



Pearmtree Hill Solar Farm

Grid Connection Cable Route Bird Survey Report

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July 2025

Planning Act 2008
Infrastructure Planning
(Applications: Prescribed Forms
and Procedure) Regulations 2009 –
Regulation 5(2)(q)

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1.0 INTRODUCTION

1.1 Purpose of this report

- 1.1.1 This report presents details of the survey methodology and the results of surveys undertaken to record wintering and passage birds present within and in close proximity to the proposed grid connection corridor for Peartree Hill Solar Farm (hereafter referred to as 'the Proposed Development') between September 2024 and April 2025 inclusive.
- 1.1.2 This report was not submitted in support of the DCO Application on 21 February 2025 as the surveys that have informed it were still ongoing at that time. Bird surveys of the grid connection cable route had not previously been undertaken (in the period between 2021/22 and 2023/24) as the preferred cable route option had not yet been determined (although some areas surveyed during that survey period were within the Order Limits of the northern end of the grid connection cable route and data from these were included in the **Habitats Regulation Assessment – information to Inform Appropriate Assessment [APP-145]** that was submitted in support of the DCO Application). It should be noted that in the absence of survey data to inform the DCO Application, the **Habitats Regulation Assessment – information to Inform Appropriate Assessment [APP-145]** that was submitted in support of the DCO Application assumed a worst-case scenario, i.e. that functionally linked land was present along the grid connection cable route and that it supported similar species to those identified in Land Areas B to F. The survey work of the grid connection cable route has confirmed this assumption. The data and conclusions from this report have been incorporated into the assessments presented in the updated **Habitats Regulation Assessment – information to Inform Appropriate Assessment [EN010157/APP/5.3]**, and referenced in the updated **ES Volume 2, Chapter 7: Biodiversity [EN010157/APP/6.2]**.

1.2 Development proposals

- 1.2.1 The Proposed Development comprises the construction, operation (including maintenance) and decommissioning of a solar photovoltaic (PV) electricity generating and storage facility with an export capacity of up to 320 megawatts (MW) and associated infrastructure, as described within **ES Volume 1, Chapter 3: Proposed Development Description [APP-039]** and Schedule 1 of the **Draft Development Consent Order [AS-008]**.
- 1.2.2 The Proposed Development comprises several areas of land (Land Areas B-F) connected by a series of underground cables. The Proposed Development would connect to the National Grid Creyke Beck Substation, located approximately 5.6km south-west of the southern extent of the Land Areas, via underground cables (the 'grid connection cable route'). The Land Areas and

underground cable routes are shown on **ES Volume 3, Figure 1.2: Land Areas and Cable Routes Plan with Field Numbering System [APP-053]**.

1.3 Grid connection cable route

- 1.3.1 The grid connection cable route is identified on **ES Volume 3, Figure 1.2: Land Areas and Cable Routes Plan with Field Numbering System [APP-053]**, and is also displayed on **Figure 1** within this report.
- 1.3.2 The underground cabling would comprise two 132kV cables plus associated cabling such as a bare copper earth cable and fibre optic cable. The maximum dimensions of the cable trench required to install the cabling would be 1.6m deep by 1.5m wide.
- 1.3.3 The 132kV cables will be installed via a combination of open cut trenches and horizontal directional drilling (HDD). The open cut sections of underground cabling would be located in existing gaps in hedgerows wherever practicable. The areas requiring HDD are identified on **ES Volume 3, Figure 3.3: Indicative HDD Crossing Points [APP-057]**.
- 1.3.4 Where HDD would be used, the launch/reception pits required for crossings would be a maximum of 7m by 3m in area and 1.5m in depth to allow space for the necessary equipment. The launch/reception pits will not be located within 50m of a bank of a Main River, 20m of a bank of other watercourses, 50m of railway infrastructure, or 10m of a highway verge.
- 1.3.5 The design parameters set out above are contained in the **Design Parameters Document [APP-150]**, which is secured via Requirement 3, Schedule 2 of the **draft Development Consent Order [PDA-012]**.

1.4 Survey area

- 1.4.1 The survey area covers the land along the approximately 6.2km length of the grid connection cable route. The grid connection cable route is mainly arable fields; however, there are sections of modified grassland and notable habitats within Figham Pastures Local Wildlife Site (see Figure 2: UK Habitat Classification Survey in **ES Volume 4, Appendix 7.10: Biodiversity Net Gain Assessment [EN010157/APP/6.4]**).
- 1.4.2 Birds observed outside of but within 200m of the Order Limits, for example in the northern portion of Figham Common or in fields adjacent to the Order Limits, were also recorded.

2.0 SURVEY METHODOLOGY

2.1 Target species

- 2.1.1 For the purpose of this survey, only observations of specific target species were recorded, these being waterbirds (e.g. wildfowl, herons, waders, gulls, etc) and raptors listed on Schedule 1 of the Wildlife and Countryside Act 1981 (as amended) (e.g. hen harrier, hobby, etc), with particular attention paid to those species for which the Humber Estuary Special Protection Area (SPA) and Ramsar Site is designated.

2.2 Field surveys

- 2.2.1 The field surveys for wintering and passage birds were undertaken between September 2024 and April 2025 inclusive.
- 2.2.2 Due to the mixed topography and habitat composition of the survey area, a combination of vantage point (VP) and walkover surveys were utilised in order to cover the survey area effectively.
- 2.2.3 Two VP locations were selected to cover the western half of the survey area; VP1 located on the eastern bank of the River Hull to cover the Eastern Fields, and VP2 located on the east side of Figham Common to cover this portion of the survey area (see **Figure 2**). VP surveys involved suitably experienced ornithologists observing the survey area from an elevated position for a period of three-hours at a time, mapping bird species observed within the survey area (either visually or through their vocalisations) using standard British Trust for Ornithology (BTO) species codes and behaviour notation [**Ref-1**].
- 2.2.4 The walkover surveys involved suitably experienced ornithologists walking pre-determined transect routes (see **Figure 2**) throughout the survey area during the daytime, using the same recording method as the VP surveys. The transect routes were interspersed with stops, during which the ornithologist scanned for birds using optical equipment. Where flocks of waders or wildfowl were observed, they were observed at a suitable distance so that their behavior, such as whether they were feeding or roosting, could be noted.
- 2.2.5 Birds of particular note observed within 200m of the Order Limits, such as flocks of waders, were also recorded. Special attention was given to undertaking counts of any notable assemblages of feeding and/or roosting birds.
- 2.2.6 The field surveys comprised one visit per month between September 2024 and April 2025 inclusive, with each visit comprising one survey of each of the VP locations and survey transects. Survey visits were undertaken in suitable weather conditions at varying times of day, avoiding extreme temperatures, heavy rain, snow or fog during which bird activity may be atypical and/or surveying may be impractical.

2.2.7 The dates and weather conditions for all survey visits are indicated in **Appendix A**.

2.3 Limitations

2.3.1 No obvious limitations to the survey work have been identified.

2.3.2 It should be noted that ecological features (e.g. bird populations) are transient, and that the distributions of habitats and species may be subject to change. As such, in line with Chartered Institute of Ecology and Environmental Management (CIEEM) guidance **[Ref-2]**, the ecological survey data presented in this report are considered valid for at least two years, after which, if site conditions change markedly, it may be necessary for further field surveys to be undertaken.

3.0 RESULTS

3.1.1 A total of 21 target bird species were recorded during the surveys. The peak counts for the species recorded on each of the eight visits are summarised in **Table 1** below, with descriptions provided for each.

Table 1 Summary of target species observations during the 2024-25 wintering and passage surveys

Species	Peak Count								Description
	V1	V2	V3	V4	V5	V6	V7	V8	
Barnacle Goose						1			A single bird was amongst a Pink-footed Goose flock feeding in the Eastern Fields during visit 6.
Greylag Goose					2		2		A pair were present feeding on arable fields in the southern portion of the survey area on visits 5 and 7.
Pink-footed Goose					267	910			A large flock was feeding in the Eastern Fields during visits 5 and 6. Recorded occasionally as a flyover.
Eurasian White-fronted Goose						36			A group of birds was present amongst a Pink-footed Goose flock feeding in the Eastern Fields during visit 6.
Mute Swan	4		2		4				Up to four birds were present in the Figham Common and River Hull area on three visits.

Species	Peak Count								Description
	V1	V2	V3	V4	V5	V6	V7	V8	
Mallard	4	2	6	29	2	9	1	13	The majority of observations were of small groups of birds feeding and resting along the River Hull.
Teal						2			A pair were feeding on a flooded field adjacent to the Eastern Fields during visit 6.
Grey Heron	2	1				1			Single birds were occasionally observed feeding along ditches in the eastern half of the survey area.
Little Egret	1	1		2		1			Single birds were occasionally observed feeding along ditches in the eastern half of the survey area.
Cormorant	1	4				1			Occasionally observed fishing or resting along the River Hull.
Marsh Harrier				1				1	An adult male was hunting over Figham Common during visit 4, and a juvenile flew over the same location on visit 8.
Moorhen	5	2	3	4		1		5	The majority of observations were of individual birds feeding and resting along the River Hull.
Lapwing			12			303	12	13	A large flock of 303 birds were present on a flooded field adjacent to the

Species	Peak Count								Description
	V1	V2	V3	V4	V5	V6	V7	V8	
									Eastern Fields during visit 6. Small to medium sized flocks were occasionally observed in flight over the eastern portion of the survey area.
Golden Plover						41			A flock of 41 birds were present on a flooded field adjacent to the Eastern Fields during visit 6. A flock of up to 160 birds was also observed in flight over the eastern portion of the survey area during visits 2 and 3 but not seen to land within the survey area.
Dunlin						22			A flock of 22 birds were feeding on a flooded field adjacent to the Eastern Fields during visit 6.
Snipe	1		1					2	Single birds were occasionally flushed from the wetter areas of Figham Common.
Woodcock			1						A single bird was flushed from a hedgerow in the southern portion of the survey area during visit 3.
Black-headed Gull	2	35	16	36	39	31	1		Small to medium sized flocks were occasionally encountered feeding on arable fields across the survey

Species	Peak Count								Description
	V1	V2	V3	V4	V5	V6	V7	V8	
									area, often mixed with other gull species.
Common Gull				98	42	30			Small to medium sized flocks were occasionally encountered feeding on arable fields across the survey area, often mixed with other gull species.
Herring Gull				3	2	4	1	4	Small numbers were occasionally encountered feeding on arable fields across the survey area, often mixed with other gull species.
Lesser Black-backed Gull						1			A single bird was loafing amongst a mixed gull flock in the western half of Figham Common during visit 6.

3.2 Humber Estuary SPA and Ramsar site component species

3.2.1 The Humber Estuary SPA qualifies under article 4.2 of the European Commission Bird Directive (79/409/EEC) in that it supports an internationally important assemblage of waterbirds. The SPA lies approximately 10km to the south of the Order Limits at its closest point. The list of component species of the Humber Estuary SPA was updated in June 2023. Natural England provided updated guidance documents detailing the main component species of the SPAs non-breeding waterbird assemblage. These documents outline which species should be considered in assessments, focusing on those listed on the SPA citation and those with populations exceeding 1% of the national total based on the latest Wetland Bird Survey (WeBS) data.

3.2.2 The 34 main component species of the Humber Estuary SPA non-breeding waterbird assemblage are Brent goose, Greylag goose, Pink-footed goose,

Shelduck, Shoveler, Wigeon, Mallard, Teal, Pochard, Scaup, Goldeneye, Bittern, Little egret, Marsh harrier, Hen harrier, Crane, Avocet, Oystercatcher, Lapwing, Golden plover, Grey plover, Ringed plover, Bar-tailed godwit, Black-tailed godwit, Whimbrel, Curlew, Turnstone, Knot, Sanderling, Dunlin, Ruff, Green sandpiper, Greenshank and Redshank. The Humber Estuary Ramsar Site includes the above species as cited interest features as well as an assemblage of 153,000 wintering wildfowl.

- 3.2.3 Of the 34 main component species, nine were recorded during the field surveys. **Table 2** below compares the peak count for each of these species against the most recent five-year average Wetland Bird Survey (WeBS) count total for the Humber Estuary (2018/19 – 2022/23) [Ref-3].

Table 2: Populations of Humber Estuary SPA and Ramsar Site species recorded

Species	Peak count and visit	WeBS 5-year average	%	Location
Greylag Goose	2	2154	>0.1%	Arable fields south of Long Lane
Pink-footed Goose	910	23330	3.9%	Eastern Fields
Mallard	29	1459	2.0%	River Hull
Teal	2	5710	>0.1%	Adjacent to Eastern Fields
Little egret	2	215	0.9%	Eastern Fields and Figham Common
Marsh Harrier	1	N/A	N/A	Figham Common
Lapwing	303	15951	1.9%	Adjacent to Eastern Fields
Golden plover	41	21160	0.2%	Adjacent to Eastern Fields
Dunlin	22	18815	0.1%	Adjacent to Eastern Fields

3.3 Usage of the survey area by wintering and passage birds

- 3.3.1 The Order Limits are indicated on **Figure 1**, with the grid connection cable route highlighted. The locations of wintering and passage birds recorded within the survey area are provided on **Figure 3** (note birds observed in flight only are not displayed).

- 3.3.2 The largest concentrations of birds were recorded on and adjacent to the large pasture fields located to the east of the River Hull. These fields comprised short cattle-grazed grassland and contain temporary seasonal floods during periods of heavy rain. During the survey, these floods were only present during the February and March 2025 visits, being dry outside of this period. A large flock of pink-footed geese were feeding in these fields during visits 5 (January 2025) and 6 (February 2025), together with 36 Eurasian white-fronted geese and one barnacle goose during the latter visit. The temporary floods only held birds during visit 6, predominantly comprising feeding and resting waders including 303 lapwing, 41 golden plover and 22 dunlin.
- 3.3.3 Away from this area, bird observations across the rest of the survey area were scarce. Small numbers of mallard and snipe were observed within the marshy grassland on Figham Common, where single marsh harriers were observed on two visits. The large arable and sheep-grazed fields that comprise the southern half of the survey area held very few wintering and passage birds, with only small numbers of feeding gulls recorded sporadically feeding and resting in these fields.
- 3.3.4 There were occasional observations of birds flying over the survey area, primarily pink-footed geese, lapwing and golden plover flying on a north-south trajectory over the eastern half of the survey area. These birds were likely moving between the Humber Estuary and the series of wetlands on the western side of the River Hull at Swine Moor, located approximately 2km north of the survey area. There were no observations of wader or wildfowl species flying into or taking off from the survey area, suggesting that the survey area is not being used by populations of wetland birds in response to nearby tidal influences on the River Hull and Humber Estuary.

4.0 CONCLUSIONS

- 4.1.1 The field surveys, undertaken between September 2024 and April 2025 inclusive, recorded a total of 21 target bird species using the survey area, including nine species which form part of the Humber Estuary SPA and Ramsar site non-breeding bird assemblage.
- 4.1.2 The survey area contained some habitats of value to wintering and passage birds, notably the pasture fields and temporary floods to the east of the River Hull.
- 4.1.3 The results indicate that the land within the grid connection cable route constitutes functionally linked land for bird species cited as interest features of the Humber Estuary SPA and the Ramsar Site. This information has informed the **Habitats Regulation Assessment – information to Inform Appropriate Assessment [EN010157/APP/5.3]** and **ES Volume 2, Chapter 7: Biodiversity [EN010157/APP/6.2]** and a full assessment of the potential impact on the non-breeding bird assemblage identified has been undertaken within these documents.

5.0 REFERENCES

Ref-1: Marchant, J.H. (1983) BTO Common Birds Census instructions. BTO, Tring.

Ref-2: CIEEM (2019) Advice Note on the lifespan of ecological surveys and reports. Available online: <https://cieem.net/resource/advice-note-on-the-lifespan-of-ecological-reports-and-surveys/>

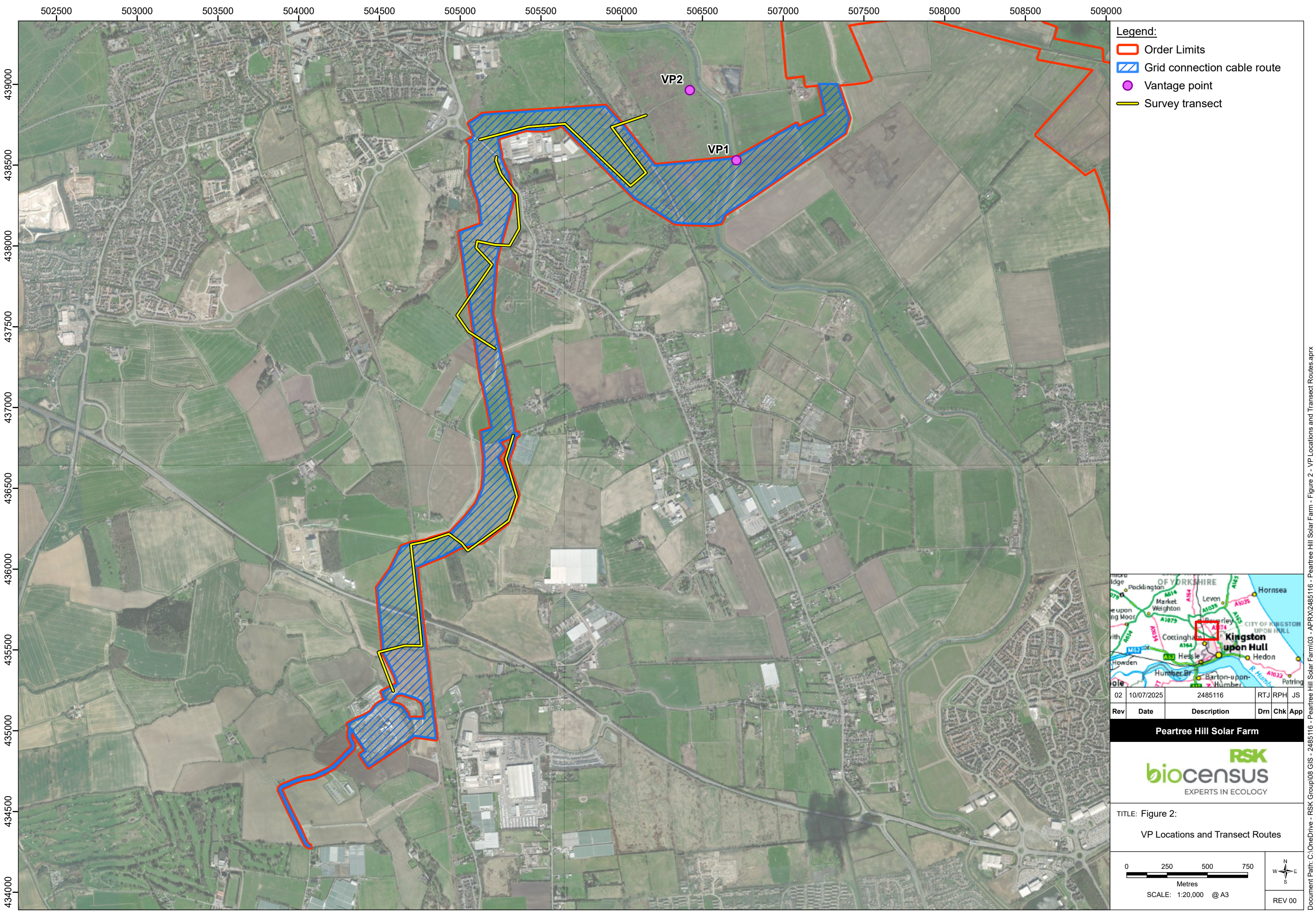
Ref-3: Woodward, I.D., Calbrade, N.A., Birtles, A., Feather, G.A., Peck, K., Wotton, S.R., Shaw, J.M., Balmer, D.E. and Frost, T.M. 2024. *Waterbirds in the UK 2022/23: The Wetland Bird Survey and Goose & Swan Monitoring Programme*. BTO/RSPB/JNCC/NatureScot. Thetford.

FIGURES

Figure 1 Site location plan

Figure 2 VP locations and transect routes

Figure 3 Target species observations

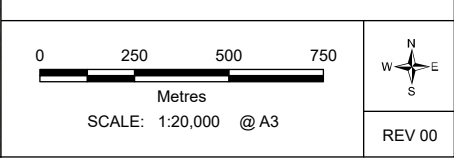


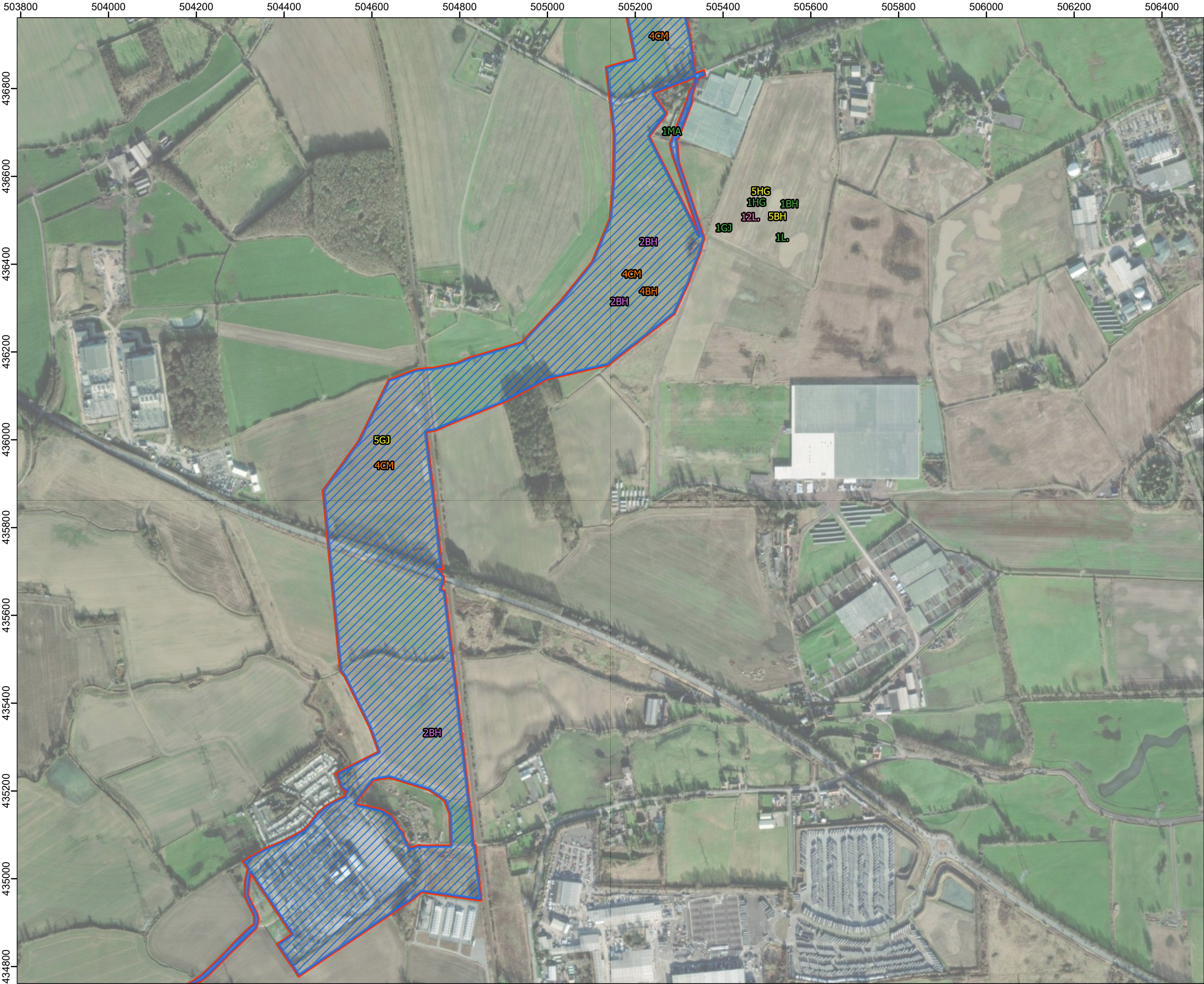
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Rev	Date	Description	Dwn	Chk	App

Peartree Hill Solar Farm



TITLE: Figure 2:
VP Locations and Transect Routes





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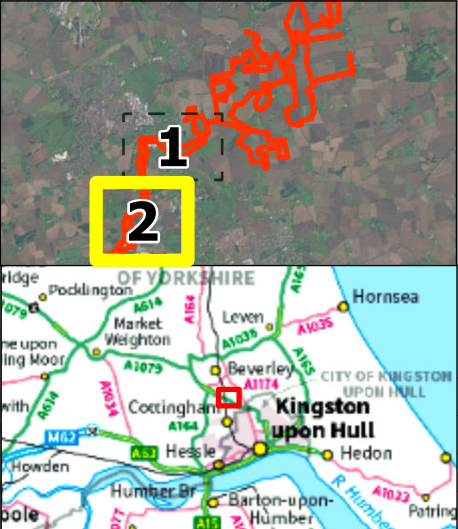
Order Limits

Grid connection cable route

Visit

- 1 - Sep 2024
- 2 - Nov 2024
- 4 - Dec 2024
- 5 - Jan 2025
- 6 - Feb 2025
- 12 - Apr 2025

Code	Scientific name	Common name
BH	<i>Larus ridibundus</i>	Black-headed Gull
BY	<i>Branta leucopsis</i>	Barnacle Goose
CA	<i>Phalacrocorax carbo</i>	Cormorant
CM	<i>Larus canus</i>	Common Gull
DN	<i>Calidris alpina</i>	Dunlin
ET	<i>Egretta garzetta</i>	Little Egret
GJ	<i>Anser anser</i>	Greylag Goose
GP	<i>Pluvialis apricaria</i>	Golden Plover
H.	<i>Ardea cinerea</i>	Grey Heron
HG	<i>Larus argentatus</i>	Herring Gull
L.	<i>Vanellus vanellus</i>	Lapwing
LB	<i>Larus fuscus</i>	Lesser Black-backed Gull
MA	<i>Anas platyrhynchos</i>	Mallard
MH	<i>Gallinula chloropus</i>	Moorhen
MR	<i>Circus aeruginosus</i>	Marsh Harrier
MS	<i>Cygnus olor</i>	Mute Swan
PG	<i>Anser brachyrhynchus</i>	Pink-footed Goose
T.	<i>Anas crecca</i>	Teal
WG	<i>Anser albifrons</i>	White-fronted Goose (European)



03	10/07/2025	2485116	RTJ	RPH	JS
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Peartree Hill Solar Farm

RSK

biocensus

EXPERTS IN ECOLOGY

TITLE: Figure 3:
Target Species Observations
Page 2 of 2

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APPENDIX A – SURVEY DETAILS

Visit	Date	Section	Times	Temperature (° C)		Cloud cover (oktas)	Wind strength (Beaufort scale) and direction	Precipitation
				Min	Max			
1	25/09/2024	VP1	12:15 – 15:15	13	13	6	2 SE	None
	26/09/2024	Fields	12:00 – 16:30	10	12	4	3 NE	None
	27/09/2024	VP2	09:00 – 12:00	8	10	8	4 N	Light Showers
2	22/10/2024	VP2	11:45 – 14:45	11	13	4	2 SW	None
	23/10/2024	Fields	10:15 – 14:15	10	12	6	2 SW	None
	23/10/2024	VP1	14:45 – 17:45	12	13	6	2 SW	None
	24/10/2024	Fields	08:00 – 10:00	8	9	2	3 SE	None
3	19/11/2024	Fields	10:00 – 12:30	4	5	5	3 NW	None
	19/11/2024	VP1	13:00 – 16:00	5	5	5	2 NW	None
	20/11/2024	VP2	08:00 – 11:00	0	2	3	2 W	None

Visit	Date	Section	Times	Temperature (° C)		Cloud cover (oktas)	Wind strength (Beaufort scale) and direction	Precipitation
				Min	Max			
	20/11/2024	Fields	11:30 – 14:00	2	3	5	3 W	None
4	19/12/2024	Fields	09:00 – 12:15	4	4	2	4 NW	None
	19/12/2024	VP2	12:45 – 15:45	4	5	0	4 W	None
	20/12/2024	VP1	09:45 – 12:45	5	6	8	4 SW	None
5	20/01/2025	VP1	10:00 – 13:00	4	4	8	3S	None
	20/01/2025	Fields	14:20 – 16:00	5	5	8	3 S	None
	21/01/2025	VP2	08:00 – 11:00	5	6	6	4 SW	Light Showers
	21/01/2025	Fields	11:30 – 14:00	6	6	8	4 SW	None
6	20/02/2025	VP1	11:15 – 14:15	12	14	6	4 SW	None
	20/02/2025	Fields	14:35 – 17:00	14	14	6	4 SW	None
	21/02/2025	VP2	08:00 – 11:00	12	14	4	5 S	None
	21/02/2025	Fields	11:30 – 15:00	14	15	4	5 S	None

Visit	Date	Section	Times	Temperature (° C)		Cloud cover (oktas)	Wind strength (Beaufort scale) and direction	Precipitation
				Min	Max			
7	18/03/2025	Fields	09:00 – 14:30	4	10	6	2 NW	None
	19/03/2025	VP1	08:00 – 11:00	2	11	2	1 N	None
	19/03/2025	VP2	11:10 – 14:10	11	14	2	2 NE	None
8	10/04/2025	Fields	10:00 – 15:00	10	14	4	2 SE	None
	11/04/2025	VP2	06:10 – 09:10	6	12	0	2 E	None
	11/04/2025	VP1	10:00 – 13:00	13	16	0	3 E	None

RWE Renewables UK Limited

Windmill Hill Business Park,
Whitehill Way,
Swindon,
Wiltshire,
England,
SN5 6PB
www.rwe.com