

Rush Wall Solar Park

Environmental Statement

Appendix 6.2

Breeding bird surveys

# Breeding bird surveys Rush Wall Solar Park June 2020

Report no: Brd Birds – 526.1

A report by

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## Report details

Site name: Rush Wall Solar Park  
Site address: Redwick, Newport  
Grid reference: ST 416 853  
Report date: 12<sup>th</sup> June 2020  
Report author: Colin Hicks BSc (Hons) MCIEEM

## Declaration of compliance

### BS 42020:2013

This study has been undertaken in accordance with British Standard 42020:2013 Biodiversity, Code of Practice for Planning and Development.

### Code of Professional Conduct

The information which we have prepared is true, and has been prepared and provided in accordance with the Chartered Institute of Ecology and Environmental Management's Code of Professional Conduct. We confirm that the opinions expressed are our true and professional bona fide opinions.

## Validity of survey data and report

The findings of this report are valid for 24 months from the date of survey. If work has not commenced within this period, an updated survey by a suitably qualified ecologist will be required.

## Revisions

Date	Report no:	Comment
02/12/2019	Brd Birds – 526.1	Original report

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## 1. Introduction

### 1.1. Background

1.1.1. Western Ecology has been commissioned to complete breeding bird surveys of land for the proposed Rush Wall Solar Park near Redwick.

### 1.2. Consultation

1.2.1. The RSPB were consulted on the recommended survey methodology. Following a site visit with Fiona Walker and Simon Roberts on 26<sup>th</sup> February 2019, the following advice was given in relation to breeding bird surveys:

*Should be designed according to target species which will probably be waders in most instances on the Gwent Levels. Thus, preferred method is Lowland breeding wader survey (O'Brien & Smith) modified to five or more visits between mid-March and early July (extended to record productivity). The survey should record all species of bird (with attention given to SPA bird feature species, Red and Amber listed species and Section 7 species) and recommend that the survey includes a buffer ideally of 250m as was adopted for the Gwent Farmers Solar scheme.*

*To estimate the population size of lapwing, the maximum number of birds recorded between mid-April and late-May is divided by two (see below).*

*Interpretation of lapwing data should follow the method we use on our sites:*

*The number of breeding pairs is calculated as the maximum count between mid-April and the end of May divided by two. As per RSPB Lapwing management projects: monitoring protocols, which is derived from: Bolton, M., Bamford, R., Blackburn, C., Cromarty, J., Eglinton, S., Ratcliffe, N., Sharpe, F., Stanbury, A. & Smart, J. (2011) Assessment of simple survey methods to determine breeding population size and productivity of a plover, the Northern Lapwing *Vanellus vanellus*. Wader Study Group Bull. 118(3): 141–152*

1.2.2. A second site visit was completed with the RSPB on 31/07/2019 to discuss the outcome of the survey contained within this report. Following this meeting, it was the opinion of the RSPB that:

*We do not consider a second year of breeding bird surveys is necessary.*

*Please do keep us informed of any potential lapwing mitigation measures.*

1.2.3. Natural Resources Wales made the following comments during the scoping process:

*The Scoping Report confirms the project site is approximately 1.3km from the Severn Estuary which is designated a Special Area of Conservation (SAC), Special Area of Protection (SPA) and Ramsar site. We agree with the report*

*that there are potential significant adverse effects on breeding and wintering birds and these should be scoped in.*

*The scope of the surveys for birds appear reasonable but there may be need for the ES to consider foraging cranes, depending on the results of the first round of surveying.*

- 1.2.4. During the scoping process, the planning inspectorate made the following comment:

*The SR (Scoping Report) identifies the potential for significant adverse effects on breeding and wintering birds. The ES should therefore include this in its scope, but it is also considered necessary to further investigate the presence of foraging cranes in the area.*

### 1.3. Survey aims

- 1.3.1. The surveys and this report characterise the use of the site and adjacent areas by birds during the spring and summer periods, including breeding birds. Although the birds listed as interest features of the Severn Estuary SSSI, Severn Estuary Ramsar and Severn Estuary SPA are overwintering and early spring, these species will also be considered within this report.

### 1.4. Site location

- 1.4.1. The site comprises an area of agricultural land to the east of Redwick, a village in Newport.

## 2. Survey Methodology

### 2.1. Desktop survey

2.1.1. The desktop survey collated existing biological records for the site and adjacent areas and identified any nature conservation sites that may be affected by the proposals. This comprises an important part of the assessment process, providing information on ecological issues that may not be apparent during the site survey.

2.1.2. Consultees for the data search included:

- South East Wales Biodiversity Records Centre - records of protected/notable species within 2km of the centre of the site and non-statutory nature conservation sites within 4km of the centre of the site.
- Natural Resources Wales datasets – Location of statutory nature conservation sites within 5km.

### 2.2. Lowland breeding wader surveys

2.2.1. Lowland breeding wader surveys were completed in line with O'Brian and Smith (1992). An experienced ornithologist walked within 100 metres of all areas of the site recording movement and behaviour of all waders on pre-prepared field maps using standard codes. This included a buffer area out to approximately 250 meters where accessible. Each bird was allocated to a single field—the first field in which it was recorded, or, if the bird was first observed in display flight, the field at the centre of its display flight. The number of field visits was increased in consultation with RSPB to include late March, mid- and late April, mid-May, mid-June and early July. During each period, 2 or 3 survey visits were required to cover the whole site and buffers.

### 2.3. Common Bird Census

2.3.1. Other Breeding Birds were also recorded and using a methodology based upon a combination of methodology, devised by the British Trust for Ornithology (BTO), and the national Breeding Bird Survey (BBS) techniques, jointly devised by the BTO, Royal Society for the Protection of Birds and the Joint Nature Conservation Committee. This included Crane as requested by NRW.

### 2.4. Conservation status

2.4.1. The conservation status of each species recorded was determined based on the following criteria:

#### Birds of Conservation Concern 4

Commonly referred to as the UK Red List for birds, this is the fourth review of the status of birds in the UK, Channel Islands and Isle of Man, and updates the last assessment in 2009. Using standardised criteria, 244 species with breeding, passage or wintering populations in the UK were assessed by experts from a range of bird NGOs and assigned to the Red, Amber or Green lists of conservation concern.

Red list species are those that are Globally Threatened according to IUCN criteria; those whose population or range has declined rapidly in recent years; and those that have declined historically and not shown a substantial recent recovery.

Amber list species are those with an unfavourable conservation status in Europe.

Species on the Green List fulfil none of the above criteria and are of least conservation concern.

#### Schedule 1 of the Wildlife and Countryside Act (1981)

The Wildlife and Countryside Act 1981 (as amended) affords greater protection to certain breeding species and are as such listed as specially protected under Schedule 1 of the Act.

#### Biodiversity Action Plan species

Species of bird are listed as Local Biodiversity Action Plan Priority Species and species are listed as species of principal importance (Section 7 of the Environment (Wales) Act 2016).

## 2.5. Classification of breeding status

2.5.1. The results of the breeding bird surveys were assessed against the European Ornithological Atlas Committee (EOAC) criteria for breeding bird status as follows:

#### Non-breeding

- Flying over
- Species observed but suspected to be still on Migration
- Species observed but suspected to be summering non-breeder

#### Possible breeder

- Species observed in breeding season in suitable nesting habitat
- Singing male present (or breeding calls heard) in breeding season in suitable breeding habitat

#### Probable breeding

- Pair observed in suitable nesting habitat in breeding season
- Permanent Territory presumed through registration of territorial behaviour (song etc) on at least two different days a week or more part at the same place or many individuals on one day
- Courtship and Display (judged to be in or near potential breeding habitat; be cautious with wildfowl)
- Visiting probable Nest site
- Agitated behaviour or anxiety calls from adults, suggesting probable presence of nest or young nearby
- Brood patch on adult examined in the hand, suggesting Incubation



- Nest Building or excavating nest-hole

Confirmed breeding

- Distraction-Display or injury feigning
- Used Nest or eggshells found (occupied or laid within period of survey)
- Recently Fledged young (nidicolous species) or downy young (nidifugous species). Careful consideration should be given to the likely provenance of any fledged juvenile capable of significant geographical movement. Evidence of dependency on adults (e.g. feeding) is helpful. Be cautious, even if the record comes from suitable habitats
- Adults entering or leaving nest-site in circumstances indicating Occupied Nest (including high nests or nest holes, the contents of which cannot be seen) or adults seen incubating Adult carrying Faecal sac or Food for young
- Nest containing Eggs
- Nest with Young seen or heard

The surveys were completed by Martin Rule, an ornithologist with experience in Wales (Table 1).

Table 1. Survey dates

Date	Time Started	Time finished	Weather
March 2019			
25/03/2019	05:45	09:45	Dry, sunny, 2/8 cloud, light NNE breeze, 7degC
29/03/2019	17:45	19:15	Dry, calm, 0/8 cloud, 10degc.
30/03/2019	05:15	09:15	Dry, calm, misty, 6 degc
April 2019			
15/04/2019	17:00	20:30	Dry, 8/8 cloud, fresh SE wind, slowly decreasing, 13degc
16/04/2019	05:30	08:30	Continuous light rain; calm, 8/8 cloud, 8degc
16/04/2019	07:00	20:00	Dry, calm, 8/8 cloud, 12 degc
30/04/2019	05:20	08:30	Dry, calm, 1/8 cloud, 4-9degc
30/04/2019	17:30	20:30	Dry, calm, 6/8 cloud, 15-12degc
01/05/2019	05:20	08:20	Dry, calm, 8/8 cloud, 10degc
May 2019			
09/05/2019	18:00	21:00	Sunny, dry, mod-fresh W breeze, 5/8 cloud, 14degc
11/05/2019	18:20	21:20	Dry, sunny, calm, 5/8 cloud, 14degc
12/05/2019	05:20	08:20	Dry, sunny, calm, 2/8 cloud, 7-10degc
June 2019			
14/06/2019	17:30	21:30	Overcast, dry, light W breeze, dropping to calm, 6/8 cloud, 15-12degc
15/06/2019	04:30	08:30	Overcast, intermittent light rain, light S breeze, 8/8 cloud, 13degc
July 2019			
06/07/2019	05:00	08:00	Dry, sunny, calm, 2/8 cloud, 14degc
06/07/2019	18:15	21:15	Dry, sunny, calm, 2/8 cloud, 18degc
07/07/2019	05:30	08:30	Dry, sunny, light W breeze, 14degc



## 2.6. Survey constraints

- 2.6.1. All areas of the development site were readily accessible due to the open, flat nature of this landscape. The majority of adjacent areas within the 250m buffer were included within the survey by observation from public rights of way.

## 2.7. Study area

2.7.1. The study area of the biological records search is within a 2km radius of the site for bird species. The survey area for the lowland breeding wader surveys is within the proposed solar park and a 250 metre buffer (where accessible), and the area for the Common Breeding Bird Census is within the footprint of the solar park.

**Legend**

-  Development footprint
-  Magor Marsh SSSI
-  Severn Estuary SSSI/SPA/Ramsar



Title: Map 1. Survey area and statutory sites with bird interest

Project: Rush Wall Solar Park

Checked by: CDH      Version: 01  
Date: 24/04/2020

## 3. Results

### 3.1. Desktop survey

3.1.1. The biological record search 2313 bird records from South East Wales Biodiversity Records Centre within 2km. These are detailed in Table 2.

Table 2. Bird records within 2km

Common name	Conservation listings	Count
Barn Owl	WCA1.1, WCA9, Bern, CITES, LBAP (ANG, CLY, CON, CRM, DEN, FLI, GWY, PEM, POW, SNP, TRA, VOG, WRE), WBAm(RSPB), LI(VC43), UKBAm(RSPB)	19
Bar-tailed Godwit	BDir1, BDir22, S7, Bonn, WBR(RSPB), LBAP (BBNP, CON, GWY, VOG), UKBAm(RSPB)	3
Bewick's Swan	BDir1, WCA1.1, S7, UKBAP, Bonn, Bern, LBAP (CON, GWY, POW, VOG), WBAm(RSPB), UKBAm(RSPB)	4
Black Redstart	WCA1.1, Bern, LBAP (GWY, VOG), WBAm(RSPB), UKBR(RSPB), UKBAm(RSPB)	2
Black-headed Gull	BDir22, S7, Bonn, WBR(RSPB), LBAP (GWY, VOG), UKBAm(RSPB)	12
Black-tailed Godwit	BDir22, WCA1.1, UKBAP, Bonn, RD1 (UK), LBAP (CON, GWY), WBAm(RSPB), UKBR(RSPB)	1
Brambling	WCA1.1, LBAP (CON)	2
Bullfinch	S7, UKBAP, WBR(RSPB), LBAP (BBNP, CER, CLY, CON, DEN, FLI, GWY, PEM, TRF, VOG), UKBR(RSPB)	25
Cetti's Warbler	WCA1.1, LBAP (ANG, PEM, VOG)	133
Coal Tit	Bern, LBAP (CON, POW), WBAm(RSPB)	15
Common Crossbill	WCA1.1, Bern, LBAP (CON, POW), LI(VC43)	1
Common Gull	BDir22, Bonn, WBR(RSPB), UKBAm(RSPB)	12
Common Sandpiper	Bonn, Bern, WBAm(RSPB)	6
Common Scoter	BDir22, WCA1.1, S7, UKBAP, Bonn, LBAP (ANG, BBNP, CER, CON, CRM, DEN, FLI, GWY, PEM, VOG), WBAm(RSPB), UKBR(RSPB)	4
Cormorant	Bonn, LBAP (CON, GWY, POW), WBAm(RSPB), UKBAm(RSPB)	10
Cuckoo	S7, UKBAP, WBR(RSPB), LBAP (CON, DEN, FLI, GWY, VOG), UKBR(RSPB), UKBAm(RSPB)	26
Curlew	BDir22, S7, UKBAP, Bonn, RD1 (UK), WBR(RSPB), LBAP (ANG, BBNP, CLY, CON, CRM, DEN, FLI, GWY, PEM, POW, SNP, VOG), LI(VC43), UKBAm(RSPB)	12
Dipper	Bern, LBAP (BRG, CLY, CON, MTR, POW, RCT, TRA), WBAm(RSPB), UKBAm(RSPB)	1
Dunlin	Bonn, Bern, WBR(RSPB), LBAP (CON, GWY, POW), LI(VC43), UKBAm(RSPB)	9
Dunnock	S7, UKBAP, Bern, LBAP (CON, POW, VOG), UKBAm(RSPB)	46
Eider	BDir22, Bonn, LBAP (CON, GWY), WBAm(RSPB), UKBAm(RSPB)	1
Fieldfare	BDir22, WCA1.1, LBAP (CON, POW), WBAm(RSPB), UKBR(RSPB), UKBAm(RSPB)	50
Firecrest	WCA1.1, Bern, LBAP (BRG, CON, GWY, POW), WBAm(RSPB), LI(VC43), UKBAm(RSPB)	1
Gadwall	BDir21, Bonn, LBAP (CON, GWY), WBAm(RSPB), UKBAm(RSPB)	43
Garden Warbler	LBAP (BRG, CON, POW), WBAm(RSPB)	11
Garganey	BDir21, WCA1.1, Bonn, CITES, LBAP (CON, GWY), WBAm(RSPB), UKBAm(RSPB)	9
Goldcrest	Bern, LBAP (CON, POW), WBAm(RSPB), UKBAm(RSPB)	28
Golden Plover	BDir1, BDir22, S7, Bonn, WBR(RSPB), LBAP (BBNP, CON, CRM, FLI, GWY, POW, SNP, VOG), LI(VC43)	2
Goldeneye	BDir22, WCA1.2, Bonn, LBAP (CON, POW), UKBAm(RSPB)	1
Goshawk	WCA1.1, WCA9, Bonn, CITES, LBAP (CLY, CON, POW, VOG)	1

Grasshopper Warbler	S7, UKBAP, WBR(RSPB), LBAP (BBNP, CON, DEN, FLI, GWY, POW, VOG), UKBR(RSPB)	26
Great Black-backed Gull	BDir22, Bonn, Bern, WBR(RSPB), UKBAm(RSPB)	7
Green Sandpiper	WCA1.1, Bonn, Bern, LBAP (CON, VOG), UKBAm(RSPB)	5
Green Woodpecker	Bern, LBAP (CLY, CON, DEN, FLI, GWY, PEM, POW, SNP), WBAm(RSPB), UKBAm(RSPB)	19
Greenshank	BDir22, WCA1.1, Bonn, LBAP (CON, POW), UKBAm(RSPB)	7
Grey Partridge	BDir21, S7, UKBAP, WBR(RSPB), LBAP (ANG, BBNP, CLY, CON, DEN, FLI, GWY, POW, TRF, VOG), LI(VC43), UKBR(RSPB)	4
Grey Plover	BDir22, Bonn, WBR(RSPB), LBAP (CON, GWY), UKBAm(RSPB)	7
Guillemot	Bonn, LBAP (CON, PEM), WBAm(RSPB), UKBAm(RSPB)	1
Hawfinch	S7, UKBAP, Bern, LBAP (CON, DEN, FLI, GWY, POW, VOG), WBAm(RSPB), UKBR(RSPB), UKBAm(RSPB)	1
Hen Harrier	BDir1, S7, Bonn, CITES, WBR(RSPB), LBAP (BBNP, CON, DEN, FLI, GWY, POW, SNP, VOG), LI(VC43), UKBR(RSPB)	3
Hobby	WCA1.1, Bonn, Bern, CITES, LBAP (CON, GWY, POW, VOG), WBAm(RSPB), LI(VC43)	6
House Martin	Bern, LBAP (BRG, CON, POW, RCT, VOG), WBAm(RSPB), UKBAm(RSPB)	50
House Sparrow	S7, UKBAP, Bern, LBAP (CLY, CON, FLI, GWY, VOG), WBAm(RSPB), UKBR(RSPB)	51
Jack Snipe	BDir21, Bonn, LBAP (CON, POW), WBAm(RSPB)	3
Kestrel	S7, Bonn, Bern, CITES, WBR(RSPB), LBAP (ANG, CLY, CON, DEN, FLI, GWY, PEM, POW, VOG), LI(VC43), UKBAm(RSPB)	60
Kingfisher	BDir1, WCA1.1, Bern, LBAP (CLY, CON, DEN, FLI, GWY, POW, TRA), WBAm(RSPB), UKBAm(RSPB)	69
Knot	BDir22, Bonn, LBAP (BBNP, CON, GWY), WBAm(RSPB), UKBAm(RSPB)	2
Lapwing	BDir22, S7, UKBAP, Bonn, WBR(RSPB), LBAP (ANG, BBNP, CLY, CON, CRM, DEN, FLI, GWY, MON, PEM, POW, SNP, TRF, VOG), LI(VC43), UKBAm(RSPB)	39
Lesser Black-backed Gull	BDir22, Bonn, Bern, LBAP (CON, GWY, PEM, POW, SNP), WBAm(RSPB), UKBAm(RSPB)	16
Lesser Redpoll	S7, UKBAP, WBR(RSPB), LBAP (CON), LBAP (DEN, POW, VOG), UKBAm(RSPB)	10
Lesser Spotted Woodpecker	S7, UKBAP, Bern, WBR(RSPB), LBAP (BBNP, CON, DEN, FLI, GWY, POW, VOG), LI(VC43), UKBR(RSPB)	1
Linnet	S7, Bern, WBR(RSPB), LBAP (ANG, BBNP, CER, CLY, DEN, FLI, PEM, VOG), LBAP (CON, GWY), UKBR(RSPB)	21
Long-tailed Tit	WBAm(RSPB)	64
Mallard	BDir21, Bonn, LBAP (CON, GWY), WBAm(RSPB), UKBAm(RSPB)	209
Marsh Harrier	BDir1, WCA1.1, Bonn, CITES, LBAP (CON), WBAm(RSPB), UKBAm(RSPB)	3
Marsh Tit	S7, UKBAP, Bern, WBR(RSPB), LBAP (BBNP, CON, DEN, FLI, GWY, POW, VOG), UKBR(RSPB)	5
Marsh Warbler	WCA1.1, UKBAP, UKBR(RSPB)	4
Meadow Pipit	Bern, LBAP (CON), WBAm(RSPB), UKBAm(RSPB)	24
Merlin	BDir1, WCA1.1, Bonn, Bern, CITES, LBAP (CON, DEN, FLI, GWY, POW), WBAm(RSPB), LI(VC43), UKBAm(RSPB)	9
Mute Swan	BDir22, Bonn, LBAP (CON, POW), WBAm(RSPB), UKBAm(RSPB)	205
Osprey	BDir1, WCA1.1, Bonn, CITES, LBAP (GWY), WBAm(RSPB), UKBAm(RSPB)	1
Oystercatcher	BDir22, Bonn, LBAP (CON, GWY), WBAm(RSPB), LI(VC43), UKBAm(RSPB)	12

Peregrine	BDir1, WCA1.1, Bonn, Bern, CITES, LBAP (ANG, CLY, CON, GWY, PEM, POW, TRF, VOG), LI(VC43), UKBAm(RSPB)	4
Pintail	BDir21, WCA1.2, Bonn, CITES, LBAP (CON, GWY), WBAm(RSPB), UKBAm(RSPB)	4
Pochard	BDir21, Bonn, WBR(RSPB), LBAP (CON, POW), UKBR(RSPB), UKBAm(RSPB)	1
Purple Sandpiper	WCA1.1, Bonn, Bern, LBAP (CON, VOG), UKBAm(RSPB)	1
Red Kite	BDir1, WCA1.1, WCA9, Bonn, CITES, RD1 (UK), LBAP (CON, CRM, GWY, POW), WBAm(RSPB), UKBAm(RSPB)	4
Redshank	BDir22, Bonn, LBAP (ANG, CON, GWY, POW), WBAm(RSPB), UKBAm(RSPB)	17
Redstart	Bern, LBAP (CON, GWY, POW, SNP), WBAm(RSPB), UKBAm(RSPB)	2
Redwing	BDir22, WCA1.1, LBAP (CON, POW), WBAm(RSPB), UKBR(RSPB), UKBAm(RSPB)	48
Reed Bunting	S7, UKBAP, Bern, LBAP (BBNP, CER, CLY, CON, DEN, FLI, GWY, PEM, POW, VOG), WBAm(RSPB), UKBR(RSPB)	73
Ringed Plover	S7, Bonn, Bern, LBAP (BBNP, CON, CRM, GWY, VOG), WBAm(RSPB), UKBR(RSPB), UKBAm(RSPB)	5
Ruff	BDir1, BDir22, WCA1.1, Bonn, LBAP (CON), WBAm(RSPB), UKBAm(RSPB)	2
Sand Martin	Bern, LBAP (CON, DEN, FLI, GWY, POW, VOG), WBAm(RSPB), UKBAm(RSPB)	6
Sanderling	Bonn, Bern, LBAP (CON), WBAm(RSPB), UKBAm(RSPB)	5
Sandwich Tern	BDir1, Bonn, Bern, LBAP (ANG, CON, GWY), WBAm(RSPB), UKBAm(RSPB)	1
Shelduck	Bonn, Bern, LBAP (CON, GWY, VOG), WBAm(RSPB), UKBAm(RSPB)	18
Short-eared Owl	BDir1, Bern, CITES, WBR(RSPB), LBAP (CON, DEN, GWY, PEM, POW), LI(VC43), UKBAm(RSPB)	10
Shoveler	BDir21, Bonn, CITES, LBAP (ANG, CON, GWY, POW), WBAm(RSPB), UKBAm(RSPB)	34
Skylark	BDir22, S7, LBAP (ANG, BBNP, CER, CLY, CON, CRM, DEN, FLI, GWY, PEM, POW, SNP, TRF, VOG), WBAm(RSPB), UKBR(RSPB)	13
Snipe	BDir21, Bonn, LBAP (ANG, CON, DEN, FLI, GWY, POW), WBAm(RSPB), LI(VC43), UKBAm(RSPB)	45
Song Thrush	BDir22, S7, UKBAP, Bern, LBAP (ANG, BBNP, CER, CLY, CON, DEN, FLI, GWY, PEM, POW, SNP, TRF, VOG, WRE), WBAm(RSPB), UKBR(RSPB)	61
Spoonbill	BDir1, WCA1.1, Bonn, Bern, CITES, LBAP (CON), WBAm(RSPB), UKBAm(RSPB)	5
Spotted Flycatcher	S7, UKBAP, Bonn, Bern, WBR(RSPB), LBAP (BBNP, CER, CLY, CON, DEN, FLI, GWY, PEM, POW, VOG), UKBR(RSPB)	7
Spotted Redshank	BDir22, Bonn, LBAP (CON), WBAm(RSPB), UKBAm(RSPB)	6
Starling	BDir22, S7, UKBAP, Bern, WBR(RSPB), LBAP (BBNP, CON, FLI, GWY, VOG), UKBR(RSPB)	85
Stone-curlew	BDir1, WCA1.1, UKBAP, Bonn, Bern, UKBR(RSPB)	1
Swallow	Bern, LBAP (ANG, CON, GWY, POW, VOG), WBAm(RSPB), UKBAm(RSPB)	121
Swift	LBAP (BRG, RCT, VOG), WBAm(RSPB), UKBAm(RSPB)	35
Teal	BDir21, Bonn, CITES, LBAP (ANG, CON, DEN, FLI, GWY), WBAm(RSPB), LI(VC43), UKBAm(RSPB)	116
Tree Sparrow	S7, UKBAP, WBR(RSPB), LBAP (ANG, BBNP, CER, CLY, CON, CRM, DEN, FLI, GWY, PEM, POW, VOG), LI(VC43), UKBR(RSPB)	7
Tufted Duck	BDir21, Bonn, LBAP (CON, POW, VOG), WBAm(RSPB)	3
Turnstone	Bonn, Bern, LBAP (CON, GWY), WBAm(RSPB), UKBAm(RSPB)	5

Turtle Dove	BDir22, S7, UKBAP, CITES, WBR(RSPB), LBAP (BBNP, CON, GWY, MON, POW), UKBR(RSPB)	5
Wheatear	Bern, LBAP (BRG, CON, POW), WBAm(RSPB)	15
Whimbrel	BDir22, WCA1.1, Bonn, LBAP (CON, GWY), WBAm(RSPB), UKBR(RSPB), UKBAm(RSPB)	11
White-fronted Goose	BDir22, S7, UKBAP, Bonn, Bern, WBR(RSPB), LBAP (BBNP), UKBR(RSPB), UKBAm(RSPB)	1
Whitethroat	LBAP (CON, POW), WBAm(RSPB)	26
Wigeon	BDir21, Bonn, CITES, LBAP (CON, GWY), WBAm(RSPB), UKBAm(RSPB)	12
Willow Tit	S7, UKBAP, Bern, WBR(RSPB), LBAP (BBNP, DEN, FLI, POW, VOG), LBAP (CON, GWY), LI(VC43), UKBR(RSPB)	1
Willow Warbler	WBR(RSPB), LBAP (CON), UKBAm(RSPB)	45
Woodcock	BDir21, Bonn, LBAP (CON, DEN, FLI, GWY, POW), WBAm(RSPB), LI(VC43), UKBR(RSPB), UKBAm(RSPB)	2
Yellow Wagtail	S7, UKBAP, Bern, WBR(RSPB), LBAP (CON, DEN, FLI, POW, TRA, VOG), LI(VC43), UKBAm(RSPB)	14
Yellowhammer	S7, UKBAP, Bern, WBR(RSPB), LBAP (ANG, BBNP, CLY, CON, CRM, DEN, FLI, GWY, PEM, POW, SNP, VOG), UKBR(RSPB)	2

#### Key to Conservation status

UKBAP = UK Biodiversity Action Plan Priority Species  
 UKBAP (R) = UK Biodiversity Action Plan Priority Species (Research only species)  
 BDir1 = EC Birds Directive Annex 1 Species  
 BDir21 = EC Birds Directive Annex 2.1 Species  
 BDir22 = EC Birds Directive Annex 2.2 Species  
 Bern = The Bern Convention on the Conservation of European Wildlife and Natural Habitats  
 Bonn = The Bonn Convention on the Conservation of Migratory Species of Wild Animals Species  
 CITES = Convention on International Trade in Endangered Species  
 EPS = European Protected Species  
 HDir = EU Habitats Directive Species  
 NRW = Natural Resources Wales Priority Species  
 RD1 (Wales) = Welsh Red Data Book listing based on IUCN guidelines  
 RD1 (UK) = UK Red Data Book listing based on IUCN guidelines  
 RD2 (UK) = UK Red Data Book listing not based on IUCN guidelines (Nationally Rare and Scarce)  
 WBR (RSPB) = RSPB Welsh Red listed birds (not based on IUCN criteria)  
 WBAm (RSPB) = RSPB Welsh Amber listed birds (not based on IUCN criteria)  
 UKBR (RSPB) = RSPB UK Red listed birds (not based on IUCN criteria)  
 UKBAm (RSPB) = RSPB UK Amber listed birds (not based on IUCN criteria)  
 S42 = Natural Environment and Rural Communities Act 2006 (Section 42)  
 WCA1.1 = Wildlife and Countryside Act Schedule 1 Part 1 Species  
 WCA5 = Wildlife and Countryside Act Schedule 5 Species  
 WCA8 = Wildlife and Countryside Act Schedule 8 Species  
 WCA9 = Wildlife and Countryside Act Schedule 9 Species  
 WSG.P = Guidelines for the Selection of Wildlife Sites in South Wales - Primary species  
 WSG.C = Guidelines for the Selection of Wildlife Sites in South Wales - Contributory species  
 LBAP (xxx) = Local Biodiversity Action Plan Species (see key below)  
 LI (SEWBReC) = Locally Important Species (as identified by local specialists) in SEWBReC area.  
 LI (BIS) = Locally Important Species (as identified by local specialists) in BIS\* area.  
 LI (BRYO-MON) = Locally or nationally scarce or rare bryophyte in Monmouthshire.  
 LI (VC##) = Locally Important Species (as identified by local specialists) in Vice County ##  
 LI (VC##, LS) = Locally Scarce in Vice County ##  
 LI (VC##, LR) = Locally Rare in Vice County ##  
 LI (VC##, EX) = Extinct in Vice County ##  
 LI (VC##, UR) = Under Recorded in Vice County ##  
 \* BIS = Biodiversity Information Service for Powys and Brecon Beacons National Park

## 3.2. Non-statutory Nature Conservation Sites (NNCS)

3.2.1. There are no Sites of Importance for Nature Conservation (SINC) within 1 km important for birds.

## 3.3. Statutory Nature Conservation Sites

3.3.1. There are 4 statutory nature conservation sites with bird interest features within 5km of the proposed development.

### Severn Estuary SSSI

- 3.3.2. The Severn Estuary lies on the south west coast of Britain at the mouth of four major rivers (the Severn, Wye, Usk and Avon) and many lesser rivers. The immense tidal range (the second highest in the world) and classic funnel shape make the Severn Estuary unique in Britain and very rare worldwide. The intertidal zone of mudflats, sand banks, rocky platforms and saltmarsh is one of the largest and most important in Britain. The estuarine fauna includes: internationally important populations of waterfowl; invertebrate populations of considerable interest; and large populations of migratory fish, including the nationally rare and endangered Allis Shad *Alosa alosa*. The SSSI forms the major part of a larger area of estuarine habitat, which includes the Upper Severn Estuary, the Taf/Ely Estuary and Bridgwater Bay.
- 3.3.3. The estuary has a diverse geological setting and a wide range of geomorphological features, especially sediment deposits. It is important for the interpretation of coastline dynamics and land-forms, and also past changes, in sea level, sediment supply, climate and river flow. The estuary's overall interest depends on its large size, and on the processes and interrelationships between the intertidal and marine habitats and its fauna.
- 3.3.4. Beds of eel-grass *Zostera* spp. occur on the more sheltered mud and sand banks. The estuary fringes have large areas of saltmarsh. These are generally grazed by sheep and/or cattle, a significant factor determining the plant communities. A range of saltmarsh types is present, with both gradual and stepped transitions between bare mudflat and upper marsh. Glassworts *Salicornia* spp. and Annual Sea-blite *Suaeda maritima* colonise bare mud on the lower saltmarshes, and disturbed areas at higher levels. Common Cord-grass *Spartina anglica* is abundant on the seaward fringes of marshes, where it occurs as dense monocultures, or with other species, such as Sea Aster *Aster tripolium*, Greater Sea-spurrey *Spergularia media* and Common Saltmarsh-grass *Puccinellia maritima*. The middle marsh is mainly dominated by Common Saltmarsh-grass, and frequent associates include Sea-milkwort *Glaux maritima*, English Scurvygrass *Cochlearia anglica* and Sea Arrowgrass *Triglochin maritima*, together with two nationally scarce plants Bulbous Foxtail *Alopecurus bulbosus* and Slender Hare's-ear *Bupleurum tenuissimum*.
- 3.3.5. There are a few localities for an uncommon middle marsh community, which is characterised by Sea Lavender *Limonium vulgare* and Thrift *Armeria maritima*. Prominent species on the upper marsh are Red Fescue *Festuca rubra* and Saltmarsh Rush *Juncus gerardi*. Nationally scarce species occurring on the upper marshes include Sea Clover *Trifolium squamosum* and Sea Barley *Hordeum marinum*. Highly saline drying pans on the upper marsh support a community with abundant Reflexed Saltmarsh-grass *Puccinellia distans* and Lesser Sea-spurrey *Spergularia marina*. The highest saltmarsh around the driftline is usually dominated by Sea Couch *Elymus pycnanthus*, with Spear-leaved Orache *Atriplex prostrata*. Some brackish pools and depressions on the upper marshes have small stands of Common Reed *Phragmites australis* or Sea Club-rush *Scirpus maritimus*. Corn Parsley *Petroselinum segetum*, a European rarity, occurs within the site.



- 3.3.6. The fluctuating salinity and highly mobile sediments with consequent high turbidity limits the benthic invertebrates to relatively few species. Those which are tolerant of such conditions occur in very high densities on the more stable mudflats. The most prominent species are ragworm *Nereis* spp., Lugworm *Arenicola marina*, Baltic Tellin *Macoma balthica* and the Spire Shell *Hydrobia ulvae*. A greater variety of invertebrates tend to occur on the intertidal rock platforms, a more stable habitat with rock pools and a relatively high cover of seaweeds.
- 3.3.7. Seven species of migratory fish move through the Estuary between the sea and rivers. There are particularly large numbers of Atlantic Salmon *Salmo salar* and Common Eel *Anguilla anguilla*. The other species are Allis Shad, the nationally rare Twaite Shad *Alosa fallax*, the Sea Trout *Salmo trutta*, Sea Lamprey *Petromyzon marinus* and the Lampern or River Lamprey *Lampetra fluviatilis*.
- 3.3.8. The SSSI is of international importance for wintering and passage wading birds, with total winter populations averaging about 44,000 birds. Numbers can be considerably higher during severe winters when, owing to its mild climate, the Severn supports wader populations that move in from the colder coasts of Britain. The SSSI holds most of the estuary's internationally important Curlew *Numenius arquata* and Redshank *Tringa tetanus* populations, and most of its nationally important Ringed Plover *Charadrius hiaticula* and Grey Plover *Pluvialis squatarola* populations. Other waders which occur in significant numbers within the SSSI are Common Snipe *Gallinago gallinago*, Knot *Calidris canutus*, Whimbrel *Numenius phaeopus* and Turnstone *Arenaria interpres*.
- 3.3.9. The SSSI is internationally important for Dunlin *Calidris alpina* and supports about 7.5% of the British wintering population of this species. The estuary as a whole supports about 10.5% of the British wintering population and is the single most important wintering ground of Dunlin in Britain.
- 3.3.10. In late winter and early spring, the SSSI supports nationally important numbers of Shelduck *Tadorna tadorna*, following the partial dispersal from their moulting grounds in Bridgwater Bay. There are also significant numbers of Wigeon *Anas penelope*.

#### Severn Estuary RAMSAR

- 3.3.11. The Severn Estuary is one of the largest estuaries in Britain and it has the second largest tidal range in the world. Its classic funnel shape and southwest orientation makes it susceptible to extreme weather conditions in the east Atlantic. There are large urban developments on the estuary. The high tidal range leads to strong tidal stream and high turbidity, producing communities characteristic of the extreme physical conditions of liquid mud and tide-swept sand and rock. The site is particularly important for the run of migratory fish between the sea and rivers via the estuary. Species using the estuary include *Salmo salar*, *S. trutta*, *Petromyzon marinus*, *Lampetra fluviatilis*, *Alosa alosa*, *A. fallax* and *Anguilla anguilla*.

3.3.12. The estuary is also important for migratory birds during spring and autumn migrations. During the five year period 1987/88 to 1991/92, the estuary supported nationally important numbers of Common Ringed Plover *Charadrius hiaticula*, Dunlin *Calidris alpina*, Whimbrel *Numenius phaeopus*, and Common Redshank *Tringa totanus*. The site also regularly supports more than 20,000 waterfowl. In the five year period 1988/89 to 1992/93 the average peak count was 68,026 waterfowl, comprising 17,502 wildfowl and 50,524 waders. These included internationally important numbers of Greater White-fronted Goose *Anser albifrons albifrons* (3,002), Shelduck *Tadorna tadorna* (2,892), Gadwall *Anas strepera* (330), Dunlin *Calidris alpina* (41,683) and Common Redshank *Tringa totanus* (2,013). Several other species occur in nationally important numbers, including Lesser Black-backed Gulls.

#### Severn Estuary SPA

3.3.13. This area has been designated an SPA due to its importance during the spring and autumn migration periods for waders moving up the west coast of Britain, as well as in winter for large numbers of waterbirds, especially swans, ducks and waders. This site qualifies under **Article 4.1** of the Directive (79/409/EEC) by supporting populations of European importance of the following species listed on Annex I of the Directive:

##### Over winter:

Bewick's Swan *Cygnus columbianus ssp. bewickii*, 280 individuals representing at least 4.0% of the wintering population in Great Britain (5 year peak mean 1991/2 - 1995/6)

3.3.14. This site also qualifies under **Article 4.2** of the Directive (79/409/EEC) by supporting populations of European importance of the following migratory species:

##### On passage:

Ringed Plover *Charadrius hiaticula*, 655 individuals representing at least 1.3% of the Europe/Northern Africa - wintering population (5 year peak mean 1991/2 - 1995/6)

##### Over winter:

Curlew *Numenius arquata*, 3,903 individuals representing at least 1.1% of the wintering Europe - breeding population (5 year peak mean 1991/2 - 1995/6)

Dunlin *Calidris alpina alpina*, 44,624 individuals representing at least 3.2% of the wintering Northern Siberia/Europe/Western Africa population (5 year peak mean 1991/2 - 1995/6)

Pintail *Anas acuta*, 599 individuals representing at least 1.0% of the wintering Northwestern Europe population (5 year peak mean 1991/2 - 1995/6)

Redshank *Tringa totanus*, 2,330 individuals representing at least 1.6% of the wintering Eastern Atlantic - wintering population (5 year peak mean 1991/2 - 1995/6)

Shelduck *Tadorna tadorna*, 3,330 individuals representing at least 1.1% of the wintering North-western Europe population (5 year peak mean 1991/2 - 1995/6)

Assemblage qualification: A wetland of international importance.

The area qualifies under **Article 4.2** of the Directive (79/409/EEC) by regularly supporting at least 20,000 waterfowl.

Over winter, the area regularly supports 93,986 individual waterfowl (5 year peak mean 1991/2 - 1995/6) including: Gadwall *Anas strepera*, Shelduck *Tadorna tadorna*, Pintail *Anas acuta*, Dunlin *Calidris alpina alpina*, Curlew *Numenius arquata*, Redshank *Tringa totanus*, Bewick's Swan *Cygnus columbianus ssp. bewickii*, Wigeon *Anas penelope*, Lapwing *Vanellus vanellus*, Teal *Anas crecca*, Mallard *Anas platyrhynchos*, Shoveler *Anas clypeata*, Pochard *Aythya ferina*, Tufted Duck *Aythya fuligula*, Grey Plover *Pluvialis squatarola*, White-fronted Goose *Anser albifrons albifrons*, Whimbrel *Numenius phaeopus*.

Magor Marsh SSSI

- 3.3.15. This SSSI is the largest remnant of the formerly extensive fenlands near the Gwent coast. It lies on estuarine alluvium, but receives run-off from an area of Carboniferous Limestone. The site supports a variety of reed *Phragmites australis*, sedge *Carex* spp. and submerged and emergent aquatic plants. There are areas of wet meadow and both Willow *Salix* spp. and Alder *Alnus glutinosa* carr, with an intersecting system of drainage ditches – or reens and ponds. It is an important breeding ground for water and marsh birds.

### 3.4. WeBS Alerts for Severn Estuary SPA

- 3.4.1. The WeBS Alerts system is web based and provides a standardised method of identifying changes in numbers of waterbirds at a variety of spatial and temporal scales. The WeBS Alerts report provides a review of the status of species on sites in the UK which are designated due to their conservation value for waterbirds. Species that have undergone major declines in numbers are flagged, by the issuing of an Alert.
- 3.4.2. High Alerts are in place for:
- White-fronted Goose - medium term and long term;
  - Bewick's Swan - Short term and long term
- 3.4.3. Medium Alerts are in place for:
- Gadwall – Long term
  - Dunlin – Long term

White-fronted Goose

3.4.4. Numbers of White-fronted Goose (European - albifrons) over-wintering on Severn Estuary SPA have been decreasing long term. This decline has been of sufficient magnitude to trigger Alerts for the long-, medium and short-term, and the period since baseline. Numbers of this species over-wintering within South West and Wales Regions combined have been decreasing long term. Numbers of this species over-wintering in Great Britain have been decreasing long term. The comparison with regional trends is not meaningful as most of this species over-wintering in the region winter at this site. The declining proportion of numbers wintering in Great Britain supported by this site suggest that site-specific pressures may be affecting this species.

#### Bewick's Swan

3.4.5. Numbers of Bewick's Swan over-wintering on Severn Estuary SPA have been decreasing long term. This decline has been of sufficient magnitude to trigger Alerts for the long-, medium and short-term, and the period since baseline. Numbers of this species over-wintering within South West and Wales Regions combined have been decreasing long term. Numbers of this species over-wintering in Great Britain have been decreasing in the long-term, having previously increased. The trend on the site appears to be tracking that of the region and British trends. The increasing proportion of regional numbers supported by this site suggest the environmental conditions remain relatively favourable and also indicates that this site is becoming increasingly important on a regional scale for this species. In conclusion, the similarity between the declining site trend, and the regional and British trends, suggests that the declining numbers underpinning these Alerts result from broad-scale population trends.

#### Gadwall

3.4.6. Numbers of Gadwall over-wintering on Severn Estuary SPA have been decreasing in the long-term having previously increased. Consequently, Alerts have been triggered for the long-term and the period since baseline. Numbers of this species over-wintering within South West and Wales Regions combined have been increasing long term. Numbers of this species over-wintering in Great Britain have been stable in the short-term, having previously increased. The trend on the site does not appear to be tracking that of either the region or the British trend. The declining proportion of the regional numbers supported by this site suggest that site-specific pressures may be affecting this species. In conclusion, the contrast between the declining site trend and both the regional and British trends suggests that declining numbers underpinning these Alerts are most likely due to site-specific pressures.

#### Dunlin

3.4.7. Numbers of Dunlin over-wintering on Severn Estuary SPA have been increasing in the medium-term following a previous decline. Consequently, Alerts have been triggered for the long-term and the period since baseline. Numbers of this species over-wintering within South West and Wales Regions combined have been increasing in the medium-term following a previous decline. Numbers of this species over-wintering in Great Britain have been decreasing in the long-term, having previously been relatively stable. The trend

on the site appears to be tracking that of the region, although not the British trend. The increasing proportion of regional and even country-wide numbers supported by this site suggest the environmental conditions remain relatively favourable, and that this site is becoming increasingly important for this species. In conclusion, the similarity between the site trend and the regional trend suggests that the declining numbers underpinning these Alerts result from broad-scale population trends.

### 3.5. Habitat assessment

The site is set within the Gwent Levels, an extensive area of grazing marsh with reed ditches along the northern shore of the Severn Estuary. The Levels support a diverse range of wetland species, including dragon flies and water beetles, with declining farmland birds and important mammal species. The proposed solar park is set within Gwent Levels – Redwick and Llandevenny SSSI, which has been designated for invertebrate and plant interest features, and the reed and wet pasture habitat.

The Levels are a farmed habitat, and the proposed solar park is towards the northern margin of the Levels, 50 metres to the south east of the A4810 highway and 50 metres from the Tesco Magor Distribution centre. Its location towards the rear of the Levels is likely to result in low levels of activity by birds associated with the estuary. These will have a tendency to stay closer to the coast, whilst inland areas to the north don't provide wetland habitat suitable for the majority of these bird species and they will not transit the site.

Habitats within the site largely comprise grassland managed for its agricultural value and are unlikely to provide much in the way of food items for farmland birds, whilst hedgerows would screen predators, making this area unlikely to be important for many ground nesting birds. Occasional areas of rush grassland on wet field margins dried during the survey period and were cultivated by the landowners.

The reens and larger ditches have occasional fringing reed and may support breeding water and marsh birds that are an interest feature of Magor Marsh SSSI, although the improved grassland habitats would be unlikely to support ground nesting birds, such as Lapwing.

Hedgerows enclosing the site will support common and widespread nesting passerine such as Blackbird.

### 3.6. Lowland breeding wader survey

Waders were encountered on 27 occasions during the survey period comprising Snipe (Amber), Sandwich Tern (Amber) and Lapwing (Red) (Map 2).

Single Sandwich Tern were recorded on 29<sup>th</sup> March 2019 in fields beyond the north of the development, and on 16<sup>th</sup> April in F20, beyond the south of the development.

Snipe were recorded on 4 occasions:

- 29<sup>th</sup> March 2019 - 6 birds present in F18 beyond the south of the development footprint
- 30<sup>th</sup> March 2019 - a single bird in the north eastern corner of F2.

- 16<sup>th</sup> April 2019 – 4 birds in F1 in the north of the site.
- 30<sup>th</sup> April 2019 – a single bird in F2 in the north of the site.

Lapwing were encountered on 21 occasions:

- 29<sup>th</sup> March 2019 – two pairs in F2 in the north of the site were flushed during the survey and flew into adjacent GWT land.
- 30<sup>th</sup> March 2019 – a pair in the field to the east of Blackwall Lane, outside the development footprint, and 8 birds in fields F19 & F20 outside the development footprint
- 16<sup>th</sup> April 2019 - two pairs in the field to the east of Blackwall Lane, outside the development footprint, one pair in rough habitat on the western edge of F2, and one pair in F18 outside the south of the development.
- 30<sup>th</sup> April 2019 – a pair in the field to the east of Blackwall Lane, F19 and F20, outside the development footprint (thought to be prospecting for nest sites), and one pair in rough habitat on the western edge of F2.
- 11<sup>th</sup> May 2019 – a single bird in F30 in the centre of the site, a single bird in the field to the east of Blackwall Lane, and a pair in F20.
- 12<sup>th</sup> May 2019 - one pair in rough habitat on the western edge of F2
- 14<sup>th</sup> June 2019 - a pair in the field to the east of Blackwall Lane.

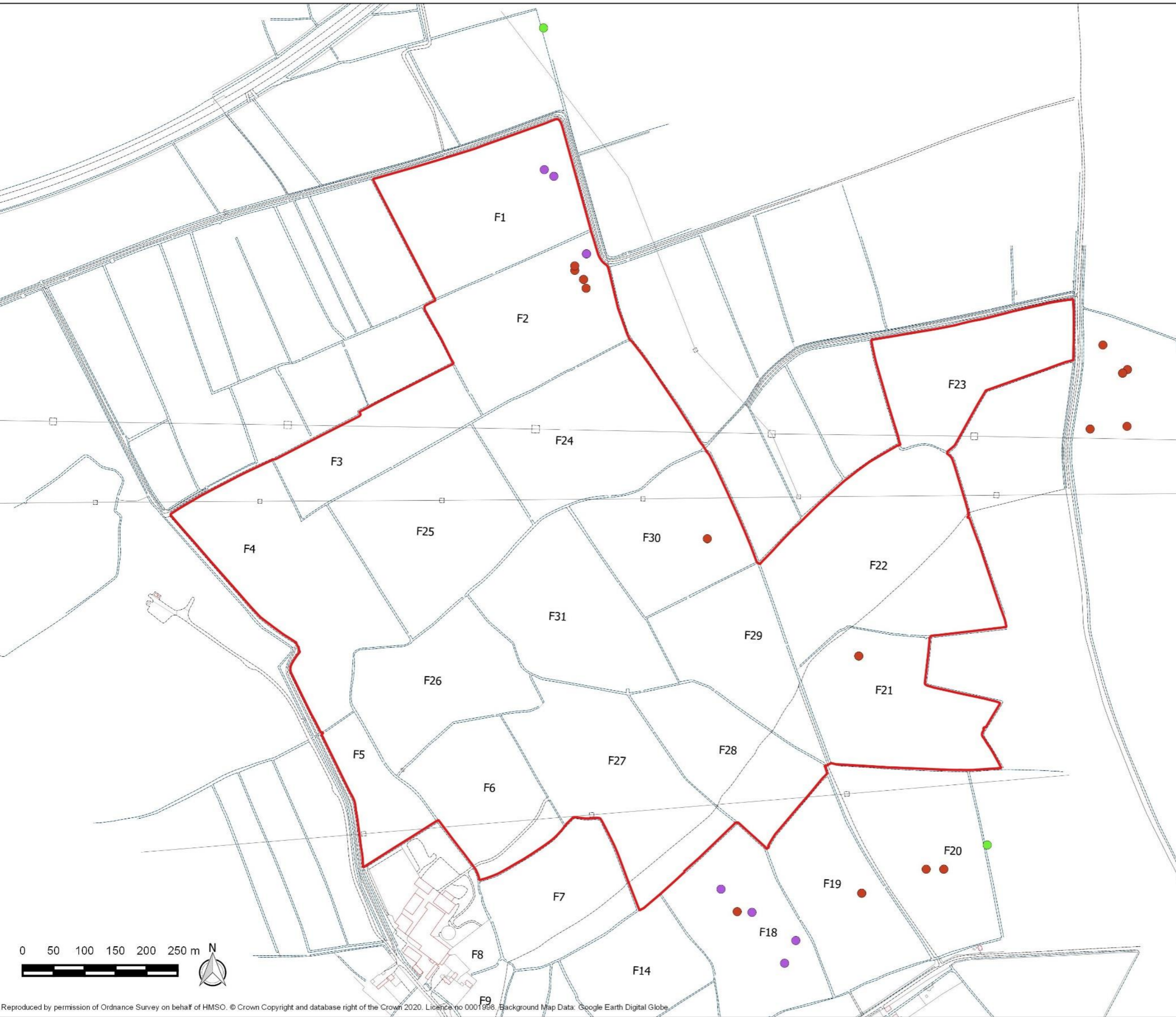
As per O'Brian and Smith (1992), the number of breeding pairs is taken as the maximum number of birds seen on a single visit, divided by two. However, no nesting activity was observed for Sandwich Tern and only single birds were observed.

For Snipe, the maximum was 4 birds on 16<sup>th</sup> April in F2, suggesting at least two pairs are nesting here (birds recorded outside the site are not considered in this calculation).

For Lapwing, the maximum was 4 birds in F2 on 29<sup>th</sup> March, indicating two pairs are likely to be present.

**Legend**

- Development footprint
- Lapwing
- Sandwich Tern
- Snipe



Title: Map 2. Lowland Breeding Waders survey results

Project: Rush Wall Solar Park

Checked by: CDH      Version: 01  
Date: 24/04/2020

### 3.4. Breeding bird transect survey

A total of 52 species of birds were recorded during the breeding bird transects in the period mid-March to mid-July 2019. Of the species recorded, 21 species are declining and included in the RSPB BoCC Red or Amber lists, whilst 11 are also species of principal importance (Table 3 and Maps 3 & 4). The remainder were common and widespread passerines, corvids, gulls and water fowl.

Of the 7 species recorded that are of Red conservation concern, many were recorded to the south and east, beyond the proposed development, with a single Linnet and Starling recorded singing within the site, along with 7 records of singing Skylark during the 6 site visits. With the exception of Skylark, these birds would nest within boundary habitats such as hedgerows, scrub and tall reeds with juveniles seen for House Sparrow, Linnet and Song Thrush.

Amongst Amber species, Dunnock and Reed Bunting were recorded singing within the site, whilst juvenile Mallard, Mute Swan, Bullfinch and Dunnock were seen. These species would nest within boundary habitats such as hedgerows, scrub and aquatic margins, and would be outside the development footprint.

A number of species not of conservation concern were also noted here.

Table 3. Species recorded during nesting bird transects.

Species	1 <sup>st</sup> visit	2 <sup>nd</sup> visit	3 <sup>rd</sup> visit	4 <sup>th</sup> visit	5 <sup>th</sup> visit	6 <sup>th</sup> visit	Breeding evidence	Conservation status (RSPB BoCC lists)	Species of Principal Importance
Blackbird	27	17	35	26	25	21	Juveniles seen		
Blackcap	3	3	19	10	5	6	Repeated singing		
Blue Tit	10	2	8	9	4	12	Juveniles seen		
Bullfinch	1	0	0	0	0	3	Juveniles seen	Amber	Yes
Buzzard	3	2	2	3	3	3	Pair in suitable habitat		
Canada Goose	0	0	0	0	2	0	Unlikely		
Carrion Crow	6	37	48	10	3	27	Juveniles seen		
Cetti's Warbler	1	1	2	1	0	1	Repeated singing		
Chaffinch	13	5	11	10	3	4	Repeated singing		
Chiffchaff	13	4	5	11	3	7	Juveniles seen		
Collared Dove	2	2	1	4	4	2	Pair in suitable habitat		
Dunnock	7	2	7	4	1	9	Juveniles seen	Amber	Yes
Fieldfare	26	0	0	0	0	0	Late winter visitors	Red	
Goldfinch	1	10	14	15	3	13	Juveniles seen		
Great Spotted Woodpecker	1	1	0	1	0	2	Birds in suitable habitat		
Great Tit	10	1	4	2	5	2	Juveniles seen		
Grey Heron	1	1	3	2	2	1	Unlikely		
Herring Gull	0	1	2	72	2	0	No	Red	Yes
House Martin	0	0	0	0	3	0	No	Amber	
House Sparrow	8	7	14	16	3	14	Juveniles seen	Red	Yes



Jackdaw	0	0	1	0	0	0	No		
Kestrel	0	1	0	0	0	0	Bird in suitable habitat	Amber	Yes
Lesser Black-backed Gull	0	0	0	43	2	0	No	Amber	
Lesser Whitethroat	0	0	0	4	0	2	Repeated singing		
Linnet	0	15	5	4	1	7	Juveniles seen	Red	Yes
Little Egret	0	0	0	0	2	5	No		
Long-tailed Tit	1	2	3	4	10	7	Juveniles seen		
Magpie	5	3	4	5	3	3	Juveniles seen		
Mallard	19	11	19	20	3	10	Juveniles seen	Amber	Yes
Meadow Pipit	7	50	0	0	0	0	No	Amber	
Moorhen	8	1	6	9	1	3	Juveniles seen		
Mute Swan	17	19	15	17	15	11	Juveniles seen	Amber	Yes
Pheasant	9	7	9	16	3	5	Birds in suitable habitat		
Pied Wagtail	1	0	0	0	0	0	Bird in suitable habitat		
Raven	0	2	2	2	4	0	Juveniles seen		
Reed Bunting	5	0	6	4	2	2	Repeated singing	Amber	Yes
Reed Warbler	0	0	13	26	5	2	Juveniles seen		
Robin	19	9	12	10	8	5	Juveniles seen		
Sedge Warbler	0	0	7	1	0	0	Birds in suitable habitat		
Shelduck	6	2	2	0	0	0	Unlikely	Amber	
Skylark	2	1	9	2	5	4	Repeated singing	Red	Yes
Song Thrush	2	2	3	6	4	4	Juveniles seen	Red	
Sparrowhawk	0	0	0	0	0	1	Bird in suitable habitat		
Starling	0	0	0	30	1	5	Unlikely	Red	Yes
Stock Dove	0	15	5	10	3	3	Birds in suitable habitat	Amber	
Stonechat	0	0	0	0	0	1	Bird in suitable habitat	Amber	
Swallow	0	0	5	8	3	2	Birds in suitable habitat	Amber	
Teal	2	2	0	0	0	0	Birds in suitable habitat	Amber	
Wheatear	1	0	1	0	0	0	Probable passage migrants		
Whitethroat	0	0	10	9	2	2	Juveniles seen		
Woodpigeon	60	9	15	22	8	25	Juveniles seen		
Wren	43	22	46	35	16	17	Juveniles seen		

**Legend**

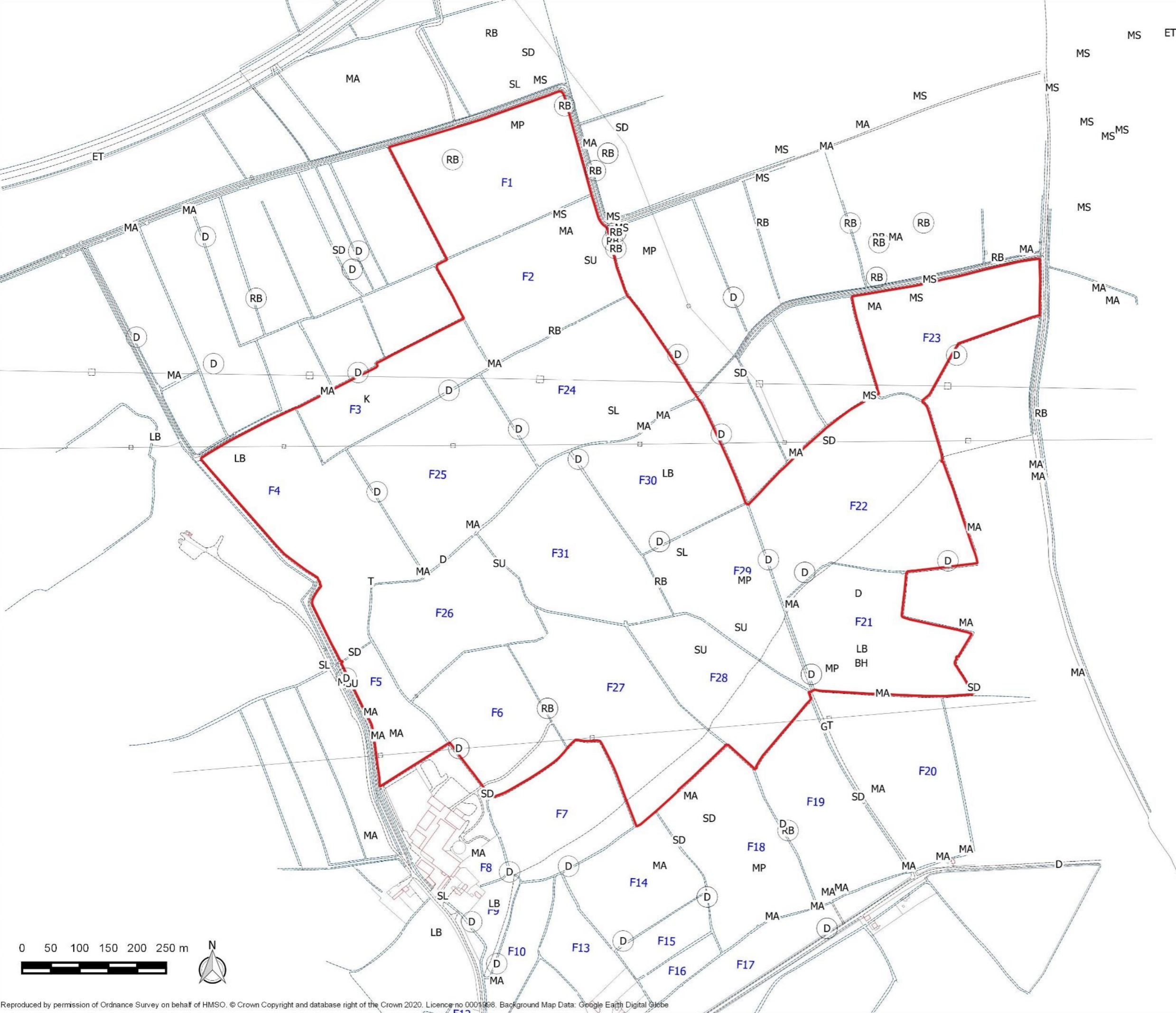
— Development footprint

Code	Species
D	Dunnock
RB	Reed Bunting
MA	Mallard
T	Teal
MP	Meadow Pipit
SD	Stock Dove
SU	Shelduck
ET	Little Egret
SL	Swallow
HM	House Martin
LB	Lesser Black-backed Gull
BH	Black-headed Gull
BF	Bullfinch
G	Green Woodpecker
K	Kestrel
G	Great Spotted Woodpecker
MS	Mute Swan

Title: Map 3. Breeding bird transects results. Species of Amber conservation concern

Project: Rush Wall Solar Park

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Date: 24/04/2020

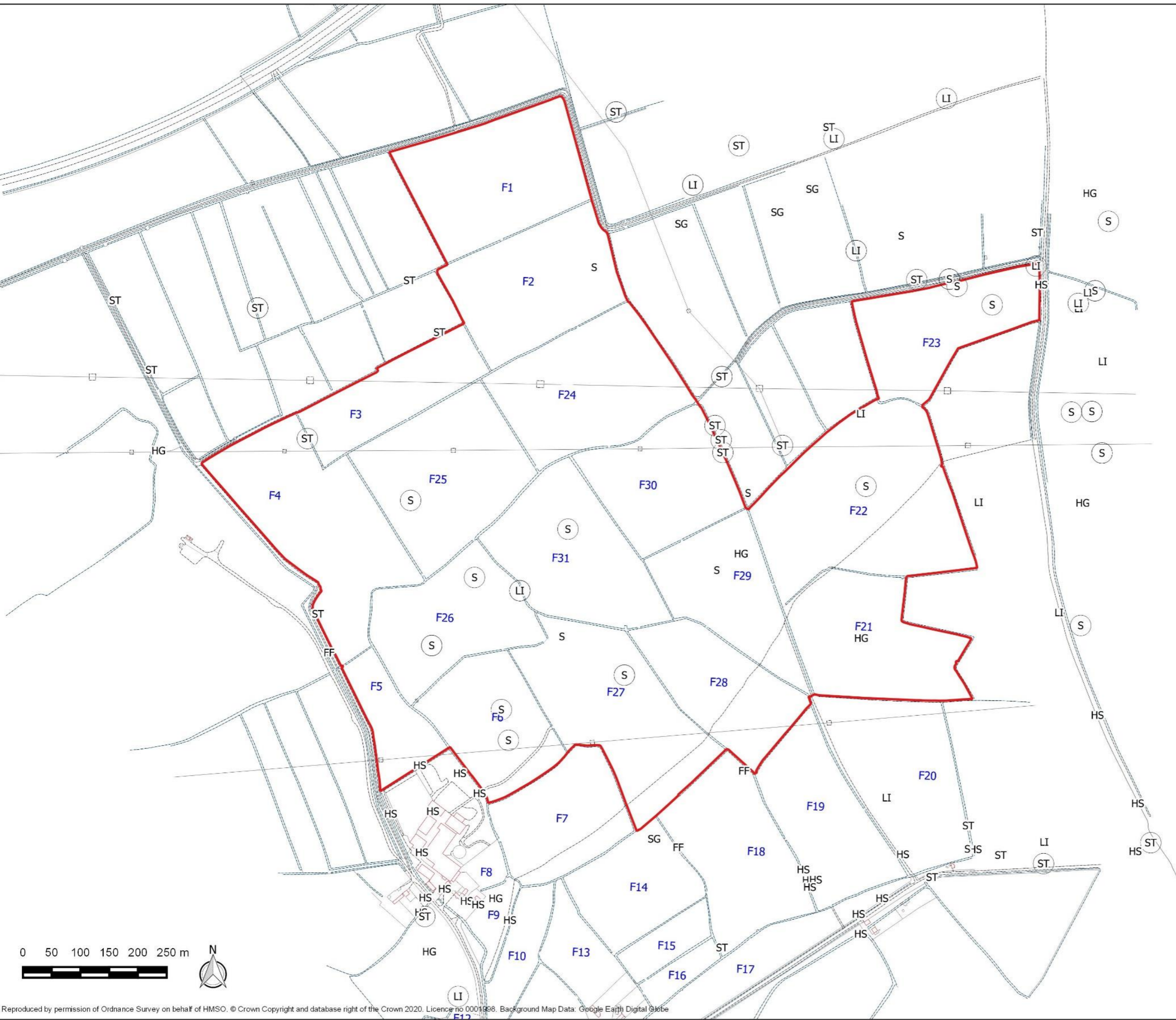


**Legend**

— Development footprint

○ Singing

Code	Species
ST	Song Thrush
FF	Fieldfare
HS	House Sparrow
S	Skylark
SG	Starling
LI	Linnet
HG	Herring Gull



Title: Map 4. Breeding bird transects results. Species of Red conservation concern

Project: Rush Wall Solar Park

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## 4. Evaluation of site for breeding birds

### 4.1. Ground nesting birds

Habitats within the site largely comprise grassland managed for its agricultural value and are unlikely to provide much in the way of food items for farmland birds, whilst hedgerows would screen predators, making this area unlikely to be important for many ground nesting birds. Occasional areas of rush grassland on wet field margins dried during the survey period and were cultivated by the landowners.

Analysis of lowland breeding wader survey results using the methods of O'Brian and Smith (1992) suggest this site supports two pairs of Snipe and 2 pairs of Lapwing during the breeding season. It is extremely unlikely that these birds successfully fledged chicks in the survey period due to ongoing agricultural management of the site.

Snipe are of Amber conservation concern and Lapwing are of Red concern and are listed under Section 7.

Singing Skylark were also observed during all of the breeding bird transect survey visits, but no evidence of successful breeding was noted.

Habitats within the development boundary are of Site value for ground nesting birds.

### 4.2. Marshland and water nesting birds

Mallard and Mute Swan were regularly recorded during the breeding bird transects, with Juvenile of both species seen. Also recorded were singing Reed Bunting, suggesting breeding here, although no juveniles were noted. These 3 bird species are listed under Section 7 Environment (Wales) Act 2016.

Teal were noted in suitable breeding habitat.

Aquatic boundary habitats are of Local value for marshland and water nesting birds.

### 4.3. Hedgerow nesting birds

Juveniles from a range of hedgerow nesting birds were recorded here including Song Thrush, Dunnock, Linnet, House Sparrow and Bullfinch.

Four of the bird species confirmed breeding are listed under Section 7 Environment (Wales) Act 2016 - House Sparrow, Dunnock, Linnet and Bullfinch.

This species mix is typical of farmland with mature hedgerows. Hedgerow boundary habitats are of Local value for nesting birds.

Crane were not recorded during any of the site visits.

## 5. References

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