

Eastern Green Link 4: Scottish Onshore Scheme

*Volume 4: Appendices
Appendix 7.4: Ornithology*

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Table of Contents

Technical Appendix 7.4 – Ornithology	1
1. Introduction	1
1.1 Background	1
1.2 Quality Assurance	1
1.3 Legislation	1
1.4 Biodiversity guidance	2
2. Methods	2
2.1 Desk Study.....	2
2.2 Field Survey	3
2.3 Limitations and Assumptions	5
3. Results	6
3.1 Nature Conservation Sites	6
3.2 Birds.....	10
4. References	16
Annex A Desk Study Records.....	17
Annex B Coastal Bird Survey Results	20

01.

Introduction

Appendix 7.4 – Ornithology

1. Introduction

1.1 Background

This appendix accompanies **Chapter 7: Ecology and Nature Conservation** of the Environmental Impact Assessment Report (EIAR). It describes the desk study and field surveys carried out to establish the baseline conditions of birds within the zone of influence (Zol) of the Scottish Onshore Scheme.

This appendix is supported by **Figure 7.2** and **Figures 7.7-7.10 (Chapter 7 Ecology and Nature Conservation, Volume 2 Main Report)**.

Throughout this appendix, species are given their common and scientific names when first referred to and their common names only thereafter. All distances are cited as the shorted distance ‘as the crow flies’, unless otherwise specified. The area encompassed by the red line boundary shown on the accompanying figures is referred to throughout as the ‘Site’.

1.2 Quality Assurance

This appendix, and the desk study and field survey described within it, has been completed in accordance with the AECOM Integrated Management System (IMS). AECOM’s IMS places emphasis on professionalism, technical excellence, quality, as well as covering health, safety, environment and sustainability management. All AECOM staff members are committed to maintaining this accreditation to those parts of BS EN ISO 9001:2015 and 14001:2015, as well as BS OHSAS 18001:2007 that are relevant to a consultancy service.

The field surveys for birds were carried out by capable AECOM employees with experience of these surveys. All are members of the Chartered Institute of Ecology and Environmental Management (CIEEM) at the appropriate grade and adhered to their strict Code of Professional Conduct.

1.3 Legislation

All species of wild bird are protected by the Wildlife and Countryside Act 1981 (as amended) (hereafter abbreviated to the ‘WCA’), which makes it an offence to intentionally or recklessly:

- Kill, injure or take a wild bird;
- Take, damage, destroy or interfere with a nest of any wild bird while it is in use or being built;
- Obstruct or prevent any bird from using its nest;
- Take or destroy an egg of any bird.

In addition, a number of rare bird species are listed on Schedule 1 of the WCA and receive further legal protection which makes it an offence to intentionally or recklessly disturb these

species whilst they are building a nest or while they are in, on or near a nest which contains eggs or young. It is furthermore an offence to disturb the dependent young of these species.

Under the Nature Conservation (Scotland) Act 2004, public bodies in Scotland have a duty to further the conservation of biodiversity. The Scottish Biodiversity List (SBL) is a list of habitats, plants and animals that Scottish Ministers consider to be of principal importance for biodiversity conservation in Scotland. The purpose of the SBL is to identify habitats and species that are of highest priority for biodiversity conservation, thereby helping public bodies to carry out their biodiversity duty. There are 105 bird species on the SBL, many which may occur within the Zol of the Development.

1.4 Biodiversity Guidance

Birds of Conservation Concern

The Birds of Conservation Concern 5 (BoCC) (Stanbury et al, 2021) places birds into ‘Red’, ‘Amber’ and ‘Green’ lists, using standardised quantitative criteria to indicate the level of conservation concern surrounding each species. Species on the Red List are of highest conservation concern and may be Globally Threatened (under International Union for Conservation of Nature (IUCN) guidelines and assessed by BirdLife International) or have experienced breeding or wintering population declines or range contractions of more than 50% over 25 years. The Amber List contains species which have European Red List status (BirdLife International, 2015) and/or have experienced breeding or wintering population declines or range contractions of more than 25% (but less than 50%) in 25 years. Green listed bird species do not fall into any of these categories and are of lowest conservation concern.

Fife Local Biodiversity Plan

Fife Local Biodiversity Action Plan (LBAP) sets out Fife Councils’ strategy for improving biodiversity within the local authority area, which contributes to the overall Scottish Biodiversity Strategy. The LBAP includes a variety of projects which focus on conserving certain landscapes and species. The only bird listed as a priority species in the Fife LBAP is corn bunting *Emberiza calandra*.

2. Methods

2.1 Desk Study

A desk study was carried out to identify nature conservation designations for which birds are qualifying or notified species, and to search for existing records of birds in proximity to the Scottish Onshore Scheme. The desk study sought to identify:

- Special Protection Areas (SPAs) and Wetlands of International Importance (‘Ramsar sites’) designated for birds within 10 km of the Scottish Onshore Scheme., extended to 20 km for sites with geese species as qualifying features;
- Sites of Special Scientific Interest (SSSIs) designated for birds within 2 km of the Scottish Onshore Scheme;

- locally designated sites within 1 km of the Scottish Onshore Scheme for which bird species are an identified reason for designation; and
- records of important bird species within 1 km of the of the Scoping Boundary¹, made in the last 10 years.

The desk study was carried out using the data sources listed in Table 1.

Table 1: Desk Study Data Sources

Data source	Date accessed	Data obtained
Fife Nature Records Centre	September 2024	<ul style="list-style-type: none"> • Records of protected and/or important bird species. • Non-statutory sites.
NatureScot SiteLink webpage (https://sitelink.nature.scot/home)	February 2025	<ul style="list-style-type: none"> • SPAs and Ramsar sites within 20 km. • SSSIs within 2 km of the Scottish Onshore Scheme, designated for bird species.
NBN Atlas Scotland (https://scotland.nbnatlas.org/)	September 2024	Commercially-available records of protected and/or important bird species within 1 km of the Scottish Onshore Scheme, made since 2014.
Ordnance Survey (OS) 1:25,000 maps and aerial photography (https://www.bing.com/maps/)	February 2025	Habitats and connectivity relevant to interpretation of planning policy and potential important bird constraints.

Additionally, Scottish Raptor Study Group were contacted on 09 May 2025 to enquire about obtaining raptor data but no response was received.

2.2 Field Survey

All field surveys relating to birds were carried out between 17 September 2024 and 19 March 2025. All field mapping was carried out using Esri Field Maps on a GPS-enabled tablet with aerial photography, to maximise mapping accuracy.

Wintering Waterbird Surveys

Survey of wintering waterbirds² was carried out once per month from September 2024 to March 2025 inclusive. Surveys were carried out of suitable habitat within 500 m of the Converter Station and 1 km of the Landfall³. The surveys were stratified according to Kincardine tide times (UK Hydrographic Office, 2025) and focussed on high and low tides, to investigate use of the area by birds under different tidal conditions. Where possible, surveys

¹ A record search was carried out to inform the scoping report (AECOM, 2024) before the Site boundary was defined.

² The BTO define 'waterbirds' as wildfowl (ducks, geese and swans), waders, rails, divers, grebes, cormorants, herons, gulls and terns. This list is extended to include all seabirds as listed within the BTO Seabird Monitoring Program.

³ Survey areas were based on the scoping boundary provided at the time of survey and not the final designs.

were carried out from two hours before to two hours after the focal tide condition and comprised a similar number of high and low tide surveys.

The surveys generally followed the method adopted by the British Trust for Ornithology (BTO) for the national WeBS scheme (BTO, 2017), which itself is based on the 'look-see' method described in Bibby *et al.* (2000).

Surveyors drove around stopping at suitable vantage points to scan the fields within the Converter Station plus a 500 m buffer. From November onwards surveyors also walked along the coastal path, scanning suitable habitat along the shoreline within 500 m of the Landfall and drove around the adjacent fields within 1 km of the Landfall scanning suitable habitat from vantage points.

Binoculars and a telescope were used to scan suitable habitat. All waterbirds encountered during the survey were counted and mapped. Gulls over-flying the survey area were not recorded. Individual birds and small flocks of birds were recorded as points. Flocks of birds which were larger / more spread out were recorded as polygons. Where large flocks occurred (>30 individuals), counts were approximate. Bird behaviour was also recorded as either foraging, loafing or roosting.

Details of the waterbird survey visits are provided in Table 2.

Table 2. Wintering Waterbird Survey Details

Survey date	Tidal state	Tide time	Start time	End time	Weather conditions	Area surveyed
17/09/24	Low	08:45	07:50	09:50	Force 2 south-westerly winds. Clear skies with excellent visibility. Temperature 13°C.	Converter Station
10/10/24	Low	12:40	11:38	13:38	Force 1-2 north-westerly winds. Clear skies with excellent visibility. Temperature 10°C.	Converter Station
14/11/24	High	13:05	10:30	15:00	Force 2 south-westerly winds. Clear skies with excellent visibility.	Converter Station, Landfall Inland, Landfall Coastal
06/12/24	Low	11:10	09:10	13:45	Force 2-3 south-westerly winds. Cloudy with excellent visibility. Temperature 5-6°C.	Converter Station, Landfall Inland, Landfall Coastal
23/01/25	High	09:03	08:45	12:10	Force 2-3 south-easterly winds. Mostly overcast but excellent visibility. Temperature 2-4°C.	Converter Station, Landfall Inland, Landfall Coastal
25/02/25	High	12:52	12:10	15:15	Force 4 westerly winds. Cloudy with excellent visibility. Temperature 8°C	Converter Station, Landfall Inland, Landfall Coastal

Survey date	Tidal state	Tide time	Start time	End time	Weather conditions	Area surveyed
19/03/25	Low	10:27	10:00	12:45	Force 1-2 easterly winds. Clear skies with excellent visibility. Temperature 5-6°C	Converter Station, Landfall Inland, Landfall Coastal

Surveys Scoped Out

No breeding bird surveys were carried out. With the exception of low value habitat at the Converter station (very largely intensive agriculturally-improved and very heavily-grazed pasture), the Scottish Onshore Scheme will involve temporary habitat loss only. Works at the Landfall will be in arable land where the small area of permanent infrastructure (Transition Joint Pit) will be buried and the ground reinstated with no permanent above-ground infrastructure. Certain sections of the cable route will be installed by Horizontal Direct Drilling (HDD) with no loss of habitat, and where the majority of the cable route is installed by trench methods the habitat will be reinstated above. Thus there will be no permanent impacts on breeding birds along the cable route or at the Landfall. The breeding bird assemblage at the Converter station is likely to comprise very small numbers of common and widespread species whose conservation status is not vulnerable to the potential impacts of the Project. The breeding species that are qualifying species of Outer Firth of Forth and St Andrews Bay Complex SPA nest on offshore islands and will not be impacted by the Project.

The scoping response letter from Fife Council, dated 17 February 2025, states that both Fife Council and NatureScot are in agreement with the approach to scope out breeding bird surveys.

2.3 Limitations and Assumptions

The aim of the desk study was to help characterise the baseline context of the Scottish Onshore Scheme and provide valuable background information that may not be captured by field survey alone. Information obtained during the desk study is dependent upon people and organisations having made and submitted records for the area of interest. As such, a lack of records for particular species does not necessarily mean they do not occur in the study area. Likewise, the presence of records for a particular species does not automatically mean that these still occur within the area of interest or are relevant to the Scottish Onshore Scheme.

Non-breeding bird surveys were carried out at the Converter Station during all winter months however surveys were only carried out around the Landfall from November-March inclusive. There should still be sufficient data from the November-March surveys to get a baseline of birds utilising the habitats. Additionally, some fields surrounding the Landfall were difficult to view from public access and only able to be seen while driving by, resulting in approximate estimates of the number of birds spotted in these fields.

Survey areas were based on the Site as it was at the time of survey, not on the final designs.

3. Results

3.1 Nature Conservation Sites

Four SPAs designated for a range of non-breeding and breeding birds are present within 20 km of the Scottish Onshore Scheme: Firth of Forth SPA, Outer Firth of Forth and St Andrews Bay Complex SPA, Forth Islands SPA, and Loch Leven SPA. Firth of Forth and Loch Leven are also designated as Ramsar sites and SSSIs.

Information on all of these nature conservation sites is given in Table 3, and their locations relative to the Project are shown on **Figure 7.2**.

Table 3. Summary of Statutory Designated Sites for Nature Conservation

Site Name	Reason for Designation	Relationship to the Project
Special Protection Areas		
Firth of Forth SPA	<p>A complex of estuarine and coastal habitats which includes extensive, invertebrate-rich intertidal flats and rocky shores, areas of saltmarsh, lagoons and sand dune. The qualifying features are the following non-breeding bird species:</p> <ul style="list-style-type: none"> • bar-tailed godwit⁴; • common scoter; • cormorant <i>Phalacrocorax carbo</i>; • curlew; • dunlin; • eider <i>Somateria mollissima</i>; • golden plover <i>Pluvialis apricaria</i>; • goldeneye; • great crested grebe <i>Podiceps cristatus</i>; • grey plover <i>Pluvialis squatarola</i>; • knot <i>Calidris canutus</i>; • lapwing; • long-tailed duck; • mallard <i>Anas platyrhynchos</i>; • oystercatcher <i>Haematopus ostralegus</i>; • pink-footed goose <i>Anser brachyrhynchus</i>; • red-breasted merganser <i>Mergus serrator</i>; • red-throated diver; • redshank <i>Tringa totanus</i>; • ringed plover; • scaup; • shelduck <i>Tadorna tadorna</i>; • Slavonian grebe <i>Podiceps auratus</i>; 	The Scottish Onshore Scheme is partially within the boundary of Firth of Forth SPA, at the Landfall at Kinghorn. The SPA extends along the north (and south) coast of the Firth of Forth.

⁴ Scientific names not included here can be found in Annex A

Site Name	Reason for Designation	Relationship to the Project
	<ul style="list-style-type: none"> • turnstone <i>Arenaria interpres</i>; • velvet scoter; • wigeon <i>Anas penelope</i>. <p>In addition, the non-breeding waterfowl assemblage and passage sandwich tern are also qualifying features.</p>	
<p>Outer Firth of Forth and St Andrews Bay Complex SPA</p>	<p>A large estuarine/marine site which encompasses the Firth of Forth and Firth of Tay. It is designated for the following qualifying non-breeding species:</p> <ul style="list-style-type: none"> • black-headed gull; • common gull <i>Larus canus</i>; • common scoter; • eider; • goldeneye; • guillemot <i>Uria aalge</i>; • herring gull; • kittiwake; • little gull; • long-tailed duck; • razorbill <i>Alca tadorna</i>; • red-breasted merganser; • red-throated diver; • shag <i>Phalacrocorax aristotelis</i>; • Slavonian grebe; and, • velvet scoter. <p>In addition, the site is also designated for the non-breeding waterfowl and seabird assemblages it supports.</p> <p>Furthermore, the following breeding species are also qualifying features:</p> <ul style="list-style-type: none"> • Arctic tern (breeding); • common tern; • gannet <i>Morus bassanus</i>; • guillemot; • herring gull; • kittiwake; • Manx shearwater; • puffin; and, • shag. <p>The breeding seabird assemblage supported by the site is also a qualifying feature.</p>	<p>The Landfall for the Scottish Onshore Scheme lies immediately adjacent to this SPA, which encompasses the Firth of Forth as far upstream as Inverkeithing.</p>
<p>Loch Leven SPA</p>	<p>Loch Leven is the largest natural eutrophic lake in Britain. It is a relatively shallow loch, surrounded by farmland, with a diverse aquatic flora and shoreline</p>	<p>The closest boundary of the SPA is approximately 2.4 km north-west of the</p>

Site Name	Reason for Designation	Relationship to the Project
	<p>vegetation. It is designated for the following qualifying non-breeding bird species:</p> <ul style="list-style-type: none"> • cormorant; • gadwall <i>Anas strepera</i>; • goldeneye; • pink-footed goose; • pochard; • shoveler <i>Anas clypeata</i>; • teal <i>Anas crecca</i>; • tufted duck <i>Aythya fuligula</i>; and, • whooper swan. <p>In addition, the non-breeding waterfowl assemblage is also a qualifying feature.</p>	<p>Scottish Onshore Scheme. The qualifying geese and swan species use land across the landscape surrounding the SPA.</p>
Forth Islands SPA	<p>A series of islands supporting the main seabird colonies in the Firth of Forth. It is designated for the following qualifying breeding species:</p> <ul style="list-style-type: none"> • Arctic tern; • common tern; • cormorant; • gannet; • guillemot; • herring gull; • kittiwake; • lesser black-backed gull <i>Larus fuscus</i>; • puffin; • razorbill; • roseate tern <i>Sterna dougallii</i>; • sandwich tern <i>Sterna sandvicensis</i>; and, • shag. <p>In addition, the breeding seabird assemblage is also a qualifying feature.</p>	<p>The closest boundary of the SPA is approximately 6.4 km south-west of the Scottish Onshore Scheme.</p>

Wetlands of International Importance

Firth of Forth Ramsar site	Designated for the same species as the Firth of Forth SPA.	Coincident with Firth of Forth SPA.
Loch Leven Ramsar site	Designated for the same species as Loch Leven SPA, as well as the eutrophic loch habitat.	Coincident with Loch Leven SPA.

Sites of Special Scientific Importance

Firth of Forth SSSI	Designated for the same list of non-breeding bird species as the Firth of Forth SPA.	Coincident with the Firth of Forth SPA.
Loch Leven SSSI	<p>Designated for the same list of non-breeding bird species as the Loch Leven SPA. In addition, the following are also notified bird features of the SSSI:</p> <ul style="list-style-type: none"> • breeding bird assemblage; 	Coincident with the boundary of Loch Leven SPA.

Site Name	Reason for Designation	Relationship to the Project
	<ul style="list-style-type: none">• breeding gadwall; and,• breeding tufted duck. <p>Non-breeding greylag goose <i>Anser anser</i> is also a notified feature.</p>	

There are no non-statutory designated sites specifically designated for birds within 1 km of the Site.

3.2 Birds

Desk Study

Recent records of 71 notable bird species were identified during the desk study, provided by Fife Nature Records Centre, these are shown in Table A1, Annex A. Eight of these species were also recorded during the wintering bird surveys.

There is no suitable nesting habitat close to the Site for any of the Schedule 1 species returned by the desk study.

Field Survey

During the field surveys a total of 22 species of waterbird were recorded, 12 of which are qualifying species of SPAs within 10 km of the Scottish Onshore Scheme.

Of the qualifying species – pink-footed goose, herring gull, cormorant, eider, long-tailed duck, shag and turnstone were all recorded in numbers representing more than 1% of their respective SPA population⁵.

All field survey results are shown in **Figures 7.9-7.12**. Results are described below split by species group and then survey type.

Waders

Oystercatcher were recorded resting in largish numbers during multiple survey visits north of the Landfall (30 in November, 20 in January and 12 in February). Purple sandpiper were only recorded on one visit, a small group of four resting south of the Landfall along with fourteen turnstone. Redshank, curlew and oystercatcher were recorded across multiple visits in small numbers feeding and roosting throughout the whole coastline including within the Landfall. The area to the north of the Landfall and to the south of the Landfall were used most consistently by foraging waders including a flock of 16 turnstone.

Ducks and Seabirds

Cormorants and shags were regularly recorded using the bay to feed in small numbers. Small groups of eider, shag and cormorant were recorded using a small island just north of the survey area to rest on multiple visits. Long-tailed duck were recorded resting in rafts in moderate numbers far out in the bay on three visits. Eider were recorded both resting and foraging more frequently and closer to the shore but not in great numbers.

Geese and Gulls

Geese were recorded using the Converter Station and the nearby quarry at both low and high tide. The fields within the Converter Station appear to be used regularly by greylag and pink-footed geese, particularly by pink-footed geese, with a peak of 500 birds. Geese were also rarely recorded in the fields near the Landfall in much smaller numbers.

Gulls were regularly recorded in all areas of survey, with small numbers scattered along the coast and larger numbers throughout the inland fields surveyed.

⁵ Proportions based on latest SPA population estimate given in Stroud et al (2016) and NatureScot (2020). Proportions not calculated for Forth Islands SPA as these populations are breeding only.

Converter Station Survey

Eight waterbird species were recorded during the Converter Station survey - three species of goose, four species of gull and one wader species (oystercatcher).

The species recorded in the greatest number was pink-footed goose with a peak count of c.500 birds recorded during the January high tide visit of the Converter Station survey.

The peak count of pink-footed geese recorded during the field survey represents 3.31% of the Firth of Forth SPA population and 3.13% of the Loch Leven SPA population.

The peak counts of common gull and black-headed gull were also recorded during the Converter Station survey representing, respectively, 0.7% and 0.07% of the Outer Firth of Forth and St Andrews Bay Complex SPA.

The results of the Converter Station survey are shown in Table 4 and presented in Figure 7.9. Birds flying over the survey area are included in the table but are not shown on the figure.

Table 4. Converter Station Wintering Bird Survey Results

Month	Tide	Species	Number*	Behaviour and location
Sep	Low	Pink-footed goose	130 + 80	Flight over Converter Station.
		Canada goose	30	Flight over Converter Station.
Oct	Low	Pink-footed goose	200	Roosting on quarry waterbody 340 m from Converter Station.
			220	Flight over Converter Station.
			27+17+4	Flight over quarry waterbody.
		Greylag goose	2	Roosting on quarry waterbody 340 m from Converter Station.
Nov	High	Pink-footed goose	1	Flight over Converter Station.
		Greylag goose	120	Flight over Converter Station (possibly landed on quarry waterbody, at nearest 200 m from Converter Station).
Dec	Low	None	-	-
Jan	High	Pink-footed goose	500	Foraging / loafing in fields within Converter Station
		Greylag goose	30	Foraging in fields within Converter Station
Feb	High	Greylag goose	2	Loafing in fields within Converter Station
		Oystercatcher	10	Foraging in fields within Converter Station
		Common gull	100	Foraging in fields within Converter Station
		Herring gull	50	Foraging in fields within Converter Station
		Black-headed gull	20	Foraging in fields within Converter Station

Month	Tide	Species	Number*	Behaviour and location
		Lesser black-backed gull	17	Foraging / loafing in fields within Converter Station
Mar	Low	None	-	-

**Where multiple numbers are given, more than one flock of the species was present within the survey area.*

Landfall Inland Survey

The fields surrounding the Landfall are used occasionally by low numbers of geese, gulls and waders.

The peak count of herring gulls across all surveys was recorded during the Landfall inland wintering bird survey with a count of 250 which represents 2% of the Outer Firth of Forth and St Andrews Bay Complex SPA population.

A peak count of 20 curlew were also recorded during this survey, representing 0.53% of the Firth of Forth SPA population.

The results of the inland wintering waterbird survey at the Landfall are shown in Table 5 and presented in Figure 7.10.

Table 5. Landfall Inland Wintering Bird Survey Results

Month	Tide	Species	Number*	Behaviour and location
Nov	High	Herring gull	250	Foraging in field 660 m from Site, 1.8 km from Landfall.
			2	Foraging in field 290 m from Site, 1.2 km from Landfall.
		Black-headed gull	20	Foraging in field 680 m from Site, 1.8 km from Landfall.
Dec	Low	Unidentified goose	8	Foraging in field 410 m from Site, 1 km from Landfall.
		Oystercatcher	2	Foraging in field 239 m from Site, 580 m from Landfall.
			1	Foraging in field 1 km from Site, 1.85 km from Landfall.
		Common gull	20	Foraging in field 1 km from Site, 1.85 km from Landfall.
Jan	High	Greylag goose	20	Foraging in field 400 m from Site, 1.5 km from Landfall.
		Common gull	14	Foraging in field 516 m from Site, 2 km from Landfall.
		Herring gull	2	Foraging in field 534 m from Site, 2 km from Landfall.
Feb	High	Curlew	20	Foraging in field 845 m from Site, 1.5 km Landfall.
Mar	Low	None	-	-

**Where multiple numbers are given, more than one flock of the species was present within the survey area.*

Landfall Coastal Survey

Fifteen species of waterbird were recorded during the Landfall coastal bird surveys, including eleven that are qualifying species of designated sites within 10 km of the Scottish Onshore Scheme.

Additional waterbird flights that are not shown on the figure or displayed in the table comprise a foraging kingfisher *Alcedo atthis* in March and an unidentified diver *Gavia* sp. in December. Merlin *Falco columbarius* was also incidentally recorded hunting along the shoreline during the November visit.

The shoreline at the Landfall is used consistently by low numbers of foraging / resting waders and gulls.

The results of the Landfall coastal bird surveys are shown in Tables B1-B6, Annex B and Figure 7.11 and 7.12. Table 6 details the number of surveys during which each species was recorded (out of five surveys), the minimum number that were recorded (when the species was present), and the maximum present during any one survey (the 'peak count'). The table and figures split the birds into 'resting' and 'foraging' behaviours. 'Resting' birds comprise birds which were recorded standing, calling, loafing and roosting. 'Foraging' comprises birds which were recorded actively feeding.

Table 6. Summarised Landfall Coastal Bird Survey Results

Species	Number of surveys during which species was present			Min Count	Peak Count	% of relevant SPA population represented by peak count
	All Records	Foraging	Resting			
Bar-tailed godwit	1	1	-	1	1 (Dec)	0.08% (Firth of Forth SPA)
Black-headed gull	4	-	4	1	4 (Nov and Feb)	0.01% (Outer Firth of Forth and St Andrews Bay Complex SPA)
Cormorant	5	4	2	1	7 (Dec)	1.14% (Firth of Forth SPA) and 4% (Loch Leven SPA)
Curlew	5	3	3	1	6 (Nov)	0.16% (Firth of Forth SPA)
Eider	4	2	4	10	58 (March)	1.09% (Firth of Forth SPA) and 0.27% (Outer Firth of Forth and St Andrews Bay Complex SPA)
Great black-backed gull	3	-	3	1	4 (Dec)	-
Grey heron	4	-	3	2	6 (Nov)	-
Herring gull	5	1	5	1	64(Nov)	0.52% (Outer Firth of Forth and St Andrews Bay Complex SPA)
Lesser black-backed gull	1	-	1	3	3 (March)	-
Long-tailed duck	3	-	3	1	10 (Dec)	5.7% (Firth of Forth SPA) and 0.56% (Outer Firth of Forth and St Andrews Bay Complex SPA)
Oystercatcher	5	4	4	7	35 (Nov)	0.5% (Firth of Forth SPA)
Purple sandpiper	1	-	1	4	4 (Nov)	-
Redshank	5	5	2	6	11 (Feb)	0.22% (Firth of Forth SPA)
Shag	3	1	2	4	27 (Dec)	1.11% (Outer Firth of Forth and St Andrews Bay Complex SPA)

Species	Number of surveys during which species was present			Min Count	Peak Count	% of relevant SPA population represented by peak count
	All Records	Foraging	Resting			
Turnstone	4	-	-	2	16 (Jan)	1.87% (Firth of Forth SPA)

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Annex A Desk Study Records

Records of notable bird species returned by Fife Nature Records Centre within 1km of the Site.

Table A1. Notable Bird Species Recorded within 1 km of the Scottish Onshore Scheme

Common name	Scientific name	Conservation Designations
Arctic skua	<i>Stercorarius parasiticus</i>	BoCC Red List and SBL
Arctic tern	<i>Sterna paradisaea</i>	Annex 1 and SBL
Balearic shearwater	<i>Puffinus mauretanicus</i>	BoCC Red List and SBL
Barnacle goose	<i>Branta leucopsis</i>	Annex 1 and SBL
Bar-tailed godwit	<i>Limosa lapponica</i>	Annex 1 and SBL
Black tern	<i>Chlidonias niger</i>	Annex 1, Sch 1 and SBL
Black-headed gull	<i>Chroicocephalus ridibundus</i>	SBL
Black-legged kittiwake	<i>Rissa tridactyla</i>	BoCC Red List
Black-tailed godwit	<i>Limosa limosa</i>	Sch1, BoCC Red List, SBL
Black-throated diver	<i>Gavia arctica</i>	Annex 1, Sch 1, SBL
Bullfinch	<i>Pyrrhula pyrrhula</i>	SBL
Common scoter	<i>Melanitta nigra</i>	Sch1, BoCC Red List, SBL
Common tern	<i>Sterna hirundo</i>	Annex1, SBL
Dunlin	<i>Calidris alpina</i>	BoCC Red List, SBL
Eurasian curlew	<i>Numenius arquata</i>	BoCC Red List, SBL
Fieldfare	<i>Turdus pilaris</i>	Sch1, BoCC Red List
Goldeneye	<i>Bucephala clangula</i>	BoCC Red List
Grasshopper warbler	<i>Locustella naevia</i>	BoCC Red List, SBL
Great northern diver	<i>Gavia immer</i>	Annex1, Sch1, SBL
Green sandpiper	<i>Tringa ochropus</i>	Sch1, SBL
Greenfinch	<i>Chloris chloris</i>	BoCC Red List
Greenshank	<i>Tringa nebularia</i>	Sch1
Grey partridge	<i>Perdix perdix</i>	BoCC Red List and SBL
Herring gull	<i>Larus argentatus</i>	BoCC Red List, SBL

Common name	Scientific name	Conservation Designations
House martin	<i>Delichon urbicum</i>	BoCC Red List
House sparrow	<i>Passer domesticus</i>	BoCC Red List, SBL
Kestrel	<i>Falco tinnunculus</i>	SBL
Kingfisher	<i>Alcedo atthis</i>	Annex1, Sch1, SBL
Lapland longspur	<i>Calcarius lapponicus</i>	Sch1
Leach's storm-petrel	<i>Hydrobates leucorhous</i>	Annex1, Sch1, BoCC Red List, SBL
Lesser redpoll	<i>Acanthis cabaret</i>	BoCC Red List, SBL
Linnet	<i>Linaria cannabina</i>	BoCC Red List, SBL
Little egret	<i>Egretta garzetta</i>	Annex1
Little gull	<i>Hydrocoloeus minutus</i>	Annex1, Sch1
Long-tailed duck	<i>Clangula hyemalis</i>	Sch1, BoCC Red List
Manx shearwater	<i>Puffinus puffinus</i>	SBL
Mediterranean gull	<i>Ichthyaetus melanocephalus</i>	Annex1, Sch1
Merlin	<i>Falco columbarius</i>	Annex1, Sch1, BoCC Red List, SBL
Mistle thrush	<i>Turdus viscivorus</i>	BoCC Red List
Northern lapwing	<i>Vanellus vanellus</i>	BoCC Red List, SBL
Peregrine falcon	<i>Falco peregrinus</i>	Annex1, Sch1, SBL
Pochard	<i>Aythya ferina</i>	BoCC Red List, SBL
Puffin	<i>Fratercula arctica</i>	BoCC Red List
Purple sandpiper	<i>Calidris maritima</i>	Sch1, BoCC Red List, SBL
Red-necked grebe	<i>Podiceps grisegena</i>	BoCC Red List, SBL
Red-throated diver	<i>Gavia stellata</i>	Annex1, Sch1, SBL
Redwing	<i>Turdus iliacus</i>	Sch1, SBL
Reed bunting	<i>Emberiza schoeniclus</i>	SBL
Reed warbler	<i>Acrocephalus scirpaceus</i>	SBL
Ring ouzel	<i>Turdus torquatus</i>	BoCC Red List, SBL
Ringed plover	<i>Charadrius hiaticula</i>	BoCC Red List
Ruff	<i>Calidris pugnax</i>	Annex1, Sch1, Red, SBL

Common name	Scientific name	Conservation Designations
Sandwich tern	<i>Thalasseus sandvicensis</i>	Annex1, SBL
Scaup	<i>Aythya marila</i>	Sch1, BoCC Red List, SBL
Shag	<i>Gulosus aristotelis</i>	BoCC Red List
Short-eared owl	<i>Asio flammeus</i>	Annex1, SBL
Siskin	<i>Spinus spinus</i>	SBL
Skylark	<i>Alauda arvensis</i>	BoCC Red List, SBL
Smew	<i>Mergellus albellus</i>	Annex1, BoCC Red List, SBL
Song thrush	<i>Turdus philomelos</i>	SBL
Spotted flycatcher	<i>Muscicapa striata</i>	BoCC Red List, SBL
Starling	<i>Sturnus vulgaris</i>	BoCC Red List
Storm petrel	<i>Hydrobates pelagicus</i>	Annex1, SBL
Swift	<i>Apus apus</i>	BoCC Red List, SBL
Tree pipit	<i>Anthus trivialis</i>	BoCC Red List, SBL
Tree sparrow	<i>Passer montanus</i>	BoCC Red List, SBL
Velvet scoter	<i>Melanitta fusca</i>	Sch1, BoCC Red List
Whinchat	<i>Saxicola rubetra</i>	BoCC Red List
Whooper swan	<i>Cygnus cygnus</i>	Annex1, Sch1, SBL
Woodcock	<i>Scolopax rusticola</i>	BoCC Red List, SBL
Yellowhammer	<i>Emberiza citrinella</i>	BoCC Red List, SBL

Annex B Coastal Bird Survey Results

Tables B1-B5 present the results of each coastal waterbird survey completed for the Scottish Onshore Scheme between November 2024 and March 2025. The ‘number present during survey’ is the total number of individuals recorded per species during each visit.

Table B1. Results of Coastal Landfall Waterbird Survey of 14 November 2024

BTO code	Species	Conservation designation(s)	Number present during survey
BH	Black-headed gull	SBL; qualifying species of Outer Firth of Forth and St Andrews Bay Complex SPA	4
CA	Cormorant	Qualifying species of Firth of Forth SPA and Loch Leven SPA	2
CU	Curlew	SBL; Red List BoCC; qualifying species of Firth of Forth SPA	6
E.	Eider	Qualifying species of Firth of Forth SPA and Outer Firth of Forth and St Andrews Bay Complex SPA	41
H.	Grey heron	-	6
HG	Herring gull	SBL; Red List BoCC; qualifying species of Outer Firth of Forth and St Andrews Bay Complex SPA and Forth Islands SPA	64
LN	Long-tailed duck	Qualifying species of Firth of Forth SPA and Outer Firth of Forth and St Andrews Bay Complex SPA	1
OC	Oystercatcher	Qualifying species of Firth of Forth SPA	35
PS	Purple sandpiper	Sch1 WCA; SBL; Red List BoCC	4
RK	Redshank	Qualifying species of Firth of Forth SPA	8
SA	Shag	Red List BoCC; qualifying species of Outer Firth of Forth and St Andrews Bay Complex SPA and Forth Islands SPA	4
TT	Turnstone	Qualifying species of Firth of Forth SPA	15

Table B2. Results of Coastal Landfall Waterbird Survey of 6 December 2024

BTO code	Species	Conservation designation(s)	Number present during survey
BA	Bar-tailed godwit	SBL; qualifying species of Firth of Forth SPA	1
BH	Black-headed gull	SBL; qualifying species of Outer Firth of Forth and St Andrews Bay Complex SPA	2
CA	Cormorant	Qualifying species of Firth of Forth SPA and Loch Leven SPA	7
CU	Curlew	SBL; Red List BoCC; qualifying species of Firth of Forth SPA	1
E.	Eider	Qualifying species of Firth of Forth SPA and Outer Firth of Forth and St Andrews Bay Complex SPA	10
GB	Great black-backed gull	Red List BoCC	4
H.	Grey heron	-	4
HG	Herring gull	SBL; Red List BoCC; qualifying species of Outer Firth of Forth and St Andrews Bay Complex SPA and Forth Islands SPA	4
LN	Long-tailed duck	Qualifying species of Firth of Forth SPA and Outer Firth of Forth and St Andrews Bay Complex SPA	10
OC	Oystercatcher	Qualifying species of Firth of Forth SPA	23
RK	Redshank	Qualifying species of Firth of Forth SPA	8
SA	Shag	Red List BoCC; qualifying species of Outer Firth of Forth and St Andrews Bay Complex SPA and Forth Islands SPA	27
TT	Turnstone	Qualifying species of Firth of Forth SPA	2

Table B3. Results of Coastal Landfall Waterbird Survey of 23 January 2025

BTO code	Species	Conservation designation(s)	Number present during survey
BH	Black-headed gull	SBL; qualifying species of Outer Firth of Forth and St Andrews Bay Complex SPA	1
CA	Cormorant	Qualifying species of Firth of Forth SPA and Loch Leven SPA	1
CU	Curlew	SBL; Red List BoCC; qualifying species of Firth of Forth SPA	1
HG	Herring gull	SBL; Red List BoCC; qualifying species of Outer Firth of Forth and St Andrews Bay Complex SPA and Forth Islands SPA	1
H.	Grey heron	-	5
OC	Oystercatcher	Qualifying species of Firth of Forth SPA	24
RK	Redshank	Qualifying species of Firth of Forth SPA	6
TT	Turnstone	Qualifying species of Firth of Forth SPA	16

Table B4. Results of Coastal Landfall Waterbird Survey of 25 February 2025

BTO code	Species	Conservation designation(s)	Number present during survey
BH	Black-headed gull	Qualifying species of Firth of Forth SPA	4
CA	Cormorant	Qualifying species of Firth of Forth SPA	1
CU	Curlew	Red List BoCC; qualifying species of Outer Firth of Forth and St Andrews Bay Complex SPA and Forth Islands SPA	4
E.	Eider	Qualifying species of Firth of Forth SPA	17
GB	Great black-backed gull	Red List BoCC	1
HG	Herring gull	SBL; Red List BoCC; qualifying species of Outer Firth of Forth and St Andrews Bay Complex SPA and Forth Islands SPA	10
LN	Long-tailed duck	Qualifying species of Firth of Forth SPA and Outer Firth of Forth and St Andrews Bay Complex SPA	8
OC	Oystercatcher	Qualifying species of Firth of Forth SPA	18
RK	Redshank	Qualifying species of Firth of Forth SPA	11
TT	Turnstone	Red List BoCC; qualifying species of Outer Firth of Forth and St Andrews Bay Complex SPA and Forth Islands SPA	2

Table B5. Results of Coastal Landfall Waterbird Survey of 19 March 2025

BTO code	Species	Conservation designation(s)	Number present during survey
CA	Cormorant	Qualifying species of Firth of Forth SPA	4
CU	Curlew	Red List BoCC; qualifying species of Outer Firth of Forth and St Andrews Bay Complex SPA and Forth Islands SPA	5
E.	Eider	Qualifying species of Firth of Forth SPA	58
GB	Great black-backed gull	Red List BoCC	2
H.	Heron	-	2
HG	Herring gull	SBL; Red List BoCC; qualifying species of Outer Firth of Forth and St Andrews Bay Complex SPA and Forth Islands SPA	1
LB	Lesser black-backed gull	Qualifying species of Forth Islands SPA	3
OC	Oystercatcher	Qualifying species of Firth of Forth SPA	7
RK	Redshank	Qualifying species of Firth of Forth SPA	6
SA	Shag	Red List BoCC; qualifying species of Outer Firth of Forth and St Andrews Bay Complex SPA and Forth Islands SPA	4

