

Rosefield Solar Farm

Environmental Statement

Volume 4
Appendix 7.12: Breeding Bird Survey Report
(2024)
(~~Confidential~~Tracked)

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Foreword

Survey information contained within **ES Volume 4, Appendix 7.12: Breeding Bird Survey Report (2024) (~~Confidential~~) [EN010158/APP/6.4.3]** forms part of the Environmental Statement for information only. The breeding bird surveys detailed within this appendix were undertaken between March and July 2024 inclusive and were based on a superseded version of the Order Limits. The results detailed within this appendix were correct at the time of writing; however, this has not impacted the assessment undertaken for breeding birds, with the results of these surveys considered satisfactory to provide a sufficient baseline in which to base the assessment upon. Further details are provided within **ES Volume 2, Chapter 7: Biodiversity [EN010158/APP/6.2.5]**.

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1. Introduction

1.1. Purpose of this report

1.1.1. This document has been updated at Deadline 4 to redact confidential information while providing the full report. The document references have not been updated from the original submission. Please refer to the **Guide to the Application [EN010158/APP/1.2.10]** for the list of current versions of documents.

1.1.1. This report presents the results of surveys for breeding birds undertaken in relation to the proposed Rosefield Solar Farm development between March and July 2024 inclusive. These surveys were conducted to inform an assessment of the breeding bird assemblage in connection with the Proposed Development.

1.2. Ecological context

1.2.1. The site of the Proposed Development (hereafter referred to as 'the Site') in which these surveys for breeding birds were undertaken consists of four areas within the Site Boundary, covering a combined total of approximately 473 hectares (ha) (**Figure 1**). These comprise:

- Parcel 1: c.180ha, centred at Ordnance Survey (OS) grid reference SP 70144 24554;
- Parcel 1a: c.17ha, centred at OS grid reference SP 70890 23003;
- Parcel 2: c.225ha, centred at OS grid reference SP 72925 22932; and
- Parcel 3: c.51ha, centred at OS grid reference SP 75027 25125.

1.2.2. The Site predominantly comprises arable fields interspersed with hedgerows, ditches, lines of trees, grassland and small areas of woodland, with occasional small buildings and ponds. The wider landscape is largely arable with occasional villages, farm complexes, scattered residential properties and woodland.

1.3. Project overview

1.3.1. Rosefield Solar Farm is a proposed solar farm with energy storage which will generate and store renewable electricity for export to the National Grid. The main features of the Proposed Development consists of the following elements:

- Solar PV development consisting of:
 - Ground mounted Solar PV generating station. The generating station would include Solar PV modules and mounting structures; and

- Balance of Solar System (BoSS) which comprises: Inverters; Transformers; Switchgear; Combiner Boxes; acoustic barriers and cabling.
- A project substation (the 'Rosefield Substation') compound comprising: Transformers; Switchgear; reactive power compensation bays; disconnectors; circuit breakers; busbars; control equipment; lightning surge arrestors; building(s) including office, control, functions, material storage, material laydown areas and welfare facilities; firewalls; fencing and acoustic barriers; a security cabin; parking as well as wider monitoring, maintenance and emergency equipment;
- A Main Collector Compound and two Satellite Collector Compounds comprising: Switchgear; Transformers; ancillary equipment; operation and maintenance and welfare facilities; material storage; material laydown areas; fencing and acoustic barriers; and security cabins;
- Battery Energy Storage System (BESS) compound comprising: batteries and associated Inverters; Transformers; Switchgear, ancillary equipment and their containers; office, control and welfare buildings; fencing and acoustic barriers; monitoring, maintenance and emergency systems; air conditioning; electrical cables; fire safety infrastructure; operation (including maintenance) security facilities; material storage; and material laydown areas;
- Interconnecting Cabling Corridor(s) to connect the Solar PV modules and the BESS to the Satellite and Main Collector Compounds to the Rosefield Substation;
- A Grid Connection Cable Corridor to connect the Rosefield Substation to the National Grid East Claydon Substation via 400kV cabling;
- Ancillary infrastructure works comprising: boundary treatment; security equipment; lighting; fencing; landscaping; internal access tracks; works to facilitate vehicular access; earthing devices; earthworks; surface water management; utility connections and diversions; and any other works identified as necessary to enable the Proposed Development;
- Green and blue infrastructure, recreation and amenity works comprising: landscaping; habitat management; biodiversity enhancement; the creation of three permissive footpaths; and works to permanently divert four public right of way footpaths in five instances;
- Site-wide operational monitoring and security equipment; and
- Highways infrastructure improvements and safety works comprising: minor junction improvement works; road widening; passing places; and works to facilitate vehicular access to the Site.

2. Legislation and guidance

2.1. Overview

- 2.1.1. Relevant legislation and guidance relating to breeding birds is summarised below. This legislation and guidance have been used to inform the evaluation of the conservation statuses of the species recorded, and when assessing the importance of the breeding bird populations present.

2.2. Legislation

European Commission Birds Directive (2009/147/EC)

- 2.2.1. Certain UK bird species (including some breeding species) are protected at an international level under the European Commission (EC) Directive on the Conservation of Wild Birds 2009 (2009/147/EC). These species are afforded enhanced legal protection and European Union member states have a responsibility to maintain populations of these species. This Directive is transposed into English law through the Conservation of Habitats and Species Regulations 2017 (as amended)¹.
- 2.2.2. Species listed on Annex 1 of the Directive are those for which the UK government is required to take special conservation measures (including the designation of land as Special Protection Areas (SPAs)) to conserve populations of these species throughout their distributions. These sites form part of the UK's national site network of core sites that are protected for rare and threatened species.
- 2.2.3. Bird species listed on Annex 1 of the Directive are those which are deemed to be:
- in danger of extinction;
 - vulnerable to specific changes to their habitats;
 - considered rare due to their small population sizes and/or restricted local distributions; and
 - in need of particular attention due to their specific habitat requirements.

Wildlife and Countryside Act 1981 (as amended)

- 2.2.4. Wild birds are protected in the UK under Section 1 of the Wildlife and Countryside Act (WCA) 1981 (as amended). This protection was extended by the Countryside Rights of Way (CROW) Act 2000. Under this legislation it is an offence to intentionally:

¹ As such, the requirements of the EC Birds Directive (2009/147/EC) apply despite the UK no longer being a member state of the European Union.

- kill, injure or take any wild bird;
- take, damage or destroy the nest of any wild bird while that nest is in use or being built; and
- take or destroy an egg of any wild bird.

2.2.5. In addition, certain species are listed on Schedule 1 of the WCA and receive special protection under Sections 1(4) and 1(5), which confer penalties where the above-mentioned offences are committed, in addition to making it an offence to intentionally or recklessly:

- disturb any such bird whilst building its nest or whilst it is in or near a nest containing eggs or dependent young; and
- disturb the dependent young of such a bird.

Natural Environment and Rural Communities Act 2006

2.2.6. The Natural Environment and Rural Communities (NERC) Act 2006 requires local and governmental authorities and departments to have regard to the conservation of biodiversity and measures associated with public rights of way and other rural affairs.

2.2.7. Forty-nine bird species are listed as being Species of Principal Importance for conservation in England under Section 41 (S41) of the NERC Act 2006, and as such they are a material consideration during the planning process. These Species of Principal Importance are those identified as requiring action under the UK Biodiversity Action Plan (UKBAP), which continue to be regarded as species of conservation priority under the UK Post-2010 Biodiversity Framework (which succeeded the UKBAP in July 2012).

2.3. Guidance

Birds of Conservation Concern

2.3.1. The Birds of Conservation Concern (BoCC) Red, Amber and Green lists categorise the UK's regularly occurring bird species according to their level of conservation concern (Stanbury *et al.*, 2021). Although these listings confer no legal protection, they are useful in guiding conservation action for individual species when birds may be affected by plans or projects.

Red list species

2.3.2. These are species of high conservation concern, including:

- species that are globally threatened according to the International Union for the Conservation of Nature (IUCN) criteria;
- species with a historical breeding decline that have not shown a substantial recent recovery;

- species that have shown a severe breeding decline over the last 25 years or longer term;
- species that have shown a severe breeding range decline over the last 25 years or longer term; and
- species whose non-breeding populations have declined over the last 25 years or longer term.

Amber list species

2.3.3. These are species of medium conservation concern, including:

- species of European Conservation Concern;
- species whose populations have declined historically but which have made a substantial recent recovery;
- species whose breeding populations have declined moderately over the last 25 years or longer term;
- species that have shown a moderate breeding range decline over the last 25 years or longer term;
- species whose non-breeding populations have declined moderately over the last 25 years or longer term; and
- rare breeders or non-breeding rarity species with internationally important or localised populations.

Green list species

2.3.4. Green list species fulfil none of the criteria detailed above. As such, they have stable or increasing populations and are not currently of conservation concern.

2.3.5. Non-native species are not afforded Red, Amber or Green list status.

Buckinghamshire guidance

2.3.6. *Forward to 2030: Biodiversity Action Plan²* sets out habitats and species of particular conservation value in Buckinghamshire and Milton Keynes in order to raise awareness of biodiversity issues and provide a mechanism through which conservation targets for these habitats and species can be delivered.

2.3.7. Whilst not providing lists of specific bird species identified as being of conservation priority in Buckinghamshire and Milton Keynes, this document highlights certain habitats of importance to breeding birds in the county, including:

² [Forward to 2030 – Buckinghamshire & Milton Keynes Natural Environment Partnership \(bucks.mknep.co.uk\)](https://bucks.mknep.co.uk) (accessed 07/08/2024).

- Arable fields and field margins providing important nesting and feeding sites for gamebirds and songbirds including corn bunting (*Emberiza calandra*), grey partridge (*Perdix perdix*) and skylark (*Alauda arvensis*);
- Hedgerows used by farmland birds for nesting, feeding and sheltering, with occasional standard trees in hedgerows used by tree-nesting bird species;
- Riparian and wetland habitats providing habitat connectivity and supporting notable species such as kingfisher (*Alcedo atthis*);
- Ancient woodlands supporting locally and nationally declining bird species; and
- Meadows and pastures used by notable species including barn owl (*Tyto alba*).

3. Methods

3.1. Desk study

- 3.1.1. A desk-based review was undertaken to identify any international statutory designated sites with features of ornithological interest (e.g., SPAs, Special Areas of Conservation (SACs) or Ramsar sites) within 10km of the Site, and any relevant national statutory designated sites (e.g., Sites of Special Scientific Interest (SSSIs)) within 2km of the Site. This review was undertaken using the Multi-Agency Geographic Information for the Countryside (MAGIC) website.
- 3.1.2. To provide supplementary data on bird species known to be present in the vicinity of the Site, ornithological records from within the Site boundary and a 2km buffer were obtained from Buckinghamshire and Milton Keynes Environmental Records Centre (BMERC) in August 2023.
- 3.1.3. Surveys for breeding birds covering the majority of the Site were undertaken in 2022 on behalf of Rosefield Solar Farm. The results of these surveys were reviewed and evaluated in the context of the 2024 breeding bird survey data.

3.2. Field surveys

- 3.2.1. The field surveys for breeding birds were undertaken between March and July 2024 inclusive in accordance with the *Bird Survey Guidelines for Assessing Ecological Impacts* (BSG) (Bird Survey and Assessment Steering Group, 2023). These comprised a series of five survey visits during which suitably experienced ornithologists walked pre-determined transect routes throughout the Site. The transect routes were interspersed with stops, during which the ornithologists scanned for birds using optical equipment. The direction in which each transect route was walked was alternated between survey visits so that different areas of the Site were surveyed at different times of day.
- 3.2.2. All bird species encountered (either visually or through their vocalisations) were recorded onto ArcGIS Field Maps software using standard British Trust for Ornithology (BTO) species codes and behaviour notation (Marchant, 1983). Any specially protected and notable bird species encountered within 50m of the Site boundary were also recorded. Particular attention was paid to recording evidence of breeding by specially protected and notable species (see **Section 3.3**).
- 3.2.3. Due to its large size, for the purpose of these surveys for breeding birds, six transect routes were devised (as indicated in **Figure 2**). These six transect routes covered all fields within the Site and walked to within 50m of all hedgerows and woodland. The six transect routes surveyed were as follows:
 - Transect 1-1: extending throughout the north of Parcel 1 for c.10km;
 - Transect 1-2: extending throughout the south of Parcel 1 for c.4.4km;

- Transect 1a: extending throughout Parcel 1a for c.2.7km;
- Transect 2-1: extending throughout the north of Parcel 2 for c.7.8km;
- Transect 2-2: extending throughout the south of Parcel 2 for c.7.6km; and
- Transect 3: extending throughout Parcel 3 for c.6.2km.

3.2.4. Due to access restrictions, Transect 3 was subject to four survey visits between May and July inclusive, rather than the five survey visits originally proposed. The potential implications of this are discussed in **Paragraph 3.4.2.**

3.2.5. Survey visits were scheduled to take place throughout the breeding season, focusing on times at which relevant specially protected and notable species were most likely to be recorded. Survey visits typically commenced within one hour of dawn and were completed by 11:00, and occasional dusk visits were undertaken to record species that are typically more active around dusk (e.g., owls). Survey visits were conducted in suitable weather conditions, avoiding extreme temperatures, heavy rain or fog during which bird activity may be atypical and/or surveying may be impractical. The dates, timings and weather conditions for all survey visits are detailed in **Annex B.**

3.3. Interpretation of survey results

Assessment of breeding status

3.3.1. The results from the five survey visits were used to assess the breeding statuses of all bird species recorded, based on the criteria presented in Gilbert *et al.* (1998)³ and taking into consideration understanding of the breeding ecology of the species in question. These criteria are based on the principle that many species are territorial during the breeding season and, as such, observation of certain behaviours (e.g., singing, displaying, aggressive interactions) can be used to infer breeding or likely breeding by a given species.

3.3.2. Breeding by a particular species within the Site can be assessed as being 'Confirmed' if:

- a nest or recently used nest was found;
- a nest with young was seen or heard;
- recently-fledged young were seen or heard;
- adults were seen entering or leaving a nest site, or an adult was seen incubating; or

³ As summarised at: <https://www.bto.org/our-science/projects/birdatlas/methods/breeding-evidence> [accessed 07/08/2024].

- a territory was positively identified due to the number and type of observations recorded (i.e., a combination of observations of a male singing from the same area of suitable nesting habitat on multiple occasions, adults seen visiting a probable nest site at that location and/or observation of a pair at that location).

3.3.3. Breeding by a particular species within the Site can be assessed as being 'Probable' if:

- nest-building was observed;
- a bird was seen visiting a probable nest site on a single occasion;
- agitated behaviour or alarm calls were observed in or near suitable nesting habitat;
- a pair was seen in suitable nesting habitat during the breeding season;
- courtship and/or display were seen; or
- a male was heard singing in the same location on two or more occasions.

3.3.4. Breeding by a particular species within the Site can be assessed as being 'Possible' if:

- a male was heard singing on one occasion during the breeding season; or
- birds were seen in or near suitable nesting habitat during the breeding season.

3.3.5. Species not observed exhibiting the behaviours above are assessed as 'Non-breeding'.

Conservation status

3.3.6. The assessment of the importance of the breeding bird populations recorded took into consideration the conservation statuses of the species recorded. Species afforded special statutory protection or included on lists of species of conservation interest were evaluated. These included:

- Wildlife and Countryside Act 1981 (as amended) Schedule 1 species;
- EC Birds Directive (2009/147/EC) Annex 1 species;
- NERC S41 Species of Principal Importance;
- BoCC Red and Amber list species; and
- Species referred to specifically in *Forward to 2030: Biodiversity Action Plan* for Buckinghamshire and Milton Keynes.

Species abundance

- 3.3.7. The importance of the breeding bird populations recorded was assessed in the context of the sizes of those populations relative to international, national and regional population estimates for the species in question.
- 3.3.8. International 1% population thresholds (i.e., the size at which a population is assessed as being of international importance, as it comprises over 1% of the international population for a given species) were obtained from Wetlands International⁴.
- 3.3.9. National 1% population thresholds (i.e., the size at which a population is assessed as being of national importance, as it comprises over 1% of the national population for a given species) were calculated from the national population estimates detailed by Woodward *et al.* (2020).
- 3.3.10. Assessment of county, district or local importance was based on professional knowledge of the species in question and information provided in the *Buckinghamshire Bird Report 2022* (Buckinghamshire Bird Club, 2023) and the *Buckinghamshire Bird Report 2020* (Buckinghamshire Bird Club, 2021).

Species diversity

- 3.3.11. The importance of the breeding bird assemblage recorded during the surveys for breeding birds was assessed according to its level of species diversity, in reference to the criteria described by Fuller (1980). It should be recognised that breeding birds have undergone widespread decline since these criteria were devised. As such, the qualifying number of species for a given importance category proposed by Fuller (1980) is now considered to be relatively high. This disparity is taken into account within the adapted importance criteria specified in **Table 1** below.

Table 1: Breeding bird assemblage importance criteria

Breeding bird assemblage importance category	Number of breeding bird species recorded	
	Fuller (1980) criteria	Adapted criteria
National	More than 85	More than 85
Regional	70-84	70-84
County	50-69	50-69
District	-	25-49
Local	25-49	Fewer than 25

⁴ As detailed by Wetlands International. Available at: [Waterbird Population Estimates \(wetlands.org\)](https://www.wetlands.org) (accessed 07/08/2024).

3.4. Limitations and assumptions

- 3.4.1. Field surveys for breeding birds were undertaken at appropriate times of day and in suitable weather conditions. Considering the habitat types and extents, and the species for which the Site is potentially suitable, the five survey visits completed between March and July 2024 inclusive are considered sufficient to record the breeding bird populations present.
- 3.4.2. Access was not granted to Parcel 3 until 9 May 2024. Parcel 3 was therefore subject to four survey visits between 9 May and 11 July 2024, rather than the five survey visits between March and July originally proposed. The northern half of Parcel 3 could not be accessed during visit 4 on 11 July 2024. Given the habitat types and extents present in Parcel 3, the 2024 survey effort is considered sufficient to have recorded the majority of breeding bird territories present within Parcel 3. As the first survey visit in Parcel 3 was conducted on 9 May 2024, species which are typically more readily detected earlier in the season (e.g., song thrush (*Turdus philomelos*)) could potentially have been missed or under-counted. This is taken into consideration in **Section 5**, with the 2022 survey results used for context. As such, this report is still considered to provide an accurate representation of the breeding bird populations present within Parcel 3 in 2024.
- 3.4.3. Transect routes were designed to maximise coverage of the Site. Where transect routes extended near to each other, the boundaries within which surveyors were to record birds when surveying a particular transect route were clearly delineated to minimise the potential for double-counting. The potential for double-counting of mobile species (e.g., raptors, cuckoo (*Cuculus canorus*)) has been taken into consideration when evaluating species abundance and habitat use in **Section 5**.
- 3.4.4. The majority of woodland areas have been excluded from the Site boundary. Whilst birds using woodland edges adjacent to the Site (e.g., within Finemere Wood SSSI and Sheephouse Wood SSSI) were recorded, considering the limited potential scope of impacts from the Proposed Development on breeding birds using woodland off site, no detailed surveys of the interior of areas of woodland for breeding birds were undertaken. Where any notable observations (e.g., potential breeding by WCA Schedule 1 species) were made in woodland further off site (i.e., >50m from the Site boundary), these were recorded on a precautionary basis. Where species were only recorded outside of the Site boundary and are highly unlikely to have been using habitats within the Site boundary (e.g., marsh tit), to accurately reflect the value of the Site for breeding birds, these species were omitted from the breeding bird assemblage recorded for the Site in 2024.
- 3.4.5. Whilst desk study data are useful in providing supplementary ecological information for a site, it should be acknowledged that these data are dependent on the submission of records to the relevant organisation. As such, a lack of records for a particular species does not necessarily mean that the species is absent from the Site and/or wider search area.

Similarly, records of a particular species do not necessarily mean that the species is still present within the Site.

- 3.4.6. It should be noted that ecological features (e.g., bird populations) are transient, and that the distributions of habitats and species may be subject to change. As such, in line with Chartered Institute of Ecology and Environmental Management (CIEEM) guidance, the ecological survey data presented in this report are considered valid for at least two years (CIEEM, 2019), after which it may be necessary for further field surveys to be undertaken.

4. Results

4.1. Desk study

Designated sites

- 4.1.1. The desk study identified no internationally designated sites with features of ornithological interest within 10km of the Site. As such, internationally designated sites are not discussed further in this report.
- 4.1.2. The desk study identified three nationally designated sites with features of ornithological interest within 2km of the Site, as presented in **Table 2** below.

Table 2: Relevant nationally designated sites

Designated site	Distance from the Site	Description
Finemere Wood SSSI	0m (i.e., immediately adjacent to the Site boundary)	c.46 ha woodland site supporting a wide range of bird species, many of which are local in the county. Resident woodland specialists include nuthatch (<i>Sitta europaea</i>), treecreeper (<i>Certhia familiaris</i>), woodpeckers and tits. The scrub habitats support breeding nightingale (<i>Luscinia megarhynchos</i>) and various warblers. Other noteworthy species include tawny owl (<i>Strix aluco</i>), sparrowhawk (<i>Accipiter nisus</i>), turtle dove (<i>Streptopelia turtur</i>) and woodcock.
Sheephouse Wood SSSI	0m (i.e., immediately adjacent to the Site boundary)	c.59 ha woodland site within which 40 bird species have been recorded including woodcock (<i>Scolopax rusticola</i>), breeding sparrowhawk, all three woodpecker species (i.e., including lesser spotted woodpecker (<i>Dryobates minor</i>)), nuthatch and treecreeper.
Grendon and Doddershall Woods SSSI	1,360m south-west	c.70 ha woodland site with considerable ornithological interest; notably breeding nightingale.

- 4.1.3. The desk study also identified non-statutory designated sites with features of ornithological interest within 2km of the Site, as presented in **Table 3** below.

Table 3: Relevant non-statutory designated sites

Designated site	Distance from the Site	Description
Shrub Woods 62X03 LWS	0m (i.e., immediately adjacent to the Site boundary)	Woodland with various typical bird species recorded including bullfinch (<i>Pyrrhula pyrrhula</i>), lesser whitethroat (<i>Curruca curruca</i>) and song thrush.
Romer Wood 72B03 LWS	0m (i.e., immediately adjacent to the Site boundary)	Woodland with various typical bird species recorded including cuckoo, garden warbler (<i>Sylvia borin</i>) and marsh tit (<i>Poecile palustris</i>).
Runts Wood 72G01 LWS	0m (i.e., immediately adjacent to the Site boundary)	Woodland with various typical bird species recorded including bullfinch, garden warbler and song thrush.
Baltimore Wood 72B04 LWS	0m (i.e., immediately adjacent to the Site boundary)	Woodland with various typical bird species recorded including cuckoo, song thrush and treecreeper.
Greatsea Wood 72B02 LWS	0m (i.e., immediately adjacent to the Site boundary)	Woodland with various typical bird species recorded including bullfinch, cuckoo and marsh tit.
Calvert Jubilee 055 Wildlife Trust Reserve	277m west	Deep lake forming part of a large disused clay pit. Especially important as an overwintering site for wildfowl, whilst scrub on site is used by nightingale.
Calvert Jubilee Nature Reserve LWS	277m west	See Calvert Jubilee Wildlife Trust Reserve above.
Grendon and Doddershall Meadows 72F09 LWS	585m south	Dry meadow, pond, ditch habitats and scrub habitats providing important roosting and breeding sites for various bird species including yellowhammer.

Designated site	Distance from the Site	Description
Calvert Brick Pits, Great Moor Sailing Club 62S07 LWS	960m west	Open standing water and surrounding habitats in which various bird species have been recorded including common tern (<i>Sterna hirundo</i>), grey wagtail (<i>Motacilla cinerea</i>), linnet (<i>Linaria cannabina</i>) and turtle dove.
Wood between Lawn Hill and Dunsty Hill 62W01 LWS	1,360m south-west	Woodland supporting various breeding bird species.
Grendon Underwood Meadows 62V11 LWS	1,460m south-west	Fields and tall hedgerows used by a range of bird species.

Species records

- 4.1.4. Data obtained from BMERC included records of various bird species which could potentially be present within the Site and surrounding land during the breeding season. Species recorded within the Site and a 2km buffer during the last ten years include the following (full details are provided in **ES Volume 4, Appendix 7.7: Preliminary Ecological Appraisal [EN010158/APP/6.4]**):
- Raptors such as barn owl, hobby (*Falco subbuteo*), goshawk (*Accipiter gentilis*), peregrine (*Falco peregrinus*), red kite and sparrowhawk;
 - Waders such as lapwing (*Vanellus vanellus*), little ringed plover (*Charadrius dubius*) and snipe (*Gallinago gallinago*);
 - Declining farmland species such as grey partridge, skylark, spotted flycatcher (*Muscicapa striata*), tree sparrow (*Passer montanus*) and yellow wagtail (*Motacilla flava*); and
 - Riparian species such as grey wagtail and kingfisher.
- 4.1.5. Surveys for breeding birds undertaken in 2022 covering the majority of the Site recorded a total of 57 bird species, including a breeding assemblage of 49 species. Noteworthy observations included:
- Barn owl: recorded calling on the boundary [REDACTED], indicating the presence of a possible territory overlapping with the Site;
 - Hobby: an active nest [REDACTED], evaluated as being of county level importance;
 - Red kite: a minimum of seven territories recorded throughout the Site, including an active nest [REDACTED]; and
 - Confirmed or possible breeding by other notable species including bullfinch, cuckoo, grey partridge, linnet, marsh tit, reed bunting

(*Emberiza schoeniclus*), skylark, song thrush, spotted flycatcher, yellow wagtail and yellowhammer.

4.2. Field surveys

4.2.1. A total of 73 bird species were recorded during the surveys for breeding birds undertaken between March and July 2024 inclusive. Peak counts (i.e., the maximum number of birds recorded in a single survey visit) and breeding statuses for each species are presented in **Table 4** below, including descriptions for selected species. Full breeding bird survey data are provided in **Annex C**. Territories of selected specially protected and notable species are shown in **Figure 2a-2d**.

4.2.2. In summary, in reference to the criteria described in **Section 3.3**, the breeding statuses of the 73 species recorded within the Site were as follows:

- Confirmed: 22 species;
- Probable: 18 species;
- Possible: nine species; and
- Non-breeding: 24 species.

Table 4: Summary of species recorded during the 2024 surveys for breeding birds

Species		Breeding status	Peak count for each transect						Description
Common name	Scientific name		1-1	1-2	1a	2-1	2-2	3	
Barn owl	<i>Tyto alba</i>	Possible	1	0	1	0	0	0	One observed taking off from/in the vicinity of a mature ash [REDACTED] on three separate occasions. One also observed in flight [REDACTED] on 30/05/24. Suitable nesting and foraging habitat present throughout the Site (further information is provided in Paragraph 5.6.4). Anecdotal accounts from landowners of breeding barn owls in the wider area.
Blackbird	<i>Turdus merula</i>	Confirmed	9	9	6	14	16	7	
Blackcap	<i>Sylvia atricapilla</i>	Confirmed	5	7	7	15	16	12	
Blue tit	<i>Cyanistes caeruleus</i>	Confirmed	25	31	30	31	24	12	
Bullfinch	<i>Pyrrhula pyrrhula</i>	Possible	0	1	0	0	1	0	Two possible territories, with one calling from a hedgerow towards the south of Parcel 1 on 27/03/24, and another calling from woodland edge on the southern boundary of Parcel 2 on 12/07/24.
Buzzard	<i>Buteo buteo</i>	Non-breeding	2	1	1	3	3	3	Frequently observed perching and in flight throughout the Site, with nests potentially present in broadleaved woodland off site.
Canada goose	<i>Branta canadensis</i>	Non-breeding	1	6	0	4	0	0	
Carrion crow	<i>Corvus corone</i>	Probable	28	47	5	26	30	12	

Species		Breeding status	Peak count for each transect						Description
Common name	Scientific name		1-1	1-2	1a	2-1	2-2	3	
Chaffinch	<i>Fringilla coelebs</i>	Confirmed	14	9	17	13	15	4	
Chiffchaff	<i>Phylloscopus collybita</i>	Confirmed	13	10	9	12	15	7	
Coal tit	<i>Periparus ater</i>	Non-breeding	0	0	1	0	0	0	
Collared dove	<i>Streptopelia decaocto</i>	Non-breeding	1	0	0	3	0	0	Probably breeding at farm buildings c.150m north of Parcel 2.
Cuckoo	<i>Cuculus canorus</i>	Probable	0	1	0	1	2	0	1-2 territories, with one singing repeatedly throughout the southern half of Parcel 2, and one recorded singing towards the east of Parcel 1 on 09/05/24.
Dunnock	<i>Prunella modularis</i>	Confirmed	10	7	2	14	4	10	Territories in hedgerows, scrub and woodland edge throughout the Site, with the greatest numbers recorded in Parcel 1, the north of Parcel 2 and Parcel 3.
Fieldfare	<i>Turdus pilaris</i>	Non-breeding	2	0	0	1	0	0	Late-departing wintering birds only.
Garden warbler	<i>Sylvia borin</i>	Probable	1	1	1	1	0	0	Singing from hedgerows and woodland edges in Parcel 1, Parcel 1a and the north-west of Parcel 2.
Goldcrest	<i>Regulus regulus</i>	Possible	3	0	0	0	0	0	Two singing near the northern boundary of Parcel1 on 26/03/24.
Goldfinch	<i>Carduelis carduelis</i>	Confirmed	15	13	3	9	11	13	

Species		Breeding status	Peak count for each transect						Description
Common name	Scientific name		1-1	1-2	1a	2-1	2-2	3	
Grasshopper warbler	<i>Locustella naevia</i>	Possible	0	1	0	0	0	1	One reeling from a hedgerow towards the east of Parcel 1 on 09/05/24, with a second reeling from scrub along a dry ditch towards the south of Parcel 3 on 25/06/24.
Great spotted woodpecker	<i>Dendrocopos major</i>	Probable	5	1	2	3	2	1	Calling and foraging throughout the Site, especially towards the north of Parcels 1 and 2. Potentially nesting in trees within or near the Site boundary.
Great tit	<i>Parus major</i>	Confirmed	13	14	12	12	17	5	
Green woodpecker	<i>Picus viridis</i>	Probable	3	1	1	1	1	2	Calling and foraging throughout the Site, especially towards the north of Parcel 1 and around woodland west of Parcel 2. Potentially nesting in trees within or near the Site boundary
Greenfinch	<i>Chloris chloris</i>	Confirmed	3	0	0	2	0	4	3-5 territories in hedgerows and scrub. Specifically, 3-4 territories towards the north of Parcel 1, and one possible territory towards the north of Parcel 3. Also 1-2 territories around buildings c. 200m from the northern boundary of Parcel 2.
Grey heron	<i>Ardea cinerea</i>	Non-breeding	2	0	0	0	0	0	
Grey partridge	<i>Perdix perdix</i>	Probable	0	0	0	1	0	0	One territory comprising arable fields and hedgerows towards the north of Parcel 2, with a male recorded display calling on 30/05/24 and a female observed on 25/06/24.
Grey wagtail	<i>Motacilla cinerea</i>	Non-breeding	0	1	0	1	0	1	Infrequently recorded flying over the Site.

Species		Breeding status	Peak count for each transect						Description
Common name	Scientific name		1-1	1-2	1a	2-1	2-2	3	
Greylag goose	<i>Anser anser</i>	Non-breeding	2	2	2	0	0	0	
Herring gull	<i>Larus argentatus</i>	Non-breeding	3	2	0	0	0	0	Infrequently recorded flying over Parcel 1.
Hobby	<i>Falco subbuteo</i>	Probable	0	0	0	1	0	0	Recorded in arable fields around a hedgerow [REDACTED] on 30/05/24 and 25/06/24. At least one adult was observed (including calling behaviour) in the vicinity of a mature tree containing a disused corvid nest which may have been used by these hobbies in 2024, although the presence of an active nest in 2024 was not confirmed.
House martin	<i>Delichon urbicum</i>	Non-breeding	0	0	0	8	1	1	Occasional foraging and calling in/near Parcels 2 and 3, with breeding colonies potentially present off site (e.g., at buildings north of Parcel2).
House sparrow	<i>Passer domesticus</i>	Probable	10	17	0	5	0	0	2-4 colonies present along site boundaries at Parcel 1, with the greatest activity recorded around farm buildings at the south-east corner of Parcel 1. A colony was also present around buildings c. 100m from the northern boundary of Parcel 2.
Jackdaw	<i>Coloeus monedula</i>	Confirmed	97	24 5	17	69	88	37	Frequently calling and foraging throughout the Site, with active nests present in the south of Parcel 2 and potentially elsewhere (especially in woodland adjacent to the Site boundary).

Species		Breeding status	Peak count for each transect						Description
Common name	Scientific name		1-1	1-2	1a	2-1	2-2	3	
Jay	<i>Garrulus glandarius</i>	Probable	2	1	3	2	4	0	Calling and foraging throughout the Site, particularly near woodland.
Kestrel	<i>Falco tinnunculus</i>	Possible	0	0	1	2	1	1	Occasional foraging throughout the Site, with suitable nest sites present within and adjacent to the Site in buildings and mature trees.
Lesser black-backed gull	<i>Larus fuscus</i>	Non-breeding	4	2	0	0	0	1	Infrequently recorded flying over Parcel 1 and 3.
Lesser whitethroat	<i>Curruca curruca</i>	Probable	5	0	1	4	5	3	Territories in scrub and hedgerows throughout the Site.
Linnet	<i>Linaria cannabina</i>	Confirmed	3	10	0	17	7	1	9-13 territories in scrub and hedgerows throughout the Site. Specifically, 2-4 territories towards the west of Parcel 1, four territories in the north of Parcel 2, 3-4 territories in the south-east of Parcel 2, and one possible territory in the north-east of Parcel 3.
Little egret	<i>Egretta garzetta</i>	Non-breeding	0	0	0	0	0	1	One flew over the south-eastern corner of Parcel 3.
Long-tailed tit	<i>Aegithalos caudatus</i>	Confirmed	7	4	5	12	15	6	
Magpie	<i>Pica pica</i>	Confirmed	6	3	2	3	4	5	In varied habitats throughout the Site, including an active nest on the eastern boundary of Parcel 2.
Mallard	<i>Anas platyrhynchos</i>	Possible	1	4	3	9	2	1	Occasionally recorded throughout the Site, including pairs towards the north and south-west of Parcel 2.

Species		Breeding status	Peak count for each transect						Description
Common name	Scientific name		1-1	1-2	1a	2-1	2-2	3	
Marsh tit	<i>Poecile palustris</i>	Non-breeding	0	1	0	0	0	0	Up to two territories in woodland immediately adjacent to Parcel 1, but not recorded within the Site boundary, with habitats within the Site boundary unlikely to be of significant value to this species.
Meadow pipit	<i>Anthus pratensis</i>	Non-breeding	16	0	0	0	0	0	One group calling in a field towards the north-east of Parcel 1 on 26/03/24.
Mistle thrush	<i>Turdus viscivorus</i>	Probable	0	2	0	1	0	0	One territory in woodland and farmland overlapping with the south of Parcel 1, with a second possible territory in woodland west of Parcel 2.
Moorhen	<i>Gallinula chloropus</i>	Non-breeding	0	0	0	1	1	0	
Nuthatch	<i>Sitta europaea</i>	Non-breeding	0	1	1	0	1	0	Occasionally calling and singing in woodland immediately adjacent to Parcels 1a and 2, but not recorded within the Site boundary, with habitats within the Site boundary unlikely to be of significant value to this species.
Peregrine	<i>Falco peregrinus</i>	Probable	1	1	0	1	0	2	Two adults (i.e., a probable pair) present [REDACTED] [REDACTED] heard calling and observed mobbing a buzzard [REDACTED] Possibly nesting [REDACTED] or on a nearby electricity pylon. Likely using suitable foraging habitat [REDACTED]. Also observed hunting in and flying [REDACTED].
Pheasant	<i>Phasianus colchicus</i>	Probable	7	4	4	6	5	4	

Species		Breeding status	Peak count for each transect						Description
Common name	Scientific name		1-1	1-2	1a	2-1	2-2	3	
Pied wagtail	<i>Motacilla alba</i>	Possible	0	2	0	1	0	0	
Raven	<i>Corvus corax</i>	Confirmed	1	5	0	1	0	4	Two territories confirmed. Active nest at OS grid reference SP 70369 24113 in a conifer towards the south of Parcel 1, from which young fledged successfully. Another family group observed towards the north of Parcel 3, with nesting considered likely to have been north of the Site boundary within East Claydon Substation. A calling bird was also recorded towards the centre of Parcel 2.
Red kite	<i>Milvus milvus</i>	Probable	9	10	3	3	5	6	6-7 territories in woodland and treelines along Site boundaries. [REDACTED] [REDACTED] Frequently foraging and perching throughout the Site. Whilst no active nests were confirmed, active nests were potentially present [REDACTED] of the Site boundary.
Red-legged partridge	<i>Alectoris rufa</i>	Possible	3	0	2	1	1	1	
Redwing	<i>Turdus iliacus</i>	Non-breeding	0	2	0	0	0	0	Late-departing wintering birds only.
Reed bunting	<i>Emberiza schoeniclus</i>	Probable	0	0	0	1	0	2	2-3 territories in scrub and hedgerows, with two territories towards the north of Parcel 2 and one territory on the north-western boundary of Parcel 3.
Robin	<i>Erithacus rubecula</i>	Confirmed	6	10	6	9	15	17	

Species		Breeding status	Peak count for each transect						Description
Common name	Scientific name		1-1	1-2	1a	2-1	2-2	3	
Rook	<i>Corvus frugilegus</i>	Confirmed	22	70	2	34	77	27	One active rookery immediately west of Parcel2 at OS grid reference SP 71759 22293. Flocks also recorded in flight and foraging throughout the Site, especially towards the south-east of Parcel 1.
Sklark	<i>Alauda arvensis</i>	Confirmed	27	9	4	29	9	8	57-67 territories in arable fields and grassland throughout the Site, with the highest densities recorded in Parcels 1 and 2. Specifically, 25-27 territories in Parcel1, two territories in Parcel 1a, 26-30 territories in Parcel 2, and 4-8 territories in Parcel 3.
Snipe	<i>Gallinago gallinago</i>	Non-breeding	4	0	0	0	0	0	
Song thrush	<i>Turdus philomelos</i>	Probable	5	3	2	4	4	4	14-18 territories in hedgerows with mature trees and woodland edges throughout the Site. Specifically, 4-6 territories in Parcel 1, 1-2 territories in Parcel1a, 4-7 territories in Parcel 2, and three territories in Parcel 3.
Sparrowhawk	<i>Accipiter nisus</i>	Non-breeding	1	0	0	0	0	0	Solitary birds recorded in Parcel 1. Potentially breeding in woodland off site.
Starling	<i>Sturnus vulgaris</i>	Non-breeding	3	4	0	2	0	5	Occasionally foraging within and flying over the Site.
Stock dove	<i>Columba oenas</i>	Probable	6	2	4	4	10	4	5-6 territories in farmland and woodland edge throughout the Site. Specifically, one territory in Parcel 1, one territory in Parcel 1a, three territories in Parcel 2, and one possible territory in Parcel 3.

Species		Breeding status	Peak count for each transect						Description
Common name	Scientific name		1-1	1-2	1a	2-1	2-2	3	
Swallow	<i>Hirundo rustica</i>	Non-breeding	5	3	0	3	0	2	Observed foraging within and flying through the Site. Potentially breeding near the Site boundary, such as around farm buildings north of Parcel 3.
Swift	<i>Apus apus</i>	Non-breeding	1	1	0	12	0	6	Observed foraging and calling throughout the Site, with a breeding colony potentially present off site at buildings north of Parcel 2.
Tree sparrow	<i>Passer montanus</i>	Possible	0	0	0	0	1	0	One singing persistently from a hedgerow comprising suitable breeding habitat on the south-eastern boundary of Parcel 2 on 31/05/24.
Treecreeper	<i>Certhia familiaris</i>	Non-breeding	0	0	0	0	1	0	Occasionally recorded in woodland immediately adjacent to the Site, but not recorded within the Site boundary, with habitats within the Site boundary unlikely to be of significant value to this species.
Tufted duck	<i>Aythya fuligula</i>	Non-breeding	0	0	0	2	0	0	
Whitethroat	<i>Curruca communis</i>	Confirmed	11	5	2	24	7	10	38-45 territories in hedgerows and scrub throughout the Site. Specifically, 12 territories in Parcel 1, 1-2 territories in Parcel 1a, 19-23 territories in Parcel 2, and 6-8 territories in Parcel 3.
Willow warbler	<i>Phylloscopus trochilus</i>	Probable	2	3	2	1	3	0	Singing in Parcels 1 and 2, with the majority recorded on 16-17/04/24 and not recorded again during subsequent visits.
Woodpigeon	<i>Columba palumbus</i>	Confirmed	16	62	10	34	92	19	Territories throughout the Site in woodland edges and hedgerows with mature trees.

Species		Breeding status	Peak count for each transect						Description
Common name	Scientific name		1-1	1-2	1a	2-1	2-2	3	
Wren	<i>Troglodytes troglodytes</i>	Confirmed	23	12	11	32	23	14	Territories throughout the Site in scrub, hedgerows and woodland edges.
Yellow wagtail	<i>Motacilla flava</i>	Confirmed	0	0	0	6	2	4	4-5 territories in arable fields and grassland. Specifically, 3-4 territories in Parcel 2, and one territory in Parcel 3 (in which recently fledged young were observed).
Yellowhammer	<i>Emberiza citrinella</i>	Confirmed	28	5	7	25	15	8	48-58 territories in hedgerows and scrub throughout the Site. Specifically, 15-20 territories in Parcel 1, three territories in Parcel 1a, 27-31 territories in Parcel 2, and 3-4 territories in Parcel 3.

5. Evaluation

5.1. Overview

- 5.1.1. The assessment of the importance of the breeding bird populations recorded during the field surveys undertaken between March and July 2024 inclusive is provided below, taking into consideration:
- any relevant designated sites with features of ornithological interest;
 - the conservation statuses of the species recorded (i.e., their inclusion on the legislation and guidance described in **Section 2**);
 - the sizes of the populations of the species recorded (i.e., species abundance);
 - the overall diversity of the breeding bird assemblage recorded; and
 - the spatial patterns of breeding bird usage of the Site, including any areas of particular importance to breeding bird populations.

5.2. Designated sites

- 5.2.1. Three nationally designated sites with features of ornithological interest are present; notably Finemere Wood SSSI and Sheephouse Wood SSSI, both of which are immediately adjacent to the Site boundary. Notable breeding bird species known to use these sites are species of woodland and scrub. Species recorded within and/or adjacent to the Site in 2024 which potentially belong to the breeding populations using these SSSIs include great spotted woodpecker, green woodpecker, nuthatch and treecreeper.
- 5.2.2. Similarly, species of woodland and scrub recorded using the Site in 2024 also potentially use woodland habitat within nearby non-statutory designated sites; notably Shrub Woods LWS, Romer Wood LWS, Runts Wood LWS and Finemere Wood Wildlife Trust Reserve, all of which are immediately adjacent to the Site. Species relevant to these non-statutory designated sites which were recorded during the 2024 field surveys include barn owl, bullfinch, cuckoo, garden warbler, marsh tit and song thrush.

5.3. Conservation status

- 5.3.1. Of the 73 species recorded during the 2024 surveys for breeding birds, the majority comprised typical common and widespread species of lowland farmland and woodland edge. 41 of the 73 species recorded are included on the legislation and guidance described in **Section 2** (as indicated in **Table 5** below).

Table 5: Specially protected and notable species recorded during the 2024 surveys for breeding birds

Species	Breeding status	Conservation status category				
		Schedule 1	Annex 1	S41	Red	Amber
Barn owl	Possible	ü	-	-	-	-
Bullfinch	Possible	-	-	ü	-	ü
Cuckoo	Probable	-	-	ü	ü	-
Dunnock	Confirmed	-	-	ü	-	ü
Fieldfare	Non-breeding	ü	-	-	ü	-
Grasshopper warbler	Possible	-	-	ü	ü	-
Greenfinch	Confirmed	-	-	-	ü	-
Grey partridge	Probable	-	-	ü	ü	-
Grey wagtail	Non-breeding	-	-	-	-	ü
Greylag goose	Non-breeding	-	-	-	-	ü
Herring gull	Non-breeding	-	-	ü	ü	-
Hobby	Probable	ü	-	-	-	-
House martin	Non-breeding	-	-	-	ü	-
House sparrow	Probable	-	-	ü	ü	-
Kestrel	Possible	-	-	-	-	ü
Lesser black-backed gull	Non-breeding	-	-	-	-	ü
Linnet	Confirmed	-	-	ü	ü	-
Little egret	Non-breeding	-	ü	-	-	-
Mallard	Possible	-	-	-	-	ü
Marsh tit	Non-breeding	-	-	ü	ü	-
Meadow pipit	Non-breeding	-	-	-	-	ü
Mistle thrush	Probable	-	-	-	ü	-
Moorhen	Non-breeding	-	-	-	-	ü
Peregrine	Probable	ü	ü	-	-	-
Red kite	Probable	ü	ü	-	-	-
Redwing	Non-breeding	ü	-	-	-	ü
Reed bunting	Probable	-	-	ü	-	ü
Rook	Confirmed	-	-	-	-	ü
Skylark	Confirmed	-	-	ü	ü	-

Species	Breeding status	Conservation status category				
		Schedule 1	Annex 1	S41	Red	Amber
Snipe	Non-breeding	-	-	-	-	ü
Song thrush	Probable	-	-	ü	-	ü
Sparrowhawk	Non-breeding	-	-	-	-	ü
Starling	Non-breeding	-	-	ü	ü	-
Stock dove	Probable	-	-	-	-	ü
Swift	Non-breeding	-	-	-	ü	-
Tree sparrow	Possible	-	-	ü	ü	-
Whitethroat	Probable	-	-	-	-	ü
Woodpigeon	Confirmed	-	-	-	-	ü
Wren	Confirmed	-	-	-	-	ü
Yellow wagtail	Confirmed	-	-	ü	ü	-
Yellowhammer	Confirmed	-	-	ü	ü	-

Schedule 1: Wildlife and Countryside Act 1981 (as amended) Schedule 1 species

Annex 1: EC Birds Directive (2009/147/EC) Annex 1 species

S41: NERC Act 2006 S41 Species of Principal Importance

Red: BoCC Red list species

Amber: BoCC Amber list species

5.3.2. In summary, the 73 species recorded included:

- Six Wildlife and Countryside Act 1981 (as amended) Schedule 1 species (of which four species were recorded breeding or potentially breeding);
- Three EC Birds Directive Annex 1 species;
- 16 NERC S41 Species of Principal Importance;
- 17 BoCC Red list species; and
- 19 BoCC Amber list species.

5.4. Species abundance

5.4.1. Based on the peak counts and the number of territories recorded for the species encountered during the 2024 surveys for breeding birds, no species were present in numbers of international or national level importance.

5.4.2. Based on their conservation statuses and the numbers recorded during the field surveys, and in reference to the *Buckinghamshire Bird Reports* for

2020 and 2022, populations of the following bird species recorded in 2024 are considered to potentially be of county or district level importance:

- **Hobby** (one territory present within the Site in 2024): uncommon breeding species in Buckinghamshire, with four records of breeding activity in 2022 and breeding evidence at 3-4 sites in 2020. The Rare Breeding Birds Panel (RBBP) reported 692 breeding pairs in the UK in 2020, including an estimated nine breeding pairs in Buckinghamshire (RBBP, 2022). The hobby breeding population recorded using the Site in 2024 is considered to potentially be of county level importance.
- **Peregrine** (one territory present [REDACTED] in 2024): increasing resident species in Buckinghamshire, with three confirmed successful breeding attempts in 2022 and presence during the breeding season at multiple sites in 2020. The RBBP reported 1,701 breeding pairs in the UK in 2020, including an estimated two breeding pairs in Buckinghamshire. The peregrine breeding population using land overlapping with the Site in 2024 is considered to potentially be of county level importance.
- **Skylark** (57-67 territories present within the Site in 2024): resident species recorded singing during the breeding season at 47 sites in Buckinghamshire in 2022, with peak counts from individual sites in 2020 of 60 (March), 50 (April), 25 (May) and 20 (June). The skylark breeding population recorded using the Site in 2024 is considered to potentially be of county level importance.
- **Tree sparrow** (one possible territory present within the Site in 2024): rapidly declining resident species apparently heading for extinction in Buckinghamshire, with consistent annual declines recorded since 1996. Recorded at three sites (all towards the north of Buckinghamshire) in 2022. Considering this number of potential breeding sites and the rapidly declining status of the species at a national and county level, the presence of a tree sparrow breeding territory within the Site in 2024 is considered to potentially be of county level importance.
- **Yellow wagtail** (4-5 territories present within the Site in 2024): rapidly declining migrant and breeding species in Buckinghamshire, with breeding evidence recorded at four sites in 2022 compared with seven sites in 2021. Considering this number of breeding sites and the rapidly declining status of the species at a national and county level, the yellow wagtail breeding population recorded using the Site in 2024 is considered to potentially be of county level importance.
- **Barn owl** (1-2 territories potentially present [REDACTED] in 2024): declining resident species in Buckinghamshire, recorded at 45 sites in 2022 compared with 40 sites in 2021 and 63 sites in 2020. The barn owl breeding population recorded using the Site in 2024 is considered to potentially be of district level importance.
- **Red kite** (6-7 territories present [REDACTED] to the Site boundary in 2024): increasing resident breeding species in

Buckinghamshire. In the absence of breeding data in the Buckinghamshire Birds Reports for 2020 and 2022, the red kite breeding population recorded using land overlapping with the Site in 2024 is considered to potentially be of district level importance.

- **Yellowhammer** (48-58 territories present within the Site in 2024): thinly distributed resident species in Buckinghamshire, with eight breeding records reported in 2022 (predominantly in central Buckinghamshire), although breeding numbers in the county are likely to be much higher. The yellowhammer breeding population recorded using the Site in 2024 is considered to potentially be of district level importance.

- 5.4.3. Considering their conservation statuses and the numbers recorded during the field surveys, populations of the other bird species recorded in 2024 are considered to be of up to local level importance.

5.5. Species diversity

- 5.5.1. Of the 73 species recorded, a total of 49 species were recorded breeding or potentially breeding within the Site during the 2024 surveys for breeding birds. In accordance with the guidance described in **Paragraph 3.3.11**, the breeding bird assemblage recorded is considered to be of district level importance. In the context of similar habitats within this region (i.e., lowland farmland in Buckinghamshire) this is considered to be a relatively diverse lowland farmland breeding bird assemblage, containing various nationally and regionally declining species including cuckoo, grasshopper warbler, grey partridge, linnet, tree sparrow, yellow wagtail and yellowhammer.

5.6. Site usage by breeding birds

- 5.6.1. Photographs of breeding bird habitats within and adjacent to the Site are provided in **Annex D**. Habitats present within the Site which are cited in *Forward to 2030: Biodiversity Action Plan* for Buckinghamshire and Milton Keynes as being important to breeding birds included arable fields, field margins and hedgerows.
- 5.6.2. Arable fields and grassland throughout the Site were used by breeding skylark and were also of value to breeding grey partridge and yellow wagtail. Arable fields were also subject to frequent foraging activity by corvids (notably jackdaw and rook) and red kite, and occasional foraging activity by other raptors including kestrel and peregrine. Adjoining hedgerows and scrub were used by a range of nationally and regionally declining breeding bird species including cuckoo, grasshopper warbler, linnet, reed bunting, tree sparrow, whitethroat and yellowhammer. Woodland adjacent to the Site supported typical breeding species and contained red kite breeding territories.
- 5.6.3. The greatest abundance and diversity of breeding birds was present in Parcels 1 and 2, whilst Parcel 1a was of comparatively low value to breeding birds. The centre and north of Parcel 2 was of greatest value to

notable declining farmland bird species such as grey partridge, tree sparrow and yellow wagtail, and supported relatively high densities of breeding linnet, skylark and yellowhammer. [REDACTED]

[REDACTED] Whilst the breeding bird assemblage recorded [REDACTED] [REDACTED] was less diverse, this area supported notable breeding bird species including grasshopper warbler, reed bunting and yellow wagtail, whilst a peregrine breeding territory [REDACTED]

- 5.6.4. Suitable barn owl foraging and nesting habitat was present throughout the Site. Larger expanses of highly suitable foraging habitat were present [REDACTED] whilst field margins throughout the Site provided habitat connectivity. Trees and buildings throughout the Site provided suitable roost and nest sites; notably trees [REDACTED] [REDACTED] Disused farm buildings [REDACTED] [REDACTED] provided suitable roost sites but lacked enclosed spaces suitable for nesting.

5.7. Comparison with 2022 breeding bird survey results

- 5.7.1. The results of the 2024 surveys for breeding birds were broadly consistent with those from surveys covering the majority of the Site completed in 2022. The 2022 surveys recorded a breeding bird assemblage of 49 species, compared with the assemblage of up to 49 species recorded in 2024.
- 5.7.2. Breeding population size for notable species such as linnet, skylark, yellowhammer and yellow wagtail was significantly higher in 2024 than in 2022, which is generally attributable to the greater area surveyed in 2024, with areas identified as being of significant value to these species in 2022 again being of significant value to these species in 2024. Notable possible breeding species recorded in 2024 that were not recorded in 2022 include grasshopper warbler and tree sparrow. Breeding hobby was recorded in the same area in 2022 and 2024, suggesting the presence of a regular breeding territory [REDACTED].

6. Conclusions

- 6.1.1. The surveys for breeding birds undertaken between March and July 2024 inclusive to inform the Proposed Development recorded a total of 73 bird species, 49 of which were breeding or potentially breeding within the Site. Breeding and potentially breeding species recorded included four WCA Schedule 1 species (barn owl, hobby, peregrine and red kite), two EC Birds Directive Annex 1 species (peregrine and red kite), 13 NERC S41 Species of Principal Importance, 11 BoCC Red list species and 11 BoCC Amber list species.
- 6.1.2. Based on the breeding bird species diversity recorded in 2024, the breeding bird assemblage is considered to be of district level importance. Breeding populations of five species recorded in 2024 are considered to potentially be of county level importance (hobby, peregrine, skylark, tree sparrow and yellow wagtail), whilst breeding populations of three species recorded are considered to potentially be of district level importance (barn owl, red kite and yellowhammer).
- 6.1.3. Arable fields, hedgerows and scrub within Parcels 1 and 2 were of greatest value to breeding birds, with the greatest diversity notable farmland bird species present towards the centre and north of Parcel 2. Parcel 3 supported a relatively narrow breeding bird assemblage but contained territories of scarce breeding species. Parcel 1a was of comparatively low value for breeding birds.

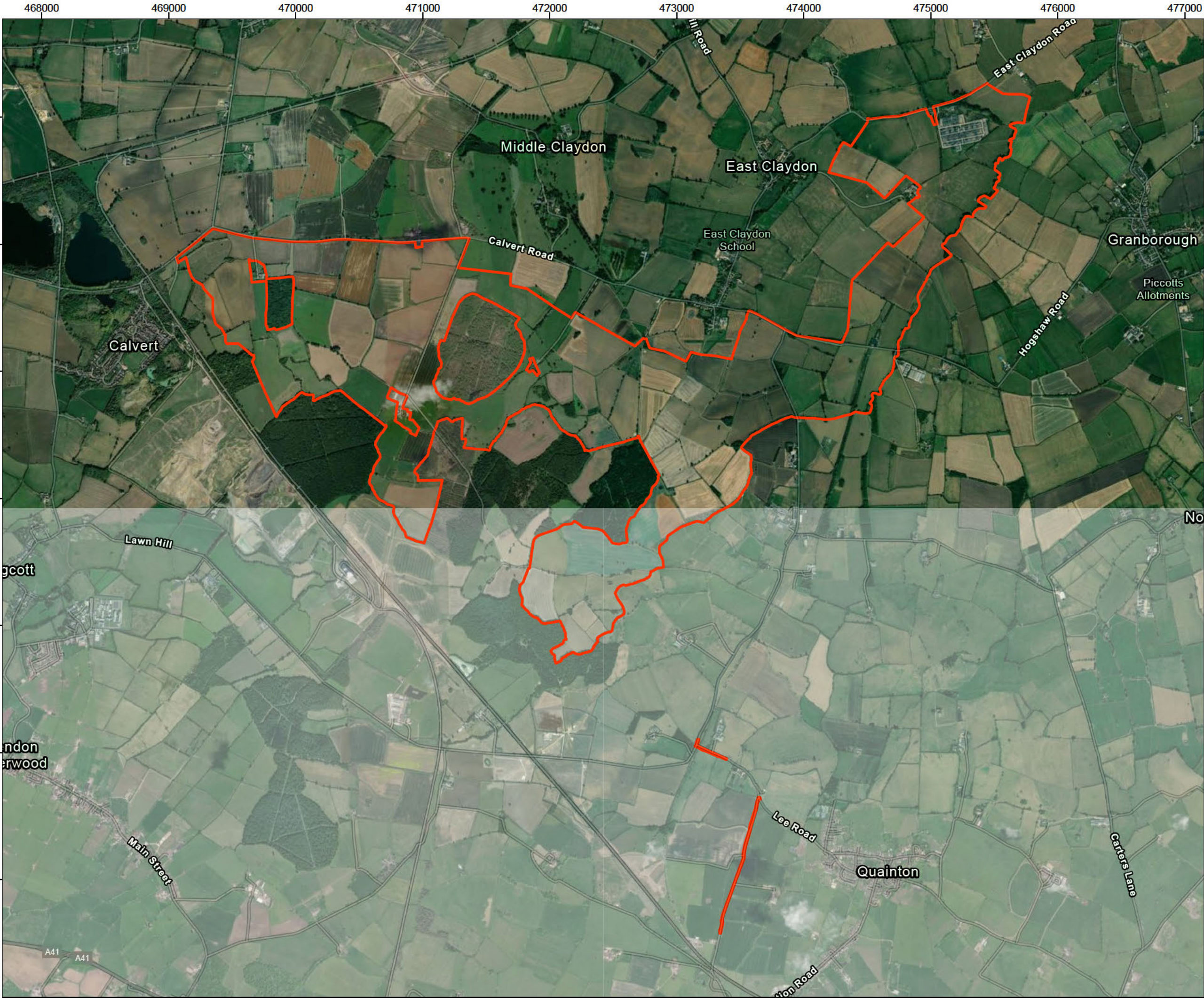
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Available at: [REDACTED]
[REDACTED]

Figures





Legend:
Site boundary

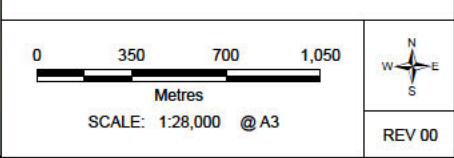


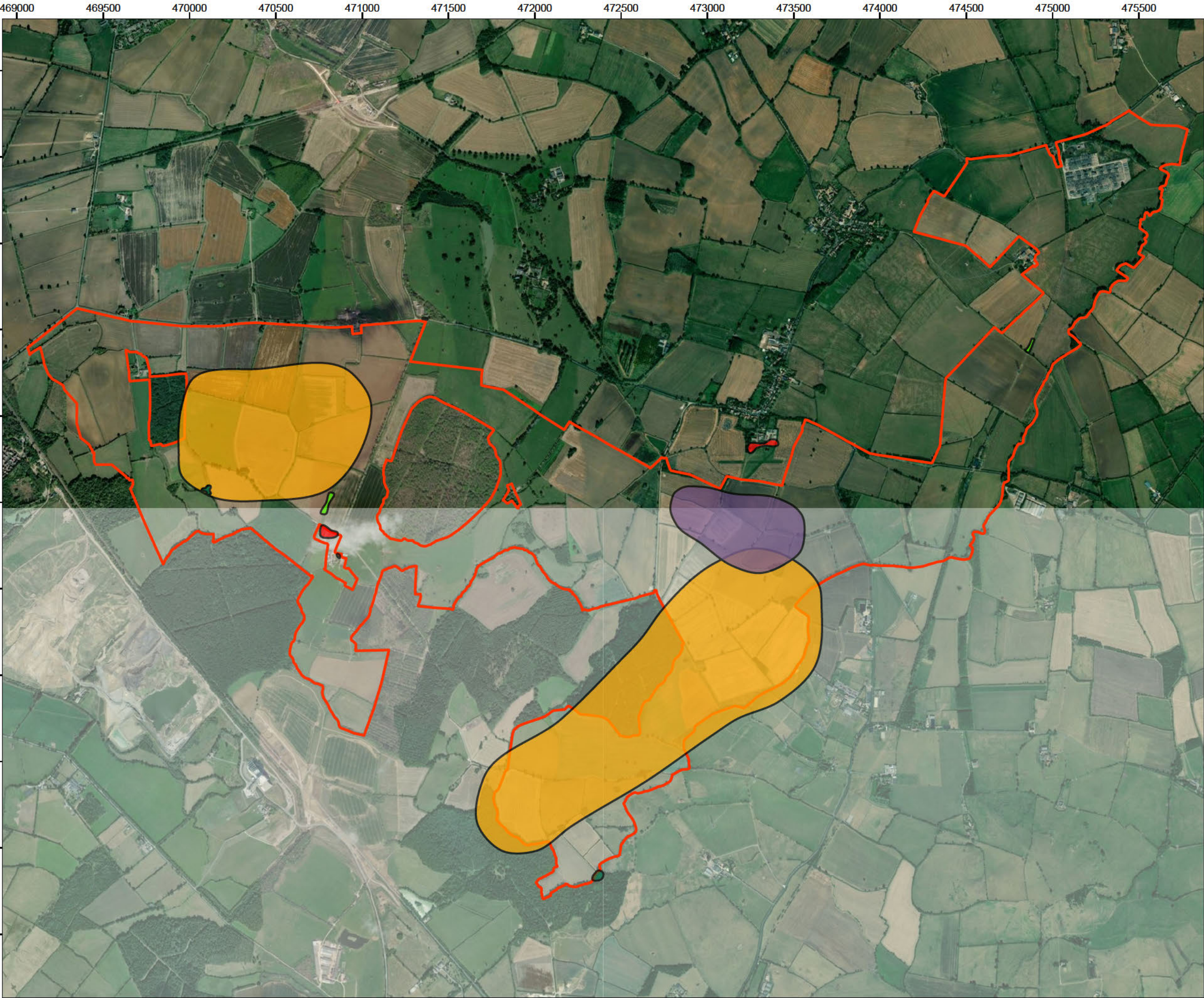
Rev	Date	Description	Drm	Chk	App
00	09/08/2024	2485353	TG	SP	GW

Rosefield Solar Farm



TITLE: Figure 1:
Site Location Plan





Legend:

Site boundary

Breeding Territories

- Bullfinch
- Cuckoo
- Grasshopper warbler
- Grey partridge
- House sparrow



00	08/08/2024	2485353	TG	SP	GW
Rev	Date	Description	Drn	Chk	App

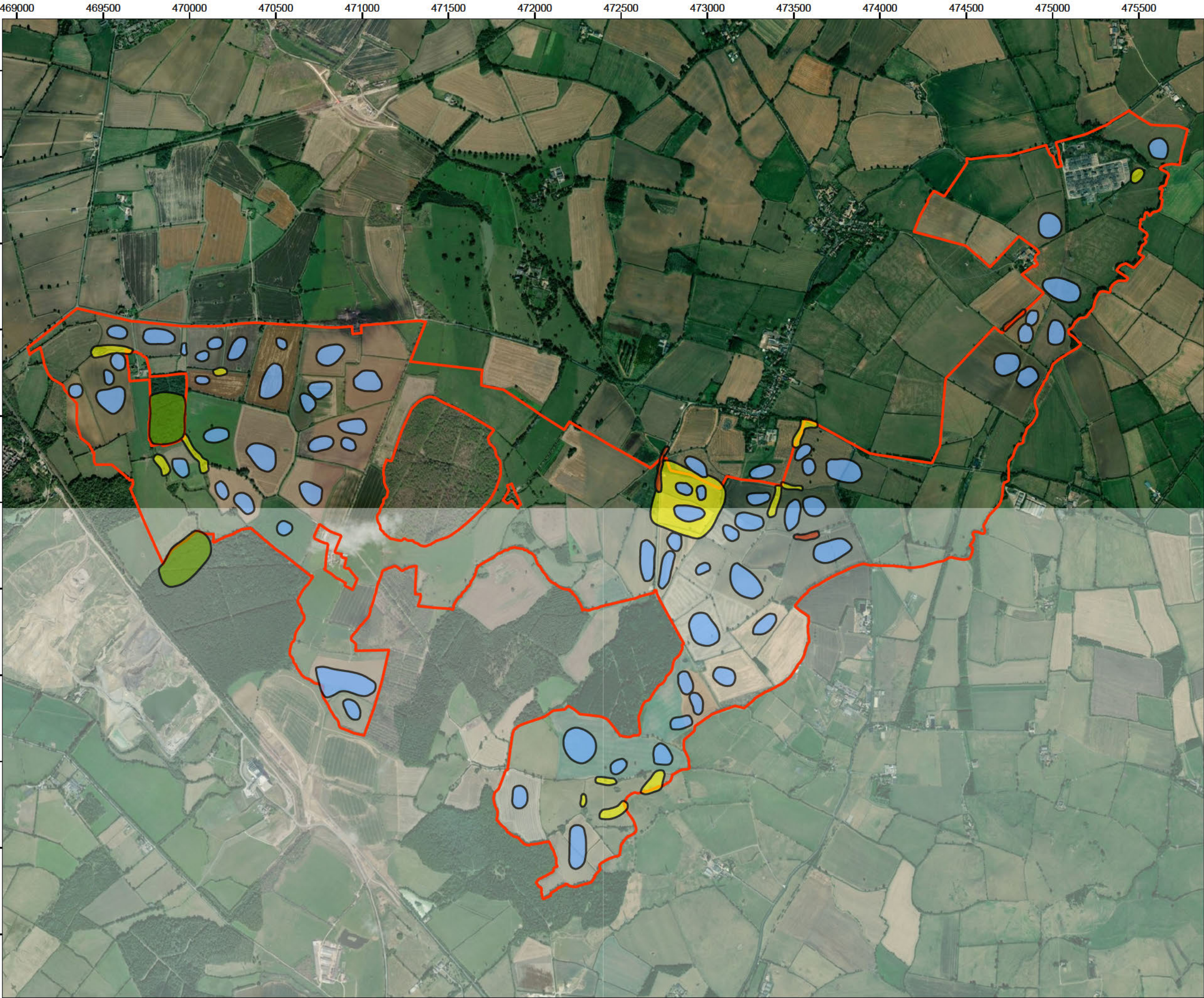
Rosefield Solar Farm

Rosefield Solar Farm

TITLE: Figure 2b(i):
Summary of 2024 Breeding Bird Survey
Results for Protected and Notable Species
NERC S41 Species of Principal Importance

0 260 520 780
Metres
SCALE: 1:20,600 @ A3

REV 00



Legend:

- Site boundary
- Breeding Territories**
 - Linnet
 - Marsh tit
 - Reed bunting
 - Skylark



00	08/08/2024	2485353	TG	SP	GW
Rev	Date	Description	Drn	Chk	App

Rosefield Solar Farm



TITLE: Figure 2b(ii):
Summary of 2024 Breeding Bird Survey
Results for Protected and Notable Species
NERC S41 Species of Principal Importance

0 260 520 780

Metres

SCALE: 1:20,600 @ A3

N
W
E
S

REV 00



Legend:

- Site boundary
- Breeding Territories**
 - Song thrush
 - Tree sparrow
 - Yellow wagtail
 - Yellowhammer



00	08/08/2024	2485353	TG	SP	GW
Rev	Date	Description	Drn	Chk	App

Rosefield Solar Farm

TITLE: Figure 2b(iii):
Summary of 2024 Breeding Bird Survey
Results for Protected and Notable Species
NERC S41 Species of Principal Importance

0260520780

Metres

SCALE: 1:20,600 @ A3

W

N

E

S

REV 00



Legend:

- Site boundary
- Breeding Territories
 - Greenfinch
 - Mistle thrush



00	08/08/2024	2485353	TG	SP	GW
Rev	Date	Description	Drn	Chk	App

Rosefield Solar Farm

TITLE: Figure 2c:
Summary of 2024 Breeding Bird Survey
Results for Protected and Notable Species
BoCC Red List Species

0260520780

Metres

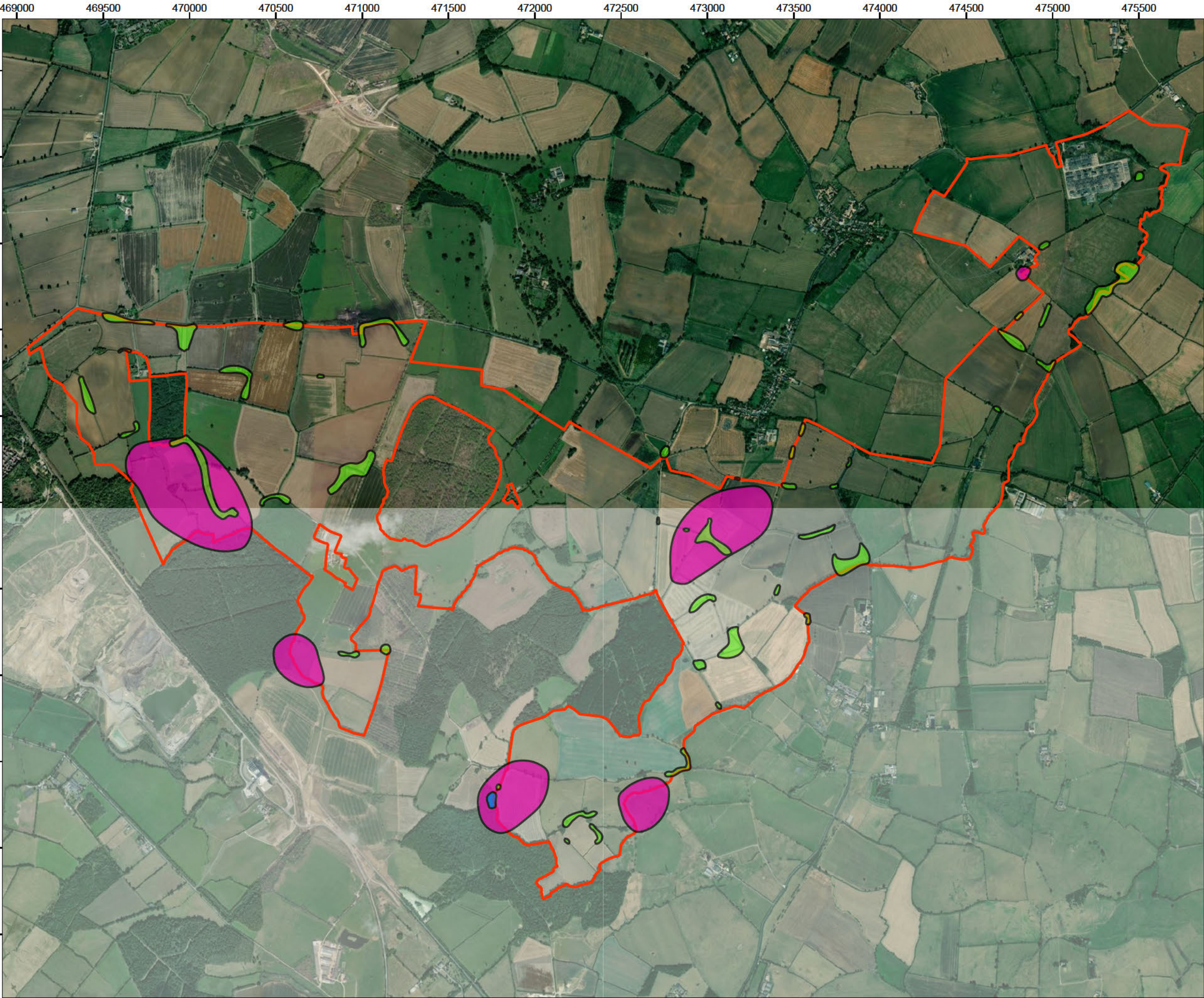
SCALE: 1:20,600 @ A3

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REV 00

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OS Open Rasters: Contains OS data © Crown Copyright and database right 2022

Document Path: C:\OneDrive\IRSK Group\IRSK Bloccensus - 05 GIS - 2485353 - Rosefield Solar Farm\02 - APRX\Breeding Bird Report\2485353 - Rosefield Solar Farm - Figure 2c - Summary of 2024 Breeding Results - BoCC Red List.aprx



Legend:

- Site boundary
- Breeding Territories**
 - Rook
 - Stock dove
 - Whitethroat



00	08/08/2024	2485353	TG	SP	GW
Rev	Date	Description	Drn	Chk	App

Rosefield Solar Farm

TITLE: Figure 2d:
Summary of 2024 Breeding Bird Survey
Results for Protected and Notable Species
BoCC Amber List Species

0260520780

Metres

SCALE: 1:20,600 @ A3

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REV 00

Annex A – Survey Details



Annex A – Survey details

Dates, timings and weather conditions for the surveys for breeding birds of the Site undertaken between March and July 2024 inclusive are provided below.

Visit no.	Date	Timing	Temp. (°C)	Weather conditions
Transect 1-1				
1	26/03/24	06:20-10:30	6-11	Overcast (8 oktas), very light breeze (BF1), dry, excellent visibility
2	16/04/24	05:00-09:15	7-11	Light cloud (3 oktas), moderate to fresh breeze (BF3-5), dry, good visibility
3	08/05/24	04:30-09:05	8-13	Overcast (8 oktas), very light breeze (BF1), dry, poor-good visibility (initially foggy before clearing)
4	30/05/24	04:00-08:10	11-14	Largely overcast (7 oktas), gentle breeze (BF3), dry, good visibility
5	25/06/24	04:00-08:45	14-20	Clear (0 oktas), calm (BF0), dry, excellent visibility
Transect 1-2				
1	27/03/24	06:30-09:55	4-8	Light cloud (2 oktas), gentle breeze (BF3), dry, excellent visibility
2	17/04/24	05:10-07:30	3-4	Partial cloud (5 oktas), light breeze (BF1-2), dry, good visibility
3	09/05/24	04:35-07:10	10-15	Very light cloud (1 okta), gentle breeze (BF3), dry, moderate-good visibility
4	30/05/24	17:20-19:30	14-15	Largely overcast (7 oktas), light breeze (BF1-2), largely dry with brief light showers, good visibility
5	11/07/24	17:30-20:00	18-20	Partial cloud (3 oktas), gentle breeze (BF3), dry, excellent visibility
Transect 1a				
1	27/03/24	09:05-10:05	8-9	Partial cloud (4 oktas), gentle breeze (BF3), dry, excellent visibility
2	17/04/24	07:35-08:40	5-6	Largely overcast (6 oktas), light breeze (BF1-2), dry, good visibility
3	09/05/24	07:15-08:55	15-17	Very light cloud (1 okta), gentle breeze (BF3), dry, good visibility
4	30/05/24	17:30-19:15	12-14	Largely overcast (6 oktas), light breeze (BF2), largely dry with some light drizzle, good visibility

Visit no.	Date	Timing	Temp. (°C)	Weather conditions
5	11/07/24	16:05-17:15	20	Light cloud (2 oktas), light breeze (BF2), dry, excellent

Transect 2-1

1	26/03/24	06:30-09:05	7-9	Light cloud (2 oktas), gentle breeze (BF3), dry, good visibility
2	16/04/24	05:00-08:05	6-11	Partial cloud (5 oktas), gentle breeze (BF3), dry, excellent visibility
3	08/05/24	04:35-09:00	9-14	Very light cloud (1 okta), very light breeze (BF1), dry, poor-good visibility (initially foggy before clearing)
4	30/05/24	04:05-08:30	10-14	Overcast (8 oktas), light breeze (BF1-2), dry, good visibility
5	25/06/24	03:50-08:45	14-20	Clear (0 oktas), very light breeze (BF1), dry, good visibility

Transect 2-2

1	27/03/24	06:30-10:45	5-8	Partial cloud (3 oktas), fresh breeze (BF4-5), dry, good visibility
2	17/04/24	05:00-09:30	2-8	Largely overcast (7 oktas), gentle breeze (BF3), largely dry with brief light showers, good visibility
3	08/05/24	15:35-18:45	18-21	Light cloud (2 oktas), light breeze (BF2), dry, good visibility
4	31/05/24	04:10-07:30	10-12	Partial cloud (5 oktas), fairly light breeze (BF2-3), dry, good visibility
5	12/07/24	04:20-07:30	16-20	Partial cloud (4 oktas), light breeze (BF2), dry, excellent

Transect 3

1	09/05/24	04:50-08:15	11-17	Clear (0 oktas), very light breeze (BF1), dry, excellent visibility
2	31/05/24	04:00-07:15	11-13	Partial cloud (5 oktas), gentle breeze (BF3), dry, good visibility
3	25/06/24	18:15-21:30	20-27	Very light cloud (1 okta), very light breeze (BF1), dry, excellent visibility
4	11/07/24	04:20-06:15	14-18	Light cloud (2 oktas), light breeze (BF2), dry, excellent visibility

Annex B – Survey Data



Annex B – Survey data

Full breeding bird survey data for the transect surveys of the Site undertaken between March and July 2024 inclusive are provided below.

Transect 1-1

Species				Count for each visit				
Common name	Scientific name	BTO code	Conservation status	1	2	3	4	5
Barn owl	<i>Tyto alba</i>	BO	Schedule 1, Green	1	0	1	0	1
Blackbird	<i>Turdus merula</i>	B.	Green	9	6	8	5	5
Blackcap	<i>Sylvia atricapilla</i>	BC	Green	1	3	5	4	2
Blue tit	<i>Cyanistes caeruleus</i>	BT	Green	15	20	25	18	25
Buzzard	<i>Buteo buteo</i>	BZ	Green	0	1	0	0	2
Canada goose	<i>Branta canadensis</i>	CG	-	0	1	0	0	0
Carrion crow	<i>Corvus corone</i>	C.	Green	28	4	6	4	4
Chaffinch	<i>Fringilla coelebs</i>	CH	Green	14	13	12	10	0
Chiffchaff	<i>Phylloscopus collybita</i>	CC	Green	13	11	8	8	4
Collared dove	<i>Streptopelia decaocto</i>	CD	Green	0	0	1	0	0
Dunnoek	<i>Prunella modularis</i>	D.	S41, Amber	7	10	5	3	1
Fieldfare	<i>Turdus pilaris</i>	FF	Schedule 1, Red	2	0	0	0	0
Garden warbler	<i>Sylvia borin</i>	GW	Green	0	0	1	0	0
Goldcrest	<i>Regulus regulus</i>	GC	Green	3	0	0	0	0
Goldfinch	<i>Carduelis carduelis</i>	GO	Green	15	8	4	7	14
Great spotted woodpecker	<i>Dendrocopos major</i>	GS	Green	0	1	0	1	5
Great tit	<i>Parus major</i>	GT	Green	13	5	7	5	2
Green woodpecker	<i>Picus viridis</i>	G.	Green	3	1	0	0	0
Greenfinch	<i>Chloris chloris</i>	GR	Red	2	1	2	2	3

Species				Count for each visit				
Common name	Scientific name	BTO code	Conservation status	1	2	3	4	5
Grey heron	<i>Ardea cinerea</i>	H.	Green	1	0	0	2	0
Greylag goose	<i>Anser anser</i>	GJ	Amber	0	0	2	0	0
Herring gull	<i>Larus argentatus</i>	HG	S41, Red	3	0	0	0	0
House sparrow	<i>Passer domesticus</i>	HS	S41, Red	10	0	0	0	0
Jackdaw	<i>Coloeus monedula</i>	JD	Green	97	1	20	22	11
Jay	<i>Garrulus glandarius</i>	J.	Green	1	2	0	1	0
Lesser black-backed gull	<i>Larus fuscus</i>	LB	Amber	0	4	0	0	0
Lesser whitethroat	<i>Curruca curruca</i>	LW	Green	0	5	2	3	2
Linnet	<i>Linaria cannabina</i>	LI	S41, Red	0	2	3	1	1
Long-tailed tit	<i>Aegithalos caudatus</i>	LT	Green	7	0	2	0	0
Magpie	<i>Pica pica</i>	MG	Green	6	2	2	0	1
Mallard	<i>Anas platyrhynchos</i>	MA	Amber	1	0	1	0	0
Meadow pipit	<i>Anthus pratensis</i>	MP	Amber	16	1	0	0	0
Peregrine	<i>Falco peregrinus</i>	PE	Schedule 1, Annex 1, Green	1	0	0	0	0
Pheasant	<i>Phasianus colchicus</i>	PH	-	7	3	1	4	1
Raven	<i>Corvus corax</i>	RN	Green	1	0	0	0	0
Red kite	<i>Milvus milvus</i>	KT	Schedule 1, Annex 1, Green	9	3	3	3	3
Red-legged partridge	<i>Alectoris rufa</i>	RL	-	0	1	1	3	0
Robin	<i>Erithacus rubecula</i>	R.	Green	4	6	5	4	4
Rook	<i>Corvus frugilegus</i>	RO	Amber	22	9	9	3	0

Species				Count for each visit				
Common name	Scientific name	BTO code	Conservation status	1	2	3	4	5
Skylark	<i>Alauda arvensis</i>	S.	S41, Red	27	22	22	21	16
Snipe	<i>Gallinago gallinago</i>	SN	Amber	0	4	0	0	0
Song thrush	<i>Turdus philomelos</i>	ST	S41, Amber	5	1	1	3	2
Sparrowhawk	<i>Accipiter nisus</i>	SH	Amber	1	0	0	0	1
Starling	<i>Sturnus vulgaris</i>	SG	S41, Red	1	0	0	0	3
Stock dove	<i>Columba oenas</i>	SD	Amber	4	6	5	2	0
Swallow	<i>Hirundo rustica</i>	SL	Green	0	1	2	0	5
Swift	<i>Apus apus</i>	SI	Red	0	0	0	1	0
Whitethroat	<i>Curruca communis</i>	WH	Amber	0	4	11	4	8
Willow warbler	<i>Phylloscopus trochilus</i>	WW	Amber	0	2	0	0	0
Woodpigeon	<i>Columba palumbus</i>	WP	Amber	13	9	10	11	16
Wren	<i>Troglodytes troglodytes</i>	WR	Amber	23	13	16	16	10
Yellowhammer	<i>Emberiza citrinella</i>	Y.	S41, Red	28	13	8	11	15

Schedule 1: Wildlife and Countryside Act 1981 (as amended) Schedule 1 species

Annex 1: EC Birds Directive (2009/147/EC) Annex 1 species

S41: NERC Act 2006 S41 Species of Principal Importance

Red: BoCC Red list species

Amber: BoCC Amber list species

Green: BoCC Green list species

- None of the above conservation status categories apply

Transect 1-2

Species				Count for each visit				
Common name	Scientific name	BTO code	Conservation status	1	2	3	4	5
Blackbird	<i>Turdus merula</i>	B.	Green	7	7	2	9	3
Blackcap	<i>Sylvia atricapilla</i>	BC	Green	1	4	5	7	1
Blue tit	<i>Cyanistes caeruleus</i>	BT	Green	31	25	11	4	2
Bullfinch	<i>Pyrrhula pyrrhula</i>	BF	S41, Amber	1	0	0	0	0
Buzzard	<i>Buteo buteo</i>	BZ	Green	1	0	0	0	1
Canada goose	<i>Branta canadensis</i>	CG	-	0	0	0	6	0
Carrion crow	<i>Corvus corone</i>	C.	Green	32	47	3	6	5
Chaffinch	<i>Fringilla coelebs</i>	CH	Green	9	6	5	4	0
Chiffchaff	<i>Phylloscopus collybita</i>	CC	Green	10	9	4	7	3
Cuckoo	<i>Cuculus canorus</i>	CK	S41, Red	0	0	1	0	0
Dunnock	<i>Prunella modularis</i>	D.	S41, Amber	3	7	2	3	3
Garden warbler	<i>Sylvia borin</i>	GW	Green	0	0	0	1	0
Goldfinch	<i>Carduelis carduelis</i>	GO	Green	3	13	0	2	8
Grasshopper warbler	<i>Locustella naevia</i>	GH	S41, Red	0	0	1	0	0
Great spotted woodpecker	<i>Dendrocopos major</i>	GS	Green	0	0	0	1	1
Great tit	<i>Parus major</i>	GT	Green	12	14	3	0	5
Green woodpecker	<i>Picus viridis</i>	G.	Green	0	0	1	0	0
Grey wagtail	<i>Motacilla cinerea</i>	GL	Amber	1	0	0	0	0
Greylag goose	<i>Anser anser</i>	GJ	Amber	0	2	0	0	1
Herring gull	<i>Larus argentatus</i>	HG	S41, Red	0	2	0	0	0
House sparrow	<i>Passer domesticus</i>	HS	S41, Red	14	6	3	8	17
Jackdaw	<i>Coloeus monedula</i>	JD	Green	65	79	17	90	24 5

Species				Count for each visit				
Common name	Scientific name	BTO code	Conservation status	1	2	3	4	5
Jay	<i>Garrulus glandarius</i>	J.	Green	1	0	0	0	0
Lesser black-backed gull	<i>Larus fuscus</i>	LB	Amber	2	0	0	0	0
Linnet	<i>Linaria cannabina</i>	LI	S41, Red	0	10	6	0	4
Long-tailed tit	<i>Aegithalos caudatus</i>	LT	Green	1	4	3	0	0
Magpie	<i>Pica pica</i>	MG	Green	1	3	0	2	1
Mallard	<i>Anas platyrhynchos</i>	MA	Amber	0	0	0	4	0
Marsh tit	<i>Poecile palustris</i>	MT	S41, Red	1	1	0	0	0
Mistle thrush	<i>Turdus viscivorus</i>	M.	Red	2	2	0	0	0
Nuthatch	<i>Sitta europaea</i>	NH	Green	0	0	1	0	0
Peregrine	<i>Falco peregrinus</i>	PE	Schedule 1, Annex 1, Green	1	0	0	0	0
Pheasant	<i>Phasianus colchicus</i>	PH	-	4	3	2	2	3
Pied wagtail	<i>Motacilla alba</i>	PW	Green	2	0	0	0	0
Raven	<i>Corvus corax</i>	RN	Green	3	5	1	3	3
Red kite	<i>Milvus milvus</i>	KT	Schedule 1, Annex 1, Green	10	5	3	3	2
Redwing	<i>Turdus iliacus</i>	RE	Schedule 1, Amber	2	0	0	0	0
Robin	<i>Erithacus rubecula</i>	R.	Green	9	10	3	7	1
Rook	<i>Corvus frugilegus</i>	RO	Amber	12	31	21	35	70
Skylark	<i>Alauda arvensis</i>	S.	S41, Red	9	7	4	2	0
Song thrush	<i>Turdus philomelos</i>	ST	S41, Amber	2	3	1	2	1
Starling	<i>Sturnus vulgaris</i>	SG	S41, Red	4	0	0	0	0
Stock dove	<i>Columba oenas</i>	SD	Amber	1	1	1	1	2
Swallow	<i>Hirundo rustica</i>	SL	Green	0	0	0	0	3
Swift	<i>Apus apus</i>	SI	Red	0	0	0	1	0

Species		Count for each visit							
Common name	Scientific name	BTO code	Conservation status	1	2	3	4	5	
Whitethroat	<i>Curruca communis</i>	WH	Amber	0	2	5	2	0	
Willow warbler	<i>Phylloscopus trochilus</i>	WW	Amber	0	3	0	0	0	
Woodpigeon	<i>Columba palumbus</i>	WP	Amber	62	8	6	36	8	
Wren	<i>Troglodytes troglodytes</i>	WR	Amber	12	11	6	5	3	
Yellowhammer	<i>Emberiza citrinella</i>	Y.	S41, Red	4	4	2	5	3	

Schedule 1: Wildlife and Countryside Act 1981 (as amended) Schedule 1 species

Annex 1: EC Birds Directive (2009/147/EC) Annex 1 species

S41: NERC Act 2006 S41 Species of Principal Importance

Red: BoCC Red list species

Amber: BoCC Amber list species

Green: BoCC Green list species

- None of the above conservation status categories apply

Transect 1a

Species				Count for each visit				
Common name	Scientific name	BTO code	Conservation status	1	2	3	4	5
Barn owl	<i>Tyto alba</i>	BO	Schedule 1, Green	0	0	0	1	0
Blackbird	<i>Turdus merula</i>	B.	Green	4	2	3	6	0
Blackcap	<i>Sylvia atricapilla</i>	BC	Green	1	7	4	4	3
Blue tit	<i>Cyanistes caeruleus</i>	BT	Green	6	12	8	7	30
Buzzard	<i>Buteo buteo</i>	BZ	Green	1	0	0	0	0
Carriion crow	<i>Corvus corone</i>	C.	Green	0	5	1	1	2
Chaffinch	<i>Fringilla coelebs</i>	CH	Green	17	1	5	4	0
Chiffchaff	<i>Phylloscopus collybita</i>	CC	Green	5	9	5	5	3
Coal tit	<i>Periparus ater</i>	CT	Green	1	0	0	0	0
Dunnock	<i>Prunella modularis</i>	D.	S41, Amber	0	1	2	0	0
Garden warbler	<i>Sylvia borin</i>	GW	Green	0	0	1	0	0
Goldfinch	<i>Carduelis carduelis</i>	GO	Green	1	3	0	3	1
Great spotted woodpecker	<i>Dendrocopos major</i>	GS	Green	0	0	0	2	0
Great tit	<i>Parus major</i>	GT	Green	12	3	5	0	0
Green woodpecker	<i>Picus viridis</i>	G.	Green	0	1	0	0	0
Greylag goose	<i>Anser anser</i>	GJ	Amber	0	0	2	0	0
Jackdaw	<i>Coloeus monedula</i>	JD	Green	17	0	4	2	5
Jay	<i>Garrulus glandarius</i>	J.	Green	3	3	0	0	0
Kestrel	<i>Falco tinnunculus</i>	K.	Amber	0	0	1	0	0
Lesser whitethroat	<i>Curruca curruca</i>	LW	Green	0	0	1	0	0
Long-tailed tit	<i>Aegithalos caudatus</i>	LT	Green	5	5	3	2	4
Magpie	<i>Pica pica</i>	MG	Green	1	1	0	2	0

Species				Count for each visit				
Common name	Scientific name	BTO code	Conservation status	1	2	3	4	5
Mallard	<i>Anas platyrhynchos</i>	MA	Amber	0	0	0	3	0
Nuthatch	<i>Sitta europaea</i>	NH	Green	0	0	1	0	0
Pheasant	<i>Phasianus colchicus</i>	PH	-	1	3	4	4	4
Red kite	<i>Milvus milvus</i>	KT	Schedule 1, Annex 1, Green	3	1	1	2	2
Red-legged partridge	<i>Alectoris rufa</i>	RL	-	0	0	0	2	0
Robin	<i>Erithacus rubecula</i>	R.	Green	6	3	2	1	2
Rook	<i>Corvus frugilegus</i>	RO	Amber	0	0	0	2	0
Skylark	<i>Alauda arvensis</i>	S.	S41, Red	2	4	2	3	0
Song thrush	<i>Turdus philomelos</i>	ST	S41, Amber	1	1	1	2	0
Stock dove	<i>Columba oenas</i>	SD	Amber	0	0	2	0	4
Whitethroat	<i>Curruca communis</i>	WH	Amber	0	0	0	2	1
Willow warbler	<i>Phylloscopus trochilus</i>	WW	Amber	0	2	0	0	0
Woodpigeon	<i>Columba palumbus</i>	WP	Amber	0	2	0	6	10
Wren	<i>Troglodytes troglodytes</i>	WR	Amber	6	11	6	3	3
Yellowhammer	<i>Emberiza citrinella</i>	Y.	S41, Red	1	7	2	3	3

Schedule 1: Wildlife and Countryside Act 1981 (as amended) Schedule 1 species

Annex 1: EC Birds Directive (2009/147/EC) Annex 1 species

S41: NERC Act 2006 S41 Species of Principal Importance

Red: BoCC Red list species

Amber: BoCC Amber list species

Green: BoCC Green list species

- None of the above conservation status categories apply

Transect 2-1

Species				Count for each visit				
Common name	Scientific name	BTO code	Conservation status	1	2	3	4	5
Blackbird	<i>Turdus merula</i>	B.	Green	3	8	14	14	7
Blackcap	<i>Sylvia atricapilla</i>	BC	Green	0	4	15	4	12
Blue tit	<i>Cyanistes caeruleus</i>	BT	Green	22	23	21	16	31
Buzzard	<i>Buteo buteo</i>	BZ	Green	1	0	1	2	3
Canada goose	<i>Branta canadensis</i>	CG	-	1	2	4	0	0
Carrion crow	<i>Corvus corone</i>	C.	Green	9	26	6	26	20
Chaffinch	<i>Fringilla coelebs</i>	CH	Green	13	7	6	10	2
Chiffchaff	<i>Phylloscopus collybita</i>	CC	Green	5	9	12	7	7
Collared dove	<i>Streptopelia decaocto</i>	CD	Green	0	1	0	0	3
Cuckoo	<i>Cuculus canorus</i>	CK	S41, Red	0	0	0	1	0
Dunnock	<i>Prunella modularis</i>	D.	S41, Amber	7	14	8	5	10
Fieldfare	<i>Turdus pilaris</i>	FF	Schedule 1, Red	1	0	0	0	0
Garden warbler	<i>Sylvia borin</i>	GW	Green	0	1	0	1	1
Goldfinch	<i>Carduelis carduelis</i>	GO	Green	0	7	2	9	6
Great spotted woodpecker	<i>Dendrocopos major</i>	GS	Green	1	1	1	1	3
Great tit	<i>Parus major</i>	GT	Green	3	7	6	5	12
Green woodpecker	<i>Picus viridis</i>	G.	Green	1	1	0	0	0
Greenfinch	<i>Chloris chloris</i>	GR	Red	2	2	1	1	1
Grey partridge	<i>Perdix perdix</i>	P.	S41, Red	0	0	0	1	1
Grey wagtail	<i>Motacilla cinerea</i>	GL	Amber	0	0	0	1	0
Hobby	<i>Falco subbuteo</i>	HY	Schedule 1, Green	0	0	0	1	1
House martin	<i>Delichon urbicum</i>	HM	Red	0	0	0	8	0

Species				Count for each visit				
Common name	Scientific name	BTO code	Conservation status	1	2	3	4	5
House sparrow	<i>Passer domesticus</i>	HS	S41, Red	0	2	0	0	5
Jackdaw	<i>Coloeus monedula</i>	JD	Green	11	13	12	27	69
Jay	<i>Garrulus glandarius</i>	J.	Green	1	1	0	2	0
Kestrel	<i>Falco tinnunculus</i>	K.	Amber	2	0	0	0	0
Lesser whitethroat	<i>Curruca curruca</i>	LW	Green	0	0	4	4	2
Linnet	<i>Linaria cannabina</i>	LI	S41, Red	0	8	17	5	10
Long-tailed tit	<i>Aegithalos caudatus</i>	LT	Green	12	4	12	3	0
Magpie	<i>Pica pica</i>	MG	Green	1	0	1	3	1
Mallard	<i>Anas platyrhynchos</i>	MA	Amber	0	9	0	3	0
Mistle thrush	<i>Turdus viscivorus</i>	M.	Red	0	1	0	0	0
Moorhen	<i>Gallinula chloropus</i>	MH	Amber	0	1	0	0	0
Peregrine	<i>Falco peregrinus</i>	PE	Schedule 1, Annex 1, Green	0	0	1	0	0
Pheasant	<i>Phasianus colchicus</i>	PH	-	3	6	5	4	1
Pied wagtail	<i>Motacilla alba</i>	PW	Green	0	0	0	1	0
Raven	<i>Corvus corax</i>	RN	Green	1	0	0	0	0
Red kite	<i>Milvus milvus</i>	KT	Schedule 1, Annex 1, Green	1	3	0	2	1
Red-legged partridge	<i>Alectoris rufa</i>	RL	-	1	0	0	0	0
Reed bunting	<i>Emberiza schoeniclus</i>	RB	S41, Amber	1	0	1	1	0
Robin	<i>Erithacus rubecula</i>	R.	Green	4	9	6	8	3
Rook	<i>Corvus frugilegus</i>	RO	Amber	0	2	34	0	5
Skylark	<i>Alauda arvensis</i>	S.	S41, Red	16	22	29	17	19

Species				Count for each visit				
Common name	Scientific name	BTO code	Conservation status	1	2	3	4	5
Song thrush	<i>Turdus philomelos</i>	ST	S41, Amber	1	2	4	1	1
Starling	<i>Sturnus vulgaris</i>	SG	S41, Red	0	0	0	0	2
Stock dove	<i>Columba oenas</i>	SD	Amber	0	4	1	3	2
Swallow	<i>Hirundo rustica</i>	SL	Green	0	0	0	3	3
Swift	<i>Apus apus</i>	SI	Red	0	0	0	12	8
Tufted duck	<i>Aythya fuligula</i>	TU	Green	0	0	0	2	0
Whitethroat	<i>Curruca communis</i>	WH	Amber	0	5	24	17	17
Willow warbler	<i>Phylloscopus trochilus</i>	WW	Amber	0	1	0	0	0
Woodpigeon	<i>Columba palumbus</i>	WP	Amber	5	28	10	34	30
Wren	<i>Troglodytes troglodytes</i>	WR	Amber	11	13	32	22	29
Yellow wagtail	<i>Motacilla flava</i>	YW	S41, Red	0	1	6	1	2
Yellowhammer	<i>Emberiza citrinella</i>	Y.	S41, Red	21	24	21	19	25

Schedule 1: Wildlife and Countryside Act 1981 (as amended) Schedule 1 species

Annex 1: EC Birds Directive (2009/147/EC) Annex 1 species

S41: NERC Act 2006 S41 Species of Principal Importance

Red: BoCC Red list species

Amber: BoCC Amber list species

Green: BoCC Green list species

- None of the above conservation status categories apply

Transect 2-2

Species				Count for each visit				
Common name	Scientific name	BTO code	Conservation status	1	2	3	4	5
Blackbird	<i>Turdus merula</i>	B.	Green	5	6	11	16	6
Blackcap	<i>Sylvia atricapilla</i>	BC	Green	0	3	11	16	3
Blue tit	<i>Cyanistes caeruleus</i>	BT	Green	20	24	17	18	16
Bullfinch	<i>Pyrrhula pyrrhula</i>	BF	S41, Amber	0	0	0	0	1
Buzzard	<i>Buteo buteo</i>	BZ	Green	3	1	1	0	1
Carriion crow	<i>Corvus corone</i>	C.	Green	1	3	4	30	6
Chaffinch	<i>Fringilla coelebs</i>	CH	Green	3	10	10	15	7
Chiffchaff	<i>Phylloscopus collybita</i>	CC	Green	5	11	10	15	8
Cuckoo	<i>Cuculus canorus</i>	CK	S41, Red	0	0	1	2	0
Dunnock	<i>Prunella modularis</i>	D.	S41, Amber	4	3	4	4	4
Goldfinch	<i>Carduelis carduelis</i>	GO	Green	0	4	1	11	6
Great spotted woodpecker	<i>Dendrocopos major</i>	GS	Green	2	0	1	2	0
Great tit	<i>Parus major</i>	GT	Green	4	12	8	17	1
Green woodpecker	<i>Picus viridis</i>	G.	Green	1	1	0	0	0
House martin	<i>Delichon urbicum</i>	HM	Red	1	0	0	0	0
Jackdaw	<i>Coloeus monedula</i>	JD	Green	11	9	8	88	27
Jay	<i>Garrulus glandarius</i>	J.	Green	0	0	0	1	4
Lesser whitethroat	<i>Curruca curruca</i>	LW	Green	0	1	2	5	0
Linnet	<i>Linaria cannabina</i>	LI	S41, Red	1	7	7	4	7
Long-tailed tit	<i>Aegithalos caudatus</i>	LT	Green	2	5	12	15	3
Magpie	<i>Pica pica</i>	MG	Green	2	0	3	4	4
Mallard	<i>Anas platyrhynchos</i>	MA	Amber	0	0	0	2	0

Species				Count for each visit				
Common name	Scientific name	BTO code	Conservation status	1	2	3	4	5
Moorhen	<i>Gallinula chloropus</i>	MH	Amber	0	1	0	0	0
Nuthatch	<i>Sitta europaea</i>	NH	Green	0	0	0	1	0
Pheasant	<i>Phasianus colchicus</i>	PH	-	5	3	2	3	5
Red kite	<i>Milvus milvus</i>	KT	Schedule 1, Annex 1, Green	5	4	2	3	4
Red-legged partridge	<i>Alectoris rufa</i>	RL	-	0	0	0	1	0
Robin	<i>Erithacus rubecula</i>	R.	Green	5	7	1	15	3
Rook	<i>Corvus frugilegus</i>	RO	Amber	3	77	0	10	0
Skylark	<i>Alauda arvensis</i>	S.	S41, Red	8	9	6	8	7
Song thrush	<i>Turdus philomelos</i>	ST	S41, Amber	3	2	0	4	0
Stock dove	<i>Columba oenas</i>	SD	Amber	0	4	1	3	10
Tree sparrow	<i>Passer montanus</i>	TS	S41, Red	0	0	0	1	0
Treecreeper	<i>Certhia familiaris</i>	TC	Green	0	1	0	1	0
Whitethroat	<i>Curruca communis</i>	WH	Amber	0	4	5	7	1
Willow warbler	<i>Phylloscopus trochilus</i>	WW	Amber	0	3	0	1	0
Woodpigeon	<i>Columba palumbus</i>	WP	Amber	13	18	21	33	92
Wren	<i>Troglodytes troglodytes</i>	WR	Amber	7	23	4	21	14
Yellow wagtail	<i>Motacilla flava</i>	YW	S41, Red	0	0	2	1	1
Yellowhammer	<i>Emberiza citrinella</i>	Y.	S41, Red	5	10	3	10	15

Schedule 1: Wildlife and Countryside Act 1981 (as amended) Schedule 1 species

Annex 1: EC Birds Directive (2009/147/EC) Annex 1 species

S41: NERC Act 2006 S41 Species of Principal Importance

Red: BoCC Red list species

Amber: BoCC Amber list species

Species				Count for each visit				
Common name	Scientific name	BTO code	Conservation status	1	2	3	4	5

Green: BoCC Green list species

- None of the above conservation status categories apply

Transect 3

Species				Count for each visit			
Common name	Scientific name	BTO code	Conservation status	1	2	3	4
Blackbird	<i>Turdus merula</i>	B.	Green	5	3	7	2
Blackcap	<i>Sylvia atricapilla</i>	BC	Green	12	6	0	3
Blue tit	<i>Cyanistes caeruleus</i>	BT	Green	12	5	4	5
Buzzard	<i>Buteo buteo</i>	BZ	Green	0	0	3	0
Carrion crow	<i>Corvus corone</i>	C.	Green	12	2	7	6
Chaffinch	<i>Fringilla coelebs</i>	CH	Green	4	3	2	2
Chiffchaff	<i>Phylloscopus collybita</i>	CC	Green	7	6	4	2
Dunnock	<i>Prunella modularis</i>	D.	S41, Amber	10	1	1	3
Goldfinch	<i>Carduelis carduelis</i>	GO	Green	13	6	5	8
Grasshopper warbler	<i>Locustella naevia</i>	GH	S41, Red	0	0	1	0
Great spotted woodpecker	<i>Dendrocopos major</i>	GS	Green	0	0	1	0
Great tit	<i>Parus major</i>	GT	Green	4	5	3	2
Green woodpecker	<i>Picus viridis</i>	G.	Green	2	0	0	0
Greenfinch	<i>Chloris chloris</i>	GR	Red	0	4	0	1
Grey wagtail	<i>Motacilla cinerea</i>	GL	Amber	0	0	0	1
House martin	<i>Delichon urbicum</i>	HM	Red	0	1	0	0
Jackdaw	<i>Coloeus monedula</i>	JD	Green	37	17	11	8
Kestrel	<i>Falco tinnunculus</i>	K.	Amber	0	1	0	0
Lesser black-backed gull	<i>Larus fuscus</i>	LB	Amber	0	1	0	0
Lesser whitethroat	<i>Curruca curruca</i>	LW	Green	3	1	0	0
Linnet	<i>Linaria cannabina</i>	LI	S41, Red	1	0	1	0
Little egret	<i>Egretta garzetta</i>	ET	Annex 1, Green	0	1	0	0
Long-tailed tit	<i>Aegithalos caudatus</i>	LT	Green	6	3	0	0
Magpie	<i>Pica pica</i>	MG	Green	3	4	5	2

Species				Count for each visit			
Common name	Scientific name	BTO code	Conservation status	1	2	3	4
Mallard	<i>Anas platyrhynchos</i>	MA	Amber	1	1	0	0
Peregrine	<i>Falco peregrinus</i>	PE	Schedule 1, Annex 1, Green	1	0	2	0
Pheasant	<i>Phasianus colchicus</i>	PH	-	4	3	4	1
Raven	<i>Corvus corax</i>	RN	Green	4	0	3	2
Red kite	<i>Milvus milvus</i>	KT	Schedule 1, Annex 1, Green	2	4	4	6
Red-legged partridge	<i>Alectoris rufa</i>	RL	-	1	0	0	0
Reed bunting	<i>Emberiza schoeniclus</i>	RB	S41, Amber	0	0	0	2
Robin	<i>Erithacus rubecula</i>	R.	Green	17	6	5	6
Rook	<i>Corvus frugilegus</i>	RO	Amber	27	6	0	2
Skylark	<i>Alauda arvensis</i>	S.	S41, Red	8	1	1	6
Song thrush	<i>Turdus philomelos</i>	ST	S41, Amber	3	3	4	1
Starling	<i>Sturnus vulgaris</i>	SG	S41, Red	2	0	0	5
Stock dove	<i>Columba oenas</i>	SD	Amber	1	2	4	1
Swallow	<i>Hirundo rustica</i>	SL	Green	2	0	0	1
Swift	<i>Apus apus</i>	SI	Red	0	6	0	2
Whitethroat	<i>Curruca communis</i>	WH	Amber	10	4	3	3
Woodpigeon	<i>Columba palumbus</i>	WP	Amber	19	15	10	10
Wren	<i>Troglodytes troglodytes</i>	WR	Amber	14	9	3	9
Yellow wagtail	<i>Motacilla flava</i>	YW	S41, Red	1	0	4	0
Yellowhammer	<i>Emberiza citrinella</i>	Y.	S41, Red	8	6	4	7

Schedule 1: Wildlife and Countryside Act 1981 (as amended) Schedule 1 species

Annex 1: EC Birds Directive (2009/147/EC) Annex 1 species

S41: NERC Act 2006 S41 Species of Principal Importance

Red: BoCC Red list species

Species				Count for each visit			
Common name	Scientific name	BTO code	Conservation status	1	2	3	4

- Amber: BoCC Amber list species
- Green: BoCC Green list species
- None of the above conservation status categories apply

Annex C – Site photographs



Annex C – Site photographs



Photograph 1. Typical arable field in Parcel 1 used by breeding skylark



Photograph 2. Active raven nest site in a mature conifer towards the south of Parcel 1



Photograph 3. Arable field towards the north of Parcel 2, in which a display calling grey partridge was observed



Photograph 4. Arable fields towards the centre of Parcel 2, used by breeding skylark



Photograph 5. [REDACTED]



Photograph 6. Scrub and grassland towards the south-east of Parcel 2, used by breeding linnet and yellowhammer



Photograph 7. Yellow wagtail territory in an arable field towards the north-east of Parcel 2



Photograph 8. Field margin towards the south of Parcel 2, used by breeding yellow wagtail



Photograph 9. Grassland field margin and hedgerow towards the south of Parcel 3, used by breeding yellowhammer



Photograph 10. Woodland edge [REDACTED] subject to frequent red kite calling activity and used by other breeding birds including song thrush



Photograph 11. [REDACTED]



Photograph 12. [REDACTED]



Photograph 13. Scrub towards the south of Parcel 3 used by reeling grasshopper warbler



Photograph 14. Shallow waterbody and hedgerow on the boundary of Parcel 3 used by breeding reed bunting



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