



The Sirius Group

Solar Farm, Kelham, Newark

BIRD REPORT

September 2023

FPCR Environment and Design Ltd

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1.0 NON-TECHNICAL SUMMARY

- 1.1 FPCR Environment & Design Ltd. were commissioned by Sirius Planning to conduct a suite of surveys on land at a proposed development site to the west of Kelham, Nottinghamshire. Proposals for the site involve the use of current arable cropland for a solar farm and battery energy storage system with the areas of bordering woodland and some sections of the existing fields along the northeast boundary of the Site.
- 1.2 A full Breeding Bird Survey was conducted in May and June 2020 with a subsequent scoping Wintering Bird Survey in November 2021 and update Breeding Bird Surveys in May 2022 and April 2023. The application site boundary previously encompassed additional areas including the grazed grassland fields to the west and has been since reduced. For completeness the full scope of survey results have been included. The 2020 survey identified 49 species of which 22 were considered 'notable'. Six species were confirmed as breeding on site, 22 were considered probable breeders and the remaining 21 species were considered possible or non-breeders. The scoping Wintering Bird Survey identified 32 species of which 14 were 'notable' whilst the update Breeding Bird Surveys identified 48 species in 2022, of which 21 were notable species, with the 2023 survey recording a total of 32 species, of which 14 notable species, and having near complete overlap with the 2020 survey effort.
- 1.3 The Site therefore does not meet any of the relevant selection criteria and consequently does not qualify for consideration as a Local Wildlife Site based on its breeding and/or wintering bird populations.
- 1.4 The breeding bird assemblages within the Site were typical of the habitats present, comprising mainly common and widespread species. The assemblages associated with the internal fields, hedgerows, woodland blocks and scrub were considered to be of **Local** conservation importance while those associated with the various wetland habitats were considered of **Site** conservation importance.
- 1.5 The wintering bird assemblages were typical of the habitats present and involved very few species and at very low numbers and were therefore considered of **Site** importance.
- 1.6 The proposals are therefore considered to result in a **Local Adverse** impact on breeding skylark and yellow wagtail with **Local Adverse** to **Negligible** impacts on the other breeding and wintering bird species.
- 1.7 Disturbance is expected to be limited to the construction phase and is anticipated to have a **Minor Adverse** impact during the breeding season.
- 1.8 Mitigation measures are recommended to minimise disturbance impacts from construction operations; any vegetation clearance will be undertaken outside the bird nesting season (March – August, inclusive). If this is not possible, an ecologist should make a check of any suitable breeding habitat prior to its clearance, with suitable stand-offs (as determined by the ecologist) retained around any active nests until dependant young have fledged.
- 1.9 A range of enhancement opportunities have been suggested based on the habitats and bird species recorded to achieve biodiversity gains. These include sensitive planting schemes and the provision of a range of nest boxes.

2.0 INTRODUCTION

- 2.1 FPCR Environment & Design Ltd were commissioned by Sirius Planning to undertake bird surveys on a Site to the west of Kelham (central OS grid reference SK 766 558), hereafter referred to as 'the Site'.

Site Location and Context

- 2.2 A full description of the habitats present on Site will be provided in the Ecological Appraisal which should be read in conjunction with this report (FPCR, 2023).
- 2.3 The majority of the Site is dominated by large compartments of arable cropland seeded with both maize and cereal crops over the period covered by these surveys. Other habitats present on Site include small areas of species-poor semi-improved grassland at the margins of the arable cropland, small blocks of dense scrub.
- 2.4 Linear habitat features include a number of hedgerows separating the agricultural compartments. A wet ditch is present and a line of scattered scrub separating the large, central arable compartment from the artificial pond at the east of the Site.
- 2.5 The Site is bound by existing residential development to the east, further agricultural land to the north and south – the former predominantly cereal cropland while the latter is dominated by grazing pastures – and the aforementioned woodland on the slopes of Kelham Hills to the west.
- 2.6 The application site boundary previously encompassed additional areas including the grazed grassland fields to the west and has been since reduced. For completeness the full scope of survey results have been included within this report.

Site Proposals

- 2.7 The Site is proposed for the development of a solar farm and battery energy storage system with associated access. This would comprise rows of solar panels mounted on battery containers and includes ancillary structures including transformers and substations, internal service roads and deer fencing and infra-red CCTV cameras.

Survey Objectives

- 2.8 The initial Breeding Bird Survey was carried out between May (2 visits) and June (one visit) 2020. The objectives of the survey were to:
- Identify the presence of any designated nature conservation sites that support notable breeding bird assemblages within or in the vicinity of the Site.
 - Identify the presence, species, and distribution of breeding birds within the Site.
 - Evaluate the conservation importance of habitats within the Site to local bird populations and identify any areas of ornithological interest.
 - Make recommendations to minimise the potential impact of development and to consider opportunities for additional mitigation, compensation, and enhancement where relevant.
- 2.9 The Scoping Wintering Bird Survey was carried out across a single visit to site in November 2021. The objectives of the survey were to:

- Identify the presence and distribution of wintering birds;
 - Evaluate the conservation importance of wintering bird populations present;
 - Evaluate the importance of wintering bird populations and the anticipated residual impacts of the development, and
 - To identify areas of ornithological interest and make recommendations to minimise the potential impact of the scheme.
- 2.10 Due to the time elapsed since the full Breeding Bird Survey was conducted update surveys were undertaken in May 2022 and April 2023. The objectives of this survey were to:
- To identify the presence and distribution of breeding birds on the Site in 2022 and 2023;
 - To determine whether the bird assemblage recorded has significantly altered since surveys conducted in 2020 and;
 - To identify alterations in the ornithological interest of the site and make additional recommendations where appropriate to minimise the potential impact of the scheme based on the results of the most up to date survey data.

3.0 LEGISLATION & STATUS

Legislation

- 3.1 The Wildlife and Countryside Act 1981 (as amended) (WCA) is the principal legislation affording protection to UK wild birds. Under this legislation all birds, their nests and eggs are protected by law, and it is an offence, with certain exceptions, to recklessly or intentionally:
- Kill, injure or take any wild bird.
 - Take, damage, or destroy the nest of any wild bird while in use or being built; or
 - Take or destroy the egg of any wild bird.
- 3.2 Additional protection is afforded to species listed on Schedule 1 of the WCA, whereby intentional disturbance whilst building or occupying a nest or disturbance of dependent young is also considered an offence.
- 3.3 Certain species have also been identified as Species of Principal Importance (SPI) under Section 41 of the NERC Act 2006 (NERC S.41). The S.41 list is used to guide decision-makers such as public bodies, including local and regional authorities, in implementing their duty under Section 40 of the Natural Environment and Rural Communities Act 2006, to have regard to the conservation of biodiversity in England, when carrying out their normal functions.
- 3.4 The Site falls within the Nottinghamshire Local Biodiversity Action Plan (LBAP) which identifies several targets for UK priority species that occur within this area, however all bird species included are also covered under NERC S.41 or national level conservation classifications discussed below.

Status

- 3.5 In addition to statutory protection, some bird species are classified according to their conservation status, such as their inclusion on the Red and Amber lists of Birds of Conservation Concern (BoCC) in the UK:
- 3.6 Red list (high conservation concern) species meet at least one of the following criteria:
- They are globally threatened according to IUCN criteria.
 - Their population has declined rapidly (50% or more) in recent years.
 - They that have declined historically and not shown a substantial recent recovery.
- 3.7 Amber list (medium conservation concern) species are those that meet at least one of the following criteria:
- They have an unfavourable conservation status in Europe.
 - Their population or range has declined moderately (between 25% and 49%) in recent years.
 - Their population has declined historically but made a substantial recent recovery.
 - They are rare breeders.
 - They have internationally important or localised populations.
- 3.8 Green list (low conservation concern) species fulfil none of the above criteria.

4.0 METHODOLOGY**Desktop Study**

- 4.1 To compile existing baseline ornithological information, the following statutory and non-statutory organisations were consulted for data regarding designated sites for which birds are a qualifying feature, and protected/notable bird records:
- Natural England via the Multi Agency Geographic Information for the Countryside (MAGIC) website
 - Nottinghamshire Biological and Geological Records Centre (NBGRC)
- 4.2 The geographical extent of the search area for biodiversity information was related to the significance of sites and species and potential zones of influence which might arise from development within the Site, as follows:
- 5km around the Site boundary for sites of International Importance (e.g. Special Areas of Conservation (SACs), Special Protection Areas (SPAs), Ramsar sites);
 - 2km around the Site boundary for statutory sites of National or Regional Importance (e.g. Sites of Special Scientific Interest (SSSIs)) and
 - 1km around the Site for non-statutory designated sites of County Importance (e.g. Sites of Importance for Nature Conservation (SINCs)/Local Wildlife Sites (LWSs)) and protected or otherwise notable species records within the last 20 years.

Field Surveys

- 4.3 To provide a reasonable level of accuracy for determining the population status of the breeding birds on the Site, three surveys were undertaken between dawn and 11.00 in early May, late May and June 2020. Surveys in 2020 encompassed a larger site boundary including grazed grassland fields to the west which were since removed from the application. A route was mapped out prior to the surveys being undertaken, paying particular attention to any linear features, such as hedgerows and watercourses, and other features such as ponds and scrub. Bird surveys were not undertaken in unfavourable conditions, such as heavy rain or persistent strong wind (conditions which can negatively affect the results). Table 1 provides details of the survey dates and weather conditions.
- 4.4 The wintering bird populations on Site were assessed by an initial scoping survey to assess the number of species, and individuals thereof, utilising the habitats present with the results of this survey used to determine the need for further survey effort through further surveys. In this case, a single survey was deemed sufficiently representative of the presence/absence status of bird species on the Site, so no further surveys were undertaken. This is discussed in more detail below. This survey was carried out in from dawn until early afternoon in November 2021 and followed the same methodology described in Section 4.2.
- 4.5 The update breeding bird surveys in May 2022 and April 2023 followed the methodology detailed above. A single visit each year is considered sufficient when determining whether any significant changes to the breeding bird assemblage present have occurred since the last suite of surveys.

Table 1: Survey Dates and Conditions

Survey	Date	Cloud Cover (%)	Rain	Wind (Beaufort)	Visibility
2020 Breeding Bird Surveys					
1	07.05.20	5	None	Light Air	Good
2	28.05.20	50	None	None	Excellent
3	25.06.20	0	None	Light Air	Excellent
2021 Scoping Wintering Bird Survey					
4	25.11.21	5	None	Light Breeze	Excellent
2022 Update Breeding Bird Survey					
5	03.05.22	10	None	Light Air	Excellent
2023 Update Breeding Bird Survey					
6	17.04.23	90	None	None	Excellent

- 4.6 The methodology employed was broadly based on territory mapping¹ used for the British Trust for Ornithology (BTO) Common Bird Census (CBC). Standard BTO species codes and symbols for bird activities were used to identify birds and denote activity, sex and age where appropriate.

¹ Bibby, C.J., N.D. Burgess & D.A. Hill, 2000: Bird Census Techniques: 2nd Edition. London: Academic Press

Species & Assemblage Assessment

- 4.7 The Chartered Institute of Ecology and Environmental Management (CIEEM) guidance on ecological impact assessment assesses nature conservation importance within a geographical context². To attain each level of importance, an ornithological resource or one of the features (species population or assemblage of species) should meet the criteria set out in Table 2. In some cases, professional judgment may be required to increase or decrease the allocation of importance, based upon local knowledge.
- 4.8 The Site has also been assessed against the selection criteria for Local Wildlife Site (LWS) for Nottinghamshire³ on a number of criteria set out for breeding birds. LWSs are recognised by central government as an important tool in promoting sustainable development and protecting biodiversity.
- 4.9 The recent county annual bird report, *The Birds of Nottinghamshire – Annual Report for 2017*⁴, was consulted to inform the assessment. The abundance of species referred to by these reports is classified by the following criteria:
- Very Rare – Fewer than ten records ever;
 - Rare – Between 11 and 50 records ever;
 - Scarce – Between 51 and 200 records ever;
 - Uncommon – Resident species with a very limited distribution, or, non-resident species recorded on no more than 20 occasions in an average year;
 - Fairly Common – Species which may be encountered during most visits to suitable habitats;
 - Common – Species likely to be encountered in reasonable numbers on all visits to suitable habitats.

Table 2: Evaluation Criteria

Nature Conservation Value	Examples of Selection Criteria
International	A species which is part of the cited interest of an SPA and which regularly occurs in internationally or nationally important numbers. A species present in internationally important numbers (>1% of international population).
National	A species which is part of the cited interest of a SSSI and which regularly occurs in nationally or regionally important numbers. A nationally important assemblage of breeding or over-wintering species. A species present in nationally important numbers (>1% UK population). Rare breeding species (<300 breeding pairs in the UK).
Regional	Species listed as being of principal importance under NERC S.41 which are not covered above, and which regularly occurs in regionally important numbers. Species present in regionally important numbers (>1% of regional population). Sustainable populations of species that are rare or scarce within a region. Species on the BoCC Red List & which regularly occur in regionally important numbers.

² http://www.cieem.net/data/files/Publications/EcIA_Guidelines_Terrestrial_Freshwater_and_Coastal_Jan_2016.pdf

³ Crouch, N.C. (2018) Nottinghamshire LWS Handbook – Guidelines for the selection of Local Wildlife Sites in Nottinghamshire. Part 2A – Local Wildlife Sites selection criteria: species. 2nd Edition. Nottinghamshire Biological and Geological Records Centre, Nottingham.

⁴ The Birds of Nottinghamshire Annual Report for 2017 (2021).

Nature Conservation Value	Examples of Selection Criteria
County	Species listed as being of principal importance under NERC S.41 which are not covered above and which regularly occurs in county important numbers Species present in county important numbers (>1% of county population). Sustainable populations of species that are rare or scarce within a county, or are listed as being of principal importance under S41 of the NERC Act. A site designated for its county important assemblage of birds (e.g. a SINC Site). Species on the BoCC Red List & which regularly occur in county important numbers.
Local	Other species of conservation interest (e.g. all other species on the BoCC Red and Amber List or species listed as being of principal importance under NERC S.41 which are not covered above) regularly occurring in locally sustainable populations. Sustainable populations of species which are rare or scarce within the locality.
Site	Species that are common and widespread

5.0 RESULTS & EVALUATION

Desk Study

Designated Sites

- 5.1 No statutory sites related to birds were identified within the search area.

Protected/Notable Species

- 5.2 The desktop study returned records of 20 bird species from within 1km of the site plus a further five bird species without exact grid references the 1km square of which overlapped, at least in part, with the site boundary.
- 5.3 Of the 25 species returned 17 are considered notable with eight BoCC red-listed species, 7 BoCC amber-listed species, and two green-listed species afforded protection under WCA Schedule 1. These are listed in Table 3.

Table 3: Bird Species Records from Desktop Study

Name		Status		Within Site Boundary
		WCA Sch.1	NERC S.41	
BoCC Red List				
Grey partridge	<i>Perdix perdix</i>		+	No
Swift	<i>Apus apus</i>			No
Lapwing	<i>Vanellus vanellus</i>		+	No
Woodcock	<i>Scolopax rusticola</i>			No
Marsh tit	<i>Poecile palustris</i>		+	No
House martin	<i>Delichon urbicum</i>			No
Spotted flycatcher	<i>Muscicapa striata</i>		+	No
House sparrow	<i>Passer domesticus</i>		+	No

Name		Status		Within Site Boundary
		WCA Sch.1	NERC S.41	
BoCC Amber List				
Woodpigeon	<i>Columba palumbus</i>			No
Oystercatcher	<i>Haematopus ostralegus</i>			No
Tawny owl	<i>Strix aluco</i>			No
Kestrel	<i>Falco tinnunculus</i>			No
Sedge warbler	<i>Acrocephalus schoenobaenus</i>			No
Wren	<i>Troglodytes troglodytes</i>			No
Grey wagtail	<i>Motacilla cinerea</i>			No
BoCC Green List				
Mute swan	<i>Cygnus olor</i>			No
Buzzard	<i>Buteo buteo</i>			No
Hobby	<i>Falco Subbuteo</i>	+		No
Kingfisher	<i>Alcedo atthis</i>	+		No
Great spotted woodpecker	<i>Dendrocopos major</i>			No
Swallow	<i>Hirundo rustica</i>			No
Chiffchaff	<i>Phylloscopus collybita</i>			No
Blackbird	<i>Turdus merula</i>			No
Robin	<i>Erithacus rubecula</i>			No
BoCC Unlisted				
Little owl	<i>Athene Noctua</i>			No

- 5.4 There were no records from within the Site boundary itself and habitats on Site are not deemed suitable for marsh tit, spotted flycatcher, oystercatcher, or mute swan.

Field Surveys

2020 Breeding Bird Surveys

- 5.5 A total of 49 bird species were recorded during the full Breeding Bird Survey (for complete list see Appendix A). Of these, 22 species meet the criteria of at least one of the following pieces of legislation/classifications discussed above: Schedule 1 of the WCA; Section 41 of the NERC Act 2006; and BoCC Red or Amber lists. These species are referred to as 'notable' species.
- 5.6 Breeding evidence accumulated across all three surveys was used in the assignment of breeding status for each species in the following results.
- 5.7 Of the 49 species recorded as present during the Breeding Bird Survey, six were confirmed as breeding. None of these species are considered notable, all being of low conservation concern (BoCC Green-listed).
- 5.8 Twenty-two species were considered probable breeders which included nine notable species: skylark *Alauda arvensis*, whitethroat *Curruca communis*, wren *Troglodytes troglodytes*, starling

Sturnus vulgaris, song thrush *Turdus philomelos*, bullfinch *Pyrrhula pyrrhula*, greenfinch *Chloris chloris*, linnet *Linaria cannabina*, and yellowhammer *Emberiza citrinella*. The other 13 probable breeding species were all BoCC Green-listed and therefore of low conservation concern.

- 5.9 The remaining 27 species recorded were considered possible breeders or non-breeders on the Site.
- 5.10 Table 4 provides a summary of the notable species recorded during the breeding bird survey and their respective breeding statuses on site, whilst Figure 1 shows the approximate locations where they were recorded.

Table 4: Notable Breeding Bird Species Recorded in 2020 and Their Recent Status in Nottinghamshire.

Species	Legal / Conservation Status	Peak Count/ Number of Survey Occasions Recorded	Breeding Status	Recent Status in Nottinghamshire
Mallard <i>Anas platyrhynchos</i>	Amber List	3 / 3	Non-breeder	Common but declining resident breeder.
Stock dove <i>Columba oenas</i>	Amber List	3 / 3	Possible	Fairly common resident breeder restricted to rural areas.
Woodpigeon <i>Columba palumbus</i>	Amber List	8 + 23 flyovers / 3	Probable	Common resident breeder.
Moorhen <i>Gallinula chloropus</i>	Amber List	1 / 1	Possible	Common resident breeder.
Oystercatcher <i>Haematopus ostralegus</i>	Amber List	1 flyover / 1	Non-breeder	Common passage migrant and scarce breeder.
Herring gull <i>Larus argentatus</i>	Red list NERC S.41	1 flyover / 1	Non-breeder	Common winter visitor and passage migrant. No recent reports of breeding.
Rook <i>Corvus frugilegus</i>	Amber List	138 + 19 flyovers / 3	Non-breeder	Common resident in rural areas.
Skylark <i>Alauda arvensis</i>	Red List NERC S.41	9 / 3	Probable	Common resident breeder.
House martin <i>Delichon urbicum</i>	Red List	3 flyovers / 1	Non-breeder	Common summer migrant breeder.
Sedge Warbler <i>Acrocephalus schoenobaenus</i>	Amber List	2 / 1	Possible	Common summer migrant breeder.
Whitethroat <i>Curruca communis</i>	Amber List	14 / 3	Probable	Common summer migrant breeder.
Wren <i>Troglodytes troglodytes</i>	Amber List	17 / 3	Probable	Common resident breeder.
Starling <i>Sturnus vulgaris</i>	Red List NERC S.41	2 / 1	Probable	Common resident breeder and passage migrant.
Song thrush <i>Turdus philomelos</i>	Amber List NERC S.41	3 / 2	Probable	Common but sharply declining resident breeder.
House sparrow <i>Passer domesticus</i>	Red List NERC S.41	1 + 1 colony / 3	Possible	Common but sharply declining resident breeder.

Species	Legal / Conservation Status	Peak Count/ Number of Survey Occasions Recorded	Breeding Status	Recent Status in Nottinghamshire
Dunnock <i>Prunella modularis</i>	Amber List NERC S.41	4 / 2	Possible	Common resident breeder.
Yellow Wagtail <i>Motacilla flava</i>	Red List NERC S.41	2 / 1	Possible	Fairly common summer migrant breeder.
Bullfinch <i>Pyrrhula pyrrhula</i>	Amber List NERC S.41	2 / 1	Probable	Fairly common but declining resident breeder.
Greenfinch <i>Chloris chloris</i>	Red List	6 / 3	Probable	Common resident breeder.
Linnet <i>Linaria cannabina</i>	Red List NERC S.41	7 / 3	Probable	Common resident breeder.
Yellowhammer <i>Emberiza citrinella</i>	Red List NERC S.41	5 / 2	Probable	Common but sharply declining resident breeder.
Reed bunting <i>Emberiza schoeniclus</i>	Amber List NERC S.41	1 / 1	Possible	Fairly common resident breeder.

2021 Scoping Wintering Bird Survey

- 5.11 During the single scoping Wintering Bird Survey undertaken in November 2021 a total of 32 species were recorded from within the survey area (Appendix B). Of these, 14 species meet the requirements described in Section 5.2 for consideration as notable species.
- 5.12 Table 5 summarises the notable wintering bird species, whilst Figure 2 illustrates their distribution across the Site.

Table 5: Notable Wintering Bird Species Recorded in 2021 and Their Recent Status in Nottinghamshire.

Species	Legal/ Conservation Status	Count	Recent Status in Nottinghamshire
Stock dove <i>Columba oenas</i>	Amber List	1	Fairly common resident restricted to rural areas.
Woodpigeon <i>Columba palumbus</i>	Amber List	56 + 86 flyovers	Common resident.
Black-headed gull <i>Chroicocephalus ridibundus</i>	Amber List	7 flyovers	Common resident.
Rook <i>Corvus frugilegus</i>	Amber List	51 flyovers	Common resident.
Wren <i>Troglodytes troglodytes</i>	Amber List	10	Common resident.
Starling <i>Sturnus vulgaris</i>	Red List NERC S.41	8	Common but sharply declining resident.
Song thrush <i>Turdus philomelos</i>	Amber List NERC S.41	1	Common but sharply declining resident.
Mistle thrush <i>Turdus viscivorus</i>	Red List	1	Common resident.

Species	Legal/ Conservation Status	Count	Recent Status in Nottinghamshire
Redwing <i>Turdus iliacus</i>	Amber List WCA Sch.1	6 + 18 flyovers	Common winter migrant.
Dunnock <i>Prunella modularis</i>	Amber List NERC S.41	4	Common resident.
Grey wagtail <i>Motacilla cinerea</i>	Amber List	1	Uncommon resident.
Greenfinch <i>Chloris chloris</i>	Red List	2	Common resident.
Linnet <i>Linaria cannabina</i>	Red List NERC S.41	3	Common resident.
Yellowhammer <i>Emberiza citrinella</i>	Red List NERC S.41	1	Common but sharply declining resident.

2022 Update Breeding Bird Survey

- 5.13 The update Breeding Bird Survey in May 2022 identified 48 bird species within the Site (Appendix C). Of the total, 21 species were notable due their conservation status under the conditions detailed in the evaluation section above.
- 5.14 Assignment of breeding status on a single survey is approximate as evidence accumulated across three surveys is typically used. Consequently, it is likely that several of the species recorded on the update Breeding Bird Survey have higher breeding statuses than provided here, though a single survey is considered sufficient for historical comparison of breeding species assemblages.
- 5.15 Ten species were recorded during the 2020 surveys that were not noted in 2022. These included one confirmed breeder in coot *Fulica atra*, two probable breeders, green woodpecker *Picus viridis* and notable bullfinch, and a further three possible breeders: notable moorhen *Gallinula chloropus*, notable sedge warbler *Acrocephalus schoenobaenus*, and nuthatch *Sitta europaea*. Re-occurrence would not be expected for the four species recorded as flyovers on a single visit only in 2020.
- 5.16 The 2022 survey identified an additional nine species to those noted within the Site during the 2020 Breeding Bird Surveys. These included four species recorded as flyovers only, none of which are likely to breed on or around the Site, A further two of these additional species, raven *Corvus corax* and meadow pipit *Anthus pratensis*, were considered non-breeders given their extensive state of primary wing moult, and active foraging behaviour coinciding with a national-level movement of migrant passerines respectively.
- 5.17 Four species were confirmed as breeding on this survey occasion with active nests of both woodpigeon *Columba palumbus* and blackbird *Turdus merula* located, and adult jackdaws *Coloeus monedula* and robin *Erithacus rubecula* seen carrying food items to suitable breeding habitat on Site.
- 5.18 Eighteen further species were considered probable breeders which included nine notable species: stock dove *Columba oenas*, skylark, whitethroat, house sparrow *Passer domesticus*, dunnock *Prunella modularis*, yellow wagtail *Motacilla flava*, greenfinch, linnet, and yellowhammer. The remaining nine probable breeders are of low conservation concern (BoCC Green listed).

- 5.19 The remaining 26 species recorded were considered possible breeders or non-breeders on the Site.
- 5.20 Table 6 provides a summary of the notable species recorded during the update survey and their respective breeding statuses on site, and Figure 3 shows the locations where they were recorded.

Table 6: Notable Breeding Bird Species Recorded in 2022 and Their Recent Status in Nottinghamshire.

Species	Legal/ Conservation Status	Count	Breeding Status	Recent Status in Nottinghamshire
Greylag goose <i>Anser anser</i>	Amber List WCA Sch.1 (Part II)	2 flyovers	Non-breeder	Common resident breeder.
Mallard <i>Anas platyrhynchos</i>	Amber List	6 + 4 flyovers	Possible	Common but declining resident breeder.
Stock dove <i>Columba oenas</i>	Amber List	3 + 8 flyovers	Probable	Fairly common resident breeder restricted to rural areas.
Woodpigeon <i>Columba palumbus</i>	Amber List	51 + 23 flyovers	Confirmed	Common resident breeder.
Black-headed gull <i>Chroicocephalus ridibundus</i>	Amber List	1 flyover	Non-breeder	Common semi-resident breeder at known colonies.
Kestrel <i>Falco tinnunculus</i>	Amber List	2	Possible	Fairly common resident breeder.
Rook <i>Corvus frugilegus</i>	Amber List	17 + 47 flyovers	Possible	Common resident in rural areas.
Skylark <i>Alauda arvensis</i>	Red List NERC S.41	7	Probable	Common resident breeder.
Whitethroat <i>Curruca communis</i>	Amber List	21	Probable	Common summer migrant breeder.
Wren <i>Troglodytes troglodytes</i>	Amber List	22	Possible	Common resident breeder.
Starling <i>Sturnus vulgaris</i>	Red List NERC S.41	3	Possible	Common resident breeder and passage migrant.
Song thrush <i>Turdus philomelos</i>	Amber List NERC S.41	6	Possible	Common but sharply declining resident breeder.
Mistle thrush <i>Turdus viscivorus</i>	Red List	1	Possible	Common resident breeder.
House sparrow <i>Passer domesticus</i>	Red List NERC S.41	1 + 2 colonies	Probable	Common but sharply declining resident breeder.
Dunnock <i>Prunella modularis</i>	Amber List NERC S.41	14	Probable	Common resident breeder.
Yellow wagtail <i>Motacilla flava</i>	Red List NERC S.41	4 + 2 flyovers	Probable	Fairly common summer migrant breeder.
Meadow pipit <i>Anthus pratensis</i>	Amber List	1	Non-breeder	Common resident breeder, very common passage migrant.
Greenfinch <i>Chloris chloris</i>	Red List	3 + 3 flyovers	Probable	Common resident breeder.
Linnet <i>Linaria cannabina</i>	Red List NERC S.41	7	Probable	Common resident breeder.

Species	Legal/ Conservation Status	Count	Breeding Status	Recent Status in Nottinghamshire
Yellowhammer <i>Emberiza citrinella</i>	Red List NERC S.41	6	Probable	Common but sharply declining resident breeder.
Reed bunting <i>Emberiza schoeniclus</i>	Amber List NERC S.41	1	Possible	Fairly common resident breeder.

2023 Update Breeding Bird Survey

- 5.21 The update Breeding Bird Survey in April 2023 identified 32 bird species within the Site (Appendix C). Of the total, 14 species were notable due their conservation status under the conditions detailed above.
- 5.22 Assignment of breeding status on a single survey is approximate as evidence accumulated across three surveys is typically used. Consequently, it is likely that several of the species recorded on the update Breeding Bird Survey have higher breeding statuses than provided here though a single survey is considered sufficient for historical comparison of breeding species assemblages. Eighteen species were recorded during the 2022 update survey that were not recorded during 2023, including eight notable species, one of which was noted as flyover species only, and re-occurrence of these species would not be expected. The other seven notable species not recorded during the 2023 update survey but that had been previously included kestrel *Falco tinnunculus*, whitethroat *Curruca communis*, starling *Sturnus vulgaris*, mistle thrush *Turdus viscivorus*, yellow wagtail *Motacilla flava*, meadow pipit *Anthus pratensis*, and reed bunting *Emberiza schoeniclus*.
- 5.23 Three species were recorded during the 2023 surveys that were not noted in 2022, namely grey partridge *Perdix perdix*, coot and green woodpecker *Picus viridis*, two of which were recorded during the full 2020 surveys (coot and green woodpecker), as confirmed and possible breeders respectively.
- 5.24 Twenty species were recorded during the 2020 surveys which were not recorded during the update 2023 survey. Of these, a total of 9 were notable species; three were recorded as flyovers only, and six were other notable species.
- 5.25 The 2023 survey confirmed two species as breeding, namely coot, and wren of which the latter is considered notable.
- 5.26 A further seven species were considered probable breeders which included two notable species: dunnoek and greenfinch. The remaining five probable breeders are of low conservation concern (BoCC Green listed) or not listed.
- 5.27 The remaining 23 species recorded were considered possible breeders or non-breeders on the Site.
- 5.28 Table 7 provides a summary of the notable species recorded during the update survey and their respective breeding statuses on site, and Figure 4 shows the locations where they were recorded.

Table 7: Notable Breeding Bird Species Recorded in 2023 and Their Recent Status in Nottinghamshire.

Species	Legal/ Conservation Status	Count	Breeding Status	Recent Status in Nottinghamshire
Greylag Goose <i>Anser anser</i>	Amber List WCA Sch.1 (Part II)	2 flyovers	Non-breeder	Common resident
Mallard	Amber List	3	Possible	Common resident
Grey Partridge	Red List NERC S.41	2	Possible	Fairly Common Resident
Stock dove <i>Columba oenas</i>	Amber List	3	Probable	Fairly common resident breeder restricted to rural areas.
Woodpigeon <i>Columba palumbus</i>	Amber List	54	Probable	Common resident breeder.
Rook <i>Corvus frugilegus</i>	Amber List	8 + 4 flyovers	Probable	Common resident in rural areas.
Skylark <i>Alauda arvensis</i>	Red List NERC S.41	8	Probable	Common resident breeder.
Wren <i>Troglodytes troglodytes</i>	Amber List	9	Confirmed	Common resident breeder.
Song thrush <i>Turdus philomelos</i>	Amber List NERC S.41	2	Probable	Common but sharply declining resident breeder.
House sparrow <i>Passer domesticus</i>	Red List NERC S.41	2 colonies	Probable	Common but sharply declining resident breeder.
Dunnock <i>Prunella modularis</i>	Amber List NERC S.41	5	Probable	Common resident breeder.
Greenfinch <i>Chloris chloris</i>	Red List	4	Probable	Common resident breeder.
Linnet <i>Linaria cannabina</i>	Red List NERC S.41	5	Probable	Common resident breeder.
Yellowhammer <i>Emberiza citrinella</i>	Red List NERC S.41	5	Probable	Common but sharply declining resident breeder.

Bird Survey Results Description

Breeding Birds

- 5.29 The majority of species recorded are typical of the habitats found across the Site, being heavily influenced by the current agricultural management. The internal sections of large fields provide limited breeding opportunities for most species recorded with the exception of the notable skylark and yellow wagtail, both declining species commonly associated with farmland. Field interiors were also used as foraging areas by corvids, particularly rook *Corvus frugilegus*, in large numbers, pigeons (*Columbidae*), pheasants *Phasianus colchicus* and by scavenging buzzards *Buteo buteo*.
- 5.30 Skylark was considered a probable breeder on site based on several males holding territories throughout the 2020 breeding season. The 2022 and 2023 update surveys confirmed this still to be the case with the number of territories appearing stable. In 2020 yellow wagtail was considered only a possible breeder as birds were present in suitable habitat but no other behaviours indicative

of breeding were observed. The 2022 update survey upgraded the breeding status of yellow wagtail to probable as two pairs of birds were observed disputing territories in the northernmost crop parcel. Yellow wagtail were not recorded during the 2023 survey, however, this species is a summer visitor to the UK, and as such, is considered likely to remain a probable breeder on Site, as breeding conditions on Site have not changed, and given the early-season timing of the 2023 survey it is plausible birds had not returned to the Site from migration.

- 5.31 Arable field margins and their boundaries provided suitable breeding and foraging habitat for small numbers of other widespread farmland birds including the notable species stock dove, linnet, yellowhammer, and reed bunting *Emberiza schoeniclus*, with field interiors providing further foraging opportunities. In both 2020 and 2022 reed bunting was considered only a possible breeder on the evidence of a single male, plausibly the same individual, in suitable habitat at the west end of the central track, however, the species was not recorded during the 2023 survey. Pairs of both linnet and yellowhammer were observed in these habitats in 2020 and thus were classified as probable breeders with pairs of both species still present in 2022 and 2023 indicating continued probable breeding at this Site. Stock dove was regarded as a possible breeder in 2020 with at least one singing male present. In 2022, this species was upgraded to a probable breeder as a male was seen in display flight between the two woodland blocks on the Site boundary, whilst the 2023 survey recorded pairs of stock dove in suitable habitat, thus continuing to consider stock dove as probable breeders on Site. The 2022 survey also noted the presence of a male and a female kestrel from these habitats, a species that had been absent in 2020, and was absent again in 2023, though not a definitive pair and thus these are included as a possible breeder on Site only. Species of low conservation concern recorded utilising the fields margins in 2020, 2022 and/or 2023 included pheasant, red-legged partridge *Alectoris rufa*, pigeons *Columbidae*, and corvids *Corvidae*.
- 5.32 The modified grassland was the preferred foraging habitat for the notable woodpigeon as well as the more widespread, generalist notable species such as starling and song thrush plus mistle thrush noted for the only time during the 2022 update survey. No notable species were recorded as breeding in these habitats, though a single meadow pipit *Anthus pratensis* was present on the 2022 update survey it was considered a passage migrant. The modified grassland compartments were not surveyed in 2023 due to a change in the application boundary. Other species recorded utilising the other limited areas of grassland habitats on Site include green woodpecker *Picus viridis* and blackbird *Turdus merula*.
- 5.33 The small area of marshy grassland in the northwest corner of the wider Site supported two singing sedge warblers *Acrocephalus schoenobaenus* in 2020 indicating the possible breeding of this species in the wider area. The update survey in 2022 noted this area had dried and much more closely resembled the surrounding grazing pasture with evidence of access by cattle noted, and no sedge warblers present though it was noted that further survey would be required to conclusively state the species is no longer over-summering on the Site. These field compartments were not surveyed in 2023, due to a change in application boundary.
- 5.34 The hedgerows, stands of dense scrub, and woodlands hosted several resident and migratory breeding species including the low concern species collared dove *Streptopelia decaocto*, great spotted woodpecker *Dendrocopos major*, blackbird, robin *Erithacus rubecula*, corvids including jay *Garrulus glandarius* alongside common tit, warbler, and finch species. Notable species including woodpigeon, whitethroat *Curruca communis*, wren, starling, song thrush, bullfinch, greenfinch, and dunnoek were all noted to be using on-site hedgerow/woodland linear features.

- 5.35 An active woodpigeon nest was located during the 2022 update survey confirming the breeding of this species on Site. All other notable species except stock dove and dunnock were considered probable breeders in 2020 based on territorial males and/or pairs noted during the survey visits. Stock dove and dunnock were considered possible breeders in 2020 and both were upgraded to probable breeders following the 2022 visit with both species seen displaying and the latter observed in copulation, a conclusion which remained following the results of the 2023 survey. The other notable species recorded in these habitats were all still present in 2022 and their breeding statuses unchanged following the 2023 update survey.
- 5.36 The remaining species associated with this habitat were considered possible breeders in the absence of any further supporting evidence aside from redstart *Phoenicurus phoenicurus* with a single bird observed on the 2020 June survey, considered likely to still be on migration to more suitable breeding grounds away from Site.
- 5.37 A colony of house sparrows was recorded in 2020 associated with the hedgerow alongside Broadgate Lane to the east and corresponding gardens of the offsite properties. This colony was still present in both 2022 and 2023, along with a second at the Brickyard Cottages in the extreme northeast of the wider Site. It is considered unlikely birds from either colony regularly breed within the site boundary though a lone male collecting nest material to the west of the Site in 2022 was considered evidence of the Site's importance as a resource for providing nesting material and thus while unlikely to actually be breeding within the site boundary the species' is regarded as a probable breeder on site to reflect the importance of the Site in this regard.
- 5.38 The offsite artificial pond and area of inundated vegetation in the north-eastern parcel supported possible breeding moorhen *Gallinula chloropus* and non-breeding mallard *Anas platyrhynchos* respectively in 2020. Mallard was not deemed to be breeding in the inundated area, as it was dry for the whole duration surveyed in 2020. During the 2022 survey, no moorhen were present in any of the wetland areas on site, indicating the probable loss of this species as a breeder at this Site. However, mallard were again noted within the inundated area, which then held areas of standing water and as such, the area was considered suitable breeding habitat, resulting in breeding status of mallard being upgraded to a possible breeder on this basis. During the 2023 survey, coot were recorded as confirmed breeders, due to the presence of an active nest on the offsite artificial pond, and mallard were upgraded to probable breeders within the semi-improved grassland to the south-east of Site, along the running water ditch, as a pair were recorded, and the adjacent grassland considered suitable breeding habitat for this species.
- 5.39 Several notable species were recorded overflying the Site only and were therefore considered to be non-breeders. In 2020 these were oystercatcher *Haematopus ostralegus*, herring gull *Larus argentatus*, rook *Corvus frugilegus*, and house martin *Delichon urbicum*. A further two notable species not recorded in 2020 were picked up as flyovers during the 2022 survey, namely greylag goose *Anser anser* and black-headed gull *Chroicocephalus ridibundus*, with the 2023 survey noting swallow *Hirundo rustica* as a flyover only species, potentially utilising the Site as a foraging resource.
- 5.40 A large rookery was located just beyond the Site boundary in a dense area of plantation woodland that separates the rear lawns of the hotel from Broadgate Lane in 2020 with substantial numbers of rook overflying the Site as they commuted between their nest sites and suitable foraging habitat in the wider landscape. The rookery was still present and active in 2022 and 2023 with the assessment of this species as a probable breeder at the Site highly likely to refer to individuals

from this colony, though, as above regarding house sparrow, is preserved to reflect the importance of the Site as a foraging and nest material resource.

Wintering Birds

- 5.41 The number of birds recorded on Site in the winter was exceptionally low given the size of the Site and the habitats present. In addition to this, the number and diversity of notable species was also very poor and thus a single survey was deemed adequate to quantify the wintering bird assemblage.
- 5.42 The farmland habitats (arable cropland, modified grassland for grazing, field margins and managed hedgerows) vary in their value to wintering birds.
- 5.43 The arable interiors were species-poor with only five species in total noted utilising them. This included two notable species, stock dove and woodpigeon, using the habitat as suitable foraging. Neither species occurred in significant numbers with a single stock dove and 56 woodpigeons across the Site. Species of low conservation concern (BoCC Green Listed) in these habitats were pheasant, carrion crow *Corvus corone*, and a peak count of 33 pied wagtails *Motacilla alba* though this number is typical of many sites across the county in winter.
- 5.44 The margins of the cropland provided additional foraging resources for stock dove and woodpigeon plus several other widespread but declining species of conservation priority in the UK (BoCC Red Listed and NERC S.41 priority species), namely starling, linnet, and yellowhammer.
- 5.45 The wintering bird assemblage in the grazing pastures was much the same as in the arable field margins with stock dove, woodpigeon, and starling frequent. Additionally, these areas were the primary ground foraging opportunity for overwintering thrushes on the Site with notable song thrush (1 individual), mistle thrush (1), and redwing *Turdus iliacus* (6) all present and joined by common and widespread blackbird *Turdus merula* (11).
- 5.46 The hedgerows, scrub, and woodland habitats on or bordering the Site attracted a variety of species though all in low numbers. Most of these species were widespread and/or common generalists but there were some notable species including wren, dunnock, and greenfinch using them for foraging. These habitats were also used as shelter and roosting by the notable species feeding in the arable, marginal, and grazing pasture compartments.
- 5.47 Birds were largely absent from the wetland habitats in winter though a single grey wagtail *Motacilla cinerea*, a notable species, and four little grebes *Tachybaptus ruficollis* utilised the artificial lake to the east of the Site for foraging. Two grey herons were also noted, one feeding in the wet ditch between the southern arable compartments and another flushed from the area of inundated land to the north of the Site.
- 5.48 A further two notable species were recorded overflying the Site only comprising black-headed gull and rook. Although the Site provides potential winter foraging resources for both species no individuals of either species were recorded in these habitats within the site boundary.

Evaluation

Bird Assemblage

Local Wildlife Site Assessment

- 5.49 The Site was assessed against published criteria for Local Wildlife Site selection to compare the Site to the thresholds for Nottinghamshire. The survey area between 2020 and 2022 encompassed a wider survey area not included within the current application.
- 5.50 To be considered for LWS assignment a site must support species featured on the Nottinghamshire Birds of Conservation Concern (Notts BoCC) list, as provided in Annex 1 of the Nottinghamshire LWS Handbook, that regularly occur in the county for breeding or wintering. This list includes most BoCC red- or amber-listed species from the national assessment plus a small number of nationally green-listed species that are of local significance at the county-level.
- 5.51 Not all species listed on the Notts BoCC list contribute to LWS designation as they occur only erratically in the county such that conservation of a site where the species has been recorded offers little conservation value, or, because their conservation is deemed best served by another means.
- 5.52 Species are regarded as having a regular breeding presence a site if they have been recorded in three of the last five years for which data is available. A species is classed as breeding if evidence of confirmed or probable breeding is gathered.
- 5.53 Regular presence in relation to overwintering should likewise involve records between November and March inclusive in at least three of the previous five years of available data or where historical evidence is available of a site being a traditional wintering site for a given species.
- 5.54 The criteria relevant to breeding and/or wintering birds are:
- If the site has a rare UK breeding bird;
 - If the site has a colony of a colonial breeding species on Notts BoCC;
 - If the site has two or more species of breeding waders;
 - If the site has an important breeding bird assemblage;
 - If the site has an important wintering bird assemblage;
 - If the site supports a significant proportion of the UK wintering population of a species.
- 5.55 No UK rare breeding birds, colonies of Notts BoCC species, nor breeding waders were noted within the boundary so the Site is not eligible for LWS designation under criteria 1, 2 or 3 of the above.
- 5.56 Arable farmland where the bird interest changes from field to field over time, is not considered suitable for LWS designation. Consequently, arable farmland has not been included in the selection criteria for habitat based LWSs for breeding or wintering birds. Resultantly, the Site has not been assessed against criteria 4 or 5 above as it is dominated by this habitat type.
- 5.57 The Site only supported a single species of wintering waterbird considered by criteria 6 – little grebe. The presence of four individuals falls far below the 0.5% threshold of 80 individuals required for LWS designation under criterion 6 above.

- 5.58 The site therefore does not meet the any of the relevant selection criteria and consequently does not qualify for consideration as a Local Wildlife Site based on its breeding and/or wintering bird populations.

Breeding Assemblage

- 5.59 Arable farmland and the associated margins provided suitable foraging and/or breeding habitat for several farmland species including moderate numbers of skylark alongside smaller numbers of stock dove, woodpigeon, yellow wagtail, linnet, yellowhammer, and reed bunting. Birds of prey utilising the arable fields and considered possible breeders on site included buzzard and kestrel, are classed as well-established resident species in the county though the latter is included on the BoCC Amber List. There is an abundance of similar suitable agricultural habitat in the local landscape and therefore the Site is considered to be of no more than **Local** importance for its breeding farmland bird assemblage.
- 5.60 Hedgerows, scrub, and woodland blocks on and around the Site provided breeding and/or foraging habitat for a variety of common and widespread generalist species. The assemblage recorded is typical of such habitat in the region and whilst the assemblage did include several notable species all in low numbers and none are of conservation priority in Nottinghamshire as all are deemed fairly common to common in the county. These included stock dove, woodpigeon, whitethroat, wren, starling, song thrush, dunnoek, bullfinch, and greenfinch. This coupled with the presence of several larger areas of similar woodland habitat nearby in the local area means the Site is considered of **Local** importance for this assemblage.
- 5.61 Wetland breeders were limited to sedge warbler, plus a confirmed breeding of moorhen in 2020 though the species was absent in 2022, however, was present again in 2023, and confirmed breeding of mallard in wetter areas in 2023. Given the breeding status of mallard, and the apparent loss of moorhen as breeding species during 2023, along with the availability of suitable breeding habitat in the surrounding area, the Site is considered of **Site** importance for its breeding wetland bird assemblage.

Wintering Assemblage

- 5.62 Overall, the number of birds present on the Site in winter is very low none of the notable species present were represented by more than ten individuals when flyovers are discounted and hence the decision that further survey would not likely result in changes to assessed value of the Site to wintering birds. Furthermore, none of the habitats held significant numbers of other species of low conservation concern such that the wintering bird assemblages associated with all the habitats on site are considered of **Site** importance only.

Individual Species

- 5.63 Table 8 summarises the seventeen bird species recorded within the site that are of at least **Local** importance.
- 5.64 Although rook did occur on site in numbers which would be significant for the county according to the information available in the county bird report should the species have been breeding within the Site boundary, the location of the rookery in woodland adjacent to the site, results in the birds utilising the Site primarily for foraging with nest material collection also likely to be occurring around the woodland edges. As such, the Site itself is not critical to the functioning of the rookery given

the abundance of similar habitat in the wider landscape, and the observations of birds commuting over the Site to surrounding fields for foraging even prior to development of the Site. Therefore, the Site is assessed to be of **Local** nature conservation value for this species in spite of the numbers present.

- 5.65 Other species of at least **Local** importance are considered so on the basis of their BoCC listing making them species of conservation interest but that do not occur in county important numbers on the Site are listed below in Table 8. Notable species recorded as migrants, summering non-breeders, or flyovers are discounted as they were not seen to utilise any of the habitats on site and are arguably, therefore, unaffected by any changes to the land use.
- 5.66 The other bird species recorded utilising the habitats within the Site were either recorded in smaller numbers and/or considered common and widespread species nationally and/or locally. These species are recognised as being of only **Site** importance and not included in Table 8.

Table 8: Birds of Local Nature Conservation Importance or Higher

Name		Status		Nature Conservation Value
		WCA Sch.1	NERC S.41	
BoCC Red List				
Skylark	<i>Alauda arvensis</i>	+	+	Local
Starling	<i>Sturnus vulgaris</i>		+	Local
House sparrow	<i>Passer domesticus</i>		+	Local
Yellow wagtail	<i>Motacilla flava</i>		+	Local
Greenfinch	<i>Chloris chloris</i>			Local
Linnet	<i>Linaria cannabina</i>		+	Local
Yellowhammer	<i>Emberiza citrinella</i>		+	Local
BoCC Amber List				
Mallard	<i>Anas platyrhynchos</i>			Local
Stock dove	<i>Columba oenas</i>			Local
Woodpigeon	<i>Columba palumbus</i>			Local
Kestrel	<i>Falco tinnunculus</i>			Local
Rook	<i>Corvus frugilegus</i>			Local
Whitethroat	<i>Curruca communis</i>			Local
Wren	<i>Troglodytes troglodytes</i>			Local
Song thrush	<i>Turdus philomelos</i>		+	Local
Redwing	<i>Turdus iliacus</i>	+		Local
Dunnock	<i>Prunella modularis</i>		+	Local

6.0 DISCUSSION & RECOMMENDATIONS

- 6.1 The following section provides an assessment of the potential impacts upon notable birds breeding and/or wintering on the Site likely to result from the proposed development. Where appropriate, recommendations are provided for mitigation and enhancement that take account of the likely

ecological effects. Throughout the evaluation, any recommendations for mitigation have been informed by the most up-to-date indicative layout.

- 6.2 The proposed solar farm and battery energy storage system will result in losses of arable habitat on Site though some potential habitat for birds can be maintained through the species rich grassland habitat proposed below the panel arrays.
- 6.3 Hedgerows and site boundary woodlands are to be retained and will offer some scope for mitigation with suitable buffers and seed-bearing grassland strips to maintaining their value as both breeding and winter foraging resources.

Impact Assessment for Birds

- 6.4 The potential impact of the loss or change of habitat upon breeding and/or wintering bird species arising from the effects of development is based upon an understanding of each species' ecological requirements, the type of development, number of birds recorded within the survey area, their nature conservation criteria based on legislation and current guidance, their county status according to the county bird report and professional judgement.
- 6.5 The following potential impacts to the recorded bird populations and assemblage may result from the proposals:
 - Direct loss/change of habitat; and/or
 - Disturbance during construction and/or operation.

Habitat Loss

- 6.6 The individual species recorded on site that are arguably the most vulnerable to impacts from the habitat loss or changes associated with this proposed development include the 23 species considered to be of at least **Local** importance. These are notable species that are either specially protected, appear on the BoCC Red or Amber lists and/or are listed as a NERC priority species and were recorded in at least locally important numbers.
- 6.7 The loss of large open fields will likely lead to a decline and potentially a total loss of skylark and yellow wagtail as probable breeders on site, since these species require this habitat for nesting. Mitigation measures are discussed below under Habitat Mitigation.
- 6.8 However, research on the use of solar farms by skylark suggests little difference in territory defending between solar and non-solar fields, and research shows they use solar farms for foraging in the summer⁵. The difference in actual nesting attempts and success however is unclear, and in this particular study it was lower. The overall effect of the scheme on skylark if no measures were to be implemented are expected to be **Minor Adverse** at the local level.
- 6.9 Yellow wagtail requires open fields and clear sight lines to nest which will be obscured by arrays of solar panels. The proposals currently, with no mitigation, are therefore considered to result in a **Minor Adverse** at the local level impact on this species as a probable breeder from the Site.
- 6.10 The loss of agricultural habitat will also reduce the overall availability of foraging resources and potential breeding habitat at the margins for kestrel, house sparrow, linnet, yellowhammer, and reed bunting. The loss of agricultural land will also reduce the overall availability of winter foraging

⁵ Montag, Parker & Clarkson (2016), The Effects of Solar Farms On Local Biodiversity: A Comparative Study Published by Clarkson & Woods and Wychwood Biodiversity Copyright © Clarkson & Woods and Wychwood Biodiversity ISBN: 978-1-5262-0223-9.

resources for the following farmland specialists on site: stock dove, woodpigeon, starling, linnet, and yellowhammer. Given the moderate to low numbers of these farmland specialists both breeding and wintering on site, the abundance of similar habitat nearby, and the retention of some arable areas post-development it is considered that the effects of habitat loss will have a **Minor Adverse** impact on the other farmland specialists.

- 6.11 The retention of all hedgerows and site boundary woodlands will maintain suitable breeding habitat for stock dove, woodpigeon, whitethroat, house sparrow, wren, starling, song thrush, mistle thrush, and greenfinch. Additionally, winter foraging resources will be retained for the resident notable species and winter migrants which on this Site are limited to redwing. Both woodlands on the site boundary will be buffered by a 5m offset therefore retaining their value as edge habitats providing valuable foraging resources in the winter. As such, this will therefore lead to a **Negligible** impact on the species listed above and woodland specialists.
- 6.12 The retention of the ditches and adjacent waterbodies will lead to a **Negligible** impact on the limited assemblage of bird species utilising this habitat, which includes the notable species mallard, moorhen, and wintering grey wagtail.

Disturbance Impacts

- 6.13 Construction operations have the potential to disturb birds using the development area of the site for roosting, foraging, and breeding. Operations likely to disturb breeding birds include noise and displacement during vegetation clearance, initial ground works and some construction activities. During the breeding season disturbance may lead to nest desertion or the avoidance of the area and reduce the suitability of retained nesting areas, such as the retained hedgerows or woodland edge. Whilst there is some potential for breeding success to be reduced, this is expected to have a **Minor Adverse** impact on the local conservation status of most of the bird species using the survey area for breeding.

Habitat Mitigation

- 6.14 To mitigate for the losses in marginal habitats, the provision of relatively undisturbed, species-rich grassland is included within any retained areas, which will create alternative foraging opportunities for farmland birds through the provision of new resources and safe habitat. This will have a **Minor Beneficial** impact for starling, linnet, yellowhammer, and reed bunting.
- 6.15 This grassland should include seed mixes specifically designed to provide foraging resources for birds and be cut after mid-July to allow plants to set seed. The use of fertilisers and pesticides should be avoided. Recommended enhancements to achieve the above are:
- Native species tussock-forming grassland which will be seeded within the majority of the site, around and beneath the solar panels.
 - Native species-rich wildflower grassland which will be seeded around the outer edge of the solar farm and along paths through the site.
 - Tree and hedgerow planting – using native species and good landscape planting, to create a substantive habitat corridor between the panel arrays to enhance connectivity with the retained hedgerows bisecting the Site.

Ground Nesting Species

- 6.16 Habitat management techniques should be employed, where deemed possible and appropriate, to encourage the grassland to develop a mix of low/sparsely vegetated areas and tussocky areas, in order to provide maximum benefit to breeding and wintering skylark.
- 6.17 Under current proposals and associated habitat creation plans/BNG requirements, the arable land is to be enhanced to species-rich grassland, and whilst the presence of solar panels is considered to have an impact on skylark and yellow wagtail (both ground nesting species), due to the loss of open habitat, the enhancement of the grassland is expected to provide significant benefits to much of the breeding bird assemblage, and skylark and yellow wagtail.
- 6.18 Whilst the results of studies remain unclear, research suggests that there is a decreased but ultimately maintained presence of territory defending on solar farms, which may result in fewer breeding attempts or reduced breeding success. As such, the number of breeding pairs of skylark and yellow wagtail on Site may be reduced, it is expected that the species-rich grassland creation across the Site will result in increased and improved foraging opportunities for any breeding pairs remaining on Site, as well as for any in the vicinity. With the above mitigation measures in place, it is expected that the scheme will result in a **Negligible to Minor Adverse** impact at a local level for skylark and yellow wagtail.

Disturbance Mitigation

- 6.19 To avoid disturbance to breeding birds, ground and vegetation clearance works will be undertaken prior to the bird-breeding season (March to August, inclusive). If this is not possible, the area will be checked prior to removal of vegetation or ground works by an experienced ecologist. If active nests are found, vegetation will be left untouched and suitably buffered from works until all birds have fledged. Specific advice will be provided prior to undertaking the clearance. This would be a statutory requirement due to the protection of all nesting birds and their nests under the Wildlife and Countryside Act, 1981 (as amended). A suitably qualified ecologist would need to supervise this.

Enhancements

- 6.20 In addition to the above mitigation measures, further enhancements that could be integrated with the on-going management of the site include the erection of a mixture of nest box types. The following provides details of suggested suitable nest box types:
- a) A mixture of small hole (26mm and 32mm) boxes placed along the retained habitat around the proposed development area to provide nesting opportunities for a range of tit species. These boxes generally have a high uptake rate.
 - b) Small open fronted nest boxes should be placed throughout the site especially on trees which support a climber such as ivy which provides a degree of concealment. These boxes typically attract robin and blackbird.
 - c) Stock dove nest boxes within the more established boundary habitats including mature tree standards.
 - d) Consideration should also be given to the provision of kestrel boxes along retained woodland and standards within hedgerows bordering offsite compartment to provide optimal breeding habitat adjacent to alternative foraging resources for this species.

Appendix A: Kelham - 2020 Breeding Bird Survey Results & EOAC Criteria for Categorisation of Breeding Status

Species: British Common Name	Species: Scientific name	Survey 1 07.05.20	Survey 2 25.05.20	Survey 3 25.06.20	Conservation Status & Protection	Breeding status ⁶
Mute Swan	<i>Cygnus olor</i>	2 flyovers	0	0	Green List	Non-breeder F
Mallard	<i>Anas platyrhynchos</i>	1 + 2 flyovers	1	2 + 1 flyover	Amber List	Non-breeder UH, F
Pheasant	<i>Phasianus colchicus</i>	13	7	2	Not Listed	Probable P,H
Stock Dove	<i>Columba oenas</i>	1	1	3	Amber List	Possible S,H
Woodpigeon	<i>Columba palumbus</i>	8 + 23 flyovers	17	12 + 7 flyovers	Amber List	Probable P,S,H,F
Collared Dove	<i>Streptopelia decaocto</i>	2 flyovers	1	1	Green List	Possible S,H,F
Moorhen	<i>Gallinula chloropus</i>	1	0	0	Amber List	Possible H
Coot	<i>Fulica atra</i>	0	2 + 4 juvs	2 + 4 juvs	Green List	Confirmed FL, H
Oystercatcher	<i>Haematopus ostralegus</i>	1 flyover	0	0	Amber List	Non-breeder F
Herring Gull	<i>Larus argentatus</i>	0	0	1 flyover	Red List NERC S.41	Non-breeder F
Cormorant	<i>Phalacrocorax carbo</i>	0	0	1 flyover	Green List	Non-breeder F
Buzzard	<i>Buteo buteo</i>	1 flyover	1 + 1 flyover	1 + 2 flyover	Green List	Possible H,F
Great Spotted Woodpecker	<i>Dendrocopos major</i>	5	0	3	Green List	Possible H
Green Woodpecker	<i>Picus viridis</i>	1	0	3	Green List	Probable T,S,H
Jay	<i>Garrulus glandarius</i>	1	0	1	Green List	Possible H
Magpie	<i>Pica pica</i>	1	3	4	Green List	Possible H
Jackdaw	<i>Coloeus monedula</i>	2 + 3 flyovers	30 + 1 flyovers	22 + 3 flyovers	Green List	Possible H,F
Rook	<i>Corvus frugilegus</i>	51 flyovers	40 + 2 flyovers	138 + 19 flyovers	Amber List	Non-breeder UH,F
Carrion Crow	<i>Corvus corone</i>	2	20 + 1 flyover	3	Green List	Confirmed ON,P,H,F
Blue Tit	<i>Cyanistes caeruleus</i>	7	2	8	Green List	Confirmed FF,FL,A,S,H
Great Tit	<i>Parus major</i>	8	5	2	Green List	Probable A,P,S,H

⁶European Ornithological Atlas Committee, 1979. *Categories of Breeding Bird Evidence*. European Ornithological Atlas Committee.

Species: British Common Name	Species: Scientific name	Survey 1 07.05.20	Survey 2 25.05.20	Survey 3 25.06.20	Conservation Status & Protection	Breeding status ⁶
Skylark	<i>Alauda arvensis</i>	5	5	9	Red List NERC S.41	Probable T,S,H
Swallow	<i>Hirundo rustica</i>	7 flyovers	1	2 + 2 flyovers	Green List	Probable P,H,F
House Martin	<i>Delichon urbicum</i>	0	0	3 flyovers	Red List	Non-breeder F
Long-tailed Tit	<i>Aegithalos caudatus</i>	2	0	6	Green List	Confirmed FL,P,H
Chiffchaff	<i>Phylloscopus collybita</i>	10	2	8	Green List	Probable T,S,H
Sedge Warbler	<i>Acrocephalus schoenobaenus</i>	2	0	0	Amber List	Possible S,H
Blackcap	<i>Sylvia atricapilla</i>	14	0	4	Green List	Confirmed ON,T,S,H
Garden Warbler	<i>Sylvia borin</i>	0	1	1	Green List	Probable T,S,H
Lesser Whitethroat	<i>Curruca curruca</i>	3	0	2	Green List	Probable T,S,H
Whitethroat	<i>Curruca communis</i>	14	2	9	Amber List	Probable A,T,P,S,H
Goldcrest	<i>Regulus regulus</i>	1	0	0	Green List	Possible S,H
Wren	<i>Troglodytes troglodytes</i>	13	17	11	Amber List	Probable T,S,H
Nuthatch	<i>Sitta europaea</i>	0	0	1	Green List	Possible H
Treecreeper	<i>Certhia familiaris</i>	1	0	0	Green List	Possible H
Starling	<i>Sturnus vulgaris</i>	0	0	2	Red List NERC S.41	Probable P,H
Song Thrush	<i>Turdus philomelos</i>	3	0	2	Amber List NERC S.41	Probable T,S,H
Blackbird	<i>Turdus merula</i>	20	10	11	Green List	Confirmed FL,T,P,S,H
Robin	<i>Erithacus rubecula</i>	9	3	4	Green List	Probable A,T,S,H
House Sparrow	<i>Passer domesticus</i>	1 + 1 colony	1 colony	1 colony	Red List NERC S.41	Possible H
Dunnock	<i>Prunella modularis</i>	4	0	4	Amber List NERC S.41	Possible S,H
Yellow Wagtail	<i>Motacilla flava</i>	0	0	2	Red List NERC S.41	Possible H
Chaffinch	<i>Fringilla coelebs</i>	7	1	3	Green List	Probable P,S,H
Bullfinch	<i>Pyrrhula pyrrhula</i>	2	0	0	Amber List NERC S.41	Probable P,H

Species: British Common Name	Species: Scientific name	Survey 1 07.05.20	Survey 2 25.05.20	Survey 3 25.06.20	Conservation Status & Protection	Breeding status ⁶
Greenfinch	<i>Chloris chloris</i>	6	1 flyover	5	Red List	Probable T,S,H,F
Linnet	<i>Linaria cannabina</i>	5	2	7	Red List NERC S.41	Probable P,H
Goldfinch	<i>Carduelis carduelis</i>	5	0	8	Green List	Probable P,H
Yellowhammer	<i>Emberiza citrinella</i>	0	3	5	Red List NERC S.41	Probable T,P,S,H
Reed Bunting	<i>Emberiza schoeniclus</i>	0	1	0	Amber List NERC S.41	Possible H
Total Species	No. 49	39	27	41		

Breeding Status evidence can be broken down into four sections, each with their own codes, as defined by the European Ornithological Atlas Committee:

Confirmed breeder

DD – distraction display or injury feigning

UN – used nest or eggshells found from this season

FL – recently fledged young or downy young

ON – adults entering or leaving nest-site in circumstances indicating occupied nest

FF – adult carrying faecal sac or food for young

NE – nest containing eggs

NY – nest with young seen or heard

Probable breeder - Evidence accumulated during the survey indicates that the bird species is breeding on site.

P – pair in suitable nesting habitat

T – permanent territory (defended over at least 2 survey occasions)

D – courtship and display

N – visiting probable nest site

A – agitated behaviour

I – brood patch of incubating bird (from bird in hand)

B – nest building or excavating nest-hole

Possible breeder - Evidence accumulated during the survey indicates that the bird species could be breeding on site, but the evidence is less conclusive than that obtained for probable breeders.

H – observed in suitable nesting habitat

S – singing male

Non-breeder

F – flying over

M – migrant

U – summering non-breeder

UH – observed in unsuitable nesting habitat

Appendix B: Kelham – 2021 Scoping Wintering Bird Survey Results

Species: British Common Name	Species: Scientific name	Survey 1 25.11.21	Conservation Status & Protection
Pheasant	<i>Phasianus colchicus</i>	18	Not Listed
Stock Dove	<i>Columba oenas</i>	1	Amber List
Woodpigeon	<i>Columba palumbus</i>	56 + 86 flyovers	Amber List
Collared Dove	<i>Streptopelia decaocto</i>	1	Green List
Little Grebe	<i>Tachybaptus ruficollis</i>	4	Green List
Black-headed Gull	<i>Chroicocephalus ridibundus</i>	7 flyovers	Amber List
Grey Heron	<i>Ardea cinerea</i>	2	Green List
Buzzard	<i>Buteo buteo</i>	3 + 4 flyovers	Green List
Great Spotted Woodpecker	<i>Dendrocopos major</i>	1	Green List
Jay	<i>Garrulus glandarius</i>	3 + 1 flyover	Green List
Magpie	<i>Pica pica</i>	2 + 3 flyovers	Green List
Jackdaw	<i>Coloeus monedula</i>	2 + 7 flyovers	Green List
Rook	<i>Corvus frugilegus</i>	51 flyovers	Amber List
Carrion Crow	<i>Corvus corone</i>	20 + 5 flyovers	Green List
Blue Tit	<i>Cyanistes caeruleus</i>	21	Green List
Great Tit	<i>Parus major</i>	13	Green List
Wren	<i>Troglodytes troglodytes</i>	10	Amber List
Starling	<i>Sturnus vulgaris</i>	8	Red List NERC S.41
Song Thrush	<i>Turdus philomelos</i>	1	Amber List NERC S.41
Mistle Thrush	<i>Turdus viscivorus</i>	1	Red List
Redwing	<i>Turdus iliacus</i>	6 + 18 flyovers	Amber List WCA Sch.1
Blackbird	<i>Turdus merula</i>	11	Green List

Species: British Common Name	Species: Scientific name	Survey 1 25.11.21	Conservation Status & Protection
Robin	<i>Erithacus rubecula</i>	13	Green List
Dunnoch	<i>Prunella modularis</i>	4	Amber List NERC S.41
Grey Wagtail	<i>Motacilla cinerea</i>	1	Amber List
Pied Wagtail	<i>Motacilla alba</i>	33 + 2 flyovers	Green List
Chaffinch	<i>Fringilla coelebs</i>	10	Green List
Greenfinch	<i>Chloris chloris</i>	2	Red List
Linnet	<i>Linaria cannabina</i>	3	Red List NERC S.41
Goldfinch	<i>Carduelis carduelis</i>	34	Green List
Siskin	<i>Spinus spinus</i>	2	Green List
Yellowhammer	<i>Emberiza citronella</i>	1	Red List NERC S.41
Total No. Species	32	32	

Appendix C: Kelham – 2022 / 2023 Update Breeding Bird Survey Results

Species: British Common Name	Species: Scientific name	Survey 5 05.05.22	2022 Breeding status ⁷	Survey 6 17.04.2023	2023 Breeding status	Conservation Status & Protection
Greylag Goose	<i>Anser anser</i>	2 flyovers	Non-breeder F	2 flyovers	Non-breeder	Amber List WCA Sch.1 (Part II)
Mallard	<i>Anas platyrhynchos</i>	6 + 4 flyovers	Possible H,F	3	Possible H	Amber List
Grey Partridge	<i>Perdix perdix</i>		Not recorded	2	Possible H	Red List NERC S.41
Pheasant	<i>Phasianus colchicus</i>	13	Probable P,H	3	Probable P,H	Not Listed
Red-legged Partridge	<i>Alectoris rufa</i>	8	Probable P,H	7	Possible H	Not Listed
Feral Pigeon	<i>Columba livia f. domestica</i>	24 flyovers	Non-breeder F		Not recorded	Not Listed
Stock Dove	<i>Columba oenas</i>	3 + 8 flyovers	Probable D,S,H,F	3	Possible H	Amber List
Woodpigeon	<i>Columba palumbus</i>	51 + 23 flyovers	Confirmed ON,P,S,H,F	54	Possible H	Amber List
Collared Dove	<i>Streptopelia decaocto</i>	3	Possible S,H		Not recorded	Green List
Black-headed Gull	<i>Chroicocephalus ridibundus</i>	1 flyover	Non-breeder F		Not recorded	Amber List
Cormorant	<i>Phalacrocorax carbo</i>	1 flyover	Non-breeder F		Not recorded	Green List
Coot	<i>Fulica atra</i>		Not recorded	2	Confirmed ON,P,H	Green List
Buzzard	<i>Buteo buteo</i>	2 + 5 flyovers	Possible H,F		Not recorded	Green List
Great Spotted Woodpecker	<i>Dendrocopos major</i>	3	Probable A,H		Not recorded	Green List
Green Woodpecker	<i>Picus viridis</i>		Not recorded	3	Possible H	Green List
Kestrel	<i>Falco tinnunculus</i>	2	Possible H		Not recorded	Amber List
Jay	<i>Garrulus glandarius</i>	1 + 1 flyover	Possible H,F	1 flyover	Non-breeder	Green List
Magpie	<i>Pica pica</i>	9 + 1 flyover	Possible H,F		Not recorded	Green List
Jackdaw	<i>Coloeus monedula</i>	15 + 10 flyovers	Confirmed FF,P,H,F	8 + 3 flyovers	Possible H	Green List
Rook	<i>Corvus frugilegus</i>	17 + 47 flyovers	Possible S,H,F	8 + 4 flyovers	Possible H	Amber List
Carrion Crow	<i>Corvus corone</i>	12	Probable P,H	7 + 7 flyovers	Possible H	Green List

⁷European Ornithological Atlas Committee, 1979. *Categories of Breeding Bird Evidence*. European Ornithological Atlas Committee.

Species: British Common Name	Species: Scientific name	Survey 5 05.05.22	2022 Breeding status ⁷	Survey 6 17.04.2023	2023 Breeding status	Conservation Status & Protection
Raven	<i>Corvus corax</i>	1 + 2 flyovers	Non-breeder U,F		Not recorded	Green List
Blue Tit	<i>Cyanistes caeruleus</i>	3	Probable D,A,P,S,H	14	Probable S,H	Green List
Great Tit	<i>Parus major</i>	7	Possible S,H	9	Probable A,N,H	Green List
Skylark	<i>Alauda arvensis</i>	7	Probable D,P,S,H	8	Possible S,H	Red List NERC S.41
Swallow	<i>Hirundo rustica</i>	12 + 1 flyover	Probable D,P,H,F	1 flyover	Non-breeder F	Green List
Long-tailed Tit	<i>Aegithalos caudatus</i>	7	Probable P,H	2	Possible H	Green List
Chiffchaff	<i>Phylloscopus collybita</i>	11	Possible S,H	8	Possible S,H	Green List
Blackcap	<i>Sylvia atricapilla</i>	19	Probable P,S,H	3	Possible S,H	Green List
Garden Warbler	<i>Sylvia borin</i>	1	Possible S,H		Not recorded	Green List
Lesser Whitethroat	<i>Curruca curruca</i>	4	Possible S,H		Not recorded	Green List
Whitethroat	<i>Curruca communis</i>	21	Probable P,S,H		Not recorded	Amber List
Goldcrest	<i>Regulus regulus</i>	3	Possible S,H	1	Possible S,H	Green List
Wren	<i>Troglodytes troglodytes</i>	22	Possible S,H	9	Confirmed ON,A,S,H	Amber List
Treecreeper	<i>Certhia familiaris</i>	3	Possible H		Not recorded	Green List
Starling	<i>Sturnus vulgaris</i>	3	Possible H		Not recorded	Red List NERC S.41
Song Thrush	<i>Turdus philomelos</i>	6	Possible S,H	2	Possible S,H	Amber List NERC S.41
Mistle Thrush	<i>Turdus viscivorus</i>	1	Possible H		Not recorded	Red List
Blackbird	<i>Turdus merula</i>	24	Confirmed FF,ON,A,P,S, H	11	Probable A,S,H	Green List
Robin	<i>Erithacus rubecula</i>	12	Confirmed FF,S,H	9	Possible S,H	Green List
House Sparrow	<i>Passer domesticus</i>	1 + 2 colonies	Probable B,H	2 colonies	Possible H	Red List NERC S.41
Dunnock	<i>Prunella modularis</i>	14	Probable D,P,S,H	5	Probable A,S,H	Amber List NERC S.41
Yellow Wagtail	<i>Motacilla flava</i>	4 + 2 flyovers	Probable P,H,F		Not recorded	Red List NERC S.41
Pied Wagtail	<i>Motacilla alba</i>	1 flyover	Non-breeder F	2	Possible H	Green List

Species: British Common Name	Species: Scientific name	Survey 5 05.05.22	2022 Breeding status ⁷	Survey 6 17.04.2023	2023 Breeding status	Conservation Status & Protection
Meadow Pipit	<i>Anthus pratensis</i>	1	Non-breeder M		Not recorded	Amber List
Chaffinch	<i>Fringilla coelebs</i>	10	Probable P,S,H	4	Probable P,S,H	Green List
Greenfinch	<i>Chloris chloris</i>	3 + 3 flyovers	Probable D,S,H,F	4	Probable P,H	Red List
Linnet	<i>Linaria cannabina</i>	7	Probable P,H	5	Possible H	Red List NERC S.41
Goldfinch	<i>Carduelis carduelis</i>	3 + 1 flyover	Possible H,F	9	Possible H	Green List
Yellowhammer	<i>Emberiza citronella</i>	6	Probable P,S,H	5	Possible S,H	Red List NERC S.41
Reed Bunting	<i>Emberiza schoeniclus</i>	1	Possible H		Not recorded	Amber List NERC S.41
Total No. Species	50	48		32		

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 Site Boundary

HS House Sparrow

LI Linnet

S Skylark

SG Starling

YW Yellow Wagtail

Y Yellowhammer

GR Greenfinch

HM House Martin

BF Bullfinch

D Dunnock

MA **Mallard**

OC Oystercatcher

RB Reed Bunting

SD Stock Dove

WH **Whitethroat**

MH Moorhen

RO Rook

SW Sedge Warbler

ST Song Thrush

WP Woodpigeon

WR Wren

→ Fly over only

NERC Species of Principal Importance

Schedule 1 Species

LBAP Species (underlined)

K:\9500\9511\ECO\QGIS\QGIS 2.14\Plans\Bird Figures\BoCC5 Plans\BoCC5 - BBS Plan 2020\9511-E-01 Breeding Bird Survey Results Plan - Distribution of Notable Species.qgs

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 The Sirius Group
 project
 Solar Farm,
 Kelham, Newark
 drawing title
 2020 BREEDING BIRD SURVEY RESULTS PLAN
 - DISTRIBUTION OF NOTABLE SPECIES
 scale @ a3
 1:6500
 drawing / figure number
Figure 1
 drawn
 OJB
 issue
 23/5/2022
 rev
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Key

Site Boundary

BoCC Red List Species

- LI Linnet
- M Mistle Thrush
- Y Yellowhammer
- GR Greenfinch

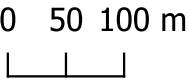
BoCC Amber List Species

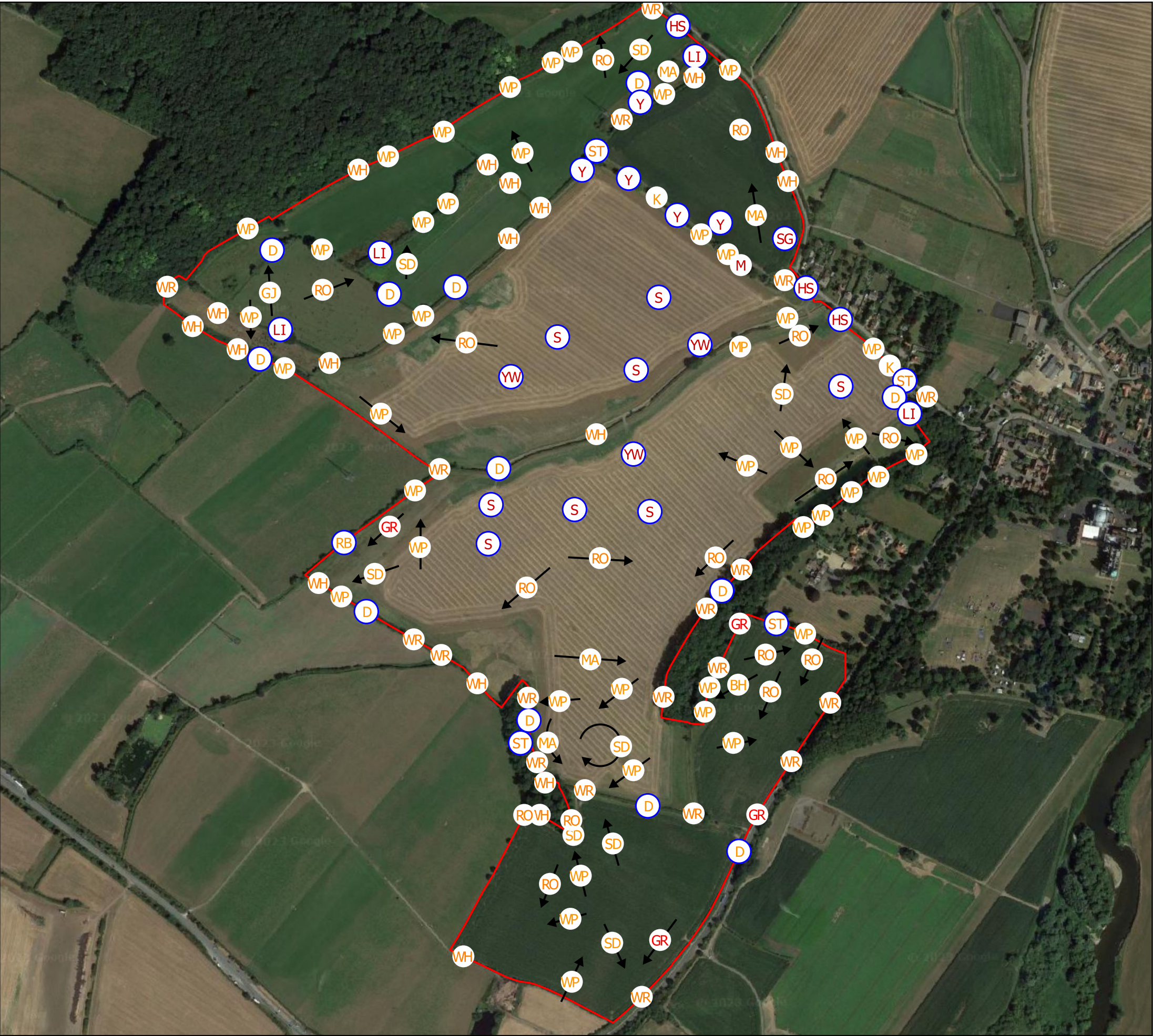
- BH Black-headed Gull
- D Dunnock
- SD Stock Dove
- GL Grey Wagtail
- RE Redwing
- RO Rook
- ST Song Thrush
- WP Woodpigeon
- WR Wren

→ Fly over only

Additional Protections:

- NERC Species of Principal Importance
- Schedule 1 Species
- LBAP Species (underlined)





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Key

Site Boundary

BoCC Red List Species

- HS House Sparrow
- LI Linnet
- M Mistle Thrush
- S Skylark
- SG Starling
- YW Yellow Wagtail
- Y Yellowhammer
- GR Greenfinch

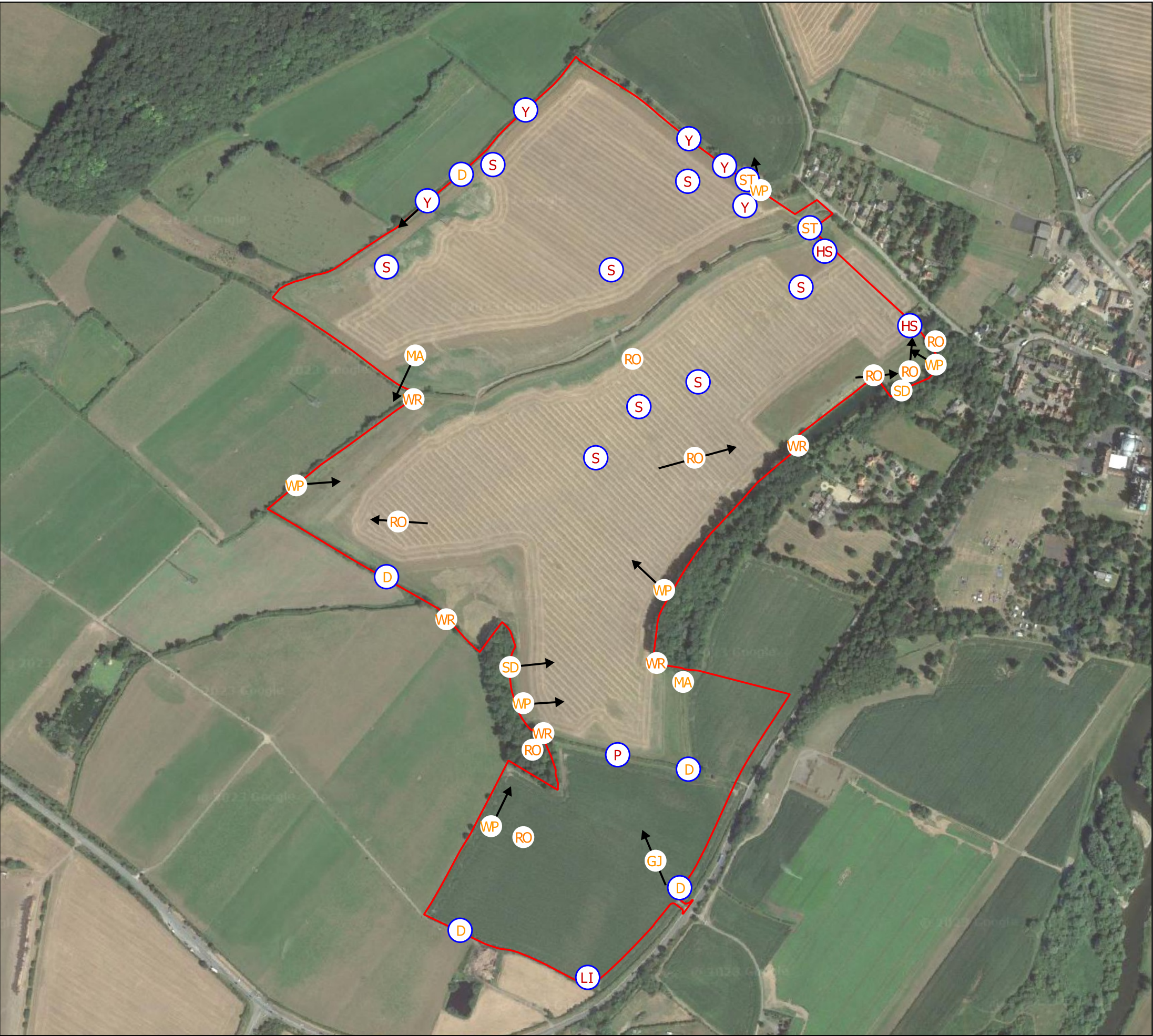
BoCC Amber List Species

- BH Black-headed Gull
- D Dunnock
- GJ Greylag Goose
- K Kestrel
- MA Mallard
- MP Meadow Pipit
- RB Reed Bunting
- SD Stock Dove
- WH Whitethroat
- RO Rook
- ST Song Thrush
- WP Woodpigeon
- WR Wren

→ Fly over only

Additional Protections

- NERC Species of Principal Importance
- Schedule 1 Species
- LBAP Species (underlined)



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Key

Site Boundary

BoCC Red List Species

- P Grey Partridge
- HS House Sparrow
- LI Linnet
- S Skylark
- Y Yellowhammer

BoCC Amber List Species

- D Dunnock
- GJ Greylag Goose
- MA Mallard
- SD Stock Dove
- RO Rook
- ST Song Thrush
- WP Woodpigeon
- WR Wren

Additional Protections

- NERC Species of Principal Importance