



## West of Orkney Windfarm

### Offshore Ornithology Supplementary Environmental Information

#### Annex 1H: Design-based analysis mean abundance estimates from each calendar month of all birds (sitting and flying)

---

**Date:** 19 June 2024

**Tel:** 0141 342 5404

**Web:** [www.macarthurgreen.com](http://www.macarthurgreen.com)

**Address:** 93 South Woodside Road | Glasgow | G20 6NT

---

## Document Quality Record

Version	Status	Person Responsible	Date
0.1	Draft	Dr. S. Raveh	09/05/2024
0.2	Reviewed	Dr. Ross McGregor	18/06/2024
0.3	Updated	Dr. Ross McGregor	19/06/2024
1	Internal Approval	Dr. Ross McGregor	19/06/2024

MacArthur Green is helping combat the climate crisis by operating a biodiversity positive, carbon conscious business. Read more at [www.macarthurgreen.com](http://www.macarthurgreen.com)



## CONTENTS

1.1	Arctic Skua.....	1
1.2	Arctic Tern .....	2
1.3	Auk sp. ....	3
1.4	Black-headed Gull.....	4
1.5	Black Guillemot .....	5
1.6	Common Gull.....	6
1.7	Common Tern.....	7
1.8	Cory's Shearwater.....	8
1.9	European Storm-petrel.....	9
1.10	Fulmar.....	10
1.11	Gannet .....	11
1.12	Great Black-backed Gull.....	12
1.13	Great Northern Diver .....	13
1.14	Great Shearwater.....	14
1.15	Great Skua .....	15
1.16	Guillemot .....	16
1.17	Herring Gull.....	18
1.18	Kittiwake.....	19
1.19	Large Auk sp.....	20
1.20	Lesser Black-backed Gull .....	21
1.21	Little Auk .....	22
1.22	Little Gull.....	23
1.23	Manx Shearwater.....	24
1.24	Puffin .....	25
1.25	Razorbill.....	27
1.26	Red-throated Diver .....	29
1.27	Shag .....	30
1.28	Sooty Shearwater .....	31

## LIST OF TABLES

Table 1. Monthly abundance of Arctic skua recorded in flight and on the sea, S.D., mean of bootstraps, coefficient of variation (CV) and 95% confidence intervals in the OAA, OAA plus 2 km buffer and OAA plus 4 km buffer.....	1
Table 2. Monthly abundance of Arctic tern recorded in flight and on the sea, S.D., mean of bootstraps, coefficient of variation (CV) and 95% confidence intervals in the OAA, OAA plus 2 km buffer and OAA plus 4 km buffer.....	2
Table 3. Monthly abundance of auk sp. recorded in flight and on the sea, S.D., mean of bootstraps, coefficient of variation (CV) and 95% confidence intervals in the OAA, OAA plus 2 km buffer and OAA plus 4 km buffer.....	3
Table 4. Monthly abundance of black-headed gull recorded in flight and on the sea, S.D., mean of bootstraps, coefficient of variation (CV) and 95% confidence intervals in the OAA, OAA plus 2 km buffer and OAA plus 4 km buffer.....	4
Table 5. Monthly abundance of black guillemot recorded in flight and on the sea, S.D., mean of bootstraps, coefficient of variation (CV) and 95% confidence intervals in the OAA, OAA plus 2 km buffer and OAA plus 4 km buffer.....	5
Table 6. Monthly abundance of common gull recorded in flight and on the sea, S.D., mean of bootstraps, coefficient of variation (CV) and 95% confidence intervals in the OAA, OAA plus 2 km buffer and OAA plus 4 km buffer.....	6
Table 7. Monthly abundance of common tern recorded in flight and on the sea, S.D., mean of bootstraps, coefficient of variation (CV) and 95% confidence intervals in the OAA, OAA plus 2 km buffer and OAA plus 4 km buffer.....	7
Table 8. Monthly abundance of Cory's shearwater recorded in flight and on the sea, S.D., mean of bootstraps, coefficient of variation (CV) and 95% confidence intervals in the OAA, OAA plus 2 km buffer and OAA plus 4 km buffer.....	8
Table 9. Monthly abundance of European storm-petrel recorded in flight and on the sea, S.D., mean of bootstraps, coefficient of variation (CV) and 95% confidence intervals in the OAA, OAA plus 2 km buffer and OAA plus 4 km buffer.....	9
Table 10. Monthly abundance of fulmar recorded in flight and on the sea, S.D., mean of bootstraps, coefficient of variation (CV) and 95% confidence intervals in the OAA, OAA plus 2 km buffer and OAA plus 4 km buffer.....	10
Table 11. Monthly abundance of gannet recorded in flight and on the sea, S.D., mean of bootstraps, coefficient of variation (CV) and 95% confidence intervals in the OAA, OAA plus 2 km buffer and OAA plus 4 km buffer.....	11
Table 12. Monthly abundance of great black-backed gull recorded in flight and on the sea, S.D., mean of bootstraps, coefficient of variation (CV) and 95% confidence intervals in the OAA, OAA plus 2 km buffer and OAA plus 4 km buffer .....	12
Table 13. Monthly abundance of great northern diver recorded in flight and on the sea, S.D., mean of bootstraps, coefficient of variation (CV) and 95% confidence intervals in the OAA, OAA plus 2 km buffer and OAA plus 4 km buffer .....	13
Table 14. Monthly abundance of great shearwater recorded in flight and on the sea, S.D., mean of bootstraps, coefficient of variation (CV) and 95% confidence intervals in the OAA, OAA plus 2 km buffer and OAA plus 4 km buffer .....	14

Table 15. Monthly abundance of great skua recorded in flight and on the sea, S.D., mean of bootstraps, coefficient of variation (CV) and 95% confidence intervals in the OAA, OAA plus 2 km buffer and OAA plus 4 km buffer.....	15
Table 16. Monthly abundance of guillemot recorded in flight and on the sea, S.D., mean of bootstraps, coefficient of variation (CV) and 95% confidence intervals in the OAA, OAA plus 2 km buffer and OAA plus 4 km buffer.....	16
Table 17. Monthly abundance of guillemot (including unidentified auks apportioned using identified auk ratios) recorded in flight and on the sea, S.D., mean of bootstraps, coefficient of variation (CV) and 95% confidence intervals in the OAA, OAA plus 2 km buffer and OAA plus 4 km buffer.....	16
Table 18. Monthly abundance of guillemot (including unidentified auks apportioned using identified auk ratios and accounting for availability bias) recorded in flight and on the sea, S.D., mean of bootstraps, coefficient of variation (CV) and 95% confidence intervals in the OAA, OAA plus 2 km buffer and OAA plus 4 km buffer.....	17
Table 19. Monthly abundance of herring gull recorded in flight and on the sea, S.D., mean of bootstraps, coefficient of variation (CV) and 95% confidence intervals in the OAA, OAA plus 2 km buffer and OAA plus 4 km buffer.....	18
Table 20. Monthly abundance of kittiwake recorded in flight and on the sea, S.D., mean of bootstraps, coefficient of variation (CV) and 95% confidence intervals in the OAA, OAA plus 2 km buffer and OAA plus 4 km buffer.....	19
Table 21. Monthly abundance of large auk sp. recorded in flight and on the sea, S.D., mean of bootstraps, coefficient of variation (CV) and 95% confidence intervals in the OAA, OAA plus 2 km buffer and OAA plus 4 km buffer.....	20
Table 22. Monthly abundance of lesser black-backed gull recorded in flight and on the sea, S.D., mean of bootstraps, coefficient of variation (CV) and 95% confidence intervals in the OAA, OAA plus 2 km buffer and OAA plus 4 km buffer.....	21
Table 23. Monthly abundance of little auk recorded in flight and on the sea, S.D., mean of bootstraps, coefficient of variation (CV) and 95% confidence intervals in the OAA, OAA plus 2 km buffer and OAA plus 4 km buffer.....	22
Table 24. Monthly abundance of little gull recorded in flight and on the sea, S.D., mean of bootstraps, coefficient of variation (CV) and 95% confidence intervals in the OAA, OAA plus 2 km buffer and OAA plus 4 km buffer.....	23
Table 25. Monthly abundance of Manx shearwater recorded in flight and on the sea, S.D., mean of bootstraps, coefficient of variation (CV) and 95% confidence intervals in the OAA, OAA plus 2 km buffer and OAA plus 4 km buffer.....	24
Table 26. Monthly abundance of puffin recorded in flight and on the sea, S.D., mean of bootstraps, coefficient of variation (CV) and 95% confidence intervals in the OAA, OAA plus 2 km buffer and OAA plus 4 km buffer.....	25
Table 27. Monthly abundance of puffin (including unidentified auks apportioned using identified auk ratios) recorded in flight and on the sea, S.D., mean of bootstraps, coefficient of variation (CV) and 95% confidence intervals in the OAA, OAA plus 2 km buffer and OAA plus 4 km buffer.....	25
Table 28. Monthly abundance of puffin (including unidentified auks apportioned using identified auk ratios and accounting for availability bias) recorded in flight and on the sea, S.D., mean of bootstraps, coefficient of variation (CV) and 95% confidence intervals in the OAA, OAA plus 2 km buffer and OAA plus 4 km buffer.....	26

Table 29. Monthly abundance of razorbill recorded in flight and on the sea, S.D., mean of bootstraps, coefficient of variation (CV) and 95% confidence intervals in the OAA, OAA plus 2 km buffer and OAA plus 4 km buffer.....	27
Table 30. Monthly abundance of razorbill (including unidentified auks apportioned using identified auk ratios) recorded in flight and on the sea, S.D., mean of bootstraps, coefficient of variation (CV) and 95% confidence intervals in the OAA, OAA plus 2 km buffer and OAA plus 4 km buffer.....	27
Table 31. Monthly abundance of razorbill (including unidentified auks apportioned using identified auk ratios and accounting for availability bias) recorded in flight and on the sea, S.D., mean of bootstraps, coefficient of variation (CV) and 95% confidence intervals in the OAA, OAA plus 2 km buffer and OAA plus 4 km buffer.....	28
Table 32. Monthly abundance of red-throated diver recorded in flight and on the sea, S.D., mean of bootstraps, coefficient of variation (CV) and 95% confidence intervals in the OAA, OAA plus 2 km buffer and OAA plus 4 km buffer.....	29
Table 33. Monthly abundance of shag recorded in flight and on the sea, S.D., mean of bootstraps, coefficient of variation (CV) and 95% confidence intervals in the OAA, OAA plus 2 km buffer and OAA plus 4 km buffer.....	30
Table 34. Monthly abundance of sooty shearwater recorded in flight and on the sea, S.D., mean of bootstraps, coefficient of variation (CV) and 95% confidence intervals in the OAA, OAA plus 2 km buffer and OAA plus 4 km buffer.....	31

## 1.1 Arctic Skua

**Table 1. Monthly abundance of Arctic skua recorded in flight and on the sea, S.D., mean of bootstraps, coefficient of variation (CV) and 95% confidence intervals in the OAA, OAA plus 2 km buffer and OAA plus 4 km buffer.**

Month	Abundance											
	OAA				OAA plus 2 km buffer				OAA plus 4 km buffer			
	Estimate (S.D.)	Mean (bs)	95% c.i.	CV	Estimate (S.D.)	Mean (bs)	95% c.i.	CV	Estimate (S.D.)	Mean (bs)	95% c.i.	CV
Jan	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Feb	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Mar	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Apr	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
May	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Jun	3.87 (6.41)	3.92	0-23.23	1.65	3.87 (6.32)	3.86	0-23.23	1.63	3.87 (6.3)	3.83	0-23.23	1.63
Jul	2.64 (5.75)	2.66	0-15.86	2.18	10.58 (18.01)	10.81	0-55.52	1.70	10.58 (17.01)	10.21	0-55.52	1.61
Aug	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Sep	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Oct	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Nov	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Dec	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	

## 1.2 Arctic Tern

**Table 2. Monthly abundance of Arctic tern recorded in flight and on the sea, S.D., mean of bootstraps, coefficient of variation (CV) and 95% confidence intervals in the OAA, OAA plus 2 km buffer and OAA plus 4 km buffer.**

Month	Abundance											
	OAA				OAA plus 2 km buffer				OAA plus 4 km buffer			
	Estimate (S.D.)	Mean (bs)	95% c.i.	CV	Estimate (S.D.)	Mean (bs)	95% c.i.	CV	Estimate (S.D.)	Mean (bs)	95% c.i.	CV
Jan	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Feb	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Mar	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Apr	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
May	3.88 (6.57)	3.98	0-23.29	1.69	3.88 (6.47)	3.88	0-23.29	1.67	3.88 (6.41)	3.82	0-23.29	1.65
Jun	89.14 (120.22)	90.00	0-379.83	1.35	89.14 (121.73)	89.34	0-379.83	1.37	89.14 (120.6)	89.30	0-379.83	1.35
Jul	5.29 (9.41)	5.13	0-31.73	1.78	15.86 (27.86)	15.46	0-95.18	1.76	15.86 (29.83)	16.62	0-103.11	1.88
Aug	23.41 (47.53)	23.51	0-148.26	2.03	31.15 (45.37)	30.14	0-148.26	1.46	36.36 (50.88)	35.55	0-179.48	1.40
Sep	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Oct	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Nov	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Dec	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	

### 1.3 Auk sp.

**Table 3. Monthly abundance of auk sp. recorded in flight and on the sea, S.D., mean of bootstraps, coefficient of variation (CV) and 95% confidence intervals in the OAA, OAA plus 2 km buffer and OAA plus 4 km buffer.**

Month	Abundance											
	OAA				OAA plus 2 km buffer				OAA plus 4 km buffer			
	Estimate (S.D.)	Mean (bs)	95% c.i.	CV	Estimate (S.D.)	Mean (bs)	95% c.i.	CV	Estimate (S.D.)	Mean (bs)	95% c.i.	CV
Jan	77.48 (27.24)	76.50	30.99-131.72	0.35	123.97 (32.73)	125.22	61.98-193.7	0.26	123.97 (32.56)	123.07	61.98-185.95	0.26
Feb	12.91 (9.95)	12.92	0-38.73	0.77	12.91 (10.09)	13.00	0-38.73	0.78	18.07 (14.39)	17.95	0-54.22	0.80
Mar	15.49 (20.03)	15.56	0-61.96	1.29	23.24 (21.47)	23.17	0-69.71	0.92	27.11 (24.37)	26.83	0-77.45	0.90
Apr	131.77 (77.53)	131.07	30.95-271.46	0.59	170.54 (107.01)	169.02	30.95-356.78	0.63	228.71 (166.26)	229.69	30.95-488.63	0.73
May	27.17 (25.96)	27.83	0-85.4	0.96	50.46 (49.47)	51.30	0-147.51	0.98	85.39 (76.23)	86.15	0-225.15	0.89
Jun	38.72 (37.84)	38.39	0-123.89	0.98	50.33 (48.8)	50.86	0-147.12	0.97	85.18 (74.66)	85.60	0-216.81	0.88
Jul	175.32 (123.11)	172.87	0-372.88	0.70	249.58 (156.69)	247.86	23.26-497.27	0.63	350.64 (228.33)	347.99	23.26-713.82	0.65
Aug	80.53 (64.08)	79.58	7.8-216.82	0.80	122.29 (87.09)	123.02	15.61-294.45	0.71	159.03 (98.63)	159.62	23.21-340.72	0.62
Sep	83.38 (51.41)	84.38	7.75-178.21	0.62	112.1 (66.52)	112.63	7.75-224.69	0.59	135.45 (77.41)	133.64	15.49-263.43	0.57
Oct	42.65 (20.19)	42.69	7.75-85.29	0.47	73.66 (24.13)	73.05	31.02-124.06	0.33	85.29 (25.23)	84.61	38.77-139.57	0.30
Nov	54.22 (25.42)	54.08	7.76-108.37	0.47	77.46 (30.34)	78.70	23.27-147.07	0.39	81.34 (28.4)	81.22	31.02-139.59	0.35
Dec	31 (28.46)	31.72	0-93	0.92	42.62 (39.16)	42.48	0-116.24	0.92	46.5 (42.87)	46.66	0-131.74	0.92

## 1.4 Black-headed Gull

**Table 4. Monthly abundance of black-headed gull recorded in flight and on the sea, S.D., mean of bootstraps, coefficient of variation (CV) and 95% confidence intervals in the OAA, OAA plus 2 km buffer and OAA plus 4 km buffer.**

Month	Abundance											
	OAA				OAA plus 2 km buffer				OAA plus 4 km buffer			
	Estimate (S.D.)	Mean (bs)	95% c.i.	CV	Estimate (S.D.)	Mean (bs)	95% c.i.	CV	Estimate (S.D.)	Mean (bs)	95% c.i.	CV
Jan	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Feb	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Mar	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Apr	3.87 (6.49)	3.95	0-23.21	1.68	3.87 (6.59)	3.96	0-23.21		3.87 (6.24)	3.87	0-23.21	1.61
May	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Jun	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Jul	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Aug	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Sep	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Oct	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Nov	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Dec	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	

## 1.5 Black Guillemot

**Table 5. Monthly abundance of black guillemot recorded in flight and on the sea, S.D., mean of bootstraps, coefficient of variation (CV) and 95% confidence intervals in the OAA, OAA plus 2 km buffer and OAA plus 4 km buffer.**

Month	Abundance											
	OAA				OAA plus 2 km buffer				OAA plus 4 km buffer			
	Estimate (S.D.)	Mean (bs)	95% c.i.	CV	Estimate (S.D.)	Mean (bs)	95% c.i.	CV	Estimate (S.D.)	Mean (bs)	95% c.i.	CV
Jan	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Feb	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Mar	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Apr	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
May	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Jun	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Jul	2.58 (5.5)	2.62	0-15.5	2.13	2.58 (5.37)	2.53	0-15.5	2.08	2.58 (5.58)	2.60	0-15.5	2.16
Aug	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Sep	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Oct	3.88 (6.45)	3.83	0-23.26	1.66	3.88 (6.4)	3.99	0-23.26	1.65	3.88 (6.47)	3.94	0-23.26	1.67
Nov	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Dec	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	

## 1.6 Common Gull

**Table 6. Monthly abundance of common gull recorded in flight and on the sea, S.D., mean of bootstraps, coefficient of variation (CV) and 95% confidence intervals in the OAA, OAA plus 2 km buffer and OAA plus 4 km buffer.**

Month	Abundance											
	OAA				OAA plus 2 km buffer				OAA plus 4 km buffer			
	Estimate (S.D.)	Mean (bs)	95% c.i.	CV	Estimate (S.D.)	Mean (bs)	95% c.i.	CV	Estimate (S.D.)	Mean (bs)	95% c.i.	CV
Jan	0 (0)	0	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Feb	0 (0)	0	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Mar	0 (0)	0	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Apr	0 (0)	0	0-0		3.88 (6.25)	3.68	0-23.27	1.61	3.88 (6.52)	3.92	0-23.27	1.68
May	0 (0)	0	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Jun	0 (0)	0	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Jul	0 (0)	0	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Aug	0 (0)	0	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Sep	0 (0)	0	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Oct	0 (0)	0	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Nov	0 (0)	0	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Dec	0 (0)	0	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	

## 1.7 Common Tern

**Table 7. Monthly abundance of common tern recorded in flight and on the sea, S.D., mean of bootstraps, coefficient of variation (CV) and 95% confidence intervals in the OAA, OAA plus 2 km buffer and OAA plus 4 km buffer.**

Month	Abundance											
	OAA				OAA plus 2 km buffer				OAA plus 4 km buffer			
	Estimate (S.D.)	Mean (bs)	95% c.i.	CV	Estimate (S.D.)	Mean (bs)	95% c.i.	CV	Estimate (S.D.)	Mean (bs)	95% c.i.	CV
Jan	0 (0)	0	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Feb	0 (0)	0	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Mar	0 (0)	0	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Apr	0 (0)	0	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
May	0 (0)	0	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Jun	0 (0)	0	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Jul	0 (0)	0	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Aug	0 (0)	0	0-0		2.65 (5.38)	2.71	0-15.92	2.03	5.31 (8.91)	5.27	0-23.89	1.68
Sep	0 (0)	0	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Oct	0 (0)	0	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Nov	0 (0)	0	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Dec	0 (0)	0	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	

## 1.8 Cory's Shearwater

**Table 8. Monthly abundance of Cory's shearwater recorded in flight and on the sea, S.D., mean of bootstraps, coefficient of variation (CV) and 95% confidence intervals in the OAA, OAA plus 2 km buffer and OAA plus 4 km buffer.**

Month	Abundance											
	OAA				OAA plus 2 km buffer				OAA plus 4 km buffer			
	Estimate (S.D.)	Mean (bs)	95% c.i.	CV	Estimate (S.D.)	Mean (bs)	95% c.i.	CV	Estimate (S.D.)	Mean (bs)	95% c.i.	CV
Jan	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Feb	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Mar	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Apr	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
May	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Jun	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Jul	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Aug	2.58 (5.55)	2.52	0-15.49	2.15	2.58 (5.49)	2.57	0-15.49	2.13	2.58 (5.58)	2.65	0-15.49	2.16
Sep	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Oct	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Nov	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Dec	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	

## 1.9 European Storm-petrel

**Table 9. Monthly abundance of European storm-petrel recorded in flight and on the sea, S.D., mean of bootstraps, coefficient of variation (CV) and 95% confidence intervals in the OAA, OAA plus 2 km buffer and OAA plus 4 km buffer.**

Month	Abundance											
	OAA				OAA plus 2 km buffer				OAA plus 4 km buffer			
	Estimate (S.D.)	Mean (bs)	95% c.i.	CV	Estimate (S.D.)	Mean (bs)	95% c.i.	CV	Estimate (S.D.)	Mean (bs)	95% c.i.	CV
Jan	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Feb	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Mar	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Apr	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
May	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Jun	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Jul	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Aug	67.11 (105.33)	67.91	0-317.49	1.57	74.85 (113.57)	73.93	0-340.72	1.52	95.58 (138.57)	96.00	0-402.67	1.45
Sep	10.33 (16.59)	10.17	0-54.24	1.61	12.91 (20.53)	13.08	0-61.98	1.59	41.32 (59.15)	42.03	0-170.44	1.43
Oct	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Nov	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Dec	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	

## 1.10 Fulmar

**Table 10. Monthly abundance of fulmar recorded in flight and on the sea, S.D., mean of bootstraps, coefficient of variation (CV) and 95% confidence intervals in the OAA, OAA plus 2 km buffer and OAA plus 4 km buffer.**

Month	Abundance											
	OAA				OAA plus 2 km buffer				OAA plus 4 km buffer			
	Estimate (S.D.)	Mean (bs)	95% c.i.	CV	Estimate (S.D.)	Mean (bs)	95% c.i.	CV	Estimate (S.D.)	Mean (bs)	95% c.i.	CV
Jan	1255.19 (222.27)	1,249.51	875.34-1720.27	0.18	1921.53 (300.47)	1,930.27	1394.66-	0.16	2797.07 (321.56)	2,805.12	2215.96-3463.6	0.11
Feb	648.21 (372.3)	648.85	108.43-1293.61	0.57	976.18 (543.9)	984.77	232.35-1959.78	0.56	1355.81 (720.09)	1,358.82	333.04-2478.77	0.53
Mar	1189.88 (442.61)	1,194.22	495.7-1899.94	0.37	1682.13 (621.18)	1,677.17	759.04-2613.39	0.37	2104.59 (758.89)	2,101.07	1014.63-	0.36
Apr	371.72 (161.77)	374.70	69.8-682.53	0.44	449.16 (173.58)	444.63	124.1-752.33	0.39	569.21 (181.74)	566.03	209.41-858.73	0.32
May	85.36 (44.99)	84.52	15.5-170.8	0.53	228.83 (55.83)	227.34	131.76-356.72	0.24	267.64 (60.39)	270.51	139.74-387.52	0.23
Jun	61.94 (65.85)	62.26	0-178.09	1.06	85.17 (88.56)	85.20	0-224.55	1.04	104.53 (107.24)	104.43	0-271.01	1.03
Jul	341.54 (155.9)	342.26	116.28-641.64	0.46	485.2 (262.87)	490.31	155.04-994.74	0.54	758.63 (462.28)	755.52	279.06-	0.61
Aug	930.9 (656.43)	930.09	265.31-2706.97	0.71	1105.01 (652.11)	1,102.27	366.75-2779.03	0.59	1357.49 (679.66)	1,354.53	538.43-2954.18	0.50
Sep	1566.3 (1226.78)	1,589.78	457.14-	0.78	1917.82 (1265.23)	1,916.01	619.85-5268.33	0.66	2204.62	2,192.56	891.03-	0.57
Oct	1294.92 (517.3)	1,289.71	403.21-2574.73	0.40	1721.39 (481.75)	1,719.99	721.13-2745.12	0.28	2965.9 (979.13)	2,952.28	1325.94-	0.33
Nov	631.7 (357.6)	635.68	263.17-1458.16	0.57	813.77 (347.66)	817.51	425.72-1613.06	0.43	1971.75 (528.13)	1,971.54	1013.84-	0.27
Dec	1635.12 (368.89)	1,630.01	968.7-2410.13	0.23	2774.25 (1018.46)	2,774.99	1480.18-	0.37	3432.94	3,434.54	1751.42-6470.9	0.40

## 1.11 Gannet

**Table 11. Monthly abundance of gannet recorded in flight and on the sea, S.D., mean of bootstraps, coefficient of variation (CV) and 95% confidence intervals in the OAA, OAA plus 2 km buffer and OAA plus 4 km buffer.**

Month	Abundance											
	OAA				OAA plus 2 km buffer				OAA plus 4 km buffer			
	Estimate (S.D.)	Mean (bs)	95% c.i.	CV	Estimate (S.D.)	Mean (bs)	95% c.i.	CV	Estimate (S.D.)	Mean (bs)	95% c.i.	CV
Jan	23.24 (14.35)	22.93	0-54.24	0.62	30.99 (15.84)	30.78	7.75-69.73	0.51	30.99 (16.09)	30.56	7.75-62.18	0.52
Feb	49.06 (30.68)	49.46	0-108.45	0.63	59.39 (32.86)	59.72	0-116.19	0.55	90.38 (29.24)	90.62	31-147.25	0.32
Mar	85.29 (67.66)	85.56	7.75-209.38	0.79	127.92 (79.28)	127.34	23.24-263.67	0.62	166.67 (81.49)	166.25	54.22-310.19	0.49
Apr	445.17 (199.4)	444.45	170.63-812.31	0.45	603.93 (227.26)	606.27	286.97-997.98	0.38	739.47 (247.16)	739.20	395.56-1152.71	0.33
May	252.02 (114.99)	252.32	100.93-496.03	0.46	376.12 (144.4)	376.01	178.57-666.54	0.38	546.8 (138.84)	543.44	302.79-821.55	0.25
Jun	263.36 (116.15)	264.37	116.08-518.78	0.44	336.96 (122.17)	335.60	162.78-596.22	0.36	406.67 (134.82)	406.03	217.04-681.39	0.33
Jul	314.15 (130.01)	312.72	120.31-617.58	0.41	400.83 (131.37)	395.71	176.45-689.76	0.33	653.26 (373.05)	664.73	312.8-1732.42	0.57
Aug	851.66 (1091.59)	851.89	93.64-3981.64	1.28	958.12 (1078.22)	964.43	156.07-3917.55	1.13	1228.14 (1083.22)	1,246.90	265.31-4068.62	0.88
Sep	673.71 (287.49)	669.45	252.95-1200.83	0.43	902.28 (320.8)	903.26	426.85-1510.72	0.36	1284.07 (345.81)	1,283.99	695.61-1882.59	0.27
Oct	938.23 (233.43)	941.55	550.53-1387.97	0.25	1170.85 (325.96)	1,171.51	659.09-1721.4	0.28	1399.6 (363.39)	1,409.35	852.94-	0.26
Nov	11.62 (9.51)	11.43	0-31.02	0.82	34.85 (20.22)	34.53	0-77.4	0.58	46.47 (23.83)	46.74	7.76-92.88	0.51
Dec	31 (28.3)	30.85	0-92.99	0.91	42.62 (33.02)	42.36	0-108.68	0.77	46.5 (31.15)	46.42	7.75-116.24	0.67

## 1.12 Great Black-backed Gull

**Table 12. Monthly abundance of great black-backed gull recorded in flight and on the sea, S.D., mean of bootstraps, coefficient of variation (CV) and 95% confidence intervals in the OAA, OAA plus 2 km buffer and OAA plus 4 km buffer.**

Month	Abundance											
	OAA				OAA plus 2 km buffer				OAA plus 4 km buffer			
	Estimate (S.D.)	Mean (bs)	95% c.i.	CV	Estimate (S.D.)	Mean (bs)	95% c.i.	CV	Estimate (S.D.)	Mean (bs)	95% c.i.	CV
Jan	61.98 (21.35)	62.13	23.24-108.47	0.34	61.98 (22.59)	63.71	23.24-108.47	0.36	85.23 (23.2)	85.67	46.49-139.47	0.27
Feb	72.3 (48.45)	72.17	15.49-185.91	0.67	116.19 (78.84)	115.02	15.5-286.57	0.68	170.42 (97.5)	170.48	54.02-441.47	0.57
Mar	11.62 (9.47)	11.44	0-30.98	0.81	23.25 (12.19)	23.18	0-46.53	0.52	34.88 (14.59)	34.73	7.75-69.71	0.42
Apr	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
May	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Jun	7.75 (12.9)	8.03	0-46.51	1.66	7.75 (12.24)	7.27	0-46.51	1.58	7.75 (12.47)	7.78	0-46.51	1.61
Jul	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Aug	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Sep	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Oct	3.88 (6.62)	3.90	0-23.26	1.71	7.75 (10.54)	7.70	0-31.02	1.36	15.51 (21.73)	15.93	0-69.79	1.40
Nov	116.21 (34.06)	117.58	54.29-186.12	0.29	162.67 (54.6)	163.51	69.8-270.91	0.34	182.02 (70.33)	181.37	69.8-309.81	0.39
Dec	139.49 (131.25)	139.81	0-364.23	0.94	220.86 (165.72)	222.20	23.25-480.48	0.75	275.11 (196.61)	275.46	46.49-581.42	0.71

### 1.13 Great Northern Diver

**Table 13. Monthly abundance of great northern diver recorded in flight and on the sea, S.D., mean of bootstraps, coefficient of variation (CV) and 95% confidence intervals in the OAA, OAA plus 2 km buffer and OAA plus 4 km buffer.**

Month	Abundance											
	OAA				OAA plus 2 km buffer				OAA plus 4 km buffer			
	Estimate (S.D.)	Mean (bs)	95% c.i.	CV	Estimate (S.D.)	Mean (bs)	95% c.i.	CV	Estimate (S.D.)	Mean (bs)	95% c.i.	CV
Jan	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Feb	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Mar	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Apr	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
May	7.76 (7.1)	7.50	0-23.29	0.92	7.76 (6.85)	7.54	0-23.29	0.88	7.76 (7.08)	7.70	0-23.29	0.91
Jun	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Jul	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Aug	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Sep	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Oct	3.88 (6.2)	3.73	0-23.26	1.60	3.88 (6.28)	3.82	0-23.26	1.62	3.88 (6.26)	3.86	0-23.26	1.62
Nov	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Dec	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	

## 1.14 Great Shearwater

**Table 14. Monthly abundance of great shearwater recorded in flight and on the sea, S.D., mean of bootstraps, coefficient of variation (CV) and 95% confidence intervals in the OAA, OAA plus 2 km buffer and OAA plus 4 km buffer.**

Month	Abundance											
	OAA				OAA plus 2 km buffer				OAA plus 4 km buffer			
	Estimate (S.D.)	Mean (bs)	95% c.i.	CV	Estimate (S.D.)	Mean (bs)	95% c.i.	CV	Estimate (S.D.)	Mean (bs)	95% c.i.	CV
Jan	0 (0)	0	0-0		0 (0)	0	0-0		0 (0)	0.00	0-0	
Feb	0 (0)	0	0-0		0 (0)	0	0-0		0 (0)	0.00	0-0	
Mar	0 (0)	0	0-0		0 (0)	0	0-0		0 (0)	0.00	0-0	
Apr	0 (0)	0	0-0		0 (0)	0	0-0		0 (0)	0.00	0-0	
May	0 (0)	0	0-0		0 (0)	0	0-0		0 (0)	0.00	0-0	
Jun	0 (0)	0	0-0		0 (0)	0	0-0		0 (0)	0.00	0-0	
Jul	0 (0)	0	0-0		0 (0)	0	0-0		0 (0)	0.00	0-0	
Aug	0 (0)	0	0-0		0 (0)	0	0-0		0 (0)	0.00	0-0	
Sep	0 (0)	0	0-0		0 (0)	0	0-0		2.63 (5.47)	2.63	0-15.81	2.08
Oct	0 (0)	0	0-0		0 (0)	0	0-0		0 (0)	0.00	0-0	
Nov	0 (0)	0	0-0		0 (0)	0	0-0		0 (0)	0.00	0-0	
Dec	0 (0)	0	0-0		0 (0)	0	0-0		0 (0)	0.00	0-0	

## 1.15 Great Skua

**Table 15. Monthly abundance of great skua recorded in flight and on the sea, S.D., mean of bootstraps, coefficient of variation (CV) and 95% confidence intervals in the OAA, OAA plus 2 km buffer and OAA plus 4 km buffer.**

Month	Abundance											
	OAA				OAA plus 2 km buffer				OAA plus 4 km buffer			
	Estimate (S.D.)	Mean (bs)	95% c.i.	CV	Estimate (S.D.)	Mean (bs)	95% c.i.	CV	Estimate (S.D.)	Mean (bs)	95% c.i.	CV
Jan	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Feb	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Mar	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Apr	27.14 (23.62)	27.34	0-77.56	0.87	31.01 (27.34)	31.05	0-85.32	0.88	38.77 (34.07)	38.25	0-100.83	0.88
May	3.88 (6.27)	3.75	0-23.25	1.62	11.63 (9.57)	11.58	0-31	0.82	19.39 (11.04)	19.30	0-46.5	0.57
Jun	15.49 (18.76)	15.64	0-54.2	1.21	15.49 (18.64)	15.50	0-54.2	1.20	23.23 (26.43)	23.52	0-77.43	1.14
Jul	7.93 (9.46)	7.69	0-32.08	1.19	21 (14.5)	21.04	0-48.12	0.69	26.29 (12.98)	26.17	7.75-54.26	0.49
Aug	113.79 (185.87)	110.17	0-621.01	1.63	113.79 (185.58)	111.87	0-628.97	1.63	113.79 (191.2)	117.35	0-644.9	1.68
Sep	0 (0)	0.00	0-0		0 (0)	0.00	0-0		2.63 (4.98)	2.54	0-15.81	1.89
Oct	3.88 (6.25)	3.91	0-23.26	1.61	3.88 (6.17)	3.75	0-23.26	1.59	3.88 (6.69)	4.06	0-23.26	1.73
Nov	3.88 (5.8)	3.63	0-15.51	1.50	3.88 (6.19)	3.91	0-23.27	1.60	3.88 (6.32)	3.99	0-23.27	1.63
Dec	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	

## 1.16      Guillemot

**Table 16. Monthly abundance of guillemot recorded in flight and on the sea, S.D., mean of bootstraps, coefficient of variation (CV) and 95% confidence intervals in the OAA, OAA plus 2 km buffer and OAA plus 4 km buffer.**

Month	Abundance											
	OAA				OAA plus 2 km buffer				OAA plus 4 km buffer			
	Estimate (S.D.)	Mean (bs)	95% c.i.	CV	Estimate (S.D.)	Mean (bs)	95% c.i.	CV	Estimate (S.D.)	Mean (bs)	95% c.i.	CV
Jan	612.1 (100.17)	606.65	418.2-798.25	0.16	1038.25 (126.01)	1,038.21	805.8-1293.93	0.12	1379.16 (144.91)	1,366.38	1092.48-	0.11
Feb	645.45 (722.94)	653.18	38.75-2261.76	1.12	818.45 (793.87)	809.85	100.75-2470.88	0.97	1081.82 (984.1)	1,078.83	224.75-	0.91
Mar	778.48 (657.13)	776.47	62.04-1711.71	0.84	1138.7 (911.35)	1,138.64	162.85-2377.8	0.80	1669.31 (1365.83)	1,667.42	240.4-3617.05	0.82
Apr	2162.72 (1260.64)	2,174.47	742.68-	0.58	3108.52 (1831.98)	3,088.70	1083.08-	0.59	4387.66	4,384.47	1516.31-7818.07	0.60
May	632.59 (463.33)	632.76	100.76-1358.67	0.73	908.11 (628.8)	906.83	162.76-1878.85	0.69	1598.84 (1056.2)	1,603.41	333.27-3253.24	0.66
Jun	1103.72 (581.13)	1,105.24	372.08-	0.53	1328.36 (638.06)	1,322.27	503.85-	0.48	1661.48 (674.33)	1,681.84	813.92-2989.01	0.41
Jul	2323.68	2,326.96	496.11-5250.8	0.67	3565.71 (2383.45)	3,557.33	860.45-	0.67	4296.34 (2584.11)	4,296.73	1379.62-	0.60
Aug	1391.34 (643.2)	1,383.88	445.85-2614.1	0.46	2229.26 (1032.32)	2,233.24	772.28-4096.73	0.46	3426 (1798.18)	3,414.02	1106.67-	0.52
Sep	2200.09 (351.36)	2,209.10	1462.37-	0.16	3128.6 (401.65)	3,120.54	2292.36-	0.13	4262.39 (455.16)	4,275.00	3478.07-	0.11
Oct	1756.28 (284.44)	1,753.22	1287.17-	0.16	2756.54 (463.53)	2,761.96	2008.29-	0.17	3566.84 (402.87)	3,570.05	2876.75-	0.11
Nov	410.43 (221.7)	410.00	147.35-781.78	0.54	580.9 (213.93)	582.53	286.94-952.06	0.37	797.73 (316.12)	799.31	395.51-1292.64	0.40
Dec	507.59 (207.55)	509.73	224.72-852.46	0.41	879.56 (294.64)	882.02	464.95-1379.43	0.33	1236.04 (400.04)	1,235.97	705.17-1883.16	0.32

**Table 17. Monthly abundance of guillemot (including unidentified auks apportioned using identified auk ratios) recorded in flight and on the sea, S.D., mean of bootstraps, coefficient of variation (CV) and 95% confidence intervals in the OAA, OAA plus 2 km buffer and OAA plus 4 km buffer.**

Month	Abundance											
	OAA				OAA plus 2 km buffer				OAA plus 4 km buffer			
	Estimate (S.D.)	Mean (bs)	95% c.i.	CV	Estimate (S.D.)	Mean (bs)	95% c.i.	CV	Estimate (S.D.)	Mean (bs)	95% c.i.	CV
Jan	712.83 (116.65)	706.48	487.02-929.61	0.16	1193.21 (144.82)	1,193.16	926.07-	0.12	1580.61 (166.08)	1,565.96	1252.06-	0.11
Feb	689.34 (173.04)	697.48	405.68-1063.27	0.25	880.42 (174.71)	871.46	581.09-1256.1	0.20	1164.45 (195.67)	1,161.30	842.81-1587.29	0.17
Mar	844.34 (119.38)	842.16	622.3-1088.5	0.14	1227.8 (140.57)	1,227.72	970.14-1518.85	0.11	1781.66 (223.35)	1,779.74	1366.21-	0.13
Apr	2313.91 (296.53)	2,326.55	1754.75-	0.13	3310.11 (321.34)	3,288.91	2728.5-3974.65	0.10	4659.04 (343.64)	4,655.48	3992.83-	0.07
May	652 (113.66)	652.16	443.81-896.3	0.17	931.39 (158.51)	930.08	652.63-1265.74	0.17	1653.17 (289.72)	1,657.94	1124.01-2254.3	0.18

Month	Abundance											
	OAA				OAA plus 2 km buffer				OAA plus 4 km buffer			
	Estimate (S.D.)	Mean (bs)	95% c.i.	CV	Estimate (S.D.)	Mean (bs)	95% c.i.	CV	Estimate (S.D.)	Mean (bs)	95% c.i.	CV
Jun	1126.96 (286.16)	1,128.52	648.5-1732.19	0.25	1351.59 (304.56)	1,345.39	815.66-1982.76	0.23	1692.45 (311.71)	1,713.18	1159.47-	0.18
Jul	2456.53 (423.13)	2,460.08	1688.68-	0.17	3754.28 (552.44)	3,745.86	2735.05-	0.15	4543.17 (525.58)	4,543.56	3532.04-	0.12
Aug	1448.6 (242.97)	1,440.73	1004.56-1948.7	0.17	2309.92 (328.14)	2,313.82	1660.03-	0.14	3532.84 (381.28)	3,520.57	2769.86-	0.11
Sep	2304.13 (304.81)	2,313.63	1737.68-	0.13	3271.9 (360.67)	3,263.53	2589.83-	0.11	4436.94 (428.34)	4,450.02	3645.88-	0.10
Oct	1864.84 (264.39)	1,861.54	1367.35-	0.14	2927.13 (340.33)	2,932.81	2313.83-3614.31	0.12	3776.19 (346.99)	3,779.51	3156.4-4518.1	0.09
Nov	491.76 (82.79)	491.25	333.78-654.78	0.17	700.96 (99.77)	702.86	513.5-897.84	0.14	929.42 (105.16)	931.26	734.79-1142.53	0.11
Dec	592.83 (88.79)	595.41	426.35-777.12	0.15	1019.05 (129.49)	1,021.76	781.84-1273.92	0.13	1394.9 (136.25)	1,394.75	1145.94-1670	0.10

**Table 18. Monthly abundance of guillemot (including unidentified auks apportioned using identified auk ratios and accounting for availability bias) recorded in flight and on the sea, S.D., mean of bootstraps, coefficient of variation (CV) and 95% confidence intervals in the OAA, OAA plus 2 km buffer and OAA plus 4 km buffer.**

Month	Abundance											
	OAA				OAA plus 2 km buffer				OAA plus 4 km buffer			
	Estimate (S.D.)	Mean (bs)	95% c.i.	CV	Estimate (S.D.)	Mean (bs)	95% c.i.	CV	Estimate (S.D.)	Mean (bs)	95% c.i.	CV
Jan	906.53 (148.35)	898.46	619.37-1182.22	0.16	1541.87 (187.13)	1,541.82	1196.68-	0.12	2045.5 (214.92)	2,026.54	1620.31-	0.11
Feb	888.14 (222.8)	898.60	522.76-1369.6	0.25	1136.02 (225.24)	1,124.53	749.76-1620.22	0.20	1492.35 (250.45)	1,488.35	1080.42-	0.17
Mar	1084.47 (154.2)	1,081.68	797.85-1399.91	0.14	1576.4 (181.12)	1,576.28	1244.42-	0.11	2296.8 (288.17)	2,294.34	1760.81-	0.13
Apr	3019.34 (386.79)	3,035.87	2290.07-	0.13	4306.27 (417.94)	4,278.62	3549.99-	0.10	6062.23 (446.73)	6,057.45	5195.96-	0.07
May	787.82 (138.37)	788.02	534.79-1085.39	0.18	1133.18 (194.55)	1,131.52	791.7-1544.14	0.17	2048.97 (361.36)	2,054.63	1389.76-	0.18
Jun	1456.13 (369.74)	1,458.16	837.98-2238.11	0.25	1731.12 (390.09)	1,723.17	1044.69-	0.23	2168.82 (399.4)	2,195.39	1485.94-	0.18
Jul	3179.61 (547.63)	3,184.23	2185.98-	0.17	4860.91 (714.42)	4,850.19	3542.8-6262.02	0.15	5874.16 (679.23)	5,874.80	4567.6-7187.11	0.12
Aug	1895.88 (318.04)	1,885.59	1314.66-	0.17	3025.21 (429.78)	3,030.34	2174.06-	0.14	4625.37 (499.13)	4,609.28	3626.54-	0.11
Sep	3010.67 (398.17)	3,023.06	2270.69-	0.13	4275.05 (471.24)	4,264.12	3383.93-	0.11	5799.78 (559.96)	5,816.87	4765.69-	0.10
Oct	2388.23 (339.5)	2,384.15	1749.37-	0.14	3729.67 (434.21)	3,737.12	2947.57-	0.12	4784.21 (440.24)	4,788.63	3998.48-	0.09
Nov	631.15 (106.22)	630.50	428.43-840.28	0.17	906.21 (128.96)	908.68	663.91-1160.68	0.14	1192.75 (134.95)	1,195.12	942.99-1466.21	0.11
Dec	767.2 (114.64)	770.56	552.16-1005.15	0.15	1321.28 (167.66)	1,324.72	1014.09-1651.13	0.13	1809.5 (176.61)	1,809.26	1486.79-	0.10

## 1.17 Herring Gull

**Table 19. Monthly abundance of herring gull recorded in flight and on the sea, S.D., mean of bootstraps, coefficient of variation (CV) and 95% confidence intervals in the OAA, OAA plus 2 km buffer and OAA plus 4 km buffer.**

Month	Abundance											
	OAA				OAA plus 2 km buffer				OAA plus 4 km buffer			
	Estimate (S.D.)	Mean (bs)	95% c.i.	CV	Estimate (S.D.)	Mean (bs)	95% c.i.	CV	Estimate (S.D.)	Mean (bs)	95% c.i.	CV
Jan	7.75 (7.07)	7.55	0-23.24	0.91	7.75 (7.45)	7.86	0-23.24	0.96	15.5 (9.85)	15.44	0-38.74	0.64
Feb	5.16 (9.44)	5.26	0-30.98	1.83	5.16 (9.44)	5.31	0-30.98	1.83	7.75 (9.45)	7.69	0-30.98	1.22
Mar	3.88 (6.3)	3.85	0-23.26	1.62	7.75 (7.1)	7.85	0-23.26	0.92	7.75 (7.14)	7.77	0-23.26	0.92
Apr	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
May	0 (0)	0.00	0-0		7.75 (12.28)	7.86	0-46.5	1.58	7.75 (12.61)	8.14	0-46.5	1.63
Jun	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Jul	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Aug	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Sep	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Oct	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Nov	15.5 (12.81)	15.32	0-46.53	0.83	15.5 (12.76)	15.48	0-46.53	0.82	19.38 (16.33)	18.99	0-54.29	0.84
Dec	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	

## 1.18 Kittiwake

**Table 20. Monthly abundance of kittiwake recorded in flight and on the sea, S.D., mean of bootstraps, coefficient of variation (CV) and 95% confidence intervals in the OAA, OAA plus 2 km buffer and OAA plus 4 km buffer.**

Month	Abundance											
	OAA				OAA plus 2 km buffer				OAA plus 4 km buffer			
	Estimate (S.D.)	Mean (bs)	95% c.i.	CV	Estimate (S.D.)	Mean (bs)	95% c.i.	CV	Estimate (S.D.)	Mean (bs)	95% c.i.	CV
Jan	46.49 (16.44)	46.46	15.5-77.67	0.35	92.98 (25.21)	91.96	46.49-147.21	0.27	116.22 (27.28)	114.91	61.98-170.46	0.23
Feb	193.65 (116.5)	193.37	31-402.8	0.60	237.55 (134.68)	235.40	54.25-488.01	0.57	294.36 (169.72)	295.16	77.5-635.19	0.58
Mar	922.31 (218.04)	922.19	534.25-1380.37	0.24	1216.78 (209.78)	1,224.11	836.32-	0.17	1689.58 (235.96)	1,684.30	1287.31-2207.41	0.14
Apr	197.66 (115.56)	199.75	46.42-403.31	0.58	317.82 (192.67)	320.81	85.1-636.19	0.61	414.69 (225.65)	415.46	139.25-783.36	0.54
May	50.43 (32.87)	50.75	0-116.26	0.65	81.46 (44.16)	81.20	0-170.8	0.54	104.74 (52.64)	103.87	7.75-201.86	0.50
Jun	104.6 (71.41)	103.14	15.49-294.56	0.68	108.48 (74.94)	107.34	15.49-294.75	0.69	123.98 (80.25)	128.04	23.23-333.32	0.65
Jul	552.64 (699.79)	558.53	32.08-2316.17	1.27	690.15 (800.46)	678.30	62.01-2625.5	1.16	769.43 (868.33)	769.24	85.27-2824.18	1.13
Aug	66.24 (87.13)	66.26	0-246.81	1.32	84.77 (107.56)	84.89	0-302.54	1.27	121.71 (140.91)	122.07	0-382.16	1.16
Sep	59.51 (75.06)	59.60	0-240.19	1.26	64.72 (70.09)	63.70	0-232.44	1.08	72.63 (67.79)	72.74	0-232.44	0.93
Oct	585.43 (157.82)	583.26	333.42-953.74	0.27	798.66 (250.07)	797.87	449.54-1310.61	0.31	1135.96 (373.13)	1,150.81	651.15-1930.74	0.33
Nov	139.51 (66.4)	138.75	46.44-271.43	0.48	170.51 (74.62)	171.53	54.18-310.2	0.44	178.25 (70.4)	179.52	77.21-317.96	0.39
Dec	50.37 (30.86)	50.79	7.75-123.99	0.61	69.74 (41.61)	69.61	15.5-162.73	0.60	89.12 (46.52)	88.07	23.25-185.98	0.52

**1.19      Large Auk sp.**

**Table 21. Monthly abundance of large auk sp. recorded in flight and on the sea, S.D., mean of bootstraps, coefficient of variation (CV) and 95% confidence intervals in the OAA, OAA plus 2 km buffer and OAA plus 4 km buffer.**

Month	Abundance											
	OAA				OAA plus 2 km buffer				OAA plus 4 km buffer			
	Estimate (S.D.)	Mean (bs)	95% c.i.	CV	Estimate (S.D.)	Mean (bs)	95% c.i.	CV	Estimate (S.D.)	Mean (bs)	95% c.i.	CV
Jan	23.24 (12.55)	23.61	0-46.49	0.54	30.99 (14.09)	30.55	7.75-61.98	0.45	77.48 (25.86)	77.02	30.99-131.72	0.33
Feb	33.56 (31.63)	34.16	0-100.69	0.94	51.64 (37.49)	51.98	0-123.92	0.73	67.14 (28.79)	67.45	15.5-123.94	0.43
Mar	58.12 (25.89)	57.80	15.51-116.18	0.45	77.49 (31.17)	76.96	23.26-147.16	0.40	100.75 (32.02)	101.48	46.47-170.4	0.32
Apr	54.28 (51.43)	54.72	0-155.12	0.95	73.66 (62.79)	73.98	0-186.14	0.85	93.04 (75.16)	93.49	0-217.17	0.81
May	7.76 (13.01)	7.71	0-46.58	1.68	7.76 (12.96)	7.99	0-46.58	1.67	27.17 (27.64)	27.85	0-93.17	1.02
Jun	11.62 (12.48)	11.65	0-46.46	1.07	11.62 (11.87)	11.25	0-46.46	1.02	11.62 (11.83)	11.60	0-46.46	1.02
Jul	15.86 (26.84)	15.88	0-87.25	1.69	31.73 (49.07)	31.97	0-142.77	1.55	50.17 (70.89)	50.90	0-206.22	1.41
Aug	13.12 (14.46)	13.43	0-47.77	1.10	15.73 (13.56)	15.90	0-47.77	0.86	28.84 (17.77)	28.47	0-71.66	0.62
Sep	46.64 (37.48)	47.07	0-147.21	0.80	65.04 (39)	65.15	7.9-162.71	0.60	78.11 (41.46)	78.86	23.24-174.01	0.53
Oct	65.91 (29.01)	65.63	23.26-124.06	0.44	100.8 (29.4)	101.07	46.52-162.83	0.29	127.94 (46.03)	127.34	46.52-217.11	0.36
Nov	27.11 (17.97)	27.11	0-69.66	0.66	42.6 (20.34)	43.07	7.76-85.14	0.48	50.35 (21.46)	49.90	15.51-93.06	0.43
Dec	54.25 (38.27)	53.96	0-139.49	0.71	96.87 (47.09)	97.28	23.25-201.49	0.49	112.37 (48.11)	111.64	38.75-217.18	0.43

## 1.20 Lesser Black-backed Gull

**Table 22. Monthly abundance of lesser black-backed gull recorded in flight and on the sea, S.D., mean of bootstraps, coefficient of variation (CV) and 95% confidence intervals in the OAA, OAA plus 2 km buffer and OAA plus 4 km buffer.**

Month	Abundance											
	OAA				OAA plus 2 km buffer				OAA plus 4 km buffer			
	Estimate (S.D.)	Mean (bs)	95% c.i.	CV	Estimate (S.D.)	Mean (bs)	95% c.i.	CV	Estimate (S.D.)	Mean (bs)	95% c.i.	CV
Jan	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Feb	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Mar	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Apr	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
May	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Jun	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Jul	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Aug	2.58 (5.39)	2.45	0-15.49	2.09	2.58 (5.56)	2.63	0-15.49	2.15	5.16 (9.61)	5.27	0-30.97	1.86
Sep	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Oct	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Nov	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Dec	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	

## 1.21 Little Auk

**Table 23. Monthly abundance of little auk recorded in flight and on the sea, S.D., mean of bootstraps, coefficient of variation (CV) and 95% confidence intervals in the OAA, OAA plus 2 km buffer and OAA plus 4 km buffer.**

Month	Abundance											
	OAA				OAA plus 2 km buffer				OAA plus 4 km buffer			
	Estimate (S.D.)	Mean (bs)	95% c.i.	CV	Estimate (S.D.)	Mean (bs)	95% c.i.	CV	Estimate (S.D.)	Mean (bs)	95% c.i.	CV
Jan	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.0	0-0	
Feb	2.58 (5.68)	2.55	0-23.24	2.20	5.16 (6.86)	5.20	0-23.24	1.33	7.75 (9.39)	7.6	0-31	1.21
Mar	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.0	0-0	
Apr	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.0	0-0	
May	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.0	0-0	
Jun	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.0	0-0	
Jul	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.0	0-0	
Aug	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.0	0-0	
Sep	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.0	0-0	
Oct	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.0	0-0	
Nov	3.87 (6.38)	3.89	0-23.22	1.65	11.61 (14.45)	11.59	0-46.44	1.24	19.35 (22.1)	19.1	0-61.92	1.14
Dec	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.0	0-0	

## 1.22 Little Gull

**Table 24. Monthly abundance of little gull recorded in flight and on the sea, S.D., mean of bootstraps, coefficient of variation (CV) and 95% confidence intervals in the OAA, OAA plus 2 km buffer and OAA plus 4 km buffer.**

Month	Abundance											
	OAA				OAA plus 2 km buffer				OAA plus 4 km buffer			
	Estimate (S.D.)	Mean (bs)	95% c.i.	CV	Estimate (S.D.)	Mean (bs)	95% c.i.	CV	Estimate (S.D.)	Mean (bs)	95% c.i.	CV
Jan	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.0	0-0	
Feb	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.0	0-0	
Mar	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.0	0-0	
Apr	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.0	0-0	
May	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.0	0-0	
Jun	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.0	0-0	
Jul	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.0	0-0	
Aug	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.0	0-0	
Sep	2.58 (5.41)	2.47	0-15.49	2.09	2.58 (5.71)	2.63	0-23.24	2.21	2.58 (5.54)	2.6	0-15.49	2.14
Oct	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.0	0-0	
Nov	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.0	0-0	
Dec	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.0	0-0	

## 1.23 Manx Shearwater

**Table 25. Monthly abundance of Manx shearwater recorded in flight and on the sea, S.D., mean of bootstraps, coefficient of variation (CV) and 95% confidence intervals in the OAA, OAA plus 2 km buffer and OAA plus 4 km buffer.**

Month	Abundance											
	OAA				OAA plus 2 km buffer				OAA plus 4 km buffer			
	Estimate (S.D.)	Mean (bs)	95% c.i.	CV	Estimate (S.D.)	Mean (bs)	95% c.i.	CV	Estimate (S.D.)	Mean (bs)	95% c.i.	CV
Jan	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Feb	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Mar	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Apr	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
May	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Jun	3.88 (6.56)	3.92	0-23.25	1.69	7.75 (10.63)	7.81	0-31.01	1.37	7.75 (10.62)	7.89	0-31.01	1.37
Jul	2.64 (5.65)	2.63	0-15.86	2.14	2.64 (5.55)	2.59	0-15.86	2.10	7.93 (13.32)	7.96	0-39.66	1.68
Aug	2.6 (5.13)	2.61	0-15.61	1.97	2.6 (5.2)	2.61	0-15.61	2.00	7.78 (9.18)	7.81	0-31.21	1.18
Sep	2.63 (5.64)	2.64	0-15.81	2.14	2.63 (5.69)	2.66	0-15.81	2.16	7.85 (9.76)	7.93	0-31.62	1.24
Oct	0 (0)	0.00	0-0		0 (0)	0.00	0-0		3.88 (6.39)	3.77	0-23.26	1.65
Nov	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Dec	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	

## 1.24 Puffin

**Table 26. Monthly abundance of puffin recorded in flight and on the sea, S.D., mean of bootstraps, coefficient of variation (CV) and 95% confidence intervals in the OAA, OAA plus 2 km buffer and OAA plus 4 km buffer.**

Month	Abundance											
	OAA				OAA plus 2 km buffer				OAA plus 4 km buffer			
	Estimate (S.D.)	Mean (bs)	95% c.i.	CV	Estimate (S.D.)	Mean (bs)	95% c.i.	CV	Estimate (S.D.)	Mean (bs)	95% c.i.	CV
Jan	0 (0)	0.00	0-0		7.75 (7.26)	7.67	0-23.24	0.94	7.75 (7.44)	7.64	0-23.24	0.96
Feb	2.58 (5.42)	2.54	0-15.49	2.10	2.58 (5.4)	2.59	0-15.49	2.09	2.58 (5.4)	2.61	0-15.49	2.09
Mar	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Apr	902.34 (146.39)	906.11	628.24-1199.13	0.16	1150.22 (155.97)	1,144.63	845.41-1446.78	0.14	1351.7 (135.8)	1,349.66	1085.77-	0.10
May	1327.53 (1260.39)	1,321.87	54.06-3322.92	0.95	2111.59 (1950.72)	2,113.39	124.01-4914.7	0.92	3159.54 (2801.15)	3,168.63	255.77-6902.25	0.89
Jun	3606.28 (722.1)	3,600.06	2377.12-5218.82	0.20	4520.43 (735.54)	4,543.72	3317.58-	0.16	5818.07 (804.09)	5,819.69	4410.45-	0.14
Jul	1582.5 (933.68)	1,570.36	577.47-3394.65	0.59	2448.91	2,447.50	1018.6-5020.79	0.54	3623.96	3,615.28	1660.24-	0.42
Aug	1211.58 (496.79)	1,198.40	557.32-2325.38	0.41	2233.42 (1184.22)	2,226.70	1035.02-	0.53	3289.09	3,261.19	1743.41-	0.46
Sep	790.75 (752.67)	789.86	61.98-2208.2	0.95	982.33 (947.84)	983.61	92.97-2665.53	0.96	1215.77 (1129.75)	1,220.38	147.2-3153.66	0.93
Oct	116.31 (49.84)	116.98	38.77-217.11	0.43	143.45 (54.6)	144.60	62.03-255.88	0.38	166.71 (54.74)	167.25	77.54-279.15	0.33
Nov	0 (0)	0.00	0-0		0 (0)	0.00	0-0		3.88 (6.43)	3.92	0-23.27	1.66
Dec	3.87 (6.48)	3.97	0-23.25	1.67	3.87 (6.39)	3.77	0-23.25	1.65	7.75 (10.27)	7.92	0-31	1.33

**Table 27. Monthly abundance of puffin (including unidentified auks apportioned using identified auk ratios) recorded in flight and on the sea, S.D., mean of bootstraps, coefficient of variation (CV) and 95% confidence intervals in the OAA, OAA plus 2 km buffer and OAA plus 4 km buffer.**

Month	Abundance											
	OAA				OAA plus 2 km buffer				OAA plus 4 km buffer			
	Estimate (S.D.)	Mean (bs)	95% c.i.	CV	Estimate (S.D.)	Mean (bs)	95% c.i.	CV	Estimate (S.D.)	Mean (bs)	95% c.i.	CV
Jan	0 (0)	0.00	0-0		7.75 (7.26)	7.67	0-23.24	0.94	7.75 (7.44)	7.64	0-23.24	0.96
Feb	2.58 (2.34)	2.54	0-7.75	0.91	2.58 (2.29)	2.59	0-7.75	0.89	2.58 (2.28)	2.61	0-7.75	0.88
Mar	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Apr	937.21 (138.29)	941.14	691.73-1218.94	0.15	1188.96 (141)	1,183.08	912.45-1469.27	0.12	1398.2 (140.24)	1,396.01	1125.66-	0.10
May	1343.06 (247.59)	1,337.31	915.16-1869.12	0.18	2146.53 (296.78)	2,148.37	1586.43-	0.14	3217.76 (349.5)	3,227.02	2612.89-3925.3	0.11

Month	Abundance											
	OAA				OAA plus 2 km buffer				OAA plus 4 km buffer			
	Estimate (S.D.)	Mean (bs)	95% c.i.	CV	Estimate (S.D.)	Mean (bs)	95% c.i.	CV	Estimate (S.D.)	Mean (bs)	95% c.i.	CV
Jun	3633.39 (691.6)	3,627.12	2395.33-2118.34	0.19	4559.14 (692.7)	4,582.52	3335.15-6056.8	0.15	5883.9 (759.33)	5,885.34	4535.5-7452.38	0.13
Jul	1640.84 (236.27)	1,628.19	1176.68-2118.34	0.14	2539.01 (319.97)	2,537.40	1956.4-3203.41	0.13	3772.63 (580.68)	3,763.51	2759.81-	0.15
Aug	1245.39 (226.59)	1,231.79	820.78-1712.24	0.18	2290.78 (377.47)	2,283.94	1582.6-3027.87	0.16	3367.53 (491)	3,339.12	2447.72-	0.15
Sep	814.15 (130.37)	813.18	570.91-1075.62	0.16	1010.9 (133.09)	1,012.19	770.43-1285.89	0.13	1249.5 (134.16)	1,254.25	1006.9-1537.45	0.11
Oct	116.31 (31.08)	116.98	62.03-178.44	0.27	147.33 (33.91)	148.51	87.72-214.95	0.23	170.59 (35.52)	171.12	107.26-245.83	0.21
Nov	0 (0)	0.00	0-0		0 (0)	0.00	0-0		3.88 (3.6)	3.92	0-11.63	0.93
Dec	3.87 (3.62)	3.97	0-11.62	0.94	3.87 (3.65)	3.77	0-11.62	0.94	7.75 (4.62)	7.92	0-19.37	0.60

**Table 28. Monthly abundance of puffin (including unidentified auks apportioned using identified auk ratios and accounting for availability bias) recorded in flight and on the sea, S.D., mean of bootstraps, coefficient of variation (CV) and 95% confidence intervals in the OAA, OAA plus 2 km buffer and OAA plus 4 km buffer.**

Month	Abundance											
	OAA				OAA plus 2 km buffer				OAA plus 4 km buffer			
	Estimate (S.D.)	Mean (bs)	95% c.i.	CV	Estimate (S.D.)	Mean (bs)	95% c.i.	CV	Estimate (S.D.)	Mean (bs)	95% c.i.	CV
Jan	0 (0)	0.00	0-0		7.75 (7.26)	7.67	0-23.24	0.94	7.75 (7.44)	7.64	0-23.24	0.96
Feb	2.58 (2.34)	2.54	0-7.75	0.91	2.58 (2.29)	2.59	0-7.75	0.89	2.58 (2.28)	2.61	0-7.75	0.88
Mar	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Apr	1065.03 (157.41)	1,069.59	785.78-1385.63	0.15	1355.53 (160.92)	1,348.55	1039.81-	0.12	1599.64 (160.49)	1,597.00	1287.65-	0.10
May	1541.02 (284.15)	1,534.44	1049.98-	0.18	2460.94 (340.33)	2,463.04	1818.68-	0.14	3687.41 (401.12)	3,697.98	2993.12-	0.11
Jun	4210.54 (802.18)	4,203.27	2774.65-	0.19	5271.86 (801.61)	5,298.78	3855.42-	0.15	6794.16 (877.25)	6,795.68	5236.58-	0.13
Jul	1901.67 (273.81)	1,886.96	1363.68-	0.14	2942.06 (370.81)	2,940.20	2266.9-3712.04	0.13	4363.39 (672.9)	4,352.83	3190.38-	0.15
Aug	1448.62 (263.46)	1,432.80	954.89-1991.38	0.18	2663.37 (438.9)	2,655.41	1839.9-3520.42	0.16	3909.92 (569.96)	3,876.94	2842.2-5058.24	0.15
Sep	946.39 (151.45)	945.26	663.78-1250.09	0.16	1176.77 (154.87)	1,178.28	896.97-	0.13	1451.68 (155.77)	1,457.20	1170.01-1786.01	0.11
Oct	135.7 (36.35)	136.49	72.31-208.5	0.27	170.59 (39.25)	171.96	101.58-248.87	0.23	197.73 (41.24)	198.37	124.14-285.1	0.21
Nov	0 (0)	0.00	0-0		0 (0)	0.00	0-0		3.88 (3.6)	3.92	0-11.63	0.93
Dec	3.87 (3.62)	3.97	0-11.62	0.94	3.87 (3.65)	3.77	0-11.62	0.94	7.75 (4.62)	7.92	0-19.37	0.60

## 1.25 Razorbill

**Table 29. Monthly abundance of razorbill recorded in flight and on the sea, S.D., mean of bootstraps, coefficient of variation (CV) and 95% confidence intervals in the OAA, OAA plus 2 km buffer and OAA plus 4 km buffer.**

Month	Abundance											
	OAA				OAA plus 2 km buffer				OAA plus 4 km buffer			
	Estimate (S.D.)	Mean (bs)	95% c.i.	CV	Estimate (S.D.)	Mean (bs)	95% c.i.	CV	Estimate (S.D.)	Mean (bs)	95% c.i.	CV
Jan	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Feb	30.98 (29.8)	30.80	0-92.95	0.96	38.73 (38.52)	39.16	0-123.92	0.99	38.73 (38.27)	39.41	0-116.39	0.99
Mar	38.77 (38.03)	39.10	0-124.08	0.98	69.78 (55.73)	69.06	7.75-186.12	0.80	104.65 (50.63)	104.74	23.24-217.14	0.48
Apr	27.15 (30.09)	27.22	0-85.32	1.11	54.29 (58.8)	54.78	0-162.88	1.08	81.44 (85.26)	81.29	0-224.92	1.05
May	3.88 (6.09)	3.99	0-15.53	1.57	3.88 (5.93)	3.80	0-15.53	1.53	15.51 (12.95)	15.69	0-46.5	0.84
Jun	19.38 (22.38)	19.45	0-62.21	1.15	19.38 (22.36)	19.52	0-69.76	1.15	46.51 (53.52)	47.12	0-155.03	1.15
Jul	31.79 (45.02)	32.13	0-150.7	1.42	45 (61.6)	44.65	0-206.22	1.37	66.15 (90.7)	66.12	0-277.6	1.37
Aug	38.88 (46.71)	38.48	0-162.62	1.20	51.87 (44.98)	52.25	0-162.62	0.87	59.61 (55.82)	59.94	0-193.59	0.94
Sep	65.09 (33.66)	64.56	7.75-134.38	0.52	115.05 (92.95)	114.24	7.75-348	0.81	172.75 (150.42)	173.14	23.24-545.42	0.87
Oct	7.75 (10.35)	7.77	0-31.02	1.33	11.63 (14.58)	11.69	0-46.52	1.25	19.39 (13.89)	19.43	0-46.52	0.72
Nov	3.87 (6.28)	3.73	0-23.22	1.62	7.75 (7.14)	7.64	0-23.27	0.92	7.75 (7.22)	7.71	0-23.27	0.93
Dec	7.75 (10.37)	7.74	0-31	1.34	11.62 (14.74)	11.71	0-46.5	1.27	11.62 (14.55)	11.55	0-46.5	1.25

**Table 30. Monthly abundance of razorbill (including unidentified auks apportioned using identified auk ratios) recorded in flight and on the sea, S.D., mean of bootstraps, coefficient of variation (CV) and 95% confidence intervals in the OAA, OAA plus 2 km buffer and OAA plus 4 km buffer.**

Month	Abundance											
	OAA				OAA plus 2 km buffer				OAA plus 4 km buffer			
	Estimate (S.D.)	Mean (bs)	95% c.i.	CV	Estimate (S.D.)	Mean (bs)	95% c.i.	CV	Estimate (S.D.)	Mean (bs)	95% c.i.	CV
Jan	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Feb	33.56 (17.33)	33.41	2.58-70.23	0.52	41.31 (18.79)	41.77	10.33-80.55	0.45	41.31 (18.56)	42.08	7.75-83.65	0.45
Mar	46.52 (21.9)	46.92	14.1-92.18	0.47	81.41 (31.64)	80.57	23.26-144.21	0.39	120.16 (41.46)	120.18	45.66-208.01	0.35
Apr	27.15 (9.06)	27.22	11.63-46.54	0.33	58.17 (16.18)	58.69	29.09-91.41	0.28	85.32 (19.01)	85.16	48.75-121.88	0.22
May	3.88 (3.25)	3.99	0-11.65	0.84	3.88 (3.22)	3.80	0-11.65	0.83	15.51 (9.69)	15.69	0-34.9	0.63

Month	Abundance											
	OAA				OAA plus 2 km buffer				OAA plus 4 km buffer			
	Estimate (S.D.)	Mean (bs)	95% c.i.	CV	Estimate (S.D.)	Mean (bs)	95% c.i.	CV	Estimate (S.D.)	Mean (bs)	95% c.i.	CV
Jun	19.38 (7.82)	19.45	7.75-34.88	0.40	19.38 (7.71)	19.52	3.88-34.88	0.40	46.51 (17.93)	47.12	15.5-85.27	0.39
Jul	31.79 (20.72)	32.13	2.64-76.91	0.65	45 (23.26)	44.65	7.93-95.36	0.52	68.8 (27.13)	68.76	24.83-126.39	0.39
Aug	41.46 (22.74)	41.04	8.39-90.84	0.55	54.45 (27.08)	54.80	11.12-111.25	0.50	62.19 (27.83)	62.55	16.46-121.33	0.45
Sep	65.09 (31.68)	64.56	13.07-132.72	0.49	120.32 (56.44)	119.46	27.31-240.45	0.47	178.02 (69.52)	178.47	56.81-323.5	0.39
Oct	7.75 (4.83)	7.77	0-19.39	0.62	11.63 (6.16)	11.69	0-23.26	0.53	19.39 (13.34)	19.43	0-46.52	0.69
Nov	3.87 (3.57)	3.73	0-11.61	0.92	7.75 (7.14)	7.64	0-23.24	0.92	7.75 (7.22)	7.71	0-23.24	0.93
Dec	7.75 (4.88)	7.74	0-19.37	0.63	11.62 (6.34)	11.71	0-23.35	0.55	11.62 (6.26)	11.55	0-23.25	0.54

**Table 31. Monthly abundance of razorbill (including unidentified auks apportioned using identified auk ratios and accounting for availability bias) recorded in flight and on the sea, S.D., mean of bootstraps, coefficient of variation (CV) and 95% confidence intervals in the OAA, OAA plus 2 km buffer and OAA plus 4 km buffer.**

Month	Abundance											
	OAA				OAA plus 2 km buffer				OAA plus 4 km buffer			
	Estimate (S.D.)	Mean (bs)	95% c.i.	CV	Estimate (S.D.)	Mean (bs)	95% c.i.	CV	Estimate (S.D.)	Mean (bs)	95% c.i.	CV
Jan	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Feb	38.73 (20.01)	38.56	2.95-81.07	0.52	49.05 (22.25)	49.60	12.39-95.53	0.45	49.05 (21.98)	49.96	9.29-99.14	0.45
Mar	54.28 (25.19)	54.74	16.66-106.83	0.46	96.92 (37.35)	95.91	28.43-171.1	0.39	143.41 (49.57)	143.45	54.27-248.49	0.35
Apr	31.02 (10.36)	31.10	13.3-53.18	0.33	69.8 (19.41)	70.43	34.9-109.69	0.28	100.83 (22.47)	100.64	57.62-144.04	0.22
May	3.88 (3.25)	3.99	0-11.65	0.84	3.88 (3.22)	3.80	0-11.65	0.83	19.38 (11.88)	19.62	0-42.65	0.61
Jun	23.25 (9.38)	23.34	9.3-41.86	0.40	23.25 (9.25)	23.42	4.65-41.86	0.40	54.26 (20.91)	54.98	18.09-99.48	0.39
Jul	37.07 (23.88)	37.48	3.17-89.09	0.64	52.94 (26.96)	52.49	9.52-111.22	0.51	82.02 (31.78)	81.97	30-149.38	0.39
Aug	49.21 (26.42)	48.73	10.32-106.33	0.54	64.79 (31.76)	65.16	13.5-131.27	0.49	72.54 (32.09)	72.92	19.36-140.6	0.44
Sep	78.1 (37.82)	77.49	15.94-158.81	0.48	143.87 (67.29)	142.85	32.89-287.07	0.47	217.28 (84.75)	217.83	69.54-394.7	0.39
Oct	7.75 (4.83)	7.77	0-19.39	0.62	11.63 (6.16)	11.69	0-23.26	0.53	19.39 (13.34)	19.43	0-46.52	0.69
Nov	3.87 (3.57)	3.73	0-11.61	0.92	7.75 (7.14)	7.64	0-23.24	0.92	7.75 (7.22)	7.71	0-23.24	0.93
Dec	7.75 (4.88)	7.74	0-19.37	0.63	15.5 (8.45)	15.61	0-31.13	0.55	15.5 (8.35)	15.40	0-31	0.54

## 1.26 Red-throated Diver

**Table 32. Monthly abundance of red-throated diver recorded in flight and on the sea, S.D., mean of bootstraps, coefficient of variation (CV) and 95% confidence intervals in the OAA, OAA plus 2 km buffer and OAA plus 4 km buffer.**

Month	Abundance											
	OAA				OAA plus 2 km buffer				OAA plus 4 km buffer			
	Estimate (S.D.)	Mean (bs)	95% c.i.	CV	Estimate (S.D.)	Mean (bs)	95% c.i.	CV	Estimate (S.D.)	Mean (bs)	95% c.i.	CV
Jan	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Feb	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Mar	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Apr	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
May	0 (0)	0.00	0-0		3.88 (5.78)	3.77	0-15.53	1.49	3.88 (5.96)	3.83	0-15.53	1.54
Jun	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Jul	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Aug	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Sep	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Oct	3.88 (6.66)	3.97	0-23.26	1.72	3.88 (6.46)	3.98	0-23.26	1.67	3.88 (6.65)	4.06	0-23.26	1.71
Nov	0 (0)	0.00	0-0		3.87 (5.84)	3.59	0-15.48	1.51	3.87 (6.3)	3.96	0-23.22	1.63
Dec	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	

## 1.27 Shag

**Table 33. Monthly abundance of shag recorded in flight and on the sea, S.D., mean of bootstraps, coefficient of variation (CV) and 95% confidence intervals in the OAA, OAA plus 2 km buffer and OAA plus 4 km buffer.**

Month	Abundance											
	OAA				OAA plus 2 km buffer				OAA plus 4 km buffer			
	Estimate (S.D.)	Mean (bs)	95% c.i.	CV	Estimate (S.D.)	Mean (bs)	95% c.i.	CV	Estimate (S.D.)	Mean (bs)	95% c.i.	CV
Jan	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Feb	0 (0)	0.00	0-0		0 (0)	0.00	0-0		2.58 (5.74)	2.71	0-23.25	2.22
Mar	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Apr	3.88 (6.34)	3.85	0-23.27	1.64	7.76 (10.7)	7.81	0-31.02	1.38	11.63 (14.62)	11.50	0-46.54	1.26
May	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Jun	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Jul	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Aug	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Sep	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Oct	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Nov	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Dec	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	

## 1.28 Sooty Shearwater

**Table 34. Monthly abundance of sooty shearwater recorded in flight and on the sea, S.D., mean of bootstraps, coefficient of variation (CV) and 95% confidence intervals in the OAA, OAA plus 2 km buffer and OAA plus 4 km buffer.**

Month	Abundance											
	OAA				OAA plus 2 km buffer				OAA plus 4 km buffer			
	Estimate (S.D.)	Mean (bs)	95% c.i.	CV	Estimate (S.D.)	Mean (bs)	95% c.i.	CV	Estimate (S.D.)	Mean (bs)	95% c.i.	CV
Jan	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Feb	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Mar	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Apr	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
May	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Jun	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Jul	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Aug	2.58 (5.3)	2.48	0-15.49	2.05	5.16 (9.24)	5.12	0-30.97	1.79	5.16 (9.73)	5.27	0-30.97	1.88
Sep	0 (0)	0.00	0-0		2.58 (5.34)	2.59	0-15.5	2.07	2.58 (5.42)	2.66	0-15.5	2.10
Oct	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Nov	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Dec	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	