Inch Cape Offshore Wind Farm

New Energy for Scotland

Offshore Environmental Statement:
VOLUME 2F
Appendix 15C: Ornithology Intertidal and Nearshore Baseline

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Inch Cape Offshore Wind Farm

Appendix 15C:
Intertidal and Near-shore Coastal Bird Baseline

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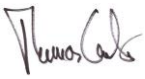
	Signature:			
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CONTENTS

15C.1 INTRODUCTION

15C.1.1 Purpose and Scope of the Report

This report details the results of intertidal and coastal bird surveys undertaken for the onshore grid connection cable landfall site options associated with the Inch Cape Offshore Wind Farm. These surveys were designed to assess the use of the intertidal and near shore coastal habitats associated with the cable landfall option study areas by qualifying species of the Firth of Forth Special Protection Area (SPA) and Wetland of International Importance (Ramsar Site) and other bird species of conservation concern. The findings of these surveys will be used to inform the Inch Cape Offshore Wind Farm Ecological Impact Assessment and the Habitats Regulations Appraisal in relation to the Firth of Forth SPA and Ramsar Site.

The main objectives of these surveys were to identify any areas;

- which support significant numbers of qualifying species of the Firth of Forth SPA and Ramsar Site;
- which are of importance for large assemblages of wetland birds;
- which support important numbers of notable or legally protected wetland bird species (e.g. Annex 1 and Schedule 1 species); and
- seasonal periods of sensitivity for wetland birds (e.g. staging posts for migratory birds or traditional feeding and roosting grounds).

15C.1.1.1 Firth of Forth SPA and Ramsar Site

The Firth of Forth is of international importance for nature conservation, as indicated by its statutory designation and legal protection as an SPA and Ramsar site. The Firth of Forth is also of national nature conservation importance, being listed as a Site of Special Scientific Interest (SSSI).

The Firth of Forth SPA consists of over 25 individual sites stretching from the inner reaches of the Forth Estuary near Alloa, Clackmannanshire (NS 863 914) in the west to Fife Ness, Fife (NO 639 096) and Dunbar, East Lothian (NS 677 729) at the outer reaches of the Firth of Forth in the east. This complex of sites contains a variety of coastal and estuarine habitats which attract large numbers and a wide variety of over-winter and passage wetland birds (waders and waterfowl) to the area.

This area is designated under the EU Birds Directive (1979, 79/409/EEC as amended) due to its importance in protecting and conserving certain European wild bird populations and their habitats, as well as protecting migratory birds and those considered rare or vulnerable. The site qualifies under Article 4.1 of the directive by supporting populations of European important species listed on Annex 1 and under Article 4.2 of the directive by regularly supporting winter populations of European and international importance of certain migratory species. The site further qualifies by supporting a winter waterfowl assemblage of European importance consisting of at least 95,000 individuals including a further 17 species to those designated under Articles 4.1 and 4.2 alone. The full list of qualifying species of the Firth of Forth SPA is presented in Table 15C.1. A copy of the full Firth of Forth SPA citation can be found on Scottish Natural Heritage's (SNH) SiteLink website (http://gateway.snh.gov.uk/sitelink/index.jsp).

Table 15C.1 also presents the populations for the full suite of SPA qualifying species at classification as presented in the SPA citation. However, these population figures are derived from British Trust for Ornithology (BTO) Wetland Bird Survey (WeBS) 5 year peak counts from the periods 1992/93 - 1996/97 and 1993/94 - 1997/98 and are thus almost 20 year out of date. Therefore, more up to date population figures were obtained from the BTO from the equivalent Firth of Forth SPA WeBS count sectors from the period 2006/07 - 2010/11. These figures are also presented in Table 15C.1

Sites designated as SPAs under the Birds Directive and Special Areas of Conservation (SACs) under The Habitats Directive (1992, 92/43/EEC) make up the 'Natura 2000 Network' of protected sites. Where these sites include intertidal or marine habitats they are referred to as European Marine Sites. The Birds Directive (1997) and the Habitats Directive (1992) are transposed into UK law through the Conservation (Natural Habitats, &c) Regulations 1994 (as amended). Further information relating to the relevant European and national nature conservation policy and legislation are included in Chapters 2, 3 and 15, Policy Background, Regulatory Requirements and Ornithology respectively.

TABLE 15C.1: QUALIFYING SPECIES OF THE FIRTH OF FORTH SPA

Species	Qualifying Population*	Updated SPA Population**	Qualifying Season (W=winter, P=passage)***	SPA Qualification Basis****
Bar-tailed godwit	1974	1502	W	Article 4.1
Golden plover	2949	3527	W	Article 4.1
Red-throated diver	90	102	W	Article 4.1
Slavonian grebe	84	29	W	Article 4.1
Sandwich tern	1617	1037	P	Article 4.1
Knot	9258	4088	W	Article 4.2
Pink-footed goose	10852	25888	W	Article 4.2
Redshank	4341	5141	W	Article 4.2
Shelduck	4509	4047	W	Article 4.2
Turnstone	860	934	W	Article 4.2
Common scoter	2880	2808	W	Article 4.2 (Assemblage only)
Cormorant	682	653	W	Article 4.2 (Assemblage only)
Curlew	1928	4567	W	Article 4.2 (Assemblage only)
Dunlin	9514	6988	W	Article 4.2 (Assemblage only)
Eider	9400	5925	W	Article 4.2 (Assemblage only)
Goldeneye	3004	1340	W	Article 4.2 (Assemblage only)
Great crested grebe	720	139	W	Article 4.2 (Assemblage only)
Grey plover	724	469	W	Article 4.2 (Assemblage only)
Lapwing	4148	5480	W	Article 4.2 (Assemblage only)
Long-tailed duck	1045	220	W	Article 4.2 (Assemblage only)
Mallard	2564	1166	W	Article 4.2 (Assemblage only)
Oystercatcher	7846	8235	W	Article 4.2 (Assemblage only)
Red-breasted merganser	670	347	W	Article 4.2 (Assemblage only)
Ringed plover	328	1080	W	Article 4.2 (Assemblage only)
Scaup	437	60	W	Article 4.2 (Assemblage only)
Velvet scoter	635	928	W	Article 4.2 (Assemblage only)
Wigeon	2139	2251	W	Article 4.2 (Assemblage only)

Note:
* SPA Qualifying Populations based on Firth of Forth SPA citation (2001)
** Updated SPA populations based on BTO WeBS 5-year peak monthly counts for the equivalent Firth of Forth SPA WeBS count sectors over the period 2006/07 - 2010/11.
*** Sites selected for waterbird species on the basis of their occurrence in the breeding, passage or winter periods also provide legal protection for these species when they occur at other times of year
**** SPA Qualification Basis;

- Article 4.1 = Regularly Occurring, Nationally Important Populations of Species Listed in Annex I of the EC Birds Directive
- Article 4.2 = Regularly Occurring, Internationally Important Populations of Migratory Species

Article 4.2 (Assemblage only) = Important Component Species of the Internationally Important Assemblage of Birds

The Firth of Forth is also listed as a Ramsar Site under the Conservation of Wetlands of International Importance especially as Waterfowl Habitat (an agreement signed in Ramsar, Iran 1971). The qualifying bird interests of the Ramsar site are the same as for the Firth of Forth SPA. There is no specific legislation governing the protection of Ramsar Sites. However, all Ramsar Sites are also Natura Sites and so are protected under the relevant statutory requirements (The Scottish Government, 2010).

In addition, the Firth of Forth is a nationally important site designated as a Site of Special Scientific Interest (SSSI) under the Wildlife and Countryside Act 1981(as amended). Notified in August 2000, for both biological and geological features, the SSSI has 46 qualifying interests including many bird species and habitats. A full list can be found on SNH's SiteLink website (http://gateway.snh.gov.uk/sitelink/index.jsp).

15C.2 METHODOLOGY

15C.2.1 Intertidal and Near Shore Coastal Bird Surveys

The programme of monthly intertidal and near shore coastal bird surveys was conducted over a period of thirteen months between January 2012 and January 2013 inclusive. Although the largest numbers of birds were expected to be present during the non-breeding season (approximately September to March, covering the spring and autumn migration periods as well as the winter months), data was collected for the full year in order to cover the post-breeding period for which sandwich tern (one of the Firth of Forth SPA qualifying species) qualifies and to provide confirmation of the periods when fewer birds were present.

The intertidal and near shore coastal bird survey area extended for approximately six kilometres along the East Lothian coast from Prestonpans Sea Front at Ox Rocks (NT 38288 74352) to the eastern end of Seton Sands (NT43301 76480) in order to cover the full area under investigation for potential cable landfall sites. Given the extent of this survey area it was segregated into five discrete count sectors[1] (Sectors A-E) (Figure 15C.1), identified as follows;

- **Sector A: Prestonpans Sea Front** (Ox Rocks (NT 38288 74352) to Lidl Supermarket (NT 39045 74987));
- **Sector B: Cockenzie Power Station** (Lidl Supermarket (NT 39045 74987) to Cockenzie harbour (NT 39678 75626));
- **Sector C: Cockenzie and Port Seton Sea Front** (Cockenzie Harbour (NT 39678 75626) to Wrecked Craigs, Seton Sands West (NT 40808 75976));
- **Sector D: Seton Sands West** (Wrecked Craigs, Seton Sands West (NT 40808 75976) to **Seton Sands Holiday Village** (NT 41954 75889)); and,
- **Sector E: Seton Sands** (Seton Sands Holiday Village (NT 41954 75889) to Seton Sands East (NT43301 76480)).

Subsequently, potential cable landfall study areas were identified by Inch Cape Offshore Limited (ICOL) at Cockenzie and Seton Sands (Figure 15C.1). As such these are the areas which will be focussed on in this report and only the intertidal and near shore coastal bird survey data from the relevant survey sectors will be presented here. These included;

- **Cockenzie Study Area**: Sectors A and B
- **Seton Sands Study Area**: Sector E

Sectors A and B combined and Sector E cover at least 500 m either side of their respective Cable Landfall Study Areas and each sector extended out to 1.5 km from the Mean High Water Springs (MHWS) mark. To identify the distribution of birds, the count sectors were segregated into three distance bands; 0 - 500 m, 500 m - 1 km and 1 km - 1.5 km.

Surveys of each sector were conducted by a single surveyor at approximately fortnightly intervals between January 2012 and January 2013. During each survey the number of birds present along the foreshore and near shore coastal waters was counted and ascribed to one of the three distance bands. Sightings records were plotted onto a field map using standard British Trust for Ornithology (BTO) species codes.

[1] Segregating smaller count sectors is a recognised way of simplifying field surveys where large distances are involved as it reduces the size of large expansive habitats (e.g. exposed intertidal mudflats) and introduces a systematic and effective way of counting the entire site. It also allows the results to be interpreted at much greater detail enabling definitive conclusions to be made with regard to the objectives of the study.

Surveys were scheduled to cover a range of different tidal conditions (high, low and mid-tide; spring and neap tides) throughout the survey programme. Survey methods were based on the high tide (core count) methodology of the BTO/ Joint Nature Conservancy Committee (JNCC)/ Royal Society for the Protection of Birds (RSPB)/ Wildfowl and Wetlands Trust (WWT) Wetland Bird Survey (WeBS) scheme (Musgrove et al. 2003 and Holt et al. 2011). This involved the surveyor counting birds from vantage points along the coast using binoculars and a telescope. In addition to the location and number of birds, notes were also made as to whether they were foraging, roosting or loafing. Flying birds were also recorded although for the purposes of this report only those birds which were obviously using the habitats of the survey area (e.g. terns or gannets, as opposed to birds simply flying over/through the sectors) have been included here.

Field records were transferred to a Geographic Information System (GIS). This produced accurate information on the distribution of birds within the study area and enabled maps to be produced so that areas of ornithological importance could be identified.

Weather conditions including wind speed (using the Beaufort Scale), cloud cover (estimated as eighths or octas of the sky), visibility and temperature were also recorded as well as sources of disturbance to birds encountered during surveys. Details of the intertidal and near shore coastal bird survey effort is presented in Table 15C.2.

TABLE 15C.2 - INTERTIDAL AND NEAR SHORE COASTAL BIRD SURVEY EFFORT & TIDE COVERAGE

Month	Date	Sector	Survey Start Time (hr:min)	Survey End Time (hr:min)	Tidal State	Observer
Jan '12	28/01/12	A	09:30	10:00	Mid-low	JD
	28/01/12	B	10:00	10:45	Mid-low	JD
	28/01/12	E	13:00	14:00	Low-mid	JD
Feb '12	19/02/12	A	10:50	11:50	Mid-high	KAS
	19/02/12	B	11:50	12:25	Mid-high	KAS
	19/02/12	E	15:20	16:30	Mid-low	KAS
	23/02/12	E	15:20	16:35	High-mid	KAS
	23/02/12	B	12:30	13:14	Mid-high	KAS
	23/02/12	A	11:50	12:29	Mid-low	KAS
	29/02/12	B	12:05	12:40	Low-mid	JN
	29/02/12	E	14:45	15:45	Mid-low	JN
	29/02/12	A	10:45	12:00	Mid-low	JN
Mar '12	03/03/12	B	11:50	12:40	High-mid	KAS
	03/03/12	E	14:50	15:55	Mid-low	KAS
	03/03/12	A	11:05	11:50	High-mid	KAS
	22/03/12	A	06:30	07:15	Mid-low	JN
	22/03/12	B	07:15	07:50	Mid-low	JN
	22/03/12	E	09:50	10:45	Low-mid	JN
Apr '12	08/04/12	A	09:05	10:00	Mid-low	KAS
	08/04/12	B	10:00	10:55	Low-mid	KAS
	08/04/12	E	13:05	14:15	Mid-high	KAS
	22/04/12	A	12:40	13:25	Low-mid	KAS
	22/04/12	B	13:25	14:15	Mid-high	KAS
	22/04/12	E	16:10	17:20	High-mid	KAS
May '12	02/05/12	E	15:20	16:35	Mid-low	KAS
	02/05/12	B	12:10	13:05	High-mid	KAS
	02/05/12	A	11:25	12:10	Mid-high	KAS
	24/05/12	B	11:16	11:56	Low-mid	KAS
	24/05/12	A	10:26	11:15	Mid-low	KAS
	24/05/12	E	14:15	15:12	Mid-high	KAS
Jun '12	02/06/12	A	10:15	11:05	Mid-high	KAS
	02/06/12	E	13:55	15:20	High-mid	KAS
	02/06/12	B	10:16	11:05	Mid-high	KAS
	20/06/12	B	09:20	10:15	Low-mid	KAS
	20/06/12	E	12:30	13:40	Mid-high	KAS

TABLE 15C.2 - INTERTIDAL AND NEAR SHORE COASTAL BIRD SURVEY EFFORT & TIDE COVERAGE						
Month	**Date**	**Sector**	**Survey Start Time (hr:min)**	**Survey End Time (hr:min)**	**Tidal State**	**Observer**
	20/06/12	A	08:50	09:20	Mid-low	KAS
July '12	13/07/12	A	10:35	11:20	High-mid	KAS
	13/07/12	E	14:10	15:25	Mid-low	KAS
	13/07/12	B	11:20	12:05	High-mid	KAS
	26/07/12	E	15:05	16:10	Low-mid	KAS
	26/07/12	A	11:10	11:55	Mid-low	KAS
	26/07/12	B	11:55	12:45	Mid-low	KAS
Aug '12	12/08/12	A	10:50	11:40	High-mid	KAS
	12/08/12	B	11:40	12:30	High-mid	KAS
	12/08/12	E	14:45	15:40	Mid-low	KAS
	24/08/12	A	13:50	14:40	Low-mid	KAS
	24/08/12	E	17:45	18:50	Mid-high	KAS
	24/08/12	B	14:40	15:35	Low-mid	KAS
Sept '12	07/09/12	A	11:15	12:10	Mid-low	KAS
	07/09/12	B	12:10	13:05	Low-mid	KAS
	07/09/12	E	15:40	16:45	Mid-high	KAS
	26/09/12	A	09:40	11:10	Mid-high	KAS
	27/09/12	B	10:45	12:00	Mid-high	KAS
	27/09/12	E	14:55	16:20	High-mid	KAS
Oct '12	05/10/12	A	16:30	17:30	Mid-high	JN
	08/10/12	B	09:50	10:00	High-mid	JN
	08/10/12	E	13:15	14:15	Low-mid	JN
	19/10/12	A	11:00	12:05	Mid-low	KAS
	21/10/12	B	10:10	11:20	Mid-low	KAS
	21/10/12	E	13:55	15:15	Low-mid	KAS
Nov '12	02/11/12	A	12:40	14:05	Mid-high	KAS
	03/11/12	B	10:10	11:20	Low-mid	KAS
	03/11/12	E	14:20	15:20	Mid-high	KAS
	23/11/12	A	12:30	13:50	High-mid	KAS
	24/11/12	E	13:35	14:50	High-mid	KAS
	24/11/12	B	09:10	10:35	Mid-high	KAS
Dec '12	07/12/12	A	12:30	13:50	Mid-low	KAS
	15/12/12	E	13:10	14:20	Mid-high	KAS
	15/12/12	B	09:20	10:40	Low-mid	KAS
	29/12/12	A	12:40	13:40	Mid-high	KAS
Jan '13	01/01/13	B	09:05	10:15	Mid-low	KAS
	01/01/13	E	13:00	14:10	Mid-high	KAS
	09/01/13	A	12:15	13:40	High-mid	KAS
	14/01/13	E	13:00	14:15	Mid-high	KAS
	14/01/13	B	09:15	10:15	Mid-low	KAS
	30/01/13	A	12:25	13:30	Low-mid	KAS

Notes: Observer key: JD = Joris Driessen; JN = John Nadin; KAS = Kathy Shaw

In terms of representative tidal coverage across the three count sectors this is summarised in Table 15C.3.

TABLE 15C.3 – PROPORTION OF SURVEYS ACROSS THE TIDAL CYCLE WITHIN EACH COUNT SECTOR					
Sector	**Total Number of Surveys**	**Number (and Proportion) of Surveys at Different Tidal States**			
		High-Mid Tide	**Mid-Low Tide**	**Low-Mid Tide**	**Mid-High Tide**
A	26	5 (19%)	11 (42%)	3 (12%)	7 (27%)
B	25	5 (20%)	6 (24%)	8 (32%)	6 (24%)
E	25	5 (20%)	6 (24%)	5 (20%)	9 (36%)

15C.2.2 Contextual Background Data

15C.2.2.1 Wetland Bird Survey (WeBS) Data[2]

WeBS count data were obtained from the BTO, consisting of the most recent high and low tide datasets gathered from survey areas which most closely corresponded to count sectors A, B and E (Figures 15C.2 and 15C.3). WeBS counts are specifically aimed at recording the number of water birds which use particular wetland and coastal habitats.

Core counts are conducted around high water on all estuaries and key wetland sites in the UK, generally on a set day each month. As the counts are undertaken around high water, they are able to ensure a relative accuracy of counting, as waterfowl are relatively close to the estuary banks. Core counts therefore tend to quantify birds present at high tide roosts.

The WeBS low tide count scheme generally records the number of waders and wildfowl that are foraging within a count sector. It aims to monitor the importance of inter-tidal feeding areas of UK estuaries and complement the information gathered by WeBS core counts. Low tide counts provide information to gauge the potential effects on waterbirds of a variety of human activities which affect the extent or value of inter-tidal habitats.

High tide core counts are conducted every year while low tide counts are usually undertaken every six years.

Although extremely valuable in providing historical and contextual wetland bird data for particular sites of interest, WeBS data are sometimes limited by the fact that it covers comparatively large areas and is therefore not necessarily representative of small scale patterns of bird abundance and distribution. Furthermore, it is extremely unlikely that the defined WeBS count sectors will cover exactly the same areas being covered in targeted, project-specific surveys. Consequently, the WeBS data was used to supplement the more site specific data gathered during the intertidal and coastal bird surveys rather than provide a direct comparison.

Data were obtained for the following WeBS count sectors;

High Tide (Figure 15C.2):
- Prestonpans – Port Seaton (sector reference: 83417)
- Port Seton – Craigielaw (sector reference: 83915)

Low Tide (Figure 15C.3):
- Prestonpans Seafront (sector reference: BF105)
- Cockenzie Power Station Seafront (sector reference: BF106)
- Seton Sands Central (sector reference: BF113)

High tide data covered the 5 year period 2006/07 - 2010/11 while the low tide data were collected in 2009/10.

The extent of these WeBS high and low tide count sectors correspond closely with the Intertidal and Nearshore Bird Survey Sectors (Figures 15C.2 and 15C.3). The low tide count sectors are slightly less comparable although they are still expected to be relatively representative of the birds present in these corresponding areas.

[2] The Wetland Bird Survey is a national bird census programme co-ordinated through the British Trust for Ornithology, the Wildfowl and Wetlands Trust (WWT), the RSPB and the Joint Nature Conservation Committee (JNCC).

15C.3 RESULTS

15C.3.1 Bird Survey Data

The following presents interpretation of the intertidal and near shore coastal bird survey results (Figures 15C.4-15C.22). Tables showing the peak counts for each species in each month as well as the peak count over the course of the entire survey period are presented within the main text for each count sector (Tables 15C.4 - 15C.6). These tables also show what proportion the overall peak counts represent compared against the various SPA species latest population estimates, as provided in Table 15C.1. These representative proportions allowed the relative importance of each count sector for individual SPA qualifying species to be identified. A critical threshold of 1% of the qualifying population was used to determine whether a particular sector was of significant importance for a particular species[3]. Sectors of greatest importance for SPA qualifying species, and wetland birds in general could then be identified, allowing a confident interpretation of the value of specific habitats within the study area.

More detailed tables showing the distribution of birds between the different distance bands within each count sector are presented in *Annex 15C.1* (Tables 15C.1.1 - 15C.1.3). Tables summarising the peak counts for each species in each distance band and the proportion of each species SPA qualifying population that these represent are presented in *Annex 15C.2* (Tables 15C.2.1 - 15C.2.3).

For the purposes of clarity, reference to the breeding, non-breeding, post-breeding and passage seasons in the following text relate to the following periods;

- Breeding Season (mid-March-August inclusive);
- Non-Breeding Season (September-mid-March inclusive);
- Post-breeding Season (mid-July-September);
- Autumn Passage (September-November Inclusive); and
- Spring Passage (March-mid-May inclusive).

15C.3.1.1 Cockenzie Study Area

Sector A (Prestonpans Sea Front)

Habitat Description

This sector covers the intertidal and shallow near shore coastal habitats in front of the town of Prestonpans. The tidal range along this stretch of coastline is limited to less than 50 m and at low tide a narrow strip of pebble and boulder beach interspersed with rocky outcrops becomes exposed.

[3] It should be noted that there is no accepted criterion for establishing the importance of discrete sites within SPAs for individual qualifying species. Determining a count sectors importance for individual qualifying species by employing the critical threshold of 1% of that species qualifying population is recognised within the ecology field as a standard method for assessing the importance of sites within SPAs and follows the Joint Nature Conservation Committee's recommended procedure for the selection of biological SSSIs.

Survey Results

Twenty eight species were recorded in Sector A, of which fifteen were SPA qualifying species. The following interpretation of survey results for each species should be read in conjunction with Table 15C.4.

TABLE 15C.4 – MONTHLY PEAK COUNTS OF INTERTIDAL AND COASTAL BIRDS RECORDED IN SECTOR A (PRESTONPANS SEA FRONT)

Species	SPA Pop*	Jan'12	Feb'12	Mar'12	Apr'12	May'12	Jun'12	Jul'12	Aug'12	Sep'12	Oct'12	Nov'12	Dec'12	Jan'13	Peak	% SPA POP
SPA Qualifying Species																
Bar-tailed godwit	1502	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Golden plover	3527	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Red-throated diver	102	-	-	-	-	-	-	-	-	-	2	2	-	-	2	**2.0**
Slavonian grebe	29	-	-	-	-	-	-	-	-	-	-	2	-	1	2	**6.9**
Sandwich tern	1037	-	-	-	-	11	5	10	28	1	-	-	-	-	28	**2.7**
Knot	4088	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pink-footed goose	25888	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Redshank	5141	-	3	-	-	-	-	-	-	-	-	2	-	1	3	0.1
Shelduck	4047	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Turnstone	934	-	21	2	-	-	-	-	2	5	5	10	5	8	21	**2.2**
Common scoter	2808	-	-	-	1	1	-	-	-	-	-	-	8	30	30	**1.1**
Cormorant	653	-	-	3	1	1	3	2	8	8	1	6	1	1	8	**1.2**
Curlew	4567	-	2	1	-	-	-	-	1	1	2	1	-	-	2	<0.1
Dunlin	6988	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Eider	5925	24	18	20	22	26	10	26	30	39	30	29	43	136	136	**2.3**
Goldeneye	1340	20	-	-	-	-	-	-	-	-	-	-	-	-	20	**1.5**
Great crested grebe	139	-	-	-	-	-	-	-	-	-	-	1	-	-	1	0.7
Grey plover	469	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Lapwing	5480	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Long-tailed duck	220	-	-	3	-	-	-	-	-	-	-	1	-	1	3	**1.4**
Mallard	1166	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Oystercatcher	8235	2	10	36		3	2	2	6	7	1	13	2		36	0.4
Red-breasted merganser	347	-	3	2	-	-	-	11	-	-	3	1	27	7	27	**7.8**
Ringed plover	1080	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Scaup	60	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Velvet scoter	928	2	-	18	5	1	-	-	-	-	4	7	4	3	18	**1.9**
Wigeon	2251	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Non-SPA Qualifying Species																
Black-headed gull	-	7	14	22	1	-	-	12	9	10	33	17	2	8	**33**	-
Common gull	-	2	1	2	-	-	-	5	3	-	9	-	-	4	**9**	-
Common tern	-	-	-	-	-	-	-	2	2	-	-	-	-	-	**2**	-
Gt black-backed gull	-	2	1	1	1	3	1	1	2	2	1	1	3	2	**3**	-
Guillemot	-	-	-	-	1	1	8	4	85	14	8	3	1	-	**85**	-
Gannet	-	-	-	-	-	1	2	11	6	2	1	-	-	-	**11**	-
Herring gull	-	22	29	71	56	46	69	38	60	66	35	69	42	59	**71**	-
Kittiwake	-	-	-	-	-	-	-	-	-	1	-	-	-	-	**1**	-
Lsr black-backed gull	-	-	-	-	-	2	-	-	1	1	1	1	-	-	**2**	-
Little grebe	-	-	-	-	-	-	-	1	-	-	-	-	-	-	**1**	-
Purple sandpiper	-	-	3	-	-	-	-	-	-	-	-	3	-	-	**3**	-
Razorbill	-	-	-	5	1	9	7	1	84	8	-	-	-	-	**84**	-
Shag	-	2	1	3	2		1	4	14	6	10	6	11	2	**14**	-

TABLE 15C.4 – MONTHLY PEAK COUNTS OF INTERTIDAL AND COASTAL BIRDS RECORDED IN SECTOR A (PRESTONPANS SEA FRONT)																
Species	**SPA Pop***	**Jan'12**	**Feb'12**	**Mar'12**	**Apr'12**	**May'12**	**Jun'12**	**Jul'12**	**Aug'12**	**Sep'12**	**Oct'12**	**Nov'12**	**Dec'12**	**Jan'13**	**Peak**	**% SPA POP**

Note: * SPA Pop = each SPA Qualifying species most up to date population estimate based on BTO WeBS 5-year peak monthly counts for the equivalent Firth of Forth SPA WeBS count sectors over the period 2006/07 - 2010/11.

The most abundant and consistently present of the SPA qualifying species was **eider duck**. Eiders were recorded within this sector on every month of the survey programme and were present in relatively consistent numbers of between 10 and 43 individuals on all but the January 2013 count when the peak of 136 birds was recorded. All birds were recorded out on the open water with the majority being present within 500 m of the shore, although similar numbers were occasionally recorded between 500 m and 1 km offshore. Beyond 1 km eider numbers were typically less than 10. Although the above stand out peak count of 136 represented 2.3% of the latest SPA population estimate, all other counts represented less than 1% suggesting that in general, this count sector is not of great importance to eider ducks.

Cormorants were also regularly present throughout the year and although numbers were consistently low (between 1 and 8 individuals), the peak count of 8 (August and September 2012) represented 1.2% of the SPA qualifying population. With the exception of this peak count, the counts in all other months represented less than 1% of the SPA qualifying population suggesting that in general this count sector is not of great importance for cormorants. The majority of birds recorded in this sector were observed within the 0-500 m distance band indicating that the shallow near shore waters of this sector are of some importance to this species, although birds were present within all three distance bands.

Turnstones were regularly present throughout the passage and winter months and were typically represented by no more than 10 birds, although the peak count was 21 (February 2012). All birds were recorded along the intertidal foreshore as is typical for this shorebird species. Although the peak count represented 2.2% of the latest SPA population estimate, one other count of 10 individuals (November 2012) also represented over 1% of the population indicating that this sector occasionally supports significant numbers of turnstones and is thus of some importance to the species. In general however, the survey data suggest that this count sector is not of great importance for turnstones.

Velvet scoters were also regularly present throughout the passage and winter months although they were typically represented by no more than 7 birds with a peak count of 18 individuals (March 2012). Nonetheless, the latest SPA population estimate for velvet scoter is such that even this relatively low count still represented 1.9% of the SPA qualifying population. Almost all of the birds recorded within this sector were found within 1 km offshore indicating that the near shore coastal waters are of importance for this species.

Sandwich terns were regularly present throughout the breeding and post-breeding season with numbers ranging from 1 to the peak of 28 individuals (August 2012). This peak count along with another count of 11 individuals (May 2012) represented 2.7% and 1.1% of the latest SPA population estimate. The majority of birds recorded in this sector were observed within the 0-500 m distance band indicating that the shallow near shore waters are of some importance to this species during the breeding and post-breeding season.

Red-throated divers were only recorded on two of the thirteen survey months (October and November 2012) and were represented by no more than 2 individuals. Nonetheless, the latest SPA population estimate for red-throated diver is such that even these low and infrequent counts represented 2.0% of the population. Individual birds were recorded in all three distance bands and thus each offshore sector zone supported at least 1.0% of the estimated SPA population. However, despite the presence of significant numbers of red-throated divers in this sector their occurrence was very occasional and in general the survey data suggests that this count sector is not of great importance to the species.

Slavonian grebes were also recorded on just two of the survey months (November 2012 and January 2013) and were represented by no more than 2 individuals. However, like red-throated diver, the latest SPA population estimate for Slavonian grebe is such that this low count still represented 6.9% of the population. Of the three individuals recorded

all were located between 0-500 m indicating that the shallow near shore waters of Sector A are of some importance to this species. However, the very occasional presence of this species suggests that in general this count sector is not of great importance.

Red-breasted mergansers were regularly recorded in this sector throughout the winter months as well as being present in July. The species was typically represented by no more than 3 birds constituting less than 1% of the latest SPA population estimate. However, counts of 7 (January 2013), 11 (July 2012) and the peak count of 27 (December 2012) represented 2%, 3.2% and 7.8% of the population respectively. Almost all birds were recorded within 1 km offshore. Thus the survey data suggests that the near shore coastal waters occasionally support significant numbers of red-breasted mergansers and are of some importance to the species.

Common scoters were only occasionally recorded within this sector during the winter months and were only present in very low numbers during the passage and breeding season typically being represented by no more than 8 birds. However, a stand out peak count of 30 individuals (January 2013) represented 1.1% of the latest SPA population estimate. These birds were recorded in the 0-500 m distance band. Despite this one off count however, the survey data suggests that this count sector is of low importance to common scoters.

Goldeneye were only recorded within this sector on one occasion, although the count of 20 individuals (January 2012) represented 1.5% of the latest SPA population estimate. All birds were recorded along the intertidal foreshore. Despite this one off count however, the survey data suggests that in general this count sector is of low importance to goldeneye.

Long-tailed ducks were recorded on just three occasions and were represented by no more than three individuals (March 2012). However, the latest population estimate for long-tailed ducks in the Firth of Forth SPA is much reduced compared to the original population estimate at classification such that even this very low peak count still represented 1.4% of the population. Birds were recorded between 0-500 m and between 1 km and 1.5 km indicating that birds use both the shallow near shore waters and deeper coastal waters of Sector A. However, the very occasional presence of this species suggests that in general this count sector is not of great importance to long-tailed ducks.

The remaining four SPA qualifying species were either regularly present but in comparatively low numbers (e.g. **oystercatcher** (≤36)), or were recorded both infrequently and in low numbers (e.g. **curlew** (≤2), **redshank** (≤3) and **great crested grebe** (1)) and represented less than 1% of their respective SPA population estimates. Thus the survey data indicates that this sector is of low importance to these species.

There were no records of the other twelve SPA qualifying species in this sector which include bar-tailed godwit, golden plover, knot, pink-footed goose, shelduck, dunlin, grey plover, lapwing, mallard, ringed plover, scaup, and wigeon.

Thirteen non-SPA qualifying species we also recorded. These included two records of 3 purple sandpipers (February and November 2012), a species which is listed under Schedule 1 of the Wildlife and Countryside Act 1981 (as amended). These birds were recorded along the intertidal habitat. However, the low abundance and infrequency of purple sandpiper records suggests that the habitat of this sector does is not particularly important for the species.

All other non-SPA qualifying species recorded in this sector were typically coastal birds which included;

- gulls (including black-headed gull, common gull, herring gull, lesser black-backed gull, great black-backed gull and kittiwake);
- auks (including guillemots and razorbills);

- other seabirds (including gannets, shags and common terns); and
- little grebe.

All of these species are common and widespread and regularly occur in the coastal waters of north east Scotland either throughout the year, or during the breeding or non-breeding season. By comparison most species were recorded in relatively low numbers compared to their national breeding and wintering populations[4] although reasonably large counts of guillemots (85) and razorbills (84) were recorded in August 2012, during the post-breeding period, the vast majority of which were recorded between 500 m and 1.5 km off shore.

Sector B (Cockenzie Power Station)

Habitat Description

This sector covers the near intertidal and shallow near shore coastal habitats in front of and adjacent to Cockenzie Power Station and includes the Power Station jetty. The power station itself is protected from the sea by a large brick and concrete sea wall. The tidal range at this location is such that the tide barely retreats below the bottom of the sea wall at low tide while at high tide the water rises to around half way up the wall. To the west of the power station is a narrow strip of pebble and boulder beach, approximately 200 m in length which connects to the intertidal habitat of Sector A.

Survey Results

Twenty nine species were recorded in Sector B, of which fourteen were SPA qualifying species. The following interpretation of survey results for each species should be read in conjunction with Table 15C.5.

TABLE 15C.5 – MONTHLY PEAK COUNTS OF INTERTIDAL AND COASTAL BIRDS RECORDED IN SECTOR B (COCKENZIE POWER STATION)

Species	SPA Pop*	Jan'12	Feb'12	Mar'12	Apr'12	May'12	Jun'12	Jul'12	Aug'12	Sep'12	Oct'12	Nov'12	Dec'12	Jan'13	Peak	% SPA POP
SPA Qualifying Species																
Bar-tailed godwit	1502	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Golden plover	3527	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Red-throated diver	102	1	-	-	-	-	-	-	-	4	2	5	-	-	5	**4.9**
Slavonian grebe	29	-	-	-	-	-	-	-	-	-	-	2	-	2	2	**6.9**
Sandwich tern	1037	-	-	-	-	5	1	8	23	1	-	-	-	-	23	**2.2**
Knot	4088	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pink-footed goose	25888	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Redshank	5141	-	-	-	-	-	-	-	-	-	-	1	2	-	2	<0.1
Shelduck	4047	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

[4] Forrester, R. W., Andrews, I. J., McInerny. C. J., Murray, R. D., McGowan, R. Y., Zonfrillo, B., Betts, M.W., Jardine, D.C. and Grundy, D.S. (eds) (2007). *The Birds of Scotland*. The Scottish Ornithologists' Club, Aberlady.

TABLE 15C.5 – MONTHLY PEAK COUNTS OF INTERTIDAL AND COASTAL BIRDS RECORDED IN SECTOR B (COCKENZIE POWER STATION)

Species	SPA Pop*	Jan'12	Feb'12	Mar'12	Apr'12	May'12	Jun'12	Jul'12	Aug'12	Sep'12	Oct'12	Nov'12	Dec'12	Jan'13	Peak	% SPA POP
Turnstone	934	-	4	-	-	-	-	-	-	13	-	-	-	-	13	**1.4**
Common scoter	2808	1	1	-	2	1	-	-	-	-	-	-	-	33	33	**1.2**
Cormorant	653	-	8	-	4	2	-	18	14	2	15	18	15	-	18	**2.8**
Curlew	4567	-	-	-	-	-	-	-	-	-	1	-	-	-	1	<0.1
Dunlin	6988	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Eider	5925	30	23	55	59	11	10	3	12	105	20	11	62	82	105	**1.8**
Goldeneye	1340	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Great crested grebe	139	-	-	-	-	-	-	-	-	2	-	-	-	-	2	**1.4**
Grey plover	469	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Lapwing	5480	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Long-tailed duck	220	-	-	6	-	-	-	-	4	-	-	1	-	-	6	**2.7**
Mallard	1166	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Oystercatcher	8235	12	10	2	5	4	1	4	-	10	9	15	11	7	15	0.2
Red-breasted merganser	347	-	1	-	-	-	-	-	-	-	-	1	1	-	1	0.3
Ringed plover	1080	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Scaup	60	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Velvet scoter	928	2	4	4	1	35	-	-	-	2	4	7	5	1	35	**3.8**
Wigeon	2251	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Non-SPA Qualifying Species																
Black-headed gull	-	-	-	-	2	-	-	-	110	-	13	113	28	49	113	-
Common gull	-	1	-	-	2	-	-	-	118	2	5	2	22	16	118	-
Common tern	-	-	-	-	-	-	1	-	-	-	-	-	-	-	1	-
Fulmar	-	-	-	-	-	-	-	-	-	1	-	-	-	-	1	-
Gt black-backed gull	-	-	3	1	2	5	3	2	12	-	5	2	4	2	12	-
Guillemot	-	-	-	2	1	18	31	7	414	71	40	2	-	1	414	-
Gannet	-	-	-	-	-	40	2	6	46	14	-	-	-	-	46	-
Herring gull	-	8	18	38	70	115	75	73	430	23	25	111	18	39	430	-
Kittiwake	-	-	-	-	-	-	-	2	18	-	-	-	-	-	18	-
Lsr black-backed gull	-	-	-	-	1	-	-	-	12	-	-	1	-	-	12	-

TABLE 15C.5 – MONTHLY PEAK COUNTS OF INTERTIDAL AND COASTAL BIRDS RECORDED IN SECTOR B (COCKENZIE POWER STATION)

Species	SPA Pop*	Jan'12	Feb'12	Mar'12	Apr'12	May'12	Jun'12	Jul'12	Aug'12	Sep'12	Oct'12	Nov'12	Dec'12	Jan'13	Peak	% SPA POP
Little grebe	-	-	-	-	-	-	-	1	-	-	-	-	-	-	1	-
Mute swan	-	-	-	-	-	-	-	-	1	-	-	-	-	-	1	-
Puffin	-	-	-	-	-	8	1	-	-	-	-	-	-	-	8	-
Razorbill	-	-	1	18	-	20	5	2	416	-	3	-	-	-	416	-
Shag	-	3	3	5	18	1	1	9	25	6	30	6	19	10	30	-
Unidentified auk spp.	-	-	-	-	-	-	-	-	-	-	50	6	-	-	50	-

Note: * SPA Pop= each SPA Qualifying species most up to date population estimate based on BTO WeBS 5-year peak monthly counts for the equivalent Firth of Forth SPA WeBS count sectors over the period 2006/07 - 2010/11.

As in Sector A the most abundant and consistently present of the SPA qualifying species was **eider duck**. Eiders were recorded within this sector on every month of the survey programme and were generally most abundant throughout the non-breeding season. During this time numbers ranged between 11 (November 2012) and the peak of 105 (September 2012) but were more often between 30 and approximately 80 birds. During the breeding season, numbers were no more than 12 birds. All birds were recorded out on the open water with the majority being present within 1 km offshore indicating that the shallower near shore waters are of some importance to this species. However, although the peak count of 105 birds (above) represents 1.1% of the SPA qualifying population, all other counts represented less than 1% suggesting that in general, this count sector is not of great importance to eider ducks.

Cormorants were also regularly present throughout the year with numbers ranging between 2 and the peak of 18 birds (July and December 2012). The two peak counts represented 2.6% of the SPA qualifying population and in fact all but one of the counts in the non-breeding season represented over 1% of the SPA population. The majority of birds recorded in this sector were observed within the 0-500 m distance band indicating that the shallow near shore waters of this sector regularly support significant numbers of cormorants and are of reasonably high importance to the species.

Velvet scoters were also regularly present throughout the passage and winter months although as in Sector A they were typically represented by no more than 7 birds. However, the stand out peak count of 35 individuals (May 2012) represented 5.5% of the SPA qualifying population and with almost all birds being recorded within 1 km offshore the data suggests that the near shore coastal occasionally support significant numbers of velvet scoters and are of some importance to the species. Nonetheless, with most counts representing less that 1% of the SPA qualifying population, the survey data suggest that in general this sector is not of great importance for velvet scoters.

Sandwich terns were regularly present throughout the breeding and post-breeding season with numbers ranging from 1 to the peak of 23 individuals (August 2012). This peak count represented 2.2% of the latest SPA population estimate. However, all other monthly peak counts represented less than 1% of the SPA qualifying population suggesting that in general this count sector is not of great importance for the species. The majority of birds recorded in this sector were observed within the 1 km offshore indicating that the shallow near shore waters are of some importance to this species.

Red-throated divers were recorded relatively frequently in this sector during the non-breeding season with most birds being present between the autumn and early winter months. Although the number of birds recorded in each month was low, ranging between 1 and the peak of 5 individuals (November 2012), due to the species low estimated SPA population the peak count represents 4.9%. Birds were recorded in all three distance bands indicating that both the shallower near shore and deeper coastal waters support significant numbers of red-throated divers and are thus of reasonably high importance to the species.

Slavonian grebe was recorded on just two of the survey months (November 2012 and January 2013) and were represented by no more than 2 individuals. As detailed above however, the latest SPA population estimate for Slavonian grebe is such that this low count still represented 6.9% of the population. All birds were recorded within 1 km offshore indicating that the shallow near shore waters of Sector B are of some importance to this species. However, the very occasional presence of this species suggests that in general this count sector is not of great importance.

Turnstones were only recorded within this sector on two occasions, with counts of 4 and 13 (February 2012 and September 2012 respectively). However, the peak count of 13 represented 1.4% of the latest SPA population estimate. All birds were recorded along the intertidal foreshore. Despite this one off count however, the survey data suggests that in general this count sector is not of great importance to turnstones.

Common scoters were only occasionally recorded within this sector during the winter months and were typically represented by no more than 2 birds. However, a peak count of 33 individuals (January 2013) represented 1.2% of the latest SPA population estimate. Almost all of the birds observed were recorded in the 0-500 m distance band. Despite this one off count however, the survey data suggests that in general this count sector is of low importance to common scoters.

Great crested grebe was only recorded within this sector on one occasion, although the count of 20 individuals (September 2012) represented 1.4% of the latest SPA population estimate. Both birds were recorded within 500 m of the shore. Despite this one off count however, the survey data suggests that in general this count sector is of low importance to great crested grebes.

Long-tailed ducks were recorded on just three occasions and were represented by no more than six individuals (March 2012). However, the latest population estimate for long-tailed ducks in the Firth of Forth SPA is much reduced compared to the original population estimate at classification such that even this very low peak count represented 2.7% of the population. Birds were recorded within 1 km of the shore indicating that birds use the shallow near shore waters of Sector A. However, the very occasional presence of this species suggests that in general this count sector is not of great importance to long-tailed ducks.

The remaining four SPA qualifying species were either regularly present but in comparatively low numbers (e.g. **oystercatcher** (≤15)), or were recorded both infrequently and in low numbers (e.g. **curlew** (1), **redshank** (≤2) and **red-breasted merganser** (1)) and represented less than 1% of their respective SPA population estimates. Thus the survey data indicates that this sector is of low importance to these species.

There were no records of the other thirteen SPA qualifying species in this sector which include bar-tailed godwit, golden plover, knot, pink-footed goose, shelduck, dunlin, goldeneye, grey plover, lapwing, mallard, ringed plover, scaup, and wigeon.

Fifteen non-SPA qualifying species we also recorded, almost all of which were typical coastal birds including;

- gulls (including black-headed gull, common gull, herring gull, lesser black-backed gull, great black-backed gull and kittiwake);
- auks (including guillemots, razorbills, puffins and unidentified auks);
- other seabirds (including gannets, fulmars, shags and common terns); and,
- mute swan and little grebe.

All of these species are common and widespread and regularly occur in the coastal waters of north east Scotland either throughout the year, or during the breeding or non-breeding season. By comparison most species were recorded in relatively low numbers compared to their national breeding and wintering populations[4]. However, exceptionally large counts of herring gulls (430), guillemots (414) and razorbills (416) were recorded in August 2012 during the post-breeding period, the vast majority of which were recorded within 500 m offshore, although reasonable numbers of guillemots and razorbills were recorded in all distance bands. The guillemot and razorbill counts correspond to similar high counts in the neighbouring Sector A during the same month (see *Section 15C.3.1.1* above).

15C.3.1.2 Seton Sands Study Area

Sector E (Seton Sands)

Habitat Description

This sector covers the intertidal and shallow near shore coastal habitats associated with Seton Sands. The tidal range along this stretch of coastline is between 250 m and 400 m and at low tide a reasonably large expanse of intertidal sandy beach becomes exposed.

Survey Results

Sector E supported the highest diversity and abundance of species, with thirty six species being recorded, of which nineteen were SPA qualifying species. The following interpretation of survey results for each species should be read in conjunction with Table 15C.6.

TABLE 15C.6 – MONTHLY PEAK COUNTS OF INTERTIDAL AND COASTAL BIRDS RECORDED IN SECTOR E (SETON SANDS)

Species	SPA Pop*	Jan'12	Feb'12	Mar'12	Apr'12	May'12	Jun'12	Jul'12	Aug'12	Sep'12	Oct'12	Nov'12	Dec'12	Jan'13	Peak	% SPA Pop
SPA Qualifying Species																
Bar-tailed godwit	1502	12	18	8	-	-	-	-	-	18	4	13	2	11	18	**1.2**
Golden plover	3527	-	-	-	-	-	-	-	-	2	-	2	-	4	4	0.1
Red-throated diver	102	-	-	1	-	-	2	1	-	6	2	3	-	-	6	**5.9**
Slavonian grebe	29	-	1	-	-	-	-	-	-	2	-	2	-	-	2	**6.9**
Sandwich tern	1037	-	-	-	-	38	2	13	8	1	-	-	-	-	38	**3.7**
Knot	4088	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pink-footed goose	25888	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Redshank	5141	-	2	10	2	-	-	-	1	12	1	10	13	8	13	0.3
Shelduck	4047	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Turnstone	934	-	-	-	-	-	-	-	-	-	3	14	22	21	22	**2.4**
Common scoter	2808	-	26	26	-	70	-	-	-	4	-	-	8	-	70	**2.5**
Cormorant	653	2	3	2		8	1	9	2	1	11	2	-	-	11	**1.7**
Curlew	4567	-	2	7	1	1	-	4	-	-	3	1	-	2	7	0.2

TABLE 15C.6 – MONTHLY PEAK COUNTS OF INTERTIDAL AND COASTAL BIRDS RECORDED IN SECTOR E (SETON SANDS)

Species	SPA Pop*	Jan'12	Feb'12	Mar'12	Apr'12	May'12	Jun'12	Jul'12	Aug'12	Sep'12	Oct'12	Nov'12	Dec'12	Jan'13	Peak	% SPA Pop
SPA Qualifying Species																
Dunlin	6988	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Eider	5925	1	7	43	15	58	17	58	425	57	7	47	36	-	425	**7.2**
Goldeneye	1340	3	-	-	-	-	-	-	-	-	-	-	-	-	3	0.2
Great crested grebe	139	-	-	-	-	-	-	-	-	-	1	-	-	-	1	0.7
Grey plover	469	-	2	-	-	-	-	-	-	2	1	3	-	-	3	0.6
Lapwing	5480	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Long-tailed duck	220	-	1	17	-	-	-	-	-	-	-	13	-	2	17	**7.7**
Mallard	1166	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Oystercatcher	8235	33	12	42	-	12	-	12	21	17	12	30	9	17	42	0.5
Red-breasted merganser	347	-	19	6	3	2	-	7	-	1	2	13	28	1	28	**8.1**
Ringed plover	1080	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Scaup	60	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Velvet scoter	928	8	16	121	3	9	-	-	14	-	29	60	4	5	121	**13.0**
Wigeon	2251	8	66	56	-	-	-	-	-	-	-	26	6	19	66	**2.9**
Non-SPA Qualifying Species																
Black-headed gull	-	-	127	102	24	-	-	14	49	20	39	116	14	38	127	-
Black-throated diver	-	-	-	-	-	-	-	-	-	1	-	-	-	-	1	-
Common gull	-	-	23	10	-	-	-	4	2	14	-	60	14	3	60	-
Common tern	-	-	-	-	-	-	-	-	10	-	-	-	-	-	10	-
Fulmar	-	-	-	-	-	-	1	-	-	-	-	-	-	-	1	-
Gt black-backed gull	-	-	5	3	2	11	-	-	-	1	7	1	-	-	11	-
Guillemot	-	-	-	-	2	1	3	8	5	13	4	-	-	-	13	-
Gannet	-	-	-	-	-	1	22	11	49	3	-	-	-	-	49	-
Herring gull	-	10	207	141	49	134	37	54	10	40	30	118	63	6	207	-
Lsr black-backed gull	-	-	-	6	4	-	-	-	-	1	-	-	-	-	6	-
Mute swan	-	-	2	2	-	-	-	-	-	-	2	-	-	-	2	-
Puffin	-	-	-	-	2	-	5	-	-	-	-	-	-	-	5	-
Razorbill	-	-	1	6	2	6	7	-	-	1	-	-	-	-	7	-
Red-necked grebe	-	-	-	2	-	-	-	-	12	1	3	-	-	-	12	-
Shag	-	-	2	3	-	11	2	-	2	-	6	4	-	3	11	-
Unidentified gull spp.	-	-	-	-	-	-	-	-	-	-	-	50	-	-	50	-
Unidentified scoter spp.	-	-	-	-	-	-	-	-	-	-	-	180	-	-	180	-

Note: * SPA Pop= each SPA Qualifying species most up to date population estimate based on BTO WeBS 5-year peak monthly counts for the equivalent Firth of Forth SPA WeBS count sectors over the period 2006/07 - 2010/11.

Eider ducks were recorded within this sector on all but the last month of the survey programme (January 2013) with numbers typically ranging between approximately 10 and 5860 birds and representing less than 1% of the latest SPA qualifying population estimate. However, an exceptionally high count of 425 birds was recorded in August 2012 during the post-breeding season and this represented 7.24.5% of the SPA population. Throughout the year birds were recorded in all distance bands although the majority were found within 1 km offshore suggesting that the habitat associated with the shallower near shore waters are of some importance to this species. However, given that all but the peak count represented less than 1% of the latest SPA qualifying population estimate the survey data indicates that in general this count sector does not support significant numbers of of low importance for eider ducks.

Velvet scoters were also regularly present throughout the passage and winter months although numbers were highly variable, fluctuating from fewer than 10 birds in some months, between 14 and 60 individuals in others and with a peak count of 121 (March 2012) which represented 13% of the latest SPA population estimate. Indeed, the mid-range counts of 14 to 60 birds represented 1.5% and 6.5% respectively. A further count of 180 unidentified scoter species was also recorded in November 2012, which would represent an even larger proportion of the velvet scoter SPA population if these unidentified birds were velvet scoters. The vast majority of birds were recorded between 500 m and 1.5 km offshore indicating that the habitat associated with the deeper waters of this sector are of high importance to velvet scoters.

Wigeon were regularly present throughout the winter months although numbers were highly variable with counts ranging from a low of 6 to the peak of 66 (February 2012). This peak represented 2.9% of the latest SPA population estimate, while other reasonably high counts of 56 (March 2012) and 26 (November 2012) represented 2.5% and 1.2% of the population respectively. All birds recorded in this sector were observed within 1 km offshore indicating that the near shore coastal waters of Seton Sands are of reasonable importance to wigeon.

Red-breasted mergansers were regularly recorded in this sector throughout the year although numbers were reasonably variable, fluctuating from no more than two or three birds, mid-range counts of between 6 (March 2012) and 19 (February 2012) individuals and with a peak count of 28 (March 2012). While the peak represented 8.1% of the latest SPA population estimate the mid-range counts also represented between 1.7% and 5.5% of the estimated SPA population respectively. The vast majority of birds were recorded within 1 km offshore indicating that the habitats associated with the shallower near shore waters of this sector are of reasonably high importance to this species.

Sandwich terns were regularly present between May and September with numbers ranging from 1 (September 2012) to the peak of 38 individuals (May 2012). This peak count represented 3.7% of the latest SPA population estimate. However, all but one of the other monthly peak counts represented less than 1% of the SPA qualifying population suggesting that in general this count sector is of low importance for this species. The majority of birds recorded in this sector were observed within 500 m offshore indicating that the shallow near shore waters are of some importance to this species. Sandwich terns have declined as a breeding species in the Forth of Forth and have not bred locally since 2008 (Forth Seabird Group website), so all records are likely to be passage birds travelling to or from breeding sites elsewhere.

Red-throated divers were recorded sporadically throughout the year with regular sightings in the late autumn/early winter months as well as isolated sightings in the spring and summer months. With the exception of the peak count of 6 individuals (September 2012), all other sightings were of no more than 3 birds. Despite this, all records of the species represented more than 1% of the SPA population due to the species low estimated SPA population with the peak count representing 5.9%. Birds were recorded in all three distance bands although the majority were observed with 1 km offshore thus

suggesting that the shallower near shore waters are of reasonably high importance to the species.

Slavonian grebe was recorded on just three of the survey months (February, September and November 2012) and were represented by no more than 2 individuals. As detailed above however, the latest SPA population estimate for Slavonian grebe is such that these low counts still represented 6.9% of the population. All birds were recorded within 1 km offshore indicating that the shallow near shore waters off Seton Sands are of some value to this species. However, the occasional presence of this species suggests that in general this count sector's importance is low.

Long-tailed ducks were only occasionally recorded in this sector during the non-breeding season. Counts ranged from 1 to the peak of just 17 individuals (March 2012). However, given the species low estimated SPA population this peak represented 7.7% of the population. When present, birds were typically recorded within 1 km offshore suggesting that the habitat associated with the shallower near shore waters of this sector may be of some value to this species. However, the irregular occurrence and general low abundance of long-tailed ducks suggests that in general this sector is of low importance to the species.

Turnstones were only recorded in this sector during the early and mid-winter months of 2012/13 with numbers ranging from just 3 in October 2012 to the peak of 22 in December 2012. While the peak count represented 2.4% of the latest SPA population estimate, the November and January 2013 counts of 14 and 21 respectively also represented over 1% of the population. With all birds being recorded along the intertidal foreshore the survey data thus indicates that this sector is of reasonable importance to the species for part of the year.

Common scoters were typically recorded during the non-breeding season (September-March) although their presence within the sector was irregular. During this time the peak count of 26, which was recorded in both February and March 2012, represented just under 1% of the latest SPA population suggesting that the habitats of the sector are of low importance to the species. However, the peak count for the whole year of 70 was recorded during the breeding season (May 2012). This stand out peak count represented 2.5% of the SPA population. It should be noted that a count of 180 unidentified scoter species was also recorded in November 2012, which would represent an even larger proportion of the common scoter SPA population if these unidentified birds were common scoters. Almost all of the birds observed were recorded in between 500 m and 1.5 km offshore suggesting that the habitat associated with the deeper waters of this sector may be of some value to this species. Nevertheless, with the counts from all other months representing less than 1% of the SPA qualifying population the survey data suggests that in general this count sector is of low importance for common scoters.

Cormorants were also present throughout much of the year and although numbers were no more than 11 individuals this peak count (October 2012) represented 1.7% of the latest SPA population estimate. Two further counts of 8 in May and 9 July 2012 also represented over 1% of the SPA population. Despite this however, the peak counts in all other months represented less than 1% of the SPA qualifying population suggesting that in general this count sector is of low importance for cormorants.

Bar-tailed godwit were present throughout the non-breeding season but were absent from the sector during the breeding season. Even during the passage and winter months numbers were relatively low, ranging from 2 (December 2012) to the peak of 18 (February and September 2012). Although these peak counts represented 1.2% of the latest SPA population estimate all other counts represented less than 1% of the population indicating that this count sector rarely supports significant numbers of bar-tailed godwits. Nevertheless, given the species consistent presence throughout the non-breeding season and with the majority of birds recorded being observed along the intertidal sandflats, the data suggests that Seton Sands is of some importance to this species.

The remaining seven SPA qualifying species were either regularly present but in comparatively low numbers (e.g. **oystercatcher** (<u>≤42</u>), **curlew** (<u>≤7</u>) and **redshank** (<u>≤13</u>)), or were recorded both infrequently and in low numbers (e.g. **golden plover** (<u>≤</u>4), **great crested grebe** (1), **goldeneye** (3) and **grey plover** (≤3) represented less than 1% of their respective SPA qualifying populations. Thus the survey data indicates that this sector is of low importance to these species.

There were no records of the other eight SPA qualifying species in this sector which include knot, pink-footed goose, shelduck, dunlin, lapwing, mallard, ringed plover and scaup.

Fifteen non-SPA qualifying species were also recorded. These included two Schedule 1 listed species of the Wildlife and Countryside Act (1981); red-necked grebe and black-throated diver (which is also listed on Annex 1 of the EC Birds Directive). Black-throated diver was only represented by a single individual on just one of the survey months, suggesting that this sector does is not important for the species. However, red-necked grebes were regularly recorded during the autumn passage months, including the peak count of 12 individuals (August 2012), as well as a count of 2 in March 2012. The highest number of birds was found between 500 m and 1.5 km offshore, although birds were recorded in all distance bands, suggesting that the near shore habitats of this sector are of some importance to this species, particularly during the autumn months.

All other non-SPA qualifying species recorded in this sector were typically coastal birds which included;

- gulls (including black-headed gull, common gull, herring gull, lesser black-backed gull, great black-backed gull and unidentified gull species);
- auks (including guillemots, razorbills and puffins);
- other seabirds (including gannets, fulmars, shags and common terns); and,
- mute swan.

All of these species are common and widespread and regularly occur in the coastal waters of north east Scotland either throughout the year, or during the breeding or non-breeding season. By comparison most species were recorded in relatively low numbers compared to their national breeding and wintering populations, although reasonably large counts of herring gulls were recorded throughout the winter months. Birds were recorded in all distance bands but were generally concentrated within 1 km offshore suggesting that the near shore habitats of this sector are of some importance to this species.

15C.3.2 Interpretation of WeBS Data

The high tide WeBS data, which covers the period 2006/07 - 2010/11 (the most recently available five year period), included the following information:

- Five year average monthly counts for each species;
- Five year peak monthly counts for each species;
- Five year peak counts for both autumn and winter and the month in which they were recorded in; and,
- Details of the international and national importance of the sectors for each species.

By comparison the low tide data are much less detailed and only gives peak and mean counts of the various species recorded in each individual count sector over the winter period November 2010 - February 2011.

Tables 15C.7 – 15C.9 present comparisons of the peak counts from each Inch Cape Offshore Wind Farm Onshore Grid Connection Intertidal and Coastal Bird Survey Count Sector and the 5-year peak WeBS count for the nearest corresponding count sector. All WeBS peak counts are high tide counts unless otherwise identified.

The following presents brief comparative summaries of these peak counts.

15C.3.2.1 Sector A (Prestonpans Sea Front)

The WeBS data lists 31 species having been recorded in the comparative survey sector, of which 22 are SPA qualifying species. This compares to 28 species having been recorded during the Inch Cape Intertidal and Coastal Bird Surveys, of which 15 are SPA qualifying species. The WeBS data list eight SPA qualifying species which were not recorded during the surveys including bar-tailed godwit, golden plover, knot, shelduck, dunlin, grey plover, ringed plover and wigeon, and one which was recorded during the survey but which had not been recorded during the WeBS surveys; Slavonian grebe.

Twenty of the 22 SPA qualifying species listed in the WeBS data were represented by higher peak counts than those recorded during the Inch Cape Intertidal and Coastal Bird Surveys. The peak counts for four of these 20 species represented $\geq$1% of their respective SPA population estimates where they had not previously done so in the Inch Cape Intertidal and Coastal Bird Surveys (great crested grebe, grey plover, ringed plover and oystercatcher).

Furthermore, the peak counts for five of the 20 species represented notable increases (i.e.>5%) in the representative proportion of their respective SPA population estimates compared to the peak counts recorded during the Inch Cape Intertidal and Coastal Bird Surveys (red-throated diver, cormorant, great crested grebe, long-tailed duck, and red-breasted merganser).

By comparison, two of the 22 SPA qualifying species listed in the WeBS data were represented by lower peak counts than those recorded during the Inch Cape Intertidal and Coastal Bird Surveys. These included velvet scoter and Sandwich tern, of which the peak count for the latter species represented less than 1% of the respective SPA population estimate whereas the peak counts recorded during the Inch Cape Intertidal and Coastal Bird Surveys had represented >1%.

Overall, the WeBS data suggest that the habitats associated with the Prestonpans Sea Front can support a slightly greater diversity and abundance of SPA qualifying species than was recorded during the Inch Cape Intertidal and Coastal Bird Surveys. Furthermore, most of the species are represented by higher representative proportions of their respective SPA qualifying populations than the Inch Cape Intertidal and Coastal Bird Surveys suggest. It should be noted however, that the extent of the comparative WeBS count sector is greater than the area covered by Sector A, which represents approximately 25% of the equivalent WeBS Sector. Thus the WeBS data are likely to over-represent the importance of this sector for some species, in relation to the area around the cable landfall site.

15C.3.2.2 Sector B (Cockenzie Power Station)

The WeBS data list 31 species having been recorded in the comparative survey sector, of which 22 are SPA qualifying species. This compares to 29 species having been recorded during the Inch Cape Intertidal and Coastal Bird Surveys, of which 14 are SPA qualifying species. The WeBS data list nine SPA qualifying species which were not recorded during the surveys including bar-tailed godwit, golden plover, knot, shelduck, dunlin, goldeneye, grey plover, ringed plover and wigeon, and one which was recorded during the surveys but which had not been recorded during the WeBS surveys; Slavonian grebe.

Twenty of the 22 SPA qualifying species listed in the WeBS data were represented by higher peak counts than those recorded during the Inch Cape Intertidal and Coastal Bird Surveys. The peak counts for five of these 20 species represented $\geq$1% of their respective SPA population estimates where they had not previously done so in the Inch Cape Intertidal and Coastal Bird Surveys (goldeneye, grey plover, oystercatcher, red-breasted merganser and ringed plover). Furthermore, the peak counts for five of the 13 species represented notable increases (i.e.>5%) in the representative proportion of their

respective SPA population estimates compared to the peak counts recorded during the Inch Cape Intertidal and Coastal Bird Surveys (red-throated diver, cormorant, great crested grebe, long-tailed duck, and red-breasted merganser; the same five species as in Sector A).

By comparison, two of the 22 SPA qualifying species listed in the WeBS data were represented by lower peak counts than those recorded during the Inch Cape Intertidal and Coastal Bird Surveys. These included velvet scoter and Sandwich tern, of which the peak counts for both species represented less than 1% of their respective SPA population estimates whereas the peak counts recorded during the Inch Cape Intertidal and Coastal Bird Surveys had represented >1%.

Overall, the WeBS data suggest that the coastal habitats off Cockenzie Power Station can support a slightly greater diversity and abundance of SPA qualifying species than was recorded during the Inch Cape Intertidal and Coastal Bird Surveys. Furthermore, most of the species are represented by higher representative proportions of their respective SPA qualifying populations than the Inch Cape Intertidal and Coastal Bird Surveys suggest. It should be noted however, that the extent of the comparative WeBS count sector is greater than the area covered by Sector B, which represents approximately 25% of the equivalent WeBS Sector. Thus the WeBS data are likely to over-represent the importance of this sector for some species, in relation to the area around the cable landfall site.

15C.3.2.3 Sector E (Seton Sands)

The WeBS data list 37 species having been recorded in the comparative survey sector, of which 25 are SPA qualifying species. This compares to 36 species having been recorded during the Inch Cape Intertidal and Coastal Bird Surveys, of which 19 are SPA qualifying species. The WeBS data list six SPA qualifying species which were not recorded during the Inch Cape Intertidal and Coastal Bird Surveys (knot, shelduck, dunlin, mallard, lapwing and ringed plover).

Twenty three of the 25 SPA qualifying species listed in the WeBS data were represented by higher peak counts than those recorded during the Inch Cape Intertidal and Coastal Bird Surveys. The peak counts for ten of these 23 species represented $\geq$1% of their respective SPA population estimates where they had not previously done so in the Inch Cape Intertidal and Coastal Bird Surveys (knot, golden plover, redshank, curlew, great crested grebe, grey plover, lapwing, oystercatcher, mallard and ringed plover). Furthermore, the peak counts for seven of the 21 species represented notable increases (i.e.>5%) in the representative proportion of their respective SPA population estimates compared to the peak counts recorded during the Inch Cape Intertidal and Coastal Bird Surveys (bar-tailed godwit, golden plover, Slavonian grebe, turnstone, grey plover, long-tailed duck, and red-breasted merganser).

By comparison, only two of the 25 SPA qualifying species listed in the WeBS data were represented by lower peak counts than those recorded during the Inch Cape Intertidal and Coastal Bird Surveys (red-throated diver and goldeneye). However, neither of these decreases was considered to be significant with both representing a reduction of no more than 1%.

Overall, the WeBS data suggest that the intertidal and coastal habitats of Seton Sands support a similar diversity and abundance of SPA qualifying species than was recorded during the Inch Cape Intertidal and Coastal Bird Surveys. The majority of the species are however represented by higher representative proportions of their respective SPA qualifying populations than the Inch Cape Intertidal and Coastal Bird Surveys suggest, although it should be noted, that the extent of the comparative WeBS count sector is greater than the area covered by Sector E, which represents approximately 33% of the equivalent WeBS Sector. Thus the WeBS data are likely to over-represent the importance of this sector for some species, in relation to the area around the cable landfall site.

TABLE 15C.7 – COMPARISON OF SECTOR A (PRESTONPANS SEA FRONT) SURVEY DATA AND PRESTON GRANGE - PORT SETON / BF 105 WEBS DATA PEAK COUNTS									
Species (SPA species only)	**SPA Pop***	**Survey Data**			**WeBS Data****			**WeBS v's Survey Data Comparison**	
		Peak Count	**% SPA Pop**	**Month of Peak Count**	**5-yr Peak Count**	**% SPA Pop**	**Month of Peak Count**	**Peak Count Difference (+/-)**	**Peak Count % Difference (+/-)**
Bar-tailed godwit	1502	-	-	-	3	0.2	Dec	3	0.2
Golden plover	3527	-	-	-	29	0.8	Feb	29	0.8
Red-throated diver	102	2	2.0	Oct	13	12.7	Nov	11	10.8
Slavonian grebe	29	2	6.9	Nov	-	-	-	-2	-6.9
Sandwich tern	1037	28	2.7	Aug	2	0.2	Sep	-26	-2.5
Knot	4088	-	-	-	11	0.3	Jan	11	0.3
Pink-footed goose	25888	-	-	-	-	-	-	-	-
Redshank	5141	3	0.1	Feb	28	0.5	Oct	25	0.5
Shelduck	4047	-	-	-	2	<0.1	Jan	2	<0.1
Turnstone	934	21	2.2	Feb	38	4.1	Dec	17	1.8
Common scoter	2808	30	1.1	Jan	140	5.0	Jun	110	3.9
Cormorant	653	8	1.2	Sep	72	11.0	Sep	64	9.8
Curlew	4567	2	<0.1	Feb	19	0.4	Mar	17	0.4
Dunlin	6988	-	-	-	13	0.2	Jan	13	0.2
Eider	5925	136	2.3	Jan	223	3.8	Jul	87	1.5
Goldeneye	1340	20	1.5	Jan	34	2.5	Mar	14	1.0
Great crested grebe	139	1	0.7	Nov	24	17.3	Oct	23	16.5
Grey plover	469	-	-	-	23	4.9	Nov	23	4.9
Lapwing	5480	-	-	-	-	-	-	-	-
Long-tailed duck	220	3	1.4	Mar	24	10.9	Mar	21	9.5
Mallard	1166	-	-	-	-	-	-	-	-
Oystercatcher	8235	36	0.4	Mar	126	1.5	Jan	90	1.1
Red-breasted merganser	347	27	7.8	Dec	79	22.8	Apr	52	15.0
Ringed plover	1080	-	-	-	16	1.5	Jan	16	1.5
Scaup	60	-	-	-	-	-	-	-	-
Velvet scoter	928	18	1.9	Mar	10(LT)	1.1	N/A	-8	-0.9
Wigeon	2251	-	-	-	11	0.5	Dec	11	0.5

Notes:
* SPA Pop= each SPA Qualifying species most up to date population estimate based on BTO WeBS 5-year peak monthly counts for the equivalent Firth of Forth SPA WeBS count sectors over the period 2006/07 - 2010/11.
** All WeBS peak counts are high tide counts unless identified by (LT).

TABLE 15C.8 – COMPARISON OF SECTOR B (COCKENZIE POWER STATION) SURVEY DATA AND PRESTON GRANGE - PORT SETON / BF 106 WEBS DATA PEAK COUNTS									
Species (SPA species only)	**SPA Pop***	**Survey Data**			**WeBS Data****			**WeBS v's Survey Data Comparison**	
		Peak Count	**% SPA Pop**	**Month of Peak Count**	**5-yr Peak Count**	**% SPA Pop**	**Month of Peak Count**	**Peak Count Difference (+/-)**	**Peak Count % Difference (+/-)**
Bar-tailed godwit	1502	-	-	-	3	0.2	Dec	3	0.2
Golden plover	3527	-	-	-	29	0.8	Feb	29	0.8
Red-throated diver	102	5	4.9	Nov	13	12.7	Nov	8	7.8
Slavonian grebe	29	2	6.9	Jan	-	-	-	-2	-6.9
Sandwich tern	1037	23	2.2	Aug	2	0.2	Sep	-21	-2.0
Knot	4088	-	-	-	11	0.3	Jan	11	0.3
Pink-footed goose	25888	-	-	-	-	-	-	-	-
Redshank	5141	2	<0.1	Dec	28	0.5	Oct	26	0.5
Shelduck	4047	-	-	-	2	<0.1	Jan	2	<0.1
Turnstone	934	13	1.4	Sep	38	4.1	Dec	25	2.7
Common scoter	2808	33	1.2	Jan	140	5.0	Jun	107	3.8
Cormorant	653	18	2.8	Jul	72	11.0	Sep	54	8.3
Curlew	4567	1	<0.1	Oct	19	0.4	Mar	18	0.4
Dunlin	6988	-	-	-	13	0.2	Jan	13	0.2
Eider	5925	105	1.8	Sep	223	3.8	Jul	118	2.0
Goldeneye	1340	-	-	-	34	2.5	Mar	34	2.5
Great crested grebe	139	2	1.4	Sep	24	17.3	Oct	22	15.8
Grey plover	469	-	-	-	23	4.9	Nov	23	4.9
Lapwing	5480	-	-	-	-	-	-	-	-
Long-tailed duck	220	6	2.7	Mar	24	10.9	Mar	18	8.2
Mallard	1166	-	-	-	-	-	-	-	-
Oystercatcher	8235	15	0.2	Nov	126	1.5	Jan	111	1.3
Red-breasted merganser	347	1	0.3	Feb	79	22.8	Apr	78	22.5
Ringed plover	1080	-	-	-	16	1.5	Jan	16	1.5
Scaup	60	-	-	-	-	-	-	-	-
Velvet scoter	928	35	3.8	May	4(LT)	0.4	N/A	-31	-3.3
Wigeon	2251	-	-	-	11	0.5	Dec	11	0.5

Notes:
* SPA Pop= each SPA Qualifying species most up to date population estimate based on BTO WeBS 5-year peak monthly counts for the equivalent Firth of Forth SPA WeBS count sectors over the period 2006/07 - 2010/11.
** All WeBS peak counts are high tide counts unless identified by (LT).

TABLE 15C.9 – COMPARISON OF SECTOR E (SETON SANDS) SURVEY DATA AND PORT SETON - CRAIGIELAW / BF 113 WEBS DATA PEAK COUNTS									
Species (SPA species only)	**SPA Pop***	**Survey Data**			**WeBS Data****			**WeBS v's Survey Data Comparison**	
		Peak Count	**% SPA Pop**	**Month of Peak Count**	**5-yr Peak Count**	**% SPA Pop**	**Month of Peak Count**	**Peak Count Difference (+/-)**	**Peak Count % Difference (+/-)**
Bar-tailed godwit	1502	18	1.2	Feb	211	14.0	Feb	193	12.8
Golden plover	3527	4	0.1	Jan	192	5.4	Aug	188	5.3
Red-throated diver	102	6	5.9	Sep	5	4.9	Oct	-1	-1.0
Slavonian grebe	29	2	6.9	Sep	12	41.4	Feb	10	34.5
Sandwich tern	1037	38	3.7	May	41	4.0	May	3	0.3
Knot	4088	-	-	-	135	3.3	Apr	135	3.3
Pink-footed goose	25888	-	-	-	-	-	-	-	-
Redshank	5141	13	0.3	Dec	121	2.4	Sep	108	2.1
Shelduck	4047	-	-	-	4	0.1	Apr	4	0.1
Turnstone	934	22	2.4	Dec	87	9.3	Jan	65	7.0
Common scoter	2808	70	2.5	May	196	7.0	Apr	126	4.5
Cormorant	653	11	1.7	Oct	32	4.9	Aug	21	3.2
Curlew	4567	7	0.2	Mar	124	2.7	Jul	117	2.6
Dunlin	6988	-	-	-	16	0.2	Aug & Oct	16	0.2
Eider	5925	425	7.2	Aug	452	7.6	Jul	27	0.5
Goldeneye	1340	3	0.2	Jan	2	0.1	Nov	-1	-0.1
Great crested grebe	139	1	0.7	Oct	3	2.2	Feb	2	1.4
Grey plover	469	3	0.6	Nov	70	14.9	Apr	67	14.3
Lapwing	5480	-	0.0	-	171	3.1	Sep	171	3.1
Long-tailed duck	220	17	7.7	Mar	29	13.2	Apr	12	5.5
Mallard	1166	-	-	-	26	2.2	Dec	26	2.2
Oystercatcher	8235	42	0.5	Mar	388	4.7	Dec	346	4.2
Red-breasted merganser	347	28	8.1	Dec	101	29.1	Sep	73	21.0
Ringed plover	1080	-	-	-	26	2.4	Jan	26	2.4
Scaup	60	-	-	-	-	-	-	-	-
Velvet scoter	928	121	13.0	Mar	161	17.3	Sep	40	4.3
Wigeon	2251	66	2.9	Feb	107	4.8	Oct	41	1.8

Notes:
* SPA Pop= each SPA Qualifying species most up to date population estimate based on BTO WeBS 5-year peak monthly counts for the equivalent Firth of Forth SPA WeBS count sectors over the period 2006/07 - 2010/11.
** All WeBS peak counts are high tide counts unless identified by (LT).

15C.4 SUMMARY AND CONCLUSIONS

15C.4.1 Summary of Survey Results and Supporting WeBS Data

The survey results show that Sector E (Seton Sands) is the most sensitive area for intertidal and coastal birds, as it supports the highest diversity and abundance of both SPA and non-SPA qualifying species. Indeed the near-shore coastal waters are particularly important for velvet scoters, supporting up to 13% of the latest Firth of Forth SPA population. The data also indicates that the habitats of Seton Sands are also important for a number of other species including eider duck, wigeon, red-breasted merganser, red-throated diver, cormorant, Sandwich tern, Slavonian grebe, common scoter bar-tailed godwit and turnstone, supporting between 1 and 8.1% of these species either throughout the year or during certain seasons. With the exception of turnstone and bar-tailed godwit, all of these species are open water coastal birds indicting that it is the near-shore waters which are of most importance to birds in this area. The survey data also indicates that this area supports small numbers of other SPA qualifying species, although the results suggest that the habitats are not of such great importance to them compared to the species mentioned above.

Sector B (Cockenzie Power Station), also supports a reasonably high diversity of species. However, the number of species which were recorded in significant proportions of their respective Firth of Forth SPA population estimates was lower than in Sector E. Key species for which the survey data suggests that the habitats associated with this sector are of importance included red-throated diver, velvet scoter, Slavonian grebe, Sandwich tern, turnstone, common scoter, eider, long-tailed duck, great crested grebe and cormorant. These species represented between 1 and 6.9% of their respective SPA populations. All of these species with the exception of turnstone, are open water coastal birds indicting that it is the near-shore waters which are of most importance to birds in this area. Several other SPA qualifying species such as oystercatcher and red-breasted merganser were also recorded in this sector, although the data suggest that the habitats are of relatively low value to these species.

Sector A (Prestonpans Sea Front) supported a similar diversity of species to Sector B. Indeed, the data indicated that the habitats associated with this area are important to a very similar suite of species to Sector B with the addition of red-breasted merganser and goldeneye but with the exception of great crested grebe. Those species were generally recorded in lower numbers although peak counts represented between 1 and 7.8% of their respective SPA populations estimates. As in Sector B, all of these species, except turnstone, are open water coastal birds indicting that it is the near-shore waters which are of most importance to birds in this area. Several other SPA qualifying species such as oystercatcher, redshank and curlew were also recorded in this sector, although the data suggest that the habitats are of relatively low value to these species.

Table 15C.10 presents a list of the species which occurred in significant proportions (i.e. $\geq$1%) of their latest SPA populations estimates in each of the count sectors during the survey programme.

The WeBS data for the comparative Intertidal and Coastal Bird Surveys sectors suggests that the habitats associated with all three of the count sectors support a greater diversity and abundance of SPA qualifying species than was recorded during the Intertidal and Coastal Bird Surveys. Furthermore, many of these species were represented by higher proportions of their respective SPA qualifying populations than the peak counts recorded during the Intertidal and Coastal Bird Surveys suggested. Thus the habitats associated with this sector may be of even greater importance than the survey data indicates although it should be noted that the extent of the comparative WeBS count sectors is greater than the areas covered by the three Intertidal and Coastal Bird Surveys sectors. Thus the WeBS data are likely to over-represent the importance of this sector for some species.

TABLE 15C.10 – SUMMARY LIST OF SPA QUALIFYING SPECIES RECORDED IN SIGNIFICANT NUMBERS IN EACH SECTOR (I.E. GREATER THAN 1% OF THEIR RESPECTIVE ESTIMATED SPA POPULATIONS)

Sector A (Prestonpans Sea Front)		Sector B (Cockenzie Power Station)		Sector E (Seton Sands)	
Species (& SPA Pop*)	**% SPA Pop**	**Species (& SPA Pop*)**	**% SPA Pop**	**Species (& SPA Pop*)**	**% SPA Pop**
Red-breasted merganser (347)	7.8	Slavonian grebe (29)	6.9	Velvet scoter (928)	13.0
Slavonian grebe (29)	6.9	Red-throated diver (102)	4.9	Red-breasted merganser (347)	8.1
Sandwich tern (1037)	2.7	Velvet scoter (928)	3.8	Long-tailed duck (220)	7.7
Eider (5925)	2.3	Cormorant (653)	2.8	Eider (5925)	7.2
Turnstone (934)	2.2	Long-tailed duck (220)	2.7	Slavonian grebe (29)	6.9
Red-throated diver (102)	2.0	Sandwich tern (1037)	2.2	Red-throated diver (102)	5.9
Velvet scoter (928)	1.9	Eider (5925)	1.8	Sandwich tern (1037)	3.7
Goldeneye (1340)	1.5	Great crested grebe (139)	1.4	Wigeon (2251)	2.9
Long-tailed duck (220)	1.4	Turnstone (934)	1.4	Common scoter (2808)	2.5
Cormorant (653)	1.2	Common scoter (2808)	1.2	Turnstone (934)	2.4
Common scoter (2808)	1.1			Cormorant (653)	1.7
				Bar-tailed godwit (1502)	1.2

Notes: * SPA Pop = each SPA Qualifying species most up to date population estimate based on BTO WeBS 5-year peak monthly counts for the equivalent Firth of Forth SPA WeBS count sectors over the period 2006/07 - 2010/11.

This table presents a summary of species which occurred in significant proportions of their SPA qualifying populations in each of the count sectors at some point during the survey programme. It does not differentiate between species which were regularly present in significant numbers and those which may only have occurred once during the entire survey programme, nor does is distinguish between which of the offshore distance bands the majority of individuals of each species were typically recorded in. Such details can be found elsewhere in this report including in the interpretation of the survey results.

15C.4.2 Conclusions

Based on a comparison of the number of SPA qualifying species recorded in each the three count sectors and the representative proportions of those species' estimated SPA populations between the count sectors it is concluded that the least sensitive sector is Sector A (Prestonpans Sea Front). Nonetheless, the data shows that all three sectors are of some importance to qualifying species of the Firth of Forth SPA and therefore any potential impacts on these species from the Inch Cape Offshore Wind Farm onshore grid connection cable laying operations will need to be assessed in more detail as part of an Ecological Impact Assessment and Habitats Regulations Appraisal.

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FIGURES

Figure 15C.1: Intertidal and Coastal Bird Survey Areas

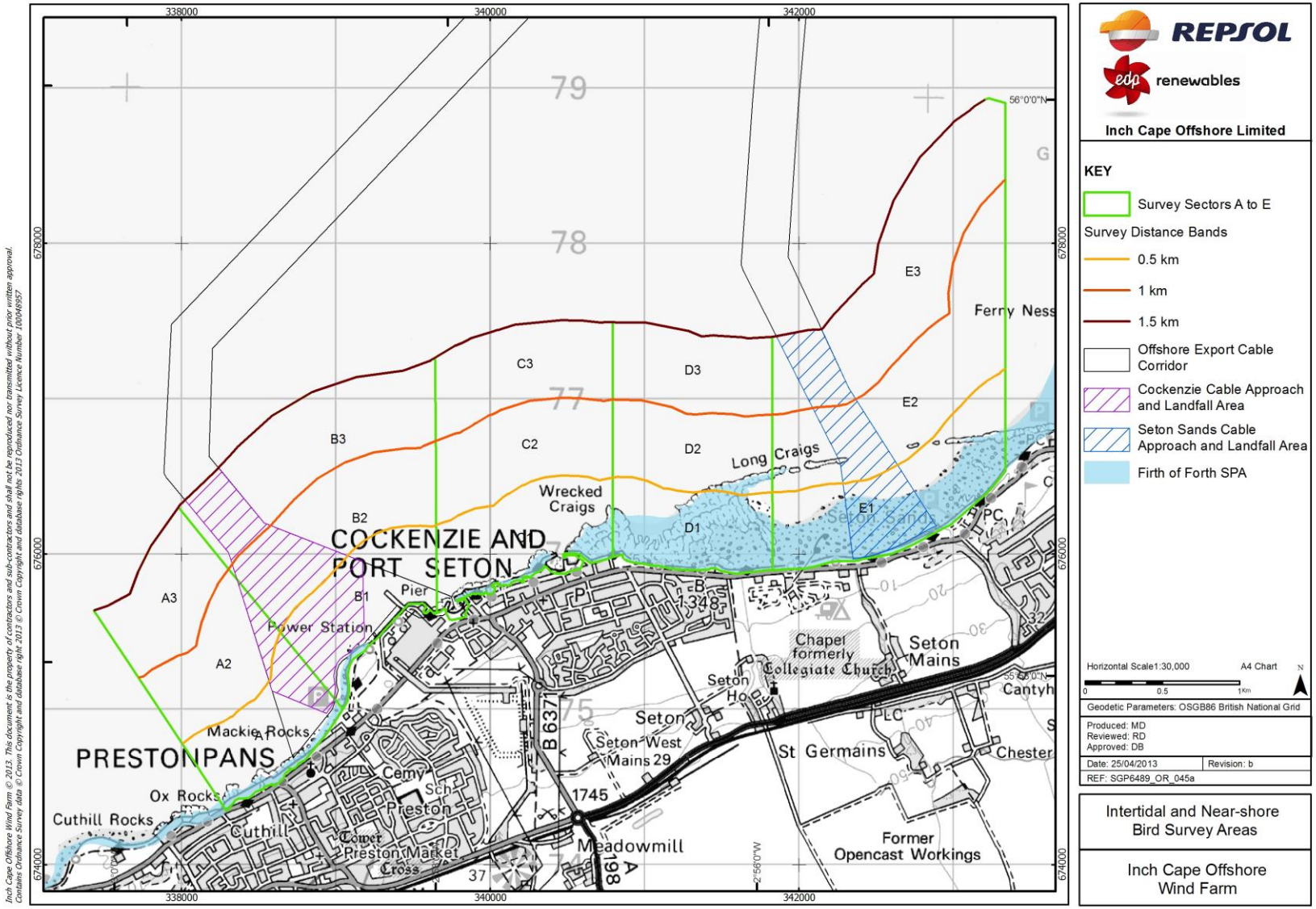


Figure 15C.2: High Tide WeBS Count Sectors

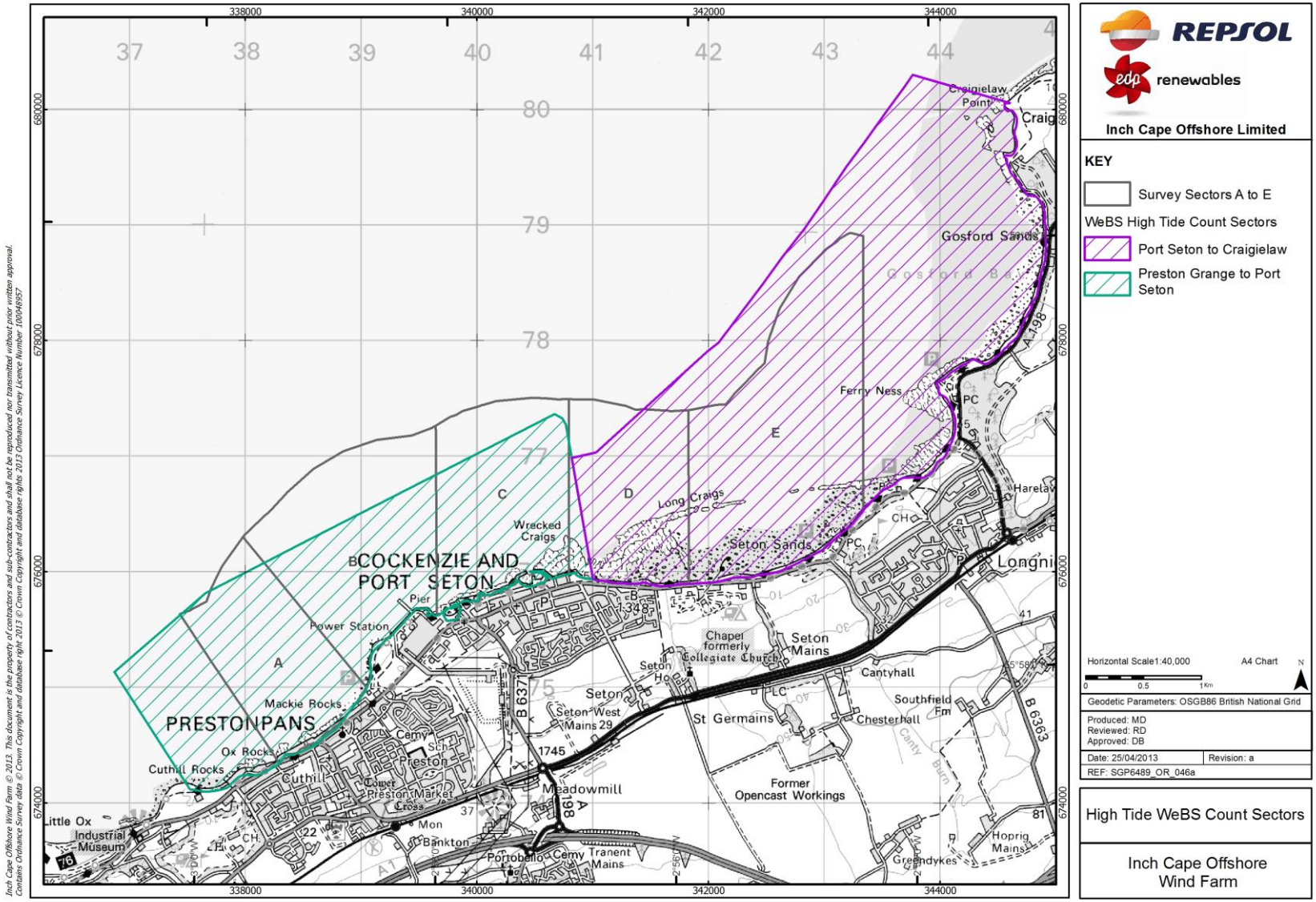


Figure 15C.3: Low Tide WeBS Count Sectors

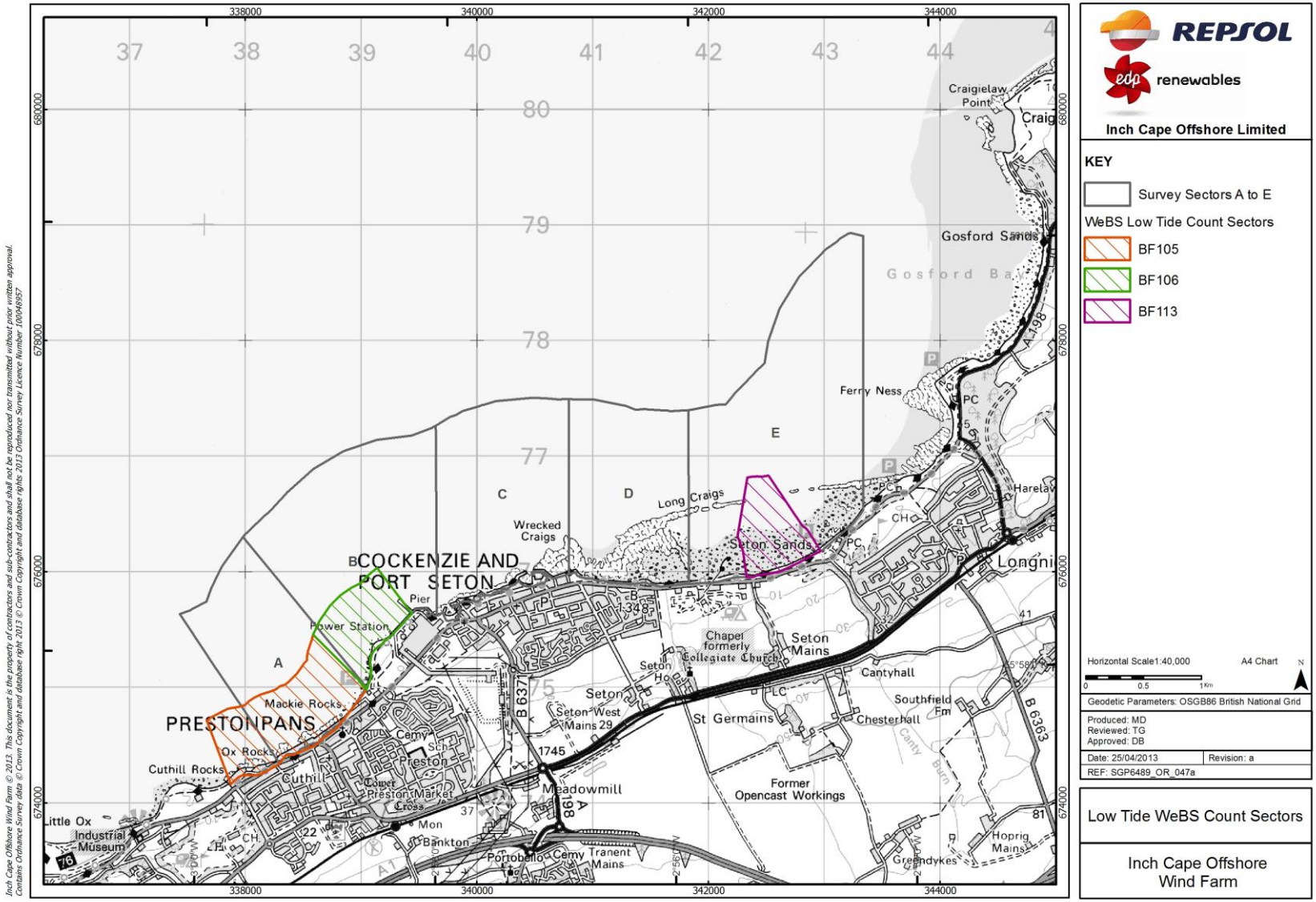


Figure 15C.4: Raw Count Distribution of High to Mid Tide

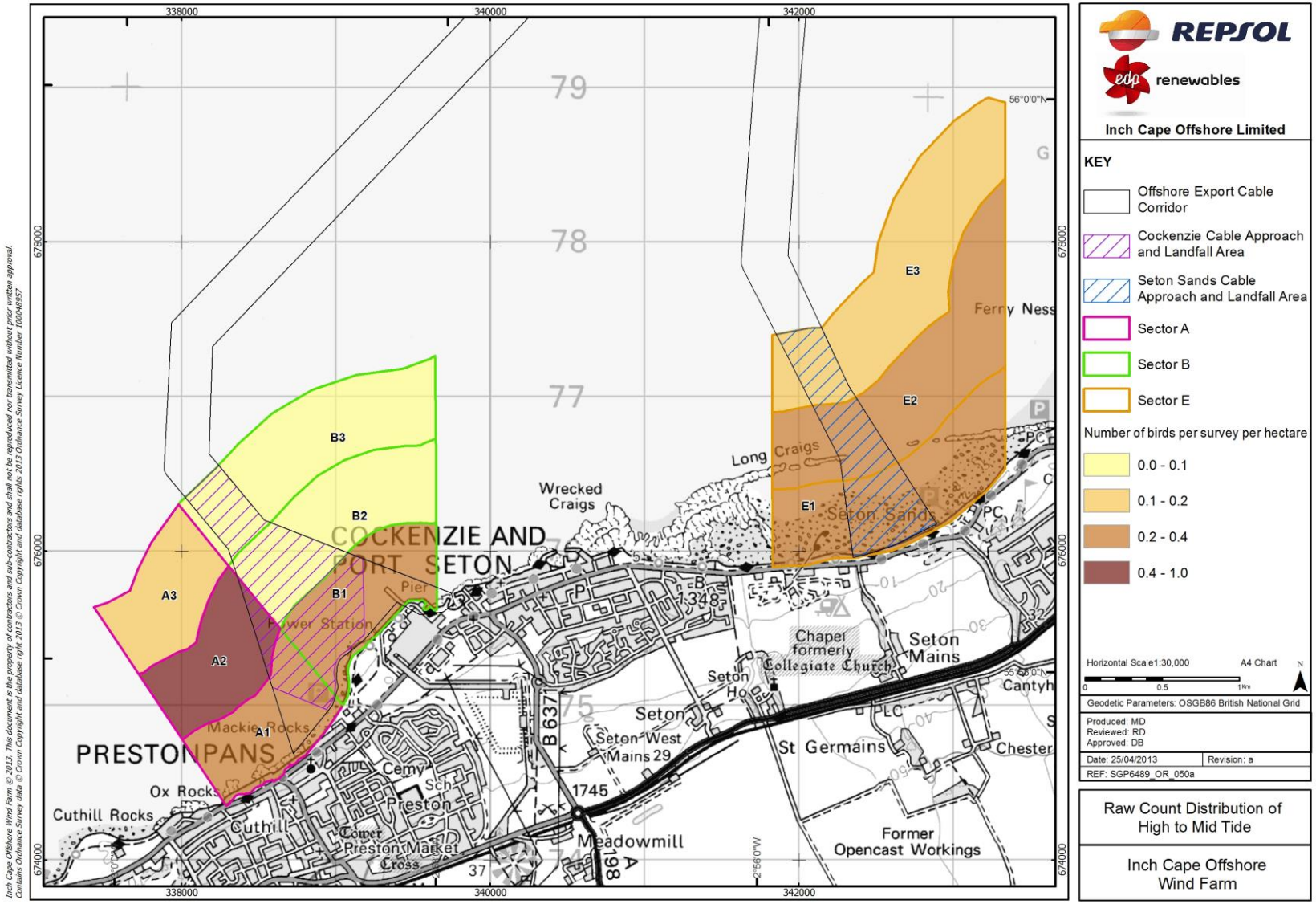


Figure 15C.5: Raw Count Distribution of Mid to Low Tide

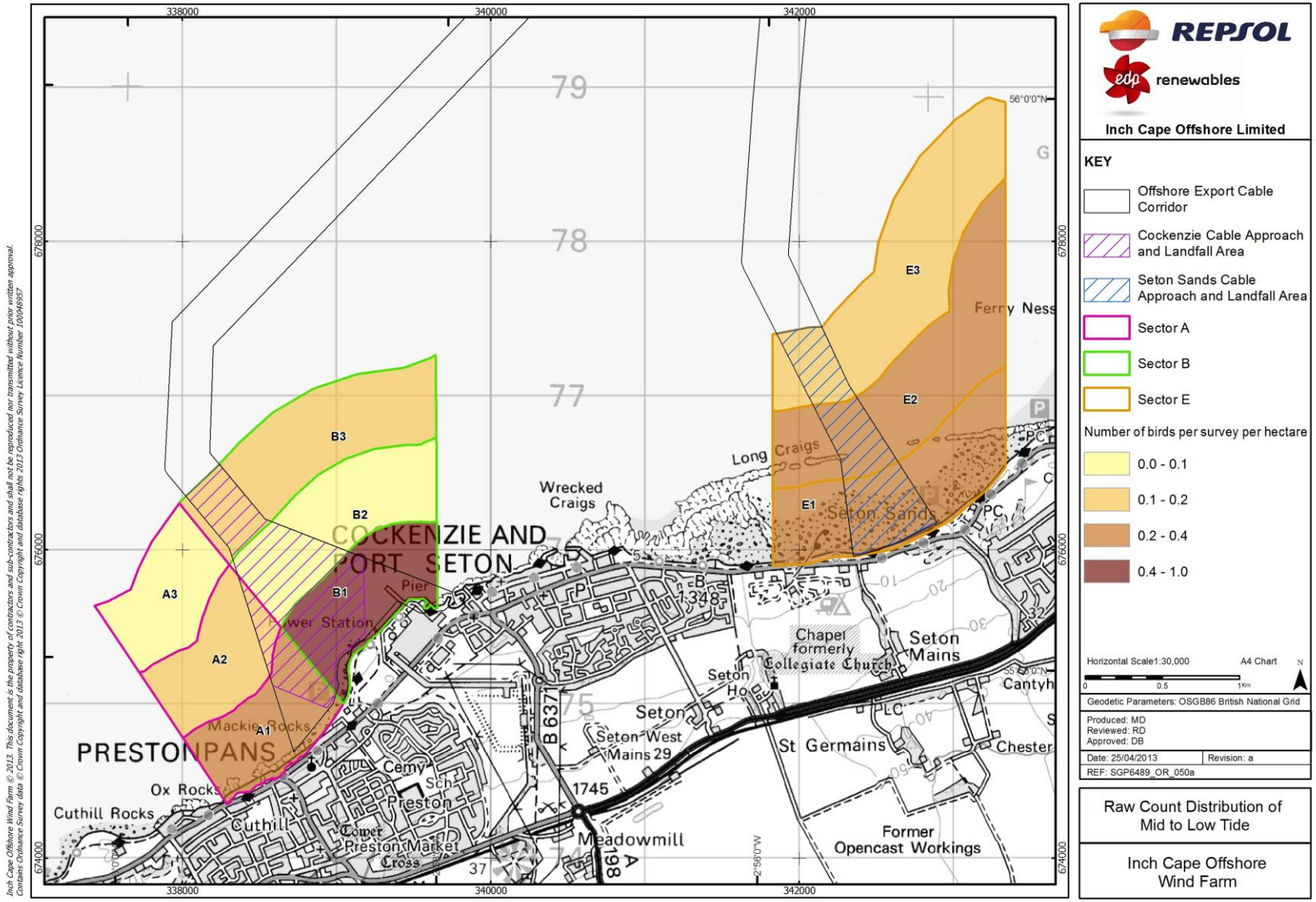


Figure 15C.6: Raw Count Distribution of Low to Mid Tide

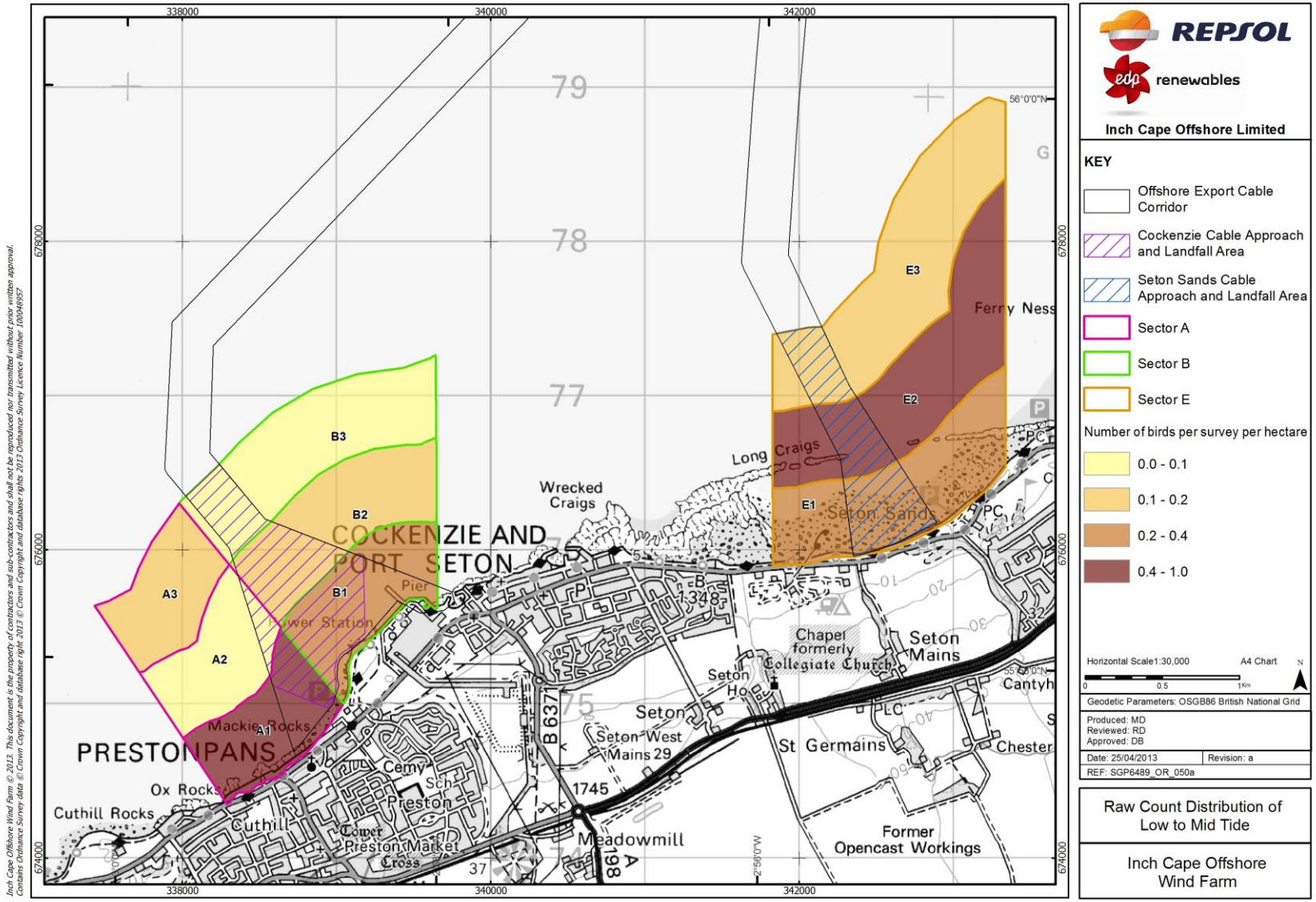


Figure 15C.7: Raw Count Distribution of Mid to High Tide

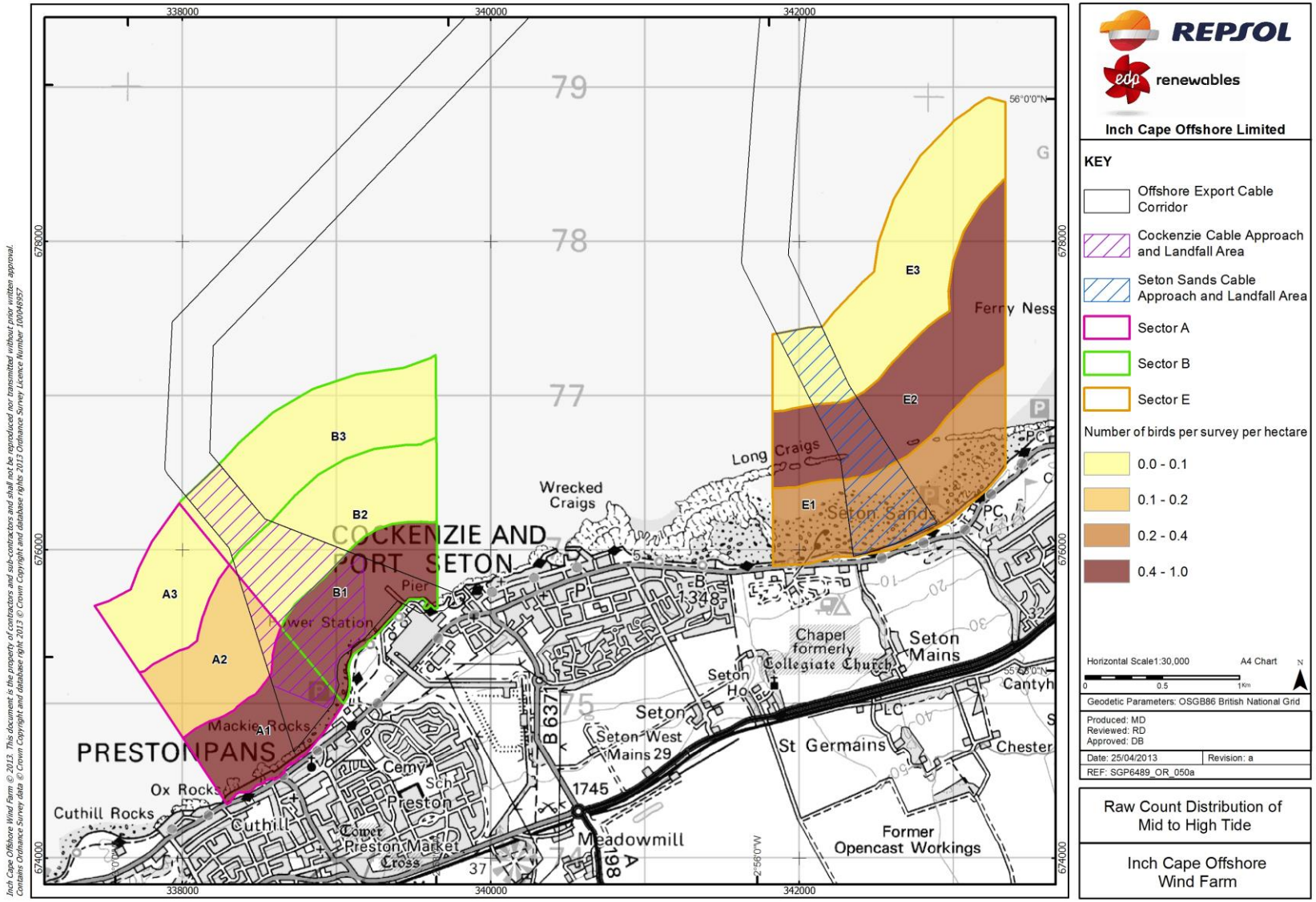


Figure 15C.8: Raw Count Distribution of Bar-Tailed Godwit

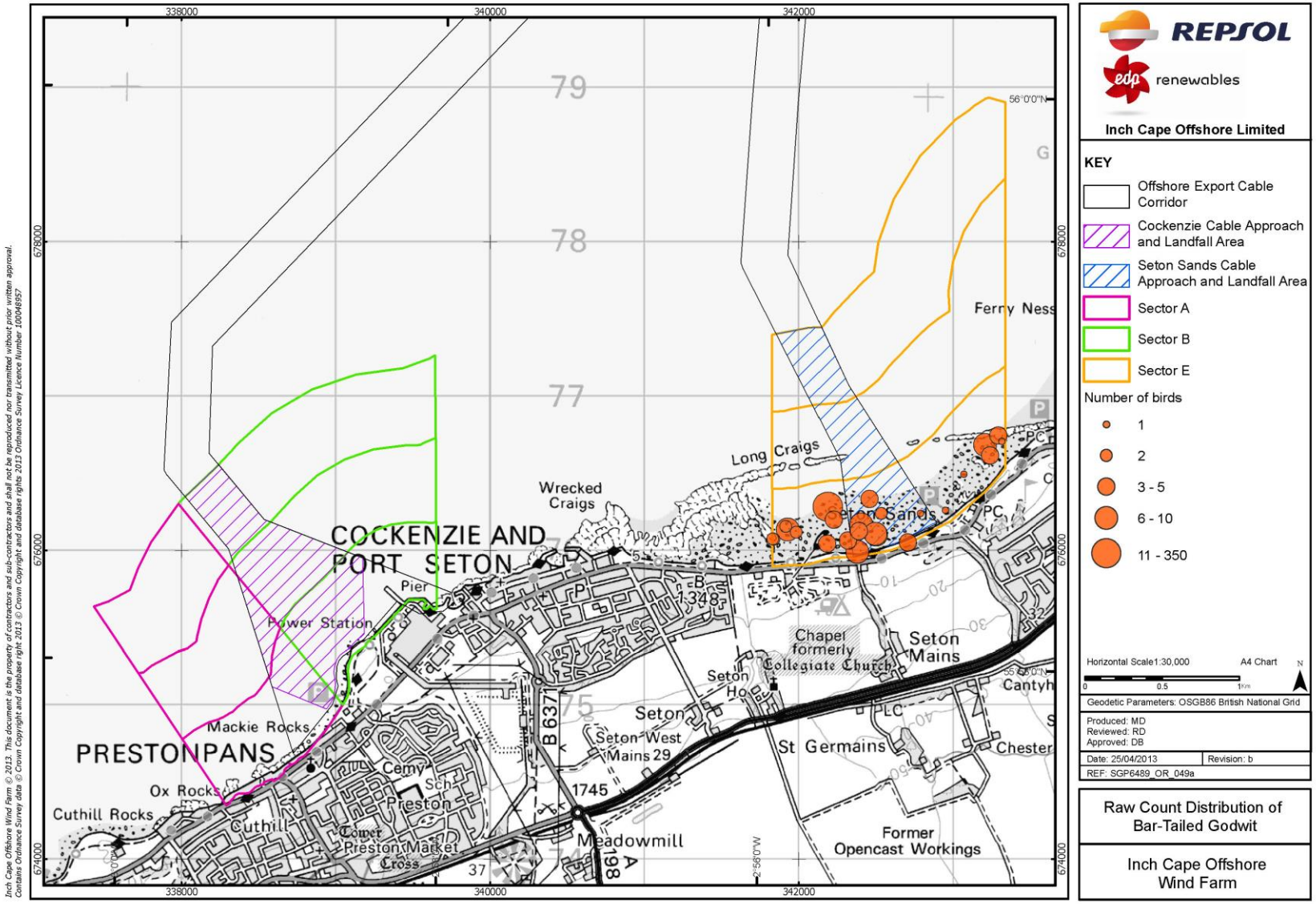


Figure 15C.9: Raw Count Distribution of Red-Throated Diver

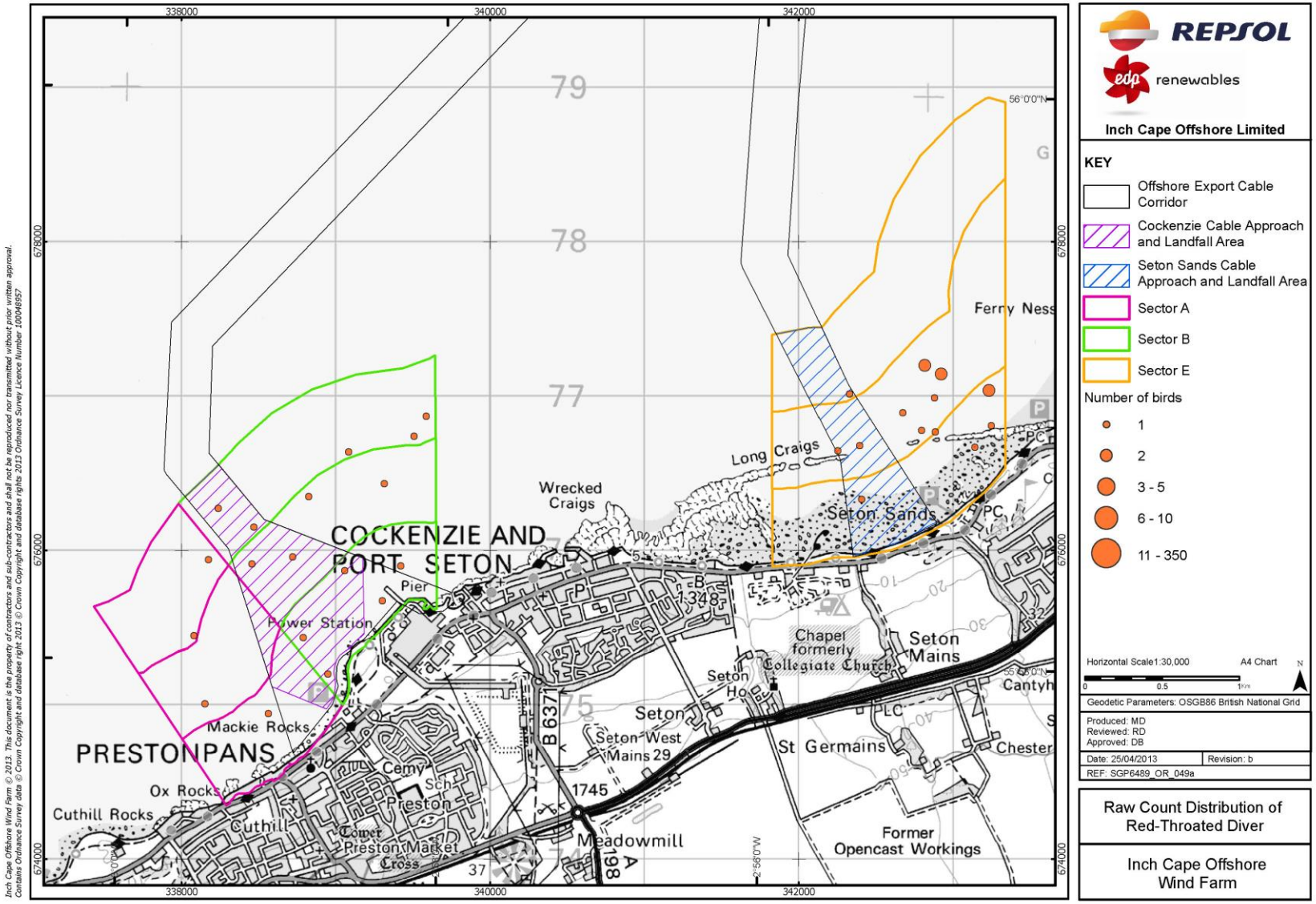


Figure 15C.10: Raw Count Distribution of Slavonian Grebe

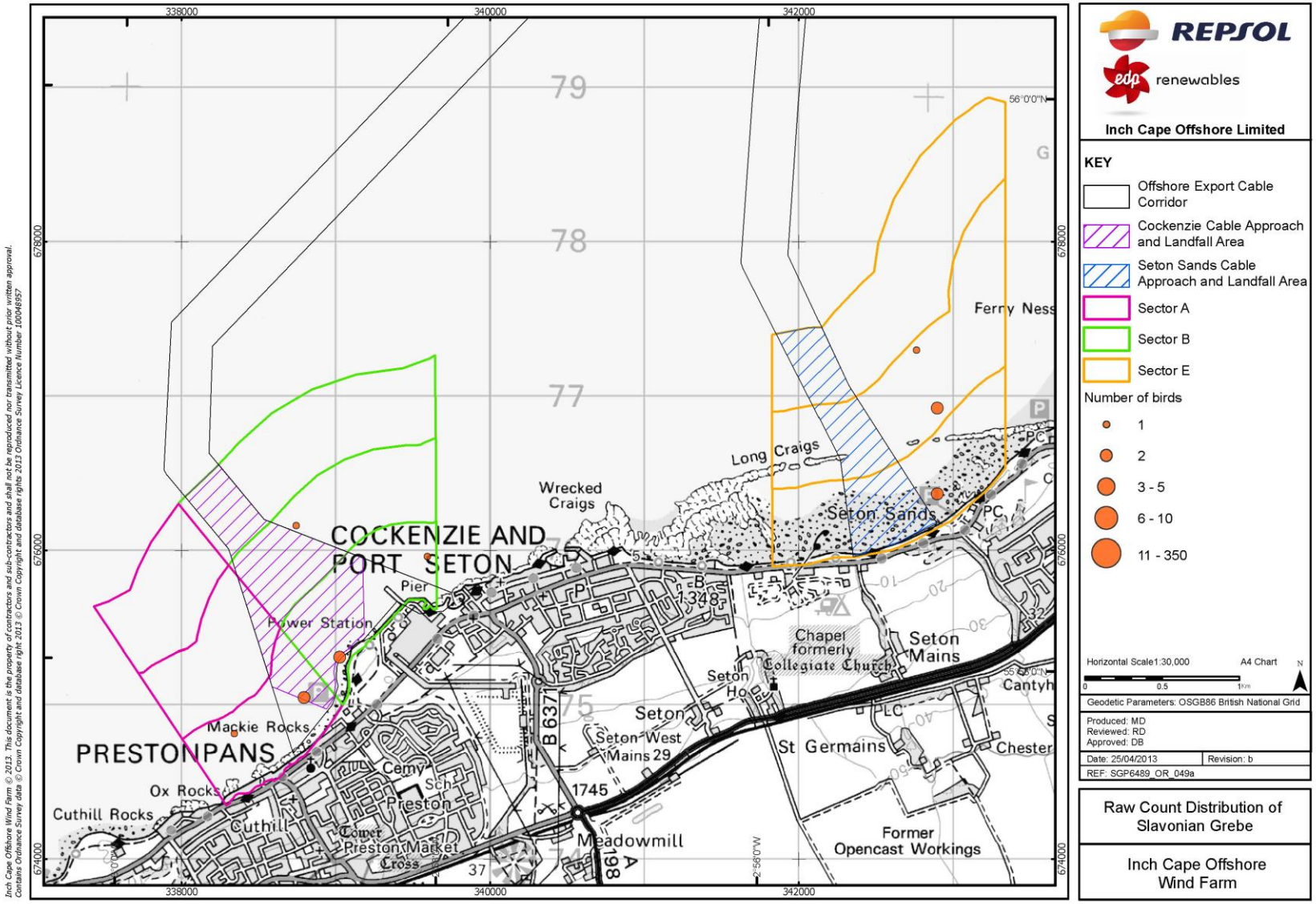


Figure 15C.11: Raw Count Distribution of Sandwich Tern

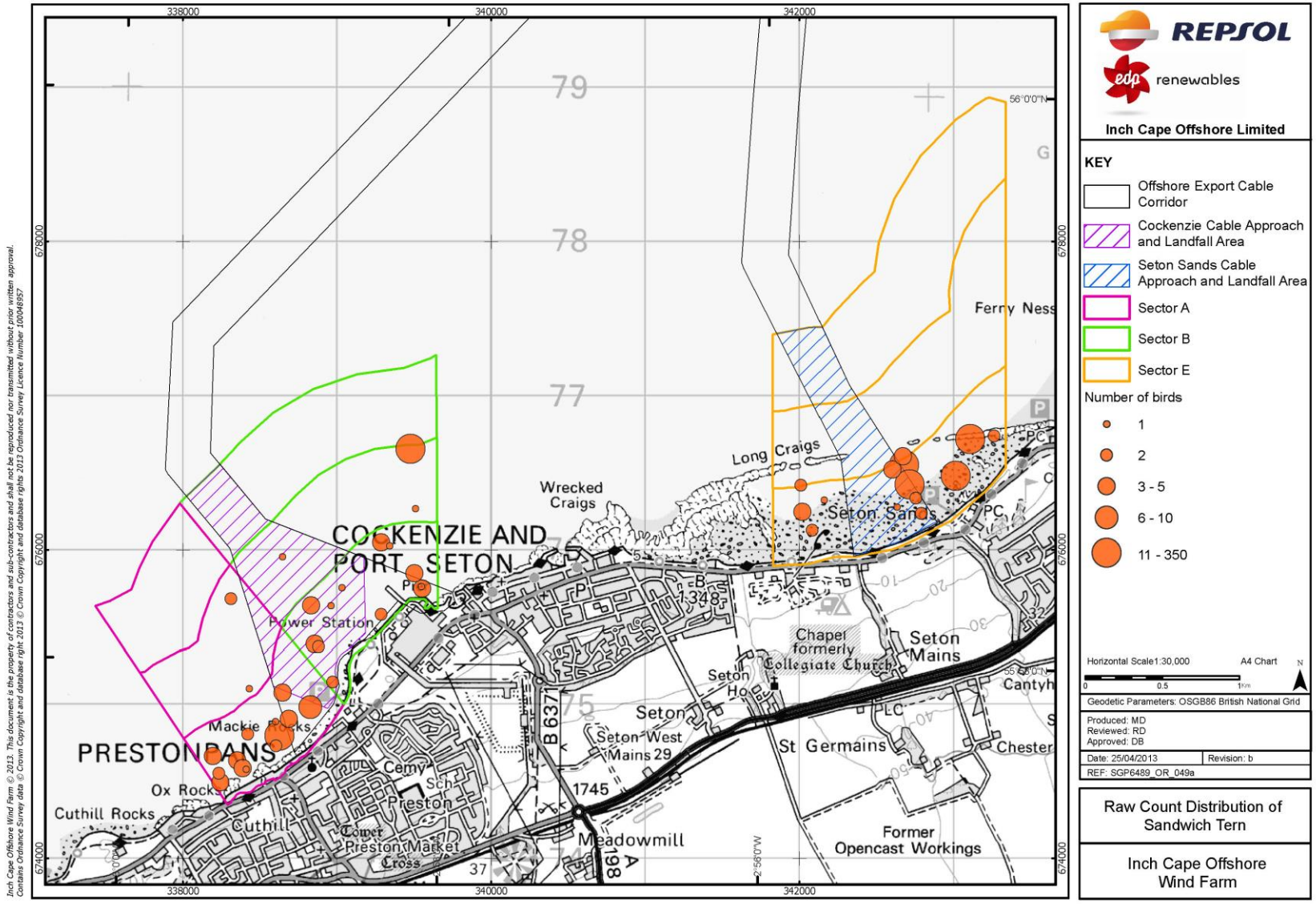


Figure 15C.12: Raw Count Distribution of Turnstone

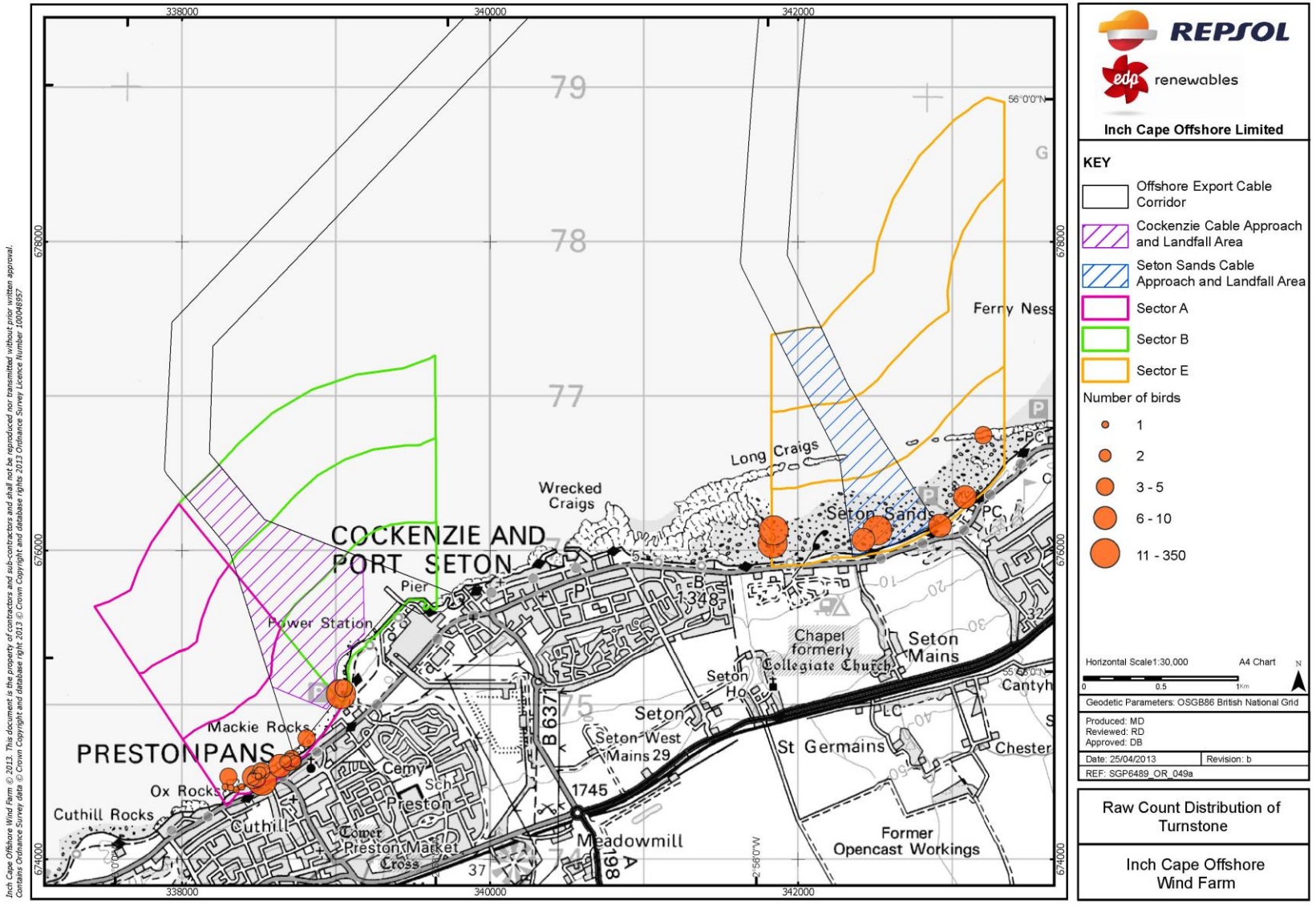


Figure 15C.13: Raw Count Distribution of Common Scoter

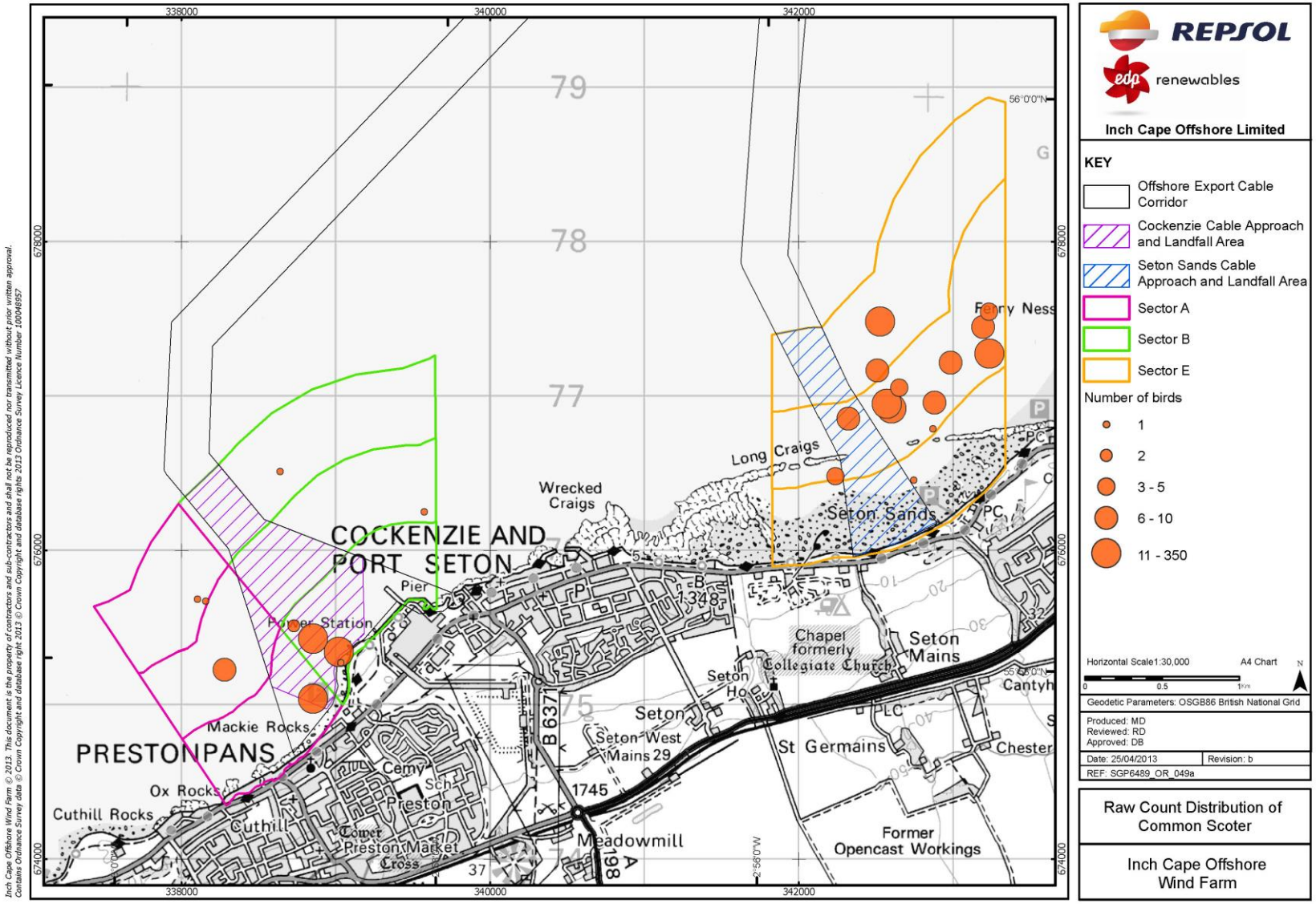


Figure 15C.14: Raw Count Distribution of Cormorant

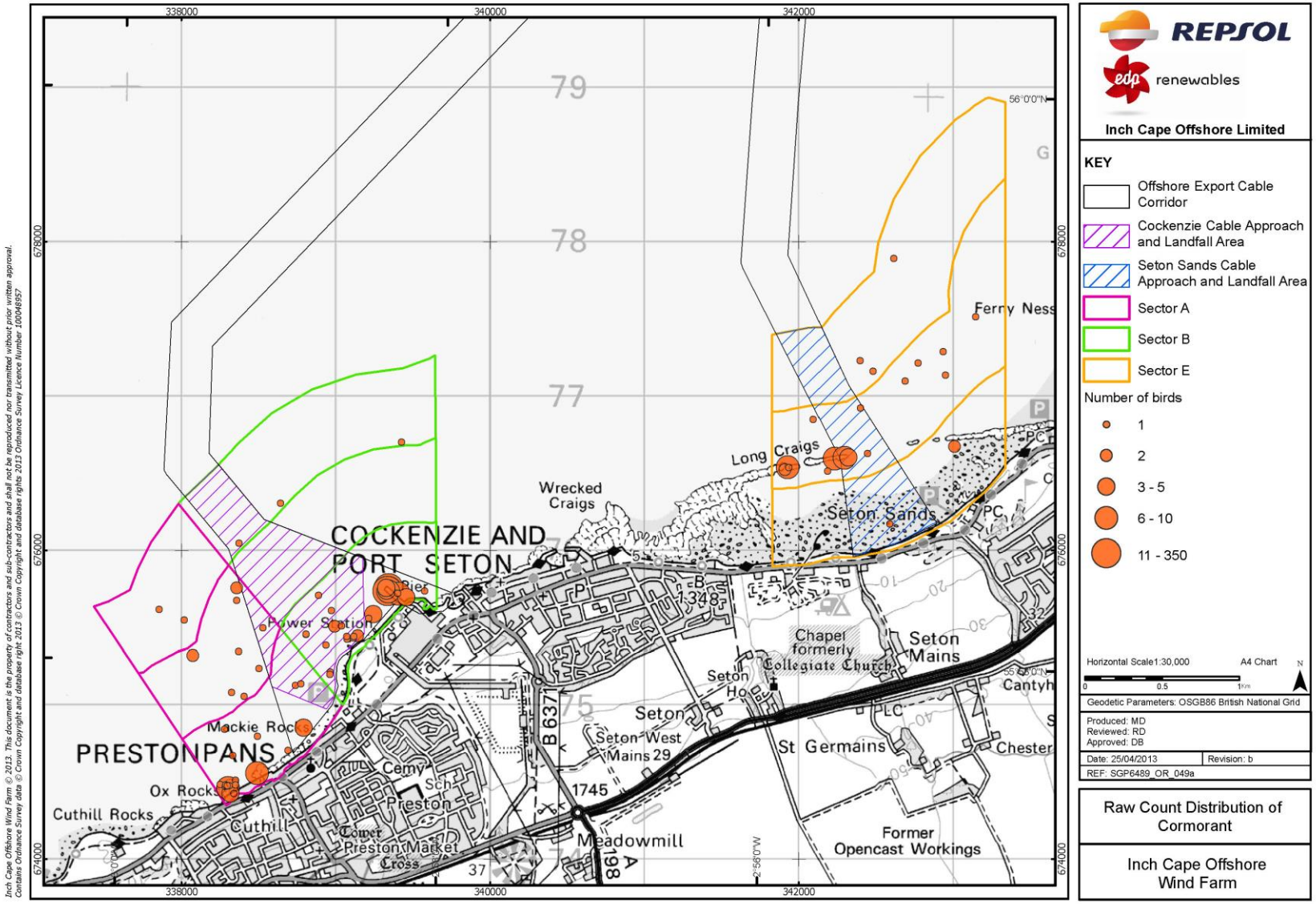


Figure 15C.15: Raw Count Distribution of Eider

Figure 15C.16: Raw Count Distribution of Goldeneye

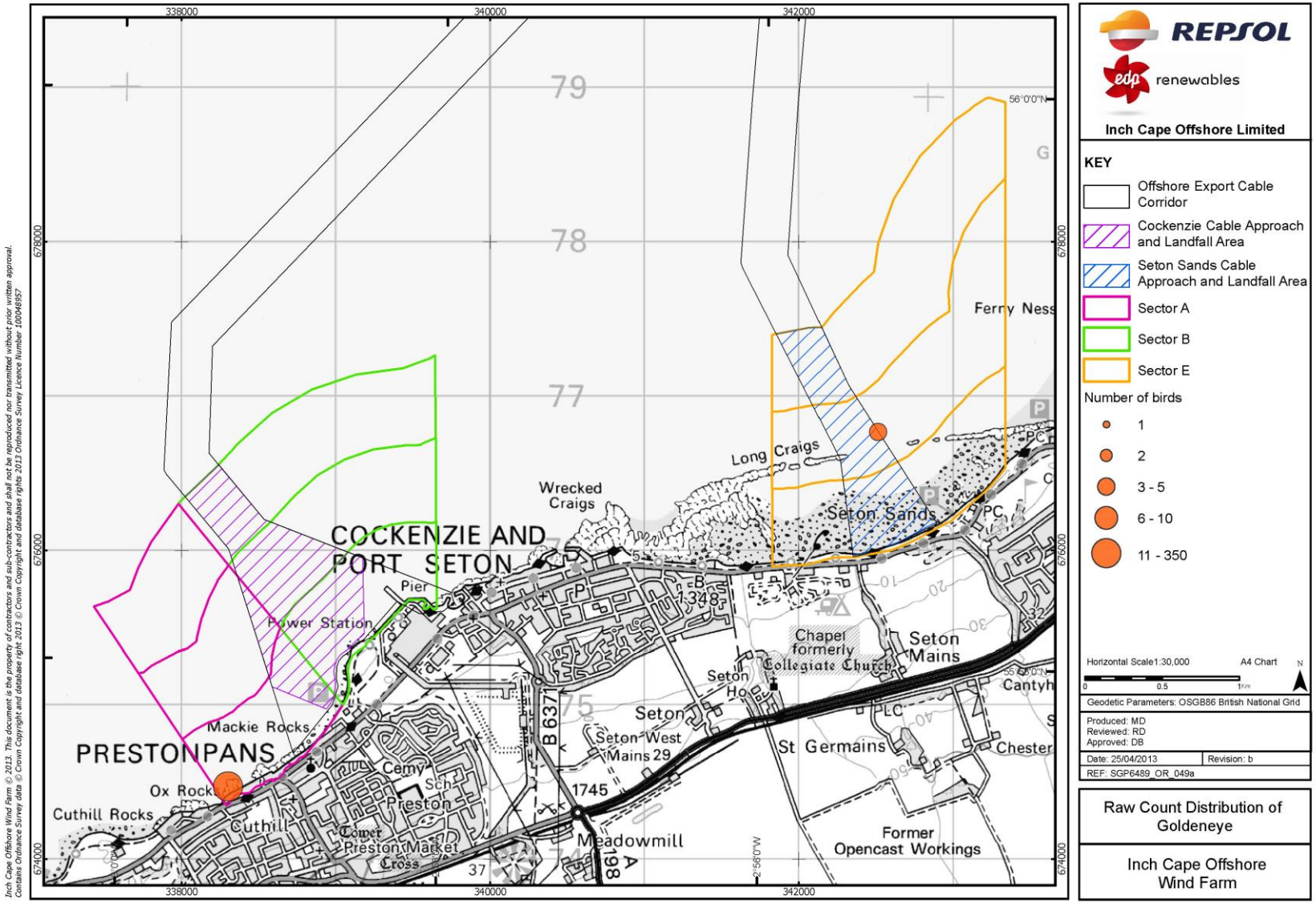


Figure 15C.17: Raw Count Distribution of Great Crested Grebe

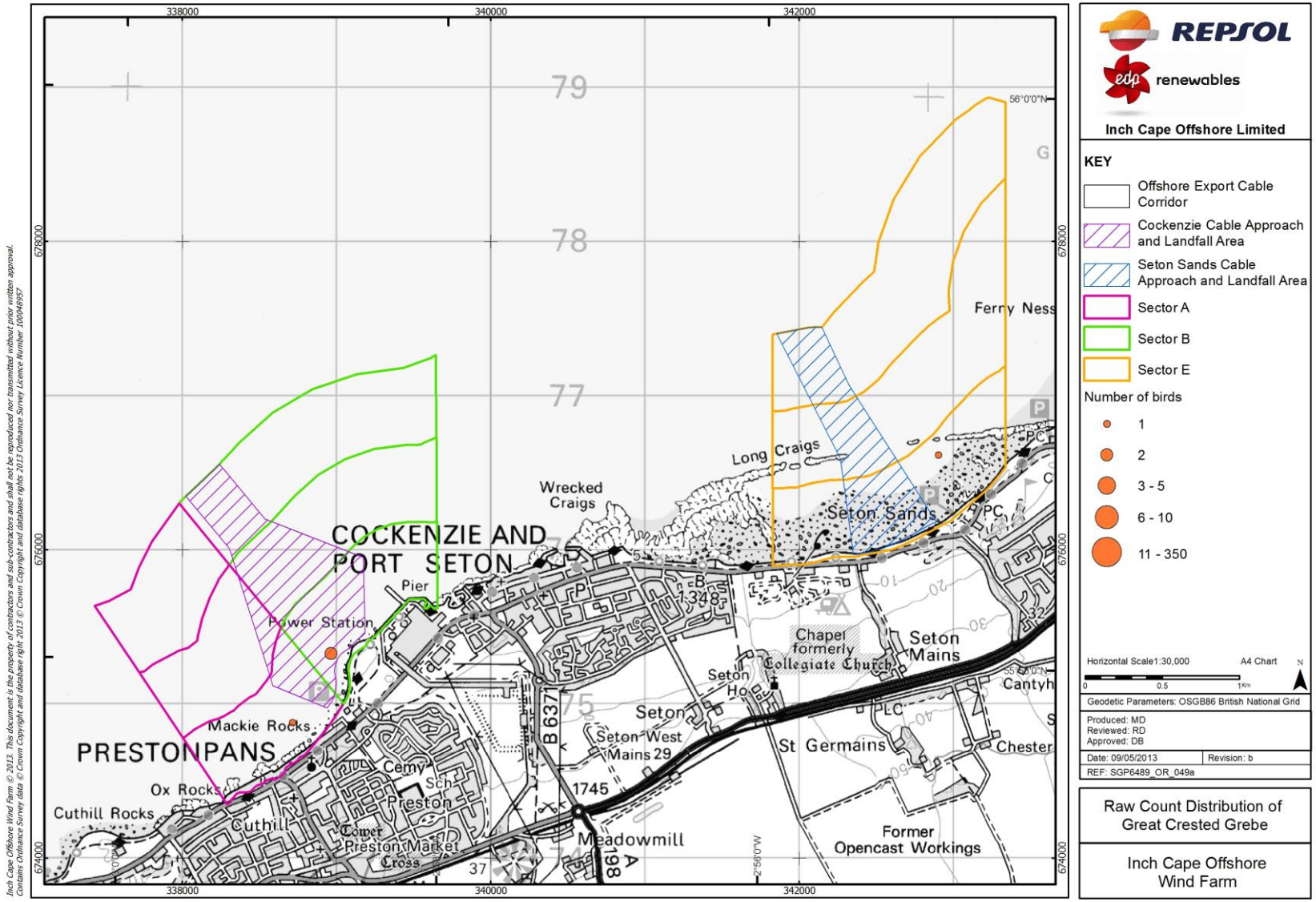


Figure 15C.18: Raw Count Distribution of Grey Plover

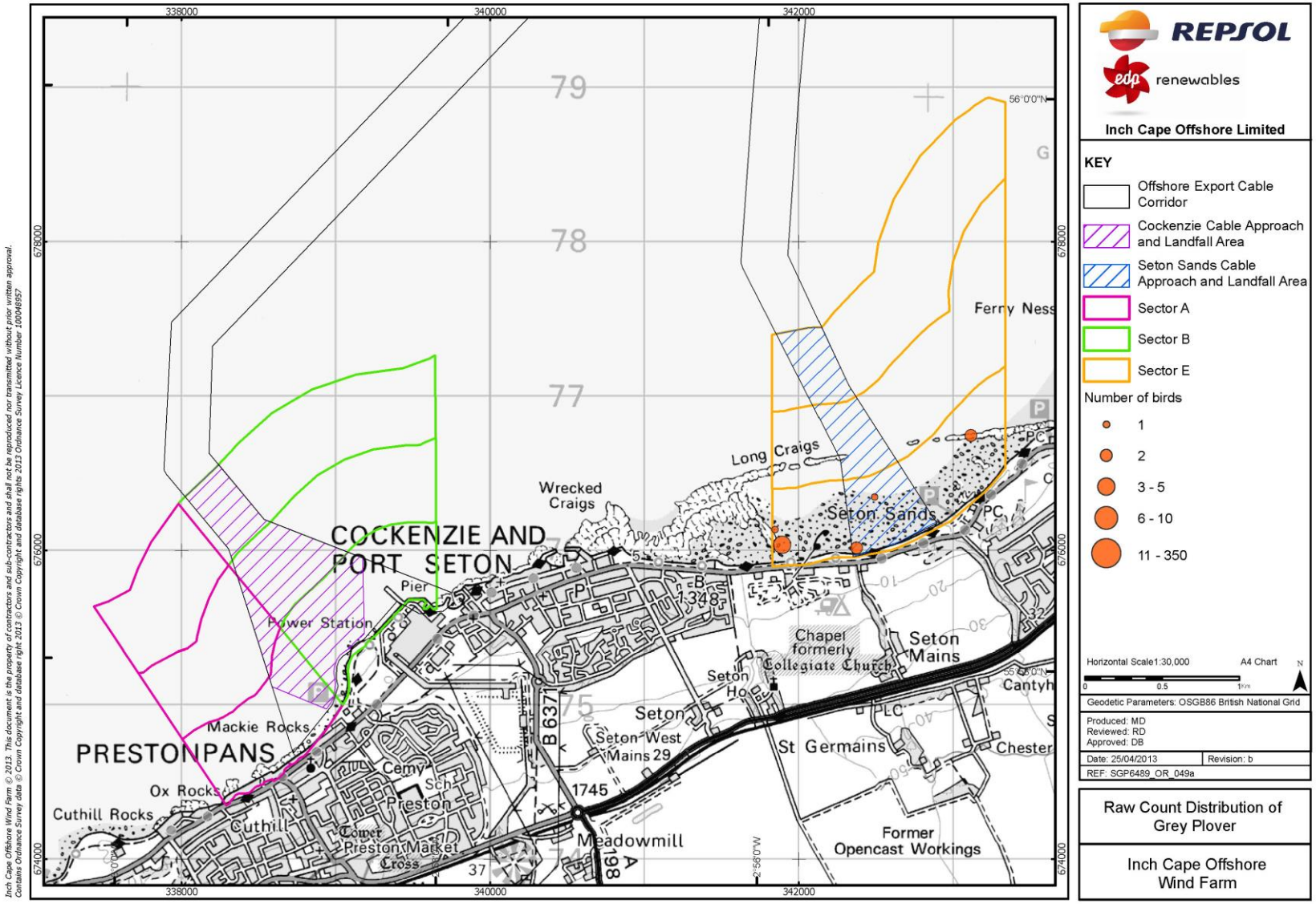


Figure 15C.19: Raw Count Distribution of Long-Tailed Duck

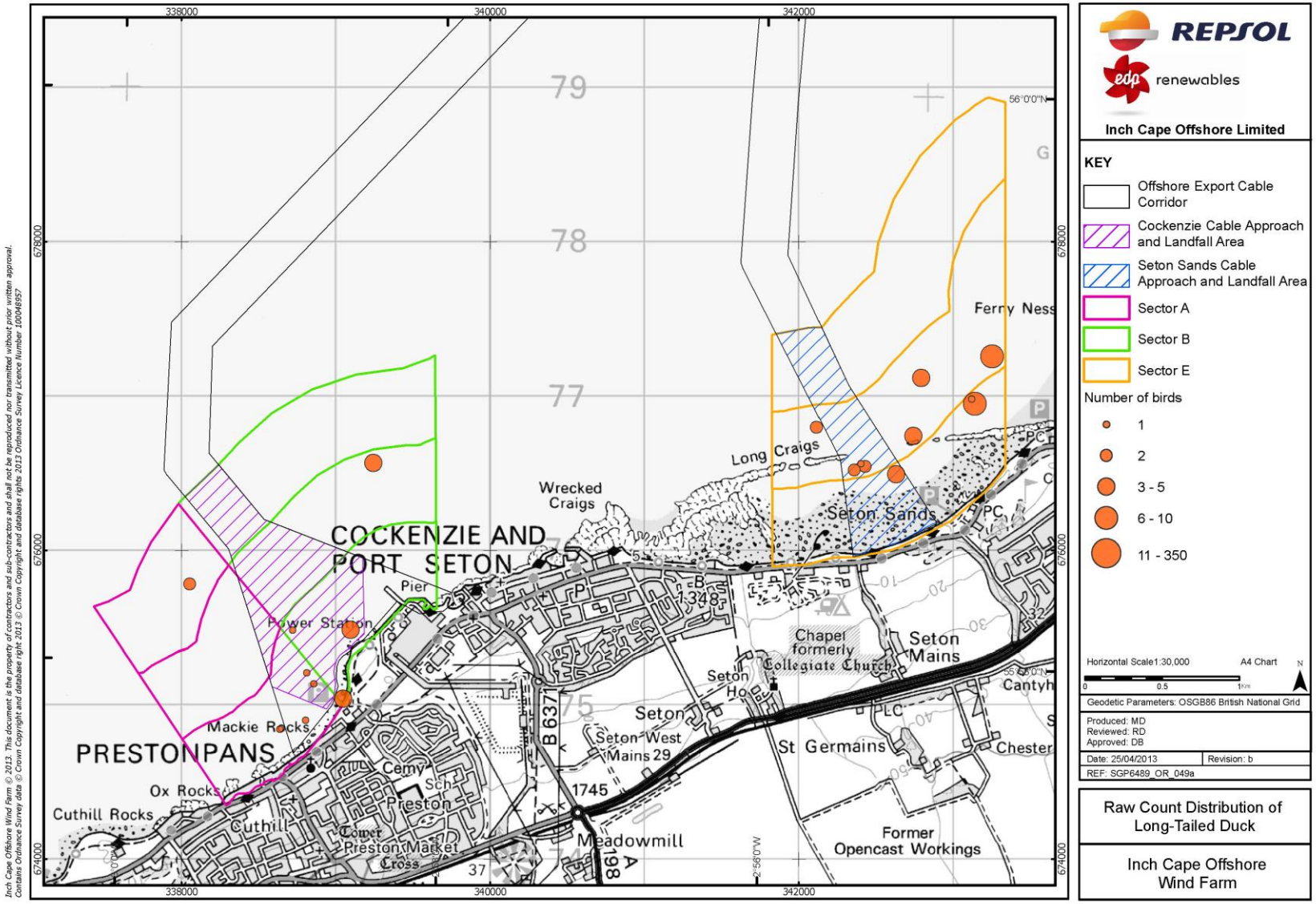


Figure 15C.20: Raw Count Distribution of Red-Breasted Merganser

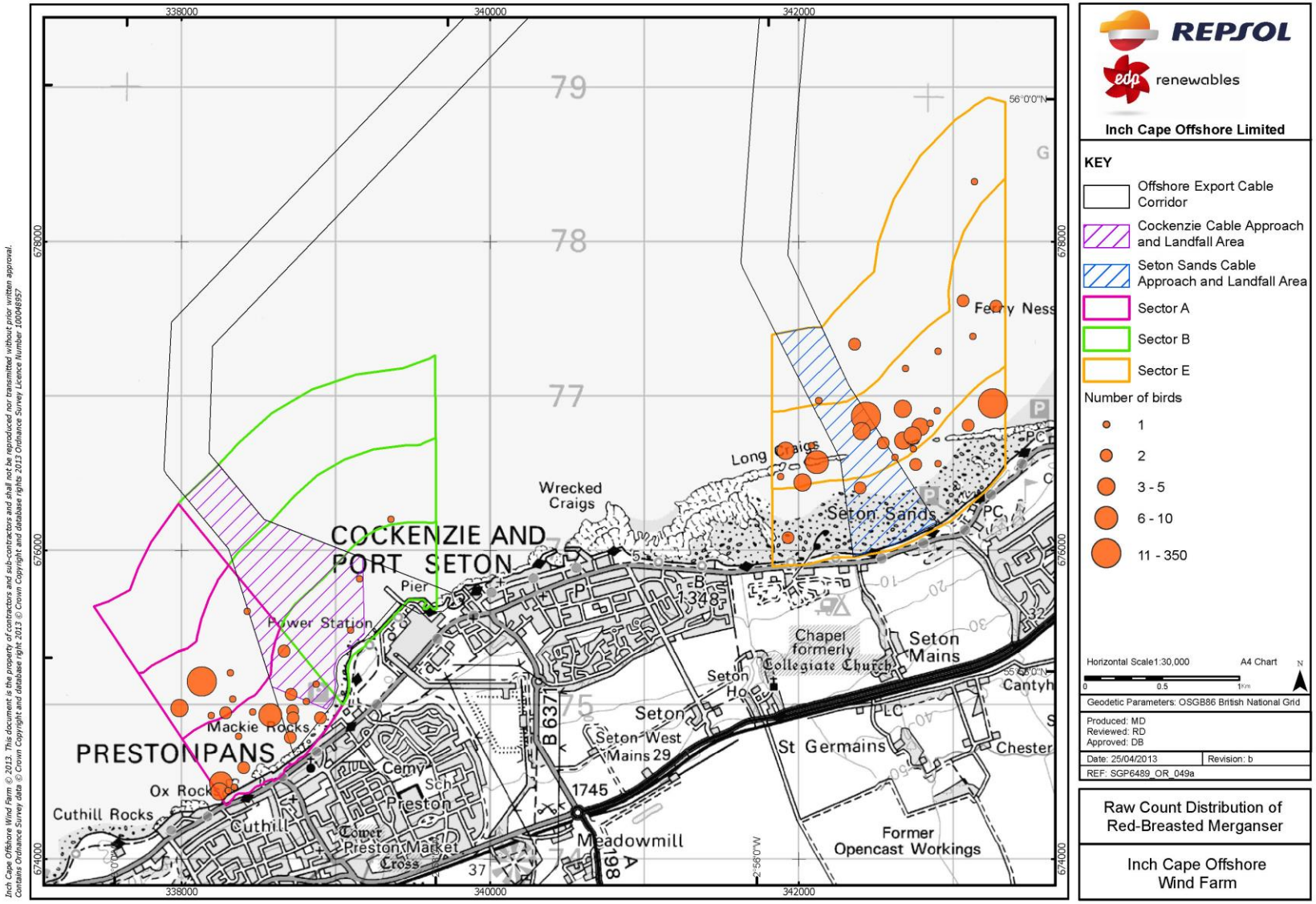


Figure 15C.21: Raw Count Distribution of Velvet Scoter

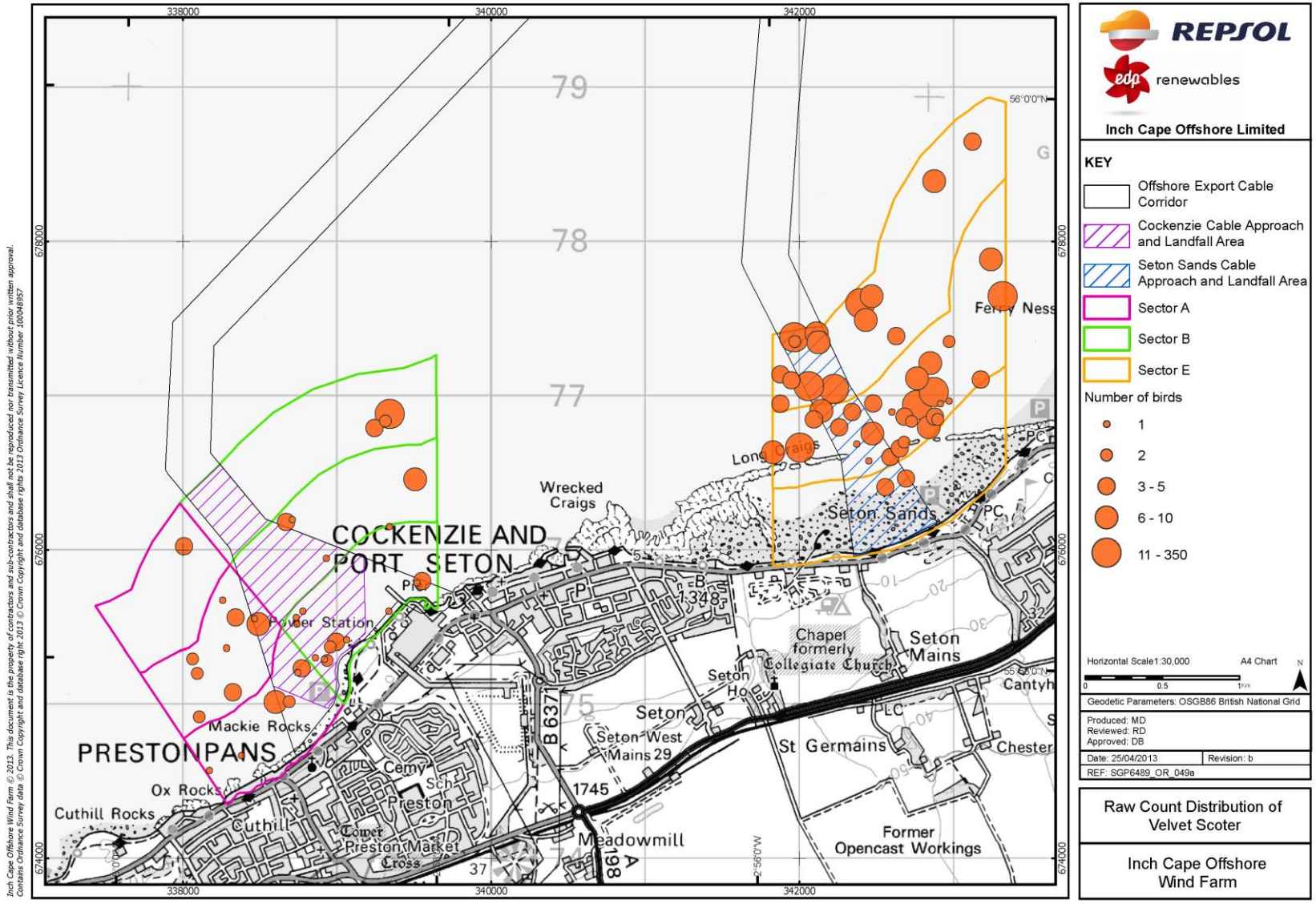
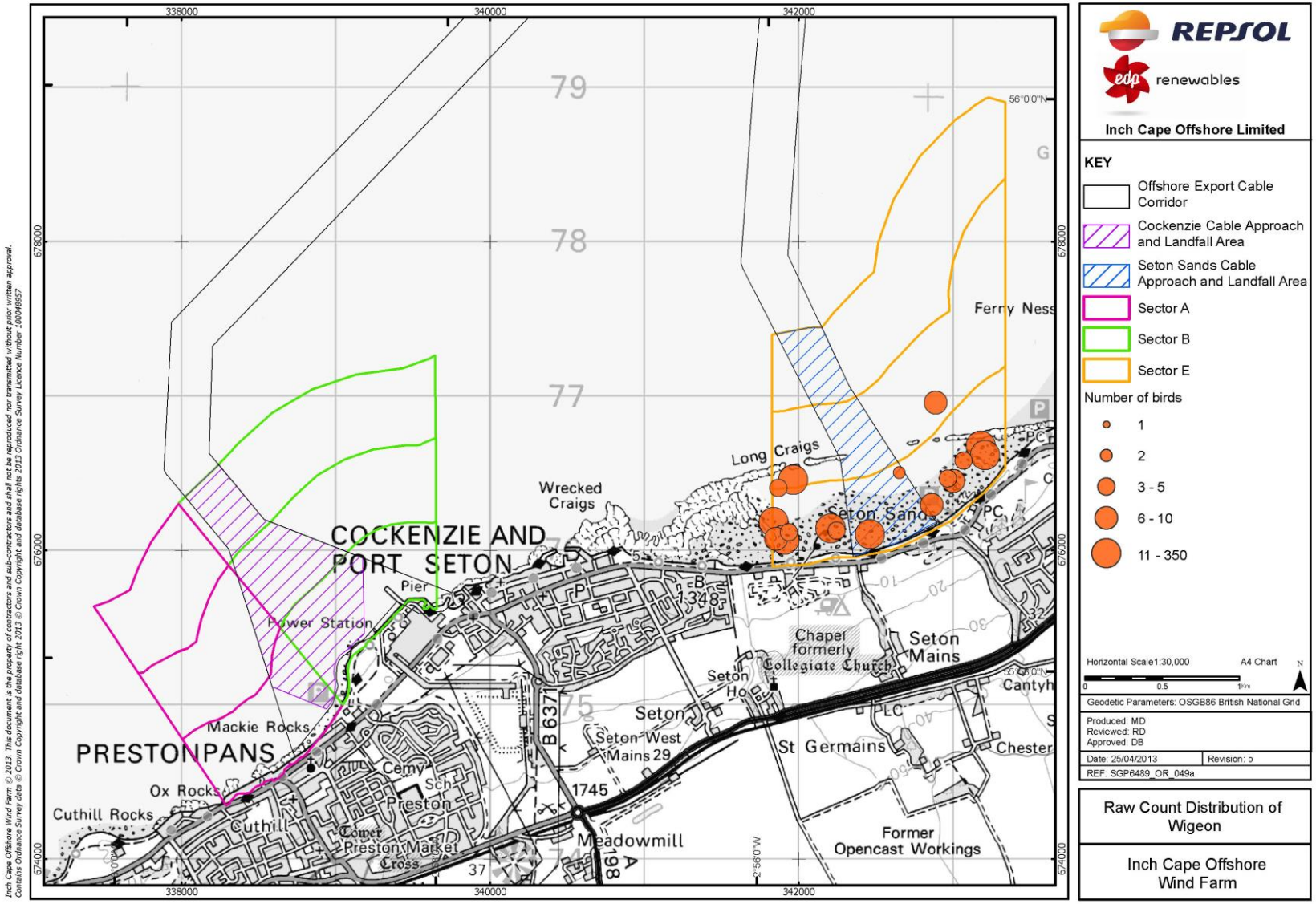


Figure 15C.22: Raw Count Distribution of Wigeon



ANNEX 15C.1: INTERTIDAL AND COASTAL BIRD SURVEY RESULTS – MONTHLY PEAK COUNTS PER DISTANCE BAND

TABLE 15C.1.1 – MONTHLY PEAK COUNTS OF INTERTIDAL AND COASTAL BIRDS RECORDED PER DISTANCE BAND IN SECTOR A (PRESTONPANS SEA FRONT)																
Species	**SPA Pop***	**Distance Zone**	**Jan'12**	**Feb'12**	**Mar'12**	**Apr'12**	**May'12**	**Jun'12**	**Jul'12**	**Aug'12**	**Sep'12**	**Oct'12**	**Nov'12**	**Dec'12**	**Jan'13**	**Peak**
SPA Qualifying Species																
Red-throated diver	90	0-500 m										1				**1**
		500 m-1 km											1			**1**
		1 km-1.5 km										1	1			**1**
		Total										2	2			**2**
Slavonian grebe	84	0-500 m											2		1	**2**
		500 m-1 km														**-**
		1 km-1.5 km														**-**
		Total											2			**2**
Sandwich tern	1617	0-500 m					9	4	10	28	1					**28**
		500 m-1 km					2	1								**2**
		1 km-1.5 km														**-**
		Total					11	5	10	28	1					**28**
Redshank	4341	0-500 m		3									2		1	**3**
		500 m-1 km														**-**
		1 km-1.5 km														**-**
		Total		3									2		1	**3**
Turnstone	860	0-500 m		21	2					2	5	5	10	5	8	**21**
		500 m-1 km														**-**
		1 km-1.5 km														**-**
		Total		21	2					2	5	5	10	5	8	**21**
Common scoter	2880	0-500 m													30	**30**
		500 m-1 km												8		**8**
		1 km-1.5 km				1	1									**1**
		Total				1	1							8	30	**30**
Cormorant	682	0-500 m			2	1	1	1	4	7	8	1	2		1	**8**
		500 m-1 km			1			1	2				4	1		**4**
		1 km-1.5 km						1		1						**1**
		Total			3	1	1	3	2	8	8	1	6	1	1	**8**

TABLE 15C.1.1 – MONTHLY PEAK COUNTS OF INTERTIDAL AND COASTAL BIRDS RECORDED PER DISTANCE BAND IN SECTOR A (PRESTONPANS SEA FRONT)																
Species	**SPA Pop***	**Distance Zone**	**Jan'12**	**Feb'12**	**Mar'12**	**Apr'12**	**May'12**	**Jun'12**	**Jul'12**	**Aug'12**	**Sep'12**	**Oct'12**	**Nov'12**	**Dec'12**	**Jan'13**	**Peak**
Curlew	1928	0-500 m		2	1					1	1	2	1			**2**
		500 m-1 km														**-**
		1 km-1.5 km														**-**
		Total		2	1					1	1	2	1			**2**
Eider	9400	0-500 m	17	8	13	11	10	7	19	20	34	10		28	42	**42**
		500 m-1 km	7	2	7	7	2	2	6	4	4	18	20	15	64	**64**
		1 km-1.5 km		8		4	4	1	1	6	1	2	9		30	**30**
		Total	24	18	20	22	26	10	26	30	39	30	29	43	136	**136**
Goldeneye	3004	0-500 m	20													**20**
		500 m-1 km														**-**
		1 km-1.5 km														**-**
		Total	20													**20**
Great crested grebe	720	0-500 m											1			**1**
		500 m-1 km														**-**
		1 km-1.5 km														**-**
		Total											1			**1**
Long-tailed duck	1045	0-500 m			1								1		1	**1**
		500 m-1 km														**-**
		1 km-1.5 km			2											**2**
		Total			3								1		1	**3**
Oystercatcher	7846	0-500 m	2	10	36		3	2	2	6	7	1	13	2		**36**
		500 m-1 km														**-**
		1 km-1.5 km														**-**
		Total	2	10	36		3	2	2	6	7	1	13	2		**36**
Red-breasted merganser	670	0-500 m		2	2				11			2		13	5	**13**
		500 m-1 km		1								1	1	14	2	**14**
		1 km-1.5 km														**-**
		Total		3	2				11			3	1	27	7	**27**

TABLE 15C.1.1 – MONTHLY PEAK COUNTS OF INTERTIDAL AND COASTAL BIRDS RECORDED PER DISTANCE BAND IN SECTOR A (PRESTONPANS SEA FRONT)																
Species	**SPA Pop***	**Distance Zone**	**Jan'12**	**Feb'12**	**Mar'12**	**Apr'12**	**May'12**	**Jun'12**	**Jul'12**	**Aug'12**	**Sep'12**	**Oct'12**	**Nov'12**	**Dec'12**	**Jan'13**	**Peak**
Velvet scoter	635	0-500 m	2		12		1						1		1	**12**
		500 m-1 km			6	1						4	6	4	2	**6**
		1 km-1.5 km				4										**4**
		Total	2		18	5	1					4	7	4	3	**18**
Non-SPA Qualifying Species																
Black-headed gull	-	0-500 m	7	14	22	1			12	9	10	33	17	1	8	**33**
		500 m-1 km												1		**1**
		1 km-1.5 km														**-**
		Total	7	14	22	1			12	9	10	33	17	2	8	**33**
Common gull	-	0-500 m	2	1	2				2	1		9			4	**9**
		500 m-1 km							3	2						**3**
		1 km-1.5 km														**-**
		Total	2	1	2				5	3		9			4	**9**
Common tern	-	0-500 m							2	2						**2**
		500 m-1 km														**-**
		1 km-1.5 km														**-**
		Total							2	2						**2**
Great black-backed gull	-	0-500 m	2	1	1		3	1			2			1		**3**
		500 m-1 km										1	1	1	2	**2**
		1 km-1.5 km				1			1	2			1	1		**2**
		Total	2	1	1	1	3	1	1	2	2	1	1	3	2	**3**
Guillemot	-	0-500 m				1	1	1		2	3	5		1		**5**
		500 m-1 km						4	4	44	8	3	3			**44**
		1 km-1.5 km						3		39	3					**39**
		Total				1	1	8	4	85	14	8	3	1		**85**
Gannet	-	0-500 m									2	1				**2**
		500 m-1 km					1									**1**
		1 km-1.5 km						2	11	6						**11**
		Total					1	2	11	6	2	1				**11**

TABLE 15C.1.1 – MONTHLY PEAK COUNTS OF INTERTIDAL AND COASTAL BIRDS RECORDED PER DISTANCE BAND IN SECTOR A (PRESTONPANS SEA FRONT)																
Species	**SPA Pop***	**Distance Zone**	**Jan'12**	**Feb'12**	**Mar'12**	**Apr'12**	**May'12**	**Jun'12**	**Jul'12**	**Aug'12**	**Sep'12**	**Oct'12**	**Nov'12**	**Dec'12**	**Jan'13**	**Peak**
Herring gull	-	0-500 m	22	27	47	52	42	45	38	55	64	30	45	40	47	**64**
		500 m-1 km		2	20	2	4	9		1	1	5	16	2	12	**20**
		1 km-1.5 km			4	2		15		4	1		8			**15**
		Total	22	29	71	56	46	69	38	60	66	35	69	42	59	**71**
Kittiwake	-	0-500 m									1					**1**
		500 m-1 km														**-**
		1 km-1.5 km														**-**
		Total									1					**1**
Lesser black-backed gull	-	0-500 m					2			1	1	1	1			**2**
		500 m-1 km														**-**
		1 km-1.5 km														**-**
		Total					2			1	1	1	1			**2**
Little grebe	-	0-500 m							1							**1**
		500 m-1 km														**-**
		1 km-1.5 km														**-**
		Total							1							**1**
Purple sandpiper	-	0-500 m		3									3			**3**
		500 m-1 km														**-**
		1 km-1.5 km														**-**
		Total		3									3			**3**
Razorbill		0-500 m				1	1	2			1					**2**
		500 m-1 km			2		7	3		60	5					**60**
		1 km-1.5 km			3		1	2	1	24	2					**24**
		Total			5	1	9	7	1	84	8					**84**
Shag		0-500 m	2	1	3	2		1	4	14	6	7	5	6	2	**14**
		500 m-1 km										2	1	5		**5**
		1 km-1.5 km										1				**1**
		Total	2	1	3	2		1	4	14	6	10	6	11	2	**14**

Note: *SPA Pop= each species SPA Qualifying population at classification as per the Firth of forth SPA Citation.

TABLE 15C.1.2 – MONTHLY PEAK COUNTS OF INTERTIDAL AND COASTAL BIRDS RECORDED PER DISTANCE BAND IN SECTOR B (COCKENZIE POWER STATION)																
Species	**SPA Pop***	**Distance Zone**	**Jan'12**	**Feb'12**	**Mar'12**	**Apr'12**	**May'12**	**Jun'12**	**Jul'12**	**Aug'12**	**Sep'12**	**Oct'12**	**Nov'12**	**Dec'12**	**Jan'13**	**Peak**
SPA Qualifying Species																
Red-throated diver	90	0-500 m	1								2		2			**2**
		500 m-1 km									2	1	1			**2**
		1 km-1.5 km										1	2			**2**
		Total	1								4	2	5			**5**
Slavonian grebe	84	0-500 m											1		2	**2**
		500 m-1 km											1			**1**
		1 km-1.5 km														**-**
		Total											2		2	**2**
Sandwich tern	1617	0-500 m					5	1	6	7	1					**7**
		500 m-1 km							2	16						**16**
		1 km-1.5 km														**-**
		Total					5	1	8	23	1					**23**
Redshank	4341	0-500 m											1	2		**2**
		500 m-1 km														**-**
		1 km-1.5 km														**-**
		Total											1	2		**2**
Turnstone	860	0-500 m		4							13					**13**
		500 m-1 km														**-**
		1 km-1.5 km														**-**
		Total		4							13					**13**
Common scoter	2880	0-500 m	1			2									33	**33**
		500 m-1 km		1												**1**
		1 km-1.5 km					1									**1**
		Total	1	1		2	1								33	**33**
Cormorant	682	0-500 m		8		4	2		16	14	2	15	17	15		**17**
		500 m-1 km														**-**
		1 km-1.5 km							2				1			**2**
		Total		8		4	2		18	14	2	15	18	15		**18**

TABLE 15C.1.2 – MONTHLY PEAK COUNTS OF INTERTIDAL AND COASTAL BIRDS RECORDED PER DISTANCE BAND IN SECTOR B (COCKENZIE POWER STATION)																
Species	**SPA Pop***	**Distance Zone**	**Jan'12**	**Feb'12**	**Mar'12**	**Apr'12**	**May'12**	**Jun'12**	**Jul'12**	**Aug'12**	**Sep'12**	**Oct'12**	**Nov'12**	**Dec'12**	**Jan'13**	**Peak**
Curlew	1928	0-500 m										1				**1**
		500 m-1 km														**-**
		1 km-1.5 km														**-**
		Total										1				**1**
Eider	9400	0-500 m	30	11	46	31	7	8		10	96	15		23	29	**96**
		500 m-1 km		10		22	4	2	3	2	9	5	8	39	4	**39**
		1 km-1.5 km		2	9	6							3		49	**49**
		Total	30	23	55	59	11	10	3	12	105	20	11	62	82	**105**
Great crested grebe	720	0-500 m									2					**2**
		500 m-1 km														**-**
		1 km-1.5 km														**-**
		Total									2					**2**
Long-tailed duck	1045	0-500 m			3					4			1			**4**
		500 m-1 km			3											**3**
		1 km-1.5 km														**-**
		Total			6					4			1			**6**
Oystercatcher	7846	0-500 m	12	10	2	5	4	1	4		10	9	15	11	7	**15**
		500 m-1 km														**-**
		1 km-1.5 km														**-**
		Total	12	10	2	5	4	1	4		10	9	15	11	7	**15**
Red-breasted merganser	670	0-500 m		1										1		**1**
		500 m-1 km											1			**1**
		1 km-1.5 km														**-**
		Total		1									1	1		**1**
Velvet scoter	635	0-500 m	2	4		1					2	3	1	5	1	**5**
		500 m-1 km			1		10					1	4			**10**
		1 km-1.5 km			3		25						2			**25**
		Total	2	4	4	1	35				2	4	7	5	1	**35**

TABLE 15C.1.2 – MONTHLY PEAK COUNTS OF INTERTIDAL AND COASTAL BIRDS RECORDED PER DISTANCE BAND IN SECTOR B (COCKENZIE POWER STATION)																
Species	**SPA Pop***	**Distance Zone**	**Jan'12**	**Feb'12**	**Mar'12**	**Apr'12**	**May'12**	**Jun'12**	**Jul'12**	**Aug'12**	**Sep'12**	**Oct'12**	**Nov'12**	**Dec'12**	**Jan'13**	**Peak**
Non-SPA Qualifying Species																
Black-headed gull	-	0-500 m				2				110		12	9	27	27	**110**
		500 m-1 km										1	4	1		**4**
		1 km-1.5 km											100		22	**100**
		Total				2				110		13	113	28	49	**113**
Common gull	-	0-500 m	1			2				118	1	5	2	22	16	**118**
		500 m-1 km									1					**1**
		1 km-1.5 km														**-**
		Total	1			2				118	2	5	2	22	16	**118**
Common tern	-	0-500 m						1								**1**
		500 m-1 km														**-**
		1 km-1.5 km														**-**
		Total						1								**1**
Fulmar	-	0-500 m									1					**1**
		500 m-1 km														**-**
		1 km-1.5 km														**-**
		Total									1					**1**
Great black-backed gull	-	0-500 m		3		2		2	2	10		3	1	3	1	**10**
		500 m-1 km						1				2			1	**2**
		1 km-1.5 km			1		5			2			1	1		**5**
		Total		3	1	2	5	3	2	12		5	2	4	2	**12**
Guillemot	-	0-500 m			2		1	17	1	313	27	2			1	**313**
		500 m-1 km					11	10	4	35	14	34	2			**35**
		1 km-1.5 km				1	6	4	2	66	30	4				**66**
		Total			2	1	18	31	7	414	71	40	2		1	**414**
Gannet	-	0-500 m								6						**6**
		500 m-1 km					4	2			2					**4**
		1 km-1.5 km					36		6	40	12					**40**
		Total					40	2	6	46	14					**46**

TABLE 15C.1.2 – MONTHLY PEAK COUNTS OF INTERTIDAL AND COASTAL BIRDS RECORDED PER DISTANCE BAND IN SECTOR B (COCKENZIE POWER STATION)																
Species	**SPA Pop***	**Distance Zone**	**Jan'12**	**Feb'12**	**Mar'12**	**Apr'12**	**May'12**	**Jun'12**	**Jul'12**	**Aug'12**	**Sep'12**	**Oct'12**	**Nov'12**	**Dec'12**	**Jan'13**	**Peak**
Herring gull	-	0-500 m	8	18	15	67	39	42	72	399	9	17	8	16	36	**399**
		500 m-1 km			17	2	41	32		20	10	8	1		3	**41**
		1 km-1.5 km			6	1	35	1	1	11	4		102	2		**102**
		Total	8	18	38	70	115	75	73	430	23	25	111	18	39	**430**
Kittiwake	-	0-500 m							2	18						**18**
		500 m-1 km														**-**
		1 km-1.5 km														**-**
		Total							2	18						**18**
Lesser black-backed gull	-	0-500 m								12						**12**
		500 m-1 km				1							1			**1**
		1 km-1.5 km														**-**
		Total				1				12			1			**12**
Little grebe	-	0-500 m							1							**1**
		500 m-1 km														**-**
		1 km-1.5 km														**-**
		Total							1							**1**
Mute swan		0-500 m								1						**1**
		500 m-1 km														**-**
		1 km-1.5 km														**-**
		Total								1						**1**
Puffin		0-500 m					2									**2**
		500 m-1 km					6	1								**6**
		1 km-1.5 km														**-**
		Total					8	1								**8**
Razorbill		0-500 m		1	1					323		1				**323**
		500 m-1 km			15		7	2	1	33		2				**33**
		1 km-1.5 km			2		13	3	1	60						**60**
		Total		1	18		20	5	2	416		3				**416**

TABLE 15C.1.2 – MONTHLY PEAK COUNTS OF INTERTIDAL AND COASTAL BIRDS RECORDED PER DISTANCE BAND IN SECTOR B (COCKENZIE POWER STATION)																
Species	**SPA Pop***	**Distance Zone**	**Jan'12**	**Feb'12**	**Mar'12**	**Apr'12**	**May'12**	**Jun'12**	**Jul'12**	**Aug'12**	**Sep'12**	**Oct'12**	**Nov'12**	**Dec'12**	**Jan'13**	**Peak**
Shag		0-500 m	3	3	3	17	1		9	25	6	28	5	19	8	**28**
		500 m-1 km			2	1						1			2	**2**
		1 km-1.5 km										1	1			**1**
		Total	3	3	5	18	1	1	9	25	6	30	6	19	10	**30**
Unidentified auk species		0-500 m														**-**
		500 m-1 km														**-**
		1 km-1.5 km										50	6			**50**
		Total										50	6			**50**

Note: *SPA Pop= each species SPA Qualifying population at classification as per the Firth of forth SPA Citation.

TABLE 15C.1.3 – MONTHLY PEAK COUNTS OF INTERTIDAL AND COASTAL BIRDS RECORDED PER DISTANCE BAND IN SECTOR E (SETON SANDS)																
Species	**SPA Pop***	**Distance Zone**	**Jan'12**	**Feb'12**	**Mar'12**	**Apr'12**	**May'12**	**Jun'12**	**Jul'12**	**Aug'12**	**Sep'12**	**Oct'12**	**Nov'12**	**Dec'12**	**Jan'13**	**Peak**
SPA Qualifying Species																
Bar-tailed godwit	1974	0-500 m	12	18	8						18	4	13	2	11	**18**
		500 m-1 km														**-**
		1 km-1.5 km														**-**
		Total	12	18	8						18	4	13	2	11	**18**
Golden plover	2949	0-500 m									2		2		4	**4**
		500 m-1 km														**-**
		1 km-1.5 km														**-**
		Total									2		2		4	**4**
Red-throated diver	90	0-500 m							1		4		1			**4**
		500 m-1 km			1			2			2	2	1			**2**
		1 km-1.5 km											1			**1**
		Total			1			2	1		6	2	3			**6**

TABLE 15C.1.3 – MONTHLY PEAK COUNTS OF INTERTIDAL AND COASTAL BIRDS RECORDED PER DISTANCE BAND IN SECTOR E (SETON SANDS)																
Species	**SPA Pop***	**Distance Zone**	**Jan'12**	**Feb'12**	**Mar'12**	**Apr'12**	**May'12**	**Jun'12**	**Jul'12**	**Aug'12**	**Sep'12**	**Oct'12**	**Nov'12**	**Dec'12**	**Jan'13**	**Peak**
Slavonian grebe	84	0-500 m									2					**2**
		500 m-1 km		1									2			**2**
		1 km-1.5 km														**-**
		Total		1							2		2			**2**
Sandwich tern	1617	0-500 m					38	2	11	4	1					**38**
		500 m-1 km							2	4						**4**
		1 km-1.5 km														**-**
		Total					38	2	13	8	1					**38**
Redshank	4341	0-500 m		2	10	2				1	12	1	10	13	8	**13**
		500 m-1 km														**-**
		1 km-1.5 km														**-**
		Total		2	10	2				1	12	1	10	13	8	**13**
Turnstone	860	0-500 m										3	14	22	21	**22**
		500 m-1 km														**-**
		1 km-1.5 km														**-**
		Total										3	14	22	21	**22**
Common scoter	2880	0-500 m			1											**1**
		500 m-1 km		20	25		20				4			8		**25**
		1 km-1.5 km		6			50									**50**
		Total		26	26		70				4			8		**70**
Cormorant	682	0-500 m			2								1			**2**
		500 m-1 km	2	3			7	1	8	1	1	11	2			**8**
		1 km-1.5 km					1		1	1						**1**
		Total	2	3	2		8	1	9	2	1	11	2			**11**
Curlew	1928	0-500 m		1	7	1	1		4			3	1		2	**7**
		500 m-1 km		1												**1**
		1 km-1.5 km														**-**
		Total		2	7	1	1		4			3	1		2	**7**

TABLE 15C.1.3 – MONTHLY PEAK COUNTS OF INTERTIDAL AND COASTAL BIRDS RECORDED PER DISTANCE BAND IN SECTOR E (SETON SANDS)																
Species	**SPA Pop***	**Distance Zone**	**Jan'12**	**Feb'12**	**Mar'12**	**Apr'12**	**May'12**	**Jun'12**	**Jul'12**	**Aug'12**	**Sep'12**	**Oct'12**	**Nov'12**	**Dec'12**	**Jan'13**	**Peak**
Eider	9400	0-500 m		2	13	3	6	16	16	70	51		4			**70**
		500 m-1 km	1	5	18	6	52	1	42	305	6	3	13	33		**305**
		1 km-1.5 km			12	6				50		4	30	3		**50**
		Total	1	7	43	15	58	17	58	425	57	7	47	36		**425**
Goldeneye	3004	0-500 m	3													**3**
		500 m-1 km														**-**
		1 km-1.5 km														**-**
		Total	3													**3**
Great crested grebe	720	0-500 m										1				**1**
		500 m-1 km														**-**
		1 km-1.5 km														**-**
		Total										1				**1**
Grey plover	724	0-500 m		2							2	1	3			**3**
		500 m-1 km														**-**
		1 km-1.5 km														**-**
		Total		2							2	1	3			**3**
Long-tailed duck	1045	0-500 m		1	12											**12**
		500 m-1 km			5								13		2	**13**
		1 km-1.5 km														**-**
		Total		1	17								13		2	**17**
Oystercatcher	7846	0-500 m	33	2	42		12		5	21	17	11	30	9	17	**42**
		500 m-1 km		10					7			1				**10**
		1 km-1.5 km														**-**
		Total	33	12	42		12		12	21	17	12	30	9	17	**42**
Red-breasted merganser	670	0-500 m		12									2	4		**12**
		500 m-1 km		7	6	1	2		7		1	1	10	24	1	**24**
		1 km-1.5 km				2						1	1			**2**
		Total		19	6	3	2		7		1	2	13	28	1	**28**

TABLE 15C.1.3 – MONTHLY PEAK COUNTS OF INTERTIDAL AND COASTAL BIRDS RECORDED PER DISTANCE BAND IN SECTOR E (SETON SANDS)																
Species	**SPA Pop***	**Distance Zone**	**Jan'12**	**Feb'12**	**Mar'12**	**Apr'12**	**May'12**	**Jun'12**	**Jul'12**	**Aug'12**	**Sep'12**	**Oct'12**	**Nov'12**	**Dec'12**	**Jan'13**	**Peak**
Velvet scoter	635	0-500 m											4			**4**
		500 m-1 km	8	16	37		4					19	26	4	5	**37**
		1 km-1.5 km		30	84	3	5			14		10	30			**84**
		Total	8	16	121	3	9			14		29	60	4	5	**121**
Wigeon	2139	0-500 m	8	60									26	6	15	**60**
		500 m-1 km		6	56										4	**56**
		1 km-1.5 km														**-**
		Total	8	66	56								26	6	19	**66**
Non-SPA Qualifying Species																
Black-headed gull	-	0-500 m		127	102	17			14	49	20	39	116	13	38	**127**
		500 m-1 km				7								1		**7**
		1 km-1.5 km														**-**
		Total		127	102	24			14	49	20	39	116	14	38	**127**
Black-throated diver	-	0-500 m									1					**1**
		500 m-1 km														**-**
		1 km-1.5 km														**-**
		Total									1					**1**
Common gull	-	0-500 m		23	10					2	14		60	14	3	**60**
		500 m-1 km							4							**4**
		1 km-1.5 km														**-**
		Total		23	10				4	2	14		60	14	3	**60**
Common tern	-	0-500 m								10						**10**
		500 m-1 km														**-**
		1 km-1.5 km														**-**
		Total								10						**10**
Fulmar	-	0-500 m														**-**
		500 m-1 km														**-**
		1 km-1.5 km						1								**1**
		Total						1								**1**

TABLE 15C.1.3 – MONTHLY PEAK COUNTS OF INTERTIDAL AND COASTAL BIRDS RECORDED PER DISTANCE BAND IN SECTOR E (SETON SANDS)																
Species	**SPA Pop***	**Distance Zone**	**Jan'12**	**Feb'12**	**Mar'12**	**Apr'12**	**May'12**	**Jun'12**	**Jul'12**	**Aug'12**	**Sep'12**	**Oct'12**	**Nov'12**	**Dec'12**	**Jan'13**	**Peak**
Great black-backed gull	-	0-500 m		4	1						1					**4**
		500 m-1 km		1	2	2						7				**7**
		1 km-1.5 km					11						1			**11**
		Total		5	3	2	11				1	7	1			**11**
Guillemot	-	0-500 m							3	2	9					**9**
		500 m-1 km				1	1	3	4	3	4	2				**4**
		1 km-1.5 km				1			1			2				**2**
		Total				2	1	3	8	5	13	4				**13**
Gannet	-	0-500 m						8			2					**8**
		500 m-1 km					1	1	1		1					**1**
		1 km-1.5 km						13	10	49						**49**
		Total					1	22	11	49	3					**49**
Herring gull	-	0-500 m	2	203	101	45	8	6	18	10	40	4	80	35	4	**203**
		500 m-1 km	8	4	34	4	20	4	36			24	38	28	2	**38**
		1 km-1.5 km			6		106	27				2				**106**
		Total	10	207	141	49	134	37	54	10	40	30	118	63	6	**207**
Lesser black-backed gull	-	0-500 m				4					1					**4**
		500 m-1 km			6											**6**
		1 km-1.5 km														**-**
		Total			6	4					1					**6**
Mute swan	-	0-500 m		2								2				**2**
		500 m-1 km			2											**2**
		1 km-1.5 km														**-**
		Total		2	2							2				**2**
Puffin	-	0-500 m				1										**1**
		500 m-1 km						5								**5**
		1 km-1.5 km														**-**
		Total				1		5								**5**

TABLE 15C.1.3 – MONTHLY PEAK COUNTS OF INTERTIDAL AND COASTAL BIRDS RECORDED PER DISTANCE BAND IN SECTOR E (SETON SANDS)																
Species	**SPA Pop***	**Distance Zone**	**Jan'12**	**Feb'12**	**Mar'12**	**Apr'12**	**May'12**	**Jun'12**	**Jul'12**	**Aug'12**	**Sep'12**	**Oct'12**	**Nov'12**	**Dec'12**	**Jan'13**	**Peak**
Razorbill	-	0-500 m						2			1					**2**
		500 m-1 km		1	4	2	6	1								**6**
		1 km-1.5 km			2			4								**4**
		Total		1	6	2	6	7			1					**7**
Red-necked grebe	-	0-500 m			2						1					**1**
		500 m-1 km								7		3				**7**
		1 km-1.5 km								5						**5**
		Total			2					12	1	3				**12**
Shag	-	0-500 m		1	1		1	1				1			1	**1**
		500 m-1 km		1	2		10			1		5	4		2	**10**
		1 km-1.5 km						1		1						**1**
		Total		2	3		11	2		2		6	4		3	**11**
Unidentified gull species	-	0-500 m														**-**
		500 m-1 km														**-**
		1 km-1.5 km											50			**50**
		Total											50			**50**
Unidentified scoter species	-	0-500 m														**-**
		500 m-1 km														**-**
		1 km-1.5 km											180			**180**
		Total											180			**180**

Note: *SPA Pop= each species SPA Qualifying population at classification as per the Firth of forth SPA Citation.

ANNEX 15C.2: INTERTIDAL AND COASTAL BIRD SURVEY RESULTS - PEAK COUNTS PER DISTANCE BAND FOR EACH COUNT SECTOR AND REPRESENTATIVE PROPORTIONS OF SPA QUALIFYING SPECIES POPULATIONS

TABLE 15C.2.1 - PEAK COUNTS OF INTERTIDAL AND COASTAL BIRDS RECORDED PER DISTANCE BAND AND REPRESENTATIVE PROPORTIONS OF SPA QUALIFYING POPULATIONS IN SECTOR A (PRESTONPANS SEA FRONT)

Species	SPA Pop*	0-500 m			500 m - 1 km			1 km – 1.5 km			TOTAL (0-1.5 km)		
		Peak Count	% SPA Pop	Month of Peak Count	Peak Count	% SPA Pop	Month of Peak Count	Peak Count	% SPA Pop	Month of Peak Count	Peak Count	% SPA Pop	Month of Peak Count
Article 4.1 Qualification: Regularly Occurring, Nationally Important Populations of Species Listed in Annex I of the EC Birds Directive													
Bar-tailed godwit	1502	-	-	-	-	-	-	-	-	-	-	-	-
Golden plover	3527	-	-	-	-	-	-	-	-	-	-	-	-
Red-throated diver	102	**1**	**1.0**	Oct	**1**	**1.0**	Nov	**1**	**1.0**	Nov	**2**	**2.0**	Oct
Slavonian grebe	29	**2**	**6.9**	Nov	-	-	-	-	-	-	**2**	**6.9**	Nov
Sandwich tern	1037	**28**	**2.7**	Aug	2	0.2	May	-	-	-	**28**	**2.7**	Aug
Article 4.2 Qualification: Regularly Occurring, Internationally Important Populations of Migratory Species													
Knot	4088	-	-	-	-	-	-	-	-	-	-	-	-
Pink-footed goose	25888	-	-	-	-	-	-	-	-	-	-	-	-
Redshank	5141	3	0.1	Feb	-	-	-	-	-	-	3	0.1	Feb
Shelduck	4047	-	-	-	-	-	-	-	-	-	-	-	-
Turnstone	934	**21**	**2.2**	Feb	-	-	-	-	-	-	**21**	**2.2**	Feb
Article 4.2 Qualification (Assemblage Only): Important Component Species of the Internationally Important Assemblage of Birds													
Common scoter	2808	**30**	**1.1**	Jan	8	0.3	Dec	1	<0.1	Apr	**30**	**1.1**	Jan
Cormorant	653	**8**	**1.2**	Sep	4	0.6	Nov	1	0.2	Aug	**8**	**1.2**	Sep
Curlew	4567	2	<0.1	Feb	-	-	-	-	-	-	2	<0.1	Feb
Dunlin	6988	-	-	-	-	-	-	-	-	-	-	-	-
Eider	5925	42	0.7	Jan	64	**1.1**	Jan	30	0.5	Jan	**136**	**2.3**	Jan
Goldeneye	1340	20	**1.5**	Jan	-	-	-	-	-	-	20	**1.5**	Jan
Great crested grebe	139	1	0.7	Nov	-	-	-	-	-	-	1	0.7	Nov
Grey plover	469	-	-	-	-	-	-	-	-	-	-	-	-
Lapwing	5480	-	-	-	-	-	-	-	-	-	-	-	-
Long-tailed duck	220	1	0.5	Jan	-	-	-	2	0.9	Mar	3	**1.4**	Mar
Mallard	1166	-	-	-	-	-	-	-	-	-	-	-	-
Oystercatcher	8235	36	0.4	Mar	-	-	-	-	-	-	36	0.4	Mar
Red-breasted merganser	347	**13**	**3.7**	Dec	-	-	-	-	-	-	**27**	**7.8**	Dec
Ringed plover	1080	-	-	-	-	-	-	-	-	-	-	-	-
Scaup	60	-	-	-	-	-	-	-	-	-	-	-	-
Velvet scoter	928	**12**	**1.3**	Mar	6	0.6	Mar	4	0.4	Apr	**18**	**1.9**	Mar
Wigeon	2251	-	-	-	-	-	-	-	-	-	-	-	-

TABLE 15C.2.1 - PEAK COUNTS OF INTERTIDAL AND COASTAL BIRDS RECORDED PER DISTANCE BAND AND REPRESENTATIVE PROPORTIONS OF SPA QUALIFYING POPULATIONS IN SECTOR A (PRESTONPANS SEA FRONT)

Species	SPA Pop*	0-500 m			500 m - 1 km			1 km – 1.5 km			TOTAL (0-1.5 km)		
		Peak Count	% SPA Pop	Month of Peak Count	Peak Count	% SPA Pop	Month of Peak Count	Peak Count	% SPA Pop	Month of Peak Count	Peak Count	% SPA Pop	Month of Peak Count
Non-SPA Qualifying Species													
Black-headed gull	-	33	-	Oct	1	-	Dec	-	-	-	33	-	Oct
Common gull	-	9	-	Oct	3	-	Jul	-	-	-	9	-	Oct
Common tern	-	2	-	Jul	-	-	-	-	-	-	2	-	Jul
Great black-backed gull	-	3	-	May	2	-	Jan	2	-	Aug	3	-	May
Guillemot	-	5	-	Oct	44	-	Aug	39	-	Aug	85	-	Aug
Gannet	-	2	-	Sep	-	-	-	11	-	Jul	11	-	Jul
Herring gull	-	64	-	Sep	20	-	Mar	15	-	Jun	71	-	Mar
Kittiwake	-	1	-	Sep	-	-	-	-	-	-	1	-	Sep
Lesser black-backed gull	-	2	-	May	-	-	-	-	-	-	2	-	May
Little grebe	-	1	-	Jul	-	-	-	-	-	-	1	-	Jul
Purple sandpiper	-	3	-	Feb	-	-	-	-	-	-	3	-	Feb
Razorbill	-	2	-	Jun	60	-	Aug	24	-	Aug	84	-	Aug
Shag	-	14	-	Aug	5	-	Dec	1	-	Oct	14	-	Aug

Note: *SPA Pop= each SPA Qualifying species most up to date population estimate based on BTO WeBS 5-year peak monthly counts for the equivalent Firth of Forth SPA WeBS count sectors over the period 2006/07 - 2010/11.

TABLE 15C.2.2 - PEAK COUNTS OF INTERTIDAL AND COASTAL BIRDS RECORDED PER DISTANCE BAND AND REPRESENTATIVE PROPORTIONS OF SPA QUALIFYING POPULATIONS IN SECTOR B (COCKENZIE POWER STATION)

Species	SPA Pop*	0-500 m			500 m - 1 km			1 km – 1.5 km			TOTAL (0-1.5 km)		
		Peak Count	% SPA Pop	Month of Peak Count	Peak Count	% SPA Pop	Month of Peak Count	Peak Count	% SPA Pop	Month of Peak Count	Peak Count	% SPA Pop	Month of Peak Count
Article 4.1 Qualification: Regularly Occurring, Nationally Important Populations of Species Listed in Annex I of the EC Birds Directive													
Bar-tailed godwit	1502	**-**	-	-	**-**	-	-	**-**	-	-	**-**	-	-
Golden plover	3527	**-**	-	-	**-**	-	-	**-**	-	-	**-**	-	-
Red-throated diver	102	**2**	**2.0**	Sep	**2**	**2.0**	Sep	**2**	**2.0**	Nov	**5**	**4.9**	Nov
Slavonian grebe	29	**2**	**6.9**	Jan	**1**	**3.4**	Nov	**-**	-	-	**2**	**6.9**	Jan
Sandwich tern	1037	**7**	0.7	Aug	**16**	**1.5**	Aug	**-**	-	-	**23**	**2.2**	Aug
Article 4.2 Qualification: Regularly Occurring, Internationally Important Populations of Migratory Species													
Knot	4088	**-**	-	-	**-**	-	-	**-**	-	-	**-**	-	-
Pink-footed goose	25888	**-**	-	-	**-**	-	-	**-**	-	-	**-**	-	-
Redshank	5141	2	<0.1	Dec	**-**	-	-	**-**	-	-	2	<0.1	Dec

TABLE 15C.2.2 - PEAK COUNTS OF INTERTIDAL AND COASTAL BIRDS RECORDED PER DISTANCE BAND AND REPRESENTATIVE PROPORTIONS OF SPA QUALIFYING POPULATIONS IN SECTOR B (COCKENZIE POWER STATION)

Species	SPA Pop*	0-500 m			500 m - 1 km			1 km – 1.5 km			TOTAL (0-1.5 km)		
		Peak Count	% SPA Pop	Month of Peak Count	Peak Count	% SPA Pop	Month of Peak Count	Peak Count	% SPA Pop	Month of Peak Count	Peak Count	% SPA Pop	Month of Peak Count
Shelduck	4047	-	-	-	**-**	-	-	**-**	-	-	-		-
Turnstone	934	**13**	**1.5**	Sep	**-**	-	-	**-**	-	-	**13**	**1.4**	Sep
Article 4.2 Qualification (Assemblage Only): Important Component Species of the Internationally Important Assemblage of Birds													
Common scoter	2808	**33**	**1.1**	Jan	1	<0.1	Feb	1	<0.1	May	**33**	**1.2**	Jan
Cormorant	653	**17**	**2.6**	Nov	-	-	-	2	0.3	Jul	**18**	**2.8**	Jul
Curlew	4567	1	<0.1	Oct	-	-	-	-	-	-	1	<0.1	Oct
Dunlin	6988	**-**	-	-	-	-	-	-	-	-	**-**	-	-
Eider	5925	**96**	**1.6**	Sep	39	0.7	Dec	49	0.8	Dec	**105**	**1.8**	Sep
Goldeneye	1340	**-**	-	-	**-**	-	-	-	-	-	-	-	-
Great crested grebe	139	2	**1.4**	Sep	**-**	-	-	**-**	-	-	2	**1.4**	Sep
Grey plover	469	**-**	-	-	**-**	-	-	-	-	-	-	-	-
Lapwing	5480	**-**	-	-	**-**	-	-	-	-	-	-	-	-
Long-tailed duck	220	4	**1.8**	Aug	**3**	**1.4**	Mar	-	-	-	6	**2.7**	Mar
Mallard	1166		-	-	**-**	-	-	-	-	-	-	-	-
Oystercatcher	8235	15	0.2	Nov	**-**	-	-	-	-	-	15	0.2	Nov
Red-breasted merganser	347	1	0.3	Feb	**1**	0.3	Nov	-	-	-	1	0.3	Feb
Ringed plover	1080	**-**	-	-	**-**	-	-	-	-	-	-	-	-
Scaup	60	**-**	-	-	**-**	-	-	-	-	-	-	-	-
Velvet scoter	928	5	0.5	Dec	**10**	**1.1**	May	**25**	**2.7**	May	**35**	**3.8**	May
Wigeon	2251	**-**	-	-	**-**	-	-	-	-	-	-	-	-
Non-SPA Qualifying Species													
Black-headed gull	-	110	-	Aug	4	-	Nov	22	-	Jan	110	-	Aug
Common gull	-	118	-	Aug	1	-	Sep	-	-	-	118	-	Aug
Common tern	-	1	-	Jun	-	-	-	-	-	-	1	-	Jun
Fulmar	-	1	-	Sep	-	-	-	-	-	-	1	-	Sep
Great black-backed gull	-	10	-	Aug	2	-	Oct	5	-	May	10	-	Aug
Guillemot	-	313	-	Aug	35	-	Aug	66	-	Aug	414	-	Aug
Gannet	-	6	-	Aug	5	-	May	40	-	Aug	46	-	Aug
Herring gull	-	399	-	Aug	41	-	May	102	-	Nov	430	-	Aug
Kittiwake	-	18	-	Aug	-	-	-	-	-	-	18	-	Aug
Lesser black-backed gull	-	12	-	Aug	1	-	Apr	-	-	-	12	-	Aug
Little grebe	-	1	-	Jul	-	-	-	-	-	-	1	-	Jul

TABLE 15C.2.2 - PEAK COUNTS OF INTERTIDAL AND COASTAL BIRDS RECORDED PER DISTANCE BAND AND REPRESENTATIVE PROPORTIONS OF SPA QUALIFYING POPULATIONS IN SECTOR B (COCKENZIE POWER STATION)

Species	SPA Pop*	0-500 m			500 m - 1 km			1 km – 1.5 km			TOTAL (0-1.5 km)		
		Peak Count	% SPA Pop	Month of Peak Count	Peak Count	% SPA Pop	Month of Peak Count	Peak Count	% SPA Pop	Month of Peak Count	Peak Count	% SPA Pop	Month of Peak Count
Mute Swan	-	1	-	Aug	-	-	-	-	-	-	1	-	Aug
Puffin	-	1	-	May	6	-	May	-	-	-	8	-	May
Razorbill	-	323	-	Aug	33	-	Aug	60	-	Aug	416	-	Aug
Shag	-	28	-	Oct	2	-	Jan	1	-	Jan	30	-	Oct
Unidentified auk spp.	-	-	-	-	-	-	-	50	-	Oct	50	-	Oct

Note: *SPA Pop= each SPA Qualifying species most up to date population estimate based on BTO WeBS 5-year peak monthly counts for the equivalent Firth of Forth SPA WeBS count sectors over the period 2006/07 - 2010/11.

TABLE 15C.2.3 - PEAK COUNTS OF INTERTIDAL AND COASTAL BIRDS RECORDED PER DISTANCE BAND AND REPRESENTATIVE PROPORTIONS OF SPA QUALIFYING POPULATIONS IN SECTOR E (SETON SANDS)

Species	SPA Pop*	0-500 m			500 m - 1 km			1 km – 1.5 km			TOTAL (0-1.5 km)		
		Peak Count	% SPA Pop	Month of Peak Count	Peak Count	% SPA Pop	Month of Peak Count	Peak Count	% SPA Pop	Month of Peak Count	Peak Count	% SPA Pop	Month of Peak Count
Article 4.1 Qualification: Regularly Occurring, Nationally Important Populations of Species Listed in Annex I of the EC Birds Directive													
Bar-tailed godwit	1502	18	**1.2**	Feb	-	-	-	-	-	-	18	**1.2**	Feb
Golden plover	3527	4	0.1	Jan	-	-	-	-	-	-	4	0.1	Jan
Red-throated diver	102	**4**	**3.9**	Sep	**2**	**2.0**	Jan	**1**	**1.0**	Nov	**6**	**5.9**	Sep
Slavonian grebe	29	**2**	**6.9**	Sep	**2**	**6.9**	Nov	-	-	-	**2**	**6.9**	Sep
Sandwich tern	1037	**38**	**3.7**	May	4	0.4	Aug	-	-	-	**38**	**3.7**	May
Article 4.2 Qualification: Regularly Occurring, Internationally Important Populations of Migratory Species													
Knot	4088	-	-	-	-	-	-	-	-	-	-	-	-
Pink-footed goose	25888	-	-	-	-	-	-	-	-	-	-	-	-
Redshank	5141	13	0.3	Dec	-	-	-	-	-	-	13	0.3	Dec
Shelduck	4047	-	-	-	-	-	-	-	-	-	-	-	-
Turnstone	934	**22**	**2.4**	Dec	-	-	-	-	-	-	**22**	**2.4**	Dec
Article 4.2 Qualification (Assemblage Only): Important Component Species of the Internationally Important Assemblage of Birds													
Common scoter	2808	1	<0.1	Mar	25	0.9	Mar	**50**	**1.8**	May	**70**	**2.5**	May
Cormorant	653	2	0.3	Mar	**11**	**1.7**	Oct	1	0.2	Aug	**11**	**1.7**	**Oct**
Curlew	4567	7	0.2	Mar	1	<0.1	Feb	-	-	-	7	0.2	Mar
Dunlin	6988	-	-	-	-	-	-	-	-	-	-	-	-
Eider	5925	70	**1.2**	Aug	**305**	**5.1**	Aug	50	0.8	Aug	**425**	**7.2**	Aug
Goldeneye	1340	-	-	-	3	0.2	Jan	-	-	-	3	0.2	Jan

TABLE 15C.2.3 - PEAK COUNTS OF INTERTIDAL AND COASTAL BIRDS RECORDED PER DISTANCE BAND AND REPRESENTATIVE PROPORTIONS OF SPA QUALIFYING POPULATIONS IN SECTOR E (SETON SANDS)

Species	SPA Pop*	0-500 m			500 m - 1 km			1 km – 1.5 km			TOTAL (0-1.5 km)		
		Peak Count	% SPA Pop	Month of Peak Count	Peak Count	% SPA Pop	Month of Peak Count	Peak Count	% SPA Pop	Month of Peak Count	Peak Count	% SPA Pop	Month of Peak Count
Great crested grebe	139	1	0.7	Oct	-	-	-	-	-	-	1	0.7	Oct
Grey plover	469	3	0.6	Nov	-	-	-	-	-	-	3	0.6	Nov
Lapwing	5480	-	-	-	-	-	-	-	-	-	-	-	-
Long-tailed duck	220	**12**	**5.5**	Mar	**13**	**5.9**	Nov	-	-	-	**17**	**7.7**	Mar
Mallard	1166	-	-	-	-	-	-	-	-	-	-	-	-
Oystercatcher	8235	42	0.5	Mar	10	0.1	Feb	-	-	-	42	0.5	Mar
Red-breasted merganser	347	**12**	**3.5**	Feb	**24**	**6.9**	Dec	2	0.6	Apr	**28**	**8.1**	**Dec**
Ringed plover	1080	-	-	-	-	-	-	-	-	-	-	-	-
Scaup	60	-	-	-	-	-	-	-	-	-	-	-	-
Velvet scoter	928	4	0.4	Nov	**37**	**4.0**	Mar	**84**	**9.1**	Mar	**121**	**13.0**	Mar
Wigeon	2251	**60**	**2.7**	Feb	**56**	**2.5**	Mar	-	-	-	**66**	**2.9**	Feb
Non-SPA Qualifying Species													
Black-headed gull	-	127	-	Feb	7	-	Apr	-	-	-	127	-	Feb
Black-throated diver	-	1	-	Sep	-	-	-	-	-	-	1	-	Sep
Common gull	-	60	-	Nov	4	-	Jul	-	-	-	60	-	Nov
Common tern	-	10	-	Aug	-	-	-	-	-	-	10	-	Aug
Fulmar	-	-	-	-	-	-	-	1	-	Jun	1	-	Jun
Great black-backed gull	-	4	-	Feb	-	-	-	11	-	May	11	-	May
Guillemot	-	9	-	Sep	4	-	Jul	2	-	Oct	9	-	Sep
Gannet	-	8	-	Jun	1	-	Jul	49	-	Aug	49	-	Aug
Herring gull	-	203	-	Feb	28	-	Nov	106	-	May	207	-	Feb
Lesser black-backed gull	-	4	-	Apr	6	-	Mar	-	-	-	6	-	Mar
Mute swan	-	2	-	Feb	2	-	Mar	-	-	-	2	-	Feb
Puffin	-	1	-	Apr	5	-	Jun	-	-	-	5	-	Jun
Razorbill	-	2	-	Jun	6	-	May	4	-	Jun	7	-	Jun
Red-necked grebe		2	-	Mar	7	-	Aug	5	-	Aug	12	-	Aug
Shag		1	-	Jan	10	-	May	1	-	Aug	11	-	Jun
Unidentified gull spp.		-	-	-	-	-	-	50	-	Nov	50	-	Nov
Unidentified scoter spp.		-	-	-	-	-	-	180	-	Nov	180	-	Nov

Note: *SPA **Pop**= each SPA Qualifying species most up to date population estimate based on BTO WeBS 5-year peak monthly counts for the equivalent Firth of Forth SPA WeBS count sectors over the period 2006/07 - 2010/11.