



Airedale International

AIREDALE ECOLOGICAL MONITORING

Year Five Report





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CONTENTS

| | | |
|-------------|--|----------|
| 1. | INTRODUCTION | 1 |
| 1.1. | OVERVIEW | 1 |
| 1.2. | BACKGROUND | 1 |
| 1.3. | BRIEFS AND OBJECTIVES | 2 |
| 2. | METHODOLOGY | 3 |
| 2.1. | BREEDING BIRD SURVEY | 3 |
| 2.2. | NOTES AND LIMITATIONS | 4 |
| 3. | RESULTS AND EVALUATION | 5 |
| 3.1. | BREEDING BIRD SURVEY | 5 |
| 4. | CONCLUSIONS AND RECOMMENDATIONS | 8 |
| 5. | BIBLIOGRAPHY | 9 |

TABLES

| | |
|---|---|
| Table 1 - Dates and weather conditions of the Breeding Bird Surveys | 4 |
| Table 2 - Confirmed Probable and Possible Breeding Birds on Site | 6 |
| Table 3 - Non-breeding Bird Recorded on the Site | 7 |

FIGURES

| | |
|---|----|
| Figure 1 - Visit 1 Bird Species Registrations | 10 |
| Figure 2 - Visit 2 Bird Species Registrations | 11 |
| Figure 3 - Visit 3 Bird Species Registrations | 12 |

EXECUTIVE SUMMARY

Planning permission for remodelling of the Airedale Air Conditioning Facility (hereafter referred to as 'the Site') in north-west Leeds (see **Figure 1**) was granted in 2014 (Planning Permission Ref: 14/00477/FU). To meet requirements of Planning Condition 19, WSP was commissioned in 2014 to produce a Biodiversity Enhancement & Management Plan (BEMP) by Airedale International.

The BEMP outlined that site conditions for protected mammals, breeding/foraging birds, invertebrates and amphibians require improving and that improvement of habitat quality across the whole Site is required (WSP, 2014). The BEMP also included the requirement of ecological monitoring of the Site during the first, second, third, fifth and tenth year following completion of its remodelling (hereafter referred to as 'the Works'), to assess whether the BEMP conditions are being met (WSP, 2014).

Therefore, WSP was commissioned by Airedale International to undertake the ecological monitoring of the Site. The initial monitoring report was issued during 2017 (WSP, 2017). This version of the monitoring report outlines the conditions during 2020, the fifth year following completion of the Works. As only required in 2020, a breeding bird survey was undertaken in order to assess the Site.

A total of 24 bird species were recorded on or over the Site in 2020. Of these, 16 are considered to breed on the Site. Of these breeding species, bullfinch *Pyrrhula pyrrhula* and dunnock *Prunella modularis* are amber listed species of conservation concern (Eaton *et al.* 2015). The results show a slight decrease in the overall number of species breeding on the Site in comparison to Year One and Year Two. However, the 2020 breeding bird survey results represent a slight increase in number of species recorded breeding and using the Site compared to the Year Three breeding bird data.

All recommendations laid out in the BEMP have been met by Airedale International. Monitoring will be undertaken in 2025, the tenth and final year following completion of remodelling.

1. INTRODUCTION

1.1. OVERVIEW

- 1.1.1. In September 2014, WSP was commissioned by Airedale International to undertake ecological monitoring of the Airedale Air Conditioning Facility. Post construction monitoring was previously undertaken in year one (2016), year two (2017) and year three (2018). This report covers year five (2020) of monitoring. Future monitoring will also be undertaken in 2025, year 10 following completion of construction.
- 1.1.2. The Airedale Air Conditioning Factory (hereafter referred to as 'the Site') is located on the A65 in north-west Leeds (National Grid Reference SE 21931 38837) and is defined by the red line boundary (RLB) in **Figure 1**, which was provided at the time of commission.

1.2. BACKGROUND

- 1.2.1. An extended Phase 1 habitat survey, bat scoping, bat activity and great crested newt *Triturus cristatus* survey were undertaken on Site during 2013 by BL Ecology (BL Ecology 2013a, BL Ecology 2013b, BL Ecology 2013c), which informed the planning application.
- 1.2.2. Planning permission for the remodelling of the Site (hereafter referred to as 'the Works') was granted in 2014 (Planning Permission Ref: 14/00477/FU). The planning permission requirements included planning Condition 19 which states:
- *"Prior to the commencement of development a Biodiversity Enhancement & Management Plan (BEMP) shall be submitted to and approved in writing by the Local Planning Authority (LPA)...*
 - *The Plan shall also set out (where the results from the monitoring show that the Aims and Objectives of the BEMP are not being met) how contingencies and/or remedial action will be identified, agreed and implanted so that the development still delivers the Objectives of the originally approved scheme. The approved Plan will be implemented in accordance with the approved details."*
- 1.2.3. As a result, in 2014 WSP was commissioned to produce the BEMP (WSP, 2014), within which five aims were identified. These are:
- improve Site conditions for protected mammals;
 - improve Site conditions for breeding/foraging birds;
 - improve Site conditions for invertebrates;
 - improve Site conditions for amphibians; and
 - improve habitat quality across the Site.
- 1.2.4. In addition to these five aims, it was recommended that monitoring of breeding birds be undertaken in years 1, 2, 3, 5 and 10 post-construction. The monitoring would include assessments of the habitats, bat activity and breeding birds within the Site, with a report being issued for each year that monitoring was undertaken.
- 1.2.5. Therefore, in February 2016, WSP was commissioned by Airedale International to commence the ecological monitoring of the Site. This report outlines the conditions in the fifth year post-completion of the remodelling. Please note, the Year Five report should be read in conjunction with the Year One, Two and Three reports (WSP, 2017; WSP, 2018 and WSP, 2019).

1.3. BRIEFS AND OBJECTIVES

BREEDING BIRDS

1.3.1. WSP was commissioned to undertake breeding bird assessments to:

- provide a list of bird species encountered, their breeding status and an estimate of the likely number of territories/colonies of bird species breeding on or close to the Site; and
- provide additional recommendations for further survey or mitigation to ensure that the recommendations within the BEMP are adhered to.

2. METHODOLOGY

2.1. BREEDING BIRD SURVEY

- 2.1.1. To inform an evaluation of the habitats within the Site for bird species, three breeding bird survey (BBS) visits were conducted (**Figure 1**). The survey work was undertaken with regard to methods adapted from standard methods used within the British Trust for Ornithology's (BTO) Breeding Bird Survey (BBS) and Common Bird Census (CBC), both as summarised by Gilbert *et al.* (1998). Visits were completed during April, May and June 2020.
- 2.1.2. All three survey visits to the Site were completed in the early morning, within 30 minutes of sunrise, and were approximately one hour in duration.
- 2.1.3. During each survey visit the Site was walked slowly along a pre-determined transect route, which was designed to ensure that all suitable habitats were surveyed within 30m while visually scanning and listening to calls/songs. In accordance with good practice guidance (Bibby *et al.*, 2000) the start points and direction of the transect was varied on each survey visit to minimise bias, as birds may be active at different times of day in different areas. The locations of birds seen and heard were mapped using standard BTO two letter codes and activity symbols (Gilbert *et al.*, 1998). Where breeding activity was observed this was recorded in accordance with the following categories (based on standard BTO criteria):
- **non-breeder** – birds observed flying over, considered to still be on migration or a summering non-breeder;
 - **possible breeding** – birds observed singing or present in suitable habitat in the breeding season;
 - **probable breeding** – a pair observed in suitable habitat, territorial behaviour observed in the same place on at least two separate occasions, or by many individuals simultaneously on one day, or birds observed visiting a probable nest site, showing courtship or display behaviour in suitable breeding habitat or nest building; and
 - **confirmed breeding** – nest containing eggs or young seen or heard, adults observed carrying faecal sac or food, feigning injury as a distraction display or entering or leaving a nest site in circumstances indicating an occupied nest, a used nest or eggshells recorded, or recently fledged or downy young recorded (showing evidence of dependency on adults).
- 2.1.4. Field observations from all survey visits were combined to enable identification of clear clusters of records and to provide an indication of likely territory/colony numbers.

DATES AND CONDITIONS OF THE BREEDING BIRD SURVEYS

- 2.1.5. Breeding bird surveys were undertaken by a WSP ecologist with eight years' ornithological survey experience, including breeding bird surveys. Dates of survey and weather conditions are given in **Table 1** below.

Table 1 - Dates and weather conditions of the Breeding Bird Surveys

| Survey visit | Date | Sunrise time | Start time | Finish time | Weather Conditions (start / end) | | | |
|--------------|----------|--------------|------------|-------------|----------------------------------|-------|---------------------|-----------------|
| | | | | | Temperature (°C) | Rain | Cloud cover (oktas) | Wind (Beaufort) |
| 1 | 15/04/20 | 06:05 | 06:10 | 07:10 | 4 | N/A | 2/8 | SW 3 |
| 2 | 15/05/20 | 05:09 | 05:30 | 06:30 | 7 | NA | 2/8 | NW 1 |
| 3 | 12/06/20 | 04:35 | 05:00 | 06:00 | 11 | Light | 8/8 | NE 3 |

2.2. NOTES AND LIMITATIONS

- 2.2.1. Whilst every effort has been made to detect all species present, some bird species are more difficult to detect due to their cautious and discrete nature and therefore may go undetected by this survey method. As a constraint applicable to all bird surveys, this is not considered to place significant constraints upon interpretation of the results for this Site.

3. RESULTS AND EVALUATION

3.1. BREEDING BIRD SURVEY

- 3.1.1. A total of 24 species were recorded on or over the Site. Of these, 16 are considered to be possible, probable or confirmed to breed on the Site. A total of six species which are of elevated legal protection or species of conservation concern were recorded on or over the Site, two of which, bullfinch and dunnock are considered to breed on the Site.
- 3.1.2. The numbers of birds recorded within each category are listed below¹.
- Three species listed as SPI (also UKBAP species):
 - Dunnock was a probable breeder on the Site; and
 - House sparrow and starling were not considered to breed within the Site.
 - Two Birds of Conservation Concern (BoCC) red list species, namely; house sparrow and starling. Both species were not considered to breed within the Site.
 - Four BoCC amber list species:
 - Dunnock and bullfinch were considered to breed on Site.
 - Mallard *Anas platyrhynchos* and oystercatcher *Haematopus ostralegus* were not considered to breed on the Site.
- 3.1.3. Bird species that have been recorded as confirmed, probable or possible breeders during the 2020 surveys are listed within **Table 2** below. The table includes recorded breeding status and evidence for this. The location of the bird registrations for all species recorded within the Site during each visit are shown in **Figures 1-3**.
- 3.1.4. Species recorded on or over the Site during the breeding bird survey but were not considered to breed within the Site are listed in **Table 3**. This included birds flying over, loafing or foraging on the Site for which suitable breeding habitat is not present and bird registrations where no breeding behaviour was recorded.

¹ It should be noted categories are not exclusive and a species can be listed in more than one conservation category (for example listed as both a Species of Principal Importance (SPI) in accordance with the Natural Environment and Rural Communities (NERC) Act 2006 and the UK Biodiversity Action Plan (UKBAP) species and as either a red or amber list Bird of Conservation Concern (BoCC))

Table 2 - Confirmed Probable and Possible Breeding Birds on Site

| Common name | Scientific name | Status * | Breeding status on Site | Notes |
|--|--------------------------------|----------|-------------------------|---|
| Blackbird | <i>Turdus merula</i> | G | Possible | Singing male present in suitable habitat to the north of the Site. |
| Blackcap | <i>Sylvia atricapilla</i> | G | Probable | Up to four singing males recorded in a visit within the scrub to the north and south of the Site. |
| Blue tit | <i>Cyanistes caeruleus</i> | G | Confirmed | One active nest with chicks recorded within a Schwelger bat box adjacent to the upper pond on Site. |
| Bullfinch | <i>Pyrrhula pyrrhula</i> | A | Possible | Singing male present in suitable habitat to the north of the Site (Figure 2). |
| Coal tit | <i>Periparus aper</i> | G | Possible | Singing individual present in suitable habitat to the north of the Site. |
| Chiffchaff | <i>Phylloscopus collybita</i> | G | Probable | Singing individual present over multiple visits within the scrub to the north east of the Site. |
| Dunnock | <i>Prunella modularis</i> | NERC; A | Probable | Territories present throughout the Site (Figures 1-3). |
| Goldfinch | <i>Carduelis carduelis</i> | G | Probable | Territories present throughout the Site. |
| Great tit | <i>Parus major</i> | G | Probable | Territories present throughout the Site. |
| Greenfinch | <i>Carduelis chloris</i> | G | Probable | Singing bird repeatedly observed in a tree to the west of the main structure, with suitable breeding scrub below. |
| Long-tailed tit | <i>Aegithalos caudatus</i> | G | Possible | Individuals recorded across the Site. |
| Moorhen | <i>Gallinula chloropus</i> | G | Confirmed | Two successful breeding attempts within the upper and lower ponds within the Site. |
| Pied wagtail | <i>Motacilla alba</i> | G | Possible | One territory to the north of the main structure |
| Robin | <i>Erithacus rubecula</i> | G | Probable | One territory present adjacent to the upper pond, with three fledglings present on the second visit. |
| Woodpigeon | <i>Columba palumbus</i> | G | Probable | Two singing birds present within suitable habitat in the south east corner of the Site. |
| Wren | <i>Troglodytes troglodytes</i> | G | Probable | Territories located throughout the Site. |
| * BoCC Status: R – Red; A – Amber; G- Green; or listed as Natural Environment and Rural Communities (NERC) Section 41. | | | | |

Table 3 - Non-breeding Bird Recorded on the Site

| Common name | Scientific name | Status * | Notes |
|--|------------------------------|----------|---|
| Carrion crow | <i>Corvus corone</i> | G | Individuals recorded flying over Site and calling from trees on the Site entrance, however no further breeding behaviour exhibited. |
| Great spotted woodpecker | <i>Dendrocopos major</i> | G | Individual flew from the west in to a tree on Site and then returned, no breeding behaviour exhibited. |
| House sparrow | <i>Passer domesticus</i> | R; NERC | Individuals recorded adjacent to the Site, no breeding behaviour exhibited within the Site. |
| Jackdaw | <i>Corvus monedula</i> | G | Individuals recorded flying over Site and calling from trees adjacent to Site, however no further breeding behaviour exhibited. |
| Magpie | <i>Pica pica</i> | G | Individuals recorded flying over Site and calling from trees adjacent to Site, however no further breeding behaviour exhibited. |
| Mallard | <i>Anas platyrhynchos</i> | A | One individual recorded flying over the Site. |
| Oystercatcher | <i>Haematopus ostralegus</i> | A | One individual recorded flying over the Site calling. |
| Starling | <i>Sturnus vulgaris</i> | R; NERC; | Individuals recorded foraging on Site, however no further breeding behaviour exhibited. |
| * BoCC Status: R – Red; A – Amber; G- Green; or listed as NERC Section 41. | | | |

4. CONCLUSIONS AND RECOMMENDATIONS

- 4.1.1. In 2020, the overall number of birds recorded at the Site had increased back to the baseline figure of 24 species. There has been a slight decrease in the number of bird species considered to breed on the Site from a baseline of 19 in Year 1 of monitoring to 16 in Year 5 of monitoring.
- 4.1.2. Years 2 and 3 of post construction monitoring indicated a negative trend in bird species using the Site. However, the results of the 2020 surveys indicate this to reflect the cyclical nature of bird populations rather than an actual decline.
- 4.1.3. In total, 24 species, six of which are of conservation concern, were recorded on or over the Site. Sixteen species were recorded as breeding within the Site; with dunnoek and bullfinch representing protected/notable breeding species.
- 4.1.4. Planning conditions set out with the BEMP (WSP 2014) have been met with regards to bird box installation at the Site. Starling were recorded foraging within the Site and house sparrow recorded along the Site boundary. Both these species are listed on the BoCC red list, and are Section 41 NERC listed. They readily uptake nest boxes, which represents an opportunity to further enhance the Site for these species, above and beyond what is required within the BEMP (WSP 2014). The installation of further specialist starling and house sparrow nest boxes could provide an ecological enhancement for the Site, though not required in accordance with Planning Permission Ref: 14/00477/FU.
- 4.1.5. Monitoring will be undertaken again in 2025, the tenth and final year following completion of remodelling.

5. BIBLIOGRAPHY

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Key

Species

- B. - Blackbird
- BC - Blackcap
- BT - Blue tit
- C. - Carrion crow
- CC - Chiff chaff
- CT - Coal tit
- D. - Dunnock
- FP - Feral Pigeon
- GO - Goldfinch
- GR - Greenfinch
- GT - Great tit
- JD - Jackdaw
- LT - Long tailed tit
- MA - Mallard
- MG - Magpie
- MH - Moorhen
- PW - Pied wagtail
- R. - Robin
- SG - Starling
- WP - Wood pigeon
- WR - Wren

Singing

Calling

Using Nestbox

Flight Direction

Transect Route

Site Boundary

Client

Airedale International

Project

2020 Breeding Bird Survey

Title

Visit 1 Bird Species Registrations

| | | | |
|-------------|----------|-----------|----|
| Drawing No: | Figure 1 | Drawn: | RP |
| Date: | 22/07/20 | Checked: | DC |
| Scale: | 1:1,350 | Approved: | SP |



Key

Species

B. - Blackbird

BC - Blackcap

BF - Bullfinch

BT - Blue tit

C. - Carrion crow

CC - Chiffchaff

D. - Dunnock

GO - Goldfinch

GR - Greenfinch

GS - Great spotted woodpecker

GT - Great tit

HS - House sparrow

JD - Jackdaw

MG - Magpie

MH - Moorhen

OC - Oystercatcher

PW - Pied wagtail

R. - Robin

SG - Starling

WP - Wood pigeon

WR - Wren

Singing

Calling

Using Nestbox

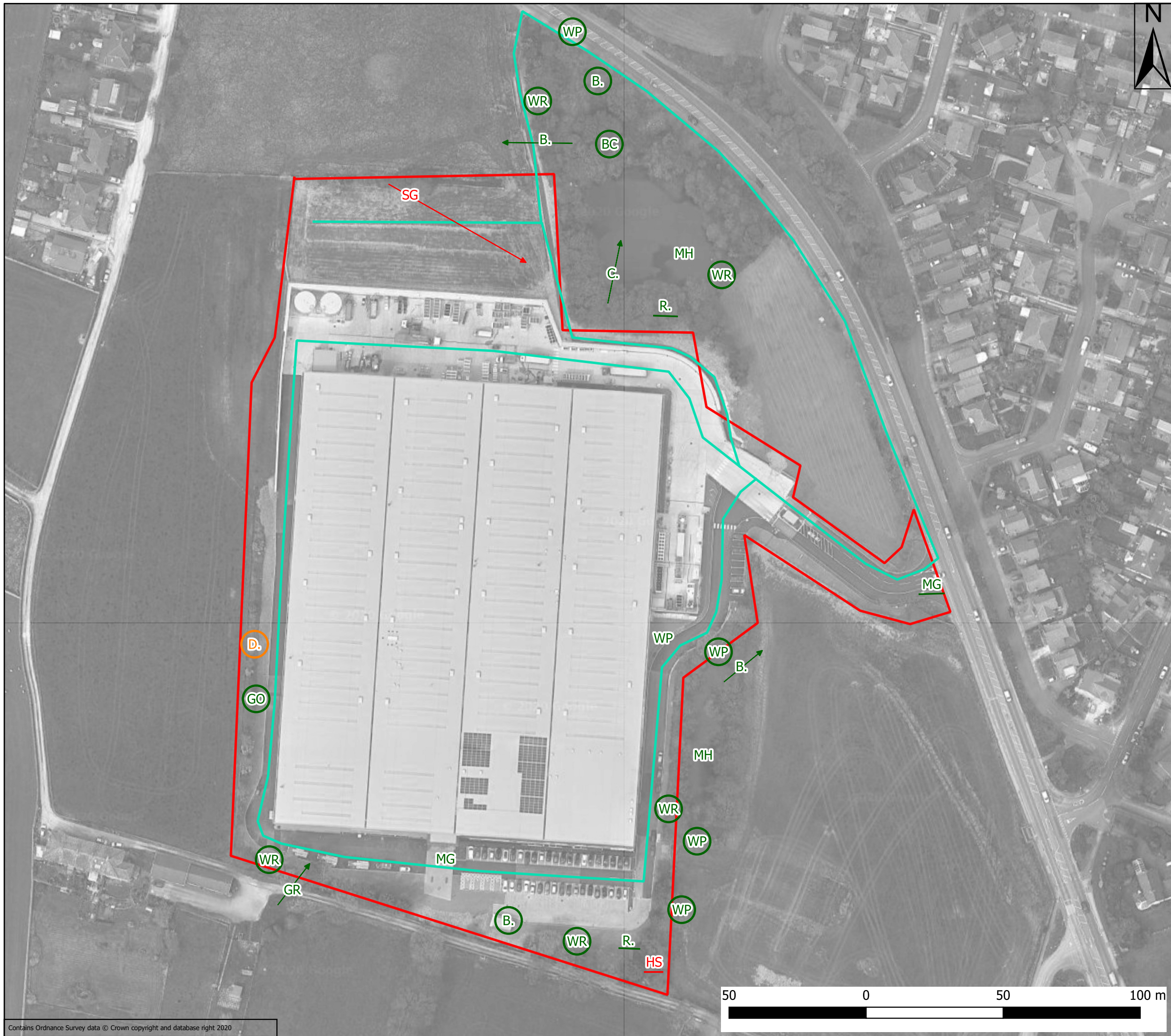
Flight Direction

Transect Route

Site Boundary



| | | | |
|-------------|--------------------------------------|-----------|----|
| Client | Airedale International | | |
| Project | 2020 Breeding Bird Monitoring Survey | | |
| Title | Visit 2 Bird Registrations | | |
| Drawing No: | Figure 2 | Drawn: | RP |
| Date: | 22/07/20 | Checked: | DC |
| Scale: | 1:1,350 | Approved: | SP |



Key

Species

- B. - Blackbird
- BC - Blackcap
- C. - Carrion crow
- D. - Dunnock
- GO - Goldfinch
- GR - Greenfinch
- HS - House sparrow
- MG - Magpie
- MH - Moorhen
- R. - Robin
- SG - Starling
- WP - Wood pigeon
- WR - Wren

Singing

Calling

Flight direction

Transect Route

Site Boundary

Client

Airedale International

Project

2020 Breeding Bird Monitoring Survey

Title

Visit 3 Bird Registrations

| | | | |
|-------------|----------|-----------|----|
| Drawing No: | Figure 3 | Drawn: | RP |
| Date: | 22/07/20 | Checked: | DC |
| Scale: | 1:1,350 | Approved: | SP |



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