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Appendix 7.4: Wintering Bird Report

Applicant

Hallam Land Management Limited

Project

Land East of Knowsley Lane, Knowsley

Date

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1.0 INTRODUCTION

- 1.1 The following Wintering Bird Report has been prepared by FPCR Environment and Design Ltd on behalf of the Hallam Land Management as an appendix to the Ecology Chapter of the Environmental Statement for land east of Knowsley Lane, Knowsley (Central OS Grid Ref: SJ 43687 94684) herein referred to as 'the Site'.
- 1.2 This report has been prepared to support the Ecology Chapter of the Environmental Statement (ES) for the proposals. This report should therefore be read in conjunction with the ES ecology chapter (Chapter 7).

Site Context

- 1.3 The Site is located on the southern border of Knowsley village. It comprises approximately 33.6ha of arable field, priority deciduous woodland, modified grassland, hedgerows, scrub and a number of ponds.
- 1.4 The north of the Site is bordered by a residential area, to the west and east there are areas used for commercial use within young woodland, with further areas of arable, grassland and woodland habitats to the south, east and west of Site.

Site Proposals

- 1.5 The proposals for the Site include up to 700 new dwellings with associated access and gardens. Green infrastructure proposals include the retention and enhancement of existing woodland and scrub and creation of additional native mixed scrub, individual trees, species rich grassland and woodland. This will provide a buffer and enhancement to retained woodland habitat. Other habitats include formal and informal amenity grassland areas, a traditional orchard and ornamental planting

Report Aims and Objectives

- 1.6 This report has been prepared to achieve the following objectives:
- Describe the survey methodologies employed to inform this assessment;
 - Identify the presence, species and distribution of wintering birds within or in the vicinity of the Site;
 - Evaluate the conservation importance of habitats within the Site to local bird populations and identify any areas of ornithological interest;
 - Identify and describe potentially significant ecological effects associated with the proposals on wintering birds; and
 - Make recommendations to minimize the potential impact of development and to consider opportunities for additional mitigation, compensation and enhancement where relevant.

2.0 LEGISLATION AND STATUS

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 Natural Environment and Rural Communities Act 2006, to have regard to the conservation of biodiversity in England, when carrying out their normal functions.
- 2.4 The local biodiversity action plan for North Merseyside includes action plans for certain species within the county. Specific species plans include corn bunting *Emberiza calandra*, grey partridge *Perdix perdix*, lapwing *Vanellus vanellus*, skylark *Alauda arvensis*, song thrush *Turdus philomelos* and urban birds.

Status

- 2.5 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.
- 2.6 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/or
 - that they have declined historically and not shown a substantial recent recovery.
- 2.7 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;

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

² Stanbury, A., Eaton, M., Aebischer, N., Balmer, D., Brown, A., Douse, A., Lindley, P., McCulloch, N., Noble, D., and Win I. 2021. The status of our bird populations: the fifth Birds of Conservation Concern in the United Kingdom, Channel Islands and Isle of Man and second IUCN Red List assessment of extinction risk for Great Britain. British Birds 114:723-747

- they are rare breeders; and
- they have internationally important or localised populations.

2.8 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 ornithological information, statutory and non-statutory organisations were consulted for data regarding designated sites for which birds are a designating feature and protected/notable bird records. These included the Merseyside biobank, magic maps and county bird reports.
- 3.2 Details on the methodology for the desk study are provided in the accompanying ES ecology chapter.

Field Survey

Diurnal Survey

- 3.3 The methodology employed was broadly based on the non-breeding survey methodology as per the bird survey guidelines³. 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 route around the survey area was mapped out prior to the surveys being undertaken, paying particular attention to linear features, such as hedgerows and tree lines, and natural features such as ponds and areas of scrub. When arriving on-site, any notable birds present were initially observed at a distance from a viewpoint. This process was repeated at several viewpoints around the Site, as required. The route was therefore adapted so that any birds present could be carefully followed, with a suitable distance maintained at all times to minimise any risk of the surveyor altering bird behaviour. Information was recorded on bird behaviour, paying particular attention to any behavioural changes and their potential cause.
- 3.5 Surveys were conducted between October and March inclusive in 2024/2025, to incorporate both the passage and over-wintering periods. The survey effort has been decided based on knowledge of the local area and the proximity to internationally designated sites (cited for their ornithological interest). To provide a robust level of accuracy for determining the population status of wintering birds in the survey area an, a total of thirteen surveys have been undertaken with two surveys undertaken each month, to cover the passage and over-wintering period.
- 3.6 Bird Surveys were not conducted in unfavourable conditions such as heavy rain or strong wind, (conditions which can negatively affect the results). Table 1 provides details of the survey dates and weather conditions for each survey period.

Survey Timing

- 3.7 Surveys were programmed at times which maximised visibility to allow for increased visual identification of birds, as such there was no specific time of day targeted.

Nocturnal Survey

- 3.8 To assess the potential use of the site by wintering birds as a nocturnal roosting or foraging resources, four surveys were conducted during the wintering bird season (November-February, inclusive).

³ Bird Survey & Assessment Steering Group (2025). Bird Survey Guidelines for assessing ecological impacts <https://birdsurveyguidelines.org> [04.06.25]

- 3.9 The route around the site was predetermined and follows that set for the diurnal survey and included pre-determined vantage point locations which allowed open areas to be scanned.
- 3.10 Surveyors used thermal scopes (Pulsar Axion XQ30) to identify the presence of birds present onsite. Surveys began at least one hour after sunset.

Table 1: Wintering Bird Survey Dates and Conditions

Survey	Date	Cloud Cover (%)	Rain	Wind (Beaufort)	Visibility
Diurnal Surveys					
1	28.09.24	100	0	2	Good
2	17.10.24	85	0	1	Good
3	29.10.24	95	0	1	Good
4	15.11.24	100	0	1	Very Good
5	26.11.24	10	0	2	Very Good
6	09.12.24	85	0	3	Very Good
7	18.12.24	100	0	2	Good
8	08.01.25	50	0	0	Excellent
9	23.01.25	60	0	3	Excellent
10	07.02.25	90	0	3	Excellent
11	19.02.25	80	0	2	Excellent
12	05.03.25	70	0	1	Excellent
13	18.03.25	0	0	2	Excellent
Nocturnal Surveys					
1	26.11.24	10	0	1	N/A
2	18.12.24	100	0	1	N/A
3	23.01.25	60	0	3	N/A
4	19.02.25	40	0	2	N/A

Assessment

Population Significance

- 3.11 The Site was assessed against the published selection criteria for LWS in North Merseyside⁴ which evaluates the Site against thresholds for county value. The selection criteria for LWS includes the below criterion for wintering birds:
- “Any site which regularly supports more than 0.5% of the total British population of any native bird species during the non-breeding season.”
 - “Any site from which the following have been recorded in the last five-year period for which data are available
 - a) 30 breeding species
 - b) 60 breeding and/or wintering species
 - c) 100 breeding and/or wintering and/or passage species

⁴ Merseyside Environmental Advisory Service (2008) North Merseyside: Local Wildlife Site Selection Guidelines. [Access online: <https://www.merseysidebiodiversity.org.uk/download/north-merseyside-local-wildlife-site-selection-guidelines/>]

3.12 The most recent county annual bird report Lancashire Bird Report 2020 was consulted to inform the assessment, as it covers the Knowsley area. The abundance of breeding species referred to in this report follows the guidelines as used in the county annual bird report:

- Abundant: more than 5000 annually
- Very common: 1001 – 5000 annually
- Common: 201-1000 annually
- Fairly common: 21-200 annually
- Uncommon: 11-20 annually
- Scarce: 51-250 records in the past 25 years
- Rare: 11-50 records in the past 25 years
- Vagrant (or very rare passage migrant): 1-10 records in past 25 years

Species and Assemblage Assessment

3.13 The Chartered Institute of Ecology and Environmental Management (CIEEM) guidance on ecological impact assessment assesses nature conservation importance within a geographical context⁵. This has been utilised to undertake an impact assessment of the proposals regarding wintering birds and the scale of impact. The use of professional judgement based on local knowledge was also be used to determine the importance of ornithological features.

Limitations

3.14 It is considered that there were no limitations to the surveys and the subsequent assessment.

⁵CIEEM, 2018. Guidelines for Ecological Impact Assessment in the UK and Ireland. Updated September 2019. Winchester: Chartered Institute of Ecology and Environmental Management. [Online]. Available at: <https://cieem.net/wp-content/uploads/2019/02/Combined-EcIA-guidelines-2018-compressed.pdf> [

4.0 RESULTS

Desktop Study

- 4.1 The locations of designated Sites and notable bird species records identified through the desktop study search area has been presented in Figure 7.3

Designated Sites

- 4.2 Six internationally designated sites cited for their ornithological interest were identified within the desk study. All are over 10km from the Site. These sites were all cited for their wintering ornithological interest as Special Protection Areas (SPA), RAMSAR wetland and/ or Special Areas of Conservation (SAC).
- 4.3 None of the non-statutory sites in close proximity to the Site are cited for their wintering bird assemblages.
- 4.4 A summary of the bird species and assemblages included within the designated site citation is provided in Table 2 below. A full description of all designated sites within the search area is provided within the ecology ES chapter 7 and Appendix 7.1.

Table 2: Designated Sites cited for Ornithological Interest within the Desktop Study

Site Name	Distance from Site at Closest Point	Description
Liverpool Bay SPA	10.7km	Marine areas supporting large aggregations of wintering red throated diver and common scoter. Qualifying features include non-breeding red throated diver, little gull and common scoter. As well as an internationally important waterbird assemblage.
Mersey Estuary SPA / Ramsar	10.7km	During the winter the site is of major importance for ducks and waders. Qualifying features include overwintering golden plover, redshank, shelduck, teal, pintail, dunlin and black-tailed godwit. The site also supports on passage redshank, as well as an internationally important waterbird assemblage.
Mersey Narrows and North Wirral Foreshore RAMSAR / SPA / SAC	11.2km	. Qualifying features include non-breeding bar tailed godwit, little gull and knot. The site also supports an internationally important waterbird assemblage.
Ribble and Alt Estuaries RAMSAR/ SPA	11.8km	Qualifying features include wintering Bewick's swan, whooper swan, golden plover, bar-tailed godwit, pink-footed goose, shelduck, wigeon, teal, pintail, oystercatcher, grey plover, knot, sanderling, dunlin, black-tailed godwit and redshank. This site also supports waterbird and seabird assemblages.
Martin Mere RAMSAR/SPA	18.8km	Comprises a low-lying complex of open water, marsh and grassland habitats overlying deep peat and occupying part of the former site of a large freshwater lake drained for agriculture in the nineteenth century. The Wildfowl & Wetlands Trust (WWT) who manage the area as a nature reserve, with a large visitors centre. Numbers of wintering waterbirds regularly exceed 20,000 individuals and include internationally important numbers of swans, ducks and geese.
Dee Estuary RAMSAR/SPA	22km	Of major importance for waterbirds. During the winter the habitats, provide feeding and roosting sites for internationally important numbers of ducks and waders

Protected / Notable Species

- 4.5 The locations of protected species records are provided by Merseyside Biobank are shown on Figure 7.3 .

- 4.6 No bird records were returned within the Site boundary; however, two records were returned within 1km of the Site; house sparrow *Passer domesticus* and barn owl *Tyto alba*
- 4.7 183 records of notable birds were returned at tetrad spatial resolution. These records were of 31 notable species; a full list is provided in ES Chapter Appendix 7.1.

Field Survey

- 4.8 A total of 52 bird species were recorded within the survey area. Of these, 26 appear on one or more of the following and are hereafter referred to as 'notable species':
- BoCC Red or Amber lists;
 - Section 41 of the NERC Act 2006; and / or
 - Local Biodiversity Action Plan
- 4.9 Species solely considered notable for their inclusion on schedule 1 of the Wildlife and Countryside Act 1981, have been omitted from the notable species list for the wintering assemblage, due to this legislation only providing additional protections to these species whilst breeding. Any schedule 1 birds and any breeding behaviours observed across the passage and wintering period will be included and discussed in the corresponding breeding bird report.

Table 3: Notable Bird Species Recorded and Their Recent Status in Lancashire. Species highlighted in blue are associated with designated sites.

Species	Legal / Conservation Status	Peak Count / No. of Survey Visits	Recent Status in County
Mallard <i>Anas platyrhynchos</i>	Amber List	2/3	Very common and widespread winter visitor
Teal <i>Anas crecca</i>	Amber List	3/1	Very common winter visitor
Stock Dove <i>Columba oenas</i>	Amber List	1/1	Fairly common resident
Woodpigeon <i>Columba palumbus</i>	Amber List	97/13	Abundant and widespread resident
Moorhen <i>Gallinula chloropus</i>	Amber List	1/1	Common resident
Lapwing <i>Vanellus vanellus</i>	Red List NERC S.41	6/2	Abundant but decreasing winter visitor
Woodcock <i>Scolopax rusticola</i>	Red list	1/2	Common winter visitor
Snipe <i>Gallinago gallinago</i>	Amber List	1/1	Common but declining wintering bird
Sparrowhawk <i>Accipiter nisus</i>	Amber List	1/3	Fairly common breeding resident, uncommon passage migrant
Kestrel <i>Falco tinnunculus</i>	Amber List	2/11	Fairly common resident
Rook <i>Corvus frugilegus</i>	Amber List	4/2	Common resident
Skylark <i>Alauda arvensis</i>	Red List NERC S.41	36/11	Common breeding resident and passage migrant
Wren <i>Troglodytes troglodytes</i>	Amber List	10/13	Abundant breeding resident, passage migrant and winter visitor

Species	Legal / Conservation Status	Peak Count / No. of Survey Visits	Recent Status in County
Starling <i>Sturnus vulgaris</i>	Red List NERC S.41	15/2	Abundant breeding bird, double passage migrant and winter visitor
Song Thrush <i>Turdus philomelos</i>	Amber List NERC S.41	8/11	Common breeding resident
Mistle Thrush <i>Turdus viscivorus</i>	Red List	2/3	Common breeding resident; some autumn dispersal and passage
Redwing <i>Turdus iliacus</i>	Red List	60/6	Abundant double passage migrant and winter visitor
Fieldfare <i>Turdus pilaris</i>	Red List WCA Sch.1	1/1	Common to abundant winter visitor and passage migrant
House Sparrow <i>Passer domesticus</i>	Red List NERC S.41	38/12	Abundant but decreasing resident
Dunnock <i>Prunella modularis</i>	Amber List NERC S.41	8/12	Abundant breeding resident and uncommon double passage migrant
Meadow Pipit <i>Anthus pratensis</i>	Amber List	25/7	Common breeding bird, abundant passage migrant
Bullfinch <i>Pyrrhula pyrrhula</i>	Amber List NERC S.41	1/3	Common breeding resident
Greenfinch <i>Chloris chloris</i>	Red List	5/10	Common but declining breeding resident
Linnet <i>Linaria cannabina</i>	Red List NERC S.41	2/2	Common but declining breeding resident. Double passage migrant.
Redpoll <i>Acanthis flammea</i>	Red List NERC S.41	1/1	Common double passage migrant and winter visitor
Reed Bunting <i>Emberiza schoeniclus</i>	Amber List NERC S.41	10/6	Common breeding bird and winter visitor

Results Description

- 4.10 Twenty-six notable species were recorded within the site boundary during field surveys, of which three species are considered as qualifying features or within the waterbird assemblage of either the Mersey Estuary SPA / Ramsar, Ribble and Alt Estuaries RAMSAR/SPA, Martin Mere Ramsar/SPA and/ or Dee Estuary Ramsar/SPA were recorded within the site boundary: mallard, teal and lapwing.
- 4.11 The arable field which comprises the western parcel of the Site provides foraging and roosting opportunities for notable species. This includes regular use by flocks of skylark *Alauda arvensis* and meadow pipit *Anthus pratensis*. Towards the end of the survey period, lapwing *Vanellus vanellus* were also recorded utilising this habitat.
- 4.12 The grassland parcels also provided foraging opportunities for birds on site, but this was largely restricted to common and widespread species, with some occasional use by meadow pipit and nocturnal use by snipe *Gallinago gallinago* and woodcock *Scolopax rusticola*.
- 4.13 Parcels of woodland, scrub and hedgerows were present throughout the Site and its boundaries and supported similar assemblages of notable species, including regular use by house sparrow, *Passer domesticus* song thrush *Turdus philomelos*, redwing *Turdus iliacus*, greenfinch *Chloris chloris* and wren *Troglodytes troglodytes*. Reed bunting *Emberiza schoeniclus* were also recorded to occasionally use the scrub and hedgerow habitats.

- 4.14 The woodland ponds occasionally supported waterbirds such as mallard *Anas platyrhynchos*, teal *Anas crecca* and moorhen *Gallinula chloropus*.
- 4.15 The grassland and arable fields also provided foraging habitat for notable birds of prey including sparrowhawk *Accipiter nisus* and kestrel *Falco tinnunculus*.

Wintering Assemblage

- 4.16 The species assemblage onsite is typical for the grassland, arable, scrub and woodland habitats present. The wintering bird assemblage recorded to be using the Site contains 26 notable species amongst more common and widespread species.
- 4.17 The species assemblages were largely concentrated to as farmland or woodland specialists amongst more generalist species utilising the associated habitat types within the site boundary.
- 4.18 The hedgerows and arable compartments were used by declining farmland specialists which included small numbers of linnet and reed bunting, and a peak count of 37 skylark. These species were recorded consistently across the wintering period, however due to the range of the numbers recorded, the county population and availability of further habitat immediately offsite it is considered that the farmland assemblage is of local level importance.
- 4.19 The woodland and scrub compartments were used by generalist and woodland species and were consistently used by small numbers of song thrush, greenfinch and wren with larger flocks of woodpigeon *Columba palumbus* and occasionally redwing *Turdus iliacus*. The generalist and woodland assemblages were considered to be of local level importance.

Local Wildlife Selection Criteria

- 4.20 None of the species recorded reached the thresholds stated within the LWS selection criteria, as such the site is not considered to qualify as an LWS based on its wintering bird numbers nor is the wintering bird assemblage considered to be of county level importance.

5.0 DISCUSSION

- 5.1 The following section provides an assessment of the value of the wintering bird assemblages present within the site, and the potential impacts of the proposals upon wintering birds.

Impact Assessment

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

Designated Sites

- 5.4 As discussed in the accompanying HRA, the Site is over 10km from international statutory designated sites, cited for their ornithological interest. However, some notable birds included within these designations will travel up to 15km away from the designated site to use habitat resources for foraging and roosting opportunities. Such areas are referred to as "supporting habitat".
- 5.5 The wintering bird surveys have demonstrated that the habitats within the Site supported three species included as a qualifying feature or within the waterbird assemblage of either/ or one of the designated sites: Mersey Estuary SPA / Ramsar, Ribble and Alt Estuaries RAMSAR/ SPA, Martin Mere Ramsar/SPA and Dee Estuary Ramsar/SPA. The site was not consistently used by these species (mallard, teal and lapwing). The impacts upon the designated sites as a result of loss of habitat are assessed in the accompanying HRA and so are not discussed further in this report.

Habitat Loss

- 5.6 The proposals will require the loss of the farmland and grassland habitats within the Site, whilst the majority of woodland, hedgerows and scrub will be retained.
- 5.7 The loss of the arable habitats will likely lead to the loss of farmland birds on site such as skylark, reed bunting and meadow pipit, which utilise the site for foraging and roosting. Without mitigation, the proposals are considered to lead to an adverse impact on farmland species recorded.
- 5.8 The retention of scrub, woodland and hedgerows across the Site will ensure the development continues to provide foraging and roosting opportunities to the generalist and woodland specialist species recorded within the Site, including song thrush, mistle thrush, woodpigeon and dunnock.

Habitat Loss Mitigation

- 5.9 The proposals include the creation of species-rich grassland within the green infrastructure scheme and will provide foraging opportunities to a limited number of farmland species such

as linnet and reed bunting. This grassland should include seed mixes specifically designed to provide foraging resources for birds and be cut after mid-July to allow plants to set seed. The use of fertilisers and pesticides should be avoided.

- 5.10 The provision of further scrub planting and a community orchard will provide further suitable foraging habitat for the generalist and woodland species present within the site, such as redwing.
- 5.11 Whilst the availability of suitable habitat adjacent to the Site will lessen impacts it is still considered that the loss of foraging and roosting habitat will result in a negative impact on a local scale for farmland birds.
- 5.12 Retained and newly planted hedgerows should include grassy margins on either side, to provide further foraging opportunities.

Residual Effect

- 5.13 The proposals will lead to the loss of all the arable habitat as such this will significantly reduce the habitat available for wintering farmland birds utilising the Site. Whilst the habitat creation on Site will be limited to the farmland specialists it can offer foraging opportunities for (i.e. linnet and reed bunting), it is considered that the scale of adverse impacts will be reduced by the abundance of further suitable arable habitat in the wider landscape to the Site. As such it is considered there will be a non-significant negative impact on farmland birds.
- 5.14 The retention of woodland, hedgerows and scrub will ensure the development will result in a negligible impact on the generalist and woodland species recorded within the Site. The proposed planting within the green infrastructure of the development will likely result in a not-significant positive impact for these species in the long term as the vegetation matures.

Disturbance

- 5.15 Construction operations have the potential to disturb birds using the Site for roosting and foraging. 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 periods. 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.
- 5.16 Research has shown that domestic cats may impact upon wild bird populations, especially locally, within 100m of each cat's home⁶. However, a precautionary approach is advised, as the bird species involved are very productive and cats are also most likely going after birds that are in poor condition. It is considered likely that areas of suitable bird habitat that are likely to be affected by cat predation would comprise the gardens, hedgerows, woodland, scrub and some areas of countryside in the surrounding landscape. In the absence of mitigation, it is considered that any increase in bird predation on these areas as a result of the proposed development would only result in an adverse impact of up to local significance.

⁶ <https://www.sciencefocus.com/nature/pet-cats-should-they-be-kept-indoors>

Disturbance Mitigation

- 5.17 In order to deter encroachment of domestic cats into sensitive areas and also to provide refuges for birds, it is recommended that the boundaries around the development are strengthened through the planting of native thorny plant species (e.g. blackthorn *Prunus spinosa*, hawthorn *Crataegus monogyna*).

Residual Effect

- 5.18 Through the planting of thorny vegetation which will act as a deterrent to domestic cats, it is considered that the impacts on wintering species will be negligible.

6.0 CONCLUSION

- 6.1 The suite of wintering bird surveys identified a range of bird assemblages within and in the vicinity of the Site. The impacts on these were assessed against the proposals for the development.
- 6.2 The assessment has demonstrated that in the absence of mitigation, proposals will lead to the loss of the farmland bird assemblage, which would be significant at a site scale as a result of the loss of arable and grassland habitats within the proposals.
- 6.3 Proposals have from been landscape and ecology led from an early stage in the process, ensuring that the scheme can be designed to mitigate for negative effects associated with the construction proposals and anticipated habitat losses.
- 6.4 Through this combination of mitigation, compensation and enhancement detailed within this appendix report and Ecology ES Chapter has demonstrated that the proposals will lead to at most non-significant negative effects on wintering farmland birds. However, proposals are likely to provide non-significant positive effects on generalist and woodland bird species.

APPENDIX 7.A: WINTERING BIRD SURVEY RESULTS – DIURNAL

Species: British Common Name	Species: Latin name	Survey 1 28.09.2 4	Survey 2 17.10.2 4	Survey 3 29.10.2 4	Survey 4 15.11.24	Survey 5 26.11.2 4	Survey 6 09.12.2 4	Survey 7 18.12.2 4	Survey 8 08.01.2 5	Survey 9 23.01.2 5	Survey 10 07.02.2 5	Survey 11 19.02.2 5	Survey 12 05.03.2 5	Survey 13 18.03.2 5	Conservatio n Status & Protection
Mallard	<i>Anas platyrhynchos</i>		2					2					1		Amber List
Teal	<i>Anas crecca</i>											3			Amber List
Pheasant	<i>Phasianus colchicus</i>	3	6	15	4	4	9	19	11	4		11	3	12	Not Listed
Red-legged Partridge	<i>Alectoris rufa</i>	26	21	17	16	15	2	6	11			3	9	17	Not Listed
Feral Pigeon	<i>Columba livia f. domestica</i>			4 flyover											Not Listed
Stock Dove	<i>Columba oenas</i>												1		Amber List
Woodpigeon	<i>Columba palumbus</i>	97	20	50 + 17 flyover	2	6	7	34	18	26	17	33	48	46	Amber List
Moorhen	<i>Gallinula chloropus</i>	1													Amber List
Lapwing	<i>Vanellus vanellus</i>												6	4	Red List NERC S.41
Woodcock	<i>Scolopax rusticola</i>						1	1							Red List
Snipe	<i>Gallinago gallinago</i>								1						Amber List
Grey Heron	<i>Ardea cinerea</i>		1 flyover		1	1				2	1	2			Green List
Sparrowhawk	<i>Accipiter nisus</i>			1 flyover	1 flyover						1				Amber List

Species: British Common Name	Species: Latin name	Survey 1 28.09.2 4	Survey 2 17.10.2 4	Survey 3 29.10.2 4	Survey 4 15.11.24	Survey 5 26.11.2 4	Survey 6 09.12.2 4	Survey 7 18.12.2 4	Survey 8 08.01.2 5	Survey 9 23.01.2 5	Survey 10 07.02.2 5	Survey 11 19.02.2 5	Survey 12 05.03.2 5	Survey 13 18.03.2 5	Conservatio n Status & Protection
Buzzard	<i>Buteo buteo</i>		1 flyover		1 + 1 flyover		1 + 2 flyover			2	1		2		Green List
Kestrel	<i>Falco tinnunculus</i>	1	1	1	1	2	2	1	1	2	1		2	2	Amber List
Jay	<i>Garrulus glandarius</i>		2	3 + 1 flyover	2	1	3	3	2	4	2	2	1	1	Green List
Magpie	<i>Pica pica</i>	2	3	4	4	3	2	1	4		2	3	1	2	Green List
Jackdaw	<i>Coloeus monedula</i>	24	55	34 + 150 flyover	92	24	45		4	3	151	6	10	10	Green List
Rook	<i>Corvus frugilegus</i>								3				4		Amber List
Carrion Crow	<i>Corvus corone</i>	9	14	8	4	2	2		3					17	Green List
Greater Spotted Woodpecker					1			1							Green List
Coal Tit	<i>Periparus ater</i>		1	1					9						Green List
Blue Tit	<i>Cyanistes caeruleus</i>	4	6	13	4	17	9	4	13	10	32	17	8	12	Green List
Great Tit	<i>Parus major</i>	2	3	6	9	3	4	2	4	3	11	8	5	4	Green List
Skylark	<i>Alauda arvensis</i>		10	5 + 3 flyover	12	13	26	24		4	36	1	8	1	Red List NERC 5.41
Swallow	<i>Hirundo rustica</i>	2													Green List
Long-tailed Tit	<i>Aegithalos caudatus</i>		8	20	16	14	15	6				1		10	Green List

Species: British Common Name	Species: Latin name	Survey 1 28.09.2 4	Survey 2 17.10.2 4	Survey 3 29.10.2 4	Survey 4 15.11.24	Survey 5 26.11.2 4	Survey 6 09.12.2 4	Survey 7 18.12.2 4	Survey 8 08.01.2 5	Survey 9 23.01.2 5	Survey 10 07.02.2 5	Survey 11 19.02.2 5	Survey 12 05.03.2 5	Survey 13 18.03.2 5	Conservatio n Status & Protection
Chiffchaff	<i>Phylloscopus collybita</i>	1	1											1	Green List
Blackcap	<i>Sylvia atricapilla</i>		1	1											Green List
Goldcrest	<i>Regulus regulus</i>	1	2	4			2					2	2	1	Green List
Wren	<i>Troglodytes troglodytes</i>	7	4	4	9	9	10	6	2	2	2	3	4	2	Amber List
Nuthatch	<i>Sitta europaea</i>		1	2 + 1 flyover	1		2		1						Green List
Treecreeper	<i>Certhia familiaris</i>		2		1						1	2			Green List
Starling	<i>Sturnus vulgaris</i>			15									6		Red List NERC S.41
Song Thrush	<i>Turdus philomelos</i>	1	3	1	1	1	2	2		1	1		8	2	Amber List NERC S.41
Mistle Thrush	<i>Turdus viscivorus</i>			1								2		2	Red List
Redwing	<i>Turdus iliacus</i>		60	25	14		4		4	15					Amber List WCA Sch.1
Blackbird	<i>Turdus merula</i>	6	31	19	9	12	9	7	9	6	12	5	15	9	Green List
Fieldfare	<i>Turdus pilaris</i>		1												Red List WCA Sch.1
Robin	<i>Erithacus rubecula</i>	4	6	14	12	10	10	9	4	7	7	6	5	9	Green List
Stonechat	<i>Saxicola rubicola</i>		1	1								1			Green List

Species: British Common Name	Species: Latin name	Survey 1 28.09.2 4	Survey 2 17.10.2 4	Survey 3 29.10.2 4	Survey 4 15.11.24	Survey 5 26.11.2 4	Survey 6 09.12.2 4	Survey 7 18.12.2 4	Survey 8 08.01.2 5	Survey 9 23.01.2 5	Survey 10 07.02.2 5	Survey 11 19.02.2 5	Survey 12 05.03.2 5	Survey 13 18.03.2 5	Conservatio n Status & Protection
House Sparrow	<i>Passer domesticus</i>		4	20	1	13	8	1	25	15	15	7	8	38	Red List NERC S.41
Dunnock	<i>Prunella modularis</i>	1	5	6	2	8	3	3	1	1	8		7	4	Amber List NERC S.41
Pied Wagtail	<i>Motacilla alba</i>			5 flyover	3		1		1				1		Green List
Meadow Pipit	<i>Anthus pratensis</i>		2	1	25	3		8			18			3	Amber List
Chaffinch	<i>Fringilla coelebs</i>		4	9	3	4			5		1		1	1	Green List
Bullfinch	<i>Pyrrhula pyrrhula</i>								1				1	1	Amber List NERC S.41
Greenfinch	<i>Chloris chloris</i>	1	4	3		5	1	1		2	2		2	2	Red List
Linnet	<i>Linaria cannabina</i>		2											1	Red List NERC S.41
Redpoll	<i>Acanthis flammea</i>			1											Red List NERC S.41
Siskin	<i>Carduelis spinus</i>							2							Green List
Goldfinch	<i>Carduelis carduelis</i>	2	4	12	9	16	1	3		2	7	1	1	3	Green List
Reed Bunting	<i>Emberiza schoeniclus</i>			1		3	3			4	8			10	Amber List NERC S.41
Ring-necked Parakeet	<i>Psittacula krameri</i>			2 + 7 flyover	1	4									Not Listed
Total No. Species	55	22	35	36	34	25	27	24	23	20	23	21	28	29	

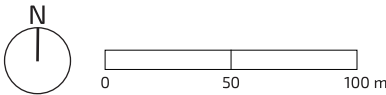
APPENDIX 7.B: WINTERING BIRD SURVEY RESULTS – NOCTURNALS

Species: British Common Name	Species: Latin name	Survey 1 26.11.24	Survey 2 18.12.24	Survey 3 29.10.24	Survey 4 15.11.24	Conservation Status & Protection
Snipe	<i>Gallinago gallinago</i>		1			Amber List
Grey Heron	<i>Ardea cinerea</i>				1	Green List
Blackbird	<i>Turdus merula</i>				1	Green List
Skylark	<i>Alauda arvensis</i>					Red List NERC 5.41
Robin	<i>Erithacus rubecula</i>		1			Green List
Long-tailed Tit	<i>Aegithalos caudatus</i>		6			Green List
Total No. Species	6		3		2	

FPCR Environment and Design Ltd

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Site Boundary

BoCC 5 Red List Species

GR Greenfinch

BoCC 5 Amber List Species

D Dunnock

MH Moorhen

ST Song Thrush

WP Woodpigeon

WR Wren

NERC Species of Principal Importance

Schedule 1 Species

date 07/08/25 drwn/chkd
DV / MS

client
Hallam Land Management Ltd

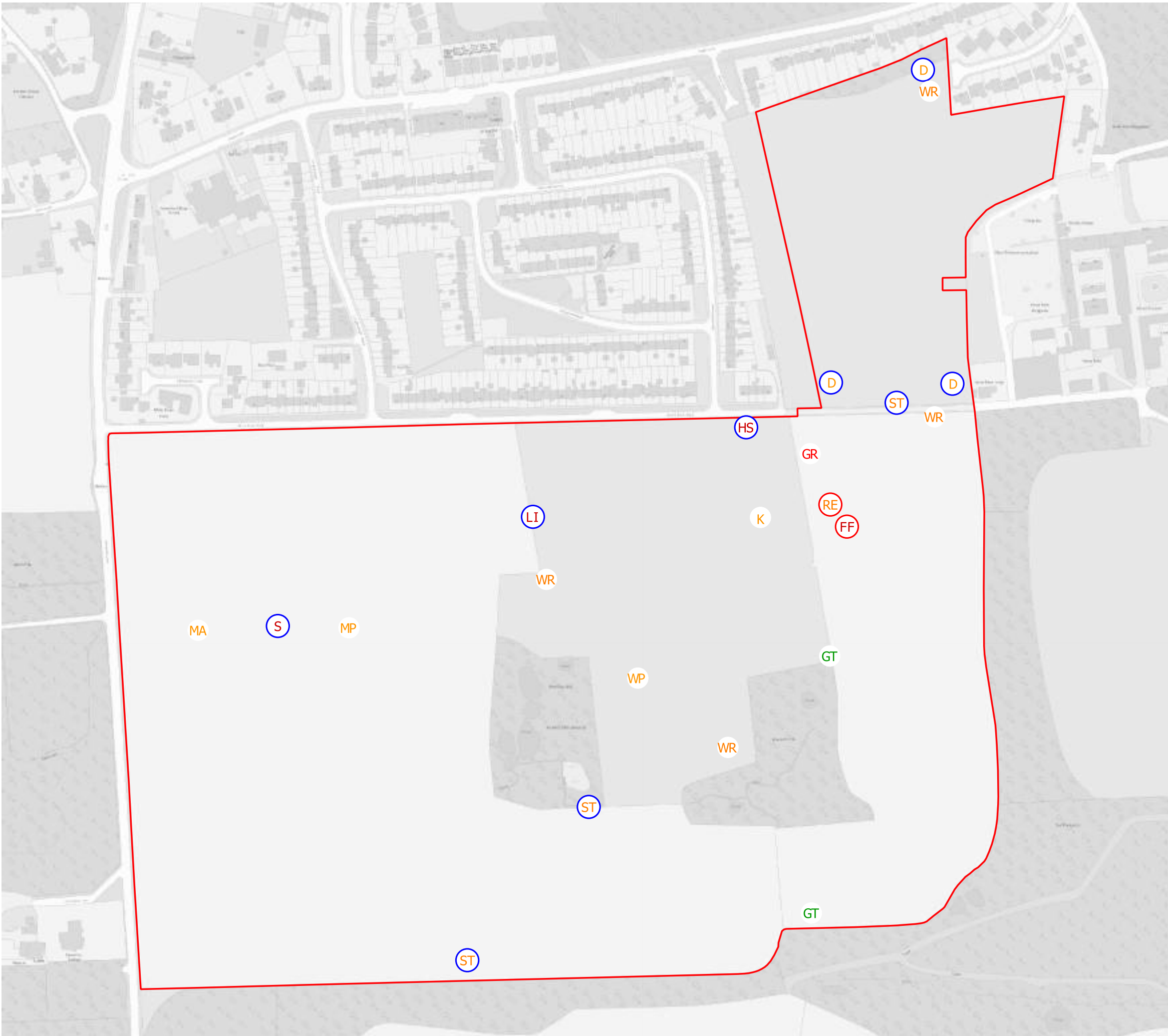
project
Land east of Knowsley Lane,
Knowsley

title scale
WBS RESULTS PLAN - DISTRIBUTION 1:3,000 @ A3
OF NOTABLE SPECIES - 28/09/24

number rev

FIGURE 7.4.1

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& design



N

0

50

100 m

Site Boundary

BoCC 5 Red List Species

FF

Fieldfare

HS

House Sparrow

LI

Linnet

S

Skylark

GR

Greenfinch

BoCC 5 Amber List Species

D

Dunnock

K

Kestrel

MA

Mallard

MP

Meadow Pipit

RE

Redwing

ST

Song Thrush

WP

Woodpigeon

WR

Wren

BoCC 5 Green List Species

GT

Great Tit

NERC Species of Principal Importance

Schedule 1 Species

date

07/08/25

drwn/chkd

DV / MS

client

Hallam Land Management Ltd

project

Land east of Knowsley Lane,
Knowsley

title

WBS RESULTS PLAN - DISTRIBUTION
OF NOTABLE SPECIES - 17/10/24

scale

1:3,000 @ A3

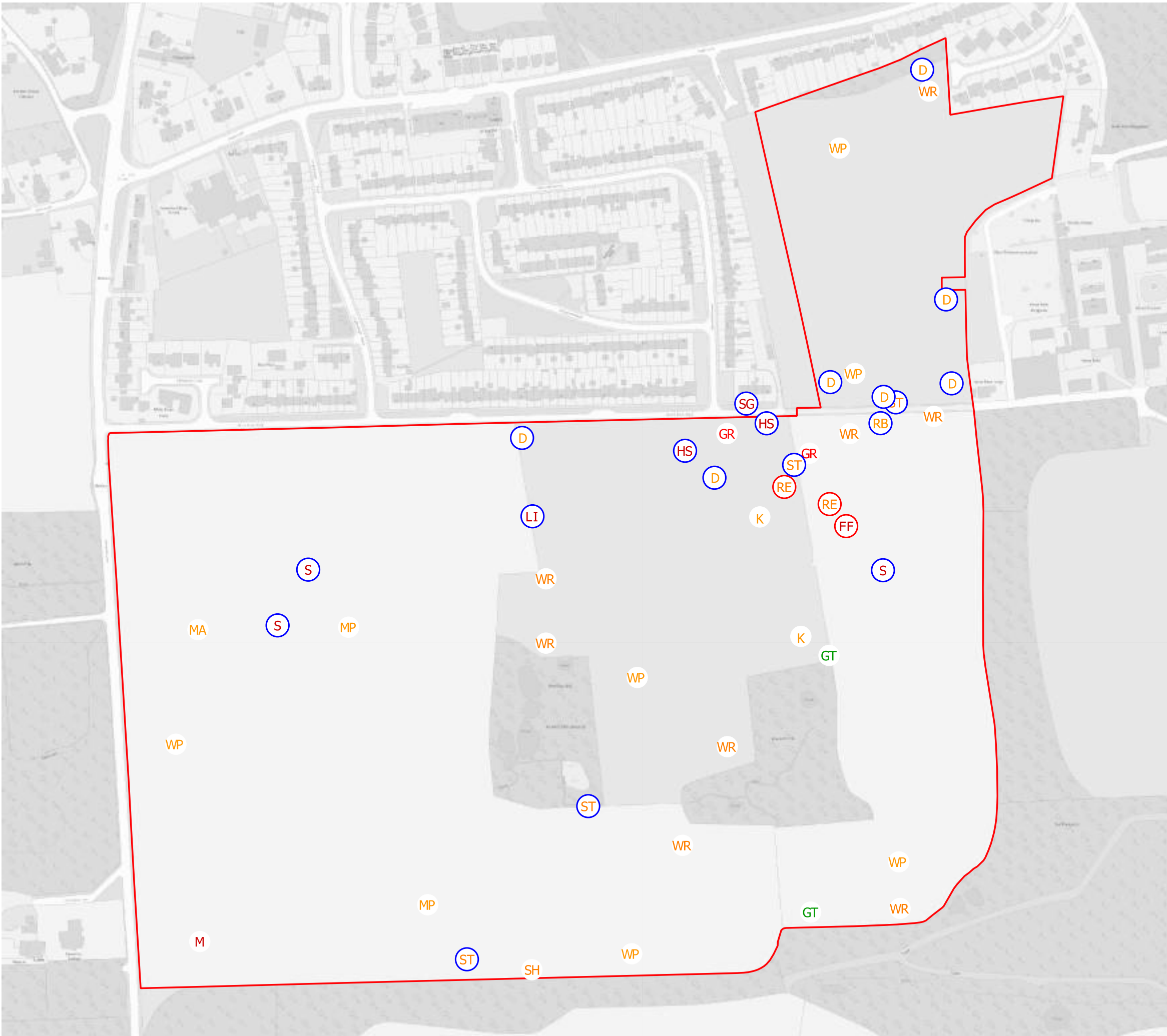
number

FIGURE 7.4.2

rev

-

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& design



N

0

50

100 m

Site Boundary

BoCC 5 Red List Species

FF

Fieldfare

HS

House Sparrow

LI

Linnet

M

Mistle Thrush

S

Skylark

SG

Starling

GR

Greenfinch

BoCC 5 Amber List Species

D

Dunnock

K

Kestrel

MA

Mallard

MP

Meadow Pipit

RB

Reed Bunting

RE

Redwing

ST

Song Thrush

SH

Sparrowhawk

WP

Woodpigeon

WR

Wren

NEPC Species of Principal Importance

Schedule 1 Species

date

07/08/25

drwn/chkd

DV / MS

client

Hallam Land Management Ltd

project

Land east of Knowsley Lane,
Knowsley

title

WBS RESULTS PLAN - DISTRIBUTION
OF NOTABLE SPECIES - 29/10/24

scale

1:3,000 @ A3

number

FIGURE 7.4.3

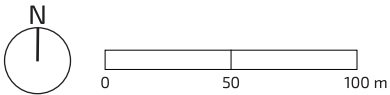
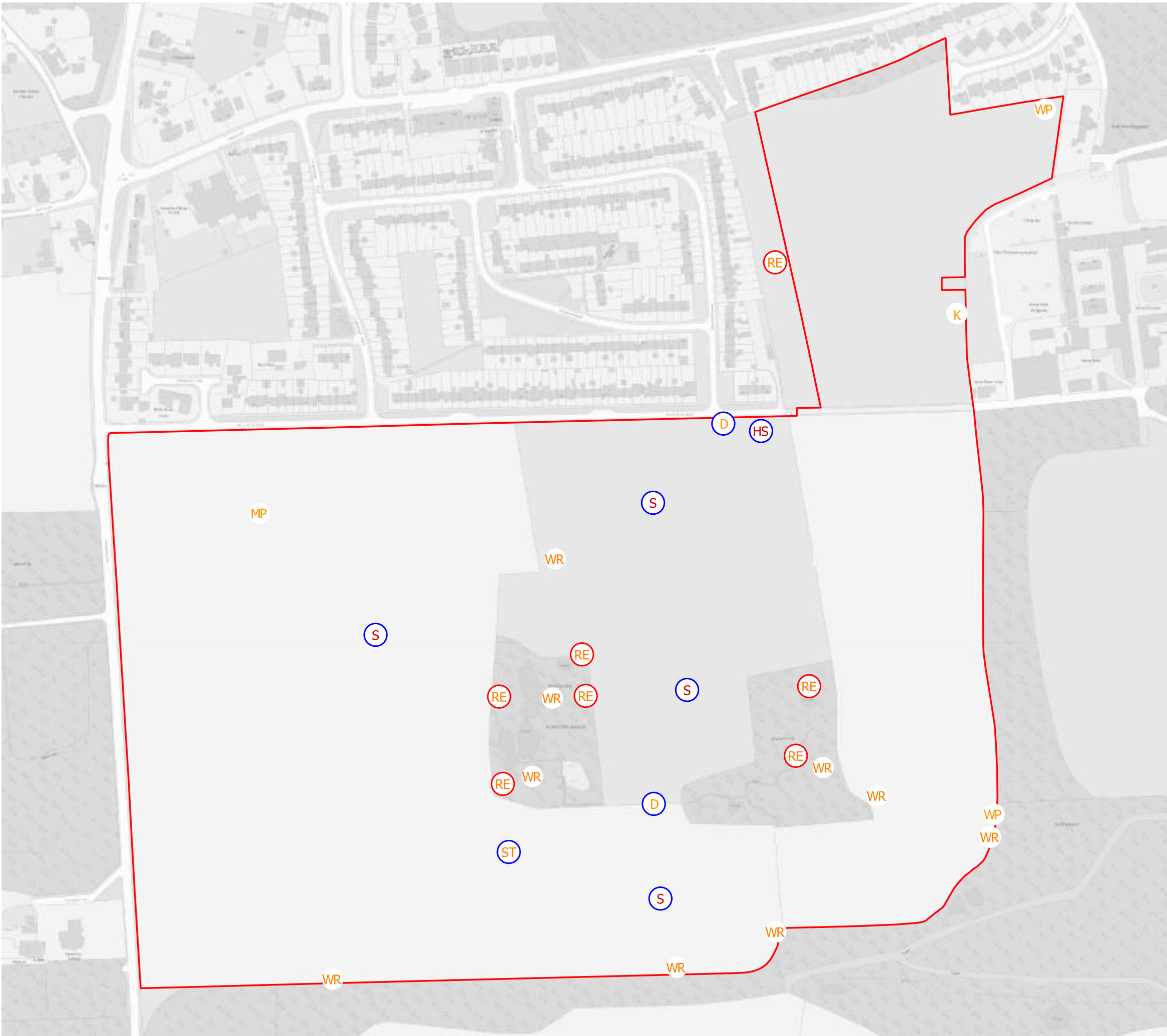
rev

-

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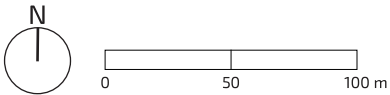
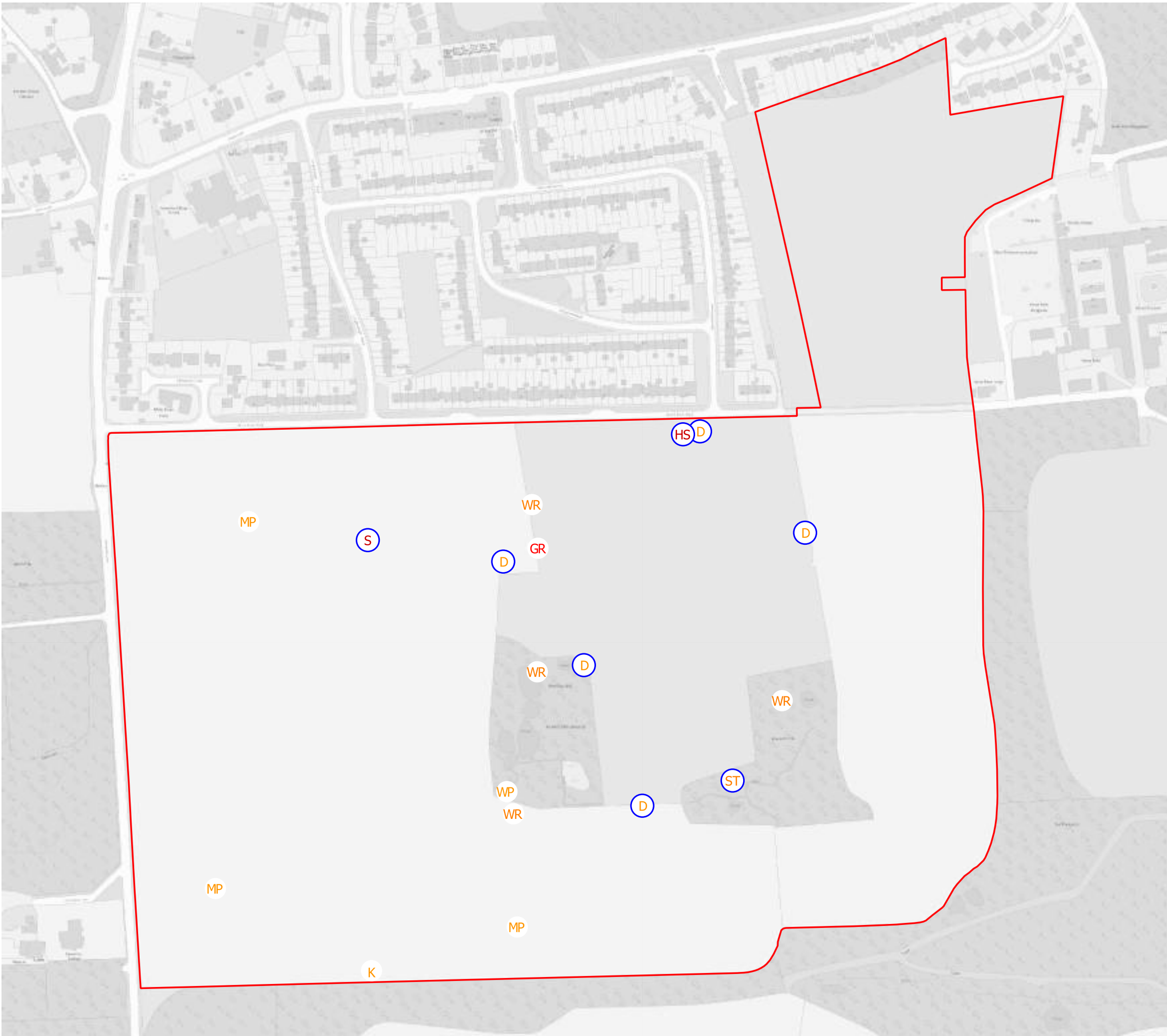
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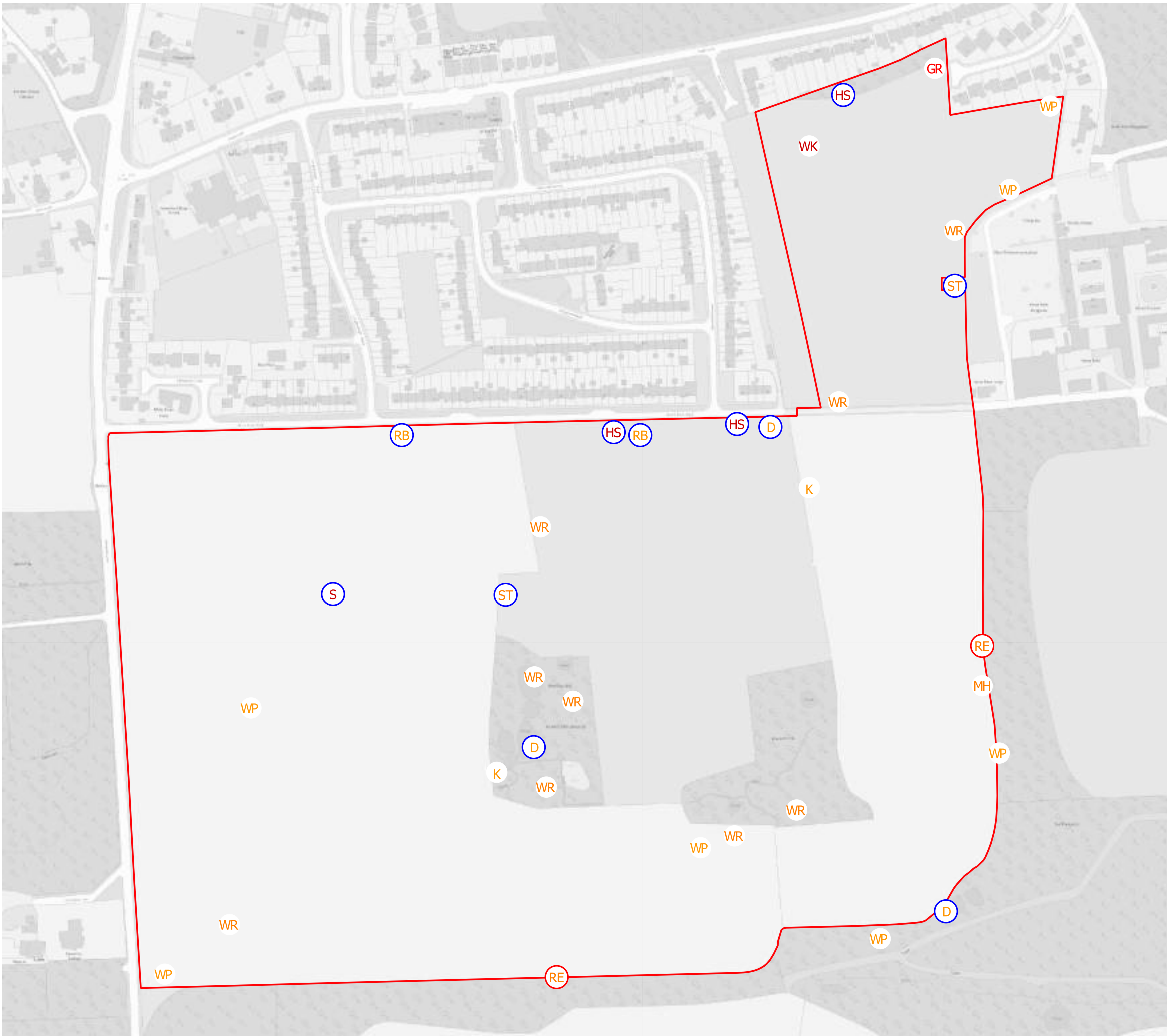
- Site Boundary**
- BoCC 5 Red List Species**
- HS** House Sparrow
 - S** Skylark
- BoCC 5 Amber List Species**
- D** Dunnock
 - K** Kestrel
 - MP** Meadow Pipit
 - RE** Redwing
 - ST** Song Thrush
 - WP** Woodpigeon
 - WR** Wren
- NERC Species of Principal Importance**
- Schedule 1 Species**

date	07/08/25	drwn/chkd	DV / MS
client	Hallam Land Management Ltd		
project	Land east of Knowsley Lane, Knowsley		
title	WBS RESULTS PLAN - DISTRIBUTION OF NOTABLE SPECIES - 15/11/24	scale	1:3,000 @ A3
number	FIGURE 7.4.4	rev	-



- Site Boundary
- BoCC 5 Red List Species
 - HS House Sparrow
 - S Skylark
 - GR Greenfinch
- BoCC 5 Amber List Species
 - D Duncock
 - K Kestrel
 - MP Meadow Pipit
 - ST Song Thrush
 - WP Woodpigeon
 - WR Wren
- NERC Species of Principal Importance
- Schedule 1 Species

date	07/08/25	drwn/chkd	DV / MS
client	Hallam Land Management Ltd		
project	Land east of Knowsley Lane, Knowsley		
title	WBS RESULTS PLAN - DISTRIBUTION OF NOTABLE SPECIES - 26/11/24	scale	1:3,000 @ A3
number	FIGURE 7.4.5	rev	-



N

0

50

100 m

Site Boundary

BoCC 5 Red List Species

HS

House Sparrow

S

Skylark

WK

Woodcock

GR

Greenfinch

BoCC 5 Amber List Species

D

Dunnock

K

Kestrel

RB

Reed Bunting

MH

Moorhen

RE

Redwing

ST

Song Thrush

WP

Woodpigeon

WR

Wren

NERC Species of Principal Importance

Schedule 1 Species

date

07/08/25

client

Hallam Land Management Ltd

project

Land east of Knowsley Lane,
Knowsley

title

WBS RESULTS PLAN - DISTRIBUTION
OF NOTABLE SPECIES - 09/12/24

scale

1:3,000 @ A3

number

FIGURE 7.4.6

drwn/chkd

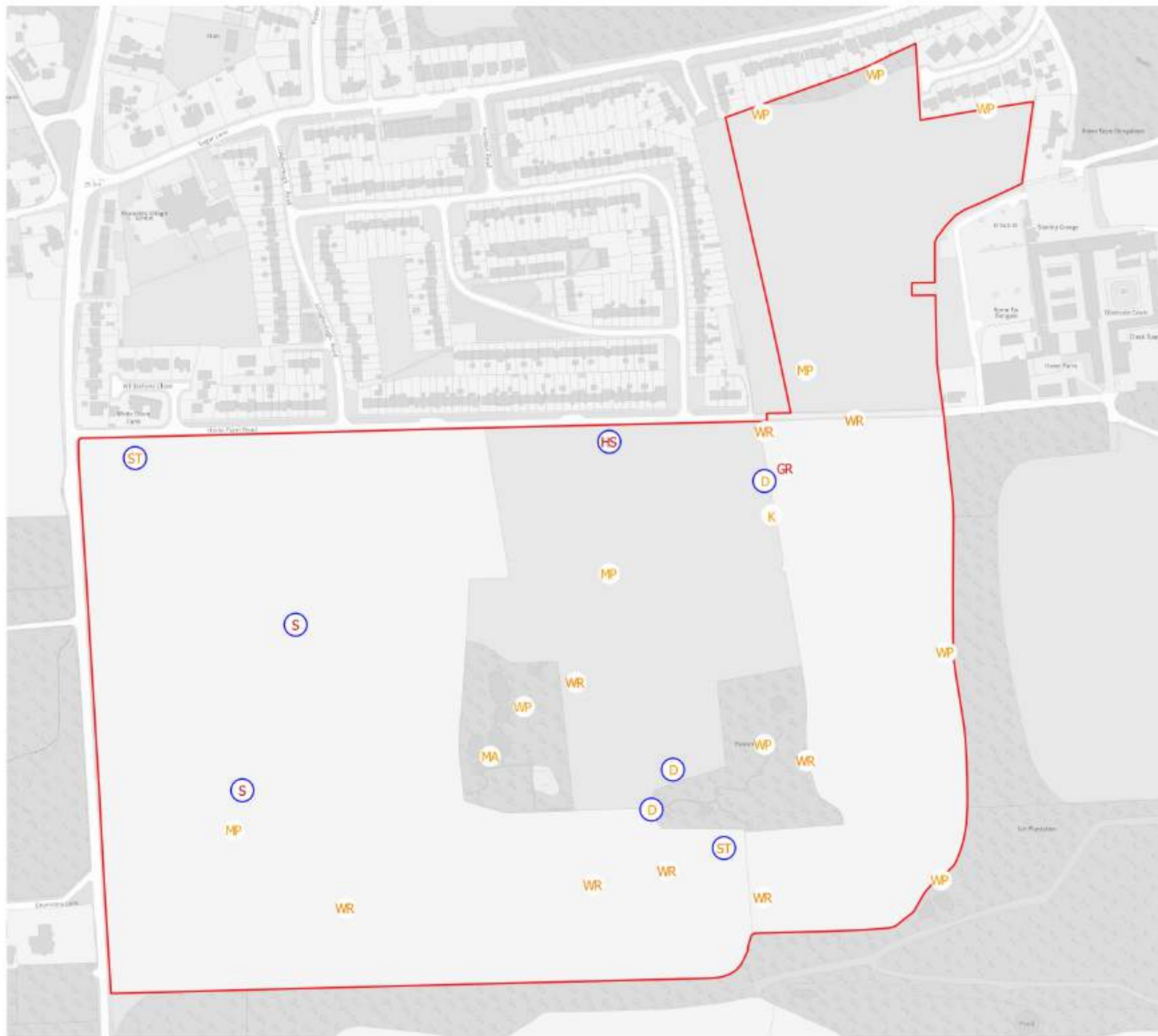
DV / MS

rev

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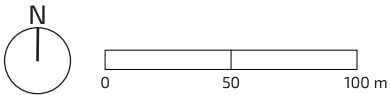
- Site Boundary
- BoCC 5 Red List Species**
- HS House Sparrow
- S Skylark
- GR Greenfinch
- BoCC 5 Amber List Species**
- D Dunnock
- K Kestrel
- MA Mallard
- MP Meadow Pipit
- ST Song Thrush
- WP Woodpigeon
- WR Wren
- NERC Species of Principal Importance
- Schedule 1 Species

date 07/08/25 drawn/checked DY / MS

client **Hallam Land Management Ltd**
project **Land east of Knowsley Lane, Knowsley**

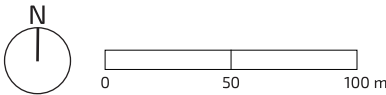
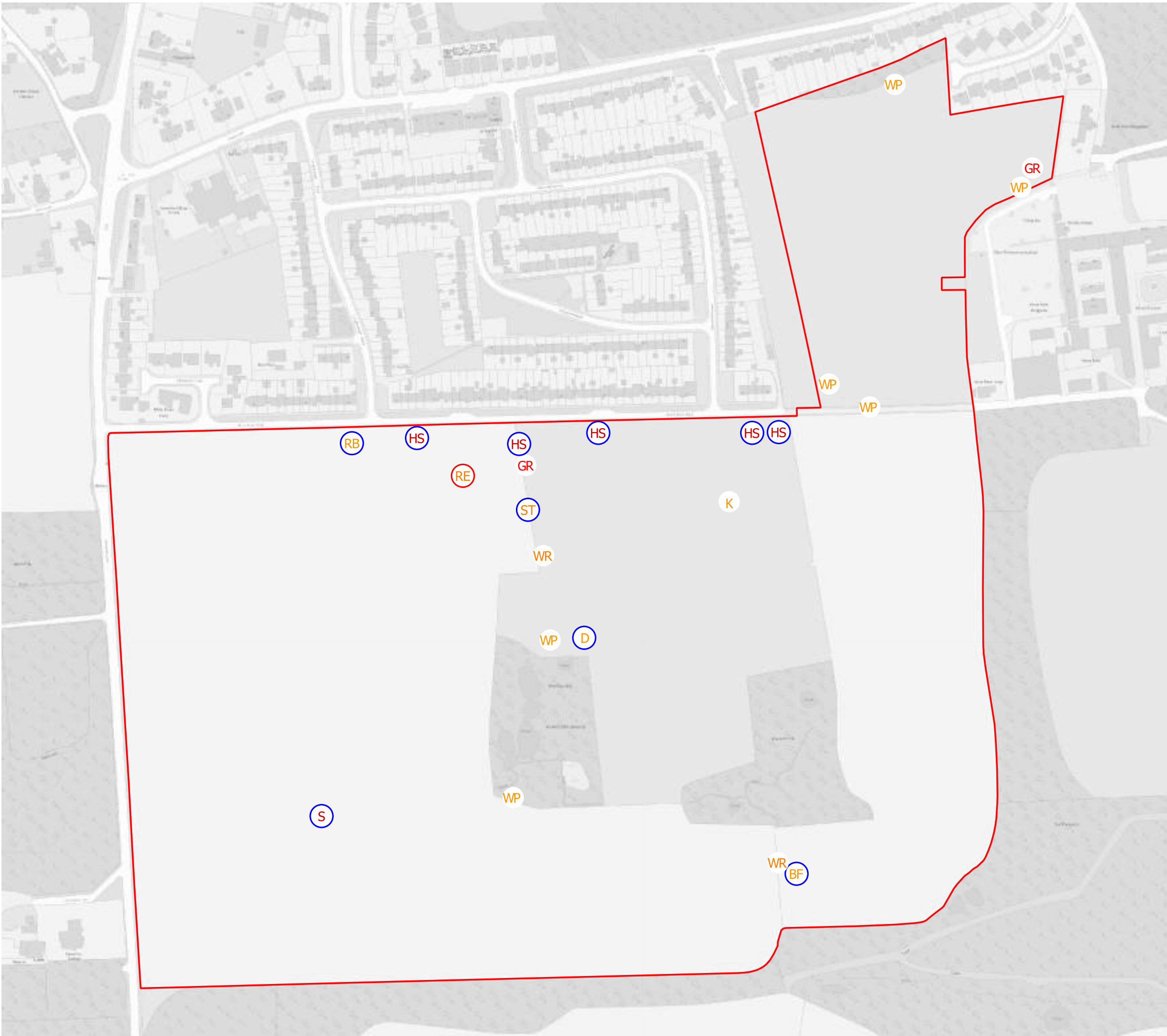
title **WBS RESULT'S PLAN - DISTRIBUTION OF NOTABLE SPECIES - 18/12/24** scale 1:3,000 @ A3

number **FIGURE 7.4.7** rev -



- Site Boundary**
- BoCC 5 Red List Species**
- HS** House Sparrow
 - S** Skylark
- BoCC 5 Amber List Species**
- D** Dunnock
 - K** Kestrel
 - SN** Snipe
 - RE** Redwing
 - RO** Rook
 - WP** Woodpigeon
 - WR** Wren
- NERC Species of Principal Importance**
- Schedule 1 Species**

date	07/08/25	drwn/chkd	DV / MS
client	Hallam Land Management Ltd		
project	Land east of Knowsley Lane, Knowsley		
title	WBS RESULTS PLAN - DISTRIBUTION OF NOTABLE SPECIES - 08/01/25	scale	1:3,000 @ A3
number	FIGURE 7.4.8	rev	-



Site Boundary

BoCC 5 Red List Species

HS House Sparrow

S Skylark

GR Greenfinch

BoCC 5 Amber List Species

BF Bullfinch

D Dunnock

K Kestrel

RB Reed Bunting

RE Redwing

ST Song Thrush

WP Woodpigeon

WR Wren

NERC Species of Principal Importance

Schedule 1 Species

date 07/08/25 drwn/chkd DV / MS

client Hallam Land Management Ltd

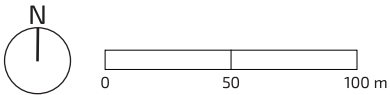
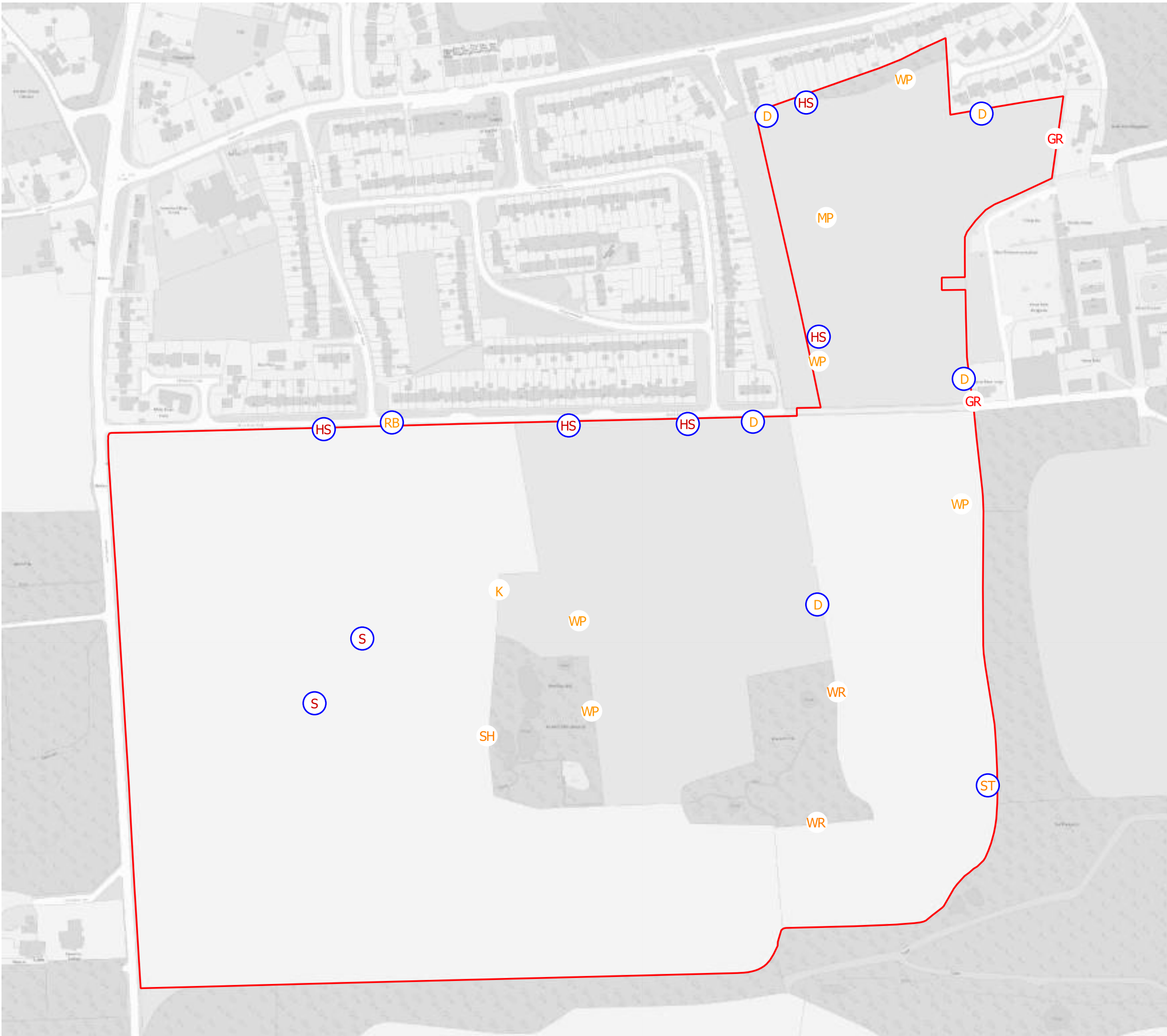
project Land east of Knowsley Lane, Knowsley

title WBS RESULTS PLAN - DISTRIBUTION OF NOTABLE SPECIES - 23/01/25 scale 1:3,000 @ A3

number rev

FIGURE 7.4.9

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Site Boundary

BoCC 5 Red List Species

HS House Sparrow

S Skylark

GR Greenfinch

BoCC 5 Amber List Species

D Dunnock

K Kestrel

MP Meadow Pipit

RB Reed Bunting

ST Song Thrush

SH Sparrowhawk

WP Woodpigeon

WR Wren

Blue circle: NERC Species of Principal Importance

Red circle: Schedule 1 Species

date 07/08/25 drwn/chkd
DV / MS

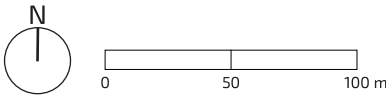
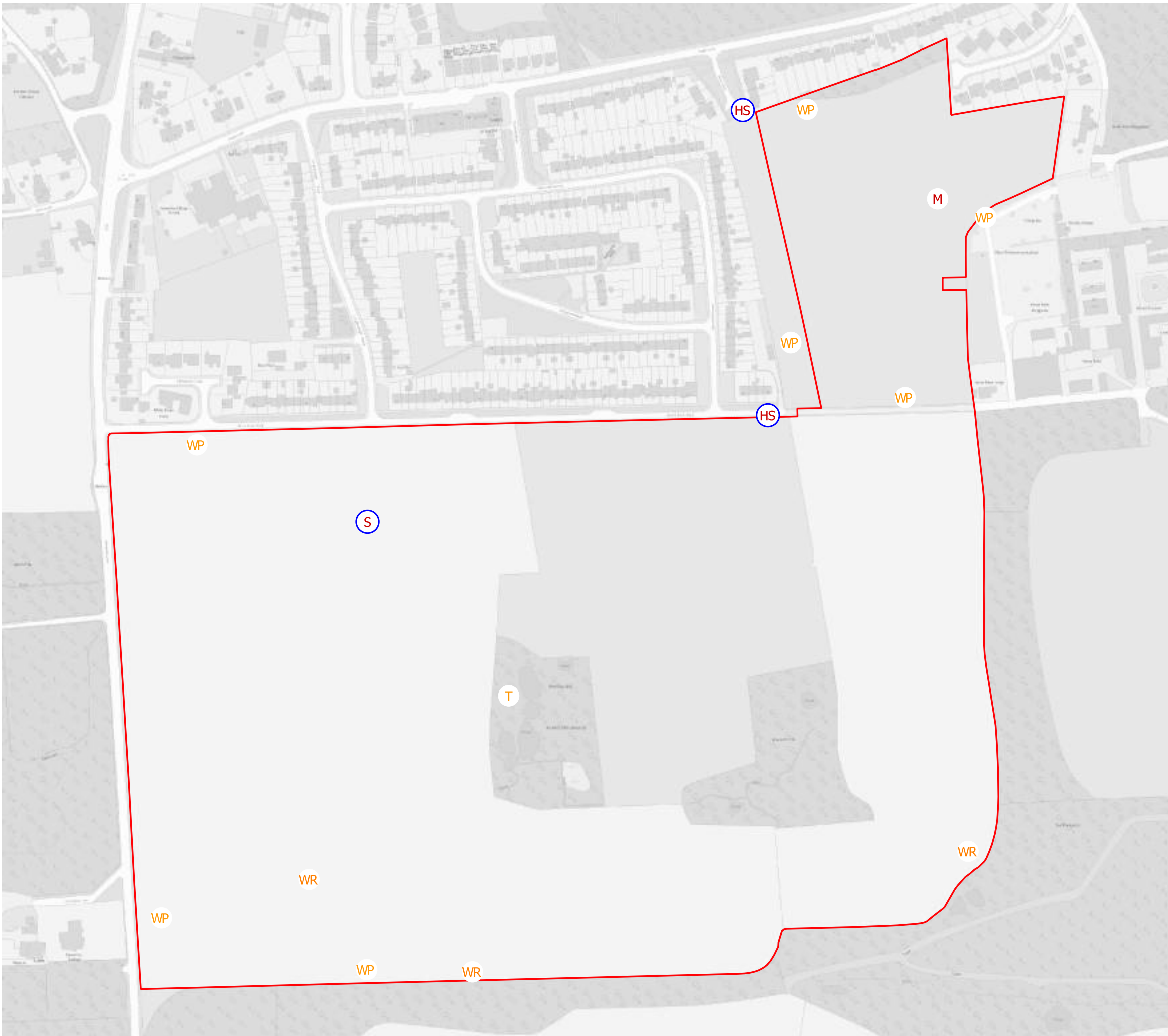
client
Hallam Land Management Ltd
project
**Land east of Knowsley Lane,
Knowsley**

title
**WBS RESULTS PLAN - DISTRIBUTION
OF NOTABLE SPECIES - 07/02/25** scale
1:3,000 @ A3

number rev

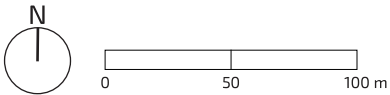
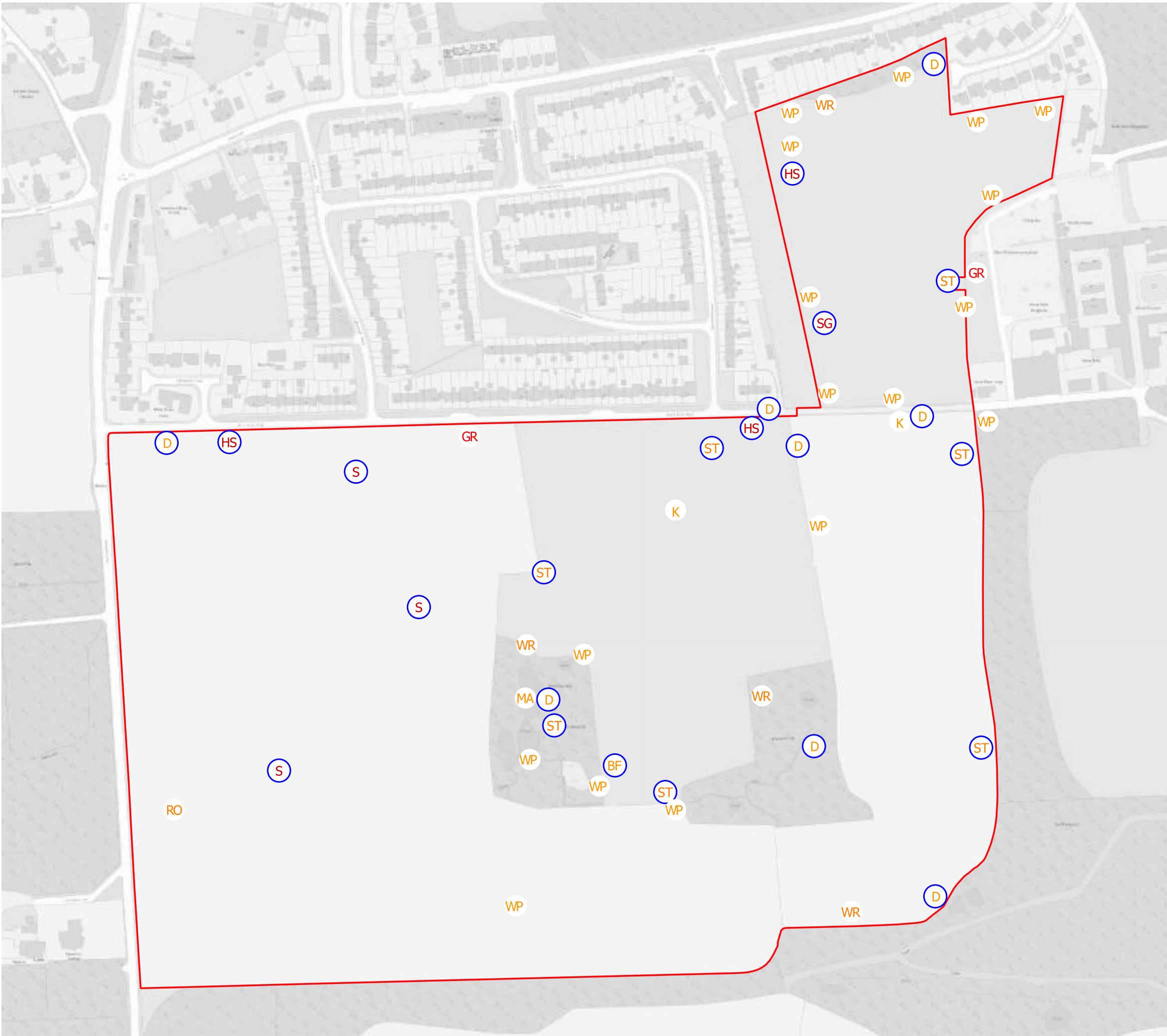
FIGURE 7.4.10

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- Site Boundary**
- BoCC 5 Red List Species**
- HS** House Sparrow
 - M** Mistle Thrush
 - S** Skylark
- BoCC 5 Amber List Species**
- T** Teal
 - WP** Woodpigeon
 - WR** Wren
- NERC Species of Principal Importance**
- Schedule 1 Species**

date	07/08/25	drwn/chkd	DV / MS
client	Hallam Land Management Ltd		
project	Land east of Knowsley Lane, Knowsley		
title	WBS RESULTS PLAN - DISTRIBUTION OF NOTABLE SPECIES - 19/02/25	scale	1:3,000 @ A3
number	FIGURE 7.4.11	rev	-

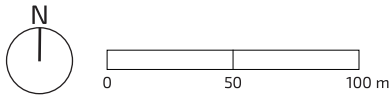
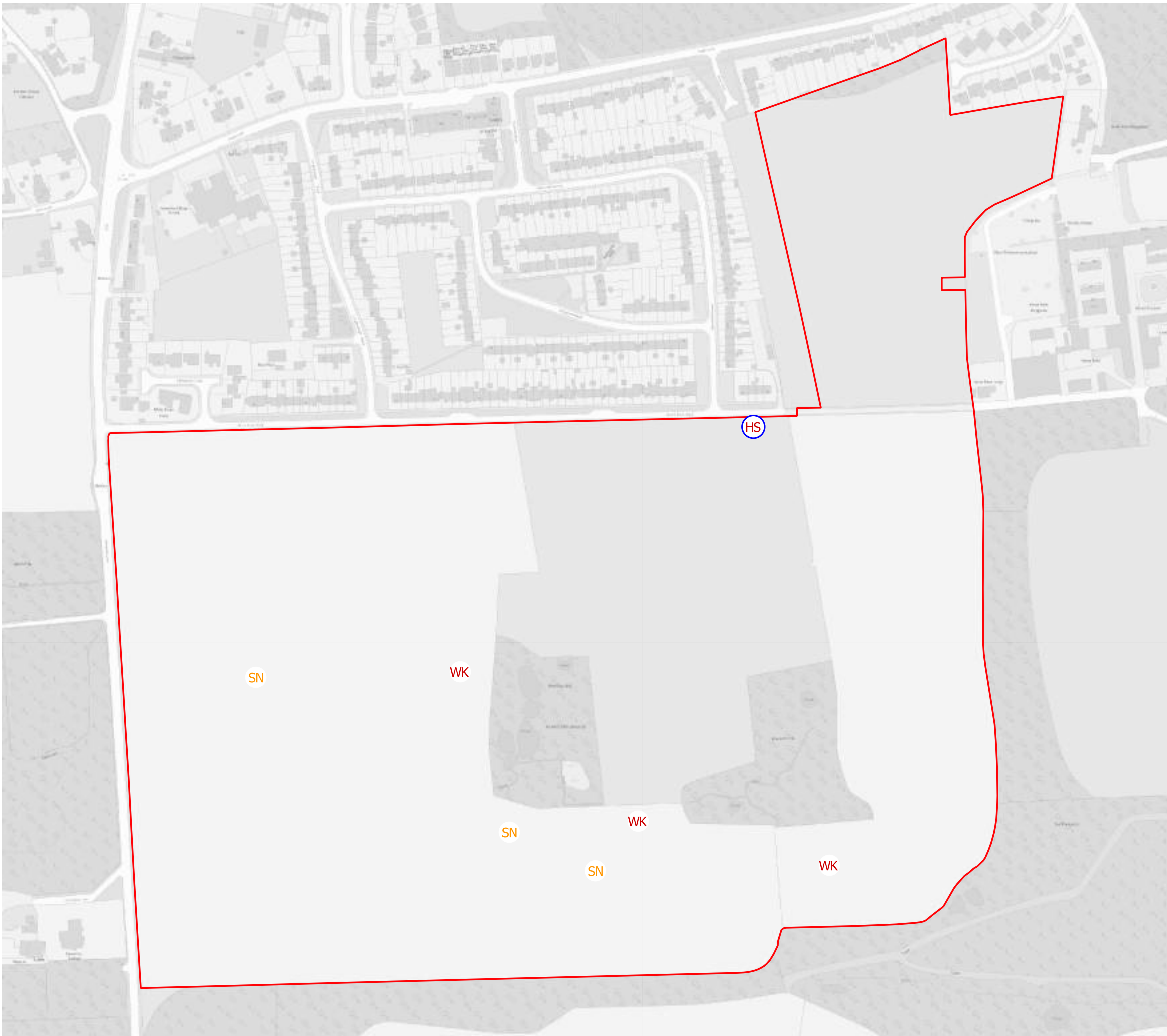


- Site Boundary**
- BoCC 5 Red List Species**
- HS** House Sparrow
 - S** Skylark
 - SG** Starling
 - GR** Greenfinch
- BoCC 5 Amber List Species**
- BF** Bullfinch
 - D** Dunnock
 - K** Kestrel
 - MA** Mallard
 - RO** Rook
 - ST** Song Thrush
 - WP** Woodpigeon
 - WR** Wren
- NERC Species of Principal Importance**
- Schedule 1 Species**

date	07/08/25	drwn/chkd	DV / MS
client	Hallam Land Management Ltd		
project	Land east of Knowsley Lane, Knowsley		
title	WBS RESULTS PLAN - DISTRIBUTION OF NOTABLE SPECIES - 05/03/25	scale	1:3,000 @ A3
number	FIGURE 7.4.12	rev	-



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- Site Boundary
- BoCC 5 Red List Species
 - HS House Sparrow
 - WK Woodcock
- BoCC 5 Amber List Species
 - SN Snipe
- NERC Species of Principal Importance
- Schedule 1 Species

date	07/08/25	drwn/chkd	DV / MS
client	Hallam Land Management Ltd		
project	Land east of Knowsley Lane, Knowsley		
title	WBS RESULTS PLAN - DISTRIBUTION OF NOTABLE SPECIES - Nocturnal	scale	1:3,000 @ A3
number	FIGURE 7.4.14	rev	-