



Postcombe and Lewknor Solar, Land south of Postcombe

On behalf of Postcombe and Lewknor Solar Farm Limited

March 2025

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1 Executive Summary

Report purpose	This report identifies the findings of a breeding bird survey at a proposed solar farm site at the land south of Postcombe, Thame, Oxfordshire, OX9 7EE (approximate central grid reference SU71105 98880). This report also outlines the potential impacts and recommended mitigation, compensation and enhancement measures.					
Date and methods of survey	A breeding bird survey of the site was conducted between March and July 2024.					
Key findings	 The site, situated south of Postcombe, is approximately 86ha in extent and includes the following habitats: Large arable fields; Neutral grassland along field margins; Small parcels of lowland mixed deciduous woodland; Other broadleaved woodland plantations; Species-rich native hedgerows with trees; and Other native hedgerows. Aston Rowant SAC/SSSI/NNR and Chiltern Beechwoods SAC/SPA located 1.4km and 2.2km from the site. Key findings include: A total of 67 species recorded during the survey of which 27 are confirmed/probable breeding species; A minimum of 18 skylark territories; Suitable nesting habitat for Schedule 1 species including barn owl and red kite (albeit not confirmed breeding in 2024); 					
	 The site's arable field hedgerows and woodland strips support an assemblage of breeding birds typical of such habitats in Oxfordshire of value in a local context. 					
Potential impacts	All woodland parcels and hedgerows are proposed for retention as part of the scheme. However, without mitigation, proposals within the site will result in the loss of breeding habitat for ground nesting species including skylark (a minimum of 18 territories will be lost).					
Measures to avoid and/or reduce impacts and deliver biodiversity enhancements	Skylark territories lost due to the proposals will be mitigated through provision of offsite skylark compensation plots. Retained habitats will be safeguarded. Habitat buffers will be created along field margins to provide cover and foraging habitat. Vegetation clearance will be timed to avoid nesting birds. Foraging perches for barn owl will be included will be included in the final proposals to provide perches for barn owl using the site and surrounding area.					



2 Introduction

2.1 Background

2.1.1 Ecology by Design was commissioned by ITP Energised (now SLR Consulting) to undertake a breeding bird survey of land south of Postcombe, Thame, Oxfordshire, OX9 7EE (approximate central grid reference SU71105 98880).

2.2 Site Description

2.2.1 The 86ha site is situated to the south of the village of Postcombe and is bisected by the M40 motorway. It comprises large arable fields, other neutral grassland along field margins, other broadleaved woodland and hedgerows. The site lies within a largely arable landscape with some scattered small deciduous woodland parcels and areas of wood pasture. Aston Rowant SAC/SSSI/NNR is located 1.4km southeast of the site.

2.3 Proposed Works

2.3.1 The proposals for the site are for the construction of a solar farm. It is understood that it is proposed to retain all the woodland parcels and hedgerows within the scheme design, however there may be severance of habitats for access roads and cabling.

2.4 Aims of Report

2.4.1 This report presents an appraisal of the potential impacts of the proposed development works on the breeding bird assemblage. The report outlines the assessment of potential impacts and recommendations for avoidance, mitigation, compensation and enhancement measures.

2.5 Personnel

- 2.5.1 This project is led by Principal Ecologist Karen Lunan BSc (Hons), MSc, MCIEEM who has over 18 years' experience in ecological consultancy.
- 2.5.2 The breeding bird surveys were led and report written by experienced ornithologist Nick Boyd with assistance from Oli Bulpitt BSc (Hons) MSc ACIEEM and experienced ornithologist Greg Holland.
- 2.5.3 The review of the report was provided by Jessica Stuart-Smith, Principal Ecologist BSc (Hons), MCIEEM, who has been an ecological consultant for 10years.



3 Methods

3.1 Desk Study

- 3.1.1 A desk study was carried out and reported within a Habitat Report (Ecology by Design, June 2024) which consulted the following sources:
 - Thames Valley Environmental Records Centre (TVERC) (returned 18th April 2024);
 - MAGIC (magic.defra.gov.uk) (accessed 18th April 2024); and
 - Local Planning Policy documents and the local planning portal.
- 3.1.2 A summary of the bird records returned from the 2km data search are outlined in this report.

3.2 Breeding Bird Survey

- 3.2.1 Breeding bird surveys were conducted between March and July 2024; six visits were made by experienced ornithologists Nick Boyd (five visits), Oli Bulpitt (three visits) and Greg Holland (two visits) at dawn and dusk. Table 3.1 sets out the dates and weather conditions for each visit.
- 3.2.2 The methodology was based on the Common Standards Monitoring Guidance (JNCC, 2004), Bird Census Techniques (Bibby *et al.*, 2000) and the Bird Survey Guidelines (Bird Survey & Assessment Steering Group, 2023).
- 3.2.3 During each visit, a transect was walked at a slow pace to enable birds to be detected, identified and located by sight and sound, using 10 x 40mm binoculars and a 15-45 x 60mm spotting scope. Frequent stops were made to scan suitable habitats and listen for singing and calling birds. All areas of suitable breeding habitat within and adjacent to the site boundary were approached to within 50m.
- 3.2.4 The location and activity of each bird detected was recorded and mapped using standard two-letter BTO species codes combined with activity symbols (see Figures 1-6, Appendix 2). Territories were inferred from registrations of birds made in the same location on more than one occasion.
- 3.2.5 Birds exhibiting breeding behaviour were assigned to one of four categories: confirmed breeding, probable breeder, possible breeder or non-breeding, based on the BTO Breeding Status Codes (see the legend of Figures 1-6). Where territories were not identified, due to the species not holding territories or being highly mobile, but the species was seen in pairs, the number of pairs has been estimated from sightings across all visits.

Table 3.1: Breeding bird survey dates and survey conditions



Visit No.	Date	Start Time	End Time	Sunrise (or sunset if dusk)	Surveyors	Weather Conditions
1	25/03/2024	05:57	12:40	05:54	NB*	Start: 6°C, cloud 8/8, wind Bf 3 End: 11°C, 7/8 cloud, wind Bf 4
2	24/04/2024	05:45	10:34	05:48	NB, OB	Start: 6°C, cloud 8/8, wind Bf 2 End: 8°C, 7/8 cloud, wind Bf 4
3	01/05/2024	05:41	10:25	05:34	NB, GH	Start: 9°C, cloud 1/8, wind Bf 0 End: 13°C, 4/8 cloud, wind Bf 2
4	20/05/2024 (dusk)	19:50	23:02	Sunset: 20:58	NB, GH	Start: 18°C, cloud 1/8, wind Bf 3 End: 12°C, cloud 1/8, wind Bf 3
5	12/06/2024	05:05	10:30	04:45	NB, OB	Start: 8°C, cloud 7/8, wind Bf 0 End: 13°C, cloud 5/8, wind Bf 2
6	02/07/2024	6:00	11:52	04:51	ОВ	Start: 13°C, cloud 6/8, wind Bf 3 End: 16°C, cloud 8/8, wind Bf 3

^{*}Where NB = Nick Boyd, OB = Oli Bulpitt, and GH = Greg Holland

Evaluation of Breeding Birds

- 3.2.6 The assessment of the importance of the site for breeding birds takes in to account the abundance of species on site, the quality of habitat present and the geographical range of the bird species based on national and regional accounts. The Oxfordshire Bird List produced by the Oxfordshire Ornithological Society was used to determine the value of the species present on site at a county level.
- 3.2.7 A number of criteria are available to determine the conservation status of those bird species recorded during the completed surveys as well as attributing a value to the overall bird assemblage. The most appropriate of these are listed below:
 - Species included in citations as reasons for designation of local protected sites of European and National Importance.
 - Schedule 1 of the Wildlife and Countryside Act The Wildlife and Countryside Act affords greater protection to certain species that are considered appropriately at risk nationally and are as such listed as specially protected under Schedule 1.
 - Birds of Conservation Concern 5 (Eaton et al. 2021) Under this approach, UK bird populations are assessed using quantitative criteria, to determine the population status of each species and then placed on one of three lists: Red, Amber or Green.



- Red list species are of high conservation concern, being either globally threatened, having historical UK population declines between 1800 and 1995 or a rapid population decline or breeding range contraction by 50% or more in the last 25 years.
- Amber list species are of medium conservation concern due to a number of factors, for example having suffered between 25% and 49% contraction of UK breeding range or a 25-49% reduction in breeding or non-breeding populations over the last 25 years.
- o Green list species have a favourable conservation status.
- Species of Principal Importance included under Section 41 (England) of the Natural Environment and Rural Communities (NERC) Act 2006 as well as those for which specific Local Biodiversity Action Plans have been prepared.
- Species listed as being of Global Conservation Concern by the International Union for the Conservation of Nature (IUCN). Species listed as being Vulnerable, Endangered or Critically Endangered are considered within this assessment.

Breeding Status

- 3.2.8 Breeding status as defined using criteria devised by the European Bird Census Council (EBBC), which is presented below.
 - Confirmed breeding (C)
 - o 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)
 - Adults entering or leaving nest-site in circumstances indicating occupied nest (including high nest or nest-holes, the contents of which cannot be seen) or adult seen incubating
 - Adult carrying faecal sac or food for young
 - Nest containing eggs
 - Nest with young seen or heard
 - Probable breeding (PR)
 - o 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 apart at the same place
 - Courtship and display
 - Visiting a probable nest site
 - Agitated behaviour or anxiety calls from adults



- o Brood patch on adult examined in the hand
- Nest building or excavating nest-hole
- Possible breeding (PO)
 - o Species observed in breeding season in possible nesting habitat
 - Singing male(s) present (or breeding calls heard) in breeding season
- Non-breeding (NB)
 - A species present during the survey but considered to be not breeding within the survey area. Recorded simply as a bird flying over the site or are present on site but considered to be a non-breeding species due to a lack of suitable breeding habitat or lack of behaviour characteristic of breeding.

3.3 Limitations/Constraints

- 3.3.1 The wildlife and wider ecological interest of a site can change. The report presented here is a statement of the findings of surveys carried out between March and July 2024. Any appreciable delay in making reference to this report or changes to the proposed development boundary may necessitate a re-survey.
- 3.3.2 Weather conditions were suitable to conduct the surveys.
- 3.3.3 During the dusk survey on 21st May, a vehicle entered the southwestern half of the site (PR7) and sprayed the adjacent verge of the M40 motorway with what is assumed to be a pesticide or weedkiller. Out of health and safety concerns, the surveyor did not access this part of the site boundary during this survey. However, as this area was fully accessed during the remaining five surveys, it is not considered that this will impact the overall assessment.



4 Results and Interpretation

4.1 Bird Records

4.1.1 The desk study returned a total of 744 records of 57 bird species within a 2km search area, comprising a mix of species typical of urban, arable, wetland and woodland habitats. 25 of these species are on the BTO Red list, with 13 species on Schedule 1 of the Wildlife and Countryside Act (1981), 12 species on Section 41 of the Natural Environment and Rural Communities (NERC) Act, and four species on Annex 1 of the EU Birds Directive. There were 91 records of red kite, a Schedule 1 and Annex 1 species with a well-established breeding population in the broader area of the site.

4.2 Breeding Bird Survey

- 4.2.1 The full results of breeding bird survey are presented in the figures in Appendix 2.
- 4.2.2 The locations of birds are described using the parcel references from Figure 1 of the Habitat Report (Ecology by Design, 2024).

Species Assemblage

- 4.2.3 A total of 67 species were recorded within the survey area across the six survey visits. Of these,
 15 species were confirmed breeding, 12 were probable breeders, 18 possible breeders and 22 were non-breeding species.
- 4.2.4 Of the species recorded on site, 16 are associated with farmland habitats. These are:
 - corn bunting (Emberiza calandra);
 - goldfinch (Carduelis carduelis);
 - greenfinch (Chloris chloris);
 - grey partridge (*Perdix perdix*);
 - jackdaw (Corvus monedula);
 - kestrel (Falco tinnunculus);
 - lapwing (Vanellus vanellus);
 - linnet (*Linaria cannabina*);
 - reed bunting (Emberiza schoeniclus);
 - rook (Corvus frugilegus);
 - skylark (Alauda arvensis);
 - stock dove (Columba oenas);
 - whitethroat (Curruca communis);



- woodpigeon (Columba palumbus);
- yellow wagtail (*Motacilla flava*);
- yellowhammer (Emberiza citrinella);
- 4.2.5 Of these, jackdaw and skylark were confirmed breeding; goldfinch, greenfinch, grey partridge, reed bunting, stock dove, whitethroat and woodpigeon were 'probable' breeders; corn bunting, kestrel, linnet, yellow wagtail and yellowhammer were 'possible' breeders; and the rest non-breeding.
- 4.2.6 Four species recorded on site are on Schedule 1 of the Wildlife and Countryside Act 1981 (as amended). Two of these, barn owl (*Tyto alba*) and red kite (*Milvus milvus*) were considered possible breeders. A single barn owl was seen hunting in suitable breeding habitat adjacent to the site's southern boundary, in the field to the northwest of Sheepbrook Cottage (the off-site house adjacent to pond P2), although no breeding behaviour was noted; in August 2024, during a dormouse survey a single barn owl feather was found in the northern part of the site along the eastern boundary of the woodland (PR16). Red kite were regularly seen foraging on-site throughout the survey period, and a pair were observed mating in the northwest of the site in March, but no evidence of nesting was noted on subsequent surveys, suggesting no successful breeding occurred on-site in 2024. However, it should be assumed that either of these species could attempt breeding at the Lewknor site in future breeding seasons. Two further Schedule 1 species, hobby (*Falco subbuteo*) and peregrine (*Falco peregrinus*), were seen once each flying over the site; neither of these is considered likely to attempt breeding on-site.
- 4.2.7 A total of 14 species recorded are listed on Section 41 of the Natural Environment and Rural Communities (NERC) Act (2006), 16 are on the Birds of Conservation Concern (BOCC) red list and a further 17 are on the BOCC amber list, as detailed on Table 4.1. Red-listed species present that are not specifically associated with farmland habitats include house sparrow (*Passer domesticus*) and mistle thrush (*Turdus viscivorus*); these were determined as confirmed and probably breeding on-site respectively.

Habitat use

4.2.8 The majority of species encountered were associated with the hedgerows and woodland belts on site, and with woodlands and built-up habitats adjoining the site boundaries. Groundnesting species present that are breeding or possibly breeding in the open fields are skylark, grey partridge, yellow wagtail, pheasant (*Phasianus colchicus*) and red-legged partridge (*Alectoris rufa*). Of these, skylark was the only species with a significant breeding presence,



with at least 18 territories held through song across the whole site, comprising minimum counts of 12 singing males on PR7 (southwest), two on PR1 (north), and four on PR3 (east). The remaining ground-nesting bird species listed above were each represented on-site by only a single pair or territorial male.

- 4.2.9 Within the oil seed rape field running along the northeastern edge of the M40 motorway (PR11), a male yellowhammer was present "sub-singing" in March, and a male reed bunting was present in March and April, singing in the latter month. However, it is not thought that either species bred on this field, with the yellowhammer thereafter only heard off-site to the northeast, and the reed bunting later only noted holding territory further southwest on PR7 and off-site near pond P1.
- 4.2.10 Other than the ground-nesting species mentioned in 4.2.6, all remaining bird species observed landing on or flying directly above the site's main three arable fields were deemed to be visiting it to forage or passing overhead without landing. This mostly pertains to tree-nesting species such as red kite and carrion crow (*Corvus corone*). Meadow pipit (*Anthus campestris*) and tree pipit (*Anthus campestris*) are both ground-nesting species, but the site is out of the usual breeding range and habitat preferences of both; the timing of sightings in March (meadow pipit) and early May (tree pipit) is consistent with birds foraging on migration towards breeding grounds elsewhere.
- 4.2.11 Within the red line boundary, the areas of greatest importance to breeding birds are the site's woodland and hedgerow parcels, particularly those with a well-developed understorey such as PR6, PR10, H4 and H7. The site's large arable fields, PR1, PR3 and PR7 are of parish/neighbourhood value for breeding skylark, but negligible value for other breeding bird species. PR11, the site's smaller oilseed rape field, held no confirmed skylark territories. Woodland belts with little understorey, such as PR9, PR15 and PR16, currently hold negligible value for breeding birds.
- 4.2.12 A summary of the species observed, their breeding behaviours and number of territories is given in Table 4.1 below. Breeding evidence codes are included in Appendix 4.



Reference: EBD03850

Table 4.1: Breeding Bird Survey Results

Species	Latin	Breeding Evidence	Estimated No. of Pairs / Territories	Protection/ Priority Status	County Status ¹	Value of Site for Local Population
Confirmed bro	eeding					
Blackbird	Turdus merula	FL, FF	Territories: 5	-	VC, Br, Re & WV	Negligible
Blackcap	Sylvia atricapilla	FL	Territories: 8	-	Co, Br, SV	Negligible
Blue tit	Cyanistes caerulus	FL, ON,	Territories: 5	-	VC, Br, Re	Negligible
Chaffinch	Fringilla coelebs	FL, ON	Territories: 6	-	VC, Br, Re & WV	Negligible
Chiffchaff	Phylloscopus collybita	FL	Territories: 6	-	VC, Br, SV	Negligible
Collared dove	Streptopelia decaocto	FL	Territories: 1	-	VC, Br, Re	Negligible
Dunnock	Prunella modularis	FL, ON	Territories: 6	S41 ² , BOCC ³ Amber	VC, Br, Re	Negligible
House sparrow	Passer domesticus	ON, FF	Territories: 1	S41, BOCC Red	VC, Br, Re	Negligible
Jackdaw	Coloeus monedula	ON	Pairs: 1	-	VC, Br, Re	Negligible
Long-tailed tit	Aegithalos caudatus	FL, ON, FF	Territories: 1	-	VC, Br, Re	Negligible
Pheasant	Phasianus colchicus	FL	Territories: 1	-	VC, Br, Re	Negligible
Robin	Erithacus rubecula	FL, ON	Territories:	-	VC, Br, Re	Negligible
Skylark	Alauda arvensis	FL, FF	Territories: 18	S41, BOCC Red	VC, Br, Re	District
Song thrush	Turdus philomelos	FF	Territories: 4	S41, BOCC Red	VC, Br, Re & WV	Negligible

¹ From Oxfordshire Ornithological Society (1997). "VC" = Very common; "Co" = Common; "Un" = Uncommon; "Ra" = Rare; "VR" = Very rare; "Br" = ; "Breeding" = ; "OB" = Occasional breeding; "Re" = Resident; "SV" = Summer visitor; "WV" = Winter visitor; "PM" = Passage migrant; "Va" = Vagrant

² S41 = Species of Principal Importance on Section 41 of the Natural Environment and Rural Communities (NERC) Act 2006

³ BOCC = Birds of Conservation Concern 5



Wren	Troglodytes troglodytes	FL	Territories:	BOCC Amber	VC, Br, Re	Negligible
Probable bree	eder					
Buzzard	Buteo buteo	N, A	Territories: 2	-	Co, Br, Re	Negligible
Carrion crow	Corvus corone	P, T, FL	Pairs: 2	-	VC, Br, Re	Negligible
Goldfinch	Carduelis carduelis	Р, Т	Territories: 1	-	VC, Br, Re	Negligible
Great tit	Parus major	P, T, D	Territories: 2	-	VC, Br, Re	Negligible
Greenfinch	Chloris chloris	P, T, A	Territories: 2	BOCC Red	VC, Br, Re	Negligible
Grey partridge	Perdix perdix	Р	Pairs: 1	Sch1, BPCC Amber	Co, Br, Re	Negligible
Mistle thrush	Turdus viscivorus	T, A	Territories: 1	BOCC Red	VC, Br, Re	Negligible
Red-legged partridge	Alectoris rufa	Р	Pairs: 1	-	VC, Br, Re	Negligible
Reed bunting	Emberiza schoenliclus	Р, Т	Territories: 1	S41, BOCC Amber	VC, Br, Re	Negligible
Stock dove	Columba oenas	Т	Territories: 2	BOCC Amber	Co, Br, Re	Negligible
Whitethroat	Curruca communis	Т	Territories: 2	BOCC Amber	Co, Br, SV	Negligible
Woodpigeon	Columba palumbus	P, T, D	Pairs: 6	BOCC Amber	VC, Br, Re	Negligible
Possible breed	der					
Barn owl	Tyto alba	Н	-	Sch1 ⁴	Un, Br, Re	Negligible
Coal tit	Periparus ater	S	-	-	VC, Br, Re	Negligible
Corn bunting	Emberiza calandra	S	-	S41, BOCC Red	C, Br, Re	Negligible
Goldcrest	Regulus regulus	S	-	-	VC, Br, Re	Negligible
Great spotted woodpecker	Dendrocopo s major	Н	-	-	Co, Br, Re	Negligible
Green woodpecker	Picus viridis	S	-	-	Co, Br, Re	Negligible

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⁴ Schedule 1 of the Wildlife and Countryside Act 1981 (as amended)



Jay	Garrulus glandarius	Н	-	-	Co, Br, Re	Negligible
Kestrel	Falco tinnunculus	Н	-	BOCC Amber	Co, Br, Re	Negligible
Lesser whitethroat	Curruca curruca	S	-	-	Co, Br, SV	Negligible
Linnet	Linaria cannabina	S	-	S41, BOCC Red	VC, Br, Re	Negligible
Magpie	Pica pica	Н	-	-	VC, Br, Re	Negligible
Pied wagtail	Motacilla alba	Н	-	-	VC, Br, Re & WV	Negligible
Red kite	Milvus milvus	H (P, D)	-	Sch1	Un, Br, Re	Negligible
Sparrowhaw k	Accipiter nisus	Н	-	-	Co, Br, Re	Negligible
Tawny owl	Strix aluco	Н	-	BOCC Amber	VC, Br, Re	Negligible
Treecreeper	Certhia familiaris	H (FL)	-	-	Co, Br, Re	Negligible
Yellow wagtail	Motacilla flava	Н, S	-	S41, BOCC Red	Co, Br, SV & PM	Negligible
Yellowhamm er	Emberiza citronella	H, S	-	S41, BOCC Red	VC, Br, Re	Negligible
Non-breeding						
Canada goose	Branta canadensis	U	-	-	Co, Br, Re	Negligible
Feral pigeon	Columba livia domestica	F	-	-	VC, Br, Re	Negligible
Fieldfare	Turdus pilaris	M, F	-	Sch1, BOCC Red	VC, WV	Negligible
Grey heron	Ardea cinerea	F	-	-	Co, Br, Re	Negligible
Grey wagtail	Motacilla cinerea	F	-	BOCC Amber	Co, Br, Re & WV	Negligible
Herring gull	Larus argentatus	F	-	S41, BOCC Red	VC, WV	Negligible
Hobby	Falco subbuteo	F	-	Sch1	Un, Br, SV	Negligible
House martin	Delichon urbicum	F	-	BOCC Red	VC, Br, SV	Negligible
Lapwing	Vanellus vanellus	M, F	-	S41, BOCC Red	Co, Br, Re & WV	Negligible



Lesser black- backed gull	Larus fuscus	F	-	BOCC Amber	VC, Re & WV	Negligible
Lesser redpoll	Acanthis cabaret	M, F	-	S41, BOCC Red	Ra, OB, WV	Negligible
Mallard	Anas platyrhynch os	F	-	BOCC Amber	VC, Br, Re & WV	Negligible
Meadow pipit	Anthus pratensis	М	-	BOCC Red	Co, Br, Re & WV	Negligible
Moorhen	Gallinula chloropus	U	-	BOCC Amber	VC, Br, Re	Negligible
Oystercatch er	Haematopus ostralegus	F	-	BOCC Amber	Ra, PM	Negligible
Peregrine	Falco peregrinus	F	-	Sch1	Ra, Br, Re & WV	Negligible
Raven	Corvus corax	F	-	-	VR, Va	Negligible
Rook	Corvus frugilegus	F	-	BOCC Amber	VC, Br, Re	Negligible
Swallow	Hirundo rustica	F	-	-	VC, Br ,SV	Negligible
Swift	Apus apus	F	-	BOCC Red	VC, Br, Re	Negligible
Tree pipit	Anthus trivialis	M	-	S41, BOCC Red	Ra, OB, SV	Negligible
Tufted duck	Aythya fuligula	M, F	-	-	VC, Br, Re & WV	Negligible

Bird Survey Evaluation

- 4.2.13 All confirmed breeding species, probable breeders and possible breeders are abundant, common or fairly common in Oxfordshire according to the Oxfordshire county list, with the exception of red kite. The latter species is classed as uncommon, but it should be noted that since this list was last updated in 1997 red kite has become significantly more common across Oxfordshire following its successful re-introduction in the county. Species listed as rare or very rare in the county, such as raven (*Corvus corax*), lesser redpoll (*Acanthis cabaret*), oystercatcher (*Haematopus ostralegus*), peregrine and tree pipit are not considered likely to nest on site, since no breeding behaviours were observed in any of these species.
- 4.2.14 Therefore, the site is considered to support an assemblage of farmland birds that is typical of the region. However, given that there are 27 confirmed/probable breeding species, in accordance with criteria adapted from Fuller (1980) and in line with the species valuation in



Appendix 3, the breeding bird assemblage is assessed as being of local value within a geographic context. In relation to skylark, given that approximately 18 skylark territories are present within the red line, the presence of this species on site is considered to be of District value in line with the species valuation in Appendix 3.



5 Potential Impacts and Recommendations

5.1.1 This section presents the potential impacts and subsequent recommendations for the proposed solar development at the site.

5.2 Breeding Birds

Potential Impacts

- 5.2.1 It is understood that all hedgerows, woodland parcels and trees are proposed to be retained; the solar array will be positioned within the fields; and the proposed access tracks will use existing field openings and gaps in hedges.
- 5.2.2 As such, nesting habitats within the site's hedgerows, woodland parcels and trees will be retained, but they may be subject to disturbance during the construction phase.
- 5.2.3 Habitat for ground-nesting species, such as skylark, will be lost, and also subject to disturbance during the construction phase. A minimum of 18 skylark territories will be permanently lost.
- As well as skylark, there may be some impacts to other species potentially using areas of field PR7 for nesting, specifically grey partridge, yellow wagtail and reed bunting. However, no more than one pair each of these species is considered to be breeding on-site. In each case the birds were found close to the site's southwestern boundary, with suitable habitat for each in these areas off-site. Reed bunting and yellow wagtail both typically prefer wetter habitats, and territorial (singing) males of both species were seen flying back and forth between PR7 on-site and the areas around off-site pond P1 to the south. The pair of grey partridge were first found on the southwestern boundary, with suitable longer-sward grassland present outside this boundary. It should also be noted that grey partridge typically prefer to nest in fields margins, for example adjacent to hedgerow, rather than in interior fields such as those due to be impacted by these proposals.

Recommendation R1: Skylark Compensation Plots

- 5.2.5 There are at least 18 skylark territories on site, representing a population of Neighbourhood/District value in a geographic context. Skylarks were recorded off-site in the surrounding landscape to the east, northeast and west, indicating that there is suitable breeding habitat throughout the local area and suggesting that a healthy wider population is present.
- 5.2.6 To mitigate the loss of nesting habitat, 18 skylark plots should be created either within the site ownership boundary or via an agreement with a third-party landowner in close proximity to the site. This may be achieved through a Section 106 agreement or similar and should cover a



period of 30 years. Where this is not possible, other compensation measures should be explored.

- 5.2.7 The skylark plots should comprise 24m² plots which are 80m from field boundaries and margins. Fields should be 5 ha or larger, with a maximum of 2 plots per ha. For arable fields, the plots should also be located away from tramlines. The plots should be left unsown or treated with herbicide before 31st December. Thereafter the plots can be managed with the same treatment as the rest of the field. Harvesting should be timed to avoid impacts to ground nesting birds, taking place from August onwards. For grasslands, grazing and cutting regimes should be paused between early April and the end of May, and any subsequent cuts beyond the end of May should be 7 weeks apart.
- 5.2.8 Maintaining a foraging resource for skylark, and other farmland birds, includes the provision of bird food plots. This involves leaving rotational set-aside unsprayed for as long as possible (ideally July), and leaving weedy winter stubbles (receiving no glyphosate or herbicides) until March. Bird food plots should be located in south or south-west facing sunny locations, with low levels of weeds, and close to nesting, roosting and other feeding habitats, such as hedgerows. Plots can be moved annually to suit other management activities on site.
- 5.2.9 The trees, hedgerows and woodlands within site should be fully safeguarded from harm as part of any detailed proposals through the demarcation and fencing of root protection areas during construction works or as otherwise indicated by a suitably qualified arboriculturist. These root projection zones must be strictly enforced to prevent further damage to the trees on site.

Recommendation R2: Safeguarding Retained Habitats for breeding birds

5.2.10 It is proposed to retain hedgerows and woodland parcels within and adjacent to the site as part of the scheme. These should be fully safeguarded from harm as part of any detailed proposals through the demarcation and fencing of root protection areas during construction works or as otherwise indicated by a suitably qualified arboriculturist. These root protection zones must be strictly enforced to prevent further damage to the trees and woodlands on site.

Recommendation R3: Habitat enhancements for breeding birds

5.2.11 Grey partridge are present along the southern boundary of field PR7. It is recommended that the field margins in this area are protected and enhanced for the benefit of this species by retaining a minimum 3m field margin buffer that is managed by infrequent cutting to enable tussocky sward to develop, which this species typically uses for cover when nesting. This enhancement would be of value to other bird species and could be applied to all field margins and woodland edges across the site, where practicable. The boundary feature between the



southern end of woodland PR9 and the residential property (Sheepbrook Cottage) is of particular value for this enhancement.

Recommendation R4: Protection of active nests

- 5.2.12 All birds' nests are protected whilst in use. Ecology by Design have found through extensive experience of nesting bird checks that locating skylark nests within large cereal crop fields cannot be carried out with accuracy, given the frequent landing behaviour of the birds within the crop and effective camouflage of their nests. Therefore, the vegetation removal/soil stripping within the cereal crop field will be timed to avoid the skylark breeding season (April August, inclusive) to ensure active skylark nests are not damaged or destroyed. If the field is not planted with crops at the time of the vegetation clearance/soil stripping, a suitably qualified ecologist will carry out an assessment to confirm if the field is no longer suitable for breeding skylarks and that clearance can continue.
- 5.2.13 If any active birds' nests are found prior to the works within any vegetation to be affected, then these must be left alone until they cease to be in use. Ideally, works to suitable nesting habitat/features should be scheduled to avoid the bird nesting season (March to August inclusive). Should such works take place during March-August inclusive, they must be immediately preceded by a check for any active nests by a suitably qualified ecologist. Any active nests identified during works (regardless of time of year) would need to be protected and left with a suitable buffer (to be defined by the ecologist) until the nest is no longer active.

Recommendation R6: Bird foraging enhancement

5.2.14 In addition to the habitat enhancements outlined in R3 above, it is recommended that perches suitable for barn owl are included along the site's south-western boundary adjacent to where barn owl were seen foraging during the surveys in order to provide opportunities for this species to perch. These will be in the form of 2m wooden fence posts along the southwestern field boundary.



6 Relevant Legislation and Policy

6.1 Local Planning Policy

6.1.1 The South Oxfordshire Local Plan was adopted in 2011 and contains the following policies of relevance to this document:

Policy ENV2: Biodiversity – Designated Sites, Priority Habitats and Species

- "1. The highest level of protection will be given to sites of international nature conservation importance (Special Areas of Conservation). Development that is likely to result in a significant effect, either alone or in combination, on such sites will need to satisfy the requirements of the Conservation of Habitats and Species Regulations 2017 (as amended).
- 2. Sites of Special Scientific Interest (SSSI) are of national importance. Development that is likely to have an adverse effect on a SSSI (either on its own or in combination with other developments) will only be permitted in exceptional circumstances, where it can be demonstrated that the benefits of the development in the location proposed clearly outweigh any harm to the special interest features and the SSSI's contribution to the local ecological network. In such circumstances, measures should be provided (and secured through planning conditions or legal agreements) that would mitigate or, as a last resort, compensate for the adverse effects resulting from development.
- 3. Development likely to result, either directly or indirectly to the loss, deterioration or harm to:
 - Local Wildlife Sites
 - Local Nature Reserves
 - Priority Habitats and Species 168 Local Plan 2035 DECEMBER 2020 South Oxfordshire District Council
 - Legally Protected Species
 - Local Geological Sites
 - Ecological Networks (Conservation Target Areas)
 - Important or ancient hedges or hedgerows
 - Ancient woodland and veteran trees

will only be permitted if:

i) the need for, and benefits of the development in the proposed location outweigh the adverse effect on the interests;



- ii) it can be demonstrated that it could not reasonably be located on an alternative site that would result in less or no harm to the interests; and
- iii) measures will be provided (and secured through planning conditions or legal agreements), that would avoid, mitigate or as a last resort, compensate for the adverse effects resulting from development.
- 4. Development resulting in the loss or deterioration of irreplaceable habitats (such as ancient woodland and ancient or veteran trees) will be refused planning permission, unless there are wholly exceptional reasons justifying the granting of planning permission. 5. Where development has the potential to affect a proposed wildlife site the developer must undertake surveys and assessments to determine whether the site meets the criteria for Local Wildlife Site status."

Policy ENV3: Biodiversity

- "1. Development that will conserve, restore and enhance biodiversity in the district will be supported. All development should provide a net gain in biodiversity where possible. As a minimum, there should be no net loss of biodiversity. All proposals should be supported by evidence to demonstrate a biodiversity net gain using a recognised biodiversity accounting metric. South Oxfordshire District Council Local Plan 2035 DECEMBER 2020 169
- 2. Development proposals which would result in a net loss of biodiversity will only be considered if it can be demonstrated that alternatives which avoid impacts on biodiversity have been fully explored in accordance with the mitigation hierarchy. In the absence of alternative sites or layouts, development proposals must include adequate mitigation measures to achieve a net gain of biodiversity. Where harm cannot be prevented or adequately mitigated, appropriate compensation measures will be sought, as a last resort, through planning conditions or planning obligations (depending on the circumstances of each application) to offset the loss by contributing to appropriate biodiversity projects to achieve an overall net gain for biodiversity.
- 3. Planning permission will only be granted if impacts on biodiversity can be avoided, mitigated or, as a last resort, compensated fully."

6.2 Exit from European Union

6.2.1 The Conservation of Habitats and Species Regulations 2017 (as amended), referred to as the '2017 Regulations,' are one of the pieces of domestic law that transposed the land and marine aspects of the Habitats Directive (Council Directive 92/43/EEC) and certain elements of the Wild Birds Directive (Directive 2009/147/EC) (known as the Nature Directives). Changes to the 2017 Regulations have been made by the Conservation of Habitats and Species (Amendment)



- (EU Exit) Regulations 2019 (referred to as the '2019 Regulations') to transfer functions from the European Commission to the appropriate authorities in England and Wales.
- 6.2.2 The amendments prescribed by the 2019 Regulations allow existing protections afforded by current wildlife legislation and transposed EC Council Directives to be operable from 01 January 2021.
- 6.2.3 The 2019 Regulations protect rare and vulnerable birds and the habitats that they depend upon. This is achieved in part through the classification of Special Protection Areas (SPAs). The Habitats Directive aims to protect plants, habitats and animals other than birds. This is achieved in part through the creation of Special Areas of Conservation (SACs). SPAs and SACs are collectively referred to as the 'National Site Network'.
- 6.2.4 Designated Wetlands of International Importance (known as Ramsar sites) do not form part of the National Site Network, however, all Ramsar sites remain protected in the same was as SACs and SPAs.

6.3 National Planning Policy Framework

- 6.3.1 The National Planning Policy Framework (NPPF) was updated in December 2024 (MHCLG, 2024) thereby replacing the older version of December 2023.
- 6.3.2 In relation to planning for climate change, para 162 states: Plans should take a proactive approach to mitigating and adapting to climate change, taking into account the long-term implications for flood risk, coastal change, water supply, biodiversity and landscapes, and the risk of overheating and drought from rising temperatures. Policies should support appropriate measures to ensure the future health and resilience of communities and infrastructure to climate change impacts, such as providing space for physical protection measures, or making provision for the possible future relocation of vulnerable development and infrastructure.
- 6.3.3 The new framework sets out in section 15 that planning policies and decisions should contribute to and enhance the natural and local environment by ... (d) minimising impacts on and providing net gains for biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures and incorporating features which support priority or threatened species such as swifts, bats and hedgehogs (Para 187).
- 6.3.4 To protect and enhance biodiversity and geodiversity (Para 192), plans should:
 - identify, map and safeguard components of local wildlife-rich habitats and wider ecological networks, including the hierarchy of international, national and locally designated sites of importance for biodiversity; wildlife corridors and stepping stones that connect them; and



- areas identified by national and local partnerships for habitat management, enhancement, restoration or creation; and
- promote the conservation, restoration and enhancement of priority habitats, ecological networks and the protection and recovery of priority species; and identify and pursue opportunities for securing measurable net gains for biodiversity.
- 6.3.5 When determining planning applications, local planning authorities should apply the following principles (Para 193):
 - if significant harm to biodiversity resulting from a development cannot be avoided (through locating on an alternative site with less harmful impacts), adequately mitigated, or, as a last resort, compensated for, then planning permission should be refused;
 - development on land within or outside a Site of Special Scientific Interest, and which is
 likely to have an adverse effect on it (either individually or in combination with other
 developments), should not normally be permitted. The only exception is where the benefits
 of the development in the location proposed clearly outweigh both its likely impact on the
 features of the site that make it of special scientific interest, and any broader impacts on
 the national network of Sites of Special Scientific Interest;
 - development resulting in the loss or deterioration of irreplaceable habitats (such as ancient
 woodland and ancient or veteran trees) should be refused, unless there are wholly
 exceptional reasons and a suitable compensation strategy exists; and
 - development whose primary objective is to conserve or enhance biodiversity should be supported; while opportunities to improve biodiversity in and around developments should be integrated as part of their design, especially where this can secure measurable net gains for biodiversity or enhance public access to nature where this is appropriate.
- 6.3.6 The following should be given the same protection as habitats sites (Para 194):
 - potential Special Protection Areas and possible Special Areas of Conservation;
 - listed or proposed Ramsar sites; and
 - sites identified, or required, as compensatory measures for adverse effects on habitats sites, potential Special Protection Areas, possible Special Areas of Conservation, and listed or proposed Ramsar sites.
- 6.3.7 The presumption in favour of sustainable development does not apply where the plan or project is likely to have a significant effect on a habitats site (either alone or in combination with other plans or projects), unless an appropriate assessment has concluded that the plan or project will not adversely affect the integrity of the habitats site (Para 195).



6.4 Birds

- 6.4.1 All nesting wild birds are protected under Section 1 of the Wildlife and Countryside Act 1981 (as amended) which makes it an offence to intentionally kill, injure or take any wild bird or take, damage or destroy its nest whilst in use or being built, or take or destroy its eggs. In addition to this, for some rarer species (listed on Schedule 1 of the Act), it is an offence to disturb them whilst they are nest building or at or near a nest with eggs or young, or to disturb the dependent young of such a bird.
- The Conservation of Habitats and Species Regulations 2017 (as amended) places duties on competent authorities (including Local Authorities and National Park Authorities) in relation to wild bird habitat. These provisions relate back to Articles 1, 2 and 3 of the EC Directive on the conservation of wild birds (2009/147/EC, 'Birds Directive') (Regulation 10 (3)) requires that the objective is the 'preservation, maintenance and re-establishment of a sufficient diversity and area of habitat for wild birds in the United Kingdom, including by means of the upkeep, management and creation of such habitat, as appropriate, having regard to the requirements of Article 2 of the new Wild Birds Directive...' Regulation 10 (7) states: 'In considering which measures may be appropriate for the purpose of security or contributing to the objective in [Regulation 10 (3)] Paragraph 3, appropriate account must be taken of economic and recreational requirements'.
- 6.4.3 In relation to the duties placed on competent authorities under the 2017 Regulations (as amended), Regulation 10 (8) states: 'So far as lies within their powers, a competent authority in exercising any function [including in relation to town and country planning] in or in relation to the United Kingdom must use all reasonable endeavours to avoid any pollution or deterioration of habitats of wild birds (except habitats beyond the outer limits of the area to which the new Wild Birds Directive applies).'



7 References

Bibby, C.J., Burgess, N.D., Hill, D.A., Mustoe, S., & Lambton, S. (2000). Bird Census Techniques. Academic Press Inc.

Bird Survey & Assessment Steering Group (2023). *Bird Survey Guidelines for assessing ecological impacts*. Online resource (accessed online 15th August 2023 at https://birdsurveyguidelines.org)

BSI Standards Limited (2013). BS42020:2013 Biodiversity: Code of practice for planning and development

British Trust for Ornithology (2024). https://www.bto.org/understanding-birds/birdfacts/skylark

CIEEM (2019). Guidelines for Ecological Impact Assessment in the UK and Ireland. Terrestrial, Freshwater, Coastal and Marine. Version 1.1 Updated September 2019. Chartered Institute of Ecology and Environmental Management, Winchester

MHCLG (2024). *National Planning Policy Framework*. Ministry of Housing, Communities & Local Government, Worcester.

Ecology by Design (2024). Lewknor Solar Habitat Report.

Fuller, R.J. (1980). *A method for assessing the ornithological interest of sites for conservation*. Biological Conservation 17: 229-239.

Oxfordshire Ornithological Society (1997). The Oxfordshire County List. https://www.oos.org.uk/oxonlist.php

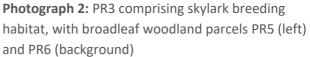
Stace, C. (2019). New British Flora of the British Isles, fourth edition. Cambridge University Press.

UKHab Ltd. (2023). UK Habitat Classification Version 2.0 at https://ukhab.org



Appendix 1 - Photographs

Photograph 1: PR7 comprising skylark breeding habitat, looking across the M40 to treeline PR15





Photograph 3: PR7 looking south towards barn owl foraging habitat; treeline PR9 on the right



Photograph 4: Male reed bunting on PR11



Photograph 5: Grey partridge pair on PR7



Photograph 6: Male greenfinch adjacent to hedgerow H2







Appendix 2 - Figures

Next page:

- Figure 1: Breeding Bird Survey March 2024
- Figure 2: Breeding Bird Survey April 2024
- Figure 3: Breeding Bird Survey May (early) 2024
- Figure 4: Breeding Bird Survey May (late) 2024
- Figure 5: Breeding Bird Survey June 2024
- Figure 6: Breeding Bird Survey July 2024





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Appendix 3 - Definitions of the geographic Context of Species Importance

Geographic Context of Importance	Examples
International	Any regularly occurring population of an internationally important species, which is threatened or rare in the UK. i.e. it is a UK Red Data Book species or listed as occurring in 15 or fewer 10km squares in the UK (categories 1 and 2 in the UK BAP) or of uncertain conservation status or of global conservation concern in the UK BAP. A regularly occurring, nationally significant population/number of any internationally important species.
National	Any regularly occurring population of a nationally important species which is threatened or rare in the region or county (see local BAP). A regularly occurring, regionally or county significant population/number of any nationally important species.
Regional	Any regularly occurring, locally significant population of a species listed as being nationally scarce which occurs in 16-100 10km squares in the UK or in a Regional BAP or relevant Natural Area on account of its regional rarity or localisation; A regularly occurring, locally significant number of a regionally important species.
County/ Metropolitan	Any regularly occurring, locally significant population of a species which is listed in a County/Metropolitan "red data book" or BAP on account of its regional rarity or localisation; A regularly occurring, locally significant number of a County/Metropolitan important species.
District / Borough	A population of a species that is listed in a District/Borough BAP because of its rarity in the locality or in the relevant Natural Area profile because of its regional rarity or localisation; A regularly occurring, locally significant number of a District / Borough important species during a critical phase of its life cycle.
Local i.e. Parish / Neighbourhood	Species that are not threatened but are valued at a local level on intrinsic appeal.
Negligible	Common or widespread species.



Appendix 4 - BTO Breeding Evidence Codes

Breeding Code	Description					
Non-breeding						
F	Flying over					
М	Species observed but suspected to be still on migration					
U	Species observed but suspected to be summering non-breeder					
Possible breeder						
Н	Species observed in breeding season in suitable nesting habitat					
S	Singing male present (or breeding calls heard) in breeding season in suitable breeding habitat					
Probable breeding						
Р	Pair observed in suitable nesting habitat in breeding season					
Т	Permanent territory presumed through registration of territorial behaviour (song etc) on at least two different days a week or more apart at the same place or many individuals on one day					
D	Courtship and display (judged to be in or near potential breeding habitat; be cautious with wildfowl)					
N	Visiting probable nest site					
А	Agitated behaviour or anxiety calls from adults, suggesting probable presence of nest or young nearby					
I	Brood patch on adult examined in the hand, suggesting Incubation					
В	Nest building or excavating nest-hole					
Confirmed breeding						
DD	Distraction-display or injury feigning					
UN	Used nest or eggshells found (occupied or laid within period of survey)					
FL	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 habitat.					
ON	Adults entering or leaving nest-site in circumstances indicating Occupied Nest (including high nests or nest holes, the contents of which can not be seen) or adults seen incubating					
FF	Adult carrying faecal sac or food for young					
NE	Nest containing eggs					
NY	Nest with young seen or heard					

