OXFORDSHIRE
STRATEGIC RAIL FREIGHT INTERCHANGE

Environmental Statement

Chapter 6: Ecology including Arboriculture
Appendix 6.5: Bird Survey Report

Document 6.6E
Rev C

On behalf of
Oxfordshire Railfreight Limited

Prepared by FPCR Ltd.
October 2026

PINS REF:	TR050008
Document Reference	6.6E
APFP Regulation	5(2)(a)
Author	FPCR Ltd
Date	October 2026
Revision	C

FPCR | environment & design






ES6.5: Bird Survey Report

Client

Oxfordshire Railfreight Limited

Project

Ardley, Oxfordshire Strategic Rail Freight Interchange (OxSRFI)

Date

October 2026

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Rev	Issue Status	Prepared/Date	Approved/Date
-		OJB / 20.08.25	RG / 22.08.25
A	Final	RG / 16.09.25	RG / 16.09.25
B	Final	OJB / 19.01.26	RG / 30.03.26
C	Final – Change Application	OJB / 14.10.26	RG / 15.10.26

1.0 NON-TECHNICAL SUMMARY

Report Scope and Methodology
Six Breeding Bird Surveys and four Wintering Bird Surveys were conducted in 2024-2025 across land near Ardley, Oxfordshire at the location of the proposed Strategic Rail Freight Interchange and three Breeding Bird surveys were undertaken of two additional arable fields to the northwest in 2026. The results of earlier surveys undertaken by FPCR across 2018-2022 are also summarised within this report where relevant. The Application Site largely comprises large arable fields and grassland, with smaller areas of scrub and woodland/tree cover, and hedgerows. Wintering bird surveys were completed monthly between November 2024 and February 2025 inclusive. Breeding bird surveys were conducted between March and July 2025, and across the additional fields in May and June 2026. Survey methodologies broadly followed the Bird Survey Guidelines[1] and the survey area encompassed the whole 'Main Site' and areas within and around the 'Highways Works Areas' considered to be located within the zone of influence for adverse effects on breeding and/or wintering birds.
Ecological Baseline
Upper Heyford Airfield Local Wildlife Site (LWS) is located adjacent to the western boundary of the Main Site and is considered to be of county importance for several farmland bird species. A total of 71 bird species were recorded during the breeding surveys in 2025, of which 41 were considered 'notable' species. The species assemblage is typical of the habitats present onsite, with farmland specialists being the main species recorded. A total of 71 bird species also were recorded during the wintering surveys, of which 36 were considered 'notable' species. The wintering bird species assemblage is typical of the habitats onsite, with farmland specialists again being the main species recorded.
Assessment of Impacts
Within the Main Site there is to be a total loss of existing arable and grassland habitats, and extensive losses of hedgerows, scrub and some small woodland blocks. Exceptions to the habitat loss within the Main Site are woodland blocks, including a corridor extending south-westwards along Ashgrove Brook from Ashgrove Farm, much of the existing scrub corridor either side of the existing railway cutting, and perimeter hedgerows where present. The M40 J10 Highways Works Area will result in losses of arable land and a small area of woodland to the northeast of Ardley village to enable to construction of new slip road routes. To the northeast of the Main Site the proposed route of the new Ardley Bypass will bisect a number of large arable fields and hedgerows, resulting in fragmentation of these fields into a series of more enclosed compartments either side of the Bypass. To the southeast, the proposed Middleton Stoney Relief Road will cross existing arable land and will necessitate the removal of a section of the woodland corridor along Gagle Brook, and with surrounding arable land lost to facilitate the provision of structural planting and other habitats as part of the green infrastructure delivery. The Site is used by bird species cited within the Upper Heyford Airfield LWS designation, though as suitable habitats are present both within the LWS and on-site these are likely to form two elements of a wider local metapopulation for the relevant species. The integrity of the population within the LWS is therefore not considered dependant on the existence of the habitats within the Main Site, though some foraging benefit may arise in years when the on-site crop rotation is favourable. The proposed development will result in the loss of one confirmed barn owl nest site and likely will impact at least one active barn owl roost site. The inclusion of extensive green infrastructure within the scheme design including native species-rich grasslands, a significant proportion of which will be sensitively managed with respect to ground-nesting birds and winter foraging provisions for farmland species, together with new mixed native scrub planting will provide a high quality resource for such species,

[1] https://birdsurveyguidelines.org

further enhanced by the provision of a dedicated area of seed-bearing cover crops for farmland birds. The proposed green infrastructure will furthermore provide additional habitats for the range of common and widespread generalist and woodland edge bird species recorded, particularly as these habitats mature.
Recommended Mitigation, Compensation and Enhancement
The provision of extensive structural planting around the Main Site, through areas of green infrastructure and along the Ardley Bypass and Middleton Stoney Relief Road and extensive creation of high-quality grasslands will reduce the effects of habitat fragmentation by preserving connectivity through the Site to the wider landscape and provide new shelter, nesting and foraging resources. Wetland features will be designed with a varied bed profile to provide suitable condition for a range of wetland plants to establish. Several will also be designed to hold a degree of water throughout the winter, providing opportunities for wetland birds to colonise the Site. A scheme of nestbox provision is proposed to benefit a wide range of bird species and includes bespoke provision for barn owl.

2.0 INTRODUCTION

2.1 FPCR were commissioned by Oxfordshire Railfreight Ltd. to carry bird surveys at the proposed Oxfordshire Strategic Rail Freight Interchange (OxSRFI) site near Ardley, Oxfordshire, hereafter referred to as the Application Site.

2.2 The main objective of this assessment was to establish levels of bird activity across the Application Site to confirm potential impacts and mitigation requirements.

2.3 This document should be read in conjunction with the other ecological documents prepared for this application including Chapter 6 of the Environmental Statement, the Ecological Appraisal (ES Appendix ES6.1) and the Biodiversity Net Gain (BNG) Report (ES Appendix ES6.9).

Development Proposals

2.4 In brief the Proposed Development comprises the construction of a Strategic Rail Freight Interchange with industrial units, associated infrastructure and soft landscaping (referenced to herein as the 'Main Site') and associated strategic road network improvement works including the M40 J10 Highways Works Area, the Ardley Bypass and Principal Access, the Middleton Stoney Relief Road, Heyford Park Link and Secondary Access.

2.5 Full details of the Proposed Development are provided in in Chapter 2 of the Environmental Statement: Description of Development and Alternatives.

Site Location & Context

2.6 The Application Site, as defined by the Order Limits, is located south and south-east of Ardley and comprises two interrelated component parts, the 'Main Site' and the 'Highways Works Areas'.

2.7 The Main Site is located between the B430 and the former RAF Upper Heyford airfield and immediately south of the Chiltern Railway main line. This area encompasses Ashgrove Farm and a Biffa 'In Vessel Compositing' facility (IVC) and is dominated by arable and neutral grassland field compartments with hedgerows, trees, scrub, and neutral grassland at the field margins. Other habitats present include small plantation broadleaved woodland stands, lowland calcareous grassland, coniferous woodland, scrub, ephemeral vegetation, tall forbs, small waterbodies, and brook sections. Habitats associated with the farmstead include buildings, modified grassland, introduced shrub, bare ground, hardstanding, and unsealed surfaces.

2.8 The Highway Works Areas include land to the east and west of the M40 Junction 10 and to the west of the M40 Junction 9 that largely comprises arable land with planted tree groups and scrub associated with screening functions of highways infrastructure. Other habitats include neutral grassland road verges and ponds. The proposed Ardley Bypass located to the north-east of the Main Site crosses the Chiltern Railway main line and adjacent arable fields bound by native hedgerows. The proposed route of the Middleton Stoney Relief Road to the south-east of the Main Site crosses arable fields and native hedgerows, a section of the Gagle Brook, and neutral grassland road verges and woodland associated with the B4030. A field compartment north of the route of the Middleton Stoney Relief Road and west of Gagle Brook is proposed for habitat enhancement as part of the biodiversity net gain strategy.

2.9 Surrounding land use is dominated variously by arable land with planted tree groups associated with screening functions of highways infrastructure, and agricultural fields that extend from the southern boundary and form much of the surrounding landscape. The Viridor Ardley Energy Recovery Facility ('Viridor ERF'), Valencia Waste Management Facility and Ardley Landfill Site lie

to the east of the Main Site and to the opposite side of the B430, with Ardley/Dewars Farm Quarry located to the south of the waste facilities.

Survey Objectives

2.10 Breeding Bird survey visits were undertaken across the Application site between March and July 2025 inclusive, with surveys undertaken in May and June 2026 of land subsequently added to the northwest of the Order Limits. The objectives of the Breeding Bird Survey were to:

- Identify the presence of any designated nature conservation sites that support notable breeding bird assemblages within or in the vicinity of the Site;
- Identify the presence, species, and distribution of breeding birds within the Site;
- Evaluate the conservation importance of habitats within the Site to local bird populations and identify any areas of ornithological interest, and
- Make recommendations to minimise the potential impact of development and to consider opportunities for additional mitigation, compensation, and enhancement where relevant.

2.11 The Wintering Bird survey visits were undertaken between November 2024 and February 2025 inclusive. The objectives of the Wintering Bird Survey were to:

- Identify the presence and distribution of wintering birds;
- Evaluate the conservation importance of wintering bird populations present;
- Evaluate the importance of wintering bird populations and the anticipated residual impacts of the development; and
- To identify areas of ornithological interest and make recommendations to minimise the potential impact of the scheme.

3.0 LEGISLATION & STATUS

Legislation

3.1 The Wildlife and Countryside Act 1981 (as amended) (WCA) is the principal legislation affording protection to UK wild birds. Under this legislation all birds, their nests and eggs are protected by law, and it is an offence, with certain exceptions, to recklessly or intentionally:

- Kill, injure or take any wild bird.
- Take, damage, or destroy the nest of any wild bird while in use or being built; or
- Take or destroy the egg of any wild bird.

3.2 Additional protection is afforded to species listed on Schedule 1 of the WCA, whereby intentional disturbance whilst building or occupying a nest or disturbance of dependent young is also considered an offence.

3.3 Certain species have also been identified as Species of Principal Importance (SPI) under Section 41 of the Natural Environment and Rural Communities (NERC) Act 2006. The S.41 list is used to guide decision-makers in implementing their duty under Section 40 of the NERC Act 2006, to have regard to the conservation of biodiversity in England, when carrying out their normal functions.

Strategic Documents

3.4 The Oxfordshire Local Biodiversity Action Plan (LBAP) identifies a number of targets for UK priority bird species that occur within this area, particularly in relation to farmland birds. The LBAP does not include bespoke action plans for individual bird species.

3.5 The recently published Oxfordshire Local Nature Recovery Strategy (LNRS) identifies priority species present within the county considered most likely to benefit from specific, targeted actions. Bird species listed within the LNRS and considered relevant to the Application Site are: farmland birds (specifically: corn bunting *Emberiza calandra*, grey partridge *Perdix perdix*, lapwing *Vanellus vanellus*, linnet *Linaria cannabina*, skylark *Alauda arvensis arvensis*, tree sparrow *Passer montanus*, yellowhammer *Emberiza citrinella* and yellow wagtail *Motacilla flava*), swift *Apus apus*, house martin *Delichon urbicum* and tawny owl *Strix aluco*.

Status

3.6 In addition to statutory protection, some bird species are classified according to their conservation status, such as their inclusion on the Red and Amber lists of Birds of Conservation Concern[2] (BoCC) in the UK:

3.7 Red list (high conservation concern) species meet at least one of the following criteria:

- They are globally threatened according to IUCN criteria.
- Their population has declined rapidly (50% or more) in recent years.
- They that have declined historically and not shown a substantial recent recovery.

3.8 Amber list (medium conservation concern) species are those that meet at least one of the following criteria:

- They have an unfavourable conservation status in Europe.
- Their population or range has declined moderately (between 25% and 49%) in recent years.
- Their population has declined historically but made a substantial recent recovery.
- They are rare breeders.
- They have internationally important or localised populations.

3.9 Green list (low conservation concern) species fulfil none of the above criteria.

4.0 METHODOLOGY

Desk Study

4.1 A desk study was undertaken to collate existing relevant information for the application Site and its surroundings in relation to bird species. This included a review of:

- Biological records requested from Thames Valley Environmental Records Centre (TVERC). Bird records were searched for at a resolution of 2km around the Site and were limited to records from within the last 20 years.
- Statutory designated sites within 15km of the Application Site that include bird species or assemblages as part of their designation from the Defra MAGIC website[3];

[2] Stanbury, A.J., Eaton, M., Aebischer, N., Balmer, D., Brown, A., Douse, A., Lindley, P., McCulloch, N., Noble, D., and Win I. 2021. The status of our bird populations: the fifth Birds of Conservation Concern in the United Kingdom, Channel Islands and Isle of Man and second IUCN Red List assessment of extinction risk for Great Britain. *British Birds* 114:747.

[3] https://magic.defra.gov.uk [Accessed 18.08.25].

- Relevant documents submitted as part of a previous planning application for the Site (planning ref: 08/01520/F, permission awarded 19.09.08), and
- Publicly available aerial imagery showing connectivity across the Application Site and to the wider landscape.

Field Surveys

Previous Surveys

4.2 FPCR have been undertaking ecological surveys of the Site, or sections thereof, since 2018. These have included several surveys for breeding and wintering birds that were conducted in accordance with now-superseded guidance on the number and timing of surveys required to inform Ecological Impact Assessments, but for which the methodology undertaken for each survey occasion was aligned to that used for the most recent surveys outlined in the following section.

4.3 A suite of three breeding bird surveys was undertaken on an original, smaller red line boundary for the Main Site in April, May and June 2018, with a further suite of three breeding bird surveys undertaken in April, May and June 2020 that focussed on additional land brought into the Main Site area in late 2018. The Highways Works Areas were subsequently subject to a suite of three breeding bird surveys split across consecutive seasons, with one survey in June 2021 followed by two further surveys in April and May 2022.

4.4 Wintering bird surveys were undertaken across the Main Site, including land brought in after commencement of initial surveys. Initial surveys were split across consecutive winter seasons with survey occasions in January, February, November, and December 2019. These were then revalidated by way of an update suite of four surveys, undertaken monthly between November 2022 and February 2023 inclusive. A wintering bird survey was additionally undertaken of the Highways Works Areas monthly between December 2021 and February 2022 inclusive.

4.5 Whilst superseded by the more recently undertaken surveys outlined below, the field data compiled during the above is summarised and made reference to within this document to where relevant provide further context.

2024-25 Surveys

4.6 The survey methodology employed was in accordance with the protocol specified within current best practice guidelines[4]. All birds encountered (seen or heard) were recorded on a field survey plan using standard BTO species codes and symbols for bird activities and to denote activity, sex, and age where appropriate.

4.7 The survey area covered most of the undeveloped land across the Main Site and the Highways Works Areas. Figure 1 shows the survey area within the context of the Order Limits.

4.8 Several areas within the Highways Works Areas, some relatively large in extent, were scoped out on the basis that the existing land use as highways infrastructure significantly limits the suitability of habitats present for use by breeding and/or wintering birds.

4.9 The southern section of the capped Ardley Landfill site was excluded from surveys due to it being included in the Order Limits solely for the purposes of the transferal of the applicable waste management licence. No works are proposed in or adjacent to this area and management

[4] Bird Survey & Assessment Steering Group 2023. *Bird Survey Guidelines for Assessing Ecological impacts* v.1.1.1. Available at: https://birdsurveyguidelines.org [Accessed: 10.12.24 and current at the time of surveys].

is to continue under the current regime throughout the construction and operational phases of the proposed development, therefore no impacts on birds are anticipated in this area.

4.10 The need for bird surveys was also scoped out for a small section of an arable field to the south of the Main Site that is to be converted to screening planting, where the proposed habitat loss is negligible within the context of adjacent habitats and no significant adverse effect would reasonably be expected in association with this land use change.

4.11 Further areas of land adjacent to the Order Limits, particularly around major elements of the Highways Works Areas were considered to be within the Site's potential Zone of Influence (ZoI) and thus were included in the field surveys, given potential impacts associated with habitat fragmentation of existing larger arable fields and potential noise impacts. The additional areas included were associated primarily with Highways Works Areas concentrated in the northeast of the Application Site bordering proposed highways works to the M40 J10, works associated with the construction of the Ardley Bypass, and in the southeast of the Application Site along the route of the proposed Middleton Stoney Relief Road.

4.12 A route was mapped out prior to the surveys being undertaken, paying particular attention to any linear features, such as hedgerows and watercourses, and other features such as ponds and scrub. Bird surveys were not undertaken during unfavourable conditions, such as heavy rain or persistent strong wind (conditions that can negatively affect the results). To provide inter-survey temporal variation to account for variation in species' detectability throughout the day, the starting location and direction of walking were stratified across each series of surveys.

2026 Surveys

4.13 Two additional arable fields to the northwest of the Main Site were brought into the Order Limits in 2026[5]. These are to be used solely for ecological compensation and are to be enhanced to increase their value to breeding farmland birds. To establish the ornithological baseline and ascertain the suitability of these fields for fulfilling the proposed purpose as farmland bird mitigation, breeding bird surveys were undertaken across these parcels in isolation in May and June 2026 with the results considered within the site-wide impact assessment.

Breeding Bird Surveys

4.14 Breeding status was inferred for each species based on the sixteen categories implemented by the European Ornithological Atlas Committee (EOAC)[6] and their corresponding definitions, in addition to four further codes to classify non-breeding species as: birds recorded away from suitable breeding habitat; summering non-breeders; passage migrants, or flyovers. Birds were considered to be holding a territory and therefore likely to be utilizing the Application Site for breeding activities if they were recorded displaying breeding behaviours such as singing, nest building, food carrying or territorial defence. If birds did not display such behaviours, for example they were only recorded as flying over, they were considered non-breeders. These criteria and associated definitions are outlined in Appendix A.

4.15 A total of six breeding bird surveys were undertaken in 2025, spanning the season during which the majority of breeding activity occurs for typical bird species (Table 1). Based on the consultation data received and an assessment of the habitats present, no bird species with vastly differing breeding cycles are reasonably expected to occur at the Application Site. To

[5] This was one of the main changes introduced via the 'change application' made by the Applicant in October 2026.
[6] Sharrock, J.T.R. 1973. Ornithological Atlases. *Auspicium* 5:13-15.

provide a proportionate level of accuracy in the determination of the population status of breeding birds in the survey area, dawn survey visits were undertaken in March, April, May, June, and early July, and a single dusk survey was completed in early June 2025, commencing an hour prior to sunset and finishing an hour after sunset.

4.16 The dusk survey was undertaken during failing light and continued into darkness to account for temporal variations in species' detectability, being timed to coincide with peak activity of likely crepuscular and/or nocturnal species and identify important roost sites should any be present. Surveyors used Pulsar Axion XQ38 thermal imaging monoculars during this survey to observe birds.

4.17 A total of three breeding bird surveys were undertaken across the additional land brought into the Order Limits in 2026 with these surveys timed to coincide with peak breeding activity throughout June to establish the number of breeding pairs of specialised farmland bird species present and evidence the current levels of breeding success (Table 1). Based on the consultation data received, the data collected across the 2025 Survey Area, and an assessment of the habitats present, no crepuscular or nocturnal farmland bird species are considered reasonably likely to occur within the additional land, so no dusk survey was undertaken on these two compartments.

Wintering Bird Surveys

4.18 To provide a reasonable level of accuracy for determining the population status of wintering birds within the Application Site, four surveys were carried out from dawn until early afternoon, once per month between November 2024 and February 2025 inclusive (Table 1).

Table 1: 2024-25 Survey Dates & Conditions

Survey	Date	Cloud Cover (%)	Rain	Wind (Beaufort)	Visibility
Breeding Bird Surveys (Survey Area)					
BBS 1	04.03.25	10	Dry	0 – Calm	Excellent
BBS 2	14.04.25	10	Dry	1 – Light Air	Excellent
BBS 3	15.05.25	100	Dry	3 – Gentle Breeze	Very Good
BBS 4 - dusk	05.06.25	100	Dry	4 – Moderate Breeze	Very Good
BBS 5	16.06.25	5	Dry	0 – Calm	Excellent
BBS 6	10.07.25	10	Dry	0 – Calm	Excellent
Wintering Bird Surveys					
WBS 1	26.11.24	5	Dry	1 – Light Air	Excellent
WBS 2	09.12.24	100	Light rain for first 10 min, decreasing in intensity	1 – Light Air	Good
WBS 3	22.01.25	100	Dry	1 – Light Air	Good
WBS 4	12.02.25	100	Dry	2 – Light Breeze	Good
Breeding Bird Surveys (Additional Farmland Bird Mitigation Fields)					
BBS 1	05.06.26	80	Dry	1 – Light Air	Excellent
BBS 2	17.06.26	100	Light rain for first 60 min, decreasing in intensity	2 – Light Breeze	Good
BBS 3	29.06.26	80	Dry	0 – Calm	Very Good

5.0 RESULTS & EVALUATION

Desk Study - Designated Sites

5.1 One non-statutory designated site cited for its ornithological interest was identified via the desk study: Upper Heyford Airfield Local Wildlife Site (LWS). A summary of the bird species and assemblages included within the designated site citation is provided in Table 2. A full

description of all designated sites within the search area is provided within the Ecological Appraisal Report (ES Appendix ES6.1).

Table 2: Desk Study Results – Designated Sites Cited for Ornithological Interest

Site Name	Distance from Application Site at Closest Point	Description
Upper Heyford Airfield LWS	Adjacent to western boundary	Supports species-rich calcareous areas with small areas of broadleaved plantation woodland and water tanks. Notable species include bee orchid *Ophrys apifera*, dwarf thistle *Cirsium acaule*, skylark *Alauda arvensis*, corn bunting *Emberiza calandra*, grey partridge *Perdix perdix*, tree sparrow *Passer monanus* and great crested newt *Triturus cristatus*.

Protected / Notable Species

5.2 Table 3 summarises the bird records identified by the desk study located within the search area. Those that appear on one or more of the following are hereafter referred to as 'notable species':

- Schedule 1 of WCA;
- BoCC Red or Amber lists;
- Section 41 of the NERC Act 2006; and/or
- Local Biodiversity Action Plan

5.3 Three records of two notable species were returned from within the Application Site boundary:

- Lapwing (7 records within 1km). This species was recorded on-site from the road at the M40/A43 junction (within the Highways Works Area) in 2013, and
- Woodpigeon *Columba palumbus* (21 records within 1km). Two on-site records were returned: one within Middleton Stoney village and one from beside the B4030 on the outskirts of Bicester. Both locations are within the south-eastern Highways Works Area.

5.4 A further 390 records of 51 other notable species were returned from within 1km (Table 3).

Table 3: Desk Study Results – Notable Bird Species Within 2km of Site Boundary

Species	Relevant Legislation	Approx. Dist. from Site of Closest Record	Description
Shoveler *Spatula clypeata*	Amber List	260m	One record from gravel pits at Ardley Quarry.
Gadwall *Mareca strepera*	Amber List	260m	One record of two post-breeding adults at Ardley Quarry to the southeast of the Main Site.
Mallard *Anas platyrhynchos*	Amber List	30m	12 records split across wetland sites within the search area. Most records originate from the Ardley Quarry/Trow Pool area.
Grey Partridge *Perdix perdix*	Red List NERC S.41	620m	Four records – three from managed grassland within Upper Heyford Airfield and another from Himley Village on the western fringe of Bicester.
Quail *Coturnix coturnix*	Amber List WCA Sch.1	905m	Two records of singing males at Upper Heyford Airfield adjacent to the northwest of the Main Site in 2014 and 2016.
Swift *Apus apus*	Red List	10m	87 records heavily biased around urban areas within Bicester. Scattered records of mostly foraging birds from widely distributed sites.

Species	Relevant Legislation	Approx. Dist. from Site of Closest Record	Description
Cuckoo *Cuculus canorus*	Red List NERC S.41	905m	One record of a singing male at Upper Heyford Airfield adjacent to the west of the Main Site.
Stock Dove *Columba oenas*	Amber List	130m	Three records, including breeding, from three woodlands distributed throughout the search area.
Moorhen *Gallinula chloropus*	Amber List	70m	Nine records associated with wetland habitats at Ardley Quarry, Trow Pool, and Ardley Wood Quarry.
Little Ringed Plover *Thinornis dubius*	Green List WCA Sch.1	260m	One record of a confirmed breeding pair on a gravel pit at Ardley Quarry southeast of the Main Site.
Curlew *Numenius arquata*	Red List WCA Sch.1	260m	Four summer records of territorial birds at Upper Heyford Airfield to the west of the Main Site.
Common Sandpiper *Actitis hypoleucos*	Amber List	260m	Two records from the active Ardley Quarry adjacent to the southeast of the Main Site.
Black-headed Gull *Chroicocephalus ridibundus*	Amber List	70m	Eight records dated late winter and late summer from Ardley Wood Quarry and Upper Heyford Airfield adjacent to the western boundary.
Common Gull *Larus canus*	Red List	70m	Three records from Ardley Wood Quarry. Given the unsuitable habitats to support this species are presumed to relate to flyovers.
Great Black-backed Gull *Larus marinus*	Red List	260m	One record of flyovers at Ardley Quarry.
Herring Gull *Larus argentatus*	Red List NERC S.41	260m	One record of at least 50 individuals on gravel pits at Ardley Quarry southeast of the Main Site.
Lesser Black-backed Gull *Larus fuscus*	Amber List	70m	Eight records relating to aggregations of post- or non-breeding individuals at Ardley Quarry and Upper Heyford Airfield.
Common Tern *Sterna hirundo*	Amber List	260m	One record from Ardley Quarry adjacent to the southeast of the Main Site.
Sparrowhawk *Accipiter nisus*	Amber List	130m	Four records around the northwest of the Main Site and the area surrounding Ardley Quarry.
Red Kite *Milvus milvus*	Green List WCA Sch.1	70m	13 records widely spread throughout the search area including apparent breeding pairs.
Barn Owl *Tyto alba*	Green List WCA Sch.1	70m	Five records mostly of single roosting individuals centred around Upper Heyford and Somerton villages west of the Main Site.
Tawny Owl *Strix aluco*	Amber List	70m	Three records. Only live record from Upper Heyford Airfield, droppings recorded at Trow Pool and a road casualty from the M40.
Kingfisher *Alcedo atthis*	Green List WCA Sch.1	180m	One record of a single individual at Ardley Wood Quarry in 2008.
Kestrel *Falco tinnunculus*	Amber List	70m	16 records widely distributed across the ZoI with confirmed breeding near Middleton Stoney.
Peregrine *Falco peregrinus*	Green List WCA Sch.1	360m	Two records of single individuals at Upper Heyford Airfield in 2010 and 2018.
Rook *Corvus frugilegus*	Amber List	120m	Six records scattered around the peripheries of the Site of small foraging flocks.
Marsh Tit *Poecile palustris*	Red List NERC S.41	70m	Three records, peak count of one individual, at Ardley Wood Quarry nature reserve adjacent to the northeast of the Main Site.
Willow Tit *Poecile montanus*	Red List NERC S.41	330m	One record of a singing male at Ardley Quarry southeast of the Main Site in 2020.

Species	Relevant Legislation	Approx. Dist. from Site of Closest Record	Description
Skylark *Alauda arvensis*	Red List NERC S.41	70m	17 records from a range of suitable arable and grassland sites within the search area.
House Martin *Delichon urbicum*	Red List	120m	Three records of a colony comprising up to 23 nests at Upper Heyford Airfield with birds from here foraging at nearby Ardley Wood Quarry.
Willow Warbler *Phylloscopus trochilus*	Amber List	70m	Nine records, almost all from Ardley Wood Quarry nature reserve to the northeast of the Main Site.
Whitethroat *Curruca communis*	Amber List	70m	12 records distributed across the search area though significant proportions of records from the northwest of the Main Site at Upper Heyford Airfield and Ardley Wood Quarry nature reserve.
Wren *Troglodytes troglodytes*	Amber List	70m	14 records distributed across the search area.
Starling *Sturnus vulgaris*	Red List NERC S.41	120m	Nine records of foraging birds at Ardley Wood Quarry, Upper Heyford Airfield, Ardley Quarry, and Himley Village.
Song Thrush *Turdus philomelos*	Amber List NERC S.41	70m	19 records from a range of sites comprising rural and suburban landscape contexts.
Mistle Thrush *Turdus viscivorus*	Red List	80m	Four records of up to two individuals at Ardley Wood Quarry and nearby Upper Heyford Airfield toward the northeast of the Main Site.
Redwing *Turdus iliacus*	Amber List WCA Sch.1	300m	One record from Himley village adjacent to the western end of the B4030 Highways Works Areas.
Fieldfare *Turdus piliaris*	Red List WCA Sch.1	70m	Four records spread across the 1km buffer of roving foraging flocks in winter.
Spotted Flycatcher *Muscicapa striata*	Red List NERC S.41	960m	One record of a singing male at Upper Heyford Airfield adjacent to the northwest of the Main Site.
Wheatear *Oenanthe oenanthe*	Amber List	360m	Four records, all during passage periods, from Upper Heyford Airfield to the northwest of the Main Site.
House Sparrow *Passer domesticus*	Red List NERC S.41	80m	Seven records of colonies within nearby villages and at Upper Heyford Airfield.
Dunnock *Prunella modularis*	Amber List NERC S.41	70m	14 records from scattered rural and suburban locations around much of the peripheral habitat.
Yellow Wagtail *Motacilla flava*	Red List NERC S.41	850m	Three records all from Upper Heyford Airfield to the northwest of the Main Site.
Grey Wagtail *Motacilla cinerea*	Amber List	150m	One record of a single individual at Trow Pool southeast of the Main Site.
Meadow Pipit *Anthus pratensis*	Amber List	330m	Seven records, including confirmed breeding in several years, at Upper Heyford Airfield.
Bullfinch *Pyrrhula pyrrhula*	Amber List NERC S.41	70m	11 records almost all relating to Ardley Wood Quarry which is a managed scrub-woodland nature reserve.
Greenfinch *Chloris chloris*	Red List	70m	Ten records including breeding pairs from suitable habitat around the Main Site.
Linnet *Linaria cannabina*	Red List NERC S.41	70m	11 records centred around Upper Heyford Airfield, Ardley Quarry and the fringe of Bicester.
Corn Bunting *Emberiza calandra*	Red List NERC S.41	360m	Six records including up to four breeding pairs at Upper Heyford Airfield to the west of the Main Site.
Yellowhammer *Emberiza citrinella*	Red List NERC S.41	70m	16 records from a range of suitable arable and grassland sites within the search area.
Reed Bunting *Emberiza schoeniclus*	Amber List NERC S.41	130m	Five records from pond margins within Ardley Trackways SSSI, Upper Heyford Airfield, and Himley Village.

5.5 Several of the notable species for which records were returned are considered unlikely to breed and/or overwinter within the Application Site as there is little to no suitable habitat present, such as, for example waterfowl and waders.

5.6 Bird data returned from within the search area was largely concentrated in three main areas: Upper Heyford former Airfield adjacent to the northwest of the Main Site, Ardley Wood Quarry (a Berks, Bucks and Oxon Wildlife Trust nature reserve) to the north of the Chiltern Railway main line and south of Ardley village, and the active Ardley Quarry and adjacent woodland surrounding Trow Pool between the southeast of the Main Site and the route of the proposed Middleton Stoney Relief Road. It is noted however that the distribution of species records can to some extent be an artefact of varying observer coverage locally.

5.7 The desk study identified a relatively diverse assemblage of farmland birds recorded within the surrounding habitats that resembles the assemblage recorded by the surveys undertaken within the Application Site. Many of the constituent species of the desk study assemblage are present or are considered reasonably likely to be present within the Application Site and adjoining land within the wider survey area.

Field Survey

Previous Surveys

Breeding Bird Surveys – Main Site

5.8 Initial breeding bird surveys were undertaken across the extent of the original Main Site area in April, May and June 2018, during which time a total of 47 bird species were recorded, of which 23 are considered notable species. Three species were confirmed as breeding on site (starling *Sturnus vulgaris* (red list), carrion crow *Corvus corone* and great tit *Parus major* (both Green list). 19 species were considered probable breeders and the remaining 25 were considered possible or non-breeders. Additionally, based on evidence from other ecological surveys conducted by FPCR on site, barn owl *Tyto alba* (listed under Schedule 1 of the Wildlife and Countryside Act 1981) was considered a probable breeder within the Main Site.

5.9 Further surveys were conducted in 2020 that covered a subsequently added parcel of land to the south of the Main Site area. A total of 53 bird species were recorded within this area, of which 25 were notable. Thirteen species were confirmed to be breeding on-site, 14 were considered to be probable breeders and 15 possible breeders. No evidence was recorded to suggest the remaining 11 species were breeding on-site.

5.10 The entire extended Main Site was then subject to a single updating survey in 2021 which recorded 41 species, of which 21 are notable. The species composition and numbers of individuals recorded during the 2021 survey were comparable to those recorded previously, except for the additional presence of merlin *Falco columbarius*, which had not previously been recorded during breeding bird surveys, but which had been recorded during winter. This observation was considered to relate to an overwintering bird yet to migrate given the Application Site is situated far from the upland breeding areas typically used by this species.

5.11 The bird assemblages previously recorded within the Main Site were considered typical of the habitats present, with the vast majority of species both common and widespread. The assemblages associated with the tree/hedgerow cover, fields interiors and farm buildings were all considered to be of Local conservation importance, whilst the assemblage associated with wetland habitats was considered of no more than Site importance.

5.12 Nineteen bird species recorded within the Main Site were considered to individually be of Local conservation importance based on their conservation status and abundance on site: stock dove *Columba oenas*, woodpigeon *Columba palumbus*, barn owl, kestrel *Falco tinnunculus*, rook *Corvus frugilegus*, skylark, whitethroat *Curruca communis*, wren *Troglodytes troglodytes*, song thrush *Turdus philomelos*, mistle thrush *Turdus viscivorus*, spotted flycatcher *Muscicapa striata*, house sparrow *Passer domesticus*, dunnock *Prunella modularis*, yellow wagtail *Motacilla flava*, bullfinch *Pyrrhula pyrrhula*, greenfinch *Chloris chloris*, linnet, corn bunting, and yellowhammer. The remaining species recorded were considered of no more than Site level conservation importance.

Breeding Bird Surveys – Highways Works Areas

5.13 A single breeding bird survey was undertaken across the Highways Works Areas in June 2021, with two more surveys completed during the 2022 breeding season. A total of 64 bird species were recorded, of which 35 were considered notable. Seven species were confirmed as breeding while 20 species were considered probable breeders. The remaining species were considered either possible (26) or non-breeders (11).

5.14 The bird assemblages recorded on-site were considered typical of the habitats present, with most species both common and widespread. The assemblages associated with the hedgerows/woodland, field interiors, and farm buildings were all considered to be of Local conservation importance, whilst the assemblage associated with wetland areas was considered of no more than Site importance.

5.15 Seventeen individual species recorded within the Highways Works Areas were additionally considered to individually be of Local conservation importance based on their conservation status and abundance on site: grey partridge, stock dove, woodpigeon, red kite *Milvus milvus*, barn owl, rook, skylark, wren, song thrush, dunnock, yellow wagtail, meadow pipit *Anthus pratensis*, bullfinch, greenfinch, linnet, corn bunting, and yellowhammer. The remaining species recorded were considered to be of no more than Site conservation importance.

Wintering Bird Surveys

5.16 Wintering bird surveys were initially undertaken across the Main Site in January, February, November and December 2019. During these surveys a total of 55 bird species were recorded, of which 24 are considered notable species.

5.17 The agricultural fields at the time provided foraging opportunities for a wide range of notable birds including stock dove, lesser black-backed gull *Larus fuscus*, starling and flocks of fieldfare *Turdus piliaris*, and redwing *Turdus iliacus*. Skylark and yellowhammer occurred in county important numbers, whilst grey partridge also occurred in good numbers. A range of birds of prey utilised the fields for foraging including barn owl, kestrel, peregrine *Falco peregrinus*, and merlin. Small and/or occasional numbers of other species recorded among arable habitats included lapwing, snipe *Gallinago gallinago*, meadow pipit, linnet and reed bunting *Emberiza schoeniclus*. As a result, the Main Site was considered to be of Local importance for its wintering farmland bird assemblage and County level importance for skylark and yellowhammer.

5.18 The hedgerows, trees and woodland within the Main Site supported generalist and woodland species including song thrush, mistle thrush, dunnock, and bullfinch. The Main Site was considered to be of Local importance for its hedgerow/woodland bird assemblage.

5.19 The Main Site was then subject to a suite of four updating surveys undertaken once per month between November 2022 and February 2023 inclusive. A total of 63 species were recorded of which 33 were considered notable. The recorded assemblages were largely consistent with those observed by the previous surveys, with agricultural fields again supporting a significant assemblage of farmland birds including continued county important populations of both skylark and yellowhammer, and locally important numbers of other farmland birds including grey partridge, winter thrushes, and meadow pipit. The recorded birds of prey were consistent with the previous findings indicative of regular overwintering presence of both peregrine and merlin.

5.20 Winter bird surveys were carried out across the Highways Works Areas in December 2021 and January and February 2022. These surveys recorded a total of 60 bird species, of which 34 are considered notable. Arable fields and associated marginal habitats provided wintering habitat for a range of farmland specialist and generalist species, including grey partridge, stock dove, skylark, starling, redwing, fieldfare, linnet, corn bunting, and yellowhammer. These habitats also provided foraging habitat for notable species sparrowhawk *Accipiter nisus*, barn owl, and kestrel. The arable habitats within the Highway Works areas are therefore considered to be of Local importance for the wintering farmland bird assemblage it supports and County level importance for skylark, corn bunting, and yellowhammer.

5.21 The hedgerow, trees, woodland, and wetland habitats provided wintering habitat for a range of notable species including *Anas platyrhynchos*, moorhen *Gallinula chloropus* , wren, song thrush, redwing, fieldfare, and bullfinch. The Highway Works Areas are therefore considered to be of Local importance for the other wintering bird assemblages it supports.

2024-2025 Surveys

Breeding Bird Surveys

5.22 A total of 80 bird species were recorded within the survey area during the six survey occasions undertaken in 2024 and 2025 (for complete list see Appendix B). Of these, nine species were recorded overflying the survey area only and therefore were considered to be non-breeders within the Application Site. As such, these are not considered likely to be impacted by the proposed development as they do not interact with the habitats present.

5.23 Of the remaining 71 species recorded across the Application Site, 41 are notable species. Records of notable species are summarised in Table 4, and the respective distributions are illustrated in Figures 2a-2c.

Table 4: Notable Breeding Species Recorded (Survey Area)

Species	Legal / Conservation Status	Peak Count / No. of Survey Visits	EOAC Breeding Status
Mallard *Anas platyrhynchos*	Amber List	10 / 3	Probable
Grey partridge *Perdix perdix*	Red List NERC S.41	13 / 4	Probable
Swift *Apus apus*	Red List	5 / 4	Non-breeder
Stock dove *Columba oenas*	Amber List	92 / 6	Confirmed
Woodpigeon *Columba palumbus*	Amber List	1040 / 6	Confirmed
Moorhen *Gallinula chloropus*	Amber List	4 / 4	Probable

Species	Legal / Conservation Status	Peak Count / No. of Survey Visits	EOAC Breeding Status
Snipe *Gallinago gallinago*	Amber List	1 / 1	Non-breeder
Green sandpiper *Tringa ochropus*	Amber List WCA Sch.1	1 / 1	Non-breeder
Black-headed gull *Chroicocephalus ridibundus*	Amber List	112 / 2	Non-breeder
Herring gull *Larus argentatus*	Red List NERC S.41	123 / 5	Non-breeder
Lesser black-backed gull *Larus fuscus*	Amber List	77 / 5	Non-breeder
Sparrowhawk *Accipiter nisus*	Amber List	2 / 5	Confirmed
Red kite *Milvus milvus*	Green List WCA Sch.1	36 / 6	Confirmed
Barn owl *Tyto alba*	Green List WCA Sch.1	3 / 3	Confirmed
Tawny owl *Strix aluco*	Amber List	1 / 1	Probable
Kingfisher *Alcedo atthis*	Green List WCA Sch.1	1 / 1	Possible
Kestrel *Falco tinnunculus*	Amber List	5 / 4	Confirmed
Hobby *Falco subbuteo*	Green List WCA Sch.1	1 / 1	Non-breeder
Rook *Corvus frugilegus*	Amber List	177 / 6	Non-breeder
Skylark *Alauda arvensis*	Red List NERC S.41	198 / 6	Confirmed
House martin *Delichon urbicum*	Red List	9 / 3	Possible
Willow warbler *Phylloscopus trochilus*	Amber List	24 / 4	Possible
Sedge warbler *Acrocephalus schoenobaenus*	Amber List	1 / 1	Possible
Whitethroat *Curruca communis*	Amber List	36 / 5	Confirmed
Wren *Troglodytes troglodytes*	Amber List	67 / 6	Confirmed
Starling *Sturnus vulgaris*	Red List NERC S.41	384 / 3	Probable
Song thrush *Turdus philomelos*	Amber List NERC S.41	21 / 6	Confirmed
Mistle thrush *Turdus viscivorus*	Red List	7 / 4	Confirmed
Redwing *Turdus iliacus*	Amber List WCA Sch.1	205 / 1	Non-breeder
Fieldfare *Turdus piliaris*	Red List WCA Sch.1	387 / 1	Non-breeder
Wheatear *Oenanthe oenanthe*	Amber List	6 / 2	Non-breeder
House sparrow *Passer domesticus*	Red List NERC S.41	2 / 2	Confirmed
Dunnock *Prunella modularis*	Amber List NERC S.41	52 / 6	Confirmed
Yellow wagtail *Motacilla flava*	Red List NERC S.41	3 / 3	Possible

Species	Legal / Conservation Status	Peak Count / No. of Survey Visits	EOAC Breeding Status
Meadow pipit *Anthus pratensis*	Amber List	39 / 5	Confirmed
Bullfinch *Pyrrhula pyrrhula*	Amber List NERC S.41	6 / 5	Confirmed
Greenfinch *Chloris chloris*	Red List	19 / 5	Probable
Linnet *Linaria cannabina*	Red List NERC S.41	39 / 5	Confirmed
Corn bunting *Emberiza calandra*	Red List NERC S.41	11 / 5	Confirmed
Yellowhammer *Emberiza citrinella*	Red List NERC S.41	106 / 6	Probable
Reed bunting *Emberiza schoeniclus*	Amber List NERC S.41	17 / 6	Confirmed

Incidental Records

5.24 In addition to the winter active roost site discussed below, a potential barn owl nest site was identified during an aerial tree assessment of potential bat roost features undertaken on 13/05/25 of a tree hole west of Ashgrove Farm in the northern third of the Main Site (grid reference SP 529 261). Some white-washing and pellet deposition was noted around the entrance to a cavity on the trunk and at the base of the tree at this time. Adult birds were subsequently seen leaving and returning to this nest hole during a bat activity survey from a nearby vantage point position on 24/06/25 at which point the nest site was confirmed active and the species consequently upgraded to a confirmed breeder on-site. A foraging barn owl was observed over rough grassland within the Ardley IVC Composting Facility located centre-east of the Main Site on the 24/04/25, and an adult bird was observed to leave an inaccessible outbuilding at Ashgrove Farm during a bat emergence survey on 05/08/25 prior to crossing the intervening field and commencing foraging around the Ardley IVC Compositing Facility at dusk. Given the proximity of Ashgrove Farm to the confirmed tree nest site it is considered that all observations relate to the same breeding pair, with the outbuilding at Ashgrove Farm used by the male of the pair once the chicks had hatched.

5.25 An apparent tawny owl pair was regularly encountered during bat activity and trapping surveys between May and July. These sightings occurred towards the southwest of the survey area within Burntclose Copse bordering Gagle Brook where the species was also recorded during the dusk breeding bird survey. The presence of an apparent pair within suitable habitat was considered sufficient to upgrade the breeding status classification for tawny owl to probable.

5.26 A pair of kestrels was observed entering a hole within a large dead hedgerow tree immediately south of Ashgrove Farm on 13/05/25 during an aerial assessment of potential bat roost features. The contents of the cavity were not examined directly however the presence of two agitated adults in a suitable nesting feature in mid-May was considered sufficient evidence to treat kestrel as a confirmed breeding species on-site.

Breeding Bird Assemblage Description

5.27 The breeding bird species recorded were typical of the habitats present across the survey area, being heavily influenced by the current agricultural management undertaken across both the majority of the Main Site and a significant proportion of land within and adjacent to the Highways Works Areas. The composition of the breeding bird assemblages associated with the various habitats outlined below were consistent with those recorded during previous surveys

undertaken. Variances in species lists were limited to a very small number of species, most of which were recorded as lingering winter visitors and/or spring passage migrants during the most recent survey suite due to the change in survey guidance that now requires an early season survey in March that was not a requirement during previous field seasons.

5.28 Arable fields and their associated margins support a relatively limited assemblage of breeding birds, though this does include several species predominantly associated with farmland habitats, namely grey partridge, skylark, yellow wagtail, linnet, corn bunting, yellowhammer, and reed bunting, all of which are declining species of national conservation priority (Species of Principle Importance under Section 41 of the NERC Act 2006). Numbers of these specialised species of conservation priority were typically low given the size of the survey area, though more significant populations of skylark and yellowhammer were present. Peak counts for these two species were recorded in March, which was likely related to lingering winter aggregations utilising fallow fields that provided foraging opportunities, though skylark and yellowhammer numbers remained consistently at Local-County level importance throughout the breeding season. Few other species were present as confirmed or probable breeders within the arable field interiors, with these areas primarily used as transient foraging sites by common and widespread generalists encountered commonly throughout the region, and by birds of prey including both red kite and kestrel. Fallow fields supported further lingering aggregations of overwintering bird species into the spring including mixed flocks of the farmland specialist granivorous passerines discussed above, in addition to large transient flocks of woodpigeons and mixed flocks of foraging and loafing gulls. The gull species were observed to commute between the survey area and the adjacent Viridor ERF and pools within gravel pits at Ardley Quarry.

5.29 Sheep-grazed grasslands across the Main Site supported a very limited breeding bird assemblage, with no species considered to be directly breeding within such habitats. The adjacent perimeter hedgerows however supported typical farmland species including yellowhammer. Grazed compartments were utilised by foraging rooks and by smaller numbers of woodpigeon, gulls, common and widespread corvids, and passage wheatear *Oenanthe oenanthe* which were also recorded during migration on previous surveys. Moderately sized flocks of winter thrushes, both redwing and fieldfare, were recorded as foraging during the March survey occasion but not during subsequent visits, indicating these were lingering overwintering birds and/or flocks stopping over on passage.

5.30 Rough grassland was mostly restricted to the capped landfill in the east of the Application Site, with smaller parcels around existing highways infrastructure further north, and as narrow field margins to some fields in the south of the Main Site. These longer swarded, ungrazed parcels support a similar breeding bird assemblage to the arable field margins, with a relatively high density of skylarks compared to cereal cropland within the survey area, and linnet around the scrub margins. Additional species recorded within these grassland areas that were not noted present elsewhere within the Main Site included moderate numbers of meadow pipit and smaller numbers of reed bunting *Emberiza schoeniclus*, both confirmed as breeding. Swift foraged over this area frequently from the May survey until the end of the season. There are no suitable nest sites for swift within the Application Site, however it is likely there are suitable nesting sites available within the villages of Ardley and Middleton Stoney close to the Application Site boundary.

5.31 The hedgerows, areas of scrub and woodland bordering the open field compartments host several resident and migratory breeding bird species, including a relatively wide range of

common and widespread taxa such as common thrush, tit, warbler, and finch species. In addition, hedgerows bordering arable and grassland fields throughout the Application Site provide nesting opportunities for farmland bird species including linnet, yellowhammer, and reed bunting. Denser thickets of scrub along the railway embankments provide a different array of niches that support additional species such as willow warbler *Phylloscopus trochilus* and bullfinch. Many of the mature tree standards within the hedgerows have suitable cavities to support nesting stock doves and such features were utilised by breeding pairs of both barn owl and kestrel. Woodland within the Main Site occurs in small blocks supporting typical assemblages of common and widespread bird species plus mistle thrush. The more extensive woodland bordering Gagle Brook in the southeast of the survey area supported breeding tawny owl in addition to the woodland assemblage recorded across the Application Site.

5.32 The narrow watercourses and small ponds support relatively few breeding birds, though small numbers of notable mallard and moorhen were recorded close to suitable breeding habitat. Wetland habitats within an established newt mitigation area beyond the Application Site close to the M40/A43 junction supported a single sedge warbler *Acrocephalus schoenobaenus* in June. A single kingfisher *Alcedo atthis* was recorded along Gagle Brook in April but was not seen on any other survey occasion and is therefore considered unlikely to utilise the Application Site on a regular basis or to breed within the Application Site.

5.33 Farm buildings and surrounding developed areas supported limited assemblages of breeding birds, largely limited to common and widespread species tolerant of anthropogenic disturbance such as house sparrow *Passer domesticus* and dunnock *Prunella modularis*.

Wintering Bird Surveys

5.34 A total of 74 bird species were recorded within the survey area during the 2024-25 winter period (for complete list see Appendix C). Of these, three species were recorded overflying the survey area only and therefore were not considered to be utilising the Application Site. As such these are not considered likely to be impacted by the proposed development as they did not interact with the habitats present.

5.35 Of the 71 species recorded across the Application Site, 36 are considered notable species, as summarised in Table 5, with the respective distributions of each illustrated in Figures 3a-c.

Table 5: Notable Wintering Species Recorded

Species	Legal / Conservation Status	Peak Count / No. of Survey Visits
Mallard *Anas platyrhynchos*	Amber List	9 / 3
Grey partridge *Perdix perdix*	Red List NERC S.41	12 / 3
Stock dove *Columba oenas*	Amber List	65 / 4
Woodpigeon *Columba palumbus*	Amber List	2262 / 4
Moorhen *Gallinula chloropus*	Amber List	1 / 2
Lapwing *Vanellus vanellus*	Red List NERC S.41	259 / 4
Snipe *Gallinago gallinago*	Amber List	40 / 4
Green sandpiper *Tringa ochropus*	Amber List WCA Sch.1	1 / 2
Black-headed gull *Chroicocephalus ridibundus*	Amber List	131 / 1

Species	Legal / Conservation Status	Peak Count / No. of Survey Visits
Common gull *Larus canus*	Red List	1 / 1
Great Black-backed gull *Larus marinus*	Red List	1 / 1
Herring gull *Larus argentatus*	Red List NERC S.41	6 / 2
Lesser black-backed gull *Larus fuscus*	Amber List	100 / 2
Sparrowhawk *Accipiter nisus*	Amber List	3 / 4
Red kite *Milvus milvus*	Green List WCA Sch.1	14 / 4
Barn owl *Tyto alba*	Green List WCA Sch.1	2 / 2
Short-eared owl *Asio flammeus*	Amber List	1 / 1
Kestrel *Falco tinnunculus*	Amber List	12 / 4
Merlin *Falco columbarius*	Red List WCA Sch.1	1 / 1
Rook *Corvus frugilegus*	Amber List	94 / 4
Skylark *Alauda arvensis*	Red List NERC S.41	295 / 4
Wren *Troglodytes troglodytes*	Amber List	51 / 4
Starling *Sturnus vulgaris*	Red List NERC S.41	758 / 4
Song thrush *Turdus philomelos*	Amber List NERC S.41	40 / 4
Mistle thrush *Turdus viscivorus*	Red List	12 / 4
Redwing *Turdus iliacus*	Amber List WCA Sch.1	500 / 4
Fieldfare *Turdus piliaris*	Red List WCA Sch.1	529 / 4
Dunnock *Prunella modularis*	Amber List NERC S.41	46 / 4
Grey wagtail *Motacilla cinerea*	Amber List	1 / 1
Meadow pipit *Anthus pratensis*	Amber List	122 / 4
Bullfinch *Pyrrhula pyrrhula*	Amber List NERC S.41	6 / 4
Greenfinch *Chloris chloris*	Red List	18 / 3
Linnet *Linaria cannabina*	Red List NERC S.41	16 / 4
Corn bunting *Emberiza calandra*	Red List NERC S.41	85 / 3
Yellowhammer *Emberiza citrinella*	Red List NERC S.41	337 / 4
Reed bunting *Emberiza schoeniclus*	Amber List NERC S.41	73 / 4

Wintering Bird Assemblage Description

5.36 The wintering bird species recorded were largely typical of the habitats present across the survey area, being heavily influenced by ongoing agricultural management, though did include some species with less extensive distributions at county scale such as short-eared owl *Asio flammeus* and merlin discussed further below. The composition of the wintering bird

assemblages associated with the various habitats outlined below were consistent with those recorded during previous surveys undertaken, with minor differences limited to small peak counts of a very small number of species i.e. rare wintering species at a local scale.

5.37 Arable field interiors were variably left to stubble, were sown with winter cereals, or supported a cover crop or unharvested non-arable crops, with the wintering bird assemblages present varying according to the cropping regime.

5.38 Most arable land within the survey area was managed overwinter as stubble. These areas provided foraging opportunities for low to moderate numbers of typical species with notable farmland specialist species limited to small to moderately sized flocks of skylark. Other notable species recorded foraging within arable stubbles included large mixed flocks of woodpigeon and stock dove (particularly in the large compartment at the westernmost extent of the Main Site), plus transient groups of starling and winter thrushes, small flocks of rooks, and small to moderate numbers of snipe, mistle thrush, meadow pipit, and yellowhammer. A short-eared owl was recorded roosting in a bramble thicket on the boundary between on-site stubble fields and the adjacent former airfield in December, though rough grassland habitats within the former airfield appear to be more suitable for supporting populations of small mammals and therefore foraging is most likely to predominantly occur off-site.

5.39 The field to the south of the M40/A43/B430 junction within the Highways Works Area supported a sugar beet crop until January, then was cleared and prepared for planting prior to the February survey, whilst two fields within the Main Site northwest of Ashgrove Farm were planted with a seed-bearing cover crop. These compartments supported the majority of farmland specialist granivorous species recorded, with mixed flocks comprising skylark, finches including notable greenfinch and linnet, and buntings including corn bunting, yellowhammer, and reed bunting. Total counts of farmland granivorous species on-site generally increased throughout the winter season, with flocks becoming progressively more aggregated around the cover crop compartments where seed resources persisted into late winter. In addition to granivorous farmland birds, another farmland specialist, grey partridge, utilised these compartments alongside more generalist foraging flocks of stock dove, woodpigeon, starling, and winter thrushes as in the stubble areas. Birds of prey including sparrowhawk, red kite, and kestrel were all encountered hunting in and around these compartments.

5.40 Winter cereal fields were restricted to one large field compartment immediately south of Ashgrove Farm, and four smaller fields to the west of the M40 at the northern extent of the survey area within the M40/A43 junction improvement works area. The smaller compartments supported a relatively limited assemblage of wintering birds, with transient foraging flocks of starling, redwing, and fieldfare the only notable species present with any regularity. The northernmost, and largest, of these four compartments did sporadically support very small numbers of foraging meadow pipit, whilst all were additional foraging areas for red kite. The large field compartment south of Ashgrove Farm supported a similarly limited wintering bird assemblage of common and widespread generalists with few notable species, though early in the season prior to crop germination the bare substrate regularly supported flocks of both lapwing and golden plover *Pluvialis apricaria*. The numbers of these species fluctuated between survey occasions as birds commuted across to suitable habitats within the Viridor ERF and Ardley Quarry adjacent to the west of the Main Site. A single common gull *Larus canus* was noted in the same field in November.

5.41 The southern arable compartments within the Main Site comprised a mosaic of unploughed stubbles over winter, through which grew areas of unharvested brassica and rye-grass fodder. These areas were comparatively limited in their value to wintering birds and supported a very limited assemblage consisting of common and widespread generalists found ubiquitously across the Application Site in winter. Notable species were largely limited to woodpigeon and meadow pipit, both occurring in lower numbers than elsewhere on-site, plus species of low conservation concern including corvids. The field compartment directly adjacent to Ardley Quarry did additionally provide supplementary roosting areas for lapwing to those discussed above, with starling and mistle thrush also present within this compartment on occasion.

5.42 Three deep ploughed fields left unsown throughout the winter in the northeast of the Main Site were scarcely used by wintering birds, with records limited to very small numbers of skylarks and mostly relating to birds from the adjacent cover crop drinking at small pools within ruts. Some small groups of woodpigeons foraged in these compartments on occasion.

5.43 Sheep-grazed grasslands across the Main Site supported a very limited assemblage of wintering birds that included small numbers of skylarks and meadow pipits among tussocky areas. Moderately sized flocks of winter thrushes, both redwing and fieldfare, were recorded as foraging within these compartments, whilst a mixed flock of gulls, predominantly lesser black-backed gulls, foraged in the southern compartment in both January and February, with birds also recorded commuting to wetland habitats within the nearby Ardley Quarry. Inundated sections of the grazed grasslands provided additional habitat for mallard, and rougher areas at the margins were used by foraging kestrels on occasion.

5.44 Rough grassland was mostly restricted to the capped landfill in the east of the Application Site, with smaller parcels around existing highways infrastructure to the north, and as narrow field margins to some fields in the south of the Main Site. These ungrazed parcels with a longer sward supported a similar wintering assemblage to the arable field margins and one that was largely consistent with the breeding season. These areas continued to be utilised by moderate numbers of skylark, with numbers remaining largely constant throughout the winter, i.e. these did not appear to follow the patterns seen within arable land nor did the grassland support increasing flocks as was the case in the cover crops. Also recorded within rough grassland areas were relatively constant moderate numbers of meadow pipit and smaller numbers of reed bunting. Birds of prey were regularly recorded within the capped landfill area, with sparrowhawk, red kite, kestrel, and merlin (a presumed returning individual encountered within all previous wintering survey suites) actively hunting across this area.

5.45 The hedgerows, areas of scrub, and woodland bordering the field compartments provided roosting sites for the farmland bird assemblages recorded. Furthermore, these habitats supported several notable resident and migratory overwintering species including wren, dunnock, and bullfinch, in addition to flocks of winter thrushes utilising berry-bearing shrubs, and aggregations of finches utilising seed-bearing weeds at the margins. The small woodland blocks supported a relatively restricted wintering bird assemblage characterised by small populations of abundant and widespread species present throughout the region such as goldcrest *Regulus regulus*, nuthatch *Sitta europaea*, treecreeper *Certhia familiaris*, and woodpeckers. Hunting sparrowhawks were recorded on all four survey occasions in association with linear hedgerow features widely spread across the survey area.

5.46 The watercourses and ponds supported relatively few overwintering birds, though small numbers of notable mallard and moorhen were present on multiple survey occasions. Single

individuals of Canada goose *Branta canadensis*, Egyptian goose *Alopochen aegyptiaca*, coot *Fulica atra*, and cormorant *Phalacrocorax carbo*, plus two mandarin ducks *Aix galericulata* were recorded throughout the season across ponds outside the Application Site, though all occurred on single survey occasions only. Wetland habitats within the newt mitigation area beyond the Application Site boundary close to the M40/A43 junction supported further mallard and moorhen, with reed bunting also present within marginal vegetation at the peripheries. No bird species were directly associated with Gagle Brook during any of the surveys though this feature is likely utilised as a water source during the winter.

5.47 Farm buildings and surrounding developed areas supported limited assemblages of wintering birds, largely limited to common and widespread species of scrub and woodland that are also tolerant of a degree of anthropogenic disturbance, particularly woodpigeon, dunnock, and wren. A kestrel was noted hunting around the farmyard at Ashgrove Farm on one occasion.

5.48 A regularly used barn owl winter roost was located within a partially derelict outbuilding at the former Nevilles Farm at the eastern edge of a field to be bisected by the proposed Ardley Bypass.

2026 Surveys

5.49 A total of 35 bird species were recorded within the additional farmland bird mitigation land during the three survey occasions undertaken in 2026 (for complete list see Appendix D). Of these, three species were recorded overflying the survey area only and therefore were considered to be non-breeders within the additional mitigation fields. As such, these are not considered likely to be impacted by the proposed changes in land management as they do not interact with the habitats present.

5.50 Of the remaining 32 species recorded across the additional mitigation fields, 16 are notable species. Records of notable species are summarised in Table 6, and the respective distributions are illustrated in Figure 4.

Table 6: Notable Breeding Species Recorded (Additional Mitigation Land)

Species	Legal / Conservation Status	Peak Count / No. of Survey Visits	EOAC Breeding Status
Grey partridge *Perdix perdix*	Red List NERC S.41	1 / 1	Possible
Swift *Apus apus*	Red List	41 / 3	Non-breeder
Stock dove *Columba oenas*	Amber List	1 / 3	Possible
Woodpigeon *Columba palumbus*	Amber List	15 / 3	Possible
Sparrowhawk *Accipiter nisus*	Amber List	1 / 2	Non-breeder
Red kite *Milvus milvus*	Green List WCA Sch.1	1 / 2	Non-breeder
Rook *Corvus frugilegus*	Amber List	1 / 3	Non-breeder
Skylark *Alauda arvensis*	Red List NERC S.41	18 / 3	Confirmed
House martin *Delichon urbicum*	Red List	13 / 1	Non-breeder
Whitethroat *Curruca communis*	Amber List	2 / 3	Probable
Wren *Troglodytes troglodytes*	Amber List	7 / 3	Confirmed

Species	Legal / Conservation Status	Peak Count / No. of Survey Visits	EOAC Breeding Status
Song thrush *Turdus philomelos*	Amber List NERC S.41	1 / 2	Possible
Dunnock *Prunella modularis*	Amber List NERC S.41	3 / 1	Possible
Yellow wagtail *Motacilla flava*	Red List NERC S.41	4 / 3	Possible
Linnet *Linaria cannabina*	Red List NERC S.41	3 / 2	Possible
Yellowhammer *Emberiza citrinella*	Red List NERC S.41	5 / 3	Confirmed

Breeding Bird Assemblage Description

5.51 The breeding species recorded within the additional mitigation land were typical of the habitats present being heavily influence by the intensive arable land use, and largely consistent with the corresponding assemblages within the Survey Area covered in 2025.

5.52 The two arable fields and their associated narrow margins support a relatively limited assemblage of breeding birds, though this does include several species predominantly associated with farmland (and for which this land is proposed to be enhanced), namely grey partridge, skylark, yellow wagtail, linnet, and yellowhammer, all of which are declining species of national conservation priority (Species of Principle Importance under Section 41 of the NERC Act 2006). Numbers of these specialised species of conservation priority were similar to the compartments under comparable management within the Main Site in that they were typically low for the extent of habitat present, though more a more significant population of skylark was present. Few other species were present as breeding species within the arable fields, with these habitats primarily used as transient foraging sites by common and widespread generalists encountered commonly throughout the region including notable species such as woodpigeon, hunting raptors including both red kite and sparrowhawk, and hawking groups of both swift and house martin.

5.53 The hedgerows and sections of woodland edge adjacent to the field boundaries host several resident and migratory breeding bird species all of which were present across these habitats within the Survey Area in 2025. The limited extent of such habitats available within the additional mitigation land is such that the associated breeding bird assemblage is comparatively limited in species diversity and comprises only common and widespread taxa including tit, warbler, and finch species. These features do provide some further nesting opportunities for notable farmland bird species including linnet and yellowhammer.

6.0 DISCUSSION

6.1 The Proposed Development will result in significant habitat loss from the Application Site. Within the Main Site there will be total loss of existing arable and the removal of the majority of grassland habitats. There will additionally be partial loss of existing hedgerow and scrub habitats and of small woodland blocks. The two narrow woodlands within the Main Site that extend south-west from Ashgrove Farm will be retained, as will much of the existing scrub corridor either side of the existing railway cutting, and perimeter hedgerows where present.

6.2 Though mostly retained, a section along the northern edge of the rough grassland atop the capped landfill will also be lost to facilitate remediation and railway infrastructure connections. Part of the remainder of the northern section of the capped landfill is to be used to redistribute excavated contaminated material before being recapped and covered with won topsoil. Impacts will be limited

to a single breeding season after which management will revert to the current regime and existing habitats are subsequently expected to revert to the current rough grassland in the longer term.

6.3 The M40 J10 Highways Works Area will result in the loss of areas of arable land and a small area of woodland to the northeast of Ardley village for the new slip road routes. To the northeast of the Main Site the route of the new Ardley Bypass will bisect several arable fields and hedgerows and will hence result in the fragmentation of the large fields into a series of more enclosed compartments either side of the Bypass. To the southeast, the proposed Middleton Stoney Relief Road will cross existing arable land and will necessitate the removal of a narrow section of the woodland corridor along Gagle Brook. Adjacent arable land will be removed to facilitate the provision of structural planting and other habitats to deliver foraging and shelter opportunities for local fauna and to promote on-site biodiversity generally.

6.4 The green infrastructure proposed throughout the Main Site will include structural planting along a screening bund surrounding much of the perimeter that will be footed by areas of native species-rich grassland. A series of ponds will be created to the west of the developed area. In the south large attenuation basins will be largely grass covered but with central over-deepened channels supporting aquatic habitats year-round, and will be surrounded by more extensive grassland interspersed with newly created shrub, hedgerow, tree and woodland planting. To the northwest of the Main Site three arable parcels closely adjacent to the Chiltern main line and Upper Heyford Airfield LWS are to be converted from cereal cropland to floristically diverse native species grasslands as part of a wider scheme of farmland bird mitigation across the site.

6.5 Around the M40 J10 Highways Works Area additional structural planting is to be incorporated that will have a screening function to the new road infrastructure. Corridors of grassland will also be created in these areas. Further structural planting will be undertaken to the west of the Ardley Bypass, and to the east will be a grassed verge separated from the adjacent retained arable land (within the survey area but outside the Application Site) by a newly created hedgerow interspersed with tree standards.

6.6 Arable land between the Middleton Stoney Relief Road and Ardley Quarry will be converted to a mixture of native grassland, scrub and tree planting to deliver further foraging and shelter opportunities for local bird assemblages and other fauna.

6.7 The following section provides an assessment of the potential impacts of the proposals on breeding and wintering bird assemblages, and populations of constituent species thereof, within and in the vicinity of the Site. This evaluation has been informed by the Illustrative Masterplan (Drawings 08308-FPCR-ZZ-XX-DR-L-0002 RevP28 (FPCR 09/02/26) and 08308-FPCR-ZZ-XX-DR-L-0003 RevP26 (FPCR 09/02/26)).

Designated Sites

6.8 The Main Site is located directly adjacent to Upper Heyford Airfield LWS. Habitats within the Main Site can provide a habitat resource that is used at certain times by the bird populations highlighted within the LWS citation and/or populations of species within its cited assemblage namely grey partridge, skylark, and corn bunting. Given both areas support suitable breeding sites however, the LWS and the Main Site likely constitute two distinct elements of the same metapopulation. It is evident that the cover crops included in the arable rotation within the Main Site are valuable to farmland birds during the winter, including the species cited by the non-statutory designation, and provide valuable foraging for birds breeding locally but outside the Application Site.

Impact Assessment

6.9 The following potential impacts to the recorded bird populations and assemblages may result from the proposals:

- Direct loss/change of habitat, including habitat fragmentation;
- Disturbance during construction and/or operation, and
- Disturbance due to proximity of road infrastructure to occupied barn owl sites.

Habitat Loss

6.10 The proposed development will lead to the total loss of all arable habitat from within the Application Site and significant fragmentation of adjacent areas of arable land to the east of Ardley village in order to facilitate the Highway Improvement works.

6.11 Arable land within the Main Site represents a significant proportion of the arable habitat present locally. Furthermore, whilst the granivorous passerine species that make up the majority of the recorded farmland bird assemblage have gregarious habits in the winter, and utilise a network of cropland habitats across vast areas highly dependent on cropping regimes and agricultural management practices, the regular presence of significant aggregations within the Main Site is indicative of the significant role of the Main Site within this network at a local scale and above.

6.12 Some of the rough grassland atop the capped landfill is to be lost permanently to facilitate the railway infrastructure, though these losses will directly impact only a relatively small proportion of the total area available to breeding and wintering birds. However, much of the grassland within the northern section of the landfill is to be temporarily impacted during the construction phase as contaminated material won from the excavation of the proposed rail lines and regrading of the adjacent landform is to be redistributed across much of the existing landfill area (see Drawing No. OxSRFI-BWB-GEN-XX-SK-CH-SK068 P04, BWB Consulting 10.06.25). On completion of redistribution the landfill is to be recapped with topsoil and managed as per the current regime such that reversion to rough grassland habitat is expected in the long-term, though earthworks would displace breeding and wintering birds from this area until grassland has sufficiently re-established. Therefore, whilst permanent impacts to the bird assemblages present here are therefore considered unlikely to be significant, a temporary impact is anticipated, likely extending across no more than two years, comprising one year of earthworks and one of habitat reestablishment, following which the value of this grassland to species such as skylark, meadow pipit, and reed bunting will be restored.

6.13 The value of individual arable and rough grassland habitats within the site for farmland birds varies spatially and seasonally. The usage of suitable habitats by farmland birds aligns with the established patterns typical of arable land in that during the breeding season farmland birds are sparsely distributed across large areas where cropping is suitable, then during winter granivorous species form flocks and increasingly congregate around sources of food such as spilled grain or purposely planted cover crops as supplies diminish elsewhere when cropping regimes differ.

6.14 The breeding distributions of the recorded granivorous bird species typically associated with farmland in a local context are shown per compartment of suitable arable or grassland habitat on Figure 5-8 (skylark (Figure 5a), corn bunting (Figure 6a), yellowhammer (Figure 7a), reed bunting (Figure 8a)) and classified according to the potential significance of the population associated with that compartment. The number of breeding territories or peak count of

individuals recorded during winter respectively are also provided. The significance of each compartment with respect to breeding is derived from the recorded density of breeding territories in relation to published data on the average density for each species in arable landscapes. Compartments where the recorded territory density exceeds 1.5 times the average density are considered of high significance, those between 0.67-1.5 times the average density are considered of moderate significance, whilst all other compartments are considered of low significance.

6.15 For all farmland species recorded during the breeding season the peak counts of farmland birds were recorded in March. This is a result of lingering overwintering flocks of granivorous species around compartments where grain persisted into late winter that had yet to disperse onto breeding territories. These flocks result in much greater densities of individuals than each compartment could support for breeding which is demonstrated by the lower number of individuals regularly present in those compartments across the full season.

6.16 The compartments supporting the highest densities of skylarks were the rough grasslands atop the capped landfill whilst arable land across the site typically supported lower densities, and breeding territories were absent from grazed compartments. Arable compartments where territory densities were of greater significance were typically located adjacent to areas of grassland habitat such as surrounding the Upper Heyford Airfield LWS, unworked areas at the periphery of Ardley Quarry, and around the capped landfill. Away from these areas only the arable field immediately south of the M40 J10 was of high significance for breeding skylarks, most likely because the spring cereal cropping regime provided suitable vegetation much later into the season than most of the site which was under a winter cereal rotation. Late nesting attempts were therefore clustered around the limited suitable habitat. The distribution of breeding yellowhammer displayed little affiliation to specific compartments, instead being thinly spread across cereal fields. The number of pairs correlated to field size, likely reflecting the corresponding length of perimeter hedgerow, with pair density broadly consistent across occupied fields. Corn bunting and reed bunting were almost absent as breeding species on-site with the former only being found in two locations: the margins of a field in the northwest directly adjacent to Upper Heyford Airfield LWS from which several males were audible throughout the breeding season and which supports habitats of greater suitability than winter cereal crops, and the field immediately south of the M40 J10 where the spring sowing of cereal crops prolonged the suitability of the crop for nesting corn bunting later than winter sown compartments, reflecting the late breeding cycle exhibited by this species. Breeding reed buntings were only recorded from within rough grasslands atop the capped landfill and from within small reedbeds around ponds in the centre of the M40 J10 area.

6.17 The arable land within the additional mitigation area in the northwest of the Order Limits is not proposed for development and will be enhanced through changes in management and therefore no additional impacts to breeding birds in terms of habitat loss or fragmentation are expected to occur as a result of this lands' inclusion within the Order Limits.

6.18 The significance of each parcel to overwintering farmland birds is based on the thresholds published in the Oxfordshire Local Wildlife Site selection criteria for wintering birds where parcels at or exceeding the threshold for a given species are considered of high significance, those at or exceeding 50% of the threshold are considered of moderate significance, and all other compartments are considered of low significance.

6.19 Winter usage of the site by farmland birds was highly correlated with the cropping regime within each compartment. The most significant areas for all granivorous farmland birds were the two fields planted with a cover crop through a layer of cereal stubble which provided a significant foraging resource (Figures 5b, 6b, 7b, 8b). Away from this area the field immediately south of the M40 J10 supported an unharvested sugar beet crop, again with previous stubble in situ, that supported most of the corn buntings and a significant proportion of the skylarks overwintering within the site. The densities of overwintering farmland birds away from these fields were low, although small flocks of skylarks were present throughout other arable land and within rough grassland. Such populations are likely to be transient between seasons across both the site and adjacent farmland depending on the cropping rotation each season.

6.20 The removal of existing arable habitat from the Application Site will adversely impact the current breeding farmland bird assemblage including the skylark and yellowhammer breeding populations currently both of county-level significance, and species including grey partridge, linnet, corn bunting, and reed bunting that occur in populations of local-level significance. Removal of these habitats will additionally reduce the availability of foraging resources that have regularly supported wintering populations of farmland birds and most recently held overwintering populations of county-level significance for golden plover, skylark, corn bunting, yellowhammer, and reed bunting, and of local-level significance for grey partridge, lapwing, snipe, red kite, and a significant proportion of the overwintering meadow pipit population that rely on arable stubbles. Furthermore, the fragmentation of other arable field parcels within the local area, such as via the construction of the Ardley Bypass, will further contribute to adverse effects on farmland birds associated with the Proposed Development. Ardley Bypass will for example bisect the field immediately south of the M40/A43 junction that supported most of the recorded corn bunting during both the breeding and wintering seasons.

6.21 In the absence of appropriate mitigation, the loss of arable land would likely adversely impact local populations of breeding and wintering farmland birds as the proposals necessitate the loss of substantial areas of arable land that currently form part of the inter-annual rotation providing nesting and wintering foraging resources.

6.22 The loss of actively grazed grassland across the Main Site will have negligible impact on the breeding and wintering bird assemblages present as this habitat has limited suitability and thus is utilised only as a transient foraging resource by birds during the breeding and wintering seasons.

6.23 The loss of interior hedgerows from across much of the Main Site and the fragmentation of hedgerow and scrub habitats alongside the existing railway line and within the Highways Works Areas will reduce the overall availability of breeding and wintering habitat for the notable generalist bird species recorded. This loss also has the potential to inhibit southeast connectivity to Upper Heyford Airfield LWS and across the Application Site. Adverse impacts arising from the loss of hedgerows within the Main Site are not anticipated to be significant at a local scale or above given the common and widespread nature of the bird species recorded, which are typical of the habitats present on-site and within the wider landscape.

6.24 Small areas of scrub and woodland within the Main Site are to be lost though this is not likely to be significant at a local scale or above given the limited breeding and wintering bird assemblages associated with these habitats and the common and widespread nature of the bird species recorded.

6.25 The creation of bunds with mixed native species woodland and scrub planting around the perimeter of the Main Site and along the Ardley Bypass and Middleton Stoney Relief Road is an integral component of the Proposed development and hence considered embedded mitigation. This planting will include a greater shrub and tree species diversity than that currently present and once established will provide alternative north-south and east-west connectivity and alternative nesting and foraging resources for a wide range of generalist breeding and wintering birds.

6.26 All hedgerows and woodland edge habitats bordering the additional mitigation area in the northwest of the Order Limits will be retained as this area will be enhanced through changes in management and therefore no additional impacts to breeding birds in terms of habitat loss or fragmentation are expected to occur as a result of this lands' inclusion within the Order Limits.

Disturbance

6.27 Construction operations have potential to disturb birds using the development area for breeding, roosting, and foraging. Operations likely to disturb breeding birds include noise and displacement during vegetation clearance, initial ground works and some construction activities. During the breeding season disturbance may lead to nest desertion or the avoidance of an area and could reduce the suitability of retained nesting areas such as hedgerows and woodland edge habitats.

6.28 The primary adverse effect operating on local bird species and assemblages will result from habitat loss, and any impacts from disturbance need only be considered for areas of suitable habitat that remain following clearance i.e. retained woodlands. Given the proposed removal of the majority of existing habitat from within the Application Site to facilitate construction, any breeding and/or wintering bird activity will primarily occur outside the active works area, and any anthropogenic noise would not have any significant direct adverse effects to birds remaining on-site as retained habitats, once habitat loss of surrounding land is considered, will only continue to support common and widespread species often found in close proximity to development.

6.29 Whilst some of the bird species recorded during site surveys are known to be sensitive to increases in noise disturbance above levels to which they are habituated, namely: golden plover, lapwing, barn owl, and short-eared owl, suitable habitat for these species following the initial site clearance will be concentrated around the peripheries of the Main Site and within existing habitats around Ardley Quarry (some of which would be fragmented by Highway Works Areas). These areas are situated beyond the proposed vegetated bund that will surround most of the Main Site and that will provide significant noise attenuation from the point of construction. The mitigating effect of the bund will be further amplified by the planted woody vegetation as it establishes and matures, such that suitable habitats remaining within the Application Site would be sufficiently buffered from the sources of anthropogenic noise that sensitive species are unlikely to be significantly affected.

Barn Owl Nests & Roosts

6.30 The barn owl nest site within the Main Site will be lost as part of the Proposed Development, and habitat fragmentation and anticipated noise disturbance effects are likely to render the roost site at Ashgrove Farm unsuitable for continued occupation. In the absence of mitigation this would result in the likely loss of barn owl as a breeding species from the Application Site.

6.31 As discussed above, in addition to the tree nest, site surveys identified the presence of additional roost sites used by the adult pair of barn owl at Ashgrove Farm (breeding season) and beyond the Application Site the derelict barn at Nevilles Farm (winter season). It is inferred therefore

that the home range of this breeding pair currently spans both sides of existing highway infrastructure, as to be expected given the distribution of higher quality foraging habitat being concentrated mostly to the east of the B430, whilst the occupied nest site is some distance west of the road. It therefore follows that there is an existing mortality risk from road traffic.

6.32 Proposed suitable new foraging habitat for barn owl is to be created throughout the green infrastructure, but will be largely located at the peripheries of the Main Site and adjacent to the Middleton Stoney Relief Road, with gaps in the habitat corridors necessary for road crossings. The new road crossings in combination with anticipated increase in HGV traffic has the potential to increase the risk of barn owl mortality associated with road traffic accidents. The increase in risk is however considered to be small given the existing baseline risk and the topography of the proposed infrastructure, including structural features such as planting and/or earth bunds which will reduce collision risk by forcing barn owls to fly higher over road and rail infrastructure.

Mitigation

Habitat Loss

6.33 The Application Site supports an assemblage of birds typically associated with farmlands. Whilst all such species recorded also use a range of natural habitats this association arises from their ability to exploit the resources provided by arable fields. In a county context, most of the adverse effects on farmland bird species can be compensated through the provision of high-quality grasslands and meadows which typically facilitate higher territory densities than cereal monocultures.

6.34 Clearance of the site will be progressive and generally proceed from north to south, though initial works across c.14.6ha of the capped landfill to enable the reburial of landfill material excavated during construction of new railway infrastructure will commence early in the programme of works. As such, initial impacts to the habitat of higher relative importance for skylark and, to a lesser extent, reed bunting will occur initially, prior to adverse impacts from the loss of arable habitats on-site being realised. This is a temporary impact with expected time scales being one year for the associated earthworks, following which the remaining affected landfill area outside of the new railway cutting would be resown with rough grassland of equivalent ecological value, such that long-term effects at compartment scale are negligible.

6.35 The green infrastructure will incorporate new wetland habitat including attenuation features, some with over-deepened and permanently wet central channels, and small wildlife ponds that will provide enhanced habitat for the assemblage of common and widespread generalist waterbird species recorded. The proposals will also enable bird species requiring more extensive wetland habitats and marginal vegetation known to be present within the survey area but that are currently absent from the Main Site, such as sedge warbler, to expand their range locally. This will provide improved nesting opportunities for reed bunting and further encourage onsite breeding by this species.

Disturbance

6.36 To avoid disturbance to breeding birds, ground clearance works and vegetation removal and/or cutting back will where possible be undertaken prior to the bird-breeding season (i.e. avoiding March to August, inclusive). If this is not possible, the area will be checked prior to removal of vegetation or ground works by an experienced ecologist. If active nests are found, vegetation will be left untouched and suitably buffered from works until all birds have fledged. Specific

advice will be provided prior to undertaking the clearance. This would be a statutory requirement due to the protection of all nesting birds and their nests under the Wildlife and Countryside Act, 1981. A suitably qualified ecologist would supervise this.

6.37 Where proposed footpaths are routed alongside proposed farmland bird mitigation areas there is additional disturbance risk arising from increased noise and activity along the paths and within suitable neighbouring habitat leading to nest abandonment. Increased recreational activity could also lead to the trampling of ground nests by both people and dogs where footpaths are not kept to and to the general degradation of suitable habitat through trampling, eutrophication (including through dog faeces and urination), litter, arson and other anti-social behaviour. Birds are considered to be more wary of dogs than people alone and are known to flush from their nests more frequently and at greater distances when disturbed by dogs[7].

6.38 To minimise any adverse impacts arising from increased recreational disturbance in close proximity to farmland bird mitigation areas, footpaths will where possible be routed close to the margins of grassland parcels, and chain link or post and rail fencing is to be installed alongside the footpaths that will include metal meshing to at least 100cm above ground to prevent dogs going through the fencing. To promote public engagement with nature footpaths within farmland bird mitigation areas could include raised viewing screens accompanied by information boards that detail the mitigation works and identify species from the assemblages being benefitted.

6.39 The proposed area of farmland bird cover crop to support wintering farmland passerines is considered the most susceptible habitat in terms of potential disturbance impacts to priority bird species therefore this will be located away from the proposed footpaths and access.

Barn Owl Nests & Roosts

6.40 The Proposed Development will result in the loss of one occupied barn owl nest site, the likely abandonment of an active barn owl roost site, and the loss of several areas where the species was encountered foraging. To preserve the population status of barn owl locally three barn owl boxes will be provided within the Application Site. These will be situated close to existing suitable foraging habitat in order to minimise the necessity for owls to cross highways and thus keep collision risk as low as feasible. The provision of nest boxes would also ensure that, should the owls relocate to one of these there would be suitable and easily accessible foraging habitat available throughout the construction period, when suitable new habitats created within the green infrastructure are not yet sufficiently established to be of benefit.

6.41 The placement of barn owl boxes has considered proximity to novel sources of anthropogenic disturbance i.e. the development footprint, the realignment of the road network to ensure sufficient separation between owls and major roads, and existing and proposed public rights of way to minimise the risk of boxes being vandalised or other nefarious activity. One box is proposed for the area of grassland creation to the north of the Main Site that is to be managed as part of the overall biodiversity enhancement strategy, where there will be a particular focus on providing a suitable nesting resource and diverse foraging resource for displaced farmland birds. The second box is to be situated towards the east of the Main Site amongst retained on-site rough grassland atop the capped landfill that will continue to have connectivity southwards to higher quality foraging habitats around the Viridor ERF and Ardley Quarry. This north-south

[7] Murison, G. (2002) The impact of human disturbance on the breeding success of nightjar Caprimulgus europaeus on heathlands in south Dorset, England. English Nature, Peterborough.

habitat connectivity further extends to other, more expansive areas of green infrastructure creation throughout the south of the Main Site and associated with the Middleton Stoney Relief Road in which the third box will be located.

6.42 Given the nature of the Proposed Development and the potential for increased mortality risk from road traffic accidents, integrated box designs on the new industrial units are not considered appropriate for this scheme and would be unlikely to be used given the expected level of anthropogenic disturbance (both noise and light) in the immediate vicinity. The boxes will instead either be pole mounted or affixed to a suitably large and open retained mature tree standard. Boxes will be installed prior to commencement of works on-site to allow the resident barn owls sufficient time to locate the new provision before being displaced.

Compensation

Habitat Loss

6.43 An area of floristically diverse species-rich grassland, scrub islands and scattered individual tree standards is proposed in the south of the Main Site, between Ardley Quarry and Gagle Brook and adjacent to the Highway Works Area for the Middleton Stoney Relief Road. Such habitats will increase niche availability and invertebrate populations and hence provide enhanced foraging opportunities and nest sites for generalist bird species of scrub edge habitat and several farmland bird species not reliant on expansive grasslands, including linnet, yellowhammer, warblers and greenfinch, with the grassland providing suitable habitat for corn bunting, with the tree standards and taller scrub offering suitable song perches for displaying males.

6.44 To the northwest of the Application Site the proposals include the conversion of three arable field compartments to species-rich grassland, and the enhancement of an adjoining compartment to provide a seed-bearing cover crop, all high-quality habitat for farmland birds.

6.45 The grassland fields will support a combination of lowland meadow grassland and calcareous grassland, reflective of underlying soil chemistry. Soil testing has shown that nutrient levels are suitable for habitat creation to commence without the need for a period of nutrient stripping. These grasslands will be managed under prescriptions sensitive to farmland and ground-nesting birds that are to include the incorporation of seed-bearing seed mixes, varied sward heights (including some areas of sparsely vegetated or bare ground for grey partridge) and restrictions on the timings of cutting to allow completion of each species' respective breeding cycle and ensure seed availability throughout the winter. The total area of high-quality grassland proposed in the northwest of the Main Site is c.27.0ha in extent and will be created in advance of the landfill earthworks, elevating the carrying capacity of these compartments for farmland birds, particularly skylark, meadow pipit, corn bunting, and reed bunting such that they will have enhanced ability to accommodate displaced nesting pairs including those temporarily displaced from the landfill works area.

6.46 Corn bunting is a relatively specialised species in terms of habitat preference than the other farmland bird species recorded on-site, being naturally found on downland or coastal grasslands and machairs which cannot feasibly be replicated in the local setting. Whilst the field bisected by the proposed Ardley Bypass will remain in arable rotation and should continue to be used by the species to some extent, alternative artificial habitats targeting corn buntings (but that will also benefit other farmland granivorous species) are proposed involving the conversion of the north-westernmost field within the Main Site (c.6.44ha in area) to a seed-

bearing cover crop akin to that which was heavily utilised by overwintering farmland birds during the surveys. This area will be established annually in accordance with the provisions of Sustainable Farming Incentive (SFI) CAB12: Supplementary winter bird food and SFI CAHL2: Winter bird food on arable and horticultural land. The winter bird food mix block should be sown with sufficient time to allow flowering in the first summer after sowing i.e. prior to the end of June and be maintained throughout the winter i.e. until late March. The seed mix for the block should include small seed-bearing crops that are suitable for smaller farmland bird species such as spring sown varieties of wheat, barley, oats, rye, and/or triticale alongside millets, and could also incorporate brassicas such as kale and fodder radish. Blocks should be established by either broadcasting or shallow drilling (maximum depth 1cm) of seeds onto a consolidated seedbed. Ongoing management each year should include resowing areas of failed establishment, with targeted application of fertilisers to smother annual weeds and targeted control of pests and weeds if deemed necessary. The existing narrow margins will be widened and sown with the species-rich, tussock-forming grassland mix broadly following SFI CAHL4: 4m to 12m grass buffer strip on arable and horticultural land. The species mix should contain a relatively high proportion of native, tussock-forming grasses such as timothy and cock's-foot which is managed by way of a staggered annual cut in late summer after breeding bird season.

6.47 The cover crop area and adjacent lowland meadow grassland compartment will each incorporate two raised "beetle banks" to further improve invertebrate diversity and enhance foraging provisions for birds during the breeding season[8]. Beetle banks are to be created and managed in accordance with the protocol specified by Sustainable Farming Incentive AHW3: Beetle banks[9] and involve the creation of raised earthen ridges measuring at least 3m by 5m to a minimum height of 40cm and sown, by broadcasting, with a mixture of fine-leaved grasses together a small component of tussock-forming varieties. Fertilisers and pesticides will not be used. Newly created beetle banks will be cut several times during the first growing season to aid establishment, and from the second growing season onwards cutting will be undertaken between August and November as necessary to remove woody vegetation and/or undesirable species such as thistles.

6.48 The mitigation areas proposed within the scheme have existing usage by farmland birds, proving the suitability of these fields to deliver mitigation. The concentrations of wintering farmland birds around areas of cover crop indicates populations are locally limited by the availability of winter foraging resources and therefore the provision of annually renewed cover crops adjacent to neighbouring arable land to the northwest of the Main Site will ensure such provision is available every year regardless of the cropping regimes on neighbouring farmland.

6.49 Cumulatively the above measures will elevate the carrying capacity of the Application Site throughout the year compared to the baseline arable land use through increased foraging and nesting provision for farmland birds, particularly grey partridge, skylark, and yellow wagtail, in addition to corn bunting and yellowhammer and more generalist species. Despite the overall reduction in open habitats the green infrastructure will therefore enable displaced pairs from within the developed areas of the scheme to be absorbed locally. This mitigation is considered sufficient to mitigate the adverse impacts of the development on breeding farmland birds, with

[8] Murray K.A., Wilcox A. and Stoate C. 2002. A simultaneous assessment of farmland habitat use by breeding skylarks and yellowhammers. *Aspects of Applied Biology* 67: 121-127.
Stoate C. and Moorcroft D. 2007. Research-based conservation at the farm scale: development and assessment of agri-environment scheme options. *Aspects of Applied Biology* 81:161-168.

[9] see https://www.gov.uk/find-funding-for-land-or-farms/ahw3-beetle-banks [Accessed 18.08.25].

no significant long-term impacts anticipated on breeding and overwintering bird assemblages, including priority farmland bird populations.

Enhancements

6.50 Any 'gapping up' of retained hedgerows will include native and fruit/nut-bearing species, including, but not limited to hazel *Corylus avellana,* field maple *Acer campestre*, dog-rose *Rosa canina,* hawthorn *Crataegus monogyna,* dogwood *Cornus sanguinea,* honeysuckle *Lonicera periclymenum,* blackthorn *Prunus spinosa*, elder *Sambucus nigra* and holly *Ilex aquifolium*.

6.51 Additional enhancements proposed be integrated with the on-going management of the Application Site include the provision of a mixture of bird box designs and that a range of nest suitable to support woodland, farmland, and urban birds. The following nest box types and locations are recommended:

- A mix of small hole (26mm and 32mm) boxes among retained habitats will provide nesting opportunities for species such as blue tit *Cyanistes caeruleus* and great tit.
- Small open-fronted nest boxes installed throughout the green infrastructure, especially on trees that support a climber such as ivy which provides a degree of concealment. These boxes typically attract species such as robin *Erithacus rubecula* and blackbird *Turdus merula*;
- Kestrel nest boxes installed at least 5m high on lone trees, buildings or pole-mounted, close to grassland areas where possible;
- Large nest boxes (c.20 x 20 x 40cm) with large holes (15cm) for stock dove installed in small groups at least 3m high on large trees in woodland edge habitats in areas of disturbance.
- Provision of nest boxes for urban birds, including house sparrow, swallow *Hirundo rustica*, and swift, including on the industrial units where feasible.

6.52 Overall, whilst there will be extensive habitat loss from the Application Site, the embedded green infrastructure measures and additional mitigation outlined above will maintain most bird species assemblages including notable species, and deliver net gains in habitat quality across the site and surrounding areas for generalist bird species, woodland specialists and birds associated with wetland habitats, including species that are currently absent (such as sedge warbler) to expand their range locally. It is furthermore anticipated that with the implementation of the above mitigation and compensation strategy the impacts of the proposals on farmland birds and other assemblages recorded would have **negligible** significance, with some enhancements provided at a Local level, particularly for generalist species.

APPENDIX A: EOAC CRITERIA FOR CATEGORISATION OF BREEDING STATUS

Breeding Status evidence is assigned to one of four categories, each with their own codes, as defined by the European Ornithological Atlas Committee:

Confirmed breeder

DD – distraction display or injury feigning
UN – used nest or eggshells found from this season
FL – recently fledged young or downy young
ON – adults entering or leaving nest-site in circumstances indicating occupied nest
FF – adult carrying faecal sac or food for young
NE – nest containing eggs
NY – nest with young seen or heard

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

P – pair in suitable nesting habitat
T – permanent territory (defended over at least 2 survey occasions)
D – courtship and display
N – visiting probable nest site
A – agitated behaviour
I – brood patch of incubating bird (from bird in hand)
B – nest building or excavating nest-hole

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

H – observed in suitable nesting habitat
S – singing male

Non-breeder

F – flying over
M – migrant
U – summering non-breeder
UH – observed in unsuitable nesting habitat

APPENDIX B: BREEDING BIRD SURVEY RESULTS (SURVEY AREA)

Species: Common Name	Species: Scientific Name	Survey 1 04.03.25	Survey 2 14.04.25	Survey 3 15.05.25	Survey 4 05.06.25 dusk	Survey 5 16.06.25	Survey 6 10.07.25	Conservation Status & Protection	Breeding Status
Canada goose	*Branta canadensis*	7 flyovers	7 flyovers	7 + 3 flyovers				Not Listed	Non-breeder UH,F
Greylag goose	*Anser anser*	2 flyovers		2 flyovers			10 flyovers	Amber List WCA Sch.1 (Part II)	Non-breeder F
Mute Swan	*Cygnus olor*						1 flyover	Green List	Non-breeder F
Mallard	*Anas platyrhynchos*	10 + 8 flyovers	6 + 2 flyovers	1 + 6 flyovers	3 flyovers	3 flyovers	4 flyovers	Amber List	Probable D,P,S,H
Grey Partridge	*Perdix perdix*	4		13		2	2	Red List NERC S.41	Probable P,H
Pheasant	*Phasianus colchicus*	10	31	14	3	12	21	Not Listed	Confirmed FL,S,H
Red-legged Partridge	*Alectoris rufa*	6	2			2	23	Not Listed	Confirmed FL,H
Swift	*Apus apus*			2 + 2 flyovers	2	5	3	Red List	Non-breeder UH,F
Feral Pigeon	*Columba livia f. domestica*	12 flyovers	2 + 12 flyovers	6 flyovers		14 flyovers	10 + 26 flyovers	Green List	Non-breeder UH,F
Stock Dove	*Columba oenas*	8 + 10 flyovers	92 + 8 flyovers	6 + 5 flyovers	1 + 2 flyovers	3 + 11 flyovers	11 + 2 flyovers	Amber List	Confirmed ON,N,D,P,S,H,UH,F
Woodpigeon	*Columba palumbus*	1040 + 85 flyovers	137 + 42 flyovers	124 + 96 flyovers	83 + 5 flyovers	108 + 80 flyovers	188 + 80 flyovers	Amber List	Confirmed FL,D,H,UH,F
Collared Dove	*Streptopelia decaocto*			3		2 flyovers		Green List	Possible H,F
Moorhen	*Gallinula chloropus*	1	4	1			1	Amber List	Probable P,H
Lapwing	*Vanellus vanellus*			1 flyover			1 flyover	Red List NERC S.41	Non-breeder F
Snipe	*Gallinago gallinago*	1						Amber List	Non-breeder M

Species: Common Name	Species: Scientific Name	Survey 1 04.03.25	Survey 2 14.04.25	Survey 3 15.05.25	Survey 4 05.06.25 dusk	Survey 5 16.06.25	Survey 6 10.07.25	Conservation Status & Protection	Breeding Status
Green Sandpiper	*Tringa ochropus*	1						Amber List WCA Sch.1	Non-breeder M
Black-headed Gull	*Chroicocephalus ridibundus*	112 + 114 flyovers	12 flyovers			5		Amber List	Non-breeder UH,F
Great black-backed gull	*Larus marinus*	2 flyovers		1 flyover		6 flyovers		Amber List	Non-breeder F
Herring gull	*Larus argentatus*	4 + 11 flyovers	14 flyovers	2 + 9 flyovers	123	29 + 8 flyovers	2	Red List NERC S.41	Non-breeder UH,F
Lesser black-backed gull	*Larus fuscus*	14 + 30 flyovers	73 flyovers	13 + 32 flyovers	1 + 106 flyovers	77 + 31 flyovers	10 + 2 flyovers	Amber List	Non-breeder UH,F
Cormorant	*Phalacrocorax carbo*		1 flyover	5 flyovers				Green List	Non-breeder F
Grey heron	*Ardea cinerea*	2	1 + 1 flyover	4	2 + 1 flyover		1 flyover	Green List	Non-breeder UH,F
Sparrowhawk	*Accipiter nisus*	1	1	1		1	2	Amber List	Confirmed FF,H
Red kite	*Milvus milvus*	19 + 8 flyovers	19 + 9 flyovers	16 + 12 flyovers	36	16 + 8 flyovers	24 + 4 flyovers	Green List WCA Sch.1	Confirmed FF,A,D,P,H,F
Buzzard	*Buteo buteo*	10 + 6 flyovers	13 + 1 flyover	6 + 8 flyovers	9	13 + 4 flyovers	17 + 1 flyover	Green List	Confirmed FF,ON,FL,N,P,H,UH,F
Barn owl	*Tyto alba*	1	3		1			Green List WCA Sch.1	Probable P,H
Tawny owl	*Strix aluco*				1			Amber List	Possible S,H
Kingfisher	*Alcedo atthis*		1					Green List WCA Sch.1	Possible H
Great spotted woodpecker	*Dendrocopos major*	2	4 + 1 flyover	2	1	7 + 1 flyover	4 + 1 flyover	Green List	Confirmed FL,S,H,F
Green woodpecker	*Picus viridis*	3	2	2		1 + 1 flyover	5	Green List	Possible H,F
Kestrel	*Falco tinnunculus*	2	2	5		1 flyover	2	Amber List	Possible H,F
Hobby	*Falco subbuteo*					1		Green List WCA Sch.1	Non-breeder UH

Species: Common Name	Species: Scientific Name	Survey 1 04.03.25	Survey 2 14.04.25	Survey 3 15.05.25	Survey 4 05.06.25 dusk	Survey 5 16.06.25	Survey 6 10.07.25	Conservation Status & Protection	Breeding Status
Ring-necked parakeet	*Psittacula krameri*	1 flyover						Not Listed	Non-breeder F
Jay	*Garrulus glandarius*	2	6	1 flyover		7 + 1 flyover	8	Green List	Probable A,P,S,H,F
Magpie	*Pica pica*	30	39 + 1 flyover	20	4	38 + 5 flyovers	19 + 2 flyovers	Green List	Confirmed FL,P,H,F
Jackdaw	*Coloeus monedula*	49 + 37 flyovers	54 + 18 flyovers	35 + 29 flyovers	40	46 + 13 flyovers	173 + 140 flyovers	Green List	Confirmed FF,ON,B,N,P,H,F
Rook	*Corvus frugilegus*	17 + 3 flyovers	27 + 6 flyovers	22 + 5 flyovers	130 + 1 flyover	177 + 33 flyovers	107 + 109 flyovers	Amber List	Non-breeder U,F
Carrion crow	*Corvus corone*	53 + 13 flyovers	59 + 11 flyovers	18 + 37 flyovers	9	24 + 21 flyovers	11 + 41 flyovers	Green List	Probable A,N,H,F
Raven	*Corvus corax*	1 + 3 flyovers	2 + 5 flyovers	2 + 2 flyovers		3	1 flyover	Green List	Probable D,F
Coal tit	*Periparus ater*						3	Green List	Possible S,H
Blue tit	*Cyanistes caeruleus*	107	73	33	10	70	72	Green List	Confirmed FL,B,A,D,S,H
Great tit	*Parus major*	59	54	38	3	42	44	Green List	Confirmed FF,FL,A,P,S,H
Skylark	*Alauda arvensis*	198 + 1 flyover	130	86 + 1 flyover	14	150 + 2 flyovers	110 + 1 flyover	Red List NERC S.41	Confirmed FF,ON,N,D,P,S,H,F
Sand martin	*Riparia riparia*			4 flyovers				Green List	Non-breeder F
Swallow	*Hirundo rustica*		16 + 8 flyovers	9 + 7 flyovers	4	8 + 3 flyovers	20	Green List	Confirmed FL,N,S,H,F
House martin	*Delichon urbicum*			9		3	3	Red List	Possible H
Long-tailed tit	*Aegithalos caudatus*	21	30 + 3 flyovers	10	1	24	9	Green List	Confirmed FF,FL,B,D,P,S,H,F
Willow warbler	*Phylloscopus trochilus*		24	5		2	3	Amber List	Possible S,H
Chiffchaff	*Phylloscopus collybita*		37	26	3	21	22	Green List	Confirmed FL,S,H

Species: Common Name	Species: Scientific Name	Survey 1 04.03.25	Survey 2 14.04.25	Survey 3 15.05.25	Survey 4 05.06.25 dusk	Survey 5 16.06.25	Survey 6 10.07.25	Conservation Status & Protection	Breeding Status
Sedge warbler	*Acrocephalus schoenobaenus*					1		Amber List	Possible S,H
Blackcap	*Sylvia atricapilla*		26	39		25	12	Green List	Probable A,S,H
Garden warbler	*Sylvia borin*			2				Green List	Possible S,H
Lesser whitethroat	*Curruca curruca*			8		6	3	Green List	Confirmed FF,FL,N,A,P,H
Whitethroat	*Curruca communis*		7	36	6	33	19	Amber List	Confirmed FF,FL,N,D,P,S,H
Goldcrest	*Regulus regulus*	5	3	9		2	8	Green List	Possible S,H
Wren	*Troglodytes troglodytes*	40	61	57	11	67	56	Amber List	Confirmed NY,FF,FL,A,N,S,H
Treecreeper	*Certhia familiaris*	2					1	Green List	Possible S,H
Starling	*Sturnus vulgaris*	384 + 7 flyovers	3	3		4 flyovers		Red List NERC S.41	Probable D,S,H,F
Song thrush	*Turdus philomelos*	19	7	21	6	14	14	Amber List NERC S.41	Confirmed FL,A,N,P,S,H
Mistle thrush	*Turdus viscivorus*	4		1		7	1	Red List	Confirmed FF,FL,N,S,H
Redwing	*Turdus iliacus*	205 + 25 flyovers						Amber List WCA Sch.1	Non-breeder UH,F
Blackbird	*Turdus merula*	51 + 1 flyover	53	46 + 1 flyover	11	41	36	Green List	Confirmed ON,FL,A,P,S,H,F
Fieldfare	*Turdus pilaris*	387 + 85 flyovers						Red List WCA Sch.1	Non-breeder UH,F
Robin	*Erithacus rubecula*	71	77	58	15	46	38	Green List	Confirmed FL,A,D,S,H
Wheatear	*Oenanthe oenanthe*		6	1				Amber List	Non-breeder M
House sparrow	*Passer domesticus*					2	2	Red List NERC S.41	Confirmed FF,H

Species: Common Name	Species: Scientific Name	Survey 1 04.03.25	Survey 2 14.04.25	Survey 3 15.05.25	Survey 4 05.06.25 dusk	Survey 5 16.06.25	Survey 6 10.07.25	Conservation Status & Protection	Breeding Status
Dunnock	*Prunella modularis*	52	49	25	1	26	47	Amber List NERC S.41	Confirmed FF,ON,FL,N,D,P,S,H
Yellow wagtail	*Motacilla flava*		1 flyover	1	1 flyover	3 + 2 flyovers	1 + 2 flyovers	Red List NERC S.41	Possible H,F
Grey wagtail	*Motacilla cinerea*	1 flyover						Amber List	Non-breeder F
Pied wagtail	*Motacilla alba*	5	4 + 2 flyovers	4 + 3 flyovers	2	3 + 1 flyover	3	Green List	Possible H,F
Meadow pipit	*Anthus pratensis*	22	39 + 3 flyovers	5 + 1 flyover		6	4	Amber List	Confirmed FF,A,D,P,H,F
Chaffinch	*Fringilla coelebs*	53 + 1 flyover	44	25	2	19 + 2 flyovers	19 + 2 flyovers	Green List	Confirmed FF,FL,P,S,H,F
Bullfinch	*Pyrrhula pyrrhula*	4	6	1		2	4	Amber List NERC S.41	Confirmed FL,P,S,H
Greenfinch	*Chloris chloris*	6 + 1 flyover	19	12		9	12 + 1 flyover	Red List	Probable D,S,H,F
Linnet	*Linaria cannabina*	8 + 2 flyovers	17 + 2 flyovers	39 + 2 flyovers		19 + 3 flyovers	19 + 20 flyovers	Red List NERC S.41	Confirmed FF,N,P,S,H,F
Crossbill	*Loxia curvirostra*						1 flyover	Green List WCA Sch.1	Non-breeder F
Goldfinch	*Carduelis carduelis*	35 + 7 flyovers	28 + 6 flyovers	27 + 7 flyovers	9 flyovers	24 + 17 flyovers	56 + 13 flyovers	Green List	Confirmed FL,A,P,S,H,F
Corn bunting	*Emberiza calandra*	11	4	6		2	3	Red List NERC S.41	Confirmed FF,S,H
Yellowhammer	*Emberiza citrinella*	106 + 3 flyovers	39 + 5 flyovers	69 + 1 flyover	11	66 + 1 flyover	59 + 2 flyovers	Red List NERC S.41	Probable A,N,P,S,H,F
Reed bunting	*Emberiza schoeniclus*	17	9	8	10	8	9	Amber List NERC S.41	Confirmed NY,NE,ON,FL,N,P,S,H
Total Species	**80**	57	55	62	35	58	60		

APPENDIX C: WINTERING BIRD SURVEY RESULTS

Species: Common Name	Species: Scientific Name	Survey 1 26.11.24	Survey 2 09.12.24	Survey 3 22.01.25	Survey 4 12.02.25	Conservation Status & Protection
Canada goose	*Branta canadensis*			1		Not Listed
Egyptian goose	*Alopochen aegyptiaca*		1			Not Listed
Mandarin duck	*Aix galericulata*			2		Not Listed
Mallard	*Anas platyrhynchos*		2	7	9	Amber List
Teal	*Anas crecca*			3 flyovers		Amber List
Grey partridge	*Perdix perdix*		12	11	11	Red List NERC S.41
Pheasant	*Phasianus colchicus*	31	19	11	11	Not Listed
Red-legged partridge	*Alectoris rufa*	9	38	2	2	Not Listed
Feral pigeon	*Columba livia f. domestica*	10 + 6 flyovers	1 + 5 flyovers	14 flyovers	4	Green List
Stock dove	*Columba oenas*	44 + 14 flyovers	65 + 9 flyovers	19 + 10 flyovers	38 + 6 flyovers	Amber List
Woodpigeon	*Columba palumbus*	709 + 44 flyovers	1596 + 10 flyovers	2262 + 113 flyovers	938 + 76 flyovers	Amber List
Moorhen	*Gallinula chloropus*			1	1	Amber List
Coot	*Fulica atra*				1	Green List
Lapwing	*Vanellus vanellus*	259 + 72 flyovers	100	81 + 53 flyovers	126 + 64 flyovers	Red List NERC S.41
Golden plover	*Pluvialis apricaria*	131 flyovers	543 + 892 flyovers	1 flyover	300	Green List
Jack snipe	*Lymnocryptes minimus*		1			Green List
Snipe	*Gallinago gallinago*	6	4	10	40	Amber List
Green sandpiper	*Tringa ochropus*	1	1			Amber List WCA Sch.1
Black-headed gull	*Chroicocephalus ridibundus*	5 flyovers	4 flyovers	131 + 54 flyovers	33 flyovers	Amber List
Common gull	*Larus canus*	1		5 flyovers		Red List
Great black-backed gull	*Larus marinus*			1		Red List
Herring gull	*Larus argentatus*	2 flyovers	6 flyovers	6 + 3 flyovers	4 + 3 flyovers	Red List NERC S.41
Lesser black-backed gull	*Larus fuscus*	20 flyovers	32 flyovers	46 + 50 flyovers	100 + 100 flyovers	Amber List
Cormorant	*Phalacrocorax carbo*	3 flyovers	1 + 2 flyovers			Green List
Grey heron	*Ardea cinerea*	2 + 2 flyovers	3	1	1 + 6 flyovers	Green List
Great white egret	*Ardea alba*	4 flyovers				Amber List
Little egret	*Egretta garzetta*				1 flyover	Green List
Sparrowhawk	*Accipiter nisus*	1	3 + 1 flyover	1 + 1 flyover	2	Amber List
Red kite	*Milvus milvus*	3 + 15 flyovers	13 + 8 flyovers	14 + 10 flyovers	11 + 11 flyovers	Green List WCA Sch.1
Buzzard	*Buteo buteo*	22 + 3 flyovers	19 + 6 flyovers	14 + 3 flyovers	14 + 4 flyovers	Green List

Species: Common Name	Species: Scientific Name	Survey 1 26.11.24	Survey 2 09.12.24	Survey 3 22.01.25	Survey 4 12.02.25	Conservation Status & Protection
Barn owl	*Tyto alba*	1		2		Green List WCA Sch.1
Short-eared owl	*Asio flammeus*		1			Amber List
Great spotted woodpecker	*Dendrocopos major*	1	3	6 + 2 flyovers	6 + 1 flyover	Green List
Green woodpecker	*Picus viridis*	2		3 + 1 flyover	3	Green List
Kestrel	*Falco tinnunculus*	8	7 + 4 flyovers	12	4	Amber List
Merlin	*Falco columbarius*	1				Red List WCA Sch.1
Jay	*Garrulus glandarius*	7	8	7	1	Green List
Magpie	*Pica pica*	37 + 1 flyover	49 + 1 flyover	52 + 3 flyovers	43 + 1 flyover	Green List
Jackdaw	*Coloeus monedula*	35 + 20 flyovers	35 + 8 flyovers	83 + 8 flyovers	114 + 29 flyovers	Green List
Rook	*Corvus frugilegus*	31 + 9 flyovers	4 + 1 flyover	94	1 + 2 flyovers	Amber List
Carrion crow	*Corvus corone*	36 + 10 flyovers	61 + 5 flyovers	80 + 8 flyovers	66 + 40 flyovers	Green List
Raven	*Corvus corax*	1 + 2 flyovers		4 + 2 flyovers	1	Green List
Coal tit	*Periparus ater*	4		2		Green List
Blue tit	*Cyanistes caeruleus*	62	58	85	112 + 1 flyover	Green List
Great tit	*Parus major*	31	25	40	45	Green List
Skylark	*Alauda arvensis*	142 + 7 flyovers	133 + 6 flyovers	238 + 9 flyovers	295 + 3 flyovers	Red List NERC S.41
Swallow	*Hirundo rustica*	14				Green List
Long-tailed tit	*Aegithalos caudatus*	65	84	10	12	Green List
Chiffchaff	*Phylloscopus collybita*	1		1		Green List
Goldcrest	*Regulus regulus*	10	10	4	2	Green List
Wren	*Troglodytes troglodytes*	38	51	46	49	Amber List
Nuthatch	*Sitta europaea*	1				Green List
Treecreeper	*Certhia familiaris*			1		Green List
Starling	*Sturnus vulgaris*	515 + 40 flyovers	216 + 90 flyovers	758 + 105 flyovers	147 + 36 flyovers	Red List NERC S.41
Song thrush	*Turdus philomelos*	19	32	27	40	Amber List NERC S.41
Mistle thrush	*Turdus viscivorus*	7 + 2 flyovers	12	6	7	Red List
Redwing	*Turdus iliacus*	203 + 78 flyovers	203 + 20 flyovers	232 + 50 flyovers	500 + 10 flyovers	Amber List WCA Sch.1
Blackbird	*Turdus merula*	90 + 1 flyover	67	82	89	Green List
Fieldfare	*Turdus pilaris*	315 + 23 flyovers	426 + 11 flyovers	384 + 25 flyovers	529 + 13 flyovers	Red List WCA Sch.1
Robin	*Erithacus rubecula*	83	43	46	77	Green List
Stonechat	*Saxicola rubicola*	10	4	2	2	Green List
Dunnock	*Prunella modularis*	39	46	36	41	Amber List NERC S.41
Grey wagtail	*Motacilla cinerea*	1		1 flyover		Amber List
Pied wagtail	*Motacilla alba*	20 + 11 flyovers	12 + 2 flyovers	1 + 5 flyovers	12 + 2 flyovers	Green List

Species: Common Name	Species: Scientific Name	Survey 1 26.11.24	Survey 2 09.12.24	Survey 3 22.01.25	Survey 4 12.02.25	Conservation Status & Protection
Meadow pipit	*Anthus pratensis*	26 + 5 flyovers	108 + 4 flyovers	69	122 + 1 flyover	Amber List
Chaffinch	*Fringilla coelebs*	21 + 1 flyover	70	13 + 4 flyovers	31	Green List
Bullfinch	*Pyrrhula pyrrhula*	6	5	3	1	Amber List NERC S.41
Greenfinch	*Chloris chloris*	2 + 1 flyover		1 + 1 flyover	18	Red List
Linnet	*Linaria cannabina*	5 + 8 flyovers	11 + 1 flyover	16 + 5 flyovers	10	Red List NERC S.41
Goldfinch	*Carduelis carduelis*	36 + 6 flyovers	29 + 9 flyovers	95 + 9 flyovers	37 + 10 flyovers	Green List
Siskin	*Spinus spinus*	16 + 2 flyovers				Green List
Corn bunting	*Emberiza calandra*	4	85 + 1 flyover		18	Red List NERC S.41
Yellowhammer	*Emberiza citrinella*	19	66	122 + 3 flyovers	337	Red List NERC S.41
Reed bunting	*Emberiza schoeniclus*	11	12 + 2 flyovers	31	73	Amber List NERC S.41
Total Species	**74**	**60**	**52**	**60**	**53**	

APPENDIX D: BREEDING BIRD SURVEY RESULTS (ADDITIONAL MITIGATION LAND)

Species: Common Name	Species: Scientific Name	Survey 1 05.06.26	Survey 2 17.06.26	Survey 3 29.06.26	Conservation Status & Protection	Breeding Status
Grey Partridge	*Perdix perdix*			1	Red List NERC S.41	Possible H
Swift	*Apus apus*	10	41	30 + 1 flyover	Red List	Non-breeder UH,F
Stock Dove	*Columba oenas*	1 flyover	4 flyovers	1 + 2 flyovers	Amber List	Possible S,H,F
Woodpigeon	*Columba palumbus*	8 + 2 flyovers	15 + 6 flyovers	15	Amber List	Possible S,H,UH,F
Collared Dove	*Streptopelia decaocto*		2 flyovers		Green List	Non-breeder F
Sparrowhawk	*Accipiter nisus*	1 flyover	1		Amber List	Non-breeder UH,F
Red Kite	*Milvus milvus*	1 flyover	1		Green List WCA Sch.1	Non-breeder UH,F
Buzzard	*Buteo buteo*	1 flyover	1		Green List	Non-breeder UH,F
Jay	*Garrulus glandarius*		1	2	Green List	Possible H
Magpie	*Pica pica*	2	3	2	Green List	Confirmed FL,A,H
Jackdaw	*Coloeus monedula*	5 flyovers	1 + 4 flyovers	43 flyovers	Green List	Possible H,F
Rook	*Corvus frugilegus*	35 flyovers	1 + 4 flyovers	128 flyovers	Amber List	Non-breeder UH,F
Carrion Crow	*Corvus corone*		2 flyovers	1	Green List	Possible H,F
Blue Tit	*Cyanistes caeruleus*	23	16	3	Green List	Confirmed FL,A,P,H
Great Tit	*Parus major*	2	6	3	Green List	Confirmed FL,A,P,H
Skylark	*Alauda arvensis*	11	8	18	Red List NERC S.41	Confirmed NY,FF,FL,A,N,D,T,P,S,H
Swallow	*Hirundo rustica*	4	2	6	Green List	Non-breeder UH
House Martin	*Delichon urbicum*	13			Red List	Non-breeder UH
Long-tailed Tit	*Aegithalos caudatus*	6	6	6	Green List	Confirmed FL,H
Chiffchaff	*Phylloscopus collybita*	7	1		Green List	Confirmed FL,H
Blackcap	*Sylvia atricapilla*	1	2		Green List	Probable P,S,H
Whitethroat	*Curruca communis*	2	2	1	Amber List	Probable A,H
Wren	*Troglodytes troglodytes*	7	1	1	Amber List	Confirmed FL,A,S,H
Treecreeper	*Certhia familiaris*	1			Green List	Possible S,H

Species: Common Name	Species: Scientific Name	Survey 1 05.06.26	Survey 2 17.06.26	Survey 3 29.06.26	Conservation Status & Protection	Breeding Status
Song Thrush	*Turdus philomelos*		1	1	Amber List NERC S.41	Possible H
Mistle Thrush	*Turdus viscivorus*	1 flyover			Red List	Non-breeder F
Blackbird	*Turdus merula*	1 flyover	2	3	Green List	Probable A,S,H,F
Robin	*Erithacus rubecula*	4	4	1	Green List	Confirmed FL,A,S,H
Dunnock	*Prunella modularis*			3	Amber List NERC S.41	Possible S,H
Yellow Wagtail	*Motacilla flava*	4	1 flyover	2	Red List NERC S.41	Possible H,F
Pied Wagtail	*Motacilla alba*		2 flyovers		Green List	Non-breeder F
Chaffinch	*Fringilla coelebs*	4	4	3	Green List	Confirmed FF,T,S,H
Linnet	*Linaria cannabina*	1 flyover		3	Red List NERC S.41	Possible H,F
Goldfinch	*Carduelis carduelis*	2 flyovers	3 flyovers	1	Green List	Possible H,F
Yellowhammer	*Emberiza citrinella*	5 + 1 flyover	5	4	Red List NERC S.41	Confirmed FF,T,P,H,F
Total Species	**35**	27	28	24		

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Order Limits

Survey Area - Main Site (2024-25)

Survey Area - Additional Mitigation Land (2026)

date
12/10/26

drwn/chkd
OJB / RAG

client
Oxfordshire Railfreight Ltd.

project
Oxfordshire Strategic Rail Freight Interchange, Ardley

title
SITE LOCATION & SURVEY AREA PLAN

scale
1:30,000 @ A3

number
FIGURE 1

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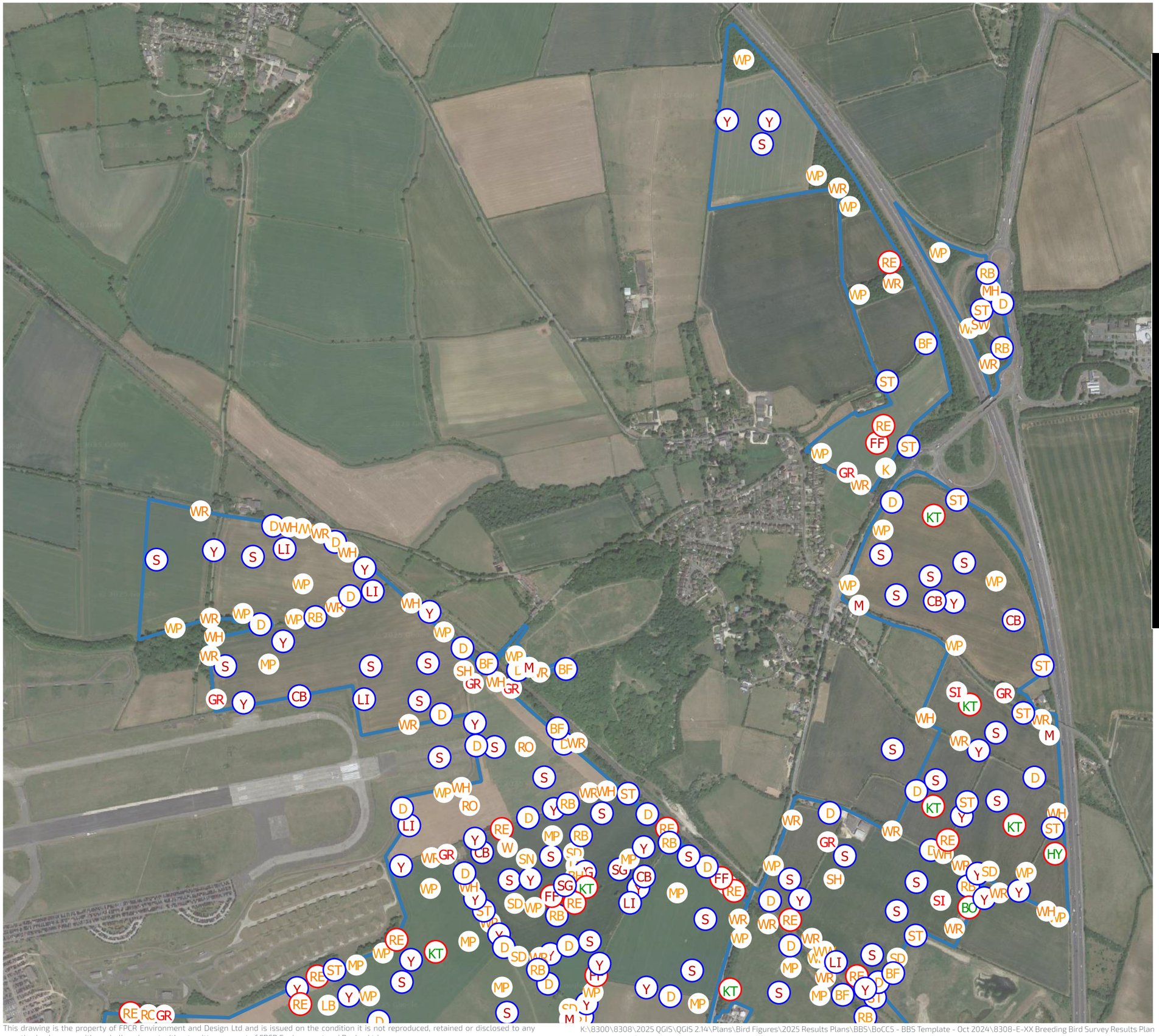

date
26/08/25

drwn/chkd
OJB / RAG

client
Oxfordshire Railfreight Ltd.

project
Oxfordshire Strategic Rail Freight Interchange, Ardley

title
BREEDING BIRD SURVEY RESULTS PLAN - DISTRIBUTION OF NOTABLE SPECIES

scale
1:10,000 @ A3

number
FIGURE 2a

rev
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NERC Species of Principal Importance

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Oxfordshire Railfreight Ltd.

project
Oxfordshire Strategic Rail Freight Interchange, Ardley

title
BREEDING BIRD SURVEY RESULTS PLAN - DISTRIBUTION OF NOTABLE SPECIES

scale
1:10,000 @ A3

number
FIGURE 2b

rev
-

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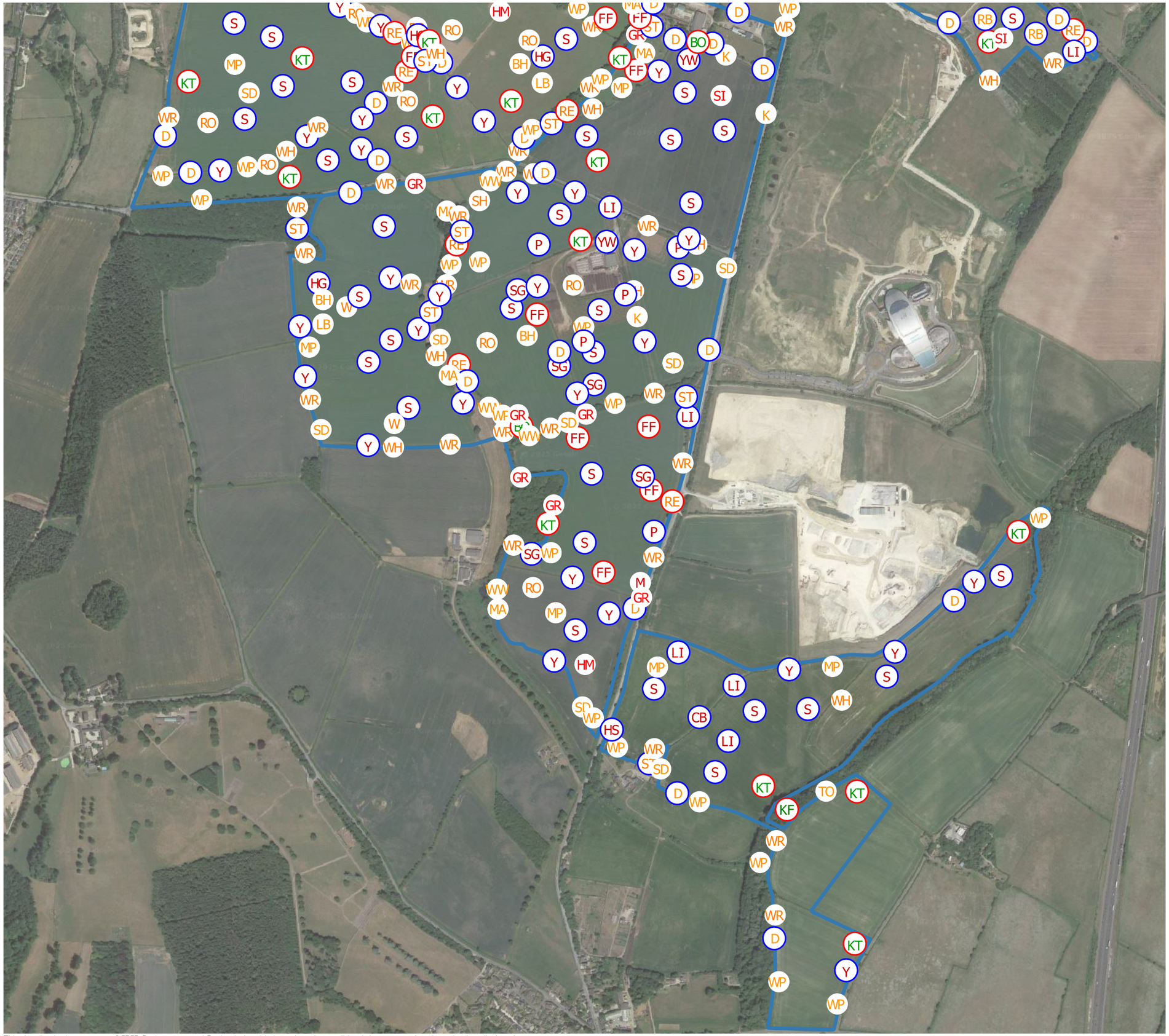

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NERC Species of Principal Importance

date
26/08/25

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client
Oxfordshire Railfreight Ltd.

project
Oxfordshire Strategic Rail Freight Interchange, Ardley

title
BREEDING BIRD SURVEY RESULTS PLAN - DISTRIBUTION OF NOTABLE SPECIES

scale
1:10,000 @ A3

number
FIGURE 2c

rev
-

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project
Oxfordshire Strategic Rail Freight Interchange, Ardley

title
WINTER BIRD SURVEY RESULTS PLAN - DISTRIBUTION OF NOTABLE SPECIES

scale
1:10,000 @ A3

number
FIGURE 3a

rev
-

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project
Oxfordshire Strategic Rail Freight Interchange, Ardley

title
WINTER BIRD SURVEY RESULTS PLAN - DISTRIBUTION OF NOTABLE SPECIES

scale
1:10,000 @ A3

number
FIGURE 3b

rev
-

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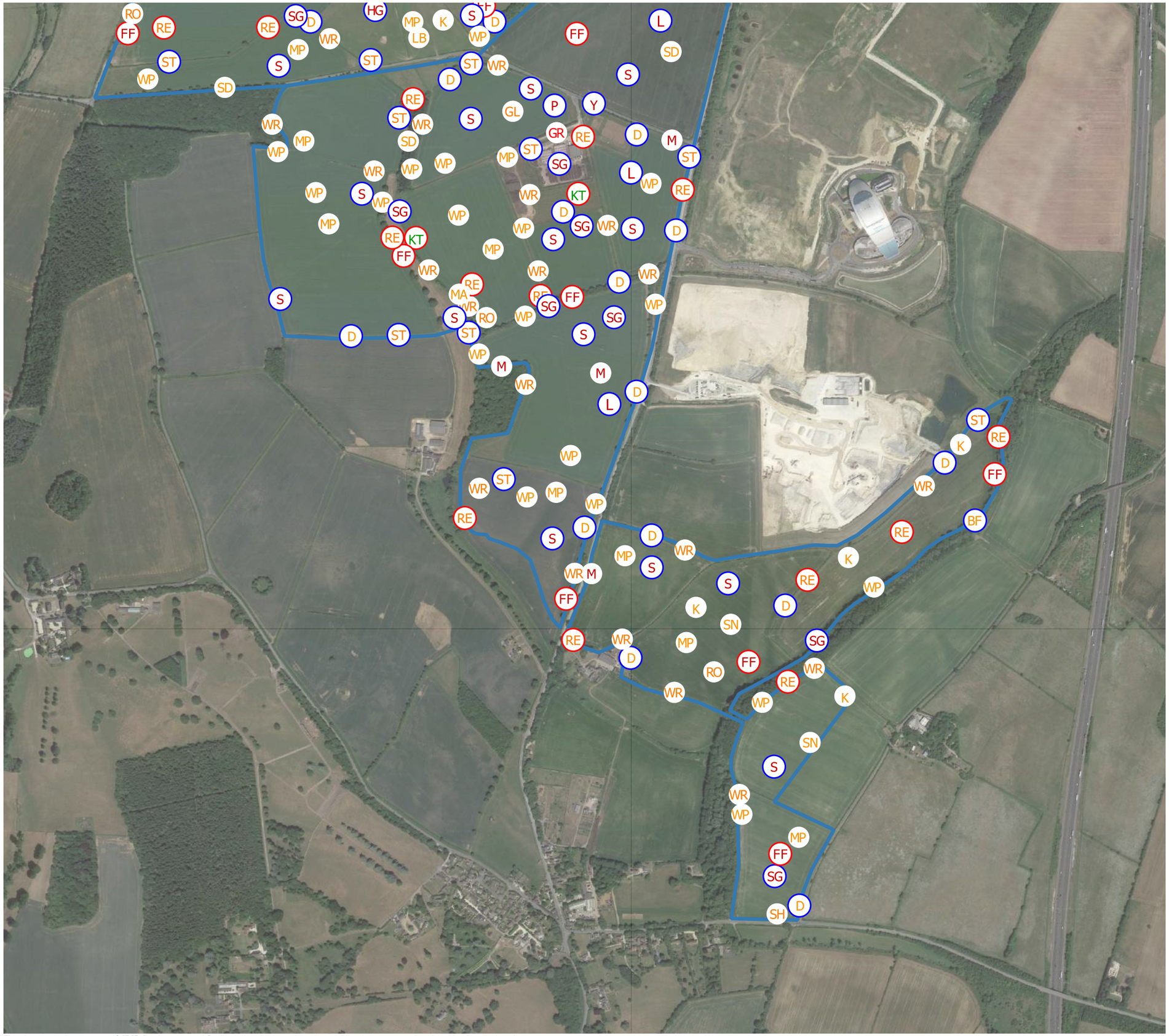

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client
Oxfordshire Railfreight Ltd.

project
Oxfordshire Strategic Rail Freight Interchange, Ardley

title
WINTER BIRD SURVEY RESULTS PLAN - DISTRIBUTION OF NOTABLE SPECIES

scale
1:10,000 @ A3

number
FIGURE 3c

rev
-

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drawn date 12/10/26

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project
Oxfordshire Strategic Rail Freight Interchange, Ardley

title
BREEDING BIRD SURVEY RESULTS PLAN - DISTRIBUTION OF NOTABLE SPECIES (ADDITIONAL MITIGATION LAND)

scale 1:2,500 @ A3

number
FIGURE 4

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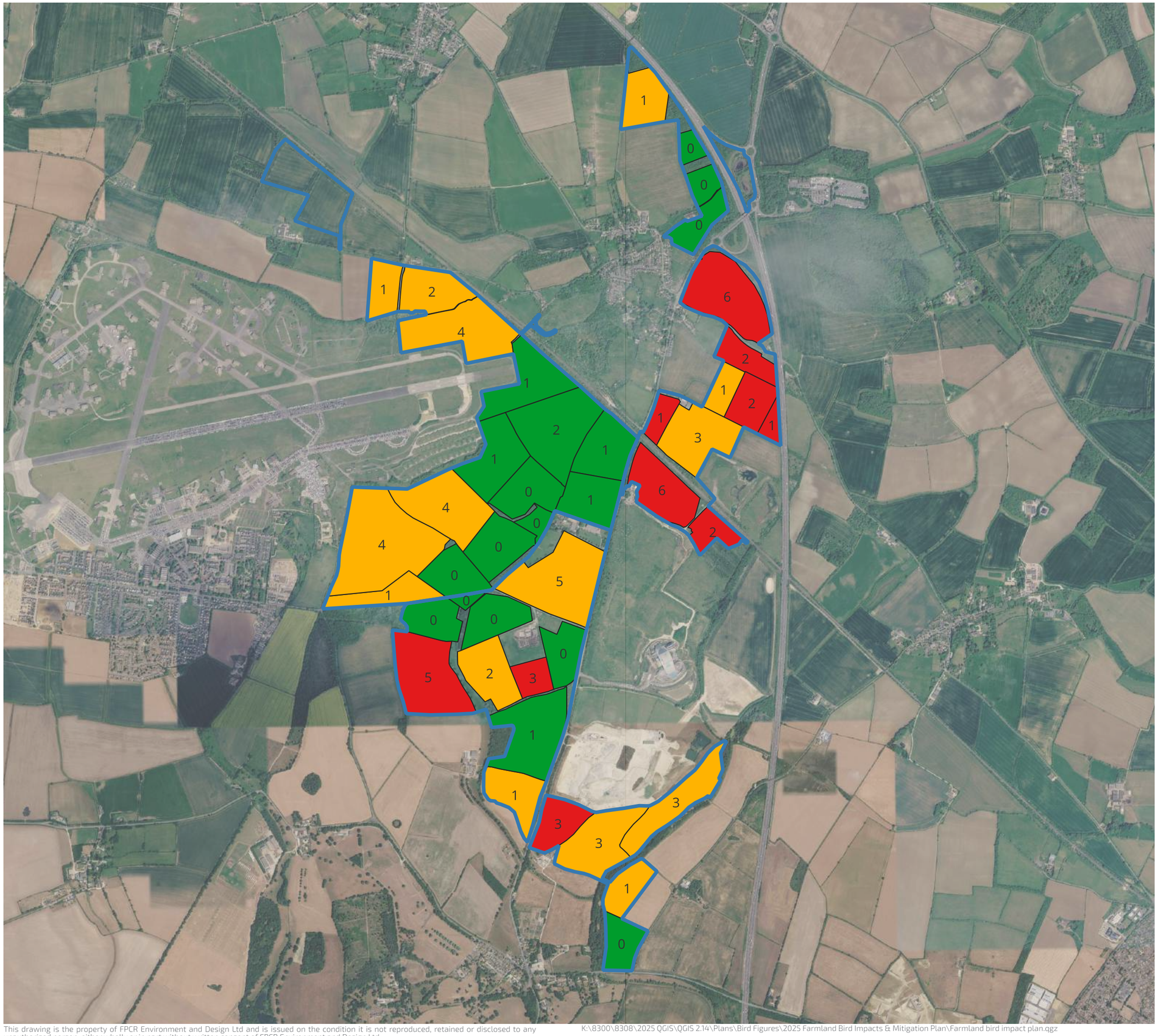

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Survey Boundary

Significance (inc. number of territories)

High

Moderate

Low

date 12/10/26

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client

Oxfordshire Railfreight Ltd.

project

Oxfordshire Strategic Rail Freight Interchange, Ardley

title

FARMLAND BIRD DISTRIBUTION PLAN: SKYLARK - BREEDING

scale 1:22,500 @ A3

number

FIGURE 5a

rev **-**

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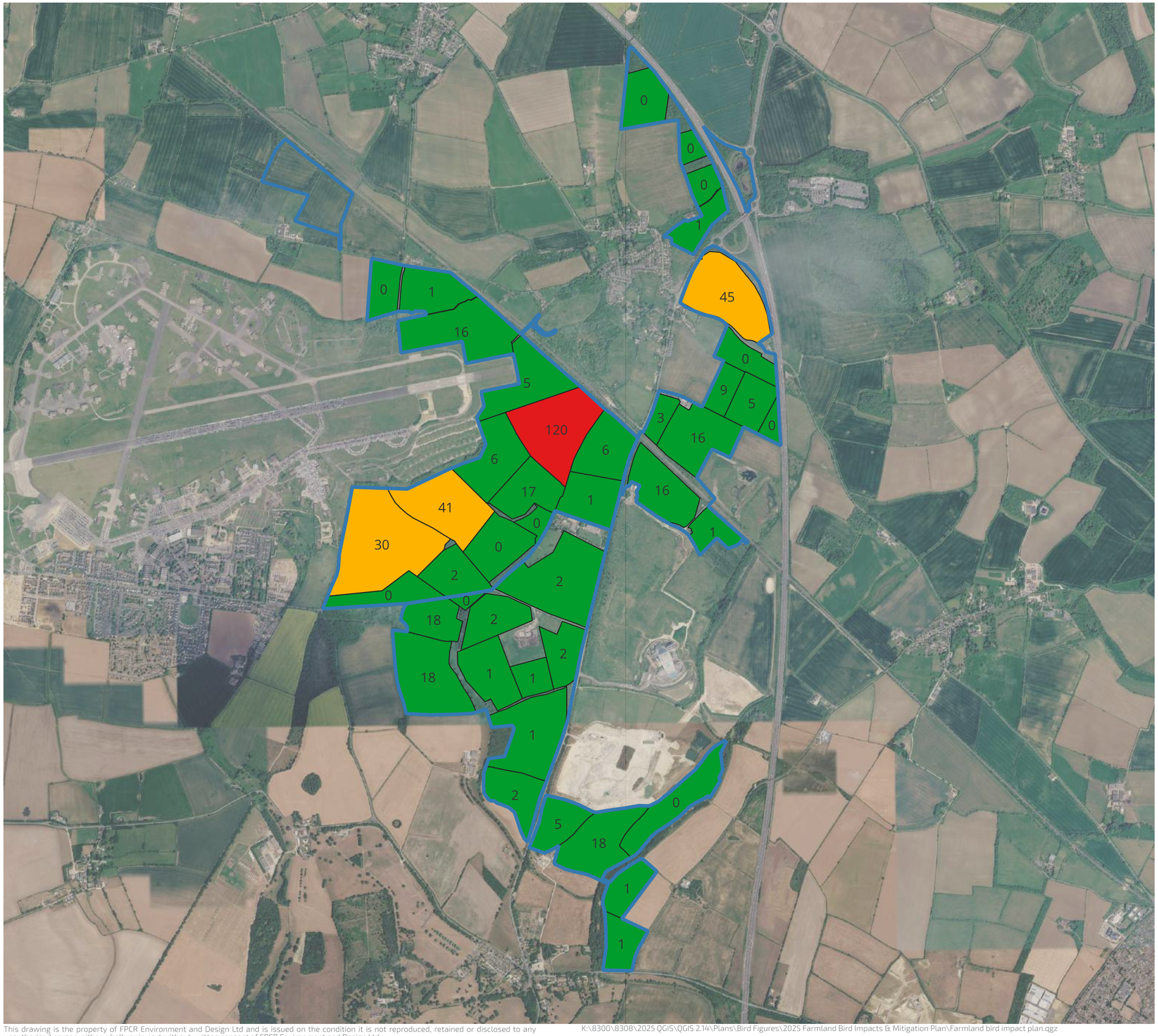

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Survey Boundary

Significance (inc. peak count)

High

Moderate

Low

date 12/10/26

drwn/chkd OJB / RAG

client

Oxfordshire Railfreight Ltd.

project

Oxfordshire Strategic Rail Freight Interchange, Ardley

title

FARMLAND BIRD DISTRIBUTION PLAN: SKYLARK - WINTERING

scale 1:22,500 @ A3

number

FIGURE 5b

rev -

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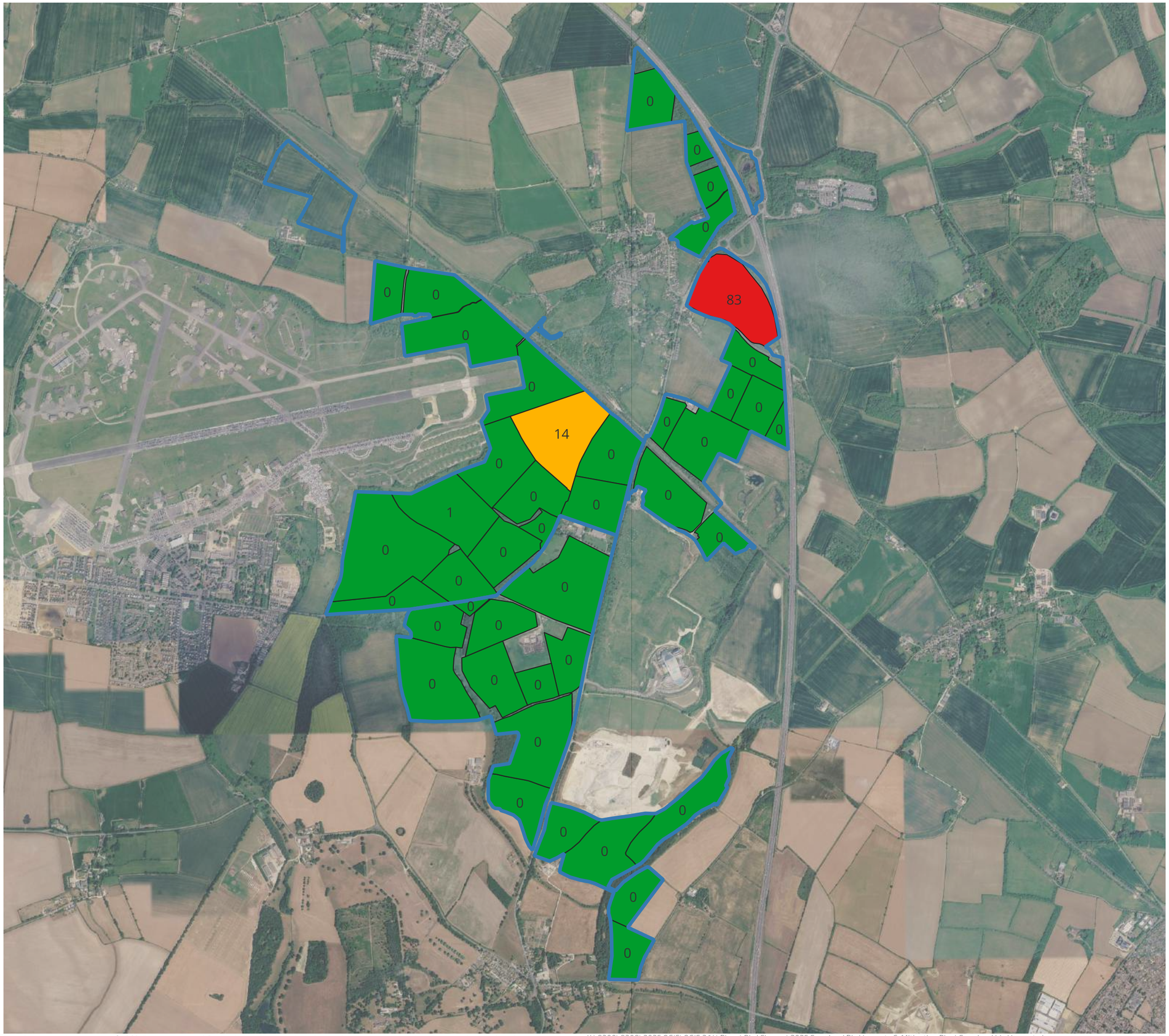
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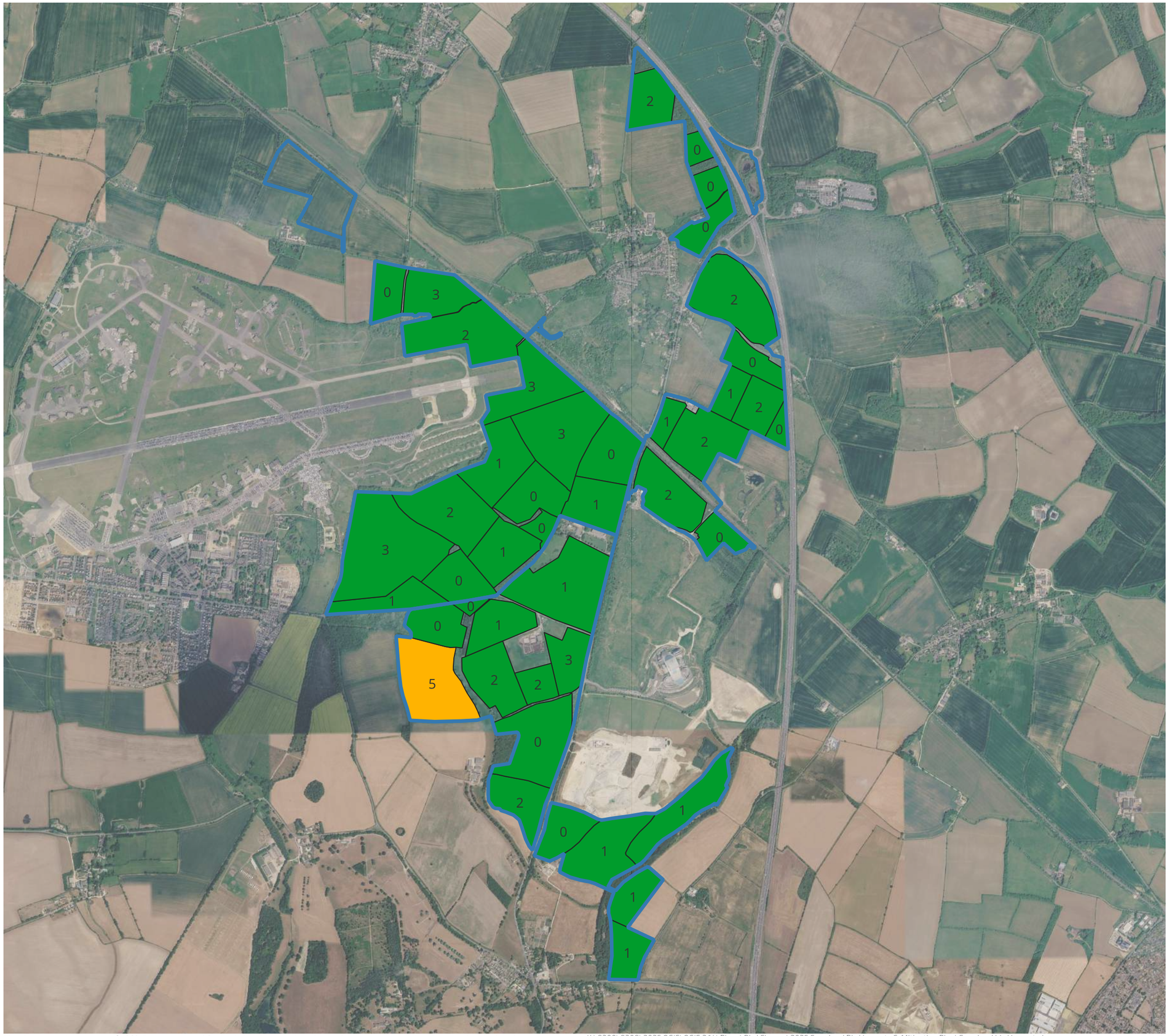

date
12/10/26

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OJB / RAG

client
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project
Oxfordshire Strategic Rail Freight Interchange, Ardley

title
FARMLAND BIRD DISTRIBUTION PLAN: YELLOWHAMMER - BREEDING

scale
1:22,500 @ A3

number
FIGURE 7a

rev
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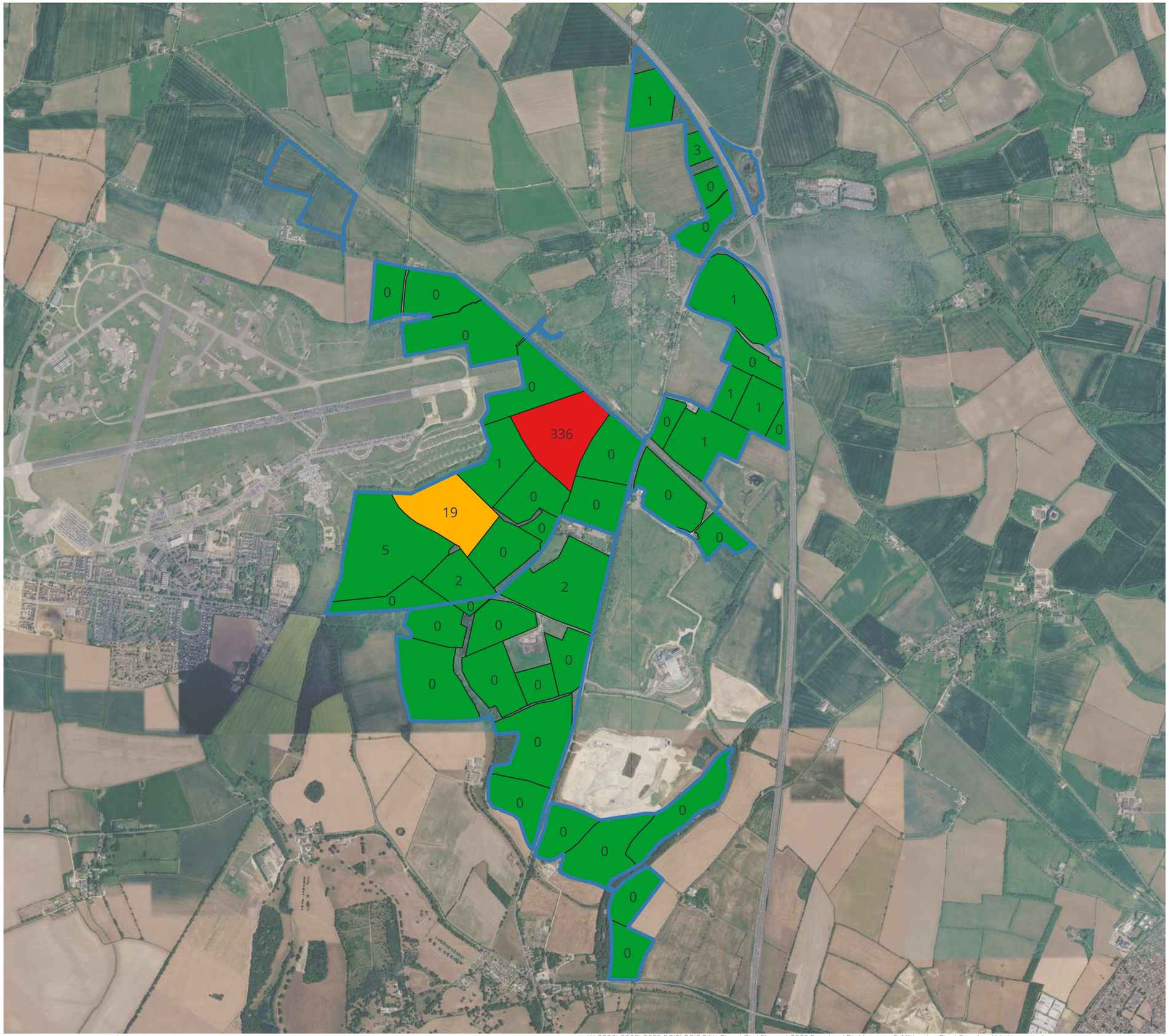

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Survey Boundary

Significance (inc. peak count)

High

Moderate

Low

date 12/10/26

drwn/chkd OJB / RAG

client

Oxfordshire Railfreight Ltd.

project

Oxfordshire Strategic Rail Freight Interchange, Ardley

title

FARMLAND BIRD DISTRIBUTION PLAN: YELLOWHAMMER - WINTERING

scale 1:22,500 @ A3

number

FIGURE 7b

rev -

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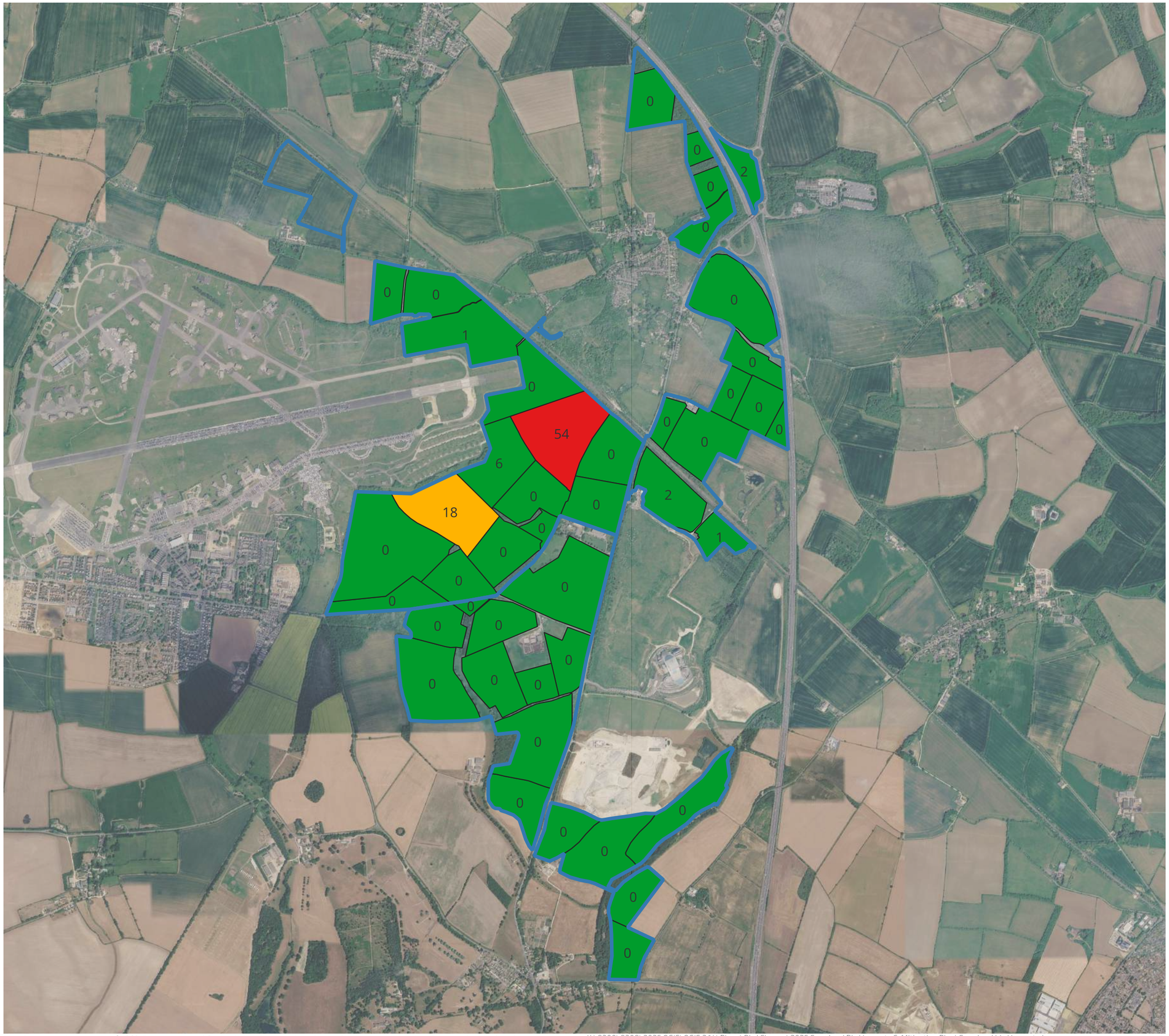
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