



## 9.6 WINTERING BIRD



West Sussex County Council

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# A29 REALIGNMENT

Wintering Bird Survey Report







## **West Sussex County Council**

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## **Wintering Bird Survey Report**

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West Sussex County Council

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## **A29 REALIGNMENT**

### Wintering Bird Survey Report

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## EXECUTIVE SUMMARY

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West Sussex County Council (WSSCC) propose 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, hereafter referred to as the 'Scheme'.

WSP UK Ltd was commissioned to complete a wintering bird survey on behalf of West Sussex County Council (WSSCC), to support the planning application for the Scheme. To inform an evaluation of the bird community and on-site habitats, three wintering bird survey visits were completed between November 2018 and March 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 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. 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, eight Birds of Conservation Concern (BoCC) red list species and seven BoCC amber list species.

Given the species recorded and habitats present, the bird community within the Survey Area is considered to be of Local 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.

Consequently, to avoid an offence under applicable legislation, minimise effects upon the wintering bird community and encourage compliance with planning policy it is recommended the following measures are incorporated within the Scheme:

- A breeding bird survey should be undertaken within the Survey Area, with target surveys to identify the use of the Survey Area by barn owl and other crepuscular species.
- Avoid the loss of woodland, orchard and scrub habitat in the west and grassland habitat in the centre of the Survey Area.
- Compensate the loss of habitat supporting wintering birds to achieve biodiversity net gain.
- Incorporate hedgerow and woodland management plans to enhance these habitats for the wintering bird community.
- Create ponds/wet swales to enhance the Survey Area for species recorded foraging, such as song thrush.

# 1. INTRODUCTION

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## 1.1. PROJECT BACKGROUND

- 1.1.1. West Sussex County Council (WSCC) propose to realign the existing A29 at Eastergate, Westergate and Barnham, hereafter referred to as the 'Proposed Development'. WSP UK Ltd was commissioned to complete a suite of wintering 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. WSCC intends to submit an Outline Business Case (OBC) to the Coast to Capital Local Enterprise Partnership (LEP) and WSCC gateway 2 review for Phase 1 (Northern Section) of the realignment of the A29.
- Phase 1 (Northern Section) (hereafter referred to as the 'Scheme') 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 WSCC 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.
- 1.1.1. The location and alignment for the Scheme 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 the 'Survey Area' WSP (2018).
- 1.2.2. The 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 south 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.
- 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. Special Protection Areas (SPA), designated for their summer breeding and wintering bird communities are present within the wider landscape, including the Pagham Harbour 7.5km south east and Chichester and Langstone Harbours 10km south west. Given the proximity to these SPAs, the PEA considered there to be potential for wintering species such as gulls, geese and waders to utilise the arable and grassland habitats present in the Survey Area.
- 1.2.4. Land within the Survey Area was subject to an ecological survey in 2016. The existing Phase 1 Habitat Survey report for the Scheme (WYG, 2016) is partly reviewed within this report.

1.2.5. The Survey Area lies within the jurisdiction of West Sussex County Council and of Arun District Council.

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

1.3.1. WSP UK Ltd was commissioned to complete a suite of wintering bird surveys for the proposed Scheme. This was to ensure sufficient baseline data regarding the wintering bird community was available to inform design of the Proposed Development. The aims of these wintering bird surveys are to provide:

- a list of bird species encountered that make up the wintering bird community on or close to the Survey Area;
- an evaluation of the value of the Survey Area for wintering birds; and
- recommendations as to how proposals should account for wintering birds in relation to legislation, planning and biodiversity policy.

1.3.2. The results of the above survey are contained within this report.

## 2. METHODS

### 2.1. WINTERING BIRD SURVEY

- 2.1.1. To inform an evaluation of the on-site habitats for bird species, three wintering bird survey visits were completed between November 2018 to March 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 were completed in the early morning, commencing during the high tide at Bognor Regis. Each of the survey visit was of approximately 3-4 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. Species, number of individuals, sex if possible, behaviour (call, alarm call, in song, in flight, visual contact) and location of each observation were recorded.
- 2.1.4. In addition, incidental/anecdotal bird records gathered during other ecological surveys within the Survey Area and the desk study have been incorporated within this report where these provide additional information to that gathered the wintering bird surveys. In particular these include:
- records of crepuscular and nocturnal birds;
  - notable wading birds and waterfowl; and
  - notable woodland birds.

### 2.2. DATES OF SURVEY AND PERSONNEL

- 2.2.1. The wintering bird survey visits were completed by a competent surveyor with 3 years' experience of ecological survey, including wintering and breeding 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	Start Time / Duration	Weather conditions	Tide Times (Bognor Regis)
1	22 November 2019	09:45 3 hours	Start: 4°C, frost and cloud, slight wind and good visibility. End: 5°C, cloudy with some wind, good visibility.	High Tide 10:07 Low Tide 03:53
2	18 January 2019	08:30 3 hours	Start: 1°C, frosty and bright with no wind, good visibility. End: 6°C, increased cloud cover, no wind, good visibility.	High Tide 08:26 Low Tide 02:03
3	26 February 2019	08:30	Start: 1°C, bright with no wind and excellent visibility.	High Tide 03:56

Survey Visit	Date	Start Time / Duration	Weather conditions	Tide Times (Bognor Regis)
		4 hours	End: 10°C, sunny and warm, no wind, excellent visibility.	Low Tide 09:55

## 2.3. EVALUATION METHODS

- 2.3.1. The evaluation of the importance of the wintering 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.
  - 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>1</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. Whilst every effort has been made to detect all species present some bird species are more difficult to detect due to their ecology (crepuscular species) or behaviour (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.
- 2.4.2. Where possible the wintering bird surveys were undertaken during high tide at the nearest coast line, at Bognor Regis. High tide was targeted to assess whether geese, ducks and wading birds were using the Survey Area as supportive foraging habitat. Due to tide times and health and safety risks, only two surveys were undertaken at high tide, with the third being undertaken at low tide. Given no SPA qualifying duck, wader or geese species were recorded during the two high tide surveys, the third survey conducted at low tide is not considered to affect the conclusions of this report.

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<sup>1</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. WINTERING BIRD SURVEY

#### OVERVIEW

- 3.1.1. A total of 40 species were recorded on or over the Survey Area during the wintering bird survey. This included 16 species which are legally protected or species of conservation concern. An anecdotal sighting of a barn owl has also been included within these counts.
- 3.1.2. The numbers of birds recorded within each category are listed below, it should be noted that these categories are not exclusive and a species can be listed in more than one conservation category. For example, a species 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). The species assemblage included;
- three species listed on Schedule 1 of the Wildlife and Countryside Act 1981 (as amended);
  - six species listed as SPI in accordance with Section 41 of the NERC Act 2006 (also UKBAP species);
  - eight Birds of Conservation Concern (BoCC) red list species; and
  - seven BoCC amber list species.
- 3.1.3. Whilst the Survey Area supports notable birds including Schedule 1, SPI and BoCC species, given their low abundance, the wintering bird community within the Survey Area is considered of Local conservation importance.

#### RESULTS OF WINTERING BIRD SURVEY

- 3.1.4. The species listed within Appendix A (Table A-1 - common and widespread species and Table A2 - notable species) have been recorded on or over the Survey Area during the wintering bird surveys. Tables A-1 and A-2 also provide the sex, age, behaviours observed and geographical importance of the species recorded. Appendix B provides the total counts of each species recorded within or flying over the Survey Area. Records from all survey visits of species which are of conservation concern are mapped on Figures 2 to 4.

#### Waterfowl (2 species)

- 3.1.5. No waterfowl were recorded foraging within the Survey Area, however mallard *Anas platyrhynchos* (BoCC amber list) and Canada goose *Branta canadensis* were recorded flying over the west of the Survey Area. It is considered likely that these species were foraging within waterbodies adjacent the Survey Area.
- 3.1.6. Cormorant *Phalacrocorax carbo* were also recorded flying over the Survey Area on every survey, however are considered unlikely to be using foraging within it.

#### Raptors and Owls (2 species)

- 3.1.7. Buzzard *Buteo buteo* were the only raptor species to be recorded within the Survey Area. One individual was recorded on all three visits within the orchard and scrub habitat to the west of the Survey Area. A second individual was recorded flying over the grasslands within the centre of the Survey Area on the second visit.



- 3.1.8. An anecdotal record of barn owl *Tyto alba* (WCA Schedule 1) was provided by one of the landowners within the Survey Area. It is believed that one individual previously roosted within a barn to the north of the Survey Area, foraging over the adjacent rough grassland.

#### **Game birds (1 species)**

- 3.1.9. Pheasants *Phasianus colchicus* were recorded on the second and third survey visit. These were recorded foraging within the woodland and orchard habitat to the west of the Survey Area.

#### **Waders (1 species)**

- 3.1.10. Woodcock *Scolopax rusticola* (BoCC red list) was recorded on the third survey visit. The individual was flushed from the rough grassland within the centre of the Survey Area, where it was likely to have been foraging.

#### **Gulls (3 species)**

- 3.1.11. Common (mew) gull *Larus canus* (BoCC amber list), herring gull *Larus argentatus* and black-headed gull *Chroicocephalus ridibundus* (BoCC amber list) were all recorded flying over the Survey Area. Common and herring gull were recorded in low numbers, either as individuals or pairs, whilst black-headed gulls were recorded in larger flocks of up to 60 birds. A few individual herring and black-headed gulls were recorded foraging in the north of the Survey Area.

#### **Pigeons (3 species)**

- 3.1.12. Woodpigeon *Columba palumbus*, collared dove *Streptopelia decaocto* and stock dove *Columba oenas* (BoCC amber list) were all recorded flying over and foraging within the Survey Area. Collared and stock dove were both recorded over the west of the Survey Area within the orchards and scrub habitat.

#### **Woodpeckers (2 species)**

- 3.1.13. Green woodpecker *Picus viridis* and greater spotted woodpecker *Dendrocopos major* were both recorded within the Survey Area. Green woodpecker was observed foraging within the small grassland to the west of the Survey Area, whilst greater spotted woodpecker was recorded drumming and foraging within the central orchards.

#### **Passerines, garden farmland and woodland species (17 species)**

- 3.1.14. In total, eleven common and widespread passerine species were recorded foraging within the Survey Area. This 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*, chiffchaff *Phylloscopus collybita*, goldcrest *Regulus regulus*, robin *Erithacus rubecula* and wren *Troglodytes troglodytes*. Many of the species recorded across the Survey Area, however the orchards, woodland and scrub within the west and centre of the Survey Area had the most activity.
- 3.1.15. Three passerine species, dunnock *Prunella modularis*, house sparrow *Passer domesticus* and starling *Sturnus vulgaris* generally associated with the residential housing/hedgerows are listed as SPI and on the BoCC list (red and amber list).. These species were regularly recorded within dense scrub, hedgerows and buildings within the centre west and east of the Survey Area. Five colonies of house sparrows were recorded across the Survey Area, predominately within the east of the Survey Area,.

- 3.1.16. Bullfinch *Pyrrhula pyrrhula* (SPI and BoCC amber list) were recorded on the second and third survey visits. Three females and one male were recorded foraging together within the scrub habitat in the west of the Survey Area. A single male was also recorded flying over the centre of the Survey Area.
- 3.1.17. Linnet *Carduelis cannabina* (SPI, BoCC red list) and meadow pipit *Anthus pratensis* (BoCC amber list) were recorded during the second and third visits within the central rough grasslands of the Survey Area. Meadow pipits were recorded foraging within the grassland whilst an individual linnet was recorded flying over this habitat.

**Passerines, corvids (3 species)**

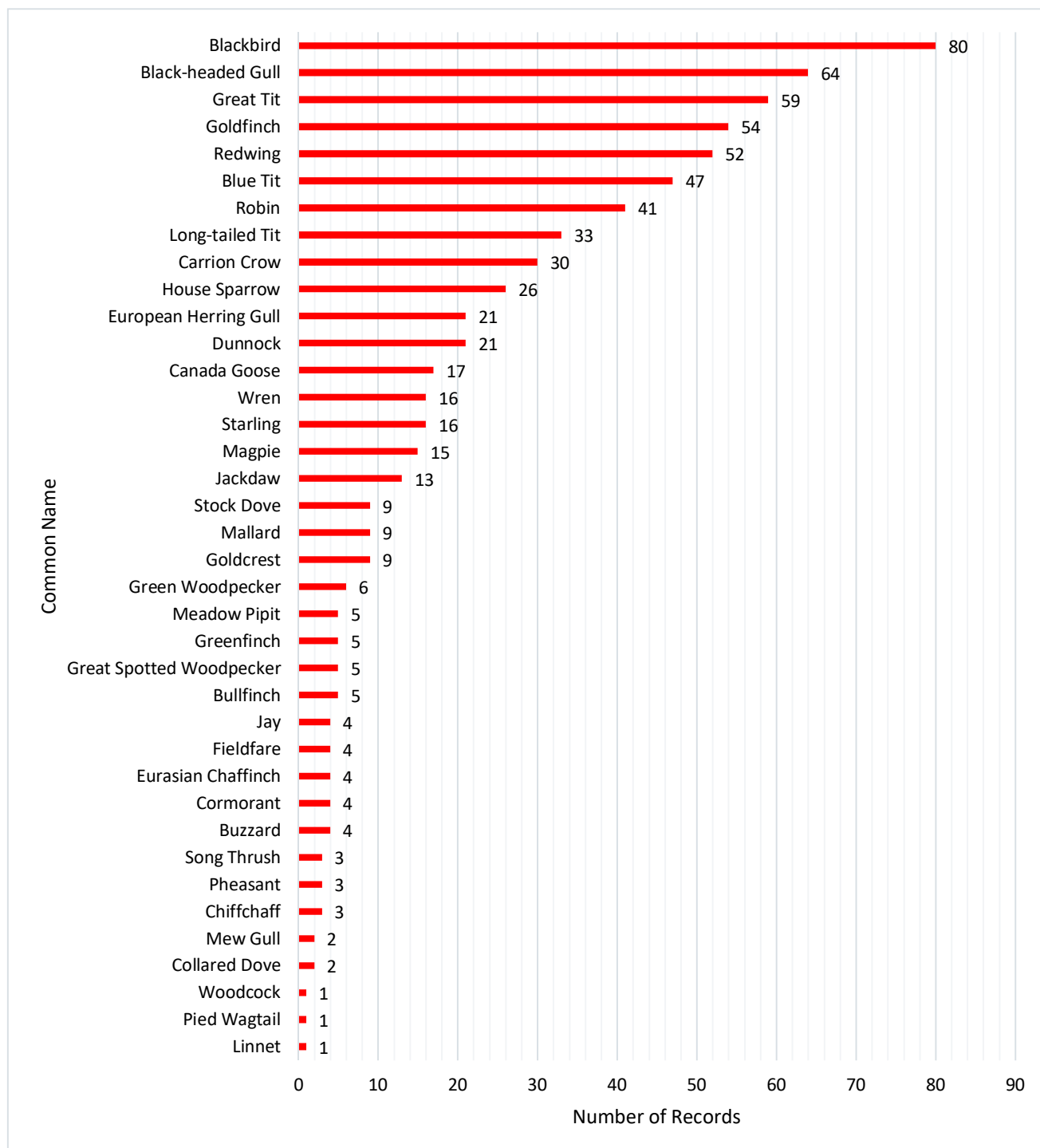
- 3.1.18. Three species of corvid were recorded within the Survey Area, jay *Garrulus glandarius*, jackdaw *Corvus monedula*, carrion crow *Corvus corone*. Jackdaw and carrion crow were recorded in the majority of habitats, often observed foraging within grasslands and woodland. Jay were only recorded within woodland habitat to the east and west of the Survey Area.

**Passerines, thrushes (3 species)**

- 3.1.19. Three notable thrush species were recorded foraging within the Survey Area, these included, redwing *Turdus iliacus* (WCA Schedule 1, BoCC red list), fieldfare *Turdus pilaris* (WCA Schedule 1, BoCC red list) and song thrush *Turdus philomelos* (SPI, BoCC red list). All three species were recorded within scrub, orchard and woodland habitats to the west of the Survey Area. Redwing were recorded in mobile flocks, with peak counts of ten individuals, with fieldfare joining these flocks only on the first visit.

3.1.20. Graph 3-1 below shows the total records for each bird species recorded within or flying over the Survey Area. Common and widespread passerine species were generally the most frequently recorded species, with the exception of the larger flocks of black-headed gull and redwing.

**Graph 3-1 - Number of wintering bird records per species across the three surveys**



## EVALUATION OF THE SITE FOR WINTERING BIRDS

- 3.1.21. 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. Whilst redwing and fieldfare are Schedule 1 species, the Survey Area does not host an important part of the wintering UK population. The Survey Area also does not host important populations of any other 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 dunnock, starling, song thrush and meadow pipit.
  - District (Arun) / County importance (West Sussex) – the Survey Area does not support a bird community of District value.
  - Regional importance – the Survey Area does not support a bird community of Regional value.
  - UK importance – the Survey Area does not support a bird community of National value.
  - International importance – the Survey Area does not support a bird community of International value.
- 3.1.22. Overall, the work established the wintering 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 Local importance.

## 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; therefore, recommendations to avoid contravention of this legislation are included within Section 5.
- 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 during breeding the season.
- 4.1.4. Of the species recorded on the Survey Area redwing, fieldfare and barn owl are listed on Schedule 1 of the Act. Given there is anecdotal evidence of barn owl within the Survey Area recommendations in relation to this species are included in Section 5. Redwing and fieldfare are winter migrants and are considered to not breed within the south of England. Both of these winter thrush species are abundant in the UK in winter (an estimated 8,600,000 and 680,000 individuals respectively) when they migrate from Scandinavian and Siberian breeding grounds to find food in warmer climes. In contrast, both are extremely rare breeding species in the UK, with 1-4 fieldfare breeding pairs recorded between 1998 and 2002 in Scotland and the Peak District, and 2-17 redwing breeding pairs recorded between 1998 and 2002 mostly in Scotland (Baker et al, 2006). Both species are only afforded protection under Schedule 1 due to their rare breeding status rather than winter status. The site is only suitable as a winter foraging resource (rather than a breeding resource) for both species.

#### 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). Eight SPI were recorded within the Survey Area, these were black-headed gull, bullfinch, dunnoek, herring gull, house sparrow, linnet, song thrush and starling.

## 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.*

- 4.2.8. *All developments shall have regard to Natural England's standing advice for protected species.'* 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 site and for targeting conservation effort and is a widely used resource for interpreting bird populations.
- 4.3.3. Red list species recorded within the Survey Area were fieldfare, herring gull, house sparrow, linnet, redwing, song thrush, staling and woodcock with amber list species black-headed gull, bullfinch, common gull, dunnoek, meadow pipit, mallard and stock dove.
- 4.3.4. Recommendations are included as applicable within Section 5 to enable continued use of the Survey Area by red and amber list species wherever possible following completion of the Scheme; with these species also used to target recommendations for potential enhancement measures where they may be of greatest value.



## BIODIVERSITY ACTION PLANS

- 4.3.5. 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).
- 4.3.6. 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). These comprise the SPI species listed under Section 4.1.5 (NERC Act) above.
- 4.3.7. 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. RECOMMENDATIONS

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- 5.1.1. Section 5.3 sets out measures which are recommended to avoid, mitigate and compensate for effects upon the wintering bird assemblage as a consequence of the Scheme. These measures aim to enable compliance with the legislation described within Section 4 above and to encourage completion of the Scheme in line with planning policy and other guidance wherever possible. Opportunities for enhancement in association with the Scheme have also been identified and targeted towards species listed as of conservation concern (Section 5.3).

### 5.2. FURTHER SURVEY

- 5.2.1. No requirement for further survey for wintering birds has been identified as a result of the survey work presented in this report, given no SPA qualifying species/assemblages (gulls) were recorded foraging in significant numbers.
- 5.2.2. Given the suitable nesting habitat present and abundance of common and widespread species, a breeding bird survey should be undertaken within the Survey Area.

### 5.3. AVOIDANCE, MITIGATION AND COMPENSATION

#### SCHEDULE 1 SPECIES

##### Barn Owl

- 5.3.1. An anecdotal record of barn owl was provided by a tenant landholder. The barn owl was seen roosting within a barn within the north of the Survey Area and foraging within adjacent rough grasslands. In the first instance, the potential barn owl roosting site should be investigated by a barn owl licence holder to assess whether evidence of barn owl use is present. Breeding bird surveys to be undertaken should be considered incorporating a crepuscular survey to identify whether this species is utilising the Survey Area.
- 5.3.2. As a precaution, demolition of this building should be scheduled outside the main breeding season (March to August inclusive) where necessary. Where required, in accordance with good practice guidance (Barn Owl Trust, 2012) this building should not be demolished until replacement provision is in place and available for barn owls to occupy. In addition to avoiding demolition of this building during the breeding season, consideration will need to be given to the potential for other construction activities within the vicinity to disturb barn owls whilst they are breeding. What is likely to constitute disturbance should be determined on a case by case basis in consultation with a suitably qualified ecologist (Barn Owl licence holder).
- 5.3.3. To compensate for the loss of existing suitable foraging habitat within the Survey Area, un-mown, rough grassland with a tussocky structure, managed to maximise small mammal occupancy (voles and mice), should also be incorporated within the Scheme. New foraging habitat provision should be designed and managed to ensure there is a no net loss of suitable foraging habitat in the long term. Where possible it should be unlit to maximise suitability for foraging owls.

#### OTHER SPECIES OF CONSERVATION CONCERN

- 5.3.4. In the first instance it is recommended clearance of vegetation or demolition of buildings is avoided during the main bird nesting season (March to August inclusive) to avoid damage or destruction of nests. If partial clearance of small areas is unavoidable in this period a suitably qualified ecologist

should be employed to inspect the area within 24hrs prior to clearance; should any nests be identified it will be necessary for a suitable sized buffer zone in which no works occur to be put in place around the nest until the young have fledged.

- 5.3.5. The Survey Area supports a wintering bird community of Local Importance including notable SPI and BoCC species. Many of the species recorded foraging within the Survey Area were identified within broadleaved woodland, orchard and scrub habitat to the west of the Survey Area and the central semi-improved neutral grassland. Where possible the loss of these habitats should be avoided, given the support they provide to the wintering bird community.
- 5.3.6. Where avoidance of these habitats is unavoidable, woodland/orchard, scrub and grassland habitat should be compensated for on at least a like for like basis. Where possible the Scheme should aim to achieve a net gain in biodiversity through compensation of these habitats in accordance with local planning policy.
- 5.3.7. New landscaping associated with the Scheme should comprise native species of local origin and include berry-bearing shrubs and trees. This is in order to provide food resources for redwing, fieldfare (Schedule 1, BoCC red list), song thrush (SPI, BoCC red list, UKBAP) and bullfinch (SPI, BoCC amber list, UKBAP) and shelter/cover for species such as dunnock (SPI, BoCC amber list, UKBAP) and compensate for the loss of woodland, orchard and scrub habitat where this is unavoidable to enable the Scheme.
- 5.3.8. In addition, grassland areas should be included within landscaping, including within the Scheme itself, providing continued foraging provision for species such as song thrush and meadow pipit (BoCC amber list). Native, species rich seed mixes of local origin should be utilised. Appropriate management of these grasslands is also recommended. This should include infrequent and sensitively timed mowing to retain a suitable sward height and provide cover for ground foraging birds such as meadow pipit and woodcock (BoCC red list).
- 5.3.9. Wherever possible compensatory habitats should be designed as connective corridors, linking to other semi-natural retained habitat areas, rather than in isolated parcels.

## 5.4. ENHANCEMENT

- 5.4.1. The Scheme offers an opportunity to enhance the Survey Area for species recorded and species which have been recorded over, but are not considered to forage on, the Survey Area. It is recommended the following measures are considered.
- Inclusion of a pond or wet swales, in association with new grassland provision within new landscaping to benefit species such as song thrush and mallard. This is encouraged within the UKBAP species action plan and could be incorporated into Sustainable Urban Drainage (SUDs) designs for the Scheme. Song thrush is both a BoCC red list and NERC Act species in addition to its UK BAP listing, whilst mallard is a BoCC amber list species.
  - Appropriate management of orchard and woodland habitats throughout and adjacent the Survey Area to improve the condition, increase the flora biodiversity and enhance these habitats for bird foraging opportunities.
  - Suitable hedgerow management to benefit the local bird populations, such as rotational trimming, sensitive timing to allow fruiting and filling gaps with native species.
  - Retention of large mature trees containing cavities wherever possible; to enable continued access to these cavities from semi-natural habitats. This would aim to enable continued use of

the Survey Area by stock dove (BoCC amber list). Where it is not possible to retain trees with existing cavities consideration should be given to providing replica cavity provision in the form of large bird boxes attached to retained trees which currently lack these features.

- To minimise effects upon ground nesting/foraging birds, including woodcock and meadow pipits, which are reliant on the grasslands within the Survey Area, the mowing regime for any large open grassland areas should be designed to maximise the suitability of this grassland; avoiding cutting early in the summer. Similarly, interpretative boards should be provided to encourage responsible dog walking to minimise the disturbance of wintering birds.

## 6. CONCLUSIONS

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- 6.1.1. A total of 40 species were recorded on or over the Survey Area during the wintering bird survey. These include 16 species which are legally protected or species of conservation concern. This total includes species which were recorded flying over or foraging on land immediately adjacent the Survey Area and an anecdotal record of barn owl.
- 6.1.2. The numbers of birds recorded within each category are listed below, it should be noted that these 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.
  - Eight SPI (also UKBAP species) were recorded within the Survey Area.
  - Eight BoCC red list species on the Survey Area were; with seven BoCC amber list species.
- 6.1.3. The bird community is considered of Local conservation importance.
- 6.1.4. To minimise effects upon the wintering bird community avoidance, mitigation and compensation measures have been recommended within Section 5. In addition, consideration has been given to opportunities to enhance the value of the Survey Area for some bird species.

## 7. REFERENCES

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### 7.1. PROJECT REFERENCES

- WSP (2018) A29 Realignment. Preliminary Ecological Appraisal.
- WYG (2016), Eastergate, Extended Phase 1 Habitat Survey, March 2016

### 7.2. TECHNICAL REFERENCES

- Arun District Council (2018). Adoption Arun Local Plan 2011-2031
- Barn Owl Trust (2012) Barn Owl Conservation Handbook, Pelagic Publishing, Exeter.
- Bibby C.J, Burgess N.D, Hill D.A, Mustoe S.H. (2000) Bird Census Techniques. Second Edition. Elsevier Ltd.
- CIEEM (2018) Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater, Coastal and Marine. Chartered Institute of Ecology and Environmental Management, Winchester.
- Eaton MA, Brown A.F, Noble D.G, Musgrove A.J, Hearn R, Lock L, Stroud D, Aebischer NJ and Gregory RD (20015) Birds of Conservation Concern 4: the population status of birds in the United Kingdom, Channel Islands and the Isle of Man. British Birds 108,pp708-746.
- HMSO (Her Majesty's Stationary Office) (1981). Wildlife and Countryside Act (as amended by the Countryside and Rights of Way Act 2000)
- HMSO (2006) Natural Environment and Rural Communities Act.
- HMSO (2017) Conservation of Habitats and Species Regulations 2017.
- The National Planning Policy Framework (NPPF) 2019 (Ministry of Housing Communities & Local Government, February 2019).
- Office of the Deputy Prime Minister (ODPM) (2005). Government Circular: Biodiversity and Geological Conservation – Statutory Obligations and their Impacts within the Planning System.
- The UK Biodiversity Action Plan; available online: <http://jncc.defra.gov.uk/page-5155>
- West Sussex County Council (2005). West Sussex Transport Plan 2001-2016

## **8. FIGURES**

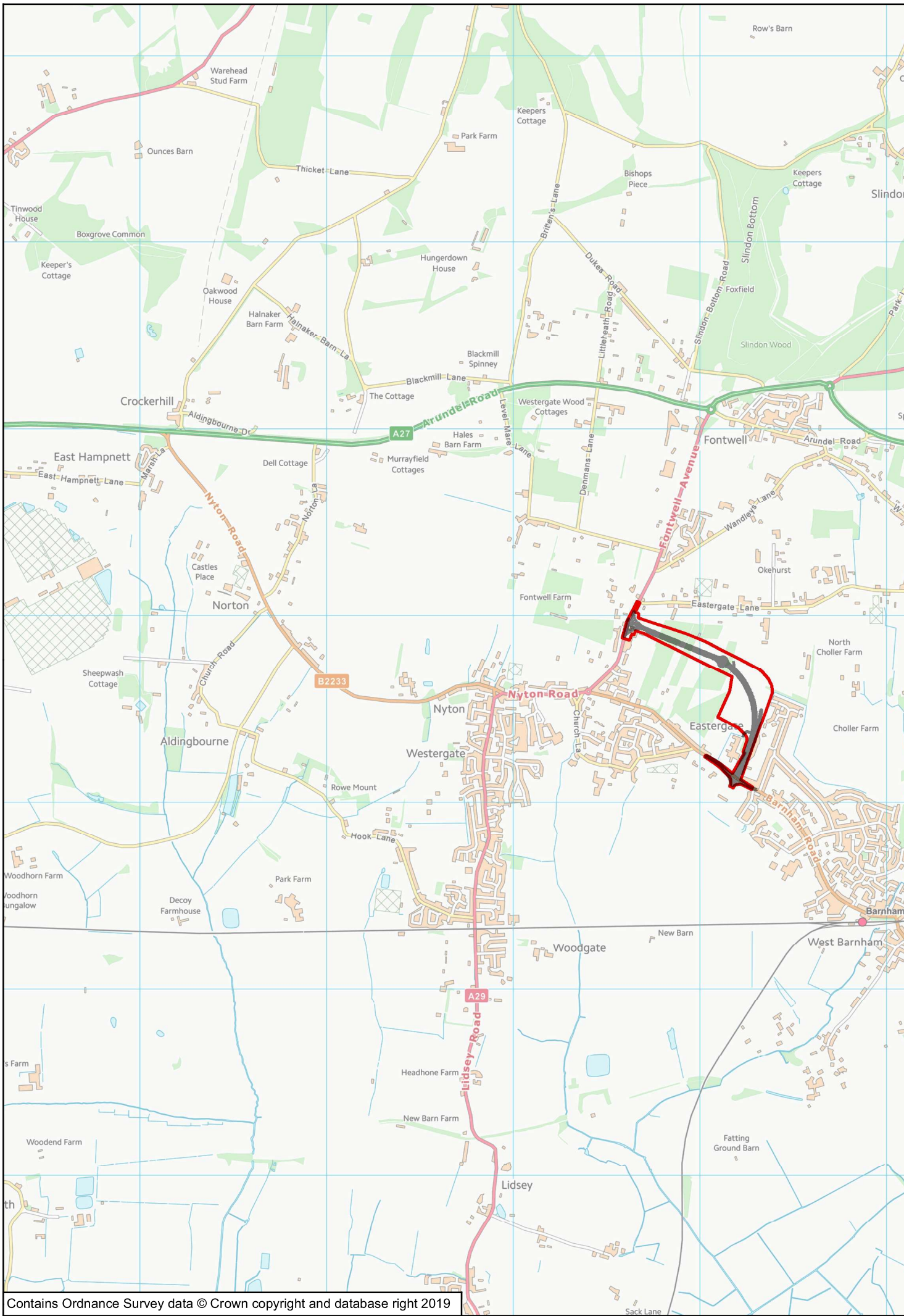
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**Figure 1 – Scheme Location Plan**

**Figure 2 – WCA Schedule 1 Species Activity Plan**

**Figure 3 – SPI Species Activity Plan**

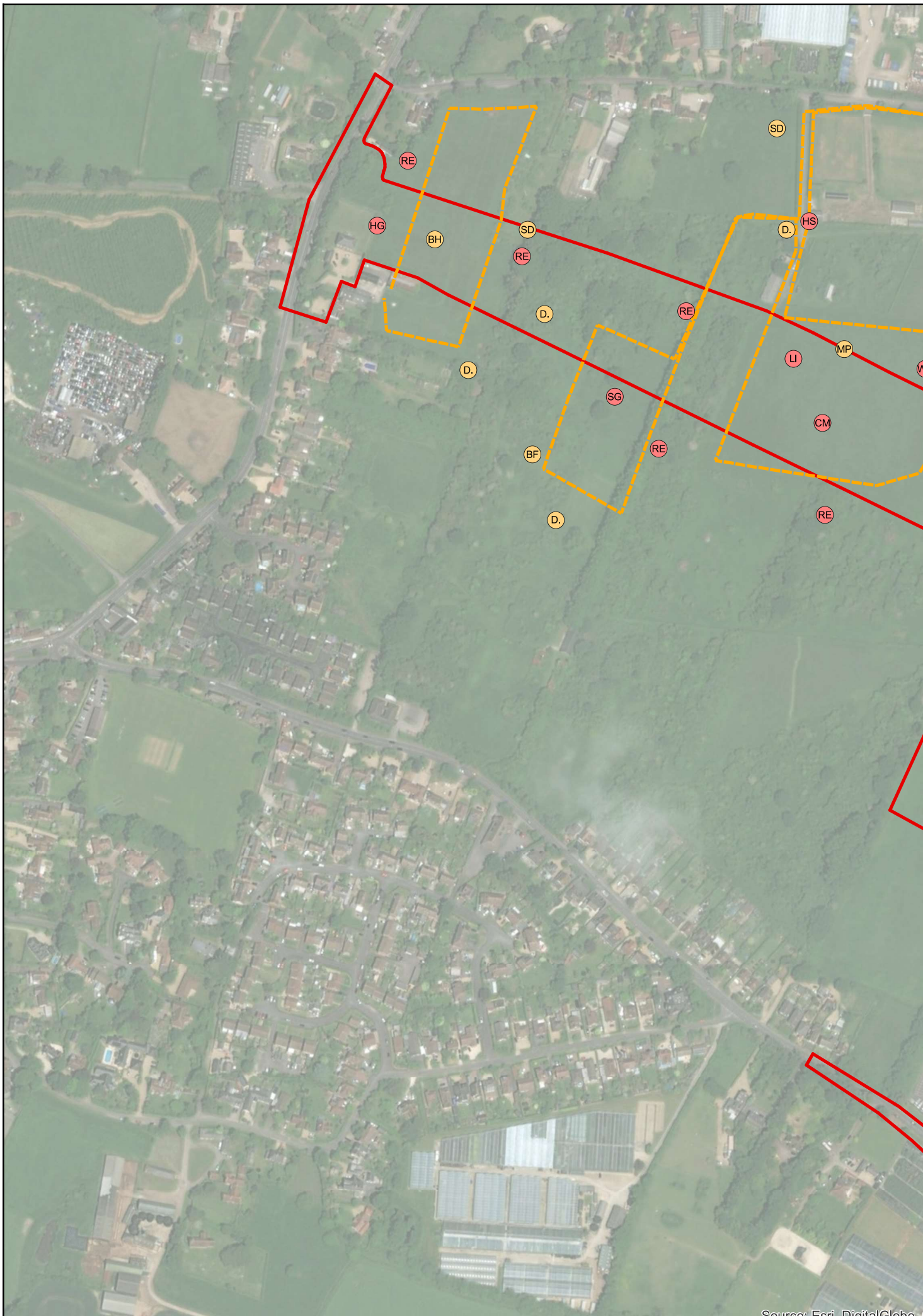
**Figure 4 – BoCC Red and Amber List Species Activity Plan**





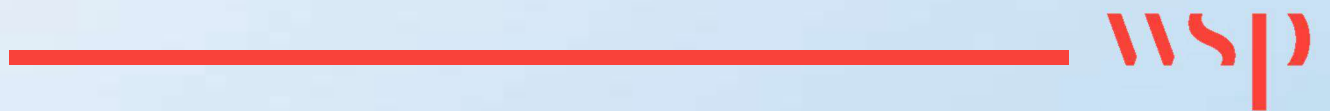






# Appendix A

## WINTERING BIRD SURVEY RESULTS



**Table A-1 - Common and widespread species recorded on or flying over the Survey Area during the v**

<b>Species</b>		<b>Notes - Sex, age and recorded behaviours</b>
<b>Common name</b>	<b>Latin name</b>	
Blackbird	<i>Turdus merula</i>	Individuals and flocks up to eight were recorded. Individuals were recorded foraging within hedgerow and scrub.
Blue tit	<i>Parus caeruleus</i>	Pairs and individuals were mostly seen foraging in the Survey Area. Calling and singing behaviours were recorded.
Buzzard	<i>Buteo buteo</i>	One individual was seen in the same area of the Survey Area on each visit. Another individual was recorded on one visit.
Canada goose	<i>Branta canadensis</i>	A flock was recorded flying over the orchard and adjacent areas on both the second and third visit. Located to the west of the Survey Area.
Carrion crow	<i>Corvus corone</i>	Individuals and groups were recorded across the Survey Area in grassland habitats.
Chaffinch	<i>Fringilla coelebs</i>	A single individual was recorded during every visit in the orchard adjacent to the scrub/grassland.
Chiffchaff	<i>Phylloscopus collybita</i>	Individuals were recorded at the same location on the first and second visit. Predominantly foraging behaviours were recorded.
Collared dove	<i>Streptopelia decaocto</i>	Individuals were recorded flying over the orchard and adjacent areas.

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Species		Notes - Sex, age and recorded behaviours
Common name	Latin name	
Cormorant	<i>Phalacrocorax carbo</i>	Cormorants were recorded flying over the Su
Goldcrest	<i>Regulus regulus</i>	Pairs and individuals were recorded across th the predominant behaviour until the third visit
Goldfinch	<i>Carduelis carduelis</i>	Small flocks, pairs and individuals were recor recorded on the third visit, only pairs and indiv breeding season.
Great spotted woodpecker	<i>Dendrocopos major</i>	Individuals were seen foraging in the centre o woodland/orchard edge. One individual recor
Great tit	<i>Parus major</i>	Small flocks, pairs and individuals were recor include singing and foraging until the final vis
Green woodpecker	<i>Picus viridis</i>	Individuals were recorded exhibiting foraging
Greenfinch	<i>Carduelis chloris</i>	Greenfinch were recorded on the third visit. A scrub area and hedgerow habitat.
Jackdaw	<i>Corvus monedula</i>	Small flocks were recorded across the Surve noted although flocks were mostly flying acro
Jay	<i>Garrulus glandarius</i>	Individuals were recorded on the first and thir adjacent to the woodland.
Long-tailed tit	<i>Aegithalos caudatus</i>	Small flocks and pairs were recorded within v Area.

Species		Notes - Sex, age and recorded behaviours
Common name	Latin name	
Magpie	<i>Pica pica</i>	Only recorded as individuals either foraging on the Survey Area or flying across.
Pheasant	<i>Phasianus colchicus</i>	Two females were recorded on the second visit, one recorded in the same area on visit three.
Pied wagtail	<i>Motacilla alba</i>	An individual was recorded foraging on the open ground.
Robin	<i>Erithacus rubecula</i>	Pairs and individuals were recorded across the Survey Area. On the second visit recorded mostly singing and calling. Singing and calling greatly increased on the third visit.
Wren	<i>Troglodytes troglodytes</i>	Individuals and pairs were recorded on every visit.
Wood pigeon	<i>Columba palumbus</i>	Large flocks, individuals and pairs were recorded on every visit.

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**Table A-2 - Notable species recorded on or flying over the Survey Area during the wintering bird survey**

Species		WCA 1981	NERC Act	BoCC		Biodiversity Action Plans (BAP)	Notes - Sex, age and recorded behaviours	Geographical Importance
Common name	Latin name	Schedule 1	Section 41	Red list	Amber list	UKBAP		
Barn owl	<i>Tyto alba</i>	✓					Anecdotal sighting of a barn owl roosting within the barn in the centre of the Survey Area, east of the orchards.	Regional
Black-headed gull	<i>Chroicocephalus ridibundus</i>				✓		Seen flying over the Survey Area in moderate numbers.	Local
Bullfinch	<i>Pyrrhula pyrrhula</i>		✓		✓	✓	Three females and one male identified foraging within scrub habitat to the west of the Survey Area. One individual male was recorded on the third visit.	County
Common (Mew) gull	<i>Larus canus</i>				✓		Recorded flying over the Survey Area.	Local



Species		WCA 1981	NERC Act 2006	BoCC		Biodiversity Action Plans (BAP)	Notes - Sex, age and recorded behaviours	Geographical Importance
Common name	Latin name	Schedule 1	Section 41	Red list	Amber list	UKBAP		
Dunnock	<i>Prunella modularis</i>		✓		✓	✓	Numerous singing males identified across the Survey Area on all visits.	Local
Fieldfare	<i>Turdus pilaris</i>	✓		✓			Few individuals recorded within flocks of redwing and blackbird. Foraging within scrub habitat within the centre of the Survey Area	District
Herring gull	<i>Larus argentatus</i>		✓	✓			Recorded flying over the Survey Area.	Local

Species		WCA 1981	NERC Act 2006	BoCC		Biodiversity Action Plans (BAP)	Notes - Sex, age and recorded behaviours	Geographical Importance
Common name	Latin name	Schedule 1	Section 41	Red list	Amber list	UKBAP		
House sparrow	<i>Passer domesticus</i>		✓	✓			Four small colonies identified across the Survey Area, associated with residential and farm buildings.	District
Linnet	<i>Carduelis cannabina</i>		✓	✓		✓	Recorded passing through the grassland habitats within the centre of the Survey Area.	County
Mallard	<i>Anas platyrhynchos</i>				✓		Recorded flying over the Survey Area.	Local
Meadow pipit	<i>Anthus pratensis</i>				✓		Recorded on the ground within the central grasslands of the Survey Area.	District

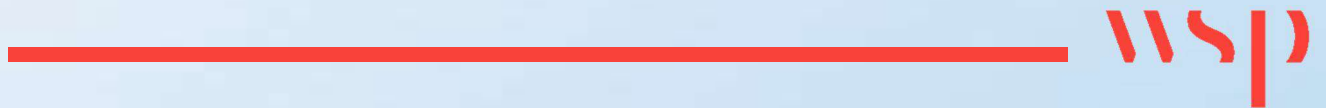
Species		WCA 1981	NERC Act 2006	BoCC		Biodiversity Action Plans (BAP)	Notes - Sex, age and recorded behaviours	Geographical Importance
Common name	Latin name	Schedule 1	Section 41	Red list	Amber list	UKBAP		
Redwing	<i>Turdus iliacus</i>	✓		✓			Recorded in moderate numbers, foraging within the orchard, woodland and scrub habitat across the Survey Area.	District
Song thrush	<i>Turdus philomelos</i>		✓	✓		✓	Recorded singing within the orchard, woodland and scrub habitats across the Survey Area.	County
Starling	<i>Sturnus vulgaris</i>		✓	✓		✓	Small numbers recorded within the woodland and orchards to the west of the Survey Area.	Local
Stock dove	<i>Columba oenas</i>				✓		One individual recorded roosting within a tree line to the north west of the Survey Area.	Local



Species		WCA 1981	NERC Act	BoCC		Biodiversity Action Plans (BAP)	Notes - Sex, age and recorded behaviours	Geographical Importance
Common name	Latin name	Schedule 1	Section 41	Red list	Amber list	UKBAP		
Woodcock	<i>Scolopax rusticola</i>			✓			One individual flushed from central rough grassland habitat.	Local

# Appendix B

## SPECIES TOTAL COUNTS



**Table B-1 - Total recorded individuals across the three 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	N/A	N/A	N/A	Anecdotal Sighting
Blackbird	<i>Turdus merula</i>	B.	27	28	25	80
Black-headed Gull	<i>Larus ridibundus</i>	BH	1	63	0	64
Blue Tit	<i>Parus caeruleus</i>	BT	11	16	20	47
Bullfinch	<i>Pyrrhula pyrrhula</i>	BF	0	4	1	5
Buzzard	<i>Buteo buteo</i>	BZ	1	2	1	4
Canada Goose	<i>Branta canadensis</i>	CG	0	9	8	17
Carrion Crow	<i>Corvus corone</i>	C.	7	19	4	30
Chaffinch	<i>Fringilla coelebs</i>	CH	1	1	2	4
Chiffchaff	<i>Phylloscopus collybita</i>	CC	1	2	0	3
Collared Dove	<i>Streptopelia decaocto</i>	CD	0	1	1	2
Common Gull	<i>Larus canus</i>	CM	2	0	0	2
Cormorant	<i>Phalacrocorax carbo</i>	CA	1	2	1	4
Dunnock	<i>Prunella modularis</i>	D.	4	5	12	21
Fieldfare	<i>Turdus pilaris</i>	FF	4	0	0	4
Goldcrest	<i>Regulus regulus</i>	GC	4	3	2	9
Goldfinch	<i>Carduelis carduelis</i>	GO	27	23	4	54
Great Spotted Woodpecker	<i>Dendrocopos major</i>	GS	3	0	2	5

<b>Common Name</b>	<b>Latin name</b>	<b>BTO Code</b>	<b>Survey 1</b>	<b>Survey 2</b>	<b>Survey 3</b>	<b>Total count per species</b>
Great Tit	<i>Parus major</i>	GT	9	24	26	59
Green Woodpecker	<i>Picus viridis</i>	G.	1	2	3	6
Greenfinch	<i>Carduelis chloris</i>	GR	0	0	5	5
Herring Gull	<i>Larus argentatus</i>	HG	10	7	4	21
House Sparrow	<i>Passer domesticus</i>	HS	8	8	10	26
Jackdaw	<i>Corvus monedula</i>	JD	4	5	4	13
Jay	<i>Garrulus glandarius</i>	J.	2	0	2	4
Linnet	<i>Carduelis cannabina</i>	LI	0	0	1	1
Long-tailed Tit	<i>Aegithalos caudatus</i>	LT	27	2	4	33
Magpie	<i>Pica pica</i>	MG	6	6	3	15
Mallard	<i>Anas platyrhynchos</i>	MA	8	0	1	9
Meadow Pipit	<i>Anthus pratensis</i>	MP	0	4	1	5
Pheasant	<i>Phasianus colchicus</i>	PH	0	1	0	1
Pied Wagtail	<i>Motacilla alba</i>	PW	0	2	1	3
Redwing	<i>Turdus iliacus</i>	RE	14	3	35	52
Robin	<i>Erithacus rubecula</i>	R.	10	15	16	41
Song Thrush	<i>Turdus philomelos</i>	ST	1	0	2	3
Starling	<i>Sturnus vulgaris</i>	SG	3	9	4	16
Stock Dove	<i>Columba oenas</i>	SD	0	7	2	9



Common Name	Latin name	BTO Code	Survey 1	Survey 2	Survey 3	Total count per species
Woodcock	<i>Scolopax rusticola</i>	WK	0	0	1	1
Wren	<i>Troglodytes troglodytes</i>	WR	2	3	11	16
Total Counts			199	286	222	694





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