



Redrow Homes Ltd.

Land South of Burbage

BIRD SURVEY REPORT

November 2023

FPCR Environment and Design Ltd

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CONTENTS

1.0	SUMMARY.....	1
2.0	INTRODUCTION.....	2
3.0	METHODOLOGY	4
4.0	RESULTS AND EVALUATION	7
5.0	DISCUSSION AND RECOMMENDATIONS	11

TABLES

Table 1: Survey Dates and Conditions for Winter Bird Surveys

Table 2: Survey Dates and Conditions for the Update Breeding Bird Survey

Table 3: Evaluation Criteria

Table 4: Notable Species Recorded during the Winter Bird Surveys 2020 and 2022-23, and their Recent Status within Leicestershire & Rutland

Table 5: Birds of at least Local Importance

APPENDICES

Appendix A: Winter Bird Survey Results 2020

Appendix B: Winter Bird Survey Results 2022-23

Appendix C: Breeding Bird Survey Results 2021

Appendix D: Breeding Bird Survey Results 2023

FIGURES

Figure 1: Winter Bird Survey Results – Distribution of Notable Species

Figure 2: Breeding Bird Survey Results 2023 – Distribution of Notable Species

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1.0 SUMMARY

- 1.1 FPCR were commissioned by Redrow Homes Ltd. to conduct a suite of ecological surveys including bird surveys at a proposed development site at Burbage, Hinckley and Bosworth, Leicestershire.
- 1.2 Wintering bird surveys were carried out in November 2020, December 2022, January 2023 and February 2023.
- 1.3 A scoping breeding bird survey (BBS) was carried out in 2021, the results of which have been previously detailed in the submitted Ecological Appraisal for the site (FPCR 2023). An update breeding bird survey was subsequently carried out in May 2023.
- 1.4 This report details the findings of the winter bird surveys (2020-2023) and the 2021 and 2023 breeding bird surveys.
- 1.5 Proposals for the site include residential development, with associated access, roads and landscaped green infrastructure.
- 1.6 A total of 38 bird species were recorded within the site during wintering bird surveys completed in 2020 and 2022-23, of which 21 were considered 'notable' species.
- 1.7 A total of 25 bird species were recorded within the site during the 2021 breeding bird survey. Of these, seven were considered 'notable' species. During the 2023 breeding bird survey, a total of 25 species were recorded, of which 13 were considered 'notable'. Of these, six were confirmed as breeding within the site, whilst five were considered probable breeders.
- 1.8 The wintering bird assemblages making use of the site were typical of the habitats present, comprising common and widespread species, and were therefore considered to be of no more than **Local** importance.
- 1.9 The habitats on site were considered to be of **Local** nature conservation value for the notable species it supports.
- 1.10 Development of the site will result in inevitable **Negligible** to **Minor Adverse** impacts to some species, including greenfinch, dunnock and snipe. Retention of the majority of boundary features however, and the provision of generous planted green infrastructure will ensure that the impact of habitat loss upon the remaining bird species recorded will be of **Minor Beneficial** or **Negligible** significance.
- 1.11 Enhancement opportunities have been suggested based on the habitats and bird species recorded in order to achieve biodiversity gains. These include sensitive planting schemes to incorporate native, fruit/seed/nut-bearing species.

2.0 INTRODUCTION

- 2.1 The following report has been prepared by FPCR Environment & Design Ltd. on behalf of Redrow Homes Ltd. and details the results of a suite of winter bird surveys carried out across an area of land in Burbage, Leicestershire (central grid reference SP 439 915). This report should be read in conjunction with the FPCR Ecological Appraisal for the site which includes the results of an Extended Phase 1 Habitat Survey (FPCR, 2023).

Site Location and Context

- 2.2 The site is located to the south of Coventry Road, Burbage and to the northwest of the M69. It comprises a number of improved and semi-improved grassland fields, with a small patch of marshy grassland and several small areas of scrub and tall ruderal vegetation. Two houses with associated gardens are located in the north of the site, and a farm with a hardstanding yard and buildings is located in the southwest. The site is flanked to the north and east by residential development and to the west by arable farmland. To the south, over the M69, lies farmland and industrial land.

Site Proposals

- 2.3 The proposals include residential development with associated access roads and green infrastructure, including attenuation ponds.

Survey Objectives

- 2.4 The wintering bird surveys were carried out in November 2020, December 2022 and January and February 2023. The objectives of the surveys 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.
- 2.5 The initial scoping breeding bird survey was carried out in April 2021, with an update survey carried out in May 2023. The objective of the update survey was to determine whether a significant change in the breeding bird assemblage had taken place since the 2021 scoping breeding bird survey.

Legislation & Status

Legislation

- 2.6 The Wildlife and Countryside Act 1981 (as amended) 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;
 - Take or destroy the egg of any wild bird.

- 2.7 Species listed on Schedule 1 of the Wildlife and Countryside Act 1981 (as amended) are specially protected at all times.
- 2.8 Certain species have also been identified Priority Species under Schedule 41 of the Natural Environment and Rural Communities (NERC) Act (2006)¹. The S41 list is used to guide decision-makers such as public bodies, including local and regional authorities, in implementing their duty under Section 40 of the NERC Act, to have regard to the conservation of biodiversity in England, when carrying out their normal functions.
- 2.9 The Biodiversity Action Plan for Leicestershire and Rutland (LLRBAP)² features species-specific action plans for barn owl *Tyto alba*, sand martin *Riparia riparia*, redstart *Phoenicurus phoenicurus* and nightingale *Luscinia megarhynchos*, in addition to plans related to other taxa.

Status

- 2.10 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 Concern³ (BoCC) in the UK:
- 2.11 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.
- 2.12 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.
- 2.13 Green list (low conservation concern) species fulfil none of the above criteria.

¹ <http://www.legislation.gov.uk/ukpga/2006/16/contents>

² Space for Wildlife Leicester, Leicestershire and Rutland Biodiversity Action Plan 2010 – 2015.

³ Stanbury et al. 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: 723-747.

3.0 METHODOLOGY

Desk Study

3.1 In order to compile existing baseline information, a desktop survey was undertaken for existing ecological data regarding statutorily and non-statutorily habitats / sites of interest to nature conservation and protected bird species. The following organisations were contacted:

- Leicestershire & Rutland Environmental Records Centre (LRERC)
- Multi Agency Geographic Information for the Countryside (www.magic.defra.gov.uk) website
- Leicestershire and Rutland Wildlife Trust (LRWT)

Field Survey

Winter Bird Survey

- 3.2 An initial scoping Winter Bird Survey (WBS) was undertaken in November 2020. The results of this survey identified a typical assemblage of wintering bird species which would be unlikely to undergo a particularly adverse impact as a result of development.
- 3.3 An update WBS was then undertaken in December 2022 to determine whether the bird assemblage had undergone a significant change. During this survey, previously un-recorded species were noted which were more likely to be negatively impacted by proposals. It was therefore considered pertinent to undertake an additional three surveys during the winter season 2022-23.
- 3.4 The survey methodology employed was broadly based on that of territory mapping⁴ as used for the British Trust for Ornithology (BTO) Common Bird Census (CBC). Standard BTO species codes and symbols for bird activities were used to identify birds, and denote activity, sex and age where appropriate.
- 3.5 On each occasion the survey area was walked during a one-day period by an ecologist experienced in bird survey, between 08:00 and 16:00. Routes were mapped out prior to the surveys being undertaken, and where possible utilised footpaths. Surveys paid particular attention to open field interiors as these provide valuable winter foraging habitat for farmland birds. Linear features, such as hedgerows, tree lines and watercourses, and natural features such as areas of scrub were also regarded during surveys. Bird surveys were not undertaken in unfavourable conditions such as heavy rain or strong wind, which may negatively affect the results. Table 1 identifies the dates and weather conditions of the surveys.

⁴ Bibby, C.J., N.D. Burgess & D.A. Hill, 2000. *Bird Census Techniques*. 2nd Edition. London: Academic Press

Table 1: Survey Dates and Conditions for Winter Bird Surveys

Date	Cloud Cover (%)	Rain	Wind	Visibility
10 th November 2020	80-100	None	Calm	Good
16 th December 2022	30-80	None	Calm – Light air	Excellent
12 th January 2023	100	Drizzle	Light air – Light breeze	Good
25 th January 2023	100	None	Light breeze	Moderate
15 th February 2023	10	None	Gentle breeze	Excellent

Breeding Bird Survey

- 3.6 A scoping breeding bird survey was undertaken in April 2021, during which it was determined that a full suite of breeding bird surveys was not necessary. An update survey was then carried out in May 2023. The breeding bird survey methodology broadly followed that of the wintering bird survey methodology, except that surveys commenced at dawn. Table 2 details the survey date and conditions of the breeding bird surveys.

Table 2: Survey Dates and Conditions for Breeding Bird Surveys

Date	Cloud Cover (%)	Rain	Wind	Visibility
16 th April 2021	10	None	Calm	Excellent
16 th May 2023	0	None	Light breeze	Good

Species & Assemblage Assessment

- 3.7 The Chartered Institute of Ecology and Environmental Management (CIEEM) guidance on ecological impact assessment assesses nature conservation importance within a geographical context⁵. To attain each level of importance, an ornithological resource or one of the features (species population or assemblage of species) should meet the criteria set out in Table 3. In some cases, professional judgment may be required to increase or decrease the allocation of importance, based upon local knowledge.
- 3.8 The site has also been assessed against the selection criteria for LWS for Leicester and Rutland⁶ on a number of criteria set out for wintering birds. LWSs are recognised by central government as an important tool in promoting sustainable development and protecting biodiversity.
- 3.9 The recent county annual bird report the *Leicestershire & Rutland Annual Bird Report 2020*⁷ was consulted to inform the assessment. The abundance of species referred to by these reports is classified by the following criteria:
- Very rare – Fewer than ten records ever;
 - Rare – Ten or more records ever, but less than annual;
 - Scarce – Fewer than ten birds occurring or pairs breeding annually;
 - Uncommon – Between ten and 100 birds occurring or pairs breeding annually;
 - Fairly common – Between 100 and 1000 birds occurring or pairs breeding annually;

⁵ <https://cieem.net/wp-content/uploads/2018/08/ECIA-Guidelines-2018-Terrestrial-Freshwater-Coastal-and-Marine-V1.1Update.pdf>

⁶ Leicestershire and Rutland Wildlife Trust (Revised 2011). *Guidelines for the Selection of Local Wildlife Sites*. [online] Leicestershire and Rutland Wildlife Trust. Available at: <https://www.lrwtr.org.uk/sites/default/files/2022-09/guidelines-lwsrevised2011-oct%20%284%29.pdf>

⁷ Leicestershire and Rutland Ornithological Society 2022. *Leicestershire and Rutland Annual Bird Report 2020*.

- Common – Between 1000 and 10,000 birds occurring or pairs breeding annually;
- Abundant – More than 10,000 birds occurring or pairs breeding annually.

Table 3: Evaluation Criteria

Nature Conservation Value	Examples of Selection Criteria
International	A species which is part of the cited interest of an SPA and which regularly occurs in internationally or nationally important numbers. A species present in internationally important numbers (>1% of international population).
National	A species which is part of the cited interest of a SSSI and which regularly occurs in nationally or regionally important numbers. A nationally important assemblage of breeding or over-wintering species. A species present in nationally important numbers (>1% UK population). Rare breeding species (<300 breeding pairs in the UK).
Regional	Species listed as being of principal importance under NERC S.41 which are not covered above, and which regularly occurs in regionally important numbers. Species present in regionally important numbers (>1% of regional population). Sustainable populations of species that are rare or scarce within a region. Species on the BoCC Red List & which regularly occur in regionally important numbers.
County	Species listed as being of principal importance under NERC S.41 which are not covered above and which regularly occurs in county important numbers Species present in county important numbers (>1% of county population). Sustainable populations of species that are rare or scarce within a county, or are listed as being of principle importance under S41 of the NERC Act. A site designated for its county important assemblage of birds (e.g. a SINC Site). Species on the BoCC Red List & which regularly occur in county important numbers.
Local	Other species of conservation interest (e.g. all other species on the BoCC Red and Amber List or species listed as being of principal importance under NERC S.41 which are not covered above) regularly occurring in locally sustainable populations. Sustainable populations of species which are rare or scarce within the locality.
Site	Species that are common and widespread.

4.0 RESULTS AND EVALUATION

Desk Study

- 4.1 There were no sites designated for supporting notable bird assemblages present within the 1km search area.
- 4.2 A number of records of notable bird species were returned from the search area, however none of the records fell within the site boundary. Several species records were from close to the site, including swift *Apus apus*, song thrush *Turdus philomelos*, house martin *Delichon urbicum*, house sparrow *Passer domesticus* and starling *Sturnus vulgaris*. Other species recorded within the 1km search area include reed bunting *Emberiza schoeniclus*, fieldfare *Turdus pilaris*, redwing *Turdus iliacus* and skylark *Alauda arvensis*.

Field Survey

Winter Bird Survey Summary

- 4.3 A total of 38 bird species were recorded within the survey area during the 2022-23 winter bird surveys (Appendices A and B). Of these, 21 appear on one or more of the following and are hereinafter referred to as 'notable' species.
- Schedule 1 of the Wildlife & Countryside Act 1981 (as amended);
 - BoCC Red or Amber lists;
 - Section 41 of the NERC Act 2006.
- 4.4 Table 4 provides a summary of the 21 notable bird species recorded on site, whilst Figure 1 shows the locations where they were recorded.

Table 4: Notable Species Recorded during the Winter Bird Surveys 2020 and 2022-23, and their Recent Status within Leicestershire & Rutland

Species	Legal/ Conservation status	Peak Count / Number of Survey Occasions Recorded	Recent Status in Leicestershire & Rutland
Mallard <i>Anas platyrhynchos</i>	Amber list	4 / 1	Common autumn and winter visitor, Fairly Common breeder
Stock dove <i>Columba oenas</i>	Amber list	4 / 2	Fairly Common to Common resident breeder
Woodpigeon <i>Columba palumbus</i>	Amber list	36 + 3 flyovers / 5	Abundant resident breeder and winter visitor
Lapwing <i>Vanellus vanellus</i>	Red list NERC S.41	31 flyovers / 2	Abundant winter visitor
Snipe <i>Gallinago gallinago</i>	Amber list	8 / 4	Fairly Common passage and winter visitor
Black-headed gull <i>Chroicocephalus ridibundus</i>	Amber list	3 flyovers / 4	Present all year, Abundant in winter
Common gull <i>Larus canus</i>	Amber list	1 flyover / 1	Abundant winter visitor
Herring gull <i>Larus argentatus</i>	Red list NERC S.41	4 flyovers / 1	Common winter visitor, new colonist
Lesser black-backed gull <i>Larus fuscus</i>	Amber list	3 flyovers / 4	Common passage and winter visitor, recent colonist
Peregrine falcon <i>Falco peregrinus</i>	Green list WCA Sch. E	1 flyover / 1	Uncommon winter and passage visitor

Species	Legal/ Conservation status	Peak Count / Number of Survey Occasions Recorded	Recent Status in Leicestershire & Rutland
Wren <i>Troglodytes troglodytes</i>	Amber list	3 / 4	Abundant resident breeder
Starling <i>Sturnus vulgaris</i>	Red list NERC S.41	91 + 17 flyovers / 3	Abundant resident breeder, passage migrant and winter visitor
Song thrush <i>Turdus philomelos</i>	Red list NERC S.41	2 / 3	Common resident breeder, recent decline; winter visitor
Mistle thrush <i>Turdus viscivorus</i>	Red list	1 / 2	Common resident breeder
Redwing <i>Turdus iliacus</i>	Amber list WCA Sch.1	55 + 7 flyovers / 4	Common winter visitor
Fieldfare <i>Turdus pilaris</i>	Red list WCA Sch.1	48 + 6 flyovers / 4	Common winter visitor, rare in summer
House sparrow <i>Passer domesticus</i>	Red list NERC S.41	29 / 3	Common resident breeder, recent decline
Dunnock <i>Prunella modularis</i>	Amber list NERC S.41	7 / 5	Abundant resident breeder, passage migrant
Grey wagtail <i>Motacilla cinerea</i>	Red list	1 / 1	Uncommon resident breeder and winter visitor
Greenfinch <i>Chloris chloris</i>	Red list	19 + 1 flyover / 3	Common resident breeder, passage migrant and winter visitor
Lesser redpoll <i>Acanthis cabaret</i>	Red list NERC S.41	4 / 1	Fairly Common passage and winter visitor

Winter Bird Survey Results Description

- 4.5 The majority of bird species recorded were typical of the range of habitats that dominate the site, being heavily influenced by the current agricultural management.
- 4.6 The areas of improved grassland generally did not attract very many species, except for a small number of notable species including grey wagtail *Motacilla cinerea*, starling, woodpigeon *Columba palumbus* and stock dove *Columba oenas*, as well as several species of low conservation concern such as magpie *Pica pica* and carrion crow *Corvus corone*. The associated hedgerows and trees provided some winter foraging/roosting habitat for dunnock *Prunella modularis*, fieldfare, redwing, greenfinch *Chloris chloris*, house sparrow, woodpigeon, mistle thrush *Turdus viscivorus* and wren *Troglodytes troglodytes*.
- 4.7 The marshy grassland in the northeast and the surrounding semi-improved grassland appeared to be consistently inundated throughout the wintering period, and therefore provided good foraging ground for wading species, including snipe *Gallinago gallinago* and golden plover *Pluvialis apricaria*. These areas also provided winter foraging areas for mallard *Anas platyrhynchos*, and lesser redpoll *Acanthis cabaret*.
- 4.8 A number of notable bird species were recorded flying over the site only, these were peregrine *Falco peregrinus*, lesser black-backed gull *Larus fuscus*, herring gull *Larus argentatus*, black-headed gull *Chroicocephalus ridibundus*, common gull *Larus canus*, and lapwing *Vanellus vanellus*.

Breeding Bird Survey Summary

- 4.9 During the initial 2021 scoping breeding bird survey, 25 bird species were recorded within the site. Of these, seven were considered notable species. Of the 25 species recorded, three were confirmed as breeding, including notable species house sparrow, which was observed carrying food for young. Two species were considered probable breeders, both of which were species of low conservation concern.
- 4.10 During the 2023 update breeding bird survey, a total of 25 species were recorded. Of these, 13 were considered notable species. Six species were confirmed as breeding within the site, including notable species starling, song thrush, dunnock and greenfinch. A further five species were considered probable breeders, including notable species house sparrow and linnet *Linaria cannabina*.

Breeding Bird Survey Results Description

- 4.11 The majority of bird species recorded were typical of the range of habitats that dominate the site, being heavily influenced by the current agricultural management.
- 4.12 Improved grassland parcels provided foraging habitat for the notable species: starling, stock dove, song thrush and dunnock, as well as species of low conservation concern such as carrion crow and magpie. Associated boundary habitats such as hedgerows and trees provided foraging and breeding habitat for several notable species, including house sparrow, wren, dunnock, greenfinch, starling and whitethroat *Sylvia communis*.
- 4.13 Buildings provided minimal breeding habitat, with only house sparrow recorded in association with these features.
- 4.14 Several notable species were recorded overflying the site only, including swift, sparrowhawk *Accipiter nisus* and herring gull.

Evaluation - Bird Assemblage

Local Wildlife Site Assessment

- 4.15 The site was assessed against published criteria for Local Wildlife Site selection⁸ to assess the site against the thresholds for county value. According to these guidelines, sites with significant and established populations of Leicestershire and Rutland (L&R) Red Data Book bird species can be selected as Local Wildlife Sites. L&R RDB birds are defined as Uncommon, Scarce, Rare or Very Rare breeding or wintering species within a current LROS County list, OR species listed in the latest BOCC as a 'red' or 'amber' species, OR a current UKBAP (now species listed under NERC S.41) or LBAP priority species. Whilst a number of the species recorded are L&R RDB species, it is considered that none were observed using the site in sufficient numbers to meet this criterion.
- 4.16 Local Wildlife Site Selection Criteria for Leicestershire & Rutland only specify open water habitats therefore it was not necessary to assess the site under the LWS criteria.

Assemblage Value

- 4.17 The bird assemblage recorded was considered typical of the habitats present, most of which are a common feature of the surrounding landscape, with the exception of the marsh/marshy

⁸ Leicestershire County Council 2011, *Guidelines for the Selection of Local Wildlife Sites in Leicester, Leicestershire and Rutland*.

grassland. Improved grassland habitats provided suitable foraging habitat for a small number of notable species, including grey wagtail, starling, woodpigeon and stock dove, whilst associated hedgerows and trees provided wintering habitat for redwing, fieldfare, dunnoek, greenfinch, house sparrow, woodpigeon, mistle thrush and wren. Furthermore, the area of semi-improved grassland and marsh/marshy grassland provided winter forage for snipe, redpoll and golden plover. As a result, the site was considered to be of **Local** level importance for its wintering bird assemblage.

Evaluation - Individual Species

- 4.18 Table 5 lists birds species recorded within the site that are of at least **Local** importance.
- 4.19 The site provided several foraging opportunities for starling in the form of open areas of improved grassland, whilst the mature trees and farm buildings provided potential areas for roosting. The site was therefore considered to be of **Local** nature conservation value for starling.
- 4.20 Hedgerows and trees provided suitable winter foraging/roosting habitat for regular flocks of redwing and fieldfare, as well as breeding habitat for dunnoek and greenfinch. These four species were recorded regularly in moderate numbers for the size of the site. The site was therefore considered to be of **Local** nature conservation value for redwing, fieldfare, greenfinch and dunnoek.
- 4.21 House sparrows were recorded in association with the farm buildings to the south of the site and with hedgerows across the site. The site was considered to be of **Local** importance for this wintering species.
- 4.22 An individual grey wagtail was recorded using the site on only one occasion, therefore grey wagtail was only considered to be of **Site** importance for the site.
- 4.23 The majority of the other wintering bird species were either recorded in smaller numbers, were recorded flying over the site and/or are considered common and widespread species, hence are considered to be of no more than **Site** importance.

Table 5: Birds of at least Local importance

Name		Status / Conservation Status		Nature Conservation Value
		WCA Sch.1	NERC S.41	
BoCC Red List				
Redwing	<i>Turdus iliacus</i>	+		Local
Fieldfare	<i>Turdus pilaris</i>		+	Local
Starling	<i>Sturnus vulgaris</i>		+	Local
House sparrow	<i>Passer domesticus</i>		+	Local
Greenfinch	<i>Chloris chloris</i>			Local
BoCC Amber List				
Dunnock	<i>Prunella modularis</i>		+	Local
Snipe	<i>Gallinago gallinago</i>			Local

DISCUSSION AND RECOMMENDATIONS

- 5.1 The following section provides an assessment of the potential impacts of the proposals upon breeding and wintering birds within the site. Where appropriate, recommendations are provided for mitigation and enhancement that take account of the likely ecological impacts resulting from the proposed development. Throughout the evaluation, any recommendations for mitigation have been informed by the most up-to-date Illustrative Masterplan (1693-08-02-100⁹).
- 5.2 The proposed residential development will encompass green infrastructure including several attenuation ponds, woodland, scrub and grassland planting, orchard planting and pedestrian/cycle links.
- 5.3 The recommendations below are provided with the aim of informing development proposals regarding how to best maintain the conservation status of bird species present.

Impact Assessment of Breeding / Wintering Birds

- 5.4 The potential impact of the loss or change of habitat upon bird species arising from the effects of development is based upon an understanding of each species' ecological requirements, the type of development, number of birds recorded on site, their nature conservation criteria based on legislation and current guidance, their county status according to *The Leicestershire & Rutland Annual Bird Report 2020* and professional judgement.
- 5.5 The following potential impacts to the recorded bird populations and assemblage may result from the proposals:
- Direct loss / change of breeding / wintering habitat;
 - Disturbance during construction and/or operation.

Habitat Loss

- 5.6 The proposals will lead to a total loss of improved, semi-improved and marshy grassland habitats from across the site. The majority of internal hedgerows will be lost to development however the boundary hedgerows and trees will mostly be retained, except for areas that will be lost to facilitate the construction of new roads/access. The creation of attenuation features and new woodland/hedgerow planting will provide mitigation for the unavoidable losses of hedgerow habitat.
- 5.7 The individual bird species recorded on site that are arguably the most vulnerable to impacts from habitat loss/change are the seven species that are considered to be of at least **Local** importance. These comprise notable species that are either specially protected, appear on the BoCC Red or Amber lists and/or are listed as a NERC Priority Species and were recorded in at least locally important numbers.
- 5.8 The loss of the improved grassland habitats and the partial loss of hedgerows will somewhat reduce the site's foraging potential for starling and wintering thrush species fieldfare and redwing. These species are highly mobile in winter and travel between different foraging sites, therefore the number recorded are unlikely to be heavily reliant on the site. Furthermore, the provision of open space, attenuation basins and scrub/woodland planting will continue to provide some on-site winter foraging/roosting areas for these species. These species are therefore expected to undergo a **Negligible** impact as a result of development.

⁹ Redrow Homes Midlands. Site Layout 1693-08-02-100.

- 5.9 Greenfinch and dunnock were recorded in association with on-site hedgerows and trees. Whilst many of the on-site hedgerows are to be lost as a result of development, the entire southern boundary vegetation and much of the eastern and western boundary vegetation is due to be retained. Both species habituate well to residential development, particularly once gardens are established, therefore it is considered that both species will be subject to a **Negligible to Minor Adverse** impact as a result of development. House sparrow, which were recorded in association with hedgerows and on-site buildings, also habituate well to residential development. This species is therefore expected to undergo a **Minor Beneficial** impact due to development.
- 5.10 The marsh/marshy grassland in which snipe were regularly found is due to be retained within the current proposals, with paths/walkways proposed close by. While the paths may cause some disturbance to snipe, it is expected that this species will continue to use the site as a wintering resource. Therefore, due to the retention of this area, snipe is expected to undergo a **Negligible to Minor Adverse** impact.
- 5.11 Habitat creation is to include wetland features that will provide additional foraging opportunities to the range of generalist species recorded, whilst also providing potential habitat for mallard, as well as additional species not recorded on site, including reed bunting *Emberiza schoeniclus*.

Disturbance Impacts

- 5.12 Construction operations have the potential to disturb birds using the site for roosting, foraging, and breeding. Operations likely to disturb breeding birds include noise from vegetation clearance, initial ground works and some construction activities, such as piling, which are of low frequency but of high amplitude. Active, high level, infrequent disturbance causes most birds to be displaced for short periods¹⁰. During the breeding season disturbance may lead to nest desertion or the avoidance of the area and a reduction in the suitability of retained nesting areas. Whilst there is some potential for breeding success to be reduced, due to the temporary, localised nature of works this is not expected to significantly impact the local conservation status of the majority of the bird species using the site for breeding.

Operational Impacts

- 5.13 During the operational phase of development, disturbance impacts have the potential to reduce the suitability of habitats for the species recorded. For the majority of generalist species these are considered to be **Negligible** as birds will habituate to the increased human presence on site.
- 5.14 Any increase in the prevalence of domestic animals during the operational phase, particularly cats, may lead to an adverse impact on small bird populations. Recent research is inconclusive as to the actual effect that domestic cats can have on wild bird populations, though a precautionary approach is advised¹¹. Given the provision of structurally varied new habitats as part of the proposed green infrastructure that will result in enhanced shelter, foraging and loafing opportunities for birds, and the location of many of these habitats away from residential development, it is considered unlikely that any increased abundance of cats would alter the conservation status of any bird population recorded present (**Negligible to Minor Adverse** significance at the local level).

¹⁰ Hockin, D., Ounsted, M., Gorman, M., Hill, D., Keller, V., and Barker, M. 1992. Examination of the effects of disturbance on birds with reference to the role of environmental impact assessments. *Journal of Environmental Management* 36:253-286.

¹¹ Gibbons, D.W. et al., 2007. *The Predation of wild birds in the UK: a review of its conservation impact and management*. RSPB research Report, Sandy.

Mitigation / Enhancements

- 5.15 It is recommended that the planting scheme incorporates a range of locally native tree, shrub, and grassland species to provide enhanced wintering habitat for a range of bird species. Where possible it is recommended that consideration is given to the provision of fruit/seed/nut bearing species of local origin to provide a diverse foraging resource for a range of bird species, including the thrush species recorded.
- 5.16 To further minimise the potential impact of domestic pets and maximise biodiversity gains it is proposed that retained and newly established hedgerows, trees and scrub are managed in the long-term for the benefit of biodiversity such that these provide areas of suitable cover and screening from potential predators as well as a foraging resource. An appropriate management regime can be secured via condition/reserved matters and should stipulate agreed target habitat conditions and a process for monitoring and review.
- 5.17 Proposed attenuation features should hold an area of permanent water, if feasible, to provide an enhancement by providing habitat for a range of wetland birds not yet recorded within the Site. Planting the attenuation features with an appropriate native marginal vegetation mix that includes common reed *Phragmites australis* will provide good nesting opportunities for species including reed bunting and warbler species. Non-native plants should be avoided as many are invasive. The creation of wetland grassland within the temporarily wet / inundated parts of the features, along with sensitive management, will provide valuable foraging habitat.
- 5.18 Additional enhancements that could be integrated with the on-going management of the site include the erection of a mixture of nest box types. The following provides details of suitable nest box types to be erected at suitable locations:
- A mixture of small hole (25 to 32mm diameter) boxes placed on suitable trees will provide nesting opportunities for species such as blue tit *Cyanistes caeruleus* and great tit *Parus major*. These boxes generally have a high uptake rate;
 - Small open fronted nest boxes placed on suitable trees especially those which support a climber such as ivy which provides a degree of concealment. These boxes typically attract species such as robin and blackbird;
 - Larger wood nest boxes with large holes (45-50 mm diameter) placed within the built environment and on suitable trees will provide nesting for starling. These boxes will also provide suitable nesting for great spotted woodpecker *Dendrocopos major* when placed on large mature trees;
 - The inclusion within the built environment of species-specific nest boxes for house sparrow and swift will encourage these urban species to breed on site, which have both undergone significant local and national declines.

Appendix A: Winter Bird Survey Results 2020

Species: British Common Name	Species: Scientific Name	Survey 1	Conservation Status & Protection
Canada Goose	<i>Branta canadensis</i>	6 flyovers	Not Listed
Woodpigeon	<i>Columba palumbus</i>	24 + 26 flyovers	Amber List
Black-headed Gull	<i>Chroicocephalus ridibundus</i>	4 flyovers	Amber List
Lesser Black-backed Gull	<i>Larus fuscus</i>	4 flyovers	Amber List
Magpie	<i>Pica pica</i>	5 + 2 flyovers	Green List
Jackdaw	<i>Coloeus monedula</i>	2	Green List
Carrion Crow	<i>Corvus corone</i>	15 + 4 flyovers	Green List
Blue Tit	<i>Cyanistes caeruleus</i>	6	Green List
Long-tailed Tit	<i>Aegithalos caudatus</i>	1	Green List
Wren	<i>Troglodytes troglodytes</i>	10	Amber List
Song Thrush	<i>Turdus philomelos</i>	1	Amber List NERC S.41
Redwing	<i>Turdus iliacus</i>	14 + 59 flyovers	Amber List WCA Sch.1
Blackbird	<i>Turdus merula</i>	11	Green List
Fieldfare	<i>Turdus pilaris</i>	7 flyovers	Red List WCA Sch.1
Robin	<i>Erithacus rubecula</i>	7	Green List
Dunnock	<i>Prunella modularis</i>	1	Amber List NERC S.41
Chaffinch	<i>Fringilla coelebs</i>	2	Green List
Greenfinch	<i>Chloris chloris</i>	1	Red List
Goldfinch	<i>Carduelis carduelis</i>	8 + 3 flyovers	Green List
Total No. Species: 19			

Appendix B: Winter Bird Survey Results 2022-23

Species: British Common Name	Species: Scientific Name	Survey 1	Survey 2	Survey 3	Survey 4	Conservation Status & Protection
Mallard	<i>Anas platyrhynchos</i>	0	0	0	4	Amber List
Pheasant	<i>Phasianus colchicus</i>	0	0	1	0	Not Listed
Stock Dove	<i>Columba oenas</i>	0	0	4	3	Amber List
Woodpigeon	<i>Columba palumbus</i>	12 + 8 flyovers	5 + 1 flyover	36 + 3 flyovers	31 + 8 flyovers	Amber List
Lapwing	<i>Vanellus vanellus</i>	21 flyovers	0	0	1 flyover	Red List NERC S.41
Golden Plover	<i>Pluvialis apricaria</i>	0	0	14	0	Green List
Snipe	<i>Gallinago gallinago</i>	8	1	5	5	Amber List
Black-headed Gull	<i>Chroicocephalus ridibundus</i>	0	2 flyovers	11 flyovers	6 flyovers	Amber List
Common Gull	<i>Larus canus</i>	0	0	1 flyover	0	Amber List
Herring Gull	<i>Larus argentatus</i>	0	0	0	4	Red List NERC S.41
Lesser Black-backed Gull	<i>Larus fuscus</i>	1 flyover	1 flyover	3 flyovers	0	Amber List
Cormorant	<i>Phalacrocorax carbo</i>	0	1 flyover	0	0	Green List
Buzzard	<i>Buteo buteo</i>	0	2	1	1 + 1 flyover	Green List
Great Spotted Woodpecker	<i>Dendrocopos major</i>	1	0	0	0	Green List
Peregrine Falcon	<i>Falco peregrinus</i>	0	0	0	1 flyover	Green List WCA Sch.1
Magpie	<i>Pica pica</i>	8	8	11	11 + 4 flyovers	Green List

Species: British Common Name	Species: Scientific Name	Survey 1	Survey 2	Survey 3	Survey 4	Conservation Status & Protection
Jackdaw	<i>Coloeus monedula</i>	0	0	0	1 flyover	Green List
Carrion Crow	<i>Corvus corone</i>	6 + 4 flyovers	9	10 + 2 flyovers	11 + 4 flyovers	Green List
Blue Tit	<i>Cyanistes caeruleus</i>	19 + 1 flyover	3	16	15 + 1 flyover	Green List
Great Tit	<i>Parus major</i>	9	6	7	5	Green List
Long-tailed Tit	<i>Aegithalos caudatus</i>	10	0	2	3	Green List
Goldcrest	<i>Regulus regulus</i>	0	0	0	2	Green List
Wren	<i>Troglodytes troglodytes</i>	0	1	2	3	Amber List
Starling	<i>Sturnus vulgaris</i>	0	6 flyovers	76 + 11 flyovers	91 + 17 flyovers	Red List NERC S.41
Song Thrush	<i>Turdus philomelos</i>	0	0	2	2	Amber List NERC S.41
Mistle Thrush	<i>Turdus viscivorus</i>	1 flyover	0	0	1	Red List
Redwing	<i>Turdus iliacus</i>	20 + 25 flyovers	19	29 + 3 flyovers	55 + 7 flyovers	Amber List WCA Sch.1
Blackbird	<i>Turdus merula</i>	9 + 1 flyover	21	31	15	Green List
Fieldfare	<i>Turdus pilaris</i>	8 + 9 flyovers	2	48 + 6 flyovers	5	Red List WCA Sch.1
Robin	<i>Erithacus rubecula</i>	9	7	21	11	Green List
House Sparrow	<i>Passer domesticus</i>	15	0	29	17 + 1 colony	Red List NERC S.41
Dunnock	<i>Prunella modularis</i>	3	3	7	7	Amber List NERC S.41
Grey Wagtail	<i>Motacilla cinerea</i>	2	0	0	0	Amber List

Species: British Common Name	Species: Scientific Name	Survey 1	Survey 2	Survey 3	Survey 4	Conservation Status & Protection
Pied Wagtail	<i>Motacilla alba</i>	1 + 1 flyover	0	1 flyover	1	Green List
Chaffinch	<i>Fringilla coelebs</i>	2	0	1 + 2 flyovers	2 + 1 flyover	Green List
Greenfinch	<i>Chloris chloris</i>	0	0	19 + 1 flyover	12 + 7 flyovers	Red List
Lesser Redpoll	<i>Acanthis cabaret</i>	0	4	0	0	Red List NERC S.41
Goldfinch	<i>Carduelis carduelis</i>	3	0	12 + 20 flyovers	17 + 14 flyovers	Green List
Total No. Species: 38						

Appendix C: Breeding Bird Survey Results 2021

Species: British Common Name	Species: Scientific name	Survey 1	Conservation Status & Protection	Breeding status ¹²
Greylag goose	<i>Anser anser</i>	2 flyovers	Amber list WCA Sch.1 (Pt. 2)	Non-breeder F
Sparrowhawk	<i>Accipiter nisus</i>	1 + 1 flyover	Green list	Possible H
Woodpigeon	<i>Columba palumbus</i>	11 + 15 flyovers	Green list	Possible H, S
Green woodpecker	<i>Picus viridis</i>	4	Green list	Probable A
Magpie	<i>Pica pica</i>	10	Green list	Possible H
Jackdaw	<i>Corvus monedula</i>	1	Green list	Possible H
Carrion crow	<i>Corvus corone</i>	16 + 9 flyovers	Green list	Possible H
Goldcrest	<i>Regulus regulus</i>	1	Green list	Possible H, S
Blue tit	<i>Cyanistes caeruleus</i>	18	Green list	Possible H, S
Great tit	<i>Parus major</i>	10	Green list	Possible H, S
Chiffchaff	<i>Phylloscopus collybita</i>	2	Green list	Possible H, S
Blackcap	<i>Sylvia atricapilla</i>	1	Green list	Possible H, S
Wren	<i>Troglodytes troglodytes</i>	13	Green list	Possible H, S
Starling	<i>Sturnus vulgaris</i>	43 + 45 flyovers	Red list NERC S.41	Possible H
Blackbird	<i>Turdus merula</i>	29 + 1 flyover	Green list	Confirmed FF
Song thrush	<i>Turdus philomelos</i>	9	Red list NERC S.41	Possible H, S
Mistle thrush	<i>Turdus viscivorus</i>	1	Red list	Possible H
Robin	<i>Erithacus rubecula</i>	19	Green list	Possible H, S
Dunnoek	<i>Prunella modularis</i>	22	Amber list NERC S.41	Possible H, S
House sparrow	<i>Passer domesticus</i>	12 + 1 colony	Red list NERC S.41	Confirmed FF
Pied wagtail	<i>Motacilla alba</i>	1 flyover	Green list	Non-breeder F

¹²European Ornithological Atlas Committee, 1979. *Categories of Breeding Bird Evidence*. European Ornithological Atlas Committee.

Species: British Common Name	Species: Scientific name	Survey 1	Conservation Status & Protection	Breeding status ¹²
Chaffinch	<i>Fringilla coelebs</i>	14 + 2 flyovers	Green list	Confirmed FF
Greenfinch	<i>Chloris chloris</i>	11	Green list	Probable S, A
Linnet	<i>Linaria cannabina</i>	6	Red list NERC S.41	Possible H
Goldfinch	<i>Carduelis carduelis</i>	2 + 2 flyovers	Green list	Possible H
Total No. Species: 25				

Breeding Status evidence can be broken down into four sections, 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.

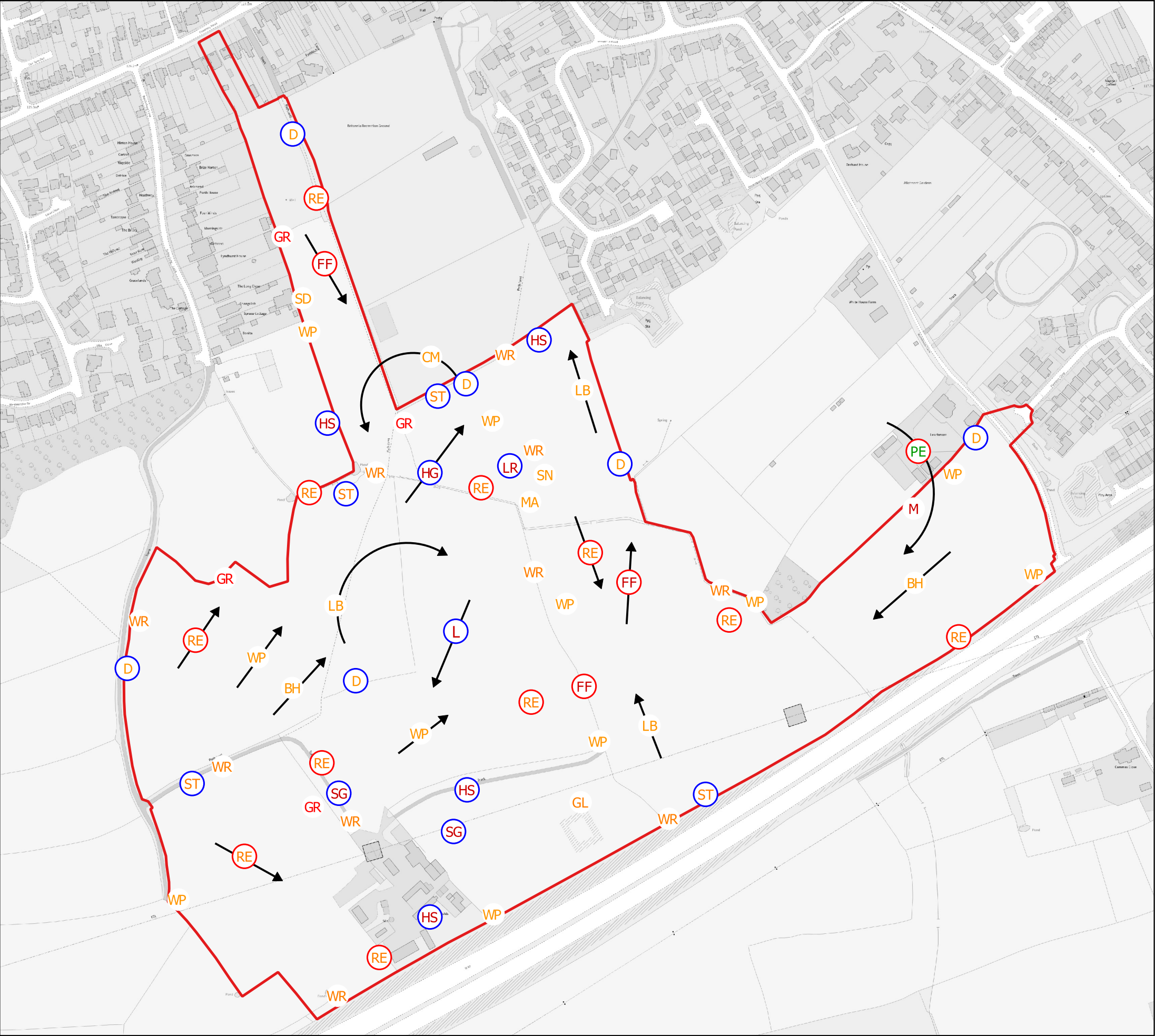
- H** – observed in suitable nesting habitat
- S** – singing male

Non-breeder

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

Appendix D: Breeding Bird Survey Results 2023

Species: British Common Name	Species: Scientific Name	Survey 1	Conservation Status & Protection	Breeding Status
Swift	<i>Apus apus</i>	2 flyovers	Red List	Non-breeder F
Stock Dove	<i>Columba oenas</i>	1	Amber List	Non-breeder U
Woodpigeon	<i>Columba palumbus</i>	4 + 11 flyovers	Amber List	Possible H
Herring Gull	<i>Larus argentatus</i>	1 flyover	Red List NERC S.41	Possible H
Sparrowhawk	<i>Accipiter nisus</i>	3 flyovers	Amber List	Non-breeder F
Magpie	<i>Pica pica</i>	7	Green List	Possible H
Jackdaw	<i>Coloeus monedula</i>	13 + 3 flyovers	Green List	Possible H
Carrion Crow	<i>Corvus corone</i>	3 + 4 flyovers	Green List	Probable H, P
Blue Tit	<i>Cyanistes caeruleus</i>	7	Green List	Confirmed FF
Great Tit	<i>Parus major</i>	2	Green List	Possible H
Swallow	<i>Hirundo rustica</i>	3	Green List	Probable H, P
Long-tailed Tit	<i>Aegithalos caudatus</i>	2	Green List	Confirmed ON
Chiffchaff	<i>Phylloscopus collybita</i>	3	Green List	Possible H, S
Blackcap	<i>Sylvia atricapilla</i>	3	Green List	Possible H
Whitethroat	<i>Curruca communis</i>	4	Amber List	Possible H, S
Wren	<i>Troglodytes troglodytes</i>	13	Amber List	Possible H, S
Starling	<i>Sturnus vulgaris</i>	25	Red List NERC S.41	Confirmed FF
Song Thrush	<i>Turdus philomelos</i>	5	Amber List NERC S.41	Confirmed ON, S
Blackbird	<i>Turdus merula</i>	13 + 1 flyover	Green List	Probable P, S, H
Robin	<i>Erithacus rubecula</i>	8	Green List	Possible H, S
House Sparrow	<i>Passer domesticus</i>	9	Red List NERC S.41	Probable H, P
Dunnock	<i>Prunella modularis</i>	11	Amber List NERC S.41	Confirmed ON
Greenfinch	<i>Chloris chloris</i>	10	Red List	Confirmed ON, P, S
Linnet	<i>Linaria cannabina</i>	2 + 1 flyover	Red List NERC S.41	Probable P, S, H
Goldfinch	<i>Carduelis carduelis</i>	2 + 7 flyovers	Green List	Possible S, H
Total No. Species: 25				



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Key

Site Boundary

Fly over only

BoCC Red List Species

FF Fieldfare

HG Herring Gull

HS House Sparrow

L Lapwing

LR Lesser Redpoll

M Mistle Thrush

SG Starling

GR Greenfinch

BoCC Amber List Species

BH Black-headed Gull

CM Common Gull

D Dunnock

LB Lesser Black-backed Gull

MA Mallard

SN Snipe

SD Stock Dove

GL Grey Wagtail

RE Redwing

ST Song Thrush

WP Woodpigeon

WR Wren

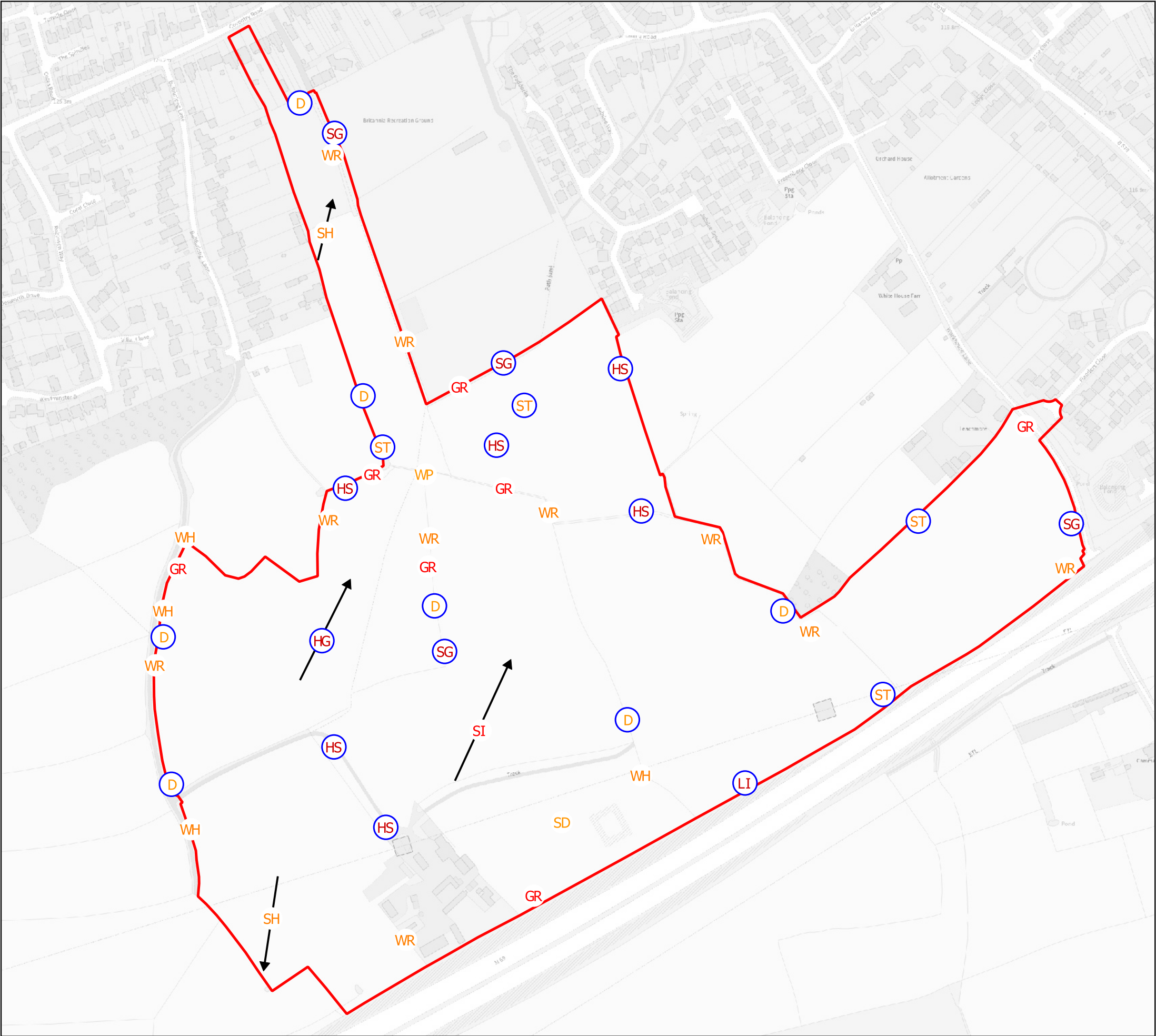
BoCC Green List Species

PE Peregrine

Additional Protections:

 NERC Species of Principal Importance

 Schedule 1 Species



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Key

- Site Boundary
- Fly over only

BoCC Red List Species

- HG Herring Gull
- HS House Sparrow
- LI Linnet
- SG Starling
- GR Greenfinch
- SI Swift

BoCC Amber List Species

- D Dunnock
- SD Stock Dove
- WH Whitethroat
- ST Song Thrush
- SH Sparrowhawk
- WP Woodpigeon
- WR Wren

Additional Protections

- NERC Species of Principal Importance
- Schedule 1 Species