



## 9.5 BREEDING BIRD



West Sussex County Council

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## **A29 REALIGNMENT**

Breeding Bird Survey Report





## **West Sussex County Council**

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## **Breeding Bird Survey Report**

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## West Sussex County Council

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# A29 REALIGNMENT

## Breeding Bird Survey Report

WSP

Mountbatten House

Basing View

Basingstoke, Hampshire

RG21 4HJ

Phone: +44 1256 318 800

Fax: +44 1256 318 700




WSP.com

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## EXECUTIVE SUMMARY

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West Sussex County Council (WSSC) proposes to construct a new road to replace/realign the existing A29 at Eastergate, Westergate and Barnham, hereafter referred to as the 'Proposed Development'. The Proposed Development is to be completed in two phases. This report focuses on Phase 1 of the Proposed Development. Phase 1 (Northern Section) will comprise a single carriageway running from the A29 Fontwell Avenue, connecting to the B2233 Barnham Road.

WSP was commissioned to complete a breeding bird survey on behalf of WSSC, to support the planning application for the Proposed Development. To inform an evaluation of the bird community and on-site habitats, three breeding bird survey visits were completed between March 2019 and May 2019. The survey work followed a standard method based on the British Trust for Ornithology's (BTO's) Common Bird Census (CBC), as summarised by Bibby et al (2000).

A total of 44 species were recorded on or over the Survey Area during the breeding bird surveys. Of these species, 15 are legally protected or species of conservation concern. This includes three Wildlife and Countryside Act Schedule 1 species, eight Species of Principal Importance (SPI) listed under the Natural Environment and Rural Communities (NERC) Act 2006, six Birds of Conservation Concern (BoCC) red list species and seven BoCC amber list species.

Given the species recorded and habitats present, the breeding bird community within the Survey Area is considered to be of District conservation importance.

All wild birds are protected from killing and injury under the Wildlife and Countryside Act 1981 (as amended). Further to this, Section 40 of the NERC Act obliges local authorities to have regard for SPI in discharging their duties and national (National Planning Policy Framework (NPPF)) and local planning policy also require consideration of protected species in the making of planning decisions.



# 1. INTRODUCTION

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## 1.1. PROJECT BACKGROUND

- 1.1.1. West Sussex County Council (WSSC) proposes to realign the existing A29 at Eastergate, Westergate and Barnham, hereafter referred to as the 'Proposed Development'. WSP was commissioned to complete a suite of breeding bird surveys for the Proposed Development.
- 1.1.2. The realignment of the A29 is required to deliver the adopted allocation of the Barnham, Eastergate, Westergate (BEW) site during the Arun Local Plan period (2011-2031). The road realignment will be delivered in two phases due to different funding mechanisms.
- 1.1.3. WSSC intends to submit an Outline Business Case (OBC) to the Coast to Capital Local Enterprise Partnership (LEP) and WSSC gateway 2 review for Phase 1 (Northern Section) of the realignment of the A29.
- Phase 1 (Northern Section) will comprise a single carriageway running from the A29 Fontwell Avenue, connecting to the B2233 Barnham Road.
- 1.1.4. At the time of writing Phase 2 (Southern Section) of the realignment of the A29 may be funded through a mix of Developer Contributions and WSSC Capital funds.
- Phase 2 (Southern Section) is a future development that will continue from Phase 1 on the B2233 Barnham Road, connecting to the A29 Lidsey Road. This phase is a future development and will not be included within the scope of the wintering bird report and therefore will not be mentioned further.
- 1.1.5. The location and alignment for the Proposed Development is shown in Figure 1.

## 1.2. ECOLOGICAL BACKGROUND

- 1.2.1. A Preliminary Ecological Appraisal (PEA) was undertaken within land up to 250m surrounding the Scheme's maximum extent of works, hereafter referred to as the 'PEA Survey Area' (WSP 2018).
- 1.2.2. The PEA Survey Area is set within a semi-rural location amongst a series of small villages and runs through a selection of semi-natural and modified habitats, dominated by orchard in the north and west, with grassland habitats to the east and south. The wider landscape is characterised by a similar patchwork of villages and arable land. The coast at Bognor Regis lies approximately 5km to the south, where the coastline comprises a sand and gravel intertidal zone bordered by a dense urban area. The PEA Survey Area lies within the jurisdiction of West Sussex County Council and of Arun District Council.
- 1.2.3. The PEA and associated desk study identified suitable foraging habitat for a wide variety of bird species, including broadleaved semi-natural woodland, orchards, dense scrub and semi-improved neutral grassland within the PEA Survey Area. Special Protection Areas (SPA), designated for their summer breeding and wintering bird communities are present within the wider landscape, including Pagham Harbour 7.5km south east and Chichester and Langstone Harbours 10km south west. The Solent and Dorset Coast pSPA is located approximately 6km south of the Survey Area and is designated for the colonies of breeding terns over summer.
- 1.2.4. Breeding bird records provided by Sussex Biodiversity Record Centre (SXBRC) up to 2km from the Proposed Development include; barn owl *Tyto alba*, cuckoo *Cuculus canorus*, turtle dove

*Streptopelia turtur*, skylark *Alauda arvensis*, meadow pipit *Anthus pratensis*, nightingale *Luscinia megarhynchos*, bullfinch *Pyrrhula pyrrhula* and song thrush *Turdus philomelos*.

- 1.2.5. WSP undertook wintering bird surveys during the winter of 2018/2019 for the Proposed Development along transects designed to cover the PEA Survey Area and adjacent semi-natural habitats, hereafter referred to as the 'Survey Area'. A total of 40 species were recorded on or over the Survey Area during the wintering bird survey. Of these species, 16 are legally protected or species of conservation concern, including redwing *Turdus iliacus*, fieldfare *Turdus pilaris*, linnet *Carduelis cannabina*, meadow pipit *Anthus pratensis*, woodcock *Scolopax rusticola* and bullfinch *Pyrrhula pyrrhula*. (WSP, 2019)

### **1.3. BRIEF AND OBJECTIVES**

- 1.3.1. To provide current baseline data regarding the bird community WSP was commissioned to complete a breeding bird survey of the 'Survey Area' to provide:
- A list of bird species encountered on or close to the Survey Area and their breeding status (i.e. confirmed, probable or possible breeding, or not considered to be breeding on the Survey Area), as well as a description of their behaviours.
  - An evaluation of the value of the Survey Area for breeding birds.
- 1.3.2. The results of the above survey are contained within this report.

## **2. METHODS**

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### **2.1. BREEDING BIRD SURVEY**

- 2.1.1. To inform an evaluation of the on-site habitats for bird species, three breeding bird survey visits were completed between March and June 2019. The survey work followed a standard method based on the British Trust for Ornithology's (BTO's) Common Bird Census (CBC), as summarised by Bibby et al. (2000).
- 2.1.2. All three survey visits to the Survey Area (as indicated by the transects shown on Figures 2-5) were completed in the early morning, commencing at dawn. Each of the dawn survey visits was of approximately three hours in duration.
- 2.1.3. During each survey visit the Survey Area was walked slowly, approaching all suitable habitat within 50m and scanning and listening for birds. In accordance with good practice guidance (Bibby et al, 2000), the start point and direction of the route walked were varied on each survey visit; this serves to minimise bias, as birds may be active at different times of day in different areas. The locations of birds seen and heard were mapped using standard BTO two letter codes and activity symbols. Where breeding activity was observed this was recorded in accordance with the following categories (based on standard BTO criteria):
- Non-breeder – Birds observed flying over, considered to still be on migration or a summering non-breeder.
  - Possible breeding – Birds observed singing or present in suitable habitat in breeding season.
  - Probable breeding – A pair observed in suitable habitat, territorial behaviour observed in the same place on at least two separate occasions, or by many individuals simultaneously on one day, or birds observed visiting a probable nest site, showing courtship or display behaviour in suitable breeding habitat or nest building.
  - Confirmed breeding – Nest containing eggs or young seen or heard, adults observed carrying faecal sac or food, feigning injury as a distraction display or entering or leaving a nest site in circumstances indicating an occupied nest, a used nest or eggshells found or recently fledged or downy young recorded (showing evidence of dependency on adults).
- 2.1.4. In addition, incidental bird records gathered during other ecological surveys within the Survey Area have been incorporated within this report where these provide additional information to that gathered during the targeted breeding bird surveys. In particular these include anecdotal records of crepuscular and nocturnal birds.

### **2.2. DATES OF SURVEY AND PERSONNEL**

- 2.2.1. The breeding bird survey visits were completed by a competent surveyor with three years' experience of ecological survey, including breeding and wintering bird surveys.
- 2.2.2. Dates of survey and weather conditions are given in Table 1 below.

**Table 1 - Dates of survey and weather conditions**

Survey Visit	Date	Duration	Weather conditions
1	28/03/19	3	Temperature – 5°C Cloud – 8/8 oktas Wind – 1 <sup>1</sup> Rain – 0
2	25/04/19	3	Temperature – 12°C Cloud – 8/8 oktas Wind – 3 Rain – 0
3	30/05/19	3	Temperature – 14°C Cloud – 7/8 oktas Wind – 1 Rain – 0

## 2.3. EVALUATION

- 2.3.1. The evaluation of the importance of the breeding bird community has been based on CIEEM (2018) guidance. This guidance recommends that valuation of the ecological receptor importance is made with reference to a geographical framework given the different communities of birds observed within the Survey Area, based on the data collected during survey.
- 2.3.2. The CIEEM criteria are based on Ratcliffe (1977), which was consulted to provide further detail as required. Specific criteria against which bird communities have been evaluated include:
- biodiversity, including species richness, range and populations of plant and animal communities;
  - rarity and typicalness of communities;
  - stage/stability of ecological succession and community development trajectory;
  - position in an ecological or geographical unit; and
  - potential and intrinsic value, ease of re-creation.
- 2.3.3. Values were categorised in the following geographical context, in accordance with the guidelines.
- International – internationally important populations of wintering birds, such as those associated with the designation and protection of SPAs, SACs and Ramsars.
  - UK – bird populations that are important for conservation within the United Kingdom as a whole, such as those associated with the designation and protection of SSSI.

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<sup>1</sup> Wind speed has been measured using the Beaufort scale. Wind speed Beaufort Scale: 0=calm, 1=light air (smoke drifts in wind), 2=light breeze (leaves rustle, wind felt on face), 3=gentle breeze (light flags extended, small twigs in constant motion); 4=moderate wind (dust, leaves and loose paper raised, small branches move), 5=fresh wind (small trees sway), 6=strong wind (large branches move, whistling in phone lines, difficult to use umbrellas), 7-12=inappropriate conditions (7=moderate gale, 8=fresh gale, 9=strong gale, 10=whole gale, 11=storm, 12=hurricane).

- National (i.e. England) – bird populations that are important for conservation within England, such as those associated with the heathlands, large woodlands/forests and moorland.
- Regional (i.e. Southern England) – bird populations that are important within a region of England.
- County (i.e. West Sussex) – bird populations that are important within a single county. Such communities are likely to be found in Survey Areas that are the most important bird conservation Survey Areas a county offers, but may be more numerous than Survey Areas of higher value and therefore are more replaceable than regional value Survey Areas.
- District/borough level (i.e. Arundel) – more common and widespread bird populations that are important within a district. Such communities are likely to be found in Survey Areas that are more readily replaceable and fairly typical for the area in which they are found.
- Local (i.e. Eastergate) – common and widespread bird populations that are important within a local area. Such areas may stand out within a 10km grid square as being of importance to bird populations, but that are of less importance and more typical/ or replaceable than those in the above categories.
- Within zone of influence only (the project Survey Area and its immediate surroundings) – the most widespread and common species/communities.

2.3.4. To inform the assessment in this report, the results of the survey, the abundance of species at different geographical levels, the geographical range of the birds concerned and their conservation status have been taken into account<sup>2</sup>. Conservation status has been assessed using the following criteria:

- Listed on Annex 1 of the EU Birds Directive (Directive 79/409/EEC);
- Listed on Schedule 1 of the Wildlife and Countryside Act (1981 as amended);
- Listed on Section 41 (Priority Species) of the Natural Environment and Rural Communities (NERC) Act, 2006;
- UK Biodiversity Action Plan (UK BAP) (JNCC 2007) and Local Biodiversity Action Plan (LBAP) priority species;
- Included in Birds of Conservation Concern (BoCC) Red List; and
- Included in Birds of Conservation Concern (BoCC) Amber List.

## 2.4. NOTES AND LIMITATIONS

2.4.1. No further site-specific limitations were applicable to this survey. Whilst every effort has been made to detect all species present some bird species are more difficult to detect due to their shy or secretive nature and therefore may have gone undetected by this survey. As a constraint applicable to all bird surveys this is not considered to place significant constraints upon interpretation of the results for this Survey Area.

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<sup>2</sup> Information on the biology and ecology of each species has been researched from the online edition of Handbook of the Birds of the World ([www.hbw.com](http://www.hbw.com)), as the pre-eminent and current reference source for such information.

## 3. RESULTS AND EVALUATION

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### 3.1. OVERVIEW

- 3.1.1. A total of 44 species were recorded on or over the Survey Area during the breeding bird survey. Of these 38 are considered to breed within the Survey Area, including 15 species which are legally protected or species of conservation concern. Of these notable species, 12 are considered to breed within the Survey Area.
- 3.1.2. Species recorded as breeding include those where nest sites themselves are located on immediately adjacent land but the Survey Area is used extensively for provisioning of those nests or for song posts. The Survey Area is therefore considered integral to the breeding success of those birds.
- 3.1.3. The numbers of birds recorded within each category are listed below. It should be noted that categories are not exclusive and a species can be listed in more than one conservation category (for example listed as both a Species of Principal Importance (SPI) in accordance with the Natural Environment and Rural Communities (NERC) Act 2006 and a UK Biodiversity Action Plan (BAP) species and as either a red or amber list Bird of Conservation Concern (BoCC)).
- Three species listed on Schedule 1 of the Wildlife and Countryside Act 1981 (as amended). Cetti's warbler *Cettia cetti* was confirmed, probable or possible breeders within the Survey Area, whilst peregrine falcon *Falco peregrinus* was observed flying over the Survey Area and not considered to breed within the Survey Area. Barn owl *Tyto alba* are also listed on Schedule 1 of the Wildlife and Countryside Act 1981 (as amended). One individual was incidentally recorded during a dusk bat survey.
  - Eight species listed as SPI in accordance with Section 41 of the NERC Act 2006 (also UKBAP species). Bullfinch *Phyrrula phyrullus*, house sparrow *Passer domesticus*, dunnock *Prunella modularis*, linnet *Linnaria cannabina*, song thrush *Turdus philomelos* and starling *Sturnus vulgaris* were confirmed, probable or possible breeders within the Survey Area whilst black-headed gull *Larus ridibundus* and herring gull *Larus argentatus* were not considered to breed within the Survey Area.
  - Six Birds of Conservation Concern (BoCC) red list species. House sparrow, linnet, mistle thrush *Turdus viscivorus*, song thrush and starling were confirmed, probable or possible breeders within the Survey Area whilst herring gull were not considered to breed within the Survey Area; and
  - Seven BoCC amber list species. Dunnock, bullfinch, kestrel *Falco tinnunculus*, meadow pipit *Anthus pratensis* and stock dove *Columba oenas* were confirmed, probable or possible breeders within the Survey Area whilst black headed gull and mallard *Anas platyrhynchos* were not considered to breed within the Survey Area.
- 3.1.4. Given the presence, diversity and abundance of Schedule 1, SPI and BoCC species recorded as confirmed, probable or possible breeders, the breeding bird community within the Survey Area is considered of District conservation value, see Section 3.3 for further detail.

## 3.2. BREEDING BIRD SURVEY

### RESULTS OF BREEDING BIRD SURVEY

- 3.2.1. The species listed within Table A-1 and A-2 in Appendix A have been recorded as confirmed, probable or possible breeders during the breeding bird survey. Records from all survey visits of species which are of conservation concern are mapped on Figures 2 to 4.
- 3.2.2. Species recorded on or over the Survey Area during the breeding bird survey but not considered to breed within the Survey Area are listed in Table A-3 and A-4 in Appendix A. This included birds flying over or foraging within the Survey Area for which suitable breeding habitat is not present within the Survey Area or those where no behaviour suggesting breeding was recorded, and birds which were considered to be present as passage migrants. Records of non-breeding species of conservation concern are mapped on Figure 5.

### GAME SPECIES

- 3.2.3. Pheasant *Phasianus colchicus* was the only game bird observed during the breeding bird survey. Only males were recorded, within the north-west orchard. This species is considered a possible breeder given suitable nesting habitat.

### GULL SPECIES

- 3.2.4. Black-headed gull (BoCC amber list) and herring gull (BoCC red list) were both observed flying over the Survey Area. On occasion they were also recorded foraging in rough and improved grasslands across the Survey Area. Both species are not considered breeders within the Survey Area given the lack of suitable nesting habitat.

### RAPTOR AND OWL SPECIES

- 3.2.5. Buzzard *Buteo buteo* and kestrel were both recorded foraging over the Survey Area. They were both observed foraging and flying over the rough grassland, east of the orchard. Buzzard are considered probable breeders within the Survey Area, given they were recorded in a pair on the second visit. Kestrel is recorded as a possible breeder, given the species was foraging within the Survey Area and the presence of suitable nesting habitat.
- 3.2.6. An individual peregrine (W&CA Schedule 1) was recorded flying over the Survey Area. This species was only recorded once and was not seen to be hunting nor resting within the Survey Area. As such this species is not considered to breed within the Survey Area.
- 3.2.7. Barn owl (W&CA Schedule 1) were anecdotally reported to be present during the winter bird survey undertaken in 2018/2019 (WSP 2019). During a dusk bat survey of a barn within the north west of the Survey Area, an individual barn owl was incidentally sighted foraging over the adjacent field. Barn owl have a large home range, and are known to nest within barns, industrial/agricultural buildings and mature trees. Suitable nesting habitat is present within the Survey Area, and therefore this species is considered a possible breeder.

### WATERBIRD SPECIES

- 3.2.8. Grey heron *Ardea cinerea*, cormorant *Phalacrocorax carbo* and mallard were observed flying over the Survey Area. None of the species were recorded foraging within the Survey Area, given the lack of standing waterbodies or running water. These species are not considered breeders within the Survey Area given the lack of suitable foraging habitat.

## CORVID SPECIES

- 3.2.9. Jackdaw *Corvus monedula*, jay *Garrulus glandarius*, carrion crow *Corvus corone* and magpie *Pica pica*, were all recorded within the Survey Area. A small jackdaw colony was observed along the line of mature trees within the centre of the Survey Area whilst the three other species were observed frequently in pairs. All four species are considered probable breeders within the Survey Area, given the suitable habitat present and frequency of paired birds.

## PASSERINE SPECIES

- 3.2.10. The majority of birds recorded within the Survey Area were passerines. These species have been split into broad groups below to aid description.

### “Garden Species”

- 3.2.11. Common and widespread species recorded during the breeding bird surveys included; blackbird *Turdus merula*, blue tit *Parus caeruleus*, great tit *Parus major*, long tailed tit *Aegithalos caudatus*, chaffinch *Fringilla coelebs*, goldfinch *Carduelis carduelis*, greenfinch *Carduelis chloris*, robin *Erithacus rubecula* and pied wagtail *Motacilla alba*. All species were recorded frequently, with the exception of chaffinch and pied wagtail (recorded once). Given the suitable nesting and foraging habitat present for all species listed above, they are all recorded as confirmed, probable or possible breeders (as detailed in Appendix A). Graph 3-1 highlights the frequency of these species, showing blackbird as the most frequently recorded bird species.
- 3.2.12. Starling (BoCC red list), dunnock (BoCC amber list) and house sparrow (BoCC red list) are all BoCC listed species. The three species were recorded in high numbers across the Survey Area.
- 3.2.13. Dunnock were frequently recorded in pairs and carrying food within the dense scrub within the north and south of the Survey Area. House sparrow were recorded in multiple colonies across the Survey Area, often associated with residential houses around the perimeter. Adult starlings were recorded with juvenile birds and chicks on the nest within mature ash and apples trees in the orchards.
- 3.2.14. As such all three species are considered confirmed breeders within the Survey Area.

### “Woodland and Scrub” Species

- 3.2.15. Chiffchaff *Phylloscopus collybita*, coal tit *Parus ater*, goldcrest *Regulus regulus* and wren *Troglodytes troglodytes* are all species commonly associated with woodland. Of these species, wren were recorded in the highest numbers (see Graph 3-1). An adult wren was observed feeding chicks within an agricultural building within the north of the Survey Area confirming breeding. The other three species are considered possible and probable breeders, given they were observed in suitable habitat but in fewer numbers.
- 3.2.16. Blackcap *Sylvia atricapilla*, whitethroat *Sylvia communis*, Cetti’s warbler (W&CA Schedule 1) are three warbler species commonly associated with dense scrub habitat. These three species were all observed in scrub habitat within and surrounding the orchards in the north and west of the Survey Area. Both blackcap and whitethroat were seen displaying breeding behaviours, carrying food and holding territories and are considered confirmed breeders.
- 3.2.17. Cetti’s warbler were recorded on two separate occasions in the same location, likely highlighting one territory being held within the dense scrub west of the orchard. Cetti’s warbler has been recorded as a possible breeder within the Survey Area.



- 3.2.18. Song thrush (BoCC red list), mistle thrush (BoCC red list), bullfinch (BoCC amber list) were all recorded most frequently within the orchards in the north and west of the Survey Area. One male bullfinch was recorded on one survey within the dense scrub adjacent the orchard and is considered a possible breeder.
- 3.2.19. Mistle thrush were recorded holding territory and foraging within the orchard on two surveys and are considered possible breeders. Song thrush were also recorded holding territory and foraging within the orchard and woodlands, however this species was recorded in higher numbers and is therefore considered a probable breeder.

#### **“Farmland” Species**

- 3.2.20. Linnet (BoCC red list) were recorded foraging within the central scrub and hedgerow habitat. A pair was observed on the final visit, with one adult observed carrying nesting material. It is therefore considered that linnets are breeding within the Survey Area.
- 3.2.21. An individual meadow pipit (BoCC amber list) was observed within the central rough grassland. The individual was disturbed as surveyors crossed the grassland, however it is unknown whether the bird was nesting or foraging. Meadow pipit are therefore recorded as possible breeders within the Survey Area given suitable breeding habitat.

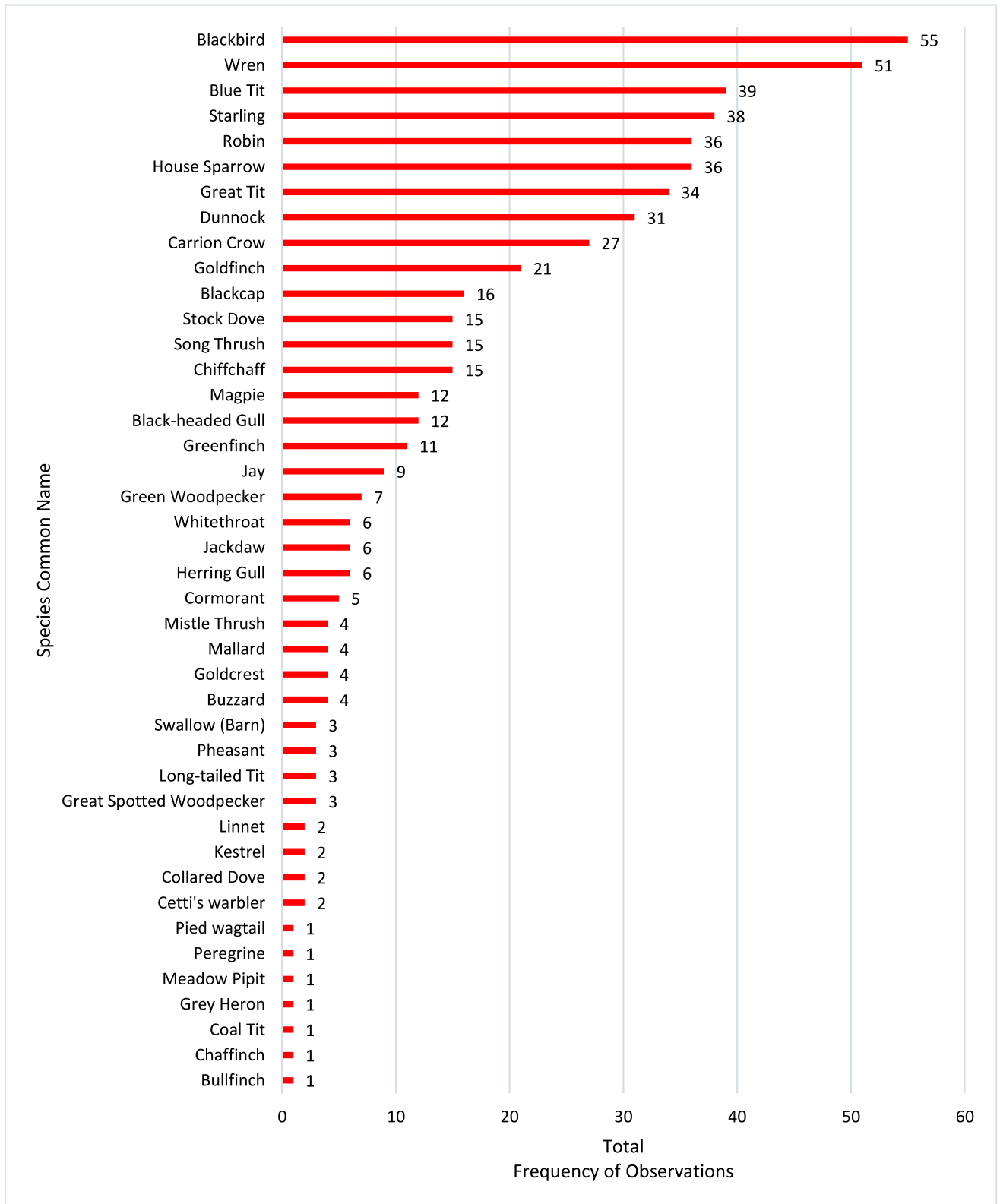
#### **SWALLOWS**

- 3.2.22. Barn swallow *Hirundo rustica* were recorded foraging over the Survey Area on two surveys. They were observed foraging within the north of the Survey Area in close proximity to horse paddocks and cattle grazed fields. Barns, stables and agricultural buildings present within and adjacent the Survey Area provide suitable nesting opportunities. This species is considered a possible breeder within the Survey Area.

#### **NEAR PASSERINES**

- 3.2.23. Stock dove (BoCC amber list), collared dove *Streptopelia decaocto* and woodpigeon *Columba palumbus* were all frequently recorded throughout the Survey Area. Stock doves were most frequently recorded within the orchard and surrounding woodlands. Collared doves were most frequently recorded within the west of the Survey Area. These two species are considered probable breeders given observations of pairs in suitable habitat and adults carrying nesting material.
- 3.2.24. Woodpigeon breeding within the Survey Area was considered probable during the breeding bird survey. It was confirmed during further badger surveys when a nest with chicks was identified within the north east of the Survey Area. Graph 3-1 does not show the number of woodpigeons recorded during the surveys given their high abundance and frequent movements as to avoid ‘double counting’.
- 3.2.25. Great spotted woodpecker *Dendrocopos major* was confirmed breeding within the Survey Area, though observation of woodpecker nesting holes (predominately within mature ash *Fraxinus excelsior* and apple trees *Malus domestica* agg.) and adults carrying food. Green woodpecker *Picus viridis* are considered probable breeders given suitable habitat, presence of nesting holes and observations of foraging within grasslands.

**Graph 3-1 - Total frequency of observations per species**



### 3.3. EVALUATION OF THE SITE FOR BREEDING BIRDS

- 3.3.1. The species recorded were evaluated using the criteria outlined in Section 2.3 and in conjunction with the Biodiversity Action Plan for West Sussex.
- Most corvids, pigeons and game birds are considered of negligible ecological value. They are common and widespread in the UK, and in most cases, they are not threatened. They are therefore considered to be of negligible conservation importance.
  - Local importance – gulls, “garden” birds, and most woodland passerines are considered as having Local importance. The Survey Area also does not host important breeding populations of any species and in general they are widespread and common. In some cases, species are listed as conservation concerns because they have suffered rapid declines in population, wintering range and breeding range, but the population numbers still remain high including dunnoek, starling, song thrush and meadow pipit.
  - District (Arun) / County importance (West Sussex) – Six SPIs were recorded as breeders within the Survey Area. These species have recently experienced serious declines in their breeding numbers, therefore as the Survey Area supports these species in moderate numbers and as breeders it is evaluated as important within the district for providing refuge, foraging and breeding habitat. The Survey Area is also considered of district value for barn owl given their incidental sighting and current national population status.
  - The Survey Area does not support a bird community of Regional/National/UK/International importance value.
- 3.3.2. Overall, the evaluation of baseline data established the breeding bird community is mostly comprised of a mixture of common and widespread species, however more notable species are present, with some being listed as Species of Principal Importance and Birds of Conservation Concern. The community is therefore considered to be of District importance.
- 3.3.3.

## 4. LEGAL AND PLANNING POLICY CONTEXT

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### 4.1. LEGISLATION

#### CONSERVATION OF HABITATS AND SPECIES REGULATIONS 2017 (HABITAT REGULATIONS)

- 4.1.1. The Habitat Regulations Part 1 Regulation 10 (2) & (3) state that local authorities *'must take such steps in the exercise of their functions as they consider appropriate to contribute to...the preservation, maintenance and re-establishment of a sufficient diversity and area of habitat for wild birds in the UK including by means of the upkeep, management and creation of such habitat...'* The legislation continues to state that economic and recreation requirements must be taken into consideration in considering which measures are appropriate.

#### WILDLIFE AND COUNTRYSIDE ACT 1981 (AS AMENDED)

- 4.1.2. Under the Wildlife and Countryside Act 1981 (as amended) all wild birds are protected from killing and injury, and their nests and eggs protected from taking, damage and destruction whilst in use.
- 4.1.3. Additional protection is extended to species listed under Schedule 1 of the Act, meaning it is also an offence to disturb these species at or near the nest, or whilst they have dependent young.
- 4.1.4. Of the species recorded within the Survey Area barn owl, peregrine and Cetti's warbler are listed on Schedule 1. Cetti's was recorded as a probable breeding species within the Survey Area, whilst barn owl are recorded as possible breeders.

#### NATURAL ENVIRONMENT AND RURAL COMMUNITIES ACT 2006

- 4.1.5. The NERC Act 2006 reinforces the duty upon all public authorities, including planning authorities, to have regard for the conservation of biodiversity when discharging their duties. The Act refines the definition of biodiversity conservation, stating that it includes restoring or enhancing a population or habitat. Section 41 of the NERC Act requires the Secretary of State to list habitats and species of principal importance (HPIs and SPIs) for the conservation of biodiversity in England. The habitats and species listed in accordance with Section 41 largely replicate those listed on the UK Biodiversity Action Plan (BAP) which occur in England (however there are exceptions). SPI (also UKBAP species) were recorded within the Survey Area, many of which are considered to breed within the Survey Area.

### 4.2. PLANNING POLICY

#### NATIONAL PLANNING POLICY FRAMEWORK

- 4.2.1. At a national context planning policy is driven by the National Planning Policy Framework (NPPF) (2019). NPPF Section 15 *Conserving and enhancing the natural environment* states:
- Planning policies and decisions should contribute to and enhance the natural and local environment by:
    - *a) protecting and enhancing valued landscapes, sites of biodiversity or geological value and soils (in a manner commensurate with their statutory status or identified quality in the development plan) ...;*

- *b) recognising the intrinsic character and beauty of the countryside, and the wider benefits from natural capital and ecosystem services – including the economic and other benefits .... of trees and woodland...; and*
- *d) minimising impacts on and providing net gains for biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures.'*
- To protect and enhance biodiversity and geodiversity, plans should:
  - *'a) Identify, map and safeguard components of local wildlife-rich habitats and wider ecological networks, including the hierarchy of international, national and locally designated sites of importance for biodiversity; wildlife corridors and stepping stones that connect them; and areas identified by national and local partnerships for habitat management, enhancement, restoration or creation...; and*
  - *b) promote the conservation, restoration and enhancement of priority habitats, ecological networks and the protection and recovery of priority species; and identify and pursue opportunities for securing measurable net gains for biodiversity.'*
- When determining planning applications, local planning authorities should apply the following principle; *'if significant harm to biodiversity resulting from a development cannot be avoided (through locating on an alternative site with less harmful impacts), adequately mitigated, or, as a last resort, compensated for, then planning permission should be refused.'*

4.2.2. Although the NPPF revoked Planning Policy Statement 9 (PPS9), the ODPM circular 06/2005 originally prepared to accompany PPS9 remains current; this states that *'the presence of a protected species is a material consideration when a planning authority is considering a development proposal'* and also includes confirmation that *'potential effects of a development, on habitats or species listed as priorities in the UK Biodiversity Action Plan (BAP)...are capable of being a material consideration in the...making of planning decisions.'* The circular advises that local authorities should consult Natural England before granting planning permission if the proposals could adversely affect a protected species, this definition of a protected species includes birds.

## LOCAL PLANNING POLICY

- 4.2.3. The West Sussex Transport Plan (2011) was subject to a Strategic Environmental Assessment (SEA) at the time of publishing which identified that;
- *'Mitigation is required to avoid negative impacts on biodiversity. This will include using green infrastructure to improve the connectivity of hedge lines to reconnect habitats, for example a 'Notable Verge' strategy is already in place; and*
  - *The impact of the [Local Transport Plan] is dependent on taking opportunities to improve green infrastructure, particularly in new development, and in the [South Downs National Park] where existing green infrastructure can be disjointed.'*
- 4.2.4. Whilst the West Sussex Structure Plan (WSSC, 2005) has no formal status, it states *'Though the Plan has no formal status in the current planning system, it remains our strategic policy statement for future development and land-use planning'*. Policy ERA2 relates to Nature Conservation, stating;
- *'(a) Development should not be permitted unless the wide range of habitats, species and geological features of the County will be protected, conserved and, where possible, enhanced particularly through long-term management mechanisms and habitat creation schemes. A particularly high level of protection should be afforded to sites and features of national and*

*international importance. Proposals for the extension or creation of new habitats should be permitted provided that they are consistent with wider environmental objectives.*

▪ (b) Local plans will include policies to:

*(1) ensure that site evaluation is undertaken to establish the nature conservation importance of proposed development sites;*

*(2) protect sites or features of nature conservation importance, including those protected under legislation and prevent development unless there are no alternative solutions and there are overriding reasons which outweigh the need to safeguard the value of sites or features;*

*(3) ensure that where development would result in the loss of an important nature conservation resource, a new resource is provided which is of at least equivalent value, where possible;*

*(4) where appropriate, secure the restoration, creation and management of habitats through development proposals; and*

*(5) where necessary, ensure the investigation and recording of sites and features of nature conservation importance, and, where appropriate, the preservation of any finds.'*

4.2.5. The Adopted Arun Local Plan (Arun DC, 2018) contains a number of policies relating to biodiversity, of which Policy ENV SP1 Natural Environment and Policy ENV DM5 Development and Biodiversity are the most pertinent.

4.2.6. Policy ENV SP1, Natural Environment states;

- *'Arun District Council will encourage and promote the preservation, restoration and enhancement of biodiversity and the natural environment through the development process and particularly through policies for the protection of both designated and non-designated sites. Where possible it shall also promote the creation of new areas for habitats and species. In relation to designated sites, development will be permitted where it protects sites listed in Tables 17.1-17.6 that are recognised for the species and habitats contained within them.'*

4.2.7. Policy ENV DM5 Development and Biodiversity states;

- *'Development schemes shall, in the first instance, seek to achieve a net gain in biodiversity and protect existing habitats on site. They shall also however incorporate elements of biodiversity including green walls, roofs, bat and bird boxes as well as landscape features minimising adverse impacts on existing habitats (whether designated or not). Development schemes shall also be appropriately designed to facilitate the emergence of new habitats through the creation of links between habitat areas and open spaces. Together, these provide a network of green spaces which serve to reconnect isolated sites and facilitate species movement.*
- *Where there is evidence of a protected species on a proposed development site, planning applications shall include a detailed survey of the subject species, with details of measures to be incorporated into the development scheme to avoid loss of the species. This involves consideration of any impacts that will affect the species directly or indirectly, whether within the application site or in an area outside of the site, which may be indirectly affected by the proposals. All surveys shall be carried out at an appropriate time of year and shall be undertaken by a qualified and, where appropriate, suitably licensed person.*
- *All developments shall have regard to Natural England's standing advice for protected species.'*

4.2.8. National and Local Planning policies are referenced as applicable within this report.

### **4.3. OTHER CONSIDERATIONS**

#### **BIRDS OF CONSERVATION CONCERN RED AND AMBER LISTS**

- 4.3.1. The UK's leading bird conservation organisations reviewed the most up to date information on the status of birds in the UK and elsewhere in their range to produce the third review of the status of birds which occur regularly in the UK. This is presented as the Birds of Conservation Concern 4 (Eaton *et al*, 2015), comprising a 'red list' of species of high conservation concern, an 'amber' list of species of moderate conservation concern, with other species that do not qualify under red or amber list criteria on the green list. To qualify on the red list species may be listed as globally threatened by IUCN, have suffered a historical decline without substantial recent recovery, or a decline of more than 50% in breeding or non-breeding populations, or a 50% contraction in breeding range over 25 years (or the longer term). Amber list species can be those listed as Species of European Conservation Concern, those which have suffered a historical decline but shown significant recent recovery, have shown a decline of between 25 and 50% in breeding or non-breeding populations, or a contraction in breeding range of between 25 and 50% over 25 years (or the longer term) or be rare or localised breeders in the UK, or be species for which 20% of the breeding or non-breeding population is found in the UK.
- 4.3.2. Red or amber listing does not confer additional protection under legislation or planning policy, however it provides a basis for informing evaluation of a survey area and for targeting conservation effort and is a widely used resource for interpreting bird populations.

#### **BIODIVERSITY ACTION PLANS**

- 4.3.3. The United Kingdom Biodiversity Action Plan (UKBAP), first published in 1994 and updated in 2007, is a government initiative designed to implement the requirements of the Convention of Biological Diversity to conserve and enhance species and habitats. The UKBAP contains a list of priority habitats and species of conservation concern in the UK, and outlines biodiversity initiatives designed to enhance their conservation status. The priority species generally correlate with those listed in accordance with Section 41 of the NERC Act (with some exceptions).
- 4.3.4. BAPs in the UK have no statutory status, but provide a framework for implementing conservation requirements. Furthermore, species listed as Priority species in the UK BAP which are also listed as Species of Principal Importance (SPI) are afforded a degree of protection under the NERC Act (2006), which states that local authorities have a duty to conserve biodiversity (see above).
- 4.3.5. The national BAP is supplemented by local BAPs which identify habitats and species of particular value or concern at the local level. The Survey Area is covered by the Sussex Biodiversity Action Plan. The Species Action Plans for the county are currently being reassessed, to be integrated into new regional action plans, however song thrush and barn owl both previously received their own action plans.

## 5. FURTHER SURVEY RECOMMENDATIONS

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### 5.1. BARN OWL SURVEY

- 5.1.1. Given the recorded sighting of barn owl within the Survey Area it is recommended that a specific barn owl survey is undertaken.
- 5.1.2. The barn owl survey should include a desk study specific to barn owl (requesting records from the Barn Owl Trust and local ornithological groups). The field surveys should be undertaken using a three-stage approach where appropriate:
- Stage 1 – site walkover, to record features of the habitat which may support barn owls;
  - Stage 2 – a detailed investigation of the features identified during Stage 1 to record potential nest sites (PNS), active roost sites (ARS), temporary rest sites (TRS), and potential foraging habitat (PFH); and
  - Stage 3 –if required, further detailed investigation during the barn owl breeding season to identify breeding and foraging activity.
- 5.1.3. The results of the barn owl survey should be used to inform specific barn owl mitigation recommendations where required. Given the protected status of this species, this could include retention of confirmed barn owl nesting sites, sensitive timings of nest site building demolition/tree removal, replacement of nesting opportunities, retention/provision of suitable foraging habitat and monitoring of alternative nesting provisions.

### 5.2. FURTHER RECOMMENDATIONS

- 5.2.1. With regard to breeding bird avoidance, mitigation and compensation recommendations, these will be provided within the overarching Environmental Statement (ES) biodiversity chapter for the Proposed Development.



## 6. CONCLUSIONS

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- 6.1.1. A total of 44 species were recorded on or over the Survey Area during the breeding bird survey, of these 38 are considered to breed within the Survey Area. These include species which are legally protected or species of conservation concern. This includes species where nest sites themselves are located on immediately adjacent land but the Survey Area is used extensively for provisioning of those nests or for song posts; and therefore these are included as breeding species as the Survey Area is integral to the breeding success of those birds.
- 6.1.2. The numbers of birds legally protected and species of conservation concern recorded are listed below, it should be noted categories are not exclusive and a species can be listed in more than one conservation category (for example listed as both SPI and UKBAP and as either a red or amber list BoCC).
- Three species listed on Schedule 1 of the Wildlife and Countryside Act 1981 (as amended) were recorded, Cetti's warbler and barn owl was confirmed as probable or possible breeders within the Survey Area, whilst no evidence of peregrine breeding within the Survey Area was recorded.
  - Six SPI (also UKBAP species) were recorded breeding on the Site; two were recorded as non-breeders within or over the Survey Area.
  - Six BoCC red list species within the Survey Area were recorded with five considered confirmed, probable or possible breeders; with seven BoCC amber list breeding species, two of which are recorded as a non-breeder.
- 6.1.3. The bird community is considered of District conservation value.

## 7. REFERENCES

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### 7.1. PROJECT REFERENCES

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### 7.2. TECHNICAL REFERENCES

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## **8. FIGURES**

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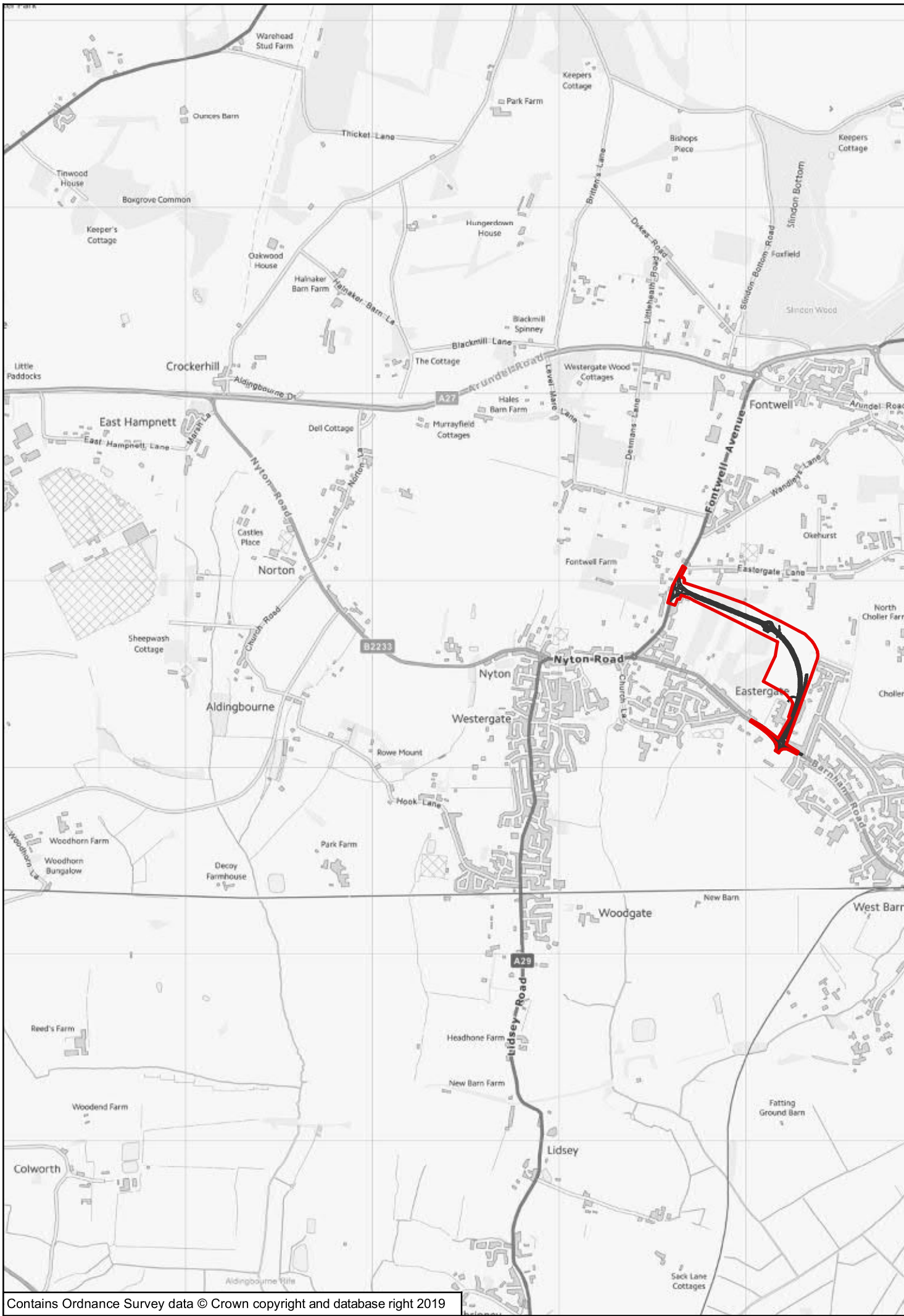
**Figure 1 - Site Location Plan**

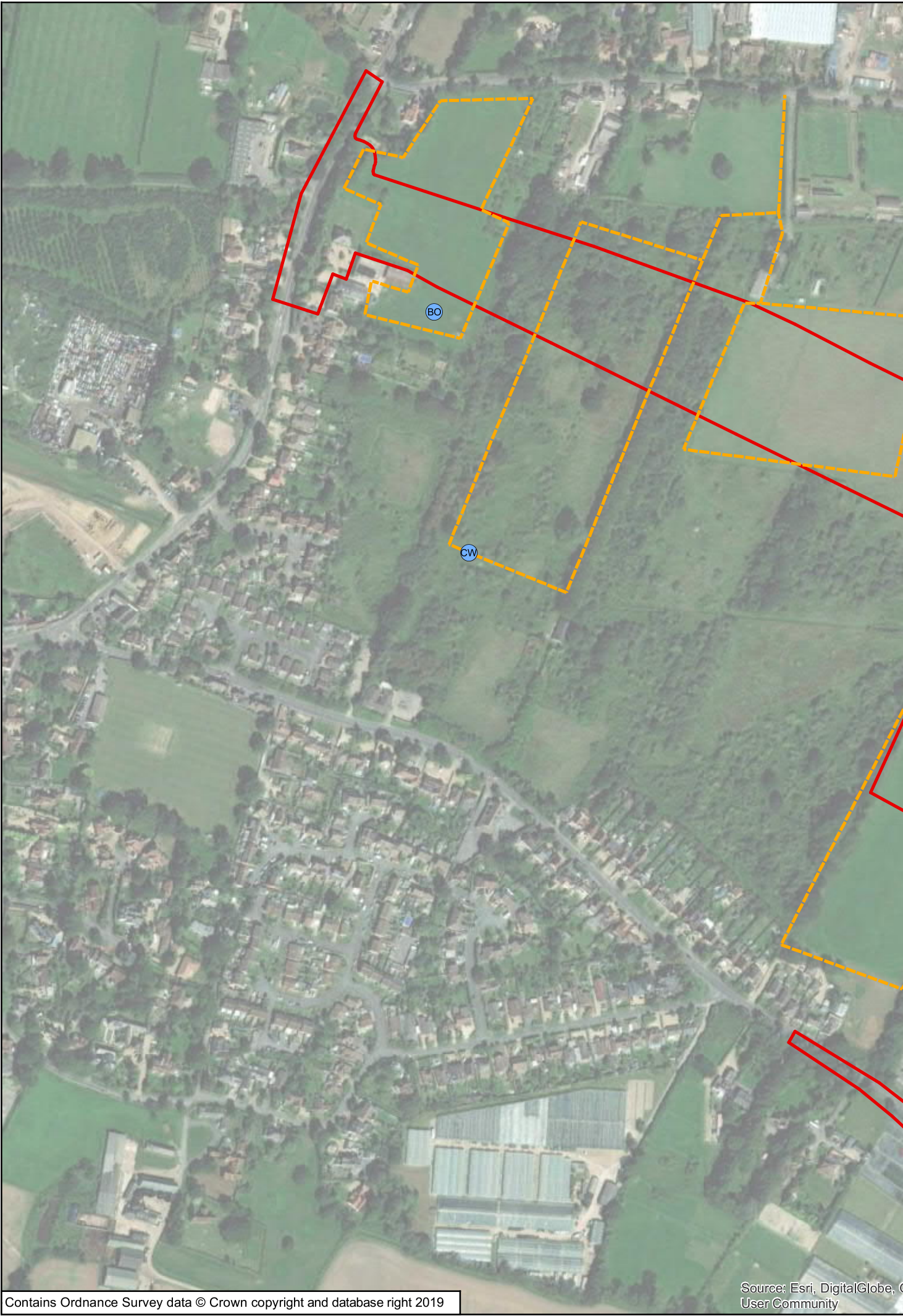
**Figure 2 - Possible, Probable or Confirmed WCA Schedule 1 Species Activity Plan**

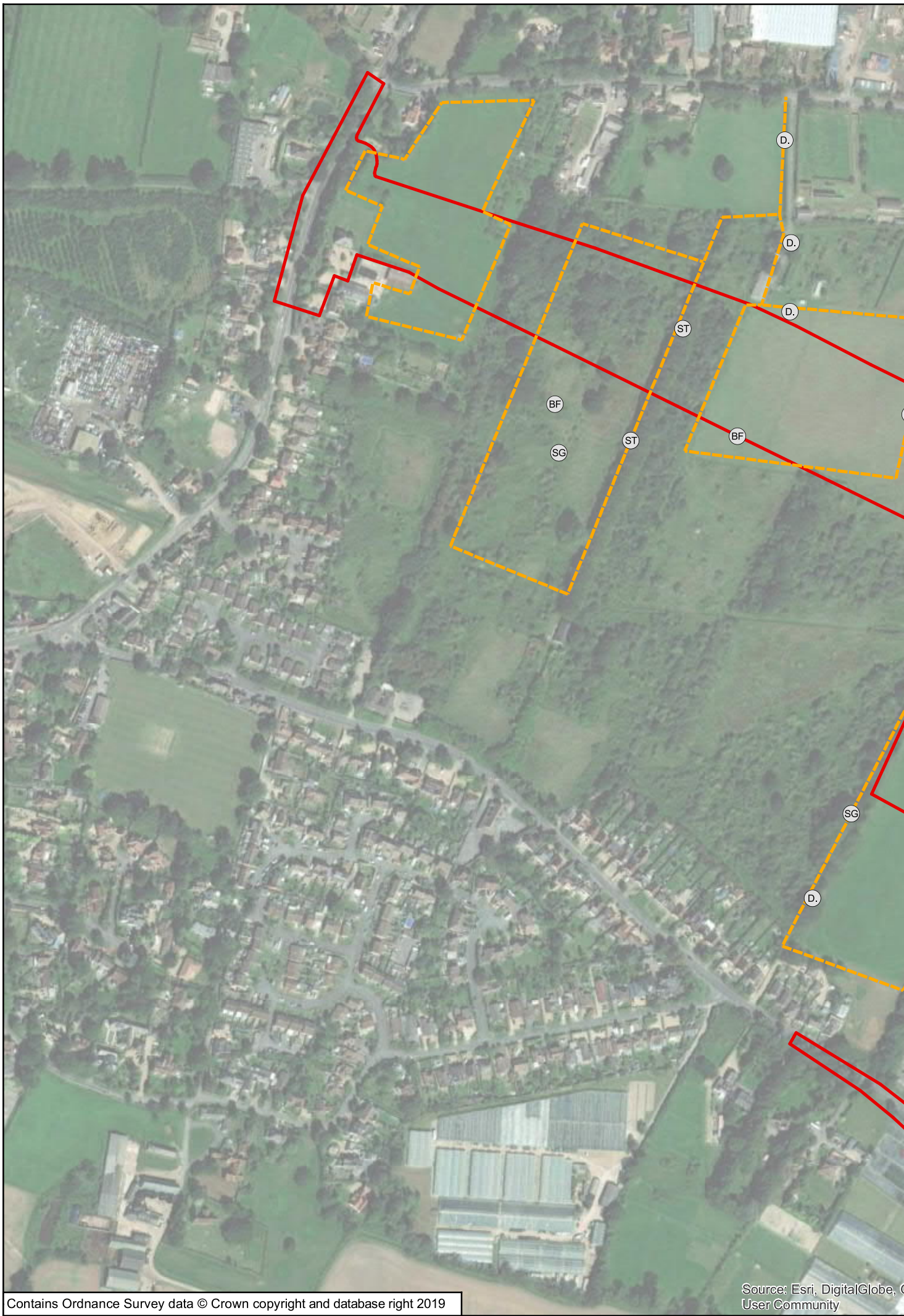
**Figure 3 - Possible, Probable or Confirmed SPI Species Activity Plan**

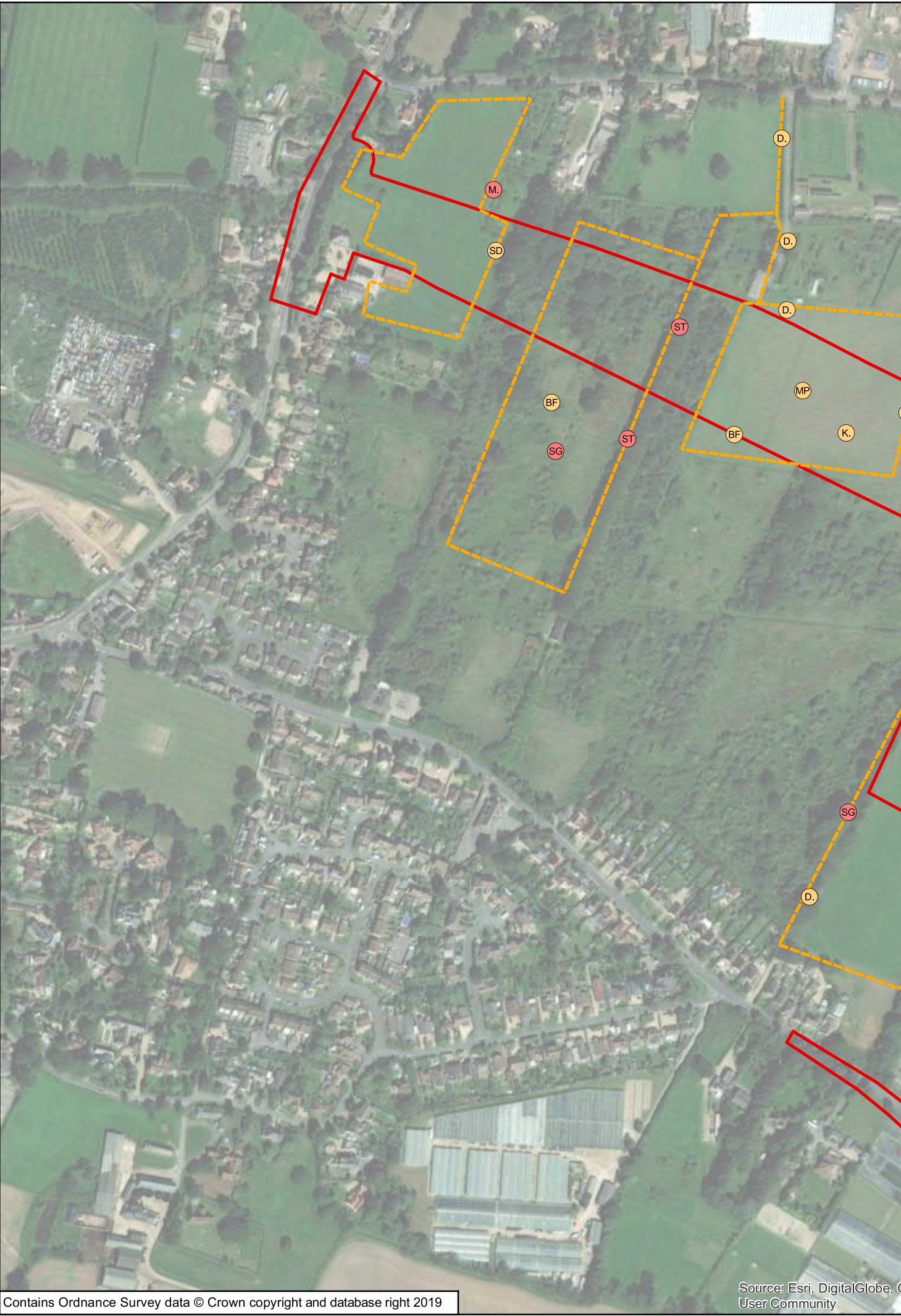
**Figure 4 - Possible, Probable or Confirmed BoCC Red and Amber List Species Activity Plan**

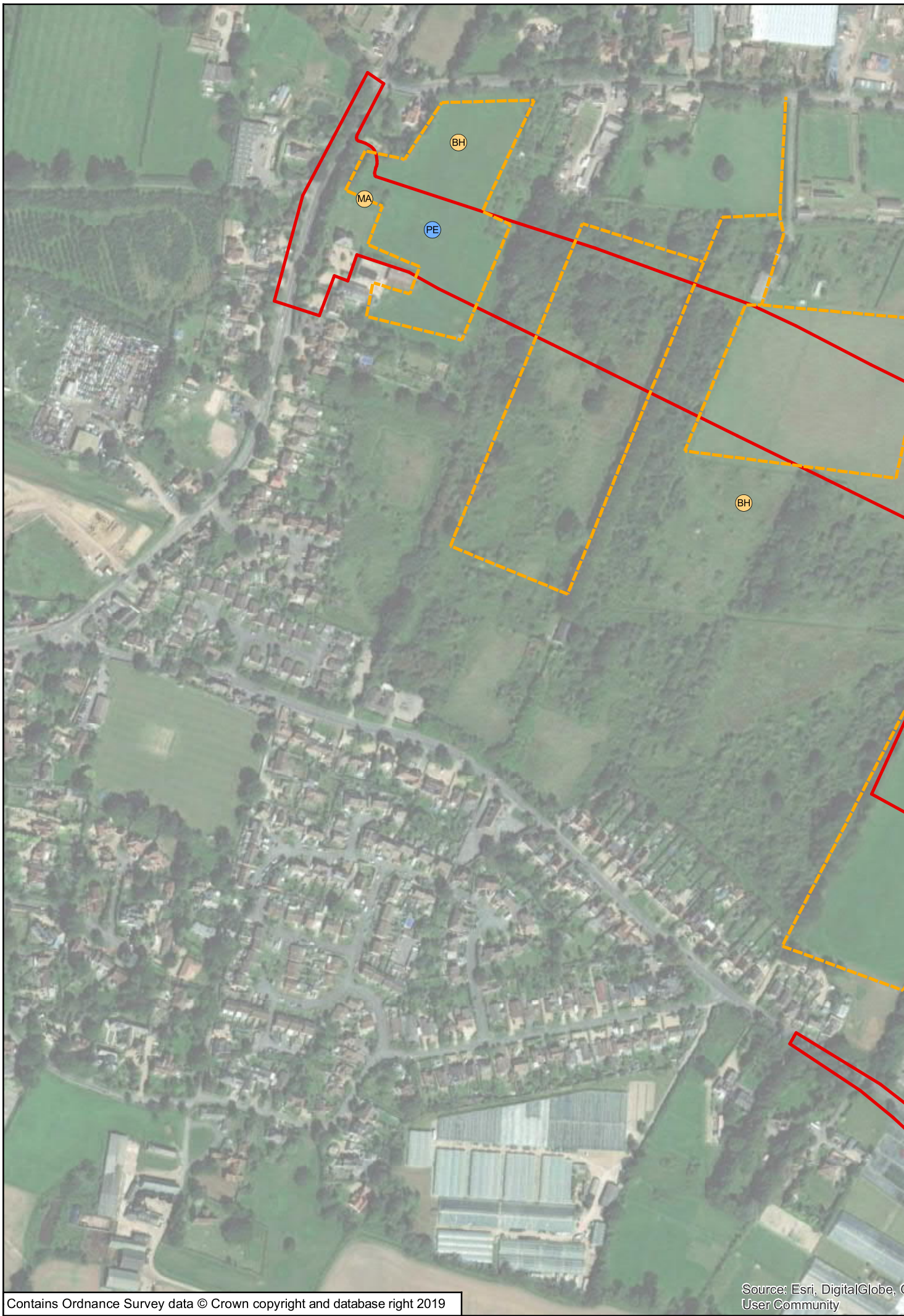
**Figure 5 - Non-breeding Notable Species Activity Plan**













# Appendix A

## **BREEDING BIRD RESULTS**



**Table A-1 - Common and widespread birds; confirmed, probable or possible breeders**

Species		Notes - Sex, age and recorded behaviours	Geographic
Common name	Latin name		
Blackbird	<i>Turdus merula</i>	<p>Distraction display from adult blackbirds, indicating breeding within the Survey Area.</p> <p>Pair observed in suitable nesting habitat in breeding season.</p> <p>Permanent territory recorded (song) on multiple survey visits.</p>	Local
Blackcap	<i>Sylvia atricapilla</i>	<p>Pair observed in suitable nesting habitat in breeding season.</p> <p>Permanent territory recorded (song) on multiple survey visits.</p> <p>Adult observed carrying food.</p>	Local
Blue Tit	<i>Parus caeruleus</i>	<p>Pair observed in suitable nesting habitat in breeding season.</p> <p>Permanent territory recorded (song) on multiple survey visits.</p> <p>Adult observed carrying food.</p>	Local



Species		Notes - Sex, age and recorded behaviours	Geography
Common name	Latin name		
		Recently fledged young observed.	
Buzzard	<i>Buteo buteo</i>	Pair observed in suitable nesting habitat in breeding season.	Local
Carrion Crow	<i>Corvus corone</i>	Species observed in suitable nesting habitat in breeding season.	Local
Chaffinch	<i>Fringilla coelebs</i>	Species observed in suitable nesting habitat in breeding season.	Local
Chiffchaff	<i>Phylloscopus collybita</i>	Species observed in suitable nesting habitat in breeding season. Permanent territory recorded (song) on multiple survey visits.	Local
Coal Tit	<i>Parus ater</i>	Species observed in suitable nesting habitat in breeding season.	Local
Collared Dove	<i>Streptopelia decaocto</i>	Pair observed in suitable nesting habitat in breeding season.	Local

Species		Notes - Sex, age and recorded behaviours	Geography
Common name	Latin name		
		Adult observed carrying nesting material.	
Goldcrest	<i>Regulus regulus</i>	Species observed in suitable nesting habitat in breeding season.	Local
Goldfinch	<i>Carduelis carduelis</i>	Species observed in suitable nesting habitat in breeding season. Permanent territory recorded (song) on multiple survey visits.	Local
Great Spotted Woodpecker	<i>Dendrocopos major</i>	Species observed in suitable nesting habitat in breeding season. Woodpecker nesting holes identified in multiple mature/dead trees.	Local
Great Tit	<i>Parus major</i>	Nest identified with calling chicks. Pair observed in suitable nesting habitat in breeding season. Permanent territory recorded (song) on multiple survey visits.	Local

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Species		Notes - Sex, age and recorded behaviours	Geography
Common name	Latin name		
Green Woodpecker	<i>Picus viridis</i>	Species observed in suitable nesting habitat in breeding season.	Local
Greenfinch	<i>Carduelis chloris</i>	Multiple pairs observed in suitable nesting habitat in breeding season. Permanent territory recorded (song) on multiple survey visits.	Local
Jackdaw	<i>Corvus monedula</i>	Species observed in suitable nesting habitat in breeding season.	Local
Jay	<i>Garrulus glandarius</i>	Species observed in suitable nesting habitat in breeding season.	Local
Long-tailed tit	<i>Aegithalos caudatus</i>	Species observed in suitable nesting habitat in breeding season.	Local
Magpie	<i>Pica pica</i>	Species observed in suitable nesting habitat in breeding season.	Local
Pheasant	<i>Phasianus colchicus</i>	Species observed in suitable nesting habitat in breeding season.	Local

Species		Notes - Sex, age and recorded behaviours	Geography
Common name	Latin name		
Pied wagtail	<i>Motacilla alba</i>	Species observed in suitable nesting habitat in breeding season.	Local
Robin	<i>Erithacus rubecula</i>	Nest identified with within barn (visible nesting material). Pair observed in suitable nesting habitat in breeding season. Permanent territory recorded (song) on multiple survey visits.	Local
Swallow	<i>Hirundo rustica</i>	Species observed in suitable nesting habitat in breeding season.	Local
Whitethroat	<i>Sylvia communis</i>	Species observed in suitable nesting habitat in breeding season. Chicks heard on the nest. Adults observed carrying food.	Local
Woodpigeon	<i>Columba palumbus</i>	Nest identified with two chicks. Adults observed feeding the chicks. Nest located within hawthorn scrub in proximity to a line of mature poplar.	Local

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Species		Notes - Sex, age and recorded behaviours	Geographical
Common name	Latin name		
Wren	<i>Troglodytes troglodytes</i>	Species observed in suitable nesting habitat in breeding season. Chicks heard on the nest. Adults observed carrying food.	Local

**Table A-2 – Notable bird species; confirmed, probable or possible breeders**

Species		WCA 1981	NERC Act 2006	BoCC		Biodiversity Action Plan	Notes - Sex, age and recorded behaviours	Geographical Importance	Status
Common name	Latin name	Schedule 1	Section 41	Red list	Amber list	UKBAP			
Barn owl	<i>Tyto alba</i>	✓					Anecdotal barn owl sighting by land	Regional	Year-round resident distribution in UK, t

Species		WCA 1981	NERC Act 2006	BoCC		Biodiversity Action Plan	Notes - Sex, age and recorded behaviours	Geographical Importance	Status
Common name	Latin name	Schedule 1	Section 41	Red list	Amber list	UKBAP			
							owners (2018). Barn owl observed flying through the Survey Area during a bat survey (2019).		increasing but sens
Bullfinch	<i>Pyrrhula pyrrhula</i>		✓		✓	✓	Species observed in suitable nesting habitat in breeding season.	County	Year-round resident distribution in UK b
Cetti's warbler	<i>Cettia cetti</i>	✓					Species observed in suitable nesting habitat in breeding season. Permanent territory recorded (song) on multiple survey visits.	Local	Formerly a BoCC n not listed as a BoC resident in southern Numbers and distri within the UK.
Dunnock	<i>Prunella modularis</i>		✓		✓	✓	Pairs observed in suitable nesting	Local	Year-round resident distribution in UK. I





Species		WCA 1981	NERC Act 2006		BoCC	Biodiversity Action Plan	Notes - Sex, age and recorded behaviours	Geographical Importance	Status
Common name	Latin name	Schedule 1	Section 41	Red list	Amber list	UKBAP			
							<p>habitat in breeding season.</p> <p>Permanent territory recorded (song) on multiple survey visits.</p> <p>Potential nesting site identified in proximity to the stables.</p>		declines in recent c and breeding popu and decreasing the
House sparrow	<i>Passer domesticus</i>		✓	✓			<p>Pairs observed in suitable nesting habitat in breeding season.</p> <p>Permanent territory recorded (song) on multiple survey visits.</p> <p>Nesting sites/colonies identified in</p>	District	Year-round residen distribution in UK. T once very abundan precipitously and p much lower than th

Species		WCA 1981	NERC Act 2006	BoCC		Biodiversity Action Plan	Notes - Sex, age and recorded behaviours	Geographical Importance	Status
Common name	Latin name	Schedule 1	Section 41	Red list	Amber list	UKBAP			
							proximity to residential buildings on the edge of the Survey Area.		
Kestrel	<i>Falco tinnuculus</i>				✓		Species observed in suitable nesting habitat in breeding season.	Local	Year-round resident distribution in UK. Some conservation concerns historic and current through persecution
Linnet	<i>Carduelis cannabina</i>		✓	✓		✓	Pair observed in suitable nesting habitat in breeding season. Adults observed carrying food.	County	Year-round resident distribution in UK. Some conservation concerns populations are declining and decreasing the
Meadow pipit	<i>Anthus pratensis</i>				✓		Species observed in suitable nesting habitat in breeding season.	District	Year-round resident hosts some winter distribution in UK. Some conservation concerns populations are declining



Species		WCA 1981	NERC Act 2006		BoCC	Biodiversity Action Plan	Notes - Sex, age and recorded behaviours	Geographical Importance	Status
Common name	Latin name	Schedule 1	Section 41	Red list	Amber list	UKBAP			
									decreasing their range
Mistle Thrush	<i>Turdus viscivorus</i>			✓			Pair observed in suitable nesting habitat in breeding season.	County	Year-round resident in UK. This species hosts some breeding populations in the north. Widespread in the south. Species of conservation concern because breeding populations are declining and decreasing their range.
Song thrush	<i>Turdus philomelos</i>		✓	✓		✓	Species observed in suitable nesting habitat in breeding season. Permanent territory recorded (song) on multiple survey visits.	County	Year-round resident in UK. This species hosts some breeding populations in the north. Widespread in the south. Species of conservation concern because breeding populations are declining and decreasing their range.
Starling	<i>Sturnus vulgaris</i>		✓	✓		✓	Adult observed feeding chicks within nesting hole.	Local	Year-round resident in UK. This species is abundant, but has declining populations in some areas.

Species		WCA 1981	NERC Act 2006	BoCC		Biodiversity Action Plan	Notes - Sex, age and recorded behaviours	Geographical Importance	Status
Common name	Latin name	Schedule 1	Section 41	Red list	Amber list	UKBAP			
							<p>Colony observed in suitable nesting habitat in breeding season.</p> <p>Recently fledged young dependent on adults.</p> <p>Adult carrying food for young.</p>		precipitously and p much lower than th
Stock dove	<i>Columba oenas</i>				✓		<p>Multiple pairs observed in suitable nesting habitat in breeding season.</p> <p>Permanent territory recorded (song) on multiple survey visits.</p>	Local	Year-round resident in UK. This species but their breeding p declined over the p



**Table A-3 – Common and widespread bird species; non-breeding**

Species			
Common name	Latin name	Notes - Sex, age and recorded behaviours	Geographic
Cormorant	<i>Phalacrocorax carbo</i>	Observed flying over the Survey Area. No suitable habitat present within the Survey Area for breeding.	Local
Grey Heron	<i>Ardea cinerea</i>	Observed flying over the Survey Area. No suitable habitat present within the Survey Area for breeding.	Local

**Table A-4 – Notable bird species; non-breeding**

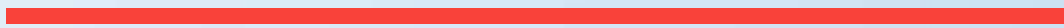
Species		WCA 1981	NERC Act 2006	BoCC					
Common name	Latin name	Schedule 1	Section 41	Red list	Amber list	UKBAP	Notes - Sex, age and recorded behaviours	Geographical Importance	Status
Black-headed gull	<i>Chroicocephalus ridibundus</i>				✓		Flocks observed flying over the Survey Area and adjacent fields. No suitable habitat present within the Survey Area for breeding.	Local	Wide is a r visitor conce winter declin their
Herring gull	<i>Larus argentatus</i>		✓	✓			Observed flying over the Survey Area. No suitable habitat present within the Survey Area for breeding.	Local	Winte Wide of co if it is popu and c
Mallard	<i>Anas platyrhynchos</i>				✓		Observed flying over the Survey Area. No suitable habitat present within the Survey Area for breeding.	Local	Year-distrib conce popu decre



Species		WCA 1981	NERC Act 2006	BoCC					
Common name	Latin name	Schedule 1	Section 41	Red list	Amber list	UKBAP	Notes - Sex, age and recorded behaviours	Geographical Importance	Statu
Peregrine	<i>Falco peregrinus</i>	✓					Observed flying over the Survey Area. No suitable habitat present within the Survey Area for breeding.	Local	Year-distrib popul since

# Appendix B

## **FREQUENCY OF SPECIES OBSERVATIONS**





**Table B-1 - Total recorded individuals across the survey visits**

Common Name	Latin name	BTO Code	Survey 1	Survey 2	Survey 3	Total count per species
Barn owl	<i>Tyto alba</i>	BO	Anecdotal sightings by land owner and incidental sighting during bat survey.			
Blackbird	<i>Turdus merula</i>	B.	16	18	21	55
Blackcap	<i>Sylvia atricapilla</i>	BC	3	4	9	16
Black-headed Gull	<i>Larus ridibundus</i>	BH	0	12	0	12
Blue Tit	<i>Parus caeruleus</i>	BT	18	10	11	39
Bullfinch	<i>Pyrrhula pyrrhula</i>	BF	0	0	1	1
Buzzard	<i>Buteo buteo</i>	BZ	0	2	2	4
Carrion Crow	<i>Corvus corone</i>	C.	4	19	4	27
Cetti's warbler	<i>Cettia cetti</i>	CW	0	1	1	2
Chaffinch	<i>Fringilla coelebs</i>	CH	0	1	0	1
Chiffchaff	<i>Phylloscopus collybita</i>	CC	6	5	4	15
Coal Tit	<i>Parus ater</i>	CT	1	0	0	1
Collared Dove	<i>Streptopelia decaocto</i>	CD	0	0	2	2
Cormorant	<i>Phalacrocorax carbo</i>	CA	0	5	0	5
Dunnock	<i>Prunella modularis</i>	D.	9	11	11	31
Goldcrest	<i>Regulus regulus</i>	GC	3	0	1	4
Goldfinch	<i>Carduelis carduelis</i>	GO	1	13	7	21
Great Spotted Woodpecker	<i>Dendrocopos major</i>	GS	2	0	1	3
Great Tit	<i>Parus major</i>	GT	9	13	12	34
Green Woodpecker	<i>Picus viridis</i>	G.	4	2	1	7
Greenfinch	<i>Carduelis chloris</i>	GR	4	4	3	11
Grey Heron	<i>Ardea cinerea</i>	H.	0	1	0	1
Herring Gull	<i>Larus argentatus</i>	HG	2	3	1	6
House Sparrow	<i>Passer domesticus</i>	HS	11	16	9	36

Common Name	Latin name	BTO Code	Survey 1	Survey 2	Survey 3	Total count per species
Jackdaw	<i>Corvus monedula</i>	JD	0	5	1	6
Jay	<i>Garrulus glandarius</i>	J.	4	3	2	9
Kestrel	<i>Falco tinnunculus</i>	K.	0	2	0	2
Linnet	<i>Carduelis cannabina</i>	LI	0	0	2	2
Long-tailed Tit	<i>Aegithalos caudatus</i>	LT	0	2	1	3
Magpie	<i>Pica pica</i>	MG	0	7	5	12
Mallard	<i>Anas platyrhynchos</i>	MA	2	2	0	4
Meadow Pipit	<i>Anthus pratensis</i>	MP	0	1	0	1
Mistle Thrush	<i>Turdus viscivorus</i>	M.	0	2	2	4
Peregrine	<i>Falco peregrinus</i>	PE	0	1	0	1
Pheasant	<i>Phasianus colchicus</i>	PH	1	1	1	3
Pied wagtail	<i>Motacilla alba</i>	PW	0	1	0	1
Robin	<i>Erithacus rubecula</i>	R.	17	13	6	36
Song Thrush	<i>Turdus philomelos</i>	ST	5	4	6	15
Starling	<i>Sturnus vulgaris</i>	SG	18	12	8	38
Stock Dove	<i>Columba oenas</i>	SD	0	13	2	15
Swallow (Barn)	<i>Hirundo rustica</i>	SL	0	2	1	3
Whitethroat	<i>Sylvia communis</i>	WH	0	3	3	6
Woodpigeon	<i>Columba palumbus</i>	WP	Numbers were not recorded due to high abundance and frequent movements.			
Wren	<i>Troglodytes troglodytes</i>	WR	11	22	18	51
Total per month			151	236	159	546



Mountbatten House  
Basing View  
Basingstoke, Hampshire  
RG21 4HJ

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