

**Annex A:
Botanical Species List**

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ANNEX A: BOTANICAL SPECIES LIST

D – Dominant, A = Abundant, F – Frequent, O – Occasional, R – Rare, LD – Locally Dominant, LA – Locally Abundant, LF – Locally Frequent, LO – Locally Occasional, LR – Locally Rare

Species-Poor Semi-Improved Grassland

Common Name	Latin Name	DAFOR Scale
American willowherb	<i>Epilobium ciliatum</i>	R
Annual meadow-grass	<i>Poa annua</i>	R
Autumn hawkbit	<i>Scorzoneroides autumnalis</i>	R
Bracken	<i>Pteridium aquilinum</i>	R
Bramble	<i>Rubus fruticosus</i> agg.	R
Broad-leaved dock	<i>Rumex obtusifolius</i>	R
Burdock species	<i>Arctium</i> sp.	R
Bush vetch	<i>Vicia sepium</i>	R
Chickweed	<i>Stellaria media</i>	R
Cock's-foot	<i>Dactylis hispanica</i>	LD
Common mouse-ear	<i>Cerastium fontanum</i>	R
Common hogweed	<i>Heracleum sphondylium</i>	R
Common nettle	<i>Urtica dioica</i>	R
Common ragwort	<i>Senecio jacobaea</i>	R
Common sorrel	<i>Rumex acetosa</i>	O
Cow parsley	<i>Anthriscus sylvestris</i>	R
Creeping bent	<i>Agrostis stolonifera</i>	O
Creeping buttercup	<i>Ranunculus repens</i>	O
Creeping thistle	<i>Cirsium arvense</i>	R
Crested dog's-tail	<i>Cynosurus cristatus</i>	R
Daisy	<i>Bellis perennis</i>	R
Dandelion	<i>Taraxacum officinale</i> agg.	R
Dove's-foot crane's-bill	<i>Geranium molle</i>	R
False oat-grass	<i>Arrhenatherum elatius</i>	LD
Greater plantain	<i>Plantago major</i>	R
Great willowherb	<i>Epilobium hirsutum</i>	R
Lesser celandine	<i>Ranunculus ficaria</i>	R
Meadow buttercup	<i>Ranunculus acris</i>	O
Meadow vetchling	<i>Lathyrus pratensis</i>	R
Mugwort	<i>Artemisia vulgaris</i>	R
Ox-eye daisy	<i>Leucanthemum vulgare</i>	R
Perennial rye-grass	<i>Lolium perenne</i>	F
Prickly sow-thistle	<i>Sonchus asper</i>	R
Redshank	<i>Persicaria maculosa</i>	R
Red clover	<i>Trifolium pratense</i>	R
Red fescue	<i>Festuca rubra</i>	R
Ribwort plantain	<i>Plantago lanceolata</i>	O

Rosebay willowherb	<i>Chamaenerion</i>	R
Rough meadow-grass	<i>Poa trivialis</i>	R
Shepherd's purse	<i>Capsella bursa-pastoris</i>	R
Sweet vernal grass	<i>Anthoxanthum odoratum</i>	R
Thistle sp.	<i>Cirsium sp.</i>	R
Yarrow	<i>Achillea millefolium</i>	R
Yorkshire fog	<i>Holcus lanatus</i>	F

Annex B:
Main Site: Passage / Breeding Bird Survey Report

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Hallam Land Management Ltd

Land off Carr Road, Deepcar

Main Site: Passage and Breeding Bird Survey Report

May 2021

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1.0 INTRODUCTION

- 1.1 The following report has been prepared by FPCR Environment and Design Ltd. on behalf of Hallam Land Management Ltd. It provides results of a suite of breeding and passage bird surveys undertaken between March and May 2021 at Land off Carr Road, Deepcar (central grid ref SK277974) known hereafter as 'the application site' or 'the site'.
- 1.2 Separate breeding bird surveys and passage bird surveys were carried out by FPCR in 2016 and 2017, respectively. The 2021 surveys were carried out to determine whether there has been a significant change in the bird population since the previous survey effort.

Site Location and Context

- 1.3 The proposed development site is located west of the town of Deepcar, and contains six fields of poor semi-improved grassland bound by stone walls. At the time of survey, the grassland had been recently grazed by cattle. Adjacent to the northern site boundary lies Fox Glen woodland, through which flows Clough Dike. Directly east of the site lies residential development, and to the west and south lies arable farmland, pasture and a golf course.

Survey Objectives

- 1.4 The objectives of the survey were to:
- Identify the presence and distribution of birds on the site in the breeding and spring passage seasons, in particular any species that contribute to the designation of The South Pennine Moors (Phase 1) SPA and The Dark Peak SSSI;
 - Assess the conservation importance of the site in relation to local populations;
 - Evaluate the importance of local bird populations and their habitat requirements.

2.0 LEGISLATION & GUIDANCE

The Wildlife & Countryside Act 1981 (as amended)

- 2.1 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.

- 2.2 Species listed on Schedule 1 of the Wildlife and Countryside Act 1981 (as amended) are specially protected at all times.

Natural Environment and Rural Communities (NERC) Act 2006

- 2.3 A number of birds feature on the Natural Environment and Rural Communities (NERC) Act 2006, Section 41 (S41) as species which are of principal importance for the conservation of biodiversity in England. 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.

Non-statutory Guidance

2.4 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; whose population or range has declined moderately (between 25% and 49%) in recent years; whose population has declined historically but made a substantial recent recovery; rare breeders; and those with internationally important or localised populations.
- Green list (low conservation concern) species fulfil none of the above criteria.

3.0 METHODOLOGY

Desktop Study

3.1 In order to compile existing baseline information, a desktop survey was undertaken in 2021 for up-to-date existing ecological data regarding statutorily and non-statutorily habitats / sites of interest to nature conservation and protected bird species. The following organisations were consulted:

- Sheffield Biological Records Centre (SBRC);
- Sheffield Bird Study Group (SBSG);
- Multi Agency Geographic Information for the Countryside (MAGIC) website².

3.2 The minimum evidence for a 'breeding record' follows the standard for national breeding bird surveys and translates as those species which are probable or confirmed breeders as referred to in this report and within Appendix A.

Field Survey Methodology

3.3 The survey methodology employed was broadly based on that of territory mapping³ 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 Committee and are grouped into three categories: possible breeder, probable breeder and confirmed breeder. Birds that were

¹ Eaton, M.A. *et al.* 2015. Birds of Conservation Concern 4: the population status of birds in the United Kingdom, Channel Islands and Isle of Man. *British Birds* 108: 708–746.

² <http://magic.defra.gov.uk>

³ Bibby, C.J., N.D. Burgess and D.A. Hill 1992. *Bird Census Techniques*. London: Academic Press.

considered to be not using the site for breeding were categorised as ‘non breeders’. Breeding evidence used in this report follows EOAC guidelines 1979⁴, as shown in Appendix A. Bird surveys were not undertaken in unfavourable conditions such as heavy rain or strong wind, which may negatively affect the results.

- 3.4 The 2021 survey effort followed the same methodology of the 2017 surveys. The 2021 surveys are referred to as breeding / passage surveys because as well as including the breeding season (April – May), they also include the spring passage season (March).
- 3.5 To provide a reasonable level of accuracy for determining the use of the site by birds during spring passage / breeding season, five surveys were carried out between March and May 2021. as in 2017, these surveys were undertaken bimonthly. Surveys lasted three hours each and comprised a mixture of transect survey and vantage point survey techniques. Three surveys were undertaken during the early morning period (from dawn) and two were undertaken late afternoon (until dusk). For the transects, a route was mapped out prior to the surveys being undertaken, paying particular attention to any linear features, such as hedgerows and tree lines, and natural features such as areas of scrub. A vantage point survey was then undertaken from the south west corner of the site.
- 3.6 Furthermore, the survey effort aims to provide sufficient evidence of the level of use of the site by any SPA Species of the South Pennine Moors SPA and SSSI Species of the Dark Peak SSSI, where development may have a significant impact on the SPA or SSSI through the loss of supporting habitat.
- 3.7 Table 1 provides the details and survey conditions of the passage / breeding bird surveys.

Table 1: Survey Dates and Conditions for 2021 Passage / Breeding Bird Surveys

Survey	Date and Time	Cloud cover (%)	Rain	Wind	Visibility
1	16.03.21 0630-0930	70-100	Light rain 0730-0830	Gentle – Moderate breeze	Excellent
2	31.03.21 1645-1945	0	None	Calm	Excellent
3	13.04.21 0600-0930	0	None	Calm	Excellent
4	28.04.21 1730-2030	30-100	None	Light air – Light breeze	Very good
5	06.05.21 0530-0915	0	None	Light breeze – Gentle breeze	Excellent

Assessment Methodology

- 3.8 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 2. In some

⁴ EOAC, 1979. Categories of Breeding Bird Evidence. European Ornithological Atlas Committee.

⁵ http://www.cieem.net/data/files/Publications/EcIA_Guidelines_Terrestrial_Freshwater_and_Coastal_Jan_2016.pdf

cases, professional judgment may be required to increase or decrease the allocation of importance, based upon local knowledge.

Table 2: Definition of Terms Relating to Nature Conservation Value

Nature Conservation Value	Selection Criteria
International	A species which is part of the cited interest of a Special Protection Area (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 Site of Special Scientific Interest (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 of Principal Importance under Schedule 41 of NERC Act (2006), which are not covered above, and which regularly occur 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 occur in regionally important numbers.
County	Species of Principal Importance under Schedule 41 of NERC Act (2006), which are not covered above, and which regularly occur 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 listed as priority species for nature conservation under S41 of the NERC Act. A site afforded a non-statutory designation for its county important assemblage of birds (e.g. a LWS). 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 listed as Species of Principal Importance under Schedule 41 of the NERC Act (2006) 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.

- 3.9 'Notable species' are considered those which are specially protected (Schedule 1), appear on the RSPB BoCC as declining (red or amber lists) and/or are identified as Species of Principal Importance under S41 of the NERC Act.

4.0 RESULTS AND EVALUATION

Desk Top Study

Designated Sites

- 4.1 The South Pennine Moors Special Protection Area (SPA) (Phase 1) lies approximately 3.6km west of site and covers extensive tracts of semi-natural moorland habitats including upland heath and

blanket mire, which are important for its assemblage of breeding moorland and moorland fringe birds. The SPA qualifies under Article 4.1 of the EC Directive on the Conservation of Wild Birds (79/409) by supporting internationally important breeding populations of the following three species:

- Merlin *Falco columbarius*
- Golden plover *Pluvialis apricaria*
- Short-eared owl *Asio flammeus*

4.2 Both merlin and golden plover spend some of their time feeding outside the SPA on adjacent areas of in-by land.

4.3 The SPA supports a rich upland breeding bird assemblage which, as well as the qualifying species listed above, includes the following non-qualifying species of interest over the breeding season: peregrine *Falco peregrinus*, lapwing *Vanellus vanellus*, dunlin *Calidris alpina schinzii*, snipe *Gallinago gallinago*, curlew *Numenius arquata*, redshank *Tringa totanus*, common sandpiper *Actitis hypoleucos*, whinchat *Saxicola rubetra*, wheatear *Oenanthe oenanthe*, ring ouzel *Turdus torquatus* and twite *Carduelis flavirostris*.

4.4 With regard to the qualifying populations of individual breeding bird species and assemblage species, the conservation objectives of The South Pennine Moors SPA (Phase 1) are:

'Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the aims of the Wild Birds Directive, by maintaining or restoring;

- The extent and distribution of the habitats of the qualifying features
- The structure and function of the habitats of the qualifying features
- The supporting processes on which the habitats of the qualifying features rely
- The population of each of the qualifying features, and,
- The distribution of the qualifying features within the site.'

4.5 The South Pennine Moors (Phase 1) SPA comprises four separate Sites of Special Scientific Interest (SSSI), all of which are of importance for their breeding bird assemblages. These are:

- Dark Peak (SSSI) – 3.6km West (same distance as SPA);
- Goyt Valley (SSSI) – 32.9km South East of Site;
- Leek Moors (SSSI) – 35.1km South of Site; and
- Eastern Peak District moors (SSSI) – 7.7km South.

4.6 The citation for The Dark Peak SSSI (the closest SSSI noted for its breeding bird population) identifies the site as supporting significant/notable breeding populations of a number of bird species including golden plover, dunlin, meadow pipit *Anthus pratensis*, curlew, red grouse *Lagopus lagopus*, merlin, short-eared owl, twite, peregrine, ring ouzel, wheatear, whinchat, tree pipit *Anthus trivialis*, redstart *Phoenicurus phoenicurus*, green woodpecker *Picus viridus*, wood warbler *Phylloscopus sibilatrix*, pied flycatcher *Ficedula hypoleuca*, dipper *Cinclus cinclus*, grey wagtail *Motacilla cinerea* and common sandpiper *Actitis hypoleucos*.

4.7 The site is outside the impact risk zone for residential development for all of these SSSI's.

Notable Bird Species Records

- 4.8 There were numerous records provided by SBRC and SBSG from within the search area. A number of notable bird species were recorded within 2km of the site, with the majority of records originating from farmland to the west and south of site. However, most of these records were provided at only a 2 or 4 figure grid reference, meaning identifying the precise locations of these records was not always possible. Of those records provided, for which large grid reference partially fell within the site boundary, the only records that may be relevant to the site in terms of the habitat present included house sparrow *Passer domesticus*, linnet *Carduelis cannabina* dunnock *Prunella modularis* and starling *Sturnus vulgaris*. Notable ground nesting species traditionally associated with farmland and grassland habitat; grey partridge *Perdix perdix* and meadow pipit have been recorded within the grid square where the site is situated. None of the species records included significant breeding evidence as described in paragraph 3.2 and none of the more precise six-figure grid reference records supplied fall within the site boundary. Table 2 provides a summary of the notable bird species records provided by SBRC and SBSG from within the search area.

Bird Species Records of the Designated Criterion of The South Pennine Moors SPA

- 4.9 The records confirm no designated species listed on the criterion for the SPA were recorded within the 1km grid square where the site is situated. Two non-qualifying species of interest listed on the citation, lapwing and curlew, were reported within the 1km grid square in which the site is located. Over the breeding/passage period (March to September) the records show lapwing and curlew are also present in small numbers locally where open farmland habitat is present demonstrating the widespread nature of this species. These records also show that over the breeding/passage period significantly higher numbers of lapwing use habitats in other grid squares which are not affected by the proposals. These grid squares include: SK2697 (87 lapwing), SK2696 (12 lapwing, with breeding confirmed in the same grid square), SK2698 (13 lapwing where breeding has been confirmed), SK2796 (70 lapwing), SK2896 (26 lapwing where breeding has been confirmed) and SK2795 (13 lapwing).
- 4.10 Similarly, records for the winter/passage period (October to March) confirm no designated species listed on the criterion for the SPA were recorded within the 1km grid square where the site is situated. However, small numbers of lapwing (up to 40) were reported within the 1km grid square where the site is located and also occur much more widely to the north of Deepcar and on further arable land to the south and west.
- 4.11 The records also show species listed on the designation criterion for the SPA and species of interest listed on the SPA on land surrounding the site. The locations of records for species listed on the designated criterion for the SPA are shown on Figures 1 and 3 for the breeding/passage and wintering/passage season respectively.

Bird Species Records mentioned on the Criterion of The Dark Peak SSSI

- 4.12 In addition to the lapwing and curlew records (as described in paragraph 4.9), one additional SSSI species, grey wagtail, was recorded in the 1km grid square where the site is located during the breeding/passage season. These species and other species listed on the SSSI designation were also recorded extensively in grid squares surrounding the site. Few records of SSSI species were provided from within 1km of the site boundary during the winter/passage season. A single red grouse record was provided south of Hollin Busk Lane. The locations of records for species listed

on The Dark Peak SSSI Citation are shown on Figures 2 and 4 for the breeding/passage and wintering/passage season respectively.

Field Survey

Summary of 2016 and 2017 Survey Effort

- 4.13 In the 2016 breeding bird surveys, a total of 23 species were recorded within the site boundary during the surveys including eight notable species. No species of cited interest of the South Pennine Moors SPA were recorded either on site or flying over the site. Five species displayed probable breeding evidence, including dunnock *Prunella modularis*, (NERC/Amber) and four green-listed species. The remaining sixteen comprised eleven possible breeders and five non-breeding species.
- 4.14 During the 2017 passage surveys, 43 species were recorded including 17 notable species. Eight of the recorded species were amber listed, but only four of these species (willow warbler *Phylloscopus trochilus*, dunnock, meadow pipit and bullfinch *Pyrrhula pyrrhula*) were considered 'probable breeders' within the site. Nine red listed species were confirmed, of these, song thrush and mistle thrush *Turdus viscivorus* were identified as 'possible breeders' and lapwing were identified as 'probable breeder'.
- 4.15 Curlew was only recorded flying over the site on one survey occasion and heard singing in the wider environment on three of the four survey occasions. Meadow pipit was the only SSSI species identified within the site. On the first survey occasion a flock of 43 were observed within the site and considered to be on passage. On the remaining three survey occasion in March and April lower numbers of meadow pipits were observed. From the 2017 data, it was concluded that the site did not provide a significant resource for designated or non-qualifying species listed on the SPA and the SSSI designation.

2021 Passage and Breeding Surveys

- 4.16 The five surveys carried out in 2021 recorded a total of 26 species within the site boundary, of which 9 are considered notable. One species, blackbird *Turdus merula* was confirmed as breeding on site due to observation an adult bird feeding young. One species, dunnock *Prunella modularis* was considered a probable breeder, whilst the remaining 24 species were considered possible or non-breeders.
- 4.17 Table 3 provides a summary of the notable species recorded and their breeding status on site, whilst Figure 5 shows the approximate locations where they were recorded. A full list of results is provided in Appendix A.

Table 3: Notable Species Recorded and their Recent Breeding Status in Yorkshire

Species	Legal / Conservation Status	Peak Count / Number of Survey Occasions Recorded	Breeding Status	Recent Breeding Status within Yorkshire ⁶
Mallard <i>Anas platyrhynchos</i>	Amber list	1 / 1	Non-breeder	Fairly common breeder; common migrant and winter visitor
Starling <i>Sturnus vulgaris</i>	NERC Red list	50 +54 flyovers / 5	Possible	Abundant resident
Redwing <i>Turdus iliacus</i>	Schedule 1 Red list	21 / 1	Non-breeder	Common passage migrant and winter visitor
Mistle thrush <i>Turdus philomelos</i>	Red list	5 / 2	Possible	Common resident and scarce passage migrant
House sparrow <i>Passer domesticus</i>	NERC Red list	3 / 3	Possible	Abundant resident
Dunnock <i>Prunella modularis</i>	NERC Amber list	3 / 1	Probable	Abundant resident
Grey wagtail <i>Motacilla cinerea</i>	Red list	1 flyover / 1	Non-breeder	Uncommon resident in north and west Yorkshire
Meadow pipit <i>Anthus pratensis</i>	Amber list	2 / 3	Possible	Common resident
Linnet <i>Linaria cannabina</i>	NERC Red list	7 + 2 flyovers / 3	Possible	Common resident

Description

- 4.18 The bird assemblage recorded during the passage / breeding season was considered typical of the habitats present within the site, being heavily influenced by the current agricultural management. The open fields, which at the time of survey were grazed by sheep and cows, provided foraging habitat for mallard *Anas platyrhynchos*, meadow pipit *Anthus pratensis*, starling *Sturnus vulgaris*, redwing *Turdus iliacus*, mistle thrush *Turdus viscivorus* and linnet *Linaria cannabina*.
- 4.19 Meadow pipit was recorded in low numbers twice in March and once in April. No evidence of breeding by meadow pipit was observed, therefore this species was only considered a possible breeder, and most likely only uses the site to forage / roost. Starling was regularly observed foraging within the site, and during the later surveys was seen foraging and carrying food off-site.

⁶ 2012 Yorkshire Bird Report. Abundant - More than 50,000 records per year; Common – More than 10,000 records per year; Fairly common – More than 1,000 records per year; Uncommon – 101-1000 Individuals each year in the past 10 years; Scarce – 11-100 individuals each year in the past 10 years; Rare – 0-10 individuals each year in the past 10 years; Vagrant – Up to 10 records in total since records began.

No breeding evidence or behaviour was observed by starling within the site boundary, therefore it is assumed that this species is breeding within the residential development to the east, but is considered a possible breeder within the site due to the presence of several mature trees that may provide nest holes. Mistle thrush was recorded foraging within grazed fields close to Fox Glen woodland. This species was recorded during the early spring passage surveys (March) only and was therefore not considered to utilise the site for breeding.

- 4.20 Linnets were only observed using on-site habitats once, during the first March survey, when a small flock was seen foraging in a northern field and a single male was recorded singing on the northern site boundary (the other two observations were of birds flying over the site). The lack of any additional breeding evidence later in the breeding season by this species indicates linnets are unlikely to breed within the site boundary. A single male mallard was also recorded foraging within the western field during the early passage season and is therefore non-breeder within the site. Redwing was recorded on a single occasion during the first passage survey and is therefore considered to be using the site as a winter / passage resource only.
- 4.21 Boundary vegetation such as trees and bramble scrub provided foraging and potential breeding resources for dunnocks and house sparrows. Dunnocks were recorded once during the first passage survey in a group of three in potential breeding habitat, with one individual singing. Though dunnocks were not recorded again during later surveys, dunnocks were still considered a probable breeder within the site. House sparrows were recorded in bramble scrub to the east of the site, once with nest-building material. It is likely that this species uses the adjacent residential development to breed, house sparrows are therefore only considered possible breeders within the site.
- 4.22 On a single occasion, grey wagtails were observed flying over the site only, and are therefore considered non-breeders.

Evaluation

- 4.23 The 2021 results show no significant change between the 2016 results. Furthermore the 2021 surveys recorded significantly less species than in 2017. No SPA species were recorded within the site boundary. The only SSSI species observed utilising habitats within the site boundary was meadow pipit, which was observed in low numbers and not exhibiting any behaviours to indicate breeding.
- 4.24 The majority of bird species recorded are common or abundant species in Yorkshire and the UK and no significant populations were registered. The application site is considered to be of **Local** nature conservation value in the breeding and passage season for the 9 notable species recorded. For the remaining green-listed species the site is assessed as being of **Site** nature conservation value in the breeding and spring passage season.

Notable recorded species mistle thrush, meadow pipit, starling, linnets and house sparrows are considered to be of **Local** importance, whilst all other recorded species are considered to be of **Site** importance.

5.0 DISCUSSION AND RECOMMENDATIONS

- 5.1 The following section provides an assessment of likely effects upon site list of the National Sites Networks (SPA and/or SAC) and other National designations such as SSSI from the loss of potential supporting habitats and of the potential impacts of the proposals upon breeding and passage birds. Where appropriate, recommendations are provided for mitigation and enhancement that take account of the likely ecological effects. Throughout the discussion, any recommendations for mitigation have been informed by the revised masterplan submitted in January 2020 and the 'Revised Illustrative Masterplan (April 2021)'.
- 5.2 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.

Loss of Supporting Habitat

- 5.3 The South Pennine Moors (Phase 1) SPA is designated for its breeding bird assemblage. Neither the survey or the bird records provided have identified any of the species listed in the designation criterion for the SPA within the site or in the 1km grid square the site falls within. The two non-qualifying species of interest listed on the SPA designation (lapwing and curlew) that were identified in small numbers during the previous survey effort, were not recorded within the site boundary during the 2021 surveys. However, both species were recorded within fields south of the site. Furthermore, records of these species were present in the 1km grid square and other grid squares surrounding the site, but this data demonstrates the site does not provide a significant resource for such species outside the SPA.
- 5.4 The City of Bradford Metropolitan District Council Core Strategy was required to consider the potential effects on the South Pennine Moor (Phase 2) SPA breeding bird assemblage. This is a similar breeding assemblage to South Pennine Moors (Phase 1) SPA. For this site, Natural England confirmed that it was only land within 2.5km of the SPA which had a functional link to the SPA. Therefore, if designated or listed species were using land beyond 2.5km no effects to the SPA were identified. Consequently, from the data obtained in 2016-17 and in 2021 and Natural England's assessment for the South Pennine Moors (Phase 2) SPA, habitat loss and disturbance of designated / listed SPA species over the construction phase have been identified as neutral.
- 5.5 From the completed survey work, species listed on The Dark Peak SSSI identified as using the site include meadow pipit only. This species was not identified using the site in significant numbers and meadow pipit records were also present on land surrounding the site. Furthermore, the impact risk zone for the Dark Peak SSSI which crosses the site does not highlight residential development as a proposal for which Natural England need to be consulted at 3.8km from the SSSI. Given these results and the distance from the SSSI, significant negative impacts are not expected.
- 5.6 The above evaluation has provided evidence that the proposals for development will not lead to significant adverse effects upon The South Pennine Moors SPA or The Dark Peak SSSI or their supporting habitats.

Impacts of Habitat Loss/Change

- 5.7 The impact on bird species arising from the potential effects of development is based upon an understanding of each species' ecological requirements, the type of development, the number of birds recorded on site, their nature conservation criteria based on legislation and current guidance

(e.g. BoCC red or amber listed species; Species of Principal Importance under S.41 of the NERC Act), their local status according to the 2016 Yorkshire Bird Report and professional judgement.

- 5.8 The species recorded on site that are arguably the most vulnerable to impacts are the five species (starling, mistle thrush, meadow pipit, linnet and house sparrow) that are 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. In addition, residual impacts arising from the proposed development in terms of habitat loss / change have been assessed against the development proposals set out in the latest Masterplan.
- 5.9 The loss of the four eastern fields will lead to a slight reduction in foraging / roosting habitat for meadow pipit, starling, linnet and mistle thrush. Meadow pipit were recorded on three occasions in low numbers within the two fields located to the south of the site. On two of these three occasions, meadow pipit were recorded during dusk surveys, indicating they may use the site for nocturnal roosting. The retention of the south-western field along with suitable management will ensure there is still suitable roosting, foraging and possible breeding habitat for meadow pipit within the site. A **negligible** impact is therefore expected for meadow pipit. Linnet were only recorded within the site on a single occasion. The retention of the western field and the associated northern hedgerow will continue to provide linnet with foraging and potential breeding habitat. A **negligible** impact is therefore expected for linnet.
- 5.10 Mistle thrush was recorded on two occasions foraging within a grazed field in the north of the site. Although this field will be lost to development, the retained western field will continue to provide open foraging habitat for this species. Furthermore, mistle thrush will readily habituate to residential environments, and likely will benefit from the development as residential gardens mature. A **negligible** impact is therefore expected for mistle thrush. Starling and house sparrow also readily adapt to residential environments and will regularly breed in residential houses and gardens. The retained open field to the west will continue to provide foraging areas for starling, as will the proposed green spaces to the north east. Starling and house sparrow are therefore expected to undergo a **beneficial** impact on a local level as a result of the proposals.
- 5.11 The 2017 FPCR bird surveys recorded lapwing within the site boundary, and in the report⁷ it was considered that this species would undergo a non-significant local adverse impact as a result of development. Lapwing were not recorded at all within the site during the 2021 passage / breeding surveys, and furthermore the retention of the western field will act as a buffer between the development and the lapwing breeding areas to the west. It is therefore expected that the impact on lapwing as a result of the proposals will reduce to **negligible**.

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 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 retained

⁷ 2017, FPCR Environment & Design Ltd. Breeding and Passage Bird Survey Report.

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

hedgerows or woodland edge. 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.

Mitigation

- 5.13 To avoid disturbance to breeding birds, ground clearance works and vegetation will be undertaken prior to the bird-breeding season (March to August, inclusive). If this is not possible, the area will be checked prior to removal of vegetation or ground works by an experienced ecologist. If active nests are found, vegetation will be left untouched and suitably buffered from works until all birds have fledged. Specific advice will be provided prior to undertaking the clearance. This would be a statutory requirement due to the protection of all nesting birds and their nests under the Wildlife and Countryside Act, 1981. A suitably qualified ecologist would supervise this.

Enhancements

- 5.14 Additional planting is to be incorporated into the green infrastructure across the site and will provide additional 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 birds species, including redwing and mistle thrush. The appropriate management of the retained grassland should be considered where possible to provide the sward diversity preferred by meadow pipit.
- 5.15 The inclusion of a wet SuDS with associated planting to the north of the site and the wet / dry SuDS feature centrally within the site will provide additional foraging habitat for recorded notable species such as house sparrow and meadow pipit. This area should be planted with native marginal vegetation such as soft rush *Juncus effusus* and sedges.
- 5.16 Additional enhancements that may be integrated with the ongoing management of the site include the erection of a mixture of nest box types. The following provides details of other suitable nest box types to be erected at suitable locations:
- A mixture of small hole (26mm and 32mm) boxes placed along the retained habitat around the proposed development area will provide nesting opportunities for blue tit *Cyanistes caeruleus* and great tit *Parus major*. These boxes generally have a high uptake rate;
 - Small open fronted nest boxes should be 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;
 - The provision of nest boxes for urban birds, including house sparrow, house martin and swift. Given the urbanised nature of the proposed development, opportunities exist to encourage these species to breed on site.

Appendix A: Passage / Breeding Bird Survey Results 2021

Common Name	Scientific Name	Survey 1	Survey 2	Survey 3	Survey 4	Survey 5	Conservation Status	Breeding Status
Mallard	<i>Anas platyrhynchos</i>	0	1	0	0	0	Amber list	Non-breeder UH
Pheasant	<i>Phasianus colchicus</i>	1	1	2	1	1	Not listed	Possible H
Collared dove	<i>Streptopelia decaocto</i>	0	2 flyovers	0	0	0	Green list	Non-breeder F
Woodpigeon	<i>Columba palumbus</i>	6 + 3 flyovers	11 + 7 flyovers	2 + 1 flyover	12	2 + 2 flyovers	Green list	Possible H
Magpie	<i>Pica pica</i>	1	2	0	0	1	Green list	Possible H
Jackdaw	<i>Corvus monedula</i>	2 flyovers	3 + 2 flyovers	0	4 flyovers	1 + 2 flyovers	Green list	Possible H
Rook	<i>Corvus frugilegus</i>	1 + 1 flyover	3 flyovers	0	0	0	Green list	Possible H
Carrion crow	<i>Corvus corone</i>	3	2	1 + 1 flyover	3	2 + 1 flyover	Green list	Possible H
Great tit	<i>Parus major</i>	0	2	0	0	0	Green list	Possible H
Wren	<i>Troglodytes troglodytes</i>	1	1	0	0	0	Green list	Possible H
Starling	<i>Sturnus vulgaris</i>	50 + 54 flyovers	18 + 7 flyovers	10 + 14 flyovers	15 + 42 flyovers	2 flyovers	NERC Red list	Possible H
Blackbird	<i>Turdus merula</i>	2	0	5	2	1	Green list	Confirmed FF
Redwing	<i>Turdus iliacus</i>	21	0	0	0	0	Schedule 1 Red list	Non-breeder M
Mistle thrush	<i>Turdus viscivorus</i>	5	2	0	0	0	Red list	Non-breeder M
Whitethroat	<i>Sylvia communis</i>	0	0	0	0	1	Green list	Possible H, S
Swallow	<i>Hirundo rustica</i>	0	0	0	0	1 flyover	Green list	Non-breeder F
Robin	<i>Erithacus rubecula</i>	1	1	0	0	0	Green list	Possible H
Dunnock	<i>Prunella modularis</i>	3	0	0	0	0	NERC Amber list	Probable P
House sparrow	<i>Passer domesticus</i>	3	0	1	2	0	NERC Red list	Probable B
Grey wagtail	<i>Motacilla cinerea</i>	1 flyover	0	0	0	0	Red list	Non-breeder F

Common Name	Scientific Name	Survey 1	Survey 2	Survey 3	Survey 4	Survey 5	Conservation Status	Breeding Status
Pied wagtail	<i>Motacilla alba</i>	3	5	1	0	2	Green list	Possible H
Meadow pipit	<i>Anthus pratensis</i>	1 + 8 flyovers	1	0	2	0	Amber list	Possible H
Chaffinch	<i>Fringilla coelebs</i>	0	1	0	0	0	Green list	Possible H
Greenfinch	<i>Carduelis chloris</i>	1 + 3 flyovers	0	0	0	0	Green list	Possible H
Goldfinch	<i>Carduelis carduelis</i>	1 + 6 flyovers	0	3 flyovers	1	0	Green list	Possible H
Linnet	<i>Linaria cannabina</i>	7 + 2 flyovers	1 flyover	0	5 flyovers	0	NERC Red list	Possible H, S
Total No. Species: 26								

Breeding Status evidence can be broken down into four sections, each with their own codes:

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

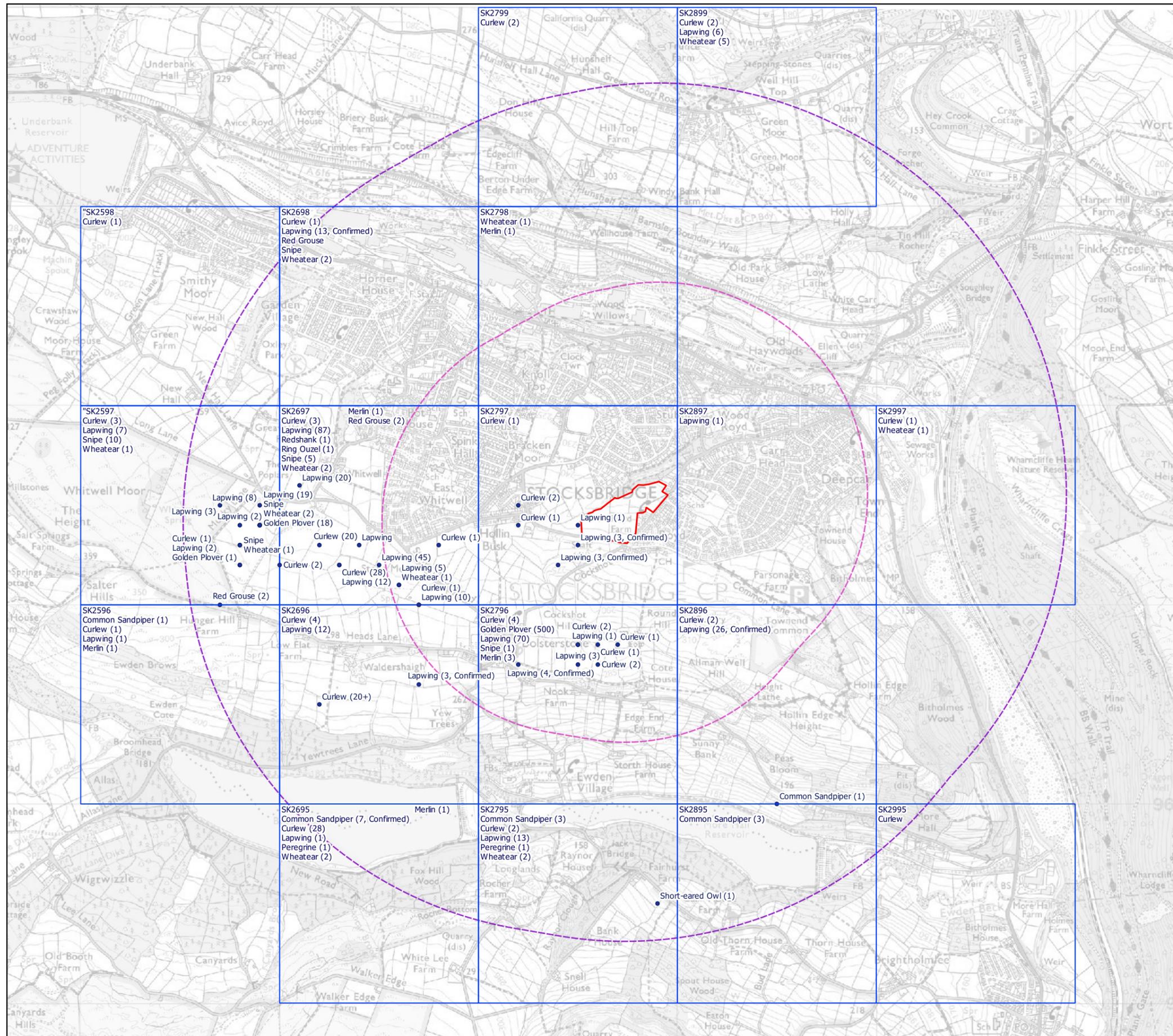
S – singing male

Non-breeder

F – flying over

M – migrant

U – summering non-breeder



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Key

- Site Boundary
- 1km Site Boundary Buffer
- 2km Site Boundary Buffer
- Record Location - OS Grid Square (for which a 4 figure grid square was given)
- Record Location (for which a 6 figure grid square was given)

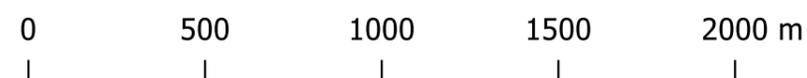
Species Records include max count and max breeding status where provided.

Merlin, Golden Plover and Short-eared Owl are qualifying species for the South Pennine Moors Phase 1 during the breeding season. All other species shown are non-qualifying species of interest during the breeding season.

Hallam Land Management Ltd.

Land off Carr Road
Deepcar

Location, number and breeding status of qualifying and non-qualifying species of the South Pennine Moors Phase 1 SPA (1st March - 30th September)



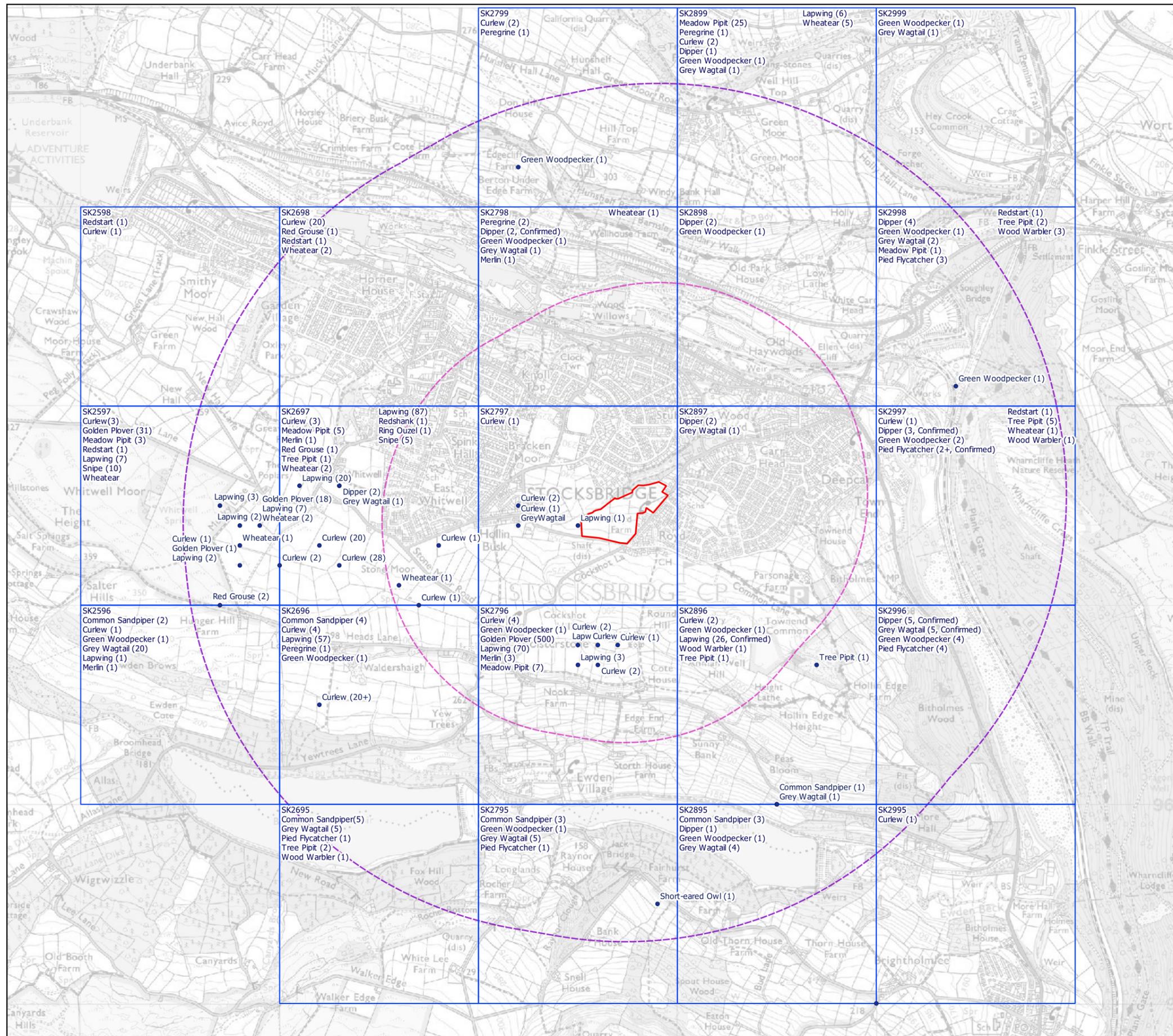
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BRJ / KG

issue
28/4/2021

drawing / figure number
Figure 1

7301-E-01



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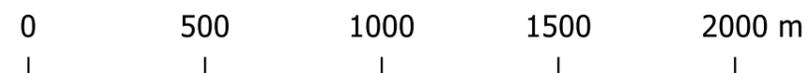
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- Record Location - OS Grid Square (for which a 4 figure grid square was given)
- Record Location (for which a 6 figure grid square was given)

Species records include max count and max breeding status where provided.

Bird species included in the Dark Peak SSSI citation of which significant or noteworthy breeding populations occur.



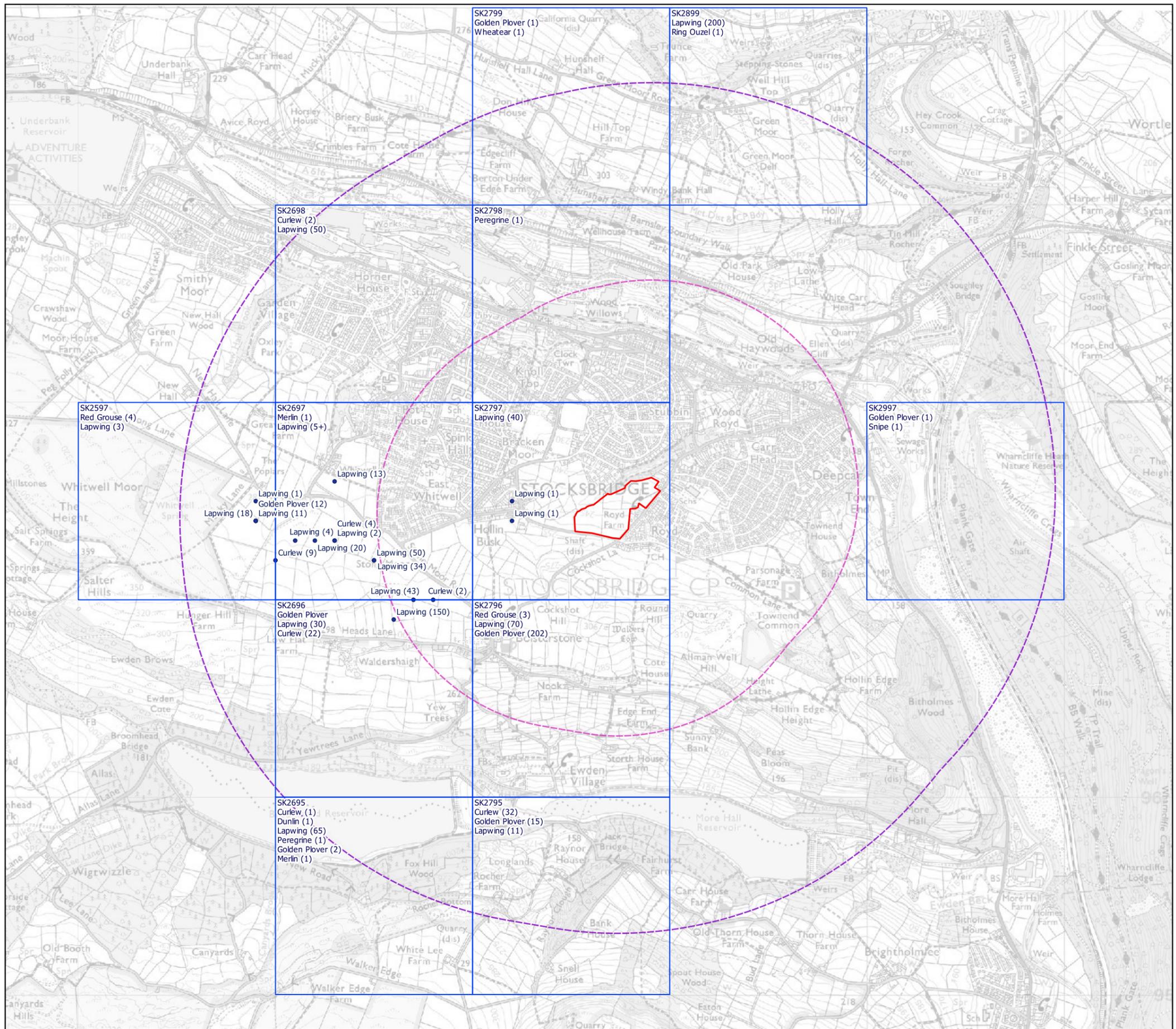
Hallam Land Management Ltd.

Land off Carr Road
Deepcar

**Location, number and breeding status of
bird species of the Dark Peak SSSI (1st
March - 30th September)**

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drawing BRJ / KG
issue 29/4/2021

Figure 2 7301-E-02



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- Record Location - OS Grid Square (for which a 4 figure grid square was given)
- Record Location (for which a 6 figure grid square was given)

Species Records include max count and max breeding status where provided.

Merlin, Golden Plover and Short-eared Owl are qualifying species for the South Pennine Moors Phase 1 during the breeding season. All other species shown are non-qualifying species of interest during the breeding season.

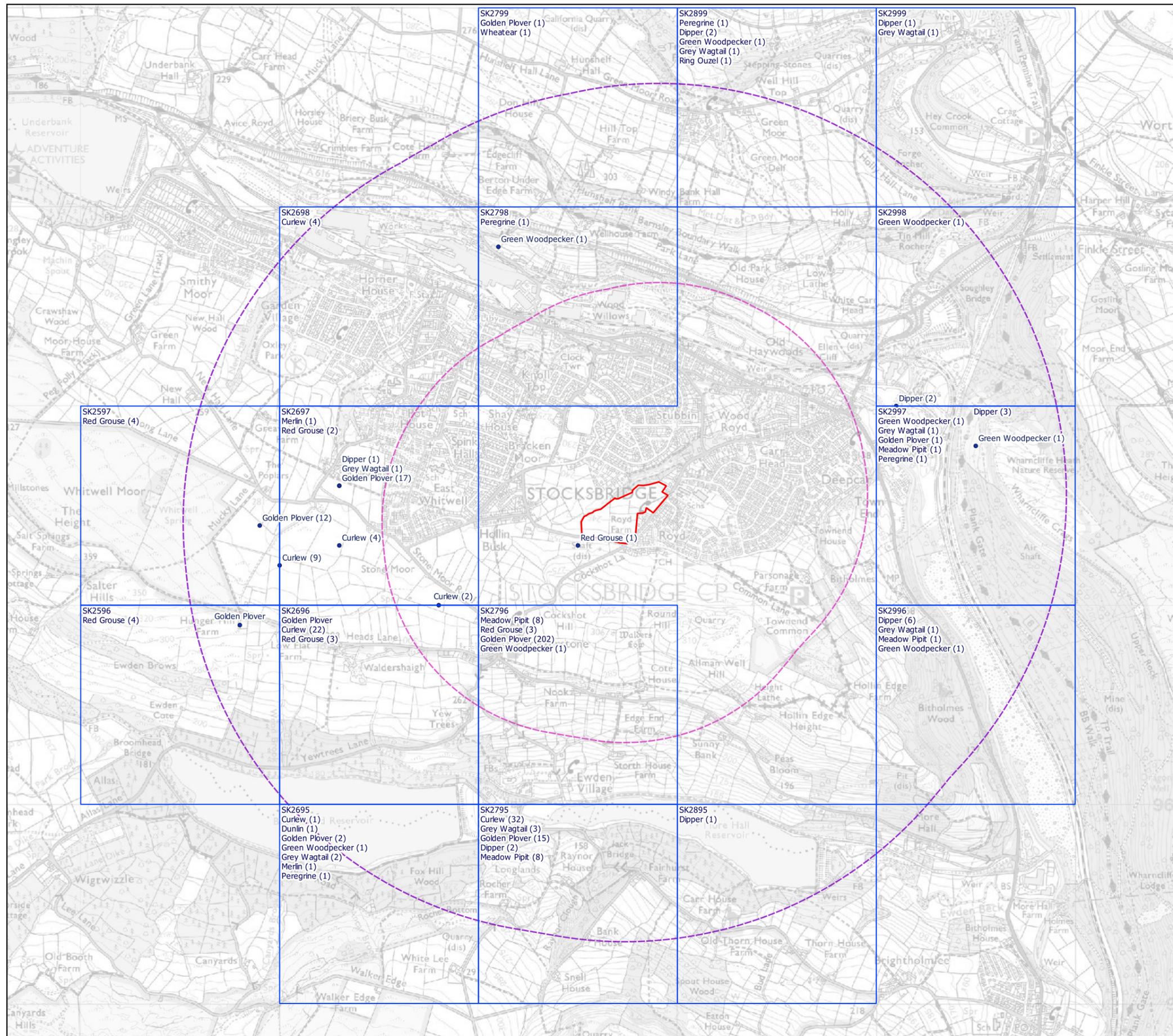
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Land off Carr Road
Deepcar

Location, number and breeding status of qualifying and non-qualifying species of the South Pennine Moors Phase 1 SPA (1st March - 30th September)



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Key

- Site Boundary
- 1km Site Boundary Buffer
- 2km Site Boundary Buffer
- Record Location - OS Grid Square (for which a 4 figure grid square was given)
- Record Location (for which a 6 figure grid square was given)

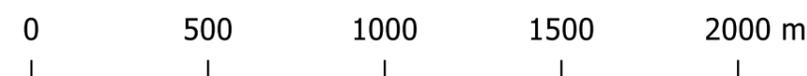
Species Records include max count where provided.

Bird species included in the Dark Peak SSSI citation of which significant or noteworthy breeding populations occur.

Hallam Land Management Ltd.

Land off Carr Road
Deepcar

Winter and passage records for species included in the citation for the Dark Peak SSSI (1st October - 28th/29th February)



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issue
30/4/2021

drawing / figure number
Figure 4

7301-E-04

**Annex C:
Main Site: Winter Bird Report**

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Hallam Land Management Ltd

Land off Carr Road, Deepcar

Main Site: Winter Bird Survey Report

May 2021

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Rev	Issue Status	Prepared / Date	Approved/Date
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2.0	LEGISLATION & GUIDANCE	4
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TABLES

Table 1: Evaluation Criteria

Table 2: Notable Species Recorded within the Site During Winter Bird Surveys 2020-21 and their Recent Status in Yorkshire

Table 3: Species Recorded Within the Site of Local Importance

APPENDICES

Appendix A: Winter Bird Survey Results 2020-21

FIGURES

Figure 1: Winter Bird Survey Plan 2020-21: Distribution of Notable Species

1.0 INTRODUCTION

- 1.1 The following report was prepared by FPCR Environment and Design Ltd. on behalf of Hallam Land Management Ltd. It provides results of a suite of winter bird surveys undertaken between December 2020 and February 2021 at Land off Carr Road, Deepcar (central grid ref SK277974) known hereafter as ‘the application site’ or ‘the site’.

Site Location and Context

- 1.2 The proposed development site is located in Deepcar, Sheffield, and contains six fields of poor semi-improved grassland bound by stone walls. At the time of survey, the grassland had been recently grazed by cattle. Adjacent to the northern site boundary lies Fox Glen woodland, through which flows Clough Dike. Directly east of the site lies residential development, and to the west and south lies arable farmland, pasture and a golf course.

Survey Objectives

- 1.3 The objectives of the survey were to:
- Identify the presence and distribution of birds on the site during winter;
 - Assess the conservation importance of the site in relation to local populations;
 - Evaluate the importance of local bird populations and their habitat requirements;
 - Make recommendations to minimise the potential impact of development and to consider opportunities for additional mitigation, compensation and enhancement where relevant.

2.0 LEGISLATION & GUIDANCE

Legislation

- 2.1 The Wildlife and Countryside Act 1981 (*as amended*)¹ (WCA) is the principal legislation affording protection to UK wild birds. Under this legislation all birds, their nests and eggs are protected by law and it is an offence, with certain exceptions, to recklessly or intentionally:
- Kill, injure or take any wild bird;
 - Take, damage or destroy the nest of any wild bird while in use or being built; or
 - Take or destroy the egg of any wild bird.
- 2.2 Additional protection is afforded to species listed on Schedule 1 of the WCA, whereby intentional disturbance whilst building or occupying a nest or disturbance of dependent young is considered an offence.
- 2.3 Certain species have also been identified as species of principal importance under Section 41 of the NERC Act 2006 (NERC S.41). The S.41 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

¹ Wildlife and Countryside Act 1981 (as amended). London:HMSO. [Online]. Available at: <http://www.legislation.gov.uk/ukpga/1981/69> [Accessed 25/03/2020]

Natural Environment and Rural Communities Act 2006, to have regard to the conservation of biodiversity in England, when carrying out their normal functions.

Status

- 2.4 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 UK²:
- 2.5 Red list (high conservation concern) 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; and
 - They that have declined historically and not shown a substantial recent recovery.
- 2.6 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; and
 - They have internationally important or localised populations.
- 2.7 Green list (low conservation concern) species fulfil none of the above criteria.

² 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** pp.708-746.

3.0 METHODOLOGY

Desktop Study

3.1 A desktop study was undertaken in 2021 to obtain existing ecological data regarding bird species from within 2km of the site. The following organisations were contacted:

- Sheffield Biological Records Centre (SBRC); and
- Sheffield Bird Study Group (SBSG).

3.2 The Multi-Agency Government Information for the Countryside (MAGIC) website (www.magic.gov.uk) was consulted for information on the presence of statutorily protected sites recognised for their ornithological importance, including SPAs within 5km and Sites of Special Scientific Interest (SSSIs) within 2km. the NERC Act (2006), Local Biodiversity Action Plan Species (LBAP) or otherwise notable species.

Field Survey Methodology

3.3 The survey methodology employed was based on that recommended in standard literature e.g. Winter Farmland Bird Survey as used for the British Trust for Ornithology (BTO)^{3,4}. Standard BTO species codes and symbols for bird activities were used to identify birds and denote activity, sex and age where appropriate.

3.4 To provide a reasonable level of accuracy for determining the population status of the wintering birds on the site, four surveys undertaken between December 2020 and February 2021, between 08.00 and 18.00. A route was mapped out prior to the surveys being undertaken, paying particular attention to any linear features, such as hedgerows and tree lines, and natural features such as areas of scrub and waterbodies. Bird surveys were not undertaken in unfavourable conditions such as heavy rain or strong wind, which may negatively affect the results.

Assessment Methodology

3.5 The conservation value of bird populations has been measured using two separate approaches: nature conservation value and conservation status. The CIEEM guidance on ecological impact assessment assesses nature conservation value within a geographical context. To attain each level of value, an ornithological resource or one of the features (species population or assemblage of species) should meet the criteria set out in Table 1. In some cases, professional judgement may be required to increase or decrease the allocation of specific value, based upon local knowledge.

3.6 The most recent county annual bird report, The Yorkshire Bird Report 2016⁵ published by the Yorkshire Naturalists' Union Birds Section was consulted to inform the assessment. The abundance of species referred to by this report and used in this particular report, follows the following criteria:

- Abundant - More than 50,000 records per year;
- Common – More than 10,000 records per year;

³ Bibby, C.J., N.D. Burgess & D.A. Hill (1992): Bird Census Techniques. London: Academic Press

⁴ Gilbert, G., Gibbons, D.W., and Evans, J. (1998). Bird Monitoring Methods: a manual of techniques for key UK species. RSPB, Sandy

⁵ Yorkshire Naturalists' Union, 2020. Yorkshire Bird Report 2016. Yorkshire Naturalists' Union Birds Section.

- Fairly common – More than 1,000 records per year;
- Uncommon – 101-1000 Individuals each year in the past 10 years;
- Scarce – 11-100 individuals each year in the past 10 years;
- Rare – 0-10 individuals each year in the past 10 years;
- Vagrant – Up to 10 records in total since records began.

Table 1: 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 Species of Principal Importance under Schedule 41 of the Natural Environment and Rural Communities (NERC) Act (2006), 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 Priority Species under Schedule 41 of the Natural Environment and Rural Communities (NERC) Act (2006), 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 listed as Species of Principal Importance for nature conservation 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 listed as Priority Species under Schedule 41 of the NERC Act (2006) 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.

3.7 Notable species' are considered those which are specially protected (Schedule 1), appear on the RSPB BoCC as declining (red or amber lists) and/or are identified as Species of Principal Importance under S41 of the NERC Act.

4.0 RESULTS AND EVALUATION

Desktop study

Designated Sites

4.1 The South Pennine Moors Special Protection Area (SPA) (Phase 1) lies approximately 3.6km west of site and covers extensive tracts of semi-natural moorland habitats including upland heath and blanket mire, which are important for its assemblage of breeding moorland and moorland fringe birds. The SPA qualifies under Article 4.1 of the EC Directive on the Conservation of Wild Birds (79/409) by supporting internationally important breeding populations of the following three species:

- Merlin *Falco columbarius*;
- Golden plover *Pluvialis apricaria*;
- Short-eared owl *Asio flammeus*.

4.2 As the South Pennine Moors SPA pertains only to breeding birds, this will be examined in more detail in the separate Breeding and Passage Bird Report.

Notable Bird Species Records

4.3 The species records that were supplied have been discussed in FPCR's 2021 Passage and Breeding Bird Survey Report⁶. To summarise, records for the winter period confirm no designated species listed on the South Pennine Moors SPA criterion were recorded within the 1km grid square in which the site is located. Furthermore, few records of species listed on the Dark Peak SSSI criterion were recorded from within 1km of the site boundary, with the exception of a single red grouse south of Hollin Busk Lane (outside the site boundary).

4.4 Data provided from the Sheffield Bird Study Group from 2017 to present will be discussed in the separate 2021 Breeding and Passage Bird Survey Report.

Field Survey

4.5 A total of 30 bird species were recorded during the 2020-21 winter bird surveys, of which 12 are considered 'notable'. A full list of results can be found in Appendix A, whilst the approximate locations of the 12 notable species can be found in Figure 1 and are detailed in Table 2.

Table 2: Notable Species Recorded within the Site During Winter Bird Surveys 2020-21 and their Recent Status in Yorkshire

Species	Conservation Status	Peak Count / Number of Survey Occasions Recorded	Recent Status within Yorkshire
Lesser black-backed gull <i>Larus fuscus</i>	Amber list	5 / 1	Fairly common passage migrant/increasing in winter.

⁶ FPCR Environment & Design Ltd., 2021. *Passage and Breeding Bird Survey Report*.

Species	Conservation Status	Peak Count / Number of Survey Occasions Recorded	Recent Status within Yorkshire
Great black-backed gull <i>Larus marinus</i>	Amber list	4 / 1	Fairly common passage migrant, winter visitor.
Black-headed gull <i>Chroicocephalus ridibundus</i>	Amber list	8 + 1 flyover / 4	Abundant in winter.
Stock dove <i>Columba oenus</i>	Amber list	1 + 1 flyover / 2	Fairly common resident, some passage and immigration.
Starling <i>Sturnus vulgaris</i>	NERC Red list	65 + 35 flyovers / 4	Abundant but decreasing resident, passage migrant and winter visitor.
Fieldfare <i>Turdus pilaris</i>	Schedule 1 Red list	21 + 6 flyovers / 3	Common passage migrant and winter visitor.
Song thrush <i>Turdus philomelos</i>	NERC Red list	1 / 1	Passage migrant and winter visitor.
Redwing <i>Turdus iliacus</i>	Schedule 1 Red list	20 / 2	Common passage migrant and winter visitor.
Mistle thrush <i>Turdus viscivorus</i>	Red List	3 / 3	Fairly common resident and scarce passage migrant.
Dunnock <i>Prunella modularis</i>	NERC Amber list	3 / 4	Common resident, passage migrant.
House sparrow <i>Passer domesticus</i>	NERC Red list	18 / 4	Abundant resident but has decreased.
Meadow pipit <i>Anthus pratensis</i>	Amber list	1 / 1	Common resident breeder, passage migrant and winter visitor.

Results Description

- 4.6 The cattle-grazed poor semi-improved grassland provided a winter foraging resource for a range of notable species such as redwing *Turdus iliacus*, fieldfare *Turdus pilaris*, mistle thrush *Turdus viscivorus*, song thrush *Turdus philomelos*, lesser black-backed gull *Larus fuscus*, great black-backed gull *Larus marinus*, black-headed gull *Chroicocephalus ridibundus*, starling *Sturnus vulgaris* and meadow pipit *Anthus pratensis*.
- 4.7 Boundary scrub and peripheral garden vegetation provided winter foraging/roosting habitat for dunnock *Prunella modularis* and house sparrow *Passer domesticus*. Furthermore both species were predominantly recorded in association with residential gardens to the east, and are therefore considered not to be heavily reliant on the site itself.
- 4.8 Off-site woodland to the north provided additional foraging resources for several species recorded within the site such as fieldfare, great tit *Parus major*, chaffinch *Fringilla coelebs* and blackbird *Turdus merula*.

Evaluation

Assemblage Value

- 4.9 The series of poor semi-improved grassland fields which predominate the site provide a foraging resource for the majority of notable species recorded throughout winter and is therefore considered the habitat of the greatest value for birds on site. This habitat is therefore considered to be of **Local** level importance for its wintering bird assemblage.
- 4.10 The scrub present to the east of the site provided limited resources for wintering birds, such as small numbers of dunnock and house sparrow. These habitats were therefore considered to be of no more than **Site** level importance for the wintering bird assemblage recorded.
- 4.11 All recorded species are fairly common to abundant species in South Yorkshire and the UK and no significant populations were registered.

Individual Species

- 4.12 Table 3 summarises the five species recorded that are considered to be of **Local** importance.
- 4.13 The majority of the other wintering bird species were either recorded in smaller numbers, recorded flying over the Site and/or are considered common and widespread breeding species nationally and/or locally. These individual species that make use of the available habitats are recognised as being of only **Site** importance.

Table 3: Species Recorded Within the Site of Local Importance

Species	Status		Importance
	NERC S.41	WCA Sch.1	
Red List			
Starling	<i>Sturnus vulgaris</i>	+	Local
Fieldfare	<i>Turdus pilaris</i>		+
Redwing	<i>Turdus iliacus</i>		+
Mistle thrush	<i>Turdus viscivorus</i>		Local
House sparrow	<i>Passer domesticus</i>	+	Local

5.0 DISCUSSION & RECOMMENDATIONS

- 5.1 The following section provides an assessment of the potential impacts of the proposals. Recommendations are provided for mitigation that are necessary to take account of the likely ecological effects. Throughout the section, any recommendations for mitigation have been informed by the revised layout submitted in Jan. 2020 and the 'Revised Illustrative Masterplan (April 2021)'.
- 5.2 The proposals comprise the construction of up to 85 residential houses with associated roads, rights of way, green infrastructure and SuDS features. An extensive grassland field compartment situated in the south west of the site would be retained and enhanced as part of the proposals.

Impact Assessment

- 5.3 The potential impact of the loss or change of habitat upon wintering bird species arising from the effects of the proposals 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 Yorkshire Bird Report and professional judgement.
- 5.4 The following potential impacts to the recorded wintering bird populations and assemblage may result from the proposals:
- Direct loss / change of wintering habitat;
 - Disturbance during construction and / or operation.

Habitat Loss

- 5.5 The development proposals include the loss of most open grassland fields, except for the western-most field which will be planted as species-rich grassland and managed for biodiversity. Boundary vegetation will be retained, and additional planting areas will be created across the site. A SuDS basin will be created to the north of the site and will be planted with marginal vegetation. The centrally balancing facility shown on the revised illustrative masterplan (April 2021) would be designed to provide species rich grassland which is tolerant of wet / dry conditions.
- 5.6 The individual species recorded on site which are arguably the most vulnerable to impacts from habitat loss/change are the five notable species that are considered to be of Local importance. These comprise species that appear on either Schedule 1 of the WCA, the BoCC Red/Amber lists, are listed as a NERC Priority Species and/or were recorded in at least locally important numbers.
- 5.7 The loss of poor semi-improved grassland will reduce foraging opportunities for the majority of species, including starling, fieldfare, redwing and mistle thrush. However, this loss will be mitigated for through the creation of a species-rich grassland in the south west of the site, which will continue to provide a winter foraging resource. Furthermore, the proposed planting across the site will provide an additional foraging resource for fieldfare, redwing and mistle thrush in the form of berry bearing shrubs. It is considered that these three winter thrush species will undergo a short term **Minor Adverse** impact at a local level during construction. However once the site becomes operational and grassland/planting matures, this impact will reduce to **Negligible**. Starling is considered to undergo a **Minor Adverse** impact due to the loss of open foraging habitat.

- 5.8 It is considered that house sparrow will undergo a **Negligible** impact during the construction phase due to its strong association with offsite habitats. This species will then likely undergo a **Minor Beneficial** impact during the operational phase due to the creation of suitable wintering habitat in the form of garden/buffer planting, particularly once gardens mature.
- 5.9 The loss of suitable over-wintering foraging habitat is predicted to have no significant effects (negligible impacts) on the local populations and/or distribution of any of the species recorded on site, or any other 'notable' species occurring locally (SK2797) i.e. grey partridge *Perdix perdix*, lapwing *Vanellus vanellus*, grey wagtail *Motacilla cinerea* and reed bunting *Emberiza schoeniclus* (as shown by the desktop study) which potentially use this resource.

Habitat Loss Mitigation

- 5.10 The proposed species-rich grassland to the west should be planted with a native species rich grassland seed mix. The use of fertilisers and pesticides should be avoided.
- 5.11 Where feasible, newly planted hedgerows should include native species-rich grassy margins on either side, to provide foraging resources for wintering birds.

Disturbance Impacts

- 5.12 Construction operations have the potential to disturb birds using the site for roosting, foraging and loafing. Operations likely to disturb wintering birds include noise from vegetation clearance, initial ground works and some construction activities, such as piling, which are of low frequency but high amplitude. Active, high level, infrequent disturbance causes most birds to be displaced for short periods⁷. During the wintering season disturbance may lead to the avoidance of important foraging habitats. Whilst there is some potential for foraging success to be reduced, this is not expected to affect the local conservation status of the majority of the wintering bird species.

Enhancements

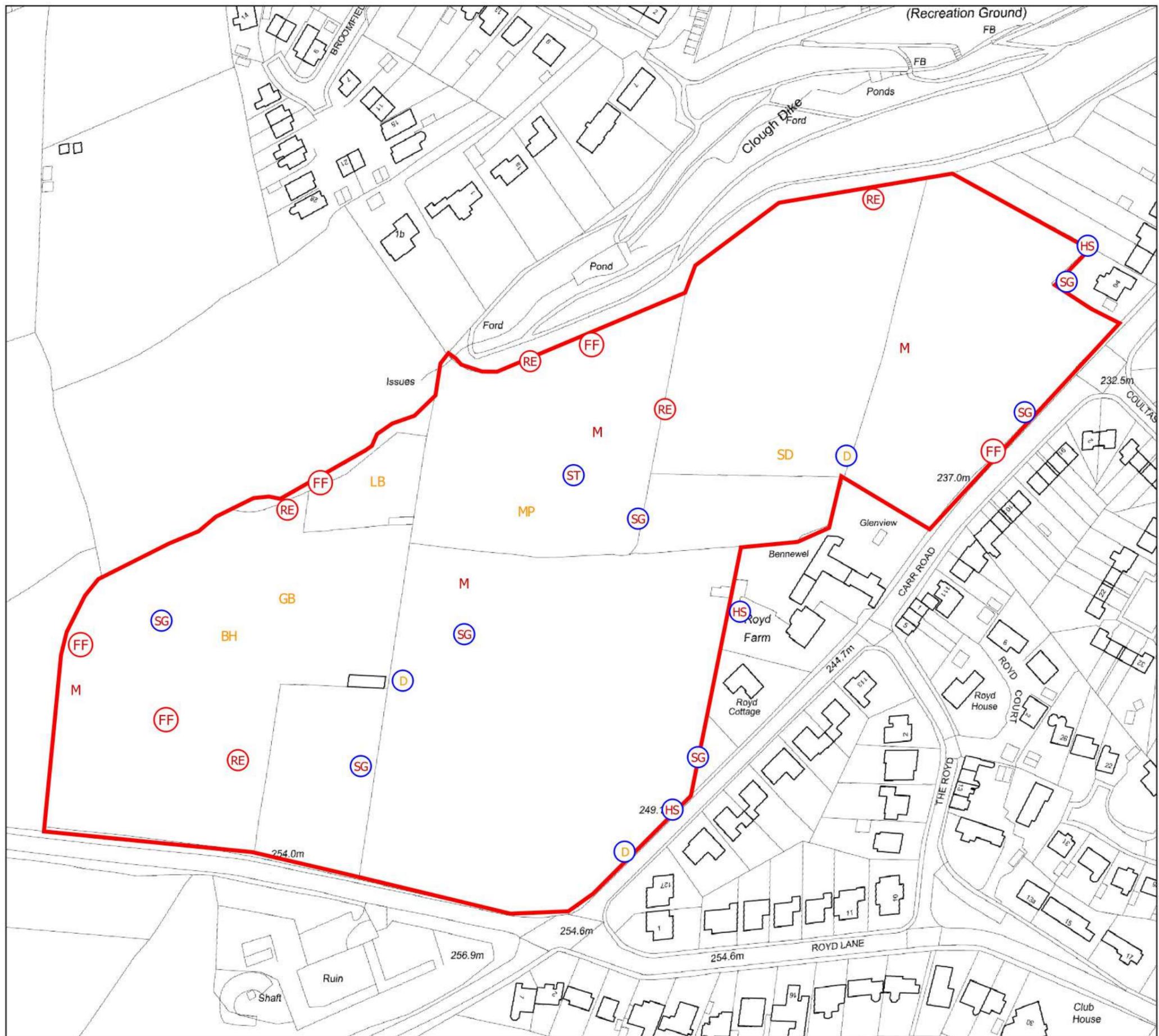
- 5.13 Within the proposed buffer/boundary planting, native species berry-bearing shrub/tree species such as hawthorn *Crataegus monogyna*, blackthorn *Prunus spinosa*, rowan *Sorbus aucuparia* and holly *Ilex aquifolium* would be provided.
- 5.14 The proposed attenuation feature will deliver an enhancement by providing habitat for species not recorded within the site such as grey wagtail and reed bunting. To improve their value, SuDS should be planted with native marginal species such as soft rush *Juncus effusus* and common reed *Phragmites australis*.

⁷ Hockin, D., Ounsted, M., Gorman, M., Hill, D., Keller, V., & 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.

Appendix A: Winter Bird Survey Results 2020-21

Common Name	Scientific Name	Survey 1	Survey 2	Survey 3	Survey 4	Conservation Status
Pheasant	<i>Phasianus colchicus</i>	0	2	0	1	Not listed
Lesser black-backed gull	<i>Larus fuscus</i>	0	0	5	0	Amber list
Great black-backed gull	<i>Larus marinus</i>	0	0	4	0	Amber list
Black-headed gull	<i>Chroicocephalus ridibundus</i>	7 flyovers	3 flyovers	1 flyover	8 + 1 flyover	Amber list
Stock dove	<i>Columba oenus</i>	0	0	1 + 1 flyover	1 flyover	Amber list
Woodpigeon	<i>Columba palumbus</i>	9 + 4 flyovers	8	3	5	Green list
Magpie	<i>Pica pica</i>	3	4	3	2 + 1 flyovers	Green list
Raven	<i>Corvus corax</i>	0	1 flyover	0	0	Green list
Jackdaw	<i>Corvus monedula</i>	27 flyovers	9 + 36 flyovers	2	32 flyovers	Green list
Rook	<i>Corvus frugilegus</i>	0	1 + 2 flyovers	62	0	Green list
Carrion crow	<i>Corvus corone</i>	7 + 2 flyovers	6 + 4 flyovers	1 flyover	7 + 3 flyovers	Green list
Coal tit	<i>Parus ater</i>	0	0	1	0	Green list
Blue tit	<i>Cyanistes caeruleus</i>	0	4	3	2	Green list
Great tit	<i>Parus major</i>	1	3	1	0	Green list
Long-tailed tit	<i>Aegithalos caudatus</i>	0	4	0	0	Green list
Wren	<i>Troglodytes troglodytes</i>	4	2	0	0	Green list
Starling	<i>Sturnus vulgaris</i>	38 + 25 flyovers	65 + 35 flyovers	38	21 flyovers	NERC Red list
Blackbird	<i>Turdus merula</i>	3	4	3	3	Green list
Fieldfare	<i>Turdus pilaris</i>	2	21 + 6 flyovers	7	0	Schedule 1 Red list
Song thrush	<i>Turdus philomelos</i>	0	0	0	1	NERC Red list
Redwing	<i>Turdus iliacus</i>	0	10	20	0	Schedule 1 Red list
Mistle thrush	<i>Turdus viscivorus</i>	3	3	0	1	Red list

Common Name	Scientific Name	Survey 1	Survey 2	Survey 3	Survey 4	Conservation Status
Robin	<i>Erithacus rubecula</i>	1	4	1	0	Green list
Dunnock	<i>Prunella modularis</i>	3	2	1	1	NERC Amber list
House sparrow	<i>Passer domesticus</i>	1 colony	1	18	1	NERC Red list
Pied wagtail	<i>Motacilla alba</i>	2 + 1 flyover	1	1	1 + 1 flyover	Green list
Meadow pipit	<i>Anthus pratensis</i>	0	0	1	0	Amber list
Chaffinch	<i>Fringilla coelebs</i>	1 + 1 flyover	5	0	0	Green list
Greenfinch	<i>Carduelis chloris</i>	1 flyover	5	6 flyovers	2	Green list
Goldfinch	<i>Carduelis carduelis</i>	5	9	2 flyovers	0	Green list
Total No. Species: 30		18	24	23	16	



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Key

Site Boundary

BoCC Red Listed Species

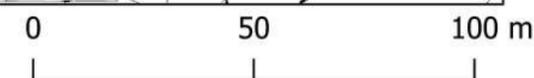
- FF Fieldfare
- HS House Sparrow
- M Mistle Thrush
- RE Redwing
- ST Song Thrush
- SG Starling

BoCC Amber Listed Species

- BH Black-headed Gull
- D Dunnock
- GB Great Black-backed Gull
- LB Lesser Black-backed Gull
- MP Meadow Pipit
- SD Stock Dove

Additional Protections:

- NERC Species of Principal Importance
- Schedule 1 Species



client: Hallam Land Management
 project: Land off Carr Road, Deepcar
 drawing title: WINTERING BIRD SURVEY PLAN: DISTRIBUTION OF NOTABLE SPECIES
 scale: 1:1600
 drawn: BRJ / KG
 issue: 25/3/2021
 drawing / figure number: **Figure 1**
 rev: **7301-E-01**

**Annex D:
Fox Glen: Extended Bird Survey**

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Hallam Land Management Ltd

Land off Carr Road, Deepcar

Fox Glen: Bird Survey Report

May 2021

FPCR Environment and Design Ltd

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-	Draft	MJF / 07.05.21	BRJ / 07.05.21	KG / 10.05.21
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Table 2: Extended Breeding Bird Survey Dates and Conditions

Table 3: Evaluation Criteria

Table 4: Desktop Study Results for Bird Species within Fox Gen Wood

Table 5: Notable Species Recorded within the Survey Area During Winter Bird Surveys 2020-21 and their Recent Status in Yorkshire

Table 6: Notable Species Recorded within the Survey Area During Extended Breeding Bird Surveys 2021 and their Recent Status in Yorkshire

Table 7: Species Recorded Within the Survey area of Local Importance

APPENDICES

Appendix A: Winter Bird Survey Results 2020-21

Appendix B: Extended Breeding Bird Survey Results 2020-21 & EOAC Criteria for Categorisation of Breeding Status

FIGURES

Figure 1: Winter Bird Survey Plan 2020-21: Distribution of Notable Species

Figure 2: Extended Bird Survey Plan 2021: Distribution of Notable Species

1.0 INTRODUCTION

- 1.1 The following report was prepared by FPCR Environment and Design Ltd. on behalf of Hallam Land Management Ltd. It provides results of a suite of winter and extended breeding bird surveys undertaken between December 2020 and May 2021 at Fox Glen Wood, Deepcar (central grid ref SK 279 977) known hereafter as 'the survey area'.
- 1.2 This report should be read in conjunction with the overwinter, breeding and passage bird reports produced to support an outline planning application for the development of up to 85 residential dwellings on land situated to the south / south west of Fox Glen.

Survey Area Location and Context

- 1.3 The survey area contains broad-leaved woodland through which a stream, Clough Dike, flows southwest to northeast. The survey area comprises Fox Glen Wood up to Park Wood Royd play area and Wood Royd Road. Areas of the Fox Glen present north east of Wood Royd Road are under private ownership and were not surveyed.
- 1.4 The proposed development area is located to the south / south west of Fox Glen. Habitats within the proposed development area comprise six fields of poor semi-improved grassland bound by stone walls.

Survey Objectives

- 1.5 The objectives of the survey were to:
- Identify the presence and distribution of wintering and breeding birds within the survey area;
 - Assess the conservation importance of the survey area in relation to local populations;
 - Evaluate the importance of local bird populations and their habitat requirements; and
 - Discuss the potential impact of the neighbouring development and, if necessary, recommend mitigation.

2.0 LEGISLATION & GUIDANCE

Legislation

2.0 The Wildlife and Countryside Act 1981 (*as amended*)¹ (WCA) is the principal legislation affording protection to UK wild birds. Under this legislation all birds, their nests and eggs are protected by law and it is an offence, with certain exceptions, to recklessly or intentionally:

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

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

2.2 Certain species have also been identified as species of principal importance under Section 41 of the Natural Environment and Rural Communities Act 2006 (NERC). The S.41 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.

Status

2.3 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 UK²:

2.4 Red list (high conservation concern) 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; and
- They that have declined historically and not shown a substantial recent recovery.

2.5 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; and
- They have internationally important or localised populations.

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

¹ Wildlife and Countryside Act 1981 (as amended). London:HMSO. [Online]. Available at: <http://www.legislation.gov.uk/ukpga/1981/69> [Accessed 25/03/2020]

² 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** pp.708-746.

3.0 METHODOLOGY

Desktop Study

3.1 A desktop study was undertaken in 2021 to obtain existing ecological data regarding bird species from within 2km of the adjacent proposed development site. The following organisations were contacted:

- Sheffield Biological Records Centre (SBRC);
- Sheffield Bird Study Group (SBSG); and
- Multi Agency Geographic Information for the Countryside (MAGIC) website³.

3.2 Full details of this consultation information is presented in the main passage and breeding bird report presented at Annex B of the Ecological PoE. This report focuses on consultation data related to Fox Glen or species listed in the LWS citation for Fox Glen.

Field Survey Methodology

3.3 The survey methodology employed was broadly based on 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.

3.4 The survey area was walked over by an experienced bird surveyor, paying particular attention to any linear features, such as hedgerows and watercourses, and features of notes such as glades. Bird surveys were not undertaken in unfavourable conditions such as heavy rain or strong wind; conditions which could negatively affect the results.

Winter Bird Survey

3.5 To provide a reasonable level of accuracy for determining the population status of wintering birds within the survey area, four survey visits were completed. Surveys were undertaken between December 2020 and February 2021 between 08:00 and 16:00. Table 1 provides details of the winter bird survey dates and weather conditions.

3.6 It should be noted that during the first winter bird survey visit, only 'notable species' were recorded. These are species which are specially protected (WCA Sch 1), appear on the RSPB BoCC as declining (red or amber lists) and/or are identified as Species of Principal Importance under S.41 of the NERC Act. On all other survey visits all bird species were recorded.

Table 1: Winter Bird Survey Dates and Conditions

Survey	Date	Cloud Cover (%)	Rain	Wind (Beaufort)	Visibility
1	09.12.20	90	None	Light Air	Very good
2	06.01.21	30	None	Light air	Excellent
3	21.01.21	10	None	Light breeze	Excellent

³ <http://magic.defra.gov.uk>

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

4	16.02.21	100	None	Light to gentle breeze	Excellent
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Extended Breeding Bird Survey

3.7 Birds were considered to be holding a territory, and therefore likely to be utilizing the survey area for breeding activities, if they were displaying breeding behaviour, such as: singing, nest building, food carrying or territorial defence. If birds did not display such behaviour, e.g. they were only recorded flying over the survey area, they were considered non-breeders. Breeding evidence used in this report follows EOAC guidelines 1979, and is reported at Appendix B.

3.8 A total of five survey visits were undertaken which started in early March (to cover the spring passage period for migrating birds) until May 2021. Three surveys were undertaken during the early morning period (from dawn) and two were undertaken late afternoon (until dusk). Table 2 provides details of the extended breeding bird survey dates and weather conditions.

Table 2: Extended Breeding Bird Survey Dates and Conditions

Survey	Date & Time of Day	Cloud Cover (%)	Rain	Wind (Beaufort)	Visibility
1	16.03.21 Dawn	70-100	Light rain 07:30-08:30, dry rest of survey	Gentle to moderate breeze	Excellent
2	31.03.21 Dusk	0	None	Calm	Excellent
3	13.04.21 Dawn	0	None	Calm	Excellent
4	28.04.21 Dawn	100-50	None	Light to gentle breeze	Very good
5	06.05.21 Dusk	0	None	Light to gentle breeze	Excellent

Assessment Methodology

3.9 The conservation value of bird populations has been measured using two separate approaches: nature conservation value and conservation status. The CIEEM guidance on ecological impact assessment assesses nature conservation value within a geographical context. To attain each level of value, 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 judgement may be required to increase or decrease the allocation of specific value, based upon local knowledge.

3.1 The most recent county annual bird report, The Yorkshire Bird Report 2016⁵ published by the Yorkshire Naturalists' Union Birds Section was consulted to inform the assessment. The abundance of species referred to by this report and used in this particular report, follows the following criteria:

- Abundant - More than 50,000 records per year;

⁵ Yorkshire Naturalists' Union, 2020. Yorkshire Bird Report 2016. Yorkshire Naturalists' Union Birds Section.

- Common – More than 10,000 records per year;
- Fairly common – More than 1,000 records per year;
- Uncommon – 101-1000 Individuals each year in the past 10 years;
- Scarce – 11-100 individuals each year in the past 10 years;
- Rare – 0-10 individuals each year in the past 10 years;
- Vagrant – Up to 10 records in total since records began.

Table 3: Evaluation Criteria

Nature Conservation Value	Selection Criteria
International	A species which is part of the cited interest of a Special Protection Area (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 Site of Special Scientific Interest (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 of Principal Importance under Schedule 41 of NERC Act (2006), which are not covered above, and which regularly occur 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 occur in regionally important numbers.
County	Species of Principal Importance under Schedule 41 of NERC Act (2006), which are not covered above, and which regularly occur 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 listed as priority species for nature conservation under S41 of the NERC Act. A site afforded a non-statutory designation for its county important assemblage of birds (e.g. a Local Wildlife 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 listed as Species of Principal Importance under Schedule 41 of the NERC Act (2006) 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

Desktop study

Designated Sites

Fox Glen Wood LWS

- 4.0 Fox Glen is designated as a Local Wildlife Site (LWS), a non-statutory designation of county importance. The LWS boundary includes the entirety of the survey area in addition to two small annexe areas of woodland to the northeast. The LWS was selected due to fulfilling the selection criteria for Upland Oak Woodland and Lowland Mixed Deciduous Woodland (both NERC S.41 'Habitats of Principal Importance') and due to its connectivity with other habitats in the Don valley.
- 4.1 A high level of bird activity is noted within the LWS citation, including common species such as great spotted woodpecker *Dendrocopos major*, coal tit *Parus ater* and treecreeper *Certhia familiaris*. The notable song thrush *Turdus philomelos* (NERC S.41 and BoCC Red List) was recorded as breeding within the LWS.

Other Designated Sites

- 4.1 The South Pennine Moors Special Protection Area (SPA) (Phase 1) lies approximately 3.6km west of survey area and is important for its assemblage of breeding moorland and moorland fringe birds.

Notable Bird Species Records

- 4.2 There were records of 13 bird species within Fox Glen Wood, as shown in Table 4. These comprise typical common woodland and generalist species and include treecreeper and the notable song thrush.

Table 4: Desktop Study Results for Bird Species within Fox Gen Wood

Common Name	Scientific Name	Conservation Status	Number of records	Date of most recent record
Blackbird	<i>Turdus merula</i>	Green list	1	2012
Blue Tit	<i>Parus caeruleus</i>	Green list	1	2012
Chaffinch	<i>Fringilla coelebs</i>	Green list	1	2019
Coal Tit	<i>Parus ater</i>	Green list	1	2012
Great Spotted Woodpecker	<i>Dendrocopos major</i>	Green list	1	2012
Great Tit	<i>Parus major</i>	Green list	1	2012
Grey Heron	<i>Ardea cinerea</i>	Green list	1	2012
Magpie	<i>Pica pica</i>	Green list	1	2012
Robin	<i>Erithacus rubecula</i>	Green list	2	2012
Song Thrush	<i>Turdus philomelos</i>	Red list NERC S.41	1	2012

Common Name	Scientific Name	Conservation Status	Number of records	Date of most recent record
Treecreeper	<i>Certhia familiaris</i>	Green list	1	2012
Woodpigeon	<i>Columba palumbus</i>	Green list	1	2012
Wren	<i>Troglodytes troglodytes</i>	Green list	2	2019

Field Survey

Winter Bird Survey Results

- 4.1 A total of 20 bird species were recorded during the winter bird surveys, of which three are considered 'notable'. A full list of results can be found in Appendix A, whilst the approximate locations of the three notable species can be found in Figure 1. Table 5 provides the survey information for the notable species.

Table 5: Notable Species Recorded within the Survey Area During Winter Bird Surveys 2020-21 and their Recent Status in Yorkshire

Species	Conservation Status	Peak Count / Number of Survey Occasions Recorded	Recent Status within Yorkshire
Redwing <i>Turdus iliacus</i>	Schedule 1 Red list	8 / 2	Common passage migrant and winter visitor.
Mistle thrush <i>Turdus viscivorus</i>	Red List	1 / 1	Fairly common resident and scarce passage migrant.
Dunnock <i>Prunella modularis</i>	NERC Amber list	1 / 2	Common resident, passage migrant.

Extended Breeding Bird Survey Results

- 4.2 A total of 26 bird species were recorded during the extended breeding bird surveys, of which five are considered 'notable'. A full list of results can be found in Appendix B, whilst the approximate locations of the five notable species can be found in Figure 2. Table 6 provide further details of the survey result for these species.
- 4.3 Of the 26 species recorded during breeding bird surveys, two were confirmed as breeding: woodpigeon *Columba palambus* and robin *Erithacus rubecula*, both of low conservation concern (BoCC green listed). Twelve species were considered probable breeders, including the notable song thrush and dunnock *Prunella modularis*.
- 4.4 The remaining 12 species recorded were considered possible breeders (11) or non-breeders (one).

Table 6: Notable Species Recorded within the Survey Area During Extended Breeding Bird Surveys 2021 and their Recent Status in Yorkshire

Species	Conservation Status	Peak Count / Number of Survey Occasions Recorded	Breeding Status	Recent Status within Yorkshire
Starling <i>Sturnus vulgaris</i>	NERC Red list	4 / 1	Possible	Abundant but decreasing resident, passage migrant and winter visitor.
Song thrush <i>Turdus philomelos</i>	NERC Red list	2 / 3	Probable	Common resident, passage migrant and winter visitor.
Mistle thrush <i>Turdus viscivorus</i>	Red List	1 / 1	Possible	Fairly common resident and scarce passage migrant.
Dunnock <i>Prunella modularis</i>	NERC Amber list	2 / 4	Probable	Common resident, passage migrant.
House sparrow <i>Passer domesticus</i>	NERC Red list	3 / 1	Non-breeder	Abundant resident but has decreased.

Results Description

- 4.5 The woodland provided breeding and foraging opportunities for a range of generalist and woodland-specialist species in small numbers, including notable species. Song thrush and dunnock were both recorded as probable breeders, with dunnock also utilising the woodland for winter foraging. Mistle thrush *Turdus viscivorus* and starling *Sturnus vulgaris* were both considered possible breeders, with mistle thrush also recorded within the survey area during winter. House sparrow *Passer domesticus* were recorded on one survey occasion during breeding season but were considered a non-breeder due to the lack of suitable nesting locations for this species within the survey area. Redwing *Turdus iliacus* utilised the survey area in small numbers for winter foraging.
- 4.6 Species of low conservation concern (BoCC green list) recorded within the survey area included treecreeper, which was only recorded in winter and therefore a non-breeder. Nuthatch *Sitta europea* was recorded throughout the year and recorded as a probable breeder, while a single green woodpecker *Picus viridus* was recorded on one survey occasion and considered only a possible breeder. Other species recorded included great spotted woodpecker, goldcrest *Regulus regulus*, blackbird *Turdus merula*, robin, wren *Troglodytes troglodytes* and a range of common warbler, tit, finch, pigeon and corvid species.

Evaluation

Assemblage Value

- 4.7 The survey area supports a typical woodland assemblage, including notable species which have undergone historic or recent declines but remain fairly common to abundant in Yorkshire and nationally. This includes the probable breeders song thrush and dunnock, the possible breeders mistle thrush and starling and the non-breeders house sparrow and redwing.

- 4.8 Species of low conservation concern (BoCC green listed) supported by the survey area include the probable breeder nuthatch, which is uncommon to fairly common within Yorkshire and the possible breeder green woodpecker, which is uncommon within Yorkshire. The survey area provides winter foraging and shelter for treecreeper.
- 4.9 Considering the large quantity of woodland habitat in the local area, in addition to the fact that many of the species supported by the survey area are generalists which inhabit many habitat types including gardens and hedgerows, the survey area is considered of no more than **Local** level importance for its wintering and breeding bird assemblages.

Individual Species

- 4.10 Table 7 summarises the four species that are considered to be of **Local** importance.
- 4.11 The other wintering and breeding bird species recorded utilising the habitats within the survey area were either recorded in smaller numbers and/or are considered common and widespread breeding species nationally and/or locally. These species are recognised as being of only **Site** importance.

Table 7: Species Recorded Within the Survey Area of Local Importance

Species	Status		Importance
	NERC S.41	WCA Sch.1	
Red List			
Song thrush	<i>Turdus philomelos</i>	+	Local
Redwing	<i>Turdus iliacus</i>	+	Local
Amber List			
Dunnock	<i>Prunella modularis</i>	+	Local
Green List			
Nuthatch	<i>Sitta europea</i>		Local

5.0 DISCUSSION

- 5.1 The following section provides an assessment of the potential impacts to the survey area from the proposals of the neighbouring development site to the south. The proposals of the development site comprise the construction of up to 85 residential houses with associated roads, rights of way, green infrastructure and SuDS features. An extensive grassland field compartment situated in the south west of the site would be retained and enhanced as part of the proposals.
- 5.2 As part of the proposals, an open water drainage connection from the main balancing facility within the site to the Clough Dike, situated in Fox Glen, is necessary. This drainage connect will require the implementation of a new outfall into Clough Dike. These works will not affect the habitats which have been installed for Willow tit.

Impact Assessment

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

Habitat Loss / Changes

- 5.5 The proposals will not result in the direct loss of mature trees within the LWS. During the implementation of the new drainage channel there will be loss of some area of dense / scattered bramble during the works. On completion of the works, this habitat will regenerate quick and such short-term effects are unlikely to affect the overall assemblage of species using Fox Glen.
- 5.6 Some of the bird species recorded within the wood rely on nearby grassland habitat for additional foraging including the notable starling and mistle thrush, in addition to green woodpecker. The development will lead to an overall loss of semi-improved grassland habitat in the adjacent development site. However, the poor semi-improved field to the west of the development site is to be retained and managed as species-rich grassland which will provide enhanced foraging for these species. Additional grassland habitats will be incorporated into the Green Infrastructure of the project. Furthermore, there is a large quantity of pasture fields, playing fields and established gardens in the wider area which will continue to provide supplementary foraging.
- 5.7 For all these reasons, it is considered the proposed habitat changes of the neighbouring development site will have a **negligible** impact on the bird species within Fox Glen Wood, including those species considered of local importance.

Disturbance Impacts

During Construction

- 5.8 Construction operations within the development site have the potential to disturb birds using the survey area for roosting, foraging and breeding. Operations likely to disturb wintering and breeding birds include noise from vegetation clearance, initial ground works and some construction activities, such as piling, which are of low frequency but high amplitude. Active, high level, infrequent disturbance causes most birds to be displaced for short periods⁶. During the breeding season disturbance may lead to nest desertion or the avoidance of the area, and during the winter season disturbance may lead to the avoidance of important foraging habitats. Whilst there is some potential for breeding and foraging success to be reduced, this will be mitigated by the appropriate buffering of trees within Fox Glen Wood from the development. This disturbance is therefore not expected to affect the local conservation status of the wintering and breeding bird species within the survey area.

During Operation

- 5.9 The increase in domestic animals during the operational phase of the development site, particularly cat, may lead to an effect on small bird populations within the survey area but there is no conclusive evidence of effects to population. It is therefore considered that the impact of domestic cats will be of **negligible** significance.
- 5.10 Fox Glen Wood currently has a circular public footpath and several informal paths throughout which are well used. Although there will be no direct access from the proposed residential development into the site, it is expected that there will be an increase in footfall within the survey area when the residential development is complete. However, given the existing high footfall within the wood this increase is expected to be insignificant. Furthermore, larger woodland with a more extensive network of public footpaths is present within Old Haywoods LWS approximately 750m northeast of the development site which would reduce the likelihood of significant added pressure on Fox Glen Wood from the proposed development. The bird species recorded within the survey area are not sensitive to pedestrian disturbance, with the majority of species frequenting gardens and urban environments. For these reasons the disturbance to birds from increased footfall within Fox Glen wood is considered to be of **negligible** significance.

⁶ Hockin, D., Ounsted, M., Gorman, M., Hill, D., Keller, V., & 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.

Appendix A: Winter Bird Survey Results 2020-21

Common Name	Scientific Name	Survey 1	Survey 2	Survey 3	Survey 4	Conservation Status
Woodpigeon	<i>Columba palumbus</i>	-	7	3	2	Green list
Collared dove	<i>Streptopelia decaocto</i>	1	0	0	0	Green list
Great spotted woodpecker	<i>Dendrocopos major</i>	-	0	1	0	Green list
Magpie	<i>Pica pica</i>	-	5	0	0	Green list
Goldcrest	<i>Regulus regulus</i>	-	0	1	1	Green list
Coal tit	<i>Parus ater</i>		2	0	1	Green list
Blue tit	<i>Cyanistes caeruleus</i>	-	10	4	2	Green list
Great tit	<i>Parus major</i>	-	9	1	3	Green list
Long-tailed tit	<i>Aegithalos caudatus</i>	-	0	0	1	Green list
Treecreeper	<i>Certhia familiaris</i>	0	1	2	0	Green list
Wren	<i>Troglodytes troglodytes</i>	-	3	0	0	Green list
Blackbird	<i>Turdus merula</i>	-	5	0	2	Green list
Redwing	<i>Turdus iliacus</i>	0	1	8	0	WCA Sch. 1 Red list
Mistle thrush	<i>Turdus viscivorus</i>	0	1	0	0	Red list
Nuthatch	<i>Sitta europea</i>	-	3	0	2	Green list
Robin	<i>Erithacus rubecula</i>	-	4	1	3	Green list
Dunnock	<i>Prunella modularis</i>	0	1	0	1	NERC Amber list
Chaffinch	<i>Fringilla coelebs</i>	-	0	2	3	Green list
Greenfinch	<i>Carduelis chloris</i>	-	0	0	1	Green list
Goldfinch	<i>Carduelis carduelis</i>	-	2	7	5	Green list
Total No. Species: 20		1	14	10	13	

**Appendix B: Extended Breeding Bird Survey Results 2020-21 & EOAC Criteria
for Categorisation of Breeding Status**

Common Name	Scientific Name	Survey 1	Survey 2	Survey 3	Survey 4	Survey 5	Conservation Status	Breeding status ⁷
Pheasant	<i>Phasianus colchicus</i>	0	0	0	0	1	Not listed	Possible H
Woodpigeon	<i>Columba palumbus</i>	7	6	16	12	10	Green list	Confirmed ON, T, S, H
Great spotted woodpecker	<i>Dendrocopos major</i>	0	0	1	0	0	Green list	Possible H
Green woodpecker	<i>Picus viridis</i>	1	0	0	0	0	Green list	Possible H
Magpie	<i>Pica pica</i>	0	0	0	3	1	Green list	Possible H
Jackdaw	<i>Corvus monedula</i>	0	0	0	0	2	Green list	Possible H
Carrion crow	<i>Corvus corone</i>	2	1	1	0	1	Green list	Possible S, H
Goldcrest	<i>Regulus regulus</i>	3	0	0	0	0	Green list	Probable P, S, H
Coal tit	<i>Periparus ater</i>	3	3	0	0	2	Green list	Probable T, D, S, H
Blue tit	<i>Cyanistes caeruleus</i>	3	1	5	3	0	Green list	Probable T, S, H
Great tit	<i>Parus major</i>	4	3	5	1	1	Green list	Probable T, S, H
Long-tailed tit	<i>Aegithalos caudatus</i>	0	0	0	3 + 1 flock	2	Green list	Possible H
Wren	<i>Troglodytes troglodytes</i>	6	5	2	6	7	Green list	Probable T, S, H
Chiffchaff	<i>Phylloscopus collybita</i>	0	3	5	3	2	Green list	Probable T, S, H
Blackcap	<i>Sylvia atricapilla</i>	0	0	0	2	2	Green list	Probable T, S, H
Starling	<i>Sturnus vulgaris</i>	0	0	4	0	0	NERC Red list	Possible S, H
Blackbird	<i>Turdus merula</i>	1	4	5	7	15	Green list	Probable T, S, H
Song thrush	<i>Turdus philomelos</i>	2	0	0	1	1	NERC Red list	Probable T, S, H
Mistle thrush	<i>Turdus viscivorus</i>	0	0	0	1	0	Red list	Possible H
Nuthatch	<i>Sitta europea</i>	0	1	1	1	1	Green list	Probable A, H
Robin	<i>Erithacus rubecula</i>	3	7	4	8	5	Green list	Confirmed UN, T, S, H

⁷European Ornithological Atlas Committee, 1979. *Categories of Breeding Bird Evidence*. European Ornithological Atlas Committee.

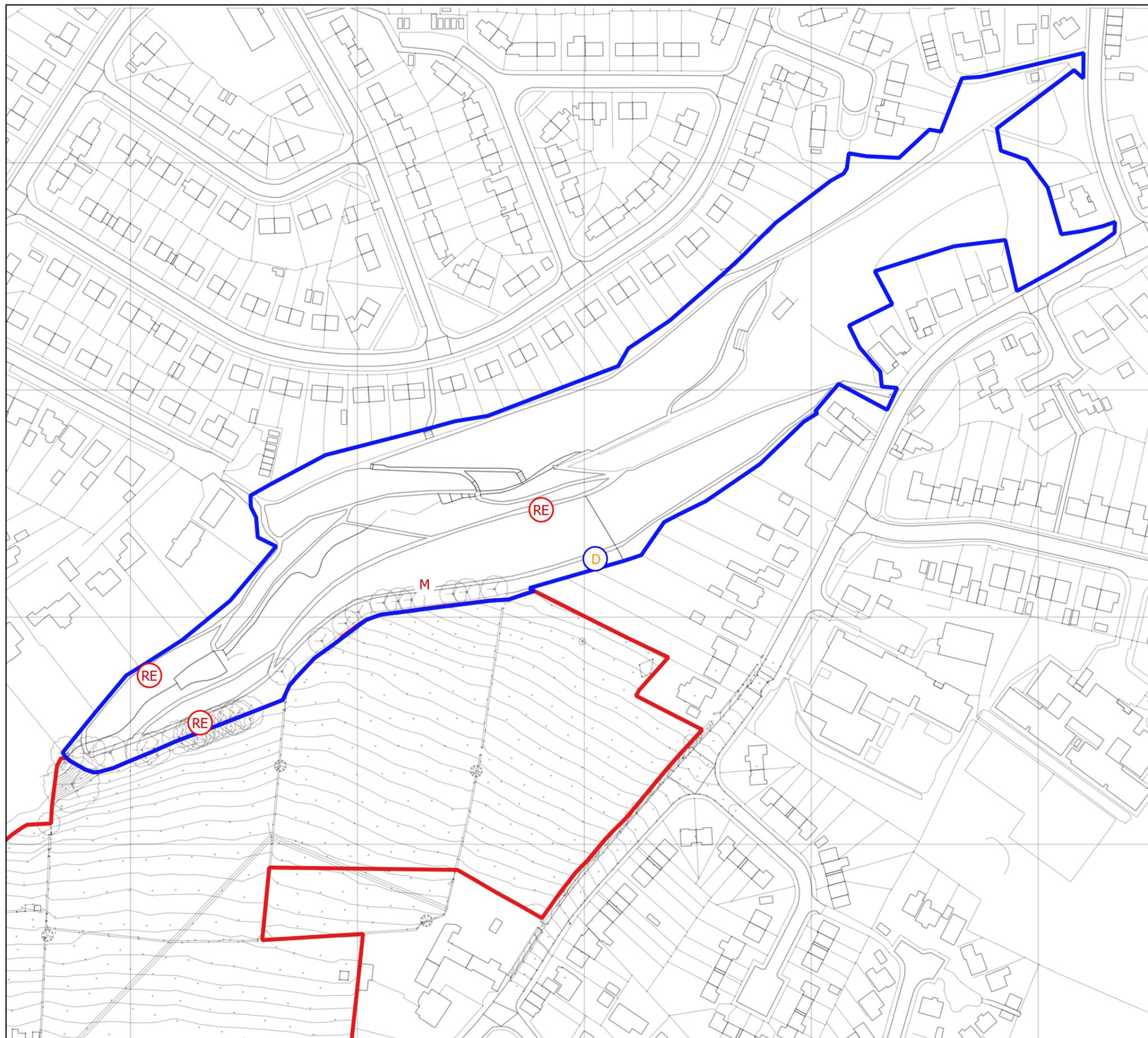
Common Name	Scientific Name	Survey 1	Survey 2	Survey 3	Survey 4	Survey 5	Conservation Status	Breeding status ⁷
Duncock	<i>Prunella modularis</i>	2	1	2	2	0	NERC Amber list	Probable P, S, H
House sparrow	<i>Passer domesticus</i>	0	0	0	0	3	NERC Red list	Non-breeder UH
Chaffinch	<i>Fringilla coelebs</i>	4	2	0	0	3	Green list	Probable P, T, S, H
Greenfinch	<i>Carduelis chloris</i>	6	1	0	0	0	Green list	Possible S, H
Goldfinch	<i>Carduelis carduelis</i>	0	0	2 flyovers	1	0	Green list	Possible H
Total No. Species: 26		14	13	13	15	17		

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Key

- Survey Area Boundary**
- Development Site Boundary**
- BoCC Red-Listed Species**
 - M **Mistle Thrush**
 - RE **Redwing**
- BoCC Amber Listed Species**
 - D **Dunnock**
- Additional Protections:**
 - NERC Species of Principal Importance**



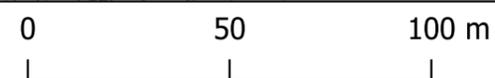
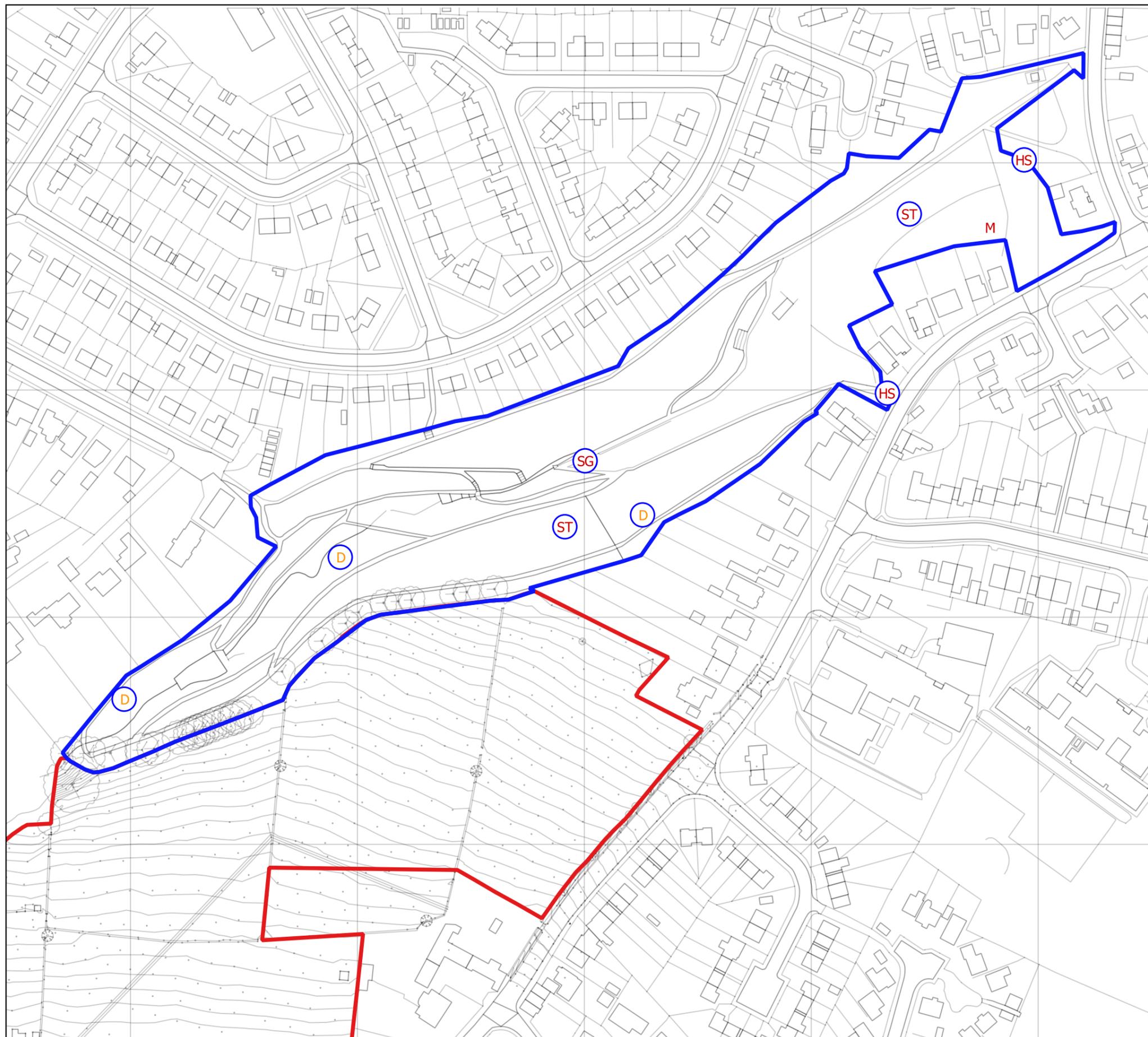
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project: Fox Glen Wood, Deepcar
drawing title: WINTER BIRD SURVEY - DISTRIBUTION OF NOTABLE SPECIES
scale: 1:1750 drawn: MJF / KG issue: 7/5/2021
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Key

- Survey Area Boundary
- Development Site Boundary
- BoCC Red-Listed Species**
- HS House Sparrow
- M Mistle Thrush
- ST Song Thrush
- SG Starling
- BoCC Amber Listed Species**
- D Dunnock
- Additional Protections:**
- NERC Species of Principal Importance



client
Hallam Land Management Ltd

project
Fox Glen Wood,
Deepcar

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DISTRIBUTION OF NOTABLE SPECIES**

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