

Appendix 11.9: Breeding Bird Technical Appendix



THE
ENVIRONMENT
PARTNERSHIP



LAND NORTH OF BRYN LANE WREXHAM BREEDING BIRD SURVEY

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2.0	April 23	PP	MW	Updated following amendments to the redline boundary and proposed development, and to the BoCC list for Wales	Issued
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DRAWINGS

G9134.020A Breeding Bird Survey Visit 1 - 11.04.2022
G9134.021A Breeding Bird Survey Visit 2 - 18.05.2022
G9134.022A Breeding Bird Survey Visit 3 - 10.06.2022
G9134.023A Breeding Bird Survey Visit 4 - 15.07.2022

1.0 Introduction

1.1 The Environment Partnership (TEP) was commissioned by Net World Sports in October 2021 to complete a breeding bird survey of land north of Bryn Lane in Wrexham, North Wales (hereafter referred to as 'the site'). Ecological surveys are required to support an Environmental Statement that will inform proposals for a commercial development.

1.2 The proposed development is commercial in nature and encompasses:

Detailed Component:

- *Demolition of existing buildings, site clearance and preparation works, including removal of vegetation and reprofiling of topsoil, where necessary;*
- *Construction of a new warehouse unit, providing 33,595 sqm Gross External Area (GEA) for B1c (light industry appropriate in a residential area), B2 (general industrial) and B8 (storage & distribution) uses (Unit 2);*
- *Construction of 8 new smaller units (Units 3-7; 14-16), providing a total of 29,659 sqm GEA for B1c (light industry appropriate in a residential area), B2 (general industrial) and B8 (storage & distribution) uses;*

Outline Component:

- *Construction of up to 72,635 sqm GEA for employment uses (B1c (light industry appropriate in a residential area), B2 (general industrial) and B8 (storage & distribution) uses), ancillary retail/drive thru facilities and potential for a hotel and petrol filling station (A1, A3, C1 or sui generis). The overall quantum of A1, A3, C1 or sui generis use would not exceed 16,150 sqm GEA;*
- *The proposed buildings will be up to 28.5m in height above ground level;*

Site Wide

- *Access and parking provision, including new access junctions, internal roads, service yards and car and HGV parking. Two new junctions are proposed (in detail) providing vehicular access, as well as cycle and pedestrian access, from Bryn Lane/Industrial Estate Road with an additional access road for a substation. Car parking spaces, HGV trailer spaces and HGV lorry spaces are proposed across the application site;*
- *Retention and enhancement of some existing on-site green spaces and provision of landscaping around the application site; and*
- *Implementation of drainage/attenuation measures.*

Site Description

1.3 The site (central grid reference SJ 38614 51101) is approximately 37.21 ha in size and is located to the east of Wrexham in North Wales.

- 1.4 The site is bounded to the south by Bryn Lane and Wrexham Industrial Estate, to the north by Francis Lane, to the west by both Industrial Estate Road and Hugmore Lane (with associated residential properties), and to the east by open agricultural fields. The wider area predominantly comprises urban development to the west associated with Wrexham town centre, with open countryside present to the north and east and the industrial estate to the south.
- 1.5 The site location within the context of the wider landscape is illustrated in Figure 1 below.

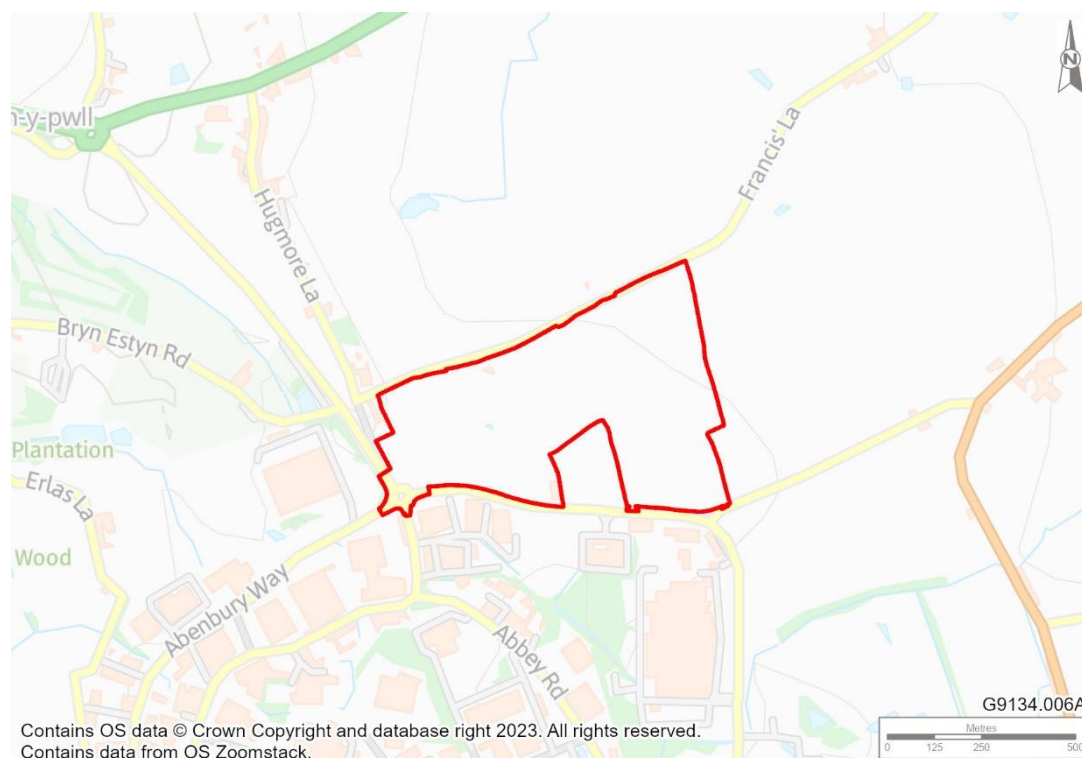


Figure 1: Site Location Plan

- 1.6 Drawings G9134.20A to G9134.23A illustrate the site boundary as well as the results of each survey visit.

Pre-existing Site Data

Desk Study

- 1.7 Desktop records of protected or notable bird species recorded within a 2 km radius of the site were requested from North Wales Environmental Information Service (COFNOD). Bird species classed as notable are those listed on any of the following:
- Schedule 1 of the Wildlife and Countryside Act 1981, as amended (WCA1);
 - Species of principal importance under Section 7 of the Environment (Wales) Act 2016 (S7);
 - Red and Amber listed Bird of Conservation Concern (BoCC) species (Stanbury et al. 2021) (BRd/BAm & BRd/BAM Wales); and
 - Bird species listed on Wrexham County Borough Council's Local Biodiversity Action Plan (LBAP) (2002).

- 1.8 There are records of 67 notable species within 2 km of the site. It is important to note that these records are from year-round meaning that even if some of these species may be using the site it is not necessarily within the breeding period.
- 1.9 Within the records returned are 13 WCA1 species. The majority of these WCA1 species are unlikely to breed on site due to a lack of suitable habitat or due to the fact that such species are largely winter visitors with few and infrequent breeding attempts recorded across much of the UK (e.g. fieldfare, redwing).
- 1.10 All notable bird species records within 2 km of the site from COFNOD are presented in Table 1.

Table 1. Notable bird species within 2 km of the site

Name of Species	Legislation*	Name of Species	Legislation*
Barn Owl	WCA1, LBAP	Mistle Thrush	BRd, BAm (Wales)
Black-headed Gull	S7, BAm, BRd (Wales)	Moorhen	BAm
Bullfinch	S7, BAm, BAm (Wales)	Mute swan	BAm
Cetti's Warbler	WCA1	Oystercatcher	BAm, BAm (Wales)
Common Gull	BAm, BAm (Wales)	Peregrine	WCA1
Common Sandpiper	BAm, BAm (Wales)	Pink-footed goose	BAm
Coot	BAm (Wales)	Pintail	BAm, BAm (Wales)
Crossbill	WCA1	Pochard	BRd, BRd (Wales)
Cuckoo	S7, BRd, BRd (Wales)	Quail	WCA1, BAm, BAm (Wales)
Curlew	S7, BRd, BRd (Wales)	Redshank	BAm, BRd (Wales)
Dunnock	S7, BAm, BAm (Wales)	Redstart	WCA1, BAm
Fieldfare	WCA1, BRd, BAm (Wales)	Redwing	WCA1, BAm
Gadwall	BAm	Reed Bunting	S7, BAm
Goldcrest	BRd (Wales)	Ringed Plover	S7, BRd, BRd (Wales)
Goshawk	WCA1, BAm (Wales)	Rook	BAm, BRd (Wales)
Grasshopper Warbler	S7, BRd, BRd (Wales)	Sedge Warbler	BAm
Great Black-backed Gull	BAm, BAm (Wales)	Shelduck	BAm, BRd (Wales)
Green Sandpiper	BAm, BAm (Wales)	Shoveler	BAm, BAm (Wales)
Greenfinch	BRd, BRd (Wales)	Skylark	S7, BRd, BAm (Wales)
Grey Heron	BAm (Wales)	Snipe	BAm, BAm (Wales)

Name of Species	Legislation*	Name of Species	Legislation*
Grey Partridge	S7, BRd, BRd (Wales)	Song Thrush	S7, BAm, LBAP
Grey wagtail	BAm, BAm (Wales)	Sparrowhawk	BAm
Greylag goose	WCA1 pt2, BAm	Spotted Flycatcher	S7, BRd, BRd (Wales)
Herring Gull	S7, BRd, BRd (Wales)	Starling	S7, BRd, BRd (Wales)
Hobby	WCA1	Stock Dove	BAm
House Martin	BRd, BAm (Wales)	Swift	BRd, BRd (Wales)
House Sparrow	S7, BRd, BAm (Wales)	Tawny Owl	BAm
Jack Snipe	BAm (Wales)	Teal	BAm, BAm (Wales)
Kestrel	S7, BAm, BRd (Wales)	Tree Sparrow	S7, BRd, BRd (Wales)
Kingfisher	WCA1, BAm	Wheatear	BAm
Lapwing	S7, BRd, BRd (Wales)	Whinchat	BRd, BRd (Wales)
Lesser Black-backed Gull	BAm, BRd (Wales)	Whitethroat	BAm, BRd (Wales)
Lesser Redpoll	S7, BRd, BAm (Wales)	Whooper Swan	WCA1, BAm
Linnet	S7, BRd, BRd (Wales)	Wigeon	BAm, BAm (Wales)
Little Ringed Plover	WCA1	Willow Warbler	BAm, BRd (Wales)
Mallard	BAm	Woodcock	BRd, BRd (Wales)
Marsh harrier	WCA1, BAm, BAm (Wales)	Wren	BAm
Marsh tit	S7, BRd, BRd (Wales)	Yellow Wagtail	S7, BRd, BRd (Wales)
Meadow Pipit	BAm, BRd (Wales)	Yellowhammer	S7, BRd, BRd (Wales)
Merlin	WCA1, BRd, BRd (Wales)		

* WCA1 = Schedule 1, S7 = Section 7; BRd = BoCC Red List (UK); BAm = BoCC Amber List (UK); (Wales) = BRd/BAm Welsh List; LBAP = Local Biodiversity Action Plan.

2.0 Method

- 2.1 The new Breeding Bird Survey guidelines published in January 2022 state that a breeding bird survey should have six survey visits as a default unless clear justification can be provided to deviate from this approach. This is to ensure that all parts of the breeding bird survey season are adequately covered. The survey guidance is currently non-mandatory but is being adopted by a number of national organisations and Local Planning Authorities.
- 2.2 A TEP Breeding bird Scoping matrix was completed for the Bryn Lane site to assess the need for a breeding bird survey and also the number of survey visits. The Scoping matrix considers a range of matters including size of site, value of habitats on site for birds, predicted habitat loss, proximity of designated sites for birds and potential to support Birds of Conservation Concern and Schedule 1 birds. The use of the Scoping matrix is an internal agreed approach.
- 2.3 Based on the findings of the scoping matrix it was concluded that a four-visit survey was appropriate to cover the site. The justification for this considered the scale of the site, the limited nesting habitats within the site and the limited potential for the site to support other breeding Birds of Conservation Concern (BoCC).
- 2.4 The breeding bird survey was carried out applying methods based on the standard breeding bird survey and common bird census methods developed by the British Trust for Ornithology (BTO) (Gilbert et al. 1998). Four evenly spaced visits were undertaken from April to July 2022 early in the morning to coincide with the peak times of breeding bird activity.
- 2.5 Bird species and activity patterns were recorded and mapped using standard BTO symbology. Birds within the 100m buffer surrounding the site boundary were also recorded during the survey, as a proportion of the bird's foraging habitat is likely to be within the site.

Limitations

- 2.6 BoCC Wales 4 was published on December 12th 2022, thus superseding BoCC Wales 3. The results illustrated in G9134.020A to G9134.023A show BoCC classifications at the time of survey, i.e. using BoCC Wales 3.
- 2.7 Amendments to the red line boundary following the survey mean that a small area in the southwest of the site, comprised of a roundabout and adjacent habitat, was not subject to survey. However, this is not considered to be a significant constraint as the area is considered to be unsuitable for breeding birds.

3.0 Results

Table 2. 2022 Breeding bird survey details

Date(s)	Visit 1 - 11/04/22 Visit 2 - 18/05/22 Visit 3 - 10/06/22 Visit 4 - 15/07/22
Surveyor	Visit 1 - Colin Davies Visit 2 - Colin Davies Visit 3 - Mike Walker Visit 4 - Maddie Heath - Sargent
Weather	Visit 1 - Dry and cloudy with a breeze Visit 2 - Dry and clear with a light breeze Visit 3 - Dry and cloudy with a light breeze Visit 4 - Dry and cloudy with a light breeze
Seasonal Constraints	There were no seasonal constraints associated with the survey.
Drawing References	G9134.20A Breeding Bird Survey Visit 1 G9134.21A Breeding Bird Survey Visit 2 G9134.22A Breeding Bird Survey Visit 3 G9134.23A Breeding Bird Survey Visit 4
Survey Periods	Visit 1 - 05:50 - 09:15 Visit 2 - 06:00 - 09:15 Visit 3 - 06:00 - 09:05 Visit 4 - 06:05 - 09:05

Table 3. Counts of bird species recorded during the 2022 breeding bird survey, including conservation and likely breeding status.

Species	Visit 1		Visit 2		Visit 3		Visit 4		Status	Likely Breeding Status (No. of Pairs)	
	S	SBU	S	SBU	S	SBU	S	SBU		S	SBU
Blackbird	4	6	6	8	1	7	4	6		Pr (3)	Pr (6)
Blackcap			5	5	3	3	1	1		Pr (2)	Pr (2)
Blue Tit	2	4	4	6	5	12	4	6		C (1) Pr (2)	C (2) Pr (3)
Canada Goose	4	4	2	6						Po	Po
Carrion Crow	2	6		2	6	7	5	6		Po	Po
Chaffinch	2	4	3	3	4	6			BAm (Wales)	Pr (2)	Pr (3)
Chiffchaff	4	7	3	7	6	8	2	3		C (1) Pr (2)	C (1) Pr (4)
Collared Dove						2				N	Po
Dunnock	3	5	3	4	2	5	3	3	S7, BAm, BAm (Wales)	Pr (3)	Pr (4)
Garden Warbler			1	1	1	1	2	2	BAm (Wales)	Pr (1)	Pr (1)
Goldcrest								2	BRd (Wales)	N	C (1)
Goldfinch	3	5	2	6	4	9		6		Pr (1)	Pr (3)
Great Spotted Woodpecker						1	1	1		Po	C (1)
Great Tit	1	2	1	2	2	7	1	1		Po	C (1)
Grey Heron							1	1	BAm (Wales)	N	N

Species	Visit 1		Visit 2		Visit 3		Visit 4		Status	Likely Breeding Status (No. of Pairs)	
	S	SBU	S	SBU	S	SBU	S	SBU		S	SBU
Herring Gull							2	2	S7, BRd, BRd (Wales)	N	Po
House Sparrow	6	26		19	5	12	2	5	S7, BRd, BAm (Wales)	Po	C (4 colonies)
Jackdaw	6	6	13	16	2	8				Po	Pr (1)
Jay							3	3		Po	Po
Kestrel							1	1	S7, BAm, BRd (Wales)	Po	Po
Lesser Whitethroat					1	1				Po	Po
Long-tailed Tit	1	2				2				Po	Po
Magpie	3	3			4	4	5	6	BAm (Wales)	Pr (1)	Pr (1)
Mallard			4	4					BAm	C (1)	C (1)
Moorhen	3	3	2	2					BAm	C (2)	C (2)
Pheasant				1				1		N	Pr (1)
Reed Bunting					1	1			S7, BAm	Po	Po
Robin	6	7	9	14	5	8	5	8		Pr (4)	C (1) Pr (5)
Rook	32	38	22	40	5	6	25	24	BAm, BRd (Wales)	C (17)	C (26)
Song Thrush	2	3		2				1	S7, BAm, LBAP	Pr (1)	Pr (2)

Species	Visit 1		Visit 2		Visit 3		Visit 4		Status	Likely Breeding Status (No. of Pairs)	
	S	SBU	S	SBU	S	SBU	S	SBU		S	SBU
Starling	8	8		2	1	2			S7, BRd, BRd (Wales)	C (1)	C (1)
Stock Dove					1	3			BAm	Po	Po
Swallow		1	2	2			1	1		Po	Po
Whitethroat			1	3	3	3			BAm, BRd (Wales)	Pr (2)	Pr (2)
Woodpigeon	45	46	6	16	11	14	6	10	BAm	Pr (1)	Pr (2)
Wren	4	7	14	17	7	8	5	9	BAm	Pr (7)	Pr (10)
Total Species	20	21	19	24	22	25	20	24			

S: Site; SBU: Site including 100m buffer. Status Key: WCA1 = Schedule 1, S41 = Section 41; BRd = BoCC Red List; BAm = BoCC Amber List; BRd (Wales) = Welsh BoCC Red List, BAm (Wales) = Welsh BoCC Amber List; LBAP = Local Biodiversity Action Plan.

Likely Breeding Status Key: C = Confirmed, Pr = probable breeding within site, Po = possibly breeding within site, N = not breeding within site

Results Summary

- 3.1 There are historic desktop records of 67 notable species that have been recorded within 2 km of the site. In total 36 bird species were recorded within the site boundary and 100m survey buffer across all four survey visits. 33 species were found within the site boundary itself with the other three recorded only within the 100 m buffer.
- 3.2 Eleven species were confirmed as breeding within the site and 100m buffer. Five of these were confirmed to be breeding within the 100m buffer alone with the remaining six found within the site boundary. Confirmed breeding is recorded when, for example, nests or fledglings are observed. Notable confirmed breeding species include: Goldcrest (one confirmed pair within the site buffer), house sparrow (four confirmed colonies within the site buffer), mallard (1 pair confirmed within the site boundary), moorhen (2 pairs confirmed within the site boundary), rook (17 nests within the site boundary and a further nine within the site buffer) and starling (1 pair confirmed within the site boundary/site buffer).
- 3.3 Thirteen species were assessed as probably breeding within the site and 100 m buffer, with two of these only judged to be probable breeders within the buffer zone. Probable breeding behaviour is recorded when birds are observed holding territory, for example by singing, on two or more visits. Notable probable breeding species include: Dunnock (three probable pairs within the site and one more within the site buffer), starling (one probable pair within in the site or buffer), whitethroat (two probable pairs within the site), woodpigeon (One probable pair with the site boundary and one within the site buffer) and wren (seven probable pairs within the site boundary, three within the site buffer).
- 3.4 Notable possible breeding species include kestrel, reed bunting and stock dove.

4.0 Discussion

Evaluation of Site Value for Breeding Birds

- 4.1 The 36 bird species recorded within the site boundary and 100m survey buffer represent a moderate species diversity.
- 4.2 Fuller (1980) devised a method of classifying the ornithological interest of sites for conservation based on three site attributes: population size, rarity and diversity.
- 4.3 No significant breeding bird concentrations (i.e. 1% or more of the national breeding population) or nationally rare breeding bird species (i.e. between 1 and 1,000 breeding pairs) were recorded during the survey.
- 4.4 The total number of confirmed, probable and possible breeding bird species recorded within a site also indicates its significance. Table 4 includes the breeding diversity criteria devised by Fuller.

Table 4: Significance of the total number of breeding species recorded at a site

Local	County	Regional	National
25-49	50-69	70-84	85+

- 4.5 Based on the above criteria, the 35 confirmed, probable, and possible breeding bird species recorded within the site and 100m buffer indicate that this site is of local significance for breeding birds.
- 4.6 However, within the site boundary itself 31 species were confirmed, probable or possible breeders with suitable habitat for the other four possible breeding species only available within the buffer zone. The majority of notable confirmed, probable and possible breeding species were utilising habitat on the site (and field) boundaries, rather than the open fields in the centre of the site, suggesting that the dominant habitats present on site are of low value to breeding birds. Almost half of the confirmed breeding species were nesting in the 100m buffer rather than within the site itself, again suggesting that the large grassland fields provide fewer nesting opportunities than the surrounding smaller fields, field boundaries, residential and industrial areas.
- 4.7 An all-encompassing assessment of the value of the site itself must be based on all the following factors (Table 5). It is concluded that the site is of **below local significance for breeding birds**.

Table 5: Assessment of the value of the site for breeding birds

Evaluation Factor	Result
Result of the Fuller species richness assessment (site only)	31 species - of local significance

Evaluation Factor	Result
Proportion of birds that were only possible breeders (site only)	9 species were possible breeders (29%)
The extent and quality of nesting habitat	The site itself is largely characterised by arable land and semi-improved grassland. The field boundary habitats do provide some potential for a range of widespread breeding birds
Range of BoCC species recorded	19 BoCC species recorded across the survey area
Abundance of BoCC species	The abundance of BoCC species was generally low

Individual Species Assessment

Notable Confirmed Breeding Species

- 4.8** House sparrow (S7, BRd, BAm Wales) were confirmed as breeding on site with four colonies observed across all visits. Birds were regularly recorded along the site boundary, though it is likely that all nesting occurred on buildings within the 100m buffer. Breeding colonies were found at both properties with farm buildings on Francis' Lane north of the site, at the houses on Hugmore Lane near the western site boundary, and a further colony was observed southeast near the industrial estate at Bryn Lane. It is probable that individuals from each of these colonies will forage on habitats within the site boundary.
- 4.9** Starling (S7, BRd, BRd Wales) were confirmed as breeding on or close to the site with a bird observed flying through the southwest of the site carrying food on Visit 3. Small foraging groups of starling were noted on Visit 1 on amenity grassland in the west of the site, and birds were regularly recorded on buildings at Holt Lodge Farm in the north-western site buffer. Starling can nest within trees containing suitable holes/crevices, but they are more likely to breed within cavities in man-made structures such as houses and buildings. It is possible that starling nested within the site, but with few trees in the southwest it is likely that the bird observed carrying food was taking this off-site and may have bred on buildings such as Holt Lodge Farm in the 100m buffer.

- 4.10 Several rookeries were located on site and within the site buffer during Visit 1. Within the site boundary 17 rook (BAm, BRd (Wales)) nests were counted in trees toward the north-eastern site boundary. Nine rook nests were recorded in the northern site buffer, close to farm buildings to the North of Francis' Lane with a further nine nests located at a rookery outside of the site buffer, 120m east of the site boundary. Rooks are communal breeders with multiple nests often spread between several tall deciduous trees, high in the upper branches. These corvids favour open farmland with copses or woodland edge habitats, but will also use parks and garden with sufficient trees and foraging habitat nearby. Removal of mature trees would likely displace the 17 rook pairs from within the site boundary. The loss of foraging grassland from within the site would increase the likelihood that these birds move north and east toward the other two rookeries where open grassland habitats remain.
- 4.11 Both mallard (BAm) and moorhen (BAm) were confirmed as breeding within the site boundary. A family of each species was noted close to the pond at the southeast of the site on Visit 3. Moorhen are likely to have nested at the pond with mallard possibly in vegetation close to the waterbody. On Visit 4 a juvenile moorhen was also noted on the pond toward the northeast of the site, suggesting a second pair may have bred at this waterbody.
- 4.12 On survey Visit 4 a goldcrest (BRd Wales) family was noted just outside of the western site boundary. Goldcrest nest in conifers, frequently in coniferous forests with spruce and fir but will also use conifers in parks and gardens. This pair likely bred within the gardens of houses on Hugmore Lane as there are no conifers in this area within the site boundary.

Notable Probable Breeding Species

- 4.13 Dunnock (S7, BAm, BAm (Wales)) are probable breeders on site, with three pairs likely within the boundary and a further territory within the site buffer. Birds were heard singing and calling on several occasions from field boundaries in the west, east and central regions of the site. Dunnock nest close to the ground in vegetation understory, bramble and scrub, but will also nest in hedgerows and residential gardens. Suitable habitat exists across the site and along field boundaries for breeding dunnock.
- 4.14 Song thrush (S7, BAm, LBAP) are regarded as probable breeders on site, with a pair likely to have nested close to the southern site boundary southwest of the pond. Birds were heard singing from this area on two occasions. A second pair is probable within the 100m site buffer close to the buildings at the north-western corner of the site. Song thrush nests are generally low down in cover including trees, shrubs and hedgerow which are represented in these parts of the site.

- 4.15 Wren (BAm) were recorded in good numbers across the site on all visits with seven probable pairs within the site boundary and a further three in the site buffer. Birds were generally heard singing from field boundaries and areas with hedgerow and vegetative cover. Wren nesting sites are highly variable: scrub, scattered broad-leaved trees, woodland, hedgerows and buildings all provide opportunities for this species. With abundant grassland and little scrub on site, wren nests are likely to be located at field boundaries with hedgerows and trees or where buildings/gardens add some habitat complexity.
- 4.16 Two pairs of whitethroat (BAm, BRd Wales) are probable within the site. Birds were singing in the south-eastern site corner close to Ridley Wood Road, and on the northern site boundary near Francis' Lane on several occasions. Whitethroat nest low to the ground often well hidden by brambles, rough herbage or low growing shrubs. They readily nest within hedgerows which exist along field boundaries in both areas that this species frequented.
- 4.17 Woodpigeon (BAm) are regarded as probably breeding on site with birds heard singing from similar locations in the central-west areas of the site on several occasions. A second pair is probable at the buildings in the northwest site buffer north of Francis' Lane. Higher numbers of woodpigeon were recorded on Visit 1 with birds foraging on central arable fields, but no signs of breeding were confirmed. This species may nest in trees, shrubs and dense hedgerows and require open habitats close-by to forage.

Notable Possible Breeding Species

- 4.18 Notable possible breeding species included kestrel (S7, BAm, BRd Wales), reed bunting (S7, BAm) and stock dove (BAm).
- 4.19 Kestrel was only noted on one occasion in flight within the site boundary. Reed bunting was observed in suitable breeding habitat by the pond at the southeast of the site, but this was the only record across all four visits. Stock dove were only recorded on Visit 3 with two birds noted at the farm buildings within the site buffer north of Francis' Lane.

Discussion

- 4.20 Overall a low number of notable species were confirmed as breeding within the site boundary, with the arable fields being generally of low value to breeding birds. The development would however displace low numbers of notable species to the surrounding area. The rooks nesting within the site boundary would likely move north and east closer to the other mapped rookeries due to the increased disturbance and reduction in adjacent foraging habitat.
- 4.21 Breeding starling and house sparrow are unlikely to be directly impacted by proposals as nests are likely on buildings in the site buffer. Indirectly these species may however be impacted by a reduction of foraging habitat. Retention of field boundary vegetation and hedgerows would benefit these species which use these habitats to forage and shelter. The installation of nest boxes specifically designed for species such as house sparrow and starling could improve the site and surrounding area's breeding potential for these red-listed species of conservation concern.

- 4.22 Replacement of any lost hedgerows with species rich native hedge would also benefit many of the notable probable breeding species recorded on survey. Loss of field boundary habitat could displace low numbers of dunnock, song thrush, whitethroat, woodpigeon and wren to neighbouring land.
- 4.23 The impacts of the proposed development and proposed mitigation are assessed in the accompanying ES Chapter (TEP Report Ref: 9134.011).
- 4.24 All wild birds and their nests and eggs are protected under the Wildlife and Countryside Act 1981 (as amended). It is recommended that all tree, vegetation and built structure clearance across site avoids the core breeding bird season, March to August inclusive; although bird nesting can take place outside this period. If clearance works are necessary during the core breeding bird season, or at any time when bird nesting is suspected, a nesting bird check of the affected area by an ecologist is required immediately prior to the clearance works taking place. Extensive clearance of potential bird nesting habitat is not always practical because nesting bird checks cannot be adequately carried out on complex and dense habitats, such as woodland and scrub, to definitively confirm that no active nests are present. Development programmes should take this constraint into account.

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DRAWINGS

G9134.020A Breeding Bird Survey Visit 1 - 11.04.2022
G9134.021A Breeding Bird Survey Visit 2 - 18.05.2022
G9134.022A Breeding Bird Survey Visit 3 - 10.06.2022
G9134.023A Breeding Bird Survey Visit 4 - 15.07.2022

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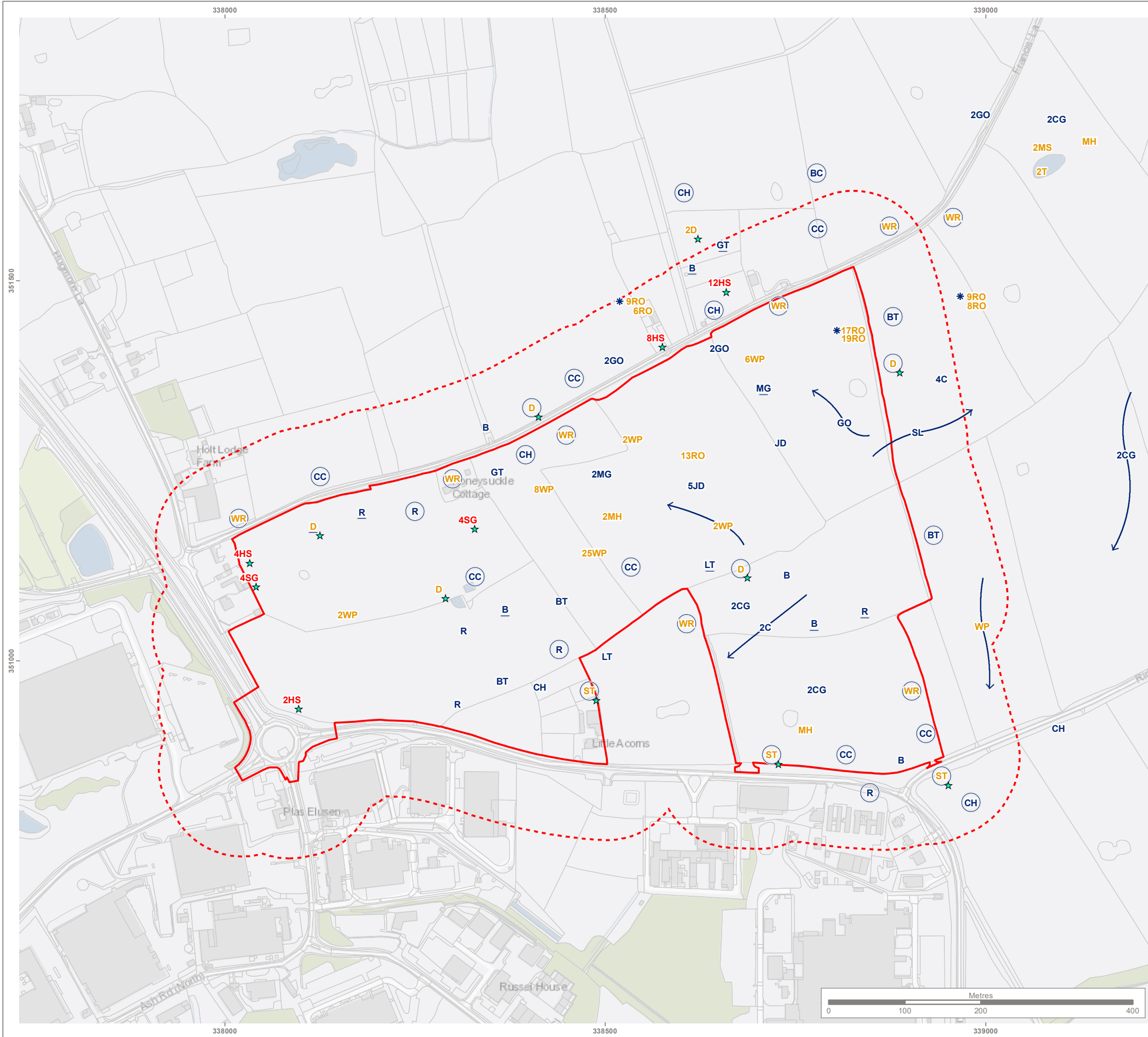
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KEY

- Site boundary
 - Site boundary 100m offset
 - ★ Section 7 species
 - Bird calling
 - Bird in song
 - ★ Nest occupied with eggs/brood
 - Directional flight line
- Species Codes**
- | | | | |
|----|-----------------|----|-------------|
| B | Blackbird | MG | Magpie |
| BC | Blackcap | MH | Moorhen |
| BT | Blue tit | MS | Mute swan |
| C | Carriion crow | R | Robin |
| CC | Chiffchaff | RO | Rook |
| CG | Canada goose | SG | Starling |
| CH | Chaffinch | SL | Swallow |
| D | Dunnock | ST | Song thrush |
| GO | Goldfinch | T | Teal |
| GT | Great tit | WP | Woodpigeon |
| HS | House sparrow | WR | Wren |
| JD | Jackdaw | | |
| LT | Long-tailed tit | | |

Note

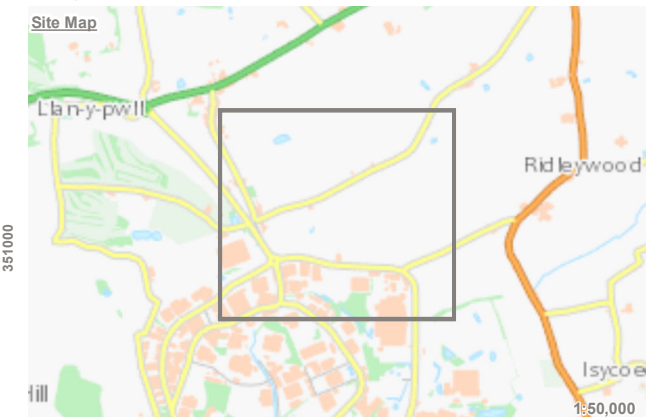
Red Red List Species **Amber** Amber List Species



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Site Map



A	Site boundary update.	SP	AE	17/04/2023
Rev	Description	Drawn	Approved	Date



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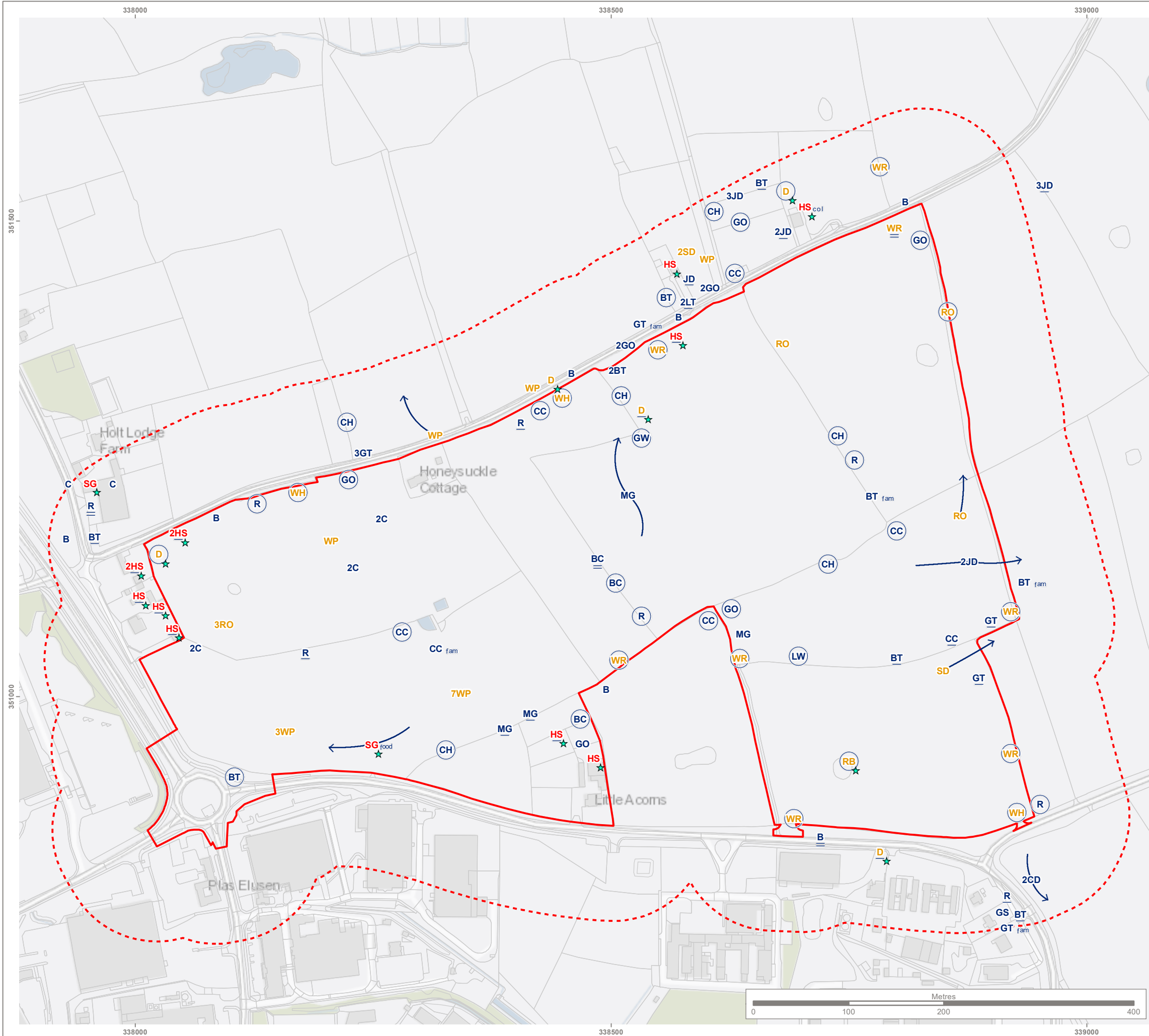
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Tel 01925 844004 e-mail tep@tep.uk.com www.tep.uk.com

Project
Land North of Bryn Lane, Wrexham

Title
**Breeding Bird Survey
Visit 1 - 11th April 2022**

Drawing Number
G9134.020A

Drawn	Checked	Approved	Scale	Date
CW	CB	MHS	1:5,000 @ A3	17/04/2023



KEY

- Site boundary
- Site boundary 100m offset
- Section 7 species
- Bird repeatedly giving alarm-calls/other vocalisations
- Bird calling
- Bird carrying food
- Bird in song
- Colony of birds
- Family group of birds
- Directional flight line

Species Codes

- B Blackbird
- BC Blackcap
- BT Blue tit
- C Carrion crow
- CC Chiffchaff
- CD Collared dove
- CH Chaffinch
- D Dunnock
- GO Goldfinch
- GS Great spotted woodpecker
- GT Great tit
- GW Garden warbler
- HS House sparrow
- JD Jackdaw
- LT Long-tailed tit
- LW Lesser whitethroat
- MG Magpie
- R Robin
- RB Reed bunting
- RO Rook
- SD Stock dove
- SG Starling
- WH Whitethroat
- WP Woodpigeon
- WR Wren

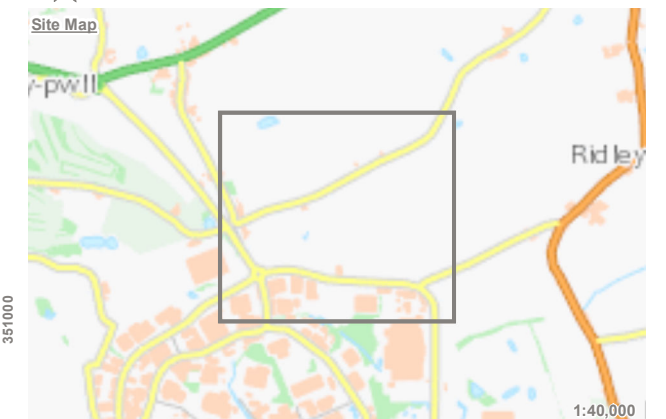
Note

- Red Red List Species
- Amber Amber List Species



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Rev	Description	Drawn	Approved	Date
A	Site boundary update.	SP	AE	17/04/2023



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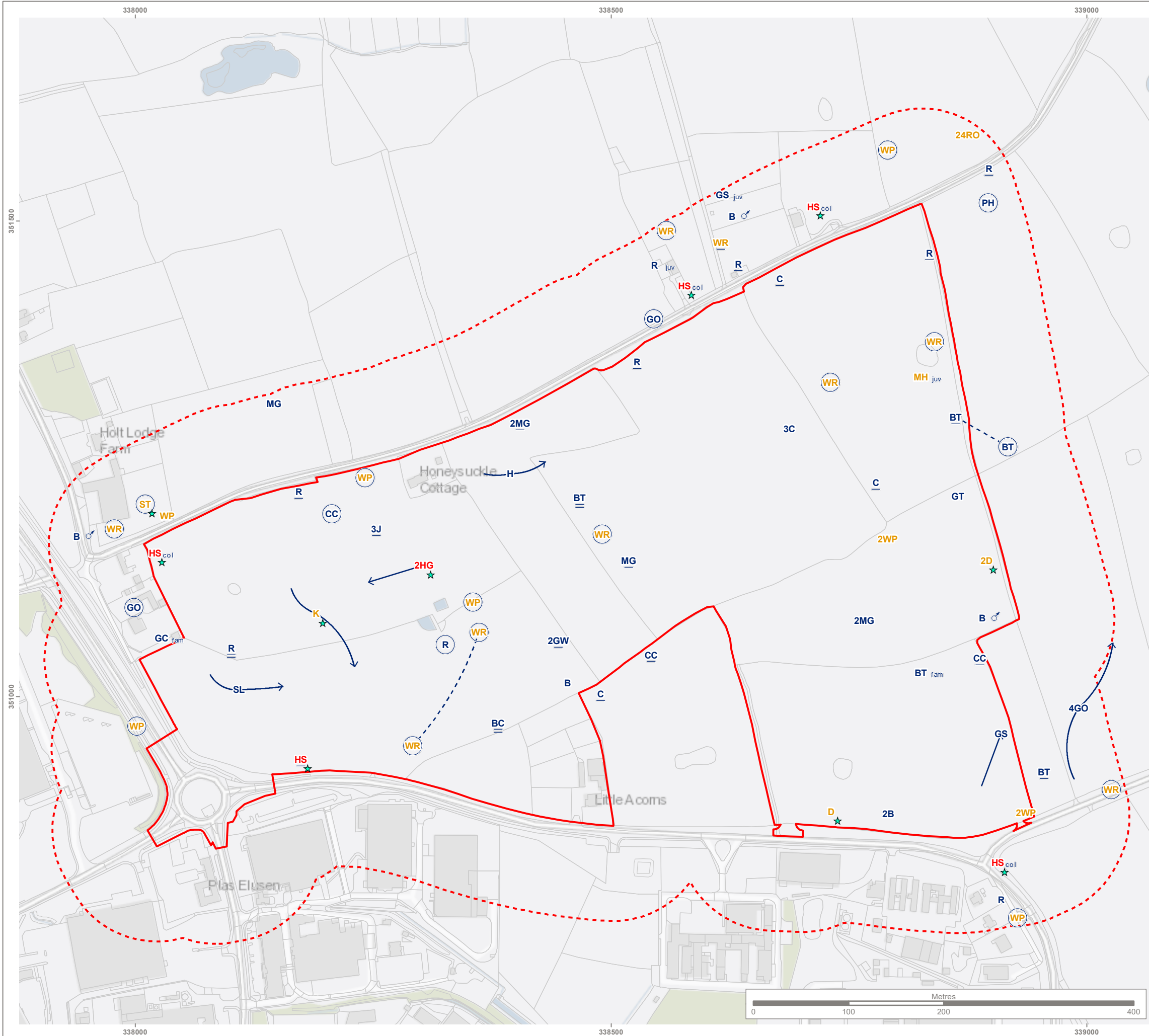
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Project
Land North of Bryn Lane, Wrexham

Title
Breeding Bird Survey
Visit 3 - 10th June 2022

Drawing Number
G9134.022A

Drawn	Checked	Approved	Scale	Date
CW	CB	MHS	1:4,000 @ A3	17/04/2023

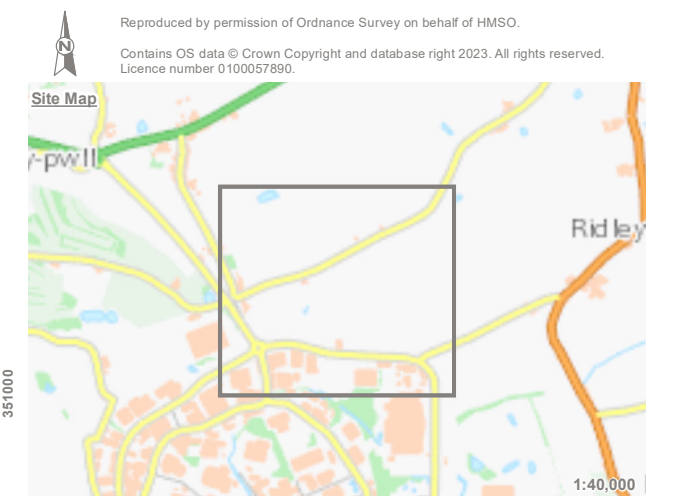


KEY

- Site boundary
 - Site boundary 100m offset
 - Section 7 species
 - Bird repeatedly giving alarm-calls/other vocalisations
 - Bird calling
 - Bird in song
 - Male
 - Juvenile
 - Colony of birds
 - Family group of birds
 - Directional flight line
 - Simultaneous registration (different birds)
- Species Codes**
- | | | | |
|----|--------------|----|--------------------------|
| B | Blackbird | D | Dunnock |
| BC | Blackcap | GC | Goldcrest |
| BT | Blue tit | GO | Goldfinch |
| C | Carrion crow | GS | Great spotted woodpecker |
| CC | Chiffchaff | GT | Great tit |
| | | GW | Garden warbler |
| | | H | Grey heron |
| | | HG | Herring gull |
| | | HS | House sparrow |
| | | J | Jay |
| | | K | Kestrel |
| | | MG | Magpie |
| | | MH | Moorhen |
| | | PH | Pheasant |
| | | R | Robin |
| | | RO | Rook |
| | | SL | Swallow |
| | | ST | Song thrush |
| | | WP | Woodpigeon |
| | | WR | Wren |

Note

Red Red List Species Amber Amber List Species



A	Site boundary update.	SP	AE	17/04/2023
Rev	Description	Drawn	Approved	Date

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Project
Land North of Bryn Lane, Wrexham

Title
Breeding Bird Survey
Visit 4 - 15th July 2022

Drawing Number
G9134.023A

Drawn	Checked	Approved	Scale	Date
CW	CB	MHS	1:4,000 @ A3	17/04/2023



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