

ENVIRONMENTAL STATEMENT (VOLUME III)

Appendix 9.8 Bird Survey Report (Clean)

HyNet Carbon Dioxide Pipeline DCO

Planning Act 2008

**The Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009 –
Regulations 5(2)(a)**

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1. INTRODUCTION

1.1. PROJECT BACKGROUND

- 1.1.1. This technical appendix includes the findings of wintering and breeding bird surveys and supports the assessment contained in **Chapter 9 – Biodiversity (Volume II)**.
- 1.1.2. This **Revision B of Appendix 9.8 Bird Survey Report** replaces and supersedes **Revision A (APP-112)**. **Appendix 9.8 (Revision B)** provides updated baseline information in response to the proposed design changes as outlined in **Table i.i of Chapter I** of the ES Addendum.
- 1.1.3. The Applicant intends to build and operate a new underground carbon dioxide (CO₂) pipeline from Cheshire, England to Flintshire, Wales with necessary Above Ground Installations (AGIs) and Block Valve Stations (BVSs). It is classed as a Nationally Significant Infrastructure Project (NSIP) and will require a Development Consent Order (DCO) under the Planning Act 2008 ('PA2008') granted by the Secretary of State for Business, Energy and Industrial Strategy (BEIS).
- 1.1.4. The DCO Proposed Development will form part of HyNet North West ('the Project'), which is a hydrogen supply and Carbon Capture and Storage ('CCS') project. The goal of the Project is to reduce CO₂ emissions from industry, homes and transport and support economic growth in the North West of England and North Wales. The wider Project is based on the production of low carbon hydrogen from natural gas. It includes the development of a new hydrogen production plant, hydrogen distribution pipelines, hydrogen storage and the creation of CCS infrastructure. CCS prevents CO₂ entering the atmosphere by capturing it, compressing it and transporting it for safe, permanent storage.
- 1.1.5. The DCO Proposed Development is a critical component of HyNet North West which, by facilitating the transportation of carbon, enables the rest of the Project to be low carbon. The hydrogen production, distribution, and CO₂ capture and storage elements of the Project do not form part of the DCO Proposed Development and will be delivered under separate consenting processes.
- 1.1.6. The DCO Application will seek consent for the construction, operation and maintenance of the following components which are part of the DCO Proposed Development, namely:
- **Ince Above Ground Installation (AGI) to Stanlow AGI Pipeline** – a section of new underground onshore pipeline (20" in diameter) to transport CO₂;

- **Stanlow AGI to Flint AGI Pipeline** – a section of new underground onshore pipeline (36” in diameter) to transport CO₂;
- **Flint AGI to Flint Connection Pipeline** – a section of new underground onshore pipeline (24” in diameter) to transport CO₂;
- **Flint Connection to Point of Ayr (PoA) Terminal Pipeline** – a section of existing Connah’s Quay to Point of Ayr (PoA) underground onshore pipeline (24” in diameter) which currently transports natural gas but will be repurposed and reused to transport CO₂. The Flint Connection to PoA Terminal Pipeline is scoped out of the EIA, except for the areas adjacent to the three BVSs that are within the Newbuild Infrastructure Boundary;
- **Four AGIs** - Ince AGI, Stanlow AGI, Northop Hall AGI, and Flint AGI;
- **Six Block Valve Stations (BVSs)** - located along:
 - The new Stanlow AGI to Flint AGI Pipeline (three in total);
 - The existing Flint Connection to PoA Terminal Pipeline (three in total);
- Other above ground infrastructure, including Cathodic Protection (CP) transformer rectifier cabinets and pipeline marker posts;
- Utility Connection infrastructure, including power utilities and Fibre Optic Cable (FOC); and
- Temporary ancillary works integral to the construction of the Newbuild Carbon Dioxide Pipeline, including Construction Compounds and temporary access tracks.

1.1.7. Further details of each element of the DCO Proposed Development are set out in **Chapter 3 – Description of the DCO Proposed Development (Volume II)** and subsequent addenda.

1.2. BRIEF SCOPE AND OBJECTIVES

1.2.1. The Applicant commissioned wintering and breeding bird surveys to support the DCO Proposed Development. This report is primarily informed by an ornithological desk study and the results of bird survey transects undertaken between October 2020 and March 2022, which were undertaken within and adjacent to the Newbuild Infrastructure Boundary.

1.2.2. The report includes an assessment of land within and beyond the Newbuild Infrastructure Boundary which supports protected and/or notable bird species or important bird assemblages.

1.2.3. The results of desk study and field surveys have been used to predict possible impacts on bird species and communities during the construction, operation and decommissioning stages of the DCO Proposed Development, in particular those populations and species associated with Special Protection Areas (SPA).

- 1.2.4. The results of the completed surveys and subsequent evaluation of the results are presented within this report. The impact assessment and recommendations for mitigation and compensation are presented within **Chapter 9: Biodiversity (Volume II)** and information contained within this report is used to inform the **Habitat Regulations Assessment (HRA) (Document reference: D.6.5.6)**.

1.3. RELEVANT LEGISLATION AND POLICY

BIRDS OF CONSERVATION CONCERN RED AND AMBER LISTS

- 1.3.1. The UK's leading bird conservation organisations periodically review the most up to date information on the status of birds in the UK and elsewhere in their range to produce a review of the status of birds which occur regularly in the UK. The latest version of this review is presented as the Birds of Conservation Concern (BoCC) 5 (**Ref.1**).
- 1.3.2. BoCC comprises a 'red list' of species of high conservation concern, an 'amber' list of species of moderate conservation concern, with other species that do not qualify under red or amber list criteria on the 'green' list.
- 1.3.3. To qualify on the red list, species may be listed as globally threatened by International Union for Conservation of Nature (IUCN), have suffered a historical decline without substantial recent recovery, or a decline of more than 50% in breeding or non-breeding populations, or a 50% contraction in breeding range over 25 years (or the longer term).
- 1.3.4. Amber list species can be those listed as Species of European Conservation Concern, those which have suffered a historical decline but shown significant recent recovery, have shown a decline of between 25 and 50% in breeding or non-breeding populations, or a contraction in breeding range of between 25 and 50% over 25 years (or the longer term) or be rare or localised breeders in the UK, or be species for which 20% of the breeding or non-breeding population is found in the UK.
- 1.3.5. Red or amber listing does not confer additional protection under legislation or planning policy; however, it provides a basis for informing evaluation of a site and for targeting conservation effort and is a widely used resource for interpreting bird populations.

WILDLIFE AND COUNTRYSIDE ACT 1981 (AS AMENDED) SCHEDULE 1 (REF. 2)

1.3.6. All naturally occurring wild birds in Great Britain are protected from persecution. It is illegal to kill, injure or 'take' any wild bird, take or damage the nest of any wild bird whilst in use or being built. The eggs of all wild birds are also protected. If you have in your possession any live wild birds, egg(s) or any part of a wild bird you are committing an offence. The birds listed in Schedule 1 of the Wildlife and Countryside Act 1981 are further protected by Special Penalties all year round for those in Part 1 and during a specified closed season for those listed in Part 2.

1.3.7. All birds are protected in some form, but some species have additional protection during the breeding season as do their nests, eggs and dependent young. To disturb any of these species you must obtain a special licence in advance. In England, permits for ringing and/or nest recording are issued by the BTO on behalf of Natural England (NE); licences for other activities are issued directly from NE. In Wales, all licences are issued directly by Natural Resources Wales (NRW) but ones for ringing and/or nest recording are applied for via the BTO.

NATURAL ENVIRONMENT AND RURAL COMMUNITIES (NERC) ACT 2006 (REF. 3) AND ENVIRONMENT (WALES) ACT 2016 (REF. 4)

1.3.8. The NERC Act 2006 sets out to protect the rarest and most threatened species in England which must be protected from adverse effects of any development. Section 41 (S41) of the NERC Act lists these species, including birds, which are Species of Principal Importance (SPI) in England.

1.3.9. Section 7 (S7) of the Environment (Wales) Act 2016 also lists species in Wales, which are considered of key significance in sustaining and improving biodiversity in relation to Wales. The S7 list replaces that within Section 42 (S42) of the NERC Act 2006.

1.3.10. Birds listed within S41 of the NERC Act and S7 of the Environment (Wales) Act are the same and are based on the old UK Biodiversity Action Plan (BAP) list.

QUALIFYING SPECIES FOR THE DEE ESTUARY (WALES) SPECIAL PROTECTION AREA (SPA)

1.3.11. The Dee Estuary (Wales) SPA and the Dee Estuary (Wales) Ramsar is designated for its bird interest, including significant numbers of individual species and important bird assemblages.

1.3.12. The area achieves Article 4.1 qualification (79/409/EEC) as during the breeding season it regularly supports:

- Little Tern *Sternula albifrons* (Eastern Atlantic - breeding) 2.9% of the GB breeding population 5-year peak mean 1995-1999.

- Common Tern *Sterna hirundo* (Northern/Eastern Europe - breeding) 3.2% of the population in Great Britain 5-year peak mean 1995-1999.

1.3.13. Over winter the area regularly supports:

- Bar-tailed Godwit *Limosa lapponica* (Western Palearctic - wintering) 2.2% of the GB population 5-year peak mean 1994/95-1998/99.

1.3.14. On passage the area regularly supports:

- Sandwich Tern *Sterna sandvicensis* (Western Europe/Western Africa) 2.3% of the population in Great Britain 5-year peak mean 1995-1999.

1.3.15. The area achieves Article 4.2 qualification (79/409/EEC) as over winter the area regularly supports:

- Pintail *Anas acuta* (North-western Europe) 9.0% of the population 5-year peak mean 1994/95-1998/99.
- Teal *Anas crecca* (North-western Europe) 1.3% of the population 5-year peak mean 1994/95-1998/99.
- Dunlin *Calidris alpina* (Northern Siberia/Europe/Western Africa) 2% of the population 5-year peak mean 1994/95-1998/99.
- Knot *Calidris canutus* (North-eastern Canada/Greenland/Iceland/North-western Europe) 3.5% of the population 5-year peak mean 1994/95-1998/99.
- Oystercatcher *Haematopus ostralegus* (Europe & Northern/Western Africa) 2.5% of the population 5-year peak mean 1994/95-1998/99.
- Black-tailed Godwit *Limosa islandica* (Iceland - breeding) 2.5% of the population 5-year peak mean 1994/95-1998/99.
- Curlew *Numenius arquata* (Europe - breeding) 1.1% of the population 5-year peak mean 1994/95-1998/99.
- Grey Plover *Pluvialis squatarola* (Eastern Atlantic - wintering) 1.1% of the population 5-year peak mean 1994/95-1998/99.
- Shelduck *Tadorna* (North-western Europe) 2.6% of the population 5-year peak mean 1994/95-1998/99.
- Redshank *Tringa totanus* (Eastern Atlantic - wintering) 3.5% of the population 5-year peak mean 1994/95-1998/99.

1.3.16. On passage the area regularly supports:

- Redshank (Eastern Atlantic - wintering) 5.9% of the population 5-year peak mean 1994/95-1998/99.

1.3.17. The area also achieves Article 4.2 qualification (79/409/EEC) as an internationally important assemblage of birds due to over winter the area regularly supporting: 120,726 waterfowl (5-year peak mean 1991/92-1995/96) including: Shelduck, Pintail, Oystercatcher, Knot, Bar-tailed Godwit and Redshank.

QUALIFYING SPECIES FOR THE MERSEY ESTUARY SPECIAL PROTECTION AREA (SPA)

1.3.18. The Mersey Estuary SPA and the Mersey Estuary Ramsar is designated for its bird interest, including significant numbers of individual species and important bird assemblages.

1.3.19. The area achieves Article 4.1 qualification (79/409/EEC) as over winter the area regularly supports:

- Golden Plover *Pluvialis apricaria* (North-western Europe - breeding) 1.2% of the GB population 5-year peak mean, 1993/94-1997/98.

1.3.20. The area achieves Article 4.2 qualification (79/409/EEC) as over winter the area regularly supports:

- Pintail (North-western Europe) 1.9% of the population 5-year peak mean, 1993/94-1997/98.
- Teal (North-western Europe) 2.9% of the population 5-year peak mean, 1993/94-1997/98.
- Wigeon *Mareca penelope* (Western Siberia/North-western/North-eastern Europe) 4.2% of the population in Great Britain 5-year peak mean, 1993/94-1997/98.
- Dunlin (Northern Siberia/Europe/Western Africa) 3.6% of the population 5-year peak mean, 1993/94-1997/98.
- Black-tailed Godwit (Iceland - breeding) 1.6% of the population 5-year peak mean, 1993/94-1997/98.
- Curlew (Europe - breeding) 1.1% of the population in Great Britain 5-year peak mean, 1993/94-1997/98.
- Grey Plover (Eastern Atlantic - wintering) 2.3% of the population in Great Britain 5-year peak mean, 1993/94-1997/98
- Great-crested Grebe *Podiceps cristatus* (North-western Europe - wintering) 1.4% of the population in Great Britain 5-year peak mean, 1993/94-1997/98
- Shelduck (North-western Europe) 2.2% of the population 5-year peak mean, 1993/94-1997/98
- Redshank (Eastern Atlantic - wintering) 2.8% of the population 5-year peak mean, 1993/94-1997/98

- Lapwing *Vanellus vanellus* (Europe - breeding) 0.7% of the population in Great Britain 5-year peak mean, 1993/94-1997/98

1.3.21. On passage the area regularly supports:

- Ringed Plover *Charadrius hiaticula* (Europe/Northern Africa - wintering) 1.7% of the population in Great Britain 5-year peak mean, 1993-1997.
- Redshank (Eastern Atlantic - wintering) 3.8% of the population 5-year peak mean, 1993-1997.

2. METHODOLOGY

2.1. DESK STUDY

2.1.1. A desk study was undertaken in July 2021 to review existing ecological baseline information available in the public domain and to obtain information held by relevant third parties. Ornithological records were collated within 2 km of the Newbuild Infrastructure Boundary. To provide baseline data, bird records from the last ten years were requested from the following organisations:

- Cofnod (North Wales Environmental Information Service) provided records of birds within 2 km of the Infrastructure Boundary within Wales (Flintshire); and
- rECOrd (The Biodiversity Information System for Cheshire, Halton, Warrington and Wirral) provided records of birds within 2 km of the Newbuild Infrastructure Boundary within England (Cheshire West and Chester).

2.1.2. Wetland Bird Survey (WeBS) count data was supplied by the British Trust for Ornithology (BTO) for important wetland sites adjacent to the Newbuild Infrastructure Boundary. WeBS counts data is used to monitor the UK's internationally important non-breeding waterbird populations and wetland sites are counted once per month, providing data for population and trends in abundance and distribution. The network of sites legally protected for their importance to wintering waterbirds depends fundamentally on the WeBS counts. 'Waterbirds' includes wildfowl (ducks, geese and swans), waders, rails, divers, grebes, cormorants and herons. Gulls and terns are optionally included.

2.1.3. At coastal locations, counting is done at high tide. At large sites, several counters will be working as a team. Each counter surveys the whole of their defined count area, known as a WeBS sector, identifying all the waterbird species present and counting the number of individuals of each species. Data supplied by the BTO provides information on peak counts for wetland sites adjacent to the Newbuild Infrastructure Boundary. **Section 2.2** below describes the proximity of any WeBS sectors to the survey transect routes.

2.2. FIELD SURVEYS

- 2.2.1. Field surveys were undertaken along eight transect routes which were distributed evenly along the length of the Newbuild Infrastructure Boundary (four within Cheshire West and Chester, England and four within Flintshire, Wales) and are presented in **Figures 9.8.1 to 9.8.8**. All transect routes were planned to be walked along Public Rights of Way (PRoW) and were designed to incorporate a variety of habitat types including, arable land, dry grassland, marshy grassland, swamp, urban fringe, woodland/scrub, hedgerows, ponds and riparian habitats. This mixture of habitat types allowed representative bird communities to be sampled across the length of the Newbuild Infrastructure Boundary.
- 2.2.2. Survey locations included targeting land potentially functionally linked to the Dee and Mersey Estuary SPAs including habitat that may support the qualifying bird species or assemblages. Wetland birds within communities recorded during transect surveys were compared to those species which are qualifying species within the SPA bird assemblages and species recorded within the closest WeBS sectors.
- 2.2.3. At least one full year of data for each transect route was recorded, with a minimum of one visit per month throughout October to February and two visits per month during March to September. An exception to this was made for Transect 2, where waterbirds were recorded during winter 2020/21 around the location of the pipeline crossing of the River Dee. No WeBS data is available for this stretch of the River Dee, so it was decided to visit this transect twice per month for all future survey months, to provide adequate data to undertake an assessment of the waterbird assemblage present. Transect 5, near Ince, was also visited twice per month throughout the winter due to its location, situated 500 m south of the Mersey Estuary SPA/Ramsar.
- 2.2.4. Transects were walked, mostly within one hour of sunrise, at a steady pace and paper field maps of each transect were annotated using standard two-letter BTO codes to show the locations and numbers of each bird species present. Transects 25 and 4, however, were walked slightly later as visits to these transects were combined with visits to Transects 26 and 5, which were commenced around sunrise, before Transects 25 and 4. Standard Common Bird Census (CBC) symbols were also used to indicate territorial behaviour and movements across the survey areas. As described above, transects included a wide range of different habitat types, which are briefly described below for each transect. Any WeBS sectors within 2 km of survey transects are described below.

TRANSECT 1

- 2.2.5. Transect 1 was located at the western end of the Newbuild Infrastructure Boundary, in Oakenholt, Flintshire and is within Section 6 (as defined within **Chapter 3 – Description of the DCO Proposed Development (Volume II)** of the Newbuild Infrastructure Boundary. The transect was 1.05 km long and started and finished on Leadbrook Drive, which runs south from the A548 Chester Road. The transect route headed south-west along a tarmac footpath, before crossing improved grassland fields surrounding Little Leadbrook Farm and continuing towards Allt-Goch Lane. The footpath was then re-traced past Little Leadbrook Farm and a section of public footpath was walked across improved grassland towards the location of Leadbrook Hall Farm, where the transect terminated on Leadbrook Drive.
- 2.2.6. Habitats present along the route consisted predominantly of improved sheep-grazed grassland, surrounded by managed species-poor hedgerows. The western end of the transect crossed a small, un-named watercourse, with a narrow band of mature trees along its length.
- 2.2.7. Within the wider landscape the most significant habitat feature for bird assemblages is the Dee Estuary, which is located just to the north of the A548 and North Wales Coast Line, directly opposite Leadbrook Drive. WeBS data is available for the Dee Estuary (England and Wales) with three sectors being located within 1 km of Leadbrook Drive:
- Oakenholt Marsh (Sector Location Code 69459), located 0.15 km north of the northern end of Leadbrook Drive;
 - Deeside Naturalists Reserve (Sector Location Code 69426), located 0.4 km east of the northern end of Leadbrook Drive; and
 - Flint Saltmarsh (Sector Location Code 69460), located 0.5 km north-west of the northern end of Leadbrook Drive.

TRANSECT 2

- 2.2.8. Transect 2 was located along the northern bank of the River Dee at Sealand, Flintshire, in Section 4 of the Newbuild Infrastructure Boundary. The transect was 4.1 km long, starting along a public footpath across arable fields, from Deeside Lane before joining a tarmac footpath along the river. The transect then continued north-west until its end point at the A494 road bridge.
- 2.2.9. Habitat present to the north of the river consisted almost entirely of arable fields and associated farm buildings. The eastern half of the transect included hedgerows and mature trees along the northern edge of the footpath but the western half of the transect consisted only of post and wire fences as boundaries.

- 2.2.10. To the south of the river the land was also arable for the eastern third of the transect. The western two thirds, however, was heavily industrialised, with factories, car parks and commercial units occupying the land, with a sewage treatment works at the end of the transect near the A494 road bridge.
- 2.2.11. The River Dee is tidal at this point and the amount of exposed mud below the grassy banks varied between surveys, but all surveys showed some degree of exposed mud along the banks.
- 2.2.12. Within the wider landscape, land to the north of the river was mostly arable, whilst land further to the south consisted of arable fields towards the eastern end of Transect 2. At the western end of the transect there were extensive areas of housing around Mancot. There are no WeBS sectors adjacent to the transect or River Dee at this point, with the nearest survey sectors being located approximately 6 km east at Queen's Park in Chester (Sector Location Code 45090) and 5.1 km north-west at Deeside Industrial Estate Lagoons (Sector Location Code 69431).

TRANSECT 3

- 2.2.13. Transect 3 was located within the village of Mollington, near Chester, in Section 3 of the Newbuild Infrastructure Boundary. The transect started on Grove Road, near the north of the village, before heading south-east, via Station Road, across cattle-grazed improved grassland, towards Townfield Lane. After following Townfield Road, in a north-westerly direction, the transect then headed north-east through more cattle and sheep-grazed improved grassland. Eventually the 2.33 km transect finished along Gypsy Lane, near St Oswalds CE Primary School.
- 2.2.14. Habitats along the transect consisted almost entirely of improved grassland with species-poor hedges and mature trees as field boundaries. There were six ponds located in fields between Grove Road and Townfield Lane.
- 2.2.15. The wider landscape included further improved grassland to the north and east of Transect 3, with housing to the south and arable land to the west. There are no WeBS sectors adjacent to Transect 3, with the nearest survey sector being located approximately 5.3 km south-east at Queen's Park in Chester (Sector Location Code 45090).

TRANSECT 4

- 2.2.16. Transect 4 was located at Stoak, Cheshire, just to the south of the M56, near its junction with the M53, in Section 2 of the Newbuild Infrastructure Boundary. The transect started on Picton Lane and headed north-east along a hedgerow-bounded public footpath, through arable fields before crossing a drainage ditch and continuing south-east across improved grassland to a metal footbridge crossing the River Gowy. The transect route then continued north along the eastern bank of the river before heading east, along the southern side of the M56. The total length of the transect was 1.37 km.
- 2.2.17. Habitats surrounding the transect included a large area of swamp and marshy grassland to the east of the River Gowy, with an active landfill site to the south. The marshy grassland was traversed by a network of drainage ditches. A small linear stand of plantation woodland was present parallel to and south of the M56, with this band of trees continuing south to form a field boundary separating the marshy grassland from arable land to the east. To the south and east of the transect was mostly arable land, which extended west of Picton Lane.
- 2.2.18. Land to the north of the M56 included another large area of swamp and marshy grassland immediately adjacent to the eastern bank of the river. None of these wetlands though are included as WeBS sectors, with the nearest such sectors located approximately 4 km north and comprising the Mersey Estuary (Manchester Ship Canal-Eastham to Frodsham, Sector Location Code 46484; Ince Bank, Sector Location Code 45420 and Manisty Bay, Sector Location Code 45419).

TRANSECT 5

- 2.2.19. Transect 5 was located to the east of Ince and south of the Manchester Ship Canal and Mersey Estuary in Cheshire, in Section 1 of the Newbuild Infrastructure Boundary. The 0.98 km long transect started south-east along Marsh Lane, before heading south along a footpath through Goldfinch Meadows (a Protos; Peel L&P nature area).
- 2.2.20. Habitat along Marsh Lane consisted of a drainage ditch running along the north of the lane, with a mixture of improved grassland and marshy grassland beyond, with approximately ten ponds located within the marshy areas. To the south of Marsh Lane there was a large field containing marshy grassland and scattered scrub. There were some large mature trees at the western end of the transect. Habitat at Goldfinch Meadows, the eastern half of the transect, consisted of more wet grassland and ponds, with large mature trees lining the southern edge of the path at the east of Transect 5.
- 2.2.21. Almost the entire length of Transect 5 is within a WeBS sector, with other, adjacent sectors as described below:

- Ince Marshes Fields (Sector Location Code 45316), containing the majority of Transect 5;
- Manchester Ship Canal-Eastham to Frodsham (Sector Location Code 46484), located 0.4 km north of Transect 5;
- Ince Bank (Sector Location Code 45420), located 0.5 km north of Transect 5;
- Frodsham Sludge Lagoons (Sector Location Code 45351), located 1.5 km north-east of Transect 5; and
- Lordship Lane Fields (Sector Location Code 45317), located 1.6 km south-east of Transect 5.

TRANSECT 7

2.2.22. Transect 7 was located to the west of Elton village, in Cheshire, immediately south of the railway line and Ince & Elton Station, in Section 1 of the Newbuild Infrastructure Boundary. The 2.08 km transect comprised a circuit walked along field boundaries through arable fields separating Stanlow Manufacturing Complex from Elton village.

2.2.23. The fields containing Transect 7 contained wheat stubble in winter 2020 but were planted up with potatoes in summer 2021 through to autumn 2021. The fields were bordered by bands/lines of mature trees along the western (Pool Lane), northern (railway) and eastern boundaries, with housing and a school to the west and south. The transect also followed small hedge and tree lines across the arable land. Part of Stanlow Manufacturing Complex (south of the railway line) comprised 230 ha of developed land to the west of Pool Lane and Transect 7 land.

2.2.24. The nearest WeBS sectors to Transect 7 include:

- Ince Marshes Fields (Sector Location Code 45316), located 1 km north of Transect 7;
- Manchester Ship Canal-Eastham to Frodsham (Sector Location Code 46484), located 1.4 km north of Transect 7;
- Ince Bank (Sector Location Code 45420), located 1.5 km north of Transect 7;
- Frodsham Sludge Lagoons (Sector Location Code 45351), located 2.4 km north-east of Transect 7; and
- Lordship Lane Fields (Sector Location Code 45317), located 2.4 km east of Transect 7.

TRANSECT 25

- 2.2.25. Transect 25 was located near Mancot, Flintshire, between the A550 and the A494, in Section 5 of the Newbuild Infrastructure Boundary. The transect started at Overlea Drive, in the south, and continued north-east through improved grassland fields towards the junction of the A550 and the A494 at its northern end. The transect also included a small section of the housing estate to the south-west of Overlea Drive.
- 2.2.26. Habitat along the 2.27 km long transect was mostly improved grassland, grazed by sheep but several small ponds were present within these fields. Field boundaries consisted of low species-poor hedgerows, with large mature trees also present along an un-named track running from Vickers Close to the A494 Aston Hill and along both sides of Clay Hill Lane.
- 2.2.27. Habitat within the wider landscape consisted of extensive residential areas to the west of the A494 and large industrial estates to the north-east, either side of the railway running beneath the A494 bridge. The industrial development continued to the southern bank of the River Dee, being the same area described within the Transect 2 description. Land to the east of the A550 was a mixture of improved grassland and residential areas.
- 2.2.28. There are no WeBS sectors near to Transect 25, with the nearest survey sectors being located approximately 2 km south-west at Hawarden Castle Lakes (Sector Location Code 69032) and 2.4 km north at Deeside Industrial Estate Lagoons (Sector Location Code 69431).

TRANSECT 26

- 2.2.29. Transect 26 was located to the north of Ewloe, Flintshire, either side of the A494, in Section 5 of the Newbuild Infrastructure Boundary. The 1.43 km long transect ran west to east from Shotton Lane to Lower Aston Lane. Between Shotton Lane and Old Aston Hill, the habitat along the transect consisted of arable land with a large pond to the east of Aston Hill Farm. Between Old Aston Hill and the A494 there was a mixture of residential properties and church grounds along the north of Church Lane and a grass covered underground reservoir to the south of Church Lane.
- 2.2.30. At the end of Church Lane and before the A494, there was a small area of broadleaved woodland with adjacent improved grassland. To the east of the A494 the transect ran along the south of a railway line, through poor semi-improved grassland, before going underneath the railway via a small subway and heading north-east towards Old Aston Hill, with residential properties to the west and improved grassland to the east.

2.2.31. There are no WeBS sectors near to Transect 26, with the nearest survey sectors being located approximately 2.2 km south-west at Hawarden Castle Lakes (Sector Location Code 69032), 2.9 km south-west at Buckley Clay Pits (Sector Location Code 69201) and 3.6 km north-east at Deeside Industrial Estate Lagoons (Sector Location Code 69431).

SURVEY DATES AND WEATHER CONDITIONS

2.2.32. Survey dates and weather conditions are provided in **Table 22**, in **Annex B**.

3. RESULTS

3.1. DESK STUDY

LOCAL RECORDS CENTRE DATA

3.1.1. The results of the desk study, using data supplied by Cofnod and rECOrd, are presented below in **Table 1**.

Table 1 – Birds of Conservation Concern within 2km of the Newbuild Infrastructure Boundary

Latin Name	Common Name	No.	BoCC1	S41/72	Sch 13
Acanthis cabaret	Lesser Redpoll	19	BoCC Red	S41/7	
Accipiter gentilis	Goshawk	1			Sch 1
Accipiter nisus	Sparrowhawk	30	BoCC Amber		
Acrocephalus schoenobaenus	Sedge Warbler	26	BoCC Amber		
Actitis hypoleucos	Common Sandpiper	250	BoCC Amber		
Alauda arvensis	Skylark	144	BoCC Red	S41/7	
Alcedo atthis	Kingfisher	140	BoCC Amber		Sch 1
Anas acuta	Pintail	171	BoCC Amber		
Anas crecca	Teal	771	BoCC Amber		
Anas platyrhynchos	Mallard	838	BoCC Amber		
Anser albifrons	White-fronted Goose	6	BoCC Red	S41/7	
Anser albifrons flavirostris	Greenland White-fronted Goose	1	BoCC Red	S41/7	
Anser anser	Greylag Goose	38	BoCC Amber		
Anser brachyrhynchus	Pink-footed Goose	9	BoCC Amber		
Anthus pratensis	Meadow Pipit	238	BoCC Amber		
Anthus trivialis	Tree Pipit	1	BoCC Red	S41/7	
Apus apus	Swift	230	BoCC Red		
Ardea alba	Great White Egret	11	BoCC Amber		
Arenaria interpres	Turnstone	45	BoCC Amber		

Latin Name	Common Name	No.	BoCC1	S41/72	Sch 13
Asio flammeus	Short-eared Owl	3	BoCC Amber		
Aythya ferina	Pochard	7	BoCC Red		
Aythya marila	Scaup	7	BoCC Red	S41/7	Sch 1
Branta bernicla	Brent Goose	25	BoCC Amber	S41/7	
Branta bernicla subsp. Bernicla	Brent Goose (dark-bellied)	5	BoCC Amber	S41/7	
Branta bernicla subsp. Hrota	Brent Goose (light-bellied)	1	BoCC Amber	S41/7	
Branta leucopsis	Barnacle Goose	180	BoCC Amber		
Bucephala clangula	Goldeneye	22	BoCC Red		
Calcarius lapponicus	Lapland Bunting	3	BoCC Amber		Sch 1
Calidris alba	Sanderling	19	BoCC Amber		
Calidris alpina	Dunlin	482	BoCC Red		
Calidris canutus	Knot	168	BoCC Amber		
Calidris ferruginea	Curlew Sandpiper	2	BoCC Amber		
Calidris pugnax	Ruff	16	BoCC Red		Sch 1
Cettia cetti	Cetti's Warbler	4			Sch 1
Charadrius dubius	Little Ringed Plover	150			Sch 1
Charadrius hiaticula	Ringed Plover	139	BoCC Red		
Chlidonias niger	Black Tern	4			Sch 1
Chloris chloris	Greenfinch	151	BoCC Red		
Chroicocephalus ridibundus	Black-headed Gull	662	BoCC Amber		
Cinclus cinclus	Dipper	2	BoCC Amber		
Circus aeruginosus	Marsh Harrier	130	BoCC Amber		Sch 1
Circus cyaneus	Hen Harrier	61	BoCC Red	S41/7	Sch 1

Latin Name	Common Name	No.	BoCC1	S41/72	Sch 13
Coccothraustes coccothraustes	Hawfinch	1	BoCC Red		
Columba oenas	Stock Dove	31	BoCC Amber		
Columba palumbus	Woodpigeon	223	BoCC Amber		
Corvus frugilegus	Rook	96	BoCC Amber		
Coturnix coturnix	Quail	1	BoCC Amber		Sch 1
Cuculus canorus	Cuckoo	8	BoCC Red	S41/7	
Cygnus columbianus	Bewick's Swan	16	BoCC Red		Sch 1
Cygnus cygnus	Whooper Swan	37	BoCC Amber		Sch 1
Cygnus olor	Mute Swan	446	BoCC Amber		
Delichon urbicum	House Martin	232	BoCC Red		
Emberiza citrinella	Yellowhammer	14	BoCC Red	S41/7	
Emberiza schoeniclus	Reed Bunting	295	BoCC Amber	S41/7	
Falco columbarius	Merlin	115	BoCC Red		Sch 1
Falco peregrinus	Peregrine	353			Sch 1
Falco subbuteo	Hobby	43			Sch 1
Falco tinnunculus	Kestrel	364	BoCC Amber		
Ficedula hypoleuca	Pied Flycatcher	3	BoCC Amber		
Fringilla montifringilla	Brambling	49			Sch 1
Gallinago gallinago	Snipe	141	BoCC Amber		
Gallinula chloropus	Moorhen	77	BoCC Amber		
Gavia stellata	Red-throated Diver	2			Sch 1
Haematopus ostralegus	Oystercatcher	633	BoCC Amber		
Hydrocoloeus minutus	Little Gull	7			Sch 1

Latin Name	Common Name	No.	BoCC1	S41/72	Sch 13
Ichthyaetus melanocephalus	Mediterranean Gull	51	BoCC Amber		Sch 1
Larus argentatus	Herring Gull	424	BoCC Red	S41/7	
Larus canus	Common Gull	211	BoCC Amber		
Larus fuscus	Lesser Black-backed Gull	386	BoCC Amber		
Larus glaucoides	Iceland Gull	2	BoCC Amber		
Larus marinus	Great Black-backed Gull	318	BoCC Amber		
Limosa lapponica	Bar-tailed Godwit	54	BoCC Amber		
Limosa limosa	Black-tailed Godwit	650	BoCC Red	S41/7	Sch 1
Linaria cannabina	Linnet	396	BoCC Red	S41/7	
Linaria flavirostris	Twite	533	BoCC Red	S41/7	
Locustella naevia	Grasshopper Warbler	4	BoCC Red	S41/7	
Mareca penelope	Wigeon	537	BoCC Amber		
Mareca strepera	Gadwall	211	BoCC Amber		
Melanitta nigra	Common Scoter	17	BoCC Red	S41/7	Sch 1
Mergellus albellus	Smew	1	BoCC Red		
Mergus serrator	Red-breasted Merganser	10	BoCC Amber		
Milvus milvus	Red Kite	17			Sch 1
Morus bassanus	Gannet	8	BoCC Amber		
Motacilla cinerea	Grey Wagtail	31	BoCC Amber		
Motacilla flava	Yellow Wagtail	47	BoCC Red		
Muscicapa striata	Spotted Flycatcher	7	BoCC Red	S41/7	
Numenius arquata	Curlew	741	BoCC Red	S41/7	
Numenius phaeopus	Whimbrel	154	BoCC Red		Sch 1

Latin Name	Common Name	No.	BoCC1	S41/72	Sch 13
Oceanodroma leucorhoa	Leach's Petrel	5	BoCC Red		Sch 1
Oenanthe oenanthe	Wheatear	284	BoCC Amber		
Pandion haliaetus	Osprey	6	BoCC Amber		Sch 1
Passer domesticus	House Sparrow	387	BoCC Red	S41/7	
Passer montanus	Tree Sparrow	64	BoCC Red	S41/7	
Perdix perdix	Grey Partridge	1	BoCC Red	S41/7	
Phalaropus lobatus	Red-necked Phalarope	1	BoCC Red		Sch 1
Phoenicurus ochruros	Black Redstart	7	BoCC Amber		Sch 1
Phoenicurus phoenicurus	Redstart	49	BoCC Amber		
Phylloscopus trochilus	Willow Warbler	97	BoCC Amber		
Platalea leucorodia	Spoonbill	15	BoCC Amber		Sch 1
Plectrophenax nivalis	Snow Bunting	1	BoCC Amber		Sch 1
Pluvialis squatarola	Grey Plover	80	BoCC Amber		
Podiceps auritus	Slavonian Grebe	3	BoCC Red		Sch 1
Poecile montanus	Willow Tit	1	BoCC Red	S41/7	
Poecile palustris	Marsh Tit	3	BoCC Red	S41/7	
Prunella modularis	Dunnock	610	BoCC Amber	S41/7	
Puffinus puffinus	Manx Shearwater	2	BoCC Amber		
Pyrrhula pyrrhula	Bullfinch	329	BoCC Amber	S41/7	
Recurvirostra avosetta	Avocet	56	BoCC Amber		Sch 1
Regulus ignicapilla	Firecrest	4			Sch 1
Saxicola rubetra	Whinchat	40	BoCC Red		
Scolopax rusticola	Woodcock	5	BoCC Red		

Latin Name	Common Name	No.	BoCC1	S41/72	Sch 13
Spatula clypeata	Shoveler	333	BoCC Amber		
Spatula querquedula	Garganey	6	BoCC Amber		Sch 1
Stercorarius parasiticus	Arctic Skua	1	BoCC Red		
Sterna hirundo	Common Tern	213	BoCC Amber		
Sterna paradisaea	Arctic Tern	13	BoCC Amber		
Sternula albifrons	Little Tern	4	BoCC Amber		Sch 1
Strix aluco	Tawny Owl	1	BoCC Amber		
Sturnus vulgaris	Starling	460	BoCC Red	S41/7	
Sylvia communis	Whitethroat	140	BoCC Amber		
Tadorna tadorna	Shelduck	628	BoCC Amber		
Thalasseus sandvicensis	Sandwich Tern	34	BoCC Amber		
Tringa erythropus	Spotted Redshank	184	BoCC Amber		
Tringa glareola	Wood Sandpiper	2	BoCC Amber		Sch 1
Tringa nebularia	Greenshank	88	BoCC Amber		Sch 1
Tringa ochropus	Green Sandpiper	39	BoCC Amber		Sch 1
Tringa totanus	Redshank	536	BoCC Amber		
Troglodytes troglodytes	Wren	208	BoCC Amber		
Turdus iliacus	Redwing	152	BoCC Amber		Sch 1
Turdus philomelos	Song Thrush	338	BoCC Amber		
Turdus pilaris	Fieldfare	135	BoCC Red		Sch 1
Turdus torquatus	Ring Ouzel	5	BoCC Red	S41/7	
Turdus viscivorus	Mistle Thrush	43	BoCC Red		
Tyto alba	Barn Owl	42			Sch 1

Latin Name	Common Name	No.	BoCC1	S41/72	Sch 13
Uria aalge	Common Guillemot	15	BoCC Amber		
Vanellus vanellus	Lapwing	584	BoCC Red	S41/7	

1 Birds of Conservation Concern Red, Amber or Green status. For definitions see **paragraphs 1.3.1 to 1.3.5** above.

2 Section 7 (S7) of the Environment (Wales) Act 2016 lists species in Wales, whilst Section 41 (S41) of the NERC Act 2006 lists species in England, which are considered of key significance in sustaining and improving biodiversity in relation to Wales and England.

3 Species within Schedule 1 of the Wildlife and Countryside Act 1981 are given additional protection by Special Penalties all year round for those in Part 1 of the Schedule.

BTO WEBS DATA

3.1.2. BTO WeBS data for survey sectors within 2km of the Newbuild Infrastructure Boundary are presented below in **Table 2** and **Table 3** below.

Table 2 – 5 Year (2014-2019) Mean Peak Counts of Waterbirds within WeBS Sectors with 2km of Transect 1

Latin Name	Common Name	1 ¹	2 ²	3 ³
Actitis hypoleucos	Common Sandpiper	2	2	0
Alcedo atthis	Kingfisher	1	1	0
Anas acuta	Pintail	387	11	1
Anas crecca	Teal	1380	614	92
Anas platyrhynchos	Mallard	298	190	24
Anser anser	Greylag Goose (British/Irish)	12	3	0
Anser brachyrhynchus	Pink-footed Goose	207	20	0
Ardea alba	Great White Egret	1	1	0
Ardea cinerea	Grey Heron	6	7	3
Arenaria interpres	Turnstone	1	2	5
Aythya fuligula	Tufted Duck	1	11	0
Aythya marila	Scaup	1	0	0
Branta canadensis	Canada Goose	638	380	129
Branta leucopsis	Barnacle Goose	2	2	0
Bucephala clangula	Goldeneye	1	0	0

Latin Name	Common Name	1 ¹	2 ²	3 ³
Calidris alpina	Dunlin	3520	14	323
Calidris canutus	Knot	11	8	10
Calidris ferruginea	Curlew Sandpiper	1	0	0
Calidris pugnax	Ruff	0	3	0
Charadrius dubius	Little Ringed Plover	0	2	0
Charadrius hiaticula	Ringed Plover	18	0	0
Chroicocephalus ridibundus	Black-headed Gull	1640	72	346
Cygnus cygnus	Whooper Swan	1	0	0
Cygnus olor	Mute Swan	3	6	0
Egretta garzetta	Little Egret	18	22	9
Fulica atra	Coot	35	39	0
Gallinago gallinago	Snipe	0	39	27
Gallinula chloropus	Moorhen	9	12	0
Haematopus ostralegus	Oystercatcher	1900	126	219
Larus argentatus	Herring Gull	49	0	81
Larus canus	Common Gull	50	0	97
Larus fuscus	Lesser Black-backed Gull	352	27	41
Larus marinus	Great Black-backed Gull	27	0	11
Limosa lapponica	Bar-tailed Godwit	1	0	1
Limosa limosa	Black-tailed Godwit	1250	143	530
Lymnocyptes minimus	Jack Snipe	0	1	0
Mareca penelope	Wigeon	2340	408	4
Mareca strepera	Gadwall	0	5	0

Latin Name	Common Name	1 ¹	2 ²	3 ³
Mergus merganser	Goosander	0	0	2
Mergus serrator	Red-breasted Merganser	1	0	0
Numenius arquata	Curlew	81	97	32
Numenius phaeopus	Whimbrel	5	0	6
Phalacrocorax carbo	Cormorant	38	10	20
Pluvialis apricaria	Golden Plover	28	0	11
Pluvialis squatarola	Grey Plover	2	0	0
Podiceps cristatus	Great Crested Grebe	7	2	2
Recurvirostra avosetta	Avocet	1	1	0
Spatula clypeata	Shoveler	0	20	0
Sterna hirundo	Common Tern	64	4	9
Tachybaptus ruficollis	Little Grebe	1	11	0
Tadorna tadorna	Shelduck	700	37	112
Thalasseus sandvicensis	Sandwich Tern	1	0	2
Tringa erythropus	Spotted Redshank	4	13	0
Tringa nebularia	Greenshank	1	15	1
Tringa totanus	Redshank	1360	2176	689
Vanellus vanellus	Lapwing	1600	409	276

1 Oakenholt Marsh; 2 Deeside Naturalists Reserve; 3 Flint Saltmarsh

Table 3 – 5 Year (2014-2019) Mean Peak Counts of Waterbirds within WeBS Sectors with 2km of Transects 5 and 7

Latin Name	Common Name	1¹	2²	3³	4³
Actitis hypoleucos	Common Sandpiper	0	8	0	1
Alcedo atthis	Kingfisher	0	1	0	1
Anas acuta	Pintail	0	11	0	27
Anas crecca	Teal	34	1006	(4)	596
Anas platyrhynchos	Mallard	18	354	5	78
Anas platyrhynchos	Domestic Mallard	0	1	0	0
Anser anser	Greylag Goose (Icelandic)	5	0	0	0
Anser anser	Greylag Goose (British/Irish)	7	35	0	18
Anser anser	Domestic Greylag Goose	0	5	0	8
Anser brachyrhynchus	Pink-footed Goose	100	663	0	120
Ardea alba	Great White Egret	0	4	0	0
Ardea cinerea	Grey Heron	1	26	1	5
Aythya ferina	Pochard	0	2	0	23
Aythya fuligula	Tufted Duck	6	68	0	144
Branta bernicla	Brent Goose (light bellied)	0	1	0	0
Branta canadensis	Canada Goose	0	6267	0	191
Branta leucopsis	Barnacle Goose	0	2	0	2
Bubulcus ibis	Cattle Egret	0	0	(1)	0
Bucephala clangula	Goldeneye	0	1	0	1
Calidris alpina	Dunlin	0	42986	0	2924
Calidris canutus	Knot	0	32	0	3
Calidris ferruginea	Curlew Sandpiper	0	1	0	7
Calidris minuta	Little Stint	0	0	0	1

Latin Name	Common Name	1 ¹	2 ²	3 ³	4 ³
Calidris pugnax	Ruff	0	13	0	37
Charadrius dubius	Little Ringed Plover	1	1	0	1
Charadrius hiaticula	Ringed Plover	0	43	2	105
Chroicocephalus ridibundus	Black-headed Gull	0	1809	400	471
Cygnus columbianus	Bewick's Swan	0	2	0	0
Cygnus cygnus	Whooper Swan	2	19	(26)	12
Cygnus olor	Mute Swan	19	26	0	17
Egretta garzetta	Little Egret	5	20	0	7
Fulica atra	Coot	8	95	0	38
Gallinago gallinago	Snipe	3	12	0	28
Gallinula chloropus	Moorhen	3	2	2	13
Haematopus ostralegus	Oystercatcher	2	409	2	2
Ichthyaetus melanocephalus	Mediterranean Gull	0	0	0	1
Larus argentatus	Herring Gull	0	515	0	12
Larus canus	Common Gull	0	20	0	73
Larus fuscus	Lesser Black-backed Gull	0	423	7	32
Larus marinus	Great Black-backed Gull	0	357	0	35
Larus michahellis	Yellow-legged Gull	0	0	0	1
Limosa lapponica	Bar-tailed Godwit	0	4	0	3
Limosa limosa	Black-tailed Godwit	0	1421	(23)	788
Lymnocyptes minimus	Jack Snipe	0	1	0	
Mareca penelope	Wigeon	4	895	0	130
Mareca strepera	Gadwall	13	36	0	52

Latin Name	Common Name	1 ¹	2 ²	3 ³	4 ³
<i>Numenius arquata</i>	Curlew	101	1268	(21)	170
<i>Numenius phaeopus</i>	Whimbrel	0	5	0	3
<i>Phalacrocorax carbo</i>	Cormorant	1	121	0	15
<i>Pluvialis apricaria</i>	Golden Plover	547	1184	0	720
<i>Pluvialis squatarola</i>	Grey Plover	0	331	0	69
<i>Podiceps cristatus</i>	Great Crested Grebe	2	23	0	1
<i>Rallus aquaticus</i>	Water Rail	1	0	0	2
<i>Recurvirostra avosetta</i>	Avocet	0	16	0	9
<i>Spatula clypeata</i>	Shoveler	5	4	(2)	266
<i>Sterna hirundo</i>	Common Tern	0	0	0	1
<i>Tachybaptus ruficollis</i>	Little Grebe	5	6	0	11
<i>Tadorna ferruginea</i>	Ruddy Shelduck	0	1	0	0
<i>Tadorna tadorna</i>	Shelduck	7	6366	4	141
<i>Tringa nebularia</i>	Greenshank	0	1	0	3
<i>Tringa ochropus</i>	Green Sandpiper	0	3	0	1
<i>Tringa totanus</i>	Redshank	0	605	0	162
<i>Vanellus vanellus</i>	Lapwing	2333	6966	(8)	1482

1 Ince Marshes Fields; 2 Ince Bank; 3 Lordship Lane Fields (parentheses indicate incomplete counts); 4 Frodsham Sludge Lagoons

3.2. FIELD SURVEYS

3.2.1. A summary of the results of the field surveys is given below with tables listing species recorded at each transect over the twelve-month survey period. Detailed results showing a breakdown of numbers recorded during each individual survey are provided in **Annex B**.

TRANSECT 1

3.2.2. A total of 50 species were recorded at Transect 1, including 15 Amber list BoCC species and nine Red list BoCC species. The list also includes seven S41/7 and two Sch 1 species.

Table 4 – Birds Species Recorded at Transect 1

Latin Name	Common Name	BoCC ¹	S41/7 ²	Sch 1 ³
Accipiter nisus	Sparrowhawk	BoCC Amber		
Aegithalos caudatus	Long-tailed Tit	BoCC Green		
Alectoris rufa	Red-legged Partridge	BoCC Green		
Anas platyrhynchos	Mallard	BoCC Amber		
Anthus pratensis	Meadow Pipit	BoCC Amber		
Ardea cinerea	Grey Heron	BoCC Green		
Branta canadensis	Canada Goose	BoCC Green		
Buteo buteo	Buzzard	BoCC Green		
Carduelis carduelis	Goldfinch	BoCC Green		
Chloris chloris	Greenfinch	BoCC Red		
Chroicocephalus ridibundus	Black-headed Gull	BoCC Amber		
Coloeus monedula	Jackdaw	BoCC Green		
Columba livia (domest.)	Feral Pigeon	BoCC Green		
Columba palumbus	Wood Pigeon	BoCC Amber		
Corvus corax	Raven	BoCC Green		
Corvus corone	Carrion Crow	BoCC Green		
Corvus frugilegus	Rook	BoCC Amber		
Cyanistes caeruleus	Blue Tit	BoCC Green		
Dendrocopos major	Great Spotted Woodpecker	BoCC Green		

Latin Name	Common Name	BoCC ¹	S41/7 ²	Sch 1 ³
Erithacus rubecula	Robin	BoCC Green		
<i>Falco tinnunculus</i>	Kestrel	BoCC Amber		
Fringilla coelebs	Chaffinch	BoCC Green		
Garrulus glandarius	Jay	BoCC Green		
Hirundo rustica	Swallow	BoCC Green		
Larus argentatus	Herring Gull	BoCC Red	S41/7	
Larus fuscus	Lesser Black-backed Gull	BoCC Amber		
Linaria cannabina	Linnet	BoCC Red	S41/7	
Motacilla alba	Pied Wagtail	BoCC Green		
Numenius arquata	Curlew	BoCC Red	S41/7	
Parus major	Great Tit	BoCC Green		
Passer domesticus	House Sparrow	BoCC Red	S41/7	
Perdix perdix	Grey Partridge	BoCC Red	S41/7	
Phasianus colchicus	Pheasant	BoCC Green		
Phylloscopus collybita	Chiffchaff	BoCC Green		
Pica pica	Magpie	BoCC Green		
Prunella modularis	Dunnock	BoCC Amber	S41/7	
Pyrrhula pyrrhula	Bullfinch	BoCC Amber	S41/7	
Regulus regulus	Goldcrest	BoCC Green		
Saxicola rubicola	Stonechat	BoCC Green		
Streptopelia decaocto	Collared Dove	BoCC Green		
Sturnus vulgaris	Starling	BoCC Red		
Sylvia atricapilla	Blackcap	BoCC Green		

Latin Name	Common Name	BoCC ¹	S41/7 ²	Sch 1 ³
<i>Sylvia communis</i>	Whitethroat	BoCC Amber		
<i>Tadorna tadorna</i>	Shelduck	BoCC Amber		
<i>Troglodytes troglodytes</i>	Wren	BoCC Amber		
<i>Turdus iliacus</i>	Redwing	BoCC Amber		Sch 1
<i>Turdus merula</i>	Blackbird	BoCC Green		
<i>Turdus philomelos</i>	Song Thrush	BoCC Amber		
<i>Turdus pilaris</i>	Fieldfare	BoCC Red		Sch 1
<i>Turdus viscivorus</i>	Mistle Thrush	BoCC Red		

1 Birds of Conservation Concern Red, Amber or Green status. For definitions see **paragraphs 1.3.1 to 1.3.5** above.

2 Section 7 (S7) of the Environment (Wales) Act 2016 lists species in Wales, whilst Section 41 (S41) of the NERC Act 2006 lists species in England, which are considered of key significance in sustaining and improving biodiversity in relation to Wales and England.

3 Species within Schedule 1 of the Wildlife and Countryside Act 1981 are given additional protection by Special Penalties all year round for those in Part 1 of the Schedule.

TRANSECT 2

3.2.3. A total of 82 species were recorded at Transect 2, including 35 Amber list BoCC species and 15 Red list BoCC species. The list also includes ten S41/7 and five Sch 1 species.

Table 5 – Birds Species Recorded at Transect 2

Latin Name	Common Name	BoCC ¹	S41/7 ²	Sch 1 ³
<i>Accipiter nisus</i>	Sparrowhawk	BoCC Amber		
<i>Actitis hypoleucos</i>	Common Sandpiper	BoCC Amber		
<i>Aegithalos caudatus</i>	Long-tailed Tit	BoCC Green		
<i>Alauda arvensis</i>	Skylark	BoCC Red	S41/7	
<i>Anas crecca</i>	Teal	BoCC Amber		
<i>Anas platyrhynchos</i>	Mallard	BoCC Amber		
<i>Anser anser</i>	Greylag Goose	BoCC Amber		
<i>Anser brachyrhynchus</i>	Pink-footed Goose	BoCC Amber		

Latin Name	Common Name	BoCC ¹	S41/7 ²	Sch 1 ³
Anthus pratensis	Meadow Pipit	BoCC Amber		
Apus apus	Swift	BoCC Red		
Ardea alba	Great White Egret	BoCC Amber		
Ardea cinerea	Grey Heron	BoCC Green		
Branta canadensis	Canada Goose	BoCC Green		
Buteo buteo	Buzzard	BoCC Green		
Carduelis carduelis	Goldfinch	BoCC Green		
Charadrius hiaticula	Ringed Plover	BoCC Red		
Chloris chloris	Greenfinch	BoCC Red		
Chroicocephalus ridibundus	Black-headed Gull	BoCC Amber		
Coloeus monedula	Jackdaw	BoCC Green		
Columba livia (domest.)	Feral Pigeon	BoCC Green		
Columba oenas	Stock Dove	BoCC Amber		
Columba palumbus	Wood Pigeon	BoCC Amber		
Corvus corax	Raven	BoCC Green		
Corvus corone	Carrion Crow	BoCC Green		
Corvus frugilegus	Rook	BoCC Amber		
Cyanistes caeruleus	Blue Tit	BoCC Green		
Cygnus cygnus	Whooper Swan	BoCC Amber		Sch 1
Cygnus olor	Mute Swan	BoCC Amber		
Delichon urbicum	House Martin	BoCC Red		
Dendrocopos major	Great Spotted Woodpecker	BoCC Green		
Egretta garzetta	Little Egret	BoCC Green		

Latin Name	Common Name	BoCC ¹	S41/7 ²	Sch 1 ³
Emberiza citrinella	Yellowhammer	BoCC Red	S41/7	
Emberiza schoeniclus	Reed Bunting	BoCC Amber	S41/7	
Erithacus rubecula	Robin	BoCC Green		
Falco peregrinus	Peregrine	BoCC Green		Sch 1
Falco tinnunculus	Kestrel	BoCC Amber		
Fringilla coelebs	Chaffinch	BoCC Green		
Gallinago gallinago	Snipe	BoCC Amber		
Gallinula chloropus	Moorhen	BoCC Amber		
Garrulus glandarius	Jay	BoCC Green		
Haematopus ostralegus	Oystercatcher	BoCC Amber		
Hirundo rustica	Swallow	BoCC Green		
Ichthyaeus melanocephalus	Mediterranean Gull	BoCC Amber		Sch 1
Larus argentatus	Herring Gull	BoCC Red	S41/7	
Larus canus	Common Gull	BoCC Amber		
Larus fuscus	Lesser Black-backed Gull	BoCC Amber		
Larus marinus	Great Black-backed Gull	BoCC Amber		
Linaria cannabina	Linnet	BoCC Red	S41/7	
Lymnocyptes minimus	Jack Snipe	BoCC Green		
<i>Mareca penelope</i>	Wigeon	BoCC Amber		
<i>Mareca strepera</i>	Gadwall	BoCC Amber		
<i>Mergus merganser</i>	Goosander	BoCC Green		
<i>Motacilla alba</i>	Pied Wagtail	BoCC Green		
<i>Motacilla cinerea</i>	Grey Wagtail	BoCC Amber		

Latin Name	Common Name	BoCC ¹	S41/7 ²	Sch 1 ³
<i>Motacilla flava</i>	Yellow Wagtail	BoCC Red		
<i>Numenius arquata</i>	Curlew	BoCC Red	S41/7	
<i>Oenanthe oenanthe</i>	Wheatear	BoCC Amber		
<i>Parus major</i>	Great Tit			
<i>Passer domesticus</i>	House Sparrow	BoCC Red	S41/7	
<i>Phalacrocorax carbo</i>	Cormorant	BoCC Green		
<i>Phasianus colchicus</i>	Pheasant	BoCC Green		
<i>Phylloscopus collybita</i>	Chiffchaff	BoCC Green		
<i>Pica pica</i>	Magpie	BoCC Green		
<i>Prunella modularis</i>	Dunnock	BoCC Amber	S41/7	
<i>Riparia riparia</i>	Sand Martin	BoCC Green		
<i>Saxicola rubetra</i>	Whinchat	BoCC Red		
<i>Saxicola rubicola</i>	Stonechat	BoCC Green		
<i>Sterna hirundo</i>	Common Tern	BoCC Amber		
<i>Streptopelia decaocto</i>	Collared Dove	BoCC Green		
<i>Sturnus vulgaris</i>	Starling	BoCC Red	S41/7	
<i>Sylvia atricapilla</i>	Blackcap	BoCC Green		
<i>Sylvia borin</i>	Garden Warbler	BoCC Green		
<i>Sylvia communis</i>	Whitethroat	BoCC Amber		
<i>Tachybaptus ruficollis</i>	Little Grebe	BoCC Green		
<i>Tadorna tadorna</i>	Shelduck	BoCC Amber		
<i>Tringa totanus</i>	Redshank	BoCC Amber		
<i>Troglodytes troglodytes</i>	Wren	BoCC Amber		

Latin Name	Common Name	BoCC ¹	S41/7 ²	Sch 1 ³
<i>Turdus iliacus</i>	Redwing	BoCC Amber		Sch 1
<i>Turdus merula</i>	Blackbird	BoCC Green		
<i>Turdus philomelos</i>	Song Thrush	BoCC Amber		
<i>Turdus pilaris</i>	Fieldfare	BoCC Red		Sch 1
<i>Vanellus vanellus</i>	Lapwing	BoCC Red	S41/7	

1 Birds of Conservation Concern Red, Amber or Green status. For definitions see **paragraphs 1.3.1 to 1.3.5** above.

2 Section 7 (S7) of the Environment (Wales) Act 2016 lists species in Wales, whilst Section 41 (S41) of the NERC Act 2006 lists species in England, which are considered of key significance in sustaining and improving biodiversity in relation to Wales and England.

3 Species within Schedule 1 of the Wildlife and Countryside Act 1981 are given additional protection by Special Penalties all year round for those in Part 1 of the Schedule.

TRANSECT 3

3.2.4. A total of 57 species were recorded at Transect 3, including 19 Amber list BoCC species and 11 Red list BoCC species. The list also includes nine S41/7 and three Sch 1 species.

Table 6 – Birds Species Recorded at Transect 3

Latin Name	Common Name	BoCC ¹	S41/7 ²	Sch 1 ³
Aegithalos caudatus	Long-tailed Tit	BoCC Green		
Anas crecca	Teal	BoCC Amber		
Anas platyrhynchos	Mallard	BoCC Amber		
Anser anser	Greylag Goose	BoCC Amber		
Anthus pratensis	Meadow Pipit	BoCC Amber		
Ardea alba	Great White Egret	BoCC Amber		
Branta canadensis	Canada Goose	BoCC Green		
Buteo buteo	Buzzard	BoCC Green		
Carduelis carduelis	Goldfinch	BoCC Green		
Certhia familiaris	Treecreeper	BoCC Green		
Chloris chloris	Greenfinch	BoCC Red		

Latin Name	Common Name	BoCC ¹	S41/7 ²	Sch 1 ³
Chroicocephalus ridibundus	Black-headed Gull	BoCC Amber		
Coloeus monedula	Jackdaw	BoCC Green		
Columba livia (domest.)	Feral Pigeon	BoCC Green		
Columba oenas	Stock Dove	BoCC Amber		
Columba palumbus	Wood Pigeon	BoCC Amber		
Corvus corax	Raven	BoCC Green		
Corvus corone	Carrion Crow	BoCC Green		
Corvus frugilegus	Rook	BoCC Amber		
Cyanistes caeruleus	Blue Tit	BoCC Green		
Dendrocopos major	Great Spotted Woodpecker	BoCC Green		
Emberiza citrinella	Yellowhammer	BoCC Red	S41/7	
Erithacus rubecula	Robin	BoCC Green		
Falco tinnunculus	Kestrel	BoCC Amber		
Fringilla coelebs	Chaffinch	BoCC Green		
Fulica atra	Coot	BoCC Green		
Garrulus glandarius	Jay	BoCC Green		
Hirundo rustica	Swallow	BoCC Green		
Larus argentatus	Herring Gull	BoCC Red	S41/7	
Larus canus	Common Gull	BoCC Amber		
Larus fuscus	Lesser Black-backed Gull	BoCC Amber		
Larus marinus	Great Black-backed Gull	BoCC Amber		
Linaria cannabina	Linnet	BoCC Red	S41/7	
Motacilla alba	Pied Wagtail	BoCC Green		

Latin Name	Common Name	BoCC ¹	S41/7 ²	Sch 1 ³
Parus major	Great Tit	BoCC Green		
Passer domesticus	House Sparrow	BoCC Red	S41/7	
Perdix perdix	Grey Partridge	BoCC Red	S41/7	
Periparus ater	Coal Tit	BoCC Green		
Phylloscopus collybita	Chiffchaff	BoCC Green		
Pica pica	Magpie	BoCC Green		
Poecile palustris	Marsh Tit	BoCC Red	S41/7	
Prunella modularis	Dunnock	BoCC Amber	S41/7	
Regulus regulus	Goldcrest	BoCC Green		
Saxicola rubicola	Stonechat	BoCC Green		
Spatula clypeata	Shoveler	BoCC Amber		
Streptopelia decaocto	Collared Dove	BoCC Green		
Sturnus vulgaris	Starling	BoCC Red	S41/7	
Sylvia atricapilla	Blackcap	BoCC Green		
Sylvia communis	Whitethroat	BoCC Amber		
Troglodytes troglodytes	Wren	BoCC Amber		
Turdus iliacus	Redwing	BoCC Amber		Sch 1
Turdus merula	Blackbird	BoCC Green		
Turdus philomelos	Song Thrush	BoCC Amber;		
Turdus pilaris	Fieldfare	BoCC Red		Sch 1
Turdus viscivorus	Mistle Thrush	BoCC Red		
Upupa epops	Hoopoe	BoCC Green		Sch 1
Vanellus vanellus	Lapwing	BoCC Red	S41/7	

¹ Birds of Conservation Concern Red, Amber or Green status. For definitions see **paragraphs 1.3.1 to 1.3.5** above.

2 Section 7 (S7) of the Environment (Wales) Act 2016 lists species in Wales, whilst Section 41 (S41) of the NERC Act 2006 lists species in England, which are considered of key significance in sustaining and improving biodiversity in relation to Wales and England.

3 Species within Schedule 1 of the Wildlife and Countryside Act 1981 are given additional protection by Special Penalties all year round for those in Part 1 of the Schedule.

TRANSECT 4

3.2.5. A total of 63 species were recorded at Transect 4, including 27 Amber list BoCC species and nine Red list BoCC species. The list also includes nine S41/7 and three Sch 1 species.

Table 7 – Birds Species Recorded at Transect 4

Latin Name	Common Name	BoCC ¹	S41/7 ²	Sch 1 ³
Acrocephalus schoenobaenus	Sedge Warbler	BoCC Amber		
Acrocephalus scirpaceus	Reed Warbler	BoCC Green		
Aegithalos caudatus	Long-tailed Tit	BoCC Green		
Alauda arvensis	Skylark	BoCC Red	S41/7	
Alcedo atthis	Kingfisher	BoCC Amber		Sch 1
Anas crecca	Teal	BoCC Amber		
Anas platyrhynchos	Mallard	BoCC Amber		
Anser anser	Greylag Goose	BoCC Amber		
Anser brachyrhynchus	Pink-footed Goose	BoCC Amber		
Anthus pratensis	Meadow Pipit	BoCC Amber		
Ardea alba	Great White Egret	BoCC Amber		
Ardea cinerea	Grey Heron	BoCC Green		
Branta canadensis	Canada Goose	BoCC Green		
Buteo buteo	Buzzard	BoCC Green		
Carduelis carduelis	Goldfinch	BoCC Green		
Chloris chloris	Greenfinch	BoCC Red		
Chroicocephalus ridibundus	Black-headed Gull	BoCC Amber		
Coloeus monedula	Jackdaw	BoCC Green		

Latin Name	Common Name	BoCC ¹	S41/7 ²	Sch 1 ³
Columba livia (domest.)	Feral Pigeon	BoCC Green		
Columba oenas	Stock Dove	BoCC Amber		
Columba palumbus	Wood Pigeon	BoCC Amber		
Corvus corax	Raven	BoCC Green		
Corvus corone	Carrion Crow	BoCC Green		
Cyanistes caeruleus	Blue Tit	BoCC Green		
Cygnus olor	Mute Swan	BoCC Amber		
Emberiza citrinella	Yellowhammer	BoCC Red	S41/7	
Emberiza schoeniclus	Reed Bunting	BoCC Amber	S41/7	
Erithacus rubecula	Robin	BoCC Green		
Falco tinnunculus	Kestrel	BoCC Amber		
Fringilla coelebs	Chaffinch	BoCC Green		
Gallinago gallinago	Snipe	BoCC Amber		
Gallinula chloropus	Moorhen	BoCC Amber		
Garrulus glandarius	Jay	BoCC Green		
Hirundo rustica	Swallow	BoCC Green		
Larus argentatus	Herring Gull	BoCC Red	S41/7	
Larus canus	Common Gull	BoCC Amber		
Larus fuscus	Lesser Black-backed Gull	BoCC Amber		
Larus marinus	Great Black-backed Gull	BoCC Amber		
Linaria cannabina	Linnet	BoCC Red	S41/7	
Motacilla alba	Pied Wagtail	BoCC Green		
Motacilla cinerea	Grey Wagtail	BoCC Amber		

Latin Name	Common Name	BoCC ¹	S41/7 ²	Sch 1 ³
Parus major	Great Tit	BoCC Green		
Phalacrocorax carbo	Cormorant	BoCC Green		
Phasianus colchicus	Pheasant	BoCC Green		
Phylloscopus collybita	Chiffchaff	BoCC Green		
Phylloscopus trochilus	Willow Warbler	BoCC Amber		
Pica pica	Magpie	BoCC Green		
Prunella modularis	Dunnock	BoCC Amber	S41/7	
Pyrrhula pyrrhula	Bullfinch	BoCC Amber	S41/7	
Regulus regulus	Goldcrest	BoCC Green		
Saxicola rubicola	Stonechat	BoCC Green		
Scolopax rusticola	Woodcock	BoCC Red		
Sturnus vulgaris	Starling	BoCC Red	S41/7	
Sylvia atricapilla	Blackcap	BoCC Green		
Sylvia communis	Whitethroat	BoCC Amber		
Sylvia curruca	Lesser Whitethroat	BoCC Green		
Tachybaptus ruficollis	Little Grebe	BoCC Green		
Troglodytes troglodytes	Wren	BoCC Amber		
Turdus iliacus	Redwing	BoCC Amber		Sch 1
Turdus merula	Blackbird	BoCC Green		
Turdus philomelos	Song Thrush	BoCC Amber		
Turdus pilaris	Fieldfare	BoCC Red		Sch 1
Vanellus vanellus	Lapwing	BoCC Red	S41/7	

¹ Birds of Conservation Concern Red, Amber or Green status. For definitions see **paragraphs 1.3.1 to 1.3.5** above.

2 Section 7 (S7) of the Environment (Wales) Act 2016 lists species in Wales, whilst Section 41 (S41) of the NERC Act 2006 lists species in England, which are considered of key significance in sustaining and improving biodiversity in relation to Wales and England.

3 Species within Schedule 1 of the Wildlife and Countryside Act 1981 are given additional protection by Special Penalties all year round for those in Part 1 of the Schedule.

TRANSECT 5

3.2.6. A total of 77 species were recorded at Transect 5, including 29 Amber list BoCC species and 14 Red list BoCC species. The list also includes 12 S41/7 and four Sch 1 species.

Table 8 – Birds Species Recorded at Transect 5

Latin Name	Common Name	BoCC ¹	S41/7 ²	Sch 1 ³
Accipiter nisus	Sparrowhawk	BoCC Amber		
Acrocephalus schoenobaenus	Sedge Warbler	BoCC Amber		
Acrocephalus scirpaceus	Reed Warbler	BoCC Green		
Aegithalos caudatus	Long-tailed Tit	BoCC Green		
Alauda arvensis	Skylark	BoCC Red	S41/7	
Anas crecca	Teal	BoCC Amber		
Anas platyrhynchos	Mallard	BoCC Amber		
Anser brachyrhynchus	Pink-footed Goose	BoCC Amber		
Anthus pratensis	Meadow Pipit	BoCC Amber		
Apus apus	Swift	BoCC Red		
Ardea alba	Great White Egret	BoCC Amber		
Ardea cinerea	Grey Heron	BoCC Green		
Aythya fuligula	Tufted Duck	BoCC Green		
Branta canadensis	Canada Goose	BoCC Green		
Buteo buteo	Buzzard	BoCC Green		
Carduelis carduelis	Goldfinch	BoCC Green		
Certhia familiaris	Treecreeper	BoCC Green		
Cettia cetti	Cetti's Warbler	BoCC Green		Sch 1

Latin Name	Common Name	BoCC ¹	S41/7 ²	Sch 1 ³
Chloris chloris	Greenfinch	BoCC Red		
Chroicocephalus ridibundus	Black-headed Gull	BoCC Amber		
Circus aeruginosus	Marsh Harrier	BoCC Amber		Sch 1
Coloeus monedula	Jackdaw	BoCC Green		
Columba livia (domest.)	Feral Pigeon	BoCC Green		
Columba oenas	Stock Dove	BoCC Amber		
Columba palumbus	Wood Pigeon	BoCC Amber		
Corvus corax	Raven	BoCC Green		
Corvus corone	Carrion Crow	BoCC Green		
Corvus frugilegus	Rook	BoCC Amber		
Cyanistes caeruleus	Blue Tit	BoCC Green		
Cygnus olor	Mute Swan	BoCC Amber		
Delichon urbicum	House Martin	BoCC Red		
Dendrocopos major	Great Spotted Woodpecker	BoCC Green		
Egretta garzetta	Little Egret	BoCC Green		
Emberiza schoeniclus	Reed Bunting	BoCC Amber	S41/7	
Erithacus rubecula	Robin	BoCC Green		
Falco tinnunculus	Kestrel	BoCC Amber		
Fringilla coelebs	Chaffinch	BoCC Green		
Fulica atra	Coot	BoCC Green		
Gallinago gallinago	Snipe	BoCC Amber		
Gallinula chloropus	Moorhen	BoCC Amber		
Garrulus glandarius	Jay	BoCC Green		

Latin Name	Common Name	BoCC ¹	S41/7 ²	Sch 1 ³
Hirundo rustica	Swallow	BoCC Green		
Larus argentatus	Herring Gull	BoCC Red	S41/7	
Larus fuscus	Lesser Black-backed Gull	BoCC Amber		
Larus marinus	Great Black-backed Gull	BoCC Amber		
Linaria cannabina	Linnet	BoCC Red	S41/7	
Linaria flavirostris	Twite	BoCC Red	S41/7	
Locustella naevia	Grasshopper Warbler	BoCC Red	S41/7	
Mareca strepera	Gadwall	BoCC Amber		
Motacilla alba	Pied Wagtail	BoCC Green		
Numenius arquata	Curlew	BoCC Red	S41/7	
Parus major	Great Tit	BoCC Green		
Passer domesticus	House Sparrow	BoCC Red	S41/7	
Periparus ater	Coal Tit	BoCC Green		
Phalacrocorax carbo	Cormorant	BoCC Green		
Phasianus colchicus	Pheasant	BoCC Green		
Phylloscopus collybita	Chiffchaff	BoCC Green		
Phylloscopus trochilus	Willow Warbler	BoCC Amber		
Pica pica	Magpie	BoCC Green		
Prunella modularis	Dunnock	BoCC Amber	S41/7	
Pyrrhula pyrrhula	Bullfinch	BoCC Amber	S41/7	
Regulus regulus	Goldcrest	BoCC Green		
Sitta europaea	Nuthatch	BoCC Green		
Spatula clypeata	Shoveler	BoCC Amber		

Latin Name	Common Name	BoCC ¹	S41/7 ²	Sch 1 ³
Sturnus vulgaris	Starling	BoCC Red	S41/7	
Sylvia atricapilla	Blackcap	BoCC Green		
Sylvia borin	Garden Warbler	BoCC Green		
Sylvia communis	Whitethroat	BoCC Amber		
Tachybaptus ruficollis	Little Grebe	BoCC Green		
Tadorna tadorna	Shelduck	BoCC Amber		
Troglodytes troglodytes	Wren	BoCC Amber		
Turdus iliacus	Redwing	BoCC Amber		Sch 1
Turdus merula	Blackbird	BoCC Green		
Turdus philomelos	Song Thrush	BoCC Amber		
Turdus pilaris	Fieldfare	BoCC Red		Sch 1
Turdus viscivorus	Mistle Thrush	BoCC Red		
Vanellus vanellus	Lapwing	BoCC Red	S41/7	

1 Birds of Conservation Concern Red, Amber or Green status. For definitions see **paragraphs 1.3.1 to 1.3.5** above.

2 Section 7 (S7) of the Environment (Wales) Act 2016 lists species in Wales, whilst Section 41 (S41) of the NERC Act 2006 lists species in England, which are considered of key significance in sustaining and improving biodiversity in relation to Wales and England.

3 Species within Schedule 1 of the Wildlife and Countryside Act 1981 are given additional protection by Special Penalties all year round for those in Part 1 of the Schedule.

TRANSECT 7

3.2.7. A total of 54 species were recorded at Transect 7, including 19 Amber list BoCC species and 10 Red list BoCC species. The list also includes seven S41/7 and two Sch 1 species.

Table 9 – Birds Species Recorded at Transect 7

Latin Name	Common Name	BoCC ¹	S41/7 ²	Sch 1 ³
Accipiter nisus	Sparrowhawk	BoCC Amber		
Aegithalos caudatus	Long-tailed Tit	BoCC Green		
Anser anser	Greylag Goose	BoCC Amber		

Latin Name	Common Name	BoCC ¹	S41/7 ²	Sch 1 ³
Anser brachyrhynchus	Pink-footed Goose	BoCC Amber		
Anthus pratensis	Meadow Pipit	BoCC Amber		
Apus apus	Swift	BoCC Red		
Ardea cinerea	Grey Heron	BoCC Green		
Branta canadensis	Canada Goose	BoCC Green		
Buteo buteo	Buzzard	BoCC Green		
Carduelis carduelis	Goldfinch	BoCC Green		
Chloris chloris	Greenfinch	BoCC Red		
Chroicocephalus ridibundus	Black-headed Gull	BoCC Amber		
Coloeus monedula	Jackdaw	BoCC Green		
Columba oenas	Stock Dove	BoCC Amber		
Columba palumbus	WoodPigeon	BoCC Amber		
Corvus corax	Raven	BoCC Green		
Corvus corone	Carrion Crow	BoCC Green		
Corvus frugilegus	Rook	BoCC Amber		
Cyanistes caeruleus	Blue Tit	BoCC Green		
Delichon urbicum	House Martin	BoCC Red		
Dendrocopos major	Great Spotted Woodpecker	BoCC Green		
Emberiza schoeniclus	Reed Bunting	BoCC Amber	S41/7	
Erithacus rubecula	Robin	BoCC Green		
Falco tinnunculus	Kestrel	BoCC Amber		
Fringilla coelebs	Chaffinch	BoCC Green		
Garrulus glandarius	Jay	BoCC Green		

Latin Name	Common Name	BoCC ¹	S41/7 ²	Sch 1 ³
Haematopus ostralegus	Oystercatcher	BoCC Amber		
Hirundo rustica	Swallow	BoCC Green		
Larus argentatus	Herring Gull	BoCC Red	S41/7	
Larus canus	Common Gull	BoCC Amber		
Larus fuscus	Lesser Black-backed Gull	BoCC Amber		
Larus marinus	Great Black-backed Gull	BoCC Amber		
Linaria cannabina	Linnet	BoCC Red	S41/7	
Motacilla alba	Pied Wagtail	BoCC Green		
Numenius arquata	Curlew	BoCC Red	S41/7	
Parus major	Great Tit	BoCC Green		
Passer domesticus	House Sparrow	BoCC Red	S41/7	
Phalacrocorax carbo	Cormorant	BoCC Green		
Phasianus colchicus	Pheasant	BoCC Green		
Phylloscopus collybita	Chiffchaff	BoCC Green		
Pica pica	Magpie	BoCC Green		
Prunella modularis	Dunnock	BoCC Amber	S41/7	
Regulus regulus	Goldcrest	BoCC Green		
Sitta europaea	Nuthatch	BoCC Green		
Streptopelia decaocto	Collared Dove	BoCC Green		
Sturnus vulgaris	Starling	BoCC Red	S41/7	
Sylvia atricapilla	Blackcap	BoCC Green		
Sylvia communis	Whitethroat	BoCC Amber		
Troglodytes troglodytes	Wren	BoCC Amber		

Latin Name	Common Name	BoCC ¹	S41/7 ²	Sch 1 ³
Turdus iliacus	Redwing	BoCC Amber		Sch 1
Turdus merula	Blackbird	BoCC Green		
Turdus philomelos	Song Thrush	BoCC Amber		
Turdus pilaris	Fieldfare	BoCC Red		Sch 1
Turdus viscivorus	Mistle Thrush	BoCC Red		

1 Birds of Conservation Concern Red, Amber or Green status. For definitions see **paragraphs 1.3.1 to 1.3.5** above.

2 Section 7 (S7) of the Environment (Wales) Act 2016 lists species in Wales, whilst Section 41 (S41) of the NERC Act 2006 lists species in England, which are considered of key significance in sustaining and improving biodiversity in relation to Wales and England.

3 Species within Schedule 1 of the Wildlife and Countryside Act 1981 are given additional protection by Special Penalties all year round for those in Part 1 of the Schedule.

TRANSECT 25

3.2.8. A total of 52 species were recorded at Transect 25, including 19 Amber list BoCC species and seven Red list BoCC species. The list also includes six S41/7 and one Sch 1 species.

Table 10 – Birds Species Recorded at Transect 25

Latin Name	Common Name	BoCC ¹	S41/7 ²	Sch 1 ³
Aegithalos caudatus	Long-tailed Tit	BoCC Green		
Anas platyrhynchos	Mallard	BoCC Amber		
Anser anser	Greylag Goose	BoCC Amber		
Anthus pratensis	Meadow Pipit	BoCC Amber		
Apus apus	Swift	BoCC Red		
Ardea cinerea	Grey Heron	BoCC Green		
Branta canadensis	Canada Goose	BoCC Green		
Buteo buteo	Buzzard	BoCC Green		
Carduelis carduelis	Goldfinch	BoCC Green		
Chloris chloris	Greenfinch	BoCC Red		
Chroicocephalus ridibundus	Black-headed Gull	BoCC Amber		
Coloeus monedula	Jackdaw	BoCC Green		

Latin Name	Common Name	BoCC ¹	S41/7 ²	Sch 1 ³
Columba livia (domest.)	Feral Pigeon	BoCC Green		
Columba oenas	Stock Dove	BoCC Amber		
Columba palumbus	Wood Pigeon	BoCC Amber		
Corvus corax	Raven	BoCC Green		
Corvus corone	Carrion Crow	BoCC Green		
Corvus frugilegus	Rook	BoCC Amber		
Cyanistes caeruleus	Blue Tit	BoCC Green		
Dendrocopos major	Great Spotted Woodpecker	BoCC Green		
Erithacus rubecula	Robin	BoCC Green		
Falco tinnunculus	Kestrel	BoCC Amber		
Fringilla coelebs	Chaffinch	BoCC Green		
Fulica atra	Coot	BoCC Green		
Gallinula chloropus	Moorhen	BoCC Amber		
Garrulus glandarius	Jay	BoCC Green		
Hirundo rustica	Swallow	BoCC Green		
Larus argentatus	Herring Gull	BoCC Red	S41/7	
Larus canus	Common Gull	BoCC Amber		
Larus fuscus	Lesser Black-backed Gull	BoCC Amber;		
Linaria cannabina	Linnet	BoCC Red	S41/7	
Motacilla alba	Pied Wagtail	BoCC Green		
Parus major	Great Tit	BoCC Green		
Passer domesticus	House Sparrow	BoCC Red	S41/7	
Periparus ater	Coal Tit	BoCC Green		

Latin Name	Common Name	BoCC ¹	S41/7 ²	Sch 1 ³
Phalacrocorax carbo	Cormorant	BoCC Green		
Phylloscopus collybita	Chiffchaff	BoCC Green		
Phylloscopus trochilus	Willow Warbler	BoCC Amber		
Pica pica	Magpie	BoCC Green		
Prunella modularis	Dunnock	BoCC Amber	S41/7	
Pyrrhula pyrrhula	Bullfinch	BoCC Amber	S41/7	
Regulus regulus	Goldcrest	BoCC Green		
Sterna hirundo	Common Tern	BoCC Amber		
Streptopelia decaocto	Collared Dove	BoCC Green		
Sturnus vulgaris	Starling	BoCC Red	S41/7	
Sylvia atricapilla	Blackcap	BoCC Green		
Sylvia communis	Whitethroat	BoCC Amber		
Troglodytes troglodytes	Wren	BoCC Amber		
Turdus iliacus	Redwing	BoCC Amber		Sch 1
Turdus merula	Blackbird	BoCC Green		
Turdus philomelos	Song Thrush	BoCC Amber		
Turdus viscivorus	Mistle Thrush	BoCC Red		

1 Birds of Conservation Concern Red, Amber or Green status. For definitions see **paragraphs 1.3.1 to 1.3.5** above.

2 Section 7 (S7) of the Environment (Wales) Act 2016 lists species in Wales, whilst Section 41 (S41) of the NERC Act 2006 lists species in England, which are considered of key significance in sustaining and improving biodiversity in relation to Wales and England.

3 Species within Schedule 1 of the Wildlife and Countryside Act 1981 are given additional protection by Special Penalties all year round for those in Part 1 of the Schedule.

TRANSECT 26

3.2.9. A total of 50 species were recorded at Transect 25, including 18 Amber list BoCC species and seven Red list BoCC species. The list also includes eight S41/7 and one Sch 1 species.

Table 11 – Birds Species Recorded at Transect 26

Latin Name	Common Name	BoCC ¹	S41/7 ²	Sch 1 ³
Accipiter nisus	Sparrowhawk	BoCC Amber		
Acrocephalus schoenobaenus	Sedge Warbler	BoCC Amber		
Actitis hypoleucos	Common Sandpiper	BoCC Amber		
Aegithalos caudatus	Long-tailed Tit	BoCC Green		
Anas platyrhynchos	Mallard	BoCC Amber		
Buteo buteo	Buzzard	BoCC Green		
Carduelis carduelis	Goldfinch	BoCC Green		
Certhia familiaris	Treecreeper	BoCC Green		
Chloris chloris	Greenfinch	BoCC Red		
Chroicocephalus ridibundus	Black-headed Gull	BoCC Amber		
Coloeus monedula	Jackdaw	BoCC Green		
Columba livia (domest.)	Feral Pigeon	BoCC Green		
Columba palumbus	WoodPigeon	BoCC Amber		
Corvus corone	Carrion Crow	BoCC Green		
Corvus frugilegus	Rook	BoCC Amber		
Cyanistes caeruleus	Blue Tit	BoCC Green		
Dendrocopos major	Great Spotted Woodpecker	BoCC Green		
Emberiza citrinella	Yellowhammer	BoCC Red	S41/7	
Emberiza schoeniclus	Reed Bunting	BoCC Amber	S41/7	
Erithacus rubecula	Robin	BoCC Green		
Fringilla coelebs	Chaffinch	BoCC Green		

Latin Name	Common Name	BoCC ¹	S41/7 ²	Sch 1 ³
Fulica atra	Coot	BoCC Green		
Gallinula chloropus	Moorhen	BoCC Amber		
Hirundo rustica	Swallow	BoCC Green		
Larus argentatus	Herring Gull	BoCC Red	S41/7	
Larus canus	Common Gull	BoCC Amber		
Larus fuscus	Lesser Black-backed Gull	BoCC Amber		
Linaria cannabina	Linnet	BoCC Red	S41/7	
Motacilla alba	Pied Wagtail	BoCC Green		
Parus major	Great Tit	BoCC Green		
Passer domesticus	House Sparrow	BoCC Red	S41/7	
Periparus ater	Coal Tit	BoCC Green		
Phasianus colchicus	Pheasant	BoCC Green		
Phylloscopus collybita	Chiffchaff	BoCC Green		
Phylloscopus trochilus	Willow Warbler	BoCC Amber		
Pica pica	Magpie	BoCC Green		
Prunella modularis	Dunnock	BoCC Amber	S41/7	
Pyrrhula pyrrhula	Bullfinch	BoCC Amber	S41/7	
Regulus regulus	Goldcrest	BoCC Green		
Streptopelia decaocto	Collared Dove	BoCC Green		
Sturnus vulgaris	Starling	BoCC Red	S41/7	
Sylvia atricapilla	Blackcap	BoCC Green		
Sylvia borin	Garden Warbler	BoCC Green		
Sylvia communis	Whitethroat	BoCC Amber		

Latin Name	Common Name	BoCC ¹	S41/7 ²	Sch 1 ³
Sylvia curruca	Lesser Whitethroat	BoCC Green		
Troglodytes troglodytes	Wren	BoCC Amber		
Turdus iliacus	Redwing	BoCC Amber		Sch 1
Turdus merula	Blackbird	BoCC Green		
Turdus philomelos	Song Thrush	BoCC Amber		
Turdus viscivorus	Mistle Thrush	BoCC Red		

1 Birds of Conservation Concern Red, Amber or Green status. For definitions see **paragraphs 1.3.1 to 1.3.5** above.

2 Section 7 (S7) of the Environment (Wales) Act 2016 lists species in Wales, whilst Section 41 (S41) of the NERC Act 2006 lists species in England, which are considered of key significance in sustaining and improving biodiversity in relation to Wales and England.

3 Species within Schedule 1 of the Wildlife and Countryside Act 1981 are given additional protection by Special Penalties all year round for those in Part 1 of the Schedule.

4. TRANSECT SUMMARIES

4.1. TRANSECT 1

- 4.1.1. The bird assemblage at Transect 1 consisted mainly of common farmland birds including six species of corvid, Pheasant, and small numbers of Red-legged and Grey Partridge. Passerines recorded in fields, hedgerows and small patches of woodland included Starling, Chaffinch, Meadow Pipit, Goldfinch, Wren, Blue Tit, Linnet, Robin and Dunnock.
- 4.1.2. Fieldfare and Redwing were frequent in the winter and gulls were regularly recorded in small flocks, with the commonest species being Black-headed Gull. Despite the transect being located less than 0.5 km from the Dee Estuary, Curlew (two birds in December 2020 and two in June 2021) and Shelduck (four birds overflying the transect in June 2021) were the only SPA qualifying species recorded at the site.
- 4.1.3. Survey data showed that despite the close proximity of the Dee Estuary, the fields surrounding Transect 1 are not regularly used by species for which the SPA is designated.

4.2. TRANSECT 2

- 4.2.1. Extra survey effort was undertaken for Transect 2 due to early results showing large counts of Redshank along the exposed banks of the River Dee. The section of the river where the pipeline crosses is not within the Dee Estuary SPA but this canalised stretch of river is directly linked to the Dee Estuary, to the north-west, albeit 3.9 km upstream at its nearest point.
- 4.2.2. The River Dee is tidal at the crossing point and the amount of exposed mud below the grassy banks varied between surveys depending on tidal state. These banks regularly supported large flocks of Redshank throughout the winter. From December 2020 to April 2021 numbers ranged from three in April 2021 to 165 in March 2021, with a mean count of 62 over the six visits. Only a single bird was recorded during each of the three visits from September 2021 to early October 2021 but from late October 2021 to late March 2022 a mean count of 61 was recorded over the 11 visits, with a minimum of zero in late November 2021 and a maximum of 146 in early March 2022.
- 4.2.3. The Redshank feeding along the banks of the river were mostly concentrated along the southern half of the transect route, including the area where the trenchless pipeline crossing is proposed.
- 4.2.4. Site designation data shows that in winter the Dee Estuary SPA regularly supports 3.5% of the Eastern Atlantic wintering population and 5.9% of the Eastern Atlantic passage population of Redshank.

- 4.2.5. A significant amount of Redshank would equate to 1% of the SPA passage or wintering population. The 5 year mean 1994/95-1998/99 for Redshank within the Dee Estuary SPA is 5,293 wintering individuals and 8,795 individuals on passage. In March 2021 the surveys along Transect 2 provided a peak count of 165 individuals, which equates to 3.1% of the wintering population and 1.9% of the passage population. Although the counts used from Transect 2 are peak counts and the figures given in the SPA designation are mean counts, this section of the River Dee can still be considered to be an important foraging area for Redshank, which constitute part of the SPA population.
- 4.2.6. Other SPA qualifying species were recorded along Transect 2 but in far smaller numbers than Redshank, including Shelduck, Curlew, Oystercatcher, Teal and Common Tern.
- 4.2.7. Large numbers of Lapwing were recorded but although small numbers were recorded on the muddy banks of the river, most were within, or overflying, arable fields to the north of the river. Mallard, Cormorant and Black-headed Gull were frequent on or flying along the length of the river throughout the year. Large numbers of Pink-Footed Goose were recorded overflying the transect in winter but only at very high altitude. Canada Goose numbers were also high but with birds generally not alighting on or directly adjacent to the river.
- 4.2.8. In May 2021 three Lapwing nests and one Oystercatcher nest were recorded within an arable field to the north of the river, approximately 250 m south-west of the Newbuild Infrastructure Boundary.

4.3. TRANSECT 3

- 4.3.1. Transect 3 was located at the northern edge of the village of Mollington, consisting predominantly of improved grassland to the north, with species-poor hedgerows and mature trees as field boundaries and several small ponds along the route.
- 4.3.2. The bird assemblage was typical of farmland and urban fringe habitat, with the most frequent species including Goldfinch, Black-headed Gull, Jackdaw, Wood Pigeon, Carrion Crow, Blue Tit, Blackbird, House Sparrow and Starling present all year round. Flocks of Fieldfare and Redwing were recorded during the winter months.
- 4.3.3. Small numbers of wildfowl were present around ponds including Teal, Mallard, Greylag Goose, Canada Goose and Shoveler. The only notable species recorded was Hoopoe, in May 2021, at the northern edge of the village.

4.4. TRANSECT 4

4.4.1. Land around Transect 4 included a large area of swamp and marshy grassland to the east of the River Gowy, with an active landfill site to the south. The marshy grassland and riverine habitat was found to support several typical species including Sedge Warbler, Reed Warbler, Teal, Mallard, Grey Heron, Snipe, Moorhen, Grey Wagtail and Kingfisher.

4.4.2. The most significant bird assemblages within the area though consisted of large flocks of gulls feeding on and over the landfill site and directly adjacent to the transect in fields to the west of the River Gowy. Species present included Black-headed Gull, Common Gull, Lesser Black-backed Gull and Greater Black-backed Gull but the most frequent species was the BoCC red-listed Herring Gull, with a peak count of 800 in January 2021.

4.5. TRANSECT 5

4.5.1. Transect 5 is located only 0.5 km south of the Mersey Estuary SPA/Ramsar. Only small numbers of Teal, Curlew and Lapwing were recorded in wet grassland fields either side of the transect, with Shelduck only recorded flying over the transect route. No other Mersey Estuary SPA qualifying species were recorded along Transect 5.

4.5.2. Species and numbers present do not indicate that land around Transect 5 is of importance for SPA qualifying species.

4.6. TRANSECT 7

4.6.1. Transect 7 is located 1.5 km south of the Mersey Estuary SPA/Ramsar site so was also assessed for its possible importance for SPA qualifying species.

4.6.2. The arable land within the transect was found to support a species assemblage typical of the habitat type. Large numbers of corvids, Black-headed Gull, Wood Pigeon, Goldfinch, Starling and winter thrushes foraged on the arable land, whilst small passerines including House Sparrow, Blackbird, Robin, Wren and Blue Tit were concentrated along field boundaries including the railway line to the north, woodland to the west and housing to the south and east. The only SPA qualifying species recorded was Curlew, which was largely restricted to birds overflying the site.

4.6.3. Species and numbers present do not indicate that land within Transect 7 is of importance for SPA qualifying species.

4.7. TRANSECT 25

- 4.7.1. Transect 25 is located along the line of the Newbuild Carbon Dioxide pipeline in Wales but is approximately 1.5 km south of the Dee Estuary SPA and Ramsar. This transect is situated on farmland between large areas of residential development to the east and west, with industrial land to the north.
- 4.7.2. The bird assemblages present along this transect were typical of the type of urban fringe/agricultural location. Large numbers of Wood Pigeon, corvids and Starling were recorded with small numbers of overflying Common Tern being the only Dee Estuary SPA qualifying species.

4.8. TRANSECT 26

- 4.8.1. Transect 26 is located near to Transect 25 and is also situated amongst urban fringe and farmland approximately 2.5 km south of the of the Dee Estuary SPA and Ramsar.
- 4.8.2. The birds present along Transect 26 were also typical of the urban fringe/agricultural location, with no Dee Estuary SPA qualifying species recorded.

4.9. NUMBER OF SPECIES RECORDED

- 4.9.1. During the winter/passage period (September to February) a total of 75 species were recorded within or adjacent to the English section of the Newbuild Infrastructure Boundary (Transects 3, 4, 5 & 7); including 28 Amber BoCC, 15 Red BoCC, two Sch 1 (Fieldfare and Redwing) and 12 S41 species.
- 4.9.2. During the breeding period (March to August) a total of 82 species were recorded within or adjacent to the English section of the Newbuild Infrastructure Boundary (Transects 3, 4, 5 & 7); including 32 Amber BoCC, 14 Red BoCC, five Sch 1 (Kingfisher, Marsh Harrier, Hoopoe, Fieldfare and Redwing) and 12 S41 species.
- 4.9.3. During the winter/passage period (September to February) a total of 76 species were recorded within or adjacent to the Welsh section of the Newbuild Infrastructure Boundary (Transects 1, 2, 25 & 26); including 32 Amber BoCC, 12 Red BoCC, four Sch 1 (Whooper Swan, Peregrine, Fieldfare and Redwing) and ten S7 species.
- 4.9.4. During the breeding period (March to August) a total of 85 species were recorded within or adjacent to the Welsh section of the Newbuild Infrastructure Boundary (Transects 1, 2, 25 & 26); including 34 Amber BoCC, 17 Red BoCC, three Sch 1 (Mediterranean Gull, Fieldfare and Redwing) and 13 S7 species.

4.10. POTENTIAL ORNITHOLOGICAL CONSTRAINTS

SPA QUALIFYING SPECIES

- 4.10.1. During the bird surveys of land within the Newbuild Infrastructure Boundary, transects were sited evenly along the proposed Newbuild Carbon Dioxide pipeline route to sample a representative selection of habitat types to allow an assessment to be made of the value of the surrounding land for bird assemblages.
- 4.10.2. It was found that the only transect with significant numbers of SPA qualifying species was Transect 2, where large numbers of Redshank used the bare banks of the River Dee, near Sealand, through the winter months. The other seven transects, including Transect 5 and Transect 7 which are near the River Mersey and Transect 1, near the River Dee did not regularly record SPA qualifying species.
- 4.10.3. Although the River Dee at the crossing point is not within the Dee Estuary SPA, it is directly linked to the SPA further north-west. The population of Redshank using the land along Transect 2 will be part of the population that occurs within the SPA and should be considered as being functionally linked.

BREEDING BIRDS

- 4.10.4. All breeding wild birds are afforded a degree of protection through the Wildlife and Countryside Act 1981 (as amended). This includes protection of active nests, eggs and young birds.
- 4.10.5. The DCO Proposed Development has the potential to directly impact upon nest sites of birds within a variety of habitats including:
- Passerines nesting within trees, scrub, hedgerows, swamp vegetation and wet ditches located along the proposed route of the Newbuild Carbon Dioxide Pipeline.
 - Water birds such as Moorhen, Coot, Mallard, Canada Goose, Mute Swan and Little Grebe are likely to nest around established ponds and surrounding vegetation along the proposed route of the Newbuild Carbon Dioxide Pipeline.
 - Arable and pasture fields along the proposed route of the Newbuild Carbon Dioxide Pipeline may support ground nesting species such as Skylark, Meadow Pipit, Lapwing and Oystercatcher.
 - The DCO Proposed Development may directly impact species within habitats described above if vegetation clearance during the breeding season is required to accommodate Construction Compounds or as part of trenchless and trenched operations during the construction stage of the DCO Proposed Development.

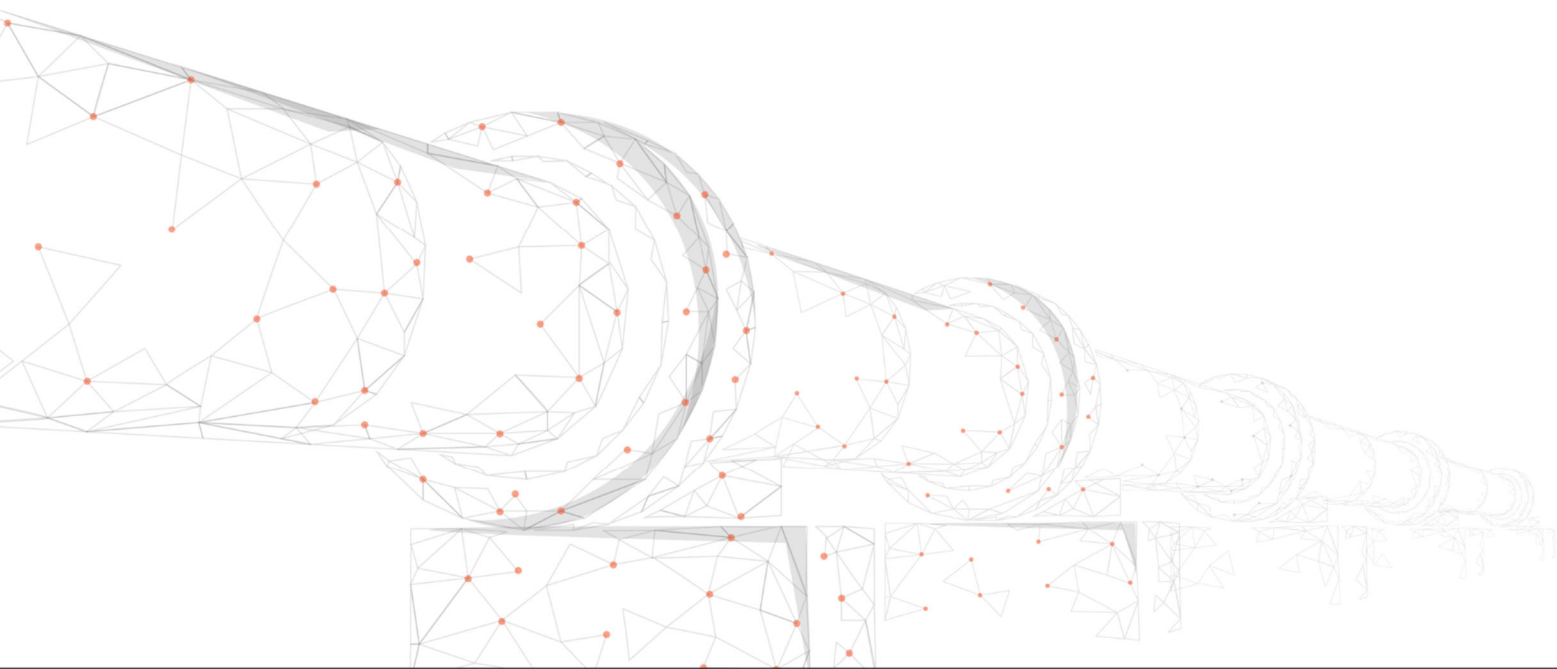
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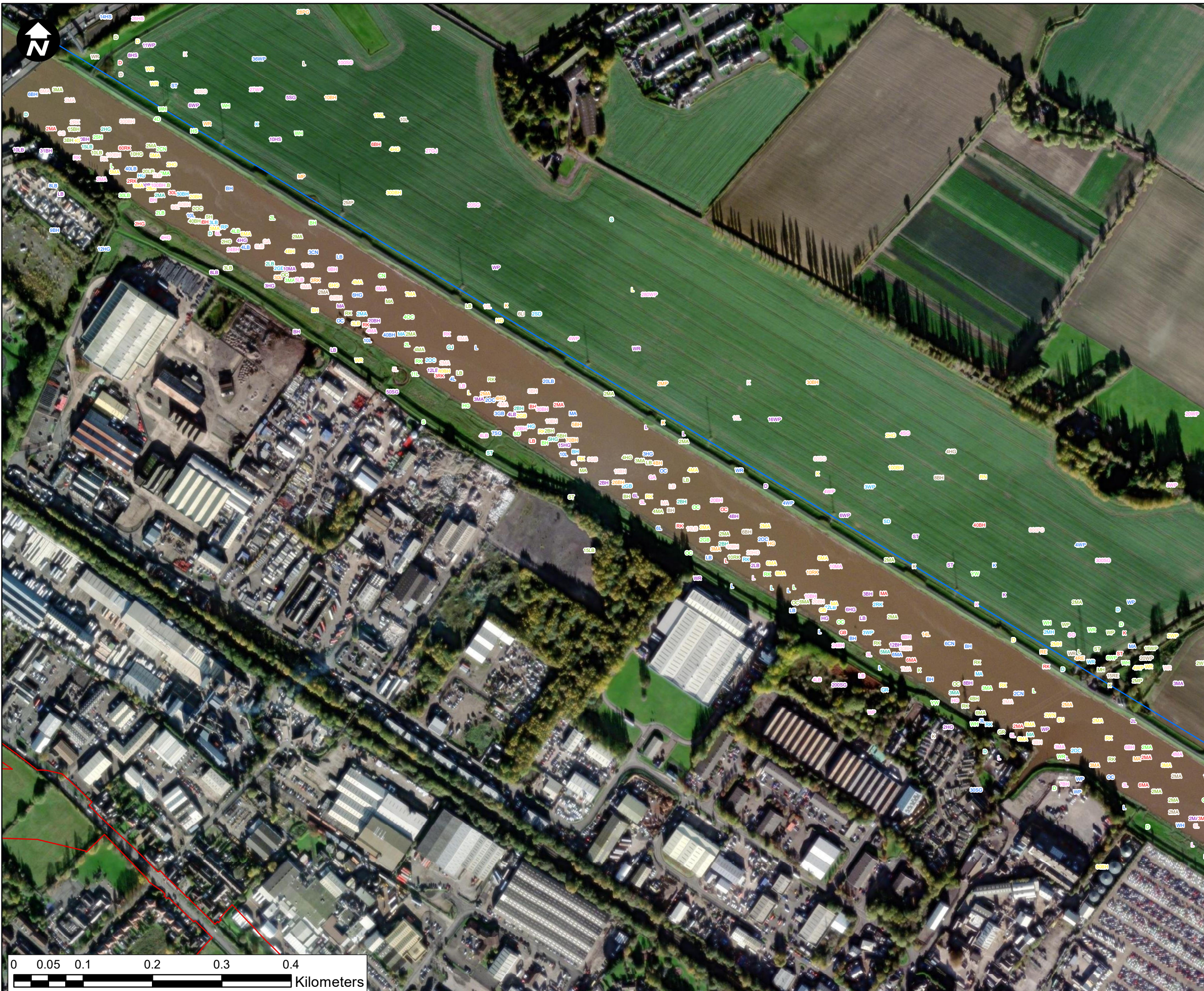
REFERENCES

- **Ref. 1** – Stanbury, A., Eaton, M., Aebischer, N., Balmer, D., Brown, A., Douse, A., Lindley, P., McCulloch, N., Noble, D., and Win I. (2021). *The status of our bird populations: the fifth Birds of Conservation Concern in the United Kingdom, Channel Islands and Isle of Man and second IUCN Red List assessment of extinction risk for Great Britain*. British Birds 114: 723-747.
- **Ref. 2** - HMSO (1981). *Wildlife and Countryside Act (as amended by the Countryside and Rights of Way Act 2000)*. HMSO, London.
- **Ref. 3** - HMSO (2006). *Natural Environment and Rural Communities Act*. HMSO, London.
- **Ref. 4** - HMSO (2016). *Environment (Wales) Act 2016*. Welsh Government.

Annex A

FIGURES





Key:

- New build infrastructure boundary
- Transect 2

Months

- XY January
- XY February
- XY March
- XY April
- XY May
- XY June
- XY July
- XY August
- XY September
- XY October
- XY November
- XY December

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HyNet North West

PROJECT TITLE
 Hynet North West Carbon Dioxide Pipeline DCO

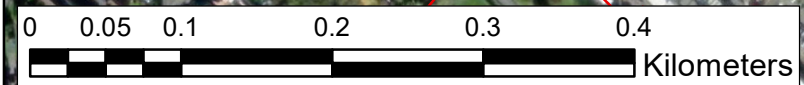
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DRAWING STATUS
 FOR DESIGN CHANGE REQUEST 1

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SCALE @ A3 SIZE 1:5,000	DATE 17/03/2023	REVISION B
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DRAWING NUMBER
 EN070007-APP-ES-9.8.2-Sheet 1





Key:

- New build infrastructure boundary
- Transect 2

Months

- XY January
- XY February
- XY March
- XY April
- XY May
- XY June
- XY July
- XY August
- XY September
- XY October
- XY November
- XY December

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PROJECT TITLE
 Hynet North West Carbon Dioxide Pipeline DCO

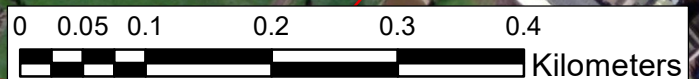
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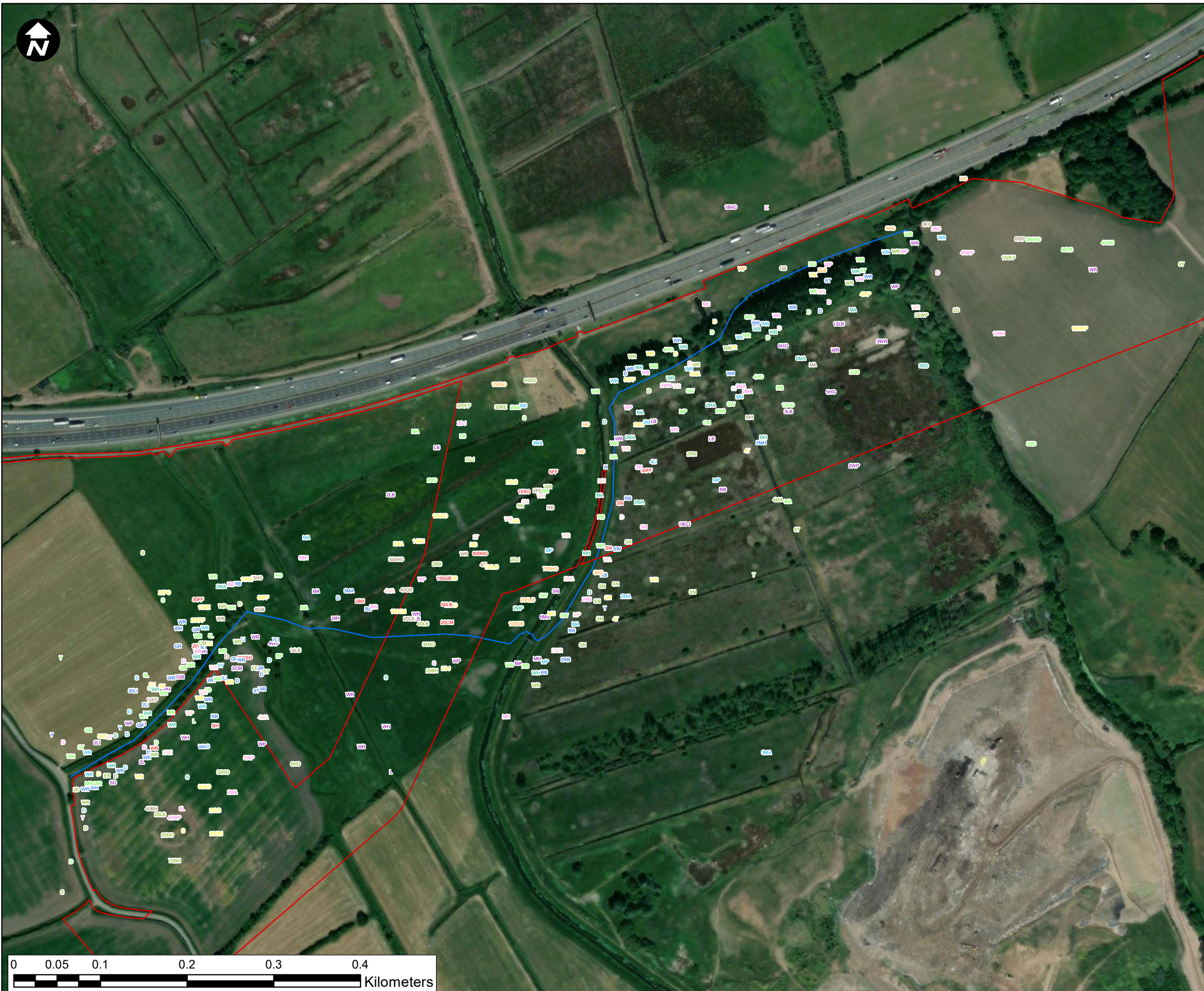
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DRAWING NUMBER
 EN070007-APP-ES-9.8.2-Sheet 2





Key:

- New build infrastructure boundary
- Transect 4

Months

- XY January
- XY February
- XY March
- XY April
- XY May
- XY June
- XY July
- XY August
- XY September
- XY October
- XY November
- XY December

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PROJECT TITLE
 Hynet North West Carbon Dioxide Pipeline DCO

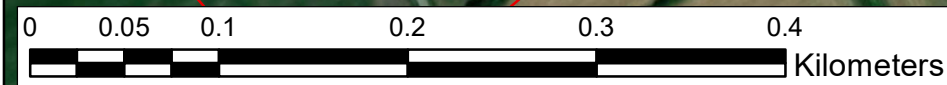
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 Figure 9.8.4 - Mapping of BoCC red/amber and Schedule 1 birds by month Transect 4

DRAWING STATUS
 FOR DESIGN CHANGE REQUEST 1

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SCALE @ A3 SIZE 1:4,000	DATE 17/03/2023	REVISION B
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DRAWING NUMBER
 EN070007-APP-ES-9.8.4





Key:

- New build infrastructure boundary
- Transect 7

Months

- XY January
- XY February
- XY March
- XY April
- XY May
- XY June
- XY July
- XY August
- XY September
- XY October
- XY November
- XY December

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PROJECT TITLE
 Hynet North West Carbon Dioxide Pipeline DCO

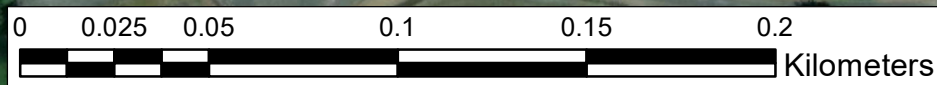
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 Figure 9.8.6 - Mapping of BoCC red/amber and Schedule 1 birds by month Transect 7

DRAWING STATUS
 FOR DESIGN CHANGE REQUEST 1

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DRAWING NUMBER
 EN070007-APP-ES-9.8.6





Key:

- New build infrastructure boundary
- Transect 25

Months

- XY January
- XY February
- XY March
- XY April
- XY May
- XY June
- XY July
- XY August
- XY September
- XY October
- XY November
- XY December

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DRAWING TITLE
 Figure 9.8.7 - Mapping of BoCC red/amber and Schedule 1 birds by month Transect 25

DRAWING STATUS
 FOR DESIGN CHANGE REQUEST 1

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DRAWING NUMBER
 EN070007-APP-ES-9.8.7





Key:

- New build infrastructure boundary
- Transect 26

Months

- XY January
- XY February
- XY March
- XY April
- XY May
- XY June
- XY July
- XY August
- XY September
- XY October
- XY November
- XY December

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PROJECT TITLE
 Hynet North West Carbon Dioxide Pipeline DCO

DRAWING TITLE
 Figure 9.8.8 - Mapping of BoCC red/amber and Schedule 1 birds by month Transect 26

DRAWING STATUS
 FOR DESIGN CHANGE REQUEST 1

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Annex B

SPECIES TABLES

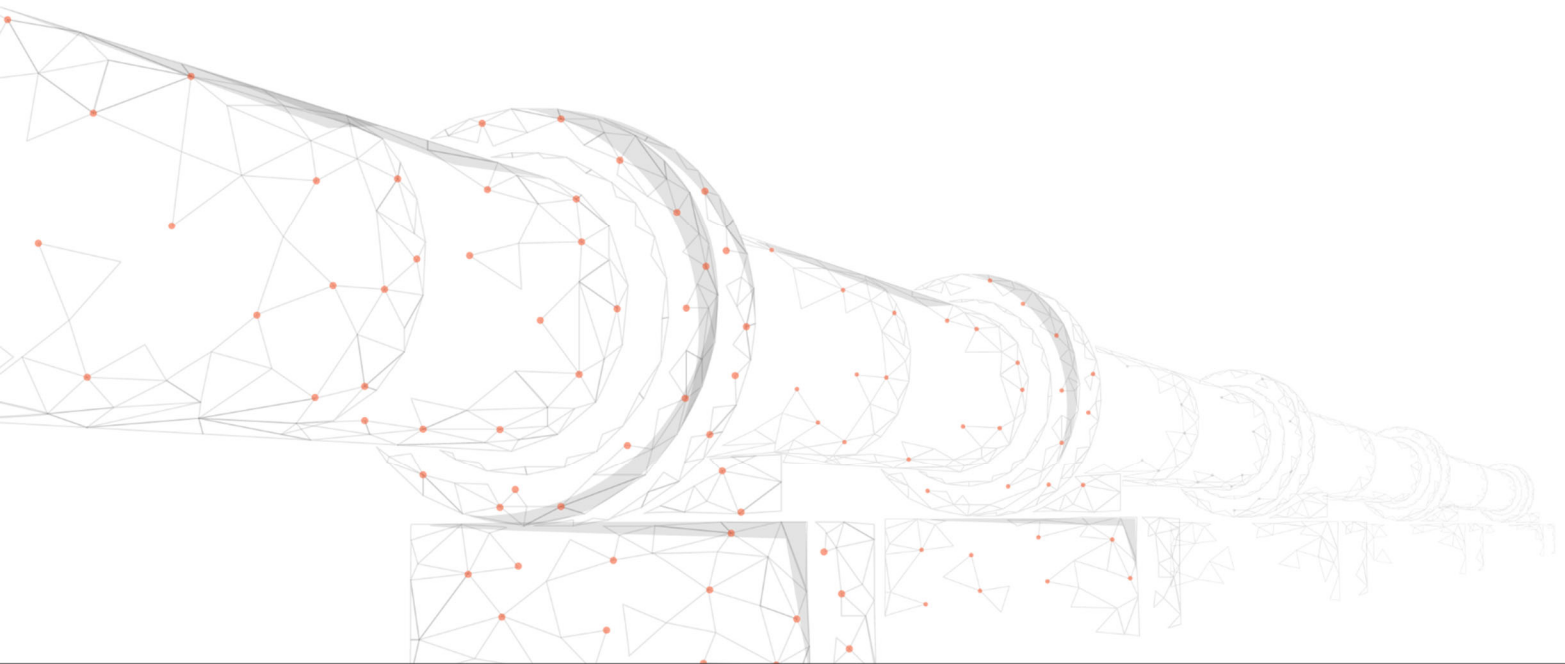


Table 12 – Transect 1 Survey Results

Latin Name	Common Name	02/11/2020	07/12/2020	22/01/2021	18/02/2021	08/03/2021	24/03/2021	14/04/2021	22/04/2021	07/05/2021	20/05/2021	03/06/2021	30/06/2021	01/07/2021	19/07/2021	05/08/2021	25/08/2021	01/09/2021	13/09/2021	12/10/2021	
Accipiter nisus	Sparrowhawk				1																
Aegithalos caudatus	Long-tailed Tit								1												
Alectoris rufa	Red-legged Partridge										2										
Anas platyrhynchos	Mallard						1							2							
Anthus pratensis	Meadow Pipit		50	30												2				5	
Ardea cinerea	Grey Heron																			1	
Branta canadensis	Canada Goose				1			1				2									11
Buteo buteo	Buzzard		1								1				1		1	1			
Carduelis carduelis	Goldfinch	6	21			4	4	22	2			1	4	13	3	6	1	3			
Chloris chloris	Greenfinch			2					1												
Chroicocephalus ridibundus	Black-headed Gull		200		12				15					2						61	14
Coloeus monedula	Jackdaw	55			20	2	34					3							4	2	10
Columba livia (domest.)	Feral Pigeon		5														18			15	
Columba palumbus	Wood Pigeon	4	3		2	3	2	3	1		1	7	1	2	3	4	4	12	16	20	
Corvus corax	Raven		1	2			1	1							1		3	2	2	1	
Corvus corone	Carrion Crow	2			27			1	3		5	4	4	6	1	4	5			1	2
Corvus frugilegus	Rook						4	2			5	1		1							12
Cyanistes caeruleus	Blue Tit	1	2	2	2	5	2	5	4	2	2	2	1		2	3	5	9	7	2	
Dendrocopos major	Great Spotted Woodpecker		1											1	1						

Latin Name	Common Name	02/11/2020	07/12/2020	22/01/2021	18/02/2021	08/03/2021	24/03/2021	14/04/2021	22/04/2021	07/05/2021	20/05/2021	03/06/2021	30/06/2021	01/07/2021	19/07/2021	05/08/2021	25/08/2021	01/09/2021	13/09/2021	12/10/2021
Erithacus rubecula	Robin	3	6	1	2	3	1	1	3	4	6		1	3	4	4	6	5	5	3
Falco tinnunculus	Kestrel			1																
Fringilla coelebs	Chaffinch	9	4		1	1	3	9	5	1	3	2	3		1				2	6
Garrulus glandarius	Jay														1					
Hirundo rustica	Swallow							3	1			2	1	6	4	5			1	
Larus argentatus	Herring Gull		10				4							1			1		1	
Larus fuscus	Lesser Black-backed Gull	81																		
Linaria cannabina	Linnet										4	4	5							
Motacilla alba	Pied Wagtail		1		2		1						1	1	1				2	
Numenius arquata	Curlew		2										2							
Parus major	Great Tit	1	1		2	2	2	4	2			1	3			1	1	1	1	
Passer domesticus	House Sparrow					10						4	1	4	4		2	6		4
Perdix perdix	Grey Partridge													1				2		
Phasianus colchicus	Pheasant		2		2	2		1	5				1	2	1			1	2	2
Phylloscopus collybita	Chiffchaff						1	3	2	2	2	2	3	7			1			
Pica pica	Magpie	4	3	1	3	3	1	1			6	6	3	2	3		2			2
Prunella modularis	Dunnock		2		3	5	1	5	1	1	2	2	1	2	1			3		1
Pyrrhula pyrrhula	Bullfinch			1																
Regulus regulus	Goldcrest														1				1	
Saxicola rubicola	Stonechat																1			
Streptopelia decaocto	Collared Dove										1	1		1	2	1	1			

Latin Name	Common Name	02/11/2020	07/12/2020	22/01/2021	18/02/2021	08/03/2021	24/03/2021	14/04/2021	22/04/2021	07/05/2021	20/05/2021	03/06/2021	30/06/2021	01/07/2021	19/07/2021	05/08/2021	25/08/2021	01/09/2021	13/09/2021	12/10/2021	
Sturnus vulgaris	Starling	10	10		8	60	8						21	7	30						
Sylvia atricapilla	Blackcap									1		1	1								
Sylvia communis	Whitethroat									1					1	1					
Tadorna tadorna	Shelduck											4									
Troglodytes troglodytes	Wren	2	3	1	1	3	3	3	5	3	5	7	7	13	6	3	8	1	5	1	
Turdus iliacus	Redwing		60		20	3															10
Turdus merula	Blackbird	2	5	2	3	11	1	2	4	3	7	9	4	10		4	2	3			
Turdus philomelos	Song Thrush					2		1	2	1		2		4	1						
Turdus pilaris	Fieldfare		3		106	20															
Turdus viscivorus	Mistle Thrush	1	1					2						5					4		

Table 13 – Transect 2 Survey Results (Part 1 Dec 20-Aug 21)

Latin Name	Common Name	17/12/2020	21/01/2021	11/02/2021	11/03/2021	22/03/2021	13/04/2021	27/04/2021	11/05/2021	25/05/2021	04/06/2021	22/06/2021	16/07/2021	27/07/2021	21/08/2021	25/08/2021
Accipiter nisus	Sparrowhawk					1										
Actitis hypoleucos	Common Sandpiper												2	2	2	
Aegithalos caudatus	Long-tailed Tit			5												
Alauda arvensis	Skylark					2	3	2	4		3		2			
Anas crecca	Teal			53	8											
Anas platyrhynchos	Mallard	107	25	94	64	28	15	25	30		10	17	16	15	6	19
Anser anser	Greylag Goose				3	41			1							
Anser brachyrhynchus	Pink-footed Goose															
Anthus pratensis	Meadow Pipit			6												
Apus apus	Swift												1			
Ardea alba	Great White Egret					1									1	
Ardea cinerea	Grey Heron			5	1	2	1	1	1		2	6	9	4	3	4
Branta canadensis	Canada Goose			8		21		2			9			3		146
Buteo buteo	Buzzard										1					
Carduelis carduelis	Goldfinch	2	1			4	5	9	9		6	8	9	8	3	11
Charadrius hiaticula	Ringed Plover						1									
Chloris chloris	Greenfinch					1	1	1				1				
Chroicocephalus ridibundus	Black-headed Gull	2	32	632	82	26		82	20		6	3	5	60	43	449
Coloeus monedula	Jackdaw	8		4							4	13				2

Latin Name	Common Name	17/12/2020	21/01/2021	11/02/2021	11/03/2021	22/03/2021	13/04/2021	27/04/2021	11/05/2021	25/05/2021	04/06/2021	22/06/2021	16/07/2021	27/07/2021	21/08/2021	25/08/2021
Columba livia (domest.)	Feral Pigeon	20									13		35	30	30	
Columba oenas	Stock Dove			2			4	4			1					
Columba palumbus	Wood Pigeon	3		10	19	2	4	6	7		17	11	46	13	39	97
Corvus corax	Raven				2											
Corvus corone	Carrion Crow	2		15	18	7		3	2			2	16	5	29	8
Corvus frugilegus	Rook															
Cyanistes caeruleus	Blue Tit	1		1	2	2	2	3	1				2			4
Cygnus cygnus	Whooper Swan			4												
Cygnus olor	Mute Swan								1							
Delichon urbicum	House Martin												3	1		
Dendrocopos major	Great Spotted Woodpecker						1									
Egretta garzetta	Little Egret				1			1				8	6	3	1	4
Emberiza citrinella	Yellowhammer										4					
Emberiza schoeniclus	Reed Bunting														1	
Erithacus rubecula	Robin		1	2		4	1	3	2		1	3		2		5
Falco peregrinus	Peregrine															
Falco tinnunculus	Kestrel	1	1	1	1	1	1	1					1		1	
Fringilla coelebs	Chaffinch	3		30	41	10		7	11		1	3				1
Gallinago gallinago	Snipe															
Gallinula chloropus	Moorhen			2	1			2								

Latin Name	Common Name	17/12/2020	21/01/2021	11/02/2021	11/03/2021	22/03/2021	13/04/2021	27/04/2021	11/05/2021	25/05/2021	04/06/2021	22/06/2021	16/07/2021	27/07/2021	21/08/2021	25/08/2021
Garrulus glandarius	Jay															
Haematopus ostralegus	Oystercatcher				13	4	4	5	4		10	15	7	3		
Hirundo rustica	Swallow							3						7	1	
Ichthyaetus melanocephalus	Mediterranean Gull											1				
Larus argentatus	Herring Gull			11	20	14		1	7		8	2	16		9	20
Larus canus	Common Gull			4							1					
Larus fuscus	Lesser Black-backed Gull	5			3	12	12	30	17			30	12	61	14	26
Larus marinus	Great Black-backed Gull	1		3	1			2				5		9	1	
Linaria cannabina	Linnet															
Lymnocyptes minimus	Jack Snipe															
Mareca penelope	Wigeon			16												
Mareca strepera	Gadwall		7	4	6	3										
Mergus merganser	Goosander					2			4							
Motacilla alba	Pied Wagtail	1		7	3	1	1	1	5			1				
Motacilla cinerea	Grey Wagtail		1										2		7	
Motacilla flava	Yellow Wagtail								2		1		3			
Numenius arquata	Curlew						1									
Oenanthe oenanthe	Wheatear							1								
Parus major	Great Tit				1				3				3			
Passer domesticus	House Sparrow			3					10			1	14		14	8

Latin Name	Common Name	17/12/2020	21/01/2021	11/02/2021	11/03/2021	22/03/2021	13/04/2021	27/04/2021	11/05/2021	25/05/2021	04/06/2021	22/06/2021	16/07/2021	27/07/2021	21/08/2021	25/08/2021
Phalacrocorax carbo	Cormorant	11	2	17	17	25						2	2	2	14	
Phasianus colchicus	Pheasant	4					2	5			3	3				
Phylloscopus collybita	Chiffchaff										2	1	4			
Pica pica	Magpie	1		8	2	11		3	1		2		4		2	5
Prunella modularis	Dunnock			3	1	1	2		3		2	4				3
Riparia riparia	Sand Martin											2				
Saxicola rubetra	Whinchat							1								
Saxicola rubicola	Stonechat			1		1										
Sterna hirundo	Common Tern										1	2	8	3		
Streptopelia decaocto	Collared Dove			1											1	1
Sturnus vulgaris	Starling										8		37	2	63	250
Sylvia atricapilla	Blackcap							1	1			1	3	2		
Sylvia borin	Garden Warbler						1									
Sylvia communis	Whitethroat										4	3	3	1		
Tachybaptus ruficollis	Little Grebe	2		3												
Tadorna tadorna	Shelduck											2				
Tringa totanus	Redshank	98	50	31	165	50	3									
Troglodytes troglodytes	Wren	1			1	3	2	4	3		3	5	3	6	4	2
Turdus iliacus	Redwing	70		1												
Turdus merula	Blackbird	2		6	5	6	1	4	4		9	3	4	5	1	2
Turdus philomelos	Song Thrush				1		1		1		1	1	2	1	2	

Latin Name	Common Name	17/12/2020	21/01/2021	11/02/2021	11/03/2021	22/03/2021	13/04/2021	27/04/2021	11/05/2021	25/05/2021	04/06/2021	22/06/2021	16/07/2021	27/07/2021	21/08/2021	25/08/2021
Turdus pilaris	Fieldfare	10		4	1											
Vanellus vanellus	Lapwing		40	151	30	23	3	6	7		19	8	36	55	27	47

Table 14 – Transect 2 Survey Results (Part 2 Sep 21-Mar 22)

Latin Name	Common Name	02/09/2021	13/09/2021	11/10/2021	25/10/2021	08/11/2021	17/11/2021	01/12/2021	16/12/2021	05/01/2022	12/01/2022	01/02/2022	08/02/2022	01/03/2022	23/03/2022
Accipiter nisus	Sparrowhawk														
Actitis hypoleucos	Common Sandpiper	2		1									1		
Aegithalos caudatus	Long-tailed Tit				10	1	6		10						
Alauda arvensis	Skylark			12	3								2	2	3
Anas crecca	Teal				1							3			
Anas platyrhynchos	Mallard	56	203	63	138	35	36	25	22	46	46	69	44	30	22
Anser anser	Greylag Goose	27				10									1
Anser brachyrhynchus	Pink-footed Goose			120	6350		633	210							
Anthus pratensis	Meadow Pipit			1		2	2	3	2				3	2	
Apus apus	Swift														
Ardea alba	Great White Egret														
Ardea cinerea	Grey Heron	2	7	1	1	2	2		2		1	3	8	1	1
Branta canadensis	Canada Goose	187	725	38		42	94	65	50	3		2		3	6
Buteo buteo	Buzzard			2				1	1	1					1
Carduelis carduelis	Goldfinch	17	10	25		2						3		6	8
Charadrius hiaticula	Ringed Plover														
Chloris chloris	Greenfinch														
Chroicocephalus ridibundus	Black-headed Gull	273	301	176	461	186	10	76		300	111	2	5	255	134
Coloeus monedula	Jackdaw	46	345	40		10		17	1			5	32		2
Columba livia (domest.)	Feral Pigeon		50	300	30	10	6	30	10	8	10	20	3	50	15

Latin Name	Common Name	02/09/2021	13/09/2021	11/10/2021	25/10/2021	08/11/2021	17/11/2021	01/12/2021	16/12/2021	05/01/2022	12/01/2022	01/02/2022	08/02/2022	01/03/2022	23/03/2022
Columba oenas	Stock Dove						2								
Columba palumbus	Wood Pigeon	383	43	3	513	3	156	10	62	124	309	107	280	16	12
Corvus corax	Raven		2										1		
Corvus corone	Carrion Crow	12	139	101	17	15	23	36	14	29	18	14	12	12	20
Corvus frugilegus	Rook	25						88							
Cyanistes caeruleus	Blue Tit	1	1			2	3	2	3		4		5	3	4
Cygnus cygnus	Whooper Swan														
Cygnus olor	Mute Swan														
Delichon urbicum	House Martin	12													
Dendrocopos major	Great Spotted Woodpecker														1
Egretta garzetta	Little Egret	3		2	4		1								4
Emberiza citrinella	Yellowhammer														
Emberiza schoeniclus	Reed Bunting														
Erithacus rubecula	Robin	1	5	2	5	4	4	2	3	2	4	1	1	3	3
Falco peregrinus	Peregrine				1										
Falco tinnunculus	Kestrel	1		2		1	2	1	1	1			1		1
Fringilla coelebs	Chaffinch		2	12	4	7	26	4	6	7	1	4	7	7	5
Gallinago gallinago	Snipe								8						
Gallinula chloropus	Moorhen														
Garrulus glandarius	Jay												1		
Haematopus ostralegus	Oystercatcher									1			2	7	17

Latin Name	Common Name	02/09/2021	13/09/2021	11/10/2021	25/10/2021	08/11/2021	17/11/2021	01/12/2021	16/12/2021	05/01/2022	12/01/2022	01/02/2022	08/02/2022	01/03/2022	23/03/2022
Hirundo rustica	Swallow														
Ichthyaetus melanocephalus	Mediterranean Gull														
Larus argentatus	Herring Gull	7	1	10	20	4	2	7		4			10		2
Larus canus	Common Gull	1												2	
Larus fuscus	Lesser Black-backed Gull	10	6	9	17	1				3	3		3	2	41
Larus marinus	Great Black-backed Gull			1	3		1			3			3	2	
Linaria cannabina	Linnet							6				15			
Lymnocyptes minimus	Jack Snipe			2											
Mareca penelope	Wigeon														
Mareca strepera	Gadwall								2	2		2			2
Mergus merganser	Goosander			1			1					2			
Motacilla alba	Pied Wagtail				1	11	2								
Motacilla cinerea	Grey Wagtail														
Motacilla flava	Yellow Wagtail														
Numenius arquata	Curlew														
Oenanthe oenanthe	Wheatear	1	1												1
Parus major	Great Tit											3	1	2	2
Passer domesticus	House Sparrow	26													
Phalacrocorax carbo	Cormorant	1	1	9	8	11	25	12	12	18	17	28	22	12	18
Phasianus colchicus	Pheasant		1				4					2	1		
Phylloscopus collybita	Chiffchaff	1													1

Latin Name	Common Name	02/09/2021	13/09/2021	11/10/2021	25/10/2021	08/11/2021	17/11/2021	01/12/2021	16/12/2021	05/01/2022	12/01/2022	01/02/2022	08/02/2022	01/03/2022	23/03/2022
Pica pica	Magpie		1	1	5	6	2	2	4	1	1	3	2	2	1
Prunella modularis	Dunnock		2	1	3	3	1	1	2		1		1	1	4
Riparia riparia	Sand Martin														
Saxicola rubetra	Whinchat														
Saxicola rubicola	Stonechat	4		1	4	5	5		2	3	3		2	1	
Sterna hirundo	Common Tern														
Streptopelia decaocto	Collared Dove	4			1						1		1		1
Sturnus vulgaris	Starling	84	470	50	60	4								200	4
Sylvia atricapilla	Blackcap														
Sylvia borin	Garden Warbler														
Sylvia communis	Whitethroat														
Tachybaptus ruficollis	Little Grebe							4		1	3	2			
Tadorna tadorna	Shelduck										1	1	2		
Tringa totanus	Redshank	1	1	1	20	11		100	98	122	13	64	83	146	15
Troglodytes troglodytes	Wren	1	2	4		1	2		2		2	1	2	1	5
Turdus iliacus	Redwing				8	1	4	15							
Turdus merula	Blackbird	1	1	3	3		3	2	9	4	7	4	2	2	5
Turdus philomelos	Song Thrush								1		2			1	4
Turdus pilaris	Fieldfare						80	41		16		2			
Vanellus vanellus	Lapwing	34	191	143	193	69	159	422	23	92	12		4	2	9

Table 15 – Transect 3 Survey Results

Latin Name	Common Name	17/12/2020	21/01/2021	11/02/2021	10/03/2021	22/03/2021	12/04/2021	21/04/2021	26/04/2021	10/05/2021	24/05/2021	07/06/2021	28/06/2021	12/07/2021	26/07/2021	06/08/2021	16/08/2021	02/09/2021	14/09/2021	13/10/2021	16/11/2021
Aegithalos caudatus	Long-tailed Tit	8		5		5			3						3			3		22	5
Anas crecca	Teal			60																	5
Anas platyrhynchos	Mallard			30	2	7	2	3	1	1	3		1				3		2	6	
Anser anser	Greylag Goose					12		2	9		2										
Anthus pratensis	Meadow Pipit				4		4														
Ardea alba	Great White Egret												1								
Branta canadensis	Canada Goose				8	6	8			2		4								3	
Buteo buteo	Buzzard		2	1	1	1	1					2		1	2	1	2	2		3	
Carduelis carduelis	Goldfinch	5	1	9	4	2	4	2	3	14	8	2	12	16	6	7	4	12		36	6
Certhia familiaris	Treecreeper																				1
Chloris chloris	Greenfinch			5	1	3	1	1	3	3	2	1	6	1	4		2				
Chroicocephalus ridibundus	Black-headed Gull			33		10		2									27		6	92	200
Coloeus monedula	Jackdaw	108		72	55	31	55	2	10	8	1	10		25	2	20	3	141	10	46	165
Columba livia (domest.)	Feral Pigeon																	60	1	30	
Columba oenas	Stock Dove			16																	
Columba palumbus	Wood Pigeon	47	7	9	201	6	200	1	8			5	4	6		12	11	7	4	34	9
Corvus corax	Raven					1			2											2	
Corvus corone	Carrion Crow	9	5	24	54	6	54	5		4	2	3	4		4	2	12	18		25	13
Corvus frugilegus	Rook	20													3				1		

Latin Name	Common Name	17/12/2020	21/01/2021	11/02/2021	10/03/2021	22/03/2021	12/04/2021	21/04/2021	26/04/2021	10/05/2021	24/05/2021	07/06/2021	28/06/2021	12/07/2021	26/07/2021	06/08/2021	16/08/2021	02/09/2021	14/09/2021	13/10/2021	16/11/2021
Cyanistes caeruleus	Blue Tit	17	7	16	6	14	9	7	4	8	1	9	12	4	9	6	10	9		7	10
Dendrocopos major	Great Spotted Woodpecker										1	1		1			2		9		
Emberiza citrinella	Yellowhammer								1										1		
Erithacus rubecula	Robin	6	5	2	1	7		6	9	4	3	3	3	3	2	4	3	5		10	9
Falco tinnunculus	Kestrel	1																			
Fringilla coelebs	Chaffinch	4	21	9	2	7	2	1	7	5	1	2	9	3				2		9	10
Fulica atra	Coot							2													
Garrulus glandarius	Jay				2		2												2	2	
Hirundo rustica	Swallow									5	2	1	1		2	5	1				
Larus argentatus	Herring Gull	8		14											3		2			42	4
Larus canus	Common Gull					20											1			8	60
Larus fuscus	Lesser Black-backed Gull																1			3	
Larus marinus	Great Black-backed Gull																1				
Linaria cannabina	Linnet										1										
Motacilla alba	Pied Wagtail	5	2		1	2	1							1					6		12
Parus major	Great Tit	4	8	3	2	4	2	8	5	5	3	3	1	1	3	2		4		4	9
Passer domesticus	House Sparrow		6	15		16			10		1	12	15	9	6	3	1	10		6	21
Perdix perdix	Grey Partridge																		1		
Periparus ater	Coal Tit					3													1		
Phylloscopus collybita	Chiffchaff								1	4	3	4	1	3	2				9		

Latin Name	Common Name	17/12/2020	21/01/2021	11/02/2021	10/03/2021	22/03/2021	12/04/2021	21/04/2021	26/04/2021	10/05/2021	24/05/2021	07/06/2021	28/06/2021	12/07/2021	26/07/2021	06/08/2021	16/08/2021	02/09/2021	14/09/2021	13/10/2021	16/11/2021
Pica pica	Magpie	2		11	2		2			3		1			2		2	1		2	10
Poecile palustris	Marsh Tit		1																		
Prunella modularis	Dunnock	2		5	2	5	2	4	1	4	1	4		3	3	1		5		9	7
Regulus regulus	Goldcrest					1															
Saxicola rubicola	Stonechat																		1		
Spatula clypeata	Shoveler				8		8														
Streptopelia decaocto	Collared Dove			1		1			2				1				2		15		
Sturnus vulgaris	Starling	39	330	124	10	2	10	9	8	12	4	2	20	18	18	1		37		85	71
Sylvia atricapilla	Blackcap								2			2		1					3		
Sylvia communis	Whitethroat										1	3	1	1							
Troglodytes troglodytes	Wren	2		1	1	6	5		8	5	3	10	10	11	10	7	5	7		2	4
Turdus iliacus	Redwing	20	60	39				1											2		1
Turdus merula	Blackbird	14	6	12	9	4	6	5	10	11	12		7	3	4			3	9	10	22
Turdus philomelos	Song Thrush		1		2	1	2	2	2	4		1	2	1					3		
Turdus pilaris	Fieldfare		100	19																	1
Turdus viscivorus	Mistle Thrush			1																2	
Upupa epops	Hoopoe									1											
Vanellus vanellus	Lapwing			8	1	2	1	2	1										6		

Table 16 – Transect 4 Survey Results

Latin Name	Common Name	04/11/2020	02/12/2020	27/01/2021	16/02/2021	25/02/2021	01/03/2021	09/03/2021	06/04/2021	20/04/2021	04/05/2021	18/05/2021	01/06/2021	25/06/2021	01/07/2021	20/07/2021	09/08/2021	19/08/2021	15/09/2021	23/09/2021	14/10/2021	
Acrocephalus schoenobaenus	Sedge Warbler												3			1						
Acrocephalus scirpaceus	Reed Warbler															1						
Aegithalos caudatus	Long-tailed Tit					6	1	6							4	7						
Alauda arvensis	Skylark							1			1	1		3								
Alcedo atthis	Kingfisher														1							
Anas crecca	Teal				4	4	8															5
Anas platyrhynchos	Mallard		1		3	4		4	3	9	6	10	3	2		3	6	2	4	2	2	8
Anser anser	Greylag Goose					2	2	2										18		2		
Anser brachyrhynchus	Pink-footed Goose				22																	
Anthus pratensis	Meadow Pipit								2	1	2		1									1
Ardea alba	Great White Egret								1													
Ardea cinerea	Grey Heron		1				2		1				1				2				1	
Branta canadensis	Canada Goose										3		7				14					
Buteo buteo	Buzzard	4	4	3	3	2	3	1	1						1		2		2	2		
Carduelis carduelis	Goldfinch					3		4	6	8	1	5	7	12	42		20	2	8			1
Chloris chloris	Greenfinch													3	2	2		2				
Chroicocephalus ridibundus	Black-headed Gull		40	3	14		90														6	
Coloeus monedula	Jackdaw				53		50													34		

Latin Name	Common Name	04/11/2020	02/12/2020	27/01/2021	16/02/2021	25/02/2021	01/03/2021	09/03/2021	06/04/2021	20/04/2021	04/05/2021	18/05/2021	01/06/2021	25/06/2021	01/07/2021	20/07/2021	09/08/2021	19/08/2021	15/09/2021	23/09/2021	14/10/2021
Columba livia (domest.)	Feral Pigeon		1				50														
Columba oenas	Stock Dove											3	6					1		2	
Columba palumbus	Wood Pigeon	1	6		175	4	20										4	1	43	45	1
Corvus corax	Raven		1			1		2	1												
Corvus corone	Carrion Crow	9	80	26	62	60	100		4			4	12	4			1	37	50	20	5
Cyanistes caeruleus	Blue Tit			6	3	4	1	3	2	3	1	1	2	3		1	2	5		4	
Cygnus olor	Mute Swan									1											
Emberiza citrinella	Yellowhammer						9			1	2			1	2	2	1			1	
Emberiza schoeniclus	Reed Bunting		1		20	5	2		1				3	2	3	6				3	
Erithacus rubecula	Robin		2	3	4	4	3	2	1	3	1	2	4	2	2	3			3	2	7
Falco tinnunculus	Kestrel						1													1	1
Fringilla coelebs	Chaffinch			10	15	88	5	3	2	11		4	2	1	1	1			6	15	2
Gallinago gallinago	Snipe			2		1	2	5									1			2	1
Gallinula chloropus	Moorhen		1			1				1		1						1	1	1	1
Garrulus glandarius	Jay						1														
Hirundo rustica	Swallow												2				1				
Larus argentatus	Herring Gull	709	395	800	255	20	56	50						218				29			
Larus canus	Common Gull			20	20	160								3				2			
Larus fuscus	Lesser Black-backed Gull	202	34	50	40	120	60							91				18			
Larus marinus	Great Black-backed Gull	100	49	150		80	2							42							

Latin Name	Common Name	04/11/2020	02/12/2020	27/01/2021	16/02/2021	25/02/2021	01/03/2021	09/03/2021	06/04/2021	20/04/2021	04/05/2021	18/05/2021	01/06/2021	25/06/2021	01/07/2021	20/07/2021	09/08/2021	19/08/2021	15/09/2021	23/09/2021	14/10/2021
Linaria cannabina	Linnet					12									30	21		5			
Motacilla alba	Pied Wagtail		8		1		2														1
Motacilla cinerea	Grey Wagtail																				1
Parus major	Great Tit			1		6				2				1	1		3		1		2
Phalacrocorax carbo	Cormorant																	1			
Phasianus colchicus	Pheasant								1						1						
Phylloscopus collybita	Chiffchaff						1		3	3	2	3	3	3		1	1				
Phylloscopus trochilus	Willow Warbler									1											
Pica pica	Magpie		5			3		2					2						1		1
Prunella modularis	Dunnock		2			3	4	6	1	3		4	3	1	3	1			2	2	3
Pyrrhula pyrrhula	Bullfinch													1							
Regulus regulus	Goldcrest							1													
Saxicola rubicola	Stonechat		3		1	1	2												1	1	
Scolopax rusticola	Woodcock				1																
Sturnus vulgaris	Starling	100		215				60													
Sylvia atricapilla	Blackcap								1	2		4	4		1	3		2			
Sylvia communis	Whitethroat											2	2	1	3	1	1	2			
Sylvia curruca	Lesser Whitethroat													1							
Tachybaptus ruficollis	Little Grebe		3											1							
Troglodytes troglodytes	Wren		2	1	1	5	1	11	2	8	5	5	10	7	6	6	8	6	3	4	13

Latin Name	Common Name	04/11/2020	02/12/2020	27/01/2021	16/02/2021	25/02/2021	01/03/2021	09/03/2021	06/04/2021	20/04/2021	04/05/2021	18/05/2021	01/06/2021	25/06/2021	01/07/2021	20/07/2021	09/08/2021	19/08/2021	15/09/2021	23/09/2021	14/10/2021	
Turdus iliacus	Redwing					25		30														2
Turdus merula	Blackbird	2	2	3	1	3	5	2	2	2	5	2	11	3	2	1	1		3	4		3
Turdus philomelos	Song Thrush				1		1	1	2				1	1	2							1
Turdus pilaris	Fieldfare		22	68		290		35														
Vanellus vanellus	Lapwing		40										12				1					

Table 17 – Transect 5 Survey Results (Part 1 Oct 20-Mar 21)

Latin Name	Common Name	07/10/2020	20/10/2020	03/11/2020	16/11/2020	02/12/2020	15/12/2020	21/01/2021	08/02/2021	22/02/2021	09/03/2021	26/03/2021
Accipiter nisus	Sparrowhawk	1		1								
Acrocephalus schoenobaenus	Sedge Warbler											
Acrocephalus scirpaceus	Reed Warbler											
Aegithalos caudatus	Long-tailed Tit		11							2		
Alauda arvensis	Skylark											
Anas crecca	Teal										2	
Anas platyrhynchos	Mallard	40		1				5	8	3	1	3
Anser brachyrhynchus	Pink-footed Goose		30									
Anthus pratensis	Meadow Pipit											
Apus apus	Swift											
Ardea alba	Great White Egret	2							3			
Ardea cinerea	Grey Heron	2				1			4			
Aythya fuligula	Tufted Duck											
Branta canadensis	Canada Goose						12			7		
Buteo buteo	Buzzard		1			1	2	1	1	1	3	
Carduelis carduelis	Goldfinch			4	6	2	3		3	5	4	5
Certhia familiaris	Treecreeper									1		
Cettia cetti	Cetti's Warbler											
Chloris chloris	Greenfinch											
Chroicocephalus ridibundus	Black-headed Gull	500		4		33	30		3			

Latin Name	Common Name	07/10/2020	20/10/2020	03/11/2020	16/11/2020	02/12/2020	15/12/2020	21/01/2021	08/02/2021	22/02/2021	09/03/2021	26/03/2021
Circus aeruginosus	Marsh Harrier										1	
Coloeus monedula	Jackdaw			4				10	6			
Columba livia (domest.)	Feral Pigeon			30		26			2	40		
Columba oenas	Stock Dove								2			
Columba palumbus	Wood Pigeon	1		3		4	20		1	13	14	20
Corvus corax	Raven				1				1			
Corvus corone	Carrion Crow	4		5		5	1		1	11	1	
Corvus frugilegus	Rook								6	3		
Cyanistes caeruleus	Blue Tit	14	8	6	2	2	1	5	7	11	1	5
Cygnus olor	Mute Swan	1			1							
Delichon urbicum	House Martin	4										
Dendrocopos major	Great Spotted Woodpecker										1	
Egretta garzetta	Little Egret	55		2		4	9		1	1		
Emberiza schoeniclus	Reed Bunting						2	1		5	1	1
Erithacus rubecula	Robin	3	2	3	1	2	2	2	6	9	2	5
Falco tinnunculus	Kestrel		2									
Fringilla coelebs	Chaffinch	3		2	5	1	3			7	2	1
Fulica atra	Coot	3		3			1	2	6		7	2
Gallinago gallinago	Snipe	1										
Gallinula chloropus	Moorhen	1		2			5	1		3		2
Garrulus glandarius	Jay											

Latin Name	Common Name	07/10/2020	20/10/2020	03/11/2020	16/11/2020	02/12/2020	15/12/2020	21/01/2021	08/02/2021	22/02/2021	09/03/2021	26/03/2021
Hirundo rustica	Swallow	3										
Larus argentatus	Herring Gull			3		14		4	2	3		
Larus fuscus	Lesser Black-backed Gull			2		1	6					
Larus marinus	Great Black-backed Gull				1					1		
Linaria cannabina	Linnet											
Linaria flavirostris	Twite						10					
Locustella naevia	Grasshopper Warbler											
Mareca strepera	Gadwall											
Motacilla alba	Pied Wagtail	10				1	10					
Numenius arquata	Curlew			1			41		10			
Parus major	Great Tit			1					1	4	1	3
Passer domesticus	House Sparrow				1							
Periparus ater	Coal Tit						1					
Phalacrocorax carbo	Cormorant										1	
Phasianus colchicus	Pheasant											
Phylloscopus collybita	Chiffchaff				1							3
Phylloscopus trochilus	Willow Warbler											
Pica pica	Magpie	1		7	1		17		4	3	4	
Prunella modularis	Dunnock		2	2	1		1	4		3	2	1
Pyrrhula pyrrhula	Bullfinch											
Regulus regulus	Goldcrest											

Latin Name	Common Name	07/10/2020	20/10/2020	03/11/2020	16/11/2020	02/12/2020	15/12/2020	21/01/2021	08/02/2021	22/02/2021	09/03/2021	26/03/2021
Sitta europaea	Nuthatch											
Spatula clypeata	Shoveler	2										
Sturnus vulgaris	Starling	150					100		4			
Sylvia atricapilla	Blackcap											
Sylvia borin	Garden Warbler											
Sylvia communis	Whitethroat											
Tachybaptus ruficollis	Little Grebe											
Tadorna tadorna	Shelduck											
Troglodytes troglodytes	Wren	1	3	2	3	4	1	2		6	9	10
Turdus iliacus	Redwing			19	1		60		10			
Turdus merula	Blackbird	1	12	7	17	9	6	3	10	4	4	4
Turdus philomelos	Song Thrush		2		2		1			1	1	1
Turdus pilaris	Fieldfare						20					
Turdus viscivorus	Mistle Thrush			1						2		
Vanellus vanellus	Lapwing	40		20								

Table 18 –Transect 5 Survey Results (Part 2 Apr 21-Sep 21)

Latin Name	Common Name	14/04/2021	30/04/2021	12/05/2021	28/05/2021	01/06/2021	25/06/2021	01/07/2021	20/07/2021	09/08/2021	19/08/2021	15/09/2021	23/09/2021
Accipiter nisus	Sparrowhawk												
Acrocephalus schoenobaenus	Sedge Warbler		5	2	6	3	6	4	3				
Acrocephalus scirpaceus	Reed Warbler	1					4		2				
Aegithalos caudatus	Long-tailed Tit				2	1				1	1		
Alauda arvensis	Skylark		1										
Anas crecca	Teal												
Anas platyrhynchos	Mallard		2	7	2		3	1	5	1	1		7
Anser brachyrhynchus	Pink-footed Goose												
Anthus pratensis	Meadow Pipit		1										
Apus apus	Swift						1						
Ardea alba	Great White Egret												
Ardea cinerea	Grey Heron							1	1	1	1	2	2
Aythya fuligula	Tufted Duck			3								2	
Branta canadensis	Canada Goose												
Buteo buteo	Buzzard											1	
Carduelis carduelis	Goldfinch	6	3	12	1	4	3		14	3	1		
Certhia familiaris	Treecreeper												
Cettia cetti	Cetti's Warbler				1			1					
Chloris chloris	Greenfinch									1		2	

Latin Name	Common Name	14/04/2021	30/04/2021	12/05/2021	28/05/2021	01/06/2021	25/06/2021	01/07/2021	20/07/2021	09/08/2021	19/08/2021	15/09/2021	23/09/2021
Chroicocephalus ridibundus	Black-headed Gull												2
Circus aeruginosus	Marsh Harrier												
Coloeus monedula	Jackdaw								10		6	1	
Columba livia (domest.)	Feral Pigeon												
Columba oenas	Stock Dove										1		
Columba palumbus	Wood Pigeon			4		4	7	1	6		6		
Corvus corax	Raven	1											
Corvus corone	Carrion Crow						3		2		2	1	5
Corvus frugilegus	Rook					2	4				12		
Cyanistes caeruleus	Blue Tit	1	1	5	2	1	3		9		7	5	6
Cygnus olor	Mute Swan	1											
Delichon urbicum	House Martin												
Dendrocopos major	Great Spotted Woodpecker								1				
Egretta garzetta	Little Egret												1
Emberiza schoeniclus	Reed Bunting				1			1	3				5
Erithacus rubecula	Robin	1						2				5	1
Falco tinnunculus	Kestrel												
Fringilla coelebs	Chaffinch	5	2	3	1	4	4	1	4		1		1
Fulica atra	Coot		1	4		3	1						1
Gallinago gallinago	Snipe						1						
Gallinula chloropus	Moorhen		1	3		2	4	1	3	1	2	3	1

Latin Name	Common Name	14/04/2021	30/04/2021	12/05/2021	28/05/2021	01/06/2021	25/06/2021	01/07/2021	20/07/2021	09/08/2021	19/08/2021	15/09/2021	23/09/2021
Garrulus glandarius	Jay											2	1
Hirundo rustica	Swallow												
Larus argentatus	Herring Gull						1				2		
Larus fuscus	Lesser Black-backed Gull										1		
Larus marinus	Great Black-backed Gull	1											
Linaria cannabina	Linnet								5				
Linaria flavirostris	Twite												
Locustella naevia	Grasshopper Warbler				1								
Mareca strepera	Gadwall				2							1	
Motacilla alba	Pied Wagtail				4								
Numenius arquata	Curlew		1						25	2			
Parus major	Great Tit		2	2		1		1	2				
Passer domesticus	House Sparrow	1											
Periparus ater	Coal Tit												1
Phalacrocorax carbo	Cormorant						6						
Phasianus colchicus	Pheasant						1				1	3	
Phylloscopus collybita	Chiffchaff	1	1	2	1	3	8	5	2		1	2	
Phylloscopus trochilus	Willow Warbler						1						
Pica pica	Magpie	1		2		2	6		1				
Prunella modularis	Dunnock	1	1	2		1	1	4				3	2
Pyrrhula pyrrhula	Bullfinch						1						

Latin Name	Common Name	14/04/2021	30/04/2021	12/05/2021	28/05/2021	01/06/2021	25/06/2021	01/07/2021	20/07/2021	09/08/2021	19/08/2021	15/09/2021	23/09/2021
Regulus regulus	Goldcrest								1				
Sitta europaea	Nuthatch							1					
Spatula clypeata	Shoveler												
Sturnus vulgaris	Starling												
Sylvia atricapilla	Blackcap		3	2	2	2	5	2	1	2			
Sylvia borin	Garden Warbler					1							
Sylvia communis	Whitethroat		2	2	8	2	2	3	2			1	
Tachybaptus ruficollis	Little Grebe			1									
Tadorna tadorna	Shelduck			3									
Troglodytes troglodytes	Wren	3	5	6	6	6	6	8	9	8	12	6	1
Turdus iliacus	Redwing												
Turdus merula	Blackbird	37	3	4	3	3	3	1		6	1		6
Turdus philomelos	Song Thrush	2		1		2	4	2	2				
Turdus pilaris	Fieldfare												
Turdus viscivorus	Mistle Thrush							1				1	
Vanellus vanellus	Lapwing												

Table 19 – Transect 7 Survey Results

Latin Name	Common Name	04/11/2020	02/12/2020	27/01/2021	16/02/2021	01/03/2021	10/03/2021	07/04/2021	21/04/2021	05/05/2021	19/05/2021	02/06/2021	29/06/2021	14/07/2021	22/07/2021	21/08/2021	26/08/2021	06/09/2021	16/09/2021	18/10/2021
Accipiter nisus	Sparrowhawk			1								1				1				
Aegithalos caudatus	Long-tailed Tit		4	1	8	5						1			4			4		12
Anser anser	Greylag Goose																			2
Anser brachyrhynchus	Pink-footed Goose			64	13															40
Anthus pratensis	Meadow Pipit	1				12								1						
Apus apus	Swift													2	9					
Ardea cinerea	Grey Heron										2			1						
Branta canadensis	Canada Goose				2							12				37	9		32	8
Buteo buteo	Buzzard		2											1			1	2		1
Carduelis carduelis	Goldfinch	49	93	61	12	1	2	2	4		2	1	12	13	10	7	4			8
Chloris chloris	Greenfinch								1						1	1				
Chroicocephalus ridibundus	Black-headed Gull		28	4	35	170	20							9			17	27	60	1
Coloeus monedula	Jackdaw	3	21	13	4	13	5	6	31	6	4	10	4	4		1	11	13	34	2
Columba oenas	Stock Dove	1						3	8	2										
Columba palumbus	Wood Pigeon	5	28	8	174	11	6	22	66		11	7	9	15	10	21	11	48	76	13
Corvus corax	Raven			2	1	1		1				1	2				2		1	
Corvus corone	Carrion Crow	22	16	9	18	11	5	8	12	2	5	5	2	1	3	1	4	4	4	12
Corvus frugilegus	Rook			2	2	3	25		104	45	10									
Cyanistes caeruleus	Blue Tit	12	8	5	7	5	8	2	9	5	5	4	10		3	5	1	6	4	8
Delichon urbicum	House Martin											2								

Latin Name	Common Name	04/11/2020	02/12/2020	27/01/2021	16/02/2021	01/03/2021	10/03/2021	07/04/2021	21/04/2021	05/05/2021	19/05/2021	02/06/2021	29/06/2021	14/07/2021	22/07/2021	21/08/2021	26/08/2021	06/09/2021	16/09/2021	18/10/2021	
Dendrocopos major	Great Spotted Woodpecker			1					1					1							
Emberiza schoeniclus	Reed Bunting	2																		1	
Erithacus rubecula	Robin	8	8	3	2	2	6	2	3	2	5	2	1		1	3	11	6	8	7	
Falco tinnunculus	Kestrel			1	2		1									2		1			
Fringilla coelebs	Chaffinch	16	12	25	3	18	2	1	1			3	1	1					3	1	3
Garrulus glandarius	Jay															4		3			
Haematopus ostralegus	Oystercatcher		6								1								1		
Hirundo rustica	Swallow													1		6					
Larus argentatus	Herring Gull	12	3	4	3	5		21	44	6				2			13	15	3	15	
Larus canus	Common Gull				11	1	5							2					18	2	
Larus fuscus	Lesser Black-backed Gull		23							1	25			1					6		
Larus marinus	Great Black-backed Gull													1							
Linaria cannabina	Linnet	15																		7	
Motacilla alba	Pied Wagtail	1																			
Numenius arquata	Curlew		50													1		4			
Parus major	Great Tit	2	4	8	4	1	3	2	1	2	1	1	1	3	1	1	1	2	1	3	
Passer domesticus	House Sparrow	66	61	59	80	80	50	10	39	8	55	19	10	12	42	3	11	10	14	20	
Phalacrocorax carbo	Cormorant	1												1							
Phasianus colchicus	Pheasant									1											
Phylloscopus collybita	Chiffchaff					1		1	1	1	1	2		1					1		
Pica pica	Magpie	14	9	6	6	4	4		1	2	3	2	2	1	4		2		2	8	

Latin Name	Common Name	04/11/2020	02/12/2020	27/01/2021	16/02/2021	01/03/2021	10/03/2021	07/04/2021	21/04/2021	05/05/2021	19/05/2021	02/06/2021	29/06/2021	14/07/2021	22/07/2021	21/08/2021	26/08/2021	06/09/2021	16/09/2021	18/10/2021
Prunella modularis	Dunnock	2	3	3	2	2	3		3		5	1	2	1			2	3	2	2
Regulus regulus	Goldcrest		1						1											
Sitta europaea	Nuthatch										1									
Streptopelia decaocto	Collared Dove		1	1	4	1	2		5		2	2	2	2	1					9
Sturnus vulgaris	Starling	70	53	74	68	32	383	6	5	5	71	69		6	10	6	26	58	155	138
Sylvia atricapilla	Blackcap								1	4	1	2	2		2					
Sylvia communis	Whitethroat									3	1		1	4	3		2			
Troglodytes troglodytes	Wren	6	6	9	4	4	7	5	7	4	6	6	10	9	4	9	3	2	3	
Turdus iliacus	Redwing		20	11	50	1														
Turdus merula	Blackbird	9	16	16	5	5	16	5	7	6	7	13	5	6	11	6		2	3	
Turdus philomelos	Song Thrush	1	1	1		2					3	1	3	3	2				1	
Turdus pilaris	Fieldfare	1		55	35	1	210													
Turdus viscivorus	Mistle Thrush					1	2			1										

Table 20 – Transect 25 Survey Results

Latin Name	Common Name	02/03/2021	16/03/2021	16/04/2021	29/04/2021	13/05/2021	26/05/2021	10/06/2021	23/06/2021	12/07/2021	28/07/2021	21/08/2021	24/08/2021	07/09/2021	16/09/2021	19/10/2021	10/11/2021	15/12/2021	11/01/2022	03/02/2022
Aegithalos caudatus	Long-tailed Tit			2			6	3	13	10	8	2	10	4	3	4	6	3	3	
Anas platyrhynchos	Mallard	2	2			2			1				2	2				3		
Anser anser	Greylag Goose	14					1	1			8									13
Anthus pratensis	Meadow Pipit			2															1	
Apus apus	Swift									2										
Ardea cinerea	Grey Heron		1													1				
Branta canadensis	Canada Goose	8	2			2							2					1		
Buteo buteo	Buzzard									2	2	1	1	1		1			1	
Carduelis carduelis	Goldfinch	14	7	4	12	16	2	12	18	28	20	40	26	35	54	12	11	5	21	
Chloris chloris	Greenfinch	4	2	2	3	2	3	4	2	3	2						1			
Chroicocephalus ridibundus	Black-headed Gull		20							1					2				5	2
Coloeus monedula	Jackdaw	59	22		28	7	8	38	5	1		2	19	8	4	42	18	41	113	103
Columba livia (domest.)	Feral Pigeon														2					
Columba oenas	Stock Dove																	3		
Columba palumbus	Wood Pigeon	20	26	7	14	10	2		19	8	11	8	13	12	7	74	10	34	73	11
Corvus corax	Raven																			1
Corvus corone	Carrion Crow	3	6	5	1	3	1		4	3	2	3	6	6	4	9	7	3	9	8
Corvus frugilegus	Rook	14													2	25	3		4	3
Cyanistes caeruleus	Blue Tit	3	5		4	2	5	7	10	7	9	5	6	6	12	5	5	6	9	15

Latin Name	Common Name	02/03/2021	16/03/2021	16/04/2021	29/04/2021	13/05/2021	26/05/2021	10/06/2021	23/06/2021	12/07/2021	28/07/2021	21/08/2021	24/08/2021	07/09/2021	16/09/2021	19/10/2021	10/11/2021	15/12/2021	11/01/2022	03/02/2022
Dendrocopos major	Great Spotted Woodpecker	1					1			1		2			1			1		
Erithacus rubecula	Robin	8	4	8	6	7	2	3	2		2	3	8	5	7	7	8	6	10	5
Falco tinnunculus	Kestrel	1																		
Fringilla coelebs	Chaffinch	14	4	3	6	5	3	4	4		5	1	4			3	11	8	9	4
Fulica atra	Coot					1														1
Gallinula chloropus	Moorhen	1	2														2	4	3	1
Garrulus glandarius	Jay													1	2	2				
Hirundo rustica	Swallow				3		3	1	1		5	6	1							
Larus argentatus	Herring Gull	5	2	3		5				1	3	3			1		2	15	2	5
Larus canus	Common Gull	2	15													6	20		25	40
Larus fuscus	Lesser Black-backed Gull			1		4														
Linaria cannabina	Linnet					7	2	2												
Motacilla alba	Pied Wagtail		1															2	1	
Parus major	Great Tit	2	6	4	3	2	3	3	2		2	3	2	3	4	3	4	11	5	4
Passer domesticus	House Sparrow	40	23		28	13	2	28	10	9	12	1	4	13	44	4	12	8	10	3
Periparus ater	Coal Tit		1																	
Phalacrocorax carbo	Cormorant													14						
Phylloscopus collybita	Chiffchaff			3	5	2	6	4		8	3	2	3		1					
Phylloscopus trochilus	Willow Warbler			2	2			1												
Pica pica	Magpie	3	4		11	3	4	4	1	3	1	4	3	5	1	1	8	17	4	7

Latin Name	Common Name	02/03/2021	16/03/2021	16/04/2021	29/04/2021	13/05/2021	26/05/2021	10/06/2021	23/06/2021	12/07/2021	28/07/2021	21/08/2021	24/08/2021	07/09/2021	16/09/2021	19/10/2021	10/11/2021	15/12/2021	11/01/2022	03/02/2022
Prunella modularis	Dunnock	2	6	3	4	2	1	6	5	3	3		3	2	4	4	9	2	3	2
Pyrrhula pyrrhula	Bullfinch									1									1	2
Regulus regulus	Goldcrest								1											
Sterna hirundo	Common Tern																	5		
Streptopelia decaocto	Collared Dove							1		2		2			2			1		
Sturnus vulgaris	Starling	150	27	27	79	20	2	87		31	30	31	26	69	9	12	40	31	68	13
Sylvia atricapilla	Blackcap			2	2		5		2	3		1								
Sylvia communis	Whitethroat				1	2		2	1											
Troglodytes troglodytes	Wren	1	3	2	6	3	6	8	6	6	4	5		1	3	1	4	1		3
Turdus iliacus	Redwing	10	2														4		50	
Turdus merula	Blackbird	22	15	10	21	9	11	5	4	11	5	7	11	6		7	23	11	7	13
Turdus philomelos	Song Thrush	2	2	2	4	4	1	3	1	2										2
Turdus viscivorus	Mistle Thrush		2	1			1											1		2

Table 21 – Transect 26 Survey Results

Latin Name	Common Name	02/03/2021	16/03/2021	16/04/2021	29/04/2021	13/05/2021	26/05/2021	10/06/2021	23/06/2021	12/07/2021	28/07/2021	21/08/2021	24/08/2021	07/09/2021	16/09/2021	19/10/2021	10/11/2021	15/12/2021	11/01/2022	03/02/2022	
Accipiter nisus	Sparrowhawk		1				1														
Acrocephalus schoenobaenus	Sedge Warbler						1														
Actitis hypoleucos	Common Sandpiper																	1			
Aegithalos caudatus	Long-tailed Tit	1	1		2											6	33	1	1	9	
Anas platyrhynchos	Mallard	2																			
Buteo buteo	Buzzard		1		1	1				2		1		1			1	1	2	2	
Carduelis carduelis	Goldfinch	4		10			3			3		5			1	20		3	1	12	
Certhia familiaris	Treecreeper													1							
Chloris chloris	Greenfinch	1		1		1		2	1												
Chroicocephalus ridibundus	Black-headed Gull			4						1	1				2	2			2		
Coloeus monedula	Jackdaw	7	6		5	3		21		1				1	3	6	77	1	1	1	
Columba livia (domest.)	Feral Pigeon													3							
Columba palumbus	WoodPigeon	6	17	13	5	7	6	14	6	18	20	16	6	14	46	22	11	47	17	17	
Corvus corone	Carrion Crow	4	2	4		1		5	1	2	3	4	1		3	3	7	6	11	4	
Corvus frugilegus	Rook										20										
Cyanistes caeruleus	Blue Tit	4	2	4		1		8	2	2	6	2	2	17	6	2	2	2	12	12	
Dendrocopos major	Great Spotted Woodpecker		1					1									1				
Emberiza citrinella	Yellowhammer												1								

Latin Name	Common Name	02/03/2021	16/03/2021	16/04/2021	29/04/2021	13/05/2021	26/05/2021	10/06/2021	23/06/2021	12/07/2021	28/07/2021	21/08/2021	24/08/2021	07/09/2021	16/09/2021	19/10/2021	10/11/2021	15/12/2021	11/01/2022	03/02/2022
Emberiza schoeniclus	Reed Bunting				1															
Erithacus rubecula	Robin	4	2	4		8	5	5	1	2	2	3	6	9	9	4	6	5	14	13
Fringilla coelebs	Chaffinch	3	4	2	12	4		3			2		3	3		1	4	1		3
Fulica atra	Coot		2																	
Gallinula chloropus	Moorhen			1																
Hirundo rustica	Swallow											1								
Larus argentatus	Herring Gull	3		2					1	2					3			4		
Larus canus	Common Gull									1										
Larus fuscus	Lesser Black-backed Gull												1							
Linaria cannabina	Linnet							1												
Motacilla alba	Pied Wagtail	4					1							1				5		
Parus major	Great Tit		2	2	4	2	3	4	1	2	1	2	1	3	2	2		2	3	3
Passer domesticus	House Sparrow	65	6	6	10	5	5	5	4	2	12	17		4	16	7	5	5	3	9
Periparus ater	Coal Tit	1																		
Phasianus colchicus	Pheasant		1			2			1											1
Phylloscopus collybita	Chiffchaff			2	2	2	2	3	4	4		2								
Phylloscopus trochilus	Willow Warbler						1													
Pica pica	Magpie	5	5		2	1	3	3	4	5	2	6	7		6	8	2		5	4
Prunella modularis	Dunnock	3	5		4		2	3	2	3	3	2	4	2	2	3	2	1	25	7
Pyrrhula pyrrhula	Bullfinch						1			1										
Regulus regulus	Goldcrest		1		1				1		1									

Latin Name	Common Name	02/03/2021	16/03/2021	16/04/2021	29/04/2021	13/05/2021	26/05/2021	10/06/2021	23/06/2021	12/07/2021	28/07/2021	21/08/2021	24/08/2021	07/09/2021	16/09/2021	19/10/2021	10/11/2021	15/12/2021	11/01/2022	03/02/2022
Streptopelia decaocto	Collared Dove			1						1										
Sturnus vulgaris	Starling			10	2									5			1			
Sylvia atricapilla	Blackcap			1	1	1	1	2	2	1	1									
Sylvia borin	Garden Warbler								1											
Sylvia communis	Whitethroat				1	1	1	1												
Sylvia curruca	Lesser Whitethroat									1										
Troglodytes troglodytes	Wren	1	5	3	4	5	6	12	6	9	7	12	3	2	2	2	3	1	2	4
Turdus iliacus	Redwing		2																40	
Turdus merula	Blackbird	4	7	1	8	1	10	8	10	12	7	2	1	3		6	12	8	15	18
Turdus philomelos	Song Thrush		1	1	1	2	1	2	5	2							1			2
Turdus viscivorus	Mistle Thrush			2			1		2						2					

Table 22 – Survey Dates and Weather Conditions

Date	Start Finish Times	Surveyors	Temp (°C)	Rain ¹	Wind ²	Wind Direction	Cloud ³
Transect 1							
02/11/20	09:00	PHa & ST	10	0	3	SW	3
	10:00		11	0	3	SW	3
07/12/20	10:10	PHa & AE	4	0	1	W	7
	11:15		5	0	1	W	6
22/01/21	12:00	PHi	5	0	0	NA	3
	13:00		5	0	0	NA	3
18/02/21	09:00	PHa & MW	6	0	3	SW	6
	09:40		7	0	3	SW	4
08/03/21	06:45	PHa & GA	2	0	1	SW	7
	07:35		3	0	1	SW	5
24/03/21	10:50	PHa & SW	13	0	3	SW	4
	11:30		14	0	2	SW	3
14/04/21	09:20	PHa & SW	7	0	1	SE	4
	10:00		9	0	1	SE	5
22/04/21	06:00	PHa & MP	2	0	1	SE	2
	06:35		3	0	1	SE	2
07/05/21	05:30	PHi	8	0	0	NA	0
	07:00		8	0	0	NA	0
20/05/21	05:15	PHa & AC	7	0	1	SE	5
	05:50		8	0	1	SE	6

Date	Start Finish Times	Surveyors	Temp (°C)	Rain ¹	Wind ²	Wind Direction	Cloud ³
03/06/21	04:50	PHa & SW	15	0	1	SE	6
	05:30		16	0	1	SE	5
30/06/21	04:55	PHa & BP	13	0	1	NE	3
	05:40		14	0	1	NE	4
01/07/21	04:50	PHi	13	0	1	NE	3
	06:00		14	0	1	NE	4
19/07/21	05:15	PHa & BP	16	0	1	W	0
	05:50		17	0	1	W	0
04/08/21	05:30	RI & GA	12	0	2	W	3
	06:30		11	0	1	W	2
25/08/21	06:05	PHi & BP	14	0	0	NW	8
	06:40		15	0	1	NW	-
01/09/21	06:15	PHa & BP	10	0	1	NE	7
	07:00		11	0	1	NE	7
13/09/21	06:45	PHi & IMcQ	13	0	1	SE	8
	07:30		14	0	1	SE	8
12/10/21	07:30	PHa & BP	13	0	3	NW	2
	08:00		13	0	3	NW	4
Transect 2							
17/12/20	10:15	PHa & AE	6	0	1	S	3
	11:10		6	0	1	S	4
15/01/21	12:00	PHi & AC	1	0	2	NW	2

Date	Start Finish Times	Surveyors	Temp (°C)	Rain ¹	Wind ²	Wind Direction	Cloud ³
	14:00		1	0	2	NW	2
11/02/21	09:00	PHa & JL	-2	0	1	SE	1
	11:05		1	0	3	SE	2
11/03/21	06:45	PHa & GA	8	2	5	W	8
	08:30		8	0	4	W	3
22/03/21	06:10	PHa & SW	7	0	1	SW	8
	07:40		8	0	1	SW	7
13/04/21	06:45	PHi	9	0	0	NA	6
	-		10	0	0	NA	6
27/04/21	06:00	PHa & SW	9	0	2	NW	7
	07:35		10	0	2	NW	8
11/05/21	05:30	PHa & GA	6	0	1	SE	2
	07:05		6	0	1	SE	3
04/06/21	05:30	PHi	8	0	0	S	1
	07:00		9	0	1	S	1
22/06/21	04:45	PHa & GA	8	0	1	NW	3
	06:30		10	0	1	NW	0
16/07/21	05:25	PHi & GA	11	0	0	NW	0
	07:20		12	0	1	NW	1
27/07/21	05:25	PHa & SW	13	0	1	SW	4
	06:50		15	0	1	SW	5
05/08/21	05:35	RI & GA	13	0	1	SE	5

Date	Start Finish Times	Surveyors	Temp (°C)	Rain ¹	Wind ²	Wind Direction	Cloud ³
	07:05		13	0	2	SE	4
25/08/21	06:20	PHa & BA	13	0	1	NE	6
	07:45		14	0	1	NE	5
02/09/21	06:35	PHi	14	0	1	SE	8
	08:25		15	0	1	SE	8
13/09/21	06:45	PHa & GA	13	2	1	SE	8
	08:50		13	2	1	SE	8
11/10/21	07:30	PHa & BP	11	0	1	W	3
	09:05		13	0	2	W	4
25/10/21	08:15	PHa & BP	10	0	1	SW	5
	10:05		12	0	1	SW	4
08/11/21	07:40	PHa & BP	8	0	2	SE	7
	09:10		9	0	3	SE	6
17/11/21	07:40	PHa & JL	8	2	1	W	6
	09:35		8	0	2	W	7
01/12/21	08:10	PHa & BP	7	2	4	NW	6
	09:45		7	2	6	NW	7
16/12/21	08:25	PHa & GA	7	0	1	SW	7
	10:10		8	0	1	SW	8
05/01/22	08:35	PHa & JL	5	3	3	NW	4
	10:20		5	0	4	NW	4
12/01/22	08:35	PHa & GA	2	0	1	SW	3

Date	Start Finish Times	Surveyors	Temp (°C)	Rain ¹	Wind ²	Wind Direction	Cloud ³
	10:10		4	0	1	SW	2
01/02/22	08:10	PHa & GA	10	0	3	NW	3
	09:45		12	0	3	NW	3
08/02/22	08:00	PHa & GA	11	0	2	SW	4
	10:00		12	0	3	SW	5
01/03/22	07:15	PHa & AJ	3	0	1	N	3
	09:05		7	0	1	N	1
24/03/22	06:15	PHa & AJ	4	0	1	SE	1
	08:05		8	0	1	SE	0
Transect 3							
17/12/20	12:00	PHa & AE	7	0	1	S	4
	14:00		7	0	1	S	5
21/01/21	09:00	PHi & ?	0	1	2	NW	-
	10:45		0	0	2	NW	-
11/02/21	12:20	PHa & JL	1	0	3	SE	4
	13:35		1	0	3	SE	3
10/03/21	-	PHi	6	2	3	SW	8
	-		7	0	3	SW	8
22/03/21	09:00	PHa & SW	9	0	1	W	7
	10:20		9	0	1	W	7
12/04/21	06:00	PHi	6	2	3	SW	8
	08:00		7	2	3	SW	8

Date	Start Finish Times	Surveyors	Temp (°C)	Rain ¹	Wind ²	Wind Direction	Cloud ³
21/04/21	07:45	PHi & GA	1	0	0	-	0
	09:45		2	0	0	SW	0
26/04/21	06:05	PHa & SW	3	0	1	SE	1
	07:20		3	0	1	SE	1
10/05/21	05:30	PHa & GA	9	0	1	SE	6
	07:00		9	0	1	SE	5
24/05/21	05:40	PHi	5	0	2	N	1
	06:15		6	0	2	N	1
07/06/21	04:45	PHa & MW	13	0	1	NW	4
	06:00		14	0	1	NW	3
28/06/21	04:40	PHa & ST	14	0	1	NE	2
	06:00		16	0	1	NE	1
12/07/21	05:00	PHa & BP	14	0	1	SE	7
	06:15		16	0	1	SE	8
26/07/21	05:15	PHa & GA	15	0	1	SW	7
	06:35		16	0	1	SW	7
06/08/21	05:35	RI & GA	15	0	2	SE	7
	06:50		15	4	2	SE	8
16/08/21	05:50	PHi	15	0	3	NW	8
	07:00		16	0	3	NW	8
02/09/21	06:15	PHa & BP	13	0	1	NE	7
	07:35		15	0	1	NE	7

Date	Start Finish Times	Surveyors	Temp (°C)	Rain ¹	Wind ²	Wind Direction	Cloud ³
14/09/21	06:45	PHa & IM	14	0	1	E	8
	08:05		15	2	1	E	8
13/10/21	07:30	PHa & BP	13	0	1	W	7
	09:00		14	0	1	W	8
16/11/21	07:30	PHa & JL	9	0	1	S	5
	09:00		10	0	1	S	6
Transect 4							
04/11/20	11:10	PHa & ST	10	4	2	NW	7
	12:20		11	2	2	NW	6
02/12/20	11:30	PHa & JL	10	0	2	SW	4
	12:30		10	0	2	SW	4
27/01/21	11:15	PHa & AE	9	0	1	W	-
	12:00		9	0	1	W	-
16/02/21	10:35	PHa & AE	11	0	2	SW	7
	11:30		12	0	2	SW	6
25/02/21	09:00	PHa & MW	8	0	1	SW	4
	10:25		9	0	1	SW	3
01/03/21	11:20	PHa & AE	7	0	2	SE	3
	12:20		8	0	2	SE	3
09/03/21	06:40	PHa & GA	4	0	2	SE	7
	07:55		5	0	2	SE	6
07/04/21	07:00	PHi	1	0	3	W	1

Date	Start Finish Times	Surveyors	Temp (°C)	Rain ¹	Wind ²	Wind Direction	Cloud ³
	08:20		2	0	3	W	1
20/04/21	06:05	PHa & GA	4	0	1	W	4
	07:00		4	0	1	W	2
04/05/21	06:30	PHi	5	0	3	N	8
	07:30		6	0	2	N	8
18/05/21	05:15	PHa & GA	9	0	1	SW	5
	06:10		10	0	1	SW	4
01/06/21	04:50	PHa & SW	12	0	1	SE	3
	05:50		13	0	1	SE	2
25/06/21	06:15	PHi & ?	13	0	2	N	8
	07:25		14	0	1	NW	8
01/07/21	05:35	PHa & BP	14	0	1	NW	7
	06:30		15	0	1	NW	7
20/07/21	06:30	PHa & BP	20	0	1	NW	2
	07:15		22	0	1	NW	0
09/08/21	06:35	RI & SW	14	0	2	S	7
	07:30		14	0	1	S	7
19/08/21	06:55	PHi	15	0	1	SW	5
	07:45		16	0	1	SW	5
15/09/21	07:35	PHa & BH	12	0	1	NW	6
	08:15		14	0	1	NW	4
23/09/21	09:20	DCa	10	0	3	SE	4

Date	Start Finish Times	Surveyors	Temp (°C)	Rain ¹	Wind ²	Wind Direction	Cloud ³
	10:00		11	0	2	S	4
14/10/21	07:30	PHa & BP	11	0	1	SW	7
	08:30		12	0	1	SW	6
Transect 5							
07/10/20	09:00	PHi	12	0	2	NW	4
	10:30		12	0	2	NW	4
20/10/20	11:15	PHi	16	0	0	N	6
	12:30		17	1	0	N	6
03/11/20	08:30	PHa & JL	8	0	2	SW	4
	09:05		8	0	2	SW	3
16/11/20	13:30	PHi & AC	11	0	2	SW	8
	14:15		12	0	2	SW	8
02/12/20	10:30	PHa & JL	9	3	3	SW	8
	11:10		9	2	2	SW	6
15/12/20	10:10	PHa & AE	7	0	2	SE	4
	11:30		7	0	2	SE	2
21/01/21	10:50	PHi & AC	6	0	3	SW	3
	12:15		6	0	2	SW	4
08/02/21	09:05	PHa & JL	1	0	2	NE	6
	09:40		1	0	2	NE	4
22/02/21	09:00	PHa & JL	8	0	1	SW	6
	09:40		8	0	1	SW	6

Date	Start Finish Times	Surveyors	Temp (°C)	Rain ¹	Wind ²	Wind Direction	Cloud ³
09/03/21	07:00	PHi & ?	2	0	1	S	6
	08:00		2	0	1	S	8
26/03/21	06:00	PHi	5	0	2	S	3
	-		6	0	2	S	4
14/04/21	13:30	PHi	11	0	2	SW	8
	-		12	0	2	SW	7
30/04/21	05:45	PHi	3	1	3	SW	1
	-		4	0	1	SW	2
12/05/21	05:30	PHa & GA	8	0	1	S	2
	06:10		9	0	1	S	3
28/05/21	05:45	PHi	11	0	0	NA	8
	07:00		12	0	0	NA	8
01/06/21	06:30	PHa & SW	14	0	1	SE	1
	07:05		15	0	1	SE	1
25/06/21	04:50	PHi	13	0	2	NW	8
	05:35		13	0	2	NW	8
01/07/21	04:40	PHa & BP	15	0	1	NW	6
	05:05		15	0	1	NW	6
20/07/21	05:15	PHa & BP	19	0	1	NW	2
	05:55		20	0	1	NW	2
09/08/21	05:40	RI & SW	14	2	2	S	7
	06:10		14	3	2	S	7

Date	Start Finish Times	Surveyors	Temp (°C)	Rain ¹	Wind ²	Wind Direction	Cloud ³
19/08/21	05:50	PHi	15	0	1	SW	7
	06:20		15	0	1	SW	7
15/09/21	06:45	PHa & BH	10	0	1	NW	7
	07:15		12	0	1	NW	6
23/09/21	08:35	DCa	11	0	2	N	5
	09:00		12	0	3	N	4
Transect 7							
04/11/20	09:20	PHa & ST	7	4	1	NW	5
	10:50		8	2	2	NW	4
02/12/20	08:50	PHa & JL	8	0	1	SW	8
	10:10		9	1	1	SW	8
27/01/21	09:15	PHa & AC	7	0	1	W	7
	10:45		8	0	1	W	6
16/02/21	09:00	PHa & AC	9	0	1	S	8
	10:10		10	0	2	S	7
01/03/21	09:15	PHa & AE	3	0	1	SE	0
	11:00		6	0	2	SE	2
10/03/21	06:45	PHa & GA	7	2	3	S	3
	08:15		8	3	4	S	4
07/04/21	07:00	PHi	3	0	0	NA	3
	08:20		4	0	0	NA	4
21/04/21	06:05	PHa & GA	7	0	2	NE	5

Date	Start Finish Times	Surveyors	Temp (°C)	Rain ¹	Wind ²	Wind Direction	Cloud ³
	07:10		7	0	3	NE	6
05/05/21	06:00	PHi	6	1	3	N	3
	08:00		7	1	2	N	4
19/05/21	05:15	PHa & GA	6	0	1	W	6
	06:15		7	0	1	W	5
02/06/21	05:00	PHa & LR	12	0	1	NE	3
	05:55		13	0	1	NE	2
29/06/21	04:40	PHa & ST	14	0	2	W	7
	05:45		15	0	3	W	6
14/07/21	04:50	PHi	15	0	1	NW	1
	06:30		16	0	2-	NW	2
22/07/21	05:15	PHa & BP	16	0	1	SE	0
	06:35		19	0	1	SE	0
12/08/21	05:45	RI & IM	12	0	3	SE	3
	07:00		11	0	2	SE	1
26/08/21	06:00	PHa & DC	16	0	1	NW	7
	07:30		18	0	1	NW	4
06/09/21	06:30	PHa & GA	15	0	0	NE	4
	07:45		16	0	0	NE	4
16/09/21	06:45	PHa & SW	14	0	1	SW	3
	07:55		16	0	1	SW	2
18/10/21	08:15	PHa & GA	12	0	1	SE	3

Date	Start Finish Times	Surveyors	Temp (°C)	Rain ¹	Wind ²	Wind Direction	Cloud ³
	09:30		13	0	2	SE	5
Transect 25							
02/03/21	07:00	PHa & AE	4	0	2	SE	8
	08:30		4	0	3	SE	8
16/03/21	08:00	PHa & GA	11	1	2	NW	8
	09:30		12	0	2	NW	7
16/04/21	06:45	PHi	0	0	0	SE	0
	08:00		1	0	0	SE	0
29/04/21	07:00	PHa & SW	5	0	1	N	2
	08:20		5	0	1	N	1
13/05/21	06:30	PHa & GA	10	0	1	NW	7
	07:40		11	1	1	NW	8
26/05/21	05:30	PHi	7	0	0	NA	2
	06:55		8	0	0	NA	2
10/06/21	06:05	PHa & GA	18	0	1	SW	5
	07:55		20	0	1	SW	3
23/06/21	05:45	PHa & GA	9	0	1	SW	2
	07:15		10	0	1	SW	2
12/07/21	06:15	PHi	14	0	1	SE	8
	07:45		15	0	2	SE	8
28/07/21	06:50	PHa & GA	16	0	2	W	6
	07:50		17	0	2	W	4

Date	Start Finish Times	Surveyors	Temp (°C)	Rain ¹	Wind ²	Wind Direction	Cloud ³
13/08/21	07:30	RI & IM	14	0	2	SW	4
	08:40		14	0	1	S	4
24/08/21	07:30	PHa & BP	14	0	1	SE	8
	08:40		15	0	1	SE	8
07/09/21	08:15	PHa & IM	16	0	1	SE	0
	09:50		19	0	1	SE	0
16/09/21	08:15	PHi	16	0	1	NW	2
	09:15		17	0	1	NW	2
19/10/21	09:40	PHa & GA	16	1	2	S	8
	10:45		17	0	2	S	8
10/11/21	09:00	PHa & MW	10	0	1	SW	7
	10:10		12	0	1	SW	5
15/12/21	09:35	PHa & GA	9	0	3	S	1
	10:45		9	0	3	S	0
11/01/22	10:15	PHa & GA	8	0	1	NW	5
	11:20		9	0	1	NW	4
03/02/22	09:35	PHa & GA	9	0	1	SW	5
	10:40		10	0	1	SW	5
Transect 26							
02/03/21	08:50	PHa & AE	4	0	2	SE	8
	09:50		5	0	2	SE	7
16/03/21	06:30	PHa & GA	9	1	2	W	8

Date	Start Finish Times	Surveyors	Temp (°C)	Rain ¹	Wind ²	Wind Direction	Cloud ³
	07:30		10	1	3	W	8
16/04/21	06:30	PHi	11	0	2	NW	6
	07:25		12	0	2	NW	4
29/04/21	05:45	PHa & SW	4	0	2	NW	3
	06:35		5	0	2	NW	2
13/05/21	05:10	PHa & GA	7	0	1	NW	5
	06:05		8	0	1	NW	6
26/05/21	05:00	PHi	9	0	3	NE	4
	06:25		10	0	1	NE	2
10/06/21	04:45	PHa & GA	15	0	1	SW	6
	05:35		16	0	1	SW	6
23/06/21	04:45	PHa & GA	7	0	1	W	3
	05:30		8	0	1	W	2
12/07/21	04:50	PHi	14	0	0	SE	8
	05:45		15	0	1	SE	7
28/07/21	05:15	PHa & GA	14	0	2	SW	8
	06:20		15	0	2	SW	7
13/08/21	05:50	RI & IM	14	0	3	SW	6
	07:00		13	0	2	SW	6
24/08/21	06:00	PHa & BP	13	0	1	SE	7
	07:00		14	0	1	SE	7
07/09/21	06:30	PHa & IM	12	0	1	SE	3

Date	Start Finish Times	Surveyors	Temp (°C)	Rain ¹	Wind ²	Wind Direction	Cloud ³
	07:45		16	0	1	SE	0
16/09/21	06:45	PHi	15	0	1	W	7
	07:55		16	0	2	W	6
19/10/21	08:15	PHa & GA	14	1	2	SE	8
	09:10		15	1	2	SE	8
10/11/21	07:35	PHa & MW	10	1	1	SW	6
	08:25		11	0	1	SW	5
15/12/21	08:20	PHa & GA	9	0	2	SW	1
	09:05		9	0	2	SW	1
11/01/22	08:30	PHa & GA	7	0	1	NW	7
	09:35		8	0	1	NW	6
03/02/22	08:00	PHa & GA	7	0	1	SW	7
	09:05		8	0	1	SW	6

1 Rain: 0=none, 1=drizzle, 2=light, 3=moderate (or heavy showers), 4=heavy.

2 Wind (Beaufort Scale): 0=calm, 1=light air (smoke drifts in wind), 2=light breeze (leaves rustle, wind felt on face), 3=gentle breeze (light flags extended, small twigs in constant motion); 4=moderate wind (dust, leaves and loose paper raised, small branches move), 5=fresh wind (small trees sway), 6=strong wind (large branches move, whistling in phone lines, difficult to use umbrellas), 7-12=inappropriate conditions (7=moderate gale, 8=fresh gale, 9=strong gale, 10=whole gale, 11=storm, 12=hurricane).

3 Cloud (Oktas): 0-8 Oktas; proportion of sky covered by cloud.