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# Southlands Solar Farm

on behalf of Enso Green Holdings J Limited

Winter Bird Survey Report 2022-2023



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# 1 INTRODUCTION

## 1.1 Project Background

- 1.1.1 Avian Ecology Ltd. (AEL) was commissioned by Enso Green Holdings J Limited, to undertake a wintering bird survey in relation to the proposed installation of a solar farm (the 'Proposed Development') on land south of Runwell Road (A132), Runwell, Wickford (the 'Site').
- 1.1.2 This report presents the detailed field survey methodologies and results of a wintering bird survey undertaken between October 2022 and March 2023, which have been used to inform an assessment of potential effects upon ornithological interests in relation to the construction and operation of the Proposed Development. This report therefore only targeted non-breeding species, with details of breeding species that were identified summer surveys detailed separately in Appendix 1 of the Southlands Solar Farm Ecological Assessment Report<sup>1</sup>.
- 1.1.3 The survey area and Site boundary are shown in **Figure 1**.
- 1.1.4 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 the surveys; both common and scientific species names together with a summary of their conservation status as relevant is provided.

## 1.2 Site Overview

- 1.2.1 The Site (as shown on **Figure 1**) is situated on land south of Runwell Road (A132) and, approximately 375m north-east of Runwell. The Site consists of a mix of arable and pastoral grassland fields bounded by hedgerows. A wet ditch bisects the Site and the River Crouch is located to the south.
- 1.2.2 The wider landscape consists of agricultural land, built up urban areas and small pockets of woodland.
- 1.2.3 In review of the MAGIC<sup>2</sup> website and with reference to **Figure 2** the Site is located within 10km of the following statutory designated sites within the UK National Site Network (European and national sites), with non-breeding (wintering) ornithological qualifying features:
- Crouch and Roach Estuaries Site of Special Scientific Interest (SSSI);
  - Crouch & Roach Estuaries (Mid-Essex Coast Phase 3) Special Protection Area (SPA);
  - Crouch & Roach Estuaries (Mid-Essex Coast Phase 3) Ramsar site;
  - Hanningfield Reservoir SSSI;
  - Benfleet and Southend Marshes SPA;
  - Benfleet and Southend Marshes Ramsar site; and,
  - Outer Thames Estuary SPA.
- 1.2.4 A summary of the above sites qualifying features is presented in **Table 1.1**. As well as species listed as non-breeding (wintering), **Table 1.1** includes qualifying species that are recorded with a peak count in

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<sup>1</sup> Avian Ecology Ltd (2022) *Southlands Solar Farm Ecological Assessment Report*

<sup>2</sup> Multi-Agency Geographic Information for the Countryside (MAGIC), available at: <https://magic.defra.gov.uk/>.

Spring/Autumn (migration) as the presence of such species at surrounding designated sites overlaps with the survey period.

**Table 1.1: Designated sites with non-breeding qualifying interests**

Designation	Distance from Site	Qualifying Features
Crouch and Roach Estuaries SSSI	1.51km east	<p>The site is important for supporting the following non-breeding and migrating bird species:</p> <ul style="list-style-type: none"> <li>• Dark-bellied brent goose (non-breeding);</li> <li>• Black-tailed godwit (non-breeding);</li> <li>• Common shelduck (non-breeding);</li> <li>• Northern shoveler (non-breeding);</li> <li>• Redshank (non-breeding);</li> <li>• Dunlin (non-breeding);</li> <li>• Lapwing (non-breeding);</li> <li>• European golden plover (non-breeding);</li> <li>• Common greenshank (migration);</li> <li>• Common sandpiper (migration);</li> <li>• Spotted redshank (migration);</li> <li>• Little stint (migration)</li> <li>• Curlew sandpiper (migration);</li> <li>• Ruff (migration);</li> <li>• Grey heron (regular usage);</li> <li>• Green sandpiper (non-breeding);</li> <li>• Short-eared owl (regular usage);</li> <li>• Hen harrier (regular usage);</li> <li>• Merlin (regular usage);</li> <li>• Jack snipe (non-breeding);</li> <li>• Water pipit (regular usage); and,</li> <li>• Barn owl (regular usage).</li> </ul>
Crouch & Roach Estuaries (Mid-Essex Coast Phase 3) SPA	1.51km east	<p>The site is designated for the following non-breeding qualifying features:</p> <ul style="list-style-type: none"> <li>• Dark-bellied brent goose (non-breeding); and,</li> <li>• Waterbird assemblage (non-breeding)<sup>3</sup>.</li> </ul>
Crouch & Roach Estuaries (Mid-Essex Coast Phase 3) Ramsar site	1.51km east	<p>The site is designated under Ramsar criterion 2, 5 and 6. Qualifying non-breeding ornithological species listed as part of the Ramsar site Criteria 5 include:</p> <ul style="list-style-type: none"> <li>• Waterbird assemblage (non-breeding)<sup>4</sup>.</li> </ul> <p>Qualifying non-breeding ornithological species listed as part of the Ramsar site Criteria 6 include:</p> <ul style="list-style-type: none"> <li>• Dark-bellied brent goose (non-breeding).</li> </ul> <p>The following species are also listed as noteworthy fauna, present in numbers of national importance:</p> <ul style="list-style-type: none"> <li>• Little egret (migration);</li> <li>• Ruff (migration);</li> </ul>

<sup>3</sup> The area is regularly used by 27,021 individual waterbirds over winter (5 year peak mean 1990/91 – 1994/95). In the absence of detailed information on qualifying assemblage species, and for the purposes of this report, these are identified in review of the Wetland Bird Survey (WEBS) Core Counts (Austin et al., 2023) and include the following estuarine species recorded at the Crouch-Roach Estuary, recorded in nationally important numbers over the most recent 5-year period: dunlin, wigeon, dark-bellied brent goose, knot, grey plover, bar-tailed godwit, shelduck, redshank, black-tailed godwit, avocet, shoveler, white-fronted goose and greenshank.

Austin, G.E., Calbrade, N.A., Birtles, G.A., Peck, K., Shaw, J.M. Wotton, S.R., Balmer, D.E. and Frost, T.M. (2023) Waterbirds in the UK 2021/22: The Wetland Bird Survey and Goose & Swan Monitoring Programme. BTO/RSPB/JNCC/NatureScot. Thetford.

<sup>4</sup> The area is regularly used by 16970 waterfowl (5 year peak mean 1998/99-2002/2003).

		<ul style="list-style-type: none"> <li>Whimbrel (migration);</li> <li>Spotted redshank (migration);</li> <li>Common greenshank (migration);</li> <li>Hen harrier (non-breeding); and,</li> <li>Black-tailed godwit (non-breeding).</li> </ul>
Hanningfield Reservoir SSSI	3.41km north-west	<p>The site is designated for the following bird species:</p> <ul style="list-style-type: none"> <li>Gadwall (non-breeding);</li> <li>Pochard (non-breeding)</li> <li>Shoveler (non-breeding);</li> <li>Teal (non-breeding);</li> <li>Tufted duck (non-breeding);</li> <li>Shelduck (non-breeding); and,</li> <li>Pintail (non-breeding).</li> </ul>
Benfleet and Southend Marshes SSSI	8.04km south	<p>The site is important for supporting the following non-breeding bird species:</p> <ul style="list-style-type: none"> <li>Dark-bellied brent goose (non-breeding);</li> <li>Grey plover (non-breeding);</li> <li>Knot (non-breeding);</li> <li>Dunlin (non-breeding);</li> <li>Redshank (non-breeding);</li> <li>Ringed plover (non-breeding);</li> <li>Bar-tailed godwit (non-breeding); and</li> <li>Oystercatcher (non-breeding).</li> </ul>
Benfleet and Southend Marshes SPA	8.61km south	<p>The site is designated for the following non-breeding qualifying features:</p> <ul style="list-style-type: none"> <li>Dark-bellied brent goose (non-breeding);</li> <li>Ringed plover (non-breeding);</li> <li>Grey plover (non-breeding);</li> <li>Red knot (non-breeding);</li> <li>Dunlin (non-breeding); and,</li> <li>Waterbird assemblage<sup>5</sup>.</li> </ul>
Benfleet and Southend Marshes Ramsar site	8.61km south	<p>The site is designated under Ramsar criterion 5 and 6. Qualifying non-breeding ornithological species listed as part of the Ramsar site Criteria 5 include:</p> <ul style="list-style-type: none"> <li>Waterbird assemblage<sup>6</sup>.</li> </ul> <p>Qualifying non-breeding ornithological species listed as part of the Ramsar site Criteria 6 include:</p> <ul style="list-style-type: none"> <li>Dark-bellied brent goose (migration);</li> <li>Grey plover (non-breeding); and,</li> <li>Red knot (non-breeding).</li> </ul> <p>With the following species identified subsequent to designation for possible future consideration:</p> <ul style="list-style-type: none"> <li>Dunlin (non-breeding).</li> </ul> <p>The following species are also listed as noteworthy fauna, present in numbers of national importance:</p> <ul style="list-style-type: none"> <li>Ringed plover (non-breeding);</li> <li>Greenshank (migration) and,</li> <li>Little egret (migration).</li> </ul>
Outer Thames Estuary SPA	9.00km east	<p>The site is designated for the following non-breeding qualifying features:</p> <ul style="list-style-type: none"> <li>Red-throated diver (non-breeding).</li> </ul>

<sup>5</sup> The area is regularly used by 30,400 individual waterbirds over winter, comprising 22,800 waders and 7,600 wildfowl (5 year peak mean 1985/86 – 1989/90).

<sup>6</sup> The area is regularly used by 32867 waterfowl (5 year peak mean 1998/99-2002/2003).

1.2.5 A search area of 10km from the Site has been used to identify the designated sites, however, several additional designated sites with non-breeding (wintering) ornithological qualifying features are present beyond a 10km buffer. These sites hold a similar suite of waterfowl and wader species as those sites listed in **Table 1.1** and the Site is considered to be located beyond the core foraging ranges of the additional non-breeding species within such sites.

## 2 METHODOLOGY

2.1.1 Wintering bird surveys comprised twelve staggered walk-over survey visits, undertaken between October 2022 and March 2023.

2.1.2 As shown in **Figure 1**, the wintering bird survey area included the Site (excluding the proposed grid connection corridor) and a 600m buffer. The ‘Site’ includes fields 1 to 8, whilst the ‘Wider Survey Area’ encompasses fields 1 and 9 to 105. Field 1 is divided between the Site and Wider Survey Area.

2.1.3 Those bird species regarded as ‘Target Species’ during survey visits included wetland bird species, principally waders, waterfowl and gulls, and Annex 1<sup>7</sup>/Schedule 1<sup>8</sup> raptors. Secondary Species recorded during survey visits included non-Annex 1/Schedule 1 raptors and owls, Schedule 1 passerine species, notable flocks of non-wetland Birds of Conservation Concern (BoCC Amber and Red List Species as per Stanbury *et al.* (2021)<sup>9</sup>), Natural Environment and Rural Communities (NERC) Act (2006) Section 41 species<sup>10</sup> and Essex LBAP species<sup>11</sup>.

2.1.4 The methodology employed during each survey visit comprised a ‘walk-over’ survey adopting the ‘look-see’ methodology described in Gilbert *et al.* (1998)<sup>12</sup>, where surveyors observed each field within the Survey Area, walking the boundaries and stopping at intervals and scanning the fields for Target Species, with binoculars.

2.1.5 All Target Species heard or seen were recorded onto field plans. The number of Secondary Species was tallied during the survey, although no attempt to map these species was made.

2.1.6 All surveys were undertaken during daylight hours in weather conditions conducive to bird surveys.

2.1.7 Survey visits were undertaken by J. Hanlon BSc, a suitably qualified and experienced ornithologist.

2.1.8 Survey effort is summarised in **Table 2.1**, with detailed survey effort presented in **Annex 2**.

**Table 2.1: Wintering bird survey effort (2022/2023).**

Survey Visit	Date	Surveyor	Start time (24hrs)	End time (24hrs)
1	21/10/2022	J. Hanlon	08:10	11:40
2	30/10/2022	J. Hanlon	14:00	16:45

<sup>7</sup> [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 17th March 2023)

<sup>8</sup> Species listed under Schedule 1 of the Wildlife & Countryside Act, 1981 (as amended) and being given increased levels of legal protection from disturbance during the breeding season. Species listed here: <https://www.rspb.org.uk/birds-and-wildlife/advice/wildlife-and-the-law/wildlife-and-countryside-act/schedules/> (accessed 17th March 2023)

<sup>9</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 17th March 2023)

<sup>10</sup> <https://www.gov.uk/government/publications/habitats-and-species-of-principal-importance-in-england> (accessed 17th March 2023)

<sup>11</sup> <https://www.braintree.gov.uk/downloads/file/2436/e47-the-essex-biodiversity-action-plan-1999> (accessed 17th March 2023)

<sup>12</sup> Gilbert G, Gibbons D.W. and Evans J. (1998) *Bird Monitoring Methods*. RSPB Sandy.

Survey Visit	Date	Surveyor	Start time (24hrs)	End time (24hrs)
3	18/11/2022	J. Hanlon	10:00	13:25
4	25/11/2022	J. Hanlon	11:00	14:35
5	16/12/2022	J. Hanlon	11:30	14:45
6	27/12/2022	J. Hanlon	10:15	13:45
7	20/01/2023	J. Hanlon	08:45	12:05
8	31/01/2023	J. Hanlon	10:30	13:40
9	09/02/2023	J. Hanlon	13:00	16:15
10	28/02/2023	J. Hanlon	10:30	13:45
11	14/03/2023	J. Hanlon	13:00	16:10
12	24/03/2023	J. Hanlon	08:30	11:45

### *Limitations*

- 2.1.9 Not all fields within the Wider Survey Area could be accessed or visualised from public rights of way (PRoW), with fields 50 to 56, 74 to 77 and 80 to 84 being inaccessible. This is not considered to be a substantial limitation to the objectives of the surveys all areas of the Site itself were included in the survey. The majority of Wider Survey Area habitat was considered to be either sub-optimal or unsuitable for local Target Species, especially those associated with nearby designated sites (such as dark-bellied brent goose; see **Table 1.1**), with such 'fields' including urban areas, dense scrub and small plots of disturbed pasture.
- 2.1.10 The proposed grid connection route was excluded from the survey, as the approximate 5.17km cable route is considered to be unsuitable for supporting wintering bird populations, especially those associated with nearby designated sites. The spatially narrow cable route follows existing roads, much of the route being a busy A-road, and runs through urban areas, whilst avoiding open agricultural land that is more likely to support wintering bird species. The cable route is highly unlikely to support Target or Secondary Species of wintering birds in noteworthy numbers, given the current land use and level of human disturbance and, therefore, its exclusion from the survey is not considered to be a significant limitation.

## **3 RESULTS**

- 3.1.1 Surveys identified a narrow range of Target Species comprising mallard, lapwing, golden plover, woodcock, black-headed gull, Mediterranean gull, common gull, herring gull, lesser black-backed gull, cormorant, little egret and marsh harrier (**Table 3.1** and **Table 3.2**) within the Survey Area.
- 3.1.2 Total, peak and mean species counts of birds utilising habitats within the Site and Wider Survey Area are summarised in **Table 3.1**.
- 3.1.3 A number of Target Species were also recorded in flight over the Survey Area, as detailed within **Table 3.2** and **Table 3.3**, but which did not utilise habitats within the Site. This included cormorant and marsh harrier.
- 3.1.4 The distribution of Target Species recorded during each survey visit is illustrated in **Figure 3**.



### Non-breeding Qualifying Species for International Statutory Designated Sites

- 3.1.5 Golden plover, lapwing and little egret were the only Target Species recorded that are listed as non-breeding qualifying features of the above-listed designated sites (see **Table 1.1**). The Crouch and Roach Estuaries SSSI is listed as an important designated site for golden plover and lapwing, whilst noteworthy national numbers of little egret are listed at Crouch & Roach Estuaries (Mid-Essex Coast Phase 3) Ramsar site and Benfleet and Southend Marshes Ramsar site.
- 3.1.6 Lapwing was recorded within the Site in low numbers on three occasions. Lapwing was identified in Fields 3 and 4, which comprised winter wheat. This included small numbers of birds ( $\leq 7$ ) flushed on three occasions. Lapwing was also identified in the Wider Survey Area in small numbers ( $\leq 4$ ) which included a flock of four birds in winter wheat (northern half of Field 1) and two birds in grassland pasture (Fields 65/68/69/71). An individual lapwing was also identified flying over the Wider Survey Area on a single occasion.
- 3.1.7 Golden plover was also recorded in low numbers within the Site and on only on a single survey visit. This included a small flock of three birds located in a winter wheat field (Field 5). At the same time, a flock of five birds was also identified flying over Field 5. The species was also identified in Field 6, whereby four birds flew in following movements from pasture paddocks in the Wider Survey Area (Fields 71 and 72).
- 3.1.1 An individual little egret was recorded within the Site on only a single occasion during survey. This individual bird was identified in the southern half of Field 1, which comprised winter wheat.

### Additional Target Species

- 3.1.2 Individual woodcock and lesser black-backed gull were both recorded on only a single occasion during surveys respectively in winter wheat Fields 2 and 5. An individual foraging Mediterranean gull was also recorded within the Site over two consecutive visits over winter wheat Fields 3-8.
- 3.1.3 Common gull and herring gull were frequently recorded within the Site in low to moderate numbers, with a maximum flock number of respectively fifty and thirty birds.
- 3.1.4 Black-headed gull was recorded frequently within the Site in moderate and/or high numbers, with the species numbers within the Site being greater than 100 birds on three visits. Foraging black-headed gulls were recorded throughout the Survey Area, with the highest on-Site concentrations located in winter wheat Fields 4 and 5, where a maximum of 400-500 birds were recorded.
- 3.1.5 Observations of cormorant, mallard and marsh harrier were restricted to either single or small numbers of birds ( $< 4$ ) in flight over the Site only.
- 3.1.6 Habitats in the Wider Survey Area outside the Site were found to support a similar assemblage of Target Species (**Table 3.1** and **Table 3.3**). This included mallard, snipe, black-headed gull, common gull and herring gull. Mallard and snipe were recorded in generally low flock numbers ( $\leq 3$ ), with snipe recorded in the Wider Survey Area only on a single occasion. Black-headed gull, common gull and herring gull were recorded in low and moderate flock numbers ( $\leq 30$ ), with congregations frequently recorded bordering the Site in Field 1.
- 3.1.7 Secondary Species recorded within the Site consisted of stock dove, woodpigeon, skylark, starling, redwing and fieldfare. All of these species apart from skylark were shown to be regularly using the Site.
- 3.1.8 Secondary species recorded within the Wider Survey Area consisted of woodpigeon, Cetti's warbler, starling and redwing.

3.1.9 The ponds within the survey area did not hold any waterfowl during the survey visits, with the exception of the pond north of Field 84, that is located at the south-eastern boundary of the Wider Survey Area. Mallard, tufted duck and Canada goose were recorded utilising this pond. The pond is located more than 500m from the Site. Note that the Site itself does not hold any waterbodies.

**Table 3.1: Wintering bird survey Target Species summary results 2022-2023 – the Survey Area.**

*\*Species listed with qualifying interest in surrounding designated sites as presented in Table 1.1*

Target Species	Site total number of birds			Wider Survey Area total number of birds		
	Total	Peak	Mean per visit	Total	Peak	Mean per visit
<b>Mallard</b>	0	0	0	5	3	0.4
<b>Lapwing*</b>	12	7	1	6	4	0.5
<b>Golden plover*</b>	7	4	0.6	4	4	0.3
<b>Woodcock</b>	1	1	0.1	0	0	0
<b>Snipe</b>	0	0	0	1	1	0.1
<b>Black-headed gull</b>	1,140 - 1,240	400-500	95-103	64	20	5.3
<b>Mediterranean gull</b>	2	1	0.2	0	0	0
<b>Common gull</b>	122	50	10.2	85	30	7.1
<b>Herring gull</b>	96	30	8	23	13	1.9
<b>Lesser black-backed gull</b>	1	1	0.1	0	0	0
<b>Cormorant</b>	0	0	0	0	0	0
<b>Little egret*</b>	1	1	0.1	0	0	0
<b>Marsh harrier</b>	0	0	0	0	0	0

*Birds recorded overflying the survey area are excluded from the summary results.*

**Table 3.2: Wintering bird survey results 2022-2023 – the Site.**

Field N°(s)	Target Species	Survey Visit											
		Oct 22	Oct 22	Nov 22	Nov 22	Dec 22	Dec 22	Jan 22	Jan 22	Feb 22	Feb 22	Mar 22	Mar 22
<b>Target Species (Number of birds)</b>													
1	Little egret*	-	-	-	-	1	-	-	-	-	-	-	-
	Common gull	-	-	-	-	-	-	-	6	-	-	-	-
	Herring gull	-	-	-	-	-	-	-	2	-	-	-	-
2	Black-headed gull	50	-	-	-	-	-	-	-	-	-	-	-
	Common gull	2	-	-	-	-	-	-	-	-	-	-	-
	Wood-cock	-	-	-	-	1	-	-	-	-	-	-	-
2	Mallard	-	-	-	-	-	-	-	-	-	-	-	(1)
2, 3	Mallard	-	-	-	-	-	-	-	-	-	-	-	(3)
2, 3, 4	Mallard	-	-	-	-	-	-	-	-	-	-	-	(4)
3	Black-headed gull	10	-	-	-	-	-	-	-	-	-	-	-
	Lapwing *	-	-	-	-	-	-	7	-	4	-	-	-
	Marsh harrier	-	(1)	-	-	-	-	-	-	-	-	-	-
3, 4	Lapwing *	-	-	-	-	-	1	-	-	-	-	-	-
3, 4, 5	Black-headed gull	-	>150	-	-	-	-	-	-	70	-	-	-
	Common gull	-	<10	-	-	-	-	-	-	25	-	-	-
	Herring gull	-	>20	-	-	-	-	-	-	10	-	-	-
	Mediterranean gull	-	-	-	-	-	-	-	-	1	-	-	-

4	Herring gull	-	-	(7)	-	-	30	-	-	-	-	-	-
	Black-headed gull	-	-	-	45	-	65	-	-	-	-	-	-
	Common gull	-	-	-	-	-	8	-	-	-	-	-	-
4, 5	Black-headed gull	-	-	-	-	-	-	80	400-500	-	-	-	-
	Common gull	-	-	-	-	-	-	1	50	-	-	-	-
	Herring gull	-	-	-	-	-	-	-	25	-	-	-	-
5	Black-headed gull	-	-	50	115	-	85	-	-	-	-	-	-
	Herring gull	-	-	1	-	-	8	-	-	-	-	-	-
	Common gull	-	-	20	-	-	-	-	-	-	-	-	-
	Lesser black-backed gull	-	-	1	-	-	-	-	-	-	-	-	-
	Cormorant	-	-	(3)	-	-	-	-	-	-	-	-	-
	Golden plover*	-	-	-	-	3 + (5)	-	-	-	-	-	-	-
6	Golden plover*	-	-	-	-	4	-	-	-	-	-	-	
6, 7	Black-headed gull	-	-	-	-	-	>20	-	-	-	-	-	
6, 7, 8	Mediterranean gull	-	-	-	-	-	-	-	1	-	-	-	
<b>Secondary Species (Number of birds)</b>													
1	Wood-pigeon	-	-	-	-	-	-	20 + (1)	-	-	-	(15)	-
1, 2, 3	Redwing	-	-	-	-	-	-	>10	-	-	-	-	-

1, 3	Fieldfare	-	-	-	35	-	-	-	-	-	-	-	-
2	Wood-pigeon	<50	-	-	45	-	-	-	-	-	-	-	-
	Starling	<50	-	-	-	-	-	-	-	-	-	-	-
	Stock dove	-	-	-	-	-	<b>11</b>	-	-	-	-	-	-
	Fieldfare	-	-	-	>11	-	-	-	-	-	-	-	-
	Redwing	-	-	-	-	-	(25)	-	-	-	-	-	-
2, 3	Starling	-	-	-	-	-	-	-	-	<b>12</b>	-	-	-
	Redwing	-	-	-	-	-	-	-	>40	-	60	-	-
2, 7, 8	Wood-pigeon	-	-	-	-	-	-	-	-	-	(10)	-	-
2, 8	Wood-pigeon	-	-	-	-	-	-	>17	-	-	-	-	-
	Starling	-	-	-	-	-	-	>20	-	-	-	-	-
3	Wood-pigeon	-	-	-	-	-	-	-	-	-	12	-	-
3, 7	Wood-pigeon	<50	-	-	15	-	-	-	-	-	-	-	-
4	Skylark	-	-	-	-	15	-	-	-	-	-	-	-
5	Stock dove	-	-	<b>11</b>	-	-	-	-	-	-	-	-	-
6	Redwing	-	-	-	-	-	-	-	-	>75	-	-	-
7	Stock dove	-	-	-	-	30	-	-	-	-	-	-	-
8	Starling	-	-	-	-	>20	-	-	-	-	-	-	-
	Wood-pigeon	-	-	-	-	-	-	-	-	-	-	>100	-
	Fieldfare	-	-	-	-	>20	-	-	-	-	-	-	-
	Redwing	-	-	-	-	>20	-	-	-	-	-	-	-

'\*' indicates species is a qualifying interest of the neighbouring designated sites (see Table 1.1).

**Target species are highlighted in bold.**

'-' means that the species was not recorded during that visit.

Observations in brackets refer to birds recorded only in flight.

**Table 3.3: Wintering bird survey results 2022-2023– the Wider Survey Area.**

Field N°(s)	Target Species	Survey Visit											
		Oct 22	Oct 22	Nov 22	Nov 22	Dec 22	Dec 22	Jan 22	Jan 22	Feb 22	Feb 22	Mar 22	Mar 22
<b>Target Species (Number of birds)</b>													
1	Common gull	-	-	10	19	-	30	-	-	15	-	-	-
	Black-headed gull	-	-	6	-	-	11	-	-	-	-	-	-
	Herring gull	-	-	-	-	-	13	-	-	10	-	-	-
	Lapwing*	-	-	-	-	-	-	-	-	4	-	-	-
55	Snipe	-	-	-	-	1	-	-	-	-	-	-	-
57	Mallard	-	-	-	-	-	-	-	-	-	-	3	-
57-62	Black-headed gull	-	-	-	-	-	-	1	-	-	-	-	-
	Common gull	-	-	-	-	-	-	2	-	-	-	-	-
58	Lapwing*	-	-	-	-	(1)	-	-	-	-	-	-	-
	Black-headed gull	-	-	-	-	-	-	1	-	-	-	15	-
	Common gull	-	-	-	-	-	-	2	-	-	-	2	-
	Mallard	-	-	-	-	-	-	3	-	-	-	-	-
64-73	Black-headed gull	-	-	20	-	-	-	-	-	-	-	-	-
65, 68, 69, 71	Lapwing*	-	-	-	-	2	-	-	-	-	-	-	-
68	Black-headed gull	-	-	-	-	-	-	-	-	-	-	-	2
69	Mallard	-	2	-	-	-	-	-	-	-	-	-	-
69, 70	Common gull	-	-	-	-	-	-	-	4	-	-	-	-
71, 72	Golden plover*	-	-	-	-	4	-	-	-	-	-	-	-
91	Black-headed gull	-	-	8	-	-	-	-	-	-	-	-	-
	Common gull	-	-	1	-	-	-	-	-	-	-	-	-

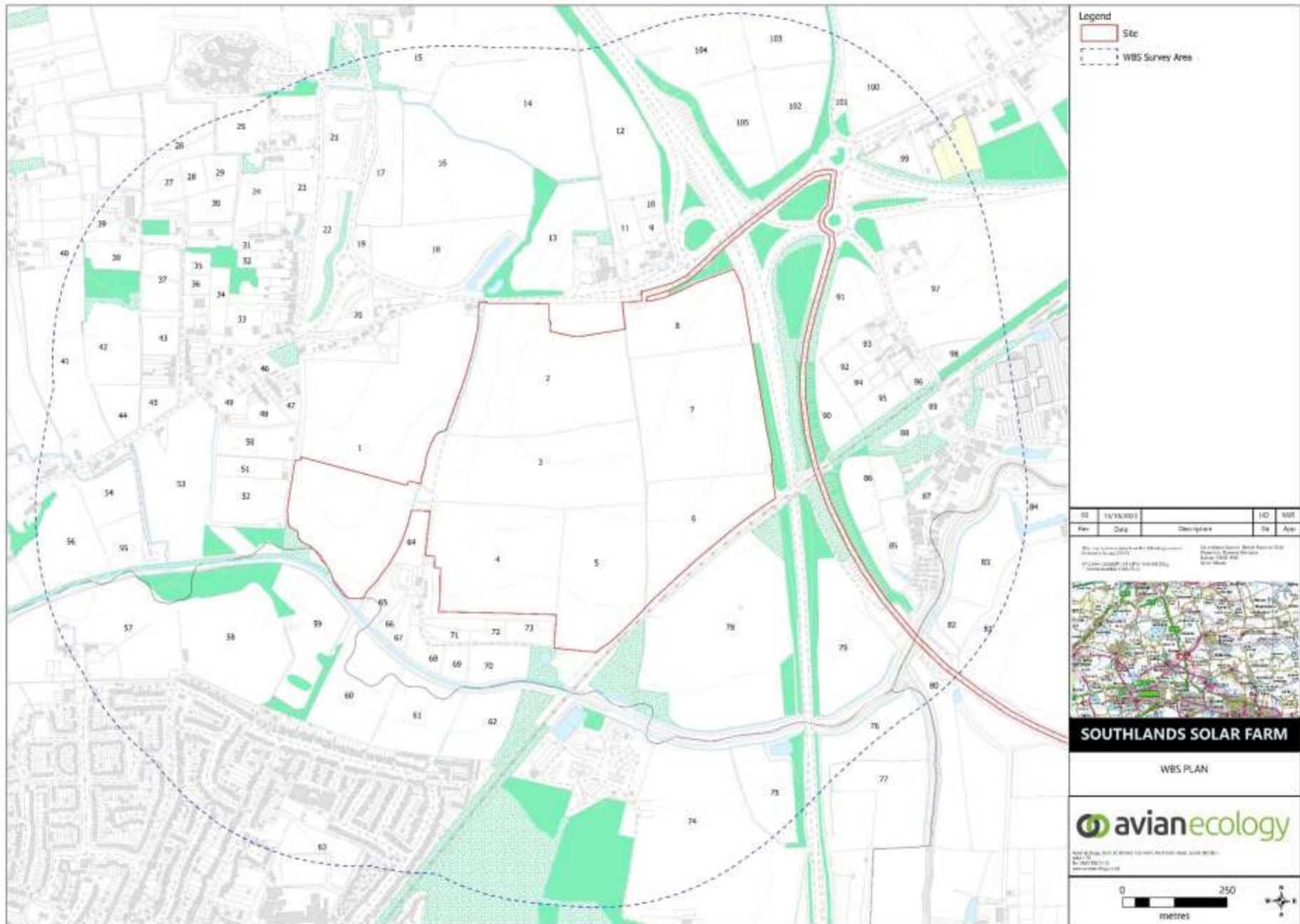
Secondary Species (Number of birds)													
1	Redwing	-	-	-	-	-	-	-	-	-	60	-	-
50-55	Woodpigeon	-	-	-	-	(>50)	-	-	-	-	-	-	-
58-59	Woodpigeon	-	-	-	-	15	-	-	-	-	-	-	-
64	Redwing	-	-	-	-	-	-	-	-	-	15	-	-
64-73	Starling	-	-	20	-	-	-	-	-	-	-	-	-
68-71	Starling	-	-	-	-	30	-	-	-	-	-	-	-
69, 70	Woodpigeon	-	-	-	-	-	-	-	>55	-	-	38	-
70	Cetti's warbler	-	1	-	-	-	-	-	-	-	-	-	-
102	Woodpigeon	-	-	-	50	-	-	-	-	-	-	-	-

'\*' indicates species is a qualifying interest of the neighbouring designated sites (see Table 1.1).  
**Target species are highlighted in bold.**  
 '-' means that the species was not recorded during that visit.  
 Observations in brackets refer to birds recorded only in flight.

## 4 SUMMARY

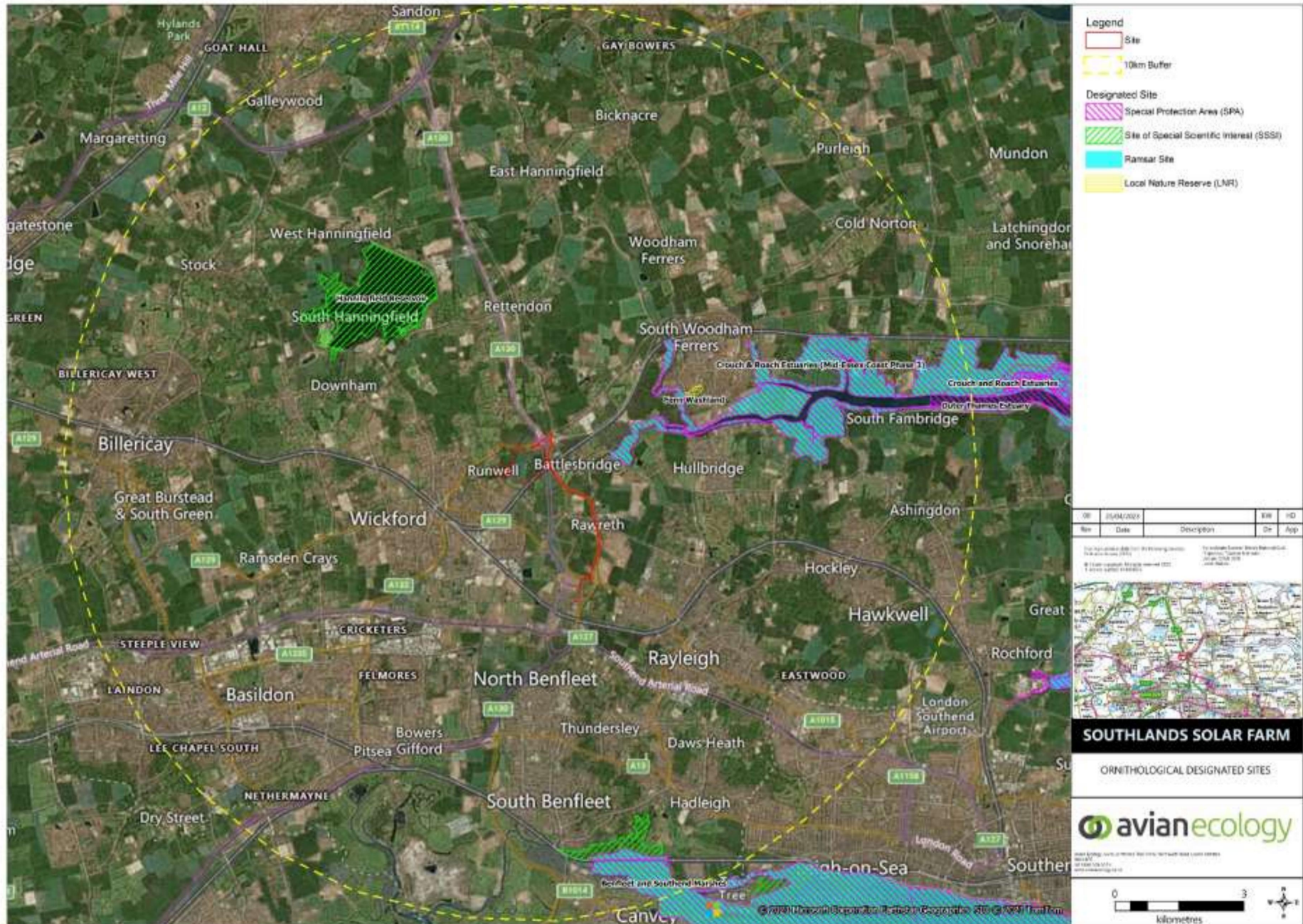
- 4.1.1 Wintering bird surveys during the 2022-2023 wintering period, recorded a typical range of species within the Site and Wider Survey Area. Regular use of habitats within the Site was recorded for black-headed gull, herring gull and common gull. Additional species, including Mediterranean gull, lesser black-backed gull, little egret and woodcock, were also recorded within the Site, however, observations were restricted to either single birds within or flying over the Site. Cormorant, lapwing, golden plover and marsh harrier were further recorded in low numbers either foraging within the Site or flying over.
- 4.1.2 The Wider Survey Area comprised a similar species assemblage with observations of mallard, lapwing, golden plover, snipe, black-headed gull, common gull, herring gull, and marsh harrier. Mallard, lapwing, golden plover and snipe were recorded in low bird numbers ( $\leq 4$ ), whilst black-headed gull, common gull and herring gull were recorded in low and moderate flock sizes ( $\leq 30$ ).

**FIGURE 1: SITE AND WIDER SURVEY AREA**

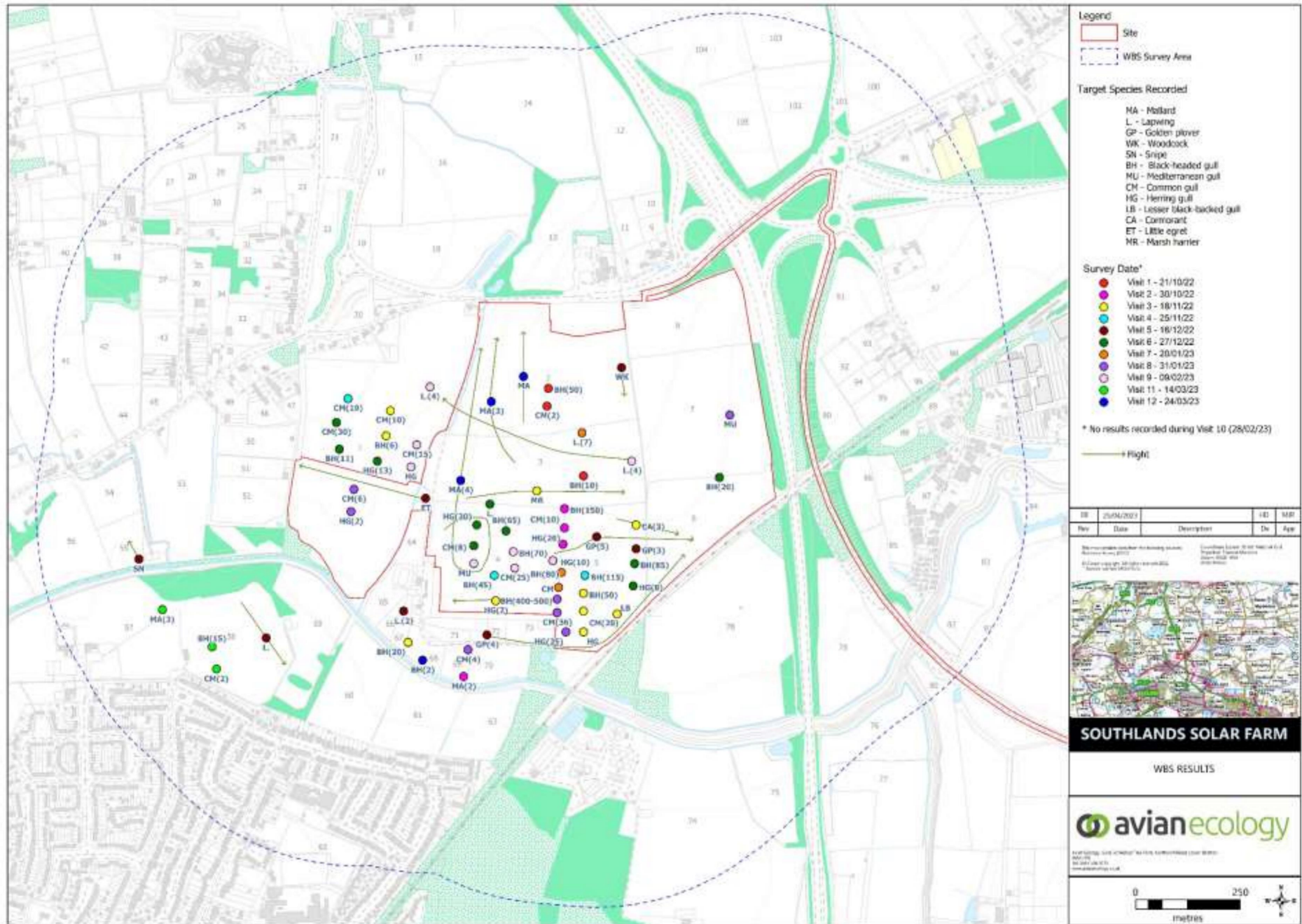




**FIGURE 2: STATUTORY DESIGNATED SITES WITH NON-BREEDING ORNITHOLOGICAL INTEREST WITHIN 10KM OF THE SITE.**



**FIGURE 3: WINTERING BIRD SURVEY RESULTS – TARGET SPECIES**



## ANNEX 1. BIRD SPECIES SUMMARY

**Table A1.1** 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 – Species listed as Annex 1 on the European Commission (EC) Birds Directive;
- Sch1.1/1a – Schedule 1 of the Wildlife & Countryside Act 1981 (as amended);
- Green/Amber/Red – Birds of Conservation Concern as listed by leading bird conservation organisations in the UK, including the RSPB and BTO. Green, Red and Amber categories are given (Stanbury *et al.*, 2021);
- Sec41 - species listed as rare and most threatened on the NERC Act (2006); and,
- LBAP – Essex Local Biodiversity Action Plan Species.

**Table A1.1: Summary of bird species.**

Common name	Species name	Conservation status
Brent Goose	<i>Branta bernicla</i>	Amber
White-fronted goose	<i>Anser albifrons</i>	Red, Sec41
Shelduck	<i>Tadorna tadorna</i>	Amber
Shoveler	<i>Spatula clypeata</i>	Amber
Gadwall	<i>Mareca strepera</i>	Amber
Wigeon	<i>Mareca penelope</i>	Amber
Mallard	<i>Anas platyrhynchos</i>	Amber
Pintail	<i>Anas acuta</i>	Amber
Teal	<i>Anas crecca</i>	Amber
Pochard	<i>Aythya ferina</i>	Red
Tufted Duck	<i>Aythya fuligula</i>	Green
Stock Dove	<i>Columba oenas</i>	Amber
Woodpigeon	<i>Columba palumbus</i>	Amber
Oystercatcher	<i>Haematopus ostralegus</i>	Amber
Avocet	<i>Recurvirostra avosetta</i>	Amber, Sch1.1, Ann1
Lapwing	<i>Vanellus vanellus</i>	Red; Sec41
Golden Plover	<i>Pluvialis apricaria</i>	Green; Ann1
Grey Plover	<i>Pluvialis squatarola</i>	Amber
Ringed Plover	<i>Charadrius hiaticula</i>	Red
Whimbrel	<i>Numenius phaeopus</i>	Red; Sch1.1
Bar-tailed Godwit	<i>Limosa lapponica</i>	Amber, Ann1
Black-tailed Godwit	<i>Limosa limosa</i>	Red; Sch1.1; Sec41

Common name	Species name	Conservation status
Knot	<i>Calidris canutus</i>	Amber
Ruff	<i>Calidris pugnax</i>	Red; Sch1.1; Ann1
Curlew Sandpiper	<i>Calidris ferruginea</i>	Amber
Dunlin	<i>Calidris alpina</i>	Red
Little Stint	<i>Calidris minuta</i>	Green
Woodcock	<i>Scolopax rusticola</i>	Red
Jack Snipe	<i>Lymnocyptes minimus</i>	Green
Snipe	<i>Gallinago gallinago</i>	Amber
Common Sandpiper	<i>Actitis hypoleucos</i>	Amber
Green Sandpiper	<i>Tringa ochropus</i>	Amber; Sch1.1
Redshank	<i>Tringa totanus</i>	Amber
Spotted Redshank	<i>Tringa erythropus</i>	Amber
Greenshank	<i>Tringa nebularia</i>	Amber; Sch1.1
Black-headed Gull	<i>Chroicocephalus ridibundus</i>	Amber
Mediterranean Gull	<i>Ichthyaetus melanocephalus</i>	Amber; Sch1.1; Ann1
Common Gull	<i>Larus canus</i>	Amber
Herring Gull	<i>Larus argentatus</i>	Red; Sec41
Lesser Black-backed Gull	<i>Larus fuscus</i>	Amber
Red-throated Diver	<i>Gavia stellata</i>	Green; Sch1.1; Ann1
Cormorant	<i>Phalacrocorax carbo</i>	Green
Grey Heron	<i>Ardea cinerea</i>	Green
Little Egret	<i>Egretta garzetta</i>	Green; Ann1
Marsh Harrier	<i>Circus aeruginosus</i>	Amber; Sch1.1; Ann1
Hen Harrier	<i>Circus cyaneus</i>	Red; Sch1.1 & 1A; Sec41; Ann1
Barn Owl	<i>Tyto alba</i>	Green; Sch1.1
Short-eared Owl	<i>Asio flammeus</i>	Amber; Ann1
Merlin	<i>Falco columbarius</i>	Red; Sch1.1; Ann1
Skylark	<i>Alauda arvensis</i>	Red; Sec41; LBAP
Cetti's Warbler	<i>Cettia cetti</i>	Green; Sch1.1
Starling	<i>Sturnus vulgaris</i>	Red; Sec41
Redwing	<i>Turdus iliacus</i>	Amber; Sch1.1

Common name	Species name	Conservation status
Fieldfare	<i>Turdus pilaris</i>	Red; Sch1.1
Water Pipit	<i>Anthus spinoletta</i>	Amber

## ANNEX 2: WINTERING BIRD SURVEY EFFORT

Date	Start Time (24 hrs)	End Time (24 hr)	High Tide (24 hrs)	High Tide (m)	Wind Speed	Wind Direction	Rain	Cloud Height	Cloud Cover	Frost	Snow	Temperature (°C)
21/10/2022	08:10	11:40	10:21	4.65	2	SW	0	1	8/8	0	0	15
30/10/2022	14:00	16:45	15:28	5.67	2	SW	0	1	4/8	0	0	15
18/11/2022	10:00	13:25	06:55	4.22	2	W	0	2	2/8-6/8	0	0	10
25/11/2022	11:00	14:35	13:03	6.01	2	SW	0	1-2	1/8-3/8	0	0	Not provided
16/12/2023	11:30	14:45	05:01	4.80	0-1	SW	0	2	1/8	1	1	0-3
27/12/2023	10:15	13:45	15:24	5.92	2	SW	0	2	8/8	0	0	6-7
20/01/2023	08:45	12:05	10:52	5.44	2-3	W	0	-	0/8	1	0	2-5
31/01/2023	10:30	13:40	07:54	4.80	2	SW	0	1	4/8-8/8	0	0	9-10
09/02/2023	13:00	16:15	14:49	5.49	1	SW	0	2	1/8-2/8	0	0	9-10
28/02/2023	10:30	13:45	05:56	4.92	2	NNE	0	1	8/8	0	0	8
14/03/2023	13:00	16:10	16:42	5.00	3	NW	0	1	3/8-5/8	0	0	6-7
24/03/2023	08:30	11:45	14:24	5.93	4	SW	0	1	3/8-4/8	0	0	10-11

### ANNEX 3: CONDITIONS

Wind Speed		W-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		Drizzle/Mist	1			150-500m	1
Light breeze	2	N	Light showers	2			>500m	2
Mod. breeze	3	NE	Heavy showers	3				
Fresh breeze	4	ENE	Heavy Rain	4				
Strong breeze	5	E						
Mod. gale	6	Etc	Visibility		Snow		Frost	
Fresh gale	7		Poor	0	None	0	None	0
Strong gale	8		< 1km	1	On site	1	Ground	1
Whole gale	9		>1km	2	High ground	2	All day	2
Storm	10							