
Mylen Leah Solar
on behalf of Statkraft UK Ltd
Non-Breeding Bird Survey Report



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1 INTRODUCTION

1.1 Project Background

- 1.1.1 Avian Ecology Ltd. was commissioned by Statkraft UK to undertake non-breeding bird surveys in relation to the proposed Mylen Leah Solar Farm (the 'Proposed Development') on land south of the village of Melbourne in East Yorkshire ('the Site').
- 1.1.2 The follow report presents the detailed methodologies and findings of surveys undertaken between October 2023 and April 2024.
- 1.1.3 The objectives of this report are to:
 - Identify the presence of notable non-breeding bird species within the Site and adjacent land; and,
 - Assess the potential importance of the non-breeding bird assemblages which the Site and adjacent land supports.
- 1.1.4 Only common bird species names are referred to within the main text of this report.
- 1.1.5 **Annex 1** provides a summary of all bird species recorded during the surveys. Both common and species names are provided, together with a summary of their conservation status as relevant.
- 1.1.6 Natural England have been contacted through their discretionary advice service (DAS) for comments on an early draft version of this report, principally with regards to survey scope and methods. Comments provided by Natural England have not been fully addressed in this report, however due consideration will be given to these prior to future revisions of this document to support a Preliminary Environmental Information Report (PEIR) and subsequent documents. It is considered that this document provides adequate information to inform scoping, outlining methods and results of surveys undertaken to date.

1.2 Site Description

- 1.2.1 The Site (see **Figure 1**) consists of an expanse of agricultural land comprising a mixture of arable and pastoral farming, surrounded by small villages and farmsteads. Small woodland copses are present within and immediately adjacent to the Site. Fields are typically bounded by hedgerows, as well as ditches and tree lines.
- 1.2.2 European sites designated for non-breeding ornithological interests located within 10km of the Draft Order Limits are summarised in **Table 1.1**. There are no additional sites located within 20km of the Draft Order Limits, designated for non-breeding pink-footed goose and which may have the potential for functional linkage based on the species' upper-range foraging distance (NatureScot 2016)¹.

¹ <https://www.nature.scot/sites/default/files/2022-12/Assessing%20connectivity%20with%20special%20protection%20areas.pdf>
(accessed 17th September 2024)

Table 1.1: European designated sites for nature conservation with non-breeding ornithological qualifying interests.

SPA: Special Protection Areas.

Designation	Distance and Direction from Site	Non-breeding Ornithological Qualifying Features
Lower Derwent Valley SPA	1.16km west	Bewick's swan (Non-breeding) Wigeon (Non-breeding) Teal (Non-breeding) Golden plover (Non-breeding) Ruff (Non-breeding) Waterbird assemblage (Non-breeding)
Lower Derwent Valley Ramsar	1.16km west	Wigeon (Non-breeding) Teal (Non-breeding) Waterbird assemblage
Humber Estuary Ramsar site	10.87km south	Bar-tailed godwit (Wintering); Black-tailed godwit (Wintering and Passage); Dunlin (Wintering and Passage); Golden plover (Wintering and Passage); Knot (Wintering and Passage); Redshank (Wintering and Passage); Shelduck (Wintering); and, Waterbird assemblage (Wintering).
Humber Estuary SPA	10.87km south	Avocet (Non-breeding); Bar-tailed godwit (Non-breeding); Bittern (Non-breeding); Black-tailed godwit (Non-breeding); Dunlin (Non-breeding); Golden plover (Non-breeding); Hen harrier (Non-breeding); Knot (Non-breeding); Redshank (Non-breeding); Ruff (Non-breeding); Shelduck (Non-breeding); and, Waterbird assemblage (Non-breeding).

2 METHODOLOGY

2.1 Non-Breeding Bird Surveys

2.1.1 Non-breeding bird surveys were undertaken between October 2023 and April 2024.

Survey Area

2.1.2 For ease of interpreting the survey results, fields within the Survey Area were numbered 1-508. Fields within the Site (total 123) and within (or partly within) the Wider Survey Area (total 414) are defined in **Table 2.1** and illustrated on **Figures 2a-f**

Table 2.1: Field allocations for the Site and Wider Survey Area.

Land Parcel	Field Number Range
The Site	2, 3, 6-21, 25-29, 35-43, 47-61, 63-116, 187, 202, 205, 206, 218, 264-266, 286, 306, 339, , 345, 348 – 350, 357, 358, 364, 365, and 451-453
Wider Survey Area	1, 4, 5, 22-24, 30-34, 44-46, 62, 117-126, 128, 130-186, 188-201, 203, 204, 207-217, 219-263, 267-285, 287-305, 307-338, 340-344, 346, 347, 351-356, 359-363, 366-450, 454-508 and 538-546 Excluding unsuitable fields detailed in Section 2.2 above.

Walkover Surveys

2.1.3 Surveys were carried out between October 2023 and April 2024 within all suitable habitats within the Site, as well as all suitable fields within a 600m buffer of the Site boundary (the Wider Survey Area), as shown in **Figure 2a-f**. The combination of the Site and Wider Survey Area will be termed the ‘Survey Area’ hereafter.

2.1.4 A total of seven walkover survey visits (one per month) were completed adopting the ‘look-see’ methodology (Gilbert *et al.* 1998²). During each survey visit surveyors observed each field within the Study Area, walking the boundaries and stopping at intervals and scanning the fields for Target Species (as detailed in Paragraph 2.1.6), with binoculars.

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

2.1.6 Target Species consisted of all species comprising non-breeding (i.e. passage and wintering) qualifying interests of the Humber Estuary SPA and Ramsar site or Lower Derwent Valley SPA and Ramsar site (see **Table 1.1**), all other wetland species including all swans, geese and ducks (excluding feral species), waders, herons, grebes, gulls, Annex 1/Schedule 1³ raptors and all owls.

2.1.7 Secondary Species also recorded consisted of non-Annex 1/Schedule 1 raptors, gulls, notable flocks of non-wetland species, feral species (e.g. Canada goose and Egyptian goose) and Amber and Red-listed Birds of Conservation Concern (BoCC)⁴ species.

2.1.8 Suitable habitats for Target Species surveyed within the Survey Area included arable/pasture fields and associated boundary features (e.g., ditches). Habitats such as woodland and scrubland were considered unsuitable for Target Species and thus were omitted from the survey.

2.1.9 Many fields featured adjacent drainage ditches. Where observations were made of Target Species within these ditches these were recorded as being associated with the closest field.

2.1.10 Habitats and fields within the Wider Survey Area were surveyed from within the Site, public rights of way (PRoWs) and access tracks where possible. Access restrictions are described in limitation, below.

2.1.11 Surveys were primarily undertaken during daylight hours. Nocturnal walkovers were undertaken separately and are described below.

² Gilbert G, Gibbons D.W. and Evans J. (1998) *Bird Monitoring Methods*. RSPB Sandy.

³ European Birds Directive Annex I species/ Schedule 1 of the Wildlife & Countryside Act 1981 (as amended)

⁴ Stanbury, A., Eaton, M., Aebsicher, 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: 723-747. Available online at <https://britishbirds.co.uk/content/status-our-bird-populations>

2.1.12 All field surveys were undertaken by G. Taylor (GT) and T. Isherwood (TI), both of whom are suitably competent and experienced ornithologists.

2.1.13 Detailed survey effort is presented in **Annex 2**.

Nocturnal Bird Survey

2.1.14 Nocturnal Bird Surveys were undertaken between November and April 2024. Survey were carried out within all suitable habitats within the Site and Wider Survey Area, as shown in **Figure 2a-f**.

2.1.15 A total of six Nocturnal Bird Survey visits were completed adopting an adapted version of the ‘look-see’ methodology (Gilbert *et al.* 1998²). During each survey visit surveyors observed each field within the Study Area, walking the boundaries and stopping at intervals and scanning the fields for Target Species, with thermal imaging cameras and recording vocalisations of birds where possible.

2.1.16 Surveys were carried out using Pulsar Lexion thermal imaging cameras used to aid detection of species and where possible record the birds to species level. Where individual birds were unidentifiable due to distance or small size of the species, surveyors used knowledge of behaviour and suitable habitat for these species to make an informed estimate of a species group e.g., *Calidris* wader (sanderling or dunlin).

2.1.17 Survey effort with detailed survey conditions are presented in **Annex 4**.

Vantage Point (VP) Flight Activity Surveys

2.1.1 Between October 2023 and April 2024, VP flight activity surveys were undertaken from four VP locations:

- VP1 – SE 72946 41378;
- VP2 – SE 75238 42497;
- VP3 – SE 76600 40749; and,
- VP4 – SE 76930 38485;

2.1.2 **Figure 3** shows the VP locations used and their viewshed coverage which appropriately covered the Site.

2.1.3 The VP flight activity surveys followed the NatureScot guidance (SNH, 2017⁵) which although is intended for wind farm developments, is considered appropriate to use for proposed solar farm developments in the absence of guidance specific to solar farm developments. Surveys were carried out over a 3hr period and flights and activity of Target Species were recorded onto basemaps. Any activity by Secondary Species was also recorded every 15 minutes, but detailed flights of these species were not recorded.

2.1.4 All surveys were undertaken during daylight hours.

2.1.5 Field surveys were undertaken by G. Taylor, a suitably qualified and experienced ornithologist.

2.1.6 Survey effort for VP flight activity surveys and a breakdown of survey conditions are presented in **Appendix 4**. A summary of VP survey effort is presented below in **Table 2.2**.

⁵ SNH (2017) Recommended bird survey methods to inform impact assessment of onshore wind farms. March 2017. V2.

Table 2.2: VP Flight Activity Survey Effort (hrs).

VP	2023			2024				Total
	October	November	December	January	February	March	April	
1	3	3	3	3	3	3	3	21
2	3	3	3	3	3	3	3	21
3	3	3	3	3	3	3	3	21
4	3	3	3	3	3	3	3	21

Field Survey Limitations

- 2.1.7 In response to the Proposed Development design, the Site boundary has evolved over time. Iterative access is shown on **Figure 1**. Notwithstanding access restrictions, fields numbered 1 to 436 were included throughout the survey period, with fields numbered 437 to 508 included from January 2024 onwards. Fields 538 to 546 were added to the Scheme following conclusion of surveys in April 2024 and so were not subject to survey. With the exception of fields 451 to 453, all fields within the Site were surveyed continuously as part of what was previously the 600m buffer area.
- 2.1.8 These fields represent a small amount of the overall survey area, and their omission is not considered a substantive limitation, with surveys providing a representative assessment of bird use within the Site
- 2.1.9 Notwithstanding the above, full access was permitted or views were available from public rights of way to all parts of the Survey Area during all surveys, excepting the following fields: 182, 183, 184, 186, 212, 213, 332, 350, 351, 352, 353, 354, 355, 356, 357, 358, 435 and 436.
- 2.1.10 Nocturnal surveys were aided by Pulsar nightvision scopes, identification to species level is not always possible, so observers used knowledge of likely species and their behaviour to identify species as best as possible.
- 2.1.11 During the October walkover survey shooting was noted beyond the Site. This may have had an impact on bird behaviours on that occasion, however is considered to represent the baseline conditions and so is not considered a significant limitation to the assessment. Shooting, or other significantly disturbing activities, were not noted on other occasions.
- 2.1.12 No significant limitations in the field survey data in informing the design and assessment of Proposed Development are therefore identified.

3 RESULTS

3.1 Walkover Surveys

The Site

- 3.1.1 Of the 124 fields within the Site, a total of 19 Target Species were recorded in 32 of these at least once during the survey period.
- 3.1.2 Target Waterbird Species recorded comprised: greylag goose, pink-footed goose, shelduck, mallard, goosander, oystercatcher, lapwing, golden plover, whimbrel, curlew, snipe, black-headed gull,

common gull, herring gull, lesser black-backed gull, grey heron and little egret. Additional Target Raptor Species included red kite, and marsh harrier

3.1.3 The only species recorded which is a qualifying feature of the Lower Derwent Valley SPA and Ramsar was golden plover. Species recorded which are a qualifying feature of the Humber Estuary SPA and Ramsar included golden plover and shelduck.

3.1.4 Target species are listed in **Table 3.1**. A full record of species recorded is provided as **Annex 3**.

3.1.5 Secondary Species recorded comprised the following:

- Blackbird;
- Buzzard;
- Canada goose;
- Chaffinch;
- Corn Bunting;
- Egyptian goose;
- Fieldfare;
- Grey partridge;
- Kestrel;
- Linnet;
- Meadow Pipit;
- Pied Wagtail;
- Redwing;
- Reed Bunting;
- Skylark;
- Sparrowhawk;
- Starling; and
- Yellowhammer.

Table 3.1: Walkover Survey - Target Species recorded within the Site

SPA/ Ramsar species in **bold**

Species	Lower Derwent Valley SPA Qualifying Species	Humber Estuary SPA Qualifying Species	Month	Max count	Total count
Black-headed gull			Jan	39	125
			Feb	394	521
			Mar	98	98
			Oct	127	220
			Nov	274	276
			Dec	211	211
Canada goose			Mar	2	2
Common gull			Jan	88	167
			Feb	222	364
			Mar	54	54
			Oct	98	149
			Nov	21	29
			Dec	5	5
Curlew			Feb	7	7

			Mar	2	2
			Apr	2	7
Little egret			Apr	1	1
Goosander			Nov	2	2
			Feb	16	25
Greylag goose			Mar	6	8
			Apr	4	8
Golden Plover	Y	Y	Mar	630	630
			Dec	285	285
			Jan	1	1
Heron			Feb	1	1
			Nov	1	1
Herring gull			Jan	33	54
			Oct	8	9
Red kite			Apr	1	1
			Oct	1	1
			Jan	68	182
Lapwing			Feb	181	181
			Mar	2	4
			Apr	2	4
			Dec	66	66
Lesser black-backed gull			Oct	31	41
			Jan	6	6
Mallard			Feb	6	10
			Mar	5	7
			Apr	2	2
			Oct	153	153
			Nov	39	39
			Dec	4	4
Marsh harrier			Jan	1	1
Oystercatcher			Mar	2	2
			Apr	1	1
Pink-footed goose			Jan	117	155
			Feb	439	440
			Mar	457	457
Snipe			Jan	1	1
Shelduck		Y	Mar	2	2
			Apr	4	6
Whimbrel			Apr	2	2

Wider Survey Area

3.1.6 Of the 389 fields within the Wider Survey Area, a total of 23 Target Species were recorded in 62 of these at least once during the survey period.

3.1.7 Target Waterbird Species recorded comprised: black-headed gull, common gull, curlew, dunlin, garganey, golden plover, greylag goose, herring gull, lapwing, lesser black-backed gull, little egret, mallard, mute swan, oystercatcher, pink-footed goose, shelduck, teal and yellow-legged gull. Target Raptor Species included barn owl, little owl, peregrine and red kite.

3.1.8 Species which are a qualifying feature of the Lower Derwent Valley SPA and Ramsar included golden plover and teal. The only species recorded which is a qualifying feature of the Humber Estuary SPA and Ramsar was golden plover.

3.1.9 It was noted during the October 2023 survey that a flock of approximately 153 mallard were grounded by a party of shooters.

3.1.10 Target species are listed in **Table 3.2**. A full record of species recorded is provided as **Annex 3**.

3.1.11 Secondary Species recorded comprised the following:

- Blackbird
- Buzzard
- Canada goose
- Egyptian goose
- Fieldfare
- Grey partridge
- Kestrel
- Redwing
- Song thrush;
- Sparrowhawk;
- Starling; and,
- Yellowhammer.

Table 3.2: Walkover Survey - Target Species recorded within the Wider Survey Area
 SPA/ Ramsar species in **bold**

Species	Lower Derwent Valley SPA Qualifying Species	Humber Estuary SPA Qualifying Species	Month	Max count	Total count
Black-headed gull			Jan	110	227
			Feb	630	1117
			Mar	130	148
			Oct	284	482
			Nov	205	521
			Dec	217	752
Barn owl			Apr	1	1
			Dec	1	1
Common gull			Jan	7	10
			Feb	64	88
			Mar	37	54
			Oct	642	729
			Nov	312	577
			Dec	18	50
Curlew			Feb	2	2
			Mar	6	10
			Apr	2	2
Dunlin			Jan	5	5
			Dec	67	69
Little egret			Mar	1	1
			Apr	2	2
			Dec	1	1
Greylag goose			Jan	7	13
			Feb	13	23
			Mar	2	10
			Apr	12	15
			Oct	1	1
			Nov	26	27
Golden plover	Y	Y	Jan	382	382
			Oct	82	82
			Dec	385	389
Garganey			Oct	2	2
Herring gull			Mar	1	2
			Oct	4	4
			Nov	19	29

Red kite			Mar	2	2
			Apr	2	2
			Dec	1	1
Lapwing.			Jan	262	518
			Feb	326	326
			Mar	4	6
			Apr	6	8
			Oct	182	182
			Nov	17	33
			Dec	89	282
Lesser black-backed gull			Oct	113	121
			Nov	2	2
Little owl			Mar	1	1
Mallard			Jan	2	2
			Feb	14	14
			Mar	6	12
			Apr	4	7
			Oct	153	153
			Nov	20	36
			Dec	17	48
Mute swan			Feb	2	2
Oyster catcher			Mar	2	2
			Apr	3	3
Peregrine			Mar	2	2
Pink-footed goose			Jan	181	181
			Feb	142	142
Shelduck			Feb	2	4
			Apr	2	3
Short-eared owl			Dec	1	1
Teal	Y		Mar	13	15
Yellow-legged gull			Oct	2	2

3.2 Nocturnal Bird Surveys

The Site

3.2.1 Of the 124 fields within the Site, 17 Target Species were recorded in 35 of these at least once during the survey period.

3.2.2 Target Waterbird Species included: coot, curlew, golden plover, grey heron, greylag goose, lapwing, mallard, oystercatcher, pink-footed goose, shelduck, snipe, teal, wigeon and woodcock. Target Raptor Species included barn owl, little owl and tawny owl.

3.2.3 Species which are a qualifying feature of the Lower Derwent Valley SPA and Ramsar included golden plover, teal and wigeon. Species recorded which are a qualifying feature of the Humber Estuary SPA and Ramsar included golden plover and shelduck.

3.2.4 Target species are listed in **Table 3.3**. A full record of species recorded during nocturnal surveys is provided as **Annex 4**.

3.2.5 Secondary Species recorded comprised the following:

- Buzzard;
- Canada goose;
- Egyptian goose;
- Fieldfare;
- Grey partridge; and
- Unknown flock likely be either starling or redwing.

Table 3.3: Nocturnal Survey - Target Species recorded within the Site
SPA/ Ramsar species in **bold**

Species	Lower Derwent Valley SPA Qualifying Species	Number Estuary SPA Qualifying Species	Month	Max count	Total count
Barn owl			Apr	1	1
			Nov	1	1
Common gull			Feb	1	1
Curlew			Mar	2	5
Greylag goose			Jan	5	5
			Feb	96	155
			Apr	2	4
			Dec	79	79
Golden plover	Y	Y	Jan	20	42
Grey heron			Feb	1	1
Lapwing			Feb	15	17
			Mar	2	2
			Nov	90	109
			Dec	20	20
Little owl			Jan	1	1
Mallard			Feb	2	4
			Mar	2	3
			Apr	2	2
			Nov	75	105
			Dec	9	18

Oystercatcher			Mar	4	6
Pink-footed goose			Jan	200	200
Snipe			Feb	1	1
			Nov	1	1
Shelduck		Y	Feb	2	2
			Mar	2	2
Teal	Y		Jan	124	128
			Feb	95	140
			Mar	10	10
			Nov	*	*
			Dec	12	16
Tawny owl			Jan	2	5
			Feb	2	2
			Mar	1	2
			Apr	1	3
			Nov	1	1
			Dec	1	3
Woodcock			Jan	30	50
			Feb	15	32
			Nov	6	14
			Dec	4	7
Wigeon	Y		Jan	8	10
			Feb	49	117
			Mar	*	*
			Nov	*	*
			Dec	4	4
Lapwing/ Golden plover**	Y (golden plover)	Y (golden plover)	Jan	50	50

* Number of birds could not be determined, typically due the observation being of calling birds or as part of a large mixed flock.

**Mixed flock recorded however numbers could not be assigned to individual species.

Wider Survey Area

3.2.6 Of the 389 fields within the Site, 18 Target Species were recorded in 44 of these at least once during the survey period.

3.2.7 Target Waterbird Species included: coot, curlew, greenshank, grey heron, greylag goose, lapwing, mallard, moorhen, mute swan, shelduck, snipe, teal, wigeon and woodcock. Target Raptor Species included barn owl, little owl, short-eared owl and tawny owl.

3.2.8 Species which are a qualifying feature of the Lower Derwent Valley SPA and Ramsar included teal and wigeon. The only species recorded which is a qualifying feature of the Humber Estuary SPA and Ramsar was shelduck.

3.2.9 Target species are listed in **Table 3.4**. A full record of species recorded during nocturnal surveys is provided as **Annex 4**.

3.2.10 The only secondary species recorded were: Canada goose, Egyptian goose and grey partridge.

Table 3.3: Nocturnal Survey - Target Species recorded within the Wider Survey Area
SPA/ Ramsar species in **bold**

Species	Lower Derwent Valley SPA Qualifying Species	Humber Estuary SPA Qualifying Species	Month	Max count	Total count
Barn owl			Jan	1	1
			Feb	2	4
			Mar	1	3
			Apr	1	3
			Nov	1	1
			Dec	1	1
Common gull			Feb	1	1
Curlew			Feb	1	1
			Mar	4	10
			Apr	2	2
			Jan	92	118
Greylag goose			Feb	40	40
			Mar	7	15
			Apr	37	83
			Nov	2	2
			Dec	49	68
Greenshank			Dec	78	78
Grey heron			Mar	1	1
Lapwing			Jan	48	91
			Mar	5	6
			Nov	160	160
			Dec	120	167
Long-eared owl			Dec	1	1
Mallard			Jan	17	17
			Feb	2	10
			Mar	4	6
			Apr	9	22
			Nov	89	109
			Dec	117	121
			Jan	1	1
Moorhen			Mar	1	1
			Jan	1	1
Mute swan			Jan	1	1
Grey partridge			Feb	6	6
			Mar	2	2
Red-legged partridge			Dec	1	1
Snipe			Jan	1	1
			Nov	*	*
Shelduck		Y	Apr	4	6

Short-eared owl			Jan	1	1
Teal	Y		Jan	11	19
			Feb	30	89
			Nov	*	*
			Dec	30	36
			Jan	2	4
Tawny owl			Feb	3	7
			Mar	1	3
			Apr	1	2
			Nov	1	3
			Dec	1	3
			Jan	11	14
Woodcock			Feb	3	12
			Mar	2	2
			Dec	1	3
			Feb	74	134
Wigeon	Y		Nov	*	*

* Number of birds could not be determined, typically due the observation being of calling birds or as part of a large mixed flock

3.3 Summary of Walkover Surveys (Daytime and Nocturnal)

- 3.3.1 Usage of fields within the Site by target species was typically irregular, with only mallard observed using the same field on five occasions (Field 364, between 2 and 39 birds). No other species was observed in the same field on greater than four occasions.
- 3.3.2 Within the Wider Survey Area lapwing were observed using Field 259 on five occasions (between 8 and 87 birds) and Field 269 on six occasions (between 3 and 326 birds). Greylag goose used Field 371 on six occasions (between 1 and 49 birds) and mallard the same field on nine occasions (Between 2 and 20 birds). No other species was observed in the same field on greater than four occasions.
- 3.3.3 Across all Target Species, five fields within the Site were used on five occasions (Fields 42, 71, 95, 103 and 265), two fields on six occasions (Fields 39 and 339), three on seven occasions (Fields 73, 97 and 364) and one on nine occasions (Field 61).
- 3.3.4 Within the Wider Survey Area, across all Target Species two fields were used on five occasions (Field 166 and 259) and two on six occasions (Fields 256 and 379), one on eight occasions (Field 378) and two on nine occasions (Fields 269 and 371).
- 3.3.5 Fields mentioned above are typically located in proximity to each other, with Field 39, 42 and 61 at the Melbourne Airfield, 364 and 378 located either side of an unnamed road north of the village of Laytham, fields 95, 97, 103 and 371 located south-east of Springfield Farm, fields 259 and 269 located nearby to South Acre Farm and Fields 71 and 73 located off Ash Lane. Only fields 166 and 339 are relatively isolated from each other.
- 3.3.6 Across the Site as a whole, no species was observed on every survey with black-headed gull (between 98 and 521 birds) and common gull (5 to 364 birds) being observed on five occasions each, tawny owl (1 to 5 birds) on six occasions, barn owl (1 to 2 birds) and greylag goose (4 to 155 birds) on seven occasions each, lapwing (2 to 181 birds) on nine occasions and mallard (2 to 105 birds) on ten occasions.

3.4 Vantage Point Flight Activity Survey Results

3.4.1 Over the seven surveys undertaken from each of the four vantage points between October 2023 and April 2024 a total of 15 target species were recorded, comprised of: red kite, pink-footed goose, lapwing, snipe, jack snipe, mute swan, golden plover, short-eared owl, greylag goose, barn owl, curlew, grey heron, peregrine, shelduck and marsh harrier.

3.4.2 The only species recorded that is a qualifying species for the Lower Derwent Valley SPA and Ramsar was golden plover. Species which are a qualifying feature of the Humber Estuary SPA and Ramsar site included golden plover and shelduck.

3.4.3 Flocks exceeding 50 individuals included greylag goose (one flock of 84 birds), golden plover (two flocks of 60 and 78 birds), lapwing (eight flocks of between 54 and 430 birds) and pink-footed goose (seven flocks of between 58 and 300 birds).

3.4.4 Observations of target species were typically of species flying over the site (56 of 65 observations). Birds observed landing within the Survey Area included lapwing (between three and 190 birds on four occasions) barn owl (1 bird on two occasions), pink-footed goose (204 birds) and greylag goose (1 bird one on occasion)

3.4.5 Birds recorded during the vantage point flight activity surveys both on the ground and in flight are summarised in **Table 3.6**. Full survey effort is shown in **Annex 4** with the details of each flight observation shown in **Annex 11**.

Table 3.6: Vantage point flight activity survey results

SPA/ Ramsar species in **bold**

VP	Month	In flight (F) or grounded (G)	Species	Number birds
1	October	F	Red kite	1
	October	F	Red kite	1
	November	F	Mute swan	2
	November	F	Lapwing	19
	December	F	Red kite	1
	January	F/G	Lapwing	89
	January	F	Pink-footed goose	204
	January	F/G	Pink-footed goose	204
	February	F	Curlew	1
	February	F	Lapwing	2
	February	F	Lapwing	13
	February	F	Greylag goose	2
	March	F	Grey heron	1
2	April	F	Shelduck	3
	October	F	Pink-footed goose	30
	October	F	Lapwing	80
	October	F	Pink-footed goose	80
	October	F	Pink-footed goose	135
	November	F	Golden plover	78
	November	F	Lapwing	70
	November	F	Lapwing	34
	January	F	Golden plover	60
	January	F/G	Lapwing	190

	January	F/G	Lapwing	4
	January	F	Lapwing	2
	January	F	Lapwing	1
	January	F	Lapwing	2
	January	F	Golden plover	45
	January	F	Red kite	1
	January	F/G	Lapwing	3
	January	F	Red kite	1
	February	F	Lapwing	72
	February	F	Lapwing	430
	February	F	Greylag goose	2
	March	F	Lapwing	6
	April	F	Greylag goose	2
	April	F	Grey heron	1
	April	F	Red kite	1
3	October	F	Red kite	1
	October	F	Red kite	1
	November	F	Lapwing	54
	November	F	Lapwing	54
	November	F	Lapwing	21
	November	F	Pink-footed goose	32
	November	F	Red kite	2
	December	F	Pink-footed goose	58
	January	F	Greylag goose	84
	January	F	Lapwing	22
	January	F	Lapwing	22
	January	F	Lapwing	22
	January	F	Greylag goose	7
	January	F	Greylag goose	22
	February	F	Pink-footed goose	300
	March	F	Peregrine	1
	April	F	Marsh harrier	1
	April	F/G	Greylag goose	1
4	October	F	Snipe	1
	October	F	Jack snipe	1
	October	F	Pink-footed goose	127
	November	F	Short-eared owl	3
	January	F/G	Barn owl	1
	January	F/G	Barn owl	1
	February	F	Greylag goose	2
	April	F	Grey heron	1

Confidential

Figure 1: Walkover Survey Access Plan

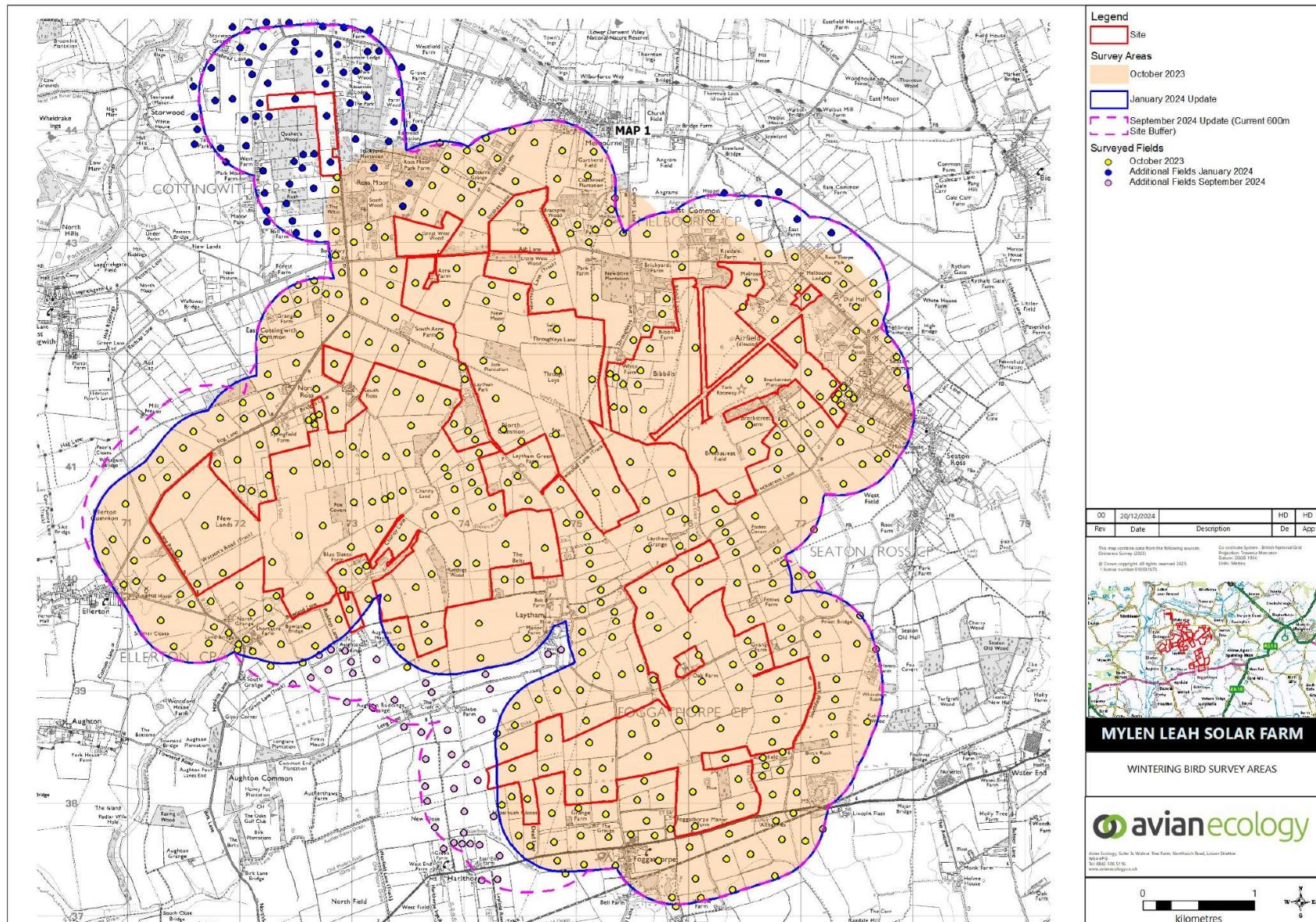


Figure 2a: Field Number Plan

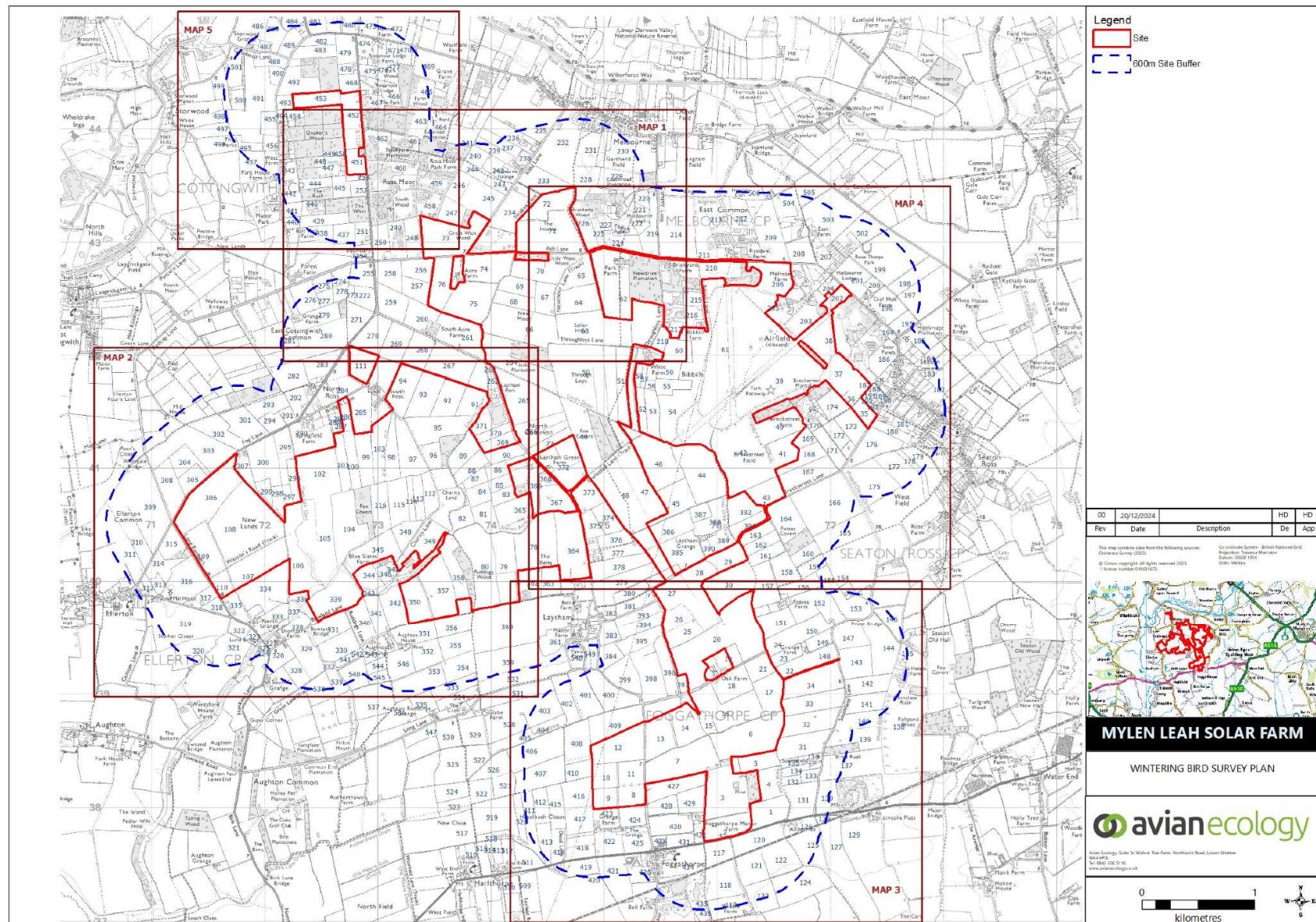


Figure 2b: Field Number Plan

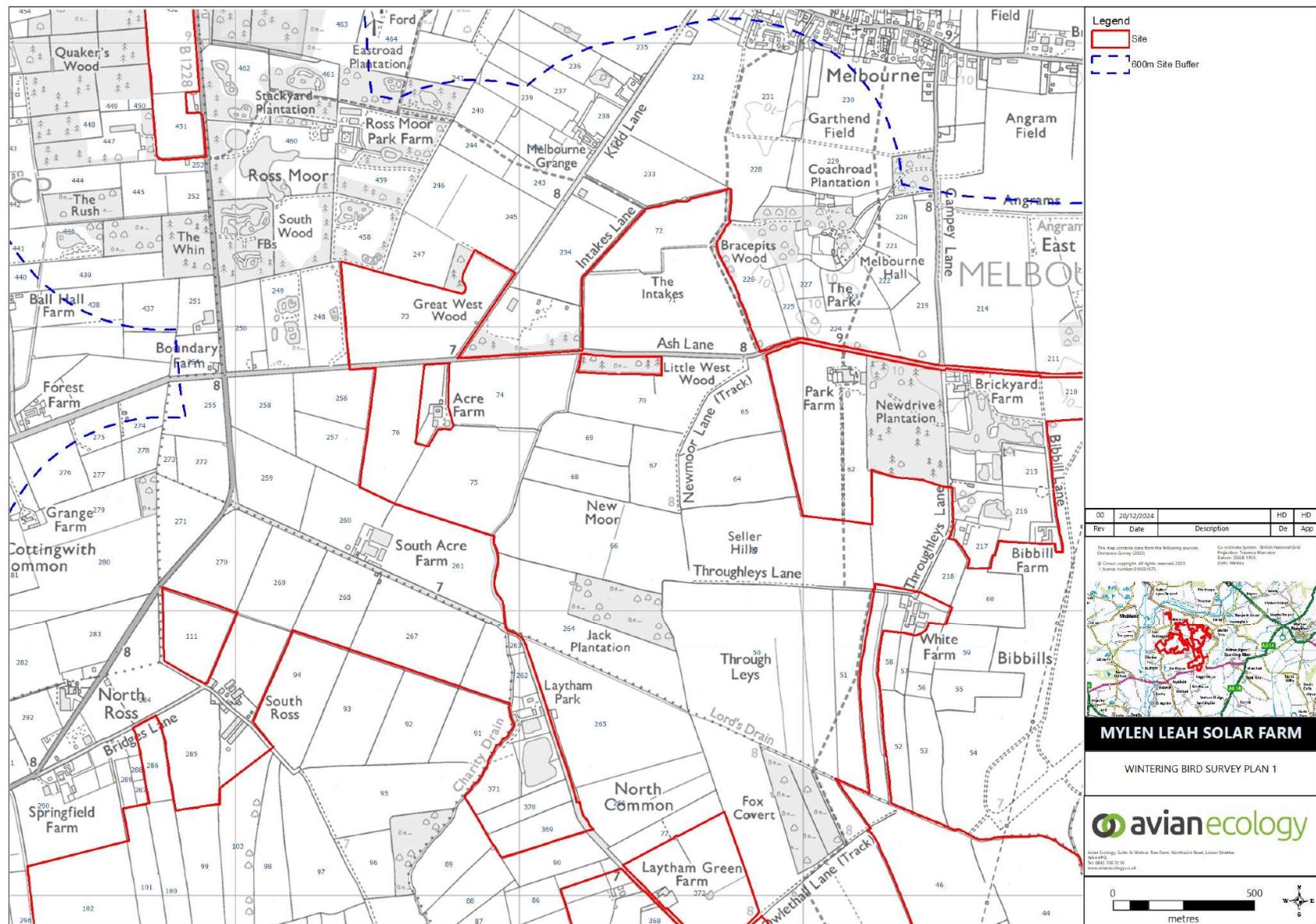


Figure 2c: Field Number Plan

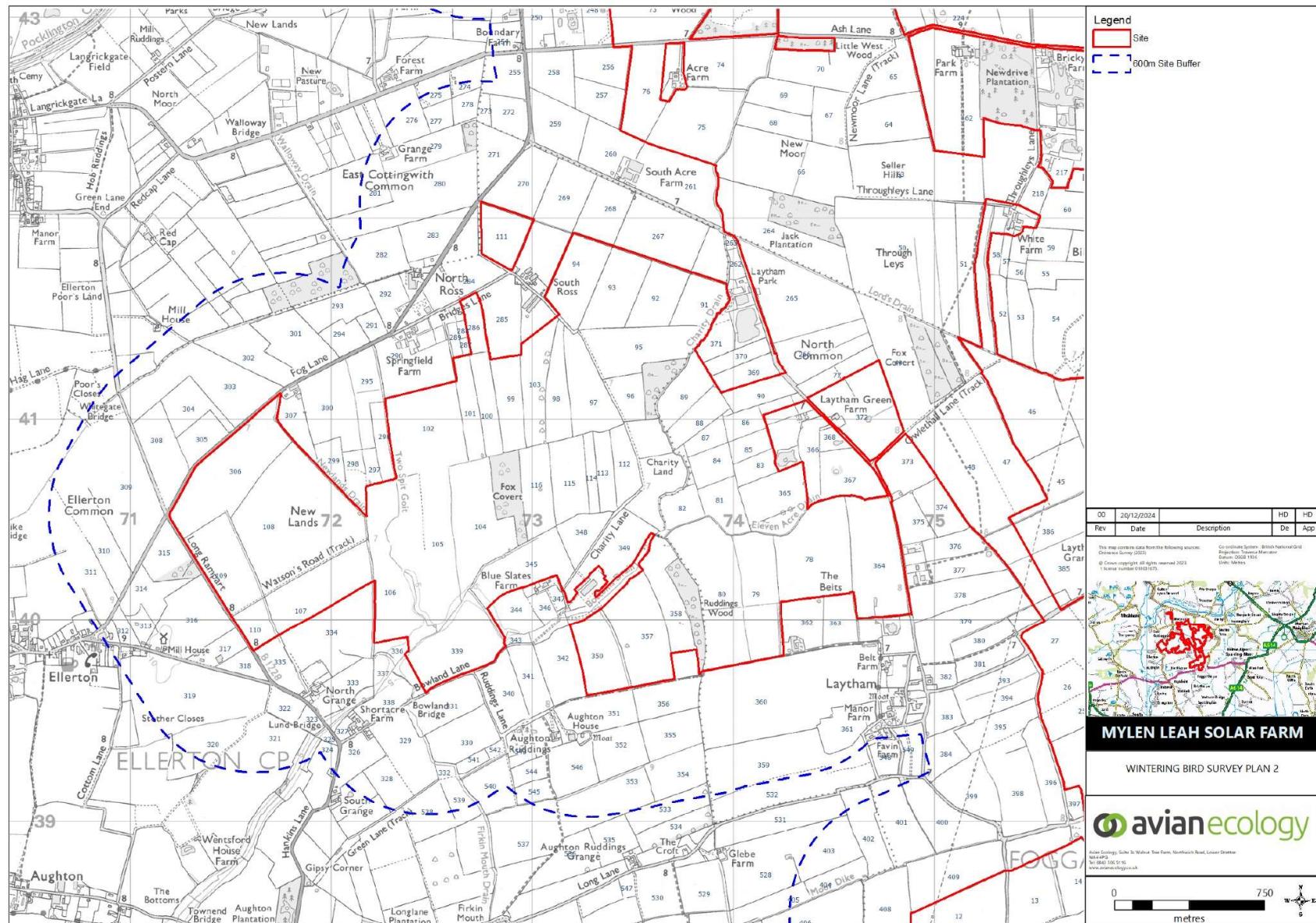


Figure 2d: Field Number Plan

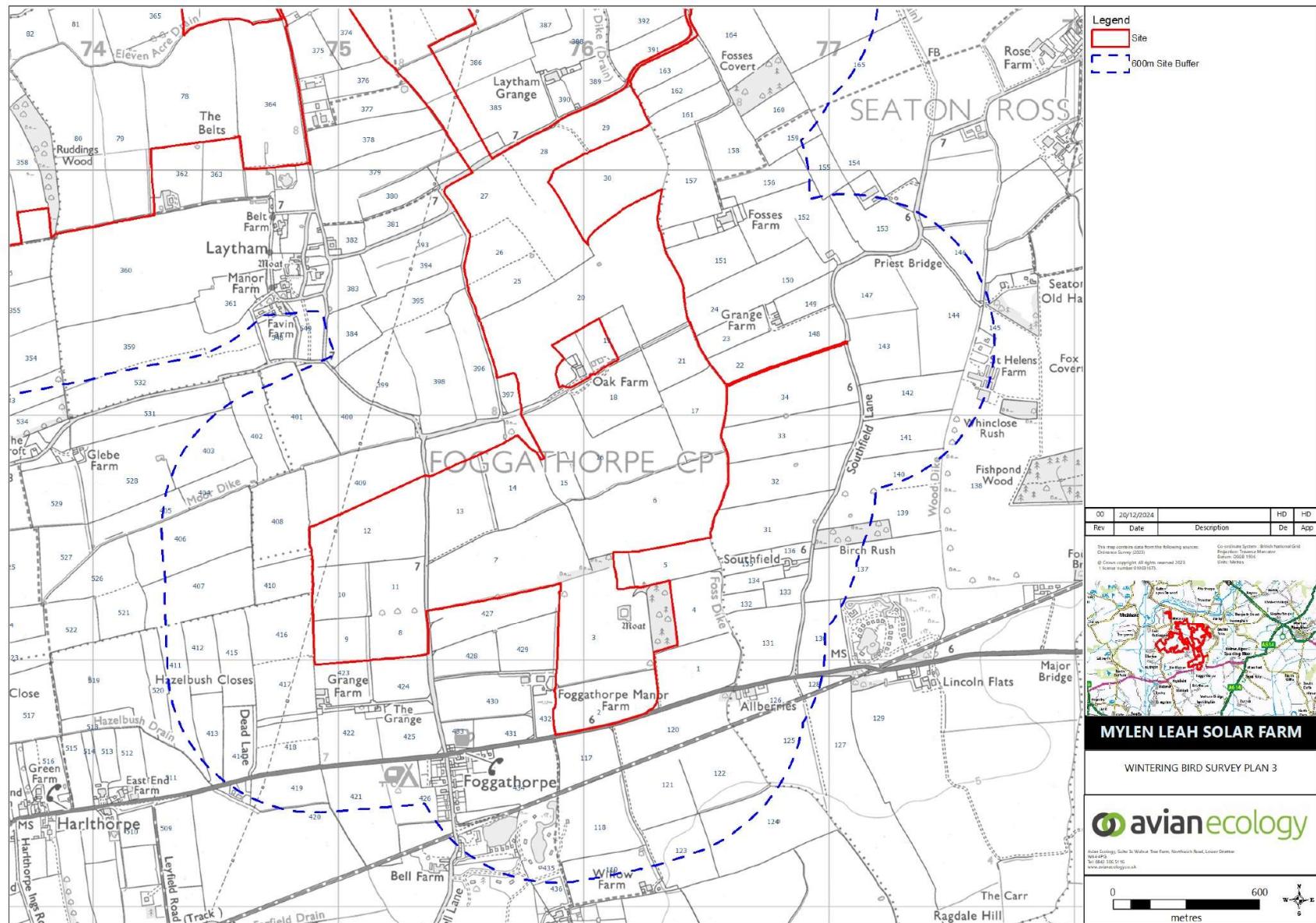


Figure 2e: Field Number Plan

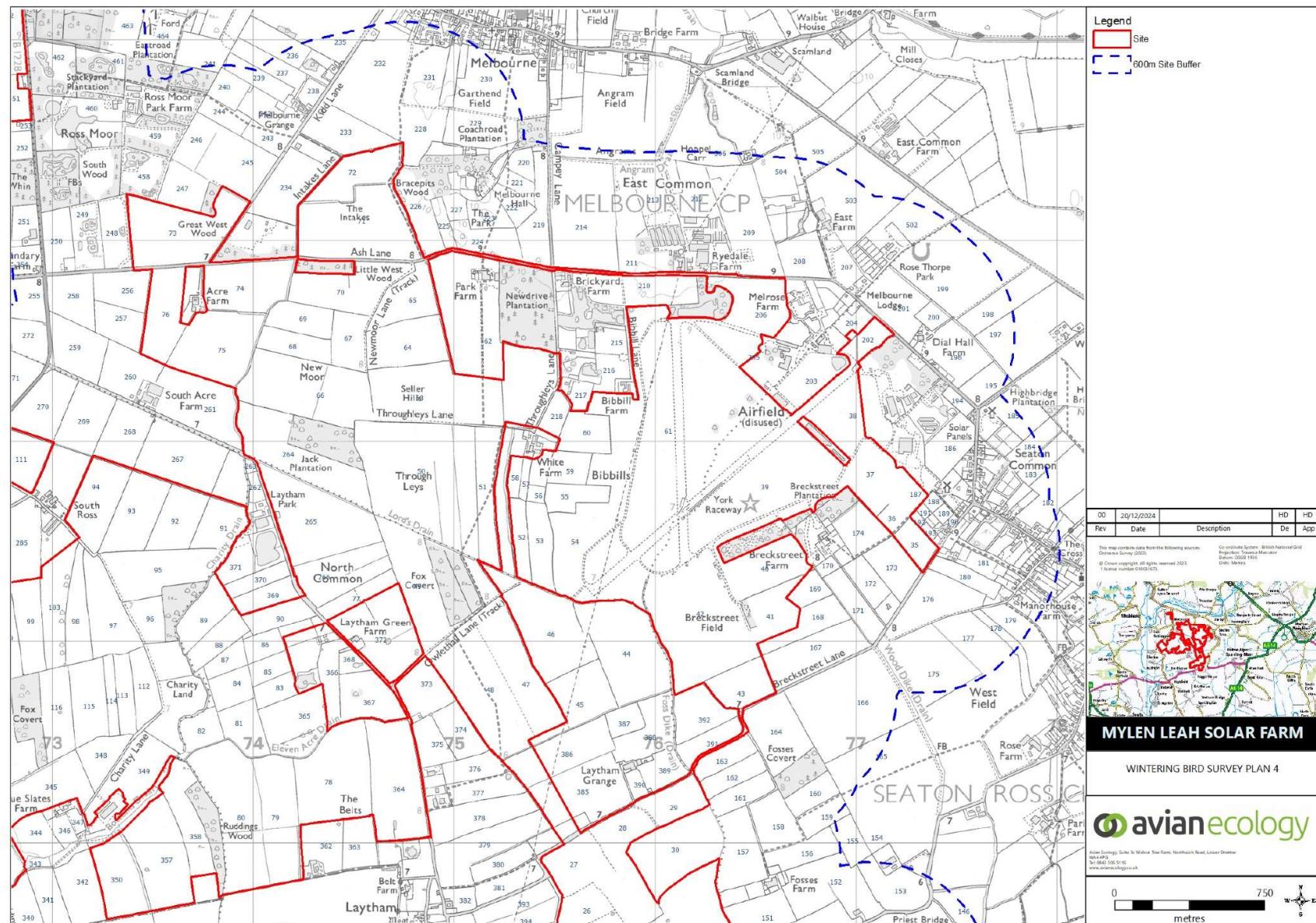


Figure 2f: Field Number Plan

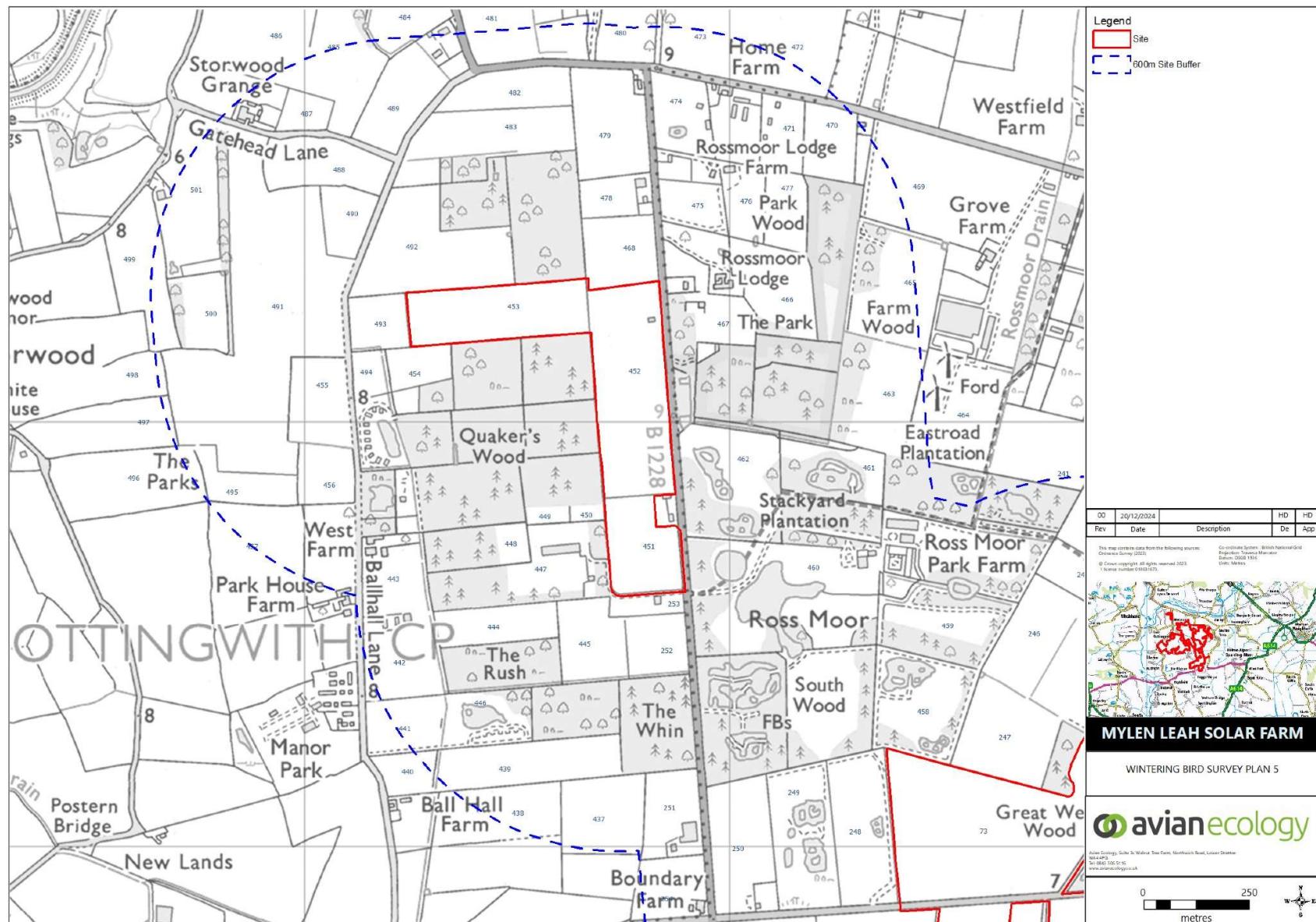
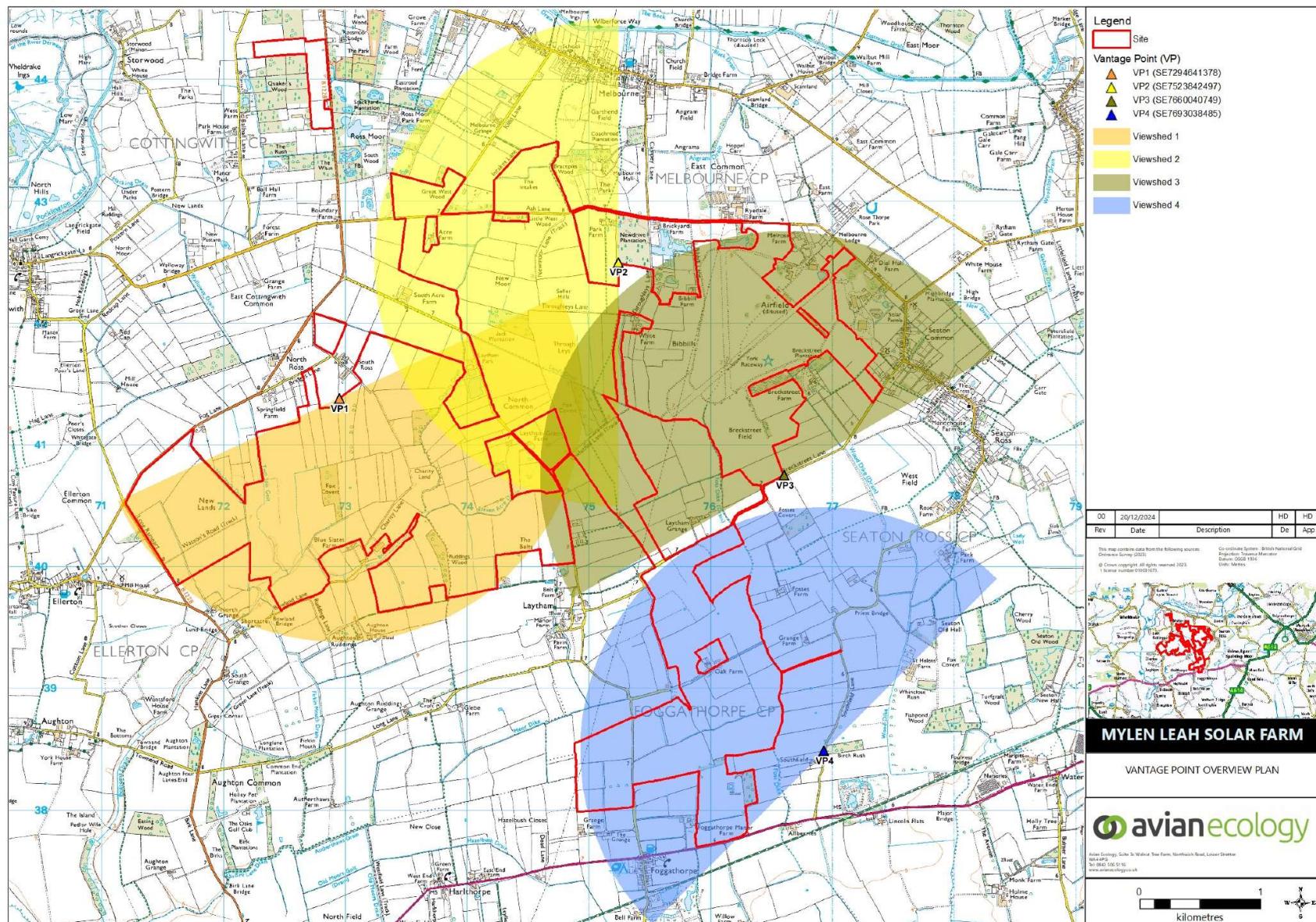


Figure 3: Vantage Point Viewshed Plan



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:

- Annex 1 – European Birds Directive Annex I species.
- S1 – Schedule 1 of the Wildlife & 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); and,
- NERC S41 - species listed as rare and most threatened on the NERC Act (2006);

Table A1.1: 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; RBBP
Mute Swan	<i>Cygnus olor</i>	Green
Egyptian Goose	<i>Alopochen aegyptiaca</i>	
Shelduck	<i>Tadorna tadorna</i>	Amber
Garganey	<i>Spatula querquedula</i>	Amber; Sch1.1; RBBP
Wigeon	<i>Mareca penelope</i>	Amber; RBBP
Mallard	<i>Anas platyrhynchos</i>	Amber
Teal	<i>Anas crecca</i>	Amber
Goosander	<i>Mergus merganser</i>	Green
Grey Partridge	<i>Perdix perdix</i>	Red; Sec41
Red-legged Partridge	<i>Alectoris rufa</i>	
Moorhen	<i>Gallinula chloropus</i>	Amber
Coot	<i>Fulica atra</i>	Green
Oystercatcher	<i>Haematopus ostralegus</i>	NT; Amber
Lapwing	<i>Vanellus vanellus</i>	NT; Red; Sec41
Golden Plover	<i>Pluvialis apricaria</i>	Green; Ann1
Whimbrel	<i>Numenius phaeopus</i>	Red; Sch1.1; RBBP
Curlew	<i>Numenius arquata</i>	NT; Red; Sec41
Dunlin	<i>Calidris alpina</i>	Red
Woodcock	<i>Scolopax rusticola</i>	Red
Jack Snipe	<i>Lymnocryptes minimus</i>	Green; RBBP
Snipe	<i>Gallinago gallinago</i>	Amber
Greenshank	<i>Tringa nebularia</i>	Amber; Sch1.1; RBBP
Black-headed Gull	<i>Chroicocephalus ridibundus</i>	Amber
Common Gull	<i>Larus canus</i>	Amber
Herring Gull	<i>Larus argentatus</i>	Red; Sec41
Yellow-legged Gull	<i>Larus michahellis</i>	Amber; RBBP
Lesser Black-backed Gull	<i>Larus fuscus</i>	Amber
Grey Heron	<i>Ardea cinerea</i>	Green
Little Egret	<i>Egretta garzetta</i>	Green; Ann1; RBBP
Sparrowhawk	<i>Accipiter nisus</i>	Amber

Common name	Species name	Conservation status
Marsh Harrier	<i>Circus aeruginosus</i>	Amber; Sch1.1; Ann1; RBBP
Red Kite	<i>Milvus milvus</i>	NT; Green; Sch1.1 & 1A; Ann1
Buzzard	<i>Buteo buteo</i>	Green
Barn Owl	<i>Tyto alba</i>	Green; Sch1.1
Little Owl	<i>Athene noctua</i>	
Short-eared Owl	<i>Asio flammeus</i>	Amber; Ann1; RBBP
Tawny Owl	<i>Strix aluco</i>	Amber
Kestrel	<i>Falco tinnunculus</i>	Amber
Peregrine	<i>Falco peregrinus</i>	Green; Sch1.1; Ann1; RBBP
Raven	<i>Corvus corax</i>	Green
Skylark	<i>Alauda arvensis</i>	Red; Sec41
Starling	<i>Sturnus vulgaris</i>	Red; Sec41
Song Thrush	<i>Turdus philomelos</i>	Amber; Sec41
Redwing	<i>Turdus iliacus</i>	NT; Amber; Sch1.1; RBBP
Blackbird	<i>Turdus merula</i>	Green
Fieldfare	<i>Turdus pilaris</i>	Red; Sch1.1; RBBP
Pied Wagtail	<i>Motacilla alba yarellii</i>	Amber
Meadow Pipit	<i>Anthus pratensis</i>	NT; Amber
Chaffinch	<i>Fringilla coelebs</i>	Green
Linnet	<i>Linaria cannabina</i>	Red; Sec41
Corn Bunting	<i>Emberiza calandra</i>	Red; Sec41
Yellowhammer	<i>Emberiza citrinella</i>	Red; Sec41
Reed Bunting	<i>Emberiza schoeniclus</i>	Amber; Sec41

ANNEX 2: NON-BREEDING BIRD SURVEY EFFORT

Table A2.1: Survey Conditions Criteria

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	4	NE	Heavy showers	4					
Fresh breeze	5	ENE	Heavy showers	4					
Strong breeze	6	E							
Mod. gale	7	Etc	Visibility		Snow		Frost		
Fresh gale	8		Poor	0	None	0	None	0	
Strong gale	9		< 1km	1	On site	1	Ground	1	
Whole gale	10		>1km	2	High ground	2	All day	2	
Storm	11								

Table A2.2: Walkover Survey Effort 2023/24

Date	Surveyor	Wind Speed	Wind Direction	Rain	Cloud Cover	Cloud Height	Visibility	Frost	Snow
03/10/2023	GT	5	W	0	2/8	2	2	0	0
10/10/2023	GT	2	SW	1	8/8	2	2	0	0
11/10/2023	GT	4	W	0	5/8	2	2	0	0
13/10/2023	GT	4	NW	3	8/8	1	2	0	0
10/11/2023	GT	4	W	0	2/8	2	2	0	0
12/11/2023	GT	2	SE	0	3/8	2	2	1	0
13/11/2023	GT	5	S	0	6/8	2	2	1	0
15/11/2023	GT	5	S	0	5/8	2	2	0	0
04/12/2023	GT	2	NE	3	8/8	2	2	0	0
05/12/2023	GT	2	NE	3	8/8	2	2	1	0
06/12/2023	GT	0	N/A	0	0/8	N/A	2	1	0
07/12/2023	GT	4	SE	3	8/8	2	2	0	0
19/01/2024	GT	3	SW	0	3/8	2	2	1	0
21/01/2024	GT	5	S	0	2/8	2	2	0	0
23/01/2024	GT	5	SW	3	8/8	2	2	0	0
24/01/2024	GT	4	W	0	8/8	2	2	0	0
14/02/2024	GT	3	SW	0	8/8	2	2	0	0
15/02/2024	GT	1	S	0	8/8	2	2	0	0
16/02/2024	GT	3	W	3	5/8	2	2	0	0
17/02/2024	GT	1	S	0	5/8	2	2	0	0
09/03/2024	GT	2	E	0	8/8	2	2	0	0
10/03/2024	GT	4	E	4	8/8	2	2	0	0
11/03/2024	GT	4	NE	1	8/8	2	2	0	0
13/03/2024	GT	4	SW	0	3/8	2	2	0	0
09/04/2024	GT	2	S	0	3/8	2	2	0	0
10/04/2024	GT	5	S	0	8/8	2	2	0	0
11/04/2024	GT	3	W	0	5/8	2	2	0	0
13/04/2024	GT	5	W	0	6/8	2	2	0	0

Table 4.4: Nocturnal Bird Survey Effort 2023/24

Date	Surveyor	Wind Speed	Wind Direction	Rain	Cloud Cover	Cloud Height	Visibility	Frost	Snow
20/11/2023	GT	1	NW	1	8/8	2	2	0	0
21/11/2023	GT	5	NE	0	7/8	2	2	0	0
22/11/2023	GT	3	SW	0	6/8	2	2	0	0
23/11/2023	GT	5	W	0	6/8	2	2	0	0
22/12/2023	GT	6	NW	0	6/8	2	2	0	0
27/12/2023	GT	5	SE	2	8/8	2	2	0	0
28/12/2023	GT	5	W	2	8/8	2	2	0	0
29/12/2023	GT	5	W	0	4/8	2	2	0	0
10/01/2024	GT	3	E	0	6/8	2	2	0	0
11/01/2024	GT	2	N	1	8/8	2	2	0	0
12/01/2024	GT	1	NW	0	8/8	2	2	0	0
13/01/2024	GT	4	NW	0	4/8	2	2	0	0
14/02/2024	GT	2	SW	0	5/8	2	2	0	0
15/02/2024	GT	2	S	1	7/8	2	2	0	0
16/02/2024	GT	1	W	1	8/8	2	2	0	0
17/02/2024	GT	0	S	0	6/8	2	2	0	0
22/03/2024	GT	4	W	0	8/8	2	2	0	0
23/03/2024	GT	5	W	0	5/8	2	2	0	0
24/03/2024	GT	4	NW	0	2/8	2	2	0	0
27/03/2024	GT	3	E	0	3/8	2	2	0	0
11/04/2024	GT	3	W	0	3/8	2	2	0	0
12/04/2024	GT	2	W	0	3/8	2	2	0	0
13/04/2024	GT	4	W	0	6/8	2	2	0	0
14/04/2024	GT	4	W	0	3/8	2	2	0	0

Table 4.5: Vantage Point Survey Effort 2023/24

Date	VP	Surveyor	Start Time	Finish Time	VP Hours	Wind Speed	Wind Direction	Rain	Cloud Cover	Cloud Height	Visibility	Frost	Snow
17/10/2023	1	TI	13:40	16:40	3	5/5/6	ESE/ESE/ESE	0/0/0	6/7/5	1/1/1	2/2/2	0/0/0	0/0/0
17/10/2023	2	TI	10:30	13:30	3	3/4/5	ESE/ESE/ESE	0/0/0	5/4/4	1/1/1	2/2/2	0/0/0	0/0/0
17/10/2023	3	GT	13:40	16:40	3	5/5/5	E/E/E	0/0/0	2/2/2	2/2/2	2/2/2	0/0/0	0/0/0
17/10/2023	4	GT	10:20	13:20	3	2/4/4	E/E/E	0/0/0	6/2/3	2/2/2	2/2/2	0/0/0	0/0/0
22/11/2023	1	GT	11:55	14:55	3	5/5/5	W/W/W	0/0/0	8/8/8	2/2/2	2/2/2	0/0/0	0/0/0
22/11/2023	2	GT	08:40	11:40	3	4/4/4	W/W/W	0/0/0	8/8/8	2/2/2	2/2/2	0/0/0	0/0/0
21/11/2023	3	GT	11:20	14:20	3	3/3/3	N/N/N	0/0/0	6/5/6	2/2/2	2/2/2	0/0/0	0/0/0
20/11/2023	4	GT	13:20	16:20	3	2/2/2	NW/NW/NW	0/2/0	8/8/8	2/2/2	2/1/2	0/0/0	0/0/0
28/12/2023	1	GT	12:00	15:00	3	5/5/5	SW/SW/SW	2/0/0	8/4/5	2/2/2	2/2/2	0/0/0	0/0/0
22/12/2023	2	GT	13:05	16:05	3	5/5/5	WNW/WNW/WNW	0/0/0	6/6/4	2/2/2	2/2/2	0/0/0	0/0/0
19/12/2023	3	GT	08:30	11:30	3	2/2/2	NW/NW/NW	1/0/0	8/8/7	1/2/2	2/2/2	0/0/0	0/0/0
17/12/2023	4	GT	11:35	14:35	3	3/3/2	SW/SW/SW	0/0/0	4/3/2	2/2/2	2/2/2	0/0/0	0/0/0
12/01/2024	1	GT	11:40	14:40	3	1/1/1	NW/NW/NW	0/0/0	8/8/8	2/2/2	2/2/2	0/0/0	0/0/0
15/01/2024	2	GT	13:15	16:15	3	4/4/4	NW/NW/NW	0/0/0	0/0/0	0/0/0	2/2/2	0/0/0	0/0/0
08/01/2024	3	GT	13:15	16:15	3	3/3/3	NE/NE/NE	0/0/0	8/8/8	2/2/2	2/2/2	0/0/0	0/0/0
03/01/2024	4	GT	12:30	15:30	3	1/1/1	W/W/W	0/0/0	7/6/7	2/2/2	2/2/2	0/0/0	0/0/0
20/02/2024	1	GT	09:00	12:00	3	4/3/3	SW/SW/SW	0/0/0	4/4/3	2/2/2	2/2/2	0/0/0	0/0/0
16/02/2024	2	GT	13:30	16:30	3	2/2/2	W/W/W	0/0/0	7/7/7	2/2/2	2/2/2	0/0/0	0/0/0
18/02/2024	3	GT	14:05	17:05	3	2/2/2	W/W/W	0/0/0	3/3/3	2/2/2	2/2/2	0/0/0	0/0/0
10/02/2024	4	GT	08:15	11:15	3	1/1/1	SE/SE/SE	0/0/0	2/?/0	2/?/0	1/0/1	0/0/0	0/0/0
27/03/2024	1	GT	15:40	18:40	3	4/4/3	SE/SE/SE	0/0/0	4/6/8	2/2/2	2/2/2	0/0/0	0/0/0

24/03/2024	2	GT	15:30	18:30	3	4/2/1	NW/NW/NW	0/0/0	2/4/2	2/2/2	2/2/2	0/0/0	0/0/0
04/03/2024	3	GT	13:00	16:00	3	3/4/4	E/E/E	0/0/0	7/7/8	2/2/2	2/2/2	0/0/0	0/0/0
10/03/2024	4	GT	12:00	15:00	3	4/4/4	E/E/E	4/4/4	8/8/8	2/2/2	2/2/2	0/0/0	0/0/0
13/04/2024	1	GT	15:45	18:45	3	5/5/5	W/W/W	0/0/4	6/6/8	2/2/2	2/2/2	0/0/0	0/0/0
30/04/2024	2	GT	08:10	11:10	3	4/5/5	SE/SE/SE	0/0/0	2/2/2	2/2/2	2/2/0	0/0/0	0/0/0
07/04/2024	3	GT	13:30	16:30	3	5/5/5	S/S/S	3/0/2	7/8/7	2/2/2	2/2/2	0/0/0	0/0/0
10/04/2024	4	GT	17:10	20:10	3	5/5/4	S/S/S	0/0/0	8/8/8	2/2/2	2/2/2	0/0/0	0/0/0

ANNEX 3 – WALOVER SURVEYS: TARGET SPECIES RECORDED 2023/24

Table A5.1: Target Species Recorded within the Draft Order Limits 2023/2024

* indicates number of birds unknown, typically due to birds only heard calling or part of a large mixed flock.

	Common Gull				5								
	Golden Plover				285								
	Lapwing				66								
	Red Kite	(1)											
76	Black-headed Gull								6				
	Common Gull								78				
	Egyptian Goose										2		
	Lapwing						28						
83	Canada Goose											2	
86	Wigeon									*			
90	Mallard										2		
93	Lapwing			20									
	Mallard	27											
	Wigeon							49					
94	Coot							(1)					
	Greylag Goose							59					
	Lapwing	90											
	Mallard	75											
	Snipe	(1)											
95	Black-headed Gull						2						
	Curlew										2		
	Greylag Goose			79									
	Tawny Owl										1		
	Teal			12									
	Wigeon			4									
	Woodcock	2		1									
96	Tawny Owl									1			
97	Black-headed Gull						2						
	Greylag Goose										2		
	Mallard			7						2			2

	Oystercatcher									2			
	Shelduck									2			4
	Teal									10			
	Wigeon						8		36				
98	Tawny Owl		1										
	Wigeon								26				
	Woodcock		1										
102	Black-headed Gull							32					
	Common Gull							68					
	Curlew									2	2		2
	Herring Gull							1					
	Lapwing							15					
	Oystercatcher									4			
	Pink-footed Goose							117					
103	Mallard	*		2									
	Shelduck												2
	Teal	*		(4)		4							
	Wigeon	*							6				
	Woodcock					1			4				
104	Black-headed Gull							22					
	Common Gull							88					
	Pink-footed Goose							38					
	Golden Plover										630		
106	Mallard								*	2			
	Pink-footed Goose						200						
	Teal								*				
	Wigeon					2			*				
109	Grey Partridge	9											
111	Golden Plover					20							

	Lapwing						15			2	
	Woodcock						4				
139	Tawny Owl						3				
144	Lapwing						2				
	Woodcock					1					
146	Grey Partridge		6								
148	Curlew							4			
	Greylag Goose							7		28	
	Mallard								9		1
150	Little Egret			(1)							
153	Tawny Owl							1			
154	Lapwing							1			
	Mallard						*		2		
	Teal						*				
	Wigeon						74				
	Woodcock							2			
160	Tawny Owl						2				
161	Tawny Owl	1									
162	Little Owl								1		
163	Greylag Goose								(2)		
164	Black-headed Gull			122							
	Tawny Owl	(1)					1				
	Woodcock						1				
166	Black-headed Gull			3							
	Lapwing			12						2	
	Red Kite									(2)	
	Tawny Owl	1							1		
	Teal						20				
	Woodcock						2				
167	Grey Partridge						6				
	Lapwing								4		6

	Pink-footed Goose								439		457		
	Shelduck										2		
	Snipe							1					
267	Black-headed Gull				64								
	Common Gull				3								
	Golden Plover	82			29								
	Lapwing	182					1						
	Woodcock												
	Barn Owl							1					
268	Black-headed Gull		103		1		38		149				
	Common Gull				3		2		2				
	Curlew								2	3			
	Dunlin			67									
	Egyptian Goose					2							
	Golden Plover				385								
	Greenshank		78										
	Greylag Goose					92				1	37		
	Lapwing	*	3	39	11	48		326					
	Mallard	*									4		
	Shelduck										4		
	Snipe	*											
	Teal	*		6		8							
	Wigeon	*											
270	Barn Owl										1		
275	Canada Goose	31											
	Garganey	2											
	Greylag Goose	1											
276	Greylag Goose						7						
280	Barn Owl								(1)				

	Lapwing				89								
326	Black-headed Gull											5	
	Common Gull											5	
329	Greylag Goose											2	
	Little Egret											1	
	Red Kite				(1)								
331	Common Gull											4	
333	Shelduck								2				
	Teal											2	
334	Black-headed Gull								630				
	Common Gull								64				
339	Grey Partridge										2	2	
	Lapwing										2		
	Mallard									1		2	
	Teal							4					
	Woodcock	6				30		1					
359	Black-headed Gull			61									
	Common Gull			312									
	Curlew										2		
	Greylag Goose										2		
	Herring Gull			19									
	Lesser Black-backed Gull			2									
360	Black-headed Gull			20									
	Common Gull			205									
	Herring Gull			2									
361	Tawny Owl				1						1		
364	Greylag Goose								9				
	Lapwing		*								2		
	Mallard		*	39	*			2	6				

	Pink-footed Goose								1				
	Shelduck								2				
	Teal	*		*		*							
	Wigeon	*											
367	Greylag Goose								4				
	Mallard								2				
	Tawny Owl									1			
	Woodcock								2				
368	Moorhen					1							
369	Greylag Goose									2			
370	Canada Goose										2		
	Greylag Goose									2			
	Mallard		20		14								
	Oystercatcher										3		
	Red Kite									(2)			
371	Canada Goose								9		12	4	12
	Coot							1					
	Egyptian Goose	2	2										
	Greylag Goose	2	1	49						1		12	2
	Mallard	20	16	4	17			2		2	6	9	4
	Oystercatcher										2		
372	Canada Goose									(1)			
	Greylag Goose							6					
	Mute Swan					1							
376	Curlew									1			
378	Black-headed Gull				43		1						
	Canada Goose										4	4	
	Common Gull				11		7						
	Curlew							1		2		2	2
	Egyptian Goose							2					

	Grey Heron									1			
	Greylag Goose									6			6
	Lapwing							29					
	Little Egret												2
	Mallard	89			10					4			
	Shelduck											2	1
	Tawny Owl			1									
	Teal							10					
	Wigeon							60					
379	Black-headed Gull				81								
	Common Gull				18								
	Greylag Goose			19		26			2				
	Lapwing						58			5			
	Mallard		117			17			14				
	Shelduck								2				
	Tawny Owl			1									
	Teal			30		11							
	Lapwing						3						
381	Curlew										2		
	Lapwing						17						
385	Lapwing						28						
	Woodcock							1					
389	Common Gull	1											
	Herring Gull		2										
	Lesser Black-backed Gull	5											
391	Teal						9						
	Woodcock						3						
392	Woodcock			1									
393	Mallard						2						
	Moorhen								1				

ANNEX 4 – WALKOVER SURVEYS: SECONDARY SPECIES RECORDED 2023/24

Field	Species	2023						2024					
		Oct		Nov		Dec		Jan		Feb		Mar	
		Walkover	Nocturnal										
11	Buzzard												2
	Kestrel							1					
12	Buzzard			1									
	Chaffinch												15
	Linnet												60
	Pied Wagtail												2
	Reed Bunting												15
	Skylark			8									
	Starling												110
18	Yellowhammer			30									35
	Starling												281
20	Blackbird												24
	Buzzard	1											
	Redwing												2
28	Corn Bunting												9
	Buzzard												1
31	Fieldfare							17					
	Blackbird					25							
	Fieldfare					20							
32	Redwing					15							
	Buzzard				1		1						
	Starling						190						
41	Buzzard	1											
42	Fieldfare									12			
53	Kestrel				1								
54	Fieldfare						60				30		
	Redwing					25							

	Starling					400				
61	Buzzard		1	1	1					1
	Fieldfare			44		14		164		28
	Linnet	30								
	Meadow Pipit	55								
	Redwing						21			
	Skylark					6				
	Starling			125				325		136
66	Lapwing/ Golden plover					50				
71	Kestrel									1
73	Buzzard					1				
99	Sparrowhawk	(1)								
103	Fieldfare				12					
109	Starling					30				
110	Buzzard	1								
111	Starling									20
143	Fieldfare					40				
147	Fieldfare					64				
149	Fieldfare					9				
463	Buzzard									1
166	Buzzard									(1)
173	Buzzard									1
174	Fieldfare					26				
175	Fieldfare	88								
	Starling	12								
206	Buzzard			1						
258	Buzzard				1					
	Fieldfare						26			
	Starling						80			
259	Redwing						107			
261	Fieldfare						49			
	Kestrel			1						1

	Starling						112					
264	Fieldfare						44					
	Redwing						17					
	Starling						38					
	Fieldfare	128										
266	Redwing	21										
	Starling						12					
	Kestrel				1				1			
267	Kestrel											1
284	Kestrel											
292	Kestrel						1					
	Starling								460			
303	Yellowhammer								6			
317	Buzzard						1					
319	Kestrel	1										
	Starling						35					
320	Starling								95			
334	Starling								4600			
339	Unidentified flock, likely starling or redwing									100		
	Fieldfare						15	2				
	Starling						60					
340	Buzzard										1	
	Kestrel	1										
359	Buzzard	1										
364	Buzzard					1						
369	Buzzard			1								
370	Kestrel			1								
372	Kestrel						1					
378	Fieldfare						11					
	Redwing						40					
	Starling						140					

ANNEX 5 – VANTAGE POINT SURVEY TARGET SPECIES DATA 2023/24

Date	VP	In flight (F)/ Grounded (G)	Species	Number birds	Start Time	Duration (sec)	Height band 1 0-10m	Height band 2 10-50m	Height band 3 50m+
17/10/2023	1	F	Red kite	1	14:36	120	0	0	120
17/10/2023	1	F	Red kite	1	14:50	90	0	90	0
17/10/2023	2	F	Pink-footed goose	30	13:13	60	15	15	30
17/10/2023	2	F	Lapwing	80	12:02	40	0	30	10
17/10/2023	2	F	Pink-footed goose	80	10:52	60	15	15	30
17/10/2023	2	F	Pink-footed goose	135	11:10	60	0	0	60
17/10/2023	3	F	Red kite	1	14:35	420	0	0	420
17/10/2023	3	F	Red kite	1	16:20	120	75	45	0
17/10/2023	4	F	Snipe	1	11:46	45	0	15	30
17/10/2023	4	F	Jack snipe	1	11:46	45	0	15	30
17/10/2023	4	F	Pink-footed goose	127	11:07	90	0	0	90
20/11/2023	4	F	Short-eared owl	3	15:54	0	0	0	0
21/11/2023	3	F	Lapwing	54	11:43	35	0	35	0
21/11/2023	3	F	Lapwing	54	11:46	75	0	0	75
21/11/2023	3	F	Lapwing	21	11:55	210	0	210	0
21/11/2023	3	F	Pink-footed goose	32	12:08	150	0	0	150
21/11/2023	3	F	Red kite	2	12:26	360	0	195	65
22/11/2023	1	G	Egyptian goose	2	12:00	-	0	0	0
22/11/2023	1	F	Mute swan	2	12:37	45	0	45	0
22/11/2023	1	F	Lapwing	19	12:46	75	30	45	0
22/11/2023	2	F	Golden plover	78	11:11	90	0	0	90
22/11/2023	2	F	Lapwing	70	11:11	90	0	0	90
22/11/2023	2	F	Lapwing	34	11:24	120	0	75	45
19/12/2023	3	F	Pink-footed goose	58	11:09	255	0	0	255
28/12/2023	1	F	Red kite	1	13:09	300	0	300	0
03/01/2024	4	F/G	Barn owl	1	14:41	30	30	0	0
03/01/2024	4	F/G	Barn owl	1	14:48	1800	1800	0	0

08/01/2024	3	F	Greylag goose	84	16:09	55	0	0	55
08/01/2024	3	F	Lapwing	22	13:28	45	45	0	0
08/01/2024	3	F	Lapwing	22	14:00	60	60	0	0
08/01/2024	3	F	Lapwing	22	14:43	60	60	0	0
08/01/2024	3	F	Greylag goose	7	15:59	30	0	0	30
08/01/2024	3	F	Greylag goose	22	16:07	40	0	0	40
12/01/2024	1	F/G	Lapwing	89	13:31	60	60	0	0
12/01/2024	1	F	Pink-footed goose	204	12:53	75	30	45	0
12/01/2024	1	F/G	Pink-footed goose	204	12:57	65	30	35	0
15/01/2024	2	F	Golden plover	60	15:26	30	0	30	0
15/01/2024	2	F/G	Lapwing	190	14:59	45	45	0	0
15/01/2024	2	F/G	Lapwing	4	13:57	90	30	60	0
15/01/2024	2	F	Lapwing	2	14:04	60	60	0	0
15/01/2024	2	F	Lapwing	1	14:46	120	120	0	0
15/01/2024	2	F	Lapwing	2	14:54	100	100	0	0
15/01/2024	2	F	Golden plover	45	14:56	30	30	0	0
15/01/2024	2	F	Red kite	1	15:09	225	0	225	0
15/01/2024	2	F/G	Lapwing	3	15:31	30	30	0	0
15/01/2024	2	F	Red kite	1	15:41	75	0	75	0
10/02/2024	4	F	Greylag goose	2	09:36	35	35	0	0
16/02/2024	2	F	Lapwing	72	13:31	75	0	0	75
16/02/2024	2	F	Lapwing	430	14:33	120	0	120	0
16/02/2024	2	F	Greylag goose	2	14:57	75	0	75	0
18/02/2024	3	F	Pink-footed goose	300	16:27	30	0	30	0
20/02/2024	1	F	Curlew	1	10:18	40	0	40	0
20/02/2024	1	F	Lapwing	2	10:49	90	0	90	0
20/02/2024	1	F	Lapwing	13	11:04	125	0	0	125
20/02/2024	1	F	Greylag goose	2	11:20	60	60	0	0
04/03/2024	3	F	Peregrine	1	13:19	40		40	
24/03/2024	2	F	Lapwing	6	17:46	65	65		
27/03/2024	1	F	Grey heron	1	18:24	35	35		
07/04/2024	3	F	Marsh harrier	1	14:03	90			90

07/04/2024	3	F/G	Greylag goose	1	14:48	30	30		
10/04/2024	4	F	Grey heron	1	19:11	140			140
13/04/2024	1	F	Shelduck	3	16:05	60	15	45	
30/04/2024	2	F	Greylag goose	2	08:26	50	50		
30/04/2024	2	F	Grey heron	1	09:47	75		75	
30/04/2024	2	F	Red kite	1	10:39	140		70	70