

Coltsdene Solar Farm
Breeding Bird Survey Report

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1 Introduction

1.1 BSG Ecology was commissioned by Renewable Energy Systems Ltd. (RES) in March 2024 to conduct a Preliminary Ecological Appraisal at the proposed Coltsdene Solar Farm, in Kibblesworth, centred on Ordnance Survey (OS) Grid Reference NZ232566. This base line report considers land within the red line provided by the client, hereafter referred to as 'the Site'. An extent greater than the Site was subject to field survey within this assessment, this is referred to as the "Survey Area" totalling 236.49 ha (including the area of the Site). Extents of both the Site and the Survey Area are provided in **Figure 1, Section 5**.

1.2 This report provides the results of the surveys only, a full Environmental Statement Chapter will detail the significance of indirect and direct effects and subsequent impacts and mitigation as required.

Site description

1.3 The Site covers an area of approximately 92.5 ha of predominantly arable land directly west of the village of Kibblesworth, Gateshead, approximately 1.3 km west of the A1 corridor.

1.4 Habitats within the Site consist primarily of arable land with associated margins and boundary hedgerows. Pockets of modified grassland, scrub and woodland are also present. Notably, Coltspool Burn flows in an easterly direction through the north of the Site and Strandy Burn is located offsite to the north, both of which are tributaries of the River Team (a statutory main river).

1.5 Habitats adjacent to the Site are dominated by arable and pastoral land with the village of Kibblesworth to the east. Four local wildlife sites (LWS) are present onsite or directly adjacent. Other habitats in the locality include pockets of deciduous woodland, connected through hedgerow networks and riparian corridors, semi-improved grassland and open mosaic habitat on previously developed land to the east.

1.6 The Site is located within the Gateshead Greenbelt (Gateshead Local Policy CS19) and the southern extent is sited within the designated Wildlife Corridor (Gateshead Local Policy 37). The Bowes Railway Line Local Wildlife Site runs through the centre of the Site (Gateshead Local Plan 2010-2030). The Site is also located within the Impact Risk Zone (IRZ) for three Sites of Special Scientific Interest (SSSI) (MAGIC accessed December 2024).

Description of project

1.7 It is understood that current proposals comprise the development of a 49.9 MW solar array and associated infrastructure, including access tracks, boundary fencing, inverters and a substation. At the time of writing, detailed plans are not available.

Personnel

1.8 The breeding bird characterisation surveys were undertaken by Tom Cadwallender, an experienced freelance Ornithologist, Alexander Permain, Senior Ecologist at BSG Ecology and Harry Glass, Ecologist at BSG Ecology. Tom and Alexander are experienced bird surveyors and regularly undertake bird surveys in lowland farmland habitats. Support personnel were used for the nocturnal survey on health and safety grounds. The territory mapping and reporting has been prepared by Alex Permain who has over 3 years' experience in report production and has considerable experience in completing breeding bird site assessments and territory mapping.

1.9 This report has been reviewed by Ian Heard. He has over 14 years of experience in completing ornithological field surveys, writing ornithological reports and providing technical advice.

2 Methods

Desk study

- 2.1 The Environmental Records Centre for the North East (ERIC NE) was approached for records of protected and notable bird records within 2 km of the Survey Area. The data for which was received on 27 November 2024.
- 2.2 Where relevant, desk study data has been discussed within **Section 3** of this report.

Breeding bird characterisation surveys

- 2.3 Six breeding bird surveys were undertaken during April, May, June and July 2025 respectively. The methodology used followed industry standard guidance available at the time (Bird Survey and Assessment Steering Group (2023).
- 2.4 The survey visits were carried out in suitable weather conditions, which were noted in accordance with British Trust for Ornithology (BTO) weather codes. Each survey visit was timed to coincide with the peak period of bird activity, i.e., between half an hour before sunrise, and concluded by mid-morning. Due to the large Survey Area, it was covered by two separate transect routes, that were surveyed on two consecutive days, (**see Figure 1**). The surveyor followed current industry standard guidance which is based on a 'look see' methodology (Bibby, *et al.*, 2000; Gilbert, *et al.*, 1998), which involves walking the transect route at a slow pace recording all birds present and their behaviours using standard BTO survey symbology. Particular attention was paid to birds displaying breeding behaviours that would provide insight into the presence of breeding territories or confirm breeding attempts. The surveyor was careful to avoid double counting by not surveying the same ground and recording the time of bird movements likely to be between the areas covered by each transect.
- 2.5 Where observed, the following breeding activities were noted to aid determination of breeding status:
- Singing male in suitable habitat;
 - Adult visiting probable nest site;
 - Nest building (including excavating nest hole);
 - Distraction display or injury feigning;
 - Used nest found;
 - Recently fledged young;
 - Adult carrying faecal sac or food;
 - Adult entering or leaving nest site in circumstances indicating occupied nest;
 - Nest with eggs found, or bird sitting but not disturbed, or eggshells found near nest; and
 - Nest with young.
- 2.6 Bird species were also recorded during the survey visits for which no evidence of breeding was noted. This included:
- Individuals flying over the Site and Survey Area;
 - Species which may breed locally but for which suitable nesting habitat does not occur within the Site and Survey Area;
 - Species where no behaviour was observed that suggested breeding was taking place.

Territory mapping

- 2.7 The bird survey data collected was used to estimate the number and approximate locations of each territory recorded within the Site and Survey Area, as well as the habitats they were using, with putative territory centres mapped where appropriate.
- 2.8 Breeding bird territories were assigned the following categories: confirmed (direct evidence of breeding, as listed above, recorded); probable (bird holding territory and recorded in suitable nesting habitat on at least two occasions); possible (bird recorded in suitable nesting habitat on one occasion). Non-breeding i.e. birds flying over (but not using) the Site / Survey Area were recorded but not included in the breeding bird assemblage.
- 2.9 For the purposes of this assessment, birds that were considered to be 'probable' breeders have been treated as 'confirmed' territories and have not been differentiated between within this report. This is a precautionary approach but reflects the likelihood of the birds holding 'probable territories' to have at least attempted to breed, even if unsuccessfully during the survey period. Birds that were recorded as possible breeding are considered to be non-breeders within this report as they did not show sufficient evidence to indicate a breeding territory.
- 2.10 Breeding territories are shown in **Figures 2a** (BoCC Red List species) and **Figure 2b** (BoCC Amber List species).
- 2.11 All territories falling at least partly inside the Site and Survey Area, were included in the area totals, even when some of the registrations forming the territory cluster fell outside the Site and Survey Area.
- 2.12 Registrations for each species from each survey visit were mapped and used to identify territory clusters.
- 2.13 **Table 1** provides summary information about the conditions under which the breeding bird characterisation surveys were undertaken.

Table 1: Breeding bird characterisation survey details

Date	Visit ID	Time	Surveyor	Weather			
				Wind (Beaufort)	Precipitation	Cloud (Oktas)	Temperature (°C)
01 April 2025	1	17:55 – 21:15	TC	1	none	1/8	10
02 April 2025	1	18:30 – 20:55	TC	1	none	8/8	8
01 May 2025	2	05:45 – 08:50	TC	1	none	4/8	10
02 May 2025	2	05:45 – 08:10	TC	1	none	2/8	6
14 May 2025	3	05:15 – 08:20	TC	2	none	8/8	9

15 May 2025	3	05:05 – 07:40	TC	2	none	8/8	8
05 June 2025	4	04:35 – 07:40	TC	1	none	5/8	8
06 June 2025	4	04:40 – 07:00	TC	2	none	6/8	9
19 June 2025	5	04:30 – 07:45	TC	1	none	2/8	10
20 June 2025	5	04:30 – 07:10	TC	2	none	4/8	14
15 July 2025	6	20:30 – 23:00	TC/HG	1	none	8/8	14
16 July 2025	6	20:30 – 23:15	TC/AP	1	none	1/8	16

Species specific surveys

Quail surveys

2.14 An incidental quail *Coturnix coturnix* observation was recorded on 13 June 2025. it was decided that dedicated surveys were required to establish whether this was a breeding attempt or a bird on passage. Industry standard guidance (Gilbert, et. al, 1998) states that six surveys should be undertaken between mid-May and late July at roughly fortnightly intervals. Surveys should start at least 30 minutes prior to sunset and finish at least 30 minutes after sunset. Based on the detection of the species on Site in June 2025 it was not possible to adhere to the prescribed methodology. Therefore, two dedicated quail surveys were undertaken, and additional survey effort was completed during both bat nighttime walkover surveys (covering the whole of the Site) see **Table 2**, and long-eared owl surveys (covering the eastern half of the Site), see **Table 3** for details. Additionally, two of the surveys for breeding birds were undertaken around dusk to increase the chances of detecting species such as quail on Site, see **Table 1**.

2.15 **Table 2** summarises the quail survey details.

Table 2: Quail survey details

Date	Time	Survey type	Weather			
			Wind (Beaufort)	Precipitation	Cloud (Oktas)	Temperature (°C)
03/06/2025	21:36 – 23:40	Night time bat walkover	1	none	4/8	12

09 July 2025	20:30 – 10:30	Quail survey	1	none	2/8	16
22/07/2025	21:27 – 23:45	Night time bat walkover	4	none	4/8	20
28 July 2025	20:15 – 21:45	Quail survey	2	none	6/8	17

- 2.16 Additional data was captured during other nocturnal related surveys (see ‘consideration to potential limitations to methods’ section). The survey results are presented in **Section 3**.

Barn owl surveys

- 2.17 In line with current industry standard guidance (Barn Owl trust, 2012), a scoping survey for suitable roosting and nesting locations for barn owl *Tyto alba* was undertaken on the 8 and 9 May 2025. The findings of these surveys indicated that the only location with potential for roosting and / or nesting barn owl was located in the ‘old granary’ at Kibblesworth Grange Farm.
- 2.18 A specific check of the ‘old granary’ for breeding barn owl was undertaken by Ian Heard (CL29/00540) and Harry Glass on the 11 June 2025. Barn owl roosting signs and a suitable nest site were observed on the first floor of the old granary, however due to concerns over the structural integrity of the building it was not possible to access the box directly.
- 2.19 A trail camera was deployed on the ground floor of the old granary at a suitable vantage point to view the entrance to the barn owl box between 30 June and 27 July 2025. The intention being to gather footage of barn owl activity at the Site and prove breeding or likely non-breeding by the number of owls present within the box.

Long-eared owl surveys

- 2.20 Based on communications with some local birdwatchers in May 2025, it came to the attention of BSG Ecology that an active long-eared owl *Asio otus* nest was present on Clarty Lane. Due to the proximity to the nest to the Site it was considered a possibility that long-eared owls may forage over the Site. BSG were commissioned for two species specific surveys.
- 2.21 As confirmed breeding was well documented from external sources and the nest site itself was determined to be sufficiently far away from the Site to limit disturbance (over 30 m) issues, it was only necessary to establish if the long-eared owls were using the Site for foraging.
- 2.22 A methodology based on industry standard guidance (Hardy et. al 2013) but taking into account the known presence of a nest and the survey was designed to limit intrusion. The methodology involved two suitably experienced surveyors (Ian Heard and Harry Glass) undertaking vantage point surveys from two positions on Site (NZ 24784 56300 and NZ 24742 56122), looking east over Clarty Lane and the eastern Site boundary, an area which the owls were most likely to commute over if foraging on Site was taking place. The surveys were undertaken between one hour before sunset and one hour after sunset.
- 2.23 **Table 3** (overleaf) summarises the long-eared owl survey details.

Table 3: long-eared owl survey details

Date	Survey Time	Sunset time	Weather			
			Wind (Beaufort)	Precipitation	Cloud (Oktas)	Temperature (°C)
03 July 2025	20:30 – 10:30	20:49	0-1	none	5/8	18
24 July 2025	20:20 – 22:30	21:22	1	none	4/8	20

Consideration as to the limitations to methods

- 2.24 Quail had not been identified as a likely ecological constraint based upon the Sites location away from the coast and the scarcity of the species as breeders in the UK. However, the detection of the species in early June and the suitability of the cereal crops on Site for breeding warranted further investigation. Due to being halfway through the prescribed survey season, it was not possible to undertake six visits between mid-May and late July at fortnightly intervals. However, two breeding bird characterisation surveys were undertaken around dusk in mid-May and late July which would have detected the presence of quail. Specific quail surveys were undertaken in early and late July. Additionally, due to the identifiability of the species call it was decided that staff undertaking nocturnal surveys for other species such as bats (two surveys) and long-eared owl surveys (two surveys) were sufficiently experienced to record quail incidentally. Therefore, eight surveys have been undertaken around dusk between May and July 2025 that have the potential to detect quail on Site. As such it is considered that sufficient survey effort has been undertaken to robustly determine if quail are likely to be breeding on Site.
- 2.25 Due to health and safety concerns around the structural integrity of the 'grain store' at Kibblesworth Grange Farm it was not possible to access the barn owl box. In order to determine if barn owl were breeding, a trail camera was deployed facing the entrance to the box in an attempt to capture footage of owls using the box.
- 2.26 Two nocturnal breeding bird characterisation visits were undertaken (visit 1 and visit 6). The industry guidance¹ allows for at least one nocturnal survey using professional judgement. The approach to undertaking an additional breeding bird characterisation survey undertaken nocturnally on visit 6 was determined as a result of the quail and owl activity recorded on and in the immediate vicinity of the Site. This not considered to be a significant deviation from the guidance, and the survey effort is considered sufficient to accurately characterise the breeding bird assemblage and territory locations, without limitation.

¹ Bird Survey & Assessment Steering Group. (2025). Bird Survey Guidelines for assessing ecological impacts, <https://birdsurveyguidelines.org> [date accessed]

3 Results

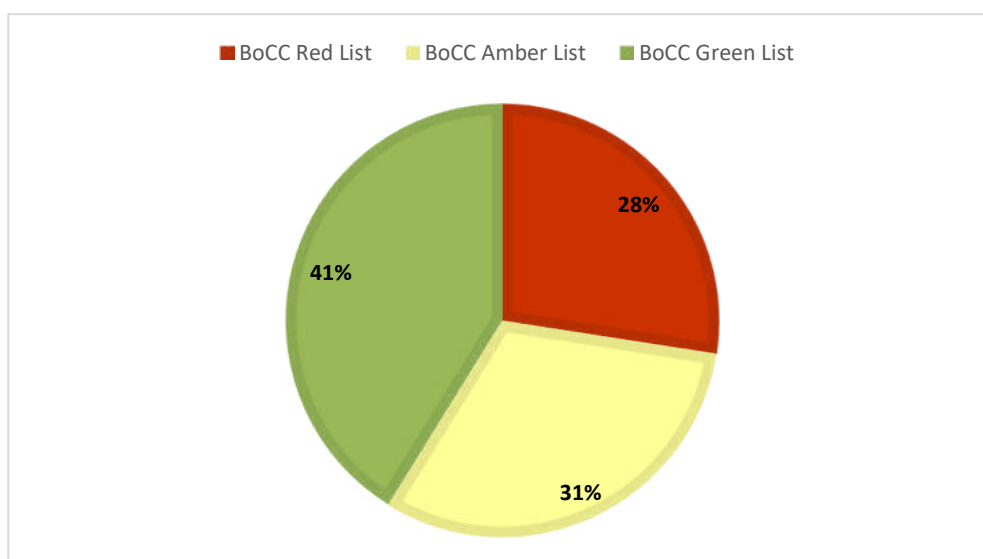
Desk study

- 3.1 ERIC NE returned 9421 records of birds within 2 km of the Survey Area. Due to the volume of records, a full summary is not provided herein, although raw data can be made available on request.
- 3.2 Of the records returned, 21 are Wildlife and Countryside Act (WCA) 1981 (as amended) Schedule 1 species but most relate to species which only occur in the United Kingdom during the autumn and winter period and do not breed in the north east of England, such as fieldfare *Turdus pilaris* and redwing *Turdus iliacus*. Other notable Schedule 1 species which could typically breed or use habitats similar to that found within the Survey Area include: barn owl (four records), hobby *Falco subbuteo* (one record), kingfisher *Alcedo atthis* (31 records), quail (one record) and red kite *Milvus milvus* (27 records).
- 3.3 Twelve of the records were Birds of Conservation Concern (BoCC) Red List species considered to be of relevance to the Site and their typical habitat requirements including: curlew *Numenius arquata*, grasshopper warbler *Locustella naevia*, grey partridge *Perdix perdix*, greenfinch *Carduelis chloris*, house sparrow *Passer domesticus*, lapwing *Vanellus vanellus*, linnet *Carduelis cannabina*, skylark *Alauda arvensis*, starling *Sturnus vulgaris*, tree sparrow *Passer montanus*, willow tit *Poecile montanus* and yellowhammer *Emberiza citrinella*. Many of the records relate to Prestwick Carr which is located to the north west of the Site. Many of the records provided only have a four-figure grid reference and therefore an accurate location cannot be determined.
- 3.4 Most of these records were only provided with a four-figure Ordnance Survey grid reference and as such, their accurate location cannot be determined. However, many of the records were submitted for 'Lamesley Pastures' and 'Burdon Moor' which are well known and well visited bird watching sites.

Breeding bird characterisation surveys

- 3.5 In total, 52 species were recorded within the Site and Survey Area during surveys conducted by BSG Ecology in 2025. Of which, fourteen were BoCC Red List species, sixteen were BoCC Amber List species, twenty-one were BoCC Green List species and one introduced species. Chart 1 shows an illustrated distribution of BoCC species within the Survey Area.

Chart 1: BoCC distribution



- 3.6 A total of 31 species were considered to be confirmed breeding within the Site and Survey Area. Of these, nine were red-listed species (grey partridge, greenfinch, house sparrow, lapwing, linnet, skylark, tree sparrow, yellowhammer and willow tit).
- 3.7 Additionally, 10 amber-listed species were considered to be breeding. These included: bullfinch *Pyrrhula pyrrhula*, dunnock *Prunella modularis*, reed bunting *Emberiza schoeniclus*, stock dove *Columba oenas*, song thrush *Turdus philomelos*, tawny owl *Strix aluco*, whitethroat *Sylvia communis*, willow warbler *Phylloscopus trochilus*, woodpigeon *Columba palumbus* and wren *Troglodytes troglodytes*. Woodpigeon are amber-listed due to the UK supporting over 25% of the European population but are a common and widespread species in the UK and ubiquitous in farmland environments. As such, woodpigeon is not considered to be a species of conservation concern and are not considered further in this report.
- 3.8 The remaining 13 species were all green-listed species and are of low conservation concern. As such, they are not considered further within this report.
- 3.9 A total of 21 additional species were observed but not considered to have established a territory, either due to unsuitable breeding habitat, or insufficient breeding evidence over the survey period. A summary of non-breeding BoCC Red and Amber List species is shown in **Table A-1, Appendix 1**.
- 3.10 **Table 4** lists the species recorded during the surveys; their breeding status and number of territories. The table also provides information on their conservation status.

Table 4: Observations and breeding pairs of species recorded within the Site and Survey Area (additional territories recorded within the Survey Area are bracketed)

Common Name	Scientific Name	BoCC Status	Breeding (✓)	Confirmed breeding territories	WCA Schedule 1	Species of Principal Importance	Estimated Breeding Pairs within the County ²
Curlew	<i>Numenius arquata</i>	Red		-	-	Y	-
Grasshopper warbler	<i>Locustella naevia</i>	Red		-	-	Y	-
Grey partridge	<i>Perdix perdix</i>	Red	✓	2 (1)	-	Y	1,500 – 2,000
Greenfinch	<i>Chloris choris</i>	Red	✓	(1)	-		<4,000
House sparrow	<i>Passer domesticus</i>	Red	✓	(3)	-	Y	>25,000
Herring gull	<i>Larus argentatus</i>	Red		-	-	Y	-
Lapwing	<i>Vanellus vanellus</i>	Red	✓	1	-	Y	11,240
Linnet	<i>Linaria cannabina</i>	Red	✓	1 (1)	-	Y	5,000
Skylark	<i>Alauda arvensis</i>	Red	✓	10 (9)	-	Y	30,000
Starling	<i>Sturnus vulgaris</i>	Red		-	-	Y	-
Swift	<i>Apus apus</i>	Red		-	-		-

² In reference to Bowey *et al* (2012). Vice County '66' County Durham.

Tree sparrow	<i>Passer montanus</i>	Red	✓	4	-	Y	800 – 1,000
Yellowhammer	<i>Emberiza citrinella</i>	Red	✓	9 (4)	-	Y	5,500 – 6,000
Willow tit	<i>Poecile montanus</i>	Red	✓	1	-	Y	300
Bullfinch	<i>Pyrrhula pyrrhula</i>	Amber	✓	1 (2)	-	Y	>1,000
Dunnock	<i>Prunella modularis</i>	Amber	✓	3 (4)	-	Y	22,300
Greylag goose	<i>Anser anser</i>	Amber		-	-	-	-
Kestrel	<i>Falco tinnuculus</i>	Amber		-	-	-	-
Mallard	<i>Anas platyrhynchos</i>	Amber		-	-	-	-
Quail	<i>Coturnix coturnix</i>	Amber		-	Y	-	-
Reed bunting	<i>Emberiza schoeniclus</i>	Amber	✓	(1)	-	Y	510 – 850
Rook	<i>Corvus frugilegus</i>	Amber		-	-	-	-
Shelduck	<i>Tadorna tadorna</i>	Amber		-	-	-	-
Stock dove	<i>Columba oenas</i>	Amber	✓	(1)	-	-	2,000
Song thrush	<i>Turdus philomelos</i>	Amber	✓	2 (8)	-	Y	11,000
Tawny owl	<i>Strix aluco</i>	Amber	✓	(2)	-	-	400
Whitethroat	<i>Sylvia communis</i>	Amber	✓	10 (12)	-	-	7,400
Woodpigeon	<i>Columba palumbus</i>	Amber	✓	(1)	-	-	N/A
Willow warbler	<i>Phylloscopus trochilus</i>	Amber	✓	2 (5)	-	-	28,000
Wren	<i>Troglodytes troglodytes</i>	Amber	✓	9 (37)	-	-	79,200
Blackbird	<i>Turdus merula</i>	Green	✓	4 (10)	-	-	40,000 – 45,000
Blackcap	<i>Sylvia atricapilla</i>	Green	✓	2 (13)	-	-	6,500
Blue tit	<i>Cyanistes caeruleus</i>	Green	✓	7 (5)	-	-	52,000
Buzzard	<i>Buteo buteo</i>	Green		-	-	-	-

Carrion crow	<i>Corvus corone</i>	Green		-	-	-	-
Chaffinch	<i>Fringilla coelebs</i>	Green	✓	12 (7)	-	-	60,000 – 70,000
Chiffchaff	<i>Phylloscopus collybita</i>	Green	✓	5 (21)	-	-	>7,100
Coal tit	<i>Pariparus ater</i>	Green	✓	(2)	-	-	8,500
Collared dove	<i>Streptopelia decaocto</i>	Green	✓	(1)	-	-	2,800
Goldcrest	<i>Regulus regulus</i>	Green	✓	(1)	-	-	5,000
Garden warbler	<i>Sylvia borin</i>	Green	✓	(2)	-	-	2,000 – 3,000
Goldfinch	<i>Carduelis carduelis</i>	Green		-	-	-	-
Great tit	<i>Parus major</i>	Green	✓	2 (1)	-	-	25,000
Jackdaw	<i>Corvus monedula</i>	Green		-	-	-	-
Kingfisher	<i>Alcedo atthis</i>	Green	✓	2	Y	-	50 – 100
Long tailed tit	<i>Aegithalos caudatus rosaceus</i>	Green		-	-	-	-
Nuthatch	<i>Sitta europaea</i>	Green		-	-	-	-
Magpie	<i>Pica pica</i>	Green		-	-	-	-
Robin	<i>Erithacus rubecula</i>	Green	✓	4 (7)	-	-	14,500
Siskin	<i>Spinus spinus</i>	Green		-	-	-	-
Swallow	<i>Hirundo rustica</i>	Green	*3	-	-	-	-
Pheasant	<i>Phasianus colchicus</i>	Not Assessed		-	-	-	-

Red List BoCC

Ground nesting birds

3.11 Three red-listed ground nesting birds were considered to be breeding in Survey Area (grey partridge, lapwing and skylark).

- Grey partridge – two territories within the Site and one additional territory within the Survey Area. The territories were generally evenly distributed amongst the Survey Area and located near field boundaries. An incidental sighting during one of the quail surveys recorded grey partridge with at least four dependant young to the centre west of the Site. Based upon Nicholas *et. al.*, 2010 agricultural habitats in optimum condition for partridge can support four pairs per 100 hectares,

³ *Swallow is not breeding in the Survey Area; however, some inactive nests were located within the farm to the south. Swallow was recorded foraging nearby and it is likely that a breeding population of swallow persists on this farm.

whereas sub-optimum habitat can support two pairs per 100 hectares. The survey area was 236.49 ha in size with a total of two pairs recorded. The densities of grey partridge indicate that the habitats on site are sub-optimal to support the species.

- Lapwing – one territory within the Site to the south east within a cereal crop field. No young were recorded but based upon observations of a male and female showing territorial behaviour, it is likely the pair made a breeding attempt.
- Skylark – ten territories within the Site and an additional nine territories within the Survey Area. Skylark was considerably the most abundant ground-nesting species. All territories were recorded in arable fields, mostly autumn/winter sown cereal crops.

3.12 Territory densities per hectare recorded on Site and for the Survey Area is shown in **Table 5**.

Table 5: Territory density of ground nesting BoCC Red List species recorded within the Site and Survey Area

Species	Territory density per hectare (Site is 92.5 ha in size)	Territory density per hectare (Survey Area is 236.5 ha in size)	Species density literature review
Grey partridge	1 pair per 46 ha (or approximately 2.17 pairs per 100 ha)	1 pair per 78 ha (or approximately 1.28 pairs per 100 ha)	Nicholas et. al. (2010): In modern farming practices, 4 pairs per 100 ha can generally be supported on optimum ground or 2 pairs per 100 ha on sub-optimum ground.
Lapwing	1 pair per 92.5 ha	1 pair per 236.5 ha	n/a
Skylark	1 pair per 9.25 ha (or 0.10 pairs per ha)	1 pair per 12.44 ha (or 0.08 pairs per ha)	Fox (2022) and Donald et al (2004): Typical skylark densities in arable farmland from studies across Europe averaged 1 pair per 3.6 ha (or 0.27 pairs per ha).

Other farmland birds

3.13 Yellowhammer was the most abundant hedgerow bird with nine confirmed territories within the Site and an additional four territories within the Survey Area. Yellowhammer territories were generally sporadic within the Survey Area, confined to hedgerow field boundaries around arable cropland.

3.14 The estimated number of territories of other BoCC Red List species were as follows:

- Greenfinch – one territory located to the east of the Survey Area, in trees adjacent to Kibblesworth Village.
- House sparrow – three territories, all of which were located in the Survey Area to the east, situated around residential dwellings.
- Linnet – one territory within the Site and an additional one territory within the Survey Area. Both of which were associated with hedgerow field boundaries.
- Tree sparrow – four territories within the Site. Two territories were located on the field boundary adjacent to the Tyne and Wear Heritage Way adjacent to the central section of the Site. One additional territory was located within the Site near Kibblesworth Grange. All territories were pairs (and possibly juveniles) in suitable habitat calling from within hedgerows.

- Willow tit – one territory located on the boundary of the Site adjacent to the Tyne and Wear Heritage Way. Willow tit was recorded on two surveys, in different areas (approximately 1 km apart) but it is likely that this relates to the same territory as willow tit can have a territory home range of up to 7 ha (Broughton, 2024). The willow tit is considered a scarce breeding bird in the region, with a population estimate of only 300 pairs within Vice County 66 'County Durham' (Bowey *et al*, 2012).

3.15 See **Figure 2a** for the BoCC Red List territory map.

Amber List BoCC

3.16 Wren was the most abundant, amber-listed species recorded with nine territories within the Site but an additional 37 territories within the Survey Area. Wren was associated with hedgerow and areas of scrub and woodland.

3.17 The estimated number of territories of other BoCC Amber List species were as follows:

- Bullfinch – one territory within the Site and one territory within the Survey Area. Both territories were located along the woodland surrounding the Tyne and Wear Heritage Way.
- Dunnock – three territories present within the Site and four additional territories within the Survey Area; all primarily associated with hedgerow.
- Reed bunting – one territory within the Survey Area. A party of three birds (including one probable juvenile) was recorded on the final survey.
- Stock dove – one territory located within the Survey Area, to the north west adjacent to Strandy Burn. All but one sedge warbler territories were located within the north east of the Survey Area. The additional territory was located within scrub in the central section of the Survey Area.
- Song thrush – two territories within the Site and an additional eight territories within the Survey Area. The territories were often associated with mature trees and scrub thickets.
- Tawny owl – two territories within the Survey Area, one located to the east along the Tyne and Wear Heritage Way and the other to the north east near Strandy Burn. Tawny owl were identified during the final breeding bird characterisation survey where contact calling was picked up between a likely pair.
- Whitethroat – a total of ten territories within the Site and an additional 12 territories within the Survey Area.
- Willow warbler – two territories within the Site and an additional five territories within the Survey Area. All territories were associated with areas of woodland and scrub.

3.18 See **Figure 2b** for the BoCC Amber List territory map.

Species-specific surveys

Quail

3.19 One quail was recorded as an incidental observation during a bat static deployment survey singing in the middle of a barley *Hordeum vulgare* crop on 13 June 2025. This was followed up with two species specific quail surveys, two long-eared owl surveys and two crepuscular breeding bird characterisation surveys, as well as two nighttime bat walkovers where surveyors were briefed to record singing quail. During the additional survey effort quail was only recorded on one other occasion, during the late July long-eared owl survey. The individual was recorded off-Site to the south east. Based on the irregularity of the records in both timings and location it is considered that the individuals recorded were either on passage through the area or had failed to find a suitable breeding site and attract mates.

Barn owl

- 3.20 A single barn owl was inadvertently flushed from the nesting box within the 'old granary' during the nest check surveys.
- 3.21 The results of the trail cam deployment showed an adult barn owl returning to the box on multiple occasions each night over the period of a month. Additionally, the footage showed that at least two owls, likely juvenile was present within the box during the month the trail camera was deployed. Therefore, breeding is confirmed.

Long-eared owl

- 3.22 The first surveys in late June recorded no evidence of long-eared owl. The second survey in late July did not record owl flying over or foraging on Site, however begging calls from at least two locations, likely different juveniles were heard from Bowes Valley Nature Reserve.
- 3.23 Based upon the survey results it likely that the juvenile owls fledged sometime in late June and took up residence within Bowes Valley Nature Reserve. The lack of sightings of adult long-eared owls during any of the crepuscular surveys suggests that their main foraging grounds are off Site, likely within Bowes Valley Nature Reserve which provides higher suitability foraging habitat for the species.

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5 Figures

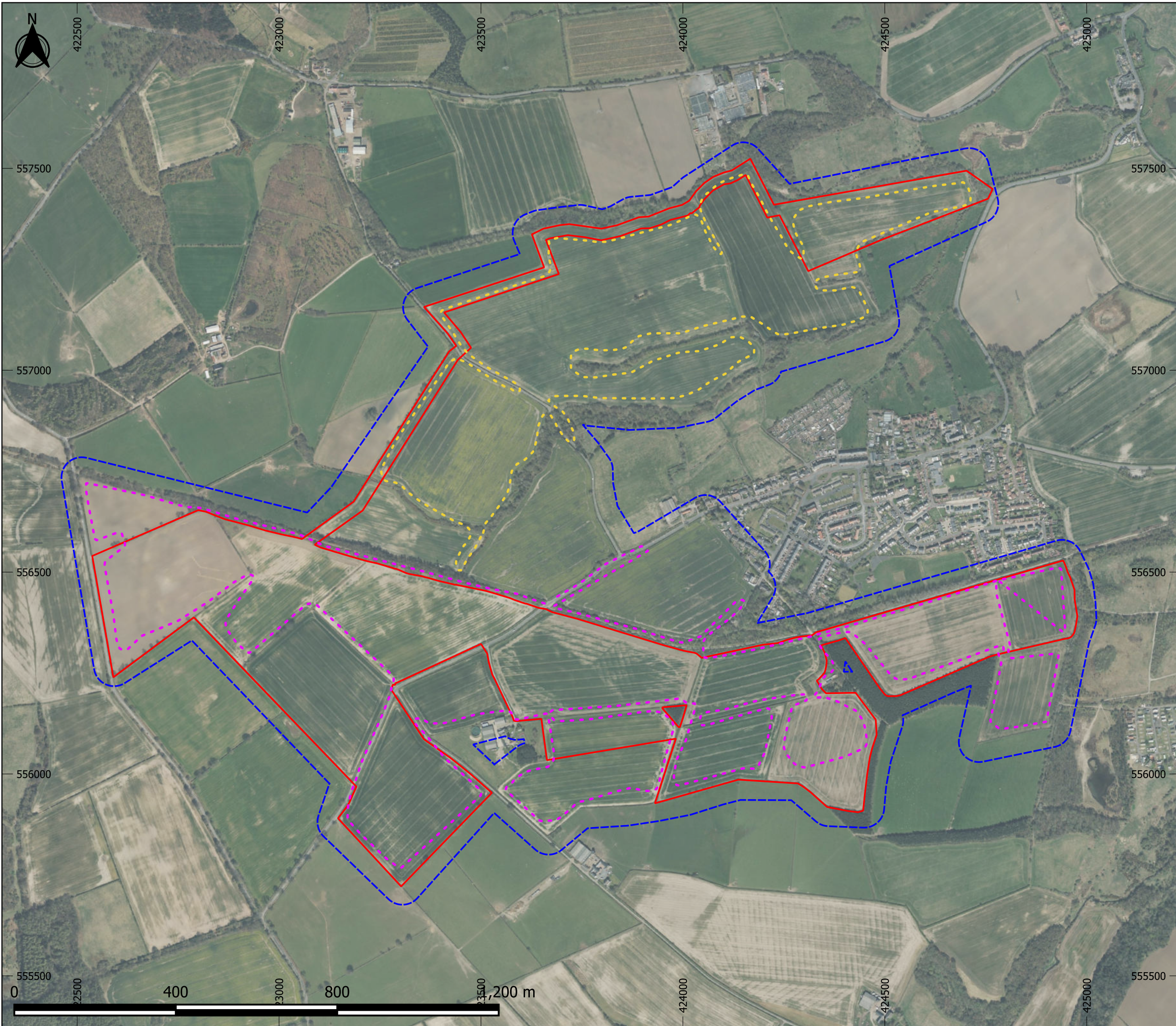
Figure 1: Breeding bird characterisation transect routes

Figure 2a: Breeding bird characterisation results: BoCC Red List territories

Figure 2b: Breeding bird characterisation results: BoCC Amber List territories

Figure 2c: Crepuscular Breeding Birds

Figure 3: Quail survey results



- Legend
- Transect A
 - Transect B
 - Survey Area
 - Site boundary



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Figure 1: Breeding bird characterisation transect routes

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Legend

- Red
- Survey Area
- Site boundary

BTO Code	Common Name
GR	Greenfinch
HS	House Sparrow
L.	Lapwing
LI	Linnet
P.	Grey Partridge
S.	Skylark
TS	Tree Sparrow
WT	Willow Tit
Y.	Yellowhammer



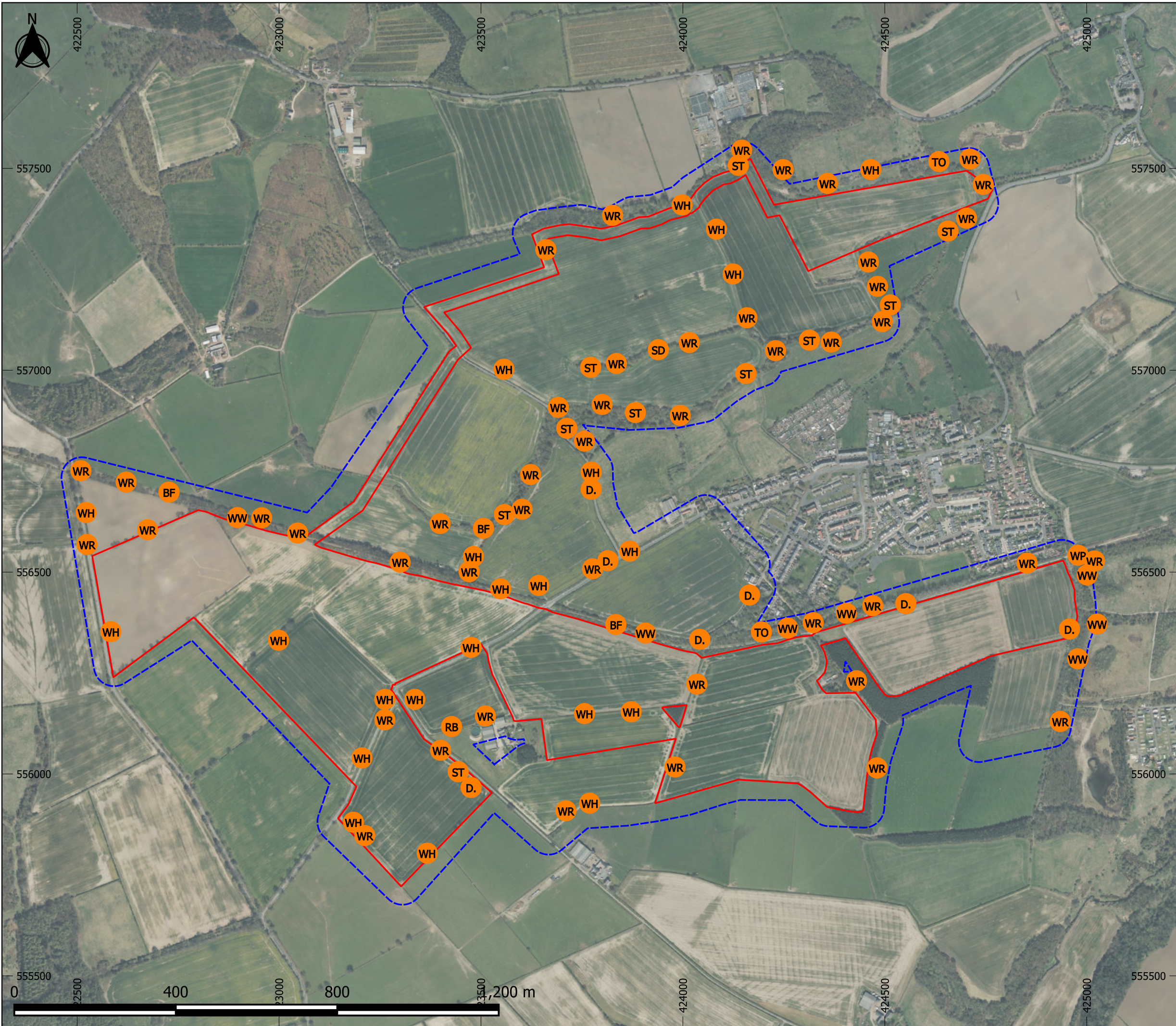
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Figure 2a: Breeding bird characterisation results – BoCC Red List territories

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Legend

- Amber
- Survey Area
- Site boundary

BTO Code	Common Name
BF	Bullfinch
D.	Dunnock
RB	Reed Bunting
SD	Stock Dove
ST	Song Thrush
TO	Tawny Owl
WH	Whitethroat
WP	Woodpigeon
WR	Wren
WW	Willow Warbler



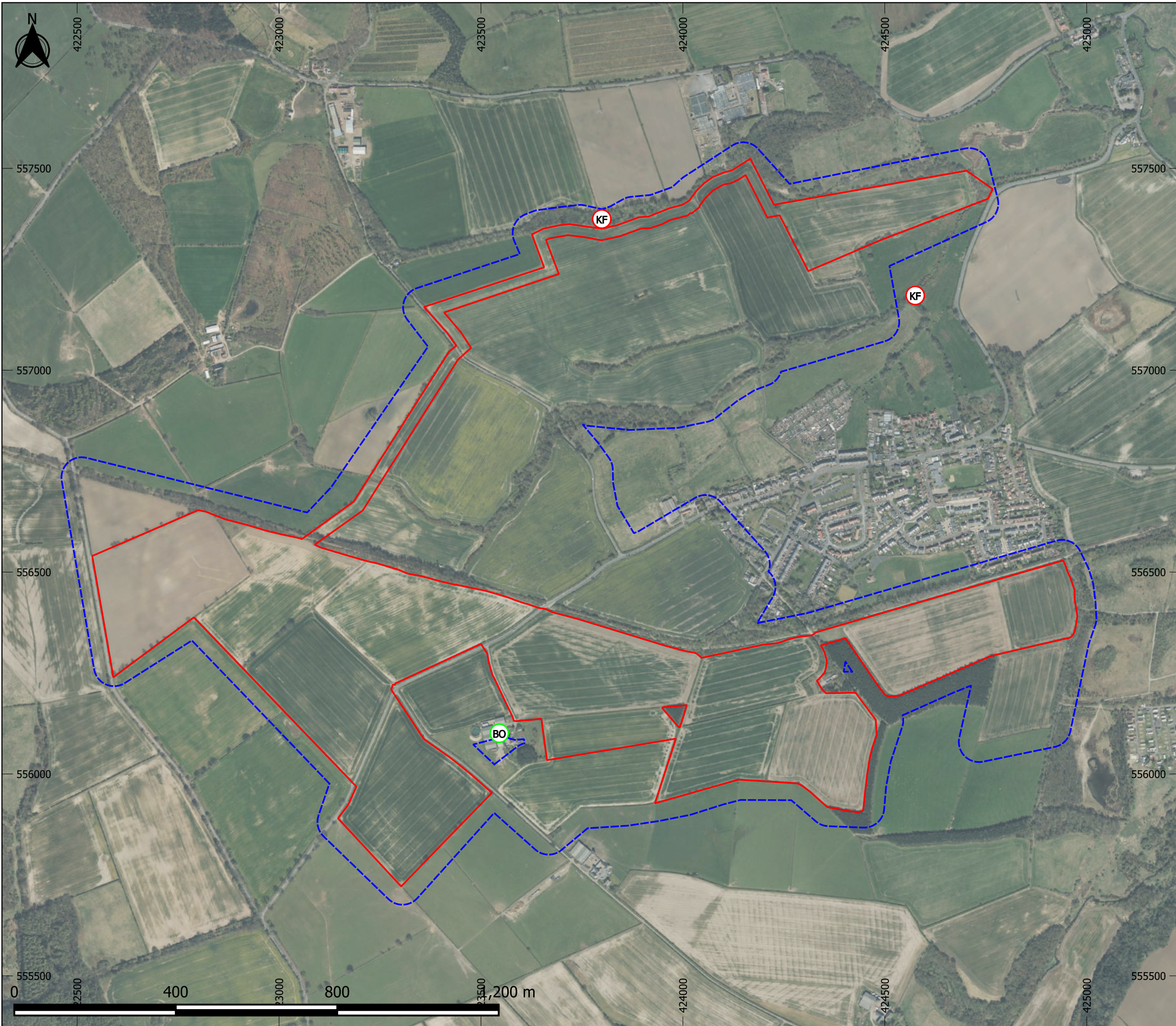
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Figure 2b: Breeding bird characterisation results – BoCC Amber List territories

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Legend

- ⊙ Nest
- ⊙ Possible nest
- Survey Area
- Site boundary

BTO Code	Common Name
BO	Barn Owl
KF	Kingfisher



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Figure 2c: Schedule 1 breeding bird territories

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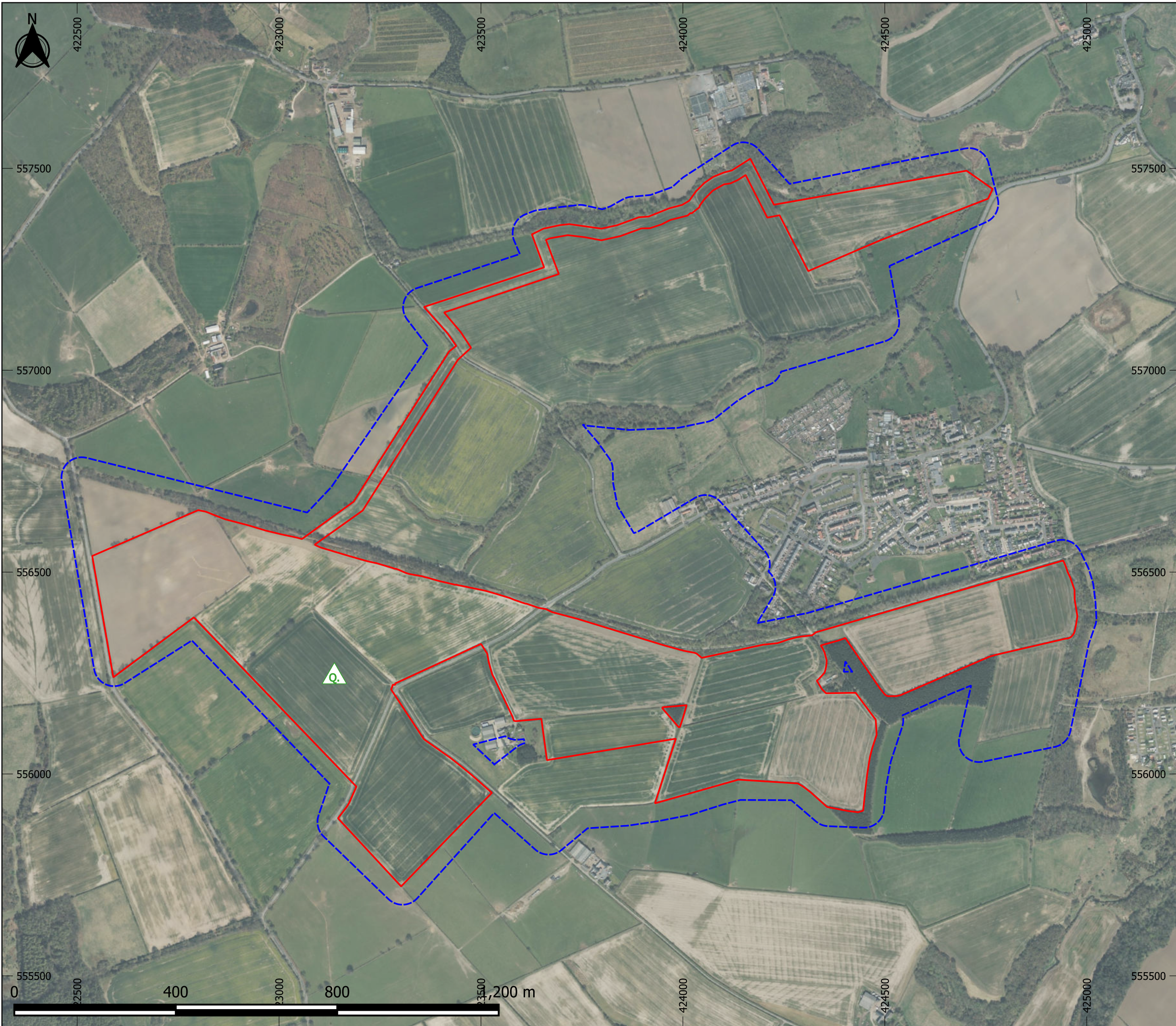
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Legend

-  Incidental observation on 13 June 2025
-  Survey Area
-  Site boundary

BTO Code	Common Name
Q.	Quail

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Figure 3: Quail survey results

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Appendix 1: Summary of non-breeding records recorded during breeding bird characterisation surveys

Table A-1: Summary of BoCC Red List and Amber List non-breeding records during the 2024 breeding bird surveys

Species	BoCC Status	Description
Curlew		Two flyovers on the first visit in April. It is considered that these birds were on migration to their grounds in the uplands.
Grasshopper warbler		One individual was 'reeling' on the boundary to the Site to the north west. No other observations of grasshopper warbler were made at this location and therefore not enough breeding evidence was recorded to indicate an established territory.
Herring gull		Multiple flyovers.
Starling		Multiple flyovers but no established breeding territories.
Swift		Flyovers and foraging activity recorded particularly during the latter part of the breeding season.
Greylag goose		Flyovers recorded on visit 1 and visit 3.
Kestrel		An individual was recorded flying over on visit 2 and visit 3.
Mallard		Female recorded within a field boundary on visit 6.
Quail		Recorded singing on one occasion but no further observations were made within the Survey Area.
Rook		Two birds flying over the Survey Area to the south on visit 3.
Shelduck		A pair recorded within the west of the Site on visit 2, considered to be a non-breeder.

Appendix 2: County species breeding status of birds recorded during the breeding bird characterisation surveys

Table A-2: County status of BoCC Red List and Amber List confirmed territories recorded within the breeding bird baseline, in reference to Bowey et al (2012)

Species	BoCC Status	County breeding status
Grasshopper warbler		Well represented
Grey partridge		Widespread resident which remains quite common
Greenfinch		Common and well distributed resident
House sparrow		Abundant but in recent years they are quite rapidly declining
Lapwing		Common breeder
Linnet		Common and well distributed resident
Skylark		Abundant resident but has shown some local declines in recent years
Tree sparrow		Locally common but sparsely distributed resident
Yellowhammer		Widespread resident in lowland areas, much more local in west of the county
Willow tit		Once common but increasingly uncommon and local resident
Bullfinch		Widespread and common resident
Dunnock		Abundant resident
Common whitethroat		Common
Reed bunting		Common but local resident breeder
Stock dove		Common resident
Song thrush		Common but declining resident
Tawny owl		Common and widespread resident
Whitethroat		Common summer visitor and remains widespread remains relatively common in areas that are not built up
Willow warbler		Abundant summer visitor which has undergone considerable declines in recent years
Wren		Abundant resident