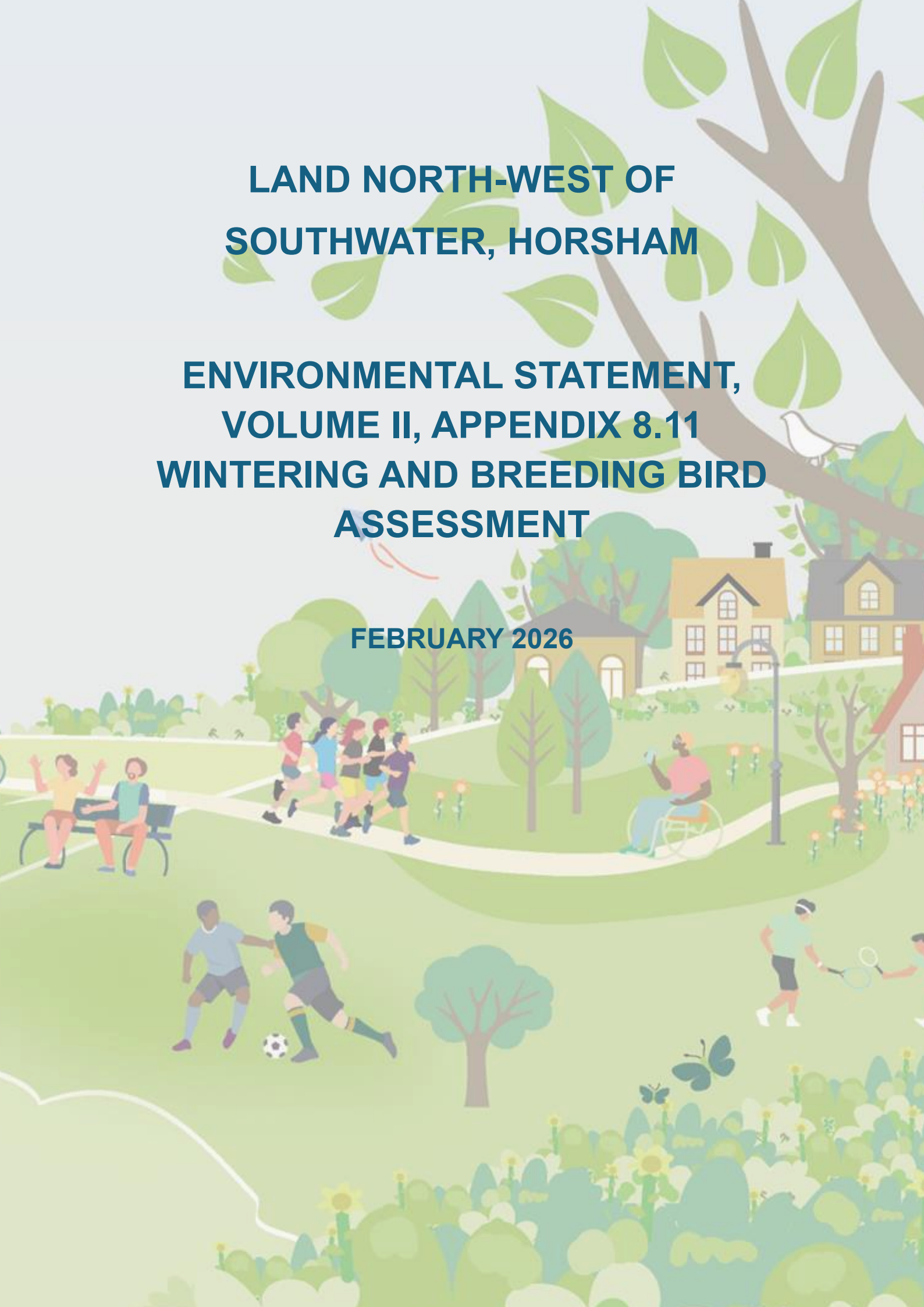


**LAND NORTH-WEST OF
SOUTHWATER, HORSHAM**

**ENVIRONMENTAL STATEMENT,
VOLUME II, APPENDIX 8.11
WINTERING AND BREEDING BIRD
ASSESSMENT**

FEBRUARY 2026





LAND NORTH WEST OF SOUTHWATER
BREEDING AND WINTERING BIRD ASSESSMENT

Prepared for Berkeley Homes (Southern) Ltd

by

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1 INTRODUCTION

1.1 Introduction and site description

1.1.1 This report describes the results of breeding and wintering bird surveys carried out within approximately 128ha of land west of Southwater, West Sussex, hereinafter referred to as 'the site'. The site centre is located by National Grid Reference TQ154274. The study was commissioned by Berkeley Homes (Southern) Ltd in October 2021.

1.1.2 The site is split into a main site and a smaller area. The main site lies on the western edge of the village of Southwater and comprises a series of arable fields, semi-improved grassland fields, and improved grassland fields bordered by hedgerows, treelines, and fence lines. Other habitats present include areas of broadleaved woodland, mixed woodland, and tall ruderal vegetation. In addition, Marlpot Gill flows in a southerly direction through the west of this area and a second stream flows east to west through the north. The main site is bordered to the west by Two Mile Ash road and associated residential properties, beyond which are arable fields; to the north by the A24, industrial units, and agricultural land; to the south by Kirsty's Wood, residential properties and grassland fields; and to the east by Worthing Road, beyond which is the settlement of Southwater.

1.1.3 The smaller area of the site measures approximately 1.35ha in size and is located approximately 800m to the north-west of the main site near Christ's Hospital railway station. This area comprises part of a grassland field and is bordered to the north by woodland; to the east by grassland fields; to the west by a public right of way and access road with residential properties and Christ's Hospital station car park beyond, and to the south by residential properties.

1.1.4 This report covers the breeding bird and wintering bird surveys of the main site carried out between November 2021 and June 2022.

1.1.5 The location and boundary of the main site are shown in *Appendix A*. A more detailed description of the habitats present and plans showing the distribution of habitats across the main site are given in the *Land at Southwater: Ecological Appraisal* (HDA, 2019).

1.2 Development proposals

1.2.1 Development proposals for the site include an outline planning application with all matters reserved for a mixed use strategic development to include demolition of existing buildings and erection of up to 1,500 dwellings, up to 15,750 sqm (GIA) of flexible employment space (Use Classes E/B2/B8), up to 2,900 sqm (GIA) flexible community facilities (Use Classes E/F1/F2); education facilities; sports facilities; 5 gypsy and traveller pitches; public open space; landscaping and related infrastructure. This will largely be focussed on the larger main site, with the smaller area to the west

proposed for provision of new parking facilities for users of the local rail network.

Legislative context

1.3 All species of bird are protected through Part 1, Sections 1 to 8, of the 1981 Wildlife and
1.3.1 Countryside Act (as amended). Subject to the provisions of Part 1 it is an offence to:

- Intentionally kill, injure or take any wild bird;
- Take, damage or destroy the nest of any wild bird whilst that nest is in use or being built;
- Take or destroy an egg of any wild bird;
- Possess or be in control of any live or dead wild bird, or anything derived from such a bird; and/or
- Possess or be in control of an egg of a wild bird, or any part of such an egg.

1.3.2 In addition, selected species of particular nature conservation interest included in Schedule 1 of the Act are afforded a higher level of protection, with significantly higher penalties applying where an offence is committed. In addition to the basic level of protection described above, it is an offence to:

- Intentionally disturb any wild bird included in Schedule 1 whilst it is building a nest or is in, on or near a nest containing eggs or young; and/or
- Disturb dependent young of such a bird.

1.3.3 Some bird species are afforded additional protection under the 2019 Conservation of Habitats and Species (Amendment) (EU Exit) Regulations. The 2019 Regulations allow for the setting up of Special Protection Areas (SPAs) where internationally important populations occur of bird species included on Annex 1 of the Council Directive 79/409 EEC on the Conservation of Wild Birds.

1.3.4 Many bird species are scarce and/or have undergone significant declines in recent years and these are listed as priority species on the UK Biodiversity Action Plan (BAP) and listed as Species of Principal Importance under Section 41 of the 2006 Natural Environment and Rural Communities (NERC) Act. Section 40 of the NERC Act and planning policy requires that these bird species are a material consideration in the planning process.

1.3.5 The UKBAP and birds listed as Species of Principal Importance generally reflect those 'red listed' by the RSPB in their publication '*Birds of Conservation Concern*' (BoCC) (RSPB, 2021).

1.4 Scope and purpose of the report

1.4.1 Phase 1 habitat surveys and desk studies initially undertaken by HDA in 2019 (HDA, 2019) identified potential for birds of conservation concern (BoCC [RSPB, 2021]), Species of Principal Importance and species specially protected under Schedule 1 of the 1981 Wildlife and Countryside Act to occur within the site.

1.4.2 Given the nature and extent of the proposed development, which would affect grassland, arable, woodland, hedgerows, and scrub habitats, along with standard trees and buildings, surveys were carried out in order to inform the likely implications of the proposed development on breeding and wintering birds. The distribution of habitats across the site is shown on the Phase 1 Habitat Survey Plan provided in *Appendix A*.

1.4.3 This report presents the survey findings in the context of the site and proposed development in order to determine:

- The bird species using the site;
- Their status (wintering, breeding or otherwise);
- The approximate number and distribution of species meeting nature conservation criteria;
- The nature conservation interest of the site for breeding and wintering birds; and
- The potential effects of the proposed development on the ornithological interest of the site.

2 DESK STUDY

2.1 Designated Sites

2.1.1 Information on statutory and non-statutory designated areas located in the vicinity of the site and its surrounds has been collated from various sources including the 'Multi Agency Geographic Information for the Countryside' (MAGIC) online database (magic.defra.gov.uk) and Sussex Biodiversity Record Centre (SxBRC). The results are described below.

Statutory designated areas

Internationally designated areas

2.1.2 No internationally designated areas such as Special Protection Areas (SPAs) or Special Areas of Conservation (SACs) are located within 10km of the site.

Nationally designated areas

2.1.3 There are no National Nature Reserves (NNRs) falling within 5km of the site.

2.1.4 Four Sites of Special Scientific Interest (SSSIs) are located within 5km of the site. These are:

- Slinfold Stream and Quarry SSSI located approximately 3.9km to the north-west of the site at its closest point. This 1.93ha SSSI is designated for its geological interest;
- St Leonard's Park Ponds SSSI located approximately 4.2km to the north-east of the site. This 4ha SSSI supports species-rich ponds along a wooded stream. Fen and marginal vegetation bordering the ponds support diverse botanical communities, and the ponds and adjacent woodland provide habitat for a diverse range of dragonflies and damselflies, including several rare species;
- St Leonard's Forest SSSI located approximately 4.5km to the north-east of the site. This 84.5ha SSSI comprises remnants of formerly more extensive deciduous woodland with examples of high forest and a varied ground flora. The presence of 'Atlantic' bryophytes within the SSSI indicate the continuity of woodland cover in this area for the past 5000 years; and
- Coneyhurst Cutting SSSI located approximately 4.9km to the south-west of the site. This 0.15ha SSSI is designated for its geological interest.

2.1.5 There are no Local Nature Reserves (LNRs) within 5km of the site.

Non-statutory designated areas

2.1.6 One Local Wildlife Site (LWS) is located within the site, namely Courtland Wood LWS. This 5.8ha LWS supports a relatively small area of semi-natural broadleaved woodland with conifer introductions, which supports a ground flora with a good number of ancient woodland indicators. The location of Courtland Wood is shown on the plans provided in *Appendix A*.

2.1.7 In addition, four further LWSs lie within 2km of the site, these include:

- Sparrow Copse LWS located approximately 460m to the north-west of the site. This 8.5ha LWS supports Ash and Maple woodland situated on the slopes of a stream valley. The woodland has a diverse shrub layer and species-rich ground flora;
- Southwater Country Park Complex LWS located approximately 550m to the south-east of the site. This 25ha LWS comprises a mosaic of habitats which support a number of rare and scarce species;
- High Wood LWS located approximately 1.4km to the north-west of the site. This 10.1ha LWS supports an area of ancient woodland with a diverse ground flora situated on steeply sloped ground; and
- The Downs Link, Nutham Wood and Greatsteeds Farm LWS located approximately 1.6km to the south-east of the site. This 35.1ha LWS comprises a range of habitats including a dismantled railway line, herb-rich meadow and ancient semi-natural woodland.

2.1.8 Seventy-nine units of woodland included on Natural England's Ancient Woodland Inventory are located within 2km of the site. Three of these units are located within the site including Smith's Copse, Courtland Wood and Two Mile Ash Gill. The locations of areas of woodland included in Natural England's Ancient Woodland Inventory are shown on the plans provided in *Appendix A*.

2.2 Existing Bird Records

2.2.1 SxBRC provided 2472 records of birds occurring within the desk study area pertaining to the 2019 Ecological appraisal (HDA 2019). In addition, a desk study conducted for the Christs Hospital site in 2022 which partially overlaps the area of the 2019 desk study provided 798 records of birds, including three species not recorded in the original desk study. *Table 1* below identifies those species for which records were provided that meet the nature conservation criteria described in *Section 1.3*. Those species first recorded in the 2022 desk study are marked with an asterisk.

Table 1: Notable bird species recorded within the desk study area

Common Name	Scientific Name	Annex I ¹	WCA 1 ²	NERC 41 ³	BOCC4 (2021) ⁴
Barn Owl	<i>Tyto alba</i>				Green
Bittern	<i>Botaurus stellaris</i>				Amber
Black Tern	<i>Chlidonias niger</i>				Green
Black-headed Gull	<i>Chroicocephalus ridibundus</i>				Amber
Bullfinch	<i>Pyrrhula pyrrhula</i>				Amber
Cetti's Warbler*	<i>Cettia cetti</i>		1		Green
Common Gull	<i>Larus canus</i>				Amber
Common Scoter	<i>Melanitta nigra</i>				Red
Corn Bunting	<i>Emberiza calandra</i>				Red
Cuckoo	<i>Cuculus canorus</i>				Red
Dunnock	<i>Prunella modularis</i>				Amber
Firecrest	<i>Regulus ignicapilla</i>				Green
Grey Partridge	<i>Perdix perdix</i>				Red
Grey Wagtail	<i>Motacilla cinerea</i>				Amber
Hawfinch	<i>Coccothraustes coccothraustes</i>				Red
Herring Gull	<i>Larus argentatus</i>				Red
Hobby	<i>Falco subbuteo</i>				Green
House Martin	<i>Delichon urbicum</i>				Red
House Sparrow	<i>Passer domesticus</i>				Red
Kestrel	<i>Falco tinnunculus</i>				Amber
Kingfisher	<i>Alcedo atthis</i>				Amber
Lapwing	<i>Vanellus vanellus</i>				Red
Lesser Redpoll	<i>Carduelis cabaret</i>				Red
Lesser Sp. Woodpecker	<i>Dendrocopos minor</i>				Red
Linnet	<i>Carduelis cannabina</i>				Red
Little Egret	<i>Egretta garzetta</i>				Green

Common Name	Scientific Name	Annex I ¹	WCA 1 ²	NERC 41 ³	BOCC4 (2021) ⁴
Mallard	<i>Anas platyrhynchos</i>				Amber
Marsh Tit	<i>Poecile palustris</i>				Red
Meadow Pipit	<i>Anthus pratensis</i>				Amber
Mistle Thrush	<i>Turdus viscivorus</i>				Red
Mute Swan	<i>Cygnus olor</i>				Amber
Nightingale	<i>Luscinia megarhynchos</i>				Red
Red Kite	<i>Milvus milvus</i>				Green
Redstart	<i>Phoenicurus phoenicurus</i>				Amber
Reed Bunting	<i>Emberiza schoeniclus</i>				Amber
Ring Ouzel	<i>Turdus torquatus</i>				Red
Sandpiper (Common)	<i>Actitis hypoleucos</i>				Amber
Skylark	<i>Alauda arvensis</i>				Red
Song Thrush	<i>Turdus philomelos</i>				Amber
Spoonbill	<i>Platalea leucorodia</i>				Amber
Spotted Flycatcher	<i>Muscicapa striata</i>				Red
Starling	<i>Sturnus vulgaris</i>				Red
Stock Dove	<i>Columba oenas</i>				Amber
Swift	<i>Apus apus</i>				Red
Tawny Owl	<i>Strix aluco</i>				Amber
Tree Pipit	<i>Anthus trivialis</i>				Red
Tree Sparrow	<i>Passer montanus</i>				Red
Turtle Dove	<i>Streptopelia turtur</i>				Red
Wheatear*	<i>Oenanthe oenanthe</i>				Amber
White-fronted Goose	<i>Anser albifrons</i>				Red
Willow Tit	<i>Poecile montanus/montana</i>				Red
Willow Warbler	<i>Phylloscopus trochilus</i>				Amber
Whinchat*	<i>Saxicola rubetra</i>				Red
Woodcock	<i>Scolopax rusticola</i>				Red
Woodlark	<i>Lullula arborea</i>				Green
Yellowhammer	<i>Emberiza citrinella</i>				Red

Notes:

1 Species listed in Annex I of Council Directive 79/409/EEC on the conservation of wild birds

2 Species specially protected under Schedule 1 of the 1981 Wildlife and Countryside Act

3 Species included in the UK Biodiversity Action Plan and Species of Principal Importance under the 2006 NERC Act

4 Species included in the Birds of Conservation Concern Red and Amber lists (RSPB, 2021)

3 METHODOLOGY

3.1 Field survey

3.1.1 Both breeding and wintering bird surveys were carried out to inform the ornithological assessment of the site. The methodologies for the breeding and wintering bird surveys undertaken are described below.

3.1.2 Breeding bird survey

3.1.2.1 The field survey methodology used for the breeding bird survey broadly followed the territory mapping methods outlined by Bibby, Burgess, Hill & Mustoe (2000) carried out over five visits.

3.1.2.2 On each visit a route was followed that allowed all parts of the main site and adjacent land to be surveyed. To avoid bias, routes were varied slightly from visit to visit. The survey area was split into two transects with each survey involving one surveyor covering each transect. The surveys were carried out by Nick Chambers and Anna Potter of HDA, ecologists experienced in bird surveys. During the surveys all aural or visual bird encounters were noted and other notable evidence of birds, such as raptor kills and owl pellets, was searched for and recorded during the survey.

3.1.2.3 Where species meeting the nature conservation criteria given in *Section 3.3.1* below were recorded these were mapped using standard BTO notation. Particular attention was given to recording evidence of breeding (e.g. song, display or territorial disputes) and recording different individuals of the same species simultaneously, indicating separate breeding territories. Birds not meeting the nature conservation criteria were simply recorded as present and a subjective assessment of abundance was made.

Timing of visits

3.1.2.4 Surveys were generally carried out in dry and bright weather conditions with low winds, thereby maximising the opportunity to record bird activity. All visits were timed to coincide with highest periods of bird activity (i.e. avoiding early afternoon), and included a visit during the peak breeding season for most species. The time, date and weather conditions for each visit are shown in *Table 2*.

Table 2: Breeding bird survey timings and weather conditions

Visit	Visit dates	Time	Weather conditions
1	18 th March 2022	06:30 - 11:00	2-13°C, clear (40% cloud).
2	6 th April 2022	06:30 - 10:15	9-13°C, overcast (100% cloud), light rain.
3	25 th April 2022	19:15 - 22:15	13-14°C, overcast (75% cloud), calm.
4	25 th May 2022	05:30 – 09:30	8-15°C, dry (50% cloud), calm.
5	15 th June 2022 (north transect)	05:30 - 08:45	9-17°C, sunny (10% cloud) dry.
	16 th June 2022 (south transect)	05.30 – 10:00	11-19°C, sunny (20% cloud), dry.

3.1.2.5 A total of 38.15 hours between both surveyors was spent recording birds over the five visits for the breeding bird survey.

3.1.3 Wintering bird survey

3.1.3.1 The field survey methodology used for the wintering bird survey broadly followed the territory mapping methods outlined by Bibby, Burgess, Hill & Mustoe (2000) carried out over six visits.

3.1.3.2 On each visit a route was followed that allowed all parts of the site and immediately adjacent habitat to be surveyed. To avoid bias, routes were varied slightly from visit to visit. The survey visits were carried out by Nick Chambers and Anna Potter of HDA, both ecologists experienced in bird surveys. During the surveys, all aural or visual bird encounters were noted and other notable evidence of birds, such as raptor kills and owl pellets, was searched for and recorded during the survey.

3.1.3.3 Where species meeting the nature conservation criteria given in *Section 3.3.1* below were recorded these were mapped using standard BTO notation. Birds not meeting the nature conservation criteria were simply recorded as present and a subjective assessment of abundance was made.

Timing of visits

3.1.3.4 Surveys were generally carried out in dry and bright weather conditions with low winds, thereby maximising the opportunity to record bird activity. The time, date and weather conditions for each visit are shown in *Table 3*.

Table 3: Wintering bird survey timings and weather conditions

Visit	Visit dates	Time	Weather conditions
1	5 th November 2021	10:30 - 15:30	5-10°C, overcast (80% cloud), dry
2	15 th December 2021	10:00 - 15:15	10-11°C, cloudy (60% cloud), damp
3	13 th January 2022	9:30 - 14:30	4 - 9°C, cloudy (50% cloud), dry.
4	8 th February 2022	10:30 - 15:00	9 -11°C, overcast (80% cloud), damp.
5	28 th February 2022	10.00 - 15:00	8-12 °C, partly cloudy (30% cloud), dry
6	7 th March 2022	9:45 – 14:30	3-7 °C, overcast (75% cloud), dry

3.1.3.5 A total of 29.5 hours was spent recording birds over the five visits for the wintering bird survey.

3.2 Interpretation of territory mapping results

3.2.1 Interpretation of the breeding bird field survey data follows the guidelines given for the territory mapping method in Bibby, Burgess, Hill and Mustoe (2000).

3.2.2 For territorial bird species of nature conservation interest, during the breeding bird survey the presence of a species in the same location on a minimum of two visits is generally

taken to constitute a breeding pair, although in some instances a cautious approach has been applied when estimating the number of breeding pairs, including consideration of observations made during the extensive suite of wider ecological survey work carried out at the site. For other species alternative measures were applied again following Bibby, Burgess, Hill & Mustoe (2000). All species recorded at the boundaries of the site have been included within the analysis.

3.3 Conservation evaluation

3.3.1 The ornithological importance of the site is assessed in two ways: firstly the conservation status of individual species is assessed by reference to the following criteria:

- Species specially protected under the Conservation of Habitats and Species (Amendment) (EU Exit) Regulations as listed on Annex 1 of the EU Birds Directive (Codified version: 2009/147/EC) (EC, 2009);
- Species specially protected under Schedule 1 of the 1981 Wildlife and Countryside Act (HMSO, 1981);
- Species included in the Birds of Conservation Concern red and amber lists (RSPB, 2021); and
- Species included in the UK Biodiversity Action Plan (BAP)/Species of Principal Importance identified under the Natural Environment and Rural Communities (NERC) Act 2006.

3.3.2 Secondly, the species assemblage of all birds is assessed with regard to published guidance on: (a) the selection of biological Sites of Special Scientific Interest (SSSIs) (*Appendix D: Drewitt et al., 2015*); and (b) the *Sussex Local Wildlife Site Selection Criteria* (Sussex Biodiversity Records Centre and Sussex Local Wildlife, undated).

3.4 Limitations

3.4.1 No constraints were encountered during the survey and it is considered that the survey findings allow a robust assessment of the likely importance of the site for breeding and wintering birds.

4 RESULTS

4.1 Breeding bird survey

4.1.1 A total of 36 bird species were recorded during the breeding bird survey, of which 29 are considered to be either breeding or hold a significant proportion of a breeding territory (either wholly or in part) in association with the site. A complete list of recorded birds and a description of their distribution across the site is given in *Appendix B. Table 4* lists all species thought to hold significant breeding territories within the site. For species meeting nature conservation criteria, *Table 4* also provides an estimate of the number of breeding territories or pairs of each species within the site. For species not meeting nature conservation criteria, a simple estimate of abundance has been made (Abundant/Frequent/Occasional/Rare).

Table 4: Breeding bird species at Land North West of Southwater 18th March - 16th June 2022

Common name	Latin name	Notes on breeding/occurrence	No. territories/ breeding pairs associated with site*
Blackbird	<i>Turdus merula</i>	Frequent: Moderate numbers of individuals and pairs recorded in association with woodland, scrub and hedgerow habitats across the site.	n/a
Blackcap	<i>Sylvia atricapilla</i>	Occasional: Moderate numbers of pairs recorded in association with woodland, scrub and hedgerow habitats across the site.	n/a
Blue Tit	<i>Parus caeruleus</i>	Frequent: Pairs and family groups frequently recorded in association with woodland, scrub and hedgerow habitats across the site. With a maximum count of 89 individuals during one visit.	n/a
Buzzard (Common)	<i>Buteo buteo</i>	Rare: One to two individuals regularly recorded foraging over the site.	n/a
Carrion Crow	<i>Corvus corone</i>	Frequent: Frequently recorded throughout the site singly and in small to medium sized groups.	n/a
Chaffinch	<i>Fringilla coelebs</i>	Frequent: Regularly encountered in fairly low numbers across the site in association with woodlands and hedgerows.	n/a
Chiffchaff	<i>Phylloscopus collybita</i>	Occasional: Moderate numbers of pairs recorded in association with woodland, scrub and hedgerow habitats across the site.	n/a
Dunnock	<i>Prunella modularis</i>	Frequent: Regularly recorded in moderate numbers in association with hedgerow and scrub habitats across the site.	5
Feral Pigeon	<i>Columba livia (domest.)</i>	Frequent: Regularly recorded in association with the cattle sheds in the north of the site.	n/a
Goldcrest	<i>Regulus regulus</i>	Rare: Recorded during three visits in association with woodland habitat in the south of the site.	n/a
Goldfinch	<i>Carduelis carduelis</i>	Rare: Recorded in pairs and small groups across the site in low numbers	n/a

Great Spotted Woodpecker	<i>Dendrocopos major</i>	Occasional: Individuals recorded in association with woodland, hedgeorws and treelines with a maximum count of three during any one visit.	n/a
Great Tit	<i>Parus major</i>	Frequent: Pairs and family groups frequently recorded in association with woodland, scrub and hedgerow habitats across the site.	n/a
Greenfinch	<i>Carduelis chloris</i>	Occasional: Individuals recorded in association with woodland and scrub, with one breeding pair in the north of the site.	1
House Sparrow	<i>Passer domesticus</i>	Occasional: Small numbers recorded primarily along the edges of residential development in the east of the site, with one breeding pair.	1
Jackdaw	<i>Corvus monedula</i>	Frequent: Regularly recorded in groups in association with grassland habitats across the site, and hedgerows and mature trees to the west of the cattle sheds in the north of the site.	n/a
Jay	<i>Garrulus glandarius</i>	Occasional: Up to 2 individuals recorded in association with woodland in the north of the site.	n/a
Long-tailed Tit	<i>Aegithalos caudatus</i>	Occasional: A maximum count of 19 individuals recorded in association with woodland, scrub and hedgerow habitats across the site.	n/a
Magpie	<i>Pica pica</i>	Frequent: Frequently recorded throughout the site in moderate numbers. Generally associated with woodland, hedgerows and adjacent grassland habitats.	n/a
Nuthatch	<i>Sitta europeaea</i>	Rare: Up to 2 individuals recorded on one occasion in association with woodland in the south of the site.	n/a
Pheasant	<i>Phasianus colchicus</i>	Occasional: Up to 5 individuals recorded across the site in association with woodland and arable habitat.	n/a
Pied Wagtail	<i>Motacilla alba</i>	Rare: Two individuals recorded on 2 occasions in the south of the site in grassland habitat.	n/a
Robin	<i>Erithacus rubecula</i>	Frequent: Moderate numbers of individuals and pairs recorded in association with woodland, scrub and hedgerow habitats across the site.	n/a

Song Thrush	<i>Turdus philomelos</i>	Occasional: Recorded in low numbers in association with woodland, hedgerow and scrub habitats with two breeding pairs.	2
Tawny Owl	<i>Strix aluco</i>	One individual recorded during the dusk survey in hedgerow and woodland habitat in the south of the site.	1
Treecreeper	<i>Certhia familiaris</i>	Occasional: Regularly recorded in small numbers, largely in association with woodland in the south of the site.	n/a
Whitethroat	<i>Sylvia communis</i>	Rare: One individual recorded on two occasions in association with hedgerow habitat in the south of the site.	1
Woodpigeon	<i>Columba palumbus</i>	Frequent: Moderate numbers recorded across the site on all survey visits. Associated with woodland, hedgerow, scrub and grassland habitats.	9
Wren	<i>Troglodytes troglodytes</i>	Frequent: Moderate numbers of individuals and pairs recorded in association with woodland, scrub and hedgerow habitats across the site.	19

* Only species meeting nature conservation criteria holding breeding territories over the site are considered in this column.

4.1.2 A further 7 species, not including species simply flying over, were also recorded using land within the site during the 2022 breeding bird survey which are considered unlikely to breed or hold distinct territories over the site. These include species either recorded as single birds, during one survey visit only, or in unsuitable breeding habitat. Such records may relate to species breeding nearby and using the site on an occasional basis for feeding, loafing, etc. *Table 5* below details these species.

Table 5: Non-breeding bird species at Land North-west of Southwater 18th March - 16th June 2022

Common name	Latin name	Notes on breeding/occurrence
Barn Owl	<i>Tyto alba</i>	Rare: One individual recorded foraging next to woodland in the north of the site during the dusk survey. Suspected to be breeding off-site in the wider area.
Bullfinch	<i>Pyrrhula pyrrhula</i>	Rare: One individual recorded during one visit in the north of the site.
Canadian Goose	<i>Branta canadensis</i>	Five individuals recorded during one visit.
Hobby	<i>Falco subbuteo</i>	One individual recorded during one survey on woodland edge in the south of the site.
Mallard	<i>Anas platyrhynchos</i>	Rare: Recorded on one occasion in association with a ditch in the south of the site.
Rook	<i>Corvus</i>	Frequent: A maximum count of 120 individuals

	<i>fruilegus</i>	recorded foraging in grassland and arable fields across the site. Frequently roosting to the west of the cattle sheds in the north of the site.
Starling	<i>Sturnus vulgaris</i>	Rare/variable numbers: Recorded on two visits with a maximum count of 15 in association with grassland habitats.

4.2 Wintering bird survey

4.2.1 A total of 30 bird species were recorded during the wintering bird survey. A complete list of birds recorded during the wintering bird survey and a description of their distribution across the site is given in *Appendix C*. *Table 6* lists all species recorded in association with the site, together with an indication of the maximum number of individuals of species of conservation interest recorded using the site on any one visit.

Table 6: Wintering bird species at Land North West of Southwater 18th March - 16th July 2022

Common name	Latin name	Notes on occurrence
Blackbird	<i>Turdus merula</i>	Occasional: Moderate numbers recorded in association with woodland and hedgerow habitats across the site.
Blue Tit	<i>Parus caeruleus</i>	Occasional: Moderate numbers of pairs and small parties recorded in association with woodland, scrub and hedgerow habitats across the site.
Buzzard (Common)	<i>Buteo buteo</i>	Rare: Small numbers recorded foraging over the site during four of the six survey visits.
Carrion Crow	<i>Corvus corone</i>	Frequent: Regularly recorded throughout the site in association with grassland and woodland habitats, individually and in groups.
Chaffinch	<i>Fringilla coelebs</i>	Rare: Up to 12 individuals recorded on 4 survey visits foraging in association with hedgerow, grassland and arable habitat across the site.
Coal Tit	<i>Periparus ater</i>	Rare: One individual recorded in association with woodland in the north of the site on one occasion.
Dunnock	<i>Prunella modularis</i>	Rare: Up to 9 individuals recorded during any one survey visit in association with hedgerow, scrub and woodland habitats across the site.
Goldcrest	<i>Regulus regulus</i>	Rare: A maximum of three individuals recorded in association with woodland and mature trees.
Goldfinch	<i>Carduelis carduelis</i>	Rare: A maximum of 13 individuals recorded on any one visit in association with mature tree and hedgerow habitats across the site.
Great Spotted Woodpecker	<i>Dendrocopos major</i>	Rare: One individual recorded during five of the survey visits in association with woodland and hedgerow habitats across the site.
Great Tit	<i>Parus major</i>	Occasional: Low-moderate numbers of pairs and small parties recorded in association with woodland and hedgerow habitats across the site.
Green Woodpecker	<i>Picus viridis</i>	Rare: One individual recorded during four of the survey visits in association with woodland and hedgerow habitats across the site.

Greenfinch	<i>Carduelis chloris</i>	Rare: A maximum of six individuals recorded on three of the survey visits in association with hedgerow habitats.
Grey Wagtail	<i>Motacilla cinerea</i>	Rare: A maximum of four individuals recorded on four of the survey visits in association with arable and grassland habitats.
House Sparrow	<i>Passer domesticus</i>	Occasional: A maximum of ten individuals recorded along hedgerows adjacent to residential development, largely in the centre of the site.
Jackdaw	<i>Corvus monedula</i>	Frequent: Groups of up to 50 regularly recorded in association with grassland and woodland across the site, particularly in hedgerows to the west of the cattle sheds in the north of the site.
Jay	<i>Garrulus glandarius</i>	Rare: Up to two individuals recorded during three survey visits in association with woodland, hedgerow and scrub habitats across the site.
Linnet	<i>Carduelis cannabina</i>	Variable numbers recorded: Small groups recorded during the final two visits only, with a maximum count of 25 individuals.
Long-tailed Tit	<i>Aegithalos caudatus</i>	Rare: A maximum of five individuals recorded in association with woodland, scrub and hedgerow habitats across the site.
Magpie	<i>Pica pica</i>	Occasional: Between 5 and 10 individuals recorded across the site during each visit.
Pheasant	<i>Phasianus colchicus</i>	Rare: Small numbers recorded in woodland and arable habitats largely in the north of the site.
Pied Wagtail	<i>Motacilla alba</i>	Rare: One individual recorded in association with grassland in the south of the site on one occasion.
Redwing	<i>Turdus iliacus</i>	Variable numbers recorded: A maximum of 50 individuals recorded in any one visit, with no records made during three of the visits.
Robin	<i>Erithacus rubecula</i>	Frequent: Up to 24 individuals recorded in association with woodland, scrub and hedgerow habitats across the site.
Rook	<i>Corvus fruilegus</i>	Variable numbers recorded: A maximum of 10 individuals recorded during any one visit, with no recordings during three visits.
Song Thrush	<i>Turdus philomelos</i>	Variable numbers recorded: A maximum of 10 individuals recorded in one visit, with no recordings during two visits.
Starling	<i>Sturnus vulgaris</i>	Occasional/variable numbers recorded: A maximum of 45 individuals recorded in one visit, with no recordings during three visits.
Treecreeper	<i>Certhia familiaris</i>	Rare: Low number of individuals recorded in association with woodland habitats across the site.
Woodpigeon	<i>Columba palumbus</i>	Frequent: Up to 92 individuals regularly recorded singly and in groups in association with hedgerow, grassland, arable and woodland habitats across the site.
Wren	<i>Troglodytes troglodytes</i>	Occasional: Low to moderate number of individuals recorded in association with woodland, scrub and hedgerow habitats across the site, with a maximum count of 11 during any one visit.

5 EVALUATION

5.1 Importance of individual species

5.1.1 Breeding bird survey

5.1.1.1 *Table 7* lists the species recorded during the survey that are thought to hold breeding territories on or over the site which meet at least one of a range of criteria relating to statutory protection or conservation importance. Species recorded during the survey but not thought to hold significant territory on or over the site are excluded from *Table 7* and, unless specifically mentioned, are not used in the evaluation of the importance of the site for individual breeding bird species.

Table 7: Species recorded holding breeding territories on or over the site that meet at least one of a range of criteria relating to statutory protection or conservation importance.

Species	Annex 1 EU Birds Directive ¹	Schedule 1 Wildlife & Countryside Act 1981 ²	UK BAP/ NERC 2006 ³	Birds of Conservation Concern ⁴
Dunnock				Amber
Greenfinch				Red
House Sparrow				Red
Song Thrush				Amber
Tawny Owl				Amber
Whitethroat				Amber
Woodpigeon				Amber
Wren				Amber

Notes on Table 7:

- 1 Species listed on Annex 1 of the EU Birds Directive (Codified version: 2009/147/EC) (EC, 2009). The 2019 Conservation of Habitats and Species (Amendment) (EU Exit) Regulations allow for the setting up of Special Protection Areas (SPAs) where internationally significant populations exist.
- 2 Species specially protected by Schedule 1 of the 1981 Wildlife and Countryside Act (as amended).
- 3 Priority Species included in the UK Biodiversity Action Plan (BAP) (UKBP, 2007)/ Species of Principal Importance under the 2006 Natural Environment and Rural Communities (NERC) Act.
- 4 Species included in the Birds of Conservation Concern 5 red and amber lists (RSPB, 2021). Red list – rapidly declining species and species of global conservation concern. Amber list – moderately declining species, rare breeders, internationally important and localised species, and those with an unfavourable conservation status in Europe.

5.1.1.2 No species included on Annex 1 of the EU Birds Directive or Schedule 1 of the 1981 Wildlife and Countryside Act (as amended) were recorded nesting or holding significant breeding territories on or over the site during the 2022 breeding bird survey.

5.1.1.3 Eight of the species recorded breeding in association with the site are included in the Birds of Conservation Concern (BoCC) red or amber lists (RSPB, 2021). Although inclusion on these lists does not confer special statutory protection or present any special legal constraints on development, the species concerned are all of conservation importance and therefore mitigation would be required if large populations of such species are likely to be affected by development of the site. This is not the case for the Land North West of Southwater site.

5.1.1.4 Two red-listed bird species were recorded breeding within or holding significant breeding territory over the site; Greenfinch and House Sparrow. Both species are included on the red list under the criteria of having undergone severe (>50%) declines in UK breeding populations in the long-term, defined as the time from the first BoCC assessment in 1969. Both remain relatively common and widespread in Britain however and the site holds only a very small proportion (<0.01%) of their UK breeding populations. *Table 8* below shows the UK population of the red listed bird species in relation to the number of territories or breeding pairs supported by the site.

Table 8: Breeding populations of red listed bird species

Species	UK Breeding Population (based on Musgrove <i>et al.</i> , 2013)	No. territories supported by site	Proportion of UK population supported by site (%)
Greenfinch	1,700,000 pairs	1	0.00009
House Sparrow	5,300,000 pairs	1*	0.00002

* Represents maximum number of breeding pairs expected to hold territories associated with the site based on counts of individuals.

5.1.1.5 Six other bird species meeting nature conservation criteria were considered to hold breeding territories within the site: Dunnock, Song Thrush, Tawny Owl, Whitethroat, Woodpigeon and Wren. Song Thrush, Tawny Owl and Dunnock are included on the BoCC amber list due to moderate (25% to 50%) breeding population declines over the past 25 years and/ or long-term. Whitethroat, Woodpigeon and Wren are included on the BoCC amber list as the UK population of these species are considered of international importance, making up over 20% of the total European populations. All remain relatively common and widespread in Britain however and the site holds only a very small proportion (<0.01%) of their UK breeding populations. *Table 9* below shows the UK population of the amber listed bird species in relation to the number of territories or breeding pairs supported by the site.

Table 9: Breeding populations of amber listed bird species

Species	UK Breeding Population (based on Musgrove <i>et al.</i> , 2013)	No. territories supported by site	Proportion of UK population supported by site (%)
Dunnock	2,500,000 territories	5	0.0002
Song Thrush	1,200,000 territories	2	0.00017
Tawny Owl	50,000 territories	1	0.002
* Whitethroat	1,100,000 territories	1	0.00009
Woodpigeon	5,400,000 pairs	9*	0.00017
* Wren	8,600,000 territories	19	0.00022

* Represents maximum number of breeding pairs expected to hold territories associated with the site based on counts of individuals.

5.1.1.6 Of these red and amber listed species, in terms of UK population, conservation status and number of territories associated with the site, the species of greatest nature conservation interest is Tawny Owl, which has an estimated UK breeding population of 50,000 territories (Musgrove *et al*, 2013). Tawny Owl were recorded during the dusk survey of the site in association with hedgerow and woodland habitat in the south of the site and it is possible that the site could form a significant part of the foraging territory for a breeding pair. It is expected that one breeding pair could hold territory associated with the site which equates to 0.002% of the UK breeding population. Tawny Owls are widely distributed in the UK except for Northern Ireland, and are associated primarily with woodland habitats, but may also breed in larger suburban gardens. In view of the development proposals for the site, which includes the retention of woodland habitats, notably Courtland Wood, as well as native tree planting, it is considered unlikely that development of the site would have a significant adverse effect on the local Tawny Owl population. Opportunities to maximise the value of the development landscape scheme for Tawny Owls and other birds of conservation interest are described in *Section 6* below.

5.1.1.7 A description of the distribution of red and amber listed birds across the site and the habitats with which they were associated is given in *Appendix B*.

5.1.1.8 Dunnock, House Sparrow and Song Thrush are also UK Biodiversity Action Plan (BAP) species and listed as Species of Principal Importance under the 2006 NERC Act. These are all relatively common and widespread red or amber listed species however and the site holds only a very small proportion (<0.01%) of their British breeding populations. Notwithstanding this, where possible development proposals should seek to maintain opportunities for breeding by these species at the site following development. This is discussed further in *Section 6* below.

5.1.2 *Wintering bird survey*

5.1.2.1 *Table 10* below lists the species recorded using the site during the wintering bird survey which meet at least one of a range of criteria relating to statutory protection or conservation importance. Species simply recorded as flying over the site are excluded from the list.

Table 10: Species recorded using the site during the wintering bird survey that meet at least one of a range of criteria relating to statutory protection or conservation importance.

Species	Annex 1 EU Birds Directive ¹	Schedule 1 Wildlife & Countryside Act 1981 ²	UK BAP/ NERC 2006 ³	Birds of Conservation Concern ⁴
Dunnock				Amber
Greenfinch				Red
Grey Wagtail				Amber

House Sparrow				Red
Linnet				Red
Redwing				Amber
Rook				Amber
Song Thrush				Amber
Starling				Red
Woodpigeon				Amber
Wren				Amber

Notes on Table 10:

- 1 Species listed on Annex 1 of the EU Birds Directive (Codified version: 2009/147/EC) (EC, 2009). The 2019 Conservation of Habitats and Species (Amendment) (EU Exit) Regulations allow for the setting up of Special Protection Areas (SPAs) where internationally significant populations exist.
- 2 Species specially protected by Schedule 1 of the 1981 Wildlife and Countryside Act (as amended).
- 3 Priority Species included in the UK Biodiversity Action Plan (BAP) (UKBP, 2007)/Species of Principal Importance under the 2006 Natural Environment and Rural Communities (NERC) Act.
- 4 Species included in the Birds of Conservation Concern 5 red and amber lists (RSPB, 2021). Red list – rapidly declining species and species of global conservation concern. Amber list – moderately declining species, rare breeders, internationally important and localised species, and those with an unfavourable conservation status in Europe.

5.1.2.2 No species included on Annex 1 of the EU Birds Directive were recorded during the wintering bird survey. One species included on Schedule 1 of the 1981 Wildlife and Countryside Act (as amended) was recorded during the wintering bird survey, Redwing. Schedule 1 listed species receive additional protection against disturbance of active nest sites relative to other breeding birds (see *Section 1.3*).

5.1.2.3 Redwing are present in large numbers in Britain during the winter, but only a very small number remain through the summer to breed. During the winter, the British Redwing population is approximately 750,000 individuals, but following the northward migration in the spring, only 30-50 pairs remain to breed. The majority of records of Redwing nesting in Britain occur in Northern Britain. It is therefore extremely unlikely that Redwing are breeding on the site, as supported by the findings of the breeding bird survey.

5.1.2.4 Four red-listed bird species were recorded within the site during the wintering bird survey: Greenfinch, House Sparrow, Linnet and Starling. All of these species are included in the red list under the criteria of having undergone a rapid ($\geq 50\%$) decline in UK breeding population over last 25 years and/or in the long-term, defined as the time from the first BoCC assessment (1969). All remain relatively common and widespread in Britain however. *Table 10* below shows the UK wintering population of the red listed bird species in relation to the maximum numbers recorded using the site during the wintering bird survey.

Table 10: Wintering populations of red listed bird species

Species	UK Population (based on Musgrove <i>et al</i> , 2013)	No. supported by site	Proportion of UK population supported by site (%)
Greenfinch	3,400,000*	6	0.00018
House Sparrow	10,600,000*	10	0.00009
Linnet	860,000*	25	0.0029
Starling	3,800,000*	45	0.00118

* Wintering population of resident species estimated by doubling numbers of pairs/territories given by Musgrove *et al.* for the UK breeding population.

- 5.1.2.5 Of the red listed birds, in terms of British population, conservation status and number of wintering individuals supported by the site, the species of highest nature conservation interest is Linnet, with the site supporting up to 0.0029% of the UK's wintering population of this species. Despite the rapid decline of its population, Linnets remain relatively common and widespread with a UK population of around 860,000 wintering individuals. Up to 25 Linnet were recorded during any one survey visit, although during some surveys the species was absent.
- 5.1.2.6 Linnet are widespread in the UK, though are scarce in highland areas. They are most abundant on the east coast of England and Scotland. Linnet numbers fell rapidly in the UK from the late 1960s, but since the mid 1980s have had a period of relative stability. The cause of the Linnet decline in the UK is likely to be associated with an increase in nest failures due to agricultural intensification. The site is dominated by grassland and arable fields bordered by hedgerows. Similar habitat is widely available in the wider area, and as such, it is likely that the habitats within the site form only a small part of a much wider foraging range for the individuals recorded during the wintering bird survey and for this species in general. It is therefore considered unlikely that the site is of substantial importance for the populations of Linnet recorded at the site during the wintering bird survey, evidenced by the fluctuating number of birds recorded using the site during the survey.
- 5.1.2.7 Seven amber listed species were recorded wintering at the site: Dunnock, Grey Wagtail, Redwing, Rook, Song Thrush, Woodpigeon and Wren. Dunnock, Grey Wagtail, Redwing and Song Thrush are included on the BoCC amber list due to moderate (25% to 50%) breeding population declines over the past 25 years and/ or long-term. Rook, Woodpigeon and Wren are included on the BoCC amber list as the UK populations of these species are considered of international importance, making up over 20% of the total European populations. All remain relatively common and widespread in Britain however and the site holds only a very small proportion (<0.01%) of their British breeding populations. *Table 11* below shows the UK wintering population of the amber listed bird species in relation to the numbers recorded within the site.

Table 11: Wintering populations of amber listed bird species

Species	UK Population (based on Musgrove <i>et al.</i> , 2013)	No. supported by site	Proportion of UK population supported by site (%)
Dunnock	5,000,000	9	0.00018
Grey Wagtail	76,000	4	0.00526
Rook	2,200,000	30	0.00136
Song Thrush	1,200,000	10	0.00083
Woodpigeon	10,800,000	92	0.00085
Wren	17,200,000	11	0.00006

* Wintering population of resident species estimated by doubling numbers of pairs/territories given by Musgrove *et al.* for the UK breeding population.

5.1.2.8 A description of the distribution of red and amber listed wintering birds across the site and the habitats with which they were associated is given in *Appendix C*.

5.1.2.9 Dunnock, House Sparrow, Linnet, Song Thrush and Starling are also UK Biodiversity Action Plan (BAP) priority species and listed as Species of Principal Importance under Section 41 of the 2006 NERC Act. Although these are all relatively common and widespread species and the site is only likely to support a small proportion of their British wintering populations, where possible development proposals should seek to maintain opportunities at the site for these species following development. This is discussed further in *Section 6* below.

5.2 Importance of the site

5.2.1 Published guidance on the selection of biological SSSIs (Drewitt *et al.*, 2015) provides a method for evaluating assemblages of breeding birds. Sites are eligible for selection as SSSIs if they support an especially good range of bird species characteristic of the habitat. This method has been employed to evaluate the site, using updated national population estimates, described in *Appendix D*.

5.2.2 The avian habitats of greatest interest within the site are Courtland Wood in the south of the site and the network of hedgerows and small parcels of woodland along the boundaries of grassland and arable fields elsewhere within the site. The grassland and arable fields themselves also provide opportunities for birds favouring open habitats such as Starling and Woodpigeon. The site does not however qualify as a candidate SSSI, either wholly or in part, for its lowland farmland or woodland bird assemblages, as the site index value scores are substantially below the threshold site index value for these habitats (5 [19%] for farmland and 7 [17%] for woodland), and the number and diversity of notable specialist farmland bird species recorded using the site for breeding and wintering was particularly low.

5.2.3 Sussex biographical record centre (SxBRC) provides information and advice on how Local Wildlife Sites should be identified in *Sussex Local Wildlife Site Selection Criteria* (SxBRC, 2022). It is not considered that the site meets any of the criteria given for selection on the grounds of its bird assemblage, either wholly or in part, under the criteria given below:

CS1 Species Criteria “Sites supporting significant populations or relic populations of internationally, nationally or locally rare species, or species assemblages, will be eligible for selection as a LWS, or may contribute towards eligibility for consideration under the habitat criteria. For these purposes, ‘supporting’ may be defined as sites that either directly support breeding populations of species or provide a significant ecological function for the life cycle of that species, including resident or migratory species to the Country or region.”

5.2.4 In summary, the site does not meet the selection criteria for either statutory or non-statutory nature conservation designation on the basis of its ornithological interest either wholly or in part. The site does however support a number of species of nature conservation interest, albeit generally fairly low numbers relative to the extent of the habitats present and these relate to relatively common and widespread species. Similar quality habitat to that found in the site is relatively abundant in the local area and as such the site is considered to be of no higher than high local interest for breeding birds, largely owing to its substantial size. Where possible the development proposals for the site should however seek to include measures to maintain opportunities for populations of the species of nature conservation interest recorded during the survey. These are outlined in *Section 6* below.

6 RECOMMENDATIONS

6.1 The site is considered in its entirety to be of up to high local value for birds, on the basis of its fairly large size and the presence of breeding and wintering birds of conservation concern included on the RSPB’s red and amber lists, and listed on the UKBAP and as Species of Principal Importance under the 2006 NERC Act. The habitats provided by the site are however relatively abundant in the wider area and all species recorded breeding or wintering at the site are relatively common and widespread in Britain, with the site supporting only a very small proportion of the British breeding or wintering population of any one species. The site does not meet the requisite scores, either wholly or in part, for qualification as a candidate SPA, SSSI or Local Wildlife Site (LWS).

6.2 Notwithstanding the above, where possible, the proposals for the site should seek to maintain and enhance opportunities for bird species of nature conservation interest recorded holding breeding territories on or over the site or wintering within the site during the suite of surveys.

Maintenance of opportunities for wintering and breeding birds

- 6.3 The bird species of highest conservation interest recorded during the surveys in the context of the site are Linnet and Starling, both of which are also listed as a Species of Principal Importance under Section 41 of the 2006 NERC Act and as a UKBAP priority species. Starling is a rapidly declining species, while Linnet underwent rapid declines in the second half of the twentieth century before stabilising. Starling were recorded in fluctuating numbers across the site during both the breeding and wintering bird survey primarily in association with grassland fields, while Linnet were recorded in low numbers during some wintering bird survey visits.
- 6.4 The likely cause of the national population decline of Starling is likely to be associated with a reduction in invertebrates from land-use changes and modern agricultural practices which can damage soils and their associated biodiversity, while the decline in Linnet was likely associated with a reduction in nesting success due to agricultural intensification. These factors are also considered the main cause of decline for the majority of other species of nature conservation interest recorded at the site. Starlings and Linnets remain relatively common and widespread in Britain however and the site supports only a very small proportion of the British breeding or wintering population of the two species. Similar habitat to that found within the site is widely available in the wider area, and as such, it is likely that the habitats within the site form only a small part of a much wider foraging range for the individuals recorded during the bird survey and for these species in general. It is therefore considered unlikely that the site is of significant importance for the populations of Starling and Linnet recorded at the site, and that a reduction in habitat from the site is unlikely to result in a significant adverse impact on the local conservation status of these species. Where possible development proposals should however seek to maintain and provide new opportunities for Starlings, Linnets and other birds of nature conservation interest through provision of new high-quality habitats within informal open space (see below).
- 6.5 Although the proposed development will result in the loss of open farmland from the much of the site and some secondary woodland habitat where a road access is provided in the north of the site, the habitat of highest conservation value, Courtland Wood LWS, would be retained. The development would also provide opportunity to create new habitats of high value (both for birds and in their own right), benefitting Starling, Linnet and a number of other bird species of conservation concern currently found at the site, and potentially providing opportunities for other species not already present. This could be achieved through the following measures:
- Where possible, retention of existing woodland, scrub, mature trees and grassland within the site, and enhancement of these habitats through sensitive management and complementary planting. Deadwood habitats should be encouraged where safe to do so.

- Retention and enhancement of the existing network of linear habitats within the site including hedgerows, treelines and mature scattered trees. Where this is not possible, alternative habitat corridors should be provided to allow movement of wildlife across and around the site.
- Use of SuDS to create new opportunities for wetland birds. SuDS for the proposed development could be used to provide a range of additional permanent and ephemeral waterbodies, ditches, swales, wet woodland and wet grassland habitats. This could also include restoration/enhancement of existing ditches.
- Provision of new high value habitats for birds and other wildlife within areas of proposed informal open space such as species-rich meadow and rough grassland, native woodland, species-rich hedgerows, orchard and scrub habitats.
- Planting schemes should use native species where appropriate, using species characteristic of the area, sourced from stock of local provenance where possible;
- Use of high value plants for foraging birds within the landscape planting scheme. This should include fruit and nut producing species in addition to those with high pollen and nectar yields (attracting invertebrate prey);
- Provision of a range of bird boxes situated on new buildings and existing trees within and adjacent to the proposed development area and wider site. Consideration should be given to the provision of Sparrow terraces and Swift boxes on suitable buildings, and Kestrel and Owl boxes on suitable retained mature trees overlooking areas of grassland within informal open space or the adjacent countryside.

6.6 It is recommended that any hedgerow or scrub management works should be carried out during January and/ or February, in order to allow the majority of fruit and nuts to be eaten prior to removal and to avoid impacts on nesting birds (see below).

6.7 Subject to the sufficient implementation of the above habitat retention, creation and enhancement measures it is expected that the opportunities currently provided by the site for the birds of conservation interest recorded could be maintained and, in some instances, enhanced.

Protection of birds during site clearance works

6.8 No birds receiving special protection when nesting under Schedule 1 of the 1981 Wildlife and Countryside Act (as amended) have been recorded breeding at the site. All breeding birds however should be afforded the basic level of protection provided by the Act, i.e. protection of nest sites during the breeding season. It is recommended that any tree felling, ground clearance, hedgerow management, scrub clearance and building demolition works are done outside of the bird nesting season (generally taken as March to September inclusive) to avoid risk of an offence being committed. In the event that this is not possible, these works should be overseen by a suitably qualified ecologist who would check for nesting birds prior to and during works. In the event that nesting birds are present, it will be necessary to delay works in the vicinity of an active nest until nesting is complete.

7 CONCLUSION

7.1 Subject to the implementation of sufficient retention, creation and enhancement of habitat for notable bird species recorded within the site as described above, the proposed development of the Land North West of Southwater site is considered unlikely to result in a significant adverse impact on local populations of breeding or wintering birds. Subject to detailed design, the proposals could in fact benefit a range of species of conservation concern recorded using the site including Starling, Greenfinch, Song Thrush and House Sparrow.

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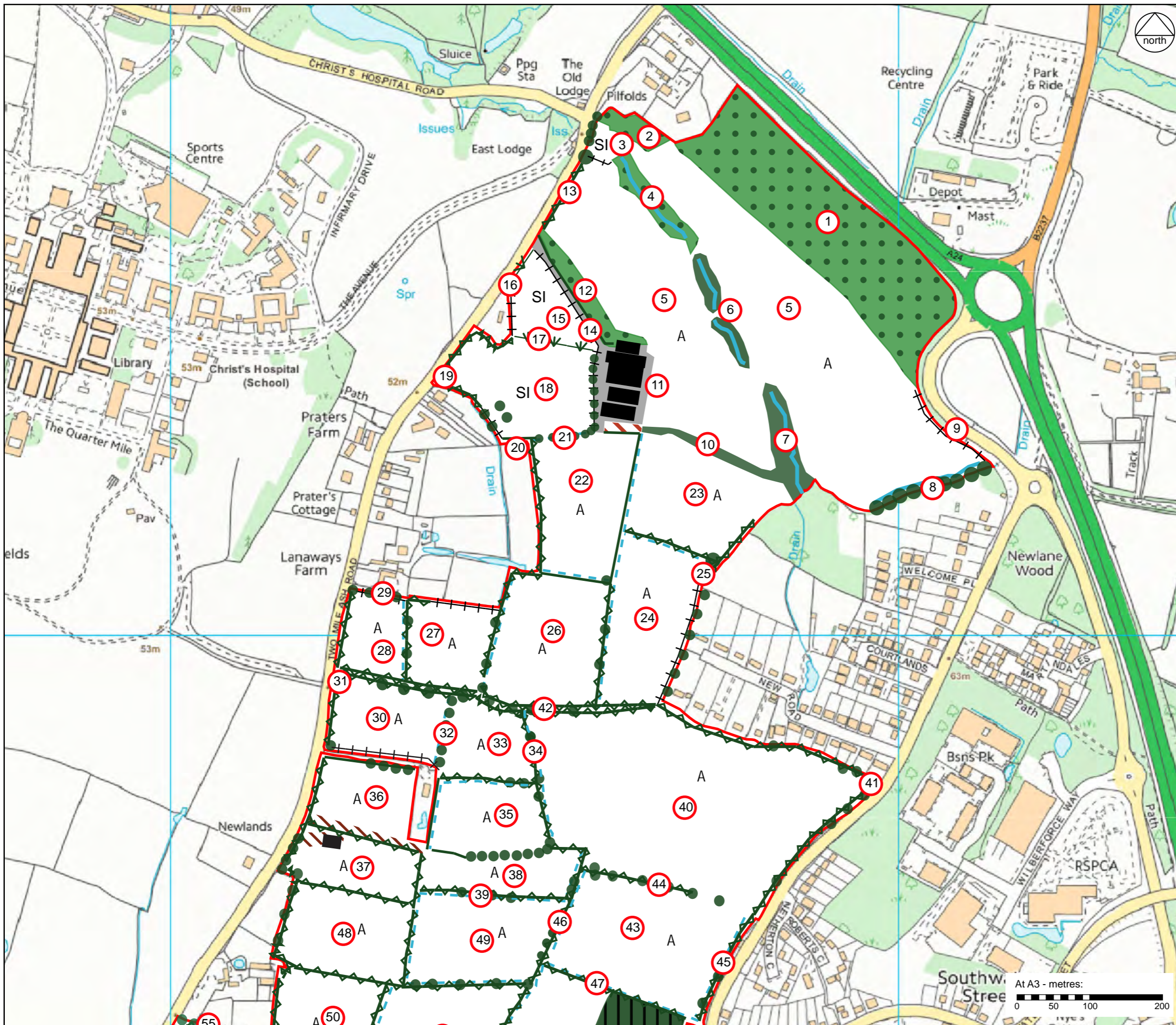
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Appendix A

Phase 1 Habitat Survey Plan and Target Notes



KEY

- Site boundary
- Broadleaved woodland
- Mixed woodland
- Scattered trees
- Intact species-rich hedgerow
- Hedgerow with trees
- Intact species-poor hedgerow
- Defunct species-poor hedgerow
- Tall ruderal vegetation
- Species-poor semi-improved grassland
- Improved grassland
- Amenity grassland
- Arable
- Stream
- Wet ditch
- Dry ditch
- Pond
- Building/Hardstanding
- Fence/Wall
- Ancient woodland*
- Local Wildlife Site
- Target Note

*Woodland listed on Natural England's Ancient Woodland Inventory.

CLIENT:
Berkeley Homes (Southern) Ltd

PROJECT:
Land North West of Southwater

TITLE:
Phase 1 Habitat Survey Plan - Main Site North

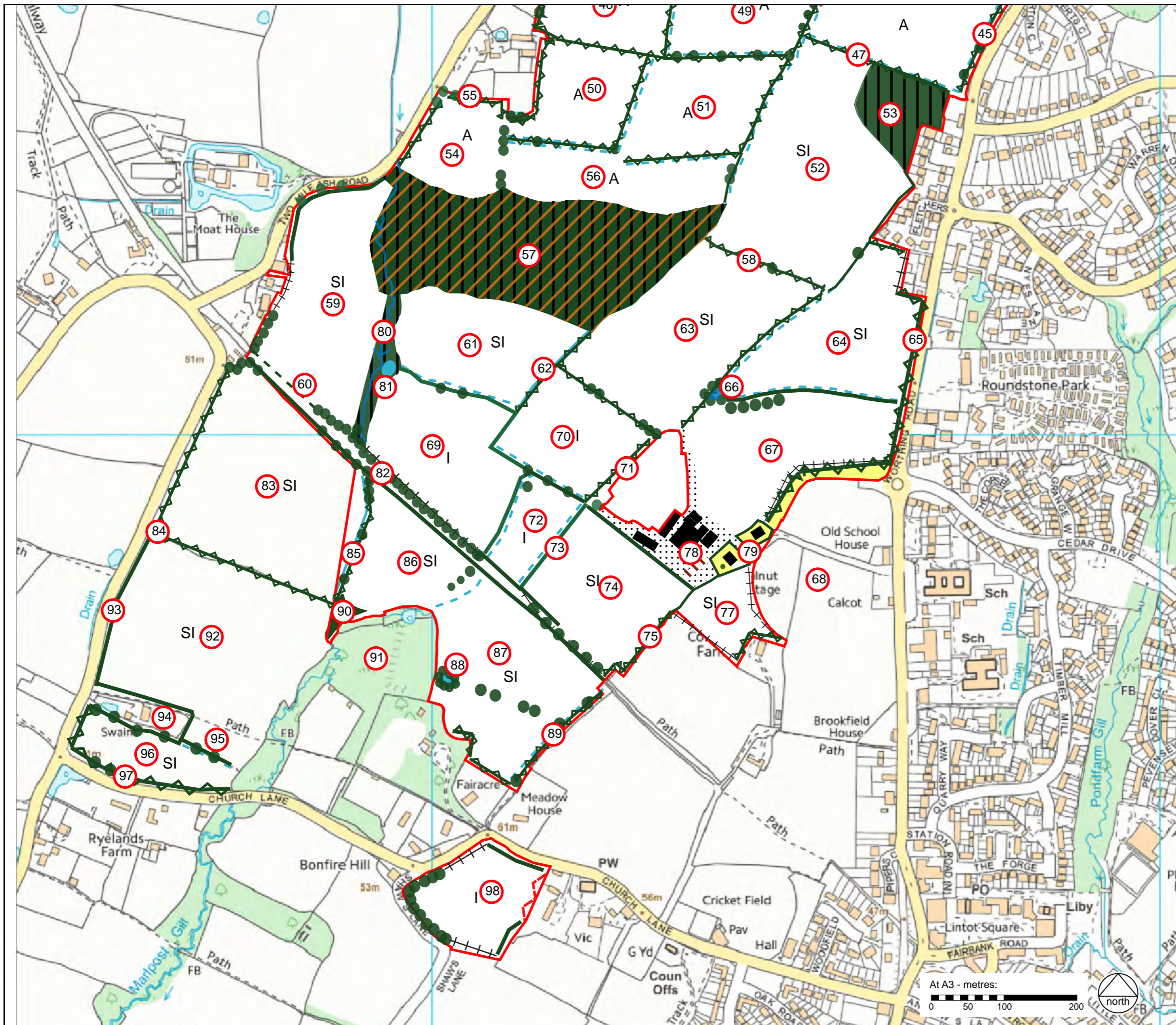
SCALE AT A3: DATE:
NTS (ref. scale bar) July 2022

2090.78 / 01A **FIGURE 8-1**

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KEY

- Site boundary
- Broadleaved woodland
- Mixed woodland
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- Defunct species-poor hedgerow
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- Wet ditch
- Dry ditch
- Pond
- Building/Hardstanding
- Fence/Wall
- Ancient woodland*
- Local Wildlife Site
- Target Note

*Woodland listed on Natural England's Ancient Woodland Inventory.

CLIENT:
Berkeley Homes (Southern) Ltd

PROJECT:
Land North West of Southwater

TITLE:
Phase 1 Habitat Survey Plan - Main Site South

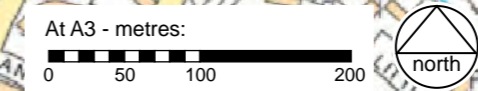
SCALE AT A3: DATE:
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2090.78 / 02A **FIGURE 8-2**

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Land North West of Southwater: Phase 1 Habitat Survey Target Notes 2022 – Main Site

1. Young mixed woodland along the northern boundary of the Site bordered by post and wire fencing. Species include Pedunculate Oak (*Quercus robur*), Wild Cherry (*Prunus avium*), Sycamore (*Acer pseudoplatanus*), Larch (*Larix decidua*), Pine (*Pinus* sp.) and Cedar (*Cedrus* sp.) with a Blackthorn (*Prunus spinosa*), Hawthorn (*Crataegus monogyna*), and Field Maple (*Acer campestre*) understorey. The ground flora below is relatively sparse and dominated by grasses including Wood False-brome (*Brachypodium sylvaticum*) and Rough Meadow-grass (*Poa trivialis*) with occasional Lords and Ladies (*Arum maculatum*). Open glades within the woodland are more species-rich and dominated by tall grasses including False Oat-grass (*Arrhenatherum elatius*), Cock's Foot (*Dactylis glomerata*) and Rough Meadow-grass with Hard Rush (*Juncus inflexus*), Common Nettle (*Urtica dioica*), Cleavers (*Galium aparine*), Common Vetch (*Vicia sativa*), Cut-leaved Cranesbill (*Geranium dissectum*), Meadow Buttercup (*Ranunculus acris*), Creeping Thistle (*Cirsium arvense*) and Hedge Woundwort (*Stachys sylvatica*).
2. Small woodland copse bordered by post and wire fencing. Mix of mature and semi-mature trees with species including Pedunculate Oak, Ash (*Fraxinus excelsior*), Wild Cherry, Scots Pine (*Pinus sylvestris*) and Common Lime (*Tilia x europaea*) with Hawthorn, Rhododendron, Elder (*Sambucus nigra*) and Bramble (*Rubus fruticosus*) below. The ground flora below is dominated by tall ruderal vegetation and coarse grasses including Common Nettle, Cow Parsley (*Anthriscus sylvestris*), Broadleaved Dock (*Rumex obtusifolius*), False Oat-grass, Cock's Foot, and Common Agrimony (*Agrimonia eupatoria*).
3. Area of unmanaged species-poor semi-improved grassland comprising Yorkshire Fog (*Holcus lanatus*), Meadow Foxtail (*Alopecurus pratensis*), Soft Brome (*Bromus hordeaceus*), Smooth Meadow-grass (*Poa pratensis*), Rough Meadow-grass, Perennial Rye-grass (*Lolium perenne*), Barren Brome (*Anisantha sterilis*) and Cock's Foot with forb species including Meadow Buttercup, Cut-leaved Cranesbill, Creeping Cinquefoil (*Potentilla reptans*), Lesser Stitchwort (*Stellaria graminea*), Common Sorrel (*Rumex acetosa*), Curled Dock (*Rumex crispus*), Hogweed (*Heracleum sphondylium*), Dandelion (*Taraxacum officinale*) and Common Nettle. A mature tree line borders the western margin of this area with species including Common Lime, Ash, Pedunculate Oak and Pine with Sycamore and Hawthorn below.
4. Band of mature woodland between two grassland fields comprising Sycamore, Pedunculate Oak, Scots Pine and Ash with an understorey of Hazel (*Corylus avellana*) coppice, Elder, Hawthorn, Hornbeam (*Carpinus betulus*) and Holly (*Ilex aquifolium*). Ground flora is present in the less shaded areas, with species including Dog's Mercury (*Mercurialis perennis*), Bluebell (*Hyacinthoides non-scripta*), Garlic Mustard (*Alliaria petiolata*), Pendulous Sedge (*Carex pendula*), Ground Ivy (*Glechoma hederacea*), Lords and Ladies, Yellow Archangel (*Lamium galeobdolon*), Common Nettle and Bramble. A slow flowing drain, with a water depth of approximately 15cm at the time of survey, comprising shallow earth banks and an earth base is present within the woodland. Due to heavy shading no aquatic vegetation is present within the ditch however the banks are bordered by occasional Pendulous Sedge and Wavy Bitter-cress (*Cardamine flexuosa*) and a rare presence of Cuckoo Flower (*Cardamine pratensis*).
5. Arable land cropped with Barley at the time of survey. Unmanaged grassland margins, approximately 1m in width, border the field with a species composition similar to those listed in target note 3.
6. Sections of above ground drainage ditch bordered by Elder, Hazel, Hawthorn and Blackthorn scrub with young Pedunculate Oak and Field Maple trees.

7. Woodland shaw extending from a larger area of off-site woodland to the south. Mature trees include Hybrid Black Poplar (*Populus x canadensis*), Wild Cherry, Ash and Sycamore with Hazel, Field Maple, Hornbeam, Elder, Blackthorn and Hawthorn below. The ground flora includes Garlic Mustard, Bluebell, Dog's Mercury, Greater Burdock (*Arctium lappa*) and Hemlock (*Conium maculatum*). A slow flowing drainage ditch courses through the woodland. The ditch ranges between approximately 50cm to 100cm wide with shallow earth banks and a water depth of approximately 15cm at the time of survey.
8. Band of mature trees along a wet ditch. Tree species include Ash, Alder (*Alnus glutinosa*), Pedunculate Oak, Hazel coppice, Holly, Hawthorn and Elder. Ground flora below the trees comprises Herb Robert (*Geranium robertianum*), Lords and Ladies, Bracken (*Pteridium aquilinum*), Ground Ivy, Pendulous Sedge and Common Nettle.
9. Wooden post and rail fence bordering the Site, beyond which is an embankment associated with Worthing Road. The embankment mostly comprises bare ground and coarse grasses at the western end with immature planted woodland comprising Ash, Pedunculate Oak and Hawthorn in the east.
10. Band of mature trees with a steep sided, dry ditch running through the centre. Species composition is similar to that listed in target note 7.
11. A steep sided earth bund separating a grassland field from the farmyard to the north. Species that have colonised the southern end of the bund include tall ruderal species such as Common Nettle, Broadleaved Dock, Creeping Thistle, Spear Thistle (*Cirsium vulgare*) and Bristly Ox-tongue (*Helminthotheca echioides*). The northern end of the bund is dominated by a species-rich composition of grassland species including Yorkshire Fog, Soft Brome, Rough Meadow-grass, Meadow Foxtail, Barren Brome, Cock's Foot, Perennial Rye-grass, Common Vetch, Grass Vetchling (*Lathyrus nissolia*), Lesser Trefoil (*Trifolium dubium*), Creeping Cinquefoil, Meadow Buttercup, Cut-leaved Cranesbill, Field Bindweed (*Convolvulus arvensis*), Dandelion, Ragwort (*Senecio jacobaea*) and Prickly Sow-thistle (*Sonchus asper*).
12. Band of semi-mature woodland bordered by post and wire fence to north and intact hedgerow to south. The woodland is dominated by Pedunculate Oak with occasional Hornbeam, Pine and Blackthorn. The ground flora comprises grasses including Yorkshire Fog, Cock's Foot and Rough Meadow-grass with Common Nettle and Cleavers.
13. Mature species-rich hedgerow, up to 3m wide and 5m tall, with mature Pedunculate Oak standards. Species within the hedgerow include Blackthorn, Hawthorn, Dog-rose (*Rosa canina*), Field Maple, Dogwood (*Cornus sanguinea*), cultivated Hawthorn (*Crataegus* sp.), Elder, Hazel, Holly and Sycamore. Ground flora below the hedge include Dog's Mercury, Bluebell, Wood Dock (*Rumex sanguineus*), Germander Speedwell (*Veronica chamaedrys*) and Bush Vetch (*Vicia sepium*). A dry ditch is present below the ditch which is overgrown with Pendulous Sedge, Great Willowherb (*Epilobium hirsutum*) and Common Nettle.
14. Hardstanding track leading to a farmyard which comprises a number of agricultural buildings associated with a dairy farm. To the north of the track is a managed intact species-poor hedgerow comprising Hawthorn, Field Maple and Elder and to the south is a post and wire fence.
15. Species-poor semi-improved grassland field with a high occurrence of Meadow and Creeping Buttercup (*Ranunculus repens*). Further species within the field include Yorkshire Fog, Rough Meadow-grass, Smooth Meadow-grass, Meadow Foxtail, Sweet Vernal-grass (*Anthoxanthum odoratum*), Smaller Cat's tail (*Phleum bertolonii*), Cock's Foot, Soft Brome, Red Clover (*Trifolium pratense*), Common Mouse-ear (*Cerastium fontanum*), Creeping Cinquefoil, Common Vetch and Field Speedwell (*Veronica persica*).

16. Mature hedgerow with Pedunculate Oak standards. Further species include Hawthorn, Pedunculate Oak, Blackthorn, Field Maple, Spindle (*Euonymus europaea*), Bramble, Dogwood and Black Bryony (*Tamus communis*). The hedge leads into a post and rail fence bordering an off-site residential property at its southern end.
17. Mostly intact species-rich hedgerow with standards comprising Blackthorn, Hawthorn, Pedunculate Oak, Field Maple, Ash and Elder with Leyland Cypress (*Cupressus × leylandii*) present adjacent to the residential property. The hedgerow becomes more managed, defunct and species-poor at the western end.
18. Species-poor semi-improved grassland field similar in species composition to target note 15 with scattered mature Oak trees and a short section of dry ditch. Bordering the east of the field is a mature tree line along a post and wire fence with species including mature Pedunculate Oak with younger Ash, Field Maple and Blackthorn with Bramble scrub below.
19. Scrubby tree line adjacent to off-site residential property with Ash, Horse Chestnut (*Aesculus hippocastanum*), Hawthorn, Sycamore and Hazel leading to mature Pedunculate Oak trees at the southern end.
20. Short section of managed, species-poor hedgerow comprising Blackthorn, Hawthorn and Bramble with a dry ditch below. Common Nettle and Cleavers dominate the ground flora with infrequent Ground Ivy, Wood Avens (*Geum urbanum*) and Cuckoo Flower also present.
21. Mature treeline of Pedunculate Oak with scrubby trees below including Hawthorn, Holly, Field Maple and Ash. A dry ditch runs the length of the treeline.
22. Arable field planted with Barley at the time of survey. Grassland field margins, ranging in width from 1m-3m, border the field and comprise species including Yorkshire Fog, Barren Brome, Rough Meadow-grass, Cock's Foot, Meadow Foxtail, Annual Meadow-grass, Shepherd's Purse (*Capsella bursa-pastoris*), Scentless Mayweed (*Tripleurospermum inodorum*), Common Mouse-ear, Groundsel (*Senecio vulgaris*), Creeping Buttercup, Germander Speedwell, Thyme-leaved Speedwell (*Veronica serpyllifolia*), Red Dead-nettle (*Lamium purpureum*), Cut-leaved Cranesbill, Garlic Mustard, Hogweed, Common Nettle, Broadleaved Dock, Spear Thistle and Creeping Thistle. A managed intact, species-poor hedgerow borders the field to the east and south dominated by Hawthorn and Blackthorn with Hazel, Dog-rose and Bramble. Ash Standards are also present. Along the western boundary of the field is a mature, intact, species-rich hedgerow up to 6m tall and 3m wide, with a dry ditch below. The western hedge comprises Blackthorn, Holly, Elder, Hazel, Hawthorn, Field Maple and Small-leaved Lime (*Tilia cordata*) with Ash and Oak standards. In addition to the grassland species above, Greater Stitchwort (*Stellaria holostea*) and Bluebell are present below the hedge.
23. Arable field uncultivated at the time of survey with grass field margins 1-5m wide, supporting a similar species composition to target note 22.
24. Arable field planted with Barley at the time of survey with field margins similar to target note 22. The northern boundary of the field is bordered by an intact, unmanaged, species-rich hedgerow with Ash standards. Further species present in the hedge include Hawthorn, Hazel, Elder, Blackthorn, Goat Willow (*Salix caprea*), Grey Willow (*Salix cinerea*), Oak and Bramble. A dry ditch runs below the hedge.
25. Unmanaged species-rich hedgerow, up to 4m wide and 7m tall, comprising Holly, Hawthorn, Elder, Hazel, Field Maple, Dog-rose, Bramble and Oak standards with a dry ditch below. The hedgerow leads into a post and rail fence with mature Oak standards along the boundary with off-site residential properties.

26. Arable field planted with Barley at the time of survey with field margins similar in composition to those listed in target note 22 with the addition of Scarlet Pimpernel (*Anagallis arvensis*), Common Chickweed (*Stellaria media*) and Field Pansy (*Viola arvensis*). The field is bordered to the east, west and south by managed species-rich hedgerows dominated by Blackthorn with occasional Dogwood, Hawthorn, Holly, Field Maple and Bramble with Ash and Oak standards.
27. Arable field planted with Barley at the time of survey with 3m wide field margins similar in composition to those listed in target note 22. Along the southern field boundary is a newly established, short and narrow, managed, species-rich hedgerow adjacent to a footpath comprising Blackthorn, Dog-rose, Field Maple, Willow (*Salix* sp.), Hazel, Hawthorn and Bramble. Along the western field boundary is a managed, species-rich hedgerow comprising Oak standards with Blackthorn, Hazel, Elder, Hawthorn, Dogwood and Bramble. Black Bryony is present within the hedge.
28. Arable field planted with Barley at the time of survey and with field margins similar in composition to those listed in target note 22 and approximately 2m wide. The western field boundary is bordered by a managed, species-rich hedgerow comprising Hawthorn, Field Maple, Blackthorn, Ash, Elder and Bramble with mature Oak standards. A post and wire fence overgrown with Common Nettle and Bramble borders the southern field boundary.
29. Post and rail fence along boundary with off-site residential property. Scrub and trees are present along the fence with species including Cultivated Cherry (*Prunus* sp.), Willow, Bramble, Ash, Hawthorn and hybrid Black Poplar.
30. Arable field, uncultivated at the time of survey, with the stalks of last year's Maize crop still present. A 1m wide field margin borders the field comprising species including Meadow Foxtail, Yorkshire Fog, Cock's Foot, Rough Meadow-grass, Barren Brome, Lesser Stitchwort, Greater Stitchwort, Germander Speedwell, Common Vetch, Creeping Buttercup, Field Bindweed, Spear Thistle, Creeping Thistle, Field Scabious (*Knautia arvensis*), Crosswort (*Cruciata laevipes*), Wood Avens, Creeping Cinquefoil, Scarlet Pimpernel and Common Nettle.
31. Intact, species-rich hedgerow with Oak and Ash standards along the northern and western field boundary. Species present include Blackthorn, Field Maple, Dog-rose, Dogwood, Hazel, Honeysuckle (*Lonicera periclymenum*), Hawthorn, Sycamore and Bramble. The hedgerow is managed and is approximately 1.5m tall and 1m wide.
32. Line of mature trees along a dry ditch, comprising mainly Pedunculate Oak with some Ash towards the southern end. There is a sparse scrub-line beneath comprising Holly, Hawthorn, Blackthorn and Elder. Ground flora below comprises Bluebell, Wood Melick (*Melica uniflora*), Wood Dock and Greater Burdock.
33. Arable field similar to Target Note 30.
34. Intact, species-rich Blackthorn dominated hedgerow. Other species present include Ash, Dog-rose, Field Maple, Hazel, Bramble, Oak. There is an Ash and an Oak standard situated along the hedgerow and a semi-mature Hazel at the southern end. A dry ditch runs along the eastern side of the hedgerow.
35. Arable field similar to Target Note 30. Bordering the south of the field is a mature, outgrown treeline dominated by Pedunculate Oak leading to a managed species-poor hedgerow at the western end, dominated by Blackthorn and Hawthorn.
36. Arable field similar to Target Note 30, bordered by a hedgerow with tree along the northern boundary; a managed Hawthorn dominated hedgerow along the eastern boundary; a managed, intact, species-rich hedgerow comprising Blackthorn, Elder, Dogwood, Privet, Ash, Hazel,

- Hawthorn and Bramble along the western boundary; and a managed, intact, species-rich hedgerow comprising Hawthorn, Hazel, Field Maple, Blackthorn, Elder, Turkey Oak (*Quercus cerris*), Ash, Holly, Dog-rose, Privet, and Pedunculate Oak with Ash and Oak standards along the southern field boundary. A dry ditch is present below the southern hedgerow and a wide band of tall ruderal vegetation is present adjacent to the hedge with species including Comfrey (*Symphytum officinale*), Common Nettle, Cow Parsley and Broadleaved Dock.
37. Arable field similar to Target Note 30 with additional grassland species within the field margin including Grass Vetchling, Birds-foot Trefoil (*Lotus corniculatus*), Bluebell, Hairy Tare (*Vicia hirsuta*) and St John's Wort (*Hypericum sp.*). An open sided barn is present in the north-west of the field.
 38. Arable field similar to Target Note 30.
 39. Intact, mature, species-rich hedgerow. Blackthorn is dominant, whilst Ash, Dog-rose, Hawthorn, Field Maple, Willow and Hazel are also present. Mature Oak trees are present along the length of the hedgerow and a dry ditch with a small seasonal pond with gently sloping earth banks is also present below.
 40. Arable field with narrow rough grassland field margins.
 41. Intact, species-rich hedgerow, comprising species including Hawthorn, Dogwood, Hazel, Elder, Field Maple, Blackthorn, Dog-rose and Bramble with Ivy and Black Bryony. Ground flora below the hedgerow includes Cleavers, Wood Avens, Ground Ivy, Dog's Mercury, Bush Vetch, Common Nettle, Lesser Stitchwort, Germander Speedwell, Silverweed (*Potentilla anserina*), Broadleaved Dock, Hogweed, Garlic Mustard, Wood Millet and False Brome. North of the hedgerow are fences and ornamental hedgerows enclosing the gardens of off-site residential properties.
 42. A public footpath bordered by narrow species-poor grassland margins runs through the Site.
 43. Arable field with narrow rough grassland field margins.
 44. Section of species-rich hedgerow comprising Hawthorn, Pedunculate Oak, Dog-rose, Hazel, Holly, Blackthorn and Field Maple with Mature Pedunculate Oak and Holly trees. Occasional Bluebell are present below the hedge.
 45. Intact, species-rich hedgerow. Species include Hawthorn, Hazel, Field Maple, Blackthorn, Sycamore, Dog Rose, Ash, Pedunculate Oak and Bramble. Apple (*Malus sp.*) trees, Cypress sp., and Horse Chestnut are infrequent. Ground flora below the hedge includes Common Ivy, Germander Speedwell, Greater Stitchwort, Wood Avens, Common Vetch, Dog's Mercury, Wood Millet and Bracken. A dry ditch runs the length of the hedgerow and is dominated by tall ruderal vegetation.
 46. Tree-lined hedgerow. Hedgerow species include Ash, Dog Wood, Rose (*Rosa sp.*), Bramble, Common Nettle, Honeysuckle, Blackthorn, Hawthorn, Elder, Holly and Field Maple. Standard trees include Ash, Pedunculate Oak, Hazel and Hawthorn. A dry ditch is present below.
 47. Intact species-rich hedgerow with dry ditch to north. Species within Hedgerow include Ash, Common Lime, Hawthorn, Wayfaring Tree (*Viburnum lantana*), Hazel, Blackthorn and Dog Rose. Water Mint (*Mentha aquatica*) is occasionally present within the ditch below.
 48. Arable field similar to Target Note 30. A hedgerow with standards including Pedunculate Oak, Elder, Dog Rose, Hazel, Ash and Bramble is located along the western edge. Along the eastern boundary of the field a hedgerow with Hawthorn, Hazel, Ash, Rose, Bramble, Blackthorn and Dogwood borders the field. Two young Ash trees are found at the northern end of the hedgerow. The hedgerow which bounds the field to the north is similar in nature to the eastern one.

49. Arable field similar to Target Note 30 bordered by managed hedgerows with mature standards and dry ditches below.
50. Arable field that was in the process of being ploughed at the time of survey bordered by intact, species-rich hedgerows.
51. Arable field that was in the process of being ploughed at the time of survey. The northern boundary of the field is lined with Oak and Ash standards and an intact, species-rich hedgerow with species including Blackthorn, Dog-rose, Ash, Hawthorn, Bramble, Hazel, Oak, Field Maple, Holly and Elder.
52. Cattle grazed species-poor, semi-improved grassland field bordered by managed hedgerows dominated by Hawthorn and Hazel with Hazel, Privet (*Ligustrum vulgare*), Bramble and Pedunculate Oak trees.
53. Small area of woodland (Smith's Copse) enclosed by a hedgerow and barbed wire and post fence. Woodland trees include Ash and Oak with Hazel coppice, Holly, Hawthorn, Midland Hawthorn (*Crataegus laevigata*), Blackthorn, Crab Apple and Field Maple. Dense areas of Cherry Laurel are also present in the southern area. Many of the more mature trees clad in Ivy. Ground flora includes Lords-and-Ladies, Wild Garlic, Bluebell, Wood Anemone (*Anemone nemorosa*), Wood Melick, Herb Robert, Wood Avens, False Brome, Wood Sedge, Pendulous Sedge, Tufted Hair-grass (*Deschampsia cespitosa*) and Common Ivy.
54. Arable field, uncultivated at the time of survey, with the stalks of last year's Maize crop still present. Bordering the field are species-rich hedgerows with a species-rich grassland field margin approximately 1m wide below. Species within the field margin include Meadow Foxtail, Cock's Foot, False Oat-grass, Rough Meadow-grass, Annual Meadow-grass (*Poa annua*), Barren Brome, Yorkshire Fog, Ground Ivy, Cowslip (*Primula veris*), Dog's Mercury, Common Ivy, Creeping Cinquefoil, Cut-leaved Cranesbill, Garlic Mustard, Field Horsetail (*Equisetum arvense*), Scarlet Pimpernel, Wood Avens, Cleavers, Bluebell, Common Vetch, Hairy Tare, Wood Dock, Creeping Thistle and Common Nettle.
55. Intact, species-rich hedgerow with standard trees. Species present include Blackthorn, Dogwood, Field Maple, Willow, Bramble, Hawthorn, Rose, Pedunculate Oak, Lime and Hazel, which is particularly frequent along the stretch of the hedgerow which runs parallel with Two Mile Ash Road. The hedgerow is approximately 1.5m and 2m tall along most of its length. Mature Oak standards and a semi-mature Ash tree are present in the north-western corner.
56. Arable field similar to Target Note 30 with wide field margins (2-4m) similar in species to Target Note 54 with a greater abundance of Cock's Foot. A mostly intact, species-rich hedgerow borders the northern boundary of the field comprising species including Hawthorn, Blackthorn, Pedunculate Oak, Elder, Hazel and Dog-rose. Below the hedgerow is a dry ditch, overgrown with tall ruderal vegetation.
57. Courtland Wood, enclosed by post and wire fence and Blackthorn dominated hedgerow with Dogwood, Dog-rose and Bramble. Mature trees within the woodland include Pedunculate Oak, Ash, Silver Birch, Wild Cherry and Small-leaved Lime with an understorey of Hazel coppice, Holly, Elder, Field Maple, Small-leaved Lime, Apple and Midland Hawthorn. The ground flora comprises Wood Speedwell (*Veronica montana*), Bluebell, Wood Dock, Goldilocks Buttercup (*Ranunculus auricomus*), Wood Millet (*Milium effusum*), Wood Melick, Herb Robert, Wood Anemone (*Anemone nemorosa*), Wood Avens, Bush Vetch, Wild Garlic (*Allium ursinum*), Pendulous Sedge, Yellow Archangel, Dog's Mercury, Stinking Iris (*Iris foetidissima*), Three-nerved Sandwort (*Moehringia trinervia*) and Cleavers. The woodland slopes down to a stream along the western edge and dry ditches are present throughout the woodland.

58. Intact species-rich hedgerow comprising Hazel, Blackthorn, Oak, Field Maple, Dog-rose, Dogwood, Honeysuckle, Hawthorn, Bramble and an Oak standard. Flora at the base of the hedgerow includes Herb Robert, Greater Stitchwort, Soft Rush (*Juncus effusus*), Broadleaved Dock, Bush Vetch, Great Willowherb, Pendulous Sedge and Germander Speedwell.
59. Species-poor, semi-improved grassland field used for cattle grazing. Species present include Yorkshire Fog, Soft Brome, Smooth Meadow-grass, Creeping Bent (*Agrostis stolonifera*), Barren Brome, Rough Meadow-grass, Cock's Foot, Bulbous Buttercup (*Ranunculus bulbosus*), White Clover (*Trifolium repens*), Germander Speedwell and Dandelion.
60. Scrubby, defunct, species-poor hedgerow dominated by Bramble and Rose with occasional Elder and Hawthorn. The hedgerow transitions into tree lines at both ends with species including Small-leaved Lime, Pedunculate Oak, Whitebeam (*Sorbus aria*) and Hazel. Below the hedgerow Lords and Ladies, Ground Ivy, Cleavers, Dog's Mercury and Common Nettle are present.
61. Species-poor semi-improved grassland field, cropped short at the time of survey due to cattle grazing. Species present include Yorkshire Fog, Meadow Foxtail, Sweet Vernal-grass, Annual Meadow-grass, Rough Meadow-grass, Common Mouse-ear, Dandelion, Self-Heal (*Prunella vulgaris*), Meadow Buttercup, Broadleaved Dock and Spear Thistle.
62. Intact, species-rich, heavily managed hedgerow with species including Hawthorn, Buckthorn (*Rhamnus cathartica*), Blackthorn, Field Maple, Dog-rose and Field-rose (*Rosa arvensis*) with Black Bryony. Ground flora below the hedgerow includes Greater Stitchwort, Herb Robert, Bugle (*Ajuga reptans*), Germander Speedwell, Cleavers, Ground Ivy, Bush Vetch, Garlic Mustard, Wood Dock, Common Sorrel and Common Nettle. A damp ditch is present below the western side of the hedgerow with Water Mint and Hemlock Water-dropwort (*Oenanthe crocata*) present within the ditch.
63. Cattle-grazed species-poor semi-improved grassland field with a similar species-composition to target note 61. Heavily trampled areas comprise bare ground with Greater Plantain (*Plantago major*).
64. Cattle-grazed species-poor semi-improved grassland field with a similar species-composition to target note 61 with additional species including Groundsel and Shepherd's Purse. Small patches of tall ruderal vegetation comprising Common Nettle and Spear Thistle are scattered within the field.
65. Intact species-rich hedgerow dominated by Dogwood although Ash, Blackthorn, Hawthorn, Rose, Bramble, Field Maple and Honeysuckle are also present along with Common Nettle and Dock. Hedgerow becomes more Hawthorn dominated to the north where it encloses the gardens of residential properties. Cypress sp., Ash and Oak standards are more frequent towards the northern end where it borders off-site residential properties. Here the hedgerow is less species-rich, dominated by Hawthorn.
66. Heavily shaded pond located within the corner of cattle-grazed field. Shallow (<40cm deep) with silt/mud base, areas of the pond margin have been heavily trampled by cattle, which together with shading has resulted in minimal aquatic vegetation. Trees surrounding the pond are typical of adjoining hedgerow including Field Maple, Hawthorn, Oak and Ash.
67. Cattle grazed species-poor semi-improved grassland field with a similar species-composition to target note 61 with additional species including Scentless Mayweed (*Tripleurospermum inodorum*) also present. Scattered standard trees including Oak and Wild Service Tree (*Sorbus torminalis*) are present along the northern boundary of the field.
68. Area of new housing development.

69. Cattle-grazed, species-poor improved grassland field bordered with Blackthorn and Hawthorn dominated hedgerows with Oak standards forming the northern and eastern boundaries. The southern boundary comprises post and rail fencing with a tree line of Ash, Oak and Aspen (*Populus tremula*) beyond.
70. Cattle grazed, species-poor improved grassland field.
71. Mature, outgrown species-rich hedgerow with trees comprising species including Ash, Oak, Hawthorn, Field Maple and Willow. A heavily shaded ditch containing a shallow amount of water at the time of survey, runs below the hedge.
72. Cattle grazed, species-poor improved grassland field that was cropped short at the time of survey. A low number of forb species were present within the sward including Shepherd's Purse, Scentless Mayweed and Creeping Buttercup. A mature Oak standard tree is present in the north-western corner. A large manure heap was located at the northern end of the field at the time of survey.
73. Intact species-poor hedgerow with species including Blackthorn, Hawthorn and Dog-rose with Field Maple, Oak, Ash and Willow standards. A seasonally wet ditch overgrown with Bramble and Common Nettle is present below the hedgerow.
74. Cattle grazed species-poor semi-improved grassland field with species including Rough Meadow-grass, Smooth Meadow-grass, Annual Meadow-grass, Meadow Foxtail, Soft Brome, Yorkshire Fog, Creeping Buttercup, Common Mouse-ear and Dandelion. A section of managed Blackthorn dominated hedgerow protrudes from the south-western corner into the field.
75. Managed, intact species-rich hedgerow with a number of Oak, Ash and Field Maple standards. Species within the hedgerow include Hawthorn, Elder, Blackthorn, Dog-rose and Field Maple, with Bramble becoming dominant at the southern end. The hedgerow is approximately 1.25m wide and 1.5m tall. A dry ditch runs below the western edge of the hedgerow, which is dominated by tall grasses and Soft Rush.
76. Fence line with semi-mature Oak trees and Bramble scrub acting as boundary between the field and public footpath.
77. Occasionally managed species-poor, semi-improved grassland field bordered by fencing and recently planted Hawthorn saplings. The grassland is dominated by Perennial Rye-grass, Soft Brome and Yorkshire Fog with occasional Smooth Meadow-grass, Dandelion, Bulbous Buttercup, Common Mouse-ear, Broadleaved Dock and Prickly Sow-thistle. The boundary of the grassland with the property to the east comprises an outgrown, scrubby hedgerow comprising Elder, Blackthorn, Hawthorn and Bramble with Oak, Ash and Cypress standards.
78. Collection of agricultural buildings within the farmyard of Great House Farm. Areas of bare ground and tall ruderal vegetation are present throughout.
79. Two residential properties comprising bungalows of red brick construction with tiled roofs, set within managed amenity grassland lawns bordered by species-poor hedgerows.
80. Woodland shaw lining the banks of Marlpost Gill. At this point the stream is very narrow (<50cm) and shallow (<10cm) with a silt substrate and very slow flow. The earth banks are steep in places, with less steep areas heavily trampled by cattle. Heavy shading from the woodland has resulted in minimal/absent aquatic and marginal vegetation, with flora along the stream banks dominated by Wild Garlic and Bluebell. The woodland is dominated by Ash and Pedunculate Oak with Lime, Willow and Birch, and has a sub-canopy of predominantly Hazel, with some Hawthorn, Field Maple, Holly and Blackthorn. Many of the mature trees are covered in Common Ivy (*Hedera helix*). The ground flora further from the stream comprises additional species to those mentioned above including Wood Anemone, Wood Melick, Sticky Mouse-ear (*Cerastium glomeratum*) and Soft Rush.

81. A pond approximately 15m by 10m in size, with steep sided earth banks and a silty base covered in leaf litter. The water depth within the pond was approximately 20cm at the time of survey. No aquatic or marginal vegetation was present due to heavy shading.
82. The Downs Link – a public footpath and cycle path located atop a steep sided earth embankment bordered on both sides by mature unmanaged hedgerow and treelines with species including Ash, Pedunculate Oak, Hazel and Hawthorn. Narrow grassland margins are present to either side of the footpath supporting species including Soft Brome, Wood False-brome, Hogweed, Greater Stitchwort, Common Ivy, Germander Speedwell, Cleavers, Wood Dock, Cow Parsley, Common Nettle and Ribwort Plantain (*Plantago lanceolata*).
83. Un-cut and un-grazed, species-poor semi-improved grassland field dominated by Soft Brome with Yorkshire Fog, Smooth Meadow-grass, Rough Meadow-grass, Dandelion, Common Mouse-ear, Meadow Buttercup and Broadleaved Dock.
84. Intact species-rich hedgerow comprising Blackthorn, Field Maple, Rose, Hazel, Ash, Hawthorn Dogwood and Bramble with Honeysuckle and Hedge Bindweed (*Calystegia sepium*).
85. Intact species-rich hedgerow, approximately 1.5m tall and 1m wide, comprising Hazel, Hawthorn, Holly, Blackthorn and Field Maple with Lombardy Poplar (*Populus nigra x italica*) and Pedunculate Oak standards. A section of Marlpost Gill flows below the hedgerow. The stream at this point is approximately 0.5m wide and was holding a shallow amount of water at the time of survey.
86. Cattle grazed species-poor, semi-improved grassland field. Species present within the grassland include Meadow Foxtail, Cock's Foot, Soft Brome, Annual Meadow-grass, Rough Meadow-grass, Yorkshire Fog and Lesser Cat's Tail with scattered Creeping Thistle. Forb species are infrequent throughout the grassland and include White Clover, Common Mouse-ear, Thyme-leaved Speedwell (*Veronica serpyllifolia*) and Spear Thistle. A short treeline of Hazel, Hawthorn and a dead tree are present in the east of the field.
87. Cattle grazed species-poor, semi-improved grassland field similar in species composition to target note 86, with scattered Pedunculate Oak standards. Forb species are infrequent and include White Clover, Common Mouse-ear and Spear Thistle.
88. A small pond with gently sloping earth banks and shallow water (<10cm) at the time of survey. The pond is heavily shaded by Oak, Hazel, Hawthorn and Field Maple scrub. Aquatic and marginal species present include Lesser Duckweed (*Lemna minor*), Floating Sweet-grass (*Glyceria fluitans*) and Pendulous Sedge with Wavy Bitter Cress, Bluebell and Common Nettle present on the banks.
89. Intact hedgerow lined with standards alongside a dry ditch. The southern end of the hedgerow encloses the grounds of a residential property, where some non-native species are found, such as Cherry Laurel (*Prunus laurocerasus*), Cypress sp. and Apple, among the typical hedgerow species including Holly, Hazel, Ash and Bramble. The section of the hedgerow that does not pertain to the boundary of the property is dominated by Blackthorn with Field Maple, Hawthorn, Hazel, Pedunculate Oak and Horse Chestnut. Ground flora below the hedge includes Wood Avens, Germander Speedwell, Wood Dock, Common Nettle and Cleavers.
90. Culvert where a stream (Marlpost Gill) emerges, having been directed beneath the ground. The course of stream at this point is meandering with a silt/earth bottom, but the stream itself was almost dry at this location at the time of survey. Banks of the stream comprise bare earth and are fairly steep sloping.
91. Broadleaved woodland, namely Kirsty's Wood, borders the Site to the south. The woodland is dominated by mature Ash and Pedunculate Oak with an understorey of Hazel and Holly with Rhododendron. Ground flora includes Wild Garlic, Bluebell, Wood Melick, Yellow Archangel, Dog's

Mercury, Wood Speedwell, Greater Stitchwort and Bramble. A shallow, slow flowing stream (Marlpost Gill) with earth banks flows through the woodland.

92. Species-poor semi-improved grassland field which had not recently been managed at the time of survey. Dominant species include Soft Brome and Yorkshire Fog with less frequent Smooth Meadow-grass, Cock's Foot, Creeping Buttercup, Greater Stitchwort, Broadleaved Dock and Field Bindweed.
93. Intact species-poor hedgerow dominated by Blackthorn with Ash, Field Maple, Dog-rose and Oak. Bramble and Hedge Bindweed are also present.
94. Grounds of property enclosed by a tidy, well-managed Hawthorn and Blackthorn dominated hedgerow.
95. Section of intact species-rich hedgerow which is well managed to a width and height of approximately 1m. Species within the hedgerow include Hawthorn, Blackthorn, Dogwood, Dog-rose and Field Maple with Hedge Bindweed. The hedgerow has several standard trees, predominantly Ash to the west and Pedunculate Oak in the east. A dry ditch is present on the southern side of the hedgerow.
96. Area of unmanaged species-poor semi-improved grassland similar in composition to target note 92 with additional species including Timothy (*Phleum pratense*), Sweet Vernal-grass, Meadow Foxtail, Lesser Trefoil, Daisy, Germander Speedwell, Bulbous Buttercup and Hogweed.
97. Intact, species-rich hedgerow separating rough grassland field (see target note 96) from Church Lane. Species present within hedgerow include Hawthorn, Ash, Bramble, Hedge Bindweed, Rose, Honeysuckle, Hazel and Field Maple. Two English Oak standards located towards western corner. Species present below the hedgerow include Wood Dock, Greater Stitchwort, Ground Ivy, Creeping Thistle and Common Nettle.
98. Species-poor improved grassland field dominated by Perennial Rye-grass with occasional Barren Brome, Soft Brome, Cock's Foot and Yorkshire Fog to the edges. The grassland is bordered by a mix of species-poor hedgerow, post and wire fencing, walls and outgrown treelines with species including Mature Oak, Wild Service Tree, Field Maple, Ash, Hawthorn, Holly, Hazel and Willow. A dry ditch is present below the southern tree line.

Appendix B

Breeding Bird Survey Results Summary Table

Breeding bird survey results summary table for Southwater 2022:

COMMON NAME*	LATIN NAME	Annex 1 Directive 2009/247/E C	Sched. 1 W&C Act 1982	UK BAP/ Sec.41 NERC Act.	BoCC 2021 (Red/ Amber/ Green/ No status)	IBA**	NOTES ON BREEDING/OCCURRENCE	NO. TERRITORIES/ BREEDING PAIRS ASSOCIATED WITH THE SITE***
Blackbird	<i>Turdus merula</i>				Green	0	Frequent: Moderate numbers of individuals and pairs recorded in association with woodland, scrub and hedgerow habitats across the site.	n/a
Blackcap	<i>Sylvia atricapilla</i>				Green	0	Occasional: Moderate numbers of pairs recorded in association with woodland, scrub and hedgerow habitats across the site.	n/a
Blue Tit	<i>Parus caeruleus</i>				Green	0	Frequent: Pairs and family groups frequently recorded in association with woodland, scrub and hedgerow habitats across the site. With a maximum count of 89 individuals during one visit	n/a
Barn Owl	<i>Tyto alba</i>				Green	3	Rare: One individual recorded foraging next to woodland in the north of the site during the dusk survey. Suspected to be breeding off-	n/a
Bullfinch	<i>Pyrrhula pyrrhula</i>				Amber	1	Rare: One individual recorded during one visit in the north of the site.	0
Buzzard (Common)	<i>Buteo buteo</i>				Green	2	Rare: One to two individuals regularly recorded foraging over the site.	n/a
Carrion Crow	<i>Corvus corone</i>				Green	0	Frequent: Frequently recorded throughout the site singly and in small to medium sized groups.	n/a
Chaffinch	<i>Fringilla coelebs</i>				Green	0	Frequent: Regularly encountered in fairly low numbers across the site in association with woodlands and hedgerows.	n/a
Chiffchaff	<i>Phylloscopus collybita</i>				Green	0	Occasional: Moderate numbers of pairs recorded in association with woodland, scrub and hedgerow habitats across the site.	n/a
Canadian Goose	<i>Branta canadensis</i>					0	Five individuals recorded during one visit.	n/a
Dunnock	<i>Prunella modularis</i>				Amber	0	Frequent: Regularly recorded in moderate numbers in association with hedgerow and scrub habitats across the site.	5
Feral Pigeon	<i>Columba livia (domest.)</i>					0	Frequent: Regularly recorded in association with the cattle sheds in the north of the site.	n/a
Goldcrest	<i>Regulus regulus</i>				Green	1	Rare: Recorded during three visits in association with woodland habitat in the south of the site.	n/a
Goldfinch	<i>Carduelis carduelis</i>				Green	0	Rare: Recorded in pairs and small groups across the site in low numbers	n/a
Great Spotted Woodpecker	<i>Dendrocopos major</i>				Green	1	Occasional: Individuals recorded in association with woodland, hedgerows and treelines with a maximum count of three during any one visit	n/a
Great Tit	<i>Parus major</i>				Green	0	Frequent: Pairs and family groups frequently recorded in association with woodland, scrub and hedgerow habitats across the site.	n/a
Greenfinch	<i>Carduelis chloris</i>				Red	0	Occasional: Individuals recorded in association with woodland and scrub, with one breeding pair in the north of the site.	1

Hobby	<i>Falco subbuteo</i>				Green	3	One individual recorded during one survey on woodland edge in the south of the site.	0
House Sparrow	<i>Passer domesticus</i>				Red	0	Occasional: Small numbers recorded primarily along the edges of residential development in the east of the site, with one breeding pair.	1
Jackdaw	<i>Corvus monedula</i>				Green	0	Frequent: Regularly recorded in groups in association with grassland habitats across the site, and hedgerows and mature trees to the west of the cattle sheds in the north of the site.	n/a
Jay	<i>Garrulus glandarius</i>				Green	1	Occasional: Up to 2 individuals recorded in association with woodland in the north of the site.	n/a
Long-tailed Tit	<i>Aegithalos caudatus</i>				Green	1	Occasional: A maximum count of 19 individuals recorded in association with wooded, scrub and hedgerow habitats across the site.	n/a
Magpie	<i>Pica pica</i>				Green	1	Frequent: Frequently recorded throughout the site in moderate numbers. Generally associated with woodland, hedgerows and adjacent grassland habitats.	n/a
Mallard	<i>Anas platyrhynchos</i>				Amber	1.5	Rare: Recorded on one occasion in association with a ditch in the south of the site.	0
Nuthatch	<i>Sitta europaea</i>				Green	1	Rare: Up to 2 individuals recorded on one occasion in association with woodland in the south of the site.	n/a
Pheasant	<i>Phasianus colchicus</i>					n/a	Occasional: Up to 5 individuals recorded across the site in association with woodland and arable habitat.	n/a
Pied Wagtail	<i>Motacilla alba</i>				Green	1	Rare: Two individuals recorded on 2 occasions in the south of the site in grassland habitat.	n/a
Robin	<i>Erithacus rubecula</i>				Green	0	Frequent: Moderate numbers of individuals and pairs recorded in association with woodland, scrub and hedgerow habitats across the site.	n/a
Rook	<i>Corvus frulegus</i>				Amber	1	Frequent: A maximum count of 120 individuals recorded foraging in grassland and arable fields across the site. Frequently roosting to the west of the cattlesheds in the north of the site.	0
Song Thrush	<i>Turdus philomelos</i>				Amber	0	Occasional: Recorded in low numbers in association with woodland, hedgerow and scrub habitats with two breeding pairs.	2
Starling	<i>Sturnus vulgaris</i>				Red	0	Rare/variable numbers: Recorded on two visits with a maximum count of 15 in association with grassland habitats.	0
Tawny Owl	<i>Strix aluco</i>				Amber	2	One individual recorded during the dusk survey in hedgerow habitat in the south of the site.	1
Treecreeper	<i>Certhia familiaris</i>				Green	1	Occasional: Regularly recorded in small numbers, largely in association with woodland in the south of the site.	n/a
Whitethroat	<i>Sylvia communis</i>				Amber	0	Rare: One individual recorded on two occasions in association with hedgerow habitat in the south of the site.	1
Woodpigeon	<i>Columba palumbus</i>				Amber	0	Frequent: Moderate numbers recorded across the site on all survey visits. Associated with woodland, hedgerow, scrub and grassland habitats.	9
Wren	<i>Troglodytes troglodytes</i>				Amber	0	Frequent: Moderate numbers of individuals and pairs recorded in association with wooded, scrub and hedgerow habitats across the site.	19

Appendix C

Wintering Bird Survey Results Summary Table

Wintering bird survey results summary table for Southwater in 2021/2022:

COMMON NAME*	LATIN NAME	Annex 1 Directive 2009/247/EC	Sched. 1 W&C Act 1982	UK BAP/ Sec.41 NERC Act.	BoCC 2021 (Red/ Amber/ Green/ No status)	NOTES ON OCCURRENCE
Blackbird	<i>Turdus merula</i>				Green	Occasional: Moderate numbers recorded in association with woodland and hedgerow habitats across the site.
Blue Tit	<i>Parus caeruleus</i>				Green	Occasional: Moderate numbers of pairs and small parties recorded in association with woodland, scrub and hedgerow habitats across the site.
Buzzard (Common)	<i>Buteo buteo</i>				Green	Rare: Small numbers recorded foraging over the site during four of the six survey visits.
Carrion Crow	<i>Corvus corone</i>				Green	Frequent: Regularly recorded throughout the site in association with grassland and woodland habitats, individually and in groups.
Chaffinch	<i>Fringilla coelebs</i>				Green	Rare: Up to 12 individuals recorded on 4 survey visits foraging in association with hedgerow, grassland and arable habitat across the site.
Coal Tit	<i>Periparus ater</i>				Green	Rare: One individual recorded in association with woodland in the north of the site on one occasion.
Dunnock	<i>Prunella modularis</i>				Amber	Rare: Up to 9 individuals recorded during any one survey visit in association with hedgerow, scrub and woodland habitats across the site.
Goldcrest	<i>Regulus regulus</i>				Green	Rare: A maximum of three individuals recorded in association with woodland and mature trees.
Goldfinch	<i>Carduelis carduelis</i>				Green	Rare: A maximum of 13 individuals recorded on each visit in association with mature tree and hedgerow habitats across the site.
Great Spotted Woodpecker	<i>Dendrocopos major</i>				Green	Rare: One individual recorded during five of the survey visits in association with woodland and hedgerow habitats across the site.
Great Tit	<i>Parus major</i>				Green	Occasional: Low-moderate numbers of pairs and small parties recorded in association with woodland and hedgerow habitats across the site.
Green Woodpecker	<i>Picus viridis</i>				Green	Rare: One individual recorded during four of the survey visits in association with woodland and hedgerow habitats across the site.
Greenfinch	<i>Carduelis chloris</i>				Red	Rare: A maximum of six individuals recorded on three of the survey visits in association with hedgerow habitats.
Grey Wagtail	<i>Motacilla cinerea</i>				Amber	Rare: A maximum of four individuals recorded on four of the survey visits in association with arable and grassland habitats.
House Sparrow	<i>Passer domesticus</i>				Red	Occasional: A maximum of ten individuals recorded along hedgerows adjacent to residential development, largely in the centre of the site.
Jackdaw	<i>Corvus monedula</i>				Green	Frequent: Groups of up to 50 regularly recorded in association with grassland and woodland across the site, particularly in hedgerows to the west of the cattle sheds in the north of the site.
Jay	<i>Garrulus glandarius</i>				Green	Rare: Up to two individuals recorded during three survey visits in association with woodland, hedgerow and scrub habitats across the site.
Linnet	<i>Carduelis cannabina</i>				Red	Variable numbers recorded: Small groups recorded during the final two visits only, with a maximum count of 25 individuals.
Long-tailed Tit	<i>Aegithalos caudatus</i>				Green	Rare: A maximum of five individuals recorded in association with woodland, scrub and hedgerow habitats across the site.
Magpie	<i>Pica pica</i>				Green	Occasional: Between 5 and 10 individuals recorded across the site during each visit.
Pheasant	<i>Phasianus colchicus</i>					Rare: Small numbers recorded in woodland and arable habitats largely in the north of the site.
Pied Wagtail	<i>Motacilla alba</i>				Green	Rare: One individual recorded in association with grassland in the south of the site on one occasion.
Redwing	<i>Turdus iliacus</i>				Amber	Variable numbers recorded: A maximum of 50 individuals recorded in any one visit, with no records made during three of the visits.
Robin	<i>Erithacus rubecula</i>				Green	Frequent: Up to 24 individuals recorded in association with woodland, scrub and hedgerow habitats across the site.
Rook	<i>Corvus fruilagus</i>				Amber	Variable numbers recorded: A maximum of 10 individuals recorded during any one visit, with no recordings during three visits.
Song Thrush	<i>Turdus philomelos</i>				Amber	Variable numbers recorded: A maximum of 10 individuals recorded in one visit, with no recordings during two visits.
Starling	<i>Sturnus vulgaris</i>				Red	Occasional/variable numbers recorded: A maximum of 45 individuals recorded in one visit, with no recordings during three visits.
Treecreeper	<i>Certhia familiaris</i>				Green	Rare: Low number of individuals recorded in association with woodland habitats across the site.
Woodpigeon	<i>Columba palumbus</i>				Amber	Frequent: Up to 92 individuals regularly recorded singly and in groups in associated with hedgerow, grassland, arable and woodland habitats across the site.

Wren	<i>Troglodytes troglodytes</i>				Amber	Rare: Low to moderate number of individuals recorded in association with woodland, scrub and hedgerow habitats across the site, with a maximum count of 11 during any one visit.
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Appendix D
Site Evaluation Methodology

Site Evaluation Methodology (taken from Drewitt *et al.*, 2015)

Published guidance by the JNCC on the selection of biological SSSI's (Drewitt *et al.*, 2015) provides a method for evaluating assemblages of breeding birds. Sites are eligible for selection as SSSI's if they support an especially good range of bird species characteristic of the habitat.

Lists of breeding bird assemblages of different habitats can be found below. Each species listed is given an index of breeding abundance (IBA) from 0 to 6, which refers to the current total number of breeding pairs in Britain (Musgrove *et al.*, 2013) as follows:

Breeding Pairs	IBA
>1 million	0
100,000 - 1,000,000	1
10,000 - 100,000	2
1,000 – 10,000	3
100 – 1,000	4
10 – 100	5
1 – 10	6

Where the population of a species falls on the border of two classes, an intermediate value may be given (e.g. 2.5).

The species list for each habitat is made up as follows. All species characteristic of the habitat and with indices of abundance of 4 to 6 (i.e. with a total British population less than 1,000 pairs) are included. Also included are more abundant species which are either primarily associated with this habitat or are associated with more than one habitat, some of which are particularly threatened by habitat change (for example drainage of wetlands or loss of heath or scrub). All species of index 0 (i.e. with more than 1 million pairs) are omitted from the lists.

The index value for a site is calculated by summing the indices of abundance for species breeding in it. A species may be included if it has been recorded as probably breeding in the majority of recent years for which information is available. Species regularly using a site for essential activities (such as feeding) while breeding may be included even if they nest outside the site. To qualify under section 3.8, the index value for a site should exceed the threshold value given for the relevant habitat.

The threshold values were derived as follows. For each habitat, the theoretical maximum score which could be obtained for those species with indices of 1 to 4 was calculated. Those species with scores of 5 and 6 were excluded, as these species with British populations of less than 100 pairs are generally very restricted in geographical distribution. In fact, this also applies to many species with an index of 3 or 4. Although species with indices of 5 and 6 are excluded in the calculation of site threshold values, any such species must be included in the calculation of a site index, as few, if any, will be present at

any one site and inclusion allows the required added importance to be given to the sites used by these rarer species (such sites might also qualify under section 3.2). Even with these rare species included, it is most unlikely that the theoretical maximum score would be achieved at any site because species from all parts of Britain and all subdivisions of the general habitat category concerned are included in its calculation. For most habitats, a site reaching half the theoretical maximum as calculated above would be an especially good example of the breeding bird community. Thus this half-maximum value is the threshold given for each habitat.

The differences in distribution patterns shown by birds make the provision of national values difficult. For some habitats, different values are given for different parts of Britain to make some allowance for this. Even if a single threshold level is given, this may allow for the absences of some species in some parts of the country. It is impracticable to make the very fine geographical divisions which biological purists might suggest. No list is provided for certain habitats (for example cliffs). In these cases, it is envisaged that sites selected on the basis of other criteria (for example see sections 3.2 or 3.5) should provide for adequate population coverage.

Mixed habitats

It is clearly impracticable to give lists for each possible combination of habitats within a site, although it is recognised that many bird species depend on a combination of habitats. Several approaches are possible:

- (i) if one (or more) of the composite habitats reaches the threshold value for that habitat, the whole site may be selected if the other habitats clearly form integral parts of the site;
- (ii) if two habitats are included in one well-defined site, the indices for species which are on both habitat lists and have been recorded for the site should be double-counted; other species score in the usual way; for the site to qualify on this basis, its total score should exceed the qualifying threshold value for the two habitats combined (for example for a woodland and lowland scrub combination $39 + 14 = 53$).

In all cases, local knowledge of the site and its context is essential.

Tables of breeding bird assemblage index values of different habitats – see above text for explanation.

Lowland scrub (excluding heath)

Turtle Dove	2	Grasshopper Warbler	2
Cuckoo	2.5	Nightingale	3
Long-eared Owl	3	Linnet	1
Willow Tit	3	Lesser Redpoll	1
Long-tailed Tit	1	Bullfinch	1
Garden Warbler	1	Yellowhammer	1
Lesser Whitethroat	2	Cirl Bunting	4

Site threshold values

14 (this does not readily apply to Wales, Scotland or Northern England)

Lowland Farmland

Grey Partridge	2	Cuckoo	2.5
Quail	4	Barn Owl	3
Marsh Harrier	4	Magpie	1
Montagu's Harrier	5	Rook	1
Buzzard	2	Swallow	1
Kestrel	2	Tree Sparrow	1
Hobby	3	Yellow Wagtail	2
Corncrake	3	Pied Wagtail	1
Stone-curlew	4	Linnet	1
Lapwing	1	Yellowhammer	1
Curlew	2	Cirl Bunting	4
Crane	5	Reed Bunting	1
Stock Dove	1	Corn Bunting	2.5
Turtle Dove	2		

Site threshold values

S and E England: 26

Wales: 17.5

Rest of Britain: 22

Woodland

Grey Heron	2	Crested Tit	3
Little Egret	4	Coal Tit	1
Honey-buzzard	5	Willow Tit	3
Red Kite	3	Marsh Tit	2
Goshawk	4	Long-tailed Tit	1
Sparrowhawk	2	Wood Warbler	3
Buzzard	2	Garden Warbler	1
Osprey	4	Nuthatch	1
Hobby	3	Treecreeper	1
Black Grouse	3	Fieldfare	6
Capercaillie	4	Redwing	5.5
Woodcock	2	Spotted Flycatcher	2
Stock Dove	1	Nightingale	3
Cuckoo	2.5	Pied Flycatcher	2
Tawny Owl	2	Redstart	1.5
Long-eared Owl	3	Tree Pipit	1.5
Wryneck	6	Siskin	1
Green Woodpecker	2	Lesser Redpoll	1
Great Spotted Woodpecker	1	Common Crossbill	2
Lesser Spotted Woodpecker	3	Scottish Crossbill	2.5
Jay	1	Bullfinch	1
Raven	3	Hawfinch	4
Firecrest	4		

Site threshold values

Northern Scotland: 33.5

Wales: 37.5

Rest of Britain: 39