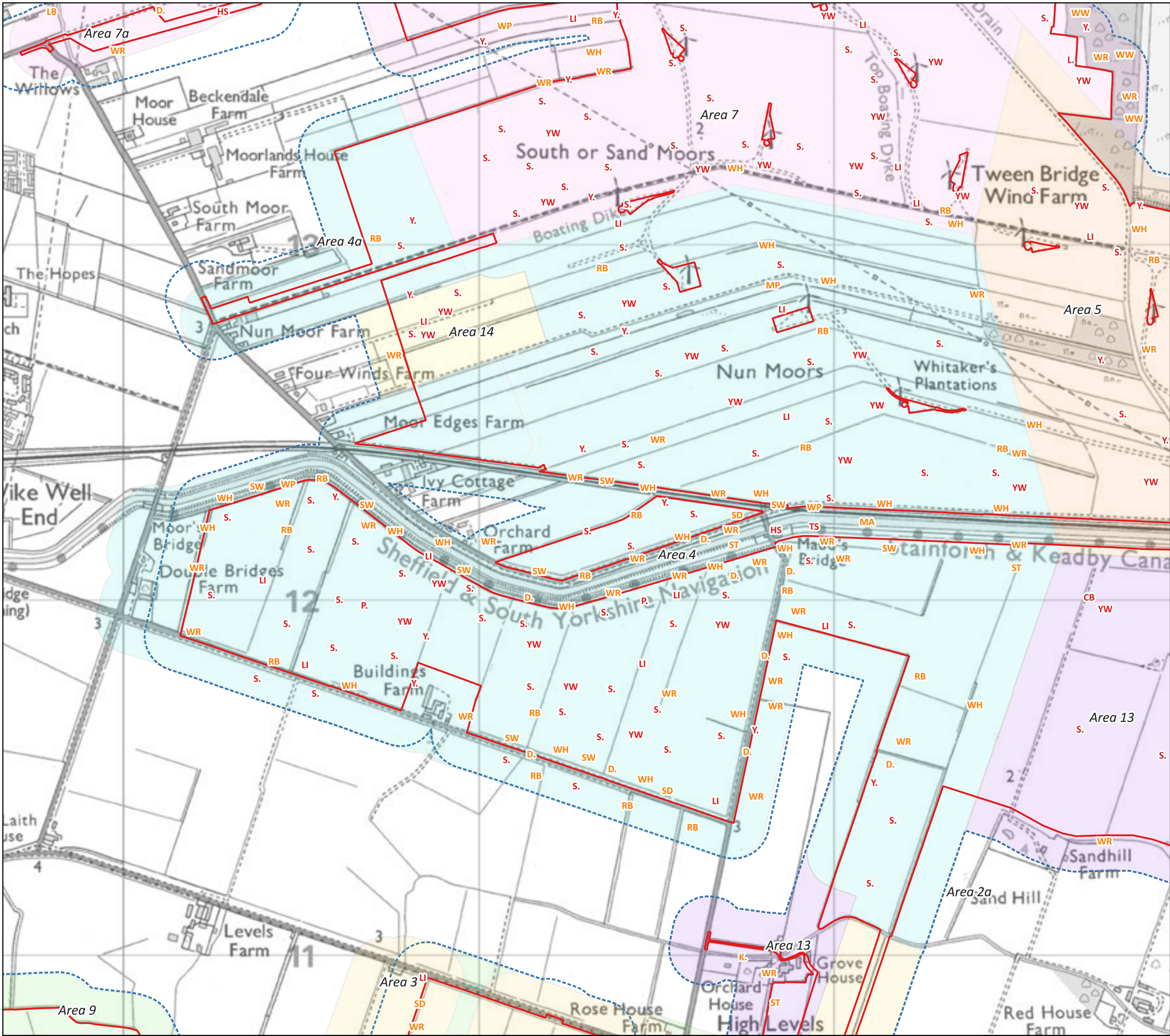
TS - Tree Sparrow

Y. - Yellowhammer

YW - Yellow Wagtail
- TWEEN BRIDGE
- Breeding bird survey results - Map 1
- Version: 01 Date: 07/11/2025
- 
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**FIGURE 3. BREEDING BIRD SURVEY RESULTS – MAP 2**





- Order Limits

100m Buffer

2023 Survey areas

Area 1 & 1a

Area 2 & sa

Area 3

Area 4

Area 5

Area 6 & 6a

Area 7 & 7a

Area 8

Area 9

2025 Survey areas

Area 10

Area 11

Area 12

Area 13

Area 14

Area 15

Amber

D. - Dunnock

GJ - Greylag Goose

K. - Kestrel

LB - Lesser Black

MA - Mallard

MH - Moorhen

MP - Meadow Pipit

RB - Reed Bunting

RO - Rook

SD - Stock Dove

ST - Song Thrush

SW - Sedge Warbler

WH - Whitethroat

WP - Woodpigeon

WR - Wren

WW - Willow Warbler

Red

CB - Corn Bunting

CK - Cuckoo

GR - Greenfinch

HM - House Martin

HS - House Sparrow

L. - Lapwing

LI - Linnet

M. - Mistle Thrush

P. - Grey Partridge

S. - Skylark

TS - Tree Sparrow

Y. - Yellowhammer

YW - Yellow Wagtail

TWEEN BRIDGE

Breeding bird survey results - Map 2

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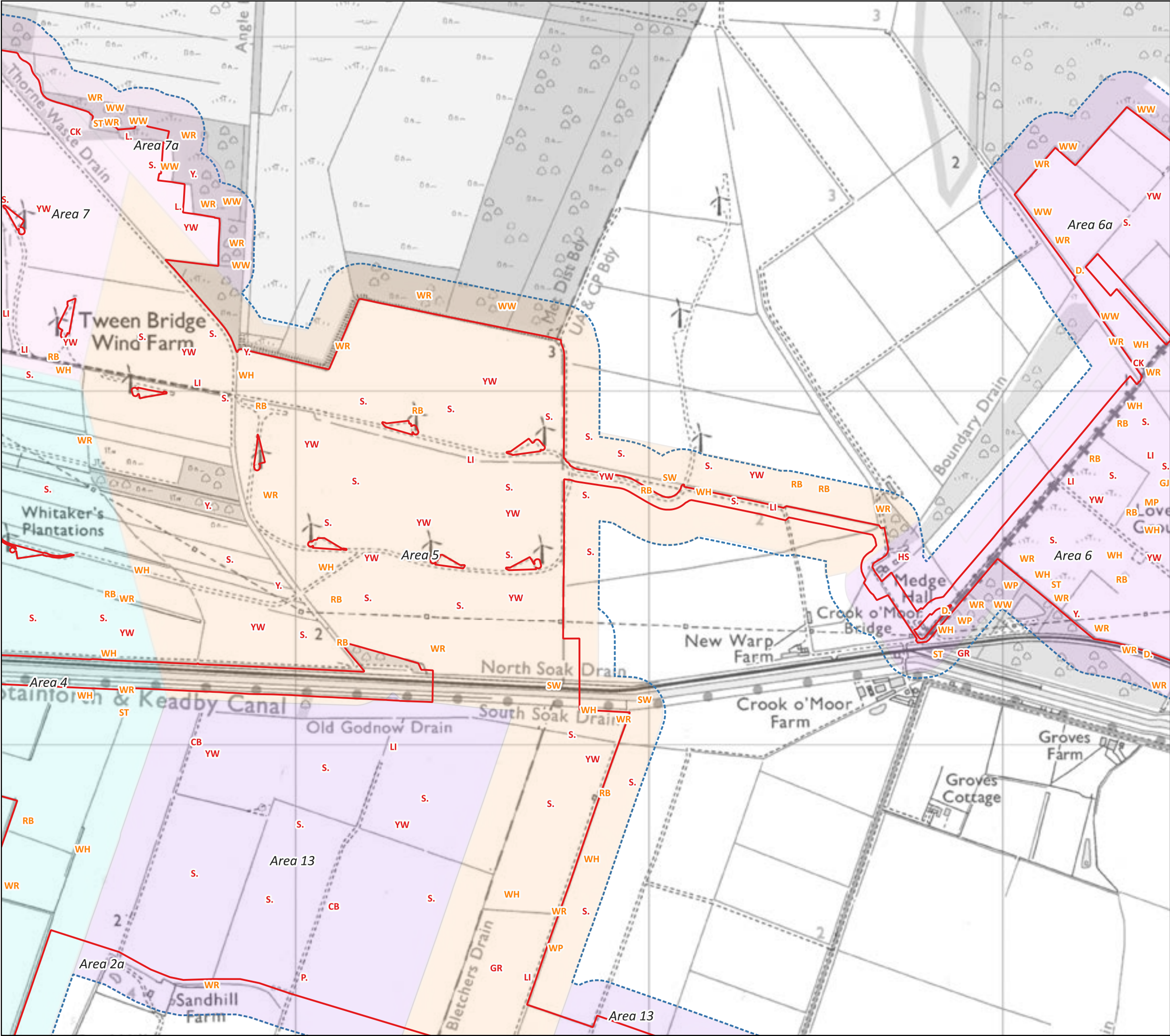
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**FIGURE 4. BREEDING BIRD SURVEY RESULTS - MAP 3**





- Order Limits
- 100m Buffer

2023 Survey areas

- Area 1 & 1a
- Area 2 & 2a
- Area 3
- Area 4
- Area 5
- Area 6 & 6a
- Area 7 & 7a
- Area 8
- Area 9

2025 Survey areas

- Area 10
- Area 11
- Area 12
- Area 13
- Area 14
- Area 15

- Amber
- D. - Dunnock
  - GJ - Greylag Goose
  - K. - Kestrel
  - LB - Lesser Black
  - MA - Mallard
  - MH - Moorhen
  - MP - Meadow Pipit
  - RB - Reed Bunting
  - RO - Rook
  - SD - Stock Dove
  - ST - Song Thrush
  - SW - Sedge Warbler
  - WH - Whitethroat
  - WP - Woodpigeon
  - WR - Wren
  - WW - Willow Warbler

- Red
- CB - Corn Bunting
  - CK - Cuckoo
  - GR - Greenfinch
  - HM - House Martin
  - HS - House Sparrow
  - L. - Lapwing
  - LI - Linnet
  - M. - Mistle Thrush
  - P. - Grey Partridge
  - S. - Skylark
  - TS - Tree Sparrow
  - Y. - Yellowhammer
  - YW - Yellow Wagtail

TWEENS BRIDGE

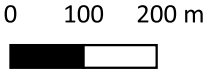
Breeding bird survey results - Map 3

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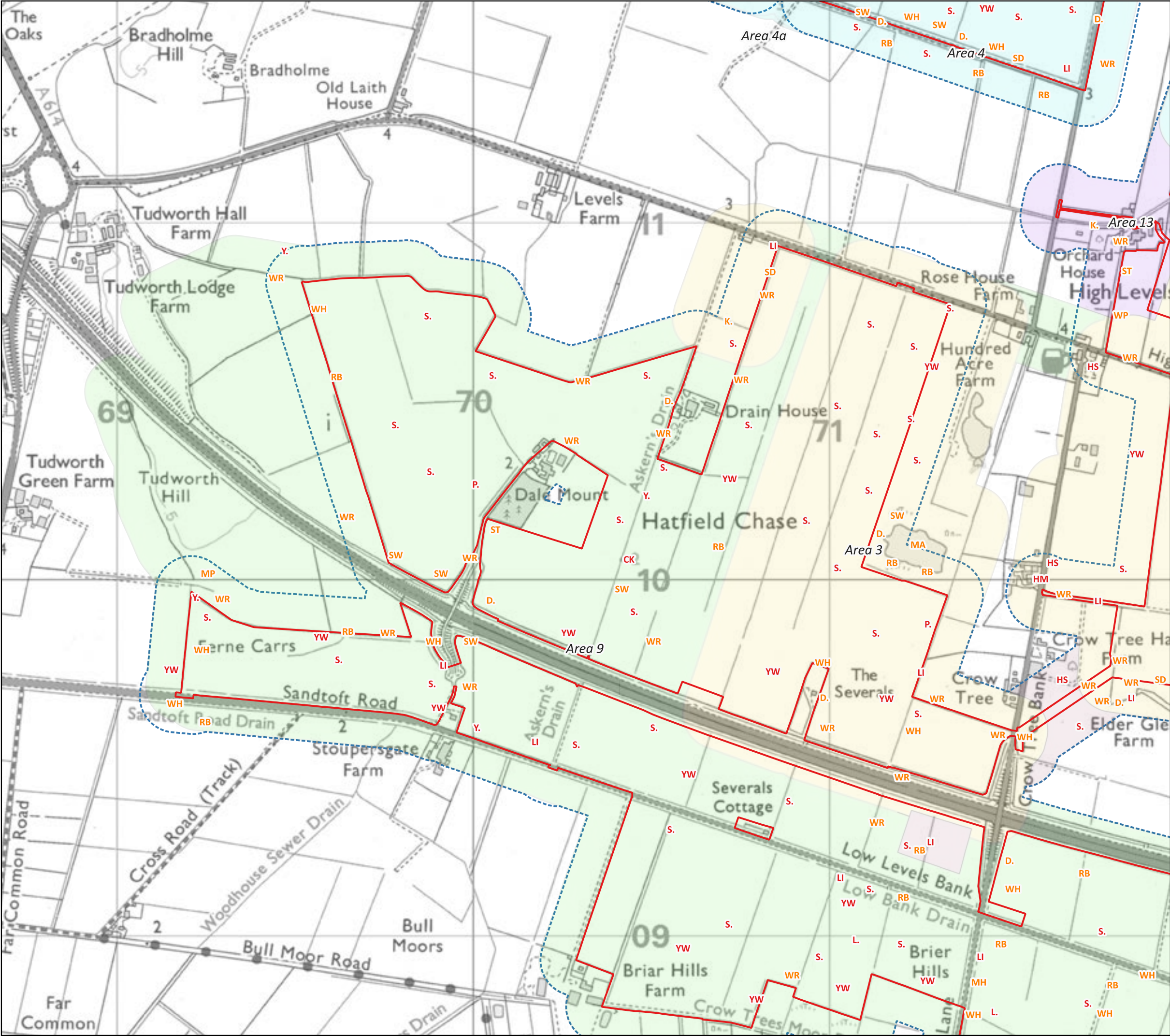


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**FIGURE 5. BREEDING BIRD SURVEY RESULTS – MAP 4**





- Order Limits

100m Buffer

2023 Survey areas

Area 1 & 1a

Area 2 & sa

Area 3

Area 4

Area 5

Area 6 & 6a

Area 7 & 7a

Area 8

Area 9

2025 Survey areas

Area 10

Area 11

Area 12

Area 13

Area 14

Area 15

Amber

D. - Dunnock

GJ - Greylag Goose

K. - Kestrel

LB - Lesser Black

MA - Mallard

MH - Moorhen

MP - Meadow Pipit

RB - Reed Bunting

RO - Rook

SD - Stock Dove

ST - Song Thrush

SW - Sedge Warbler

WH - Whitethroat

WP - Woodpigeon

WR - Wren

WW - Willow Warbler

Red

CB - Corn Bunting

CK - Cuckoo

GR - Greenfinch

HM - House Martin

HS - House Sparrow

L. - Lapwing

LI - Linnet

M. - Mistle Thrush

P. - Grey Partridge

S. - Skylark

TS - Tree Sparrow

Y. - Yellowhammer

YW - Yellow Wagtail

## TWEEN BRIDGE

### Breeding bird survey results - Map 4

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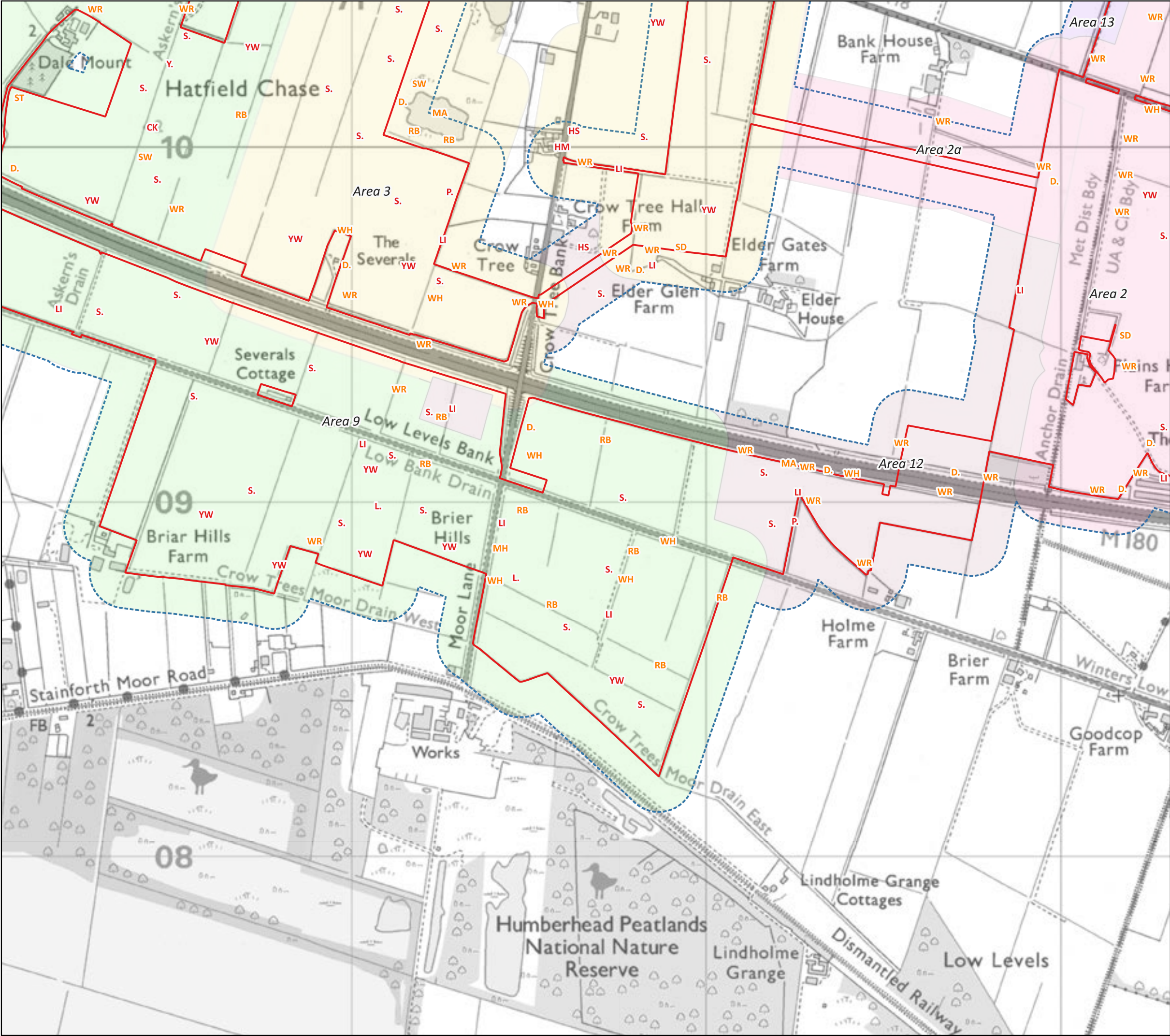
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**FIGURE 6. BREEDING BIRD SURVEY RESULTS – MAP 5**





- Order Limits
- 100m Buffer

2023 Survey areas

- Area 1 & 1a
- Area 2 & sa
- Area 3
- Area 4
- Area 5
- Area 6 & 6a
- Area 7 & 7a
- Area 8
- Area 9

2025 Survey areas

- Area 10
- Area 11
- Area 12
- Area 13
- Area 14
- Area 15

- Amber
- D. - Dunnock  
GJ - Greylag Goose  
K. - Kestrel  
LB - Lesser Black  
MA - Mallard  
MH - Moorhen  
MP - Meadow Pipit  
RB - Reed Bunting  
RO - Rook  
SD - Stock Dove  
ST - Song Thrush  
SW - Sedge Warbler  
WH - Whitethroat  
WP - Woodpigeon  
WR - Wren  
WW - Willow Warbler

- Red
- CB - Corn Bunting  
CK - Cuckoo  
GR - Greenfinch  
HM - House Martin  
HS - House Sparrow  
L. - Lapwing  
LI - Linnet  
M. - Mistle Thrush  
P. - Grey Partridge  
S. - Skylark  
TS - Tree Sparrow  
Y. - Yellowhammer  
YW - Yellow Wagtail

TWEEN BRIDGE

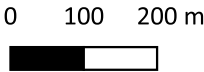
Breeding bird survey results - Map 5

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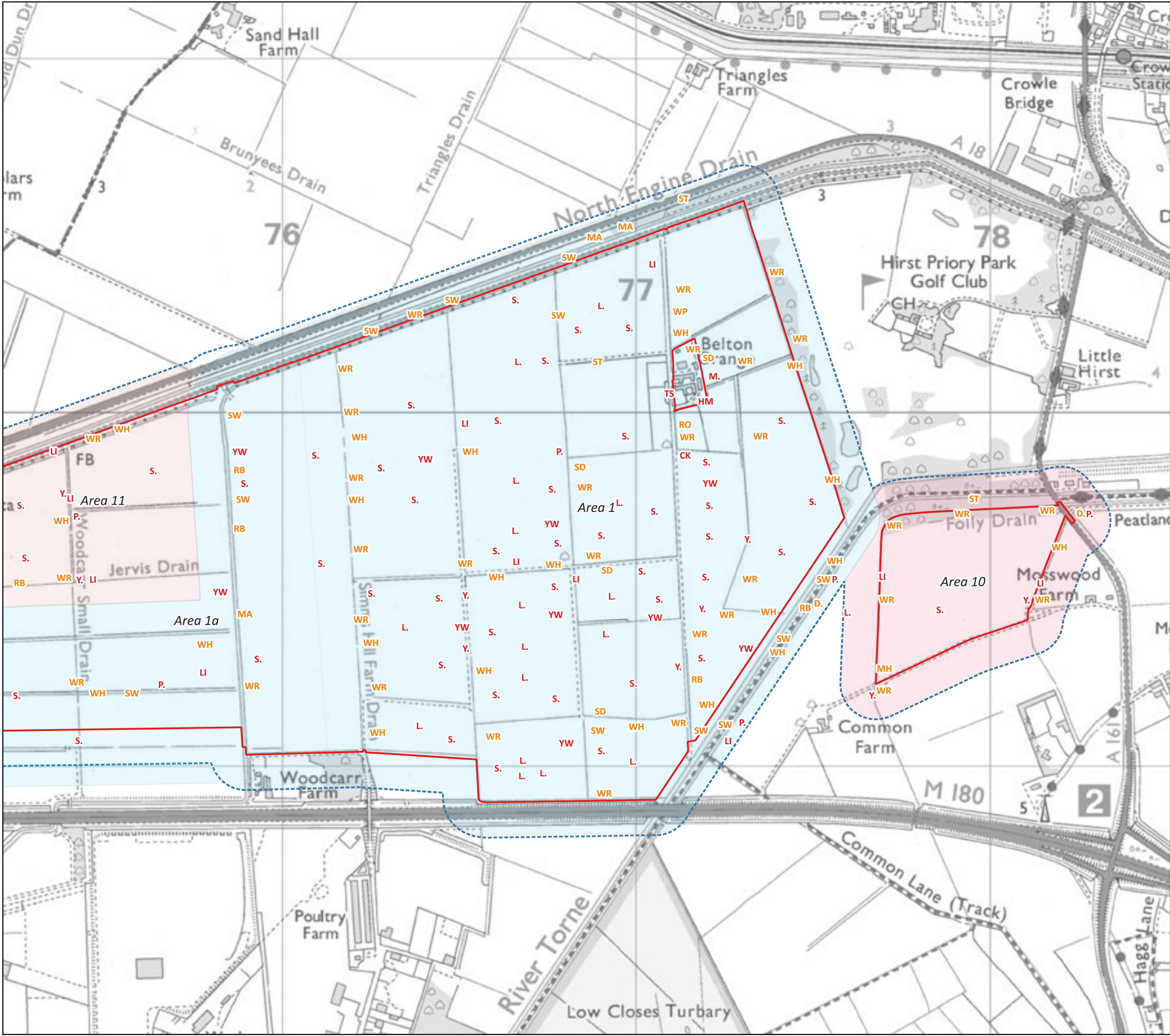
**FIGURE 7. BREEDING BIRD SURVEY RESULTS – MAP 6**





**FIGURE 8. BREEDING BIRD SURVEY RESULTS – MAP 7**





- Order Limits

100m Buffer

2023 Survey areas

Area 1 & 1a

Area 2 & sa

Area 3

Area 4

Area 5

Area 6 & 6a

Area 7 & 7a

Area 8

Area 9

2025 Survey areas

Area 10

Area 11

Area 12

Area 13

Area 14

Area 15

Amber

D. - Dunnock

GJ - Greylag Goose

K. - Kestrel

LB - Lesser Black

MA - Mallard

MH - Moorhen

MP - Meadow Pipit

RB - Reed Bunting

RO - Rook

SD - Stock Dove

ST - Song Thrush

SW - Sedge Warbler

WH - Whitethroat

WP - Woodpigeon

WR - Wren

WW - Willow Warbler

Red

CB - Corn Bunting

CK - Cuckoo

GR - Greenfinch

HM - House Martin

HS - House Sparrow

L. - Lapwing

LI - Linnet

M. - Mistle Thrush

P. - Grey Partridge

S. - Skylark

TS - Tree Sparrow

Y. - Yellowhammer

YW - Yellow Wagtail
- TWEEN BRIDGE

Breeding bird survey results - Map 7

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Date: 07/11/2025

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Units: Metres

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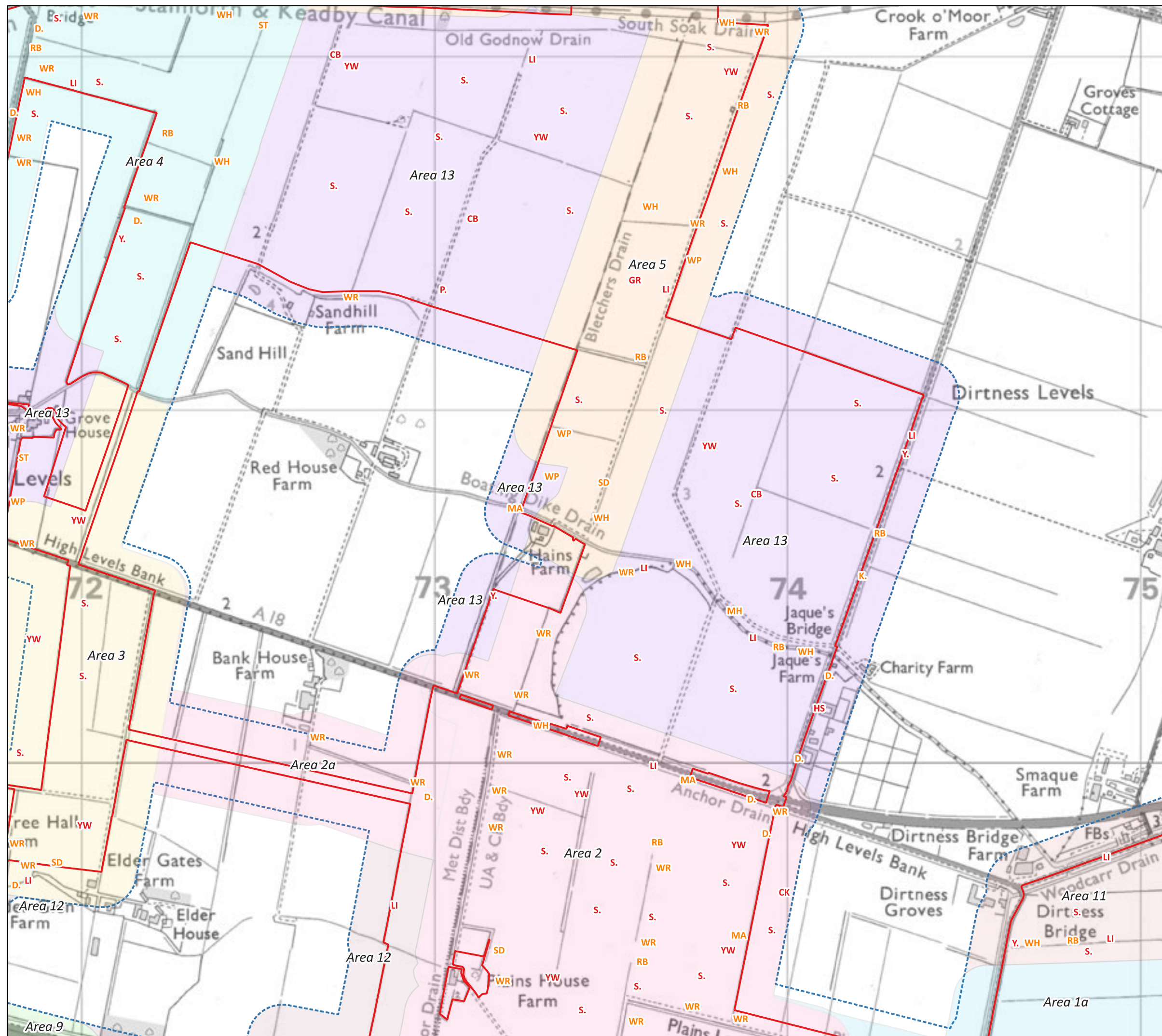
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

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







**FIGURE 9. BREEDING BIRD SURVEY RESULTS – MAP 8**











-  Order Limits  
 100m Buffer

**2023 Survey areas**

  -  Area 1 & 1a
  -  Area 2 & sa
  -  Area 3
  -  Area 4
  -  Area 5
  -  Area 6 & 6a
  -  Area 7 & 7a
  -  Area 8
  -  Area 9

**2025 Survey areas**

  -  Area 10
  -  Area 11
  -  Area 12
  -  Area 13
  -  Area 14
  -  Area 15

**Amber**

  - D. - Dunnock
  - GJ - Greylag Goose
  - K. - Kestrel
  - LB - Lesser Black
  - MA - Mallard
  - MH - Moorhen
  - MP - Meadow Pipit
  - RB - Reed Bunting
  - RO - Rook
  - SD - Stock Dove
  - ST - Song Thrush
  - SW - Sedge Warbler
  - WH - Whitethroat
  - WP - Woodpigeon
  - WR - Wren
  - WW - Willow Warbler

**Red**

  - CB - Corn Bunting
  - CK - Cuckoo
  - GR - Greenfinch
  - HM - House Martin
  - HS - House Sparrow
  - L. - Lapwing
  - LI - Linnet
  - M. - Mistle Thrush
  - P. - Grey Partridge
  - S. - Skylark
  - TS - Tree Sparrow
  - Y. - Yellowhammer
  - YW - Yellow Wagtail

## TWEEN BRIDGE

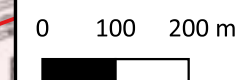
## Breeding bird survey results - Map 8

Version: 01

Date: 07/11/2025



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**FIGURE 10. BREEDING BIRD SURVEY RESULTS – MAP 9**





## ANNEX 1 BIRD SPECIES SUMMARY

**Table A1** provides a list of bird species recorded during the breeding bird surveys. Both common and species names are presented along with a summary of each species conservation status using the following abbreviations:

- Ann1 – European Birds Directive Annex I species;
- Sch1.1/1.1A/A1/1.2 – Schedule 1 part 1, 1 part 1A, A1 or 1 part 2 of the Wildlife and Countryside Act 1981 (as amended);
- BoCC – Birds of Conservation Concern as listed by leading bird conservation organisations in the UK, including the RSPB and BTO. Red and Amber categories are given (Stanbury *et al.*, 2021; Stanbury *et al.* 2024);
- Sec41 – species listed as rare and most threatened on the NERC Act (2006) (Species of principle importance for conserving biodiversity in England); and,
- LBAP – species listed under the Lincolnshire or Doncaster Local Biodiversity Action Plans.

**Table A1: Summary of bird species.**

Common name	Species name	Conservation status
Canada goose	<i>Branta canadensis</i>	-
Greylag goose	<i>Anser anser</i>	Amber
Pink-footed goose	<i>Anser brachyrhynchus</i>	Amber
Mute swan	<i>Cygnus olor</i>	Green
Whooper swan	<i>Cygnus cygnus</i>	Amber; Sch1.1; Ann1
Shelduck	<i>Tadorna tadorna</i>	Amber
Gadwall	<i>Mareca strepera</i>	Amber
Mallard	<i>Anas platyrhynchos</i>	Amber
Teal	<i>Anas crecca</i>	Amber
Tufted duck	<i>Aythya fuligula</i>	Green
Grey partridge	<i>Perdix perdix</i>	Red; Sec41; LBAP
Pheasant	<i>Phasianus colchicus</i>	-
Red-legged partridge	<i>Alectoris rufa</i>	-
Nightjar	<i>Caprimulgus europaeus</i>	Amber; Sec41; Ann1
Swift	<i>Apus apus</i>	Red
Cuckoo	<i>Cuculus canorus</i>	Red; Sec41; LBAP
Stock dove	<i>Columba oenas</i>	Amber
Woodpigeon	<i>Columba palumbus</i>	Amber
Turtle dove	<i>Streptopelia turtur</i>	Red; Sec41; LBAP
Collared dove	<i>Streptopelia decaocto</i>	Green
Moorhen	<i>Gallinula chloropus</i>	Amber
Coot	<i>Fulica atra</i>	Green
Crane	<i>Grus grus</i>	Amber; Ann1
Little grebe	<i>Tachybaptus ruficollis</i>	Green
Great crested grebe	<i>Podiceps cristatus</i>	Green
Oystercatcher	<i>Haematopus ostralegus</i>	Amber
Avocet	<i>Recurvirostra avosetta</i>	Amber; Sch1.1; Ann1
Lapwing	<i>Vanellus vanellus</i>	Red; Sec41; LBAP



Common name	Species name	Conservation status
Curlew	<i>Numenius arquata</i>	Red; Sec41; LBAP
Woodcock	<i>Scolopax rusticola</i>	Red
Snipe	<i>Gallinago gallinago</i>	Amber; LBAP
Green sandpiper	<i>Tringa ochropus</i>	Amber; Sch1.1
Black-headed gull	<i>Chroicocephalus ridibundus</i>	Amber
Lesser black-backed gull	<i>Larus fuscus</i>	Amber
Little tern	<i>Sternula albifrons</i>	Amber; Sch1.1; Ann1
Common tern	<i>Sterna hirundo</i>	Amber; Ann1
Arctic skua	<i>Stercorarius parasiticus</i>	Red; LBAP
Cormorant	<i>Phalacrocorax carbo</i>	Green
Bittern	<i>Botaurus stellaris</i>	Amber; Sch1.1; Sec41; Ann1; LBAP
Grey heron	<i>Ardea cinerea</i>	Green
Little egret	<i>Egretta garzetta</i>	Green; Ann1
Sparrowhawk	<i>Accipiter nisus</i>	Amber
Marsh harrier	<i>Circus aeruginosus</i>	Amber; Sch1.1; Ann1
Red kite	<i>Milvus milvus</i>	Green; Sch1.1 & 1A; Ann1
Buzzard	<i>Buteo buteo</i>	Green
Barn owl	<i>Tyto alba</i>	Green; Sch1.1; LBAP
Tawny owl	<i>Strix aluco</i>	Amber
Kingfisher	<i>Alcedo atthis</i>	Green; Sch1.1; Ann1
Great spotted woodpecker	<i>Dendrocopos major</i>	Green
Green woodpecker	<i>Picus viridis</i>	Green; LBAP
Kestrel	<i>Falco tinnunculus</i>	Amber
Hobby	<i>Falco subbuteo</i>	Green; Sch1.1
Peregrine	<i>Falco peregrinus</i>	Green; Sch1.1; Ann1
Jay	<i>Garrulus glandarius</i>	Green
Magpie	<i>Pica pica</i>	Green
Jackdaw	<i>Coloeus monedula</i>	Green
Rook	<i>Corvus frugilegus</i>	Amber
Carrion crow	<i>Corvus corone</i>	Green
Raven	<i>Corvus corax</i>	Green
Coal tit	<i>Parus ater</i>	Green
Blue tit	<i>Cyanistes caeruleus</i>	Green
Great tit	<i>Parus major</i>	Green
Woodlark	<i>Lullula arborea</i>	Green; Sch1.1; Sec41; Ann1; LBAP
Skylark	<i>Alauda arvensis</i>	Red; Sec41; LBAP
Sand martin	<i>Riparia riparia</i>	Green
Swallow	<i>Hirundo rustica</i>	Green
House martin	<i>Delichon urbicum</i>	Red
Cetti's warbler	<i>Cettia cetti</i>	Green; Sch1.1
Long-tailed tit	<i>Aegithalos caudatus</i>	Green
Willow warbler	<i>Phylloscopus trochilus</i>	Amber
Chiffchaff	<i>Phylloscopus collybita</i>	Green

Common name	Species name	Conservation status
Sedge warbler	<i>Acrocephalus schoenobaenus</i>	Amber
Reed warbler	<i>Acrocephalus scirpaceus</i>	Green
Grasshopper warbler	<i>Locustella naevia</i>	Red; Sec41
Blackcap	<i>Sylvia atricapilla</i>	Green
Garden warbler	<i>Sylvia borin</i>	Green
Lesser whitethroat	<i>Curruca curruca</i>	Green
Whitethroat	<i>Curruca communis</i>	Amber
Goldcrest	<i>Regulus regulus</i>	Green
Wren	<i>Troglodytes troglodytes</i>	Amber
Treecreeper	<i>Certhia familiaris</i>	Green
Starling	<i>Sturnus vulgaris</i>	Red; Sec41; LBAP
Song thrush	<i>Turdus philomelos</i>	Amber; Sec41; LBAP
Mistle thrush	<i>Turdus viscivorus</i>	Red
Redwing	<i>Turdus iliacus</i>	Amber; Sch1.1
Blackbird	<i>Turdus merula</i>	Green
Fieldfare	<i>Turdus pilaris</i>	Red; Sch1.1
Ring ouzel	<i>Turdus torquatus</i>	Red; Sec41
Robin	<i>Erithacus rubecula</i>	Green
Nightingale	<i>Luscinia megarhynchos</i>	Red; LBAP
Whinchat	<i>Saxicola rubetra</i>	Red
Stonechat	<i>Saxicola rubicola</i>	Green
Wheatear	<i>Oenanthe oenanthe</i>	Amber
Tree sparrow	<i>Passer montanus</i>	Red; Sec41; LBAP
House sparrow	<i>Passer domesticus</i>	Red; Sec41; LBAP
Dunnock	<i>Prunella modularis</i>	Amber; Sec41; LBAP
Yellow wagtail	<i>Motacilla flava</i>	Red; Sec41; LBAP
Grey wagtail	<i>Motacilla cinerea</i>	Amber
Pied wagtail	<i>Motacilla alba yarellii</i>	Green
Meadow pipit	<i>Anthus pratensis</i>	Amber
Tree pipit	<i>Anthus trivialis</i>	Red; Sec41
Chaffinch	<i>Fringilla coelebs</i>	Green
Bullfinch	<i>Pyrrhula pyrrhula</i>	Amber; Sec41; LBAP
Greenfinch	<i>Chloris chloris</i>	Red
Linnet	<i>Linaria cannabina</i>	Red; Sec41; LBAP
Redpoll	<i>Acanthis cabaret</i>	Red; Sec41
Crossbill	<i>Loxia curvirostra</i>	Green; Sch1.1
Goldfinch	<i>Carduelis carduelis</i>	Green
Corn bunting	<i>Emberiza calandra</i>	Red; Sec41; LBAP
Yellowhammer	<i>Emberiza citrinella</i>	Red; Sec41; LBAP
Reed bunting	<i>Emberiza schoeniclus</i>	Amber; Sec41; LBAP

## ANNEX 2: BREEDING BIRD SURVEY EFFORT-2022 AND 2023

Wind Speed (Beaufort)		Wind Direction	Rain		Cloud Cover		Cloud Height	
Calm	0	Use 16 point Compass	None	0	In eighths e.g.	3/8	<150m	0
Light air	1		Light Showers	1			150-500m	1
Light breeze	2	N	Heavy Showers	2			>500m	2
Gentle breeze	3	NE	Light rain	3				
Mod. breeze	4	ENE	Heavy rain	4				
Fresh breeze	5	E						
Strong breeze	6	Etc	Visibility		Snow		Frost	
Mod. gale	7		Poor	0	None	0	None	0
Fresh gale	8		< 1km	1	On site	1	Ground	1
Strong gale	9		>1km	2	High ground	2	All day	2

Visit	Area	Date	Start Time (24 hrs)	End time (24 hrs)	Sunrise (24 hrs)	Wind Speed	Wind Direction	Rain	Cloud Height	Cloud Cover	Visibility	Frost	Snow
2022													
1	1	28/04/2022	06:00	08:30	05:36	1	NE	0	2	8/8	2	0	0
1	2	10/05/2022	06:30	10:30	05:12	2	S	0	2	8/8	2	0	0
1	3	29/04/2022	08:30	11:00	05:34	1	NE	0	2	5/8	2	0	0
1	4	29/04/2022	06:00	08:30	05:34	1	NE	0	2	7/8	2	0	0
1	5	27/04/2022	07:30	11:00	05:38	1-2	N	0	2	8/8	2	0	0
1	6	28/04/2022	08:40	11:00	05:36	1	NE	0	2	8/8	2	0	0
1	7	27/04/2022	07:30	11:00	05:38	1-2	N	0	2	8/8	2	0	0
1	8	26/04/2022	07:30	10:45	05:40	1	N	0	2	8/8	2	0	0
2	1	18/05/2022	05:25	10:30	04:59	1	SW	0	2	0/8	2	0	0
2	2	26/05/2022	05:10	10:10	04:48	1	SW	0	2	7/8	2	0	0
2	3	30/05/2022	05:00	10:00	04:44	1	SW	0	2	8/8	2	0	0
2	4	30/05/2022	05:00	10:00	04:44	1	SW	0-1	2	8/8	2	0	0
2	5	17/05/2022	05:15	10:30	05:00	2	SW	0	2	2/8	2	0	0
2	6	18/05/2022	05:15	10:30	04:59	1	SW	0	2	0/8	2	0	0
2	7	17/05/2022	05:15	10:30	05:00	2	SW	0	2	2/8	2	0	0
2	8	17/05/2022	05:15	10:30	05:00	1	SW	0	2	1/8	2	0	0
3	1	07/07/2022	05:00	09:30	04:45	1-2	SW	0	2	5/8	2	0	0
3	2	16/06/2022	05:00	10:00	04:34	1	WNW	0	2	1/8	2	0	0
3	3	16/06/2022	05:00	10:00	04:34	1	W	0	2	0/8	2	0	0
3	4	05/07/2022	05:00	09:00	04:43	2	WNW	0	2	7/8	2	0	0
3	5	07/06/2022	05:00	10:30	04:37	1	NW	0	2	6/8	2	0	0
3	6	07/07/2022	05:00	09:30	04:45	1-2	SW	0	2	6/8	2	0	0
3	7	07/06/2022	05:00	10:30	04:37	1	NW	0	2	8/8	2	0	0
3	8	07/06/2022	05:00	10:30	04:37	1	NW	0	2	1/8	2	0	0
2023													



1	1a	27/04/2023	06:00	11:00	05:37	2	SE	0	2	2/8	2	0	0
1	2a	27/04/2023	06:00	11:00	05:37	2	SE	0	2	2/8	2	0	0
1	4a	05/05/2023	06:00	11:00	05:21	3	SW	0	2	5/8	2	0	0
1	6a	27/04/2023	06:00	11:00	05:37	2	SE	0	2	2/8	2	0	0
1	7a	05/05/2023	06:00	11:00	05:21	3	SW	0	2	5/8	2	0	0
1	9	22/04/2023	06:30	11:00	05:48	1	SW	1	1	8/8	1	0	0
2	1a	19/05/2023	06:00	11:00	04:57	0	NA	0	2	8/8	2	0	0
2	2a	23/05/2023	06:30	11:00	04:51	1	NE	0	2	0/8	2	0	0
2	4a	19/05/2023	06:00	11:00	04:57	0	NA	0	2	0/8	2	0	0
2	6a	21/05/2023	06:00	11:00	04:54	1	NE	0	2	0/8	2	0	0
2	7a	19/05/2023	06:00	11:00	04:57	0	NA	0	2	0/8	2	0	0
2	9	19/05/2023	06:30	11:00	04:57	0	NE	1	1	8/8	1	0	0
		21/05/2023	06:30	11:00	04:54	1	NE	0	1	0/8	1	0	0
		23/05/2023	06:30	11:00	04:51	1	NE	0	1	0/8	1	0	0
3	1a	17/06/2023	06:00	11:00	04:33	1	E	0	2	0/8	2	0	0
3	2a	14/06/2023	06:30	11:00	04:33	3	NE	0	2	0/8	2	0	0
3	4a	14/06/2023	06:00	11:00	04:33	3	NE	0	2	0/8	2	0	0
3	6a	16/06/2023	06:00	11:00	04:33	1	E	0	2	0/8	2	0	0
		17/06/2023	06:00	11:00	04:33	1	E	0	2	0/8	2	0	0
3	7a	14/06/2023	06:00	11:00	04:33	3	NE	0	2	0/8	2	0	0
3	9	16/06/2023	06:30	10:45	04:33	1	E	0	1	1/8	1	0	0
		17/06/2023	06:00	11:00	04:33	1	E	0	1	0/8	1	0	0

### ANNEX 3: BREEDING BIRD SURVEY EFFORT - 2025

Visit	Area	Date	Start Time (24 hrs)	End time (24 hrs)	Sunrise/Sunset (24 hrs)	Wind Speed	Wind Direction	Rain	Cloud Height	Cloud Cover	Visibility	Frost	Snow
1	10	31/03/2025	05:00 – 05:30	11:00	06:38	0	NA	0	NA	0/8	2	0	0
1	11	25/03/2025	05:00 – 05:30	11:00	05:53	3	SW	0	2	8/8	2	0	0
1	12	26/03/2025	05:00 – 05:30	11:00	05:51	0	NA	0	2	3/8	1-2	0	0
1	13	27/03/2025	05:00 – 05:30	11:00	05:48	1	S	0	2	2/8	2	0	0
1	14	28/03/2025	05:00 – 05:30	11:00	05:46	3	W	0	2	4/8	2	0	0
1	15	28/03/2025	05:00 – 05:30	11:00	05:46	3	W	0	2	4/8	2	0	0
2	10	16/04/2025	05:00 – 05:30	11:00	06:01	3	SE	0	2	2/8	2	0	0
		17/04/2025	05:00 – 05:30	11:00	05:58	1	SW	0	2	1/8	2	0	0
2	11	17/04/2025	05:00 – 05:30	11:00	05:58	1	SW	0	2	1/8	2	0	0
2	12	21/04/2025	05:00 – 05:30	11:00	05:49	1	E	0	NA	0/8	1-2	0	0
2	13	21/04/2025	05:00 – 05:30	11:00	05:49	1	E	0	NA	0/8	2	0	0
2	14	22/04/2025	05:00 – 05:30	11:00	05:47	1	SW	0	2	1/8	2	0	0
2	15	22/04/2025	05:00 – 05:30	11:00	05:47	1	SW	0	2	1/8	2	0	0
3	10	06/05/2025	05:10	11:50	05:18	2	NE	0	2	4/8	2	0	0
3	11	07/05/2025	05:40	11:10	05:16	1	NE	0	2	4/8	2	0	0
3	12	07/05/2025	05:40	11:10	05:16	1	NE	0	2	4/8	2	0	0
3	13	07/05/2025	05:40	11:10	05:16	1	NE	0	2	4/8	2	0	0
		08/05/2025	05:30	11:00	05:14	3	NE	0	2	8/8	2	0	0

3	14	08/05/2025	05:00	11:00	05:14	3	NE	0	2	8/8	2	0	0
3	15	08/05/2025	05:30	11:00	05:14	3	NE	0	2	8/8	2	0	0
4	10	27/05/2025	18:00	23:00	21:16	2	W	1	2	8/8	2	0	0
		28/05/2025	18:00	23:00	21:18	4	SW	0	2	4/8	2	0	0
4	11	29/05/2025	18:00	23:00	21:19	6	SW	0	2	8/8	2	0	0
4	12	29/05/2025	18:00	23:00	21:19	6	SW	0	2	8/8	2	0	0
		30/05/2025	18:00	23:00	21:20	4	SW	0	2	4/8	2	0	0
4	13	30/05/2025	18:00	23:00	21:20	4	SW	0	2	4/8	2	0	0
4	14	28/05/2025	18:00	23:00	21:18	4	SW	0	2	4/8	2	0	0
4	15	28/05/2025	18:00	23:00	21:18	4	SW	0	2	4/8	2	0	0
5	10	04/06/2025	05:00	11:00	04:38	2	NW	2	2	8/8	2	0	0
		05/06/2025	05:00	11:30	04:37	1	SW	0-1	2	8/8	2	0	0
5	11	06/06/2025	05:15	11:00	04:36	1	SW	1	2	8/8	2	0	0
5	12	06/06/2025	05:15	11:00	04:36	1	SW	1	2	8/8	2	0	0
5	13	13/06/2025	05:30	11:00	04:33	3	S	0	NA	0/8	2	0	0
5	14	13/06/2025	05:30	11:00	04:33	3	S	0	NA	0/8	2	0	0
5	15	13/06/2025	05:30	11:00	04:33	3	S	0	NA	0/8	2	0	0
6	10	20/07/2025	05:00	11:15	04:33	2	S	0	2	4/8	2	0	0
6	11	08/07/2025	05:15	11:00	04:35	3	NW	0	NA	0/8	2	0	0
6	12	08/07/2025	05:15	11:00	04:35	3	NW	0	NA	0/8	2	0	0
6	13	10/07/2025	05:30	11:00	04:34	4	W	0	NA	0/8	2	0	0
6	14	10/07/2025	05:30	11:00	04:34	4	W	0	NA	0/8	2	0	0
6	15	10/07/2025	05:30	11:00	04:34	4	W	0	NA	0/8	2	0	0

## ANNEX 4: WIDER SURVEY AREA ESTIMATED TERRITORIES

Species	Wider Survey Area Estimated Territories (2022/23)	Wider Survey Area Estimated Territories (2025)	Total Combined Wider Survey Area Estimated Territories (2022/23 and 2025)
Mallard	5	0	5
Grey partridge	2	3	5
Cuckoo	3	0	3
Stock dove	1	0	1
Woodpigeon	12	0	12
Lapwing	0	1	1
Lesser black-backed gull	1	0	1
Kestrel	1	1	2
Skylark	24	1	25
House martin	2	0	2
Willow warbler	13	0	13
Sedge warbler	11	3	14
Whitethroat	14	4	18
Wren	57	8	65
Song thrush	4	1	5
Tree sparrow	1	0	1
House sparrow	4	1	5
Dunnock	8	3	11
Yellow wagtail	6	0	6
Meadow pipit	2	0	2
Greenfinch	1	0	1
Linnet	7	4	11
Yellowhammer	8	2	10
Reed bunting	13	2	15