



Greater Cambridge Partnership

Cambourne to Cambridge

Appendix TR5.15 - Wintering Bird Survey Report





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Wintering Bird Survey Report

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WSP

62-64 Hills Road

Cambridge

CB2 1LA

Phone: +44 1223 558 050

WSP.com



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1 Introduction

1.1 Project Background

- 1.1.1. The Cambourne to Cambridge project (C2C) is a proposed new 13.6km public transport route linking Cambourne and Cambridge. It will include a dedicated busway serving communities in Cambourne and the proposed Bourn Airfield development, as well as in Hardwick, Coton and the West Cambridge campus. A service road, to be used as a path for active travel, particularly by cyclists and pedestrians, will run alongside the busway. A new travel hub will be provided at Scotland Farm.
- 1.1.2. Scheme details are provided in the main report to the Environmental Statement (ES).

1.2 Ecological Background

- 1.2.1. The recommendation for a wintering bird survey to inform the Proposed Scheme was made as part of a desk study and Protected Species Scoping Survey undertaken in 2017 (Cambridge Ecology, 2017). Records for sixty-four bird species were returned, and the following habitats were identified:
- Arable land;
 - Grassland;
 - Flood plain grazing land;
 - Hedgerows;
 - Waterbodies;
 - Dense and scattered scrub;
 - Ancient woodland;
 - Traditional orchard;
 - Broad-leaved woodland plantation;
 - Tall ruderal;
 - Wet and dry ditches; and
 - Ponds and other waterbodies.
- 1.2.2. Areas of terrestrial and aquatic habitat suitable for supporting areas for wintering birds were identified, and arable fields were considered suitable to support feeding and roosting plover, including Golden Plover *Pluvialis apricaria*, a species Listed on Annex 1 of the EU Birds Directive (Directive 79/409/EEC). Hedgerow, scrub, woodland, orchard, grassland and aquatic areas were also considered suitable to support wintering birds such as Fieldfare *Turdus pilaris* and Redwing *Turdus iliacus*.

Previous Reports

- 1.2.3. Wintering bird surveys to inform the Proposed Scheme were subsequently undertaken during the 2017-2018 and 2018-2019 winter periods (Cambridge Ecology, 2018 and Cambridge Ecology, 2020). The results of these surveys were considered to be out of date

(CIEEM, 2019) and were not sufficient to inform an impact assessment. In addition these surveys were constrained by access restrictions and were completed over a wider survey area that is no longer relevant to the Scheme boundary.

- 1.2.4. A wintering bird survey was therefore undertaken by WSP in 2022 to update the previous wintering bird survey data, resolve prior access constraints where possible, and inform the updated Survey Area following changes to the boundaries of the Proposed Scheme.
- 1.2.5. The Proposed Scheme also overlaps with a development at Bourn Airfield. Wintering bird surveys have been undertaken to inform the Bourn Airfield development from January 2014 to February 2022 (non-inclusive). Wintering bird data from these surveys has been relied upon where necessary.

Cambourne to Cambridge Better Public Transport: Winter Bird Survey 2017-18 (Cambridge Ecology, 2018) P0608-R-006a.

- 1.2.6. The surveys were undertaken between November 2017 and March 2018 and comprised the sections between Bourne Airfield and Grange Road, Cambridge, and the northern part of Bourn Airfield (March 2018 Only).
- 1.2.7. A total of 53 bird species were recorded between Bourn Airfield and Grange Road, Cambridge, including 24 species of particular conservation importance (species listed under Schedule 1 of the Wildlife and Countryside Act (1981), Species of Principal Importance (SPI), Amber or Red listed on Birds of Conservation Concern 4 (BoCC4, Eaton, et al, 2015¹). These species comprised Red Kite *Milvus milvus*, Kingfisher *Alcedo atthis*, Woodcock *Scolopax rusticola*, Skylark *Alauda arvensis* subsp. *arvensis/scotica*, Starling *Sturnus vulgaris*, Fieldfare, Redwing, Song Thrush *Turdus philomelos* subsp. *clarkei*, Mistle Thrush *Turdus viscivorus*, Dunnock *Prunella modularis*, Bullfinch *Pyrrhula pyrrhula* subsp. *pileata*, Linnet *Carduelis cannabina* subsp. *autochthona/cannabina*, Lesser Redpoll *Carduelis cabaret*, Yellowhammer *Emberiza citrinella*, Reed Bunting *Emberiza schoeniclus*, Mute Swan *Cygnus olor*, Teal *Anas crecca*, Mallard *Anas platyrhynchos*, Shoveler *Spatula clypeata*, Snipe *Gallinago gallinago*, Black-headed Gull *Chroicocephalus ridibundus*, Stock Dove *Columba oenas*, Kestrel *Falco tinnunculus* and Meadow Pipit *Anthus pratensis*.
- 1.2.8. A total of 21 bird species were recorded at Bourn Airfield, including nine species of particular conservation importance comprising Skylark, Dunnock, Reed Bunting, Black-headed Gull, Common Gull *Larus canus*, Lesser Black-backed Gull *Larus fuscus*, Stock Dove, Kestrel and Meadow Pipit.

¹ Now superseded by Stanbury et al.,(2021)

Cambourne to Cambridge Better Public Transport: Winter Bird Survey 2018-19 (Cambridge Ecology, 2020) P0608-R-015d.

- 1.2.9. The surveys were undertaken between November 2018 and March 2019 and comprised the section between the eastern entrance to Bourn Airfield and Grange Road, Cambridge.
- 1.2.10. The survey recorded a total of 62 bird species. Of these 21 species were considered to be of particular conservation importance (species listed under Schedule 1 of the Wildlife and Countryside Act (1981), SPI, Amber or Red listed on BoCC4 (Eaton, et al, 2015)). These species comprised Grey Partridge *Perdix perdix*, Little Egret *Egretta garzetta*, Barn Owl, Kingfisher, Golden Plover, Woodcock, Skylark, Marsh Tit *Poecile palustris*, Grey Wagtail *Motacilla cinerea*, Starling, Fieldfare, Redwing, Song Thrush, Mistle Thrush, House Sparrow *Passer domesticus*, Dunnock, Bullfinch, Linnet, Corn Bunting *Emberiza calandra*, Yellowhammer and Reed Bunting; plus a further ten species listed on the amber list of birds of conservation concern: Mute Swan, Teal, Mallard, Snipe, Black-headed Gull, Common Gull, Lesser-Black-Backed Gull, Stock Dove, Kestrel and Meadow Pipit.
- 1.2.11. Golden Plover flocks were recorded in arable fields to the east of the M11 motorway, and in arable fields south of the A1303 and to the west of the M11 motorway. A Barn Owl was recorded over grassland at the eastern end of the Survey Area, adjacent to Bin Brook.

Bourn Airfield, Cambridge, Cambridgeshire. Wintering Birds Survey (Thomson Environmental Consultants, 2014) BCOU109 / 001 / 001.

- 1.2.12. The surveys were undertaken between January 2014 and March 2014 and comprised of the Bourn Airfield site only.
- 1.2.13. Forty-seven bird species were recorded during the survey. Of these, fourteen species of conservation concern were recorded (species listed under Schedule 1 of the Wildlife and Countryside Act (1981), SPI, Amber or Red listed on BoCC3 (Eaton, et al, 2009²)), including Green Woodpecker *Picus viridis*, Marsh Tit, Skylark, Starling, Fieldfare, Redwing, Mistle Thrush, House Sparrow, Meadow Pipit, Dunnock, Bullfinch, Linnet, Yellowhammer and Reed Bunting.

Ecology Survey Technical Report Annexes (Draft) Bourn Airfield (Thomson Environmental Consultants, March 2022). Chapter 7 Wintering Birds. Project No.: BCOU118/001/001.

- 1.2.14. Surveys were undertaken between December 2021 and February 2022 and comprised of the Bourn Airfield site (Phase 1 development zone). Thirty-nine bird species were recorded during the surveys of Bourn Airfield development Site. Of these, 19 species of conservation concern ((species listed under Schedule 1 of the Wildlife and Countryside Act (1981), SPI,

² Now superseded by Stanbury et al.,(2021)

Amber or Red listed on BoCC5 (Stanbury et al.,2021)) were recorded, including: Black-headed Gull, Common Gull, Dunnock, Herring Gull *Larus argentatus subsp. argenteus*, Kestrel, Meadow Pipit, Mistle Thrush, Red Kite, Redwing, Reed Bunting, Rook *Corvus frugilegus*, Skylark, Song Thrush, Sparrowhawk, Starling, Stock Dove, Wood Pigeon, Wren *Troglodytes troglodytes* and Yellowhammer.

1.3 Brief and Objectives

- 1.3.1. WSP UK Ltd was commissioned by Greater Cambridge Partnership (GCP) to complete a wintering bird survey for the Proposed Scheme. This was to ensure sufficient baseline data regarding the wintering bird community was available to inform the design of the Proposed Scheme. The aims of the wintering bird survey were to:
 - Undertake a desk study reviewing records held by Cambridgeshire & Peterborough Environmental Records Centre (CPERC) and previous wintering bird surveys; and
 - Provide an up to date baseline of bird species that make up the wintering bird community associated with the Proposed Scheme.
- 1.3.2. The wintering bird report comprises a desk study, a diurnal wintering bird survey, and a dusk vantage point survey. The primary focus of the dusk vantage point survey was to identify wintering plovers and crepuscular species.
- 1.3.3. These results will be used to inform the impact assessment and proposed mitigation for wintering birds present across the Scheme. Details of the impact assessment and mitigation will be included within the Nature Conservation Chapter of the Environmental Statement for the Scheme.

2 Relevant Legislation and Policy

Conservation of Habitats and Species Regulations 2017 (Habitat Regulations)

- 2.1.1. Under the Habitat Regulations Part 1 Regulation 10 (2) & (3), local authorities must take appropriate steps to contribute to the preservation, maintenance and re-establishment of a sufficient diversity and area of habitat for wild birds in the UK. 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

- 2.1.2. Under the Wildlife and Countryside Act 1981 all wild birds are protected from killing and injury, and their nests and eggs protected from taking, damage and destruction whilst in use.
- 2.1.3. 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.

Natural Environment and Rural Communities Act 2006

- 2.1.4. 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 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 (UKBAP) which occur in England (however there are exceptions).

Other Considerations

Birds of Conservation Concern Red and Amber Lists

- 2.1.5. 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 status of our bird populations: the fifth BoCC in the United Kingdom, Channel Islands and Isle of Man and second IUCN Red List assessment of extinction risk for Great Britain' (Stanbury et al., 2021).
- 2.1.6. The review comprised 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.

- 2.1.7. 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.

Biodiversity Action Plans

- 2.1.8. 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. BAPs in the UK have no statutory status but provide a framework for implementing conservation requirements. The priority species generally correlate with those listed in accordance with Section 41 of the NERC Act (with some exceptions).
- 2.1.9. The UKBAP 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 Cambridgeshire and Peterborough Local Biodiversity Action Plan (LBAP). The LBAP includes Local Priority Species (formerly Local Species Action Plans) to help determine where practical conservation efforts should be targeted as part of planning applications. The LBAP also includes species in need of conservation listed as part of the Cambridgeshire and Peterborough Additional Species of Interest (CPASI) (Cambridgeshire and Peterborough Biodiversity Partnership (CPBP), 2021)).

3 Methodology

3.1 Notable Species

3.1.1. For the purposes of this report, 'notable' species are those which are included within at least one of the following lists:

- Schedule 1 species listed under the Wildlife and Countryside Act (1981);
- Species of principal importance for the conservation of biodiversity in England listed under Section 41 of the Natural Environment and Rural Communities Act 2006;
- Red and Amber species listed under the Birds of Conservation Concern 5 (BOCC5) (Stanbury et al., 2021); and
- Local Biodiversity Action Plan Cambridgeshire and Peterborough Biodiversity Group Priority species.

3.2 Desk Study

Study Area

3.2.1. Data from a wider 'Study Area' surrounding the Survey Area was also sought to provide contextual information about how birds use the landscape within which the proposed Scheme is located. This is hereafter referred to as the 'Study Area'. These data were used to inform the survey methodology and provide further baseline information, and comprised:

- Internationally designated sites for birds were considered within 10km of the proposed Scheme;
- Nationally designated sites for birds were considered within 5km of the proposed Scheme; and
- Individual records of all bird species and non-statutory designated sites were requested within 2km of the proposed Scheme.

Online Data

3.2.2. An ecological desk study was completed in 2022 to include data relevant to the Proposed Scheme. Records of bird species were requested from CPERC. These records included all species from within a 2km buffer of the Scheme Boundary within the last 10 years. Only notable species have been reported on within this report. Freely downloadable datasets (available from Multi Agency Geographic Information for the Countryside (MAGIC), Department for Environment, Food and Rural Affairs) were consulted for information regarding designated sites.

3.3 Field Survey

Survey Area

3.3.1. The area covered by the wintering bird survey (the 'Survey Area') comprised suitable habitat within the Red Line Boundary (RLB) of the Proposed Scheme and a 250m buffer from the

RLB. A 250m buffer was applied to allow consideration for any temporary impacts outside the footprint of the road, and to maintain consistency with previous wintering bird surveys undertaken to inform the Proposed Scheme (Cambridge Ecology, 2018 and Cambridge Ecology, 2020).

3.3.2. The Survey Area is shown in on **Figure 5.15.1-1, Annex A**.

Diurnal Wintering Bird Survey

3.3.3. The diurnal wintering bird survey was completed each month from January 2022 to March 2022. Each monthly survey comprised three or four visits depending on access availability and level of activity. Each visit commenced at sunrise and finished at approximately midday. The survey methodology employed was based on standard survey techniques, primarily the Winter Farmland Bird Survey methodology (Gillings, et al., 2008) and direct counting methods (Bibby, Burgess, Hill, & Mustoe, 2000).

3.3.4. Transects routes were designed to capture the full range of habitats suitable to support wintering birds within the Survey Area. These habitats included woodland, hedgerows, arable, scrub and grassland, as shown on **Figure 5.15.1-1, Annex A**. The Survey Area was subsequently divided into 17 sections for reporting purposes, as shown on **Figure 5.15.1-1, Annex A**.

3.3.5. During each monthly survey the transects within the Survey Area were walked once at a slow pace, with surveyors approaching all suitable habitat within 50m where possible whilst scanning and listening for birds. Surveyors also used vantage points positioned along each transect at locations providing good visibility of wintering bird habitat. In accordance with good practice guidance the start point and direction of the routes walked was varied where possible on each survey visit to minimise bias, as birds may be active at different times of day in different areas (Bibby, Burgess, Hill, & Mustoe, 2000).

3.3.6. The locations of birds seen and heard were mapped digitally using ArcGIS Field Maps. The species, number of individuals, sex if possible, behaviour (e.g. in flight) and location of each observation was recorded.

Dusk Vantage Point Survey

3.3.7. The dusk vantage point survey was completed each month from January 2022 to March 2022. Each monthly dusk vantage point survey comprised two visits, with each visit starting approximately 1.5 hours prior to sunset and finishing within 1.5 hours of sunset. The two monthly visits were undertaken at two vantage point locations; one at Bourn Airfield (Sector 3) and one within arable land to the south of the A428 (Sector 11) (see **Figure 5.15.1-1, Annex A**). The vantage point locations were designed to provide good visibility of wintering bird habitat and resolve prior access constraints.

3.3.8. A radius of 250m from the vantage point location was used to record the following information for all birds observed: species; numbers of individual birds; time of observation;

flight height (estimated within the following height bands: on land; 0-10 metres; 11-40 metres; 40 metres +); direction of flight; behaviour; time in flight observed.

- 3.3.9. The primary focus of the dusk vantage point survey was to identify wintering plovers and crepuscular species such as Golden Plover, Lapwing *Vanellus vanellus* and owl species, however all bird species encountered were recorded.

Dates of Survey and Personnel

- 3.3.10. The wintering bird survey visits were completed by competent surveyors with at least four years' experience of ornithological survey, including wintering surveys.
- 3.3.11. Diurnal wintering bird survey visits were completed on the following dates:
- Visit 1: 10 - 12 January 2022;
 - Visit 2: 15 - 16, 24 - 25 February 2022; and
 - Visit 3: 15 - 18 March 2022.
- 3.3.12. Dusk vantage point survey visits were completed on the following dates:
- Visit 1: 10 - 11 January 2022;
 - Visit 2: 15 and 24 February 2022; and
 - Visit 3: 15 and 17 March 2022.
- 3.3.13. Times and weather conditions are provided in **Table TR5-15-1-1** and **Table TR5-15-1-2, Annex A**.

3.4 Notes and Limitations

- 3.4.1. 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.
- 3.4.2. WSP were instructed to the surveys in December 2021, resulting in the surveys being undertaken between January 2022 and March 2022 rather than the full winter period of November to March. Despite this, species assemblage was consistent with previous of surveys of the area (Cambridge Ecology, 2018 and 2019). The survey data, therefore, is considered representative of the Survey Area,.
- 3.4.3. Due to access constraints, some of the surveys were undertaken by public rights of way. This is not expected to place a significant limitation on the interpretation of survey results as good coverage of the Survey Area was still attainable via the public rights of way meaning that only a small portion of the total Survey Area was not surveyed.

4 Results

4.1 Desk Study

Online data

Cambridgeshire and Peterborough Local Biodiversity Action Plan (LBAP)

4.1.1. The LBAP (CPBP, 2021) listed the following 26 bird species local priority species:

- Black-tailed Godwit *Limosa limosa* subsp. *Limosa*;
- Bullfinch;
- Grasshopper Warbler *Locustella naevia*;
- Linnet;
- Corn Bunting;
- Corn Crake *Crex crex*;
- Curlew *Numenius arquata*;
- Tree Sparrow *Passer montanus*;
- Turtle Dove *Streptopelia turtur*;
- Great Bittern *Botaurus stellaris*;
- Grey Partridge;
- Hawfinch *Coccothraustes coccothraustes*;
- Herring Gull;
- House Sparrow;
- Lesser Redpoll;
- Lesser Spotted Woodpecker *Dendrocopos minor* subsp. *Comminutus*;
- Marsh Tit;
- Northern Lapwing *Vanellus vanellus*;
- Reed Bunting;
- Skylark;
- Song Thrush;
- Spotted Flycatcher *Muscicapa striata*;
- Stone-curlew *Burhinus oedicephalus*;
- Bewick's Swan *Cygnus columbianus* subsp. *Bewickii*;
- Yellow Wagtail *Motacilla flava* subsp. *Flavissima*; and
- Yellowhammer.

4.1.2. The LBAP also listed Barn Owl *Tyto alba*, Swift *Apus apus* and Common Crane *Grus grus* as additional species of interest.

4.1.3. The LBAP contained Species Action Plans for the House Sparrow and Turtle Dove.

Cambridgeshire & Peterborough Environmental Records Centre (CPERC)

- 4.1.4. No internationally designated sites for birds were identified within 10km of the proposed Scheme, and no nationally designated sites for birds were identified within 5km of the proposed Scheme.
- 4.1.5. CPERC returned 540 records for birds within the 2km Study Area. Records for 53 bird species were returned, including the following:
- 18 species listed on Annex 1 of the EU Birds Directive (Directive 79/409/EEC);
 - 21 species listed on Schedule 1 of the Wildlife and Countryside Act (1981 as amended);
 - 24 species listed on Section 41 (Priority Species) of the NERC Act, 2006;
 - 23 UKBAP and LBAP priority species;
 - 30 species included in the BoCC Red List; and
 - 37 species included in the BoCC Amber List.
- 4.1.6. Full details of the Desk Study Results are presented in **Table TR5-15-2-1, Annex B**.

4.2 Wintering Bird Survey Overview

- 4.2.1. A total of 67 species were recorded on or over the Survey Area during the WSP diurnal and nocturnal wintering bird surveys. These results were consistent with previous wintering bird surveys completed within the Survey Area and Scheme boundary between 2014 and 2022, as discussed in Section 1.2. Comparable assemblages of birds identified, with no additional notable species being identified in the previous survey work.
- 4.2.2. The number of notable species in each category is 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 SPI in accordance with the NERC Act 2006 and a UKBAP species and as either a Red or Amber list BoCC. The species assemblage included;
- Three species listed on Schedule 1 of the Wildlife and Countryside Act 1981 (as amended);
 - Fifteen species listed as SPI in accordance with Section 41 of the NERC Act 2006 (also UKBAP species);
 - Fifteen Birds of BoCC Red list species;
 - Twenty BoCC Amber list species; and
 - Thirteen LBAP species
- 4.2.3. **Table TR5-15-4-1** presents the peak numbers of notable bird species recorded within the Survey Area in both diurnal and dusk vantage point surveys. notable species recorded within the Survey Area

Table TR5-15-4-1 – Notable Bird Species recorded January – March 2022

Common Name	Scientific name	Peak Count	Status
Fieldfare	<i>Turdus pilaris</i>	80	Sch1, BoCC Red
Redwing	<i>Turdus iliacus</i>	47	Sch1, BoCC Amber
Red Kite	<i>Milvus milvus</i>	2	Sch1
Bullfinch	<i>Pyrrhula pyrrhula</i>	1	NERC S41, LBAP
Corn Bunting	<i>Emberiza calandra</i>	2	NERC S41, BoCC Red, LBAP
Grey Partridge	<i>Perdix perdix</i>	10	NERC S41, BoCC Red, LBAP
Herring Gull	<i>Larus argentatus</i>	4	NERC S41, BoCC Red, LBAP

Common Name	Scientific name	Peak Count	Status
House Sparrow	<i>Passer domesticus</i>	30	NERC S41, BoCC Red, LBAP
Lapwing	<i>Vanellus vanellus</i>	47	NERC S41, BoCC Red, LBAP
Linnet	<i>Carduelis cannabina</i>	25	NERC S41, BoCC Red, LBAP
Marsh Tit	<i>Poecile palustris</i>	1	NERC S41, BoCC Red, LBAP
Skylark	<i>Alauda arvensis</i>	6	NERC S41, BoCC Red, LBAP
Yellowhammer	<i>Emberiza citrinella</i>	6	NERC S41, BoCC Red, LBAP
Starling	<i>Sturnus vulgaris</i>	30	NERC S41, BoCC Red
Reed Bunting	<i>Emberiza schoeniclus</i>	1	NERC S41, BoCC Amber LBAP
Song Thrush	<i>Turdus philomelos</i>	2	NERC S41, BoCC Amber LBAP
Dunnock	<i>Prunella modularis</i>	3	NERC S41, BoCC Amber
Greenfinch	<i>Chloris chloris</i>	30	BoCC Red
Mistle Thrush	<i>Turdus viscivorus</i>	1	BoCC Red
Woodcock	<i>Scolopax rusticola</i>	1	BoCC Red
Black-Headed Gull	<i>Chroicocephalus ridibundus</i>	100	BoCC Amber
Common Gull	<i>Larus canus</i>	1	BoCC Amber
Gadwall	<i>Anas strepera</i>	3	BoCC Amber
Kestrel	<i>Falco tinnunculus</i>	2	BoCC Amber
Lesser Black-Backed Gull	<i>Larus fuscus</i>	5	BoCC Amber

Common Name	Scientific name	Peak Count	Status
Mallard	<i>Anas platyrhynchos</i>	30	BoCC Amber
Meadow Pipit	<i>Anthus pratensis</i>	10	BoCC Amber
Moorhen	<i>Gallinula chloropus</i>	3	BoCC Amber
Rook	<i>Corvus frugilegus</i>	100	BoCC Amber
Snipe	<i>Gallinago gallinago</i>	1	BoCC Amber
Sparrowhawk	<i>Accipiter nisus</i>	1	BoCC Amber
Stock Dove	<i>Columba oenas</i>	21	BoCC Amber
Tawny Owl	<i>Strix aluco</i>	1	BoCC Amber
Teal	<i>Anas crecca</i>	6	BoCC Amber
Woodpigeon	<i>Columba palumbus</i>	400	BoCC Amber
Wren	<i>Troglodytes troglodytes</i>	2	BoCC Amber

4.3 Diurnal Wintering Bird Survey Results

- 4.3.1. A total of 35 notable species was recorded during the diurnal wintering bird surveys. Species listed under Schedule 1 of the Wildlife and Countryside Act (1981), NERC S41 and BoCC Red have been discussed below. Full peak counts per sector for each species can be found in **Table TR5-15-2-2** for Sector 1 – 8 and **Table TR5-15-2-3** for Sector 9 - 17, **Annex B**.
- 4.3.2. Thirty-one green BoCC or unlisted species were also recorded during the diurnal surveys, full details of these records with peak counts can be found in **Table TR5-15-2-2** for Sector 1 – 8 and **Table TR5-15-2-3** for Sector 9 - 17, **Annex B**.

Fieldfare – Schedule 1, BoCC Red

- 4.3.3. Fieldfare was recorded across the Survey Area on all surveys. Birds were recorded in and flying over Sector 3, 9, 11, 13 and 17. Only fly over records were recorded in Sector 16. The peak count of 80 individuals were recorded in March in Sector 11.

- 4.3.4. An incidental sighting of mixed flock of 71 Fieldfare and Redwing were recorded during the bat roost surveys in February within Coton Orchard, Sector 13.
- 4.3.5. Fieldfare status as Schedule 1 on Wildlife and Countryside act (1981) is due to their small breeding populations in Scotland. They are common and widespread winter visitors in Cambridgeshire and the wider UK.

Red Kite – Schedule 1

- 4.3.6. Red Kite was recorded in the Survey Area on three occasions during the February and March surveys. All records were of flyovers in Sector 5 and 9, peak counts occurred in March and comprised two individuals in each Sector.

Redwing – Schedule 1, BoCC Amber

- 4.3.7. Redwing was recorded across the Survey Area on all surveys. Redwing were recorded in Sectors 3, 5, 6, 9, 11, 13, 14, 15, 16 and 17. A peak count of 47 individuals were recorded flying over Sector 9 in February.
- 4.3.8. Redwing status as Schedule 1 on Wildlife and Countryside act (1981) is due to their small breeding populations in Scotland. They are common and widespread winter visitors in Cambridgeshire and the wider UK.

Bullfinch – NERC S41, BoCC Amber

- 4.3.9. Bullfinch was recorded on three occasions in Sector 13 and 14 in February and March. Only single individuals were recorded during each sighting.

Corn Bunting – NERC S41, BoCC Red

- 4.3.10. Corn Bunting was recorded on one occasion during the surveys. An individual was recorded in Sector 8 in March.

Dunnock – NERC S41, BoCC Amber

- 4.3.11. Dunnock was recorded across the Survey Area on all surveys and were recorded in Sector 2, 3, 5, 6, 9, 11, 13, 14, 16 and 17. The peak count for dunnock comprised 3 individuals in Sector 13 and 16 in January.

Grey Partridge – NERC S41, BoCC Red

- 4.3.12. Grey partridge was recorded on two occasions in the January and February surveys in Sector 5 and 6 respectively. The peak count was 10 individuals in Sector 5 in January.

Herring Gull – NERC S41, BoCC Red

- 4.3.13. Herring Gull was recorded on all surveys in Sector 2, 9, 13 and 17. The majority of records were flyover with the peak count of Herring Gull comprising 4 individuals in Sector 2 in March.

House Sparrow – NERC S41, BoCC Red

4.3.14. House Sparrow was recorded on all surveys in Sector 2, 5, 6, 9 and 13. The peak count of House Sparrow comprised 21 individuals in Sector 5.

Lapwing – NERC S41, BoCC Red

4.3.15. Lapwing was recorded on one occasion whereby 47 individuals were recorded flying over Sector 9 in February.

Linnet - NERC S41, BoCC Red

4.3.16. Linnet was recorded on all surveys in Sectors 2, 3, 5, 6, 9, 11, 13 and 16. The peak count of Linnet comprised 45 individuals flying over Sector 11 in February.

Marsh Tit – NERC S41, BoCC Red

4.3.17. An individual Marsh Tit was recorded on one occasion in Section 11 in January calling from Madingley Wood.

Reed Bunting – NERC S41, BoCC Amber

4.3.18. Reed Bunting was recorded on two occasions in March in Sector 9 and 16 with each sector recording an individual and two individuals respectively.

Skylark – NERC S41, BoCC Red

4.3.19. Skylark was recorded on all surveys in Sector 2, 3, 4, 5, 6, 7, 8, 9, 11, 13 and 16. The peak count of skylark comprised six individuals in Sector 11 in January.

Starling - NERC S41, BoCC Red

4.3.20. Starling was recorded on all surveys across Sectors 2, 5, 6, 9, 11, 13, 15 and 16. The peak count for Starling comprised 30 individuals in Sector 11 in February.

Song Thrush - NERC S41, BoCC Amber

4.3.21. Song thrush were only recorded in March and February in Sector 2, 3, 6, 8, 11, 13, 14, 16 and 17. The peak count for Song Thrush comprised 2 individuals in Sector 13 in March.

Yellowhammer - NERC S41, BoCC Red

4.3.22. Yellowhammer was recorded on all surveys in Sectors 2, 3, 5, 8, 9, 11, 13 and 16. The peak count for Yellowhammer comprised six individuals in Sector 5 in February.

Greenfinch – BoCC Red

4.3.23. Greenfinch was recorded on all surveys in Sectors 3, 5, 6, 9, 11, 13 and 16. A peak count for Greenfinch comprised 30 individuals in Sector 16 in January.

Mistle Thrush – BoCC Red

4.3.24. Individual Mistle Thrush was recorded on four occasions during the February and March surveys in Sector 13 and 16.

Woodcock – BoCC Red

4.3.25. An individual Woodcock was recorded flying over Sector 11

4.4 Dusk Vantage Point Survey

- 4.4.1. A total of 40 species were recorded during the dusk vantage point surveys including 21 notable species, including Fieldfare, Redwing, Bullfinch, Corn Bunting, Grey Partridge, Linnet, Skylark, Starling, Song Thrush, Dunnock, Mistle Thrush, Woodcock, Kestrel, Lesser Black-backed Gull, Mallard, Rook, Sparrowhawk, Stock Dove, Woodpigeon, Wren and Black-headed Gull. Peak counts per sector can be found in **Table TR5-15-2-4, Annex B**.
- 4.4.2. Of the target species described in Section 3.3.9 Golden Plover and Tawny Owl were recorded during the dusk vantage point survey.
- 4.4.3. A single Tawny Owl was recorded calling in Sector 3 during a dusk survey in March.
- 4.4.4. Golden Plover was recorded across all dusk surveys in Sector 1, 2, 3 and 11. Flocks of golden plover were recorded in the February dusk survey in Sector 3 forming two distinct roosts of 28 and 35 individuals. Two further roosts were recorded in Sector 2 and 11 comprising 20 and 9 individuals respectively. The peak count of Golden Plover comprised a flock of 40 individuals flying over Sector 1, 2 and 3. Surveyors kept losing sight of the flock and therefore could not confirm if they were attempting to roost within this part of the Survey Area.

5 Summary

- 5.1.1. A total of 67 species were recorded on or over the Survey Area during the WSP diurnal and nocturnal wintering bird surveys. This included 36 notable species. The number of notable species in each category is 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 SPI in accordance with the NERC and a UKBAP species and as either a Red or Amber on the BoCC. The species assemblage included:
- Three species listed on Schedule 1 of the Wildlife and Countryside Act 1981;
 - Fifteen species listed as SPI in accordance with Section 41 of the NERC Act 2006 (also UKBAP species);
 - Fifteen BoCC Red list species;
 - Twenty BoCC Amber list species; and
 - Thirteen LBAP species.
- 5.1.2. A total of 35 notable species was recorded during the diurnal wintering bird surveys and a total of 22 notable species were recorded during the dusk wintering bird surveys. During the dusk wintering bird surveys, Golden Plover roosts were recorded towards the west of the Scheme, with a peak count of 35 individuals.
- 5.1.3. These survey findings were consistent with previous wintering bird surveys completed within the Survey Area and Scheme boundary between 2014 and 2022 with comparable bird assemblages recorded.

6 References

6.1 Project references

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- Thomson Environmental Consultants (2014) Bourn Airfield, Cambridge, Cambridgeshire. Wintering Birds Survey BCOU109 / 001 / 001
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6.2 Technical references

- Bibby C.J, Burgess N.D, Hill D.A, Mustoe S.H. (2000) *Bird Census Techniques*. Second Edition. Elsevier Ltd.
- CIEEM. (2019). *Advice Note on the Lifespan of Ecological Reports and Surveys*. Winchester: CIEEM.
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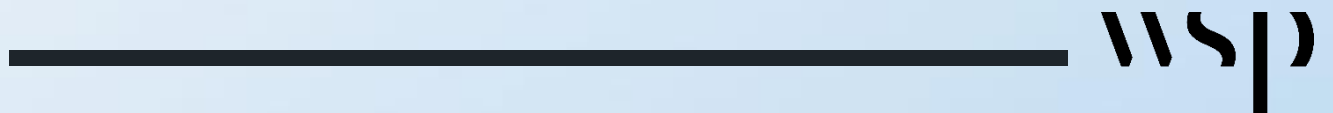
- Stanbury, A.J., Eaton, M.A., Aebischer, N.J., Balmer, D., Brown, A.F., Douse, A., Lindley, P., McCulloch, N., Noble, D.G. & Win, I. (2021) The status of our bird populations: the fifth Birds of Conservation Concern in the United Kingdom, Channel Islands and Isle of Man and second IUCN Red List assessment of extinction risk for Great Britain. *British Birds* Volume: 114, 25pp.



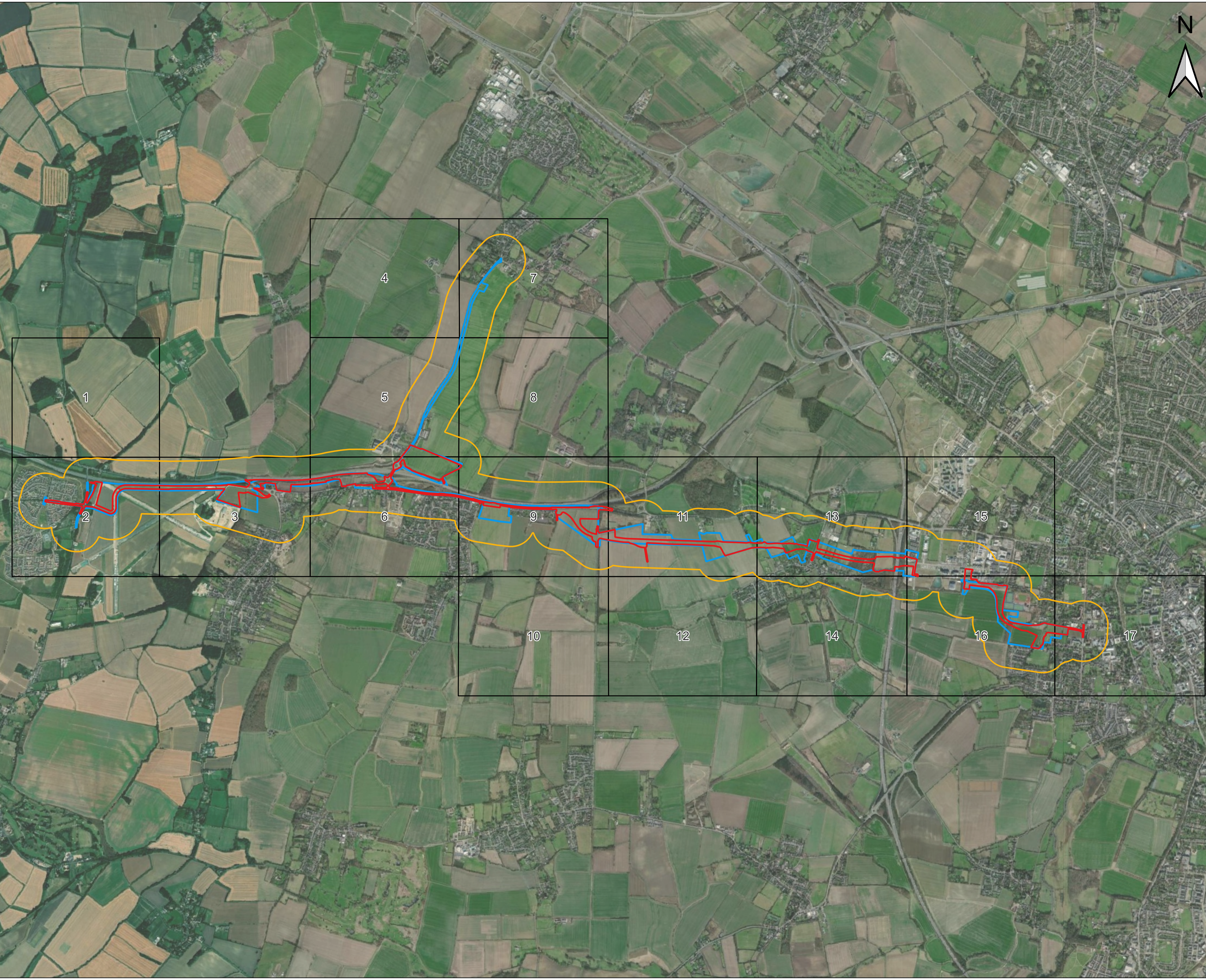
- HMSO (Her Majesty's Stationary Office) (1981). Wildlife and Countryside Act (as amended by the Countryside and Rights of Way Act 2000)
- HMSO (2006) Natural Environment and Rural Communities Act.
- HMSO (2017) Conservation of Habitats and Species Regulations 2017.

Annex A

Survey Area and Methodology



Path: \\uk.wspgroup.com\central_data\Projects\70086xxx\70086660 - C2C TWAO Stage\03 WIP\Ecology\07 GIS & Mapping\OGIS Project\Wintering Birds\C2C - Wintering Birds.qgz



THIS DRAWING MAY BE USED ONLY FOR THE PURPOSE INTENDED AND ONLY WRITTEN DIMENSIONS SHALL BE USED

- Legend
- Previous scheme Boundary
 - Survey Area
 - Sectors
 - C2C Scheme Boundary (DF4)

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Revision Details	By	Date	Suffix
	Check		

Drawing Status **FINAL**

Job Title

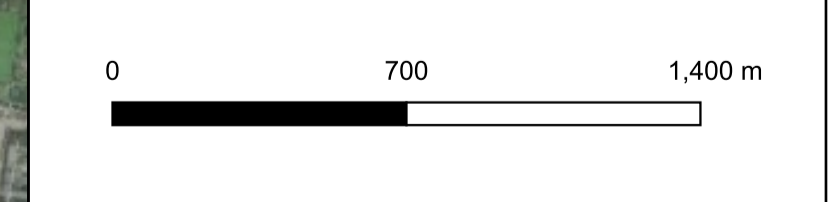
**Greater Cambridge Partnership
Cambourne to Cambridge**

Drawing Title

Wintering Bird Scheme, Survey Area and Sector Plan

Scale at A1 **1:18,000.000018**

Drawn	UKMDP002		
Stage 1 Check	RD	Stage 2 Check	IE
		Originated	AS
		Date	04/09/2023



Drawing Number

Figure A-1



Table TR5-15-1-1 - Diurnal Wintering Bird Survey dates and conditions

Survey number	1						2						3										
	1		2		3		1		2		3		4		1		2		3		4		
Visit number	1		2		3		1		2		3		4		1		2		3		4		
Date	10/01/2022		11/01/2022		12/01/2022		15/02/2022		16/02/2022		24/02/2022		25/02/2022		15/03/2022		16/03/2022		17/03/2022		18/03/2022		
Sunrise	0806		0805		0804		0715		0713		0657		0655		0615		0612		0610		0607		
Start time	0805		0754		0758		0730		0700		0657		0655		0615		0612		0610		0607		
End Time	1358		1410		1422		1230		1330		1400		1500		1220		1300		1300		1130		
Conditions	Start	End	Start	End	Start	End	Start	End	Start	End	Start	End	Start	End	Start	End	Start	End	Start	End	Start	End	
Visibility (Poor, Moderate, Good, Excellent)	Excellent	Excellent	Moderate	Moderate	Excellent	Excellent	Good	Good	-	-	Moderate	Good	Excellent	Excellent	Moderate	Excellent	Moderate	Good	Excellent	Excellent	Poor	Excellent	
Wind direction	N	N	-	-	-	-	-	-	-	-	SW	SW	NW	NW	-	-	SE	SE	SW	SW	-	-	
Wind speed (Beaufort scale)	1	2	0	0	0	0	1	4	-	-	0	3	3	1	0	0	1	1	2	1	0	0	
Weather summary	Dry	Dry	Light rain	Occasional light rain	Dry	Dry	Light rain	Heavy rain	-	-	Moderate rain and occasional heavy hail at 08:00, stopped by 09:30	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry, thick fog at dawn	Dry
Air temperature (°C)	4	6	8	9	-1	7	5	9	-	-	6	7	4	9	7	14	8	10	3	13	5	13	
Cloud cover (Oktas)	7	8	8	8	2	0	6	8	-	-	8	8	0	4	2	2	8	8	0	2	0	3	

Table TR5-15-1-2 - Dusk Vantage Point Survey dates and conditions

Survey number	1				2				3			
	1		2		1		2		1		2	
Visit number	1		2		1		2		1		2	
Date	10/01/2022		11/01/2022		15/02/2022		24/02/2022		15/03/2022		17/03/2022	
Sunset	1610		1611		1712		1730		1805		1808	
Start time	1450		1458		1600		1600		1635		1638	
End Time	1720		1730		1745		1900		1935		1938	
Conditions	Start	End	Start	End	Start	End	Start	End	Start	End	Start	End
Visibility (Poor, Moderate, Good, Excellent)	Excellent	Moderate	Excellent	Moderate	Good	-	Excellent	Poor	Excellent	Poor	Excellent	Poor
Wind direction	N	NW	-	-	-	-	W	W	SE	SE	SW	SW
Wind speed (Beaufort scale)	2	2	0	0	2	-	4	3	2	2	2	1
Weather summary	Dry	Dry	Dry, some fog	Dry	8	-	Dry	Dry	Dry	Dry	Dry	Dry
Air temperature (°C)	6	7	10	9	8	-	4	4	13	9	10	9
Cloud cover (Oktas)	8	8	8	6	8	-	1	0	8	8	1	2

Annex B

Results

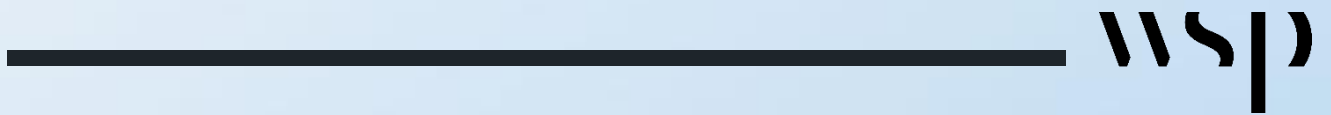


Table TR5-15-2-1 – Species records returned by CPERC of, Schedule 1 (Sch1), NERC S41, UKBAP, Red listed (BoCC Red) and Amber listed BoCC (BoCC Amber)

Common Name	Scientific Name	No. Records	Status
Arctic Tern	<i>Sterna paradisaea</i>	1	BoCC Amber
Barn Owl	<i>Tyto alba</i>	17	Sch1
Barnacle Goose	<i>Branta leucopsis</i>	12	BoCC Amber
Bittern	<i>Botaurus stellaris</i>	1	NERC S41, UKBAP, Sch1, BoCC Amber
Black Redstart	<i>Phoenicurus ochruros</i>	3	Sch1, BoCC Red
Black-headed Gull	<i>Chroicocephalus ridibundus</i>	20	BoCC Amber
Brambling	<i>Fringilla montifringilla</i>	6	Sch1
Brent Goose	<i>Branta bernicla</i>	1	NERC S41, UKBAP, BoCC Amber
Bullfinch	<i>Pyrrhula pyrrhula</i>	16	NERC S41, UKBAP, BoCC Amber
Common Crossbill	<i>Loxia curvirostra</i>	5	Sch1
Common Gull	<i>Larus canus</i>	8	BoCC Amber
Common Sandpiper	<i>Actitis hypoleucos</i>	1	BoCC Amber
Common Tern	<i>Sterna hirundo</i>	7	BoCC Amber
Cuckoo	<i>Cuculus canorus</i>	3	NERC S41, UKBAP, BoCC Red
Curlew	<i>Numenius arquata</i>	2	NERC S41, UKBAP, BoCC Red
Dunnock	<i>Prunella modularis</i>	37	NERC S41, UKBAP, BoCC Amber
Fieldfare	<i>Turdus pilaris</i>	21	Sch1, BoCC Red
Firecrest	<i>Regulus ignicapilla</i>	15	Sch1
Gadwall	<i>Anas strepera</i>	3	BoCC Amber
Golden Oriole	<i>Oriolus oriolus</i>	1	Sch1, BoCC Red
Golden Plover	<i>Pluvialis apricaria</i>	7	BirDir
Grasshopper Warbler	<i>Locustella naevia</i>	2	NERC S41, UKBAP, BoCC Red
Great Black-backed Gull	<i>Larus marinus</i>	1	BoCC Amber
Green Sandpiper	<i>Tringa ochropus</i>	3	Sch1, BoCC Amber
Grey Partridge	<i>Perdix perdix</i>	6	NERC S41, UKBAP, BoCC Red
Grey Wagtail	<i>Motacilla cinerea</i>	17	BoCC Red
Greylag Goose	<i>Anser anser</i>	11	Sch1, BoCC Amber
Hen Harrier	<i>Circus cyaneus</i>	1	NERC S41, Sch1, BoCC Red
Herring Gull	<i>Larus argentatus</i>	7	BoCC Red
Hobby	<i>Falco subbuteo</i>	25	Sch1

Common Name	Scientific Name	No. Records	Status
Honey-buzzard	<i>Pernis apivorus</i>	1	Sch1, BoCC Amber
House Martin	<i>Delichon urbicum</i>	13	BoCC Amber
House Sparrow	<i>Passer domesticus</i>	21	NERC S41, UKBAP, BoCC Red
Kestrel	<i>Falco tinnunculus</i>	24	BoCC Amber
Kingfisher	<i>Alcedo atthis</i>	19	Sch1, BoCC Amber
Lapwing	<i>Vanellus vanellus</i>	4	NERC S41, UKBAP, BoCC Red
Lesser Black-backed Gull	<i>Larus fuscus</i>	3	BoCC Amber
Lesser Redpoll	<i>Acanthis cabaret</i>	22	NERC S41, UKBAP, BoCC Red
Linnet	<i>Linaria cannabina</i>	17	NERC S41, UKBAP, BoCC Red
Little Egret	<i>Egretta garzetta</i>	22	BirDir
Little Ringed Plover	<i>Charadrius dubius</i>	1	Sch1
Mallard	<i>Anas platyrhynchos</i>	41	BoCC Amber
Marsh Tit	<i>Poecile palustris</i>	9	NERC S41, UKBAP, BoCC Red
Meadow Pipit	<i>Anthus pratensis</i>	2	BoCC Amber
Mediterranean Gull	<i>Larus melanocephalus</i>	1	Sch1, BoCC Amber
Merlin	<i>Falco columbarius</i>	2	Sch1, BoCC Red
Mistle Thrush	<i>Turdus viscivorus</i>	9	BoCC Red
Mute Swan	<i>Cygnus olor</i>	13	BoCC Amber
Nightingale	<i>Luscinia megarhynchos</i>	1	BoCC Red
Nightjar	<i>Caprimulgus europaeus</i>	1	NERC S41, UKBAP, BoCC Amber
Osprey	<i>Pandion haliaetus</i>	3	Sch1, BoCC Amber
Peregrine	<i>Falco peregrinus</i>	32	Sch1
Red Kite	<i>Milvus milvus</i>	19	Sch1
Redstart	<i>Phoenicurus phoenicurus</i>	1	BoCC Amber
Redwing	<i>Turdus iliacus</i>	21	Sch1, BoCC Red
Reed Bunting	<i>Emberiza schoeniclus</i>	6	NERC S41, UKBAP, BoCC Amber
Sandwich Tern	<i>Sterna sandvicensis</i>	1	BoCC Amber
Short-eared Owl	<i>Asio flammeus</i>	17	BoCC Amber
Shoveler	<i>Anas clypeata</i>	2	BoCC Amber
Skylark	<i>Alauda arvensis</i>	10	NERC S41, UKBAP, BoCC Red
Snipe	<i>Gallinago gallinago</i>	7	BoCC Amber



Common Name	Scientific Name	No. Records	Status
Song Thrush	<i>Turdus philomelos</i>	14	NERC S41, UKBAP, BoCC Red
Spotted Flycatcher	<i>Muscicapa striata</i>	9	NERC S41, UKBAP, BoCC Red
Starling	<i>Sturnus vulgaris</i>	38	NERC S41, UKBAP, BoCC Red
Stock Dove	<i>Columba oenas</i>	11	BoCC Amber
Swift	<i>Apus apus</i>	25	BoCC Amber
Tawny Owl	<i>Strix aluco</i>	20	BoCC Amber
Teal	<i>Anas crecca</i>	4	BoCC Amber
Tree Sparrow	<i>Passer montanus</i>	1	NERC S41, UKBAP, BoCC Red
Turtle Dove	<i>Streptopelia turtur</i>	1	NERC S41, UKBAP, BoCC Red
Whimbrel	<i>Numenius phaeopus</i>	1	Sch1, BoCC Red
Whinchat	<i>Saxicola rubetra</i>	1	BoCC Red
Wigeon	<i>Anas penelope</i>	2	BoCC Amber
Willow Warbler	<i>Phylloscopus trochilus</i>	5	BoCC Amber
Woodcock	<i>Scolopax rusticola</i>	17	BoCC Red
Yellow Wagtail	<i>Motacilla flava</i>	4	NERC S41, UKBAP, BoCC Red
Yellowhammer	<i>Emberiza citrinella</i>	13	NERC S41, UKBAP, BoCC Red

Table TR5-15-2-2 – Peak counts of species recorded during the diurnal surveys within the Survey Area within Sectors 1 - 8

Sector			1	1	2	2	3	3	4	4	5	5	6	6	7	7	8	8
Common Name	Scientific Name	Status	Peak Flyover	Peak Count	Peak Flyover	Peak Count	Peak Flyover	Peak Count	Peak Flyover	Peak Count	Peak Flyover	Peak Count	Peak Flyover	Peak Count	Peak Flyover	Peak Count	Peak Flyover	Peak Count
Fieldfare	<i>Turdus pilaris</i>	Sch1 BoCC Red						1			5	70						
Redwing	<i>Turdus iliacus</i>	Sch1 BoCC Amber					6	8			10		1					
Red Kite	<i>Milvus milvus</i>	Sch1									2							
Bullfinch	<i>Pyrrhula pyrrhula</i>	Nerc S41 LBAP																
Corn Bunting	<i>Emberiza calandra</i>	Nerc S41 BoCC Red LBAP																1
Grey Partridge	<i>Perdix perdix</i>	Nerc S41 BoCC Red LBAP										10	2					
Herring Gull	<i>Larus argentatus</i>	Nerc S41 BoCC Red LBAP			4													
House Sparrow	<i>Passer domesticus</i>	Nerc S41 BoCC Red LBAP				4						6	30					
Lapwing	<i>Vanellus vanellus</i>	Nerc S41 BoCC Red LBAP																
Linnet	<i>Carduelis cannabina</i>	Nerc S41 BoCC Red LBAP			6		5	1			2	2	1					
Marsh Tit	<i>Poecile palustris</i>	Nerc S41 BoCC Red LBAP																
Skylark	<i>Alauda arvensis</i>	Nerc S41 BoCC Red LBAP				2		1		1		2	2		1			3
Yellowhammer	<i>Emberiza citrinella</i>	Nerc S41 BoCC Red LBAP				1		1			1	6	1				1	1
Starling	<i>Sturnus vulgaris</i>	Nerc S41 BoCC Red				4					8	8	12	1				
Reed Bunting	<i>Emberiza schoeniclus</i>	Nerc S41 BoCC Amber LBAP																
Song Thrush	<i>Turdus philomelos</i>	Nerc S41 BoCC Amber LBAP				1		1					1					
Dunnock	<i>Prunella modularis</i>	Nerc S41 BoCC Amber				2		2				2	2					
Greenfinch	<i>Chloris chloris</i>	BoCC Red						1				2	1					
Mistle Thrush	<i>Turdus viscivorus</i>	BoCC Red																



Sector			1	1	2	2	3	3	4	4	5	5	6	6	7	7	8	8
Common Name	Scientific Name	Status	Peak Flyover	Peak Count	Peak Flyover	Peak Count	Peak Flyover	Peak Count	Peak Flyover	Peak Count	Peak Flyover	Peak Count	Peak Flyover	Peak Count	Peak Flyover	Peak Count	Peak Flyover	Peak Count
Woodcock	<i>Scolopax rusticola</i>	BoCC Red																
Common Gull	<i>Larus canus</i>	BoCC Amber																
Gadwall	<i>Anas strepera</i>	BoCC Amber												3				
Kestrel	<i>Falco tinnunculus</i>	BoCC Amber			1													
Lesser Black-Backed Gull	<i>Larus fuscus</i>	BoCC Amber			3					1								
Mallard	<i>Anas platyrhynchos</i>	BoCC Amber								2	30	3						
Meadow Pipit	<i>Anthus pratensis</i>	BoCC Amber									1		1					
Moorhen	<i>Gallinula chloropus</i>	BoCC Amber									3		1					
Rook	<i>Corvus frugilegus</i>	BoCC Amber			2	2	1			2	7	11	6				2	
Snipe	<i>Gallinago gallinago</i>	BoCC Amber																
Sparrowhawk	<i>Accipiter nisus</i>	BoCC Amber													1			
Stock Dove	<i>Columba oenas</i>	BoCC Amber			2	1	2				6	4					2	
Teal	<i>Anas crecca</i>	BoCC Amber											6					
Woodpigeon	<i>Columba palumbus</i>	BoCC Amber			100	1	5	6		3	20	10	20			1		
Wren	<i>Troglodytes troglodytes</i>	BoCC Amber				1	1			1	1		2					
Black-Headed Gull	<i>Chroicocephalus ridibundus</i>	BoCC Amber			20	100	1	10		3	1	1					1	
Blackbird	<i>Turdus merula</i>	BoCC Green			1	2	1	3		1	3		1					
Bluetit	<i>Cyanistes caeruleus</i>	BoCC Green				2		3			4		2					
Buzzard	<i>Buteo buteo</i>	BoCC Green				1	1			1			1				1	
Canada Goose	<i>Branta canadensis</i>	BoCC Green																

Sector			1	1	2	2	3	3	4	4	5	5	6	6	7	7	8	8
Common Name	Scientific Name	Status	Peak Flyover	Peak Count	Peak Flyover	Peak Count	Peak Flyover	Peak Count	Peak Flyover	Peak Count	Peak Flyover	Peak Count	Peak Flyover	Peak Count	Peak Flyover	Peak Count	Peak Flyover	Peak Count
Carrion Crow	<i>Corvus corone</i>	BoCC Green			3	2	2	3			2	23	2	12	3	1	1	2
Chaffinch	<i>Fringilla coelebs</i>	BoCC Green				2						10		1				
Chiffchaff	<i>Phylloscopus collybita</i>	BoCC Green										1		1				
Coal Tit	<i>Parus ater</i>	BoCC Green																
Collared Dove	<i>Streptopelia decaocto</i>	BoCC Green				1					1	7	2					
Coot	<i>Fulica atra</i>	BoCC Green												2				
Cormorant	<i>Phalacrocorax carbo</i>	BoCC Green																
Feral Pigeon	<i>Columba livia (domest.)</i>	BoCC Green										3	7	29				
Goldcrest	<i>Regulus regulus</i>	BoCC Green				1							2	2				
Golden Plover	<i>Pluvialis apricaria</i>	BoCC Green			16							180						
Goldfinch	<i>Carduelis carduelis</i>	BoCC Green			4	4		1			5	6	5	8				
Great Spotted Woodpecker	<i>Dendrocopus major</i>	BoCC Green				1		1										
Great Tit	<i>Parus major</i>	BoCC Green				2	5	1				2		2				
Green Woodpecker	<i>Picus viridis</i>	BoCC Green						1										
Grey Heron	<i>Ardea cinerea</i>	BoCC Green																
Grey Wagtail	<i>Motacilla cinerea</i>	BoCC Green																
Jackdaw	<i>Corvus monedula</i>	BoCC Green			2						3	5	3		1			
Jay	<i>Garrulus glandarius</i>	BoCC Green																
Little Grebe	<i>Tachybaptus ruficollis</i>	BoCC Green												1				
Long-Tailed Tit	<i>Aegithalos caudatus</i>	BoCC Green				2		1				2		1				
Magpie	<i>Pica pica</i>	BoCC Green			1	2	1	2			3	2	1	8				



Sector			1	1	2	2	3	3	4	4	5	5	6	6	7	7	8	8
Common Name	Scientific Name	Status	Peak Flyover	Peak Count	Peak Flyover	Peak Count	Peak Flyover	Peak Count	Peak Flyover	Peak Count	Peak Flyover	Peak Count	Peak Flyover	Peak Count	Peak Flyover	Peak Count	Peak Flyover	Peak Count
Nuthatch	<i>Sitta europaea</i>	BoCC Green																
Pheasant	<i>Phasianus colchicus</i>	BoCC Green				1		1			1	1					1	
Pied Wagtail	<i>Motacilla alba</i>	BoCC Green						1			1	40						
Red-Legged Partridge	<i>Alectoris rufa</i>	BoCC Green				3												
Robin	<i>Erithacus rubecula</i>	BoCC Green				1		1				2		2			1	
Siskin	<i>Carduelis Spinus</i>	BoCC Green																

Table TR5-15-2-3 - Peak counts of species recorded during the diurnal surveys within the Survey Area within Sectors 9 -17

Sector			9	9	10	10	11	11	12	12	13	13	14	14	15	15	16	16	17	17
Common Name	Scientific Name	Status	Peak Flyover	Peak Count	Peak Flyover	Peak Count	Peak Flyover	Peak Count	Peak Flyover	Peak Count	Peak Flyover	Peak Count	Peak Flyover	Peak Count	Peak Flyover	Peak Count	Peak Flyover	Peak Count	Peak Flyover	Peak Count
Fieldfare	<i>Turdus pilaris</i>	Sch1 BoCC Red	5	2			6	80			3	25				1	14		34	2
Redwing	<i>Turdus iliacus</i>	Sch1 BoCC Amber	14	1			6	20			47	30	1	2		15	30	4		12
Red Kite	<i>Milvus milvus</i>	Sch1	2																	
Bullfinch	<i>Pyrrhula pyrrhula</i>	Nerc S41 LBAP										1		1						
Corn Bunting	<i>Emberiza calandra</i>	Nerc S41 BoCC Red LBAP																		
Grey Partridge	<i>Perdix perdix</i>	Nerc S41 BoCC Red LBAP																		
Herring Gull	<i>Larus argentatus</i>	Nerc S41 BoCC Red LBAP	2								2									1
House Sparrow	<i>Passer domesticus</i>	Nerc S41 BoCC Red LBAP		2								2								
Lapwing	<i>Vanellus vanellus</i>	Nerc S41 BoCC Red LBAP	47																	
Linnet	<i>Carduelis cannabina</i>	Nerc S41 BoCC Red LBAP	2	1			25				4	8						1		
Marsh Tit	<i>Poecile palustris</i>	Nerc S41 BoCC Red LBAP						1												
Skylark	<i>Alauda arvensis</i>	Nerc S41 BoCC Red LBAP	2	4			1	6				1					1	2		
Yellowhammer	<i>Emberiza citrinella</i>	Nerc S41 BoCC Red LBAP	1	1				1				2						1		
Starling	<i>Sturnus vulgaris</i>	Nerc S41 BoCC Red	6	20			12	30			6	10			20	5	3			



Sector			9	9	10	10	11	11	12	12	13	13	14	14	15	15	16	16	17	17
Common Name	Scientific Name	Status	Peak Flyover	Peak Count	Peak Flyover	Peak Count	Peak Flyover	Peak Count	Peak Flyover	Peak Count	Peak Flyover	Peak Count	Peak Flyover	Peak Count	Peak Flyover	Peak Count	Peak Flyover	Peak Count	Peak Flyover	Peak Count
Reed Bunting	<i>Emberiza schoeniclus</i>	Nerc S41 BoCC Amber LBAP		1														1		
Song Thrush	<i>Turdus philomelos</i>	Nerc S41 BoCC Amber LBAP	1	1				1				2		1				1		1
Dunnock	<i>Prunella modularis</i>	Nerc S41 BoCC Amber		1				2				3		1				3		1
Greenfinch	<i>Chloris chloris</i>	BoCC Red		1			3	3			1	6						30		
Mistle Thrush	<i>Turdus viscivorus</i>	BoCC Red									1	1						1		
Woodcock	<i>Scolopax rusticola</i>	BoCC Red					1													
Common Gull	<i>Larus canus</i>	BoCC Amber	1				1													
Gadwall	<i>Anas strepera</i>	BoCC Amber																1		
Kestrel	<i>Falco tinnunculus</i>	BoCC Amber	1	1			1					1					2		1	
Lesser Black-Backed Gull	<i>Larus fuscus</i>	BoCC Amber	2														1			
Mallard	<i>Anas platyrhynchos</i>	BoCC Amber															2	30		
Meadow Pipit	<i>Anthus pratensis</i>	BoCC Amber					10	5			1	1						2		
Moorhen	<i>Gallinula chloropus</i>	BoCC Amber																3		
Rook	<i>Corvus frugilegus</i>	BoCC Amber	100	10			16	25		2	1									
Snipe	<i>Gallinago gallinago</i>	BoCC Amber					1													
Sparrowhawk	<i>Accipiter nisus</i>	BoCC Amber					1				1						1			
Stock Dove	<i>Columba oenas</i>	BoCC Amber	5	21			8	5			2	2					1	5		1
Teal	<i>Anas crecca</i>	BoCC Amber																		
Woodpigeon	<i>Columba palumbus</i>	BoCC Amber	8	10		2	400	400			100	26	30	6		7	300	30	6	10
Wren	<i>Troglodytes troglodytes</i>	BoCC Amber		1				1			1	2		2				1		
Black-Headed Gull	<i>Chroicocephalus ridibundus</i>	BoCC Amber	10	1			2				4		3				5	6	10	1
Blackbird	<i>Turdus merula</i>	BoCC Green	1	2			2	3			1	4		3			1	1		4
Bluetit	<i>Cyanistes caeruleus</i>	BoCC Green	2	4			2	6			1	3	1	3				5		1



Sector			9	9	10	10	11	11	12	12	13	13	14	14	15	15	16	16	17	17
Common Name	Scientific Name	Status	Peak Flyover	Peak Count	Peak Flyover	Peak Count	Peak Flyover	Peak Count	Peak Flyover	Peak Count	Peak Flyover	Peak Count	Peak Flyover	Peak Count	Peak Flyover	Peak Count	Peak Flyover	Peak Count	Peak Flyover	Peak Count
Buzzard	<i>Buteo buteo</i>	BoCC Green	3	1			13	1			3	1					3	1		
Canada Goose	<i>Branta canadensis</i>	BoCC Green					2													
Carrion Crow	<i>Corvus corone</i>	BoCC Green	10	20			3	20			2	3	1	2	1	3	7	6		2
Chaffinch	<i>Fringilla coelebs</i>	BoCC Green		1				1				1		5				2		1
Chiffchaff	<i>Phylloscopus collybita</i>	BoCC Green						1				1		1				1		
Coal Tit	<i>Parus ater</i>	BoCC Green		1								1								1
Collared Dove	<i>Streptopelia decaocto</i>	BoCC Green	1	1			1					2								1
Coot	<i>Fulica atra</i>	BoCC Green																		
Cormorant	<i>Phalacrocorax carbo</i>	BoCC Green									1				1		1		1	
Feral Pigeon	<i>Columba livia (domest.)</i>	BoCC Green	1								7	2					2			
Goldcrest	<i>Regulus regulus</i>	BoCC Green		1				1				1		1			2			
Golden Plover	<i>Pluvialis apricaria</i>	BoCC Green					1										90			
Goldfinch	<i>Carduelis carduelis</i>	BoCC Green	2	4			4	8			4	6		1			6	4		
Great Spotted Woodpecker	<i>Dendrocopus major</i>	BoCC Green		1				1			1	1		1				1		
Great Tit	<i>Parus major</i>	BoCC Green		3				4				3		2				2		2
Green Woodpecker	<i>Picus viridis</i>	BoCC Green	1			1		1			1	1					2	1		1
Grey Heron	<i>Ardea cinerea</i>	BoCC Green									1						2			
Grey Wagtail	<i>Motacilla cinerea</i>	BoCC Green					1													
Jackdaw	<i>Corvus monedula</i>	BoCC Green	6	3			30	40			20	7		3			4	1	5	
Jay	<i>Garrulus glandarius</i>	BoCC Green	1								1	2								1
Little Grebe	<i>Tachybaptus ruficollis</i>	BoCC Green																1		
Long-Tailed Tit	<i>Aegithalos caudatus</i>	BoCC Green		2				3				8		2			2	1		
Magpie	<i>Pica pica</i>	BoCC Green	1	1			1	2			2	2		1			2	6		
Nuthatch	<i>Sitta europaea</i>	BoCC Green																		1



Sector			9	9	10	10	11	11	12	12	13	13	14	14	15	15	16	16	17	17
Common Name	Scientific Name	Status	Peak Flyover	Peak Count	Peak Flyover	Peak Count	Peak Flyover	Peak Count	Peak Flyover	Peak Count	Peak Flyover	Peak Count	Peak Flyover	Peak Count	Peak Flyover	Peak Count	Peak Flyover	Peak Count	Peak Flyover	Peak Count
Pheasant	<i>Phasianus colchicus</i>	BoCC Green		1				1			1	1						2		
Pied Wagtail	<i>Motacilla alba</i>	BoCC Green		1			50	3			1	1						1	1	
Red-Legged Partridge	<i>Alectoris rufa</i>	BoCC Green		2																
Robin	<i>Erithacus rubecula</i>	BoCC Green		1				2				1		2		1		1		1
Siskin	<i>Carduelis Spinus</i>	BoCC Green																10		

Table TR5-15-2-4 - Peak counts of species recorded during the dusk surveys within the Survey Area per sector

Sector			1	1	2	2	3	3	9	9	11	11	12	12	13	13	14	14
Common Name	Scientific Name	Status	Peak Flyover	Peak Count	Peak Flyover	Peak Count	Peak Flyover	Peak Count	Peak Flyover	Peak Count	Peak Flyover	Peak Count	Peak Flyover	Peak Count	Peak Flyover	Peak Count	Peak Flyover	Peak Count
Fieldfare	<i>Turdus pilaris</i>	Sch1 BoCC Red					3	3				1						
Redwing	<i>Turdus iliacus</i>	Sch1 BoCC Amber										1				30		
Bullfinch	<i>Pyrrhula pyrrhula</i>	Nerc S41 LBAP														1		
Corn Bunting	<i>Emberiza calandra</i>	Nerc S41 BoCC Red LBAP									2							
Grey Partridge	<i>Perdix perdix</i>	Nerc S41 BoCC Red LBAP									2	1		1				
Linnet	<i>Carduelis cannabina</i>	Nerc S41 BoCC Red LBAP			4		1				10							
Skylark	<i>Alauda arvensis</i>	Nerc S41 BoCC Red LBAP				2						1						
Starling	<i>Sturnus vulgaris</i>	Nerc S41 BoCC Red			3		15				1	1						
Song Thrush	<i>Turdus philomelos</i>	Nerc S41 BoCC Amber LBAP						1				1						
Dunnock	<i>Prunella modularis</i>	Nerc S41 BoCC Amber						1								3		
Mistle Thrush	<i>Turdus viscivorus</i>	BoCC Red					1											
Woodcock	<i>Scolopax rusticola</i>	BoCC Red									1							
Kestrel	<i>Falco tinnunculus</i>	BoCC Amber			1													
Lesser Black-backed Gull	<i>Larus fuscus</i>	BoCC Amber			5													
Mallard	<i>Anas platyrhynchos</i>	BoCC Amber			1													
Rook	<i>Corvus frugilegus</i>	BoCC Amber									10	3	15			1		
Sparrowhawk	<i>Accipiter nisus</i>	BoCC Amber			1						1							
Stock Dove	<i>Columba oenas</i>	BoCC Amber			5	1												
Tawny Owl	<i>Strix aluco</i>	BoCC Amber						1										
Woodpigeon	<i>Columba palumbus</i>	BoCC Amber			2	2	27	4			2		36	1	20	30		
Wren	<i>Troglodytes troglodytes</i>	BoCC Amber				1						1				1		

Sector			1	1	2	2	3	3	9	9	11	11	12	12	13	13	14	14
Common Name	Scientific Name	Status	Peak Flyover	Peak Count	Peak Flyover	Peak Count	Peak Flyover	Peak Count	Peak Flyover	Peak Count	Peak Flyover	Peak Count	Peak Flyover	Peak Count	Peak Flyover	Peak Count	Peak Flyover	Peak Count
Black-headed Gull	<i>Chroicocephalus ridibundus</i>	BoCC Amber			20	50	3										1	
Blackbird	<i>Turdus merula</i>	BoCC Green				1		2				1				1		
Blue Tit	<i>Cyanistes caeruleus</i>	BoCC Green					2					2				2		
Buzzard	<i>Buteo buteo</i>	BoCC Green			1	1		1										
Canada Goose	<i>Branta canadensis</i>	BoCC Green					7											
Carrion Crow	<i>Corvus corone</i>	BoCC Green			2	5	2	2			60	4		2	1	1		
Chaffinch	<i>Fringilla coelebs</i>	BoCC Green				1						1				1		
Golden Plover	<i>Pluvialis apricaria</i>	BoCC Green	40		40	20	40	35			5	9						
Goldfinch	<i>Carduelis carduelis</i>	BoCC Green						1				1				4		
Great Spotted Woodpecker	<i>Dendrocopus major</i>	BoCC Green						1								1		
Great Tit	<i>Parus major</i>	BoCC Green				1										3		
Green Woodpecker	<i>Picus viridis</i>	BoCC Green						1				1				1		
Jackdaw	<i>Corvus monedula</i>	BoCC Green			3		6				150		7			10		
Long-tailed Tit	<i>Aegithalos caudatus</i>	BoCC Green						1										
Magpie	<i>Pica pica</i>	BoCC Green				1		2										
Pheasant	<i>Phasianus colchicus</i>	BoCC Green				1		1		4		1		2		3		
Pied Wagtail	<i>Motacilla alba</i>	BoCC Green			1		1	1			1							
Red-legged Partridge	<i>Alectoris rufa</i>	BoCC Green				2		2										
Robin	<i>Erithacus rubecula</i>	BoCC Green						1				1				1		1



62-64 Hills Road
Cambridge
CB2 1LA

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