



Harworth Group PLC

Occupation Lane, Woodville

BIRD REPORT

July 2019

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1.0 EXECUTIVE SUMMARY

- 1.1 FPCR were commissioned on behalf of Harworth Group PLC. to undertake bird surveys at a site located to the north of Occupation Lane, Woodville (central OS Grid Reference: SK 311 187).
- 1.2 A desk study was carried out by consulting MAGIC Map and the Derbyshire Wildlife Trust. Bird species records identified from within the local area included 15 notable species.
- 1.3 Three breeding bird surveys were conducted between April and June 2019 to provide information regarding the sites value to breeding birds. Survey methodology was broadly based on that of territory mapping as developed by the British Trust for Ornithology (BTO).
- 1.4 One winter scoping survey was conducted during January 2019 to provide information regarding the sites value to overwintering birds. Survey methodology was broadly consistent with breeding bird surveys.
- 1.5 The breeding bird surveys recorded a total of 46 bird species within the site, of which 16 were considered 'notable' Two species were confirmed as breeding but included no notable species. Sixteen were considered probable breeders, and the remaining 28 species were considered possible or non-breeders.
- 1.6 Winter bird surveys identified a total of 23 bird species recorded within the survey area of which nine were considered 'notable' species.
- 1.7 The bird assemblage recorded was typical of the habitats present, comprising common and widespread species. The survey area is therefore considered to be of no more than **Local** importance.
- 1.8 Development of the site as proposed will result in negligible impacts to most species, with the exception of skylark, meadow pipit and linnet. Up to ten breeding pairs of skylark were recorded and a small number of probable breeding meadow pipit, linnet and reed bunting. The loss of this habitat will lead to **Local adverse** impacts for all three species.
- 1.9 The retention of more established habitats and the habitat creation proposals included within the proposals will lead to negligible or beneficial impacts on the remainder of the assemblage recorded
- 1.10 Habitat creation has been recommended to provide additional nesting opportunities for several notable species. Mitigation measures are recommended to minimise disturbance impacts to birds during any clearance in the bird nesting season (March – August, inclusive).
- 1.11 A range of enhancement opportunities have been suggested based on the habitats and bird species recorded in order to achieve biodiversity gains. These include sensitive planting schemes and the provision of a range of nest boxes.

2.0 INTRODUCTION

- 2.1 This Bird Report has been prepared by FPCR Environment and Design Ltd. on behalf of Harworth Group PLC. and provides details of a suite of bird surveys undertaken at a site located to the north of Occupation Lane, Woodville (central OS Grid Reference: SK 311 187).
- 2.2 The site is approximately 21.49ha and comprises three fields of semi-improved grassland. Land-use to the east and south-east of the site is predominantly urban with residential dwellings along Occupation Lane and Moira Road. The remaining land surrounding the site is occupied by industrial units, with the exception of a small horse grazed field to the north east, which also includes a pond (P2). Further south of the site, industrial units extend into woodland planting while the landscape to the north and west is dominated by residential dwellings.

Survey Objectives

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

Legislation & Status

Legislation

- 2.4 Annex 1 of the EC Birds Directive lists rare and vulnerable species of regularly occurring or migratory wild birds that are subject to special conservation measures. The Directive also provides for the designation of Special protection Areas (SPA) for the protection of these species which form part of the Natura 2000 networks of sites protected by European Wildlife Legislation. The Birds Directive is transposed into UK law through the Conservation of Habitats and Species Regulations 2019.
- 2.5 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:
- Kill, injure or take any wild bird intentionally;
 - 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.

- 2.6 Additional protection is afforded to species listed on Schedule 1 of the Wildlife and Countryside Act 1981 (as amended), whereby intentional disturbance whilst building or occupying a nest or disturbance of dependent young is considered an offence.
- 2.7 The Natural Environment and Rural Communities (NERC) Act 2006 strengthens the WCA further with respect to the protection of the nests of certain birds listed on Schedule Z1a, even when they are not in use. The NERC Act also offers additional protection to birds released into the wild as part of a repopulation programme.
- 2.8 Certain species have also been identified as species of principal importance under Section 41 of the NERC Act 2006 (NERC S.41). 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 Natural Environment and Rural Communities Act 2006, to have regard to the conservation of biodiversity in England, when carrying out their normal functions.
- 2.9 The site falls within the area covered by the Derbyshire Lowland Biodiversity Action Plan (LBAP). Specific action plans are in place for a number of species and include mistle thrush *Turdus viscivorus* and song thrush *Turdus philomelos*. A further group action plan for farmland birds includes skylark *Alauda arvensis*, meadow pipit, linnet *Linaria cannabina*, and reed bunting *Emberiza schoeniclus*.

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 Concern (BoCC) in the UK¹:
- Red list (high conservation concern) species are those that are globally threatened according to IUCN criteria; those whose population has declined rapidly (50% or more) in recent years; and those that have declined historically and not shown a substantial recent recovery.
 - Amber list (medium conservation concern) species are those with an unfavourable conservation status in Europe; those whose population or range has declined moderately (between 25% and 49%) in recent years; those whose population has declined historically but made a substantial recent recovery; rare breeders; and those with internationally important or localised populations.
- 2.11 Green list (low conservation concern) species fulfil none of the above criteria.

¹ Eaton, M.A., Aebischer, N., Brown, A., Hearn, R., Lock, L., Musgrove, A., Noble, D., Stroud, D. and Gregory, R.D. 2015. *Birds of Conservation Concern 4: the population status of birds in the United Kingdom, Channel Islands and the Isle of Man*. British Birds 108, pp708-746.

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:
- Multi Agency Geographic Information for the Countryside (MAGIC) website
 - Derbyshire Wildlife Trust (DWT)

Field Survey

Breeding Bird Survey

- 3.1 The survey methodology employed was broadly based on that of territory mapping⁴ as used for the British Trust for Ornithology (BTO) Common Bird Census. Standard BTO species codes and symbols for bird activities were used to identify birds and denote activity, sex and age where appropriate. The criteria used in the assessment of breeding birds has been adapted from the standard criteria proposed by the European Ornithological Atlas Committee⁵ and are grouped into three categories: possible breeder e.g. birds observed in suitable habitat or singing male recorded, probable breeder e.g. pair in suitable habitat, territory defended, agitated behaviour or nest building and confirmed breeder e.g. recently fledged young observed, adult birds carrying food for young. Birds that were considered to be not using the site for breeding were categorised as non breeders e.g. flying over the site, migrant, habitat not suitable.
- 3.2 To provide a reasonable level of accuracy for determining the population status of the breeding birds on the site, three surveys were undertaken between 05.00 and 11.00 during April, May and June 2019. A surveyor completed a walkover of the Site, paying particular attention to any linear features, such as hedgerows and tree lines, and natural features such as areas of scrub and woodland. Bird surveys were not undertaken in unfavourable conditions, such as heavy rain or strong wind, which may negatively affect the results. Table 1 provides details of the survey dates and weather conditions.

Winter Bird Survey

- 3.3 The survey methodology employed during winter bird survey largely followed the methodology employed during breeding bird surveys (see para 3.1 and 3.2). One survey was carried out during daylight hours (0900-1600) during the winter month of January. Table 1 provides details of the survey weather conditions.

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

⁵ EOAC, 1979. *Categories of Breeding Bird Evidence*. European Ornithological Atlas Committee.

Table 1: Survey Dates and Conditions for Bird Surveys

Date	Cloud Cover (%)	Rain	Wind	Visibility
Breeding Bird Surveys				
16 th April 2019	80	None	Light breeze	Good
16 th May 2019	30	None	Light breeze	Excellent
6 th June 2019	20	None	Light breeze	Excellent
Winter Bird Survey				
8 th January 2019	40	None	Light breeze	Excellent

Species & Assemblage Assessment

- 3.4 The Chartered Institute of Ecology and Environmental Management (CIEEM) guidance on ecological impact assessment assesses nature conservation importance within a geographical context⁶. 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 2. In some cases, professional judgment may be required to increase or decrease the allocation of importance, based upon local knowledge.
- 3.5 The most recent county annual bird report, *Derbyshire Bird Report 2017* was consulted to inform the assessment. The abundance of species referred to by the report is classified by the following criteria:
- Very rare – Fewer than ten records ever
 - Rare – Ten or more records ever, but less than annual (recorded in nine or less of the last ten years). Breeding less than annually.
 - Scarce – Fewer than 20 birds occurring per annum or 10 pairs breeding
 - Uncommon – 20-100 birds occurring or 10-50 pairs breeding
 - Frequent – 100-500 birds occurring or 50-250 pairs breeding
 - Fairly common – 500-5,000 birds occurring or 250-2,500 pairs breeding
 - Common – 5,000-20,000 birds occurring or 2,500-10,000 pairs breeding
 - Very common – 20,000-50,000 birds occurring or 10,000-25,000 pairs breeding
 - Abundant – 50,000+ birds occurring or 25,000+ pairs breeding.
- 3.6 The site has also been assessed against the selection criteria for Local Wildlife Sites (LWS) for Derbyshire⁷ on a number of criteria set out for breeding birds. LWSs are recognised by central government as an important tool in promoting sustainable development and protecting biodiversity.

⁶ http://www.cieem.net/data/files/Publications/EcIA_Guidelines_Terrestrial_Freshwater_and_Coastal_Jan_2016.pdf

⁷ Derbyshire Wildlife Trust 2003 (Revised 2011). *Guidelines for the Selection of Local Wildlife Sites*. [online] Derbyshire Wildlife Trust. Available at: [http://www.derbyshirebiodiversity.org.uk/habitats/files/Guidelines%20for%20the%20Selection%20of%20Derbyshire%20Local%20Wildlife%20Sites%20\(Revised%202011\)%20reduced.pdf](http://www.derbyshirebiodiversity.org.uk/habitats/files/Guidelines%20for%20the%20Selection%20of%20Derbyshire%20Local%20Wildlife%20Sites%20(Revised%202011)%20reduced.pdf) (Accessed 14 June 2019)

Table 2: 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 overwintering 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 and which regularly occurs 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 and 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

Species Records

- 4.1 There were no bird species records, or sites (within the search area) that had been designated as a result of the bird populations they support.
- 4.2 The desk study returned records of small numbers of notable species, including kingfisher *Alcedo atthis*, bullfinch *Pyrrhula pyrrhula*, dunnock *Prunella modularis*, reed bunting *Emberiza schoeniclus* and swift *Apus apus*. Records included ten BoCC red list species comprising cuckoo *Cuculus canorus*, grey partridge *Perdix perdix*, house sparrow *Passer domesticus*, lesser spotted woodpecker *Dendrocopos minor*, linnet *Carduelis cannabina*, marsh tit *Poecile palustris*, song thrush, skylark *Alauda arvensis*, starling *Sturnus vulgaris* and yellowhammer *Emberiza citrinella*.
- 4.3 No notable species records were identified within the Site boundary. The vast majority of bird records were located in two locations; in and around the Midway Clay LWS to the north of the Site and around residential dwellings centred on Meakin Drive to the south east.

Field Survey

Breeding Bird Survey

Summary

- 4.4 A total of 46 bird species were recorded within the survey area (Appendix A). Of these, 16 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
 - LBAP for Derbyshire.
- 4.5 Of the 46 species recorded during breeding bird surveys, two were confirmed as breeding which were both BoCC Green-listed species (low conservation concern).
- 4.6 16 species were considered probable breeders, including skylark, song thrush, dunnock, bullfinch, linnet and reed bunting. The remaining 10 probable breeding species were all BoCC Green-listed species (low conservation concern).
- 4.7 The remaining 28 species recorded were considered possible breeders (18) or non-breeders (10).
- 4.8 Table 3 provides a summary of the notable bird species and their breeding status on site whilst Figure 1 shows the locations where they were recorded.

Table 3: Notable bird species recorded during Breeding Bird Surveys 2019, and their Recent Status within Derbyshire

Species	Legal/ Conservation status	Peak Count / Number of Survey Occasions Recorded	Breeding Status [†]	Recent Status in Derbyshire
Mallard <i>Anas platyrhynchos</i>	Amber List	2 / 1	Possible	A common or abundant resident and winter visitor
Black Headed Gull <i>Chroicocephalus ridibundus</i>	Amber List	5 / 2	Non-breeder	An abundant winter visitor and passage migrant. A fairly common breeder in S and NW.
Lesser Black Backed Gull <i>Larus fuscus</i>	Amber List	9 / 3	Non-breeder	A common summer visitor, passage migrant and winter visitor.
Stock dove <i>Columba oenas</i>	Amber list	8 flyovers / 2	Non-breeder	A fairly common resident
Swift <i>Apus apus</i>	Amber list	9 flyovers / 2	Non-breeder	A common summer visitor and passage migrant
Skylark <i>Alauda arvensis</i>	Red list NERC S.41 LBAP	25 / 3	Probable	A common resident and passage migrant
Willow warbler <i>Phylloscopus trochilus</i>	Amber list LBAP	2 / 3	Probable	A common summer visitor
Starling <i>Sturnus vulgaris</i>	Red list NERC S.41 LBAP	30 + 5 flyovers / 3	Non-breeder	An abundant resident, passage migrant and winter visitor
Song thrush <i>Turdus philomelos</i>	Red list NERC S.41 LBAP	4 / 3	Probable	A common resident and partial migrant
Mistle thrush <i>Turdus viscivorus</i>	Red list	3 / 1	Possible	A fairly common or common resident
Dunnock <i>Prunella modularis</i>	Amber list NERC S.41 LBAP	6 / 3	Probable	An abundant resident
House sparrow <i>Passer domesticus</i>	Red list NERC S.41 LBAP	Colony / 3	Non-breeder	A common but decreasing resident
Meadow pipit <i>Anthus pratensis</i>	Red list NERC S.41	4 / 3	Possible	In the lowlands an uncommon breeder but a common winter visitor and passage migrant

Species	Legal/ Conservation status	Peak Count / Number of Survey Occasions Recorded	Breeding Status†	Recent Status in Derbyshire
Bullfinch <i>Pyrrhula pyrrhula</i>	Amber list NERC S.41 LBAP	2 / 1	Probable	A fairly common resident
Linnet <i>Linaria cannabina</i>	Red list NERC S.41 LBAP	4 / 2	Probable	A common resident and partial migrant
Reed Bunting <i>Emberiza schoeniclus</i>	Amber list NERC S.41 LBAP	3 / 2	Probable	A fairly common resident and passage migrant

Winter Bird Survey

Summary

- 4.9 A total of 23 bird species were recorded within the survey area. Of these, nine are considered notable.
- 4.10 The distribution of the nine notable species is illustrated in Figure 2 and Table 4 provides a summary of the species recorded. A full list of birds recorded during the winter bird surveys can be found in Appendix B.

Table 4: Notable Bird Species Recorded during the 2019 Winter Scoping Survey, and their recent status in Derbyshire

Species	Legal/ Conservation status	Count	Recent Status in Derbyshire
Black-headed gull <i>Chroicocephalus ridibundus</i>	Amber list	7 flyovers	An abundant winter visitor and passage migrant. A fairly common breeder in S and NW.
Lesser black-backed gull <i>Larus fuscus</i>	Amber list	3 flyovers	A common summer visitor, passage migrant and winter visitor.
Great black-backed gull <i>Larus marinus</i>	Amber list	1	A common winter visitor. Uncommon in summer.
Herring gull <i>Larus argentatus</i>	Red list NERC S.41	2 + 22 flyovers	A common winter visitor. Uncommon in summer.
Tawny owl <i>Strix aluco</i>	Amber list	1	A fairly common resident
Skylark <i>Alauda arvensis</i>	Red list NERC S.41 LBAP	7	A common resident and passage migrant
House Sparrow <i>Passer domesticus</i>	Red list NERC S.41 LBAP	21	A common but decreasing resident

Meadow pipit <i>Anthus pratensis</i>	Amber list	8	In the lowlands an uncommon breeder but a common winter visitor and passage migrant
Linnet <i>Linaria cannabina</i>	Red list NERC S.41 LBAP	1 flyover	A common resident and partial migrant

Bird Survey Results Description

- 4.11 The majority of bird species recorded were within the grassland habitat that dominated the site. The internal parts of the semi-improved grassland provided breeding opportunities for skylark, a declining farmland species, and small numbers of meadow pipit and reed bunting. Breeding was considered probable by skylark, with up to ten breeding pairs identified in a number of regularly defended territories. The field boundaries, which were characterised by hedgerows and/or scrub and woodland, provided suitable breeding habitat for small numbers of other common and widespread bird species including two of probable breeding notable species: linnet and willow warbler *Phylloscopus trochilus*, with field interiors providing foraging resources. Other species recorded within field interiors included foraging starling and the common and widespread corvid and pigeon species recorded.
- 4.12 Hedgerows and woodland habitats across the site provided breeding and foraging opportunities for a number of common and widespread, generalist and woodland species including great spotted woodpecker *Dendrocopos major*, wren *Troglodytes troglodytes*, blackbird *Turdus merula*, robin *Erithacus rubecula* and common tit, finch and warbler species recorded. Notable species, including willow warbler, song thrush, mistle thrush, dunnock and bullfinch were all recorded using onsite hedgerows/woodland features.
- 4.13 A pond located in the south of the site provided breeding opportunities for coot *Fulica atra*, which were observed with chicks during the May survey occasion. Moorhen *Gallinula chloropus*, mallard *Anas platyrhynchos* and Canada goose *Branta canadensis* were also sighted on the pond, and were considered probable breeders, as they were spotted in pairs within suitable nesting habitat. One black-headed gull *Chroicocephalus ridibundus* was sighted on the pond, which was considered a non-breeder due to lack of suitable breeding habitat.
- 4.14 Other species recorded using onsite habitats during breeding and wintering bird surveys included house sparrow within close proximity to residential buildings to the north west and south of the site with an offsite nest observed in April. This species has specific habitat requirements and is strongly associated with urban environs and while the site provided suitable foraging resources it did not provide suitable breeding habitat.
- 4.15 Swift and swallow *Hirundo rustica* were recorded overflying the site only and due to a lack of suitable breeding habitat present on site were considered to be non-breeders.

Evaluation

Bird Assemblage

Local Wildlife Site Assessment

- 4.16 The site was assessed against published criteria for birds, set out in the Local Wildlife Site Selection Criteria for Derbyshire to assess the site against the thresholds for county value. Two of the criteria were relevant to the breeding bird assemblage recorded on site, as discussed below.

Criterion Bi3 - Any site that regularly supports a breeding population of a species on the UK 'Red List' of Birds of Conservation Concern 3 (Eaton et al, 2009) or the UK BAP Priority Bird species list or subsequent amendments.

- 4.17 Nine species that occur on either the Red List and/or Section 41 of the NERC act (previously the UK BAP) were recorded on site as probable or confirmed breeders, illustrative of a breeding record but it would be inappropriate to rely on this criteria alone as survey results from a single year cannot establish regularly supported breeding populations. Those red listed species recorded are also all fairly common to common in Derbyshire and it is therefore considered extremely unlikely the site would qualify for as a Local wildlife site based on this criterion alone.

Criterion Bi5 - Any site which regularly supports a good assemblage of breeding bird species characteristic of the habitat in which they are recorded with a value equal to or exceeding the following indices:

- i. Wetland habitats, including reedbed, open water, and fen. – 15
 - ii. Upland moorland and grassland without waterbodies – 15
 - iii. Woodland – 17
 - iv. Farmland mosaic - 13
- 4.18 One of these habitats was considered to be relevant within the context of the site: its Farmland mosaic. While woodland was present on Site, its extent was restricted to small blocks that arguably contributed more to the Site's farmland mosaic and these areas have therefore been included within this assessment. The breeding bird qualifying indices for each of these habitats from table 11d of the selection criteria was studied and compared against the thresholds for birds considered to be probable and confirmed breeders on site, as shown in Table 5. Records of possible or non-breeding species have not been included during the assessment as sufficient information was not obtained during bird surveys to suggest that they were using onsite habitats for breeding.

Table 5: Breeding Bird Assemblage Score Assessment under Wildlife Site Criterion Bi5

Habitat	Species and individual scores	Threshold Value	Site Value
Farmland mosaic	Skylark ħ 2, blackcap ħ 1, whitethroat ħ 1, song thrush ħ 2, bullfinch ħ 1, linnet ħ 2, reed bunting ħ 2	13	11

- 4.19 The calculated values for farmland mosaic assemblage fall short of the threshold values set by the guidelines and It is therefore considered the site supports an assemblage of breeding birds characteristic of the habitats on site that is of no more than **Local** importance conservation value.

Criterion Bi7 - Any site from which the following have been recorded:

- a) 45 breeding bird species or*
- b) 60 breeding and wintering bird species or*
- c) 100 breeding, wintering and passage bird species.*

- 4.20 Breeding evidence existed for just 16 of the total number of species (46).

Breeding Assemblages

- 4.21 Semi-improved grassland and their associated field margins provided suitable foraging and/or breeding habitat for several species, including skylark, linnet and reed bunting. Breeding was considered probable for all three species. As a result, the site was considered to be of **Local** level importance for this breeding bird assemblage.
- 4.22 Hedgerows, the pond and woodland features on and adjacent to the site provided suitable breeding and/or foraging habitat for an assemblage of common and widespread generalist species throughout the year. The assemblage recorded was considered typical of the habitats present, which are a common feature of the surrounding landscape with extensive woodland habitat present to the southwards. While the assemblage included a number of notable species, these species are all fairly common to abundant in Derbyshire and the numbers recorded were all considered typical of the habitats present. The site was therefore considered to be of no more than **Local** level importance for the generalist assemblage recorded.

Wintering Assemblage

- 4.23 The open field and hedgerow habitats offered a range of foraging opportunities for several notable species including skylark, meadow pipit and linnet. The scrub/woodland habitat continued to provide suitable overwintering foraging habitats for the assemblage of resident generalist species recorded over summer. No significant populations of bird species were recorded, however as with breeding birds, the mosaic of habitat resources associated with grassland and scrub habitats in the west of the Site was considered to be of **Local** level importance for the bird assemblage present year round.

Individual Species

- 4.24 Table 6 summarises those birds species recorded on the site that are of at least Local importance. These included those notable species that were recorded in suitable habitats in good numbers and/or those species where suitable habitats within the wider landscape are limited.
- 4.25 A number of notable species were either recorded in smaller numbers, were recorded flying over the site only, were noted in unsuitable breeding habitats and/or are considered common and widespread overwintering/breeding species. These individual species that make use of the available habitats are recognised as being of no more than **Site** importance.
- 4.26 The most abundant species on site was skylark, with up to ten breeding pairs recorded over the three breeding bird surveys and seven individuals using the site as winter habitat. The Derbyshire Bird Report indicates that skylark is a common species in Derbyshire and is widespread in the county; the Site is therefore considered to be of **Local** importance for skylark.

Table 6: Birds of Local Importance

Name		Survey Period Recorded During: Breeding (BBS)/Winter (WBS)	Status			Importance
			WCA Sch.1	NERC S.41	LBAP	
BoCC Red List						
Skylark	<i>Alauda arvensis</i>	BBS/WBS		+	+	Local
Song thrush	<i>Turdus philomelos</i>	BBS		+	+	Local
House Sparrow	<i>Motacilla flava</i>	BBS/WBS		+	+	Local
Linnet	<i>Carduelis cannabina</i>	BBS/WBS		+	+	Local
BoCC Amber List						
Dunnock	<i>Prunella modularis</i>	BBS		+	+	Local
Willow warbler	<i>Phylloscopus trochilus</i>	BBS			+	Local
Meadow pipit	<i>Anthus pratensis</i>	BBS/WBS				Local
Bullfinch	<i>Phyrrhula phyrrhula</i>	BBS		+	+	Local
Reed bunting	<i>Emberiza schoeniclus</i>	BBS		+	+	Local

5.0 DISCUSSION AND RECOMMENDATIONS

- 5.1 The following section provides an evaluation of the survey results and an assessment of likely effects upon breeding and overwintering birds. Where appropriate, recommendations are provided for mitigation and enhancement that take account of the likely ecological effects. Throughout the evaluation, any recommendations for mitigation have been informed by the most up-to-date Illustrative Masterplan.
- 5.2 The proposals for the site include 7.72ha of residential development which is to be located in the eastern half of the site. In the west and south, 4.61ha of development comprising employment land and a local centre (1.37ha) are proposed. In the north-west, centre and east of the site, areas of green space containing the existing pond P1 and new attenuation ponds, areas of grassland, and existing woodland and hedgerows are included within the scheme. These will form areas of public open space and habitats for wildlife.
- 5.3 The recommendations below have been given with the aim of informing development proposals on how to best maintain the conservation status of bird species present.

Impact Assessment of the Breeding & Overwintering Birds

- 5.4 The potential impacts on breeding bird species arising from the effects of development is based upon an understanding of each species's 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 *Derbyshire Bird Report 2017* 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 result in the loss of the majority of grassland habitats on Site along with small scale losses of scrub habitats. In the north-west, centre and east of the Site, areas of green space containing the existing pond P1 and new attenuation ponds, areas of grassland, and existing woodland and hedgerows are proposed. These will form areas of public open space and new habitat for wildlife.
- 5.7 The individual species recorded on site that are arguably the most vulnerable to impacts from habitat loss/change are the nine 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 list and/or are listed as a NERC Priority Species or listed as species that benefit from the objectives of the Derbyshire LBAP and were recorded in at least locally important numbers.
- 5.8 The loss of the grassland habitats will likely lead to a total loss of breeding and foraging habitat available to skylark, meadow pipit, linnet and reed bunting. While some areas of grassland habitats are to be retained or created, these will be limited in scale and are considered unlikely to support breeding habitat for skylark and meadow pipit that rely on open grassland habitats with clear sightlines for breeding. Created and retained grassland habitats may however continue to provide some breeding and foraging opportunities for reed bunting. Furthermore, while linnet rely on hedgerows and scrub for nesting, they have a strong preference for open habitats such as the grasslands present on site. Therefore, while the majority of hedgerows and scrub habitats are to be retained, the loss of open grasslands will render the site largely unsuitable for breeding linnet.
- 5.9 There are limited opportunities in the wider landscape for grassland species to be absorbed into neighbouring populations as the wider landscape is largely dominated by mixed development and woodland planting. The loss of grassland habitats will therefore result in an **Adverse impact at a local scale** on the breeding and wintering populations of these species. It is therefore recommended that an area of species rich grassland be planted in the north-west corner of the development around the proposed attenuation features. The implementation of this species rich grassland will continue to provide some opportunities for grassland species – particularly linnet and reed bunting (albeit in reduced numbers) - reducing the overall scale of the impacts on these species. Attenuation features should be planted with wet grassland and marginal vegetation mixes that will provide ideal breeding and foraging opportunities for reed bunting in addition to other wetland passerines including sedge warbler *Acrocephalus schoenobaenus*. The sensitive design of these features would ensure that impacts on reed bunting are negligible.
- 5.10 The retention of the scrub/grassland area will likely mean that recorded notable species including dunnoek and song thrush will continue to breed on site post development. In the absence of mitigation, the loss of grasslands would reduce the overall availability of year-round foraging resources for generalist species including song thrush and dunnoek. It is therefore recommended that landscape buffers containing mixed scrubland and attenuation features with associated planting are provided to introduce additional and novel breeding and foraging habitat for the generalist assemblage recorded. It is recommended that these structured landscape buffers be

planted with species-rich grassland and scrub mixes that are managed to encourage variations in vegetation height and density. This will increase the area's structural diversity and their value to nesting birds by offering a range of nesting and foraging sites with additional protection from predators. Furthermore, the generalist species recorded will readily habituate to urban environs and will quickly colonise newly created habitats once established. These measures will therefore ensure that the proposals will lead to negligible or beneficial impacts on the generalist species recorded.

Disturbance Impacts during Construction

- 5.11 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 periods⁸. During the breeding season disturbance may lead to nest desertion or the avoidance of the area and reduce the suitability of retained nesting areas, such as the hedgerows. Ground clearance works across the site are likely to be phased and will follow the phasing of the development, both staggering removal and allowing for some habituation of breeding birds, and this will minimise the extent of potential effects from the outset. Whilst there is some potential for breeding success to be reduced, this is not expected to affect the local conservation status on the majority of the bird species using the site for breeding. Disturbance effects on the majority of birds are therefore expected to be short-term and temporary and are significant at a **Local** level only.

Mitigation

- 5.12 To avoid disturbance to breeding birds and to ensure legal compliance, suitable nesting habitat (which will include the open grassland fields) will be removed outside the bird-breeding season, which runs from March to August, inclusive. If this is not possible, vegetation will be checked prior to removal by an experienced ecologist. If active nests are found, the area will be left untouched and suitably buffered from works until all birds have fledged. Specific advice will be provided prior to undertaking the clearance. This would be a statutory requirement due to the protection of all nesting birds and their nests under the Wildlife and Countryside Act 1981 (as amended). A suitably qualified ecologist would supervise this.

Enhancements

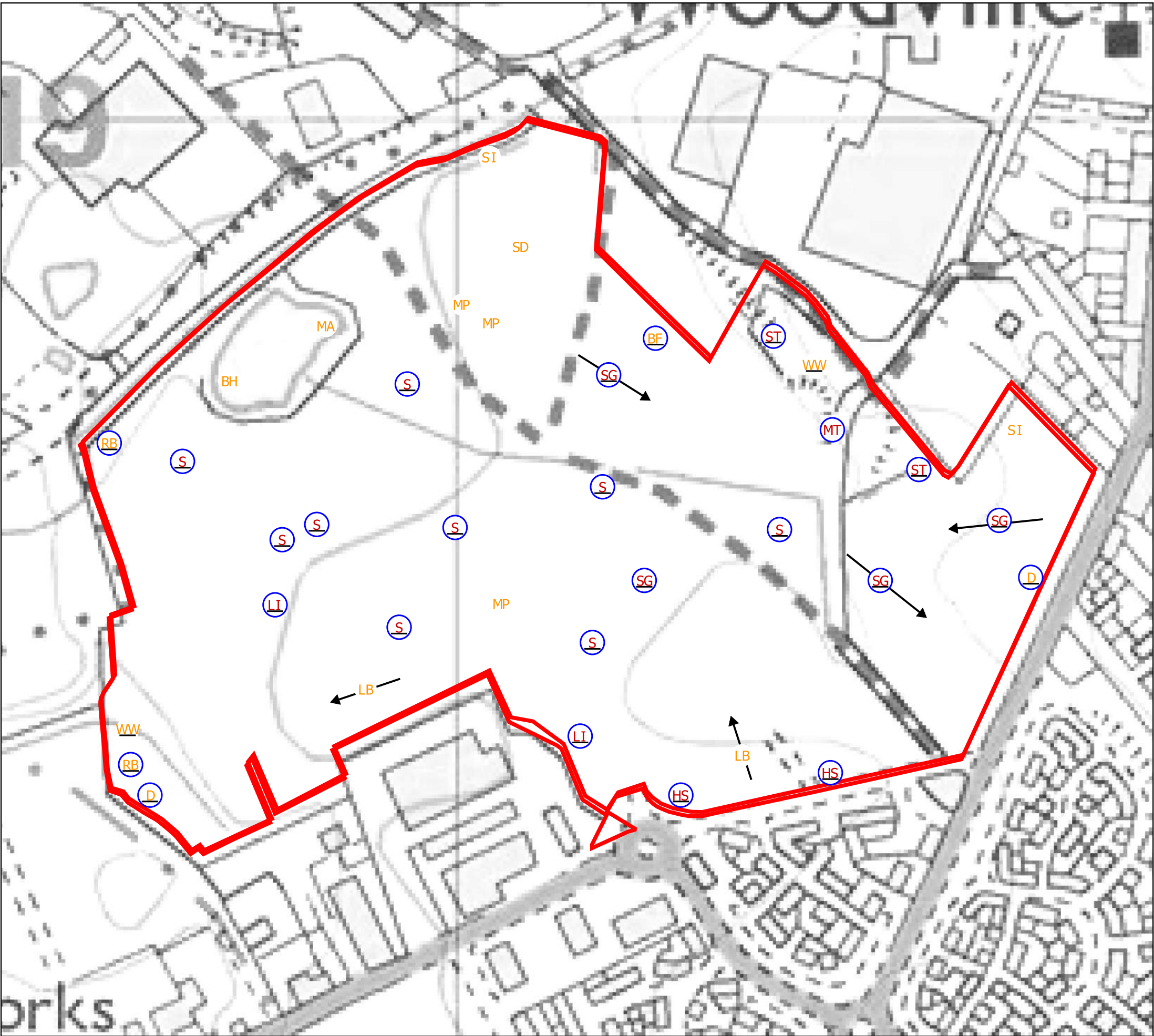
- 5.13 Additional planting is to be incorporated into the on-site green infrastructure and will provide enhanced foraging and breeding habitat for a range of bird species. Where possible it is recommended that consideration is given to the provision of native, fruit bearing species of local origin to provide an optimal foraging resource for a range of bird species.
- 5.14 Attenuation features should be planted with wet grassland and marginal vegetation mixes that will provide ideal breeding and foraging opportunities for reed bunting and other wetland passerines including sedge warbler *Acrocephalus schoenobaenus*. Where possible, attenuation features

⁸ 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

should be designed to hold some water throughout the year to provide additional breeding opportunities for waterfowl including mallard, coot and moorhen.

5.15 Additional enhancements that could be integrated with the on-going management of the site include the provision of a mixture of suitable nest box types such as:

- A mixture of small hole (26mm and 32mm) boxes placed among or adjacent to retained habitats will provide nesting opportunities for blue tit and great tit. These boxes generally have a high uptake rate;
- Small open fronted nest boxes placed throughout the site especially on trees which support a climber such as ivy which provides a degree of concealment. These boxes typically attract robin and blackbird;
- Stock dove nest boxes should be placed within the more established boundary habitats including mature tree standards;
- Consideration should subsequently be given to the provision of nest boxes for urban birds, including house sparrow, house martin, swallow and swift. Given the urbanised nature of the proposed development, opportunities exist to encourage these species to breed on site.
- Consideration should also be given to the provision of a kestrel *Falco tinnunculus* box along retained woodland bordering the proposed wildflower meadow in the west of the site that would provide optimal breeding habitat adjacent to a new foraging resource for this species to encourage onsite breeding.



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Key

BoCC Amber Listed Species BoCC Red-Listed Species

- | | | | |
|----|--------------------------|----|---------------|
| BH | Black-headed Gull | HS | House Sparrow |
| BF | Bullfinch | LI | Linnet |
| D | Dunnock | M | Mistle Thrush |
| LB | Lesser Black-backed Gull | S | Skylark |
| MA | Mallard | ST | Song Thrush |
| MP | Meadow Pipit | SG | Starling |
| RB | Reed Bunting | | |
| SD | Stock Dove | | |
| SI | Swift | | |
| WW | Willow Warbler | | |

- Site Boundary
- Fly over only
- NERC Species of Principle Importance
- Schedule 1 Species
- LBAP Species (underlined)



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project
Occupation Road,
Woodville

drawing title
BREEDING BIRD SURVEY RESULTS -
LOCATIONS OF NOTABLE SPECIES

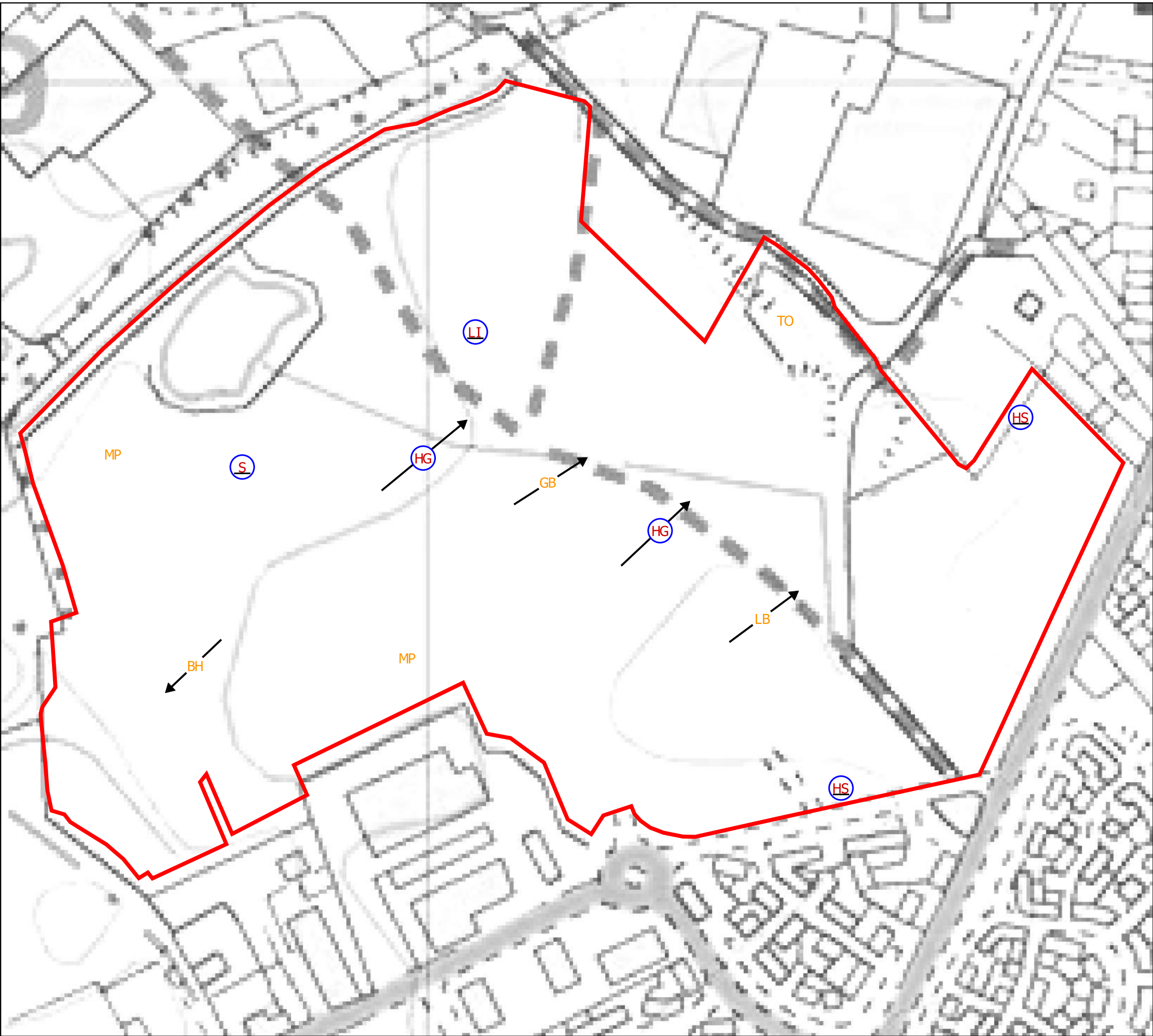
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Figure 1

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Key

BoCC Amber Listed Species

- BH Black-headed Gull
- GB Great Black-backed Gull
- LB Lesser Black-backed Gull
- MP Meadow Pipit
- TO Tawny Owl

BoCC Red Listed Species

- HG Herring Gull
- HS House Sparrow
- LI Linnet
- S Skylark

- Site Boundary
- Fly over only
- NERC Species of Principal Importance
- Schedule 1 Species
- LBAP Species (underlined)



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project
Occupation Road,
Woodville

drawing title
WINTER BIRD SURVEY RESULTS - LOCATION
OF NOTABLE SPECIES

scale
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MAF / ED

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Figure 2

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Appendix A: Occupation Lane, Woodville – 2019 Breeding Bird Survey Results & EOAC Criteria for Categorisation of Breeding Status

Species: British Common Name	Species: Latin name	Survey 1	Survey 2	Survey 3	Conservation Status & Protection	Breeding status ¹
Canada goose	<i>Branta canadensis</i>	2	0	4	Not listed	F
Mallard	<i>Anas platyrhynchos</i>	2	0	0	Amber list	H
Red-legged partridge	<i>Alectoris rufa</i>	1	0	0	Not listed	H
Pheasant	<i>Phasianus colchicus</i>	1	1	0	Not listed	H
Sparrowhawk	<i>Accipiter nisus</i>	1	0	0	Green list	F
Buzzard	<i>Buteo buteo</i>	0	1	1	Green list	H
Moorhen	<i>Gallinula chloropus</i>	0	1	0	Green list	H
Coot	<i>Fulica atra</i>	1	Family	2	Green list	FL, NY
Black-headed gull	<i>Chroicocephalus ridibundus</i>	0	2	5	Amber list	F
Lesser black- backed gull	<i>Larus fuscus</i>	9	8	3	Amber list	F
Stock dove	<i>Columba oenas</i>	7	1	0	Amber list	F
Woodpigeon	<i>Columba palumbus</i>	35	22	17	Green list	B, P, T
Collared dove	<i>Streptopelia decaocto</i>	0	2	2	Green list	P
Swift	<i>Apus apus</i>	0	3	9	Amber List	F
Great spotted woodpecker	<i>Dendrocopos major</i>	0	0	1	Green list	H
Magpie	<i>Pica pica</i>	2	1	0	Green list	H
Rook	<i>Corvus frugilegus</i>	1	0	0	Green list	F
Carrion crow	<i>Corvus corone</i>	2	4	4	Green list	H
Goldcrest	<i>Regulus regulus</i>	0	1	2	Green list	H

¹European Ornithological Atlas Committee, 1979. *Categories of Breeding Bird Evidence*. European Ornithological Atlas Committee.

Species: British Common Name	Species: Latin name	Survey 1	Survey 2	Survey 3	Conservation Status & Protection	Breeding status ¹
Blue tit	<i>Cyanistes caeruleus</i>	3	6	11	Green list	A
Great tit	<i>Parus major</i>	3	2	8	Green list	A
Coal tit	<i>Periparus ater</i>	0	0	2	Green list	H
Skylark	<i>Alauda arvensis</i>	25	24	23	Red list NERC S.41 LBAP	P, T, A
Swallow	<i>Hirundo rustica</i>	0	0	2	Green list	F
Long-tailed tit	<i>Aegithalos caudatus</i>	0	1	Family	Green list	FL
Chiffchaff	<i>Phylloscopus collybita</i>	2	0	0	Green list	S, H
Willow warbler	<i>Phylloscopus trochilus</i>	2	1	2	Amber list, LBAP	H
Blackcap	<i>Sylvia atricapilla</i>	6	2	6	Green list	P
Whitethroat	<i>Sylvia communis</i>	0	1	2	Green list	T
Nuthatch	<i>Sitta europaea</i>	1	0	0	Green list	H
Wren	<i>Troglodytes troglodytes</i>	4	3	7	Green list	S, H
Starling	<i>Sturnus vulgaris</i>	1	15	35	Red list NERC S.41 LBAP	F
Blackbird	<i>Turdus merula</i>	8	14	10	Green list	P, D
Song thrush	<i>Turdus philomelos</i>	4	2	1	Red list NERC S.41 LBAP	T
Mistle thrush	<i>Turdus viscivorus</i>	3	0	0	Red list	S, H
Robin	<i>Erithacus rubecula</i>	7	4	5	Green list	A, T
Dunnock	<i>Prunella modularis</i>	4	6	3	Amber list NERC S.41 LBAP	A, T
House sparrow	<i>Passer domesticus</i>	3	Colony	Colony	Red list NERC S.41 LBAP	UH
Pied wagtail	<i>Motacilla alba</i>	3	1	1	Green list	H
Meadow pipit	<i>Anthus pratensis</i>	1	2	4	Amber list	H
Chaffinch	<i>Fringilla coelebs</i>	1	1	1	Green list	H, S

Species: British Common Name	Species: Latin name	Survey 1	Survey 2	Survey 3	Conservation Status & Protection	Breeding status ¹
Bullfinch	<i>Pyrrhula pyrrhula</i>	2	0	0	Amber list NERC S.41 LBAP	P
Greenfinch	<i>Chloris chloris</i>	4	8	4	Green list	T
Linnet	<i>Linaria cannabina</i>	0	4	2	Red list NERC S.41 LBAP	P, T
Goldfinch	<i>Carduelis carduelis</i>	4	9	6	Green list	T
Reed bunting	<i>Emberiza schoeniclus</i>	0	2	3	Amber list NERC S.41 LBAP	P, T
Total No. Species		33	35	34		

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 B: Occupation Lane, Woodville Scoping Winter Bird Survey Results

Species: British Common Name	Species: Latin name	Survey 1	Conservation Status & Protection
Buzzard	<i>Buteo buteo</i>	3	Green list
Black-headed gull	<i>Chroicocephalus ridibundus</i>	7 flyovers	Amber list
Lesser black-backed gull	<i>Larus fuscus</i>	3 flyovers	Amber list
Herring gull	<i>Larus argentatus</i>	2 + 22 flyovers	Red list NERC S.41
Great black-backed gull	<i>Larus marinus</i>	1	Amber list
Woodpigeon	<i>Columba palumbus</i>	1 + 2 flyovers	Green list
Tawny owl	<i>Strix aluco</i>	1	Amber list
Magpie	<i>Pica pica</i>	1 + 1 flyover	Green list
Rook	<i>Corvus frugilegus</i>	1	Green list
Carrion crow	<i>Corvus corone</i>	7	Green list
Raven	<i>Corvus corax</i>	2	Green list
Blue tit	<i>Cyanistes caeruleus</i>	5	Green list
Great tit	<i>Parus major</i>	6	Green list
Coal tit	<i>Periparus ater</i>	2	Green list
Skylark	<i>Alauda arvensis</i>	7	Red list NERC S.41 LBAP
Blackbird	<i>Turdus merula</i>	8	Green list
Robin	<i>Erithacus rubecula</i>	3	Green list
House sparrow	<i>Passer domesticus</i>	21	Red list NERC S.41 LBAP
Pied wagtail	<i>Motacilla alba</i>	2	Green list
Meadow pipit	<i>Anthus pratensis</i>	8	Amber list

Species: British Common Name	Species: Latin name	Survey 1	Conservation Status & Protection
Chaffinch	<i>Fringilla coelebs</i>	1	Green list
Linnet	<i>Linaria cannabina</i>	1 flyover	Red list NERC S.41 LBAP
Goldfinch	<i>Carduelis carduelis</i>	6 + 2 flyovers	Green list
Total No. Species		23	