



# **Arklow Bank Wind Park 2**

## **Environmental Impact Assessment Report**

Volume III, Appendix 12.3: Offshore Ornithology Technical Report -  
Monthly Seabird Abundance

## Arklow Bank Wind Park 2

### Technical Appendix 12.03 Offshore Ornithology

#### Monthly Seabird Abundance

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## Glossary

Term	Meaning
Array Area	The Array Area is the area within which the Wind Turbine Generators (WTGs), the Offshore Substation Platforms (OSPs), and associated cables (export, inter-array and interconnector cabling) and foundations will be installed.
c.i.	95% confidence range

## Acronyms

Term	Meaning
c.i.	Confidence Interval
JNCC	Joint Nature Conservation Committee

## Units

Unit	Description
km	Kilometre (distance)

# 1 OFFSHORE ORNITHOLOGY TECHNICAL REPORT: MONTHLY SEABIRD ABUNDANCE

## 1.1 Introduction

1. This Technical Report provides tables of seabird abundance in each calendar month for each species recorded in the Survey Area (Volume III, Appendix 12.1: Offshore Ornithology Technical Report – Overview).
2. The tables provide abundance estimates for species recorded within the Array Area, the Array Area plus 2 km buffer and the Array Area plus 4 km buffer. These have been derived from the complete two-year dataset including 25 surveyed months (March 2018 to April 2020)<sup>1</sup>.
3. For each species there are three tables (a to c) showing the abundance of all birds recorded, birds recorded on the sea surface only, and birds in flight only, in the following sequence:
  - a) Abundance of all birds recorded (i.e. in flight and on the sea);
  - b) Abundance of birds recorded in flight only; and
  - c) Abundance of birds recorded on the sea surface only.
4. A key to the table numbering is provided in Table 12.3.1.

## 1.2 Monthly seabird abundance

5. For each bird species, monthly abundances are summarised as the mean and 95% confidence range, derived from 1,000 nonparametric bootstrap samples. The upper and lower confidence intervals were calculated by pooling all the bootstrap samples for each month. Thus, for all months except July these have been calculated from 2,000 samples in each month, and for July 3,000 samples were used. The mean was calculated as the average of the individual monthly mean values (i.e. across two estimates for all months except July and across three estimates in July only).
6. Abundance of birds recorded within the following five high-level species groups (i.e. birds identified to family level, not to species) are also presented:
  - Arctic or common tern;
  - Large auk species (guillemot and razorbill);
  - Cormorant or shag;
  - Diver species (red-throated diver, black-throated diver, great northern diver); and
  - Small gull species (common gull, black-headed gull, little gull, kittiwake).
7. For guillemot and razorbill, adjustment was made to account for availability bias, with number recorded on the sea multiplied by a species-specific correction factor to account for individuals expected to be underwater when the image was taken. The values used were those advised by

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<sup>1</sup> Twenty-five aerial surveys were carried out; three surveys in July and two in every other calendar month.

the Joint Nature Conservation Committee (JNCC) (Allen, 2013): 1.316 and 1.204 for guillemot and razorbill respectively, to account for estimates that 24% and 17% of these species are underwater at any given time.

**Table 12.3.1: Key to species abundance tables. Each table is provided as 'a' 'b' or 'c' for abundance of all birds in flight and on the sea, in flight only or on the sea only respectively.**

Species	All birds in flight and on sea	In flight	On sea
Arctic skua	12.3.1 a	12.3.1 b	12.3.1 c
Arctic tern	12.3.2 a	12.3.2 b	12.3.2 c
Arctic/common tern	12.3.3 a	12.3.3 b	12.3.3 c
Auk species	12.3.4 a	12.3.4 b	12.3.4 c
Black-headed gull	12.3.5 a	12.3.5 b	12.3.5 c
Common gull	12.3.6 a	12.3.6 b	12.3.6 c
Common scoter	12.3.7 a	12.3.7 b	12.3.7 c
Common tern	12.3.8 a	12.3.8 b	12.3.8 c
Cormorant	12.3.9 a	12.3.9 b	12.3.9 c
Cormorant/shag species	12.3.10 a	12.3.10 b	12.3.10 c
Diver species	12.3.11 a	12.3.11 b	12.3.11 c
Fulmar	12.3.12 a	12.3.12 b	12.3.12 c
Gannet	12.3.13 a	12.3.13 b	12.3.13 c
Great black-backed gull	12.3.14 a	12.3.14 b	12.3.14 c
Great northern diver	12.3.15 a	12.3.15 b	12.3.15 c
Guillemot	12.3.16 a	12.3.16 b	12.3.16 c
Herring gull	12.3.17 a	12.3.17 b	12.3.17 c
Kittiwake	12.3.18 a	12.3.18 b	12.3.18 c
Lesser black-backed gull	12.3.19 a	12.3.19 b	12.3.19 c
Little gull	12.3.20 a	12.3.20 b	12.3.20 c
Manx shearwater	12.3.21 a	12.3.21 b	12.3.21 c
Puffin	12.3.22 a	12.3.22 b	12.3.22 c
Razorbill	12.3.23 a	12.3.23 b	12.3.23 c
Red-throated diver	12.3.24 a	12.3.24 b	12.3.24 c
Sandwich tern	12.3.25 a	12.3.25 b	12.3.25 c
Shag	12.3.26 a	12.3.26 b	12.3.26 c
Small gull species	12.3.27 a	12.3.27 b	12.3.27 c

**Table 12.3.1 a: Arklow Bank. Design-based estimates of Arctic skua abundance, in flight and on the sea in the entire Array Area and buffer zones.**

Month	Array Area Abundance	95% c.i.	Array Area and 2 km buffer Abundance	95% c.i.	Array Area and 4 km buffer Abundance	95% c.i.
Jan	0	0-0	0	0-0	0	0-0
Feb	0	0-0	0	0-0	0	0-0
Mar	0	0-0	0	0-0	0	0-0
Apr	0	0-0	0	0-0	0	0-0
May	0	0-0	0	0-0	0	0-0
Jun	0	0-0	0	0-0	0	0-0
Jul	0	0-0	0	0-0	0	0-0
Aug	0	0-0	0	0-0	0	0-0
Sep	0	0-0	0	0-0	10	0-30
Oct	0	0-0	0	0-0	0	0-0
Nov	0	0-0	0	0-0	0	0-0
Dec	0	0-0	0	0-0	0	0-0

**Table 12.3.1 b: Arklow Bank. Design-based estimates of Arctic skua abundance, in flight only in the entire Array Area and buffer zones.**

Month	Array Area Abundance	95% c.i.	Array Area and 2 km buffer Abundance	95% c.i.	Array Area and 4 km buffer Abundance	95% c.i.
Jan	0	0-0	0	0-0	0	0-0
Feb	0	0-0	0	0-0	0	0-0
Mar	0	0-0	0	0-0	0	0-0
Apr	0	0-0	0	0-0	0	0-0
May	0	0-0	0	0-0	0	0-0
Jun	0	0-0	0	0-0	0	0-0
Jul	0	0-0	0	0-0	0	0-0
Aug	0	0-0	0	0-0	0	0-0
Sep	0	0-0	0	0-0	10	0-35.25
Oct	0	0-0	0	0-0	0	0-0
Nov	0	0-0	0	0-0	0	0-0
Dec	0	0-0	0	0-0	0	0-0

**Table 12.3.1 c: Arklow Bank. Design-based estimates of Arctic skua abundance, on the sea only in the entire Array Area and buffer zones.**

Month	Array Area Abundance	95% c.i.	Array Area and 2 km buffer Abundance	95% c.i.	Array Area and 4 km buffer Abundance	95% c.i.
Jan	0	0-0	0	0-0	0	0-0
Feb	0	0-0	0	0-0	0	0-0
Mar	0	0-0	0	0-0	0	0-0
Apr	0	0-0	0	0-0	0	0-0
May	0	0-0	0	0-0	0	0-0
Jun	0	0-0	0	0-0	0	0-0
Jul	0	0-0	0	0-0	0	0-0
Aug	0	0-0	0	0-0	0	0-0
Sep	0	0-0	0	0-0	0	0-0
Oct	0	0-0	0	0-0	0	0-0
Nov	0	0-0	0	0-0	0	0-0
Dec	0	0-0	0	0-0	0	0-0

**Table 12.3.2 a: Arklow Bank. Design-based estimates of Arctic tern abundance, in flight and on the sea in the entire Array Area and buffer zones.**

Month	Array Area Abundance	95% c.i.	Array Area and 2 km buffer Abundance	95% c.i.	Array Area and 4 km buffer Abundance	95% c.i.
Jan	0	0-0	0	0-0	0	0-0
Feb	0	0-0	0	0-0	0	0-0
Mar	0	0-0	0	0-0	0	0-0
Apr	245	52.38-553.38	295	90-627.88	310	125-770.25
May	285	82.38-565.25	350	142.38-653.12	380	155-727.88
Jun	0	0-0	0	0-0	0	0-0
Jul	0	0-0	0	0-0	0	0-0
Aug	3230	827.05-5474	3340	1109.50-6260.25	3640	1832.75-6881.50
Sep	30	5-72.62	130	47.38-255	210	72.38-372.62
Oct	20	0-47.62	20	5-45.25	25	0-60
Nov	0	0-0	0	0-0	0	0-0
Dec	0	0-0	0	0-0	0	0-0

**Table 12.3.2 b: Arklow Bank. Design-based estimates of Arctic tern abundance, in flight only in the entire Array Area and buffer zones.**

Month	Array Area Abundance	95% c.i.	Array Area and 2 km buffer Abundance	95% c.i.	Array Area and 4 km buffer Abundance	95% c.i.
Jan	0	0-0	0	0-0	0	0-0
Feb	0	0-0	0	0-0	0	0-0
Mar	0	0-0	0	0-0	0	0-0
Apr	245	39.50-634.62	295	97.38-635.50	310	97.38-712.62
May	90	25-197.88	155	60-280.25	185	92.12-300
Jun	0	0-0	0	0-0	0	0-0
Jul	0	0-0	0	0-0	0	0-0
Aug	1640	719.50-2685.25	1750	780-3352.50	1870	678.50-2971.50
Sep	30	0-75	130	47.38-217.62	210	87.38-402.62
Oct	20	0-47.62	20	2.38-40	25	0-57.62
Nov	0	0-0	0	0-0	0	0-0
Dec	0	0-0	0	0-0	0	0-0

**Table 12.3.2 c: Arklow Bank. Design-based estimates of Arctic tern abundance, on the sea only in the entire Array Area and buffer zones.**

Month	Array Area Abundance	95% c.i.	Array Area and 2 km buffer Abundance	95% c.i.	Array Area and 4 km buffer Abundance	95% c.i.
Jan	0	0-0	0	0-0	0	0-0
Feb	0	0-0	0	0-0	0	0-0
Mar	0	0-0	0	0-0	0	0-0
Apr	0	0-0	0	0-0	0	0-0
May	195	0-477.62	195	0-432.88	195	0-476.75
Jun	0	0-0	0	0-0	0	0-0
Jul	0	0-0	0	0-0	0	0-0
Aug	1590	133.75-3736	1590	202.25-3988.25	1770	315-4263.50
Sep	0	0-0	0	0-0	0	0-0
Oct	0	0-0	0	0-0	0	0-0
Nov	0	0-0	0	0-0	0	0-0
Dec	0	0-0	0	0-0	0	0-0

**Table 12.3.3 a: Arklow Bank. Design-based estimates of Arctic/common tern abundance, in flight and on the sea in the entire consent area and buffer zones.**

Month	Array Area Abundance	95% c.i.	Array Area and 2 km buffer Abundance	95% c.i.	Array Area and 4 km buffer Abundance	95% c.i.
Jan	0	0-0	0	0-0	0	0-0
Feb	0	0-0	0	0-0	0	0-0
Mar	0	0-0	0	0-0	0	0-0
Apr	190	12.38-522.88	215	25-572.62	230	35-590.25
May	150	20-325.5	190	47.38-360.50	220	75-405.25
Jun	0	0-0	0	0-0	0	0-0
Jul	0	0-0	0	0-0	20	0-60
Aug	540	228.75- 887.88	615	286.62- 1022.62	645	287.12- 1158.62
Sep	80	20-172.62	185	67.38-315	210	92.38-345.50
Oct	0	0-0	0	0-0	0	0-0
Nov	0	0-0	0	0-0	0	0-0
Dec	0	0-0	0	0-0	0	0-0

**Table 12.3.3 b: Arklow Bank. Design-based estimates of Arctic/common tern abundance, in flight only in the entire Array Area and buffer zones.**

Month	Array Area Abundance	95% c.i.	Array Area and 2 km buffer Abundance	95% c.i.	Array Area and 4 km buffer Abundance	95% c.i.
Jan	0	0-0	0	0-0	0	0-0
Feb	0	0-0	0	0-0	0	0-0
Mar	0	0-0	0	0-0	0	0-0
Apr	35	5-65.25	60	25-105	75	30-132.88
May	95	5-207.88	130	27.38-267.88	160	60-310.25
Jun	0	0-0	0	0-0	0	0-0
Jul	0	0-0	0	0-0	20	0-60
Aug	255	112.38- 438.12	305	155-490.25	335	159.75- 545.50
Sep	50	7.38-112.62	145	35-283.12	165	60-295.25
Oct	0	0-0	0	0-0	0	0-0
Nov	0	0-0	0	0-0	0	0-0
Dec	0	0-0	0	0-0	0	0-0

**Table 12.3.3 c: Arklow Bank. Design-based estimates of Arctic/common tern abundance, on the sea only in the entire Array Area and buffer zones.**

Month	Array Area Abundance	95% c.i.	Array Area and 2 km buffer Abundance		95% c.i.	Array Area and 4 km buffer Abundance		95% c.i.
Jan	0	0-0	0		0-0	0		0-0
Feb	0	0-0	0		0-0	0		0-0
Mar	0	0-0	0		0-0	0		0-0
Apr	155	0-465	155		0-546.38	155		0-465
May	55	0-155	60		0-170	60		2-38-215
Jun	0	0-0	0		0-0	0		0-0
Jul	0	0-0	0		0-0	0		0-0
Aug	285	59.75- 585	310		52.12- 648.62	310		74.75-662.62
Sep	30	0-90	40		10-82.62	45		5-107.62
Oct	0	0-0	0		0-0	0		0-0
Nov	0	0-0	0		0-0	0		0-0
Dec	0	0-0	0		0-0	0		0-0

**Table 12.3.4 a: Arklow Bank. Design-based estimates of Auk species abundance, in flight and on the sea in the entire Array Area and buffer zones.**

Month	Array Area Abundance	95% c.i.	Array Area and 2 km buffer Abundance		95% c.i.	Array Area and 4 km buffer Abundance		95% c.i.
Jan	975	531.88- 1496.75	1175		747.50- 1805.50	1200		721.62- 2008.50
Feb	385	172.12-638.38	395		169.75-752.62	425		224-737.88
Mar	5	0-15	10		0-25	10		0-25
Apr	5	0-15	30		2-38-67.62	65		30-110
May	25	0-65.25	90		25-157.88	120		50-192.62
Jun	30	0-85	40		5-92.62	45		5-110.25
Jul	26.67	1.58-58.42	76.67		26.67-141.75	153.33		83.17-238.42
Aug	60	10-122.88	125		37.38-237.88	245		119.75-372.62
Sep	70	7.38-175.25	135		55-278.38	210		97.38-340
Oct	70	20-120	170		90-240	260		170-355.25
Nov	260	84.75-488.12	425		225-698.12	560		284.50-825.50
Dec	180	62.38-375.50	285		107.38-505	335		154.50-587.62

**Table 12.3.4 b: Arklow Bank. Design-based estimates of Auk species abundance, in flight only in the entire Array Area and buffer zones.**

Month	Array Area Abundance	95% c.i.	Array Area and 2 km buffer Abundance	95% c.i.	Array Area and 4 km buffer Abundance	95% c.i.
Jan	15	0-50	25	0-65.25	35	10-75
Feb	15	0-35	20	0-60	20	0-57.62
Mar	0	0-0	0	0-0	0	0-0
Apr	0	0-0	0	0-0	10	0-32.62
May	10	0-30	25	0-55	30	5-75
Jun	0	0-0	0	0-0	0	0-0
Jul	0	0-0	0	0-0	0	0-0
Aug	0	0-0	0	0-0	0	0-0
Sep	0	0-0	0	0-0	5	0-15
Oct	20	0-60	20	0-60	50	10-105.25
Nov	35	0-102.88	45	0-102.62	60	10-140.25
Dec	0	0-0	0	0-0	0	0-0

**Table 12.3.4 c: Arklow Bank. Design-based estimates of Auk species abundance, on the sea only in the entire Array Area and buffer zones.**

Month	Array Area Abundance	95% c.i.	Array Area and 2 km buffer Abundance	95% c.i.	Array Area and 4 km buffer Abundance	95% c.i.
Jan	960	505-1438.38	1150	666.62-1732.62	1165	710.88-1853.12
Feb	370	137.12-665.25	375	150-718.62	405	179.75-645.25
Mar	5	0-15	10	0-30	10	0-25
Apr	5	0-15	30	5-65	55	22.38-100
May	15	0-40	65	17.38-135	90	32.38-165.25
Jun	30	0-80	40	0-112.62	45	5-102.62
Jul	26.67	3.33-60	76.67	28.25-131.75	153.33	78.25-241.92
Aug	60	15-122.62	125	42.38-265	245	137.38-432.88
Sep	70	10-167.62	135	40-240.25	205	94.75-342.62
Oct	50	14.75-85.25	150	80-210	210	120-300
Nov	225	87.38-428.12	380	190-592.88	500	284.50-780.25
Dec	180	50-352.62	285	94.50-490.50	335	169.75-527.62

**Table 12.3.5 a: Arklow Bank. Design-based estimates of Black-headed gull abundance, in flight and on the sea in the entire Array Area and buffer zones.**

Month	Array Area Abundance	95% c.i.	Array Area and 2 km buffer Abundance	95% c.i.	Array Area and 4 km buffer Abundance	95% c.i.
Jan	550	141.62-1089.12	595	199.75-1253.62	610	189-1048.88
Feb	600	147.38-1235.12	615	226.88-1261	635	135.38-1312.25
Mar	0	0-0	0	0-0	0	0-0
Apr	0	0-0	0	0-0	0	0-0
May	0	0-0	0	0-0	0	0-0
Jun	0	0-0	0	0-0	0	0-0
Jul	5	0-15	25	5-52.62	30	7.38-72.62
Aug	5	0-15	5	0-15	5	0-15
Sep	0	0-0	0	0-0	0	0-0
Oct	65	10-137.62	65	15-130.25	75	15-145
Nov	575	122.12-1327.88	700	197.38-1328	870	335.38-1623
Dec	460	54.75-1292	475	77.38-1310.50	510	92.38-1208.38

**Table 12.3.5 b: Arklow Bank. Design-based estimates of Black-headed gull abundance, in flight only in the entire Array Area and buffer zones.**

Month	Array Area Abundance	95% c.i.	Array Area and 2 km buffer Abundance	95% c.i.	Array Area and 4 km buffer Abundance	95% c.i.
Jan	420	119.75-888.12	465	129.5-855.75	480	172.38-1008.62
Feb	370	70-833.12	385	94.75-833.38	405	117.12-840.62
Mar	0	0-0	0	0-0	0	0-0
Apr	0	0-0	0	0-0	0	0-0
May	0	0-0	0	0-0	0	0-0
Jun	0	0-0	0	0-0	0	0-0
Jul	5	0-17.62	25	2.38-55	30	5-60
Aug	5	0-15	5	0-15	5	0-15
Sep	0	0-0	0	0-0	0	0-0
Oct	55	10-120	55	10-135.25	65	15-165
Nov	180	42.12-365.25	295	111.88-532.62	335	147.38-548.88
Dec	445	67.12-1194.12	460	92.12-1036.25	495	90-1152.62

**Table 12.3.5 c: Arklow Bank. Design-based estimates of Black-headed gull abundance, on the sea only in the entire Array Area and buffer zones.**

Month	Array Area Abundance	95% c.i.	Array Area and 2 km buffer Abundance	95% c.i.	Array Area and 4 km buffer Abundance	95% c.i.
Jan	130	15-302.62	130	12.38-242.62	130	10-277.62
Feb	230	49.75-467.62	230	52.38-463.62	230	36.88-452.88
Mar	0	0-0	0	0-0	0	0-0
Apr	0	0-0	0	0-0	0	0-0
May	0	0-0	0	0-0	0	0-0
Jun	0	0-0	0	0-0	0	0-0
Jul	0	0-0	0	0-0	0	0-0
Aug	0	0-0	0	0-0	0	0-0
Sep	0	0-0	0	0-0	0	0-0
Oct	10	0-25.25	10	0-25.25	10	0-30
Nov	395	22.38-897.62	405	54.75-854.12	535	78.75-1189.25
Dec	15	0-45	15	0-45	15	0-45

**Table 12.3.6 a: Arklow Bank. Design-based estimates of Common gull abundance, in flight and on the sea in the entire Array Area and buffer zones.**

Month	Array Area Abundance	95% c.i.	Array Area and 2 km buffer Abundance	95% c.i.	Array Area and 4 km buffer Abundance	95% c.i.
Jan	1740	215-5082.50	2240	256.88-4948.62	2300	399-5491
Feb	2230	716.62-5219.50	2230	682.12-4521.88	2245	536.75-4497
Mar	15	0-45	25	0-70	35	5-77.62
Apr	35	2.38-75.25	35	0-85	35	5-72.62
May	0	0-0	15	0-45	15	0-45
Jun	30	0-75.75	30	0-90	30	0-90
Jul	0	0-0	5	0-15	5	0-15
Aug	0	0-0	0	0-0	0	0-0
Sep	0	0-0	0	0-0	0	0-0
Oct	0	0-0	0	0-0	0	0-0
Nov	395	157.38-702.88	580	272.38-972.62	615	276.12-1078.62
Dec	505	35-1372.62	545	67.38-1402	630	137.38-1457.25

**Table 12.3.6 b: Arklow Bank. Design-based estimates of Common gull abundance, in flight only in the entire Array Area and buffer zones.**

Month	Array Area Abundance	95% c.i.	Array Area and 2 km buffer Abundance	95% c.i.	Array Area and 4 km buffer Abundance	95% c.i.
Jan	630	94.75-1320.75	1130	117.38-3290.50	1190	157.12-2690.75
Feb	1710	482.12-3219	1710	674.50-3188.62	1720	403.50-3048.62
Mar	5	0-15	15	2.38-30	25	10-50
Apr	0	0-0	0	0-0	0	0-0
May	0	0-0	0	0-0	0	0-0
Jun	30	0-90	30	0-105.75	30	0-90
Jul	0	0-0	5	0-15	5	0-15
Aug	0	0-0	0	0-0	0	0-0
Sep	0	0-0	0	0-0	0	0-0
Oct	0	0-0	0	0-0	0	0-0
Nov	190	60-412.62	355	157.38-590.50	385	199.75-590.25
Dec	470	27.38-1307.88	505	52.38-1307.62	590	102.12-1448.38

**Table 12.3.6 c: Arklow Bank. Design-based estimates of Common gull abundance, on the sea only in the entire Array Area and buffer zones.**

Month	Array Area Abundance	95% c.i.	Array Area and 2 km buffer Abundance	95% c.i.	Array Area and 4 km buffer Abundance	95% c.i.
Jan	1110	102.38-3235.25	1110	125-3612.25	1110	85-3609.25
Feb	520	34.25-1294	520	96.38-1181	525	40-1193.88
Mar	10	0-30	10	0-30	10	0-30
Apr	35	2.38-97.88	35	10-82.62	35	5-92.62
May	0	0-0	15	0-52.88	15	0-52.88
Jun	0	0-0	0	0-0	0	0-0
Jul	0	0-0	0	0-0	0	0-0
Aug	0	0-0	0	0-0	0	0-0
Sep	0	0-0	0	0-0	0	0-0
Oct	0	0-0	0	0-0	0	0-0
Nov	205	20-420.50	225	32.38-445.50	230	49.75-370
Dec	35	0-92.62	40	0-97.88	40	0-110

**Table 12.3.7 a: Arklow Bank. Design-based estimates of Common scoter abundance, in flight and on the sea in the entire Array Area and buffer zones.**

Month	Array Area Abundance	95% c.i.	Array Area and 2 km buffer Abundance	95% c.i.	Array Area and 4 km buffer Abundance	95% c.i.
Jan	10	0-32.62	10	0-35	10	0-30
Feb	0	0-0	0	0-0	0	0-0
Mar	0	0-0	0	0-0	0	0-0
Apr	0	0-0	0	0-0	10	0-30
May	0	0-0	0	0-0	0	0-0
Jun	10	0-30	10	0-30	10	0-30
Jul	0	0-0	0	0-0	0	0-0
Aug	0	0-0	0	0-0	0	0-0
Sep	0	0-0	0	0-0	0	0-0
Oct	0	0-0	0	0-0	10	0-25
Nov	0	0-0	0	0-0	0	0-0
Dec	20	0-55.25	20	0-42.62	20	0-50

**Table 12.3.7 b: Arklow Bank. Design-based estimates of Common scoter abundance, in flight only in the entire Array Area and buffer zones.**

Month	Array Area Abundance	95% c.i.	Array Area and 2 km buffer Abundance	95% c.i.	Array Area and 4 km buffer Abundance	95% c.i.
Jan	0	0-0	0	0-0	0	0-0
Feb	0	0-0	0	0-0	0	0-0
Mar	0	0-0	0	0-0	0	0-0
Apr	0	0-0	0	0-0	0	0-0
May	0	0-0	0	0-0	0	0-0
Jun	0	0-0	0	0-0	0	0-0
Jul	0	0-0	0	0-0	0	0-0
Aug	0	0-0	0	0-0	0	0-0
Sep	0	0-0	0	0-0	0	0-0
Oct	0	0-0	0	0-0	5	0-15
Nov	0	0-0	0	0-0	0	0-0
Dec	0	0-0	0	0-0	0	0-0

**Table 12.3.7 c: Arklow Bank. Design-based estimates of Common scoter abundance, on the sea only in the entire Array Area and buffer zones.**

Month	Array Area Abundance	95% c.i.	Array Area and 2 km buffer Abundance	95% c.i.	Array Area and 4 km buffer Abundance	95% c.i.
Jan	10	0-35	10	0-30	10	0-32.62
Feb	0	0-0	0	0-0	0	0-0
Mar	0	0-0	0	0-0	0	0-0
Apr	0	0-0	0	0-0	10	0-30
May	0	0-0	0	0-0	0	0-0
Jun	10	0-30	10	0-30	10	0-35.25
Jul	0	0-0	0	0-0	0	0-0
Aug	0	0-0	0	0-0	0	0-0
Sep	0	0-0	0	0-0	0	0-0
Oct	0	0-0	0	0-0	5	0-15
Nov	0	0-0	0	0-0	0	0-0
Dec	20	0-62.62	20	0-57.62	20	0-45

**Table 12.3.8 a: Arklow Bank. Design-based estimates of Common tern abundance, in flight and on the sea in the entire Array Area and buffer zones.**

Month	Array Area Abundance	95% c.i.	Array Area and 2 km buffer Abundance	95% c.i.	Array Area and 4 km buffer Abundance	95% c.i.
Jan	0	0-0	0	0-0	0	0-0
Feb	0	0-0	0	0-0	0	0-0
Mar	0	0-0	0	0-0	0	0-0
Apr	65	25-120.25	100	47-38-165.25	140	69.75-237.62
May	0	0-0	0	0-0	5	0-17.62
Jun	0	0-0	0	0-0	0	0-0
Jul	0	0-0	0	0-0	20	0-60
Aug	870	404.75-1330.50	950	518-1455.25	1130	674.25-1745.75
Sep	110	24.75-200	530	214.75-990	850	214.75-1721.50
Oct	0	0-0	0	0-0	0	0-0
Nov	0	0-0	0	0-0	0	0-0
Dec	0	0-0	0	0-0	0	0-0

**Table 12.3.8 b: Arklow Bank. Design-based estimates of Common tern abundance, in flight only in the entire Array Area and buffer zones.**

Month	Array Area Abundance	95% c.i.	Array Area and 2 km buffer Abundance	95% c.i.	Array Area and 4 km buffer Abundance	95% c.i.
Jan	0	0-0	0	0-0	0	0-0
Feb	0	0-0	0	0-0	0	0-0
Mar	0	0-0	0	0-0	0	0-0
Apr	65	30-120.25	90	45-155	130	70-207.88
May	0	0-0	0	0-0	5	0-15
Jun	0	0-0	0	0-0	0	0-0
Jul	0	0-0	0	0-0	20	0-80
Aug	760	294.25-1311	840	414.75-1376.25	1020	569.50-1690.50
Sep	110	29.5-190	530	170-1016.25	850	139.50-1690
Oct	0	0-0	0	0-0	0	0-0
Nov	0	0-0	0	0-0	0	0-0
Dec	0	0-0	0	0-0	0	0-0

**Table 12.3.8 c: Arklow Bank. Design-based estimates of Common tern abundance, on the sea only in the entire Array Area and buffer zones.**

Month	Array Area Abundance	95% c.i.	Array Area and 2 km buffer Abundance	95% c.i.	Array Area and 4 km buffer Abundance	95% c.i.
Jan	0	0-0	0	0-0	0	0-0
Feb	0	0-0	0	0-0	0	0-0
Mar	0	0-0	0	0-0	0	0-0
Apr	0	0-0	10	0-30	10	0-30
May	0	0-0	0	0-0	0	0-0
Jun	0	0-0	0	0-0	0	0-0
Jul	0	0-0	0	0-0	0	0-0
Aug	110	10-285.25	110	10-235.25	110	10-250.50
Sep	0	0-0	0	0-0	0	0-0
Oct	0	0-0	0	0-0	0	0-0
Nov	0	0-0	0	0-0	0	0-0
Dec	0	0-0	0	0-0	0	0-0

**Table 12.3.9 a: Arklow Bank. Design-based estimates of Cormorant abundance, in flight and on the sea in the entire Array Area and buffer zones.**

Month	Array Area Abundance	95% c.i.	Array Area and 2 km buffer Abundance	95% c.i.	Array Area and 4 km buffer Abundance	95% c.i.
Jan	5	0-15	5	0-15	5	0-15
Feb	0	0-0	5	0-15	5	0-15
Mar	0	0-0	0	0-0	0	0-0
Apr	0	0-0	0	0-0	0	0-0
May	0	0-0	0	0-0	0	0-0
Jun	0	0-0	0	0-0	10	0-30
Jul	0	0-0	0	0-0	0	0-0
Aug	0	0-0	0	0-0	0	0-0
Sep	5	0-15	5	0-17.62	5	0-15
Oct	10	0-30	10	0-40	10	0-30
Nov	0	0-0	0	0-0	0	0-0
Dec	0	0-0	0	0-0	0	0-0

**Table 12.3.9 b: Arklow Bank. Design-based estimates of Cormorant abundance, in flight only in the entire Array Area and buffer zones.**

Month	Array Area Abundance	95% c.i.	Array Area and 2 km buffer Abundance	95% c.i.	Array Area and 4 km buffer Abundance	95% c.i.
Jan	0	0-0	0	0-0	0	0-0
Feb	0	0-0	0	0-0	0	0-0
Mar	0	0-0	0	0-0	0	0-0
Apr	0	0-0	0	0-0	0	0-0
May	0	0-0	0	0-0	0	0-0
Jun	0	0-0	0	0-0	0	0-0
Jul	0	0-0	0	0-0	0	0-0
Aug	0	0-0	0	0-0	0	0-0
Sep	0	0-0	0	0-0	0	0-0
Oct	10	0-30	10	0-30	10	0-30
Nov	0	0-0	0	0-0	0	0-0
Dec	0	0-0	0	0-0	0	0-0

**Table 12.3.9 c: Arklow Bank. Design-based estimates of Cormorant abundance, on the sea only in the entire Array Area and buffer zones.**

Month	Array Area Abundance	95% c.i.	Array Area and 2 km buffer Abundance	95% c.i.	Array Area and 4 km buffer Abundance	95% c.i.
Jan	5	0-15	5	0-15	5	0-15
Feb	0	0-0	5	0-15	5	0-15
Mar	0	0-0	0	0-0	0	0-0
Apr	0	0-0	0	0-0	0	0-0
May	0	0-0	0	0-0	0	0-0
Jun	0	0-0	0	0-0	10	0-30
Jul	0	0-0	0	0-0	0	0-0
Aug	0	0-0	0	0-0	0	0-0
Sep	5	0-15	5	0-15	5	0-15
Oct	0	0-0	0	0-0	0	0-0
Nov	0	0-0	0	0-0	0	0-0
Dec	0	0-0	0	0-0	0	0-0

**Table 12.3.10 a: Arklow Bank. Design-based estimates of Cormorant/shag abundance, in flight and on the sea in the entire Array Area and buffer zones.**

Month	Array Area Abundance	95% c.i.	Array Area and 2 km buffer Abundance	95% c.i.	Array Area and 4 km buffer Abundance	95% c.i.
Jan	0	0-0	0	0-0	0	0-0
Feb	0	0-0	0	0-0	0	0-0
Mar	10	0-30	10	0-30	10	0-30
Apr	0	0-0	0	0-0	10	0-30
May	10	0-40	10	0-35.25	10	0-40
Jun	0	0-0	0	0-0	0	0-0
Jul	0	0-0	0	0-0	0	0-0
Aug	0	0-0	0	0-0	0	0-0
Sep	0	0-0	0	0-0	0	0-0
Oct	0	0-0	0	0-0	0	0-0
Nov	0	0-0	0	0-0	0	0-0
Dec	10	0-30	10	0-40	10	0-30

**Table 12.3.10 b: Arklow Bank. Design-based estimates of Cormorant/shag abundance, in flight only in the entire Array Area and buffer zones.**

Month	Array Area Abundance	95% c.i.	Array Area and 2 km buffer Abundance	95% c.i.	Array Area and 4 km buffer Abundance	95% c.i.
Jan	0	0-0	0	0-0	0	0-0
Feb	0	0-0	0	0-0	0	0-0
Mar	0	0-0	0	0-0	0	0-0
Apr	0	0-0	0	0-0	0	0-0
May	0	0-0	0	0-0	0	0-0
Jun	0	0-0	0	0-0	0	0-0
Jul	0	0-0	0	0-0	0	0-0
Aug	0	0-0	0	0-0	0	0-0
Sep	0	0-0	0	0-0	0	0-0
Oct	0	0-0	0	0-0	0	0-0
Nov	0	0-0	0	0-0	0	0-0
Dec	0	0-0	0	0-0	0	0-0

**Table 12.3.10 c: Arklow Bank. Design-based estimates of Cormorant / shag abundance, on the sea only in the entire Array Area and buffer zones.**

Month	Array Area Abundance	95% c.i.	Array Area and 2 km buffer Abundance	95% c.i.	Array Area and 4 km buffer Abundance	95% c.i.
Jan	0	0-0	0	0-0	0	0-0
Feb	0	0-0	0	0-0	0	0-0
Mar	10	0-30	10	0-30	10	0-35.25
Apr	0	0-0	0	0-0	10	0-30
May	10	0-25.25	10	0- 25.25	10	0-40
Jun	0	0-0	0	0-0	0	0-0
Jul	0	0-0	0	0-0	0	0-0
Aug	0	0-0	0	0-0	0	0-0
Sep	0	0-0	0	0-0	0	0-0
Oct	0	0-0	0	0-0	0	0-0
Nov	0	0-0	0	0-0	0	0-0
Dec	10	0-30	10	0-30	10	0-30

**Table 12.3.11 a: Arklow Bank. Design-based estimates of Diver species abundance, in flight and on the sea in the entire Array Area and buffer zones.**

Month	Array Area Abundance	95% c.i.	Array Area and 2 km buffer Abundance	95% c.i.	Array Area and 4 km buffer Abundance	95% c.i.
Jan	0	0-0	0	0-0	0	0-0
Feb	20	0- 60	20	0- 60	30	0- 90
Mar	0	0-0	0	0-0	0	0-0
Apr	0	0-0	0	0-0	0	0-0
May	0	0-0	0	0-0	0	0-0
Jun	0	0-0	0	0-0	0	0-0
Jul	0	0-0	0	0-0	0	0-0
Aug	0	0-0	0	0-0	0	0-0
Sep	0	0-0	0	0-0	0	0-0
Oct	0	0-0	0	0-0	0	0-0
Nov	0	0-0	0	0-0	0	0-0
Dec	0	0-0	0	0-0	0	0-0

**Table 12.3.11 b: Arklow Bank. Design-based estimates of Diver species abundance, in flight only in the entire Array Area and buffer zones.**

Month	Array Area Abundance	95% c.i.	Array Area and 2 km buffer Abundance	95% c.i.	Array Area and 4 km buffer Abundance	95% c.i.
Jan	0	0-0	0	0-0	0	0-0
Feb	0	0-0	0	0-0	0	0-0
Mar	0	0-0	0	0-0	0	0-0
Apr	0	0-0	0	0-0	0	0-0
May	0	0-0	0	0-0	0	0-0
Jun	0	0-0	0	0-0	0	0-0
Jul	0	0-0	0	0-0	0	0-0
Aug	0	0-0	0	0-0	0	0-0
Sep	0	0-0	0	0-0	0	0-0
Oct	0	0-0	0	0-0	0	0-0
Nov	0	0-0	0	0-0	0	0-0
Dec	0	0-0	0	0-0	0	0-0

**Table 12.3.11 c: Arklow Bank. Design-based estimates of Diver species abundance, on the sea only in the entire Array Area and buffer zones.**

Month	Array Area Abundance	95% c.i.	Array Area and 2 km buffer Abundance	95% c.i.	Array Area and 4 km buffer Abundance	95% c.i.
Jan	0	0-0	0	0-0	0	0-0
Feb	20	0-60	20	0-60	30	0-85.25
Mar	0	0-0	0	0-0	0	0-0
Apr	0	0-0	0	0-0	0	0-0
May	0	0-0	0	0-0	0	0-0
Jun	0	0-0	0	0-0	0	0-0
Jul	0	0-0	0	0-0	0	0-0
Aug	0	0-0	0	0-0	0	0-0
Sep	0	0-0	0	0-0	0	0-0
Oct	0	0-0	0	0-0	0	0-0
Nov	0	0-0	0	0-0	0	0-0
Dec	0	0-0	0	0-0	0	0-0

**Table 12.3.12 a: Arklow Bank. Design-based estimates of Fulmar abundance, in flight and on the sea in the entire Array Area and buffer zones.**

Month	Array Area Abundance	95% c.i.	Array Area and 2 km buffer Abundance	95% c.i.	Array Area and 4 km buffer Abundance	95% c.i.
Jan	0	0-0	0	0-0	20	0-60
Feb	0	0-0	0	0-0	0	0-0
Mar	0	0-0	0	0-0	0	0-0
Apr	5	0-15	10	0-30	15	0-37.62
May	0	0-0	0	0-0	0	0-0
Jun	0	0-0	0	0-0	5	0-15
Jul	0	0-0	10	0-22.62	10	0-25
Aug	0	0-0	20	0-50	20	0-45.25
Sep	10	0-30	10	0-30	10	0-30
Oct	0	0-0	0	0-0	0	0-0
Nov	0	0-0	0	0-0	0	0-0
Dec	0	0-0	0	0-0	0	0-0

**Table 12.3.12 b: Arklow Bank. Design-based estimates of Fulmar abundance, in flight only in the entire Array Area and buffer zones.**

Month	Array Area Abundance	95% c.i.	Array Area and 2 km buffer Abundance	95% c.i.	Array Area and 4 km buffer Abundance	95% c.i.
Jan	0	0-0	0	0-0	0	0-0
Feb	0	0-0	0	0-0	0	0-0
Mar	0	0-0	0	0-0	0	0-0
Apr	5	0-15	10	0-32.62	15	0-37.62
May	0	0-0	0	0-0	0	0-0
Jun	0	0-0	0	0-0	0	0-0
Jul	0	0-0	5	0-15	5	0-15
Aug	0	0-0	10	0-35.25	10	0-40
Sep	10	0-30	10	0-30	10	0-30
Oct	0	0-0	0	0-0	0	0-0
Nov	0	0-0	0	0-0	0	0-0
Dec	0	0-0	0	0-0	0	0-0

**Table 12.3.12 c: Arklow Bank. Design-based estimates of Fulmar abundance, on the sea only in the entire Array Area and buffer zones.**

Month	Array Area Abundance	95% c.i.	Array Area and 2 km buffer Abundance	95% c.i.	Array Area and 4 km buffer Abundance	95% c.i.
Jan	0	0-0	0	0-0	20	0-70.50
Feb	0	0-0	0	0-0	0	0-0
Mar	0	0-0	0	0-0	0	0-0
Apr	0	0-0	0	0-0	0	0-0
May	0	0-0	0	0-0	0	0-0
Jun	0	0-0	0	0-0	5	0-15
Jul	0	0-0	5	0-15	5	0-15
Aug	0	0-0	10	0-30	10	0-30
Sep	0	0-0	0	0-0	0	0-0
Oct	0	0-0	0	0-0	0	0-0
Nov	0	0-0	0	0-0	0	0-0
Dec	0	0-0	0	0-0	0	0-0

**Table 12.3.13 a: Arklow Bank. Design-based estimates of Gannet abundance, in flight and on the sea in the entire Array Area and buffer zones.**

Month	Array Area Abundance	95% c.i.	Array Area and 2 km buffer Abundance	95% c.i.	Array Area and 4 km buffer Abundance	95% c.i.
Jan	5	0-15	10	0-22.62	15	0-42.62
Feb	0	0-0	0	0-0	0	0-0
Mar	10	0-30	10	0-30	30	0-70
Apr	0	0-0	90	0-250.50	90	0-296.75
May	0	0-0	5	0-10	10	0-27.62
Jun	20	0-52.62	25	0-60	35	5-77.62
Jul	10	0-28.42	16.67	0-48.42	23.33	0-58.42
Aug	30	5-62.62	45	15-87.62	60	17.38-110.50
Sep	10	0-25	30	7-38-55	50	5-110
Oct	35	0-87.62	40	0-97.62	65	15-117.62
Nov	20	0-50	20	0-50	20	0-45.25
Dec	20	0-50	30	0-62.62	40	7.38-87.88

**Table 12.3.13 b: Arklow Bank. Design-based estimates of Gannet abundance, in flight only in the entire Array Area and buffer zones.**

Month	Array Area Abundance	95% c.i.	Array Area and 2 km buffer Abundance	95% c.i.	Array Area and 4 km buffer Abundance	95% c.i.
Jan	5	0-15	10	0-25	15	0-42.62
Feb	0	0-0	0	0-0	0	0-0
Mar	10	0-30	10	0-35.25	30	0-75.25
Apr	0	0-0	90	0-286.75	90	0-255.25
May	0	0-0	5	0-15	10	0-25
Jun	15	0-47.62	20	0-60.25	30	5-75
Jul	10	0-25.08	16.67	0-40	23.33	0-53.5
Aug	15	0-37.62	25	5-50	30	10-55
Sep	5	0-17.62	20	2.38-47.62	40	5-102.62
Oct	25	0-60	25	5-52.62	40	5-80
Nov	0	0-0	0	0-0	0	0-0
Dec	10	0-30	20	0-50	20	0-55

**Table 12.3.13 c: Arklow Bank. Design-based estimates of Gannet abundance, on the sea only in the entire Array Area and buffer zones.**

Month	Array Area Abundance	95% c.i.	Array Area and 2 km buffer Abundance	95% c.i.	Array Area and 4 km buffer Abundance	95% c.i.
Jan	0	0-0	0	0-0	0	0-0
Feb	0	0-0	0	0-0	0	0-0
Mar	0	0-0	0	0-0	0	0-0
Apr	0	0-0	0	0-0	0	0-0
May	0	0-0	0	0-0	0	0-0
Jun	5	0-17.62	5	0-15	5	0-15
Jul	0	0-0	0	0-0	0	0-0
Aug	15	0-30	20	5-42.62	30	15-55
Sep	5	0-15	10	0-27.62	10	0-20
Oct	10	0-32.62	15	0-40	25	2.38-62.62
Nov	20	0-50	20	0-50	20	0-45.25
Dec	10	0-27.62	10	0-35	20	5-47.62

**Table 12.3.14 a: Arklow Bank. Design-based estimates of Great black-backed gull abundance, in flight and on the sea in the entire Array Area and buffer zones.**

Month	Array Area Abundance	95% c.i.	Array Area and 2 km buffer Abundance	95% c.i.	Array Area and 4 km buffer Abundance	95% c.i.
Jan	20	0-50	20	0-45.25	20	0-50
Feb	0	0-0	0	0-0	0	0-0
Mar	0	0-0	5	0-17.62	5	0-15
Apr	0	0-0	0	0-0	0	0-0
May	0	0-0	0	0-0	0	0-0
Jun	0	0-0	0	0-0	0	0-0
Jul	0	0-0	0	0-0	5	0-15
Aug	0	0-0	0	0-0	0	0-0
Sep	5	0-15	5	0-15	5	0-15
Oct	0	0-0	0	0-0	5	0-15
Nov	15	0-45	15	0-45	15	0-45
Dec	5	0-15	10	0-35.25	10	0-30

**Table 12.3.14 b: Arklow Bank. Design-based estimates of Great black-backed gull abundance, in flight only in the entire Array Area and buffer zones.**

Month	Array Area Abundance	95% c.i.	Array Area and 2 km buffer Abundance	95% c.i.	Array Area and 4 km buffer Abundance	95% c.i.
Jan	10	0-30	10	0-30	10	0-35.25
Feb	0	0-0	0	0-0	0	0-0
Mar	0	0-0	5	0-15	5	0-15
Apr	0	0-0	0	0-0	0	0-0
May	0	0-0	0	0-0	0	0-0
Jun	0	0-0	0	0-0	0	0-0
Jul	0	0-0	0	0-0	5	0-15
Aug	0	0-0	0	0-0	0	0-0
Sep	0	0-0	0	0-0	0	0-0
Oct	0	0-0	0	0-0	5	0-15
Nov	0	0-0	0	0-0	0	0-0
Dec	0	0-0	0	0-0	0	0-0

**Table 12.3.14 c: Arklow Bank. Design-based estimates of Great black-backed gull abundance, on the sea only in the entire Array Area and buffer zones.**

Month	Array Area Abundance	95% c.i.	Array Area and 2 km buffer Abundance	95% c.i.	Array Area and 4 km buffer Abundance	95% c.i.
Jan	10	0-30	10	0-40	10	0-30
Feb	0	0-0	0	0-0	0	0-0
Mar	0	0-0	0	0-0	0	0-0
Apr	0	0-0	0	0-0	0	0-0
May	0	0-0	0	0-0	0	0-0
Jun	0	0-0	0	0-0	0	0-0
Jul	0	0-0	0	0-0	0	0-0
Aug	0	0-0	0	0-0	0	0-0
Sep	5	0-15	5	0-15	5	0-15
Oct	0	0-0	0	0-0	0	0-0
Nov	15	0-45	15	0-45	15	0-45
Dec	5	0-15	10	0-30	10	0-32.62

**Table 12.3.15 a: Arklow Bank. Design-based estimates of Great northern diver abundance, in flight and on the sea in the entire Array Area and buffer zones.**

Month	Array Area Abundance	95% c.i.	Array Area and 2 km buffer Abundance	95% c.i.	Array Area and 4 km buffer Abundance	95% c.i.
Jan	10	0-30	10	0-30	20	0-45.25
Feb	0	0-0	0	0-0	0	0-0
Mar	0	0-0	0	0-0	0	0-0
Apr	0	0-0	0	0-0	0	0-0
May	0	0-0	0	0-0	0	0-0
Jun	0	0-0	0	0-0	0	0-0
Jul	0	0-0	0	0-0	0	0-0
Aug	0	0-0	0	0-0	0	0-0
Sep	0	0-0	0	0-0	0	0-0
Oct	0	0-0	0	0-0	0	0-0
Nov	0	0-0	0	0-0	0	0-0
Dec	10	0-30	10	0-30	10	0-30

**Table 12.3.15 b: Arklow Bank. Design-based estimates of Great northern diver abundance, in flight only in the entire Array Area and buffer zones.**

Month	Array Area Abundance	95% c.i.	Array Area and 2 km buffer Abundance	95% c.i.	Array Area and 4 km buffer Abundance	95% c.i.
Jan	0	0-0	0	0-0	0	0-0
Feb	0	0-0	0	0-0	0	0-0
Mar	0	0-0	0	0-0	0	0-0
Apr	0	0-0	0	0-0	0	0-0
May	0	0-0	0	0-0	0	0-0
Jun	0	0-0	0	0-0	0	0-0
Jul	0	0-0	0	0-0	0	0-0
Aug	0	0-0	0	0-0	0	0-0
Sep	0	0-0	0	0-0	0	0-0
Oct	0	0-0	0	0-0	0	0-0
Nov	0	0-0	0	0-0	0	0-0
Dec	0	0-0	0	0-0	0	0-0

**Table 12.3.15 c: Arklow Bank. Design-based estimates of Great northern diver abundance, on the sea only in the entire Array Area and buffer zones.**

Month	Array Area Abundance	95% c.i.	Array Area and 2 km buffer Abundance	95% c.i.	Array Area and 4 km buffer Abundance	95% c.i.
Jan	10	0- 30	10	0- 30	20	0- 40
Feb	0	0-0	0	0-0	0	0-0
Mar	0	0-0	0	0-0	0	0-0
Apr	0	0-0	0	0-0	0	0-0
May	0	0-0	0	0-0	0	0-0
Jun	0	0-0	0	0-0	0	0-0
Jul	0	0-0	0	0-0	0	0-0
Aug	0	0-0	0	0-0	0	0-0
Sep	0	0-0	0	0-0	0	0-0
Oct	0	0-0	0	0-0	0	0-0
Nov	0	0-0	0	0-0	0	0-0
Dec	10	0- 30	10	0- 40	10	0- 30

**Table 12.3.16 a: Arklow Bank. Design-based estimates of Guillemot abundance, in flight and on the sea in the entire Array Area and buffer zones.**

Month	Array Area Abundance	95% c.i.	Array Area and 2 km buffer Abundance	95% c.i.	Array Area and 4 km buffer Abundance	95% c.i.
Jan	4197.37	2801.81-6369.9	5078.94	3532.07- 6923.03	5269.74	3581.08-7698.84
Feb	1578.94	686.34-2805.26	1907.89	848.36-3103.78	2078.95	1170.07-3266.45
Mar	13.16	0-32.90	46.06	13.16-92.11	72.37	26.32-125
Apr	118.43	39.48-207.40	296.06	187.33-434.21	572.37	368.09-822.69
May	736.84	417.6-1112.83	3032.90	2215.46-4007.56	6342.10	4639.31-8831.58
Jun	52.63	3.12-128.46	151.32	65.79-263.49	309.21	166.94-471.22
Jul	548.25	326.43-829.39	2008.77	1400.55- 2568.97	4192.98	3365.68-5383.77
Aug	2085.52	1361.18-2962.83	4953.95	3614.48-6418.26	7736.84	6203.45-9397.04
Sep	927.64	532.57-1460.03	2638.16	2038.82-3276.32	4914.48	4026.32-6048.69
Oct	1092.11	595.23-1728.78	2144.74	1256.74-3121.05	3348.68	2402.47-4574.34
Nov	1875	857.4-3331.91	4763.16	3317.59- 6696.06	6203.95	4344.41-8497.53
Dec	605.26	229.94-1092.43	980.26	512.18-1630.10	1203.94	762.83-1728.45

**Table 12.3.16 b: Arklow Bank. Design-based estimates of Guillemot abundance, in flight only in the entire Array Area and buffer zones.**

Month	Array Area Abundance	95% c.i.	Array Area and 2 km buffer Abundance	95% c.i.	Array Area and 4 km buffer Abundance	95% c.i.
Jan	296.06	98.68-532.90	618.42	291.94-1023.85	671.06	393.42-1066.44
Feb	13.16	0-32.90	39.48	13.16-82.40	59.21	16.28-105.26
Mar	0	0-0	0	0-0	0	0-0
Apr	19.74	0-46.06	26.31	0-65.79	59.21	22.86-121.88
May	65.79	19.74-141.94	125	59.21-203.94	269.74	125-378.78
Jun	0	0-0	6.58	0-19.74	26.31	0-65.79
Jul	26.32	0-63.70	30.70	4.39-65.79	57.02	15.24-111.95
Aug	0	0-0	0	0-0	0	0-0
Sep	0	0-0	0	0-0	0	0-0
Oct	0	0-0	26.32	0-65.79	26.32	0-62.67
Nov	217.10	78.62-470.89	250	92.11-470.89	289.47	121.22-497.53
Dec	26.31	0-59.21	46.06	13.16-88.98	72.37	32.90-141.61

**Table 12.3.16 c: Arklow Bank. Design-based estimates of Guillemot abundance, on the sea only in the entire Array Area and buffer zones.**

Month	Array Area Abundance	95% c.i.	Array Area and 2 km buffer Abundance	95% c.i.	Array Area and 4 km buffer Abundance	95% c.i.
Jan	3901.32	2241.45-6012.17	4460.52	2995.4-6453.12	4598.69	2493.09-6303.29
Feb	1565.79	610.52-3395.72	1868.42	828.29-3143.92	2019.74	1109.21-3395.89
Mar	13.16	0-32.90	46.06	16.28-88.98	72.37	22.86-138.16
Apr	98.68	32.89-187.67	269.74	147.86-385.03	513.16	318.59-733.72
May	671.05	407.24-1024.84	2907.90	2158.39-3958.06	6072.37	4566.94-7780.26
Jun	52.63	6.58-115.30	144.74	45.73-270.40	282.90	141.28-431.09
Jul	521.93	315.57-846.71	1978.07	1417.65-2624.12	4135.96	3118.53-5130.59
Aug	2085.52	1242.77-2959.04	4953.95	3675.99-6505.92	7736.84	6456.08-9454.94
Sep	927.64	565.14-1352.80	2638.16	1890.62-3566.78	4914.48	3882.73-5861.02
Oct	1092.11	625-1790.46	2118.42	1363.98-2863.16	3322.37	2512.18-4431.58
Nov	1657.89	775.66-2885.36	4513.16	2872.37-6418.09	5914.48	3965.46-7762.01
Dec	578.95	223.02-1062.99	934.21	499.02-1491.61	1131.58	610.86-1671.71

**Table 12.3.17 a: Arklow Bank. Design-based estimates of Herring gull abundance, in flight and on the sea in the entire Array Area and buffer zones.**

Month	Array Area Abundance	95% c.i.	Array Area and 2 km buffer Abundance	95% c.i.	Array Area and 4 km buffer Abundance	95% c.i.
Jan	0	0-0	0	0-0	5	0-15
Feb	10	0-35	10	0-30	10	0-32.62
Mar	0	0-0	5	0-15	5	0-15
Apr	0	0-0	0	0-0	0	0-0
May	0	0-0	0	0-0	0	0-0
Jun	0	0-0	5	0-17.62	15	0-30
Jul	0	0-0	6.67	0-16.67	10	0-26.67
Aug	0	0-0	0	0-0	0	0-0
Sep	0	0-0	0	0-0	0	0-0
Oct	0	0-0	0	0-0	0	0-0
Nov	15	0-40	20	2.38-50	30	5-70
Dec	0	0-0	0	0-0	0	0-0

**Table 12.3.17 b: Arklow Bank. Design-based estimates of Herring gull abundance, in flight only in the entire Array Area and buffer zones.**

Month	Array Area Abundance	95% c.i.	Array Area and 2 km buffer Abundance	95% c.i.	Array Area and 4 km buffer Abundance	95% c.i.
Jan	0	0-0	0	0-0	5	0-15
Feb	5	0-17.62	5	0-15	5	0-17.62
Mar	0	0-0	5	0-15	5	0-15
Apr	0	0-0	0	0-0	0	0-0
May	0	0-0	0	0-0	0	0-0
Jun	0	0-0	5	0-15	5	0-15
Jul	0	0-0	6.67	0-16.67	10	0-26.67
Aug	0	0-0	0	0-0	0	0-0
Sep	0	0-0	0	0-0	0	0-0
Oct	0	0-0	0	0-0	0	0-0
Nov	5	0-15	5	0-12.62	15	0-42.62
Dec	0	0-0	0	0-0	0	0-0

**Table 12.3.17 c: Arklow Bank. Design-based estimates of Herring gull abundance, on the sea only in the entire Array Area and buffer zones.**

Month	Array Area Abundance	95% c.i.	Array Area and 2 km buffer Abundance	95% c.i.	Array Area and 4 km buffer Abundance	95% c.i.
Jan	0	0-0	0	0-0	0	0-0
Feb	5	0-12.62	5	0-17.62	5	0-15
Mar	0	0-0	0	0-0	0	0-0
Apr	0	0-0	0	0-0	0	0-0
May	0	0-0	0	0-0	0	0-0
Jun	0	0-0	0	0-0	10	0-30
Jul	0	0-0	0	0-0	0	0-0
Aug	0	0-0	0	0-0	0	0-0
Sep	0	0-0	0	0-0	0	0-0
Oct	0	0-0	0	0-0	0	0-0
Nov	10	0-25.25	15	0-35	15	0-40
Dec	0	0-0	0	0-0	0	0-0

**Table 12.3.18 a: Arklow Bank. Design-based estimates of Kittiwake abundance, in flight and on the sea in the entire Array Area and buffer zones.**

Month	Array Area Abundance	95% c.i.	Array Area and 2 km buffer Abundance	95% c.i.	Array Area and 4 km buffer Abundance	95% c.i.
Jan	5320	2122-10659.12	5435	1938-9330.62	5480	1967.38-9526.38
Feb	7390	2895.50-12815.62	7430	1887.25-12875.88	7460	2989.25-11564.12
Mar	185	50-355.50	360	179.50-582.62	535	279.5-783.12
Apr	1880	755.38-3042.88	2105	1201.38-3376.75	2275	1176.38-3603.25
May	735	229.25-1383.38	1185	672.38-1912	1495	934-2178.62
Jun	60	20-117.62	65	20-130.75	135	67.38-222.62
Jul	150	54.92-271.92	386.67	176.33-712.42	503.33	248.25-879.08
Aug	710	114.50-1668.12	785	203.75-1338.62	920	331.62-1595.25
Sep	65	15-140	120	50-205.25	145	70-240.25
Oct	980	57.38-2735.5	1060	102.12-2858.88	1095	146.88-2890.50
Nov	3240	455.75-6864.62	3595	1090.12-7183.38	3790	1554.88-7231.75
Dec	1530	353-3495.75	3240	517.38-7276.12	3295	418.5-8093.75

**Table 12.3.18 b: Arklow Bank. Design-based estimates of Kittiwake abundance, in flight only in the entire Array Area and buffer zones.**

Month	Array Area Abundance	95% c.i.	Array Area and 2 km buffer Abundance	95% c.i.	Array Area and 4 km buffer Abundance	95% c.i.
Jan	970	394.5-1559.25	1075	486.88-1927.62	1120	566.88-1875.25
Feb	5115	2148.88-9578.88	5155	2193.88-8707.62	5180	2313.5-9125.25
Mar	120	27.38-282.62	225	112.38-402.88	360	187.38-587.62
Apr	100	20-210.50	175	80-305.25	225	117.37-340.25
May	225	82.12-445.25	430	247.38-627.62	600	404.75-843.12
Jun	25	2.38-62.62	30	10-65	80	37.38-135
Jul	80	11.58-166.67	133.33	63.33-243.83	163.33	79.67-280.17
Aug	85	37.38-142.88	135	75-202.62	220	135-322.88
Sep	60	15-122.62	110	40-192.62	135	57.38-215
Oct	150	45-282.62	225	102.12-390.50	255	100-422.62
Nov	580	222.38-1078.62	935	438.88-1558.12	985	555-1673.38
Dec	1140	234-2693.88	1250	251.88-3037.25	1300	291.88-2969.75

**Table 12.3.18 c: Arklow Bank. Design-based estimates of Kittiwake abundance, on the sea only in the entire Array Area and buffer zones.**

Month	Array Area Abundance	95% c.i.	Array Area and 2 km buffer Abundance	95% c.i.	Array Area and 4 km buffer Abundance	95% c.i.
Jan	4350	1201.12-7969.75	4360	1593.75-9236.38	4360	1399-7229.12
Feb	2275	796.62-4087.62	2275	726.38-4169.88	2280	708.25-4399.38
Mar	65	12.38-130.25	135	36.88-225	175	80-272.62
Apr	1780	713.75-3227.75	1930	1011.62-3083.12	2050	928.5-3233.12
May	510	107.12-1156.12	755	279.75-1554.38	895	454.25-1658.38
Jun	35	5-80	35	2.38-95.25	55	15-117.62
Jul	70	6.67-148.58	253.33	76.5-495.58	340	143.33-745.08
Aug	625	93.75-1340.25	650	238.75-1439	700	125-1423.12
Sep	5	0-15	10	0-32.62	10	0-27.62
Oct	830	0-2490	835	0-2505	840	0-2515
Nov	2660	309.38-5726.88	2660	489.75-6514.75	2805	460.62-5052.50
Dec	390	20-1073.62	1990	32.38-4379.75	1995	36.88-4934

**Table 12.3.19 a: Arklow Bank. Design-based estimates of Lesser black-backed gull abundance, in flight and on the sea in the entire Array Area and buffer zones.**

Month	Array Area Abundance	95% c.i.	Array Area and 2 km buffer Abundance	95% c.i.	Array Area and 4 km buffer Abundance	95% c.i.
Jan	0	0-0	0	0-0	0	0-0
Feb	0	0-0	0	0-0	0	0-0
Mar	5	0-15	5	0-17.62	25	0-75
Apr	0	0-0	0	0-0	0	0-0
May	0	0-0	0	0-0	0	0-0
Jun	0	0-0	0	0-0	0	0-0
Jul	0	0-0	0	0-0	0	0-0
Aug	0	0-0	0	0-0	0	0-0
Sep	0	0-0	0	0-0	0	0-0
Oct	0	0-0	0	0-0	0	0-0
Nov	0	0-0	0	0-0	0	0-0
Dec	0	0-0	0	0-0	0	0-0

**Table 12.3.19 b: Arklow Bank. Design-based estimates of Lesser black-backed gull abundance, in flight only in the entire Array Area and buffer zones.**

Month	Array Area Abundance	95% c.i.	Array Area and 2 km buffer Abundance	95% c.i.	Array Area and 4 km buffer Abundance	95% c.i.
Jan	0	0-0	0	0-0	0	0-0
Feb	0	0-0	0	0-0	0	0-0
Mar	5	0-17.62	5	0-20	25	0-75
Apr	0	0-0	0	0-0	0	0-0
May	0	0-0	0	0-0	0	0-0
Jun	0	0-0	0	0-0	0	0-0
Jul	0	0-0	0	0-0	0	0-0
Aug	0	0-0	0	0-0	0	0-0
Sep	0	0-0	0	0-0	0	0-0
Oct	0	0-0	0	0-0	0	0-0
Nov	0	0-0	0	0-0	0	0-0
Dec	0	0-0	0	0-0	0	0-0

**Table 12.3.19 c: Arklow Bank. Design-based estimates of Lesser black-backed gull abundance, on the sea only in the entire Array Area and buffer zones.**

Month	Array Area Abundance	95% c.i.	Array Area and 2 km buffer Abundance	95% c.i.	Array Area and 4 km buffer Abundance	95% c.i.
Jan	0	0-0	0	0-0	0	0-0
Feb	0	0-0	0	0-0	0	0-0
Mar	0	0-0	0	0-0	0	0-0
Apr	0	0-0	0	0-0	0	0-0
May	0	0-0	0	0-0	0	0-0
Jun	0	0-0	0	0-0	0	0-0
Jul	0	0-0	0	0-0	0	0-0
Aug	0	0-0	0	0-0	0	0-0
Sep	0	0-0	0	0-0	0	0-0
Oct	0	0-0	0	0-0	0	0-0
Nov	0	0-0	0	0-0	0	0-0
Dec	0	0-0	0	0-0	0	0-0

**Table 12.3.20 a: Arklow Bank. Design-based estimates of Little gull abundance, in flight and on the sea in the entire Array Area and buffer zones.**

Month	Array Area Abundance	95% c.i.	Array Area and 2 km buffer Abundance	95% c.i.	Array Area and 4 km buffer Abundance	95% c.i.
Jan	760	20-1557.88	760	20-1806	760	17.38-1837.88
Feb	370	15-1028.12	380	22.38-1010	385	17.38-1055.50
Mar	230	10-570	420	154.75-745.25	450	198-820
Apr	0	0-0	0	0-0	0	0-0
May	0	0-0	0	0-0	0	0-0
Jun	0	0-0	0	0-0	0	0-0
Jul	0	0-0	10	0-30	10	0-45.25
Aug	25	0-77.62	30	5-65	35	7.38-72.62
Sep	250	15-599.38	290	34.25-624.62	320	92.38-642.25
Oct	535	67.38-1116.25	625	105-1293.12	655	164.25-1450.25
Nov	780	309-1420.25	815	269-1506.38	1045	476.38-1674.12
Dec	1045	166.12-2389.88	1340	44.25-3616.25	1350	109.75-3203.38

**Table 12.3.20 b: Arklow Bank. Design-based estimates of Little gull abundance, in flight only in the entire Array Area and buffer zones.**

Month	Array Area Abundance	95% c.i.	Array Area and 2 km buffer Abundance	95% c.i.	Array Area and 4 km buffer Abundance	95% c.i.
Jan	500	20-1238.38	500	14.75-1230.75	500	22.38-1276.50
Feb	85	5-225	90	10-230.50	90	5-240.75
Mar	220	0-641	350	100-691	360	144.75-705.25
Apr	0	0-0	0	0-0	0	0-0
May	0	0-0	0	0-0	0	0-0
Jun	0	0-0	0	0-0	0	0-0
Jul	0	0-0	10	0-30	10	0-30
Aug	25	0-60	25	0-62.62	30	5-60
Sep	160	5-390.50	195	17.38-525.50	225	57.38-485.50
Oct	185	10-450.25	270	42.38-583.38	295	50-658.62
Nov	515	127.38-1033.62	535	137.12-1010.25	585	201.88-1223.88
Dec	970	57.38-1917.75	1120	57.38-2634.75	1130	103.25-2671.12

**Table 12.3.20 c: Arklow Bank. Design-based estimates of Little gull abundance, on the sea only in the entire Array Area and buffer zones.**

Month	Array Area Abundance	95% c.i.	Array Area and 2 km buffer Abundance	95% c.i.	Array Area and 4 km buffer Abundance	95% c.i.
Jan	260	0-625	260	0-767.62	260	5-634.38
Feb	285	10-909.75	290	10-770.75	295	17.38-815.25
Mar	10	0-30	70	10-135.25	90	10-175.75
Apr	0	0-0	0	0-0	0	0-0
May	0	0-0	0	0-0	0	0-0
Jun	0	0-0	0	0-0	0	0-0
Jul	0	0-0	0	0-0	0	0-0
Aug	0	0-0	5	0-15	5	0-15
Sep	90	19.5-220.25	95	12.38-220.25	95	2.38-213.12
Oct	350	27.38-1029.62	355	27.12-969.38	360	30-950.25
Nov	265	105-455.25	280	107.12-483.12	460	209.75-748.62
Dec	70	0-195.25	215	4.75-495	215	30-492.5

**Table 12.3.21 a: Arklow Bank. Design-based estimates of Manx shearwater abundance, in flight and on the sea in the entire Array Area and buffer zones.**

Month	Array Area Abundance	95% c.i.	Array Area and 2 km buffer Abundance	95% c.i.	Array Area and 4 km buffer Abundance	95% c.i.
Jan	0	0-0	0	0-0	0	0-0
Feb	0	0-0	0	0-0	0	0-0
Mar	0	0-0	0	0-0	0	0-0
Apr	410	77.38-857.62	675	241.62-1174.88	1155	671.62-1766
May	80	17.12-167.62	1660	582.12-3107.88	3145	1464.38-5113.12
Jun	475	112.38-1053.50	480	64.25-1198.88	490	120-1119
Jul	16.67	0-46.67	146.67	9.83-328.42	820	135.50-1859.42
Aug	1015	127.38-2387.25	1375	409.25-2902	1755	627.75-3205.38
Sep	110	0-330	195	27.38-473.38	250	52.38-560.50
Oct	0	0-0	0	0-0	0	0-0
Nov	0	0-0	0	0-0	0	0-0
Dec	0	0-0	0	0-0	0	0-0

**Table 12.3.21 b: Arklow Bank. Design-based estimates of Manx shearwater abundance, in flight only in the entire Array Area and buffer zones.**

Month	Array Area Abundance	95% c.i.	Array Area and 2 km buffer Abundance	95% c.i.	Array Area and 4 km buffer Abundance	95% c.i.
Jan	0	0-0	0	0-0	0	0-0
Feb	0	0-0	0	0-0	0	0-0
Mar	0	0-0	0	0-0	0	0-0
Apr	75	27.38-125	210	84.75-347.88	375	194.75-670.25
May	35	0-85.25	620	167.12-1310.50	1215	539-2128.75
Jun	310	19.75-765.50	315	32.38-821.75	325	32.38-822.62
Jul	16.67	0-43.50	46.67	4.92-113.50	253-33	33.33-665.25
Aug	30	0-82.62	100	0-267.62	150	37.38-322.88
Sep	0	0-0	40	0-87.62	60	17.38-122.62
Oct	0	0-0	0	0-0	0	0-0
Nov	0	0-0	0	0-0	0	0-0
Dec	0	0-0	0	0-0	0	0-0

**Table 12.3.21 c: Arklow Bank. Design-based estimates of Manx shearwater abundance, on the sea only in the entire Array Area and buffer zones.**

Month	Array Area Abundance	95% c.i.	Array Area and 2 km buffer Abundance	95% c.i.	Array Area and 4 km buffer Abundance	95% c.i.
Jan	0	0-0	0	0-0	0	0-0
Feb	0	0-0	0	0-0	0	0-0
Mar	0	0-0	0	0-0	0	0-0
Apr	335	57.38-775	465	109.25-972.25	780	269.75-1331.75
May	45	5-102.62	1040	253.50-2176.50	1930	760.62-3559.12
Jun	165	22.38-376	165	17.38-327.62	165	12.38-367.88
Jul	0	0-0	100	0-249.08	566.67	36.67-1454.17
Aug	985	67.38-2046.88	1275	416.88-2238.62	1605	596.62-3052.62
Sep	110	0-330	155	5-440	190	10-458.38
Oct	0	0-0	0	0-0	0	0-0
Nov	0	0-0	0	0-0	0	0-0
Dec	0	0-0	0	0-0	0	0-0

**Table 12.3.22 a: Arklow Bank. Design-based estimates of Puffin abundance, in flight and on the sea in the entire Array Area and buffer zones.**

Month	Array Area Abundance	95% c.i.	Array Area and 2 km buffer Abundance	95% c.i.	Array Area and 4 km buffer Abundance	95% c.i.
Jan	0	0-0	0	0-0	0	0-0
Feb	10	0-30	10	0-30	10	0-30
Mar	20	0-60	20	0-50	20	0-50
Apr	0	0-0	0	0-0	10	0-40
May	0	0-0	0	0-0	10	0-40
Jun	10	0-30	10	0-30	30	0-75.25
Jul	3.33	0-10	10	0-26.67	10	0-28.42
Aug	5	0-17.62	10	0-20	30	0-80
Sep	0	0-0	0	0-0	10	0-35.25
Oct	0	0-0	0	0-0	0	0-0
Nov	0	0-0	5	0-20	5	0-15
Dec	0	0-0	0	0-0	0	0-0

**Table 12.3.22 b: Arklow Bank. Design-based estimates of Puffin abundance, in flight only in the entire Array Area and buffer zones.**

Month	Array Area Abundance	95% c.i.	Array Area and 2 km buffer Abundance	95% c.i.	Array Area and 4 km buffer Abundance	95% c.i.
Jan	0	0-0	0	0-0	0	0-0
Feb	0	0-0	0	0-0	0	0-0
Mar	0	0-0	0	0-0	0	0-0
Apr	0	0-0	0	0-0	0	0-0
May	0	0-0	0	0-0	0	0-0
Jun	10	0-30	10	0-30	10	0-30
Jul	0	0-0	0	0-0	0	0-0
Aug	0	0-0	0	0-0	0	0-0
Sep	0	0-0	0	0-0	0	0-0
Oct	0	0-0	0	0-0	0	0-0
Nov	0	0-0	0	0-0	0	0-0
Dec	0	0-0	0	0-0	0	0-0

**Table 12.3.22 c: Arklow Bank. Design-based estimates of Puffin abundance, on the sea only in the entire Array Area and buffer zones.**

Month	Array Area Abundance	95% c.i.	Array Area and 2 km buffer Abundance	95% c.i.	Array Area and 4 km buffer Abundance	95% c.i.
Jan	0	0-0	0	0-0	0	0-0
Feb	10	0-30	10	0-30	10	0-35.25
Mar	20	0-50	20	0-50	20	0-45.25
Apr	0	0-0	0	0-0	10	0-30
May	0	0-0	0	0-0	10	0-30
Jun	0	0-0	0	0-0	20	0-60
Jul	3-33	0-10	10	0-25.08	10	0-30
Aug	5	0-15	10	0-25	30	0-80
Sep	0	0-0	0	0-0	10	0-30
Oct	0	0-0	0	0-0	0	0-0
Nov	0	0-0	5	0-15	5	0-15
Dec	0	0-0	0	0-0	0	0-0

**Table 12.3.23 a: Arklow Bank. Design-based estimates of Razorbill abundance, in flight and on the sea in the entire Array Area and buffer zones.**

Month	Array Area Abundance	95% c.i.	Array Area and 2 km buffer Abundance		95% c.i.	Array Area and 4 km buffer Abundance	
			95% c.i.	95% c.i.		95% c.i.	95% c.i.
Jan	3313.25	1718.53- 5006.92	3710.84	2139.91-6166.27	3753.02	2327.56-5729.97	
Feb	1421.68	528.92- 2417.62	1524.10	526.36-2698.35	1572.29	633.58-2702.10	
Mar	48.2	8.88-87.5	78.32	20.93-141.72	162.65	78.01-280.28	
Apr	66.26	12.05-144.88	150.60	66.26-259.04	313.26	171.24-467.32	
May	36.15	12.05-69.42	210.84	78.01-379.82	421.68	234.64-654.67	
Jun	18.07	0-54.22	18.07	0-54.22	24.09	0-60.24	
Jul	8.03	0-24.10	52.21	5.92-122.79	160.64	60.04-309.44	
Aug	1186.74	403.02- 2202.86	2246.99	1309.48-3736.90	3367.47	2150.3-4761.44	
Sep	602.41	279.97-985.39	2319.28	1515.66-3181.62	4174.70	2958.58-5760.84	
Oct	126.50	42.17-234.94	379.52	210.54-536.14	512.04	337.05-729.22	
Nov	1602.41	824.40- 2906.33	2072.29	984.48-3403.76	2734.94	1719.88-4081.32	
Dec	626.50	102.11-1290.06	1144.58	318.68-2239.01	1319.28	568.53-2609.34	

**Table 12.3.23 b: Arklow Bank. Design-based estimates of Razorbill abundance, in flight only in the entire Array Area and buffer zones.**

Month	Array Area Abundance	95% c.i.	Array Area and 2 km buffer Abundance		95% c.i.	Array Area and 4 km buffer Abundance	
			95% c.i.	95% c.i.		95% c.i.	95% c.i.
Jan	66.26	12.05-162.65	126.51	42.17-271.08	132.53	57.08-253.32	
Feb	30.12	0-87.5	66.26	18.07-150.9	72.28	8.88-138.56	
Mar	0	0-0	0	0-0	18.07	0-48.20	
Apr	30.12	0-75.45	42.17	12.05-90.36	60.24	18.07-105.57	
May	0	0-0	0	0-0	42.17	0-108.74	
Jun	0	0-0	0	0-0	6.03	0-18.07	
Jul	8.03	0-24.10	8.03	0-24.10	8.03	0-24.10	
Aug	0	0-0	0	0-0	0	0-0	
Sep	0	0-0	0	0-0	0	0-0	
Oct	18.07	0-54.22	66.26	6.03-148.05	78.31	6.03-162.66	
Nov	138.56	26.96-295.18	144.58	18.07-277.10	162.65	42.17-316.72	
Dec	18.07	0-48.49	24.09	0-63.41	42.17	6.03-90.67	

**Table 12.3.23 c: Arklow Bank. Design-based estimates of Razorbill abundance, on the sea only in the entire Array Area and buffer zones.**

Month	Array Area Abundance	95% c.i.	Array Area and 2 km buffer Abundance	95% c.i.	Array Area and 4 km buffer Abundance	95% c.i.
Jan	3246.99	1313.26-5407.23	3584.34	1992.17-5881.92	3620.48	2014.76-5534.19
Feb	1391.57	535.84-2277.71	1457.83	681.48-2553.47	1500	670.93-2663.55
Mar	48.20	12.05-114.76	78.32	14.91-169.58	144.57	51.06-250.15
Apr	36.14	2.86-78.32	108.44	48.2-183.88	253.01	108.13-391.56
May	36.15	8.88-75.45	210.84	84.03-379.82	379.52	207.68-582.08
Jun	18.07	0-54.22	18.07	0-54.22	18.07	0-54.22
Jul	0	0-0	44.18	4.02-100.60	152.61	62.15-259.14
Aug	1186.74	388.4-2592.92	2246.99	1209.34-3349.24	3367.47	2363.7-4639.16
Sep	602.41	289.16-1018.97	2319.28	1550.46-3202.41	4174.70	3064.61-5636.59
Oct	108.44	36.15-189.90	313.25	153.46-527.56	433.74	258.44-653.77
Nov	1463.86	472.14-2575.30	1927.71	866.26-2966.11	2572.29	1437.65-4007.38
Dec	608.43	104.97-1305.42	1120.48	402.71-2264.46	1277.11	469.28-2261.14

**Table 12.3.24 a: Arklow Bank. Design-based estimates of Red-throated diver abundance, in flight and on the sea in the entire Array Area and buffer zones.**

Month	Array Area Abundance	95% c.i.	Array Area and 2 km buffer Abundance	95% c.i.	Array Area and 4 km buffer Abundance	95% c.i.
Jan	115	29.75-227.62	140	44.75-255.50	165	85-285.25
Feb	90	24.75-165	115	45-210.25	130	52.38-230.25
Mar	20	2.38-40	25	0-60	30	5-60
Apr	35	0-87.62	50	7.38-102.62	70	22.38-130
May	25	5-55	30	5-60.25	35	7.38-75
Jun	0	0-0	0	0-0	0	0-0
Jul	0	0-0	0	0-0	0	0-0
Aug	0	0-0	0	0-0	0	0-0
Sep	0	0-0	0	0-0	0	0-0
Oct	45	10-92.62	45	10-107.88	45	10-102.88
Nov	5	0-15	10	0-25	25	0-67.62
Dec	60	22.38-102.62	65	27.38-117.62	90	22.12-162.62

**Table 12.3.24 b: Arklow Bank. Design-based estimates of Red-throated diver abundance, in flight only in the entire Array Area and buffer zones.**

Month	Array Area Abundance	95% c.i.	Array Area and 2 km buffer Abundance	95% c.i.	Array Area and 4 km buffer Abundance	95% c.i.
Jan	0	0-0	0	0-0	0	0-0
Feb	0	0-0	0	0-0	0	0-0
Mar	0	0-0	0	0-0	0	0-0
Apr	0	0-0	0	0-0	0	0-0
May	0	0-0	0	0-0	0	0-0
Jun	0	0-0	0	0-0	0	0-0
Jul	0	0-0	0	0-0	0	0-0
Aug	0	0-0	0	0-0	0	0-0
Sep	0	0-0	0	0-0	0	0-0
Oct	0	0-0	0	0-0	0	0-0
Nov	0	0-0	0	0-0	0	0-0
Dec	0	0-0	0	0-0	5	0-17.62

**Table 12.3.24 c: Arklow Bank. Design-based estimates of Red-throated diver abundance, on the sea only in the entire Array Area and buffer zones.**

Month	Array Area Abundance	95% c.i.	Array Area and 2 km buffer Abundance	95% c.i.	Array Area and 4 km buffer Abundance	95% c.i.
Jan	115	35-215	140	49.75- 262.88	165	72.38- 285.25
Feb	90	25-172.62	115	42.38-190	130	57.38- 245.75
Mar	20	2.38-47.62	25	0-62.62	30	5-65
Apr	35	0-85	50	10-107.62	70	20-120.25
May	25	2.38-57.62	30	5-60	35	5-75
Jun	0	0-0	0	0-0	0	0-0
Jul	0	0-0	0	0-0	0	0-0
Aug	0	0-0	0	0-0	0	0-0
Sep	0	0-0	0	0-0	0	0-0
Oct	45	10-97.62	45	7.38-97.62	45	10-95.50
Nov	5	0-15	10	0-25	25	0-65
Dec	60	17.38-105.25	65	20-115	85	35-145.25

**Table 12.3.25 a: Arklow Bank. Design-based estimates of Sandwich tern abundance, in flight and on the sea in the entire Array Area and buffer zones.**

Month	Array Area Abundance	95% c.i.	Array Area and 2 km buffer Abundance	95% c.i.	Array Area and 4 km buffer Abundance	95% c.i.
Jan	0	0-0	0	0-0	0	0-0
Feb	0	0-0	0	0-0	0	0-0
Mar	0	0-0	0	0-0	0	0-0
Apr	0	0-0	10	0-30	25	5-47.62
May	5	0-15	5	0-15	5	0-15
Jun	0	0-0	0	0-0	0	0-0
Jul	0	0-0	0	0-0	0	0-0
Aug	10	0-30	20	0-50	40	10-100
Sep	15	5-30	15	5-35	15	0-35
Oct	0	0-0	0	0-0	0	0-0
Nov	0	0-0	0	0-0	0	0-0
Dec	0	0-0	0	0-0	0	0-0

**Table 12.3.25 b: Arklow Bank. Design-based estimates of Sandwich tern abundance, in flight only in the entire Array Area and buffer zones.**

Month	Array Area Abundance	95% c.i.	Array Area and 2 km buffer Abundance	95% c.i.	Array Area and 4 km buffer Abundance	95% c.i.
Jan	0	0-0	0	0-0	0	0-0
Feb	0	0-0	0	0-0	0	0-0
Mar	0	0-0	0	0-0	0	0-0
Apr	0	0-0	10	0-20	25	5-47.62
May	5	0-15	5	0-15	5	0-15
Jun	0	0-0	0	0-0	0	0-0
Jul	0	0-0	0	0-0	0	0-0
Aug	10	0-30	20	0-50	40	10-80
Sep	15	0-30	15	0-32.62	15	0-35
Oct	0	0-0	0	0-0	0	0-0
Nov	0	0-0	0	0-0	0	0-0
Dec	0	0-0	0	0-0	0	0-0

**Table 12.3.25 c: Arklow Bank. Design-based estimates of Sandwich tern abundance, on the sea only in the entire Array Area and buffer zones.**

Month	Array Area Abundance	95% c.i.	Array Area and 2 km buffer Abundance	95% c.i.	Array Area and 4 km buffer Abundance	95% c.i.
Jan	0	0-0	0	0-0	0	0-0
Feb	0	0-0	0	0-0	0	0-0
Mar	0	0-0	0	0-0	0	0-0
Apr	0	0-0	0	0-0	0	0-0
May	0	0-0	0	0-0	0	0-0
Jun	0	0-0	0	0-0	0	0-0
Jul	0	0-0	0	0-0	0	0-0
Aug	0	0-0	0	0-0	0	0-0
Sep	0	0-0	0	0-0	0	0-0
Oct	0	0-0	0	0-0	0	0-0
Nov	0	0-0	0	0-0	0	0-0
Dec	0	0-0	0	0-0	0	0-0

**Table 12.3.26 a: Arklow Bank. Design-based estimates of Shag abundance, in flight and on the sea in the entire Array Area and buffer zones.**

Month	Array Area Abundance	95% c.i.	Array Area and 2 km buffer Abundance	95% c.i.	Array Area and 4 km buffer Abundance	95% c.i.
Jan	25	0-72.62	25	2.38-70.25	25	0-57.62
Feb	35	5-77.62	35	5-75.25	35	5-72.88
Mar	10	0-30	10	0-35.25	10	0-40
Apr	0	0-0	0	0-0	0	0-0
May	0	0-0	0	0-0	10	0-22.62
Jun	0	0-0	0	0-0	0	0-0
Jul	0	0-0	0	0-0	0	0-0
Aug	0	0-0	0	0-0	20	0-40
Sep	0	0-0	0	0-0	0	0-0
Oct	10	0-30	10	0-37.62	10	0-30
Nov	5	0-17.62	5	0-20	5	0-15
Dec	15	0-37.62	25	0-65	25	0-65

**Table 12.3.26 b: Arklow Bank. Design-based estimates of Shag abundance, in flight only in the entire Array Area and buffer zones.**

Month	Array Area Abundance	95% c.i.	Array Area and 2 km buffer Abundance	95% c.i.	Array Area and 4 km buffer Abundance	95% c.i.
Jan	0	0-0	0	0-0	0	0-0
Feb	5	0-15	5	0-17.62	5	0-15
Mar	0	0-0	0	0-0	0	0-0
Apr	0	0-0	0	0-0	0	0-0
May	0	0-0	0	0-0	5	0-15
Jun	0	0-0	0	0-0	0	0-0
Jul	0	0-0	0	0-0	0	0-0
Aug	0	0-0	0	0-0	0	0-0
Sep	0	0-0	0	0-0	0	0-0
Oct	0	0-0	0	0-0	0	0-0
Nov	0	0-0	0	0-0	0	0-0
Dec	0	0-0	10	0-30	10	0-32.62

**Table 12.3.26 c: Arklow Bank. Design-based estimates of Shag abundance, on the sea only in the entire Array Area and buffer zones.**

Month	Array Area Abundance	95% c.i.	Array Area and 2 km buffer Abundance	95% c.i.	Array Area and 4 km buffer Abundance	95% c.i.
Jan	25	5-62.62	25	0-70.25	25	0-57.62
Feb	30	2.38-80	30	5-70.25	30	2.38-70.25
Mar	10	0-30	10	0-30	10	0-30
Apr	0	0-0	0	0-0	0	0-0
May	0	0-0	0	0-0	5	0-15
Jun	0	0-0	0	0-0	0	0-0
Jul	0	0-0	0	0-0	0	0-0
Aug	0	0-0	0	0-0	20	0-50
Sep	0	0-0	0	0-0	0	0-0
Oct	10	0-37.62	10	0-35	10	0-30
Nov	5	0-15	5	0-15	5	0-15
Dec	15	0-35	15	0-35	15	0-37.62

**Table 12.3.27 a: Arklow Bank. Design-based estimates of Small gull species abundance, in flight and on the sea in the entire Array Area and buffer zones.**

Month	Array Area Abundance	95% c.i.	Array Area and 2 km buffer Abundance	95% c.i.	Array Area and 4 km buffer Abundance	95% c.i.
Jan	535	99.75- 1299.62	540	164.25- 1215.50	545	111.38- 1178.38
Feb	495	126.62- 980.25	495	147.12- 1012.50	495	159.5-918.12
Mar	0	0-0	0	0-0	10	0-30
Apr	75	20-155	80	25-157.62	80	25-150
May	0	0-0	30	0-70	30	0-70
Jun	10	0-30	10	0-30	10	0-30
Jul	0	0-0	0	0-0	0	0-0
Aug	0	0-0	0	0-0	0	0-0
Sep	10	0-20	10	0-25	15	0-40
Oct	5	0-17.62	5	0-15	10	0-25
Nov	370	71.88-940.50	390	75-926.25	445	157.38- 880.75
Dec	165	14.75-390.50	175	40-400.25	195	42.38-405.25

**Table 12.3.27 b: Arklow Bank. Design-based estimates of Small gull species abundance, in flight only in the entire Array Area and buffer zones.**

Month	Array Area Abundance	95% c.i.	Array Area and 2 km buffer Abundance	95% c.i.	Array Area and 4 km buffer Abundance	95% c.i.
Jan	50	10-97.62	55	0-122.62	60	10-125
Feb	75	25-132.88	75	14.75-147.62	75	30-142.62
Mar	0	0-0	0	0-0	10	0-30
Apr	0	0-0	0	0-0	0	0-0
May	0	0-0	0	0-0	0	0-0
Jun	0	0-0	0	0-0	0	0-0
Jul	0	0-0	0	0-0	0	0-0
Aug	0	0-0	0	0-0	0	0-0
Sep	5	0-15	5	0-15	5	0-15
Oct	5	0-17.62	5	0-15	5	0-15
Nov	45	5-117.62	50	0-117.62	80	12.38-147.62
Dec	80	25-170.25	85	25-167.88	95	37.38-182.88

**Table 12.3.27 c: Arklow Bank. Design-based estimates of Small gull species abundance, on the sea only in the entire Array Area and buffer zones.**

Month	Array Area Abundance	95% c.i.	Array Area and 2 km buffer Abundance	95% c.i.	Array Area and 4 km buffer Abundance	95% c.i.
Jan	485	105-1033.88	485	99.75-1126.12	485	57.12-1072.75
Feb	420	147.38-808.12	420	122.38-763.12	420	114.75-856
Mar	0	0-0	0	0-0	0	0-0
Apr	75	17.38-138.12	80	27.38-142.88	80	30-157.88
May	0	0-0	30	0-90	30	0-75.25
Jun	10	0-25.25	10	0-30	10	0-30
Jul	0	0-0	0	0-0	0	0-0
Aug	0	0-0	0	0-0	0	0-0
Sep	5	0-15	5	0-15	10	0-32.62
Oct	0	0-0	0	0-0	5	0-15
Nov	325	20-688.12	340	70-751.25	365	69.75-690.25
Dec	85	0-240	90	0-255.25	100	5-267.88

**1.3**

**References**

Allen, S. (2013) JNCC expert statement on ornithological issues for written representations in respect of East Anglia One offshore windfarm.