

A46 Coventry Junctions (Walsgrave) Scheme number: TR010066

6.3 Environmental Statement Appendix 8.11 Wintering Bird Report

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Infrastructure Planning (Applications: Prescribed Forms and
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**The Infrastructure Planning
(Applications: Prescribed
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A46 Coventry Junctions (Walsgrave)
Development Consent Order 202[x]

ENVIRONMENTAL STATEMENT APPENDICES
Appendix 8.11 Wintering Bird Report

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1. Introduction

1.1. Scheme overview

- 1.1.1. The A46 is part of the strategic road network forming a significant trade and export route between the East and West Midlands. As part of the Government's Road Investment Strategy (RIS2) 2020-2025, the A46 Walsgrave Junction ('the Scheme') is being improved with the realignment of the carriageway and a new grade separated junction. This aims to increase the road's capacity to cater for future developments across the region and promote safety by separating local and long-distance traffic and reducing congestion.
- 1.1.2. Sweco was commissioned by Octavius Infrastructure on behalf of National Highways to undertake wintering bird surveys.
- 1.1.3. The wintering bird surveys detailed within this report were undertaken during the preliminary design stage and were originally based upon the draft Order Limits at that time. The survey data within this report was analysed against the revised Order Limits and it was determined that there is no impact to the results or assessment from the change in the Order Limits. Therefore, the Order Limits have been used within this report.

1.2. Site description

- 1.2.1. The Order Limits are shown in Figures 1 - 13 (Appendix A). The Order Limits includes the existing A46 road with associated road verges, hedgerows, woodland, amenity grassland and mostly arable farmland. The surrounding landscape beyond the Order Limits comprises various semi-natural and man-made habitats. It is predominantly arable land to the north and east of the Order Limits, with a mixture of suburban development, woodland and recreational land to the west, beyond the River Sowe. To the southeast, the Order Limits are immediately adjacent to Coombe Abbey Park and the Coombe Pool Site of Special Scientific Interest (SSSI) which is designated for its ornithological interest. Smite Brook flows out of this site.

1.3. Aims and objectives

- 1.3.1. The aim of the wintering bird surveys was to determine which species are using the study area during winter and to assess its importance for supporting populations of notable bird species including:
- Species of Principal Importance for the purpose of conserving biodiversity covered under Section 41 (S41) of the Natural Environment and Rural Communities (NERC) Act 2006; and

- Red and amber listed Birds of Conservation Concern (BoCC) (BTO, 2021).

1.4. Previous surveys

- 1.4.1. An ornithological walkover survey was undertaken in August 2018 and reported within the 2018 Extended Phase 1 Habitat Survey (Highways England, 2018). The survey concluded that all proposed scheme options (with the exception of the Option 1 'do minimum' option) have the potential to impact upon protected and notable bird species during the over-wintering and the breeding seasons. No other targeted wintering bird surveys have been undertaken prior to the surveys detailed within this report.

1.5. Purpose

- 1.5.1. This wintering bird survey report has been prepared by Sweco for National Highways and will be used to inform the Environmental Statement (ES) biodiversity chapter at the preliminary design stage.
- 1.5.2. The report details wintering bird surveys undertaken between October 2022 and March 2024 including one survey visit in October 2022, one visit in October 2023 and bi-monthly visits between November 2023 and March 2024.

2. Methodology

2.1. Personnel

- 2.1.1. This report was produced by Sweco consultant ecologist [REDACTED] BSc (Hons) MSc Qualifying CIEEM and was reviewed by Sweco senior ecologist [REDACTED] [REDACTED] MEdol (Hons) ACIEEM, who has over eight years' experience as an ornithologist in ecological consultancy including surveys and mitigation for wintering bird, including in producing ecological impact assessments. All the surveyors used to establish baseline information have been trained or were supervised by experienced surveyors with extensive knowledge in the particular survey being undertaken. This report was approved by [REDACTED] MSc MCIEEM CEnv who has over 12 years' experience in ecological consultancy.

2.2. Wintering birds

- 2.2.1. Surveys followed a set transect which aimed to include all core habitat types within the Order Limits (as shown on Figure 1). To provide a reasonable level of accuracy for determining the population status of wintering birds in the Order Limits it was considered that one survey per month from October to March would suffice. After consultation with Natural England, it was proposed that two surveys per month were required due to the proximity of the Order Limits to Coombe Pool SSSI for which wintering waterfowl, including nationally significant number of Shoveler (*Anas clypeata*), are a qualifying feature of the SSSI. Other wintering species of note referenced within the SSSI citation include tufted duck, pochard and gulls, with the woodland also noted as important roost sites for blackbirds, redwings, fieldfares and greenfinches.
- 2.2.2. The survey methodology follows the Bird Survey Guidelines produced by the Bird Survey & Assessment Steering Group (2023) as per CIEEM good practice guidelines (CIEEM, 2023a and 2023b). The survey method was broadly based on that recommended in the standard literature Winter Bird Surveys as described in Bibby, et al. (2000). Standard British Trust for Ornithology (BTO) species codes and symbols for bird activity were used to identify birds and denote activity status where appropriate (Sutherland, 2012).
- 2.2.3. Each visit followed a set transect route which aimed to include all core habitat types within the Order Limits (collectively referred to as 'the study area' where it relates to wintering bird survey (see Figures 1 – 13 in Appendix A)). The survey included two additional vantage points at Coombe Pool to ensure full coverage and observation time for the anticipated increase in number and species of waterfowl over winter.

- 2.2.4. The study area extended approximately 500m from the Order Limits but varies by location due to the urban fringe of Coventry, the proposed works in the location of the transect, the land use and topography. In some locations, this results in a study area of less than 500m but in some locations results in a study area of more than 500m.
- 2.2.5. The surveys were led by experienced ornithologists, [REDACTED], [REDACTED] a [REDACTED] BSc (Hons) MRSB and [REDACTED] BSc (Hons) MCIEEM, and assisted by surveyors [REDACTED] and [REDACTED] BSc (Hons) MSc, during suitable weather conditions (i.e. during conditions when visibility is good in accordance with guidance from the Bird Survey & Assessment Steering Group (2023) and when high winds do not prevent the use of required equipment if required) as summarised in Table 1.

Table 1 Wintering bird survey conditions

Survey no.	Date	Time	Wind	Precipitation	Cloud (oktas)	Temperature (°C)
WBS 1	18/10/2022	07:30-11:00	1	Dry	7	6
WBS 2	17/10/2023	07:24-11:15	3	Dry	3	7
WBS 3	14/11/2023	08:20-12:15	3	Dry	8	10
WBS 4	29/11/2023	08:30-11:45	1	Dry (after heavy rain)	8	-1
WBS 5	2/12/2023	08:20-11:15	1	Mist (until 10am)	8	-2
WBS 6	21/12/2023	08:00-13:00	2	Mist	4	8
WBS 7	18/01/2023	08:15-12:30	2	Dry	3	-3
WBS 8	25/01/2024	08:30-12:15	2	Dry	7	10
WBS 9	16/02/2024	08:30-12:30	2	Light rain	4	8
WBS 10	23/02/2024	08:30-12:00	1	Dry (after light rain)	2	6
WBS 11	08/03/2024	08:00-12:15	2	Dry	6	4
WBS 12	22/03/2024	08:10-12:30	1	Dry	4	7

- 2.2.6. The conservation status of species based on evidence of population declines and restriction of range on a local and international scale, as listed on the Conservation Designations for UK Taxa list published by the JNCC (2020). The Birds of Conservation Concern (BoCC) allocates species into the green, amber or red list corresponding to a low to high level of conservation concern respectively (BTO, 2021). Species accounts for priority NERC species are obtained from the JNCC (2007).

- 2.2.7. The number of species recorded in the area is a simple measure of diversity that can help indicate the importance of the site at each season of the year. The area's importance in value can be determined by several factors including geographical location, diversity of habitats present and size. Fuller (1980) detail the diversity of criteria, for bird species diversity, as shown in Table 2.

Table 2 Bird species diversity criteria: the importance of area based on the number of bird species recorded (Fuller, 1980)¹

National Importance	Regional Importance	County Importance	Local Importance
85+	70-84	50-69	25-49

- 2.2.8. Fuller's criteria, plus professional judgement, have been used to assess the importance of the study area for wintering birds. In addition to evaluating the area based on the wintering bird assemblages, consideration is given to the value of the area for the populations of individual key species that it supports. This was done by comparing the population present within the study area with national and county wintering populations for certain species.
- 2.2.9. As Fuller's criteria was written in 1980, farmland bird species have continued to suffer a large-scale decline across the UK. Due to this, counts which are at the upper limits of each criteria should be considered using professional judgement whether it will need upgrading into the lower limits of the next highest criteria.
- 2.2.10. The conservation value of individual species can be measured by two separate approaches: nature conservation value and conservation status. The Chartered Institute of Ecology and Environmental Management (CIEEM) guidance on ecological impact assessment (CIEEM, 2018), assesses nature conservation value within a geographical context. To attain each level of value, an ornithological resource or one of the features (species population or assemblage of species) should meet the criteria set out in Table 3. In some cases, professional judgement may be required to increase or decrease the allocation of specific value, based upon local knowledge.

Table 3 Species value, terms and criteria

Species Value	Selection Criteria
International and European	A species which is part of the cited interest of a Special Protection Area and which regularly occurs in internationally or nationally important numbers. A species which is present in internationally important numbers (>1% of the international population).
National	A species which is part of the cited interest of a SSSI and which regularly

¹ Although these criteria are principle concerned with breeding populations, they are used here as an indication of the importance of the wintering bird population.

Species Value	Selection Criteria
	occurs in nationally or regionally important numbers. A nationally important assemblage of breeding or over-wintering species. A species which is present in nationally important numbers (>1% UK population). Rare breeding species (<300 breeding pairs in the UK).
Regional	Species of principal importance under Section 41 of the National Environment and Rural Communities (NERC) Act (2006), which are not covered above, and which regularly occurs in regionally important numbers. Species present in regionally important numbers (>1% of regional population). Sustainable populations of species that are rare or scarce within a region. Species on the BoCC red list and which regularly occurs in regionally important numbers.
County	Species of principal importance under Section 41 of the National Environment and Rural Communities (NERC) Act (2006), which are not covered above and which regularly occurs in county important numbers. Species present in county important numbers (>1% of county population). A site designated for its county important assemblage of birds (e.g. a Sites of Importance for Nature Conservation (SINC) Site). Species on the BoCC Red List and which regularly occur in county important numbers.
District	Species of principal importance under Section 41 of the National Environment and Rural Communities (NERC) Act (2006), which are not covered above, and are rare in the locality or in the relevant Natural Area profile. Species present in numbers just short of county importance. Sustainable populations of species which are rare or scarce within the locality. A site whose designation falls just short for inclusion for its county important assemblage of birds (e.g. a SINC Site). Other species on the BoCC red list and which are considered to regularly occur in district important numbers.
Local	Other species of conservation interest (e.g. all other species on the BoCC Red and Amber List and listed as of principle importance under Section 41 of the National Environment and Rural Communities (NERC) Act (2006) which are not covered above, regularly occurring in locally sustainable populations.
Site	All other BoCC green-listed, common and widespread species.

2.3. Impacts

2.3.1. The Scheme has the potential to generate adverse impacts during the construction phase and the operation phase.

- Construction
 - Wintering bird foraging habitat loss (direct impact) due to vegetation removal for working area and the construction of the proposed dumbbell junction and B4082

- Disturbance of construction i.e. noise and visual disturbance (indirect impact).
- Operation
 - Mortality of wintering birds e.g. traffic collisions (direct impact)
 - Disturbance of operation i.e. noise and visual disturbance (indirect impact) and associated avoidance (loss) of potential foraging habitat.

2.4. Survey limitations

- 2.4.1. Birdsong was almost inaudible along large sections of the hedges bordering the A46 due to the continuous noise coming from the high volumes of fast-moving traffic. It may be that birds were under-recorded in these areas as a result, however it is also possible that birds were simply less abundant in these areas, as a number of papers have shown that species richness and diversity decrease towards motorway habitats (Rheindt, 2003). Consequently, this limitation is not considered likely to be significant.
- 2.4.2. The details of this report will remain valid for two years from the date of the survey, after which the validity of this assessment should be reviewed to determine whether further updates are necessary. Note that the suggestions within this report should be reviewed (and reassessed if necessary) should there be any changes to the Order Limits which this report was based upon.

3. Results

3.1. Wintering bird survey

- 3.1.1. A total of 71 species were recorded within the study area (Order Limits and survey buffer) during the wintering bird surveys. Of these species, 12 were BoCC red-listed, 24 BoCC amber-listed, 10 species of principle importance (NERC), two Annex 1 and five listed under WCA Schedule 1. The full results of the wintering bird surveys are included in Appendix B.
- 3.1.2. A total of 35 species were recorded within the Order Limits only. Of these, 18 species have designations; six BoCC Red List, 10 BoCC Amber List, four NERC and three Schedule 1 of the Wildlife and Countryside act 1981 (as amended).
- 3.1.3. The majority of the birds recorded within the study area were common species associated with the hedgerows, woodland or waterbody within the study area, with 32 species classified as introduced or green listed BOCC and therefore are not considered further in this report.
- 3.1.4. The notable species recorded during the wintering bird surveys are included in Table 4, and their locations shown on Figures 2 - 13 (Appendix A).

Table 4 Notable species recorded and their designations

Common Name	Scientific Name	Designation
Black-headed Gull	<i>Chroicocephalus ridibundus</i>	Amber BOCC
Bullfinch	<i>Pyrrhula pyrrhula</i>	Amber BOCC NERC
Cetti's Warbler	<i>Cettia cetti</i>	Sch 1
Common Gull	<i>Larus canus</i>	Amber BOCC
Dunnock	<i>Prunella modularis</i>	Amber BOCC NERC
Fieldfare	<i>Turdus pilaris</i>	Red BOCC Sch 1
Gadwall	<i>Mareca strepera</i>	Amber BOCC
Goldeneye	<i>Bucephala clangula</i>	Red BOCC
Great Black-backed Gull	<i>Larus marinus</i>	Amber BOCC
Green Sandpiper	<i>Tringa ochropus</i>	Amber BOCC Sch 1
Greenfinch	<i>Chloris chloris</i>	Red BOCC
Grey Wagtail	<i>Motacilla cinerea</i>	Amber BOCC
Greylag Goose	<i>Anser anser</i>	Amber BOCC
Herring Gull	<i>Larus argentatus</i>	Red BOCC NERC
House Sparrow	<i>Passer domesticus</i>	Red BOCC NERC
Kestrel	<i>Falco falcis</i>	Amber BOCC

Common Name	Scientific Name	Designation
Kingfisher	<i>Alcedo atthis</i>	Amber BOCC Sch 1, BD Annex 1
Lapwing	<i>Vanellus vanellus</i>	Red BOCC NERC
Lesser Black-backed Gull	<i>Larus fuscus</i>	Amber BOCC
Linnet	<i>Linaria cannabina</i>	Red BOCC NERC
Little Egret	<i>Egretta garzetta</i>	BD Annex 1
Mallard	<i>Anas platyrhynchos</i>	Amber BOCC
Meadow Pipit	<i>Anthus pratensis</i>	Amber BOCC
Mistle Thrush	<i>Turdus viscivorus</i>	Red BOCC
Moorhen	<i>Gallinula chloropus</i>	Amber BOCC
Mute Swan	<i>Cygnus olor</i>	Green BOCC
Pochard	<i>Aythya ferina</i>	Red BOCC
Redwing	<i>Turdus iliacus</i>	Amber BOCC Sch 1
Rook	<i>Corvus frugilegus</i>	Amber BOCC
Skylark	<i>Alauda arvensis</i>	Red BOCC NERC
Song Thrush	<i>Turdus philomelos</i>	Amber BOCC NERC
Sparrowhawk	<i>Accipiter nisus</i>	Amber BOCC
Starling	<i>Sturnus vulgaris</i>	Red BOCC NERC
Stock Dove	<i>Columba oenas</i>	Amber BOCC
Teal	<i>Anas crecca</i>	Amber BOCC
Wigeon	<i>Mareca penelope</i>	Amber BOCC
Woodpigeon	<i>Columba palumbus</i>	Amber BOCC
Wren	<i>Troglodytes troglodytes</i>	Amber BOCC
Yellowhammer	<i>Emberiza citrinella</i>	Red BOCC NERC

- 3.1.5. Flocks of wintering birds were frequently recorded foraging within the arable fields within the Order Limits and study area including fieldfare, redwing, lapwing, linnet, meadow pipit, mistle thrush, rook, skylark, song thrush, starling, stock dove, woodpigeon and yellowhammer. All these species apart from lapwing were also often recorded within the arable field boundary hedgerows and tree lines. On particularly cold surveys, such as WBS 7 where the ground within the arable fields was frozen, redwing flocks were also recorded foraging within the woodland floor within Coombe Pool SSSI.
- 3.1.6. Other species recorded within the hedgerows on site include dunnock, greenfinch and house sparrow, with bullfinch, woodpigeon and wren also associated with woodlands.
- 3.1.7. Kestrel and sparrowhawk were occasionally recorded flying over the study area.

- 3.1.8. Species recorded within the study area which were referenced within the Coombe Pool SSSI citation include tufted duck, pochard, gulls (comprising black-headed gull, common gull, great black-backed gull, lesser black-backed gull and herring gull), along with blackbirds, redwings, fieldfares and greenfinches within the woodland. No shoveler was recorded within the study area during any wintering bird survey.
- 3.1.9. Other notable species recorded within the waterbody at Coombe Pool included: gadwall, goldeneye, greylag goose, little egret, mallard, moorhen, mute swan, teal and wigeon. Species associated with the brook to the west of Coombe Pool included kingfisher, grey wagtail, and green sandpiper. In addition, Cetti's warbler was recorded within the reedbed to the south of Coombe Pool.
- 3.1.10. Towards the end of the wintering bird surveys, breeding behaviour by a pair of kingfishers was observed from February into the March surveys, comprising frequent calling and commuting along the unnamed watercourse to the west of Coombe Pool.

3.2. Disturbance events

- 3.2.1. Disturbance was recorded at numerous points during the bird surveys. The main disturbance events are detailed in Table 5.

Table 5 Disturbance events

Activity	Time	Level of disturbance
Dog Walkers	Alarm calls heard by birds on footpaths when dogs were present.	Low – alarm calls and low-level flushing from areas adjacent to footpaths.
Archaeology	Archaeology digs were present on site during January and February.	Moderate – general detection levels were low in this area, most likely due to the archaeological operations which were occurring.
Gas bangs for bird scarers	Gas bangs in the surrounding cropland.	Moderate – general detection levels were lower across the crop fields.
Agricultural Operations	During one survey a tractor was present within one of the arable fields.	Low – low level flushing from areas adjacent to the tractor.

4. Assessment and mitigation

4.1. Bird assemblages

- 4.1.1. The overall assemblage of bird species recorded within the study area was typical of the range of habitat which dominates the area. These species are partially characterised by hedgerow, woodland, scrub habitat and arable fields.
- 4.1.2. Fuller (1980) devised a standard where the importance of an area can be assessed by the number of bird species recorded (Table 2). The number of species present within the Order Limits was 35, of which 18 species have designations which places the Order Limits within the range of local importance.

4.2. Impact of habitat change or loss

- 4.2.1. The impact on wintering bird species across the study area arising from the effects of the Scheme is based upon an understanding of each species individual requirements for winter foraging and roosting. The species recorded within the study area that are considered most sensitive to impacts from habitat change are species which are listed under Annex I of the Birds Directive, birds which are cited on the Birds of Conservation Concern red and amber list and those on the Local Biodiversity Action Plan.
- 4.2.2. The habitat requirements, species status during the surveys and nature conservation value of notable species are summarised in Section 3. Residual impacts arising from the Scheme through habitat loss or change have also been assessed for these species.

4.3. Construction impacts

- 4.3.1. Construction operations are likely to disturb bird species of nature conservation interest using the study area for roosting and foraging. The construction of the Scheme will result in land-take, fragmentation and general habitat loss.
- 4.3.2. The temporary loss of some habitat areas during the construction phase cannot be mitigated for and therefore, it is highly likely that birds currently using the Order Limits will move away to find alternative suitable winter feeding grounds.
- 4.3.3. Hedgerows that are to be removed will increase the fragmentation of corridors across the Order Limits during the construction phase. This will be unfavourable to many bird species recorded and will likely see a reduction in hedgerow and farmland species during the construction phase of the project.

- 4.3.4. Visual (including task lighting) and noise disturbance from machinery required during the construction phase will likely lead to desertion or avoidance of the study area by wintering bird species.

4.4. Operational impacts

- 4.4.1. Birds are generally considered likely to be affected by an increase in traffic and can be particularly susceptible to noise from within the Order Limits.

4.5. Mitigation measures

- 4.5.1. The following mitigation measures are suggested:
- Areas across the Scheme which require vegetation clearance during the winter months should be staggered to allow the natural food resources to be consumed by the birds remaining on site.
 - It is important that hedgerows, scrub and standard trees are retained where possible and managed for their value to birds and other wildlife.

4.6. Mitigation and conservation compensation

- 4.6.1. To ensure biodiversity is retained, protected and enhanced within the Scheme resulting in a net gain for wintering birds it is suggested that:
- Hedgerows gaps are to be infilled with at least double hedge planting; ideally triple.
 - Ensure all trees around the site are protected and retained where possible, and any trees are afforded a root protection zone as informed by an arboricultural impact assessment.
 - Native planting should be encouraged to attract invertebrates and include berry-rich species.
 - Areas of less-managed grassland, subject to traditional meadow management, should be included in the environmental masterplan, to enable the establishment of a taller, more species-rich sward which will increase both invertebrate and small mammal populations.
 - Areas of less managed, species-rich grassland should be created alongside hedgerows and sown with seed rich plant species to provide suitable foraging for wintering birds to promote species moving back into the site after works have completed.
 - Management of the scrub and any hedgerows on site will be sympathetic to wildlife once the site is operational. A wildlife-friendly cutting regime will include cutting in late winter (February) and only once every two or three years. This will allow fruiting and flowering of the hedge to provide foraging resources for birds. Hedges will be cut on a rotation to allow areas where there is always some two- to three-year-old growth.

5. References

Bibby C.J., Burgess, N.D., Hill D. A. and Mustoe, S.H. (2000) Bird Census Techniques. 2nd Edition. Academic Press, London.

Bird Survey & Assessment Steering Group, "Bird Survey Guidelines for assessing ecological impacts, v.1.1.1" 2023. [Online]. Available: <https://birdsurveyguidelines.org> (accessed in April 2023).

BTO (2021) Birds of Conservation Concern 5. [https://www.bto.org/our-science/publications/birds-conservation-concern#:~:text=Commonly%20referred%20to%20as%20the,Conservation%20Concern%205%20\(BOCC5\)](https://www.bto.org/our-science/publications/birds-conservation-concern#:~:text=Commonly%20referred%20to%20as%20the,Conservation%20Concern%205%20(BOCC5)) (accessed August 2022).

CIEEM (2018) Guidelines for Ecological Impact Assessment in the UK and Ireland, Chartered Institute of Environmental Management, Winchester.

CIEEM (2023a) Good Practise Guidance for Habitats and Species. [Online]. Available: <https://cieem.net/wp-content/uploads/2021/05/Good-Practice-Guide-2023-edit.pdf> (accessed in April 2023).

CIEEM (2023b) Guidelines for use by ornithologists and ecological consultants who engage in bird surveys for the purpose of assessing ecological impacts including Ecological Impact Assessments (EclA) and Environmental Impact Assessments. [Online]. Available: <https://cieem.net/resource/bird-survey-guidelines-for-assessing-ecological-impacts/> (accessed in April 2023).

Fuller, R.J. (1980) A Method for Assessing the Ornithological Importance of Sites for Nature Conservation Biological Conservation 17:229-239

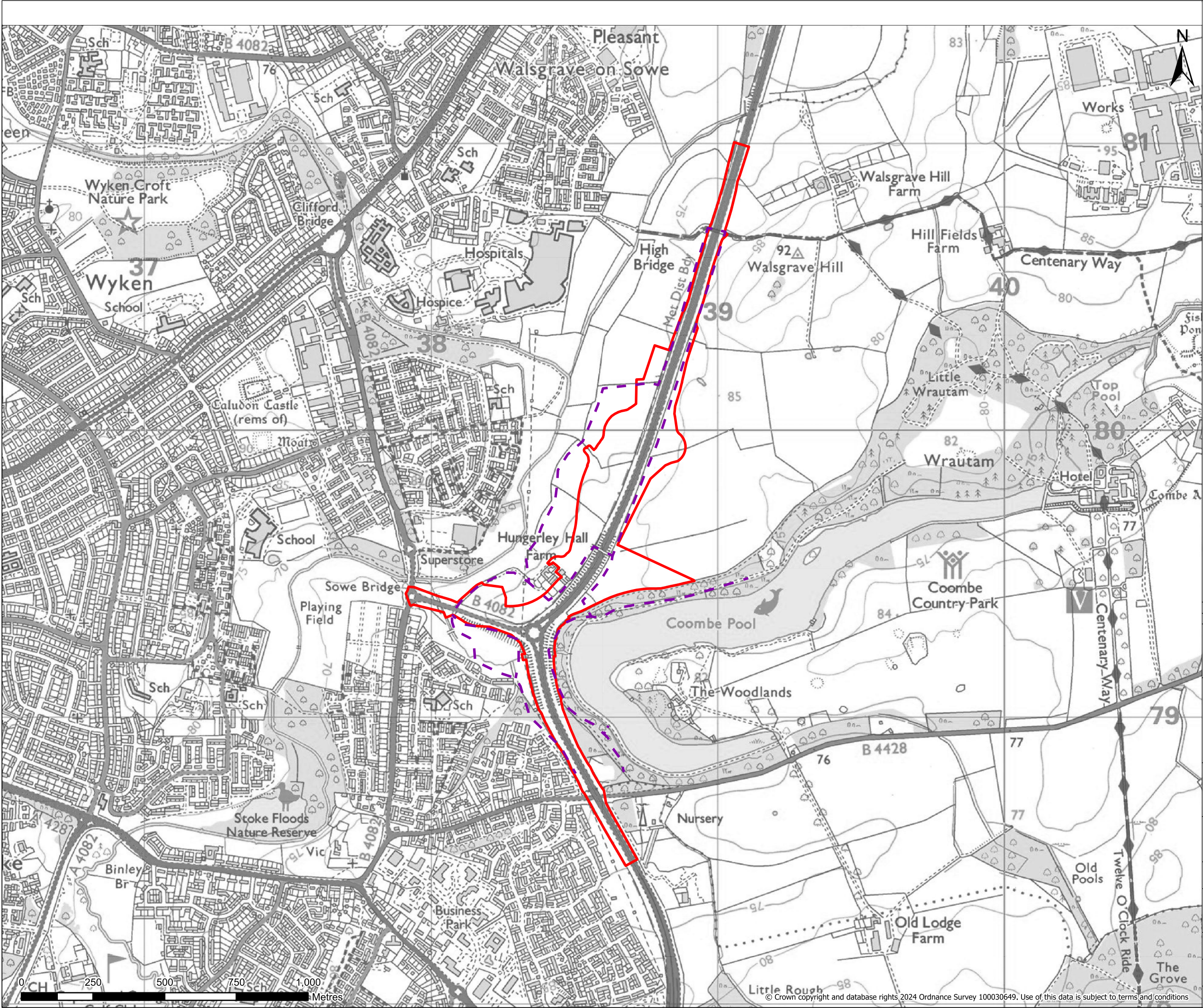
Highways England (2018). A46 Coventry Junction: Walsgrave Junction. Extended Phase 1 Habitat Update Survey Report.

JNCC (2007) UK Biodiversity Action Plan. List of UK BAP priority bird species. <https://data.jncc.gov.uk/data/98fb6dab-13ae-470d-884b-7816afce42d4/UKBAP-priority-birds.pdf> (accessed in June 2023).

Rheindt, F.E. (2003) The impact of roads on birds: Does song frequency play a role in determining susceptibility to noise pollution?. Journal of Ornithology 144, 295–306. <https://doi.org/10.1007/BF02465629> (accessed in June 2023)

Sutherland, W. J., (2012) Ecological Census Techniques, 2nd ed., Cambridge: Cambridge University Press.

Appendix A. Figures



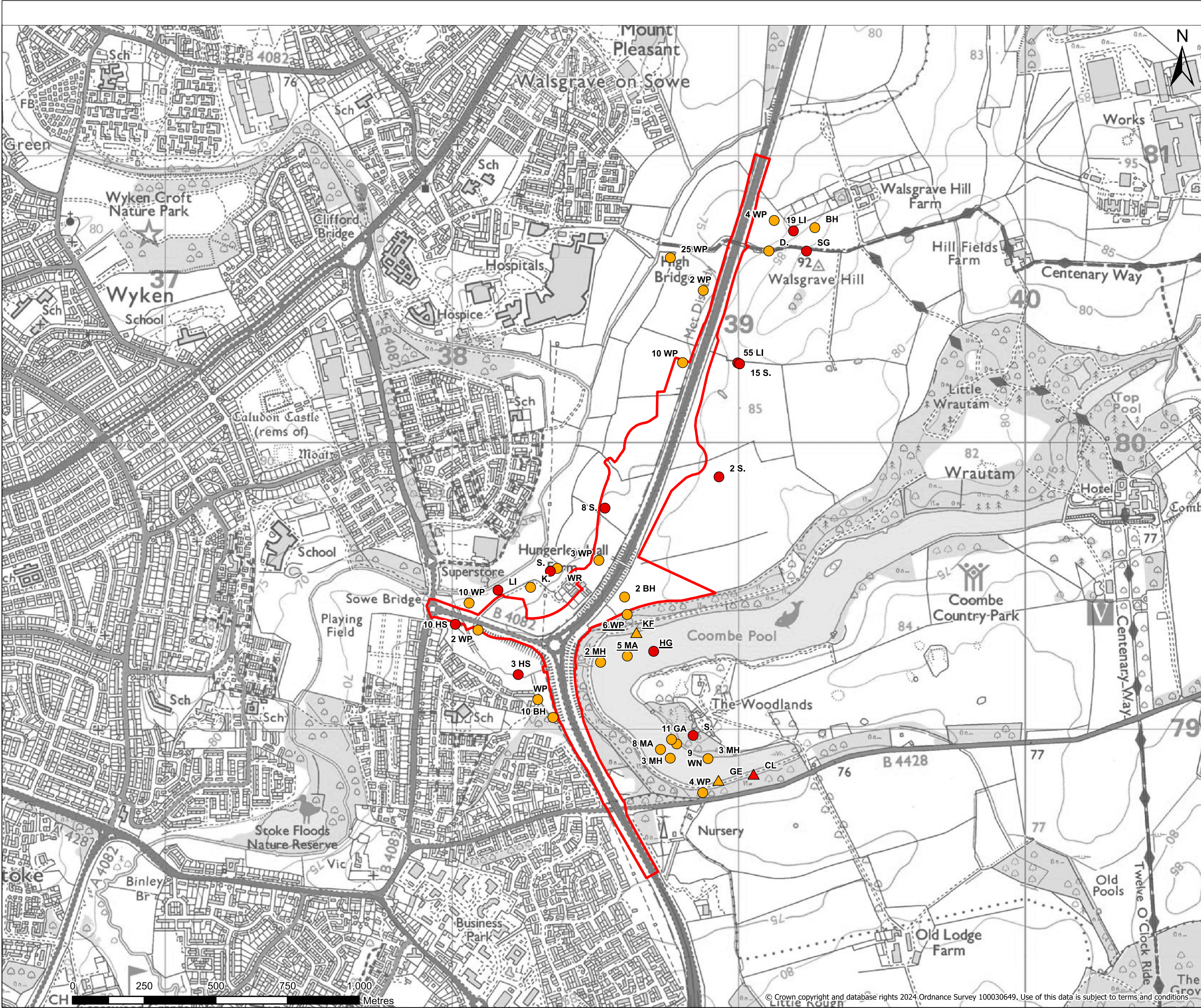
Legend

Order Limits

Survey Transect Route

Contains OS data © Crown Copyright and database right 2020

P02	06.10.2024	FIRST EDITION	AC	ER	CF
REV	DATE	REVISION NOTE	ORG	CHKD	APP
Designer					
Contractor					
Client					
Project Title A46 COVENTRY JUNCTIONS (WALSGRAVE)					
Project Stage DCO APPLICATION					
Drawing Title FIGURE 1: TRANSECT ROUTE					
Suitability FOR INFORMATION					
Sheet Size A3	Scale 1:12,500	Status S3	Revision P02		
Drawing Number HE604820-OIL-EBD-00-DR-LB-30072					



Legend

Order Limits

BOCC status / Schedule 1

Amber BOCC

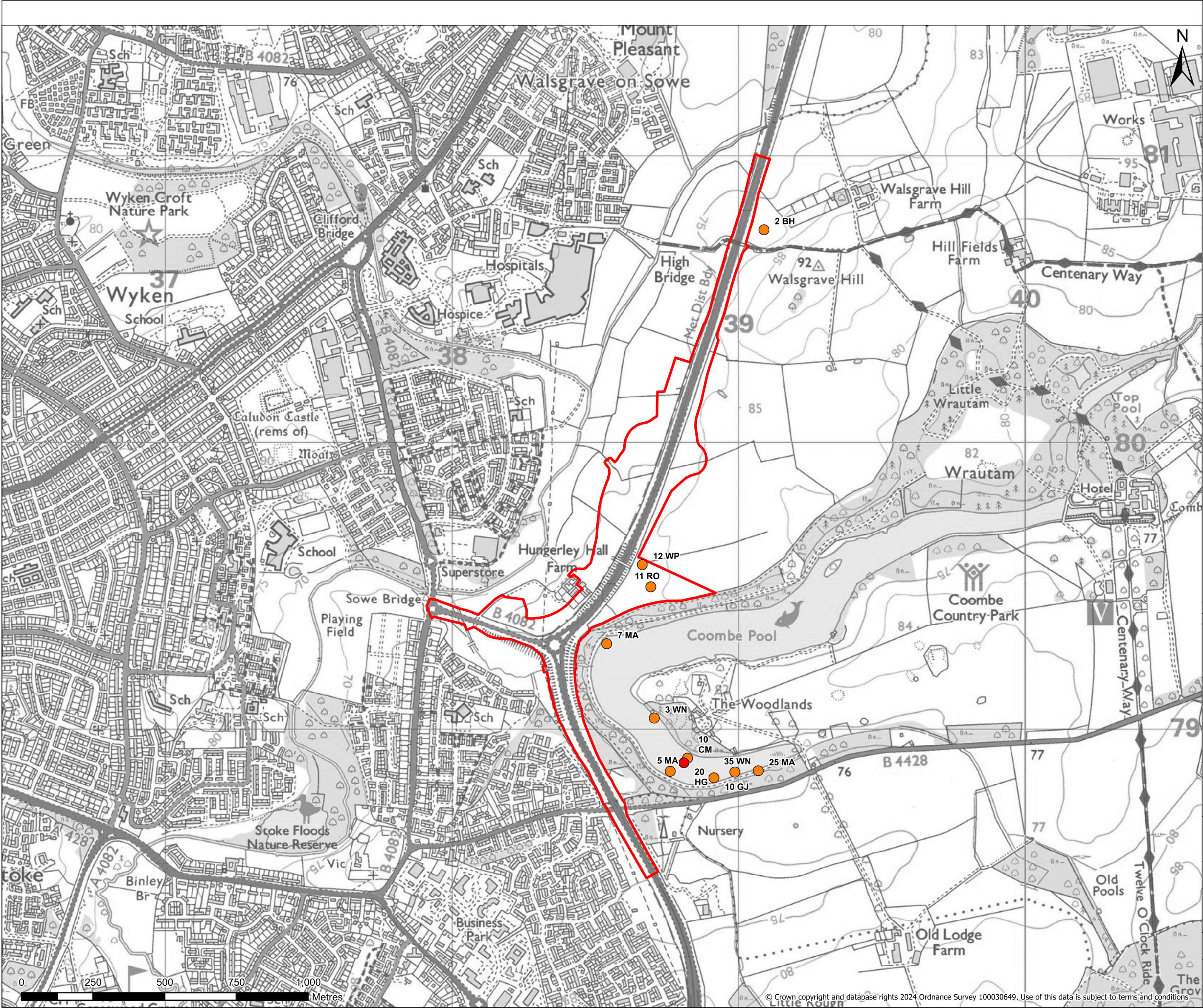
Amber BOCC Schedule 1

Red BOCC

Red BOCC Schedule 1

BTO species codes:

BH	Black-headed Gull	ET	Little Egret
BF	Bullfinch	MA	Mallard
CW	Cetti's Warbler	MP	Meadow Pipit
CM	Common Gull	M.	Mistle Thrush
D.	Duncock	MH	Moorhen
FF	Fieldfare	MS	Mute Swan
GA	Gadwall	PO	Pochard
GN	Goldeneye	RE	Redwing
GB	Great Black-backed Gull	RO	Rook
GE	Green Sandpiper	S.	Skylark
GR	Greenfinch	ST	Song Thrush
GL	Grey Wagtail	SH	Sparrowhawk
GJ	Greylag Goose	SG	Starling
HG	Herring Gull	SD	Stock Dove
HS	House Sparrow	T.	Teal
K.	Kestrel	WN	Widgeon
KF	Kingfisher	WP	Woodpigeon
L.	Lapwing	WR	Wren
LB	Lesser Black-backed Gull	Y.	Yellowhammer
LI	Linnet		



Legend

Order Limits

BOCC status / Schedule 1

Amber BOCC

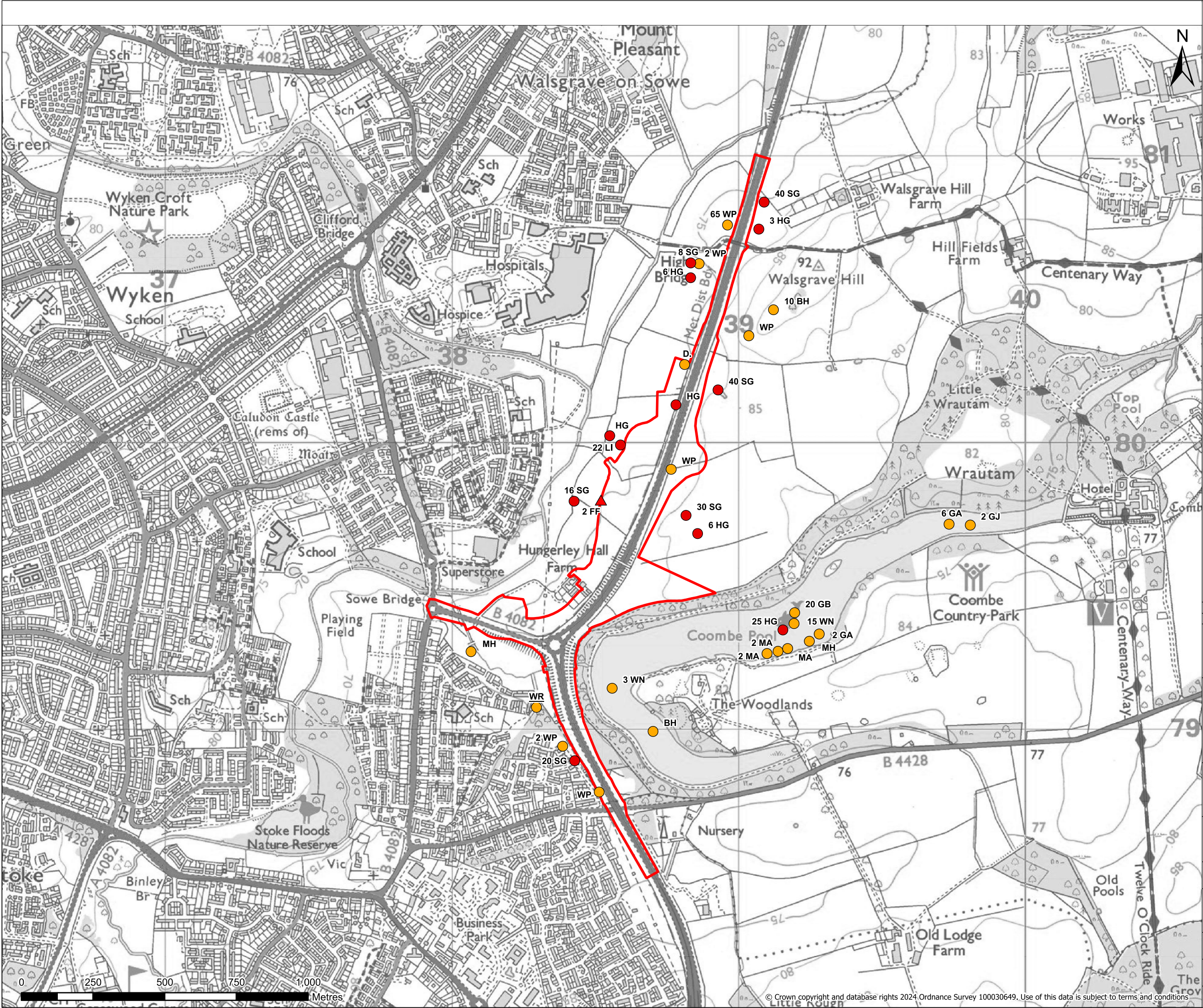
Red BOCC

BTO species codes:

BH	Black-headed Gull	ET	Little Egret
BF	Bullfinch	MA	Mallard
CW	Cetti's Warbler	MP	Meadow Pipit
CM	Common Gull	M	Mistle Thrush
D	Duncock	MH	Moorhen
FF	Fieldfare	MS	Mute Swan
GA	Gadwall	PO	Pochard
GN	Goldeneye	RE	Redwing
GB	Great Black-backed Gull	RO	Rook
GE	Green Sandpiper	S	Skylark
GR	Greenfinch	ST	Song Thrush
GL	Grey Wagtail	SH	Sparrowhawk
GJ	Greylag Goose	SG	Starling
HG	Herring Gull	SD	Stock Dove
HS	House Sparrow	T	Teal
K	Kestrel	WN	Wigeon
KF	Kingfisher	WP	Woodpigeon
L	Lapwing	WR	Wren
LB	Lesser Black-backed Gull	Y	Yellowhammer
LI	Linnet		

P01	18/09/2024	FIRST EDITION	AC	ER	CF
REV	DATE	REVISION NOTE	ORG	CHKD	APP
Designer					
Contractor					
Client					
Project Title A46 COVENTRY JUNCTIONS (WALSGRAVE)					
Project Stage DCO APPLICATION					
Drawing Title FIGURE 3: WINTERING BIRD SURVEY VISIT 2 (17/10/2023)					
Suitability FOR INFORMATION					
Sheet Size A3	Scale 1:12,500	Status S3	Revision P01		
Drawing Number HE604820-OIL-EBD-00-DR-LB-30074					

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Legend

Order Limits

BOCC status / Schedule 1

Amber BOCC

Red BOCC

Red BOCC Schedule 1

BTO species codes:

BH

Black-headed Gull

ET

Little Egret

BF

Bullfinch

MA

Mallard

CW

Cetti's Warbler

MP

Meadow Pipit

CM

Common Gull

M.

Mistle Thrush

D.

Duncock

MH

Moorhen

FF

Fieldfare

MS

Mute Swan

GA

Gadwall

PO

Pochard

GN

Goldeneye

RE

Redwing

GB

Great Black-backed Gull

RO

Rook

GE

Green Sandpiper

S.

Skylark

GR

Greenfinch

ST

Song Thrush

GL

Grey Wagtail

SH

Sparrowhawk

GJ

Greylag Goose

SG

Starling

HG

Herring Gull

SD

Stock Dove

HS

House Sparrow

T.

Teal

K.

Kestrel

WN

Widgeon

KF

Kingfisher

WP

Woodpigeon

L.

Lapwing

WR

Wren

LB

Lesser Black-backed Gull

Y.

Yellowhammer

LI

Linnet

PO2

09.10.2024

FIRST EDITION

AC

ER

CF

REV

DATE

REVISION NOTE

ORG

CHKD

APP

Designer

Contractor

Client

national highways

Project Title

A46 COVENTRY JUNCTIONS (WALSGRAVE)

Project Stage

DCO APPLICATION

Drawing Title

FIGURE 4: WINTERING BIRD SURVEY VISIT 3 (14/11/2023)

Suitability

FOR INFORMATION

Sheet Size

A3

Scale

1:12,500

Status

S3

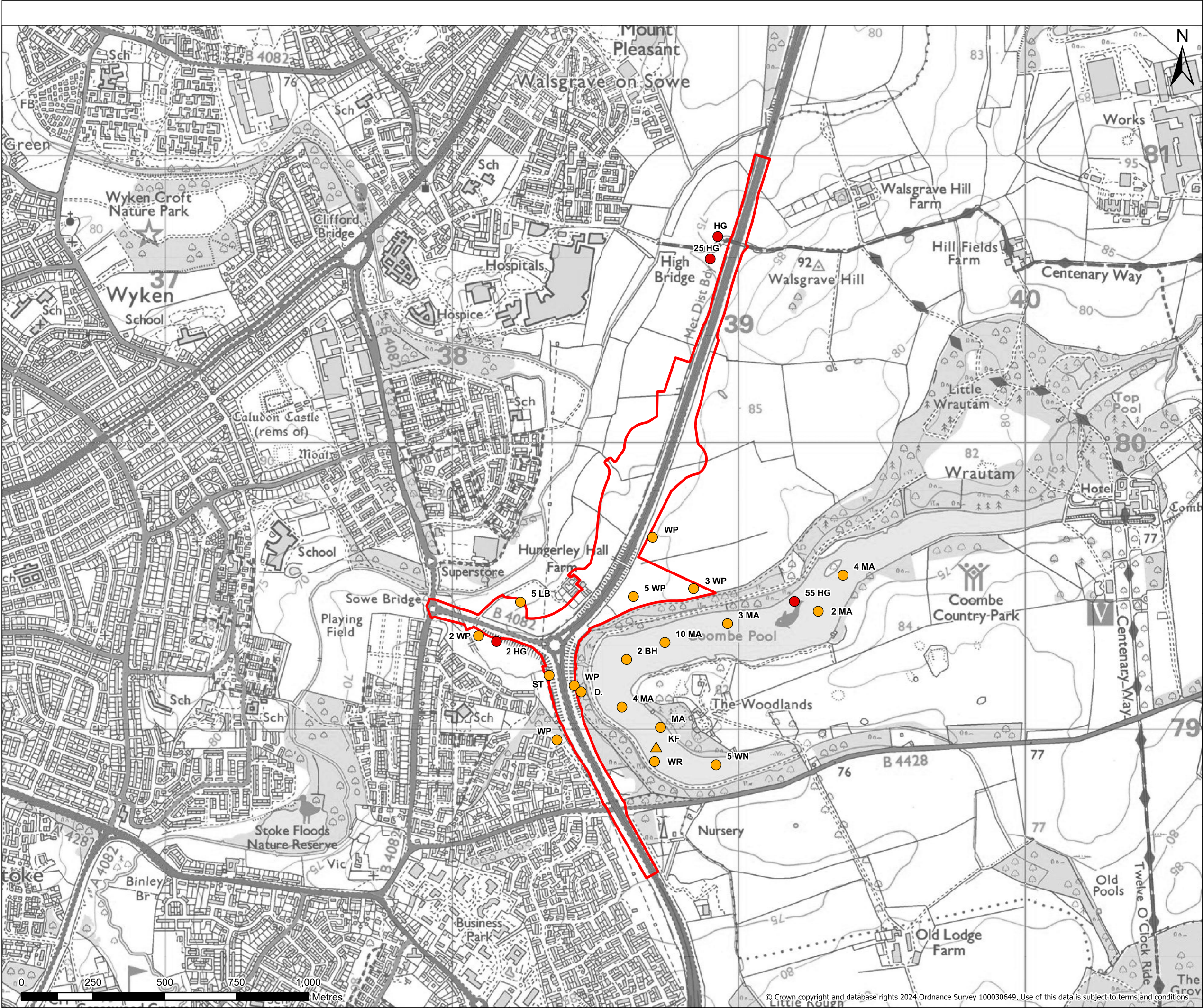
Revision

P02

Drawing Number

HE604820-OIL-EBD-00-DR-LB-30046

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Legend

Order Limits

BOCC status / Schedule 1

Amber BOCC

Amber BOCC Schedule 1

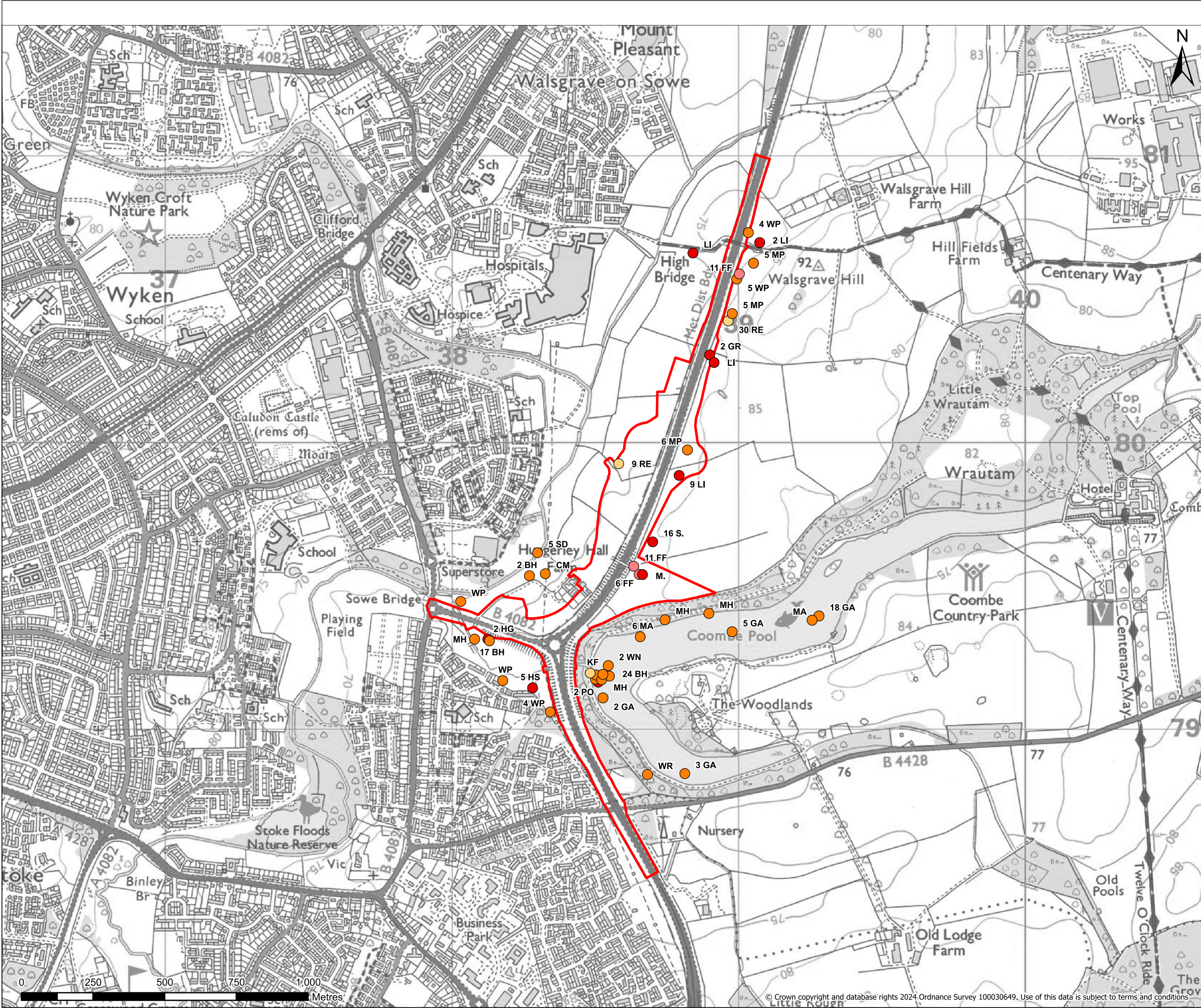
Red BOCC

BTO species codes:

BH	Black-headed Gull	ET	Little Egret
BF	Bullfinch	MA	Mallard
CW	Cetti's Warbler	MP	Meadow Pipit
CM	Common Gull	M.	Mistle Thrush
D.	Duncock	MH	Moorhen
FF	Fieldfare	MS	Mute Swan
GA	Gadwall	PO	Pochard
GN	Goldeneye	RE	Redwing
GB	Great Black-backed Gull	RO	Rook
GE	Green Sandpiper	S.	Skylark
GR	Greenfinch	ST	Song Thrush
GL	Grey Wagtail	SH	Sparrowhawk
GJ	Greylag Goose	SG	Starling
HG	Herring Gull	SD	Stock Dove
HS	House Sparrow	T.	Teal
K.	Kestrel	WN	Widgeon
KF	Kingfisher	WP	Woodpigeon
L.	Lapwing	WR	Wren
LB	Lesser Black-backed Gull	Y.	Yellowhammer
LI	Linnet		

P02	09.10.2024	FIRST EDITION	AC	ER	CF
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Designer					
Contractor					
Client					
Project Title A46 COVENTRY JUNCTIONS (WALSGRAVE)					
Project Stage DCO APPLICATION					
Drawing Title FIGURE 5: WINTERING BIRD SURVEY VISIT 4 (29/11/2023)					
Suitability FOR INFORMATION					
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Drawing Number HE604820-OIL-EBD-00-DR-LB-30047					

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Legend

Order Limits

BOCC status / Schedule 1

Amber BOCC

Amber BOCC Schedule 1

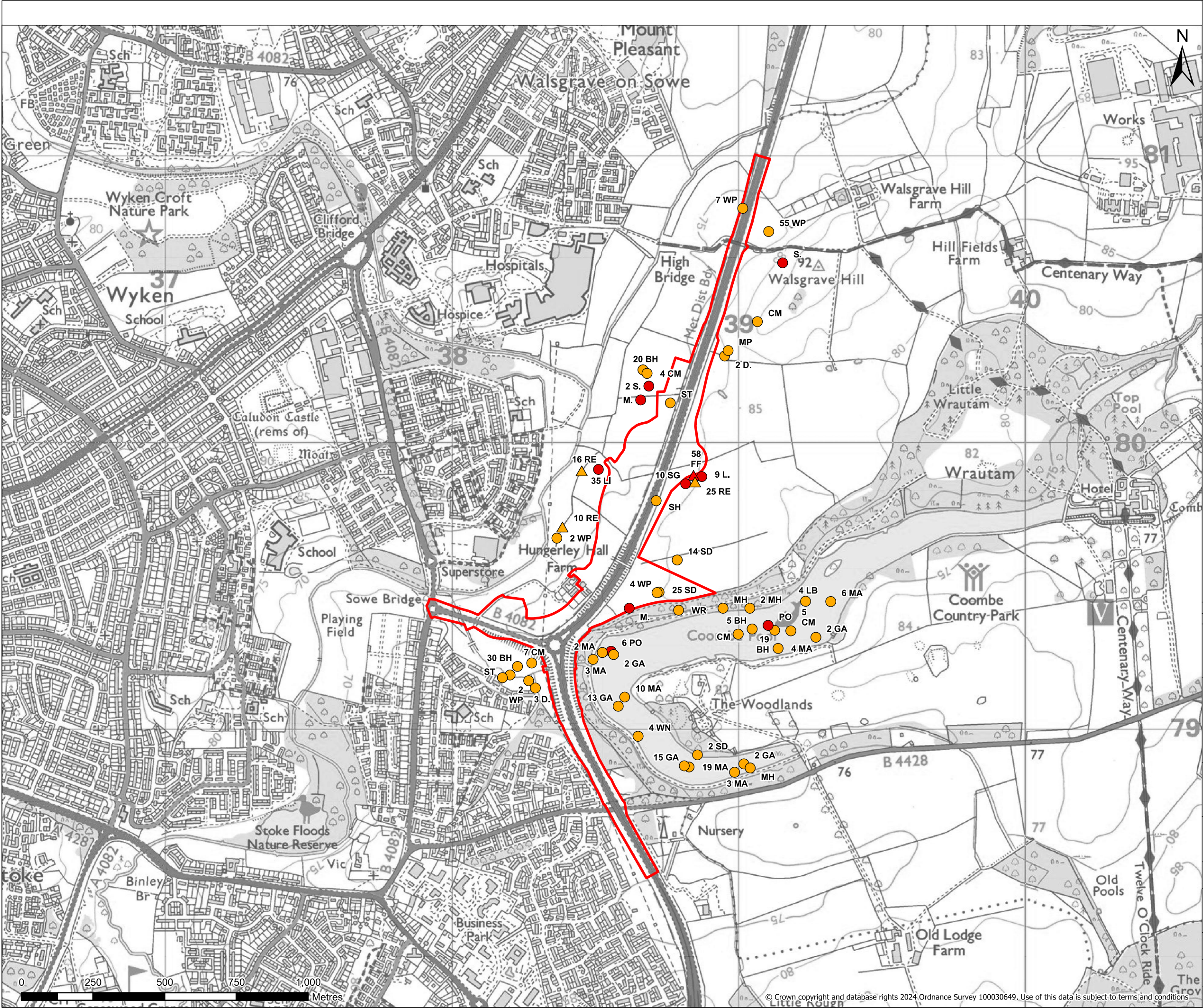
Red BOCC

Red BOCC Schedule 1

BTO species codes:

BH	Black-headed Gull	ET	Little Egret
BF	Bullfinch	MA	Mallard
CW	Cetti's Warbler	MP	Meadow Pipit
CM	Common Gull	M.	Mistle Thrush
D.	Duncock	MH	Moorhen
FF	Fieldfare	MS	Mute Swan
GA	Gadwall	PO	Pochard
GN	Goldeneye	RE	Redwing
GB	Great Black-backed Gull	RO	Rook
GE	Green Sandpiper	S.	Skylark
GR	Greenfinch	ST	Song Thrush
GL	Grey Wagtail	SH	Sparrowhawk
GJ	Greylag Goose	SG	Starling
HG	Herring Gull	SD	Stock Dove
HS	House Sparrow	T.	Teal
K.	Kestrel	WN	Widgeon
KF	Kingfisher	WP	Woodpigeon
L.	Lapwing	WR	Wren
LB	Lesser Black-backed Gull	Y.	Yellowhammer
LI	Linnet		

P02	09.10.2024	FIRST EDITION	AC	ER	CF
REV	DATE	REVISION NOTE	ORG	CHKD	APP
Designer					
Contractor					
Client					
Project Title A46 COVENTRY JUNCTIONS (WALSGRAVE)					
Project Stage DCO APPLICATION					
Drawing Title FIGURE 7: WINTERING BIRD SURVEY VISIT 6 (21/12/2023)					
Suitability FOR INFORMATION					
Sheet Size A3	Scale 1:12,500	Status S3	Revision P02		
Drawing Number HE604820-OIL-EBD-00-DR-LB-30049					



Legend

Order Limits

BOCC status / Schedule 1

Amber BOCC

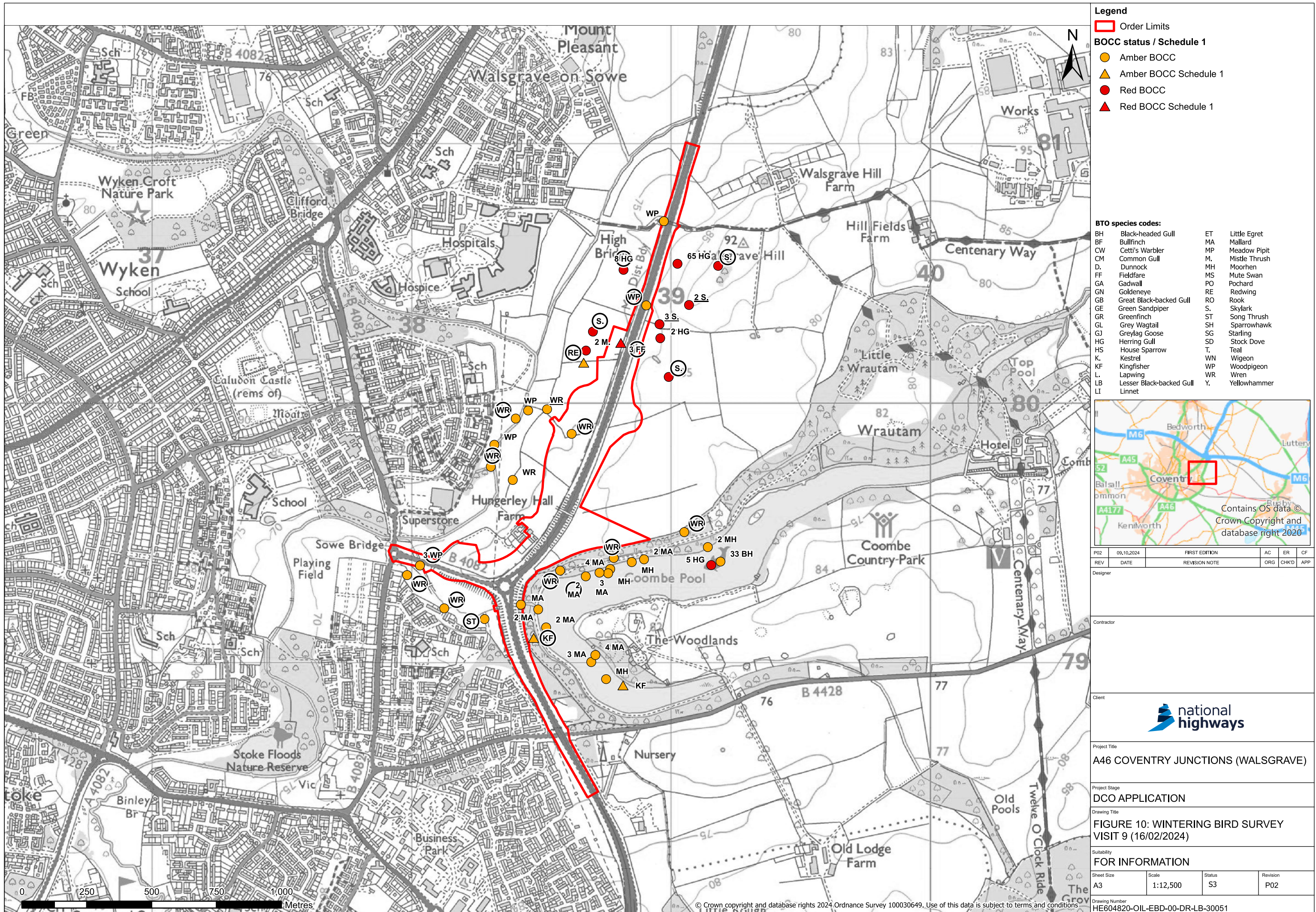
Amber BOCC Schedule 1

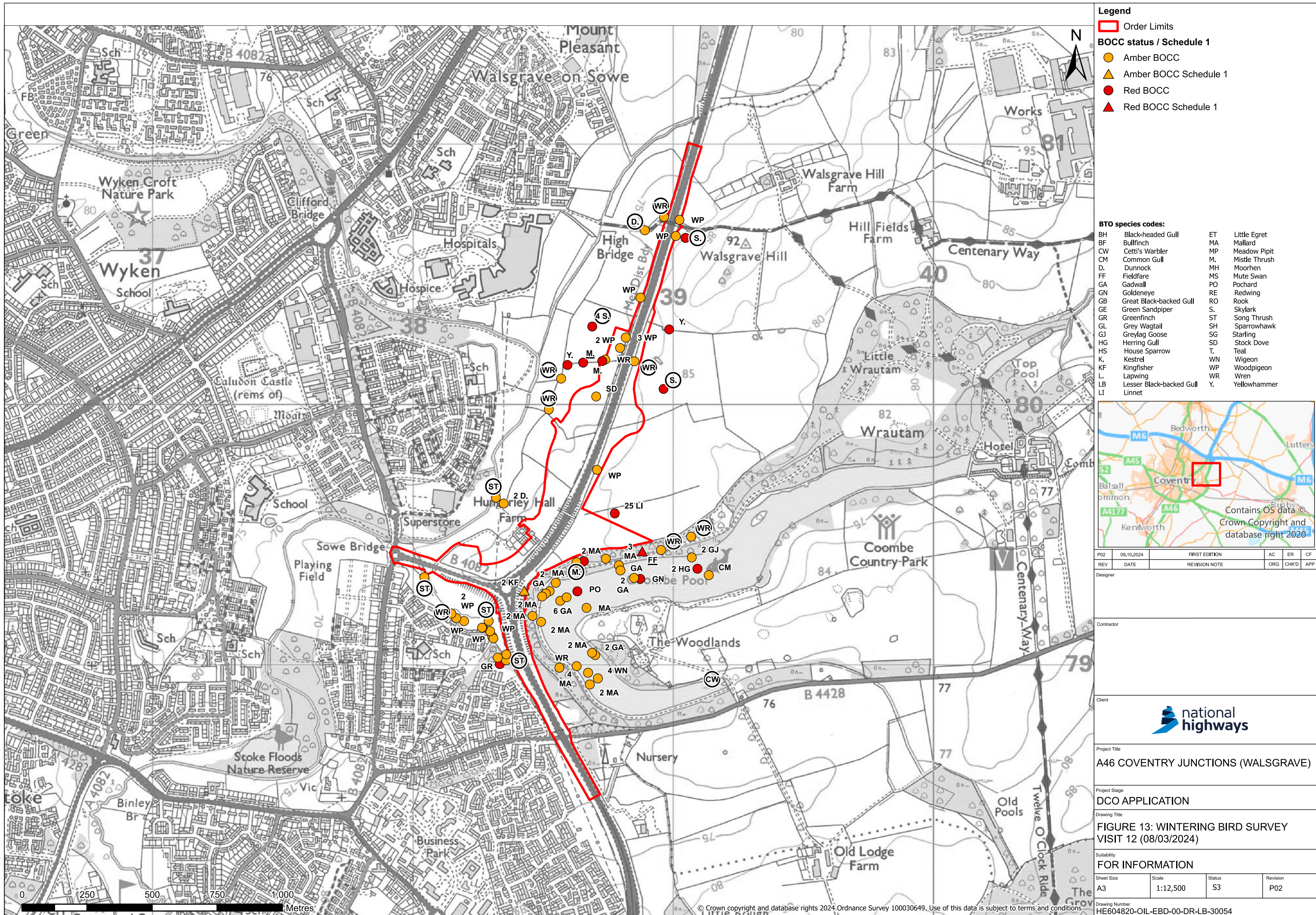
Red BOCC

Red BOCC Schedule 1

BTO species codes:

BH	Black-headed Gull	ET	Little Egret
BF	Bullfinch	MA	Mallard
CW	Cetti's Warbler	MP	Meadow Pipit
CM	Common Gull	M.	Mistle Thrush
D.	Duncock	MH	Moorhen
FF	Fieldfare	MS	Mute Swan
GA	Gadwall	PO	Pochard
GN	Goldeneye	RE	Redwing
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GJ	Greylag Goose	SG	Starling
HG	Herring Gull	SD	Stock Dove
HS	House Sparrow	T.	Teal
K.	Kestrel	WN	Widgeon
KF	Kingfisher	WP	Woodpigeon
L.	Lapwing	WR	Wren
LB	Lesser Black-backed Gull	Y.	Yellowhammer
LI	Linnet		





Appendix B. Wintering bird survey results

Site Name: A46 Walsgrave

Survey period: October 2022 – March 2024

BTO	Common name	Scientific name	BOCC / Sch 1 / NERC / BD Annex 1	Visit 1 (2022)	Visit 2	Visit 3	Visit 4	Visit 5	Visit 6	Visit 7	Visit 8	Visit 9	Visit 10	Visit 11	Visit 12
B.	Blackbird	<i>Turdus merula</i>		1		4	8	4	8	14	15	8	5	9	7
BH	Black-headed Gull	<i>Chroicocephalus ridibundus</i>	Amber BOCC	2	2	11	2	8	243	65	74	33	2	114	
BT	Blue Tit	<i>Cyanistes caeruleus</i>		4		1		5	22	36	21	18	20	12	17
BF	Bullfinch	<i>Pyrrhula pyrrhula</i>	Amber BOCC NERC							1					
BZ	Buzzard	<i>Buteo buteo</i>		2					1	2	3	2	1	1	2
CG	Canada Goose	<i>Branta canadensis</i>			54	14				6	29	2	2		
C.	Carrion Crow	<i>Corvus corone</i>		7	1	2	8	6	13	8	6	2	10	63	
CW	Cetti's Warbler	<i>Cettia cetti</i>	Sch 1										1	1	1
CH	Chaffinch	<i>Fringilla coelebs</i>		24					9		10	2			
CC	Chiffchaff	<i>Phylloscopus collybita</i>												1	7
CT	Coal Tit	<i>Periparus ater</i>		1					1						
CM	Common Gull	<i>Larus canus</i>	Amber BOCC		10				22		18		2		1
CO	Coot	<i>Fulica atra</i>		53	3	86	130	102	88	59	75	32	12	27	21
CA	Cormorant	<i>Phalacrocorax carbo</i>		2		23	7	3	3	1	3	2	2	3	1
D.	Dunnock	<i>Prunella modularis</i>	Amber BOCC NERC	1		1	1	3		2	5		5	1	4
EG	Egyptian Goose	<i>Alopochen aegyptiaca</i>		1							1		1		2
FP	Feral pigeon	<i>Columba livia domestica</i>						20							
FF	Fieldfare	<i>Turdus pilaris</i>	Red BOCC Sch 1			2		65	28	33	58	3		206	1
GA	Gadwall	<i>Mareca strepera</i>	Amber BOCC	11		8			28	15	34		2		15
GC	Goldcrest	<i>Regulus regulus</i>							1	2	6	3			4

			Red BOCC												1
GO	Goldfinch	<i>Carduelis carduelis</i>		7					10	7	13	3	4		6
GB	Great Black-backed Gull	<i>Larus marinus</i>	Amber BOCC			20									
GG	Great Crested Grebe	<i>Podiceps cristatus</i>		2	1	19	11	2	15	9	6	5	1	5	11
GS	Great Spotted Woodpecker	<i>Dendrocopos major</i>							1	3			2	1	
GT	Great Tit	<i>Parus major</i>		3		1	2	6	3	11	18	6	9	11	16
GE	Green Sandpiper	<i>Tringa ochropus</i>	Amber BOCC Sch 1	1											
G.	Green Woodpecker	<i>Picus viridis</i>		1		1		2	2	2	1	2	1		1
GR	Greenfinch	<i>Chloris chloris</i>	Red BOCC						2				1		1
H.	Grey Heron	<i>Ardea cinerea</i>		8	2	1	3	1	2	2	2	3	5	2	4
GL	Grey Wagtail	<i>Motacilla cinerea</i>	Amber BOCC	2											
GJ	Greylag Goose	<i>Anser anser</i>	Amber BOCC		10	2									2
HG	Herring Gull	<i>Larus argentatus</i>	Red BOCC NERC	1	20	42	83	69	2	25		80	3	7	2
HS	House Sparrow	<i>Passer domesticus</i>	Red BOCC NERC	3					5	1					
JD	Jackdaw	<i>Coloeus monedula</i>		5	15	41	17	19	21	32	15	6	27	23	7
J.	Jay	<i>Garrulus glandarius</i>		2				1		2	1		5		1
K.	Kestrel	<i>Falco tinnunculus</i>	Amber BOCC	1											
KF	Kingfisher	<i>Alcedo atthis</i>	Amber BOCC Sch 1 , BD Annex 1	1			1		1	2		2		1	2
L.	Lapwing	<i>Vanellus vanellus</i>	Red BOCC NERC							62	9				
LB	Lesser Black-backed Gull	<i>Larus fuscus</i>	Amber BOCC				5		3	26	4				
LI	Linnet	<i>Linaria cannabina</i>	Red BOCC NERC	55		22			13		35				25
ET	Little Egret	<i>Egretta garzetta</i>	BD Annex 1		1	4	1	1	12	8	6	6	10	2	2
LG	Little Grebe	<i>Tachybaptus ruficollis</i>							2	1	3	5			
LT	Long-tailed Tit	<i>Aegithalos caudatus</i>		2		1			21	16	10	11	6	4	6

Common and scientific names in this listed were sourced from BOU British List 9th Report (2017)

Sch 1 – Wildlife and Countryside Act 1981 (as amended) Schedule 1

NERC – Natural Environment and Rural Communities Act 2006 Section 41, species/habitats of principal importance.

BD Annex 1 – European Birds Directive, Annex 1.

BoCC Red – Birds of Conservation Concern – Red listed.

BoCC Amber – Birds of Conservation Concern – Amber listed.