

The Great Grid Upgrade

Sea Link

Sea Link

Volume 6: Environmental Statement

Document: 6.3.3.2.D
Part 3 Kent
Chapter 2 Appendix 3.2.D
Breeding Bird Survey Report 2023

Planning Inspectorate Reference: EN020026

Version: **AB**
~~March~~November 2025

Infrastructure Planning (Applications: Prescribed Forms and
Procedure) Regulations 2009 Regulation 5(2)(a)

national**grid**

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Version History

<u>Date</u>	<u>Issue</u>	<u>Status</u>	<u>Description/ Changes</u>
<u>March 2025</u>	<u>A</u>	<u>Final</u>	<u>For DCO submission</u>
<u>November 2025</u>	<u>B</u>	<u>Final</u>	<u>Updated for Deadline 1A</u>

1. Breeding Bird Survey Report 2023

1.1 Introduction

Background

- 1.1.1 The Sea Link Project (hereafter referred to as the 'Proposed Project') is a proposal by National Grid Electricity Transmission plc (hereafter referred to as National Grid) to reinforce the transmission network in the South East and East Anglia. The Proposed Project is required to accommodate additional power flows generated from renewable and low carbon generation, as well as accommodating additional new interconnection with mainland Europe. This would be achieved by reinforcing the network with a High Voltage Direct Current (HVDC) Link between the proposed Friston substation in the Sizewell area of Suffolk and the existing Richborough to Canterbury 400 kV overhead line close to Richborough in Kent.
- 1.1.2 The purpose of this document is to:
- detail the results of the breeding bird surveys of the Kent Onshore Scheme conducted in 2023; and
 - inform the need for any further surveys required and identify potential ecological constraints associated with breeding birds for incorporation into the **Application Document 6.2.3.2 Part 3 Kent Chapter 2 Ecology and Biodiversity** for the Kent Onshore Scheme and the associated **Application Document 6.6 Habitats Regulations Assessment (HRA) Report**.
- 1.1.3 Details of avoidance, mitigation, compensation and enhancement measures relating to breeding birds are not included in this report and are instead reported within **Application Document 6.2.3.2 Part 3 Kent Chapter 2 Ecology and Biodiversity**.
- 1.1.4 This appendix should be read in conjunction with the following figures:
- **Application Document 6.4.3.2.D Kent Breeding Birds 2023**.

Scope

- 1.1.5 The survey areas are shown in **Application Document 6.4.3.2.A.1 Kent Phase 1 Survey Results**. This report aims to confirm the presence of breeding bird territories within the Kent Onshore Scheme Order Limits through transect surveys conducted along the routes indicated in **Application Document 6.4.3.2.D.1 Kent Breeding Bird Transect Routes 2023**. The findings of breeding bird survey work within the Kent Onshore Scheme Order Limits have informed ecological best practice and mitigation as required, in order to ensure that development of the Proposed Project does not adversely affect breeding birds.
- 1.1.6 Proposed permanent above ground infrastructure comprises the Proposed Minster Converter Station and Proposed Substation, and overhead lines to the southwest. The remainder of the Kent Onshore Scheme Order Limits is comprised of proposed underground cabling and proposed temporary construction compounds.

The Kent Onshore Scheme Order Limits comprises four core locations. These areas are also divided into individual 'parcels', which have been referenced within this report and are as follows:

- Pegwell Bay landfall (to the east of Thanet Coastal path) – field parcel 379;
- Eastern landfall route – between the Proposed Minster Converter Station and Minster Substation to the west and landfall area to the east – field parcels 238, 328, 336, 346 and 360. Note that an area of underground trenchless installation will be present between Pegwell Bay and the eastern most construction compound;
- Proposed Minster Converter Station and Substation (fields east of the railway) – field parcels 244 and 238; and
- Overhead Line (OHL) route corridor (southwest of converter station fields to north) – field parcels 232, 233 and 236.

1.1.7 Inland sampling transects were devised (based on land access available at the time) to survey all major habitat types that are potentially to be subject to above ground works; and to, as a minimum, scan all large field expanses from a distance for bird aggregations.

1.1.8 To assist discussion of interpretation of the Survey Area and bird distribution later in this report, a number of key geographical areas are referenced as follows:

- Pegwell Bay landfall (east of Thanet Coastal path) which includes;
 - River Stour and River Stour 'mouth' – located at the southern extent of Pegwell Bay.
 - Thanet Coastal Path Public Right of Way (PRoW), which broadly follows the foreshore.
 - The 'Coastal Lagoon' – located within the centre of the option area and adjacent to the Thanet Coastal Path with Sandwich Road running parallel.
- Eastern landfall route which includes.
 - Ebbsfleet Lane – parallel to the A256 and allows access / views of the arable fields to the north of Stonelees Golf Centre.
- Proposed Minster Converter Station and Substation area which includes:
 - The A256 / Richborough Way, which separates the converter station option area from the remainder of the inland route to the east.
 - Brook Lane, a road access and PRoW through the northern half of this area.
 - Weatherlees Hill Water Treatment Works (the 'Sewage Works'), located to the immediate south of the Converter station option area.
 - Fishing lakes, located in the northern portion of this area.
- Overhead route corridor which includes:
 - River Stour canal. A tributary of the Stour, running broadly west to east through the centre of this area and with a PRoW parallel to its northern bank.
 - Railway line (Minster to Sandwich), which separates this overhead route area from the converter station option area.

- Marsh Farm Road, which is the only immediate vehicle access to this area, and which has a water treatment facility at its southern termination.

1.2 Bird Legislation, Policy and Guidance

- 1.2.1 The legislation, policy and guidance detailed within this section has been used to define the 'notable' bird species which are the focus of this report due to their inclusion in relevant legislation, policy or guidance.

Legislation

Conservation of Habitats and Species Regulations 2017 (as amended) / Directive on the Conservation of Wild Birds 2009

- 1.2.2 A number of bird species recorded in the UK (including those that are resident, overwintering and migratory) are protected at a European level under the European Commission (EC) Directive on the Conservation of Wild Birds 2009 (2009/147/EC). The Directive applies to 193 bird species or sub-species, which are:
- in danger of extinction;
 - rare, or have restricted local distribution;
 - vulnerable to specific changes in their habitat; or
 - in need of particular attention for reasons of the specific nature of their habitat.
- 1.2.3 These species are afforded enhanced legal protection and EU member states have a responsibility to maintain the populations of these species at a level that corresponds to their ecological, scientific and cultural requirements (Article 2). This Directive was transposed into English law through the Conservation of Habitats and Species Regulations 2017 (as amended).
- 1.2.4 Species listed on Annex 1 of the Directive are those for which the UK Government is required to take special conservation measures, including the designation of land as Special Protection Areas (SPAs). These sites are automatically included within the Emerald network under the Bern Convention (formerly the Natura 2000 network within the UK); a network of core breeding and resting sites that are protected for rare and threatened species.
- 1.2.5 While the UK is no longer a member of the European Union (EU), EU legislation which applied directly or indirectly to the UK before 11.00 p.m. on 31 December 2020 has been retained in UK law as a form of domestic legislation known as 'retained EU legislation'.
- 1.2.6 The Secretary of State for the Environment, Food and Rural Affairs and Welsh Ministers have made changes to parts of the Conservation of Habitats and Species Regulations 2017 (referred to as the 2017 Regulations) so that they operate effectively. Most of these changes involve transferring functions from the European Commission to the appropriate authorities in England. All other processes or terms in the 2017 Regulations remain unchanged and existing guidance is still relevant.

Wildlife and Countryside Act 1981 (as amended)

- 1.2.7 All active bird nests, eggs and young are protected from intentional and reckless destruction by the Wildlife and Countryside Act 1981 (as amended).
- 1.2.8 The Act prohibits the intentional killing, injuring or taking of wild birds and, during the breeding season, the taking, damaging or destroying of eggs or nests (whether the nest is in use or being built). In addition to this general protection, certain rare, endangered, declining or vulnerable species are afforded special protection under Schedule 1 of the Act.
- 1.2.9 Bird species listed on Schedule 1 are additionally protected against disturbance while nesting. This means that it is also an offence to disturb any Schedule 1 nesting birds or their young during the breeding season whilst they are occupying a nest site. This includes causing the parent birds or fledglings apparent stress and any other action which may lead to the parents abandoning their nests or young. Natural Environment and Rural Communities Act 2006 (as amended)
- 1.2.10 In addition to the above legislation, 49 bird species are listed as being Species of Principal Importance for conservation in England under Section 41 (S41) of the Natural Environment and Rural Communities (NERC) Act 2006. These species are of material consideration during the planning process.
- 1.2.11 The list of 49 'priority species' comprises those identified as requiring action under the UK Biodiversity Action Plan (UKBAP), which continue to be species of conservation priority under the UK Post-2010 Biodiversity Framework (succeeded the UKBAP in July 2012).

Regional/local planning and guidance

Birds of Conservation Concern (BoCC)

- 1.2.12 The Birds of Conservation Concern (BoCC) Red, Amber and Green lists (Stanbury, et al., 2021) assigns UK species to those categories in accordance with criteria that are based on their population status and stability.
- 1.2.13 Where these species are present at a site, their conservation status should be taken into account in determining the likely impacts of a proposed development.
- 1.2.14 Red status species are those species of highest conservation concern and green status species are those of low or no conservation concern. Amber status species are those species of some conservation concern.
- 1.2.15 The BoCC assigns bird species red and amber status based on a set of criteria that are summarised in the following table (Table 1.1).

Table 1.1 Birds of Conservation Concern (BoCC) red and amber list criteria.

Criteria	BoCC Status Code	Description
Red list	HD	Historical decline in breeding population.

	BDp ¹ / BDp ²	Severe breeding population decline over 25 years / longer term.
	BDr ¹ / BDr ²	Severe breeding range decline over 25 years / longer term.
	WDp ¹ / WDp ²	Severe non-breeding population decline over 25 years / longer term.
	WDr ¹	Severe non-breeding range decline over 25 years.
	IUCN	Globally threatened – CR (critically endangered) EN (endangered) VU (vulnerable).
Amber list	BDMp ¹ / BDMp ²	Moderate breeding population decline over 25 years / longer term.
	WDMp ¹ / WDMp ²	Moderate non-breeding population decline over 25 years / longer term.
	BDMr ¹ / BDMr ²	Moderate breeding range decline over 25 years / longer term.
	WDMr ¹	Moderate non-breeding range decline over 25 years.
	ERLOB	Threatened in Europe – CR (critically endangered) EN (endangered) VU (vulnerable).
	HDrec	Historical decline in breeding population in recovery.
	BR / WR	Breeding rarity / non-breeding rarity.
	BL / WL	Breeding localisation / non-breeding localisation.
	BI / WI	Breeding bird of international importance / non-breeding bird of international importance.
Green	N/A	Green list species are not of conservation concern and include all other commonly occurring birds in the UK.
Other	N/A	Non-native species (e.g. Canada goose (<i>Branta canadensis</i>), feral pigeon (<i>Columba livia domestica</i>)) are not afforded Red, Amber or Green list status.

- 1.2.16 Although it does not offer any legal protection, BoCC 5 (Stanbury, et al., 2021) provides guidance on the conservation status of UK bird species. Thus, it can be used to assess the ecological importance of bird populations and the habitats that they rely on, particularly at a local level.
- 1.2.17 These lists confer no legal status. However, they are useful when assessing the significance of predicted impacts and determining the level of mitigation that may be required when birds are to be affected by development.

Kent Local Wildlife Site selection criteria

1.2.18

In Kent an individual Local Wildlife Site (LWS) can be selected for birds if it meets the criteria within Kent LWS Selection Criteria (Kent Wildlife Trust, 2022). These guidelines are used as an informative when assessing of the geographic level of importance of a survey site for birds, especially when determining whether a site falls within Local or County importance parameters (noting that meeting LWS criteria does not automatically result in a site being assigned County level importance). These guidelines state that the criteria for selection of LWS applies to birds as follows:

'Birds

133) A set of criteria has been established by Kent Ornithological Society, as the relevant expert organisation, for the selection of Wildlife Sites on the basis of their bird fauna (which is here taken to mean the naturally occurring populations of wild birds on a site). The criteria are based on established criteria for the selection of Sites of Special Scientific Interest, and on the Kent Red Data Book.

134) The criteria are intended to be applied to areas of habitat which are more-or-less discrete and homogenous. For example, a large block of woodland should not be treated as part of the same site as a large block of farmland. However, an intimately mixed area of small fields, hedges and small woods may be treated as a unit, as may the mix of scrub, swamp, marsh and open water vegetation associated with flood plains or around abandoned quarries.

135) The criteria have been designed to recognise

a) The rarity of certain breeding and wintering bird species;

b) Birds which may be considered vulnerable because their populations are in decline;

c) Birds which are vulnerable because of their colonial nesting habitats;

d) Birds which may be considered vulnerable because their non-breeding populations are concentrated in a small number of sites; and

e) Sites of importance for the presence of a diversity of species.

A site should be selected as a Local Wildlife Site if it can be considered as a single, identifiable unit (as explained above) in terms of its bird fauna and where:

• It is occupied regularly by at least 2.5% of the county population of any one or more bird species, based on the most recent and authoritative data;

OR

• It is occupied regularly as a breeding site by species with a Kent population of 50 or fewer territories;

OR

• It holds ten or more Kent Red Data Book 2 (KRDB2) species in the breeding season;

OR

• It holds three or more Kent Red Data Book 3 (KRDB3) species at the appropriate time of year (normally this should not include a combination of breeding and wintering species);

OR

• *It holds one of the five largest colonies of colonial seabirds (with the exception of herring gull and black-headed gull), grey heron, little egret or sand martin;*

OR

• *It is occupied regularly by 5% or more of the county population of any one or more species in non-breeding seasons, based on the most recent and authoritative data;*

OR

• *It has been recorded as being regularly used in recent years by at least 50 breeding bird species;*

OR

• *It has been recorded as being regularly used in recent years by at least 60 wintering bird species;*

OR

• *It has been recorded as being regularly used in recent years by at least 100 passage bird species.'*

1.3 Methodology

Desk Study

- 1.3.1 Results of dedicated biological records data or information from local stakeholders were reviewed as part of this exercise and summarised in the Preliminary Environmental Information Report and incorporated into the ES.
- 1.3.2 A www.MAGIC.gov.uk (Department for Environment, Food and Rural Affairs, 2024) search was also conducted for any statutory areas designated for birds within 10 km of the site. This was used to review designated site citations for any bird species of particular relevance to the site (i.e. where functional linkage to designated sites could occur).
- 1.3.3 Recent Kent bird reports from the Kent Ornithological Society (KOS) were used to inform local status and distribution data of breeding birds (Kent Ornithological Society, 2023). A survey report by the Sandwich Bird Observatory Trust (Sandwich Bay Bird Observatory Trust, 2020) of the Thanet Coast and Sandwich Bay SPA was also reviewed.
- 1.3.4 Other documents were reviewed to inform evaluation and assessment as follows:
- the Kent Breeding Bird Atlas 2008-13 (Clements, 2015);
 - British Trust for Ornithology (BTO) Kent breeding bird survey trends for skylark (BTO.org, 2020);
 - Statutory and non-statutory designated site citations within 1 km of the Kent Onshore Scheme Order Limits; and
 - Local Wildlife Site (LWS) criteria (Kent Wildlife Trust, 2022).

Field Survey

- 1.3.5 The survey focused on recording bird species listed against the European Birds Directive (Annex 1)/Conservation of Habitats and Species Regulations 2017 (as amended); Wildlife and Countryside Act 1981 (as amended) Schedule 1 species; Species of Principal Importance (SPI) of the Natural Environment and Rural Communities (NERC) Act 2006, and; red and amber status species (Stanbury et al., 2021). Particular attention was taken to recording declining farmland bird species.
- 1.3.6 The survey methodology used, was based on the survey methodologies detailed in Bird Monitoring Methods: A manual of techniques for key UK species (Gilbert, Gibbons, & Evans, 1998). During the survey all bird species either seen or heard were recorded including any signs of breeding activity. Birds were recorded using the standardised British Trust for Ornithology (BTO) two-letter species codes and standardised behaviour codes (Bibby, Burgess, Hill, & Mustoe, 2000).
- 1.3.7 The area was surveyed on foot so that the surveyors passed within 50 m of most of the area within the Kent Onshore Scheme Order Limits. Note that due to the extent of the Survey Area and the presence of large expansive arable fields, such habitats were scanned from beyond 50 m from some transect sections.
- 1.3.8 The start of the bird counts were within 30 minutes after sunrise, in accordance with guidance from the Bird Survey & Assessment Steering Group (Bird Survey & Assessment Steering Group, 2023). Six survey visits including a dusk survey to record evening active species were carried out in accordance with this guidance.
- 1.3.9 Survey visits were conducted to coincide with the rising and high tide periods for the Thanet Coast and Sandwich Bay Ramsar/SPA, to record any use of inland areas by birds from the nearby designated sites.
- 1.3.10 Survey visits conducted during the optimal breeding period (late March to early June) allow for the recording of clusters of bird registrations that indicate the presence of a territory. A minimum of two registrations recorded 10 days apart is required to determine a cluster. The extent of a territory is estimated based on the number of registrations and the specific behaviours recorded (Bibby, Burgess, Hill, & Mustoe, 2000). The number of territories can be estimated upon completion of all six survey visits.
- 1.3.11 For late-arriving (to the UK) trans-Saharan migrants, e.g., spotted flycatcher (*Muscicapa striata*), for which fewer potential contacts are possible, only one registration is required to form a territory cluster. A number of species are not territorial and are dealt with appropriately, e.g., Linnet (*Linaria cannabina*), where survey data represents aggregations or loose colonies.
- 1.3.12 Species maps, indicating the estimate of territories present within the Kent Onshore Scheme Order Limits for the most significant species of conservation concern recorded, are provided in:
- **Application Document 6.4.3.2.D.2 Kent Breeding Bird Results March 2023;**
 - **Application Document 6.4.3.2.D.3 Kent Breeding Bird Results April 2023;**
 - **Application Document 6.4.3.2.D.4 Kent Breeding Bird Results May 2023;** and
 - **Application Document 6.4.3.2.D.5 Kent Breeding Bird Results June 2023.**
- 1.3.13 These maps are used to determine key habitats and assess potential impacts of the Kent Onshore Scheme Order Limits upon the bird species present on within the Kent Onshore Scheme Order Limits.

- 1.3.14 Breeding evidence was assigned to four categories: confirmed, probable, possible and non-breeding, using the standard BTO criteria (Balmer D., 2013), which are presented in the table below (Table 1.2). In some circumstances, the field evidence was unclear and professional judgement has been used, in combination with the field evidence, to assign breeding status.

Table 1.2 Evidence used to assign breeding status.

Non-Breeder	Possible Breeder	Probable Breeder	Confirmed Breeder
Migrant	Observed in suitable habitat	Pair in suitable habitat	Distraction behaviour
Summering	Singing male	Permanent territory	Used nest or eggshells found from this season
Fly-over		Courtship and display	Recently fledged young or downy young
		Visiting probable nest site	Adults entering or leaving nest site, indicating occupied nest
		Agitated behaviour	Adults carrying faecal sac or food for young
		Brood patch on incubating bird	Nest containing eggs
		Nest building or excavating	Nest with young seen or heard

- 1.3.15 While WeBS surveys were not conducted during the breeding season (as the core survey months for these comprise November to February, inclusive, when largest waterbird aggregations occur), Pegwell Bay was subject to CBC survey to record any breeding activity in this location and record waterbirds present during the breeding period.

Flight activity (vantage point) surveys

- 1.3.16 Vantage point surveys recorded flight lines of species potentially sensitive to collision with infrastructure to inform an assessment of collision risk with the OHL.
- 1.3.17 The survey methodology followed that outlined within (Scottish Natural Heritage, 2017) and focused solely on the western OHL extent of the Kent Onshore Scheme Order Limits shown in **Application Document 6.4.3.2.D.1 Kent Breeding Bird Transect Routes 2023** The surveys commenced in February 2023 and are ongoing at the time of writing.

- 1.3.18 While these surveys do not form part of the scope of this report, any key observations relevant to the 2023 breeding season (especially when not captured by the other survey types) are included as supplementary data and incorporated into the assessment.

Survey personnel, dates and weather

- 1.3.19 The `breeding bird survey visits were led by three surveyors:
- 1.3.20 Surveyor one has over 30 years of ornithological experience, which includes breeding and winter bird surveys. Surveyor two has over 15 years of ornithological survey and bird identification experience. Surveyor three has over 10 years of ornithological experience, with over four years' experience of ornithological surveys relating to development projects.
- 1.3.21 Bird survey visits were conducted in the months of March to July (inclusive) 2023. A total of six visits were undertaken.
- 1.3.22 Survey visits were not conducted during periods of prolonged heavy rain, strong wind (above Beaufort 4) or fog (which may limit or alter bird behaviour or where or surveying may be impractical) wherever possible. Survey visits were undertaken in suitable weather conditions (see Table 1.3, below). Bird surveys are conducted at varying times of day/night, in different weather conditions and take account of the tidal state and crop type (if relevant).

Table 1.3 Weather conditions for each survey visit.

Date	Visit No.	High Tide time	Tide height (m)	Sunrise / sunset	Start time	End time	Weather conditions :
31/03/2023	1	8:18am	3.72	6:32am	7:00am	11:00pm	Start 8°C, 8/8 cloud, wind BF 6, light rain End 11°C, 3/8 cloud, wind BF 5, dry
19/04/2023	2	11:51am	5.18	5:51am	5:55am	9:55am	Start 8°C, 1/8 cloud, wind BF 4, dry End 11°C, 8/8 cloud, wind BF 3-4, dry
09/05/2023	3	14:48pm	4.98	5:13am	5:16am	9:30am	Start 12°C, 8/8 cloud,

Date	Visit No.	High Tide time	Tide height (m)	Sunrise / sunset	Start time	End time	Weather conditions :
							wind BF 2, dry End 13°C, 8/8 cloud, wind BF 2, dry
31/05/2023	4	9:37am	4.18	4:44am	4:30am	8:30am	Start 12°C, 6/8 cloud, BF 4, dry End 13°C, 3/8 cloud, wind BF 3-4, dry
13/06/2023	5	20:48pm	4.44	21:11pm	18:45pm	21:55pm	Start 17°C, 0/8 cloud, BF 4, dry End 15°C, 0/8 cloud, wind BF 4, dry
04/07/2023	6	12:50pm	5.18	4:44am	4:30am	8:25am	Start 12°C, 7/8 cloud, wind BF 2, dry End 15°C, 0/8 cloud, wind BF 3, dry

Zone of influence/survey area

- 1.3.23 The potential impact(s) of a development are not always limited to the boundaries of the site concerned. A development may also have the potential to result in impacts upon ecologically important sites, habitats or species that are located beyond the site boundaries.
- 1.3.24 The area over which a development may impact ecologically important features is known as the Zone of Influence (ZOI).
- 1.3.25 The ZOI is determined by the source / type of impact, the potential pathway(s) for that impact and the location and sensitivity of the ecologically important feature(s) beyond the boundary.
- 1.3.26 The potential ZOI of a project in relation to breeding birds is used to determine the extents of the breeding bird survey area.

- 1.3.27 Standardised survey buffers for assessing the impacts of development on bird populations do not exist. However, the selected survey area provides information on the breeding birds within the area immediately surrounding the Kent Onshore Scheme Order Limits and includes areas outside of the Kent Onshore Scheme Order Limits contiguous with the draft Order Limits, where birds may potentially be adversely affected.
- 1.3.28 This ZOI was used to establish the required extents of the wintering bird survey, which included all suitable habitat within the Kent Onshore Scheme Order Limits, and relevant adjacent habitats (boundary scrub, treelines and hedgerows), also noting any obvious territorial behaviour that encompassed both the Kent Onshore Scheme Order Limits and adjacent fields.
- 1.3.29 The walked transects through the Survey Area are shown in **Application Document 6.4.3.2.D.1 Kent Breeding Bird Transect Routes 2023** and broadly comprise two routes (each surveyed by a pair of surveyors) which was further sub-divided into according to available access. These routes were as follows:
- Route 1 (covering field parcels 238 and 244). Broadly the eastern landfall route and Proposed Minster Converter Station and Substation area; and
 - Route 2 (covering field parcels 232, 328, 336, 346, 379). Broadly the Overhead route corridor, eastern landfall route and Pegwell Bay.
- 1.3.30 Based up the layout shown in **Application Document 6.4.3.2.D.1 Kent Breeding Bird Transect Routes 2023**, the Survey Area included a standardised buffer of broadly 250 m from all permanent infrastructure and a 500 m buffer from the Pegwell Bay landfall (larger buffer applied due to lack of visual barriers on the estuary and the reference to disturbance distances within Cutts et al. (Cutts, Hemingway, & Spencer, 2013). The 250 m inland buffer included all temporary works and a minimum of 50 m beyond. The underground trenchless installation section through Stonelees Golf Centre was scanned at distance but did not form part of the transect route due to the expected lack of above ground impacts in this area.

Assessment and Evaluation

Assessment criteria

- 1.3.31 The assessment of the ornithological importance of the survey area during the breeding season was made by evaluating any species afforded special statutory protection or those included on one, or more, of the lists of species of conservation interest, as detailed in within Section 2.1 Legislation, policy and guidance. These lists of 'notable' species comprise:
- Species listed on Annex 1 of the EU Birds Directive or a qualifying feature of potentially functionally linked internationally designated sites;
 - Species listed on Schedule 1 of the WCA, 1981 (as amended);
 - Priority bird species in the UK, as listed on Section 41 of the NERC Act;
 - Species listed as priority species or additional species of interest within Kent (as listed within the Kent Biodiversity Strategy); and
 - Species included in the BoCC Red and Amber Lists (Stanbury, et al., 2021).

- 1.3.32 Additionally, assemblages have been assessed against the criteria for LWS designation within the Kent LWS Selection Criteria (Kent Wildlife Trust, 2022).
- 1.3.33 The population sizes present within the survey area were also compared against the national and county breeding population estimates for certain species. 'National' estimates for breeding birds are published in a paper: 'Population estimates of birds in Great Britain and the United Kingdom' (Woodward, et al., 2020) and waterbird population estimates (Austin, et al., 2023) from national WeBS reports and winter waterbird population estimates (Frost, et al., 2019). The BTO Bird Atlas 2007-2011 (Balmer, et al., 2013) was also reviewed for species information on a national level and to inform the above assessment criteria.
- 1.3.34 Information on the population status of breeding bird species at a county level was sourced from the latest available issues of the Kent Bird Reports (Kent Ornithological Society, 2020; Kent Ornithological Society, 2023).
- 1.3.35 Information on populations of nationally rare species was sourced from the most recently published paper by the Rare Breeding Birds Panel (RBBP) (Holling & Rare Breeding Bird Panel, 2019).

Importance of bird populations (valuation)

- 1.3.36 To inform assessment of the importance of the bird populations, their biodiversity importance has been defined using geographical levels, based on criteria and guidance presented in the Chartered Institute of Ecology and Environmental Management (CIEEM) 'Guidelines for Ecological Impact Assessment in the United Kingdom and Ireland' (CIEEM, 2018) as well as professional judgement.
- 1.3.37 These assessment criteria (set out in the Table 1.4 below) have been used in conjunction with an assessment of species status, abundance and diversity to assess the biodiversity importance of the bird populations recorded during the surveys.

Table 1.4 Biodiversity Importance of Ornithological Features

Biodiversity importance	Description and examples of criteria
International or European	Resident or regularly occurring populations of species which may be considered of value at an international or European level (1) where: - the loss of these populations would adversely affect the conservation status or distribution of the species at this geographic scale; - the population forms a critical part (2) of a wider population at this scale; or - the species is at a critical phase (3) of its life cycle at this scale.
UK or National	Areas of habitats with priority species identified in the UK Post-2010 Biodiversity Framework i.e., UK Biodiversity Action Plan (BAP), including those published in accordance with Section 41 of the

Biodiversity importance	Description and examples of criteria
	NERC Act (2006) and those considered to be of principal importance for the conservation of biodiversity. Resident or regularly occurring populations of species which may be considered of importance at a UK or a national level (4) where: - the loss of these populations would adversely affect the conservation status or distribution of the species at this geographic scale; - the population forms a critical part of a wider population at this scale; or - the species is at a critical phase of its life cycle at this scale.
Regional	Populations of species of importance at a regional level (i.e. South-east England). Resident or regularly occurring populations of species which may be considered of importance at a regional level⁵ where: - the loss of these populations would adversely affect the conservation status or distribution of the species at this geographic scale; - the population forms a critical part of a wider population at this scale; or - the species is at a critical phase of its life cycle at this scale.
County	Populations of species of importance at a County (i.e. Kent) level or District (e.g. Thanet). Resident or regularly occurring populations of species which may be considered of importance at a County (or District) (6) level where: - the loss of these populations would adversely affect the conservation status or distribution of the species at this geographic scale; - the population forms a critical part of a wider population at this scale; or, - the species is at a critical phase of its life cycle at this scale
Local	Species populations of importance in a local (i.e. within ~ 2 km of the site) context. Populations and, or communities of species considered to appreciably enrich the habitat resource within the local context (such as veteran trees), including features of importance for migration, dispersal or genetic exchange.

Biodiversity importance	Description and examples of criteria
Negligible (Site)	Habitats and associated species that is of importance in the context of the site only. Populations of common and widespread species.
1 Such species include those listed within the Directive 2009/147/EC on the Conservation of Wild Birds (i.e. EC Birds Directive) (codified version of Council Directive 79/409/EEC as amended) or animal or plant species listed within Council Directive 92/43/EEC on the Conservation of Natural Habitats and of Wild Flora and Fauna (i.e. Habitats Directive). 2 Such populations include sub-populations that are essential to maintenance of metapopulation dynamics, e.g. critical emigration and, or immigration links between otherwise discrete populations. 3 Seasonal activity or behaviour upon which survival or reproduction depends. 4 Species which may be considered at the UK or national level mean: birds, other animals and plants which receive legal protection on the basis of their conservation interest (those listed within the Wildlife and Countryside Act 1981 (as amended) Schedule 1, 5 and 8); species listed for their principal importance for biodiversity (in accordance with the Natural Environment and Communities Act 2006 Section 41 England), priority species listed within the UK Post 2010 Biodiversity Framework (i.e. UK Biodiversity Action Plan (UKBAP)), or species listed within the Red Data Book. 5 Such species include those listed in the appropriate Natural Character Area description. 6 Such species include those at county level (i.e. Kent) including unitary authority area i.e. District level (i.e. South-east England); as listed on the LBAPs; and listed as a county designated site. *As well as assigning importance there is also a need to identify all legally protected species that could be affected by the proposed scheme in order that measures can be taken to ensure that adherence to the relevant legislation is observed. This may include the adoption of mitigation and appropriate licensing which are acceptable to Natural England.	
1.3.38	Only ecological features within the site and/or ZOI that are assessed as being of importance at a local level or above have been taken forward for future assessment within the Ecological Impact Assessment (EclA). Those valued at below this level of importance, for example at the ZOI level, have been scoped out of the assessment process.
1.3.39	A summary of the potential impacts upon important bird species has not been included as this is discussed in detail within the Environmental Statement (ES).
Limitations	
1.3.40	An ecological survey represents a 'snapshot' in time of the ecological condition of a site. The extent and quality of habitats present, and their suitability for protected, priority or otherwise notable species, can change substantially throughout both the course of a year and between years. However, any seasonal limitations to the appraisal are clearly identified in this report, and the 'Lifespan of this appraisal' section of this report at least partially addresses the potential for changes between years. Therefore, this standard limitation is addressed as far as is reasonably possible.

- 1.3.41 The aim of a desk study is to help characterise the baseline context of the site and provide valuable background information that would not be captured by a single site survey alone. Information obtained during a desk study was dependent upon people and organisations having made and submitted records for the area of interest. As such, a lack of records for a particular habitat or species does not necessarily mean that the habitats or species do not occur in the study area. Likewise, the presence of records for particular habitats and species does not automatically mean that these still occur within the area of interest or are relevant in the context of the Kent Onshore Scheme Order Limits.
- 1.3.42 Recorded bird numbers on a single survey visit are the sum of bird registrations including estimations of flocks. As such, counts do not always represent exact 'to the nearest bird' figures due to the inherent issues with estimating large bird numbers, but instead provide a representation of the magnitude of bird numbers present, which can be used to review overall trends through peaks and mean values.
- 1.3.43 Any potential effects of 'double counting' within the sum of bird registrations have been addressed as far as reasonably possible both by surveyor professional judgement in the field and when analysing count data.
- 1.3.44 No direct access was available to private land south the River Stour Canal. This land was therefore scanned from the PRow adjacent to the canal. Vantage point surveys ongoing at the time of the breeding bird surveys provided additional extensive coverage of this area and have been referenced in this report where appropriate. As a result, is unlikely that major breeding bird aggregations in this area have been missed, though passerines and cryptic species are assessed as underrepresented within this portion of the Survey Area.
- 1.3.45 Inland surveys during April 2023 were limited by lack of access to land parcels immediately north of the River Stour Canal (Parcel 232) and so it was only possible to conduct surveys in these areas from the available PRowS during that month, partially limiting the survey coverage during that month.
- 1.3.46 On a minority of occasions, traffic noise from an adjacent major road (the A526) made it difficult to hear calling birds in habitats directly adjacent to this road. However, any resultant impacts on bird detectability were relatively minor and are therefore not regarded as a significant limitation to the survey.
- 1.3.47 To control for time-of-day effects, the survey route was reversed or altered on each visit.
- 1.3.48 Territory mapping for wood pigeon and wren has not been carried out due to these two notable and nationally widespread species being recorded in large numbers and having some of the largest population estimates in Great Britain (Woodward, et al., 2020). These species have instead been evaluated through peak counts, breeding distribution and breeding evidence only.
- 1.3.49 The limitations on site access (as set out above) and corresponding limitations to survey coverage have been taken into account within the assessment of the survey findings. While it is likely to have less of an effect on detection of large bird aggregations and larger species, it is likely that cryptic and small passerine species were under-recorded and this is account for within the evaluation. In addition, a second season of breeding bird surveys is to be undertaken during 2024.
- 1.3.50 Territory cluster polygons should be treated as indicative and are provided to represent number of likely territories rather than exact territory size and shape. Territory cluster polygons are a product of GIS recording, surveyor judgement in reviewing species

activity and location, application of polygon 'rounding' in GIS software and professional judgement based on review of survey data for multiple dates.

Lifespan of the Appraisal

- 1.3.51 It should be noted that ecosystems are dynamic and constantly changing, and therefore species may move or new species may be recorded in subsequent years. For this reason and in accordance with current guidance, the field survey data detailed in this report are valid for two years (CIEEM, 2019). After this date, update surveys may be required and advice should be sought from an appropriately qualified ecologist to determine survey scope and methods.

1.4 Results

Desk Study

Designated sites context

- 1.4.1 A number of international designations of breeding and passage ornithological interest are present within 10 km of the Site, as follows:
- Thanet Coast and Sandwich Bay SPA and Thanet Coast and Sandwich Bay Ramsar (both within the Site).
 - Stodmarsh SPA and Stodmarsh Ramsar (approximately 8 km west of the Site).
- 1.4.2 The relevant breeding and passage ornithological qualifying features and interest for these internationally designated sites are summarised below.

Thanet Coast and Sandwich Bay SPA

- 1.4.3 The SPA qualifies under Article 4.1 of the Directive (2009/147/EC) as it is used regularly by the following species listed in Annex I during the breeding season:
- 1.4.4 *'During the breeding season the area regularly supports: little tern (Sterna albifrons) (Eastern Atlantic - breeding): 0.3% of the GB breeding population 5 year mean, 1992-1996.'*
- 1.4.5 Note also the SPA supports the following in winter (relevant as may be recorded during the early months of the breeding season):
- 1.4.6 *'The area regularly supports: golden plover Pluvialis apricaria 0.2% of the GB population (5 year peak mean 1991/92-1995/96.....411 individuals).'*
- 1.4.7 The SPA qualifies under Article 4.2 of the Directive (2009/147/EC) as it is used regularly by the following species listed in Annex II:
- 1.4.8 *'Over winter the area regularly supports: ruddy turnstone (Arenaria interpres) 1.4% of the population (5 year peak mean 1991/92-1995/96.....940 individuals).'*

Thanet Coast and Sandwich Bay Ramsar

- 1.4.9 Note that the Thanet Coast and Sandwich Bay Ramsar is not designated for breeding birds but the qualifying and noteworthy species are provided below.

- 1.4.10 The Ramsar qualifies under Ramsar criterion 6 – (species/populations occurring at levels of international importance) because it regularly supports:
- 1.4.11 *‘Species with peak counts in winter: Ruddy turnstone, (Arenaria interpres interpres), 1007 individuals, representing an average of 1% of the population (5 year peak mean 1998/9-2002/3)’.*
- 1.4.12 A number of other species are classed as ‘noteworthy fauna’ but are not qualifying species. Relevant bird species occurring at levels of national importance:
- 1.4.13 *‘Species with peak counts in spring/autumn:*
- 1.4.14 *Ringed plover, (Charadrius hiaticula), Europe/Northwest Africa 649 individuals, representing an average of 2% of the GB population (5 year peak mean 1998/9-2002/3)*
- 1.4.15 *Common greenshank, (Tringa nebularia), 35 individuals, representing an average of 5.8% of the GB population (5 year peak mean 1998/9-2002/3)*
- 1.4.16 *Species with peak counts in winter:*
- 1.4.17 *Red-throated diver, (Gavia stellata), NW Europe 57 individuals, representing an average of 1.1% of the GB population (5 year peak mean 1998/9-2002/3).*
- 1.4.18 *Great crested grebe, (Podiceps cristatus cristatus), NW Europe. 218 individuals, representing an average of 1.3% of the GB population (5 year peak mean 1998/9-2002/3).*
- 1.4.19 *Sanderling (Calidris alba), Eastern Atlantic. 598 individuals, representing an average of 2.9% of the GB population.’*

Stodmarsh SPA

- 1.4.20 The SPA qualifies under Article 4.2 of the Directive (2009/147/EC) as it is used regularly by the following species listed in Annex I during the breeding season:
- 1.4.21 *‘During the breeding season the area regularly supports: Gadwall (Mareca strepera) (North-western Europe), 0.8% of the population in Great Britain, 5 year mean, 1988-1992.’*
- 1.4.22 An internationally important assemblage of breeding and wintering waterbirds with shoveler (*Spatula clypeata*), mallard (*Anas platyrhynchos*), wigeon (*Mareca penelope*), pochard (*Aythya ferina*), tufted duck (*Aythya fuligula*), bittern (*Botaurus stellaris*), hen harrier (*Circus cyaneus*), snipe (*Gallinago gallinago*), water rail (*Rallus aquaticus*) and lapwing (*Vanellus vanellus*) referenced within the citation assemblage (though all species apart from gadwall (*Mareca strepera*) listed for wintering only).

Stodmarsh Ramsar

- 1.4.23 The Ramsar qualifies under Ramsar criterion 2 – *‘Wetland should be considered internationally important if it supports vulnerable, endangered, or critically endangered species or threatened ecological communities, because it regularly supports the following breeding/passage qualifying species/populations’* due to the following:
- 1.4.24 *‘Species regularly supported during the breeding season: Gadwall, (Mareca strepera strepera), NW Europe, 6 pairs, representing an average of 1% of the GB population (1988-92).*

- 1.4.25 *'Species with peak counts in spring/autumn: Gadwall, (Mareca strepera), 267 individuals, representing an average of 1.5% of the GB population (5 year peak mean 1998/9-2002/3).'*

Other statutory and non-designated sites

- 1.4.26 A review of other statutory and non-designated sites within 2km and which are designated at least partly for ornithological interest found that Sandwich Bay and Hacklinge Marshes SSSI is located within the Survey Area (overlapping with the Thanet Coast and Sandwich Bay SPA and Ramsar and also lying south of the proposed Converter Station and proposed Substation).
- 1.4.27 The Sandwich Bay and Hacklinge Marshes SSSI citation describes the SSSI ornithological interest as follows:
- *'The ornithological interest of Sandwich Bay and Hacklinge Marshes is centred on the large numbers of waders and wildfowl which use the area in winter and during the Spring and Autumn migrations. Dunlin (Calidris alpina) is usually the most common wader present, found particularly on the mudflats where the rich invertebrate fauna also attracts a wide range of other common species such as oystercatcher (Haematopus ostralegus), curlew (Numenius arquata), and redshank (Tringa totanus). Grey plover (Pluvialis squatarola) and sanderling (Calidris alba) both overwinter in nationally important numbers, whilst ringed plover (Charadrius hiaticula) also occurs in nationally important numbers during migration. Wildfowl that occur on the site include mallard (Anas platyrhynchos), shelduck (Tadorna tadorna) and occasionally brent goose (Branta bernicla). Many of the birds use more than one habitat, some for example feed on the mudflats at low tide and then move up to roost on the saltmarsh or grazing marsh. Breeding birds include ringed plover, oystercatcher and little tern (Sterna albifrons), a species specially protected by law and listed on Schedule 1 of the Wildlife and Countryside Act 1981. Inland areas are also of interest supporting two nationally rare species of breeding birds.'*
- 1.4.28 The area of SSSI south of the proposed Converter Station is of importance for its grassland interest but also supports a population of breeding birds. A heronry is known to exist south of the draft Order Limits. A review of other statutory and non-designated sites within 2 km found that other designated sites were designated primarily for their habitats with no detailed or specific ornithological reasons for designation provided.
- 1.4.29 As a result, where species assemblages recorded during survey may be relevant to connected designated site habitats, these are reviewed but focus is made upon the internationally designated sites listed above.

Field Survey

- 1.4.30 The results for the surveys are described below, both in the context of the combined results for all surveys and then in the context of the individual survey types.
- 1.4.31 A total of 95 bird species were recorded within the Survey Area.
- 1.4.32 Of these, four species were seen only flying over of the Survey Area and making no direct use of it as follows:
- Greylag goose (*Anser anser*);
 - Canada goose (*Branta canadensis*);

- Peregrine falcon (*Falco peregrinus*); and
- Mediterranean gull (*Ichthyaetus melanocephalus*).

- 1.4.33 Therefore, 91 species were recorded directly using the Survey Area.
- 1.4.34 Territory clusters (based on registrations across multiple dates) of at least 29 species were confirmed with a further 32 species were considered to be probable or possible breeders within the survey area, resulting in a breeding bird assemblage of 61 species. Records relating to the remaining species were of non-breeding species.
- 1.4.35 Detailed survey results are provided in **Appendix 3.2.D.1 Detailed Survey Data** within this document.
- 1.4.36 The overall peak reflects the highest count on any one individual survey visit but does also include incidental observations from other survey types (i.e., vantage point).
- 1.4.37 Species are shown in alphabetic order (rather than taxonomic) to help achieve consistency when manipulating results within a database and to assist 'lay' readers.
- 1.4.38 Note that the intertidal results are not directly comparable to previously conducted winter WeBS surveys as a smaller survey was used, focused on the area occupied by a more defined development layout and on breeding evidence, and a full tidal count was not undertaken. However, the results do give an insight into the bird activity within the intertidal Survey Area and the differences in numbers and distribution between the winter and breeding seasons.

Peak count and mean count summary

- 1.4.39 The overall peak and mean count for all recorded notable species are provided below, to show the most commonly recorded species and to show peak and means for comparison within the Evaluation section, to help assess the relative importance of the Survey Area for the various recorded notable bird species.

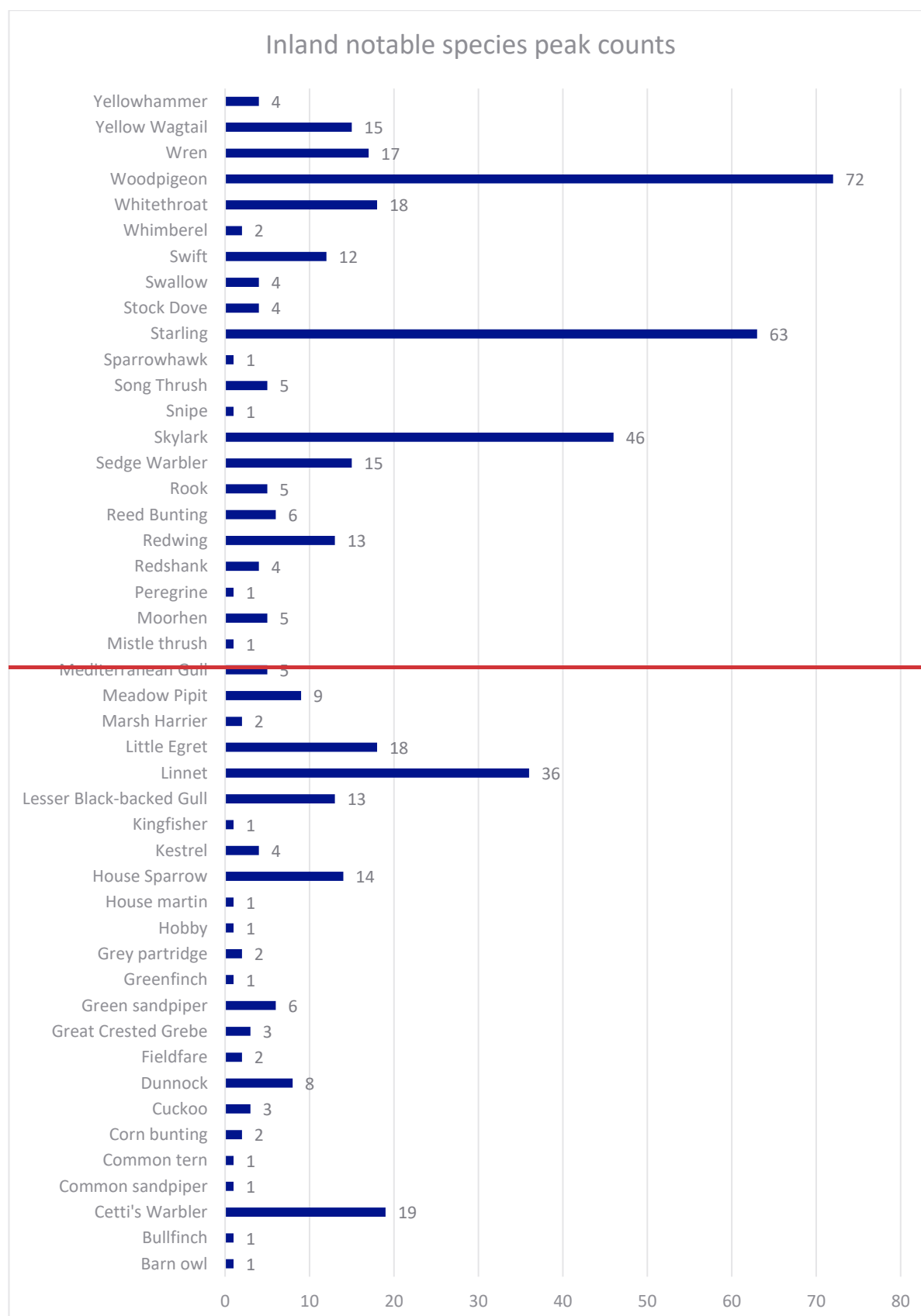
Peak counts for notable species

- 1.4.40 The peak counts for notable species are shown as two separate graphs to aid interpretation.
- 1.4.401.4.41 Plate 1.1 shows the peak counts of species that were primarily recorded inland, as these numbers are most relevant to breeding populations and inland Survey Area use.
- 1.4.411.4.42 Plate 1.2 shows the peak counts of species that were primarily recorded within the intertidal areas. These large aggregations include aggregations of waterbirds are either non-breeding or likely to breed outside of the tidal area.
- 1.4.421.4.43 As intertidal aggregations are often larger than the inland numbers, these figures have been split out to allow inland counts to be seen more clearly.
- 1.4.431.4.44 Some species occur on both graphs (primarily gulls) if they regularly occurred in both locations, and an explanatory comment is provided for these species.
- 1.4.441.4.45 The highest peaks recorded are attributable to woodpigeon (*Columba palumbus*) and starling (*Sturnus vulgaris*), representing late season flocks of these species.
- 1.4.451.4.46 Little egret (*Egretta garzetta*), mallard, skylark (*Alauda arvensis*), sedge warbler (*Acrocephalus schoenobaenus*) and yellow wagtail (*Motacilla flava*) also have prominent peak counts, and the counts of cuckoo (*Cuculus canorus*), green sandpiper

(*Tringa ochropus*) and corn bunting (*Emberiza calandra*) are also notable for these rare species. The counts of Mediterranean gull and golden plover (*Pluvialis apricaria*) are attributable to flyovers during vantage point surveys and these species were not recorded directly using the survey area.

~~1.4.46~~1.4.47 Tidal counts are largely attributable to oystercatcher (*Haematopus ostralegus*) and gull species with no other counts approaching the numbers recorded for these species. The count of avocet is notable, but all other waterbird species are recorded in numbers well below wintering peaks and are generally attributable to small groups. The count of spotted redshank (*Tringa erythropus*) is notable for this rarer species.

~~1.4.47~~1.4.48 Gulls, little egret and mallard were recorded within both the intertidal area and along the River Stour Canal, however the large counts of these species are generally attributable to the intertidal area.



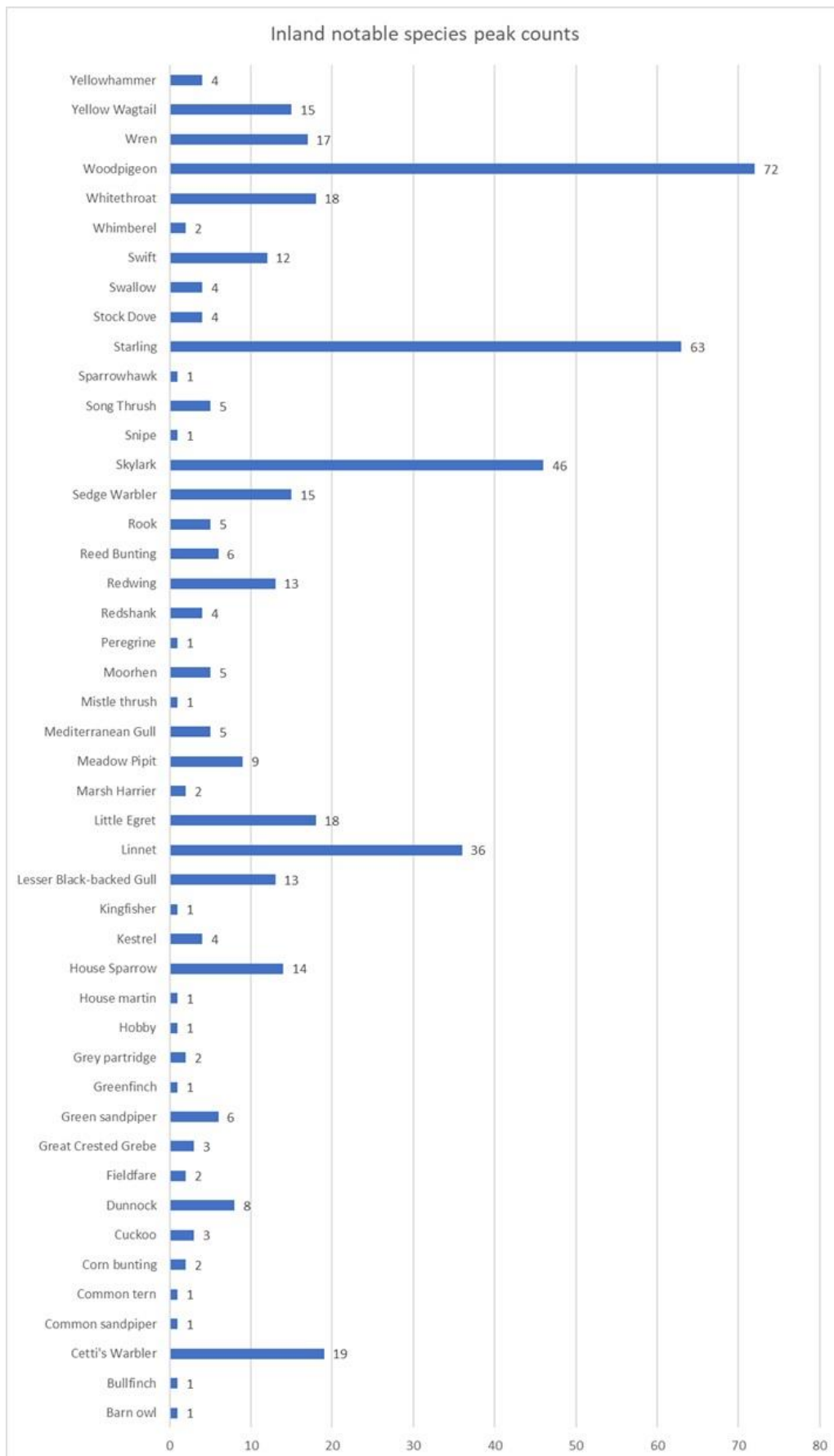
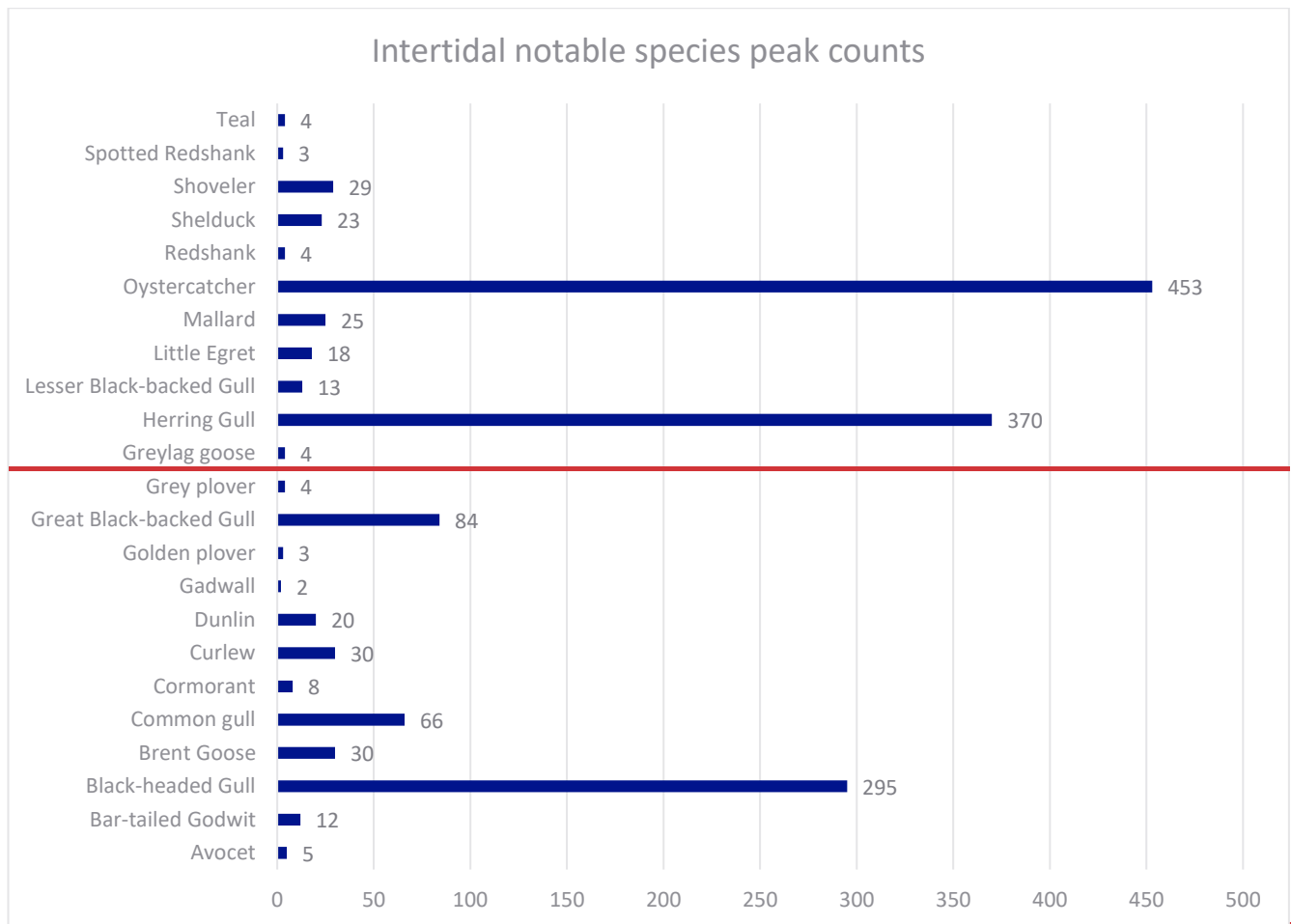


Plate 1.1 Summary of Notable Species Peak Count (inland species)



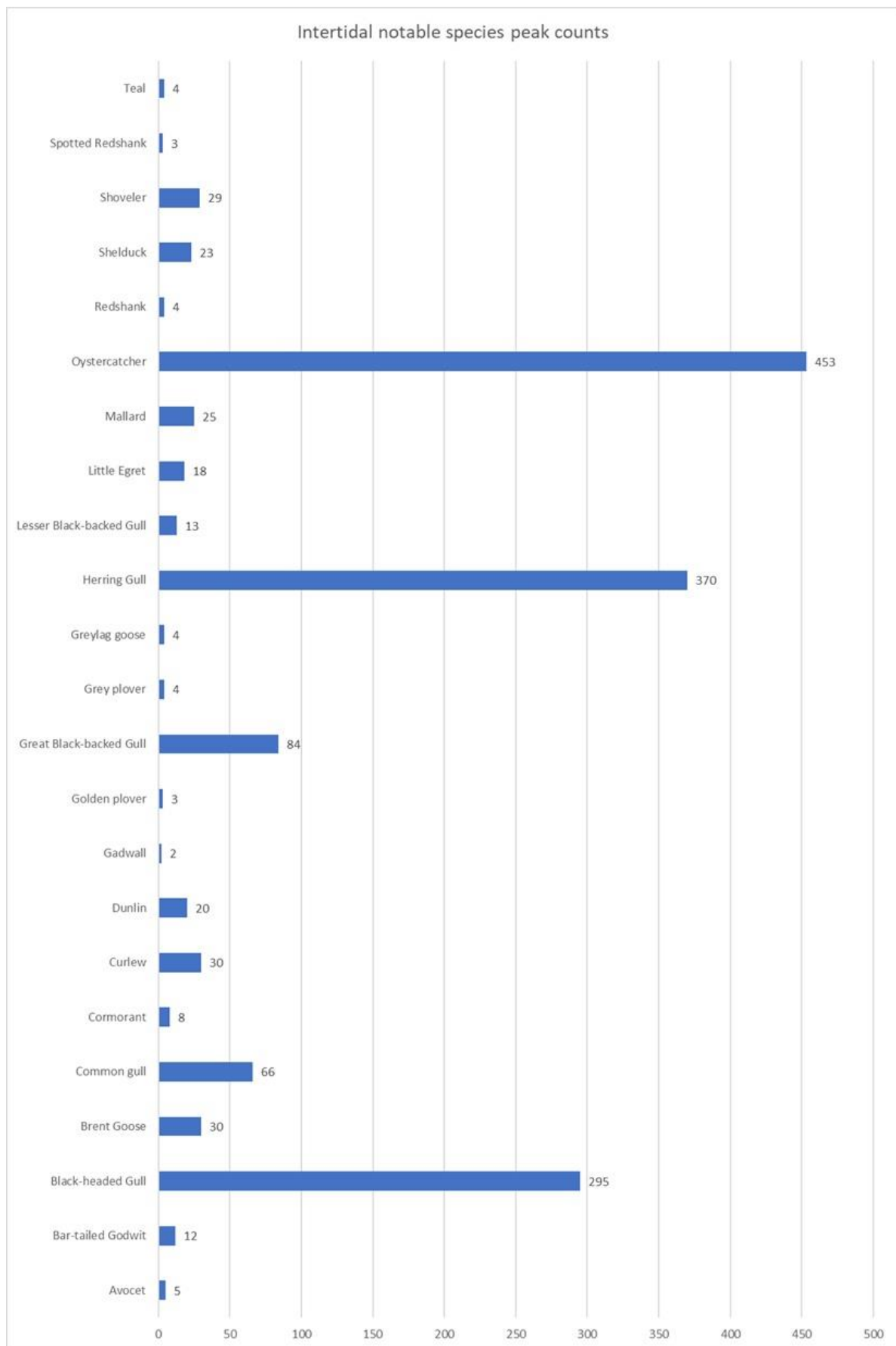


Plate 1.2 Summary of Notable Species Peak Count (intertidal species)

Mean counts for notable species

[1.4.48](#)[1.4.49](#) As for peak counts the mean counts for notable species are shown as two separate graphs to aid interpretation.

[1.4.49](#)[1.4.50](#) Plate 1.3 shows the inland mean counts and Plate 1.4 shows the intertidal species. Where a mean count is shown as 0, this represents a species recorded during vantage point survey only (i.e., not on a CBC visit and therefore not calculated into the mean).

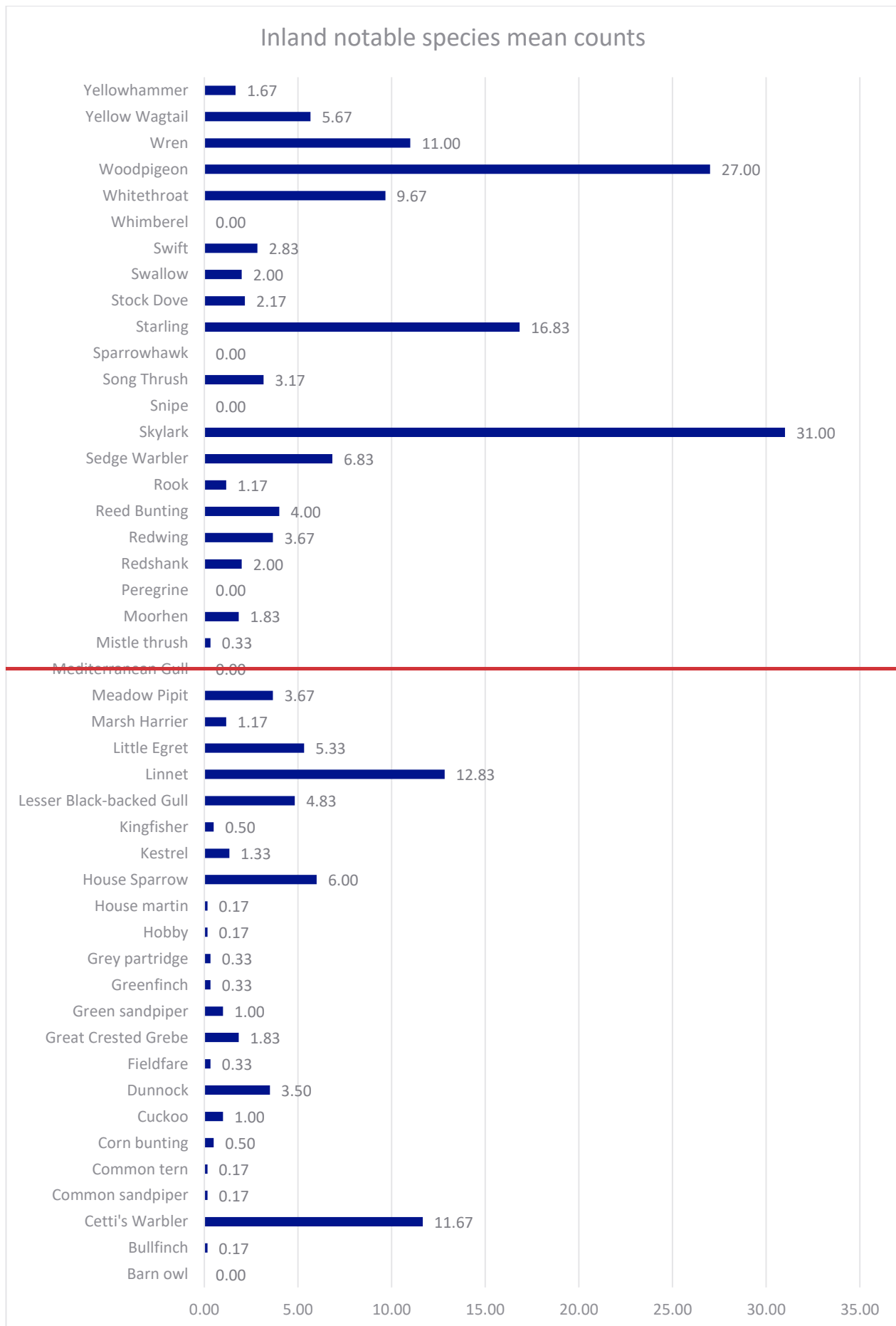
[1.4.50](#)[1.4.51](#) Inland mean counts follow an overall similar pattern as for peak counts, with the notable exception of skylark having the highest mean count and starling and woodpigeon mean counts being much reduced in comparison to their mean.

[1.4.51](#)[1.4.52](#) Cetti's warbler (*Cettia cetti*), sedge warbler, wren (*Troglodytes troglodytes*), linnet (*Carduelis cannabina*) have relatively large mean counts, but the yellow wagtail mean is much reduced compared to its peak count. Many other species show low mean counts showing that they were recorded only occasionally or on single surveys, generally without significant peaks.

[1.4.52](#)[1.4.53](#) Intertidal counts show large means for oystercatcher, herring gull (*Larus argentatus*), lesser black-backed gull (*Larus fuscus*) and black-headed gull (*Chroicocephalus ridibundus*), representing consistent large counts of these species.

[1.4.53](#)[1.4.54](#) Shelduck (*Tadorna tadorna*), mallard and curlew (*Numenius arquata*) have mean counts that are relatively high in comparison to their peak counts, i.e. regularly recorded.

[1.4.54](#)[1.4.55](#) Many of the remaining waterbirds have small mean counts consistent with small peak counts, usually indicating irregular occurrence during only part of the breeding season.



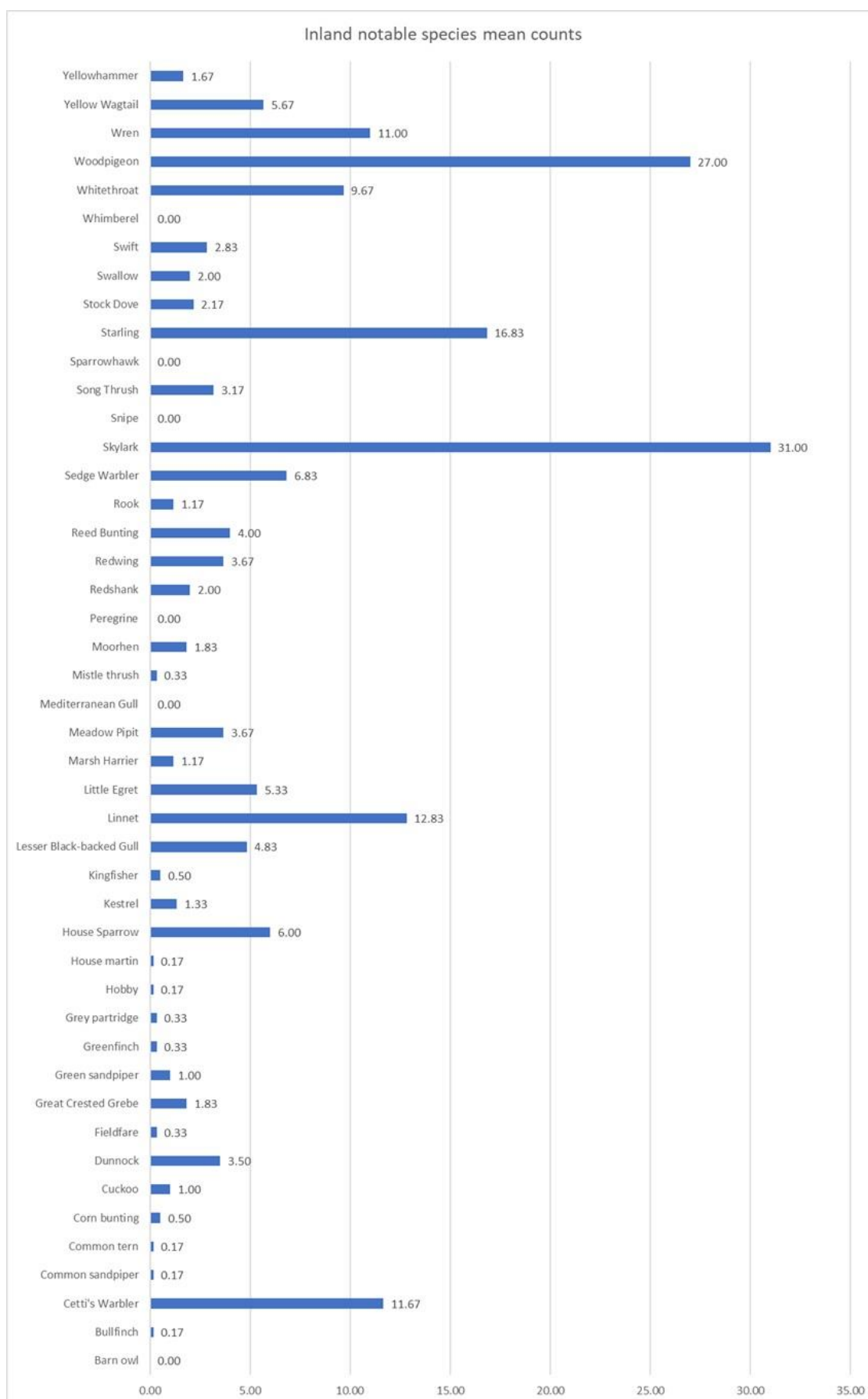
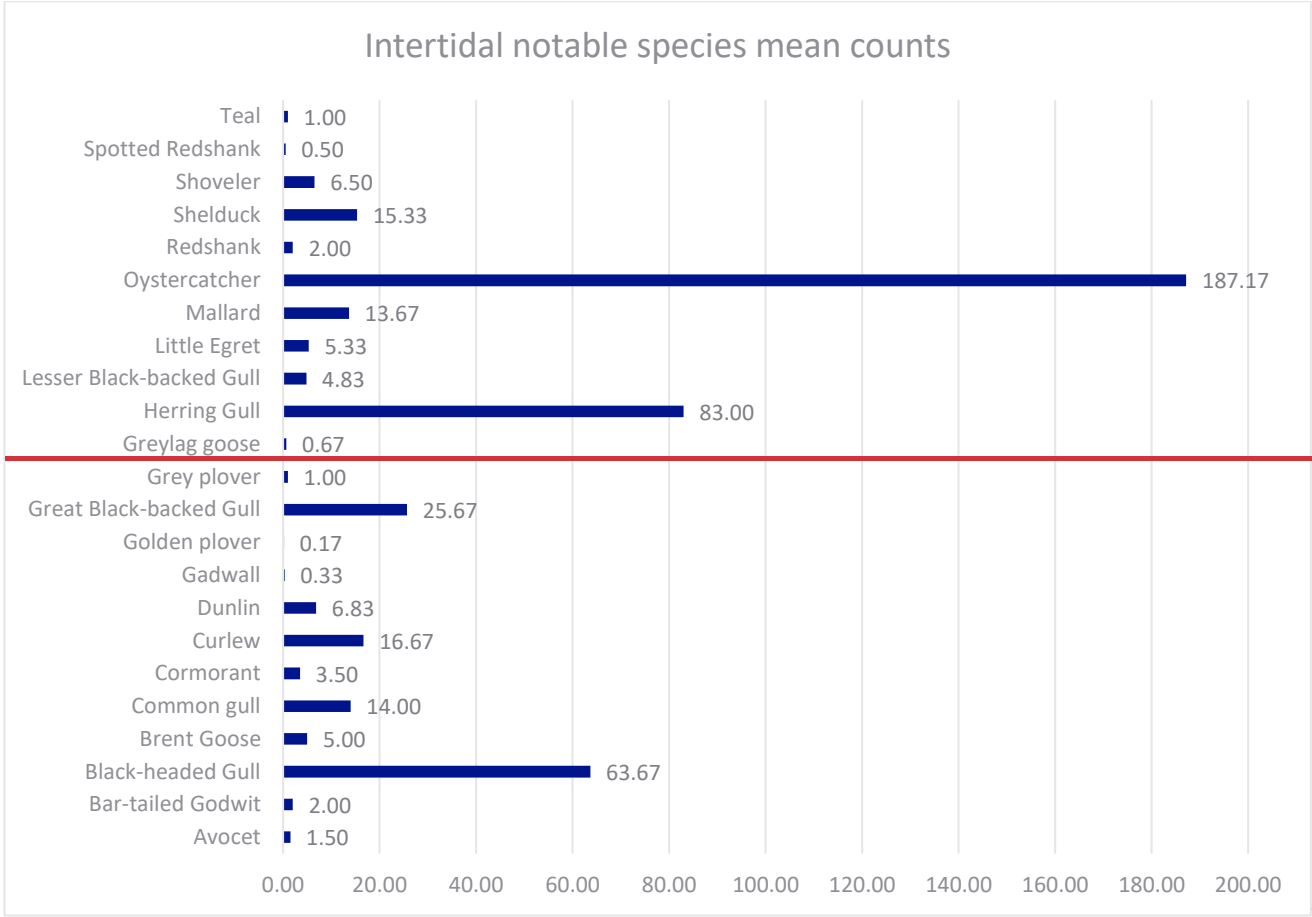


Plate 1.3 Summary of Notable Species Mean Count (inland species)



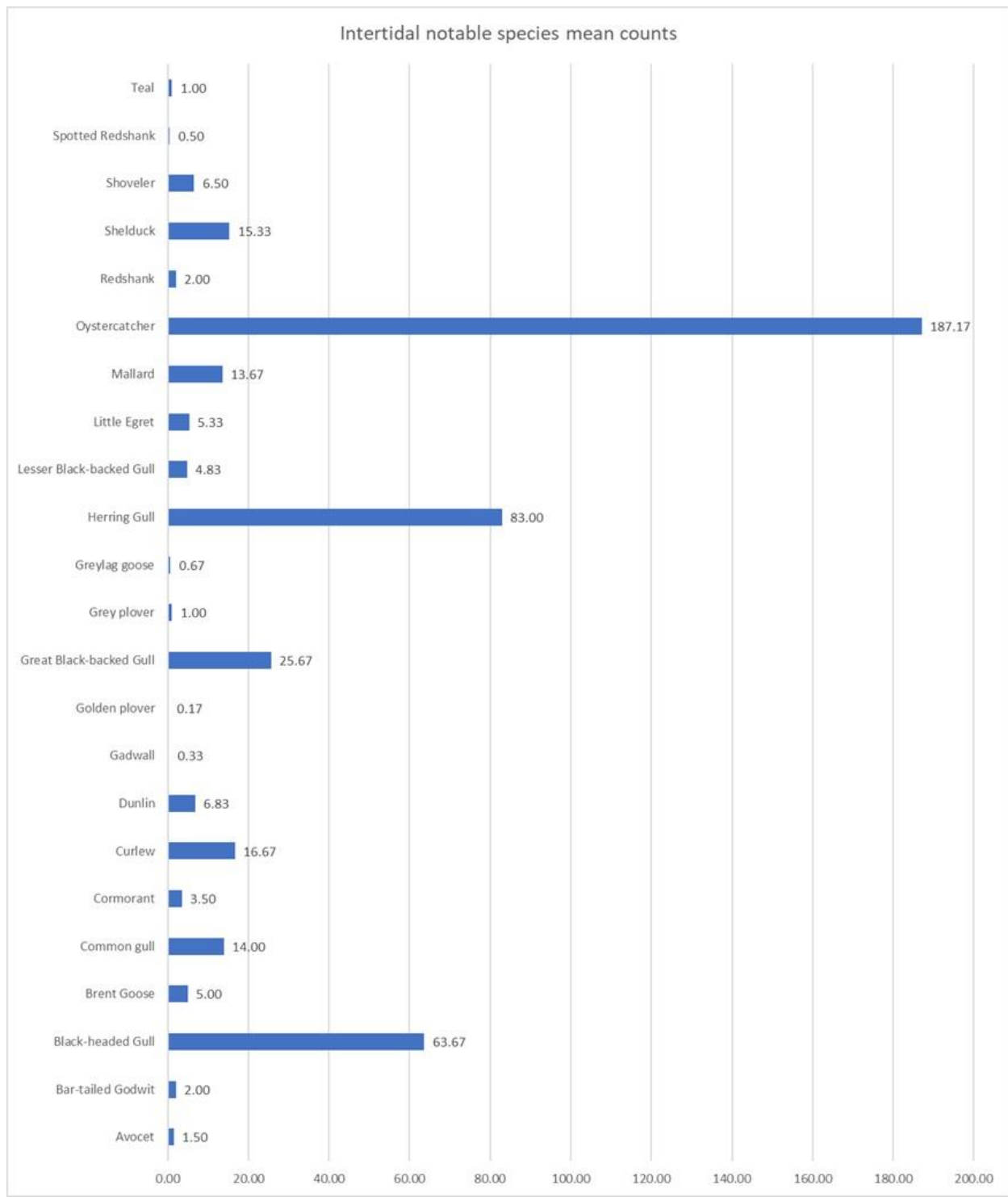
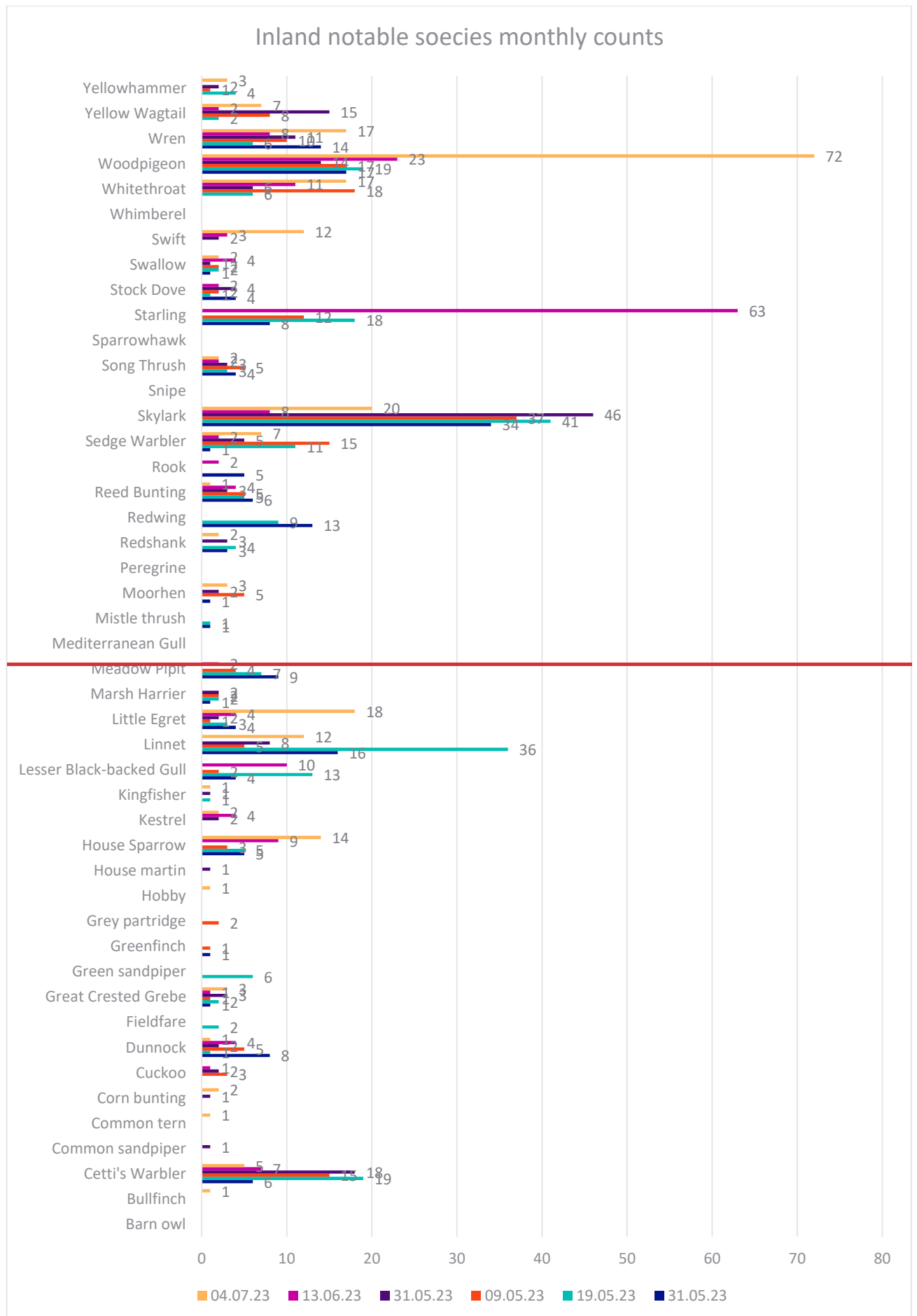


Plate 1.4 Summary of Notable Species Mean Count (intertidal species)

Temporal (Monthly) Summary

Inland

1.4.55 — The monthly counts for each species are shown in Plate 1.5 and Plate 1.6.



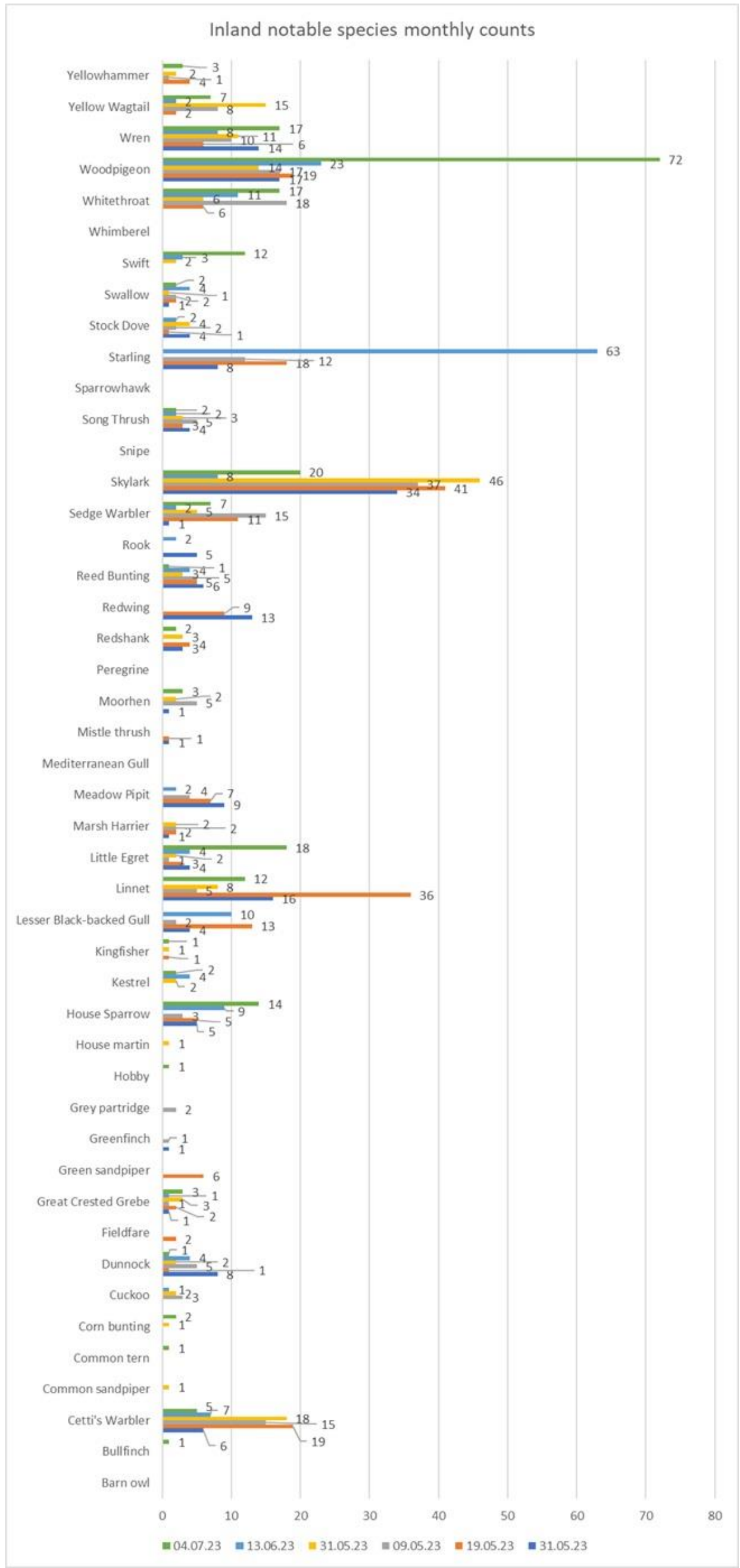
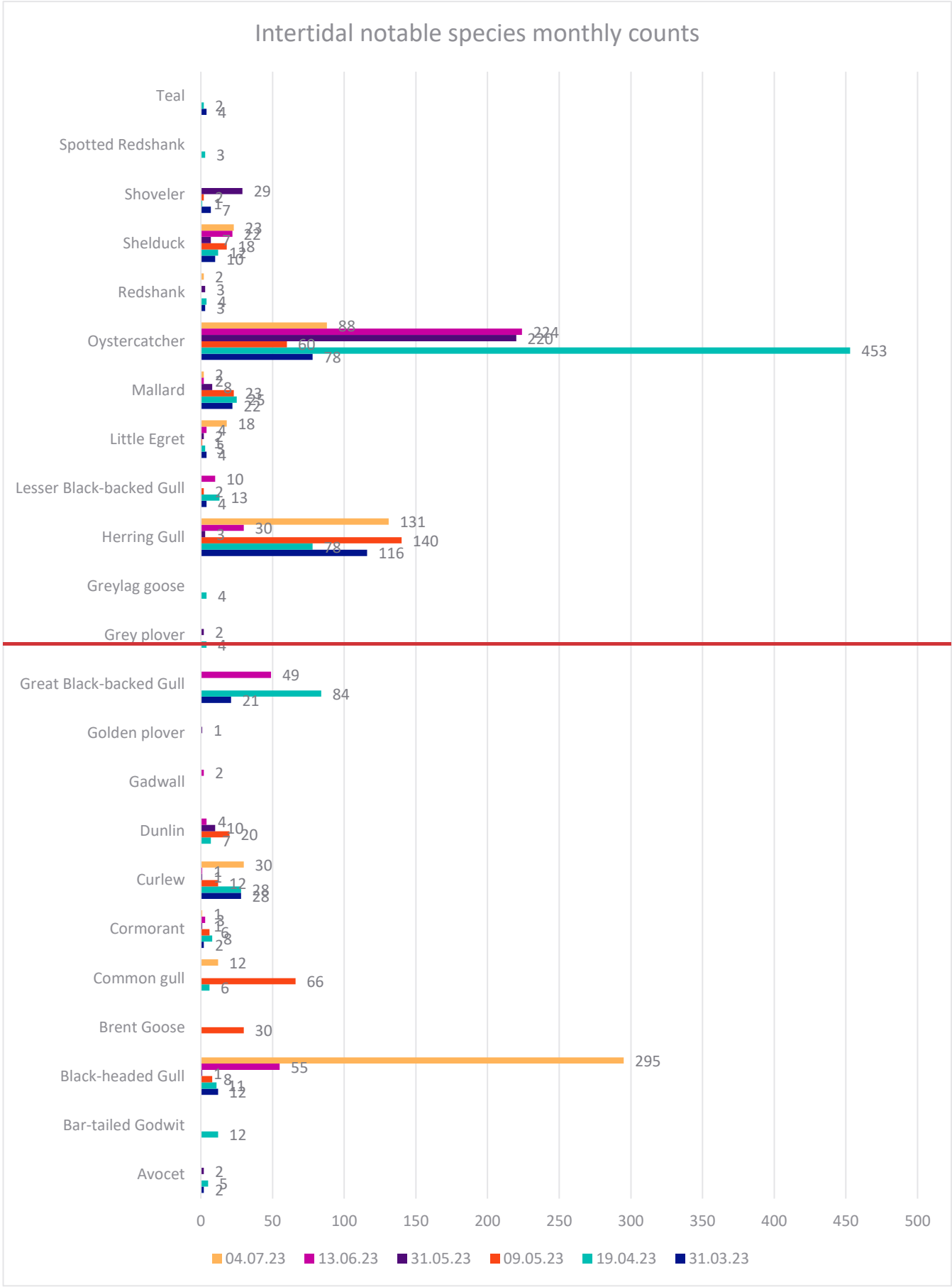


Plate 1.5 Summary of monthly species counts (inland species)



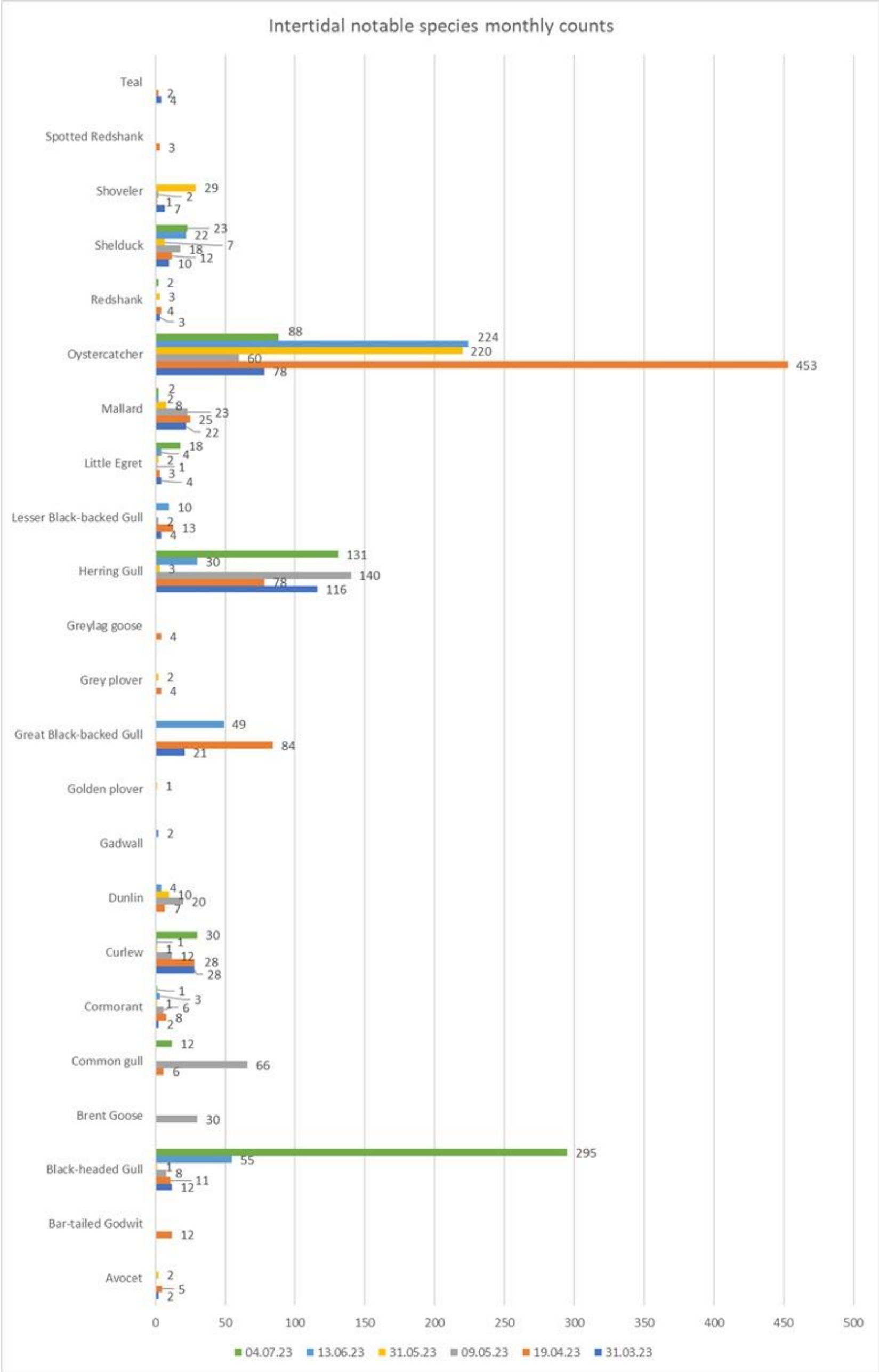


Plate 1.6 Summary of monthly species counts (intertidal species)

- 1.4.56 The large monthly peaks for the most numerous species (woodpigeon and starling) are clearly far greater than the usual counts for these species, which shows the larger variation between peak and mean for these species.
- 1.4.57 Species which are recorded relatively consistently in good numbers are skylark, linnet, Cetti's warbler and wren. Skylark in particular is one of the most frequently occurring and regularly recorded species.
- 1.4.58 Species occurring in small numbers but regularly recorded include little egret, dunnoek (*Prunella modularis*), house sparrow (*Passer domesticus*), yellow wagtail, reed bunting (*Emberiza schoeniclus*) and yellowhammer (*Emberiza citrinella*).
- 1.4.59 Notable early season recorded species such as redwing (*Turdus iliacus*), fieldfare (*Turdus pilaris*) and green sandpiper represent late wintering birds. No direct breeding evidence was recorded for these species, and they were generally not recorded beyond April.
- 1.4.60 Several later season migrants were recorded within the Survey Area including cuckoo, hobby (*Falco subbuteo*), swift (*Apus apus*) and house martin (*Delichon urbicum*).
- 1.4.61 The majority of inland species were recorded throughout the survey season, with fluctuating numbers but generally consistent presence.
- 1.4.62 Within the intertidal area, species recorded appeared to follow a general trend of overall numbers reducing from March (end of winter season) with generally lower numbers recorded across May to July. Bar-tailed godwit (*Limosa lapponica*) and teal (*Anas crecca*) are example species, being recorded in March and April and not afterwards.
- 1.4.63 Oystercatcher numbers peaked in April, but numbers between 60 and over 200 were recorded consistently during the subsequent surveys. Avocet (*Recurvirostra avosetta*) and curlew were also recorded throughout the breeding season in small groups.
- 1.4.64 Numbers of some waterbirds (shoveler and shelduck) and black-headed gull notably increased in the later months (June and July), and this may represent non-breeders or early migrants. These species were generally recorded in small groups.
- 1.4.65 Numbers of herring gull and great black-backed gull (*Larus marinus*) fluctuated but flocks in the region of 100-200 and 20-50 were recorded respectively during most months.
- 1.4.66 Some gull species, duck species and little egret were recorded along the River Stour Canal but the bulk of the monthly counts remains attributable to the intertidal area. Small groups of herring gull and common gull (*Larus canus*) (20 or less) were recorded along the canal in April and a flock of 60 herring gull were recorded in Parcel 238 (north of the convertor area) in March. Mallard and little egret numbers inland were generally limited to groups less than five or recording of individuals.

Distribution

Inland

- 1.4.67 The River Stour canal, adjacent pools, ditches and reedbeds supported notable waterbirds included mute swan (*Cygnus olor*), shelduck, little egret and mallard, though generally in small numbers (less than ten). Small groups of gulls were often present. Notable passerines within this area included meadow pipit (*Anthus pratensis*), wren, Cetti's warbler, sedge warbler, linnet and reed bunting which were often associated with

ditches, associated reed fringes and boundary hedgerows. Reed warbler (*Acrocephalus scirpaceus*) was also frequently recorded.

- 1.4.68 Kingfisher (*Alcedo atthis*) were frequently recorded along the River Stour canal, during CBC surveys and incidentally during vantage point surveys.
- 1.4.69 Marsh harriers (*Circus aeruginosus*) were frequently recorded during vantage point surveys and on occasion during CBC.
- 1.4.70 The arable fields supported good numbers of species that utilise central areas of expansive crop (i.e., skylark), though the distribution of yellow wagtail (which also uses central arable field areas) was limited by comparison.
- 1.4.71 Field boundary hedgerows supported species such as dunnoek, song thrush (*Turdus philomelos*), linnet and yellowhammer the associated distribution and number of these species was limited. The presence of extensive drains however did result in sedge warbler, Cetti's warbler and reed bunting being well distributed throughout the Survey Area.
- 1.4.72 Woodland boundaries throughout the Survey Area generally supported an expected assemblage of notable woodland and scrub species (including woodpigeon, song thrush, dunnoek and wren) but noting Cetti's warbler was well distributed due to the presence of ditches along many of the boundaries.
- 1.4.73 The fishing pools in the north of the Survey Area were noted to support great crested grebe (*Podiceps cristatus*), mallard, Cetti's warbler and were the source of the single record of foraging common tern (*Sterna hirundo*).

Intertidal

- 1.4.74 A number of key observations on distribution and habitat use within the intertidal area were made as follows:
- The lagoon adjacent to the coastal footpath was used by individuals or small groups of waders and ducks but in generally low numbers. The lagoon was also noted as having low water levels during the later survey months.
 - The edge of the saltmarsh closest to the sea was used as a roost by large (100-200) numbers of oystercatcher and herring gull and smaller numbers of other water birds including curlew. Redshank, grey plover (*Pluvialis squatarola*), shelduck and other waterbirds also foraged along this fringe.
 - The mouth of the River Stour supported large numbers of oystercatcher and gulls on occasion. During the early season visits (March and April) this area supported bar-tailed godwit, spotted redshank, dunlin (*Calidris alpina*) and gadwall.
 - A small number of records of starling, skylark, meadow pipit, reed bunting and other notable passerines were recorded within the saltmarsh and reedbed habitats, normally as individuals or small groups.

Existing disturbance

- 1.4.75 Disturbance to birds within the inland areas is limited away from roads, public rights of way and the recreational use of the fishing lakes. It is likely that agricultural machinery and activities are the main existing disturbance sources across the remainder of the Survey Area, although recreational shooting also takes place during the winter season.

- 1.4.76 Existing disturbance sources to birds in the intertidal area appeared to be comparable to those present as recorded in winter, including the following:
- Windsurfers present near the shoreline at low tide;
 - Walkers occasionally present on shore, noted on at least one occasion with dogs off lead; and
 - Boats entering the River Stour mouth.

1.5 Evaluation

Conservation Status

- 1.5.1 A total of 95 bird species were recorded within the Survey Area, of these, 67 are notable species, as summarised described within Section 1.2 Bird Legislation, policy and guidance.
- 1.5.2 From the breeding assemblage of 61 species (birds recorded as confirmed, probable or possible breeders):
- two species are included on Annex 1 of the EU Birds Directive (kingfisher and marsh harrier);
 - five species are included on Schedule 1 of the Wildlife and Countryside Act (1981, as amended) (barn owl (*Tyto alba*), marsh harrier, hobby, kingfisher and Cetti's Warbler);
 - 12 species are listed as NERC Act Section 41 Species of Principal Importance;
 - 13 species are included on the BoCC Red List; and
 - 20 species are included on the BoCC Amber List.
- 1.5.3 Table 1.5 gives a very brief commentary on the numbers and distribution of each of these species. Where a species occurs in significant numbers, it is addressed in further detail in the subsequent sections of this evaluation section.
- 1.5.4 Note where a species falls under multiple conservation status criteria, it is addressed in the first tier only.
- 1.5.5 Figures illustrating the distributions of these species within the site during the breeding bird survey are provided in:
- **Application Document 6.4.3.2.D.2 Kent Breeding Bird Results March 2023;**
 - **Application Document 6.4.3.2.D.3 Kent Breeding Bird Results April 2023;**
 - **Application Document 6.4.3.2.D.4 Kent Breeding Bird Results May 2023;** and
 - **Application Document 6.4.3.2.D.5 Kent Breeding Bird Results June 2023.**

Table 1.5 Conservation Status of Recorded Notable Species and Summary of Observations

Species	Inland	Intertidal
SPA and Ramsar Qualifying Species		
Golden plover	Flyover of three birds during March vantage point survey. Not recorded during CBC.	Single recorded adjacent the lagoon in the coastal area on the 31/05/23.
Great crested grebe	Family recorded on fishing lakes, Parcel 244	Not recorded
Shoveler	Not recorded	Recorded occasionally in low numbers within the mudflats of the coastal area
Turnstone (<i>Arenaria interpres</i>)	Recorded along the stour canal on 09.05.23	Not recorded
Wildlife & Countryside Act 1981 (as amended) Schedule 1		
Avocet	No recorded	Recorded on three surveys within the lagoon in coastal parcel.
Barn owl	Not recorded during CBC but single flight recorded during VP survey on 17.03.23	Not recorded
Cetti's warbler	Probable breeder. Recorded on every survey visit. 15 territories recorded, primarily along the ditch and field boundary networks of parcels 336,346 in the north east, field 232 along the reedbed north of the stour and Field 237 along edge of the stour and the reedbeds to the south.	Individuals recorded singing from reedbed and scrub adjacent to PRow.
Fieldfare	Flyover only, single recorded on 19/04/23.	Not recorded
Green sandpiper	Non-breeder. Passage birds within parcel 244, favouring the flooded field sections on 19/04.	Not recorded
Hobby	One flight over recorded on 04.07.23 and more frequent flights recorded in proximity to river Stour during VP surveys	Not recorded
Kingfisher	Possible breeder. Single bird recorded along the Stour on three	Not recorded

Species	Inland	Intertidal
	occasions. Recorded frequently during VP surveys.	
Marsh harrier	Peak count of three during CBC surveys on 31.05.2023 A male foraging over parcel 244 on 19/04. Probable breeder. Recorded on first four visits adjacent the rail line. Frequently recorded during VP surveys in proximity to River Stour Canal.	Not recorded
Mediterranean gull	Not recorded during CBC but single flight recorded during VP survey on 25.07.23	Not recorded
Peregrine	Not recorded during CBC but frequent flights recorded during June VP surveys	Not recorded
Redwing	Foraging in hedgerow within parcel 244 on 31/03 and recorded foraging in fields 346 on 19/04/23 only.	Not recorded
EC Birds Directive 2009 Annex 1		
Bar-tailed godwit	Not recorded	Group of 12 recorded on river stour mouth on 09/12
Dunlin	Not recorded	Recorded on intertidal area on four survey visits (flock size between 4-20).
Little egret	Recorded within the waterbodies adjacent the stour in field 232 on most survey visits and as flyovers elsewhere.	Recorded foraging along the lagoon
NERC Act 2006 Section 41		
Bullfinch (<i>Pyrrhula pyrrhula</i>)	A single in suitable boundary nesting habitat of parcel 244 on 19/04.	Not recorded.
Corn bunting	A single singing on wires just east of the fishing lake on 31/05 Recorded singing on wires just east of the fishing lake in parcel 244 and on north west corner of parcel 238 survey area	Not recorded.

Species	Inland	Intertidal
Cuckoo	Three recorded across parcel 244 at the fishing lakes and boundary ditches on 09/05. Two recorded singing in habitat suitable to support host species across parcel 232.	Probable breeder.
Curlew	Not recorded during CBC.	Recorded on all survey visits within the coastal area, mostly along the tide line or within the mudflats, max flock of 12 recorded on 09/05/23.
Dunnock	Recorded on each survey visit with four territories, with several adjacent to fishing lakes in parcel 244. Recorded singing in suitable breeding habitat in field 346 on 19/04/23.	Single recorded along the coastal area on 31/03/23.
Grey partridge (<i>Perdix perdix</i>)	A pair in suitable breeding habitat within parcel 244 on 09/05/23.	Not recorded
Herring gull	Non-breeder. Foraging flocks recorded on flooded fields within parcel 244 with 75 on 31/03 and 10 on 19/04. Recorded flying over the survey area on all survey visits. Flock of 60 recorded roosting on 09/05/23 in parcel 227. Flyover of c.370 recorded during VP surveys	Recorded on most coastal surveys with max flock of 120 on 09/05/23.
House sparrow	Recorded in small groups in proximity to residential buildings on Ebbsfleet Lane or adjacent to Marsh Farm Lane water treatment works	Recorded foraging in groups within the reedbeds along the coastal area.
Lapwing	Not recorded.	Two recorded near the lagoon in the coastal area on 19/04/23.
Lesser black-backed gull	Non-breeder. Four foraging on a flooded field within parcel 244 on 19/04.	Low numbers recorded along the tidal line in the coastal area, generally small groups of around ten birds.
Linnet	12 in hedgerow within parcel 244 on 31/03. Three territories recorded. Recorded flying over field 346 on most survey visits.	Not recorded

Species	Inland	Intertidal
	Flock of 12 recorded in northern field of parcel 237. Recorded flying over and singing in habitat adjacent the stour canal.	
Mistle thrush (<i>Turdus viscivorus</i>)	A single singing in boundary habitat on 31/03. Single recorded in boundary habitat of field 346 on 19/04/23.	Not recorded
Reed bunting	Recorded on each survey visit. At least six territories present, along field margins through inland areas and along north of the stour canal.	Occasionally recorded from reedbeds adjacent to coastal PRow as individual birds.
Skylark	Recorded on every survey visit. Estimate of 35 territories, primarily across inland arable fields 336, 346, 232 and 237	Occasionally recorded from saltmarsh adjacent to coastal lagoon.
Song thrush	Recorded on every survey visit Singles in suitable breeding habitat within parcel 244 and along the rail line in field 232. Two territories within the north east woodland fields 336, 346.	Not recorded
Starling	Three on 31/03. Five recorded foraging on single survey visit in field 237. Total of 63 recorded on 13.06.23	Small flocks recorded foraging in saltmarsh fringe along coastal parcel.
Yellowhammer	One territory recorded. A pair in suitable nesting habitat at the fishing lakes on 19/04, a single calling near the railway line on 09/05 and two in suitable nesting habitat at the west of parcel 244 on 31/05.	Not recorded
Yellow wagtail	Recorded within arable fields, particularly within north east of site.. Six territories recorded	Not recorded
BoCC Red		
House martin	Non-breeder. A single foraging over parcel 244 on 31/05..	Not recorded.
Greenfinch (<i>Chloris chloris</i>)	Single recorded flying over on 09/05/23 between field 232 and 237	Single recorded calling adjacent coastal area on 31/03/23.

Species	Inland	Intertidal
Whimbrel (<i>Numenius phaeopus</i>)	Not recorded during CBC but flyover of two birds recorded during April vantage point surveys	Not recorded
BoCC Amber		
Black-headed gull	Six flying over the parcel 244 on 31/03 and five foraging in a flooded field on 09/05.	Recorded occasionally in small groups (<10) within the lagoon or along the tide line in the coastal area. Max flock of 53 recorded on 13/06/23.
Common gull	Not recorded	Recorded occasionally along the tide line in the costal area with max flock of 50 recorded on 09/05/23.
Common sandpiper	Single recorded flying along stour on 09/05.	Not recorded
Common tern	Single hunting on fishing lakes on 04.07	Not recorded
Great black-backed gull	Not recorded	Recorded occasionally along the tide line in the coastal area with max flock of 49 recorded on 13/06/23.
Grey plover	Not recorded	Record as two on 31/04 and as four on 19/05.
Kestrel (<i>Falco tinnunculus</i>)	Singles recorded as flyover or as foraging on most survey visits	Not recorded
Mallard	Flyover and a pair on fishing lakes on 31/03, 19/04 and 31/05. A female with ducklings in a ditch on 09/05.	Individual birds occasional on coastal lagoon.
Meadow pipit	Five in arable fields within parcel 244 and a single in arable field within parcel 316 on 31/03. Two in an arable field within parcel 316 and a two including a singing bird in parcel 244 on 19/04	Individuals recorded in saltmarsh fringe.
Moorhen (<i>Gallinula chloropus</i>)	Two in suitable breeding habitat at the fishing lakes on 09/05 and a single there on 31/05. Recorded along the watercourse in field 346 and within the stour canal.	Not recorded.
Mute swan	Group of three recorded south of stour on 31/03. Pair in ditch within parcel 244 on 19/04.	Not recorded.

Species	Inland	Intertidal
Oystercatcher	Not recorded.	Recorded on all survey visits within the coastal area. Foraging along the tide line and favouring roosting adjacent the Stour mouth. Max flock of c.450 on 19/04/23.
Redshank	Not recorded.	Occasionally recorded adjacent the lagoon or mudflats in the coastal area in low numbers (<5).
Rook (<i>Corvus frugilegus</i>)	Small rookery present near to houses along Ebbsfleet Lane	Not recorded
Shelduck	Non-breeder. Two pairs in flooded field within parcel 244 on 19/04 and a single on 09/05. Recorded on occasion within the waterbodies adjacent the Stour canal.	Recorded along the mudflats in the coastal area on all survey visits with max flock of 29 on 31/05/23.
Snipe	Not recorded on CBC but recorded during VP survey on 28.04.23	Not recorded
Sparrowhawk (<i>Accipiter nisus</i>)	Recorded as individual birds during VPs but not during CBC	Not recorded
Spotted redshank	Not recorded	Three recorded on single survey near the stour mouth in coastal area on 19/04/23.
Stock dove (<i>Columba oenas</i>)	Individuals and small groups (<5) recorded on most visits. Confirmed nesting with box in parcel 244.	Not recorded
Swallow (<i>Hirundo rustica</i>)	Small groups (<5) recorded foraging over fields and near stour on most visits	Not recorded
Swift	Single recorded as flyovers across May to July	Not recorded
Teal	A pair in a ditch in parcel 244 on 19/04.	Recorded in the lagoon in the coastal area on one survey visit 31/03/23.
Woodpigeon	Frequently recorded across Site, some singing individuals and a peak count of 72 on 04/07/23 potential representing post breeding aggregating birds.	Not recorded
Wren	Recorded on each survey visit and frequent within field boundary habitats and many territories	Not recorded

Species	Inland	Intertidal
	(estimate of seven to sixteen) assessed as present.	

Functionally Linked Land – Designated Site Context

- 1.5.6 Areas that are functionally linked to European designated sites are considered when they may be affected by plans and projects. For the purposes of this assessment, land is considered 'linked' to a European site if it serves an important ecological function in maintaining or restoring the population of qualifying species at favourable conservation status (Natural England, 2016).
- 1.5.7 Limited breeding or passage qualifying species associated with the nearby designated sites were recorded. The following species listed on the Stodmarsh SPA/Ramsar citation were recorded as follows:
- Gadwall – Noting the distance of the Stodmarsh site and likely dispersal range this duck species (Natural England, 2019), it is assessed that the recorded gadwall are from a local population and not from the Stodmarsh SPA/Ramsar.
- 1.5.8 A number of species recorded as winter qualifying species were recorded, though in reduced numbers compared to previous winter surveys:
- Golden plover - Single bird recorded adjacent the lagoon in the coastal area on the 31 May 2023. Flyover recorded inland during a March vantage point survey but no recorded use of inland areas.
 - Turnstone - Recorded along the stour canal on 09 May 2023 but not utilising area and likely a passage bird.
 - Great crested grebe – family recorded on river stour canal but as for gadwall assessed to be from a local population and not from the Stodmarsh SPA, based on the distribution of this species in Kent and likely dispersal distances.
- 1.5.9 Regarding the SPAs, the above species are relevant to winter only and so have not been assessed further. Assessment of winter qualifying species is provided within 2022/23 wintering report.
- 1.5.10 Overall, the areas of the sections of the Thanet Coast SPA and Ramsar and Sandwich Bay within the Survey Area were found to support limited numbers of passage waterbirds for which they are designated, but other areas of the Survey Area did not support these species. It is noted no evidence of the presence of breeding little tern was recorded during the survey.
- 1.5.11 Small groups of mallard, shelduck, shoveler and gadwall potentially from the Hacklinge Marshes SSSI were found to be using the East Stour canal and adjacent waterbodies but generally not other areas of the Kent Onshore Scheme Oder Limits.
- 1.5.12 No evidence of functionally linked land for breeding or passage species was recorded for other areas (i.e., inland) of the Survey Area. It is assessed that there is an absence of functional linkage between the Survey Area and designated sites in relation to breeding birds, based on the survey results.

Species Abundance

- 1.5.13 No counts of any breeding bird species recorded within the Survey Area approach 1% of the national breeding population estimates (Woodward, et al., 2020). As such, the Survey Area did not support breeding populations of national importance for any species. The peak counts of spotted redshank and green sandpiper represent over 1% of the wintering national population estimates of 67 and 290 (Frost, et al., 2019) but appear attributable to late wintering/passage birds rather than being part of the breeding assemblage.
- 1.5.14 The peak count of oystercatcher of 453 was notable and approaches 0.5% of the 92,500 Great Britain breeding population estimate, but no evidence of breeding was recorded, with this species being known to breed in Sandwich Bay located beyond 6km south of the Site (Kent Ornithological Society, 2023).
- 1.5.15 At a county level, territories recorded during the field survey were compared with available within the (Birds of Kent Report 2021 (Kent Ornithological Society, 2023)). All species were recorded in low numbers in comparison with county records aside from the species discussed below.
- Oystercatcher – Pegwell Bay is known to have some of the largest breeding season counts as described in the Kent Bird Report (Kent Ornithological Society, 2023) and this is confirmed by the counts recorded during survey.
 - Spotted redshank and green sandpiper – counts over 1% of national population estimates were recorded, as discussed above.
 - Marsh harrier – use of part of the Survey Area by a possible off-site-nesting pair represents use of the Kent Onshore Scheme Order Limits by one of approximately 50 pairs stated to breed in Kent (Kent Ornithological Society, 2023).
 - Cuckoo – the recorded peak count is comparable to the peak of seven from the Kent Bird report.
 - Skylark – the recorded peaks and number of territories reflect the suitability of the arable habitats for this species.
 - Cetti's warbler counts and territories approach known sites of importance for this species elsewhere in Kent (Kent Ornithological Society, 2023) but noting this now a widespread and well distributed species across southern England.
- 1.5.16 The counts of avocet, hobby, grey partridge, yellow wagtail, sedge warbler, linnet, corn bunting and reed bunting are notable but are species that appear to have higher counts or are better represented elsewhere in the county (Clements, 2015; Kent Ornithological Society, 2023).

Species Diversity

- 1.5.17 The inland areas recorded a diverse range of species reflecting the mix of arable, wetland, woodland and riparian features present.
- 1.5.18 The River Stour Canal supports the best inland assemblage, containing the majority of waterbird, raptor and riparian passerine interest, and with rough grassland and tree lines here also supporting a range of farmland species.
- 1.5.19 Across the remainder of the inland area, species associated with field drains and small watercourses are well represented. The arable assemblage is diverse but detailed

review shows many species were recorded only in small numbers relative to the size of the Survey Area (e.g., linnet, yellowhammer and yellow wagtail).

- 1.5.20 None of the criteria for inclusion of the inland area of the Kent Onshore Scheme Order Limits as an LWS are likely to be met, with the possible exception of the raptor interest (supplemented by kingfisher, barn owl and small numbers of notable waterbirds and passerines) along with River Stour Canal.
- 1.5.21 The diverse assemblage of species recorded during the WeBS counts reflects the designated status of Pegwell Bay and was primarily comprised of a range of wildfowl, waders and gulls including recording of occasional vagrant species.

Habitat/Distribution

Inland

- 1.5.22 Overall, the inland areas held a reasonable assemblage of notable species with the River Stour canal, flooded fields and ditch networks being the most valuable habitats for birds.
- 1.5.23 The River Stour canal, adjacent pools, ditches and reedbeds were noted to support a diverse assemblage of birds as expected from the diversity of habitats present.
- 1.5.24 Mute swan, shelduck, little egret and mallard were recorded in association with the canal and river while meadow pipit, wren, Cetti's warbler, sedge warbler, linnet and reed bunting were often associated with ditches, associated reed fringes and boundary hedgerows.
- 1.5.25 Kingfisher and marsh harrier were frequently recorded in proximity to the River Stour Canal.
- 1.5.26 While limited optimal suitable nesting habitat for marsh harrier is present within the Survey Area, large areas of reedbed to the east of the River Stour Canal and adjacent to Richborough power station may be suitable. Peregrine and raven are also assessed as breeding outside the Survey Area but utilising the Survey Area on occasion for foraging.
- 1.5.27 The arable fields supported good numbers of skylark as described within the 'Species Abundance' section.
- 1.5.28 Field boundary hedgerows were generally of limited quality, comprising short, gappy hedgerows, often without wide margins and supporting a limited diversity of bird species but the extensive field drain network across the Kent Onshore Scheme Order Limits resulted in species such as Cetti's warbler, reed bunting and sedge warbler being well distributed.

Intertidal

- 1.5.29 The largest numbers of waterbirds tended to be associated with aggregation along the mouth of the River Stour or as high tide roosts along the edge of the saltmarsh. A number of species were however noted to be associated with the coastal lagoon and adjacent saltmarsh including avocet, teal and little egret.
- 1.5.30 Passerines recorded within the saltmarsh were generally not recorded as breeding, with the possible exceptions of Cetti's warbler, reed bunting and a possible meadow pipit

territory. House sparrow were recorded on occasion in association with coastal scrub but likely originate from nearby residential areas.

Temporal (Monthly Variations)

Inland

- 1.5.31 Generally, the presence of migratory bird species reflected the seasonal patterns expected of these species within the inland areas as described in the results.
- 1.5.32 The majority of inland species were recorded throughout the survey season. While numbers fluctuated, their continued presence strengthens the likelihood of probable breeding and is generally reflected in territories being present for these species.
- 1.5.33 Some species which may have been expected to be present throughout the breeding season were however only recorded on occasion within the Survey Area, either due to limited detectability, small populations or birds not establishing notable territories. Key examples include:
- Mute swan. Recorded only in March and April.
 - Common sandpiper. Recorded once in May.
 - Turnstone. Recorded once in early May, appeared to be dispersing along Stour and not resident.
 - House martin. Recorded in late May only, local populations likely to be foraging elsewhere.
 - Mistle thrush. Recorded only in March and April, an early season breeder.
 - Greenfinch. Singles only recorded in March and early May and likely an uncommon bird in the Survey Area.
 - Bullfinch. Only recorded in July but generally a difficult species to detect.
- 1.5.34 The recorded numbers of some species decreased during June and July surveys, which may be attributable to the decreased detectability of some species in the later months (i.e., decreased singing or activity levels for early breeding species).

Intertidal

- 1.5.35 Intertidal results followed a general trend of overall numbers reducing from March (end of winter season).
- 1.5.36 Noted exceptions included the presence of large oystercatcher, herring gull and great black-backed gull counts throughout the surveys. Avocet and curlew were also consistently present in small numbers.

Overall Importance of Breeding Bird Populations

Inland

- 1.5.37 Inland areas supported a good diversity and abundance of passerine species associated within the riparian habitats and with skylark being frequently recorded across

the arable fields. Raptor diversity and peak counts along the River Stour canal were also notable as well as the passage count of green sandpiper.

- 1.5.38 The species assemblage recorded within the inland area, based upon numbers and conservation status is broadly reflective of the habitats present and has been assessed as of local importance, but noting that the River Stour canal and surrounds supports the greatest diversity of habitats and species within the inland Survey Area.

Intertidal

- 1.5.39 As expected, the shoreline and intertidal areas supported a diverse bird assemblage. Locally important numbers of waterbirds were, however, only present throughout the breeding season for a limited number of species (including avocet, oystercatcher and gulls) with limited evidence of breeding of most species.
- 1.5.40 The overall valuation of the breeding bird assemblage recorded within the intertidal zone would likely meet county importance criteria (as no species numbers approach a significant proportion of national breeding estimates but are important at a county breeding season level in terms of numbers). However, the valuation of the intertidal area itself would remain as international as per its status as an SPA/Ramsar.

Species

- 1.5.41 Overall, the peak/territory counts of a small number of species are assessed as particularly notable as follows:
- Oystercatcher county – consistent recorded of groups sizes in the region of 80 to 400 being consistently recorded during the breeding season. While not representing breeding pairs (or including birds breeding elsewhere), these numbers show presence of relatively sizeable numbers of birds within the Survey Area throughout the year.
 - Spotted redshank and green sandpiper – national importance based on small Great Britain population estimates (Frost, et al., 2019), but passage only.
 - Marsh harrier provisionally assessed as local (district) importance due to the recorded peak count being comparable to county peak counts as well regular recording during surveys. The species is assessed as breeding beyond the Survey Area but making use of it for foraging and display, mostly near to the River Stour Canal.
 - Cuckoo – assessed as local (district) with a recorded count is comparable to the peak counts recorded elsewhere in Kent (Kent Ornithological Society, 2023).
 - Skylark as local (district) importance due to large peak counts and territories being comparable to peak county counts within the Kent Bird Report (Kent Ornithological Society, 2023) but a species known to be well distributed throughout the county.

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Annex 2.D.1 Detailed Survey Data

Table A.1 Detailed Survey Data

Species	Conservation Status	Visit Sum Count						Vantage Point Incidentals	Overall (by Visit) Peak Count	Overall Mean count	Highest Recorded Breeding Status	Total Number of Breeding Territories (where applicable)
		31/03/23	19/04/23	09/05/23	31/05/23	13/06/23	04/07/23					
AV. Avocet (<i>Recurvirostra avosetta</i>)	Birds Dir: An1 WCA Schedule 1 species Amber: BL, WL	2	5		2			0	5	1.5	Non-breeder	0
B. Blackbird (<i>Turdus merula</i>)	Green	7	11	5	9	10	2		11	7.33	Probable: Permanent territory	P
BA. Bar-tailed godwit (<i>Limosa lapponica</i>)	Birds Dir: An1 Amber: WL, WI		12						12	2.00	Non-breeder	0

Species	Conservation Status	Visit Sum Count						Vantage Point Incidental s	Overall (by Visit) Peak Count	Overall Mean count	Highest Recorded Breeding Status	Total Number of Breeding Territories (where applicable)
		31/03/23	19/04/23	09/05/23	31/05/23	13/06/23	04/07/23					
BC. Blackcap (<i>Sylvia atricapilla</i>)	Green	2	5	8	5		5		8	4.17	Probable Permanent territory	P
BF. Bullfinch (<i>Pyrrhula pyrrhula</i>)	Section 41 species. Amber: BDMp2						1		1	0.17	Possible: Suitable Habitat	0
BG Brent goose (<i>Branta bernicla</i>)	Amber: WL, WI				30					5	Non-breeder	0
BH. Black-headed Gull (<i>Chroicocephalus ridibundus</i>)	Amber: WDMp1, WI	12	10	8	1	55	295		295	63.50	Non-breeder	0
BO. Barn owl (<i>Tyto alba</i>)	WCA Schedule 1 species Green							1	1	0	Possible: Suitable Habitat	0
BT. Blue Tit (<i>Cyanistes caeruleus</i>)	Green	3	2	1	4	3	4		4	2.83	Probable	P

Species	Conservation Status	Visit Sum Count						Vantage Point Incidentals	Overall (by Visit) Peak Count	Overall Mean count	Highest Recorded Breeding Status	Total Number of Breeding Territories (where applicable)
		31/03/23	19/04/23	09/05/23	31/05/23	13/06/23	04/07/23					
											Permanent territory	
BZ. Buzzard (<i>Buteo buteo</i>)	Green		3			1	1		2	0.83	Possible: Suitable habitat	P
C. Carrion Crow (<i>Corvus corone</i>)	Green	6	6	14	2	5			14	5.5	Confirmed: Occupied nest	P
CA. Cormorant (<i>Phalacrocorax carbo</i>)	Green	2	8	6	1	3	1		8	3.5	Non-breeder	P
CB. Corn Bunting (<i>Emberiza calandra</i>)	Section 41 species. Red: HD, BDp2, BDr2; BDMp1, BDMr1, WDMr				1		2		2	0.50	Probable Permanent territory	1 territory
CC. Chiffchaff (<i>Phylloscopus collybita</i>)	Green	11	10	8	8		5		11	7.00	Probable	P

Species	Conservation Status	Visit Sum Count						Vantage Point Incidentals	Overall (by Visit) Peak Count	Overall Mean count	Highest Recorded Breeding Status	Total Number of Breeding Territories (where applicable)
		31/03/23	19/04/23	09/05/23	31/05/23	13/06/23	04/07/23					
											Permanent territory	
CD. Collared Dove (<i>Streptopelia decaocto</i>)	Green	1							1	0.17	Possible: Suitable habitat	P
CG. Canada goose (<i>Branta canadensis</i>)	N/A		3						3	0.50	Non-breeder	P
CH. Chaffinch (<i>Fringilla coelebs</i>)	Green	9	8	11	7	2	5		11	7.00	Probable Permanent territory	P
CK. Cuckoo (<i>Cuculus canorus</i>)	Section 41 species. Red: BDp2; BDMp1			3	2	1			3	1.00	Probable Signing	0
CM. Common Gull (<i>Larus canus</i>)	Amber: WI		6	66			12		66	14.00	Possible: Suitable habitat	0

Species	Conservation Status	Visit Sum Count						Vantage Point Incidentals	Overall (by Visit) Peak Count	Overall Mean count	Highest Recorded Breeding Status	Total Number of Breeding Territories (where applicable)
		31/03/23	19/04/23	09/05/23	31/05/23	13/06/23	04/07/23					
CN. Common Tern (<i>Sterna hirundo</i>)	Birds Dir: An1 Green						1		1	0.17	Non-breeder	0
CO. Coot (<i>Fulica atra</i>)	Green		5						5	0.83	Possible: Suitable habitat	0
CS. Common Sandpiper (<i>Actitis hypoleucos</i>)	Amber: BDMp1/2, WR				1				1	0.17	Possible: Suitable habitat	0
CU. Curlew (<i>Numenius arquata</i>)	Section41 species. Amber: ERLOB	28	28	12	1	1	30		30	16.67	Non-breeder	0
CW. Cetti's Warbler (<i>Cettia cetti</i>)	WCA Schedule 1 species Green	6	19	15	18	7	5		19	11.67	Probable Permanent territory	15 territories
D. Dunnock (<i>Prunella modularis</i>)	Section41 species. Amber: BDMp2	8	1	5	2	4	1		8	3.50	Probable Permanent territory	4 territories

Species	Conservation Status	Visit Sum Count						Vantage Point Incidentals	Overall (by Visit) Peak Count	Overall Mean count	Highest Recorded Breeding Status	Total Number of Breeding Territories (where applicable)
		31/03/23	19/04/23	09/05/23	31/05/23	13/06/23	04/07/23					
DN. Dunlin (<i>Calidris alpina</i>)	Red: WDP2; WDMp1, BDMr1, BL, WL		7	20	10	4			20	6.83	Non-breeder	0
DR. Spotted redshank (<i>Tringa erythropus</i>)	Amber: WR		3						3	0.50	Non-breeder	0
ET. Little Egret (<i>Egretta garzetta</i>)	Birds Dir An1 Green	4	3	1	2	4	18		18	5.33	Non-breeder	0
FF. Fieldfare (<i>Turdus pilaris</i>)	WCA Schedule 1 species Red: BDP1/2, BDr1, BDMr2, BR		1						1	0.17	Non-breeder	0
G. Green Woodpecker (<i>Picus viridis</i>)	Green		2			2			2	0.67	Possible: Suitable habitat	0
GA. Gadwall (<i>Anas strepera</i>)	Amber: BI					2			2	0.33	Possible:	0

Species	Conservation Status	Visit Sum Count						Vantage Point Incidents	Overall (by Visit) Peak Count	Overall Mean count	Highest Recorded Breeding Status	Total Number of Breeding Territories (where applicable)
		31/03/23	19/04/23	09/05/23	31/05/23	13/06/23	04/07/23					
GB. Great Black-backed Gull (<i>Larus marinus</i>)	Amber: BDMp2, WDMp1	21	84			49			84	25.67	Non-breeder	0
GC. Goldcrest (<i>Regulus regulus</i>)	Green	1							1	0.17	Possible: Suitable habitat	P
GE. Green Sandpiper (<i>Tringa ochropus</i>)	WCA Sch1. Amber: BDMr1, BR, WR		6						6	1.00	Non-breeder	0
GG. Great Crested Grebe (<i>Podiceps cristatus</i>)	Green	1	2	1	3	1	3		3	1.83	Confirmed Recently fledged young or downy young	1 territory
GJ. Greylag Goose (<i>Anser anser</i>)	Amber: WL, WI		4						4	0.67	Non-breeder:	0

Species	Conservation Status	Visit Sum Count						Vantage Point Incidentals	Overall (by Visit) Peak Count	Overall Mean count	Highest Recorded Breeding Status	Total Number of Breeding Territories (where applicable)
		31/03/23	19/04/23	09/05/23	31/05/23	13/06/23	04/07/23					
Flyover												
GO. Goldfinch (<i>Carduelis carduelis</i>)	Green	1	8		7	6	3		8	4.17	Probable: Singing	P
GP. Golden Plover (<i>Pluvialis apricaria</i>)	Birds Dir: An1 Green				1				1	0.17	Non-breeder	0
GR. Greenfinch (<i>Chloris chloris</i>)	Red: BDp1/2	1		1					1	0.33	Probable: Singing	0
GT. Great Tit (<i>Parus major</i>)	Green	5	3	3	2				5	2.17	Probable: Singing	P
GV. Grey Plover (<i>Pluvialis squatarola</i>)	Amber: WDMp1, WL		4		2				4	1.00	Non-breeder	0
H. Grey Heron (<i>Ardea cinerea</i>)	Green	2		1	3	1			3	1.17	Non-breeder	0
HG. Herring Gull (<i>Larus argentatus</i>)	Section 41 species.	116	78	140	3	30	131		140	83	Non-breeder	0

Species	Conservation Status	Visit Sum Count						Vantage Point Incidents	Overall (by Visit) Peak Count	Overall Mean count	Highest Recorded Breeding Status	Total Number of Breeding Territories (where applicable)
		31/03/23	19/04/23	09/05/23	31/05/23	13/06/23	04/07/23					
	Red: BDp2, WDp1, BI, WI											
HM. House Martin (<i>Delichon urbicum</i>)	Red: BDp2				1				1	0.17	Non-breeder: Fly-over	0
HS. House Sparrow (<i>Passer domesticus</i>)	Section 41 species. Red: BDp2	5	5	3		9	14		14	6	Probable Permanent territory	1 confirmed colony
HY. Hobby (<i>Falco subbuteo</i>)	WCA Sch1, Green						1		1	0.17	Possible: Suitable habitat	0
J. Jay (<i>Garrulus glandarius</i>)	Green				1				1	0.17	Possible: Suitable habitat	P
JD. Jackdaw (<i>Corvus monedula</i>)	Green					3			3	0.50	Possible: Suitable habitat	P

Species	Conservation Status	Visit Sum Count						Vantage Point Incidentals	Overall (by Visit) Peak Count	Overall Mean count	Highest Recorded Breeding Status	Total Number of Breeding Territories (where applicable)
		31/03/23	19/04/23	09/05/23	31/05/23	13/06/23	04/07/23					
K. Kestrel (<i>Falco tinnunculus</i>)	Amber: BDMp1/2				2	4	2		4	1.33	Possible: Suitable habitat	0
KF. Kingfisher (<i>Alcedo atthis</i>)	BDp1/2 WCA Sch1. Green		1		1		1		1	0.50	Possible: Suitable habitat	0
L. Lapwing (<i>Vanellus vanellus</i>)	Section 41 species. Red: BDp2, ERLOB, BDMp1, WDMP2, WI		2						2	0.33	Possible: Suitable habitat	0
LB. Lesser Black-backed Gull (<i>Larus fuscus</i>)	Amber: BL, BI	4	13	2		10			13	4.83	Non-breeder	0
LI. Linnet (<i>Linaria cannabina</i>)	Section 41 species. Red: BDp2	16	36	5	8		12		36	12.83	Probable Permanent territory	At least three colonies

Species	Conservation Status	Visit Sum Count						Vantage Point Incidents	Overall (by Visit) Peak Count	Overall Mean count	Highest Recorded Breeding Status	Total Number of Breeding Territories (where applicable)
		31/03/23	19/04/23	09/05/23	31/05/23	13/06/23	04/07/23					
LT. Long-tailed Tit (<i>Aegithalos caudatus</i>)	Green		1		1				1	0.33	Probable Singing	P
LW. Lesser Whitethroat (<i>Sylvia curruca</i>)	Green			2	1		2	1	2	0.83	Probable Permanent territory	P
M. Mistle Thrush (<i>Turdus viscivorus</i>)	Red: BDp2, BDMp1	1	1						1	0.33	Possible: Suitable habitat	0
MA. Mallard (<i>Anas platyrhynchos</i>)	Amber: WDMp1/2	22	25	23	8	2	2		25	13.67	Confirmed: Recently fledged young or downy young	1 territory
MG. Magpie (<i>Pica pica</i>)	Green	4	2	1	3	5	3		5	3.00	Possible: Suitable habitat	P

Species	Conservation Status	Visit Sum Count						Vantage Point Incidentals	Overall (by Visit) Peak Count	Overall Mean count	Highest Recorded Breeding Status	Total Number of Breeding Territories (where applicable)
		31/03/23	19/04/23	09/05/23	31/05/23	13/06/23	04/07/23					
MH. Moorhen (<i>Gallinula chloropus</i>)	Amber: BDMp2	1		5	2		3		5	1.83	Probable: Agitated behaviour	2 territories
MP. Meadow Pipit (<i>Anthus pratensis</i>)	Amber: BDMp2	9	7	1		2			9	3.67	Probable: Agitated behaviour	2 territories
MR. Marsh Harrier (<i>Circus aeruginosus</i>)	BDp1/2 WCA Sch1, Amber: BL	1	2	2	2				2	1.17	Probable: Courtship and display	0 (likely territory beyond survey areas_
MS. Mute Swan (<i>Cygnus olor</i>)	Green	3	4						3	1.67	Possible Pair	P
MU. Mediterranean Gull (<i>Larus melanocephalus</i>)	Birds Dir: An1 WCA Sch1, Amber: BL								5	0	Non breeder Flyover:	0
OC. Oystercatcher (<i>Haematopus ostralegus</i>)	Amber: ERLOB, WL, WI, BI	78	453	60	220	224	88		453	187.17	Non-breeder:	0

Species	Conservation Status	Visit Sum Count						Vantage Point Incidents	Overall (by Visit) Peak Count	Overall Mean count	Highest Recorded Breeding Status	Total Number of Breeding Territories (where applicable)
		31/03/23	19/04/23	09/05/23	31/05/23	13/06/23	04/07/23					
P. Grey Partridge (<i>Perdix perdix</i>)	Section 41 species. Red: BDp1/2; BDMr2			2					2	0.33	Probable: Pair	0
PE. Peregrine Falcon	BDp1/2; BDMr2 WCA Schedule 1 species. Green							1	1	0	Non-breeder	0
PH. Pheasant (<i>Phasianus colchicus</i>)	Green	5	2	2	3	2	1	4	5	2.50	Possible: Suitable habitat	P
PW. Pied Wagtail (<i>Motacilla alba</i>)	Green	1							1	0.17	Possible: Suitable habitat	P
R. Robin (<i>Erithacus rubecula</i>)	Green	6	3	3	2	2			6	2.67	Probable Permanent territory	P

Species	Conservation Status	Visit Sum Count						Vantage Point Incidents	Overall (by Visit) Peak Count	Overall Mean count	Highest Recorded Breeding Status	Total Number of Breeding Territories (where applicable)
		31/03/23	19/04/23	09/05/23	31/05/23	13/06/23	04/07/23					
RB. Reed Bunting (<i>Emberiza schoeniclus</i>)	Section 41 species. Amber: BDMp2	6	5	5	3	4	1		6	4.00	Probable: Pair	6 territories
RE. Redwing (<i>Turdus iliacus</i>)	WCA Schedule 1 species. Red: BDMr1/2, BR	13	9						13	3.67	Non-breeder	0
RI. Ring-necked Parakeet (<i>Psittacula krameri</i>)	N/A	2	17	1	2	2			17	4	Probable: Pair	P
RK. Redshank (<i>Tringa totanus</i>)	Amber: ERLOB, BDMp1, BDMr1/2, WI	3	4		3		2		4	2	Non-breeder	0
RN. Raven (<i>Corvus corax</i>)	Green	3	1						3	0.67	Confirmed: Adults carrying	P

Species	Conservation Status	Visit Sum Count						Vantage Point Incidental s	Overall (by Visit) Peak Count	Overall Mean count	Highest Recorded Breeding Status	Total Number of Breeding Territories (where applicable)
		31/03/23	19/04/23	09/05/23	31/05/23	13/06/23	04/07/23					
											faecal sac or food for young	
RO. Rook (<i>Corvus frugilegus</i>)	Amber: ERLOB	5				2			5	1.17	Confirmed: Adults entering or leaving nest site, indicating occupied nest	1 colony
RW. Reed Warbler (<i>Acrocephalus scirpaceus</i>)	Green		6	27	31	14	20		31	16.33	Confirmed: Recently fledged young	P
S. Skylark (<i>Alauda arvensis</i>)	Section 41 species. Red: BDp2	34	41	37	46	8	20		43	31.00	Confirmed: Recently fledged young or	37 territories

Species	Conservation Status	Visit Sum Count						Vantage Point Incidents	Overall (by Visit) Peak Count	Overall Mean count	Highest Recorded Breeding Status	Total Number of Breeding Territories (where applicable)
		31/03/23	19/04/23	09/05/23	31/05/23	13/06/23	04/07/23					
											downy young	
SD. Stock Dove (<i>Columba oenas</i>)	Amber: BL	4	1	2	4	2			4	2.17	Confirmed: Adults entering or leaving nest site, indicating occupied nest	1 territory
SG. Starling (<i>Sturnus vulgaris</i>)	Section 41 species. Red: BDp1/	8	18	12		63			63	16.83	Possible: Suitable habitat	0
SH Sparrowhawk (<i>Accipiter nisus</i>)	Amber: BDMp1,							1	1	0	Possible: Suitable habitat	1
SI. Swift (<i>Apus apus</i>)	Red: BDp1				2	3	12		12	2.83	Non breeder: Fly-over	0

Species	Conservation Status	Visit Sum Count						Vantage Point Incidentals	Overall (by Visit) Peak Count	Overall Mean count	Highest Recorded Breeding Status	Total Number of Breeding Territories (where applicable)
		31/03/23	19/04/23	09/05/23	31/05/23	13/06/23	04/07/23					
SL. Swallow (<i>Hirundo rustica</i>)	Green	1	2	2	1	4	2		4	2	Non breeder: Fly-over	0
SN. Snipe (<i>Gallinago gallinago</i>)	Amber: ERLOB, WDMp1, BDMr2							1	1	0	Possible: Suitable habitat	0
ST. Song Thrush (<i>Turdus philomelos</i>)	Section 41 species. Amber: BDMp2	4	3	5	3	2	2		5	3.17	Probable Permanent territory	2 territories
SU. Shelduck (<i>Tadorna tadorna</i>)	Amber: BDMp1, WDMp1, WL	10	12	18	7	22	23		23	15.33	Non-breeder	0
SV. Shoveler (<i>Spatula clypeata</i>)	Amber: BI	7	1	2	29				29	6.50	Non-breeder	0
SW. Sedge Warbler (<i>Acrocephalus schoenobaenus</i>)	Amber: BDMp2	1	11	15	5	2	7		15	6.83	Confirmed Adults carrying food	8

Species	Conservation Status	Visit Sum Count						Vantage Point Incidentals	Overall (by Visit) Peak Count	Overall Mean count	Highest Recorded Breeding Status	Total Number of Breeding Territories (where applicable)
		31/03/23	19/04/23	09/05/23	31/05/23	13/06/23	04/07/23					
T. Teal (<i>Anas crecca</i>)	Amber: WI	4	2						4	1	Possible: Suitable habitat	0
TT. Turnstone (<i>Arenaria interpres</i>)	Amber: WDMp1			1					1	0.17	Non-breeder	0
WH. Whitethroat (<i>Sylvia communis</i>)	Amber: BDMp2		6	18	6	11	17		18	9.67	Probable Permanent territory	At least 14 territories
WM Whimbrel (<i>Numenius phaeopus</i>)	Red BDp1, BDr1; BDMr2, WR							2	2	0	Non-breeder	0
WP. Woodpigeon (<i>Columba palumbus</i>)	Amber: BI	19	16	17	14	23	72		72	27	Probable Singing	P
WR. Wren (<i>Troglodytes troglodytes</i>)	Amber: BI	14	6	10	11	8	17		17	11.00	Probable Permanent territory	P

Species	Conservation Status	Visit Sum Count						Vantage Point Incidents	Overall (by Visit) Peak Count	Overall Mean count	Highest Recorded Breeding Status	Total Number of Breeding Territories (where applicable)
		31/03/23	19/04/23	09/05/23	31/05/23	13/06/23	04/07/23					
Y. Yellowhammer (<i>Emberiza citrinella</i>)	Section 41 species. Red: BDp2, BDMp1	4	1	2			3		4	1.50	Probable Singing	1 territory
YW. Yellow Wagtail (<i>Motacilla flava</i>)	Section 41 species. Red: BDp2; BDMp1, BDMr1/2	2	8	15	2	7			15	5.67	Confirmed Adults carrying food	6 territories

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