Breeding Bird Survey Report

ELMA 1

Ecology Solutions Ltd

September 2022

Durham Wildlife Services
Rainton Meadows
Chilton Moor
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Quality Control

Report Status: Draft

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Reviewed by	Laura Thompson Senior Ecologist; ACIEEM		21/09/2022	V1
Issued by	Sacha Elliott Senior Ecologist; MCIEEM		22/09/2022	V1

BREEDING BIRD SURVEY REPORT 2022

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Appendices

The following report documents the bird survey data of the 2022 breeding bird season, which forms a non-technical document of survey findings relating to each site visit and does not constitute a full impact assessment.

1.0 EXECUTIVE SUMMARY

1.0.1 Durham Wildlife Services (DWS) was commissioned by Ecology Solutions Limited in January 2022 to undertake breeding bird surveys of the IAMP ONE mitigation area (Ecological and Landscape Mitigation Area 1). The approximate National Grid Reference for the centre of the site is NZ 32963 58977. The surveys are required to assess the avian interest and potential of the site.

1.0.2 The principal objective of the ornithological assessment is to consider both the information from the field surveys and desk study in order to assess the potential avian interest within the survey location. The results will be used to determine the conservation status of component species and to derive an overall assessment of the importance of the site for breeding birds. Special consideration was given to identifying breeding birds as listed on Schedule 1 (WCA, 1981), Annex I and Red-listed Birds of Conservation Concern (Eaton et al. 2009; 2015; 2021).

1.0.3 In summary, a total of 68 bird species were recorded over the course of the breeding bird surveys across the core survey area (scheme footprint and functionally linked boundary habitats). There were 25 confirmed breeding, 8 probable breeding, 12 possible breeding, and 21 non-breeding species within the core survey area (Table 4). Additionally, barn owl was confirmed to be breeding off site but foraging on site during the breeding season.

1.0.4 Using the Fuller (1980) criteria, the site is at least of District level of importance for its breeding assemblage due to the number of confirmed/probable/possible breeding species identified during the surveys. However, weight is added due to the number of amber and red listed species of conservation. Additionally, several Schedule 1 and Annex 1 species utilise the site.

1.0.5 Full assessment and recommendations can be found in Sections 5 & 6 of this report.

2.0 INTRODUCTION

2.1 Background

2.1.1 Durham Wildlife Services (DWS) was commissioned by Ecology Solutions Limited in January 2022 to undertake breeding bird surveys of the IAMP ONE mitigation area (Ecological and Landscape Mitigation Area 1). The approximate National Grid Reference for the centre of the site is NZ 32963 58977. The surveys are required to assess the avian interest and potential of the site.

2.1.2 A number of surveys have already been completed across the site, focusing on the wider area as part of the IAMP developments, by several ecological companies including White, Young and Green (WYG) in 2014 and 2015, ARUP in 2016-2017, Dendra in 2017/2018 and DWS in 2018/2019. Additionally, Tetra Tech carried out monitoring of the core survey area during the 2020/21 period. These reports should be read in conjunction with this one. This report focuses on the 2022 breeding bird assemblage of the ELMA 1.

2.2 Site Description

2.2.1 The core survey site is a mixture of arable and pasture farmland, with a small woodland to the north, adjacent to the Usworth Burn, with the River Don present to the north-east. Most field boundaries have hedgerows, frequently with large trees. The land adjacent to site also consists of farmland with arable and pasture present. The site is located to the north of the Nissan Car Manufacturing Plant in Washington, Sunderland. (Figure 1 & 2, Appendix A).

2.3 Survey Objectives

2.3.1 The principal objective of the ornithological assessment is to consider both the information from the field surveys and desk study in order to assess the potential avian interest within the survey location. The results will be used to determine the conservation status of component species and to derive an overall assessment of the importance of the site for breeding birds. Special consideration was given to identifying breeding birds as listed on Schedule 1 (WCA, 1981), Annex I and Red-listed Birds of Conservation Concern (Eaton et al. 2009; 2015; 2021).

2.4 Legislation

2.4.1 The Wildlife and Countryside Act 1981

The Wildlife and Countryside Act 1981 (WCA 1981) (as amended) under Section 1, makes it an offence to intentionally kill, injure or take any wild bird, nest or egg. The possession of any of these is an offence of strict liability. The act also covers special protection for Schedule 1 species. Part 1 of Schedule 1 lists 79 rare, endangered, declining or vulnerable bird species which are protected by special penalties at all times, including the offence of disturbance.

2.4.2 Natural Environment and Rural Communities (NERC) Act (2006)

Section 41 (S41) of this Act (the 'England Biodiversity List') requires the Secretary of State to publish a list of habitats and species that are of principal importance for the conservation of biodiversity in England. The S41 list is used to guide decision-makers such as public bodies, including local and regional authorities, in implementing their duty under section 40 of the Natural Environment and Rural Communities Act 2006, to have regard to the conservation of biodiversity in England, when carrying out their normal functions.

The S41 list replaces the list published under Section 74 of the Countryside and Rights of Way (CRoW) Act 2000.

2.4.3 IUCN Birds of nature Conservation Concern

In addition to statutory protection, some bird species are classified according to their conservation status, such as their inclusion on the Red and Amber lists of Birds of Conservation Concern (BoCC) in the UK (Eaton et al. 2009; 2015; 2021):

- Red list (high conservation concern) species are those that are Globally Threatened according to IUCN criteria; those whose population has declined rapidly (50% or more) in recent years; and those that have declined historically and not shown a substantial recent recovery.

- Amber list (medium conservation concern) species are those with an unfavourable conservation status in Europe; those whose population or range has declined moderately (between 25% and 49%) in recent years; those whose population has declined historically but made a substantial recent

recovery; rare breeders; and those with internationally important or localised populations.

- Green list (low conservation concern) species fulfil none of the above criteria.

2.4.4 National Planning Policy Framework

The NPPF outlines government planning policies and how they should be applied within local authorities. The framework places an emphasis on sustainable development, encouraging the re-use of land that has previously been developed over using land that has a higher environmental value and by minimising impacts on biodiversity. The NPPF states that developments should aim to conserve or enhance biodiversity and encourages opportunities to incorporate biodiversity in and around developments.

2.4.5 Durham Biodiversity Action Plan (DBAP)

The DBAP contains action plans for species of particular importance to the biodiversity of the area.

3.0 METHODOLOGY

3.1 Desk Based Study

3.1.1 The Environmental Records Centre North East (ERIC NE) were contacted for records of protected species and sites within 2km of the site. Durham Bird Club were not consulted directly as they do not have capacity to supply ornithological data at this current time; however, ERIC NE are supplying the DBC data that they hold. Additionally, freely available online bird data (eBird, BirdTrack, Twitter etc) was also reviewed for local site records.

3.2 Field Survey

3.2.1 The survey methodology is based on the guidelines developed by the steering group 'The Bird Survey Guidelines' available at https://birdsurveyguidelines.org/. The territories of all breeding birds were mapped to allow an assessment of population. Six surveys between late-March and early-July were undertaken. Surveys generally started between 30-minutes prior to sunrise and 30-minutes after sunrise and concluded no later than 11am. At least one of the six surveys covered crepuscular and nocturnal species. The nocturnal survey was undertaken approx. 1hr prior to sunset and lasted at least 1hr after sunset when all natural light had faded. Surveys were undertaken with the aid of Swarovski 12x50 EL binoculars and a Swarovski 95mm spotting scope (when needed).

3.2.2 Territory estimations and extrapolation were assessed and mapped for priority species only (e.g., amber/red-listed species of conservation concern, S41 species, Schedule 1 species etc); however, registrations of all encounters have been mapped in Figures 4a – 4f.

3.2.2 Days of inclement weather were avoided and there were no significant limitations to the survey. The dates and weather conditions during these surveys are detailed in Table 1.

Table 1: Breeding Bird Survey dates and weather conditions.

Survey Date	Sunrise/set Times (First light/ Last light)	Survey Times	Weather Conditions

11th April 2022	06:11 (05:32/20:41)	06:00 – 09:40	Light breeze. 65% cloud cover. Clear visibility. Start: 2ºC. End: 11ºC. Dry.
5th May 2022	05:16 (04:32/21:33)	05:00 – 08:25	Light wind. 30% cloud cover. Clear visibility. Start: 6ºC. End: 11ºC. Dry.
9th June 2022 (Nocturnal)	21:42 (03:32/22:38)	20:30 – 23:00	Light breeze. 40% cloud cover. Start: 16ºC. End: 14ºC. Dry.
23rd June 2022	04:28 (03:30/22:46)	04:10 – 07:45	Light wind. 20% cloud cover. Clear visibility. Start: 12ºC. End: 19ºC. Dry.
23rd June 2022 (Nocturnal)	21:48 (03:30/22:46)	20:30 – 22:50	Light wind. 30% cloud cover. Start: 22ºC. End: 19ºC. Dry.
11th July 2022	04:42 (03:48/22:34)	04:15 – 08:00	Light breeze. 10% cloud cover. Clear visibility. Start: 13ºC. End: 20ºC. Dry.

3.2.3 A pre-determined transect route was walked throughout the survey area (Figure 3). In addition, a suitable buffer zone (minimum 100 metres and up to 250 metres where visually possible) was also surveyed around the survey area boundary. Records were made of birds singing or calling; repeated territorial calls; territorial aggression; displaying; adults carrying food or nesting material; juvenile birds and family groups. Survey data was recorded using a Samsung Galaxy Tab Active Pro and GIS software.

3.2.4 The surveys were conducted by an experienced ornithological surveyor and assistants on every occasion including:

Sacha Elliott (Barn Owl Licence CL29/00411)

Sacha is an experienced field ornithologist and keen recreational bird watcher, who has been undertaking professional bird surveys since 2009. She is proficient in several recognised methodologies and survey design, including – but not limited to – adapted common bird census/breeding bird survey, wintering/non-breeding bird survey, and species-specific techniques. Sacha currently holds a Schedule 1 licence to survey Barn Owl for the purposes of assessing the potential impacts of development.

Laura Thompson (Field Surveyor/Assistant)

Laura has been assisting with ornithological surveys since 2017. Experience includes both wintering and breeding bird surveys, as well as undertaking nest checking surveys, all of which have been carried out on a range of sites from small to large. She has previous experience of bird identification from university modules studying Biology, and from personal study. In 2017 Laura assisted with Northumberland Wildlife Trust's Osprey Watch. She can confidently identify several common bird species from visual and calls, including recognising Schedule 1 species.

Daniel Gray (Field Assistant)

Daniel has developed his bird field identification skills having carried out numerous field surveys, both in a voluntary capacity and in professional roles as a field assistant. He has experience working under a range of methodologies including vantage point, transect surveys (for both winter and breeding birds) and nesting bird checks on projects and sites covering a range of habitats and sizes.

Jennifer Peacock MSc (Field Assistant)

Jennifer has volunteered regularly as part of a variety of projects within the Northumberland Wildlife Trust. She has also completed multiple courses and online workshops such as a Field Identification Skills, Identifying Winter Trees and Ornithology, further supporting her understanding of field skills in wildlife monitoring, surveying, and tracking. Following the completion of her Wildlife Management master's degree in 2021, Jennifer has spent a season training with Total Ecology, gaining practical skills in wildlife and environmental data collection, and data analysis; with a focus on providing evidence for policy.

3.3 Valuation Methods

3.3.1 The assessment methodology for this report follows the guidelines developed by the Chartered Institute of Ecology and Environmental Management (CIEEM 2006). Accordingly, this report considers the geographic frame of reference; site designations and features; biodiversity value; large populations or important assemblages of species; potential value, secondary or supporting value; social/community value and economic value (Table 2).

Table 2: CIEEM Evaluation Criteria

Conservation Value	Examples of Selection Criteria
International	• A species which is part of the cited interest of a SPA and which regularly occurs in internationally or nationally important numbers. A species present in internationally important numbers (>1% of international population).
National	• A species which is part of the cited interest of a SSSI and which regularly occurs in nationally or regionally important numbers. • A nationally important assemblage of breeding or over-wintering species. • A species present in nationally important numbers (>1% UK population). Rare breeding species.
Regional	• Species of principle importance under S41 of the NERC Act, which are not covered above, and which regularly occur in regionally important numbers. • Species present in regionally important numbers (>1% of regional population).

	• Sustainable populations of rare or scarce species within a region. • Species on the BoCC Red List and which regularly occurs in regionally important numbers.
County	• Species of principle importance under S41 of the NERC Act, which are not covered above, and which regularly occur in county important numbers. • Species present in county important numbers (>1% of county population). Sustainable populations of rare or scarce species within a county or listed in a county BAP. • A site designated for its county important assemblage of birds (e.g., a SINC Site). • Species on the BoCC Red List and which regularly occur in county important numbers.
District	• Species of principle importance under S41 of the NERC Act, 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 rare or scarce species 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 of principle importance under S41 of the NERC Act and on the BoCC Red and Amber lists which are not covered above) regularly occurring in locally sustainable populations.
Site	• All other BoCC Green-listed common and widespread species.

3.3.2 In this report, all ecological resources or features are assigned to a value relating to their geographic frame of reference, using the following scale:

- International
- UK
- National
- Regional
- County
- District
- Local or parish including the immediate zone of influence of the site
- Not significant (not of ecological value even at the site scale).

To aid with assessment of ornithological importance, the methods developed by Fuller (1980) are used. The methodology uses the number of species recorded during the BBS to assign importance to a site based on the categories shown in Table 3.

Table 3: Valuation categories based on methods developed by Fuller (1980)

Geographical Level	**No. of species**
National	115+
Regional	114-85
County	84-55
District (Local in Fuller [1980] methodology)	54-25
Local/Parish	<25

Fuller described an assemblage of 25-49 species as being of 'Local' value, and due to its position immediately below 'County' level, this report has adapted this level to

'District' to be consistent with CIEEM guidelines. Consequently, an assemblage comprising of fewer than 25 species is assumed to be of importance at the Local/Parish level or lower.

3.3.3 In addition, survey findings were compared against their respective entries in the 'The Birds of Durham' (Bowey and Newsome, 2012), 'Birds in Durham Annual Report' (DBC 2020), and 'A Summer Atlas of the Breeding Birds of County Durham' (DBC, 2000), to provide an assessment of the individual species distribution within the county. As bird numbers fluctuate, a level of professional judgement, based on current county bird trends, was made when analysing survey findings against this publication. The status of each species Is categorised under one of seven general headings:

- Abundant: more than 10,000 per year.
- Very common: 1,001 to 10,000 per year.
- Common: 101 to 1,000 per year.
- Uncommon: 10 to 100 per year.
- Scarce: less than 10 per year.
- Rare: between 5-25 in total.
- Extremely rare: less than 5 occurrences in total.

3.3.4 Further, species were reviewed against their respective chapters in the 'Bird Atlas 2007-11: The Breeding and Wintering Birds of Britain and Ireland' (BTO, 2012) to aid assessment.

4.0 SURVEY RESULTS

4.1 Desk Based Study

4.1.1 ERIC supplied over 22000 bird records (relating to c.185 species) from DBC held data. Most records related to common and widespread species within the wider area, primarily Washington Wetland Centre; however, several of the records relate Schedule 1 bird species that are associated with site itself or adjacent to the site:

- Goshawk (records relating to West Pastures)
- Kingfisher (records relating to West Pastures)
- Garganey (off site record)
- Scaup (off site record)
- Bittern (record relating to injured bird as Testos)
- Lapland Bunting (off site record)
- Ruff (off site record)
- Temminck's Stint (off site record)
- Little Ringed Plover (records relating to West Pastures)
- Dotterel (records relating to West Pastures)
- Black Tern (off site record)
- Marsh Harrier (records relating to West Pastures and Follingsby Lane)
- Hen Harrier (records relating to West Pastures, Follingsby Lane, and Seven Houses)
- Long-tailed Duck (off site record)
- Quail (records relating to West Pastures)
- Bewick's Swan (off site record)
- Whooper Swan (off site record)
- Merlin (records relating to West Pastures)
- Peregrine (records relating to West Pastures and Follingsby Lane)
- Hobby (records relating to Testos)
- Brambling (off site records)
- Red-throated Diver (off site records)
- Little Gull (off site records)
- Mediterranean Gull (off site records)
- Black-tailed Godwit (off site records)
- Common Crossbill (records relating to Follingsby Lane)
- Bee-eater (off site record)
- Red Kite (records relating to West Pastures)
- Whimbrel (records relating to Downhill Lane)
- Honey-buzzard (records relating to Follinsby Lane)
- Spoonbill (off site record)
- Snow Bunting (records relating to West Pastures)
- Avocet (off site record)
- Firecrest (off site record)
- Wood Sandpiper (records relating to West Pastures)
- Greenshank (records relating to West Pastures)
- Green Sandpiper (records relating to Usworth)
- Redwing (records relating to West Pastures and Follinsby Lane)
- Fieldfare (records relating to West Pastures, Follinsby Lane, Usworth, and Severn Houses)
- Barn Owl (records relating to West Pastures and Nissan)

4.1.2 Records from eBird online recording relating to the survey area were also reviewed. This revealed 111 species recorded between September 2021 – June 2022. The full species list can be found in Appendix B.

4.2 Field Survey

4.2.1 A full list of bird species recorded during the site surveys is given in Tables 4. The breeding status of birds encountered within the site are classified in three categories: confirmed, probable and possible breeders and are shown in Table 4.

4.2.2 Each species recorded was assigned a breeding status according to the guidelines set out by the BTO Bird Atlas 2007-2011 (BTO, 2013). These categories are defined as follows:

Confirmed breeding: Distraction display or injury feigning;
Used nests or eggshells found (occupied or laid within the survey period);
Recently fledged young or downy young;
Adults entering or leaving a nest site in circumstances indicating occupied nest or an adult sitting on nest;
Adults carrying food for young or faecal sacs;
Nest containing eggs/young seen or heard.

Probable breeding: Pairs observed in suitable nesting habitat in breeding season;
Permanent territory presumed through registration or territorial behaviour (song etc.) on at least two different days, a week apart, at the same place;
Display and courtship;
Visiting probable nest site;
Agitated behaviour or anxiety calls from adults;
Building nest or excavating nest hole.

Possible breeding: Species observed in breeding season in possible nesting habitat.
Singing male(s) present or breeding calls heard in breeding season.

Non-breeding: Flying over;
Species observed but suspected to be still on migration;
Species observed but suspected to be summering non-breeder

4.2.4 In summary, a total of 68 bird species were recorded over the course of the breeding bird surveys across the core survey area (scheme footprint and functionally linked boundary habitats). There were 25 confirmed breeding, 8 probable breeding, 12 possible breeding, and 21 non-breeding species within the core survey area (Table 4). Additionally, barn owl was confirmed to be breeding off site but foraging on site during the breeding season.

4.2.5 11th April 2022 (Diurnal)

In summary, 304 individuals were recorded during the survey, relating to 46 species of bird. Overall, activity around site was varied with bursts of activity but frequent quiet spells of inactivity. A transition between winter and spring activity was noted with smaller groups of migratory thrushes and finch flocks still foraging within the pasture fields and boundary vegetation. A single male wheatear was observed to the western extent of the survey area – seemingly using the site to recuperate while on passage. Additionally, a small passage flock of golden plover was recorded commuting over the site, likely enroute to their upland breeding grounds. The mitigation pools to the north held a pair of little ringed plover and 2 pairs of avocet (anecdotal reports of at least 1 pair of avocet mating the week prior were shared with the author by a local bird watcher). A single male blackcap called from the hedge line to the east of the mitigation pools and lapwing were displaying over the plots to the south and the horse field to the east of the pools. Territorial singing was noted along nearly all stretches of boundary vegetation by several species and evidence of nest building was noted by blue tit and song thrush.

4.2.6 5th May 2022 (Diurnal)

Reduced numbers were recorded on this occasion due to passage and migratory birds moving on from the area. Overall, 205 individuals were observed relating to 40 separate species. Of this assemblage, 12 species were amber-listed and a further 10 species were red-listed species of conservation concern, and a single Schedule 1 species was observed. No further sign of avocet was recorded on this occasion; however, a pair of little-ringed plover were still residing on the mitigation pools.

Additional migrants were recorded during this survey with common whitethroat, grasshopper warbler, and willow warbler singing across the site. Small numbers of lapwing were observed displaying and mating around the mitigation pools and in the

adjacent horse paddock. Skylark were singing on several territories within the survey boundary and in adjacent fields, frequently coming and going between the 2 areas.

Field boundary vegetation around the site held at least 10 singing males of yellowhammer, with pairs also observed to the south of the farm buildings. A pair of tree sparrow were briefly recorded in boundary vegetation next to the farm buildings before crossing the fields to the north and leaving site.

Single records of willow tit and ringed plover were also noted; the former recorded calling within the hedgerow to the far south of the survey boundary, and the latter recorded foraging on the mitigation pools.

4.2.7 9th June 2022 (Nocturnal)

Due to the timing and purpose of the survey, only 27 individuals were recorded. This related to 14 separate species, including 3 Schedule 1 species (quail, little-ringed plover, and barn owl).

A single male barn owl was observed hunting to the west of the mitigation pools and then carrying food off site in the direction of the wildlife tower near Elliscope Farm. At the end of the survey, a lone little owl was observed hunting from a fence post along the access track to the farm.

Five male grey partridge were recorded calling and a further 2 female grey partridge were also heard. Despite encountering 3 reeling grasshopper warblers during the previous survey visit, only a single bird was recorded on this occasion.

A single quail was recorded sporadically singing to the south, along the survey boundary edge. This bird was heard in suitable breeding habitat.

4.2.8 23rd June 2022 (Diurnal)

Around 280 individuals, relating to 44 bird species was recorded during the June diurnal survey visit. This included 11 red-listed and 17 amber-listed species of conservation concern. As in previous surveys, yellowhammer was well represented across the site with 10 singing males recorded. A single willow tit was also heard on this occasion to the south of the northern woodland block. Skylark were not as mobile on this occasion but 9 were noted in song above regular territories with a further 2

individuals perching on posts in suitable breeding habitat. A single reeling grasshopper warbler remained to the south of the survey area; however, singing was infrequent.

Observations of singing whitethroat had increased with 15 male birds active on territories around the site. Meadow pipit were observed carrying food to nest sites in several locations, including directly adjacent to the farm access track. At least 2 pairs of reed bunting were recorded food carrying to the ditch between the mitigation pools and farm access track. Two song thrush were encountered in full song to the western survey boundary. A further 2 birds were recorded foraging to the south of the mitigation pools.

During the survey, 2 pairs of little-ringed plover were recorded, and one juvenile bird was noted foraging on the mitigation pools. Small flocks of ringed plover were recorded with 2 birds foraging at the mitigation pool and a further 5 in flight (likely having flown from the mitigation pools). These were likely passage birds heading to other local sites in the area.

Small numbers of lapwing were still present at the mitigation pools, with males loudly taking to the wing at the presence of the surveyor team or avian predators (i.e., kestrel and magpie). In total, 3 grey partridge were noted with a single bird foraging in the horse paddock to the east and a further 2 birds flushed from a field to the north of the farm.

4.2.9 23rd June 2022 (Nocturnal)

Due to the timing and purpose of the survey, only 23 individuals were recorded. This related to 5 separate species including 2 red-listed and a single amber-listed species of conservation concern. No barn owl or quail was recorded on this occasion within the survey boundary (or immediate adjacent habitat); however, an incidental sighting of barn owl was noted outside of the survey area when a single bird emerged from an outbuilding at Hylton Grove Farm. Four male grey partridges were recorded calling during the survey; 2 of the males appeared to be part of a pair with female birds in tow. A single little owl emerged from the barn at North Moor Farm before flying out of sight to the west.

4.2.10 11th July 2022 (Diurnal)

The survey was relatively quiet with 206 individuals observed, relating to 41 species (14 amber-listed and 10 red-listed species of conservation concern). Foraging behaviour was more apparent than singing on territory for most of the species encountered. Only 2 adult and a single juvenile little-ringed plover was noted on this occasion foraging around the mitigation pools (the water levels were significantly reduced at the time of the survey with extensive areas of mud exposed). Other wading birds, including curlew (single individual) and ringed plover (single individual) were recorded foraging on the mitigation pools. A single singing sedge warbler was recorded in scrub to the north of the mitigation pools. This bird had not been recorded in previous surveys and may relate to an unpaired male. Skylark activity was significantly reduced in comparison to previous surveys; however, this is not necessarily unusual as the skylark breeding season is generally shorter than other species. A lone little owl was recorded perched in an ash tree to the west of the farm.

Table 4: Breeding Status of birds within the survey area and their conservation status.

Common Name (County Status based on Bowey & Newsome, 2012)	Scientific Name	Status	Apr -22	Ma-22	Jun-22 (Noc 1)	Jun -22	Jun-22 (Noc 2)	Jul-22	Breeding Status
Barn owl (A widespread though relatively uncommon resident. Numbers have generally increased in recent years but remain prone to the impact of hard winters)	*Tyto alba*	Green Sch1 LBAP	0	0	1	0	0	0	Adjacent Breeder
Buzzard (An increasingly common breeder and occasional passage migrant)	*Buteo buteo*	Green	1	1	0	0	0	0	Possible
Blackbird (An abundant resident, passage migrant and winter visitor)	*Turdus merula*	Green	11	15	1	13	0	8	Confirmed
Blue Tit (An abundant and widespread breeding resident)	*Cyanistes caeruleus*	Green	14	9	0	7	0	13	Confirmed
Blackcap (A very common breeding summer visitor and passage migrant, uncommon in winter)	*Sylvia atricapilla*	Green	1	9	0	4	0	0	Confirmed
Carrion Crow (An abundant and widespread resident)	*Corvus corone*	Green	11	6	0	5	0	3	Confirmed
Chaffinch (An abundant resident, and common winter visitor and passage migrant)	*Fringilla coelebs*	Green	4	4	0	1	0	1	Confirmed
Chiffchaff (A common breeding summer visitor and passage migrant, uncommon in winter)	*Phylloscopus collybita*	Green	4	5	0	7	0	7	Confirmed
Collared Dove (A very common resident, mainly found in suburban areas)	*Streptopelia decaocto*	Green	1	0	0	0	0	0	Possible
Coot (A very common resident)	*Fulica atra*	Green	1	0	0	2	0	1	Adjacent Breeder
Cormorant (A very common coastal resident and regular inland visitor)	*Phalacrocorax carbo*	Green LBAP	1	0	0	0	0	0	Flyover
Golden Plover (An abundant passage and winter, and common breeding species on the moors)	*Pluvialis apricaria*	Green LBAP Annex 1	15	0	0	0	0	0	Flyover/Foraging
Goldfinch (A very common and well distributed resident and passage migrant)	*Carduelis carduelis*	Green	11	14	0	19	0	15	Confirmed
Great Tit (An abundant and widespread breeding resident)	*Parus major*	Green	14	5	0	10	0	4	Confirmed
Grey heron (A common and widespread resident and winter visitor, that breeds more sparsely than indicated by its widespread distribution)	*Ardea cinerea*	Green	0	0	0	1	0	0	Flyover/Foraging

Jackdaw (An abundant and widespread resident)	*Corvus monedula*	**Green**	**2**	**2**	**0**	**0**	**0**	**0**	**Flyover**
Jay (A widely distributed and common breeding species)	*Garrulus glandarius*	**Green**	**2**	**0**	**0**	**0**	**0**	**0**	**Flyover**
Lesser whitethroat (A scarce to widespread summer visitor and passage migrant)	*Curruca curruca*	**Green**	**0**	**1**	**0**	**3**	**0**	**2**	**Probable**
Little Ringed Plover (A uncommon passage migrant and scarce local breeder)	*Charadrius dubius*	**Green Sch1 LBAP**	**2**	**2**	**2**	**5**	**0**	**3**	**Confirmed**
Long-tailed tit (A common breeding resident)	*Aegithalos caudatus*	**Green**	**0**	**1**	**0**	**0**	**0**	**11**	**Probable**
Magpie (A very common resident)	*Pica pica*	**Green**	**4**	**4**	**2**	**11**	**0**	**3**	**Confirmed**
Pied Wagtail (A very common resident, passage migrant and winter visitor)	*Motacilla alba*	**Green**	**1**	**1**	**0**	**0**	**0**	**3**	**Probable**
Robin (An abundant resident and passage migrant)	*Erithacus rubecula*	**Green**	**5**	**5**	**0**	**9**	**0**	**11**	**Confirmed**
Sand Martin (A very common breeding summer visitor)	*Riparia riparia*	**Green**	**1**	**0**	**0**	**0**	**0**	**0**	**Flyover/Foraging**
Swallow	*Hirundo rustica*	**Green LBAP**	**0**	**5**	**4**	**3**	**7**	**5**	**Confirmed**
Avocet (An uncommon passage migrant and recently colonising breeder)	*Recurvirostra avosetta*	**Amber Sch1 LBAP Annex 1**	**4**	**0**	**0**	**0**	**0**	**0**	**Mated on site before moving on**
Black-headed gull (An abundant and widespread winter visitor and passage migrant; also, a locally common breeder)	*Chroicocephalus ridibundus*	**Amber**	**0**	**0**	**0**	**1**	**0**	**5**	**Flyover/Foraging**
Bullfinch (A widespread, common resident, with small numbers of passage birds occurring on a regular basis)	*Pyrrhula pyrrhula*	**Amber NERC**	**0**	**0**	**0**	**1**	**0**	**0**	**Possible**
Common whitethroat (A common summer visitor and passage migrant. It remains widespread and relatively common in areas that are not built up)	*Curruca communis*	**Amber**	**0**	**7**	**1**	**15**	**0**	**9**	**Confirmed**
Dunnock (An abundant resident and passage migrant)	*Prunella modularis*	**Amber NERC**	**2**	**1**	**0**	**3**	**0**	**4**	**Confirmed**
Great black-backed gull (Mainly a very common passage and winter visitor, but a few non-breeders are present during the summer month)	*Larus marinus*	**Amber**	**0**	**0**	**0**	**1**	**0**	**2**	**Flyover/Foraging**
Kestrel (A common breeder and passage visitor)	*Falco tinnunculus*	**Amber LBAP**	**1**	**1**	**0**	**1**	**1**	**1**	**Possible**

Lesser black-backed gull (A common summer visitor, increasing as a breeding species, and a scarce but increasing wintering species)	*Larus fuscus*	**Amber**	**0**	**0**	**0**	**1**	**0**	**0**	**Flyover/Foraging**
Mallard (A very common resident and numerous winter visitor)	*Anas platyrhynchos*	**Amber**	**0**	**2**	**0**	**9**	**0**	**1**	**Possible**
Meadow Pipit (An abundant resident and passage migrant)	*Anthus pratensis*	**Amber**	**7**	**1**	**0**	**5**	**0**	**2**	**Confirmed**
Moorhen (A very common resident)	*Gallinula chloropus*	**Amber**	**3**	**0**	**0**	**3**	**0**	**0**	**Possible**
Oystercatcher (A very common passage and winter visitor, and a locally common breeding species)	*Haematopus ostralegus*	**Amber**	**0**	**1**	**1**	**4**	**0**	**0**	**Flyover/Foraging**
Quail (A scare and erratic summer visitor, though perhaps under-recorded and somewhat overlooked)	*Coturnix coturnix*	**Amber Sch1**	**0**	**0**	**1**	**0**	**0**	**0**	**Passage likely but possible**
Redwing (A very common passage migrant and winter visitor)	*Tringa totanus*	**Amber Sch1**	**4**	**0**	**0**	**0**	**0**	**0**	**Flyover/Foraging**
Reed Bunting (A common but locally resident and a common migrant and winter visitor)	*Emberiza schoeniclus*	**Amber LBAP NERC**	**5**	**5**	**1**	**4**	**0**	**4**	**Confirmed**
Sedge warbler (A common breeding summer visitor and passage migrant)	*Acrocephalus schoenobaenus*	**Amber**	**0**	**0**	**0**	**0**	**0**	**1**	**Possible**
Shelduck (A common resident and winter visitor)	*Tadorna tadorna*	**Amber LBAP**	**2**	**1**	**0**	**0**	**0**	**0**	**Possible**
Song Thrush (A very common resident, passage migrant and winter visitor)	*Turdus philomelos*	**Amber LBAP NERC**	**2**	**1**	**1**	**4**	**0**	**1**	**Probable**
Stock dove (A common resident)	*Columba oenas*	**Amber**	**0**	**0**	**0**	**4**	**0**	**1**	**Confirmed**
Teal (An uncommon breeder, but abundant passage and winter visitor)	*Anas crecca*	**Amber**	**3**	**0**	**0**	**0**	**0**	**0**	**Flyover/Foraging**
Willow warbler (A still abundant summer visitor, and passage migrant, which has undergone considerable declines in recent years)	*Phylloscopus trochilus*	**Amber LBAP**	**0**	**3**	**0**	**2**	**0**	**4**	**Confirmed**
Wheatear (A common breeding summer visitor and passage migrant)	*Oenanthe oenanthe*	**Amber**	**1**	**0**	**0**	**0**	**0**	**0**	**Passage**
Woodpigeon (An abundant resident and winter visitor)	*Columba palumbus*	**Amber**	**21**	**20**	**0**	**37**	**0**	**20**	**Confirmed**
Wren (An abundant resident and passage migrant)	*Troglodytes*	**Amber**	**15**	**11**	**0**	**14**	**0**	**15**	**Confirmed**

	troglodytes								
Curlew (A very common resident, passage and winter visitor)	*Numenius arquata*	**Red LBAP NERC**	**2**	**0**	**0**	**0**	**0**	**1**	**Flyover/Foraging**
Fieldfare (A very common passage migrant and winter visitor)	*Turdus pilaris*	**Red Sch1**	**28**	**0**	**0**	**0**	**0**	**0**	**Flyover/Foraging**
Grasshopper warbler (A scarce to widespread summer visitor and passage migrant)	*Locustella naevia*	**Red LBAP NERC**	**0**	**3**	**1**	**1**	**0**	**0**	**Probable**
Grey partridge (A widespread resident which remains quite common. Found in lowland agricultural habitats, river valley field systems and on the fringes of upland moors)	*Perdix perdix*	**Red LBAP NERC**	**0**	**0**	**7**	**3**	**6**	**1**	**Confirmed**
Greenfinch (A very common and well distributed resident and passage migrant)	*Chloris chloris*	**Red**	**2**	**0**	**0**	**3**	**0**	**1**	**Possible**
Herring Gull (An abundant passage and winter visitor, and a common coastal breeder)	*Larus argentatus*	**Red NERC**	**6**	**2**	**0**	**6**	**0**	**6**	**Flyover/Foraging**
Lapwing (An abundant passage and winter visitor and very common breeder)	*Vanellus vanellus*	**Red LBAP NERC**	**3**	**5**	**0**	**3**	**0**	**0**	**Confirmed**
Linnet (A very common and well distributed resident and passage migrant)	*Linaria cannabina*	**Red LBAP NERC**	**30**	**12**	**0**	**13**	**0**	**8**	**Probable**
Mistle Thrush (A common and widespread resident and passage migrant)	*Turdus viscivorus*	**Red LBAP**	**1**	**0**	**0**	**0**	**0**	**0**	**Flyover/Foraging**
Ringed plover (An uncommon breeding species, more common as a winter visitor and passage migrant)	*Charadrius hiaticula*	**Red LBAP**	**0**	**1**	**0**	**7**	**0**	**1**	**Possible**
Skylark (An abundant resident and passage migrant, with local declines in recent years)	*Alauda arvensis*	**Red LBAP NERC**	**18**	**19**	**0**	**11**	**0**	**4**	**Confirmed**
Starling (An abundant resident and winter visitor)	*Sturnus vulgaris*	**Red LBAP NERC**	**7**	**2**	**0**	**8**	**0**	**9**	**Probable**
Swift (A common summer visitor and passage migrant)	*Apus apus*	**Red LBAP**	**0**	**0**	**3**	**0**	**7**	**2**	**Flyover/Foraging**
Tree Sparrow (A common but sparsely distributed resident)	*Passer montanus*	**Red LBAP NERC**	**3**	**2**	**0**	**0**	**0**	**0**	**Possible**
Willow tit (A once common but increasingly uncommon and local resident)	*Poecile montanus*	**Red LBAP NERC**	**0**	**1**	**0**	**1**	**0**	**0**	**Possible**

Yellowhammer (A common and widespread resident)	*Emberiza citrinella*	**Red LBAP NERC**	**7**	**14**	**0**	**14**	**0**	**10**	**Confirmed**
Canada Goose (A very common and widespread resident breeder and winter visitor)	*Branta canadensis*	**No Status/ Introduced**	**20**	**0**	**0**	**0**	**0**	**0**	**Flyover/Foraging**
Little owl (A widespread and fairly common resident, primarily in agricultural habitats)	*Athene noctua*	**No Status/ Introduced**	**0**	**0**	**1**	**0**	**2**	**1**	**Probable**
Pheasant (A very common resident, supplemented by extensive release programmes)	*Phasianus colchicus*	**No Status/ Introduced**	**1**	**1**	**0**	**2**	**0**	**2**	**Confirmed**

5.0 ASSESSMENT

5.1 Constraints

5.1.1 The surveys were conducted during the optimal period for undertaking breeding bird surveys (between late-March and early-July); however, the first survey did not begin until 11th April. Additionally, a nocturnal survey was planned for May; however, despite several attempts to arrange a survey visit during this period, the May visit was repeatedly rearranged due to forecast high winds and rain, and subsequently occurred in early June when weather conditions had improved.

5.1.2 Given the experience of the surveyor team and the time spent covering the site, the data collected is thought to provide an accurate representation of the species present across the core survey area and the delayed start is not considered to have had a significant impact on the survey findings. However, it should be noted that given the "snapshot" nature of the survey visits, it is possible that more species may use the site than those that have been recorded during the surveys.

5.2 Confirmed Breeding Species

5.2.1 In summary, a total of 68 bird species were recorded over the course of the breeding bird surveys across the core survey area (scheme footprint and functionally linked boundary habitats). There were 25 confirmed breeding, 8 probable breeding, 12 possible breeding, and 21 non-breeding species within the core survey area (Table 4). Additionally, barn owl was confirmed to be breeding off site but foraging on site during the breeding season. An estimation of pairs for confirmed breeding species has been provided in Table 5 (overleaf).

5.2.2 Using the Fuller (1980) criteria, the site is at least of District level of importance for its breeding assemblage due to the number of confirmed/probable/possible breeding species identified during the surveys. However, weight is added due to the number of amber and red listed species of conservation. Additionally, several Schedule 1 and Annex 1 species utilise the site. Further, the site has County level importance (1% threshold) for some of the breeding species (e.g., little ringed plover).

5.2.4 According to the Birds of Durham (2012) the breeding assemblage present would be typical for the habitats present and are not typically unusual for the area when suitable habitats are present (although, some species are scarcer breeders), given the similar

breeding species present in the wider area e.g., several pairs of little-ringed plover breed within 5km of the site.

Table 5: Estimated number of pairs relating to confirmed breeding birds only (typically – but not exclusively – based on peak number of singing/displaying males)

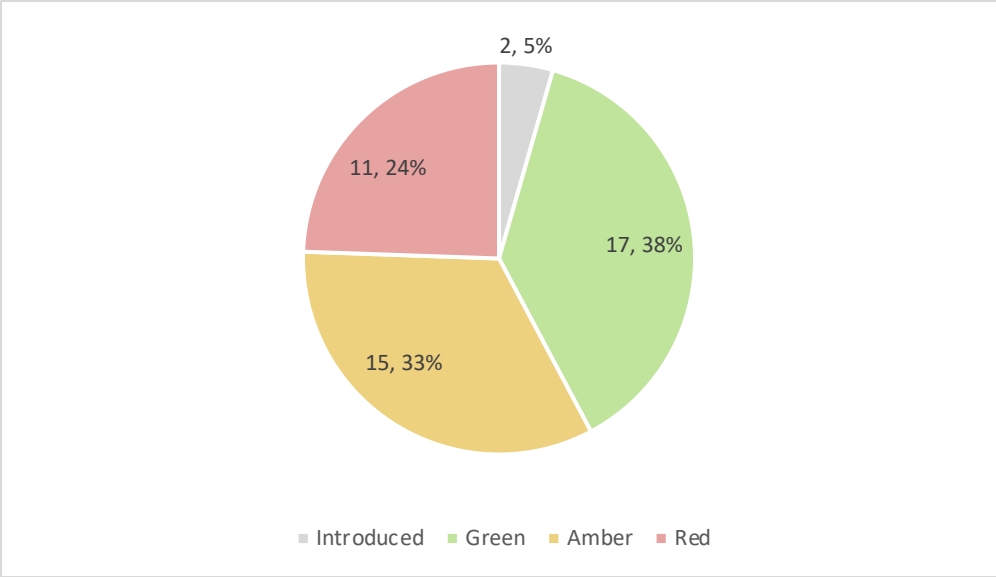
Confirmed Site Breeder	Estimated # Pairs	Associated Habitat	Breeding Population Estimates (Based on BTO, 2020; DBC 2000; 2012)
Barn owl	1 (offsite breeder)	Box/Wildlife Tower mitigation Grassland Trees	National: 4,000-14,000 pairs (variable) Local: 40 – 100 pairs
Blackbird	11	Boundary hedges Trees Scrub/Rank vegetation	National: c.5 million pairs Local: c. 49k pairs
Blue Tit	9	Boundary habitat Scrub/Rank vegetation Trees	National: c.3.4 million pairs Local: c. 52k pairs
Blackcap	4	Boundary hedges Trees Scrub/Rank vegetation	National: c.1.65 million pairs Local: c.6500 pairs
Carrion Crow	1	Trees	National: c.1million pairs Local: c. 14.8k pairs
Chaffinch	4	Boundary hedges Trees Scrub/Rank vegetation	National: c. 5 million pairs Local: c. 60k pairs
Chiffchaff	7	Boundary hedges Trees Scrub/Rank vegetation	National: c. 1.75 million pairs Local: c. 7100 pairs
Goldfinch	9	Boundary hedges Trees Scrub/Rank vegetation	National: c. 1.65 million pairs Local: c. 1800 – 2500 pairs
Great Tit	10	Boundary hedges Trees Scrub/Rank vegetation	National: c. 2.35 million pairs Local: c. 25k pairs
Little Ringed Plover	Max. 2	Disturbed land at mitigation pools Water Scrape	National: c.1250 pairs Local: 5 - 24 pairs
Magpie	3	Boundary hedges Trees Scrub/Rank vegetation	National: c. 610k pairs Local: c. 3000 pairs
Robin	7	Boundary hedges Trees Scrub/Rank vegetation	National: c.7.35 million pairs Local: c. 14.5k pairs
Swallow	1	Building	National: c. 705k pairs Local: c. 7200 pairs
Common whitethroat	9	Boundary hedges Trees Scrub/Rank vegetation	National: c. 1.1 million pairs Local: c. 7400 pairs
Dunnock	3	Boundary hedges Trees	National: c. 2.5 million pairs

		Scrub/Rank vegetation	Local: c. 22.3k pairs
Meadow Pipit	5	Arable Grassland	National: c. 2.45 million pairs Local: c. 20k pairs
Reed Bunting	3	Ditch Boundary Habitat Scrub/Rank vegetation	National: c. 275k pairs Local: c. 510 – 850 pairs
Stock dove	1	Box mitigation (barn owl box)	National: c. 320k pairs Local: c. 2000 pairs
Willow warbler	4	Boundary hedges Trees Scrub/Rank vegetation	National: c. 2.3 million pairs Local: c. 28k pairs
Woodpigeon	8	Trees Boundary Hedgerow Scrub	National: c. 5.15 million pairs Local: c. 57k pairs
Wren	15	Boundary hedges Trees Scrub/Rank vegetation	National: c. 11 million pairs Local: c. 79.2k pairs
Grey partridge	5	Grassland Arable Rank vegetation	National: c. 37k pairs Local: c. 1500 – 2000 pairs
Lapwing	3	Arable/bare Grassland	National: c. 97k pairs Local: c. 11.2k pairs
Skylark	11	Arable Grassland	National: c. 1.55 million pairs Local: c. 30k pairs
Yellowhammer	10	Boundary hedges Scrub/Rank vegetation Arable	National: c. 700k pairs Local: c. 6400 pairs
Pheasant	2	Grassland Arable Rank vegetation	-

5.3 Site Evaluation

5.3.1 It is apparent that the site provides excellent opportunities for both breeding resident birds and migratory birds. The 2022 surveys also demonstrated that the site is functionally linked to the wider landscape and further afield, acting as a stopping point for several passage species.

5.3.2 In total, 45 confirmed/probable/possible breeders were recorded across the 6 surveys. Of these, over half of the identified confirmed and potential breeding species are either amber or red listed species of conservation concern (Graph 1).



Graph 1: A visual depiction of the conservation status of the confirmed/probable/possible breeding species on site.

5.3.3 Direct comparisons to historic survey data are difficult to achieve when surveys methods are not fully replicated; however, overall, the species composition for the site closely resembles that collected by Tetra Tech during the 2020/21 period. Where differences occur, these can be accounted for by the timing of the surveys, the "snapshot' nature of single monthly survey visits, and the establishment of the wetland habitats. Several other factors could account for the variation in numbers and assembles, including, local weather and/or continental weather impacts on migratory species, annual population fluctuations, habitat changes/on-going development, and/or opportunistic site use by individual birds.

5.3.4 Of the identified species, several are listed on the Local Biodiversity Action Plan for Durham under the following action plan categories:

- Farmland Birds
- Urban and Garden Wildlife
- Woodland and Scrub
- Lowland Fen
- Ponds, Lakes & Reservoirs
- Coastal Birds
- Upland Birds

- Barn Owl

5.3.5 The following Schedule 1 species, which are afforded higher protection during the breeding period, have been identified during the surveys to date: redwing, fieldfare, quail, barn owl, little ringed plover, and avocet. Both redwing and fieldfare are mainly only potential breeding species in the Scottish Highlands (rare) with only extremely rare records associated with England. Barn owl are known to breed within the wider area and hold home ranges across the site. A single calling quail was only heard on one occasion; however, this was within suitable breeding habitat. Avocet were observed mating on site by visiting bird watchers but no evidence of nesting on site was observed.

5.3.6 The surveys highlighted the importance of the boundary, hedgerow, and treeline features on site – these features held the largest assemblage of birds overall. The open fields (grassland and arable) also provide foraging and nesting opportunities for several species of conservation concern.

6.0 RECOMMENDATIONS

6.1 Mitigation & Enhancements

6.1.1 At the time of writing, DWS were not aware of plans for the site; however, all future plans should incorporate the principles of the Mitigation Hierarchy, and firstly, seek to avoid loss of habitat and receptors wherever possible and only resort to offsetting the impacts of development (i.e., compensation for unavoidable losses) when all other alternatives have been exhausted. Additionally, if losses cannot be adequately mitigated for onsite or offsite, development plans should be amended to avoid impacts which will cause irreplaceable losses.

6.1.2 Any lost habitat features must be mitigated for either through on-site compensation or by offsetting impacts through habitat enhancement/creation elsewhere within the county, ideally within the wider landscape close to the site. It is vital that mitigation measures provide replacement habitats and/or features for the existing species assemblage before providing additional features with the aim of attracting new species to the area. The site is known to support a varied range of amber and red-listed farmland species which are declining on a national scale; therefore, conserving these local populations must be considered a high priority.

6.1.3 Further, development of the survey area without suitable and adequate mitigation of the area is likely to lead to further habitat fragmentation and isolation and subsequent loss of viable populations in the long-term, especially considering the ongoing development and use of the surrounding area (IAMP 1 & 2). The mitigation pools have attracted new breeding species, including species which are scarce breeders regionally, to the area which may become isolated or fully displaced by development surrounding the pools. This may be further exasperated by development if artificial features (e.g., buildings, fences etc) allow avian predators to perch and hunt vulnerable ground nesting species.

6.1.5 Future development plans must ensure that the Schedule 1 species identified during recent surveys are not disturbed or displaced during any operational phases of future works. Schedule 1 species are afforded special protection from disturbance during the breeding season and any disturbance at a nest site will result in an offence having been committed.

7.0 REFERENCES

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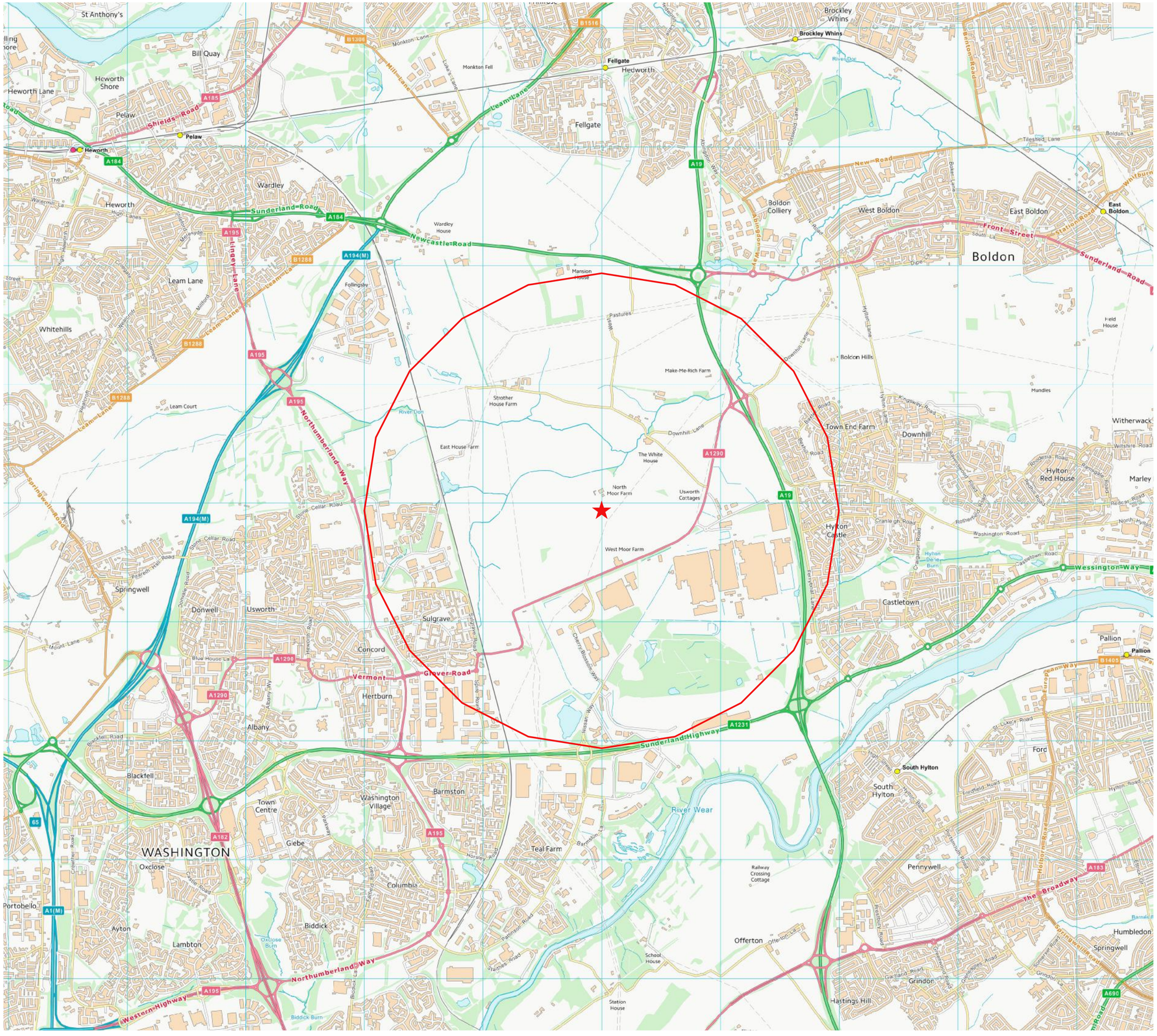
APPENDIX A

Figures



Legend

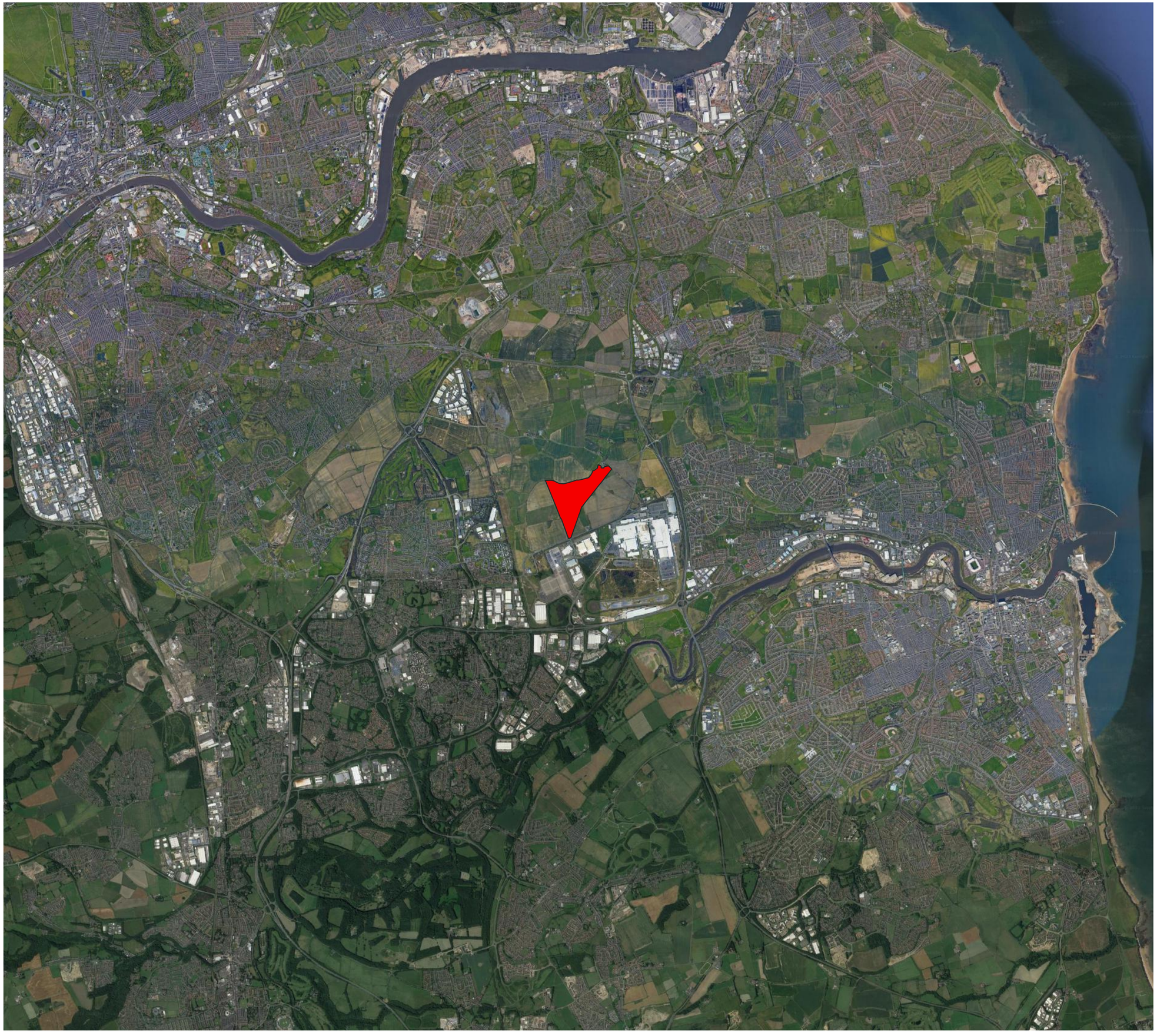
- ★ Site Location
- 2km buffer

DWS ECOLOGICAL SERVICES

Rainton Meadows
Chilton Moor
Houghton-le-Spring
Tyne and Wear
DH4 6PU

info@dwsecology.co.uk
www.dwsecology.co.uk

Project	ELMA 1 Breeding Bird Survey
Title	Location Plan
Client	Ecology Solutions Limited
Date	18th April 2022
Ref	Figure 1



Legend

Site Location

DWS ECOLOGICAL SERVICES

Rainton Meadows
Chilton Moor
Houghton-le-Spring
Tyne and Wear
DH4 6PU

info@dwsecology.co.uk
www.dwsecology.co.uk

Project	ELMA 1
Title	Aerial Habitat View
Client	Ecology Solutions
Date	07/09/2022
Ref	Figure 2

Legend

- Survey Boundary
- Approx. Transect Route
- Vantage Points

DWS ECOLOGICAL SERVICES

Rainton Meadows
Chilton Moor
Houghton-le-Spring
Tyne and Wear
DH4 6PU

info@dwsecology.co.uk
www.dwsecology.co.uk

Project	ELMA 1
Title	Survey Location & Approx. Transect Route
Client	Ecology Solutions
Date	07/09/2022
Ref	Figure 3

Legend

	Site Boundary
	BoCC Red List Species
	BoCC Amber List Species
	BoCC Green List Species
	Introduced/Non-native Species

Additional Information:
Letter codes within each point refer to the correspdoning BTO reference code and are coloured according to their BoCC Status.

Where more than one bird is observed then the size of the flock is indicated in red text alongisde the record.

CommonName	BTO_Code	CommonName	BTO_Code
Avocet	AV	Kestrel	K.
Blackbird	B.	Lapwing	L.
Blue Tit	BT	Linnet	LI
Canada Goose	CG	Little Ringed Plover	LP
Carrion Crow	C.	Magpie	MG
Chaffinch	CH	Meadow Pipit	MP
Chiffchaff	CC	Moorhen	MH
Collared Dove	CD	Pheasant	PH
Coot	CO	Pied Wagtail	PW
Cormorant	CA	Reed Bunting	RB
Dunnock	D.	Robin	R.
Fieldfare	FF	Sand Martin	SM
Golden Plover	GP	Shelduck	SU
Goldfinch	GO	Skylark	S.
Great Tit	GT	Song Thrush	ST
Greenfinch	GR	Starling	SG
Herring Gull	HG	Teal	T.
Jackdaw	JD	Tree Sparrow	TS
Jay	J.	Wheatear	W.
		Woodpigeon	WP

Survey Info:

Date: 11/04/2022
Time: 06:00 - 09:40
Weather: 2°C-11°C , 65% cloud, dry, light breeze.

DWS ECOLOGICAL SERVICES

Rainton Meadows, Chilton Moor,
Houghten-le-Spring,
Tyne and Wear, DH4 6PU
Tel: 01388488885

Project	ELMA 1
Title	Breeding Bird Survey - April 2022
Client	Ecology Solutions Ltd
Date	07/09/2022
Ref	Figure 4a

Legend

	Site Boundary
	BoCC Red List Species
	BoCC Amber List Species
	BoCC Green List Species
	Introduced/Non-native Species

Additional Information:
Letter codes within each point refer to the correspdoning BTO reference code and are coloured according to their BoCC Status.

Where more than one bird is observed then the size of the flock is indicated in red text alongisde the record.

CommonName	BTO_Code	CommonName	BTO_Code
Blackbird	B.	Long-tailed Tit	LT
Blackcap	BC	Magpie	MG
Blue Tit	BT	Mallard	MA
Buzzard	BZ	Meadow Pipit	MP
Carrion Crow	C.	Oystercatcher	OC
Chaffinch	CH	Pheasant	PH
Chiffchaff	CC	Pied Wagtail	PW
Common Whitethroat	WH	Reed Bunting	RB
Dunnock	D.	Ringed Plover	RP
Goldfinch	GO	Robin	R.
Grasshopper Warbler	GH	Shelduck	SU
Great Tit	GT	Skylark	S.
Herring Gull	HG	Song Thrush	ST
Jackdaw	JD	Starling	SG
Kestrel	K.	Swallow	SL
Lapwing	L.	Tree Sparrow	TS
Lesser Whitethroat	LW	Willow Tit	WT
Linnet	LI	Willow Warbler	WW
Little Ringed Plover	LP	Woodpigeon	WP
		Wren	WR

Survey Info:

Date - 05/05/2022
Time - 05:00 - 08:25
Weather - 6°C - 11°C, 30% cloud, dry, light wind.

DWS ECOLOGICAL SERVICES

Rainton Meadows, Chilton Moor,
Houghten-le-Spring,
Tyne and Wear, DH4 6PU
Tel: 01388488885

Project	ELMA 1
Title	Breeding Bird Survey - May 2022
Client	Ecology Solutions
Date	07/09/2022
Ref	Figure 4b

Legend

	Site Boundary
	BoCC Red List Species
	BoCC Amber List Species
	BoCC Green List Species
	Introduced/Non-native Species

Additional Information:
Letter codes within each point refer to the correspdoning BTO reference code and are coloured according to their BoCC Status.

Where more than one bird is observed then the size of the flock is indicated in red text alongisde the record.

CommonName	BTO_Code
Barn Owl	BO
Blackbird	B.
Common Whitethroat	WH
Grasshopper Warbler	GH
Grey Partridge	P.
Little Owl	LO
Little Ringed Plover	LP
Magpie	MG
Oystercatcher	OC
Quail	Q.
Reed Bunting	RB
Song Thrush	ST
Swallow	SL
Swift	SI

Survey Info:

Date: 09/06/2022
Time: 20:30 - 23:00
Weather: 16°C - 14°C, 40% cloud, dry, light breeze.

DWS ECOLOGICAL SERVICES

Rainton Meadows, Chilton Moor,
Houghten-le-Spring,
Tyne and Wear, DH4 6PU
Tel: 01388488885

Project	ELMA 1
Title	Breeding Bird Survey - June (Nocturnal 1)
Client	Ecology Solutions
Date	07/09/2022
Ref	Figure 4c

Legend

	Site Boundary
	BoCC Red List Species
	BoCC Amber List Species
	BoCC Green List Species
	Introduced/Non-native Species

Additional Information:
Letter codes within each point refer to the correspdoning BTO reference code and are coloured according to their BoCC Status.

Where more than one bird is observed then the size of the flock is indicated in red text alongisde the record.

CommonName	BTO_Code	CommonName	BTO_Code
Black-headed Gull	BH	Lapwing	L.
Blackbird	B.	Lesser Black-backed Gull	LB
Blackcap	BC	Lesser Whitethroat	LW
Blue Tit	BT	Linnet	LI
Bullfinch	BF	Little Ringed Plover	LP
Carrion Crow	C.	Magpie	MG
Chaffinch	CH	Mallard	MA
Chiffchaff	CC	Meadow Pipit	MP
Common Whitethroat	WH	Moorhen	MH
Dunnock	D.	Oystercatcher	OC
Goldfinch	GO	Pheasant	PH
Grasshopper Warbler	GH	Reed Bunting	RB
Great Black-backed Gull	GB	Ringed Plover	RP
Great Tit	GT	Robin	R.
Greenfinch	GR	Skylark	S.
Grey Heron	H.	Song Thrush	ST
Grey Partridge	P.	Starling	SG
Herring Gull	HG	Stock Dove	SD
Kestrel	K.	Swallow	SL
		Treecreeper	TC

Survey Info:

Date: 23/06/2022
Time: 04:10 - 07:45
Weather: 12°C - 19°C, 20% cloud, dry, light wind.

DWS ECOLOGICAL SERVICES

Rainton Meadows, Chilton Moor,
Houghten-le-Spring,
Tyne and Wear, DH4 6PU
Tel: 01388488885

Project	ELMA 1
Title	Breeding Bird Survey - June 2022
Client	Ecology Solutions
Date	07/09/2022
Ref	Figure 4d

Legend

	Site Boundary
	BoCC Red List Species
	BoCC Amber List Species
	BoCC Green List Species
	Introduced/Non-native Species

Additional Information:
Letter codes within each point refer to the correspdoning BTO reference code and are coloured according to their BoCC Status.

Where more than one bird is observed then the size of the flock is indicated in red text alongisde the record.

CommonName	BTO_Code
Grey Partridge	P.
Kestrel	K.
Little Owl	LO
Swallow	SL
Swift	SI

Survey Info:

Date - 23/06/2022
Time - 20:30 - 22:50
Weather - 22°C - 19°C, 30% cloud, dry, light wind

DWS ECOLOGICAL SERVICES

Rainton Meadows, Chilton Moor,
Houghten-le-Spring,
Tyne and Wear, DH4 6PU
Tel: 01388488885

Project	ELMA 1
Title	Breeding Bird Survey - June (Nocturnal 2)
Client	Ecology Solutions
Date	07/09/2022
Ref	Figure 4e

Legend

- Site Boundary
- BoCC Red List Species
- BoCC Amber List Species
- BoCC Green List Species
- Introduced/Non-native Species

Additional Information:
Letter codes within each point refer to the correspdoning BTO reference code and are coloured according to their BoCC Status.

Where more than one bird is observed then the size of the flock is indicated in red text alongisde the record.

CommonName	BTO_Code	CommonName	BTO_Code
Black-headed Gull	BH	Little Ringed Plover	LP
Blackbird	B.	Long-tailed Tit	LT
Blue Tit	BT	Magpie	MG
Carrion Crow	C.	Mallard	MA
Chaffinch	CH	Meadow Pipit	MP
Chiffchaff	CC	Pheasant	PH
Common Whitethroat	WH	Pied Wagtail	PW
Curlew	CU	Reed Bunting	RB
Dunnock	D.	Ringed Plover	RP
Goldfinch	GO	Robin	R.
Great Black-backed Gull	GB	Sedge Warbler	SW
Great Tit	GT	Skylark	S.
Greenfinch	GR	Song Thrush	ST
Grey Partridge	P.	Starling	SG
Herring Gull	HG	Swallow	SL
Kestrel	K.	Swift	SI
Lesser Whitethroat	LW	Willow Warbler	WW
Linnet	LI	Woodpigeon	WP
Little Owl	LO	Wren	WR
		Yellowhammer	Y.

Survey Info:

Date - 11/07/2022
Time - 04:15 - 08:00
Weather - 13°C - 20°C, 10% cloud, dry, light breeze.

DWS ECOLOGICAL SERVICES

Rainton Meadows, Chilton Moor,
Houghten-le-Spring,
Tyne and Wear, DH4 6PU
Tel: 01388488885

Project	ELMA 1
Title	Breeding Bird Survey - July 2022
Client	Ecology Solutions
Date	07/09/2022
Ref	Figure 4f

APPENDIX B
eBird Bird Data 2022

- Barn Owl
- Barn Swallow
- Black-headed Gull
- Black-tailed Godwit
- Canada Goose
- Carrion Crow
- Coal Tit
- Collared Dove
- Common Buzzard
- Common Chaffinch
- Common Chiffchaff
- Common Grasshopper Warbler
- Common Gull
- Common House Martin
- Common Kestrel
- Common Linnet
- Common Magpie
- Common Moorhen
- Common Pheasant
- Common Pochard
- Common Quail
- Common Redshank
- Common Reed Bunting
- Common Ringed Plover
- Common Sandpiper
- Common Shelduck
- Common Snipe
- Common Starling
- Common Swift
- Common Whitethroat
- Common Woodpigeon
- Dunlin
- Dunnock
- Eurasian Blackbird
- Eurasian Blackcap
- Eurasian Blue Tit
- Eurasian Bullfinch
- Eurasian Coot
- Eurasian Curlew
- Eurasian Green Woodpecker
- Eurasian Jackdaw
- Eurasian Jay
- Eurasian Oystercatcher
- Eurasian Siskin
- Eurasian Skylark
- Eurasian Sparrowhawk
- Eurasian Tree Sparrow
- Eurasian Wigeon
- Eurasian Wren
- Eurasian/Green-winged Teal
- European Golden Plover
- European Goldfinch
- European Greenfinch
- European Robin
- European Stonechat
- Fieldfare
- Gadwall
- Garden Warbler
- Goldcrest
- Great Black-backed Gull
- Great Cormorant
- Great Spotted Woodpecker
- Great Tit

- Great White Egret
- Green Sandpiper
- Grey Heron
- Grey Partridge
- Grey Wagtail
- Greylag Goose
- Herring Gull
- Hooded Crow
- House Sparrow
- Jack Snipe
- Lesser Black-backed Gull
- Lesser Redpoll
- Lesser Whitethroat
- Little Egret
- Little Owl
- Little Ringed Plover
- Long-tailed Tit
- Mallard
- Meadow Pipit
- Mediterranean Gull
- Mistle Thrush
- Mute Swan
- Northern Goshawk
- Northern Lapwing
- Northern Shoveler
- Northern Wheatear
- Peregrine Falcon
- Pied Avocet
- Pied Wagtail/White Wagtail
- Pink-footed Goose
- Redwing
- Rock Dove
- Rook
- Ruddy Shelduck
- Sand Martin
- Sedge Warbler
- Short-eared Owl
- Song Thrush
- Stock Dove
- Tawny Owl
- Tufted Duck
- Western Marsh Harrier
- Western Yellow Wagtail
- Whimbrel
- Whooper Swan
- Willow Tit
- Willow Warbler
- Yellowhammer

APPENDIX C
Report Conditions

Durham Wildlife Service Ltd

REPORT CONDITIONS
ELMA 1 Breeding Bird Survey

This report is produced solely for the benefit of Ecology Solutions and no liability is accepted for any reliance placed on it by any other party unless specifically agreed in writing otherwise.

This report is prepared for the proposed uses stated in the report and should not be used in a different context without reference to DWS. In time improved practices, fresh information or amended legislation may necessitate a re-assessment. Opinions and information provided in this report are on the basis of DWS using due skill and care in the preparation of the report.

This report refers, within the limitations stated, to the environment of the site in the context of the surrounding area at the time of the inspections. Environmental conditions can vary, and no warranty is given as to the possibility of changes in the environment of the site and surrounding area at differing times.

This report is limited to those aspects reported on, within the scope and limits agreed with the client under our appointment. It is necessarily restricted, and no liability is accepted for any other aspect. It is based on the information sources indicated in the report. Some of the opinions are based on unconfirmed data and information and are presented as the best obtained within the scope for this report.

Reliance has been placed on the documents and information supplied to DWS by others but no independent verification of these has been made and no warranty is given on them. No liability is accepted, or warranty given in relation to the performance, reliability, standing etc of any products, services, organisations or companies referred to in this report.

Whilst skill and care have been used, no investigative method can eliminate the possibility of obtaining partially imprecise, incomplete or not fully representative information. Any monitoring or survey work undertaken as part of the commission will have been subject to limitations, including for example timescale, seasonal and weather-related conditions.

Although care is taken to select monitoring and survey periods that are typical of the environmental conditions being measured, within the overall reporting programme constraints, measured conditions may not be fully representative of the actual conditions. Any predictive or modelling work, undertaken as part of the commission will be subject to limitations including the representativeness of data used by the model and the assumptions inherent within the approach used. Actual environmental conditions are typically more complex and variable than the investigative, predictive and modelling approaches indicate in practice, and the output of such approaches cannot be relied upon as a comprehensive or accurate indicator of future conditions.

The potential influence of our assessment and report on other aspects of any development or future planning requires evaluation by other involved parties.

The performance of environmental protection measures and of buildings and other structures

in relation to acoustics, vibration, noise mitigation and other environmental issues is influenced to a large extent by the degree to which the relevant environmental considerations are incorporated into the final design and specifications and the quality of workmanship and compliance with the specifications on site during construction. DWS accept no liability for issues with performance arising from such factors

February 2008