



Norfolk County Council

NORWICH WESTERN LINK

2021 Wintering Bird Survey Report





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CONTENTS

1.	INTRODUCTION	1
1.2.	ECOLOGICAL BACKGROUND	1
1.3.	BRIEF AND OBJECTIVES	2
1.4.	STUDY AND SURVEY AREA	2
2.	RELEVANT LEGISLATION	3
2.1.	LEGISLATION	3
3.	METHODS	4
3.1.	WINTERING BIRD SURVEY	4
3.2.	DATES OF SURVEY AND PERSONNEL	4
3.3.	NOTES AND LIMITATIONS	6
4.	RESULTS	7
4.1.	WINTERING BIRD SURVEY	7
5.	REFERENCES	13
5.1.	TECHNICAL REFERENCES	13

TABLES

Table 1 - Dates of survey and weather conditions	4
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APPENDICES

Appendix A – Wintering Bird Survey Results

Appendix B – Wintering Bird Survey 2020-21 Map

1. INTRODUCTION

1.1. PROJECT BACKGROUND

- 1.1.1. The Norwich Western Link Road (NWL) is a highway scheme linking the A1270 Broadland Northway from its junction with the A1067 Fakenham Road to the A47 trunk road near Honingham.
- 1.1.2. The NWL, hereafter referred to as the Scheme, will comprise:
- Dualling the A1067 Fakenham Road westwards from its existing junction with the A1270 to a new roundabout located approximately 400m to the north west;
 - Construction of a new roundabout; and
 - Constructing a dual carriageway link from the new roundabout to a new junction with the A47 near Honingham.
- 1.1.3. As part of a separate planned scheme, Highways England proposes to realign and dual the A47 from the existing roundabout at Easton to join the existing dual carriageway section at North Tuddenham. If that scheme proceeds, it is expected that Highways England will construct the Honingham junction and the Norwich Western Link will connect to the north-eastern side of that junction.
- 1.1.4. The Scheme will cross the River Wensum and its floodplain by means of a viaduct. The Scheme will also cross four minor roads by means of overpass or underpass bridges. The Scheme will include ancillary works such as provision for non-motorised users, necessary realignment of the local road network and the provision of environmental mitigation measures.

1.2. ECOLOGICAL BACKGROUND

- 1.2.1. The requirement for a wintering bird survey followed the identification of suitable habitats with the potential to support this species, that may be impacted by the Scheme. These habitats were identified following the Phase 1 Habitat Survey (WSP UK Ltd., 2018B) and the updated survey in 2020 and comprised woodlands, arable fields, hedgerows, scrub and floodplain / wetland habitats. It was therefore recommended that a wintering bird survey be undertaken to establish a sufficient baseline to inform the impact assessment. The scope of this survey work was agreed in principle with Natural England.
- 1.2.2. A wintering bird survey was first undertaken in 2018-2019, which comprised of vantage point surveys at a broad scale across the local landscape in the absence of a defined preferred route alignment. This was then subject to an updated survey as outlines in this Report.

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. The aim of the wintering bird surveys were to provide a list of bird species encountered that make up the wintering bird community on or close to the Survey Area.

1.4. STUDY AND SURVEY AREA

- 1.4.1. An ecological Desk Study was completed in March 2020 to include recent data relevant to the Scheme. The Study Area for this was defined as a 2km radius of the Scheme.
- 1.4.2. The Survey Area in relation to wintering birds comprised a 100m buffer of the Scheme, Appendix B.

2. RELEVANT LEGISLATION

2.1. LEGISLATION

CONSERVATION OF HABITATS AND SPECIES REGULATIONS 2017 (HABITAT REGULATIONS)

- 2.1.1. 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)

- 2.1.2. 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.
- 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 and Species of Principal Importance (HPs and SPs) 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).

3. METHODS

3.1. WINTERING BIRD SURVEY

- 3.1.1. To inform an evaluation of the on-site habitats for bird species, four wintering bird survey visits were completed on each month between November 2020 to February 2021. The survey methodology employed was based on that recommended in standard literature, e.g. Winter Farmland Bird Survey as used by for example the British Trust for Ornithology (BTO)^{1,2,3}.
- 3.1.2. All four monthly surveys were completed over two days in November, December and January and three days in February in the early morning and each of the survey visits was of approximately two - four hours in duration.
- 3.1.3. Three transects routes were identified to capture the full range of habitats within the Survey Area. These were subsequently divided into seventeen sections on the base maps that could be used to refer to a more specific area.
- 3.1.4. During each survey visit the transects within the Survey Area were walked slowly, approaching all suitable habitat whilst scanning and listening for birds. In accordance with good practice guidance 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 (Bibby, et al., 2000). The locations of birds seen and heard were mapped using standard BTO 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.

3.2. DATES OF SURVEY AND PERSONNEL

- 3.2.1. The wintering bird survey visits were completed by competent surveyors with at least six years' experience of ecological survey, including wintering and breeding bird surveys.
- 3.2.2. 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 / end time	Weather conditions
1a	11/11/20	Start: 08:30 End: 12:15	Temperature: 9°C Wind (Beaufort): 1 – 2

¹ Gillings, S., Wilson, A.M., Conway, G.J., Vickery, J.A., Fuller, R.J., Beavan, P., Newson, S.E., Noble, D.G. & Toms, M.P.(2007). Winter Farmland Bird Survey. BTO Research Report No.494

² Bibby, C.J., N.D. Burgess & D.A. Hill (1992). Bird Census Techniques. London: Academic Press

³ Gilbert, G., Gibbons, D.W., and Evans, J. (1998). Bird Monitoring Methods: a manual of techniques for key UK species. Sandy: RSPB

Survey Visit	Date	Start time / end time	Weather conditions
			Cloud (Oktas): 8 Rain: 0 – 10%
1b	12/11/20	Start: 08:15 End: 11:30	Temperature: 12°C Wind (Beaufort): 3 Cloud (Oktas): 8 Rain: 0%
2a	02/12/20	Start: 08:30 End: 12:30	Temperature: 1 – 4°C Wind (Beaufort): 1 Cloud (Oktas): 0 Rain: 0
2b	03/12/20	Start: 08:00 End: 11:00	Temperature: 3 - 7°C Wind (Beaufort): 2 Cloud (Oktas): 8 Rain: 10%
3a	12/01/21	Start: 08:15 End: 11:45	Temperature: 5°C Wind (Beaufort): 2 Cloud (Oktas): 8 Rain: 0 – 10%
3b	13/01/21	Start: 08:15 End: 12:30	Temperature: -1°C Wind (Beaufort): 0 – 1 Cloud (Oktas): 6 Rain: 0 – 50%
4a	02/02/21	Start: 8:45 End: 11:15	Temperature: 3°C Wind (Beaufort): 1 – 2 Cloud (Oktas): 8 Rain: 100%
4b	03/02/21	Start: 09:00 End: 11:30	Temperature: 6°C Wind (Beaufort): 1 – 2 Cloud (Oktas): 8 Rain: 0%

Survey Visit	Date	Start time / end time	Weather conditions
4c	24/02/21	Start: 10:00 End: 12:00	Temperature: 11°C Wind (Beaufort): 2 Cloud (Oktas): 8 Rain: 0%

3.3. NOTES AND LIMITATIONS

- 3.3.1. 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 factor applicable to all bird surveys, this is not considered to place significant constraints upon interpretation of the results for this Survey Area.

4. RESULTS

4.1. WINTERING BIRD SURVEY

OVERVIEW

- 4.1.1. A total of 74 species were recorded on or over the Survey Area during the wintering bird survey. This included 39 species which are legally protected or species of conservation concern.
- 4.1.2. The numbers of birds recorded within each category are listed below. Conservation status has been noted 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;
 - Included in Birds of Conservation Concern (BoCC; Eaton *et al.*, 2015) Red List; and
 - Included in BoCC Amber List.
- 4.1.3. 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 NERC Act 2006 can also be listed on either the Red or Amber List of BoCC.
- 4.1.4. The species assemblage included;
- Eight species listed on Schedule 1 of the Wildlife and Countryside Act 1981 (as amended);
 - Eleven species listed as SPI in accordance with Section 41 of the NERC Act 2006 (also UKBAP species);
 - Fourteen BoCC Red List species; and
 - Twenty BoCC Amber List species.

RESULTS OF WINTERING BIRD SURVEY

- 4.1.5. A full breakdown of survey results is presented within Appendix A (Table A-1 and Table A-2). A summary of species recorded that are of conservation concern is detailed below.

Cetti's warbler – Schedule 1 WCA 1981

- 4.1.6. A single Cetti's warbler *Cettia cetti* was recorded in January during transect one from scrub within a ditch in the centre of the floodplain within in the north of the Scheme (see map section three in Appendix B).

Common crossbill – Schedule 1 WCA 1981

- 4.1.7. Three common crossbill *Loxia curvirostra* were recorded during the January survey on transect 1 within the Nursery plantation woodland towards the north of the Scheme (see map section five in Appendix B).

Fieldfare – Schedule 1 WCA 1981 and BoCC Red List

- 4.1.8. Fieldfare *Turdus pilaris* were recorded across the surveys, with the majority of records originating from the November survey. This included 40 individuals that were recorded foraging on a bare arable field near transect one with 25 also recorded flying over the same field (see map sections two and three in Appendix B).

Kingfisher – Schedule 1 WCA 1981 and BoCC Amber List

- 4.1.9. Two kingfisher *Alcedo atthis* were recorded during the surveys, the first in November which was observed flying south to north across the floodplain during transect one (map section four) towards the River Wensum. The second in February flying east to west from a patch of scrub in the northern section of the floodplain during transect one (see map section three in Appendix B).

Peregrine – Schedule 1 WCA 1981

- 4.1.10. A single peregrine *Falco peregrinus* was recorded flying over an arable field during the February survey near transect one to the north of Fakenham road (see map section two in Appendix B).

Red kite – Schedule 1 WCA 1981

- 4.1.11. Six red kite *Milvus milvus* were recorded over the surveys, with a peak count of two in December and January, all recorded flying high over arable fields and woodland within the south of the Scheme during transects two and three (see map sections thirteen, fourteen and sixteen in Appendix B).

Redwing – Schedule 1 WCA 1981 and BoCC Red List

- 4.1.12. Redwing *Turdus iliacus* were recorded frequently throughout the surveys in numbers typical for this species, with a peak count of 205 individuals recorded during the November surveys. These comprised mostly of fly over counts of groups of 20-30 birds in open arable habitats within the Survey Area.

Grey wagtail – BoCC Red List

- 4.1.13. A total of five grey wagtail *Motacilla cinerea* were recorded, during the December and February surveys. The peak count of three was recorded in February with one flying over the north of the Scheme during transect one and two calling within the southern extent of the Scheme during transect three.

Herring gull – BoCC Red List

- 4.1.14. A total of 79 records herring gull *Larus argentatus* were recorded over the surveys, with a peak count of 42 observed during the January survey. This included a count of 30 individuals foraging on an arable field in the centre of the Survey Area (see map section ten Appendix B).

Lapwing – BoCC Red List and SPI under S41 of NERC 2006

- 4.1.15. Lapwing *Vanellus vanellus* were recorded during the February survey with a total count of eight, comprising of five within the north of the Survey Area on the floodplain (see map section three in Appendix B) and three on arable fields within the southern extent of the Survey Area (see map section sixteen in Appendix B).

Linnet – BoCC Red List and SPI under S41 of NERC 2006

- 4.1.16. A total of 85 linnet *Linaria cannabina* were recorded across the surveys, with a peak count of 63 recorded during the November survey which included a count of 40 within an arable field near the south of transect one to the west of long plantation (see map section six in Appendix B).

Marsh tit – BoCC Red List and SPI under S41 of NERC 2006

- 4.1.17. A single marsh tit *Poecile palustris* was recorded during the December survey on transect one within wet woodland habitat in the north of Rose Carr woodland (see map section four in Appendix B).

Mistle thrush – BoCC Red List

- 4.1.18. A total of fourteen mistle thrush *Turdus viscivorus* were recorded over the course of the surveys, with a peak count of six counts in the November survey along transect one. This was typical of the remaining counts for this species with only one count recorded within the south of the site on transect two (see map section thirteen in Appendix B).

Lesser redpoll BoCC Red List and SPI under S41 of NERC 2006

- 4.1.19. Two lesser redpoll *Acanthis cabaret* were recorded across the surveys, the first was a flyover record during the November surveys along transect one flying west to east through the nursery plantation and over Rose Carr woodland. The second record of this species occurred during the February surveys where an individual was recorded on transect one within the north of Long Plantation.

Skylark – BoCC Red List and SPI under S41 of NERC 2006

- 4.1.20. Skylark *Alauda arvensis* were recorded consistently throughout the surveys and were more abundant within the south of the Survey Area. A peak count of 24 skylark were recorded during the February surveys, the majority of which were on arable fields near transects two and three.

Song thrush – BoCC Red List and SPI under S41 of NERC 2006

- 4.1.21. A total of five song thrush *Turdus philomelos* were recorded over the surveys, with a peak count of two recorded during both the December and February surveys. Records included one song thrush flying northwards through Rose Carr on transect one and another singing from Gravelpit plantation on transect two during the December surveys, with both February counts of this species recorded within the unnamed woodland south of Ringland lane on transect one.

Starling – BoCC Red List and SPI under S41 of NERC 2006

- 4.1.22. Starling *Sturnus vulgaris* were recorded in flocks with counts typical for this species, the peak count occurring during the December surveys with 351 recorded, which included a flock of 230 birds flying over arable fields within the centre of the Survey Area near transect two (see map section eleven in Appendix B).

Woodcock – BoCC Red List

- 4.1.23. Two woodcock *Scolopax rusticola* were recorded during the January surveys both on transect one, with one flushed from Rose Carr and flew east, the other further south flushed from the nursery plantation and flew south.

Yellowhammer – BoCC Red List and SPI under S41 of NERC 2006

- 4.1.24. Twelve records of yellowhammer *Emberiza citrinella* were noted over the course of the surveys, with peak counts of five recorded on the December and February surveys. This species was most frequently recorded within hedgerows in the south of the Survey Area that bound and separate arable fields.

Black-headed gull – BoCC Amber List

- 4.1.25. Black-headed gull *Chroicocephalus ridibundus* were recorded occasionally throughout the survey area, with a peak count of 45 for this species during the November surveys, with 30 recorded within an arable field near transect three (see map section sixteen in Appendix B).

Greylag goose – BoCC Amber List

- 4.1.26. Greylag goose *Anser anser* were observed during the December and February surveys during transect one. The peak count for this species was observed during the December survey with 70 individuals flying west to east over an arable field north of Fakenham road (see map section two in Appendix B). These birds are likely to be part of a feral population rather than wild, migratory birds.

Brent goose – BoCC Amber List

- 4.1.27. A single Brent goose *Branta bernicla* was recorded during the November survey, flying west to east over the south of the floodplain in the north of the Scheme in transect one (see map section four in Appendix B). The Survey Area does not provide a typical habitat resource for Brent geese which is normally constrained to coastal habitats in winter.

Bullfinch – BoCC Amber List and SPI under S41 NERC 2006

- 4.1.28. A total of eight bullfinch *Pyrrhula pyrrhula* were noted during the surveys. Peak counts of three were recorded in November and February, including a flyover record near the floodplain on transect one (see map section four in Appendix B) and within a hedge near the beginning of transect three (see map section fourteen in Appendix B).

Common gull – BoCC Amber List

- 4.1.29. Common gull *Larus canus* were observed occasionally during the surveys totalling 154 counts, with a peak count of 104 on an arable field during transect two in January (see map section ten in Appendix B).

Dunnock – BoCC Amber List and SPI under S41 NERC 2006

- 4.1.30. Dunnock *Prunella modularis* were recorded consistently throughout the Scheme and across the survey with a total count of 34 and peak counts of ten in November and December, recorded within scrub and hedgerow habitats.

Gadwall – BoCC Amber List

- 4.1.31. Sixteen gadwall *Mareca strepera* were observed flying east to west over the floodplain during the February survey on transect one (see map section four in Appendix B).

Kestrel – BoCC Amber List

- 4.1.32. A total of thirteen kestrel *Falco tinnunculus* were noted throughout the surveys with peak counts of four recorded in both December and January. The species was evenly distributed throughout the Survey Area, consisting mostly of flyover records, with one count of a perched kestrel within a tree in the floodplain on transect one in February.

Lesser black-backed gull – BoCC Amber List

- 4.1.33. A total of 51 lesser black-backed gull *Larus fuscus* were recorded, with 50 of these relating to a single flyover of a flock heading north-west over the centre of the Survey Area (see map section nine in Appendix B) in December during transect two. The other single record of this species consisted of an individual flying south over the floodplain during transect one of the November survey.

Mallard – BoCC Amber List

- 4.1.34. A total of six mallard *Anas platyrhynchos* were recorded across the surveys, with a peak count of four recorded in November, which included two on the River Wensum and two within a stream on the south of the floodplain both on transect one (see map sections three and four in Appendix B).

Meadow pipit – BoCC Amber List

- 4.1.35. A total of 69 meadow pipit *Anthus pratensis* were recorded, the majority of these originating from a peak count of 49 in November, which included a record of 20 on an arable field in the centre of the survey area (see map section ten in Appendix B) and another flock of 20 birds flying an arable field immediately to the south (see map section eleven in Appendix B) both during transect two.

Mute swan – BoCC Amber List

- 4.1.36. A total of 33 mute swan *Cygnus olor* were recorded, all of which originated from the River Wensum floodplain within the north of the Survey Area. A peak count of thirteen was

recorded in February on transect one, with twelve down on the floodplain and an individual flyover count.

Pink-footed goose – BoCC Amber List

- 4.1.37. The total of 34 pink footed goose *Anser brachyrhynchus* were recorded in January only, with 30 of these relating to a flock flying west over the floodplain on transect one. The remaining four counts relate to a flyover of three birds heading east over the floodplain on transect one and a single count of an individual flying north over arable fields within the south of the Survey Area on transect three.

Reed bunting – BoCC Amber List and SPI under S41 of NERC 2006

- 4.1.38. Two reed bunting *Emberiza schoeniclus* were recorded in February within a hedgerow during transect three (see map section fifteen in Appendix B).

Snipe – BoCC Amber List

- 4.1.39. Fourteen snipe *Gallinago gallinago* were recorded throughout the surveys, with a peak count of thirteen recorded in December, which relate to separate counts of snipe flying over sections of the floodplain on transect one (see map sections three and four in Appendix B). The remaining record relates to an individual flying east across the floodplain near transect one in November (see map section three in Appendix B).

Stock dove – BoCC Amber List

- 4.1.40. A total of ten stock dove *Columba oenas* were recorded during the during the surveys, the majority originating from a peak count in November relating to a flock of eight flying north over arable fields during transect three (see map section fifteen in Appendix B).

Shelduck – BoCC Amber List

- 4.1.41. One shelduck *Tadorna tadorna* was recorded in January on transect one within the floodplain immediately north of Rose Carr (see map section five in Appendix B).

Teal – BoCC Amber List

- 4.1.42. A total of 22 teal *Anas crecca* were recorded over the surveys, all from the River Wensum floodplain area along transect one. The peak count of eleven for this species was recorded in February, with a group of five down in the western section of the floodplain and further count of six flying over other sections of the floodplain (see map section three in Appendix B).

Wigeon – BoCC Amber List

- 4.1.43. A single wigeon *Mareca penelope* was recorded in February on transect one, which was noted on the west of the floodplain (see map section three in Appendix B).

5. REFERENCES

5.1. TECHNICAL REFERENCES

Bibby, C. J., Burgess, N. D., Hill, D. A. & Mustoe, S. H., 2000. *Bird Census Techniques*. Bodmin, Cornwall: Academic Press.

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Appendix A

WINTERING BIRD SURVEY RESULTS

Table A-1 - Wintering bird survey data

Species	Annex I	Schedule 1	BoCC Red	BoCC Amber	NERC S41	Max count	Total count across surveys
Blackbird						54 – December	148
Black-headed gull				✓		45 – November	88
Blue tit						105 – February	282
Brent goose				✓		1 – November	1
Bullfinch				✓	✓	3 – November / February	8
Buzzard						8 – November / December / February	27
Canada goose						80 – December	107
Carrion crow						73 – January	258
Cetti's warbler		✓				1 – January	1
Chaffinch						48 – November	102
Chiffchaff						1 – February	1
Coal tit						10 – February	24

Species	Annex I	Schedule 1	BoCC Red	BoCC Amber	NERC S41	Max count	Total count across surveys
Common gull				✓		104 – January	152
Coot						6 – February	6
Common crossbill		✓				3 – January	3
Dunnock				✓	✓	10 – November / December	34
Egyptian goose						10 – November	23
Feral pigeon						41 – November	41
Fieldfare		✓	✓			69 - November	71
Gadwall				✓		16 – February	16
Goldcrest						34 – February	85
Goldfinch						31 – November	99
Great spotted woodpecker						9 – December	15
Great tit						39 – February	85
Green woodpecker						2 – November / December	5



Species	Annex I	Schedule 1	BoCC Red	BoCC Amber	NERC S41	Max count	Total count across surveys
Greenfinch						15 – February	22
Grey heron						4 – November	11
Grey wagtail			✓			3 – February	5
Greylag goose		✓		✓		70 – December	89
Herring gull			✓			42 – January	79
Jackdaw						137 – November	394
Jay						12 – February	35
Kestrel				✓		4 – November / January	13
Kingfisher		✓		✓		1 – November / February	2
Lapwing			✓		✓	8 – February	8
Lesser black-backed gull				✓		50 – December	51
Linnet			✓		✓	63 – November	85
Long-tailed tit						49 – November	150

Species	Annex I	Schedule 1	BoCC Red	BoCC Amber	NERC S41	Max count	Total count across surveys
Little egret						3 – January	6
Little grebe						1 – December	1
Magpie						16 – January	26
Mallard				✓		4 – November	6
Marsh tit			✓		✓	1 – December	1
Mistle thrush			✓			6 – November	14
Meadow pipit				✓		49 – November	69
Moorhen						3 – January / February	8
Mute swan				✓		13 - February	33
Nuthatch						5 – December	13
Peregrine		✓				1 – February	1
Pheasant						1 – November	1
Pied wagtail						45 – November	53
Pink footed goose				✓		34 – January	34

Species	Annex I	Schedule 1	BoCC Red	BoCC Amber	NERC S41	Max count	Total count across surveys
Red kite		✓				2 – December / January	6
Red-legged partridge						56 – November	64
Lesser redpoll			✓		✓	1 – November / February	2
Redwing		✓	✓			205 – November	472
Reed bunting				✓	✓	2 – February	2
Robin						29 – January	107
Rook						50 – January	66
Siskin						48 – November	99
Skylark			✓		✓	24 – February	68
Snipe				✓		13 – December	14
Song thrush			✓		✓	2 – December / February	5
Sparrowhawk						1 – December / January / February	3

Species	Annex I	Schedule 1	BoCC Red	BoCC Amber	NERC S41	Max count	Total count across surveys
Starling			✓		✓	351 – December	532
Stock dove				✓		8 – November	10
Shelduck				✓		1 – January	1
Teal				✓		11 – February	22
Treecreeper						14 – December	26
Wigeon				✓		1 – February	1
Woodcock			✓			2 – January	2
Wood pigeon						218 – December	307
Wren						30 – December	72
Yellowhammer			✓		✓	5 – December / February	12

Table A-2 - Common and widespread species recorded on or flying over the Survey Area during the wintering bird surveys

Species - Common name	Species - Latin name	Notes - Sex, age and recorded behaviours
Blackbird	<i>Turdus merula</i>	Individuals and flocks up to six were recorded foraging, alarm calling and singing.
Blue tit	<i>Parus caeruleus</i>	Pairs and individuals were seen foraging in scrub and wooded areas across the Survey Area.
Buzzard	<i>Buteo buteo</i>	A total count of 27 buzzard were recorded during the surveys, observed across the Survey Area.
Canada goose	<i>Branta canadensis</i>	Two flocks, one of 80 individuals in December flying over arable fields in the centre of the Survey Area, and one of 27 individuals flying over the floodplain in February.
Carrion crow	<i>Corvus corone</i>	Individuals and groups were recorded across the Survey Area throughout the surveys with maximum flock sizes of 50 recorded on two surveys.
Chaffinch	<i>Fringilla coelebs</i>	Chaffinch were recorded on every visit, with a flock of 35 observed on an arable field in the south of the Survey Area.
Chiffchaff	<i>Phylloscopus collybita</i>	One individual was recorded flying over the south of the Survey Area in February.
Coal tit	<i>Periparus ater</i>	Recorded on every survey in maximum flocks of three.
Coot	<i>Fulica atra</i>	Six coot were recorded in the floodplain in February.

Species - Common name	Species - Latin name	Notes - Sex, age and recorded behaviours
Egyptian goose	<i>Alopochen aegyptiaca</i>	Recorded during November, January and February surveys, maximum count of ten in November.
Feral pigeon	<i>Columba livia domestica</i>	One flock of 41 was recorded during the November survey in the north of the Survey Area on transect one, no other feral pigeon were recorded.
Goldcrest	<i>Regulus regulus</i>	Pairs and individuals were recorded across the Survey Area on every visit, in flocks of up to ten.
Goldfinch	<i>Carduelis carduelis</i>	Recorded across all visits with a maximum count of 31 in November.
Great spotted woodpecker	<i>Dendrocopos major</i>	Individuals were seen recorded on all surveys, more frequently recorded in woodland habitats in the north of the Survey Area.
Great tit	<i>Parus major</i>	Small flocks, pairs and individuals were recorded on every visit with a maximum count of 39 in February.
Green woodpecker	<i>Picus viridis</i>	A total of five were recorded across the surveys, with peak counts of two recorded in November and December, which included an individual calling from a mature tree in the south of the Survey Area.
Greenfinch	<i>Carduelis chloris</i>	Greenfinch were recorded in each month, with a max count of fifteen recorded in February with two flocks of seven observed in arable fields within the south of the Survey Area.
Grey heron	<i>Ardea cinerea</i>	Occasionally noted flying across the floodplain and perched in trees / scrub on the periphery of the floodplain.

Species - Common name	Species - Latin name	Notes - Sex, age and recorded behaviours
Jackdaw	<i>Corvus monedula</i>	Flocks of up to 50 were recorded across the Survey Area on every visit.
Jay	<i>Garrulus glandarius</i>	Individuals were recorded on all surveys, more frequently observed in the north of the Survey Area.
Long-tailed tit	<i>Aegithalos caudatus</i>	Small flocks of up to 25 were recorded within woodland, hedgerow and scrub habitat.
Little egret	<i>Egretta garzetta</i>	Individuals were occasionally noted in the floodplain on transect one with a maximum count of three recorded in January.
Little grebe	<i>Tachybaptus ruficollis</i>	A single count was recorded flying over the south of the Survey Area on transect three in November and December.
Magpie	<i>Pica pica</i>	Individuals occasionally recorded across the Survey Area on each visit.
Moorhen	<i>Gallinula chloropus</i>	A maximum count of three recorded during the surveys, from the floodplain and pond in Rose Carr.
Nuthatch	<i>Sitta europaea</i>	Individuals observed in woodlands in the north of the Survey Area.
Pheasant	<i>Phasianus colchicus</i>	Only one pheasant was recorded over the surveys foraging near Fakenham road in the north of the Survey Area.
Pied wagtail	<i>Motacilla alba</i>	Individuals occasionally noted throughout the surveys, with a flock of 41 observed in long plantation in November.

Species - Common name	Species - Latin name	Notes - Sex, age and recorded behaviours
Red-legged partridge	<i>Alectoris rufa</i>	Occasionally observed within the arable fields near the southern extent of the survey area, with a flock of 50 observed in November.
Robin	<i>Erithacus rubecula</i>	Individuals were recorded across the Survey Area on every visit.
Rook	<i>Corvus frugilegus</i>	Flocks occasionally noted, with a peak count of 50 in January, with 20 foraging on an arable field on transect two, and 30 calling from Gravelpit plantation on transect two.
Siskin	<i>Spinus spinus</i>	Occasionally observed in small flocks, with a flock of 39 observed flying over arable fields within the south of the Survey Area in January on transect three.
Sparrowhawk	<i>Accipiter nisus</i>	A single sparrowhawk was observed during the December, January and February visits, flying north to south into spring hills woodland, east to west over arable fields in the centre of transect two, and flying east along the southern edge of Long Plantation on transect two.
Treecreeper	<i>Certhia familiaris</i>	Individuals occasionally noted across the Survey Area, with a total count of 26.
Wood pigeon	<i>Columba palumbus</i>	Flocks of up to 100 were recorded on every visit across the Survey Area.
Wren	<i>Troglodytes troglodytes</i>	Individuals were recorded on every visit, more frequently recorded on transects one and two.

Appendix B

WINTERING BIRD SURVEY 2020 – 21 MAP

Path: \\uk.wspgroup.com\central\data\Projects\7004\19x\7004\1922 - Norwich Western Link\02 WIP\EC Ecology\06 GIS & Mapping\04 Baseline Surveys\Bird Surveys\Winter Birds\NW1 Winter Birds 2020-21.gpx

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



- Legend
- Scheme boundary
 - 100m survey area buffer
 - Transect route one
 - Transect route two
 - Transect route three
 - Map sections 1 - 18



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Revision Details	By	Date	Suffix
	Check		

Drawing Status: **FINAL**

Job Title

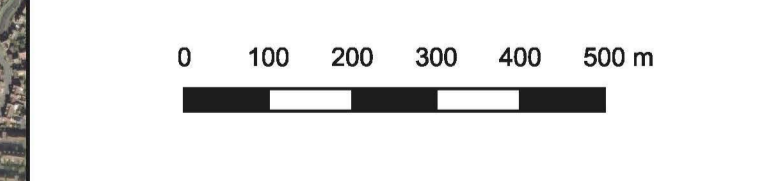
**Norfolk County Council
Norwich Western Link**

Drawing Title

**Wintering Bird Survey 2020 - 21
Map**

Scale at A1: **1:9,000**

Drawn	UKRxE005		
Stage 1 Check	IE	Stage 2 Check	AH
Originalist	RE	Date	29/06/2021



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