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Chilmington Green 2010 Breeding Bird Survey

Ward Homes (A Trading Name of BDW Trading Ltd), Pentland Homes, Hodson Developments and Jarvis Homes

March 2012



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CONTENTS

EXECUTIVE SUMMARY	1
1 INTRODUCTION	2
2 METHODOLOGY	4
3 RESULTS	6
4 DISCUSSION	15
5 MITIGATION AND ENHANCEMENT MEASURES	16
6 CONCLUSIONS	18
7 REFERENCES	19

Figures and Appendices

Figure 1 Study Area Boundary

Figure 2 Ecological Constraints Plan - Protected Species - Birds

Figure 3 Breeding Bird Survey Results - Visit 1

Figure 4 Breeding Bird Survey Results - Visit 2

Figure 5 Breeding Bird Survey Results - Visit 3

Figure 6 Breeding Bird Survey Results - Visit 4

Figure 7 Breeding Bird Survey Results - Visit 5

Figure 8 Breeding Bird Survey Results - Visit 6

Figure 9 - 29 Territory Maps for Species of Conservation Concern

Appendix A: Summary map showing areas of high bird numbers and/or diversity

Appendix B BTO Species Codes

Appendix C European Bird Census Council Breeding Categories

EXECUTIVE SUMMARY

WSP Environmental Ltd were commissioned by a developer consortium comprising, Ward Homes (A Trading Name of BDW Trading Ltd), Pentland Homes, Hodson Developments and Jarvis Homes to undertake a breeding bird survey of the Chilmington Green Site at Chilmington Green near Ashford, Kent.

This report has been prepared to support both a future planning application for development of a proportion of the Chilmington Green Site, and to form part of the evidence base for the Area Action Plan (AAP) which is being prepared by Ashford Borough Council to provide a framework for development of Chilmington Green/Discovery Park site. As such the study area used for this survey relates to the maximum area of search for the AAP, approximately 428.5ha including all built and non-built development.

This report presents the findings of a breeding bird survey of the study area completed during April to June (inclusive) 2010. The methodology used follows current best practice guidance (British Trust for Ornithology [BTO] methods adapted from Bibby 2000).

The report includes an assessment of potential impacts upon breeding birds which could arise from large scale redevelopment of the study area; the results and assessment has been used to inform masterplanning for the specific development proposed by the developer consortium (referred to as the Proposed Development). Consequently, the mitigation and enhancement measures set out in this report are the measures which have been incorporated into the scheme which is submitted in the outline planning application.

During the course of six survey visits, the study area was assessed for its potential to support all species of birds. Targeted dusk surveys were also conducted to ascertain the presence/absence of crepuscular species.

- A total of 64 species were recorded within the study area. Of these, a total of 26 species were confirmed as breeding within the study area and a further 17 as probably breeding. Possible breeding species numbered 13 and non-breeding species (those visiting the study area to feed or simply flying over) totalled eight.
- Nine Red-listed species were recorded. None of these are especially scarce, in spite of declining significantly at a national level over the last 25 years.
- Nineteen Amber-listed species were recorded. Not all were proved to hold territories within the study area and some were flyover records only.

In the absence of mitigation large-scale development within the study area has the potential to impact upon breeding birds in the following ways:

- Loss of nests and eggs and killing or injury of fledglings if structures and habitats are cleared during the breeding season; and
- Loss of suitable habitat for species leading to an overall decrease in numbers and diversity of breeding birds, although the impacts upon individual species are anticipated to differ significantly.

Measures are recommended to mitigate the effect of large-scale development, and enhance the development area; these comprise maintaining and incorporating areas of higher quality habitat which support denser populations and diversity of birds, enhancing existing habitats, incorporating native planting where possible, providing linkages across the Proposed Development and with the wider surrounding area, and providing a range of artificial nesting structures where appropriate.

1 INTRODUCTION

1.1 BACKGROUND

1.1.1 The Chilmington Green Site is situated to the south-west of Ashford, Kent (Central Grid reference TQ 978 399). The Site is proposed for development as an urban extension, including dwellings together with employment, community and retail facilities, in accordance with the Ashford Core Strategy (adopted 2008).

1.1.2 An Area Action Plan (AAP) is being prepared by Ashford Borough Council to provide a framework for development of the Chilmington Green Site. The maximum area of search for the AAP is an area approximately 428.5 hectares in size including all built and non-built development centred at Grid Reference TQ 979396. This area is hereafter referred to as the 'study area'. The study area includes land which will fall outside of the eventual outline planning application boundary of the Proposed Development, for example at Chilmington Green hamlet.

1.1.3 A developer consortium comprising Ward Homes (A Trading Name of BDW Trading Ltd), Pentland Homes, Hodson Developments and Jarvis Homes is preparing a masterplan to develop a proportion of the study area. The proposal is for a comprehensive mixed use development and is hereafter referred to as the 'Proposed Development'.

1.1.4 WSP Environmental Ltd (WSPE) were commissioned by the developer consortium to undertake a breeding bird survey of the study area.

1.1.1 This report has been prepared to support a future planning application for a Proposed Development and forms part of the evidence base for the Action Plan (AAP) which is being prepared by Ashford Borough Council to provide a framework for development of the study area.

1.1.5 The need for the breeding bird survey was highlighted within an Extended Phase I Habitat Survey undertaken by WSPE in July 2008 (WSPE, 2008) and updated in 2010 (WSPE, 2010). This identified the presence of a range of habitats suitable for use by a variety of breeding bird species including species of particular conservation concern.

1.2 REPORT STRUCTURE

1.2.1 This report has been produced in two main sections:

- Survey methodology, results and discussion (Sections 2-4) which provide an assessment of the study area for breeding birds and an overview of the potential impacts of development in the absence of mitigation; and
- Mitigation and enhancement measures and conclusions (Sections 5-6) which set out measures which will be taken specifically in relation to the Proposed Development and have been incorporated into the masterplan.

1.3 AIMS AND OBJECTIVES

1.3.1 The main aims of the survey were:

- To map the distribution and species composition of breeding birds using the study area;
- To produce territory maps for species of conservation concern;
- To determine the areas with highest diversity and/or numbers of birds within the study area;
- To identify key constraints and potential impacts relating to birds associated with the Proposed Development; and
- To inform the potential need for mitigation to ensure legal compliance during the development process.

1.4 STUDY AREA CHARACTERISTICS

1.4.1 The study area is delineated by the suburbs of Ashford (Singleton and Stanhope) at the northern and eastern boundaries and the village of Stubbs' Cross lies at the southern tip. Field boundaries and Ashford Road (A28) form the other study area limits, as shown on **Figure 1**.

1.4.2 The land-use within the Proposed Development Site is varied, but the dominant habitat is large fields of arable crops to the north and south of Chilmington Green hamlet itself. There are a few small areas of pasture and rough grassland. The majority of fields have hedgerows delineating their boundaries, some of which are interspersed with trees. There are some small areas of woodland – particularly noteworthy are Coleman's Kitchen Wood in the east

of the study area and Stubbcross Wood adjacent to Tally Ho Road in the south of the study area. Very little wetland habitat is present; comprising ditches, scattered field, woodland and garden ponds only. Houses with gardens, farm buildings, and a few small business/light industrial units are also present within the study area.

1.5 LEGISLATION AND POLICY

1.5.1 All UK species of wild birds and their nests and eggs are protected by law (for the whole or part of the year) by the Wildlife and Countryside Act, 1981 (as amended and strengthened by the Countryside and Rights of Way [CROW] Act, 2000). This makes it an offence, with certain exceptions, to intentionally or recklessly kill, injure or take any wild bird, and take, damage or destroy the nest of any wild bird while it is in use or being built. Some bird species with high individual levels of conservation importance are protected at all times under Schedule 1 of the 1981 Act.

1.5.2 The UK's leading bird conservation organisations work together to review the status of the birds that occur regularly in the UK. This review aims to provide an up-to-date assessment of conservation priorities in terms of birds. The latest assessment took place in 2009. A total of 246 species have been assessed against a set of objective criteria to place each on one of three lists – green, amber and red – indicating an increasing level of conservation concern. These lists are known as 'Birds of Conservation Concern' (BoCC). There are currently 52 species on the red list, 126 on the amber list and 68 on the green list. The red list has increased by 12 species since 2002, with 18 species added but six moved from red to amber.

- Seven quantitative criteria are used to assess the population status of each species and to place it on the red, amber or green list. These are: global conservation status, recent decline, historical decline, European conservation status, rare breeders, localised species and international importance.
- Red-list species are those that are globally threatened according to the IUCN criteria; those whose population or range has declined rapidly in recent years; and those that have declined historically and not shown a substantial recent recovery.
- Amber-list species are those with an unfavourable conservation status in Europe; those where population range has declined moderately in recent years; those where population has declined historically but made a substantial recent recovery; rare breeders; and those with internationally important or localised populations.
- Green-list species are those which do not fulfil any of the red or amber list criteria and they are not considered in detail in this report.

1.5.3 The Natural Environment and Rural Communities (NERC) Act came into force on 1st Oct 2006. Section 41 (S41) of the Act requires the Secretary of State to publish a list of habitats and species which are of principal importance for the conservation of biodiversity in England. The list of Species of Principal Importance (SPIs) has been drawn up in consultation with Natural England, as required by the Act; this is almost entirely based on the species identified as requiring action under the UK BAP, with some additions.

1.5.4 The S41 list is used to guide decision-makers such as public bodies, including local and regional authorities, in implementing their duty under section 40 of the Natural Environment and Rural Communities Act 2006, to have regard to the conservation of biodiversity in England, when carrying out their normal functions. A number of common and widespread bird species, alongside rarer species are listed as SPIs. The Government's Planning Policy Statement 9 (PPS 9) on Biodiversity and Geological Conservation states that SPIs should be protected from the adverse effects of development through the planning system. Such species are therefore deemed a material consideration within the planning process and their conservation requirements should be promoted through the incorporation of beneficial biodiversity designs within development proposals.

1.5.5 In addition, under PPS9 the presence of a protected species is a material consideration when a planning authority is considering a development proposal that, if carried out, would be likely to result in harm to the species or its habitat. Many bird species are also listed as UK Biodiversity Action Plan (UKBAP) priority species.

2 METHODOLOGY

2.1 DESK STUDY

2.1.1 A desk study exercise was undertaken in 2007 and has been updated to incorporate additional information available since 2007 in order to determine the presence of records of bird species (June 2010). Information was requested for the study area itself and a 2 km radius around the study area in line with standard guidelines (IEA, 1995). The results of the desk study are shown on **Figure 2** and discussed in Section 3.

2.1.2 As part of the desk study the following statutory and non-statutory bodies were consulted including:

- Kent and Medway Biological Records Centre (KMBRC) (including Kent Ornithological Society (KOS));
- Natural England; and
- Environment Agency.

2.2 FIELD SURVEY

2.2.1 The field survey methodology followed current best practice guidance (British Trust for Ornithology [BTO] methods adapted from Bibby 2000).

2.2.2 Habitats present on-site were sampled during a walked transect, during which the surveyor mapped the presence of birds seen or heard. Each survey commenced from a different start point, to help reduce any bias from surveys beginning from the same points at the same start times. With the exception of the limitations listed below, the conditions were such that the field surveyor could walk easily to all areas and could determine bird locations accurately, apart from in restricted areas such as private gardens/businesses where positions were marked as accurately as possible. The area was surveyed at a very slow walking pace, with many stops throughout to listen and record all birds present. The location, identity and breeding behaviour of all birds seen and heard were marked accurately on large scale field maps using the appropriate BTO Species Codes (**see Appendix B**).

2.2.3 Following the final visit, mapping of the ornithological usage of the study area was undertaken (see **Figures 3 – 7**). The resulting figures were used to assess key areas and species likely to be impacted upon by the Proposed Development (see **Appendix A**). Territory maps for Birds of Conservation Concern (BoCC) recorded were also compiled (see **Figures 9 - 29**).

2.3 SURVEY TIMING AND PERSONNEL

2.3.1 The survey was completed by Greenprint Ecology on behalf of WSPE.

2.3.2 The study area was surveyed on six occasions according to current best practice guidance (British Trust for Ornithology [BTO] methods adapted from Bibby 2000). Four dawn survey visits were made to the study area during May and June 2010 and two evening visits were conducted within this same time period. The survey details and weather conditions are shown in Table 1 below.

Table 1: Survey dates, times and weather conditions

Date	Start time	Weather conditions	Notes
28.04.10	06.00	Dry, sunny, cloud=6, wind=1-2, temp = 10-19°C.	Started out misty, then quickly became very warm. Very still.
29.04.10	05.30	Dry, overcast, cloud=7, wind=1-2, temp = 10-20°C.	As above.
30.04.10	06.00	Dry, sunny, cloud=6, wind=1-2, temp = 10-19°C.	As above.
05.05.10	05.30	Dry, sunny, cloud=6, wind=2-3, temp = 9-14°C.	Breezy, cool wind.
06.05.10	05.30	Dry, sunny, cloud=6, wind= 2-3, temp = 9-16°C.	As above.
07.05.10	05.30	Dry, sunny, cloud =7, wind=1-2, temp = 7-15°C.	As above.

Date	Start time	Weather conditions	Notes
18.05.10	06.00 & 19.00	Dry, sunny, cloud =3, wind=0-1, temp = 6-15°C.	Started out misty, then quickly became warm. Very still.
19.05.10	06.00 & 19.00	Dry, overcast, cloud =8, wind=0-1, temp = 8-14°C.	As above.
20.05.10	05.30	Dry, overcast, then sunny spells, cloud =4, wind=0-1, temp = 8-17°C.	As above.
02.06.10	06.00 & 19.00	Dry, sunny, cloud=5, wind=0-1, temp = 9-18°C.	Started out misty, then quickly became very warm. Very still.
03.06.10	06.00 & 19.00	Dry, sunny, cloud=2, wind=1-2, temp = 10-21°C.	Warm & bright from the start.
04.06.10	05.30	Dry, sunny, cloud=3, wind= 1-2, temp = 9-16°C.	As above.

2.4 SURVEY LIMITATIONS

2.4.1 Full access across the southern part of the study area (to the south of Chilmington Green Road and the north-west of Criol Lane) was not possible. This part of the study area was surveyed from Public Rights of Way. A subsequent survey of this area has been undertaken during 2011; please refer to the Chilmington Green 2011 Breeding Bird Survey (WSP, 2012).

3 RESULTS

3.1 DESK STUDY

3.1.1 Records of 16 Schedule 1 and 31 BAP species have been identified within 2km of the study area. These have been summarised in Table 2 below and those records from within the last 15 years have been plotted on **Figure 2: Ecological Constraints: Birds** (Extended Phase 1 habitat survey report (WSP, 2012)).

3.1.2 With the exception of a single lapwing record located within the study area boundary to the north east of Chilmington Green hamlet, the majority of records were from a single location in Great Chart to the north of the study area and a single location in Worton Wood to the north east of the study area.

3.1.3 In addition to the Schedule 1 and BAP records, an additional 30 amber listed and 2 red listed species were returned from within the search area.

Table 2: Schedule 1 and BAP species

Common Name	Latin Name	Date	BAP	Schedule 1
Barn Owl	<i>Tyto alba</i>	1997		X
Bewick's Swan	<i>Cygnus columbianus</i>	1997	X	X
Black Redstart	<i>Phoenicurus ochruros</i>	1997		X
Bullfinch	<i>Pyrrhula pyrrhula</i>	2008	X	
Common Crossbill	<i>Loxia curvirostra</i>	1997		X
Corn Bunting	<i>Miliaria calandra</i>	1992	X	
Cuckoo	<i>Cuculus canorus</i>	2005	X	
Curlew	<i>Numenius arquata</i>	1997	X	
Duncock	<i>Prunella modularis</i>	2005	X	
Fieldfare	<i>Turdus pilaris</i>	2003		X
Firecrest	<i>Regulus ignicapillus</i>	1998		X
Goldeneye	<i>Bucephala clangula</i>	2000		X
Grasshopper Warbler	<i>Locustella naevia</i>	1971	X	
Green Sandpiper	<i>Tringa ochropus</i>	2006		X
Grey Partridge	<i>Perdix perdix</i>	1992	X	
Hawfinch	<i>Coccothraustes coccothraustes</i>	1982	X	
Herring Gull	<i>Larus argentatus</i>	2005	X	
Hobby	<i>Falco subbuteo</i>	2005		X
House Sparrow	<i>Passer domesticus</i>	2005	X	
Kingfisher	<i>Alcedo atthis</i>	2006		X
Lapwing	<i>Vanellus vanellus</i>	2005	X	
Lesser Redpoll	<i>Carduelis cabaret</i>	2002	X	
Lesser Spotted Woodpecker	<i>Dendrocopus minor</i>	1999	X	
Linnet	<i>Carduelis cannabina</i>	2005	X	
Little Ringed Plover	<i>Charadrius dubius</i>	1985		X
Marsh Tit	<i>Parus palustris</i>	1971	X	
Redwing	<i>Turdus iliacus</i>	2006		X
Reed Bunting	<i>Emberiza schoeniclus</i>	1992	X	
Ring Ouzel	<i>Turdus torquatus</i>	1997	X	
Skylark	<i>Alauda arvensis</i>	2005	X	
Song Thrush	<i>Turdus philomelos</i>	2005	X	

Common Name	Latin Name	Date	BAP	Schedule 1
Spotted Flycatcher	<i>Muscicapa striata</i>	2005	X	
Starling	<i>Sturnus vulgaris</i>	2005	X	
Stone-curlew	<i>Burhinus oedicnemus</i>	1972	X	X
Tree Pipit	<i>Anthus trivialis</i>	1971	X	
Tree Sparrow	<i>Passer montanus</i>	1992	X	
Turtle Dove	<i>Streptopelia turtur</i>	1992	X	
Whimbrel	<i>Numenius phaeopus</i>	1997		X
White-fronted Goose	<i>Anser albifrons</i>	1997	X	X
Willow Tit	<i>Parus montanus</i>	1992	X	
Wryneck	<i>Jynx torquilla</i>	2000	X	X
Yellow Wagtail	<i>Motacilla flava</i>	2002	X	
Yellowhammer	<i>Emberiza citronella</i>	2005	X	

3.2 FIELD SURVEY

3.2.1 A total of 64 bird species were recorded at the study area during the survey period. Species deemed to be simply flying over the area, without utilising the area in any way, were included on survey maps but were recorded as non-breeding. A total of 26 species were confirmed as breeding at the study area and a further 17 as probably breeding. Possible breeding species numbered 13 and non-breeding species – those visiting the study area to feed or simply flying over – totalled eight. Table 3 lists all birds recorded during surveys and provides an indication of their breeding status in the study area. Breeding status was assigned using the criteria set out in the European Bird Census Council Breeding Categories guidelines. An explanation of the letter codes which follow the breeding status listings can be found in **Appendix C**.

Table 3: All species recorded, breeding status and field notes

Common Name	Scientific Name	Breeding Status	Notes
Barn Owl	<i>Tyto alba</i>	Possible breeding (H)	One record of a single bird flying west along the hedge line south of Ashford Road.
Blackbird	<i>Turdus merula</i>	Confirmed breeding (FF)	Numerous and widespread across study area. Recorded on all visits. Maximum count = 34.
Blackcap	<i>Sylvia atricapilla</i>	Confirmed breeding (FF)	Widespread across study area, especially wooded areas. Recorded on all visits. Maximum count = 15.
Black-headed Gull	<i>Larus ridibundus</i>	Non-breeding	Flyover records only.
Blue Tit	<i>Parus caeruleus</i>	Confirmed breeding (FL)	Numerous and widespread across study area. Recorded on all visits. Maximum count = 31.
Bullfinch	<i>Pyrrhula pyrrhula</i>	Possible breeding (H)	Recorded in small numbers on four visits. Maximum count = three.
Carrion Crow	<i>Corvus corone</i>	Confirmed breeding (NY)	Many records relate to birds flying over study area. Recorded on all visits. Maximum count = 20.
Chaffinch	<i>Fringilla coelebs</i>	Confirmed breeding (FF)	Numerous and widespread across study area. Recorded on all visits. Maximum count = 36.
Chiffchaff	<i>Phylloscopus collybita</i>	Confirmed breeding (FL)	Widespread across study area, especially wooded areas. Recorded on all visits. Maximum count = 9.
Collared Dove	<i>Streptopelia decaocto</i>	Confirmed breeding (NE)	Numerous and widespread across study area. Maximum count = 10.
Common Buzzard	<i>Buteo buteo</i>	Possible breeding (H)	One record of a single bird flying north over Purchase Wood.
Common Gull	<i>Larus canus</i>	Non-breeding	Flyover records only.
Common Whitethroat	<i>Sylvia communis</i>	Confirmed breeding (FF)	Numerous and widespread across study area. Recorded on all visits. Maximum count = 57.
Cuckoo	<i>Cuculus canorus</i>	Probable breeding (T)	Three records of singing males, two associated with ponds south of Mock Lane and one south of Chart Road.

Common Name	Scientific Name	Breeding Status	Notes
Duncock	<i>Prunella modularis</i>	Confirmed breeding (FF)	Widespread across study area, especially along hedges. Recorded on all visits. Maximum count = 16.
Feral Pigeon	<i>Columba livia (domest.)</i>	Probable breeding (P,T)	Recorded on two visits, maximum count = 28.
Garden Warbler	<i>Sylvia borin</i>	Probable breeding (T)	Recorded in small numbers on two visits. Maximum count = two.
Goldcrest	<i>Regulus regulus</i>	Possible breeding (S)	One male singing in the same area, in conifers near Chilmington Green Farm, on two visits.
Goldfinch	<i>Carduelis carduelis</i>	Probable breeding (P)	Recorded in small numbers on three visits. Maximum count = seven.
Great Black-backed Gull	<i>Larus marinus</i>	Non-breeding	Flyover records only.
Great Spotted Woodpecker	<i>Dendrocopos major</i>	Probable breeding (A)	Recorded in small numbers on five visits. Maximum count = three.
Great Tit	<i>Parus major</i>	Confirmed breeding (FL)	Numerous and widespread across study area. Recorded on all visits. Maximum count = 24.
Green Woodpecker	<i>Picus viridis</i>	Probable breeding (A)	Recorded in small numbers on all visits, across the study area. Maximum count = five.
Greenfinch	<i>Carduelis chloris</i>	Confirmed breeding (FF)	Widespread across study area. Recorded on all visits. Maximum count = 11.
Grey Heron	<i>Ardea cinerea</i>	Non-breeding	One flyover record only.
Greylag Goose	<i>Anser anser</i>	Non-breeding	One flyover record of six birds.
Herring Gull	<i>Larus argentatus</i>	Non-breeding	Flyover records only.
Hobby	<i>Falco subbuteo</i>	Possible breeding (H)	One record of a single bird flying north-east along Criol Lane.
House Martin	<i>Delichon urbica</i>	Probable breeding (N)	Present in small numbers on two visits. Probably breeds at Great Chilmington Farm and other houses nearby.
House Sparrow	<i>Passer domesticus</i>	Confirmed breeding (FF)	Present in reasonable numbers near houses/buildings. Recorded on all visits, maximum count = 34.
Jackdaw	<i>Corvus monedula</i>	Possible breeding (H)	Most records relate to birds flying over study area. Recorded on four visits. Maximum count = 8.
Jay	<i>Garrulus glandarius</i>	Confirmed breeding (FL)	Recorded in small numbers on four visits. Maximum count = four.
Kestrel	<i>Falco tinnunculus</i>	Possible breeding (H)	Recorded on four visits in low numbers.
Lesser Black-backed Gull	<i>Larus fuscus</i>	Non-breeding	Flyover records only.
Lesser Whitethroat	<i>Sylvia curruca</i>	Possible breeding (S)	Two records of different males singing on one visit.
Linnets	<i>Carduelis cannabina</i>	Confirmed breeding (FF)	Present in good numbers, particularly along hedges. Recorded on all visits, maximum count = 34.
Long-tailed Tit	<i>Aegithalos caudatus</i>	Confirmed breeding (FL)	Recorded in small numbers on five visits. Maximum count = six.
Magpie	<i>Pica pica</i>	Confirmed breeding (FL)	Widespread across study area. Recorded on all visits. Maximum count = 7.
Mallard	<i>Anas platyrhynchos</i>	Probable breeding (P)	Five records, two of which were of pairs in ditches, probably nesting there.
Mistle Thrush	<i>Turdus viscivorus</i>	Possible breeding (H)	One individual recorded on two visits.
Moorhen	<i>Gallinula chloropus</i>	Probable breeding (P)	Recorded in small numbers on three visits, most records associated with a pond just north of Hedgers Way.
Nightingale	<i>Luscinia megarhynchos</i>	Probable breeding (T)	One male singing in the same area, in woodland north-west of Mock Lane, on three visits.
Nuthatch	<i>Sitta europaea</i>	Possible breeding (H)	One individual recorded on one visit in woodland strip along Long Length.
Peregrine Falcon	<i>Falco peregrinus</i>	Non-breeding	One record of a single bird being mobbed by a Crow close to the pond north of Long Length.
Pheasant	<i>Phasianus colchicus</i>	Probable breeding (P)	Recorded in small numbers on all visits. Maximum count = six.
Pied Wagtail	<i>Motacilla alba</i>	Probable breeding (P)	Present in small numbers on three visits. Probably breeds in study area.
Red-legged Partridge	<i>Alectoris rufa</i>	Probable breeding (A)	Two records of calling birds, both in arable areas.

Common Name	Scientific Name	Breeding Status	Notes
Reed Bunting	<i>Emberiza schoeniclus</i>	Confirmed breeding (FF)	Present in reasonable numbers, particularly along hedges. Recorded on all visits, maximum count = 11.
Robin	<i>Erithacus rubecula</i>	Confirmed breeding (FL)	Numerous and widespread across study area. Recorded on all visits. Maximum count = 31.
Rook	<i>Corvus frugilegus</i>	Confirmed breeding (FL)	Most records relate to birds flying over study area. Recorded on five visits. Maximum count = 5.
Sedge Warbler	<i>Acrocephalus schoenobaenus</i>	Possible breeding (S)	One record of a single male singing in oilseed rape field south of Mock Lane.
Skylark	<i>Alauda arvensis</i>	Confirmed breeding (FF)	Numerous and widespread across arable areas of study area. Recorded on all visits. Maximum count = 35.
Song Thrush	<i>Turdus philomelos</i>	Confirmed breeding (FF)	Recorded in small numbers on five visits. Maximum count = five.
Sparrowhawk	<i>Accipiter nisus</i>	Possible breeding (H)	One record of a single bird flying east along Long Length.
Starling	<i>Sturnus vulgaris</i>	Confirmed breeding (FL)	Numerous and widespread across study area. Recorded on all visits. Maximum count = 159.
Stock Dove	<i>Columba oenas</i>	Probable breeding (T,N)	Recorded in small numbers on all visits. Maximum count = five. Most records associated with Coleman's Kitchen Wood.
Swallow	<i>Hirundo rustica</i>	Confirmed breeding (NY)	Numerous and widespread, especially near outbuildings. Recorded on all visits. Maximum count = 21.
Swift	<i>Apus apus</i>	Possible breeding (H)	Recorded in small numbers on two visits. Maximum count = four.
Tawny Owl	<i>Strix aluco</i>	Probable breeding (T)	Records of single males calling, mostly associated with Coleman's Kitchen Wood, one record from Purchase Wood.
Treecreeper	<i>Certhia familiaris</i>	Probable breeding (T)	Single birds recorded on four visits, three records from woodland north of Tally Ho Road.
Woodpigeon	<i>Columba palumbus</i>	Confirmed breeding (NE)	Numerous and widespread across study area. Recorded on all visits. Maximum count = 78.
Wren	<i>Troglodytes troglodytes</i>	Confirmed breeding (FF)	Numerous and widespread across study area. Recorded on all visits. Maximum count = 42.
Yellow Wagtail	<i>Motacilla flava</i>	Probable breeding (T)	One male singing in the same area, south of Chilmington Green Farm, on four visits.
Yellowhammer	<i>Emberiza citrinella</i>	Confirmed breeding (FF)	Present in reasonable numbers, particularly along hedges. Recorded on all visits, maximum count = 11.

3.2.2 Table 4 lists the numbers of estimated territories for all BoCC species recorded. This is deduced from breeding behaviour (singing, alarm calls, food carrying, etc.) observed during surveys and compiled from field maps.

Table 4: Estimated number of territories for Birds of Conservation Concern (BoCC)

Common Name	Scientific Name	Estimated number of territories in study area
Barn Owl	<i>Tyto alba</i>	One
Black-headed Gull	<i>Larus ridibundus</i>	None
Bullfinch	<i>Pyrrhula pyrrhula</i>	Four
Common Gull	<i>Larus canus</i>	None
Common Whitethroat	<i>Sylvia communis</i>	Fifty
Cuckoo	<i>Cuculus canorus</i>	Two
Dunnock	<i>Prunella modularis</i>	Fifteen
Great Black-backed Gull	<i>Larus marinus</i>	None
Green Woodpecker	<i>Picus viridis</i>	Six

Common Name	Scientific Name	Estimated number of territories in study area
Greylag Goose	<i>Anser anser</i>	None
Herring Gull	<i>Larus argentatus</i>	None
House Martin	<i>Delichon urbica</i>	Two
House Sparrow	<i>Passer domesticus</i>	Thirty-five
Kestrel	<i>Falco tinnunculus</i>	Two
Lesser Black-backed Gull	<i>Larus fuscus</i>	None
Linnet	<i>Carduelis cannabina</i>	Sixteen
Mallard	<i>Anas platyrhynchos</i>	Two
Mistle Thrush	<i>Turdus viscivorus</i>	Two
Nightingale	<i>Luscinia megarhynchos</i>	One
Reed Bunting	<i>Emberiza schoeniclus</i>	Fifteen
Skylark	<i>Alauda arvensis</i>	Thirty
Song Thrush	<i>Turdus philomelos</i>	Ten
Starling	<i>Sturnus vulgaris</i>	Sixty
Stock Dove	<i>Columba oenas</i>	Three
Swallow	<i>Hirundo rustica</i>	Nine
Swift	<i>Apus apus</i>	Two
Yellow Wagtail	<i>Motacilla flava</i>	One
Yellowhammer	<i>Emberiza citrinella</i>	Fifteen

3.2.3 Table 5 lists the key species found in the study area, as defined by their protected status, and whether they are subject to a national Biodiversity Action Plan (UK BAP), or a Local Biodiversity Action Plan (LBAP) or are listed under Schedule 1 of the Wildlife and Countryside Act (1981).

Table 5 Key species found in the study area as defined by their protected status

Common Name	Scientific Name	Conservation status in wider context	
		Birds of Conservation Concern Listing	Other Listings
Barn Owl	<i>Tyto alba</i>	Amber	Schedule 1 WCA
Black-headed Gull	<i>Larus ridibundus</i>	Amber	-
Bullfinch	<i>Pyrrhula pyrrhula</i>	Amber	UK BAP & LBAP
Common Gull	<i>Larus canus</i>	Amber	-
Common Whitethroat	<i>Sylvia communis</i>	Amber	-
Cuckoo	<i>Cuculus canorus</i>	Red	UK BAP
Duncock	<i>Prunella modularis</i>	Amber	UK BAP

Common Name	Scientific Name	Conservation status in wider context	
		Birds of Conservation Concern Listing	Other Listings
Great Black-backed Gull	<i>Larus marinus</i>	Amber	-
Green Woodpecker	<i>Picus viridis</i>	Amber	-
Greylag Goose	<i>Anser anser</i>	Amber	-
Herring Gull	<i>Larus argentatus</i>	Red	UK BAP
Hobby	<i>Falco subbuteo</i>	Green	Schedule 1 WCA
House Martin	<i>Delichon urbica</i>	Amber	-
House Sparrow	<i>Passer domesticus</i>	Red	UK BAP
Kestrel	<i>Falco tinnunculus</i>	Amber	-
Lesser Black-backed Gull	<i>Larus fuscus</i>	Amber	-
Linnet	<i>Carduelis cannabina</i>	Red	UK BAP & LBAP
Mallard	<i>Anas platyrhynchos</i>	Amber	-
Mistle Thrush	<i>Turdus viscivorus</i>	Amber	-
Nightingale	<i>Luscinia megarhynchos</i>	Amber	-
Peregrine	<i>Falco peregrinus</i>	Green	Schedule 1 WCA
Reed Bunting	<i>Emberiza schoeniclus</i>	Amber	UK BAP & LBAP
Skylark	<i>Alauda arvensis</i>	Red	UK BAP & LBAP
Song Thrush	<i>Turdus philomelos</i>	Red	UK BAP & LBAP
Starling	<i>Sturnus vulgaris</i>	Red	UK BAP
Stock Dove	<i>Columba oenas</i>	Amber	-
Swallow	<i>Hirundo rustica</i>	Amber	-
Swift	<i>Apus apus</i>	Amber	-
Yellow Wagtail	<i>Motacilla flava</i>	Red	UK BAP
Yellowhammer	<i>Emberiza citrinella</i>	Red	UK BAP

3.2.4 The study area as a whole supported a minimum of 26 (confirmed) breeding bird species, and a maximum of 56 (including those considered as probable and possible breeders). Numbers and diversity of birds recorded was highest where there were hedgerows, mature trees, woodland, gardens and farm buildings. In general terms, the areas of the study area consisting of arable crops contained the lowest numbers and diversity of birds (**see Appendix A**). Table 5 shows that nine Red-listed species and 19 Amber-listed species were recorded in the study area. Of these 38 species, 19 held breeding territories within the study area.

3.2.5 Nine Red-listed species were recorded, and each of these is discussed in further detail below:

- **Cuckoo** was observed on three occasions, all records were of singing males. Two of these sightings were associated with ponds south of Mock Lane (Grid Reference: TQ 975 407). The third was a record from an area of scrub near Chilmington Green Farm (TQ 982 406). Generally viewed as a widespread but rapidly declining species in the UK, this is also the case in Kent. In the absence of mitigation large scale re-development of the study area

could have a negative impact on cuckoo if food and egg-laying opportunities were depleted and disturbance levels increased.

- **Herring Gull** was recorded flying over the study area in low numbers on three visits. This species was likely to be commuting between feeding and roosting areas – there were no significant areas of water in the study area. Kent Bird Report (2007) describes herring gull numbers as ‘numerous and increasing’. It is very unlikely that a change in land use at this study area would have a negative impact on this species.
- **House Sparrow** was recorded on all visits, with recently fledged birds observed close to the houses at Hedgers Way to the east of the study area. Most records of this species were associated with the houses and gardens at Hedgers Way and around the buildings at Chilmington Green Farm. Kent Bird Report (2007) describes House Sparrow in Kent as ‘common but declining’. This is also the case across the rest of the UK. As with Starling, this species could be negatively impacted through a loss of feeding areas but this would be dependent on the suitability of the new development for this species.
- **Linnet** was widespread and fairly common along hedgerows in the arable habitats on the study area. It was a confirmed breeding species, with observations of adult birds carrying food to nest sites and sightings of recently fledged young. Any loss of arable habitat is likely to have a negative impact upon the numbers of this species at a Site level, and possibly in the immediate surrounding area. Unmitigated hedgerow and arable land loss would result in a reduction of both nest sites and food supplies. Kent Bird Report (2007) states that this is a ‘Widespread summer visitor and passage migrant, with only small flocks overwintering’.
- **Skylark** was widespread and numerous amongst the arable crops on the study area. It was a confirmed breeding species, with several observations of adult birds carrying food to nest sites and also sightings of recently fledged young. The loss of these arable habitats is a likely outcome of development and this could have a major impact upon the numbers of this species, both at a Site level and within the immediate surrounding areas. A loss of the arable land in the study area would result in the removal of both nest sites and food supplies. Kent Bird Report (2007) states that this is ‘a common but declining resident species’.
- **Song Thrush** was recorded in small numbers on five visits. The maximum count was five for the study area and breeding was confirmed through observations of adults carrying food to nests. Song thrush was recorded mostly in areas with trees and hedges, and therefore unmitigated losses of these habitats would be likely to have a negative impact on the numbers of this species on the study area. Song thrush is described as common and widespread but declining in Kent as a whole (Kent Bird Report, 2007).
- **Starling** was recorded on all visits, with parties of young and adults observed feeding on the arable fields within the eastern part of the study area close to Hedgers Way. Most records of this species were associated with the houses and gardens at Hedgers Way. Kent Bird Report (2007) describes Starlings in Kent as ‘abundant and widespread but declining’. This is also the case across the rest of the UK. In the absence of mitigation it would seem likely that this species may undergo some reduction in numbers if the study area were to be developed, due to the loss of feeding areas although this would be dependent on the suitability of the new development for this species.
- **Yellow Wagtail** was recorded on three survey visits. On each occasion, a single male of this species was seen and heard singing in the same location. The bird was using the fence along the Greensand Way footpath, near Chilmington Green Farm, as a song post on each visit. This species is described as ‘widespread but declining’ in Kent (Kent Bird Report, 2007). Large scale re-development of the study area could bring about a decline in suitable habitat and an increased disturbance at the study area which could result in the loss of Yellow Wagtail as a breeding species at a Site level.
- **Yellowhammer** was recorded on all visits, with a maximum count of 11. Yellowhammer was widespread and fairly common along hedgerows in the arable habitats in the study area. It was a confirmed breeding species, with several observations of adult birds carrying food to nest sites. This species favours open farmland and a loss of arable habitat is likely to have a negative impact upon the numbers of this species in the study area, and possibly in surrounding areas close by. The unmitigated loss of hedgerows and arable land could result in the loss of both nest sites and food supplies. Kent Bird Report (2007) states that this is a ‘Common but declining resident, particularly in rural areas’.

3.2.6 Nineteen Amber-listed species were recorded, and these are discussed below:

- **Barn Owl** was recorded once. One adult was observed flying south-west by a hedge alongside the A28, to the north of the study area. Unmitigated losses of hunting habitat such as rank grassland, including verges and ditch edges, and pastures/grassland areas would have a negative impact on this species at a Site level, and possibly within the immediate surrounding area. There are some old farm buildings which have the potential to be used for nesting and the presence or otherwise of barn owls should be determined within these buildings. Kent Bird Report (2007) states that this is a 'Scarce resident, passage migrant and winter visitor in small numbers'.
- **Black-headed Gull** was recorded once, with six birds seen flying over the study area. There are no significant water bodies within the survey area and these birds were likely to be commuting between roosting and feeding areas. It is very unlikely that a change in land use at the study area would have a negative impact on this species.
- **Bullfinch** was recorded in small numbers (up to three) on five survey visits. Most observations were of birds associated with woodland, gardens and hedgerows. Clearly, the study area's hedges were important for Bullfinch and the loss of these could have a negative impact upon numbers of this species at a Site level. The unmitigated loss of feeding areas may also have a negative impact. However, it seems unlikely that development would have a major negative effect on this species beyond a Site level, with other suitable habitat available nearby for feeding and nesting.
- **Common Gull** was recorded on three occasions, with small numbers flying over the study area. There are no significant water bodies within the survey area and these birds were likely to be commuting between roosting and feeding areas. It is very unlikely that a change in land use at the study area would have a negative impact on this species.
- **Common Whitethroat** was recorded on all six visits and it was one of the most numerous species at the study area. A maximum count of 57 was recorded, with most birds recorded along hedgerows and in scrub at the study area. The unmitigated loss of the study area's hedges and scrub could have a negative impact upon numbers of this species at a Site level, and could cause dispersal into other nearby areas. Any loss of feeding areas may also have a negative impact. However, it seems unlikely that development would have a major negative effect on this species beyond a Site level. Described as a 'Widespread and increasing summer visitor and passage migrant' by the Kent Bird Report (2007).
- **Dunnock** was recorded on all surveys and was widespread across the study area, mostly associated with hedgerows and gardens. Clearly, the study area's hedges are important for Dunnock and the loss of these would have a negative impact upon numbers of this species at a Site level. The loss of feeding areas may also have a negative impact on Dunnock. However, it seems unlikely that development would have a major negative effect on this species beyond a Site level, with other nearby areas available for feeding and nesting.
- **Great Black-backed Gull** was recorded twice flying over the study area. There are no significant water bodies within the survey area and these birds were likely to be commuting between roosting and feeding areas. It is unlikely that any change in land-use at the study area would have any negative impact upon this species.
- **Green Woodpecker** was recorded at the study area during four survey visits. The maximum count was five. Records were all of lone birds likely to be commuting between feeding areas and breeding areas. This species is likely to breed in the study area, with suitable mature trees available in Coleman's Kitchen Wood, Stubbcross Wood and in gardens and hedgerows in the study area. Kent Bird Report (2007) states that Green Woodpecker is a 'Widespread and increasing resident'. If there were to be a loss of suitable breeding and feeding areas (woodland, hedgerows, gardens) this could result in the dispersal of this species to other suitable areas close to the study area.
- **Greylag Goose** was recorded once, with six birds observed flying over the study area. There were no significant water bodies within the survey area and these birds were likely to be commuting between roosting and feeding areas. It is very unlikely that a change in land use at the study area would have any impact on this species.
- **House Martin** was recorded in small numbers on two occasions and was likely to breed on houses in the study area. Although a change in land-use may have some impact by reducing foraging areas available to this species, it seems unlikely that it would have a major negative effect on this species, with other nearby areas available for feeding.

- **Kestrel** was recorded in low numbers on four visits. Several observations were of birds hunting over areas of open pasture/grassland. It is likely that this species breeds in the study area. Loss of hunting and nesting habitat could have a negative impact upon this species at a Site level only.
- **Lesser Black-backed Gull** was recorded once, with three birds observed flying over the study area. There are no significant water bodies within the survey area and these birds were likely to be commuting between roosting and feeding areas. It is very unlikely that a change in land use at the study area would have a negative impact on this species.
- **Mallard** was recorded on four occasions, with two records being of pairs in ditches, probably nesting there. The other records were of Mallards flying over the study area. A net loss of ditches in study area could have a negative impact upon the numbers of this species in the study area. However, this is unlikely to have any impact other than at a Site scale.
- **Mistle Thrush** was observed on two survey visits, both records being of single birds. Although a change in land-use may have some impact by reducing foraging areas available to this species, it seems unlikely that it would have a major negative effect on this species, with other nearby areas available for feeding. This species is described as 'Widespread but declining' in Kent (Kent Bird Report, 2007).
- **Nightingale** was recorded on three occasions, all records were of one singing male in the small area of woodland north-west of Mock Lane (Grid Reference: TQ 980 409). Kent holds a quarter of the UK breeding population of this species (Kent Bird Report, 2007). Given that this was the only Nightingale recorded in the study area, the unmitigated loss of this woodland could lead to the loss of this species breeding within the study area.
- **Reed Bunting** was recorded on all surveys and was widespread across the study area, but mostly associated with hedgerows (especially those with adjacent ditches). Again, the study area's hedges were important for this species and the unmitigated loss of these would have a negative impact upon numbers of Reed Bunting at a Site level. The loss of feeding areas may also have a negative impact. However, it seems unlikely that development would have a major negative effect on this species beyond a Site level, with other nearby areas available for feeding and nesting.
- **Stock Dove** was recorded in small numbers (maximum five) on all six survey visits. Most observations were of birds associated with Coleman's Kitchen Wood where this species is likely to breed. The loss of this woodland would be likely to have a negative impact on numbers of this species at a Site level although it is understood that this woodland would be retained within any future development proposals. Kent Bird Report (2007) states that this is a 'Widespread and increasing resident species'.
- **Swallow** was a numerous and widespread bird at the study area, recorded on all visits and with a maximum count of 21. Birds were generally recorded in flight, foraging over grassland, farmland and gardens. Nest sites were confirmed at Chilmington Green Farm but are also likely to be present across the study area wherever suitable outbuildings or other structures are available. Although a change in land-use may have some impact by reducing foraging areas available to this species, it seems unlikely that it would have a major negative effect on this species, with other areas nearby available for foraging.
- **Swift** was recorded in small numbers on two occasions. Swifts are likely to breed in house roofs in the study area. Although a change in land-use may have some impact by reducing foraging areas available to this species, it seems unlikely that it would have a major negative effect on this species, with other nearby areas suitable for foraging Swifts.

4 DISCUSSION

4.1 EVALUATION

4.1.1 No attempt is made here to assign statistical population density and diversity figures to the results. The following discussion of the value of the study area is based upon professional judgement and through experience of similar surveys.

4.1.2 Fuller (1980) has devised standard procedures for evaluating breeding bird communities on sites. Recording the number of species on a site can provide a simple measure of species diversity from which to confer a level of conservation importance to a site. For breeding birds, the standard qualifying levels provided by Fuller are as follows: National Importance, 85+ species; Regional Importance, 70-84 species; County Importance, 50-69 species; Local Importance, 25- 49 species.

4.1.3 A total of 64 species were recorded in the study area. Of these, a total of 26 species were confirmed as breeding and a further 17 as probably breeding. The confirmed breeding species list for the whole study area numbered 26, which falls inside the range for Local Importance. It may be argued that proof of breeding was not achieved for some species which may indeed have been breeding in the study area, so this figure could well be higher.

4.1.4 None of the species recorded in the study area can be considered especially rare or unexpected. They are a typical selection of birds to be found in the habitats described within this region. The presence of woodland, gardens, hedgerows and mature trees at the study area are clearly important in terms of numbers and diversity of species within the area. It is these habitats which support both the highest numbers and biggest diversity of species. The results of surveys from arable fields were much lower in both numbers of birds and in species diversity. However, they still provide foraging areas for many species and nesting habitat for skylark.

4.2 OVERVIEW OF POTENTIAL IMPACTS IN THE ABSENCE OF MITIGATION OR AVOIDANCE MEASURES

4.2.1 In the absence of mitigation large-scale development within the study area has the potential to impact upon breeding birds in the following ways:

- Loss of nests and eggs and killing or injury of fledglings if structures and habitats are cleared during the breeding season; and
- Loss of suitable habitat for species leading to an overall decrease in numbers and diversity of breeding birds, although the impacts upon individual species are anticipated to differ significantly.

5 MITIGATION AND ENHANCEMENT MEASURES

5.1 MITIGATION AND ENHANCEMENT

5.1.1 The Proposed Development includes a variety of ecological measures that have been 'designed in' to the scheme. These measures reflect the findings and recommendations of the baseline ecological studies undertaken at the Site. In relation to breeding birds, the principal measures that have been adopted are as follows;

- Phasing the provision of replacement habitat and enhancement measures to ensure that adequate compensation for breeding birds can be provided in advance of each development phase;
- Maintaining and incorporating existing areas of higher quality habitat which support denser populations and diversity of birds – i.e. woodland areas, scrub, rank grassland, mature trees and hedgerows;
- Incorporating native planting where possible in landscaping schemes;
- Creating new high quality habitat for birds outside of the development boundary and provide linkage through the Site with other adjacent habitats to create corridors for wildlife movement within and between areas;
- Providing broad buffer zones of long grassland and scrub, where possible, throughout green spaces to increase the potential foraging areas for a range of bird species; and
- Providing artificial nest boxes, or other structures, within the development where appropriate.

5.1.2 Habitat provision is designed such to minimise impacts upon species recorded on-site, in example:

- **Starlings** would be likely to colonise the Proposed Development, post construction, since the Proposed Development will comprise a mixture of dwellings and associated gardens (at arrange of densities, including some large gardens), areas of open space including playing fields, play areas, allotments, woodland and wetland habitat and well as a large area of retained farmland habitat. Usage of the Site by starlings is likely to increase over time as these areas of open space mature and the increased diversity of available habitat on-site is considered likely to off-set any potentially adverse impact associated with increased cat ownership areas across the Site. The same could be said for both **house sparrow** and **song thrush**;
- **Stock Dove, Green Woodpecker** and **Nightingale** will benefit from the retention of all areas of existing woodland, (including the area in which Nightingale was recorded) on Site. Care has been taken to ensure that the extent of mature tree loss will also be minimised, and a large proportion of the most mature trees on-site will be retained. In addition, there will be new native woodland and tree planting resulting in a net gain in this habitat type in the long-term;
- **Dunnock, Common Whitethroat, Bullfinch** and **Reed Bunting** are all reliant on the existing hedgerow habitat on-site, both for nesting and feeding. The masterplan has been developed to maximise hedgerow retention throughout the Proposed Development in addition, hedgerow enhancement measures are proposed across the south of the Site, especially linked to the farmland enhancement areas. These species will also benefit from other habitat creation measures across the proposed development, including wetland creation (especially of value to reed bunting), orchards and allotments, and areas of formal and informal open space throughout the 'green fingers' of the Proposed Development;
- **Swallow** are nesting within farmland buildings in the study area and many of these buildings will be retained within the Proposed Development. Furthermore, additional buildings suitable for nesting by swallows are likely to exist post-development. The foraging habitat for this species is associated with the agricultural fields and especially the land currently used for cattle grazing. Suitable foraging habitat will be provided within the Proposed Development through a combination of enhanced farmland habitat and wildflower meadows adjoining SUDs areas. In particular, management options for the enhanced farmland habitat will include the potential for low-intensity livestock grazing, which would provide attractive foraging habitat for swallows. In addition to the semi-natural habitats that will be created and managed throughout the Proposed Development, the built environment also presents an opportunity to support nesting birds and this will be encouraged through the incorporation of artificial nest boxes throughout the built environment; and

- **Cuckoo, skylark, yellow wagtail, linnet and yellowhammer** have the potential to be greatly affected by habitat change on-site absence of any appropriate mitigation or habitat retention; these species could potentially be lost as a breeding species within the Site. Ecologically managed farmland habitat, and provision of new scrub and enhanced hedgerow habitat has been designed in to the masterplan to avoid this. Additionally, the vast majority of the ponds will be retained in the Proposed Development and there will be a net increase in both wetland and scrub habitat across the study area as a result of SUDs and wetland creation, especially in the southern part of the Site.

5.1.3 In the case of Skylark, a change in land-use across the study area could result in a loss of arable habitat important to these species, but not considered to be of particular value to the wider assemblage. In order to ensure that the Proposed Development includes sufficient provision for these species an area of over 60ha ecologically managed farmland will be retained or created, and enhanced to benefit farmland birds. Management will include the provision of skylark plots, retention of winter stubble, incorporation of arable field margins and a less intensive, rotational hedgerows management regime. The high quality of this replacement habitat, along with a long-term commitment to its provision each year, is considered adequate to off-set the loss of arable habitat elsewhere in the Proposed Development.

5.1.4 The combination of these measures is expected to significantly increase the habitat quality within the retained farmland areas for farmland birds and this increase in quality, alongside a long-term commitment to beneficial management practices is considered adequate to off-set the impact of habitat loss elsewhere within the Proposed Development. In fact, it is anticipated that the fecundity (breeding success) of skylark nesting within the enhanced farmland habitat will be greater than that of skylark currently breeding across the study area and positive benefits to the other farmland birds using the study area are also anticipated.

6 CONCLUSIONS

6.1.1 A total of 64 bird species were recorded within the study area. Of these, a total of 26 species were confirmed as breeding within the study area and a further 17 as probably breeding. Possible breeding species numbered 13 and non-breeding species – those visiting the study area to feed or simply flying over – totalled eight.

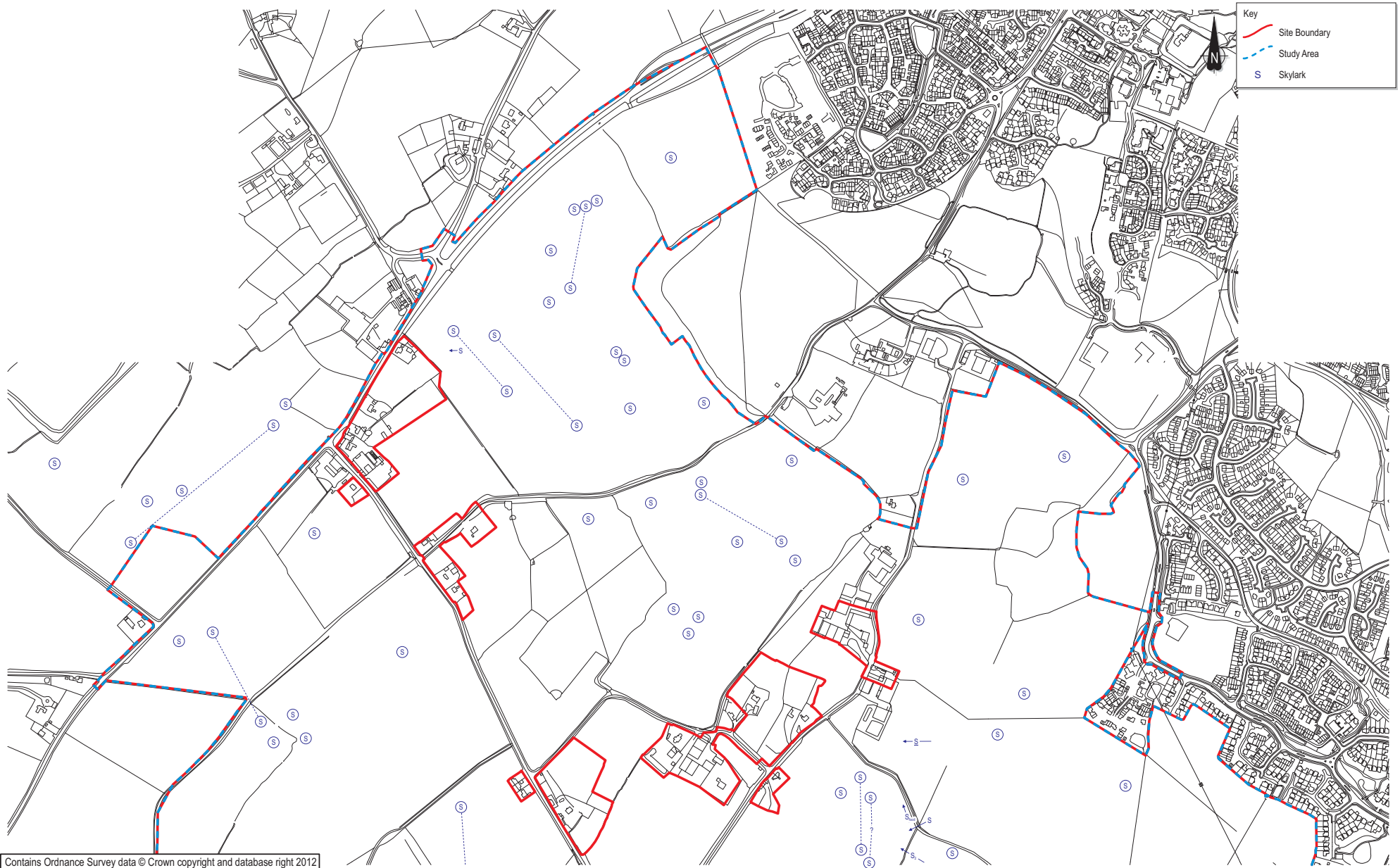
6.1.2 Nine Red-listed species were recorded. None of these are especially scarce, in spite of declining significantly at a national level over the last 25 years. Nineteen Amber-listed species were recorded. Not all were proved to hold territories within the study area and some were flyover records only.

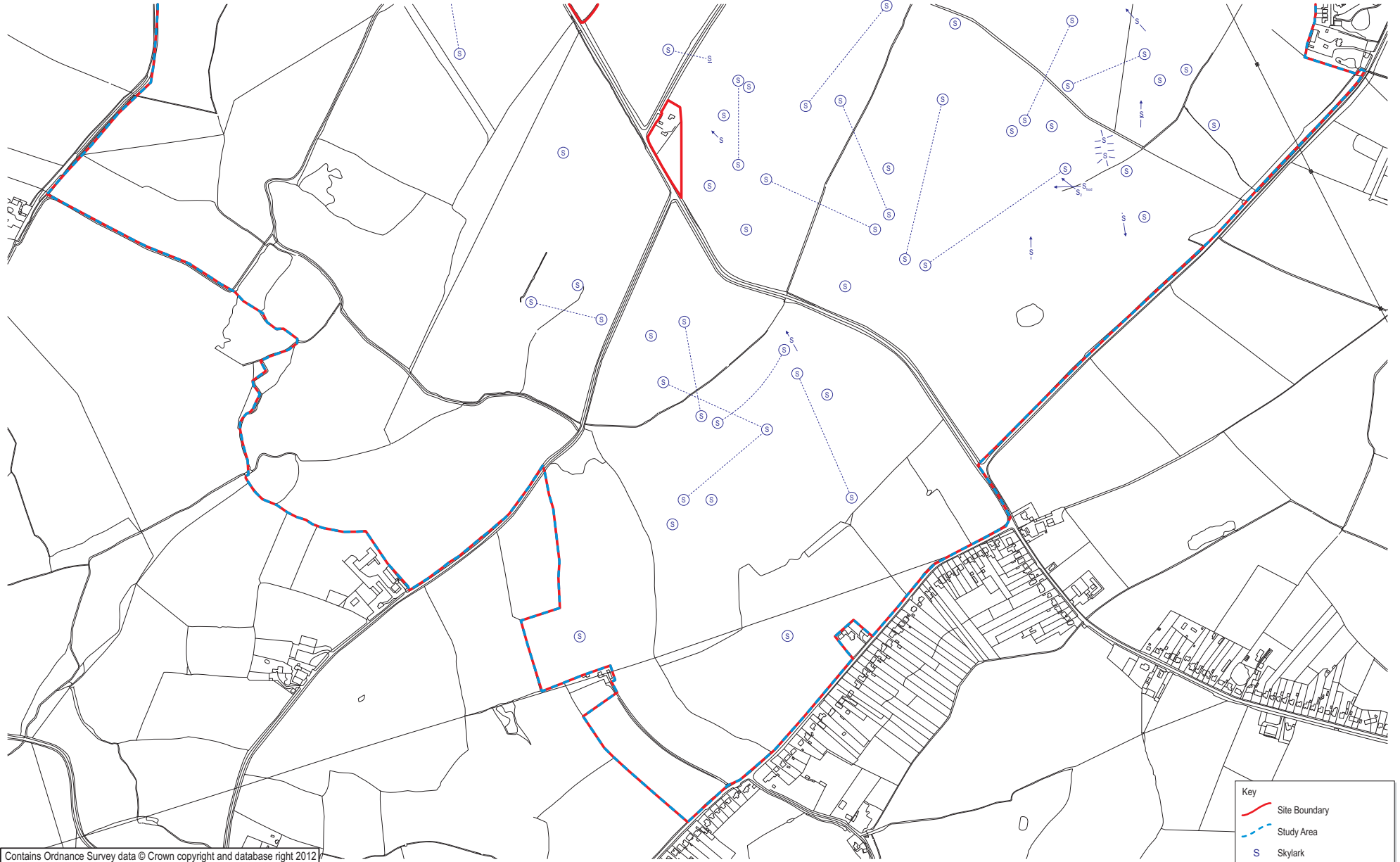
6.1.3 The Proposed Development includes a variety of ecological measures that have been 'designed in' to the scheme. These measures reflect the findings and recommendations of the baseline ecological studies undertaken at the Site. In relation to breeding birds, the principal measures that have been adopted are as follows:

- Maintaining and incorporating existing areas of higher quality habitat which support denser populations and diversity of birds – i.e. woodland areas, scrub, rank grassland, mature trees and hedgerows;
- Incorporating native planting where possible in landscaping schemes;
- Creating new high quality habitat for birds outside of the development boundary and provide linkage through the Proposed Development with other adjacent habitats to create corridors for wildlife movement within and between areas;
- Providing broad buffer zones of long grassland and scrub, where possible, throughout green spaces to increase the potential foraging areas for a range of bird species; and
- Providing artificial nest boxes, or other structures, within the Development where appropriate.

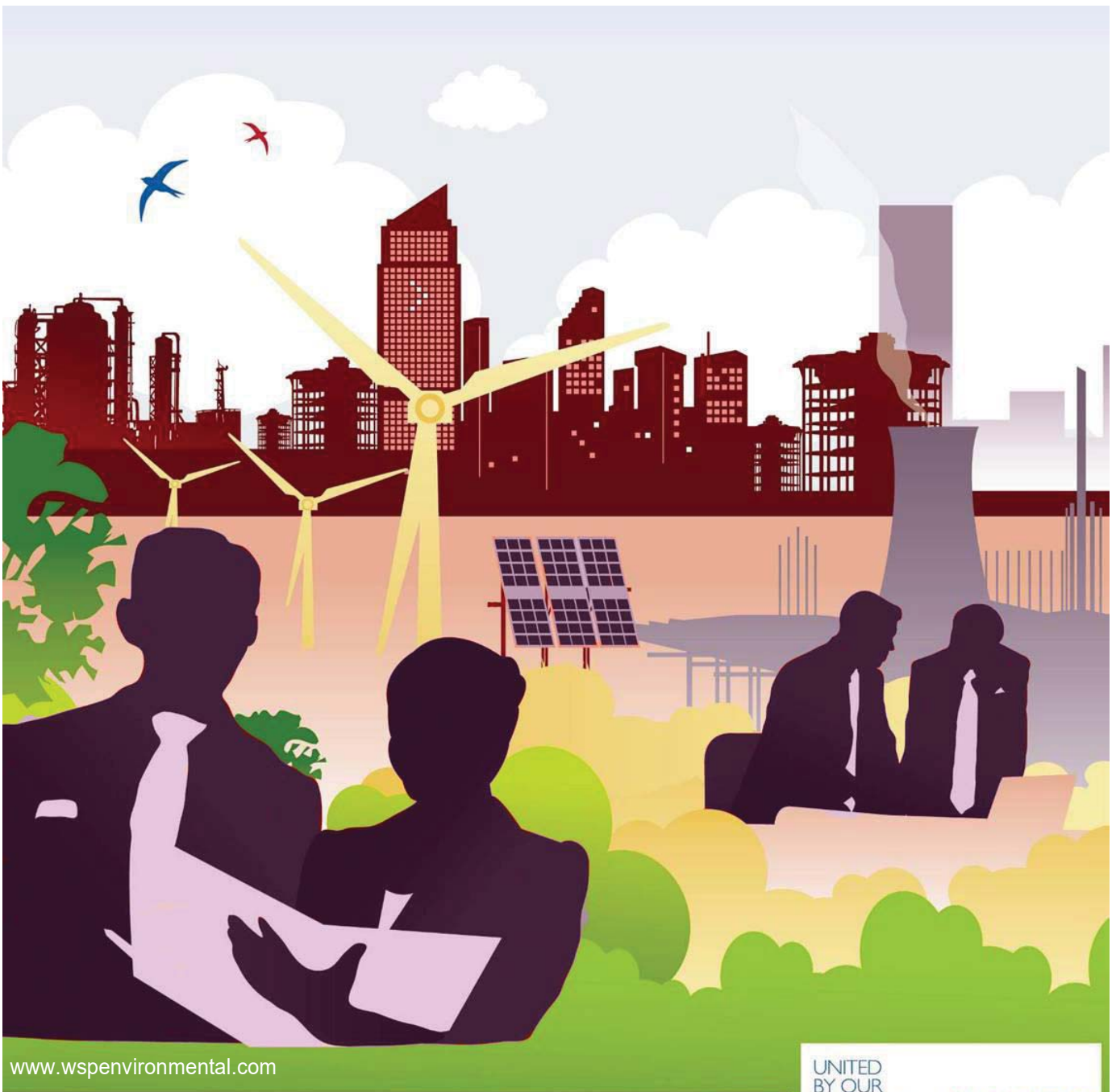
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Chilmington Green 2011 Breeding Bird Survey Report

Ward Homes (A Trading Name of BDW Trading Ltd), Pentland Homes, Hodson Developments and Jarvis Homes

March 2012



QUALITY MANAGEMENT

Issue/revision	Issue 1	Revision 1	Revision 2	Revision 3
Remarks	Draft for Comment	Draft issue ES submission	Final issue for ES submission	
Date	June 2011	January 2012	March 2012	
Prepared by	Greenprint Ecology & Angela Simmons (WSPE)	Revisions by Angela Simmons and Johanna Fewtrell	Revisions by Johanna Fewtrell	
Signature				
Checked by	Angela Simmons	Angela Simmons	Hattie Spray	
Signature				
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CONTENTS

EXECUTIVE SUMMARY	1
1 INTRODUCTION	2
2 METHODOLOGY	4
3 RESULTS	5
4 DISCUSSION	11
5 MITIGATION AND ENHANCEMENT MEASURES	12
6 CONCLUSIONS	14
7 REFERENCES	15

Figures and Appendices

Figure 1 Study Area Boundary

Figure 2 Ecological Constraints Plan - Protected Species - Birds

Figure 3 Breeding Bird Survey Results - Visit 1

Figure 4 Breeding Bird Survey Results - Visit 2

Figure 5 Breeding Bird Survey Results - Visit 3

Figure 6 Breeding Bird Survey Results - Visit 4

Figure 7 - 23 Territory Maps for Species of Conservation Concern

Appendix A: Summary map showing areas of high bird numbers and/or diversity

Appendix B BTO Species Codes

Appendix C European Bird Census Council Breeding Categories

EXECUTIVE SUMMARY

WSP Environmental Ltd were commissioned by a developer consortium comprising Ward Homes (A Trading Name of BDW Trading Ltd), Pentland Homes, Hodson Developments and Jarvis Homes to undertake a breeding bird survey of the Chilmington Green Site at Chilmington Green near Ashford, Kent.

This report has been prepared to support both a future planning application for development of a proportion of the Chilmington Green Site, and to form part of the evidence base for the Area Action Plan (AAP) which is being prepared by Ashford Borough Council to provide a framework for development of Chilmington Green/Discovery Park site. As such the study area used for this survey relates to the maximum area of search for the AAP, approximately 428.5ha including all built and non-built development.

This report presents the findings of a breeding bird survey of the study area completed during April to June (inclusive) 2011. The methodology used follows current best practice guidance (British Trust for Ornithology [BTO] methods adapted from Bibby 2000). The 2011 survey was undertaken to extend survey work completed in 2010, and provide a robust evidence base for the entire study area, for this reason this report is intended to be read in conjunction with the 2010 Breeding Bird Survey Report (WSP, 2012).

The report includes an assessment of potential impacts upon breeding birds which could arise from large scale redevelopment of the study area; the results and assessment has been used to inform masterplanning for the specific development proposed by the developer consortium comprising Barratt Strategic, Pentland Homes, Hodson Developments and Jarvis Homes (referred to as the Proposed Development). Consequently, the mitigation and enhancement measures set out in this report are the measures which have been incorporated into the outline planning application.

During the course of four survey visits, the study area was assessed for its potential to support all species of birds. Targeted dusk surveys were also conducted to ascertain the presence/absence of crepuscular species.

- A total of 37 bird species were recorded within the study area during the survey period. A total of 13 species were confirmed as breeding within the study area and a further 11 as probably breeding. Possible breeding species numbered 10 and non-breeding species – those visiting the study area to feed or simply flying over – totalled three.
- Seven Red-listed species were recorded. None of these are especially scarce, in spite of declining significantly at a national level over the last 25 years.
- Nine Amber-listed species were recorded. Not all were proved to hold territories within the study area and some were flyover records only.

In combination, the 2010 and 2011 surveys recorded a total of 65 species present within the study area, only one species was recorded during 2011 which was not recorded in 2010; fieldfare. The 2011 survey did not record any species to be breeding within the wider study area which had not already been confirmed in 2010, but the status of hobby in the additional survey area was recorded as 'probable breeding' where previously it had been recorded as 'possible breeding'.

In the absence of mitigation large-scale development within the study area has the potential to impact upon breeding birds in the following ways:

- Loss of nests and eggs and killing or injury of fledglings if structures and habitats are cleared during the breeding season; and
- Loss of suitable habitat for species leading to an overall decrease in numbers and diversity of breeding birds, although the impacts upon individual species are anticipated to differ significantly.

Measures are recommended to mitigate the effect of large-scale development, and enhance the development area; these comprise maintaining and incorporating areas of higher quality habitat which support denser populations and diversity of birds, enhancing existing habitats, incorporating native planting where possible, providing linkages across the Proposed Development and with the wider surrounding area, and providing a range of artificial nesting structures where appropriate.

1 INTRODUCTION

1.1 BACKGROUND

1.1.1 The Chilmington Green Site is situated to the south-west of Ashford, Kent (Central Grid reference TQ 978 399). The Site is proposed for development as an urban extension, including dwellings together with employment, community and retail facilities, in accordance with Ashford's Core Strategy (adopted 2008).

1.1.2 An Area Action Plan (AAP) is being prepared by Ashford Borough Council to provide a framework for development of the Chilmington Green Site. The maximum area of search for the AAP is an area approximately 428.5 hectares in size including all built and non-built development centred at Grid Reference TQ 979396. This area is hereafter referred to as the 'study area'. The study area includes land which will fall outside of the eventual outline planning application boundary of the Proposed Development, for example at Chilmington Green hamlet.

1.1.3 A developer consortium comprising Ward Homes (A Trading Name of BDW Trading Ltd), Pentland Homes, Hodson Developments and Jarvis Homes is preparing a masterplan to develop a proportion of the study area. The proposal is for a comprehensive mixed use development and is hereafter referred to as the 'Proposed Development'.

WSP Environmental Ltd (WSPE) were commissioned by the developer consortium to undertake a breeding bird survey within the study area during 2010¹ (which is reported separately), subsequently the study area was extended and further survey commissioned in 2011. This report is intended to be read in conjunction with the previous 2010 Breeding Bird Survey Report (WSP, 2012).

1.1.4 This report has been prepared to support a future planning application for a Proposed Development and forms part of the evidence base for the Action Plan (AAP) which is being prepared by Ashford Borough Council to provide a framework for development of the study area.

1.1.5 The need for the surveys were highlighted within an Extended Phase I Habitat Survey undertaken by WSPE in July 2008 (WSPE, 2008) and updated in 2010 (WSPE, 2012). This identified the presence of a range of habitats suitable for use by a variety of breeding bird species including species of particular conservation concern.

1.2 REPORT STRUCTURE

1.2.1 This report has been produced in two main sections:

- Survey methodology, results and discussion (Sections 2-4) which provide an assessment of the study area for breeding birds and an overview of the potential impacts of development in the absence of mitigation; and
- Mitigation and enhancement measures and conclusions (Sections 5-6) which set out measures which will be taken specifically in relation to the Proposed Development and have been incorporated into the masterplan.

1.3 AIMS AND OBJECTIVES

1.3.1 The main aims of the survey were:

- To map the distribution and species composition of breeding birds using the study area;
- To produce territory maps for species of Conservation Concern;
- To determine the areas with highest diversity and/or numbers of birds within the study area;
- To identify key constraints and potential impacts relating to birds associated with the Proposed Development; and
- To inform the potential need for mitigation to ensure legal compliance during the development process.

1.4 STUDY AREA CHARACTERISTICS

1.4.1 The study area is delineated by the suburbs of Ashford (Singleton and Stanhope) at the northern and eastern boundaries and the village of Stubbs' Cross lies at the southern tip. Field boundaries and Ashford Road (A28) form the other study area limits, as shown on **Figure 1**.

¹ This survey was carried out in respect of the original area of the proposed Chilmington Green Site as defined in April 2010, a wider area was subsequently considered for inclusion within the AAP. The proposed study area is now subject to the inclusion of additional land to the south; shown on **Figure 1** as the area where access was not permitted in September 2010; this area is the subject of this report.

1.4.2 The land-use within the Proposed Development Site is varied, but the dominant habitat is large fields of arable crops to the north and south of Chilmington Green hamlet itself. There are a few small areas of pasture and rough grassland. The majority of fields have hedgerows delineating their boundaries, some of which are interspersed with trees. There are some small areas of woodland – particularly noteworthy are Coleman’s Kitchen Wood in the east of the study area and Stubbcross Wood adjacent to Tally Ho Road in the south of the study area. Very little wetland habitat is present; comprising ditches, scattered field, woodland and garden ponds only. Houses with gardens, farm buildings, and a few small business/light industrial units are also present within the study area.

1.5 LEGISLATION AND POLICY

1.5.1 All UK species of wild birds and their nests and eggs are protected by law (for the whole or part of the year) by the Wildlife and Countryside Act, 1981 (as amended and strengthened by the Countryside and Rights of Way [CROW] Act, 2000). This makes it an offence, with certain exceptions, to intentionally or recklessly kill, injure or take any wild bird, and take, damage or destroy the nest of any wild bird while it is in use or being built. Some bird species with high individual levels of conservation importance are protected at all times under Schedule 1 of the 1981 Act.

1.5.2 The UK’s leading bird conservation organisations work together to review the status of the birds that occur regularly in the UK. This review aims to provide an up-to-date assessment of conservation priorities in terms of birds. The latest assessment took place in 2009. A total of 246 species have been assessed against a set of objective criteria to place each on one of three lists – green, amber and red – indicating an increasing level of conservation concern. These lists are known as ‘Birds of Conservation Concern’ (BoCC). There are currently 52 species on the red list, 126 on the amber list and 68 on the green list. The red list has increased by 12 species since 2002, with 18 species added but six moved from red to amber.

- Seven quantitative criteria are used to assess the population status of each species and to place it on the red, amber or green list. These are: global conservation status, recent decline, historical decline, European conservation status, rare breeders, localised species and international importance.
- Red-list species are those that are globally threatened according to the IUCN criteria; those whose population or range has declined rapidly in recent years; and those that have declined historically and not shown a substantial recent recovery.
- Amber-list species are those with an unfavourable conservation status in Europe; those where population range has declined moderately in recent years; those where population has declined historically but made a substantial recent recovery; rare breeders; and those with internationally important or localised populations.
- Green-list species are those which do not fulfil any of the red or amber list criteria and they are not considered in detail in this report.

1.5.3 The Natural Environment and Rural Communities (NERC) Act came into force on 1st Oct 2006. Section 41 (S41) of the Act requires the Secretary of State to publish a list of habitats and species which are of principal importance for the conservation of biodiversity in England. The list of Species of Principal Importance (SPIs) has been drawn up in consultation with Natural England, as required by the Act; this is almost entirely based on the species identified as requiring action under the UK BAP, with some additions.

1.5.4 The S41 list is used to guide decision-makers such as public bodies, including local and regional authorities, in implementing their duty under section 40 of the Natural Environment and Rural Communities Act 2006, to have regard to the conservation of biodiversity in England, when carrying out their normal functions. A number of common and widespread bird species, alongside rarer species are listed as SPIs. The Government’s Planning Policy Statement 9 (PPS 9) on Biodiversity and Geological Conservation states that SPIs should be protected from the adverse effects of development through the planning system. Such species are therefore deemed a material consideration within the planning process and their conservation requirements should be promoted through the incorporation of beneficial biodiversity designs within development proposals.

1.5.5 In addition, under PPS9 the presence of a protected species is a material consideration when a planning authority is considering a development proposal that, if carried out, would be likely to result in harm to the species or its habitat. Many bird species are also listed as UK Biodiversity Action Plan (UKBAP) priority species.

2 METHODOLOGY

2.1 DESK STUDY

2.1.1 A desk study exercise was undertaken in 2007 and has been updated in June 2010 to incorporate additional information available since 2007 in order to determine the presence of records of bird species. Information was requested for the study area itself and a 2 km radius around the study area in line with standard guidelines (IEA, 1995). Please refer to the desk study section of the Chilmington Green 2010 Breeding Birds Survey report (WSP, 2012) for a full account of the desk study methodology. The results of the desk study are shown on **Figure 2** and discussed in Section 3.

2.2 FIELD SURVEY

2.2.1 The field survey methodology followed current best practice guidance (British Trust for Ornithology [BTO] methods adapted from Bibby 2000). The survey encompasses all land previously unsurveyed in 2010 (see **Figure 1**).

2.2.2 Habitats present were sampled during a walked transect, during which the surveyor mapped the presence of birds seen or heard. Each survey commenced from a different start point, to help reduce any bias from surveys beginning from the same points at the same start times. With the exception of the limitations listed below, the conditions were such that the field surveyor could walk easily to all areas and could determine bird locations accurately, apart from in restricted areas such as private gardens/businesses where positions were marked as accurately as possible. The area was surveyed at a very slow walking pace, with many stops throughout to listen and record all birds present. The location, identity and breeding behaviour of all birds seen and heard were marked accurately on large scale field maps using the appropriate BTO Species Codes (see **Appendix B**).

2.2.3 Following the final visit, mapping of the ornithological usage of the study area was undertaken (see **Figures 3 – 6**). The resulting figures were used to assess key areas and species likely to be impacted upon by the Proposed Development (see **Appendix A**). Territory maps for Birds of Conservation Concern (BoCC) recorded were also compiled (see **Figures 7 - 23**).

2.3 SURVEY TIMING AND PERSONNEL

2.3.1 The survey was completed by Greenprint Ecology on behalf of WSPE.

2.3.2 The remaining study area (not previously surveyed) was surveyed on four occasions according to current best practice guidance (BTO methods adapted from Bibby, 2000). Four dawn survey visits were made to the study area during March to June 2011. The survey dates, times and weather conditions are shown in Table 1 below.

Table 1: Survey dates, times and weather conditions

Date	Start time	Weather conditions	Notes
28.03.11	06.00	Dry, sunny spells, cloud = 6/8, wind = 0-1, temp = 10-13°C.	Very still.
19.04.11	06.00	Dry, sunny, cloud = 5/8, wind = 0-1, temp = 10-14°C.	Sunny and warm.
17.05.11	06.00	Dry, overcast, cloud = 7/8, wind = 1-2, temp = 10-12°C.	Cloudy and mild.
02.06.11	06.00	Dry, sunny spells, cloud = 6, wind = 1-2, temp = 14-16°C.	Sunny spells, warm.

3 RESULTS

3.1 DESK STUDY

3.1.1 Records of 16 Schedule 1 and 31 BAP species were identified within 2km of the study area; records for an additional 30 amber listed and 2 red listed species were returned. The results of the desk study are shown on **Figure 2**.

3.2 FIELD SURVEY

3.2.1 A total of 37 bird species were recorded during the survey. Species recorded simply flying over the study area, without utilising it in any way, were included on survey maps but were recorded as non-breeding. A total of 13 species were confirmed as breeding within the study area and a further 11 as probably breeding. Possible breeding species numbered 10 and non-breeding species – those visiting the study area to feed or simply flying over – totalled three. Table 2 lists all birds recorded during surveys and provides an indication of their likely breeding status within the study area. Breeding status was assigned using the criteria set out in the European Bird Census Council Breeding Categories guidelines. An explanation of the letter codes which follow the breeding status listings can be found in **Appendix B**.

Table 2: All species recorded, breeding status and field notes

Common Name	Scientific Name	Site Breeding Status	Notes
Blackbird	<i>Turdus merula</i>	Confirmed breeding (FY)	Numerous and widespread across the study area. Recorded on all visits. Maximum count = nine.
Blackcap	<i>Sylvia atricapilla</i>	Probable breeding (T)	Associated with wooded areas. Recorded in low numbers on three visits. Maximum count = three.
Blue Tit	<i>Parus caeruleus</i>	Confirmed breeding (FL)	Numerous and widespread across the study area. Recorded on all visits. Maximum count = 18.
Carrion Crow	<i>Corvus corone</i>	Probable breeding (P, T)	Recorded on all visits. Maximum count = 14.
Chaffinch	<i>Fringilla coelebs</i>	Confirmed breeding (FF)	Numerous and widespread across the study area. Recorded on all visits. Maximum count = 19.
Chiffchaff	<i>Phylloscopus collybita</i>	Probable breeding (T)	Recorded in low numbers on all visits. Maximum count = two.
Collared Dove	<i>Streptopelia decaocto</i>	Probable breeding (T)	One male singing by houses to the north-east of the study area on two visits.
Common Buzzard	<i>Buteo buteo</i>	Possible breeding (H)	One record of a single bird flying east at the northern edge of the study area.
Common Gull	<i>Larus canus</i>	Non-breeding	Flyover records of small numbers on all visits.
Common Whitethroat	<i>Sylvia communis</i>	Confirmed breeding (FF)	Numerous and widespread in hedges across the study area. Recorded on three visits. Maximum count = 15.
Dunnock	<i>Prunella modularis</i>	Probable breeding (T, A)	Recorded on all visits in low numbers. Maximum count = five.
Fieldfare	<i>Turdus pilaris</i>	Non-breeding	Ten birds recorded feeding on arable field to north of the study area on visit one.
Goldfinch	<i>Carduelis carduelis</i>	Possible breeding (H)	Recorded in small numbers on one visit.
Great Spotted Woodpecker	<i>Dendrocopos major</i>	Probable breeding (A)	Single bird calling from Willow Wood on two visits.
Great Tit	<i>Parus major</i>	Confirmed breeding (FY)	Numerous and widespread across the study area. Recorded on all visits. Maximum count = 24.
Green Woodpecker	<i>Picus viridis</i>	Probable breeding (A)	Recorded in low numbers on two visits in areas with mature trees.
Hobby	<i>Falco subbuteo</i>	Probable breeding (P, T, A)	Two records of a pair in the same area. On visit three, pair calling and flying north-east along northern boundary. On visit four, pair calling from tree to the north-west of Willow Wood.
House Sparrow	<i>Passer domesticus</i>	Probable breeding (T)	Recorded on all visits in low numbers close to houses/buildings.
Jackdaw	<i>Corvus monedula</i>	Possible breeding (H)	Flyover records only on two visits. Maximum count = five.

Common Name	Scientific Name	Site Breeding Status	Notes
Jay	<i>Garrulus glandarius</i>	Possible breeding (H)	Single birds recorded on two visits.
Lesser Black-backed Gull	<i>Larus fuscus</i>	Non-breeding	Flyover record only of two birds on visit three.
Linnet	<i>Carduelis cannabina</i>	Confirmed breeding (FY)	Present in good numbers, particularly along hedges. Recorded on all visits, maximum count = 11.
Long-tailed Tit	<i>Aegithalos caudatus</i>	Confirmed breeding (ON)	Recorded in small numbers on all visits. Maximum count = three.
Magpie	<i>Pica pica</i>	Confirmed breeding (FL)	Recorded on three visits. Maximum count = five.
Nightingale	<i>Luscinia megarhynchos</i>	Possible breeding (S)	One male singing in woodland south-west of Willow Wood on visit three only.
Pheasant	<i>Phasianus colchicus</i>	Probable breeding (P)	Recorded in small numbers on all visits. Maximum count = five.
Reed Bunting	<i>Emberiza schoeniclus</i>	Confirmed breeding (FY)	Present in reasonable numbers, particularly along hedges. Recorded on all visits, maximum count = nine.
Robin	<i>Erithacus rubecula</i>	Confirmed breeding (FY)	Recorded on all visits. Maximum count = five.
Rook	<i>Corvus frugilegus</i>	Possible breeding (H)	Recorded on one visit – two birds flying over the study area.
Skylark	<i>Alauda arvensis</i>	Confirmed breeding (FY)	Numerous and widespread across arable areas of within the study area. Recorded on all visits. Maximum count = 15.
Song thrush	<i>Turdus philomelos</i>	Possible breeding (S)	Recorded in small numbers on two visits. Associated with trees and hedges.
Starling	<i>Sturnus vulgaris</i>	Possible breeding (S)	Recorded in low numbers on two visits.
Stock Dove	<i>Columba oenas</i>	Possible breeding (H)	Two birds recorded flying over the study area on visit two.
Swallow	<i>Hirundo rustica</i>	Possible breeding (H)	Recorded flying over the study area in low numbers on visits three and four.
Woodpigeon	<i>Columba palumbus</i>	Confirmed breeding (ON)	Numerous and widespread across the study area. Recorded on all visits. Maximum count = 19.
Wren	<i>Troglodytes troglodytes</i>	Probable breeding (T, A)	Recorded on all visits. Mostly associated with hedgerows. Maximum count = eight.
Yellowhammer	<i>Emberiza citrinella</i>	Confirmed breeding (FY)	Present in reasonable numbers, particularly along hedges. Recorded on all visits, maximum count = five.

3.2.2 Table 3 (below) lists the numbers of estimated territories for all BoCC species recorded within the study area. This has been deduced from observations of breeding behaviour (in the form of singing, alarm calls, food carrying, etc.) witnessed during surveys and compiled from field maps.

Table 3: Estimated number of territories for Birds of Conservation Concern (BoCC)

Common Name	Scientific Name	Estimated number of territories within the study area
Common Gull	<i>Larus canus</i>	None
Common Whitethroat	<i>Sylvia communis</i>	Fourteen
Dunnock	<i>Prunella modularis</i>	Six
Fieldfare	<i>Turdus pilaris</i>	None
Green Woodpecker	<i>Picus viridis</i>	Two
House Sparrow	<i>Passer domesticus</i>	Three
Lesser Black-backed Gull	<i>Larus fuscus</i>	None
Linnet	<i>Carduelis cannabina</i>	Eight
Nightingale	<i>Luscinia megarhynchos</i>	One
Reed Bunting	<i>Emberiza schoeniclus</i>	Ten
Skylark	<i>Alauda arvensis</i>	Fourteen
Song Thrush	<i>Turdus philomelos</i>	Two
Starling	<i>Sturnus vulgaris</i>	Two
Stock Dove	<i>Columba oenas</i>	None
Swallow	<i>Hirundo rustica</i>	One
Yellowhammer	<i>Emberiza citrinella</i>	Eight

3.2.3 Table 4 (below) lists the key species found during the survey, as defined by their protected status. It also indicates whether each species is subject to a national Biodiversity Action Plan (UK BAP), or a Local Biodiversity Action Plan (LBAP) and/or if the species is listed under Schedule 1 of the Wildlife and Countryside Act (1981).

3.2.4 If a bird is listed as a Schedule 1 species, it is an offence to intentionally disturb it whilst it is building a nest, or when it is in, on or near a nest containing eggs or young; or to disturb dependent young even if not in the nest.

Table 4 Key species found within the study area as defined by their protected status

Common Name	Scientific Name	Conservation status in wider context	
		Birds of Conservation Concern Listing	Other Listings
Common Gull	<i>Larus canus</i>	Amber	-
Common Whitethroat	<i>Sylvia communis</i>	Amber	-
Dunnock	<i>Prunella modularis</i>	Amber	UK BAP
Fieldfare	<i>Turdus pilaris</i>	Red	Schedule 1 WCA
Green Woodpecker	<i>Picus viridis</i>	Amber	-
Hobby	<i>Falco subbuteo</i>	Green	Schedule 1 WCA
House Sparrow	<i>Passer domesticus</i>	Red	UK BAP

Common Name	Scientific Name	Conservation status in wider context	
		Birds of Conservation Concern Listing	Other Listings
Lesser Black-backed Gull	<i>Larus fuscus</i>	Amber	-
Linnet	<i>Carduelis cannabina</i>	Red	UK BAP & LBAP
Nightingale	<i>Luscinia megarhynchos</i>	Amber	-
Reed Bunting	<i>Emberiza schoeniclus</i>	Amber	UK BAP & LBAP
Skylark	<i>Alauda arvensis</i>	Red	UK BAP & LBAP
Song Thrush	<i>Turdus philomelos</i>	Red	UK BAP & LBAP
Starling	<i>Sturnus vulgaris</i>	Red	UK BAP
Stock Dove	<i>Columba oenas</i>	Amber	-
Swallow	<i>Hirundo rustica</i>	Amber	-
Yellowhammer	<i>Emberiza citrinella</i>	Red	UK BAP

3.2.5 The area surveyed in 2011 supported a minimum of 13 (confirmed) breeding bird species, and a maximum of 34 (including those considered as probable and possible breeders). In most cases, the numbers and diversity of birds recorded was highest where the habitat contained hedgerows, mature trees and woodland. In general terms, the areas of the study area consisting of arable crops contained the lowest numbers and diversity of birds (see **Appendix A**).

3.2.6 Table 4 shows that two Schedule 1 species were noted on-site, along with seven Red-listed species and nine Amber-listed species. Of these 16 species, eight certainly held breeding territories within the area surveyed in 2011.

3.2.7 Two Schedule 1 species were recorded – hobby and fieldfare. Fieldfare is discussed below as it is also Red-listed. Hobby was recorded on two visits. On both occasions a pair of birds was observed and it is probable these were the same birds each time. On visit three the pair was seen flying along the northern boundary of the study area - both birds were calling. On visit four a pair was seen perched in an ivy-covered hedgerow tree to the north-east of the study area. The birds were again calling. No nest or young were detected but the ivy was such that it could have hidden a nest and it seems likely this pair were certainly nesting close by. Kent Bird Report (2007) states that there are 'increasing numbers breeding' in the county.

3.2.8 Seven Red-listed species were recorded, and each of these is discussed in further detail below:

- **Skylark** was widespread and numerous amongst the arable fields within the study area. It was a confirmed breeding species, with at least one observation of an adult bird carrying food to a nest site amongst the crops. The loss of these arable habitats would have a major impact upon the numbers of this species, both at a Site level and within the immediate surrounding areas. The loss of the arable land on-site would result in the removal of both nest sites and food supplies for Skylarks. Kent Bird Report (2007) states that this is 'a common but declining resident species'.
- **Song Thrush** was recorded in small numbers on two visits and breeding was not confirmed. This species was observed in areas with larger trees and hedges, so the loss of any of these habitats is likely to have a negative impact on the numbers of Song Thrush on-site. Described as 'common and widespread but declining' in Kent as a whole (Kent Bird Report, 2007).
- **Fieldfare** was recorded on visit one only when ten birds were seen feeding on an arable field to the north of the study area. Many Fieldfares do not return to breeding areas in northern and central Europe until April and these birds were probably feeding in preparation for the migration ahead. The retention or planting of hedges and trees which produce a berry crop (e.g. Hawthorn) may help maintain the wintering numbers of this species on-site. Kent Bird Report (2007) states that this species is a 'common passage migrant and winter visitor'.

- **Starling** was recorded in small numbers on two visits. Kent Bird Report (2007) describes Starlings in Kent as 'abundant and widespread but declining'. This is also the case across the rest of the UK. It would seem likely that this species may undergo some reduction in numbers post-development, due to the loss of feeding areas.
- **House Sparrow** was recorded in low numbers on all visits, with most records associated with the houses to the east of the study area. Kent Bird Report (2007) describes House Sparrow in Kent as 'common but declining'. As with Starling, it would seem probable that numbers may undergo some reduction if the study area was to be developed, due mainly to the loss of feeding areas.
- **Linnet** was widespread along hedgerows within the study area. It was a confirmed breeding species, with at least one observation of an adult bird carrying food to a nest site within a hedgerow. Loss of hedges and arable land would result in a reduction of both nest sites and food supplies for this species. Kent Bird Report (2007) states that this is a 'widespread summer visitor and passage migrant, with only small flocks overwintering'.
- **Yellowhammer** was recorded on all visits, with a maximum count of five. This species was mostly associated with the hedgerows that existed amongst the arable fields on-site. Yellowhammer was a confirmed breeding species, with observations of adult birds carrying food to hedgerow nest sites. The loss of hedges and arable habitats would result in a decrease in the numbers of both nest sites and available food supplies. Kent Bird Report (2007) states that this is a 'common but declining resident, particularly in rural areas'.

3.2.9 Nine Amber-listed species were recorded, and these are discussed below:

- **Common Gull** was recorded on all four visits, with small numbers seen flying over the study area on each occasion. There were no significant water bodies within the survey area and these birds were likely to be commuting between roosting and feeding areas. It is very unlikely that a change in land use within the study area would have a negative impact on this species.
- **Lesser Black-backed Gull** was recorded once, with two birds observed flying over the study area. No significant water bodies exist within the survey area and these birds were probably commuting between roosting and feeding areas. In common with the previous species, it is very unlikely that a change in land use here would have a negative impact on this species.
- **Stock Dove** was recorded on one survey visit, when two were seen flying over the north of the study area. No signs of breeding were recorded but it is possible that this species could breed on-site, as there was suitable breeding habitat present. Kent Bird Report (2007) states that this is a 'widespread and increasing resident species'.
- **Green Woodpecker** was recorded at the study area during two survey visits. Records were of lone birds likely to be commuting between feeding and breeding areas. This species is likely to breed on-site, with suitable mature trees available in Willow Wood, along some hedges and also in the other small areas of woodland on-site. Kent Bird Report (2007) states that Green Woodpecker is a 'widespread and increasing resident'. Loss of breeding and feeding areas would probably result in dispersal of this species to other suitable areas close to the study area.
- **Swallow** was recorded on visits three and four in low numbers. Birds were recorded in flight, foraging over farmland. No nest sites were confirmed but were likely to occur wherever suitable outbuildings or other structures were available. Although a change in land-use may have some impact by reducing foraging areas available to this species, it seems unlikely that it would have a major negative effect on this species, with other areas nearby available for foraging.
- **Duncock** was recorded in low numbers on all surveys and was mostly associated with hedgerows and woodland. The hedges within the study area were clearly important for Duncock and the loss of these would have a negative impact upon numbers of this species at a Site level. The loss of feeding areas may also have a negative impact on Duncock. However, beyond a Site level, it seems unlikely that development would have a major negative effect on this species, with other nearby areas available for both feeding and nesting.
- **Nightingale** was recorded on one occasion only – on visit three - when a singing male was heard in the small area of woodland south-west of Willow Wood (known as Roughet Wood). It is possible that this individual had recently arrived on migration and had then moved on to another area by visit four. Kent holds a quarter of the UK breeding population of this species (Kent Bird Report, 2007). It is likely that development would have a negative impact on this species if wooded areas were lost, as this would reduce nesting opportunities and food supplies.
- **Common Whitethroat** was recorded on all visits and it was one of the more numerous species within the study area. A maximum count of 15 was recorded, with most birds observed singing along hedgerows. Any significant

loss of the study area's hedges and scrub would have a negative impact upon numbers of this species at a Site level, and would be likely to cause dispersal into other nearby areas. The loss of feeding areas may also have a negative impact. It seems unlikely that development would have a major negative effect on this species beyond a Site level. Described as a 'widespread and increasing summer visitor and passage migrant' by the Kent Bird Report (2007).

- **Reed Bunting** was recorded on all surveys, with a maximum count of nine. This species was mostly associated with hedgerows - especially those with adjacent ditches. Again, the study area's hedges were important for this species and any loss of these would have a negative impact upon numbers at a Site level. Any loss of feeding areas may also have a negative impact. However, it seems unlikely that development would have a major negative effect on this species beyond a Site level, with other nearby areas available for feeding and nesting.

4 DISCUSSION

4.1 EVALUATION

4.1.1 No attempt is made here to assign statistical population density and diversity figures to the results. The following discussion of the value of the study area is based upon professional judgement and through experience of similar surveys and development proposals.

4.1.2 Fuller (1980) devised standard procedures for evaluating breeding bird communities on sites. Recording the number of species on a site can provide a simple measure of species diversity from which to confer a level of conservation importance to a site. For breeding birds, the standard qualifying levels provided by Fuller are as follows: National Importance, 85+ species; Regional Importance, 70-84 species; County Importance, 50-69 species; Local Importance, 25-49 species.

4.1.3 The confirmed breeding species list for the study area considered in this report numbered 13, which falls outside the range for Local Importance. However, when combined with the rest of the Site as a whole (i.e. the complete Proposed Development area, included data reported within the 2010 survey) the total number falls inside the range for Local Importance. It may be argued that proof of breeding was not achieved for some species which may indeed have been breeding on-site, so this figure could be marginally higher.

4.1.4 In combination, the 2010 and 2011 surveys recorded a total of 65 species, only one species was recorded during 2011 which was not recorded in 2010; fieldfare. The 2011 survey did not record any species to be breeding on-site which had not already been confirmed in 2010, but the status of Hobby in the additional survey area was recorded as 'probable breeding' where previously it had been recorded as 'possible breeding'.

4.1.5 None of the species recorded within the study area in either 2010, or 2011 can be considered especially rare or unexpected. They are a typical selection of birds to be found in the habitats described within this region. The presence of woodland, hedgerows and mature trees at the study area are clearly important in terms of numbers and diversity of species within the area. It is these habitats which support both the highest numbers and biggest diversity of species. The arable fields were much lower in both numbers of birds and in species diversity. However, they still provided foraging areas for many species and nesting and foraging habitat for skylark.

4.2 OVERVIEW OF POTENTIAL IMPACTS IN THE ABSENCE OF MITIGATION OR AVOIDANCE MEASURES

4.2.1 In the absence of mitigation large-scale development within the study area has the potential to impact upon breeding birds in the following ways:

- Loss of nests and eggs and killing or injury of fledglings if structures and habitats are cleared during the breeding season; and
- Loss of suitable habitat for species leading to an overall decrease in numbers and diversity of breeding birds, although the impacts upon individual species are anticipated to differ significantly.

5 MITIGATION AND ENHANCEMENT MEASURES

5.1 MITIGATION AND ENHANCEMENT

5.1.1 The Proposed Development includes a variety of ecological measures that have been 'designed in' to the scheme. These measures reflect the findings and recommendations of the baseline ecological studies of the Site. In relation to breeding birds, the principal measures that have been adopted are as follows:

- Phasing the provision of replacement habitat and enhancement measures to ensure that adequate compensation for breeding birds can be provided in advance of each development phase;
- Maintaining and incorporating existing areas of higher quality habitat which support denser populations and diversity of birds – i.e. woodland areas, scrub, rank grassland, mature trees and hedgerows;
- Incorporating native planting where possible in landscaping schemes;
- Creating new high quality habitat for birds outside of the development boundary and provide linkage through the Site with other adjacent habitats to create corridors for wildlife movement within and between areas;
- Providing broad buffer zones of long grassland and scrub, where possible, throughout green spaces to increase the potential foraging areas for a range of bird species; and
- Providing artificial nest boxes, or other structures, within the development where appropriate.

5.1.2 The outline measures are shown visually in the Ecological Enhancement Strategy reporting (WSP, 2012). Habitat provision is designed such to minimise impacts upon species recorded on-site, in example:

- **Starlings** would be likely to colonise the Proposed Development, post construction, since the Proposed Development will comprise a mixture of dwellings and associated gardens (at arrange of densities, including some large gardens), areas of open space including playing fields, play areas, allotments, woodland and wetland habitat and well as a large area of retained farmland habitat. Usage of the Site by starlings is likely to increase over time as these areas of open space mature and the increased diversity of available habitat on-site is considered likely to off-set any potentially adverse impact associated with increased cat ownership areas across the Site. The same could be said for both **house sparrow** and **song thrush**; and
- **Stock Dove, Green Woodpecker** and **Nightingale** will benefit from the retention of all areas of existing woodland, (including the area in which Nightingale was recorded) on Site. Care has been taken to ensure that the extent of mature tree loss will also be minimised, and a large proportion of the most mature trees on-site will be retained. In addition, there will be new native woodland and tree planting resulting in a net gain in this habitat type in the long-term.
- **Dunnock, Common Whitethroat, Bullfinch** and **Reed Bunting** are all reliant on the existing hedgerow habitat on-site, both for nesting and feeding. The masterplan has been developed to maximise hedgerow retention throughout the Proposed Development in addition, hedgerow enhancement measures are proposed across the south of the Site, especially linked to the farmland enhancement areas. These species will also benefit from other habitat creation measures across the proposed development, including wetland creation (especially of value to reed bunting), orchards and allotments, and areas of formal and informal open space throughout the 'green fingers' of the Proposed Development;
- **Swallow** are nesting within farmland buildings in the study area and many of these buildings will be retained within the Proposed Development. Furthermore, additional buildings suitable for nesting by swallows are likely to exist post-development. The foraging habitat for this species is associated with the agricultural fields and especially the land currently used for cattle grazing. Suitable foraging habitat will be provided within the Proposed Development through a combination of enhanced farmland habitat and wildflower meadows adjoining sustainable urban drainage systems (SUDs) areas. In particular, management options for the enhanced farmland habitat will include the potential for low-intensity livestock grazing, which would provide attractive foraging habitat for swallows. In addition to the semi-natural habitats that will be created and managed throughout the Proposed Development, the built environment also presents an opportunity to support nesting birds and this will be encouraged through the incorporation of artificial nest boxes throughout the built environment; and

- **Cuckoo, skylark, yellow wagtail, linnet and yellowhammer** have the potential to be greatly affected by habitat change on-site absence of any appropriate mitigation or habitat retention; these species could potentially be lost as a breeding species within the Site. Ecologically managed farmland habitat, and provision of new scrub and enhanced hedgerow habitat has been designed in to the masterplan to avoid this. Additionally, the vast majority of the ponds will be retained in the Proposed Development and there will be a net increase in both wetland and scrub habitat across the study area as a result of SUDs and wetland creation, especially in the southern part of the Site.

5.1.3 In the case of Skylark, a change in land-use across the study area could result in a loss of arable habitat important to these species, but not considered to be of particular value to the wider assemblage. In order to ensure that the Proposed Development includes sufficient provision for these species an area of over 60ha ecologically managed farmland will be retained or created, and enhanced to benefit farmland birds. Management will include the provision of skylark plots, retention of winter stubble, incorporation of arable field margins and a less intensive, rotational hedgerows management regime. The high quality of this replacement habitat, along with a long-term commitment to its provision each year, is considered adequate to off-set the loss of arable habitat elsewhere in the Proposed Development.

5.1.4 The combination of these measures is expected to significantly increase the habitat quality within the retained farmland areas for farmland birds and this increase in quality, alongside a long-term commitment to beneficial management practices is considered adequate to off-set the impact of habitat loss elsewhere within the Proposed Development. In fact, it is anticipated that the fecundity (breeding success) of skylark nesting within the enhanced farmland habitat will be greater than that of skylark currently breeding across the existing study area and positive benefits to the other farmland birds using the study area are also anticipated.

6 CONCLUSIONS

6.1.1 A total of 37 species were recorded during the 2011 survey. Of these, 13 species were confirmed as breeding within the study area and a further 11 as probably breeding. Possible breeding species numbered 10 and non-breeding species – those visiting the study area to feed or simply flying over – totalled three.

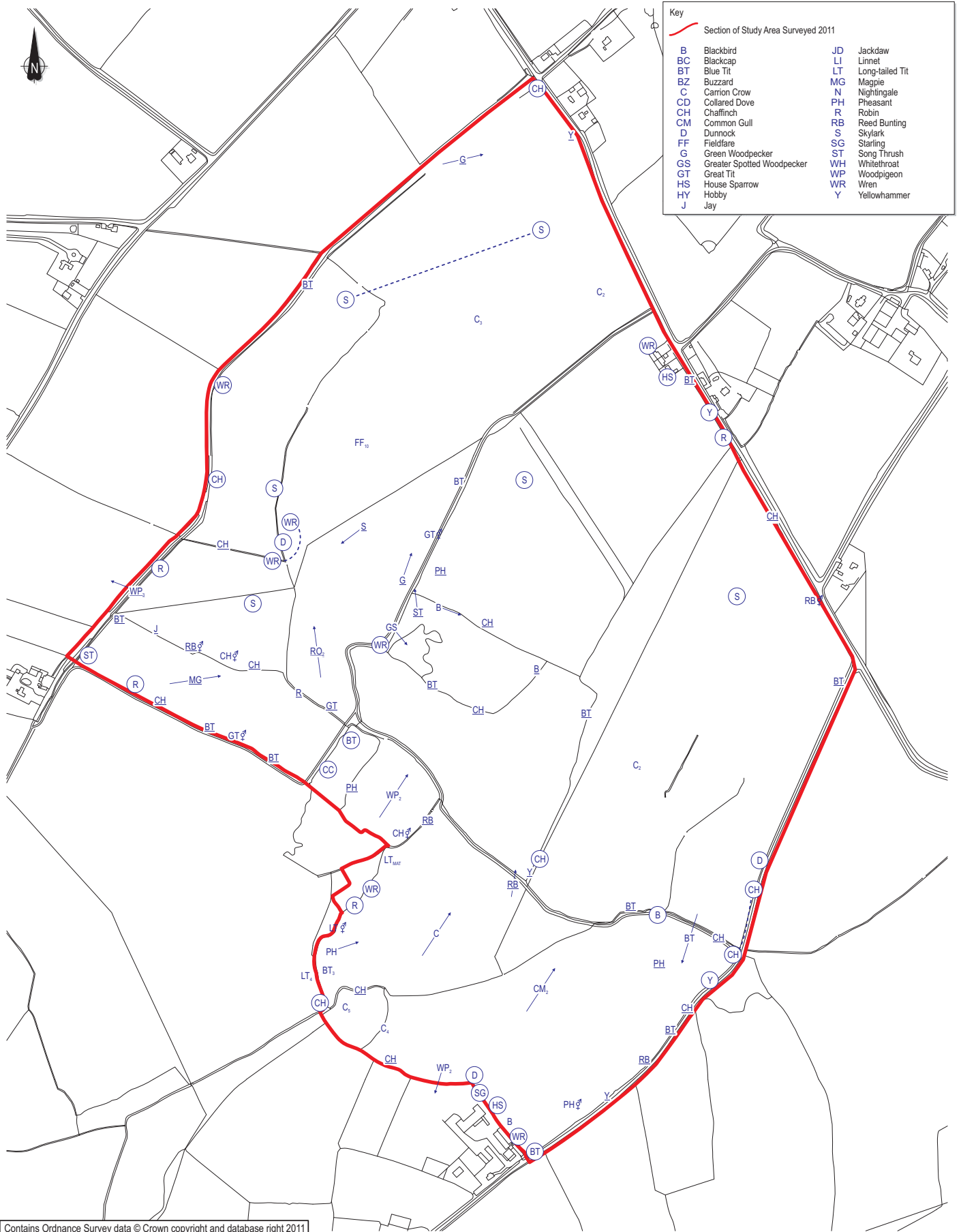
6.1.2 In combination, the 2010 and 2011 surveys recorded a total of 65 species present within the study area, only one species was recorded during 2011 which was not recorded in 2010; fieldfare. The 2011 survey did not record any species to be breeding within the wider study area which had not already been confirmed in 2010, but the status of hobby in the additional survey area was recorded as 'probable breeding' where previously it had been recorded as 'possible breeding'.

6.1.3 The Proposed Development includes a variety of ecological measures that have been 'designed in' to the scheme. These measures reflect the findings and recommendations of the baseline ecological studies of the Site. In relation to breeding birds, the principal measures that have been adopted are as follows;

- Maintaining and incorporating existing areas of higher quality habitat which support denser populations and diversity of birds – i.e. woodland areas, scrub, rank grassland, mature trees and hedgerows;
- Incorporating native planting where possible in landscaping schemes;
- Creating new high quality habitat for birds outside of the development boundary and provide linkage through the Proposed Development with other adjacent habitats to create corridors for wildlife movement within and between areas;
- Providing broad buffer zones of long grassland and scrub, where possible, throughout green spaces to increase the potential foraging areas for a range of bird species; and
- Providing artificial nest boxes, or other structures, within the development where appropriate.

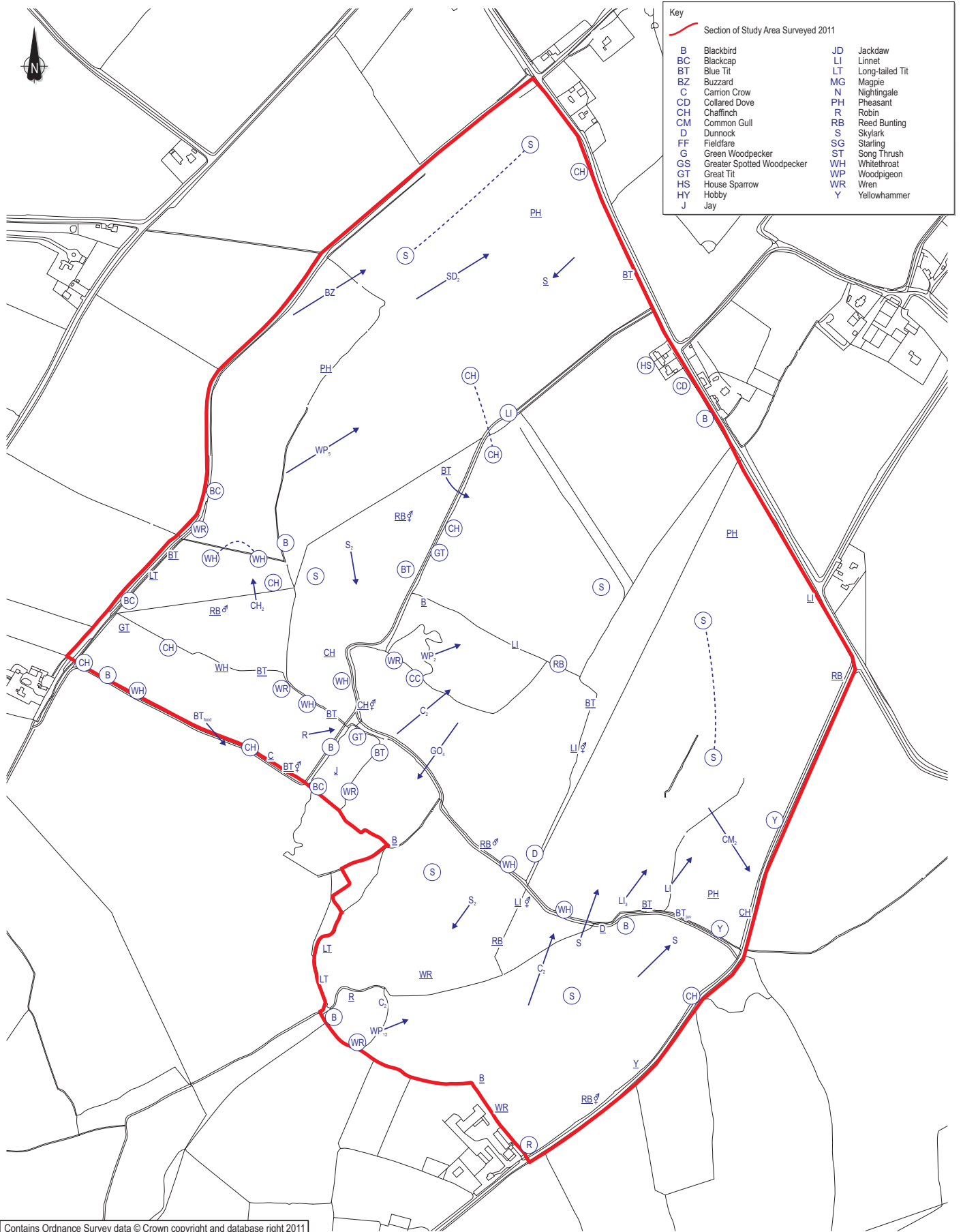
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Figure 4 Breeding Bird Survey Results – Visit 2



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Figure 5 Breeding Bird Survey Results – Visit 3

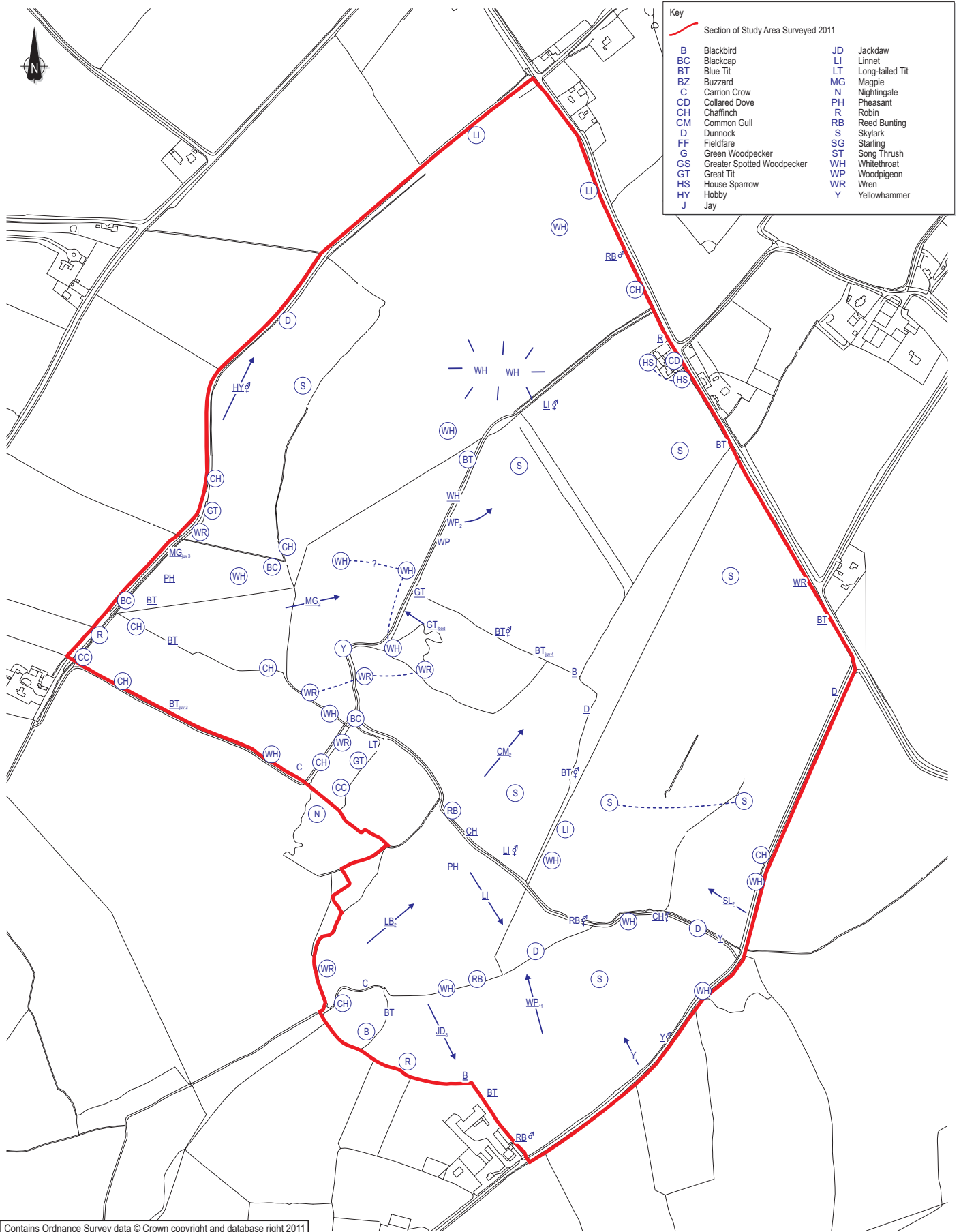
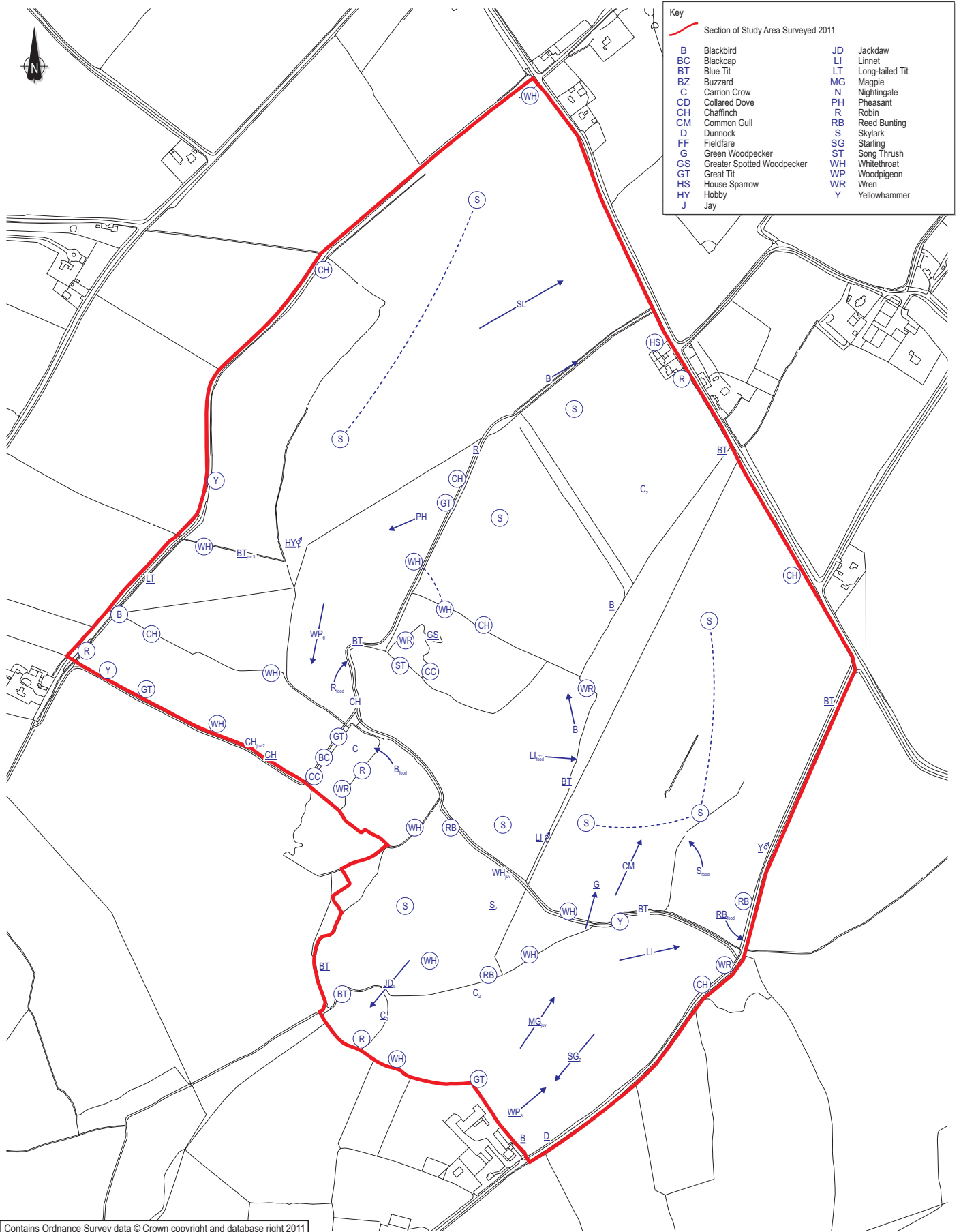
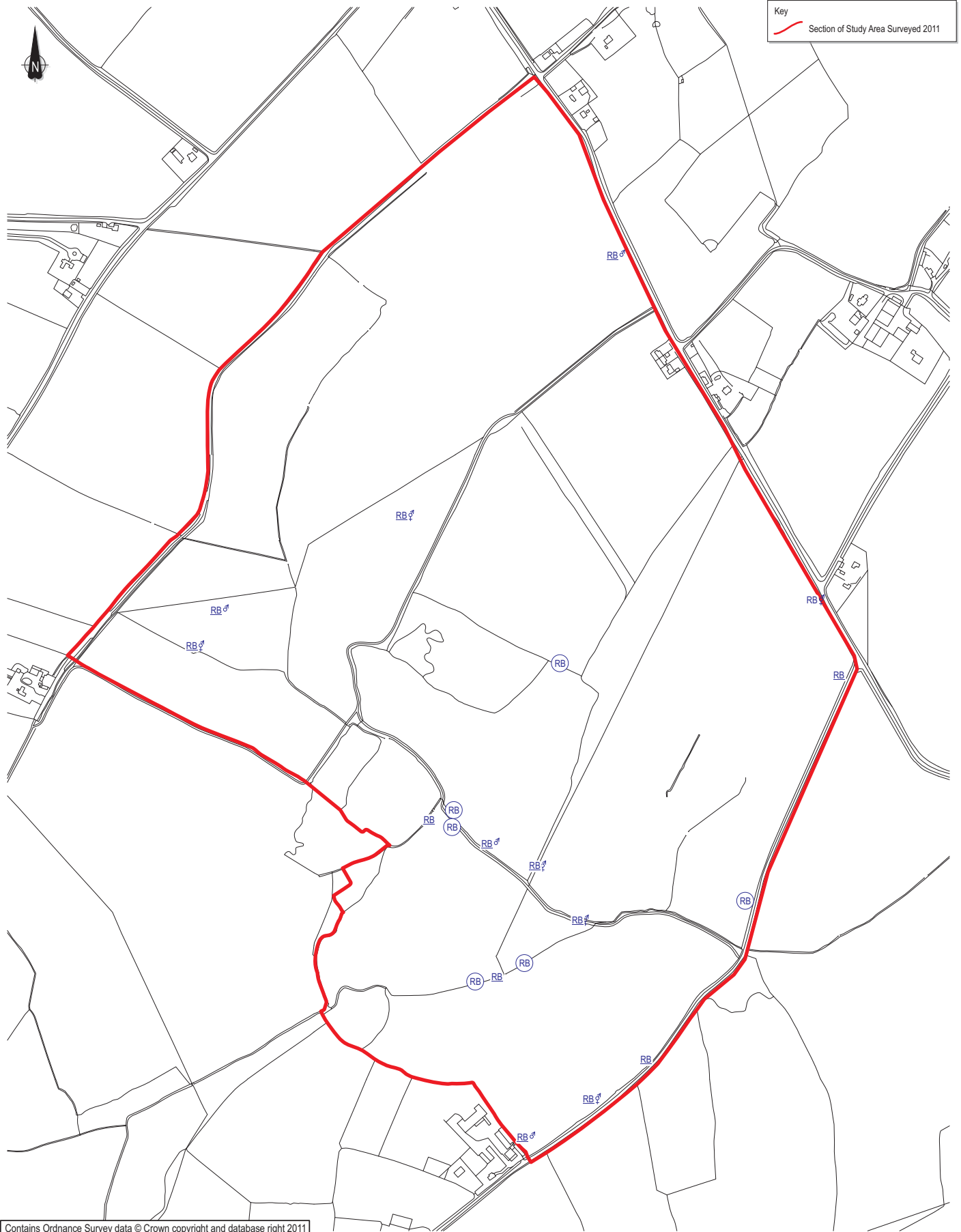


Figure 6 Breeding Bird Survey Results – Visit 4

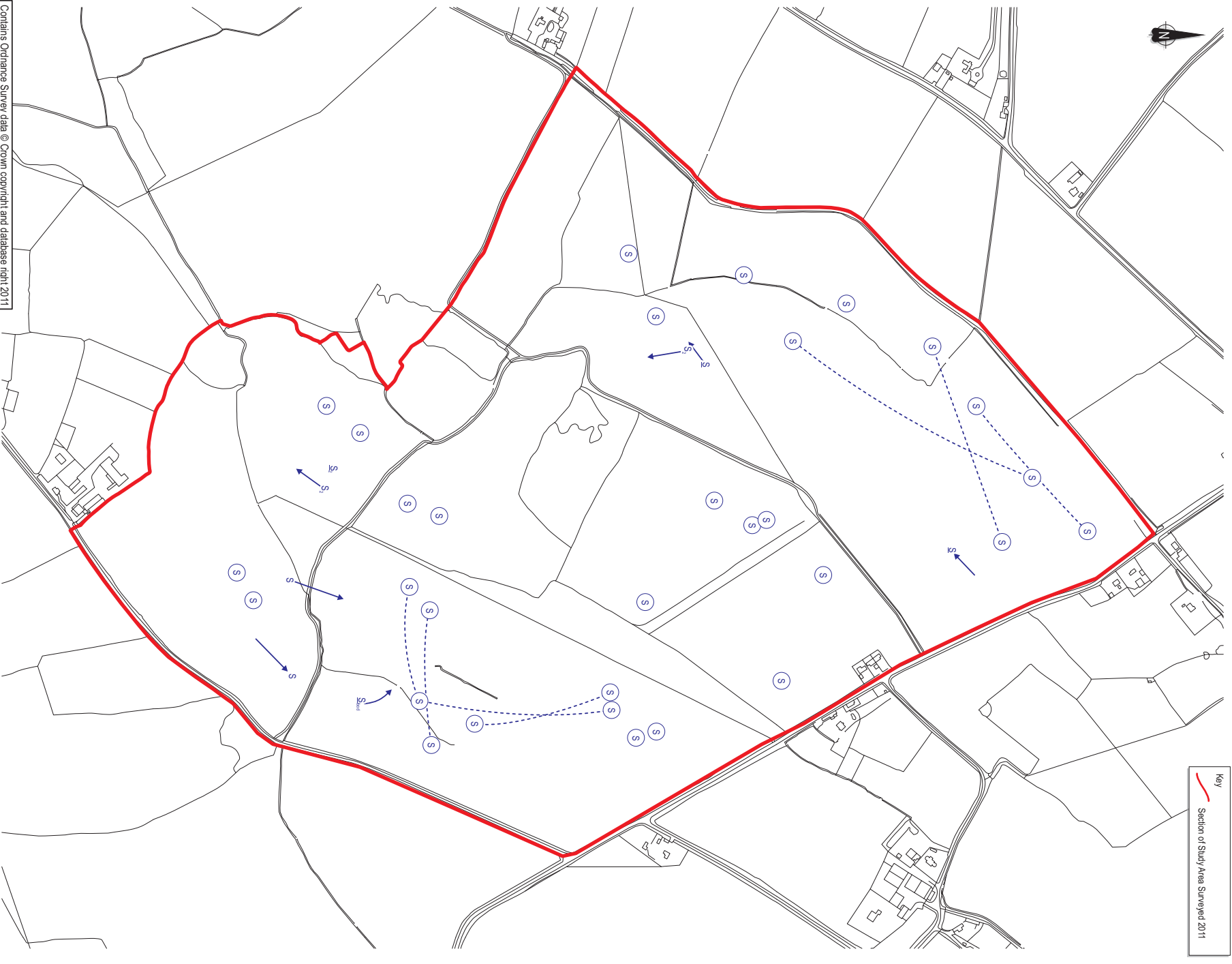


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Figures 7-23 Territory Maps for Species of Conservation Concern



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