

West of Orkney Windfarm

Offshore Ornithology Supplementary Environmental Information

Annex 1B: Design-based analysis abundance estimates from each survey recorded of all birds (sitting and flying)

Date: 19 June 2024

Tel: 0141 342 5404

Web: 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



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.....	19
1.18	Kittiwake.....	20
1.19	Large Auk sp.....	21
1.20	Lesser Black-backed Gull	22
1.21	Little Auk	23
1.22	Little Gull.....	24
1.23	Manx Shearwater.....	25
1.24	Puffin	26
1.25	Razorbill.....	29
1.26	Red-throated Diver	32
1.27	Shag	33
1.28	Sooty Shearwater	34

LIST OF TABLES

Table 1. Abundance of Arctic skua recorded in flight and on the sea in each survey, 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. Abundance of Arctic tern recorded in flight and on the sea in each survey, 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. Abundance of Auk sp. recorded in flight and on the sea in each survey, 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. Abundance of black-headed gull recorded in flight and on the sea in each survey, 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. Abundance of black guillemot recorded in flight and on the sea in each survey, 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. Abundance of common gull recorded in flight and on the sea in each survey, 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. Abundance of common tern recorded in flight and on the sea in each survey, 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. Abundance of Cory's shearwater recorded in flight and on the sea in each survey, 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. Abundance of European storm-petrel recorded in flight and on the sea in each survey, 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. Abundance of fulmar recorded in flight and on the sea in each survey, 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. Abundance of gannet recorded in flight and on the sea in each survey, 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. Abundance of great black-backed gull recorded in flight and on the sea in each survey, 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. Abundance of great northern diver recorded in flight and on the sea in each survey, 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. Abundance of great shearwater recorded in flight and on the sea in each survey, 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. Abundance of great skua recorded in flight and on the sea in each survey, 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. Abundance of guillemot recorded in flight and on the sea in each survey, 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. Abundance of guillemot (including unidentified auks apportioned using identified auk ratios) recorded in flight and on the sea in each survey, S.D., mean of bootstraps, coefficient of variation (CV) and 95% confidence interval, in the OAA, OAA plus 2 km buffer and OAA plus 4 km buffer.....	17
Table 18. Abundance of guillemot (including unidentified auks apportioned using identified auk ratios and accounting for availability bias) recorded in flight and on the sea in each survey, S.D., mean of bootstraps, coefficient of variation (CV) and 95% confidence interval, in the OAA, OAA plus 2 km buffer and OAA plus 4 km buffer.....	18
Table 19. Abundance of herring gull recorded in flight and on the sea in each survey, 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 20. Abundance of kittiwake recorded in flight and on the sea in each survey, 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 21. Abundance of large auk sp. recorded in flight and on the sea in each survey, 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 22. Abundance of lesser black-backed gull recorded in flight and on the sea in each survey, 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 23. Abundance of little auk recorded in flight and on the sea in each survey, 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 24. Abundance of little gull recorded in flight and on the sea in each survey, 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 25. Abundance of Manx shearwater recorded in flight and on the sea in each survey, 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 26. Abundance of puffin recorded in flight and on the sea in each survey, 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 27. Abundance of puffin (including unidentified auks apportioned using identified auk ratios) recorded in flight and on the sea in each survey, 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 28. Abundance of puffin (including unidentified auks apportioned using identified auk ratios and accounting for availability bias) recorded in flight and on the sea in each survey, 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 29. Abundance of razorbill recorded in flight and on the sea in each survey, 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 30. Abundance of razorbill (including unidentified auks apportioned using identified auk ratios) recorded in flight and on the sea in each survey, 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 31. Abundance of razorbill (including unidentified auks apportioned using identified auk ratios and accounting for availability bias) recorded in flight and on the sea in each survey, 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
Table 32. Abundance of red-throated diver recorded in flight and on the sea in each survey, 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.....	32
Table 33. Abundance of shag recorded in flight and on the sea in each survey, 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.....	33
Table 34. Abundance of sooty shearwater recorded in flight and on the sea in each survey, 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.....	34

1.1 Arctic Skua

Table 1. Abundance of Arctic skua recorded in flight and on the sea in each survey, 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.

Survey	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
Jul-2020	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Aug-2020	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Sep-2020	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Oct-2020	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Nov-2020	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Dec-2020	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Jan-2021	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Feb-2021	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Mar-2021	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Apr-2021	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
May-2021	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Jun-2021	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Jul-2021	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Aug-2021	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Sep-2021	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Oct-2021	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Nov-2021	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Dec-2021	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Feb-2022	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Feb-2022	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Mar-2022	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Apr-2022	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
May-2022	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Jun-2022	7.74 (7.17)	7.84	0-23.23	0.93	7.74 (7.07)	7.73	0-23.23	0.91	7.74 (7.08)	7.65	0-23.23	0.91
Jul-2022	7.93 (7.54)	7.98	0-23.79	0.95	31.73 (16.48)	32.44	7.93-63.45	0.52	31.73 (15.59)	30.62	0-63.45	0.49
Aug-2022	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Sep-2022	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	

1.2 Arctic Tern

Table 2. Abundance of Arctic tern recorded in flight and on the sea in each survey, 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.

Survey	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
Jul-2020	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Aug-2020	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Sep-2020	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Oct-2020	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Nov-2020	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Dec-2020	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Jan-2021	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Feb-2021	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Mar-2021	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Apr-2021	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
May-2021	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Jun-2021	178.29 (112.71)	180.00	0-434.09	0.63	178.29 (116.91)	178.69	0-434.09	0.66	178.29 (114.62)	178.60	0-434.09	0.64
Jul-2021	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Aug-2021	0 (0)	0.00	0-0		23.23 (18.62)	22.42	0-69.69	0.80	23.23 (18.13)	22.79	0-69.69	0.78
Sep-2021	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Oct-2021	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Nov-2021	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Dec-2021	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Feb-2022	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Feb-2022	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Mar-2022	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Apr-2022	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
May-2022	7.76 (7.39)	7.97	0-23.29	0.95	7.76 (7.33)	7.76	0-23.29	0.94	7.76 (7.28)	7.63	0-23.29	0.94
Jun-2022	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Jul-2022	15.86 (10.4)	15.39	0-39.66	0.66	47.59 (29.9)	46.38	0-111.04	0.63	47.59 (31.81)	49.86	0-118.97	0.67
Aug-2022	70.23 (58.83)	70.54	0-202.89	0.84	70.23 (58.57)	68.00	0-202.89	0.83	85.84 (60.65)	83.86	7.8-218.49	0.71
Sep-2022	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	

1.3 Auk sp.

Table 3. Abundance of Auk sp. recorded in flight and on the sea in each survey, 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.

Survey	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
Jul-2020	256.66 (64.12)	257.06	144.37-384.98	0.25	384.98 (73.92)	381.12	248.63-537.57	0.19	561.43 (105.84)	558.70	376.96-769.97	0.19
Aug-2020	47.77 (20.88)	46.93	7.96-87.58	0.44	95.54 (26.72)	96.75	47.77-151.27	0.28	159.23 (41.22)	162.34	87.58-254.77	0.26
Sep-2020	23.24 (12.63)	23.52	0.54-23	0.54	30.99 (14.6)	30.27	7.75-61.98	0.47	38.74 (14.95)	38.19	15.49-69.73	0.39
Oct-2020	54.28 (19.09)	53.55	23.26-93.05	0.35	69.79 (22.01)	69.15	31.02-116.31	0.32	77.54 (21.7)	76.69	38.77-124.06	0.28
Nov-2020	38.78 (18.23)	38.63	7.76-77.55	0.47	62.04 (23.74)	62.49	23.27-108.77	0.38	69.8 (24.39)	70.18	23.27-124.08	0.35
Dec-2020	7.75 (7.57)	7.95	0.23-25	0.98	7.75 (7.13)	7.62	0.23-25	0.92	7.75 (7.34)	7.82	0.23-25	0.95
Jan-2021	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-2021	15.49 (10.48)	15.57	0.38-73	0.68	15.49 (10.78)	15.66	0.38-73	0.70	30.98 (13.96)	30.83	7.75-61.96	0.45
Mar-2021	30.98 (17.83)	31.11	0.69-71	0.58	38.73 (19.31)	38.96	7.75-77.45	0.50	46.47 (20.45)	45.73	7.75-92.94	0.44
Apr-2021	201.66 (45.14)	199.67	116.34-294.73	0.22	271.46 (50.58)	268.35	178.39-372.29	0.19	387.8 (59.82)	389.52	279.22-511.9	0.15
May-2021	7.75 (7.58)	7.93	0.23-25	0.98	7.75 (7.18)	7.87	0.23-25	0.93	15.5 (10.29)	15.45	0.38-75	0.66
Jun-2021	7.75 (7.2)	7.67	0.23-25	0.93	7.75 (7.38)	7.77	0.23-25	0.95	15.5 (9.13)	15.81	0.38-76	0.59
Jul-2021	15.5 (10.13)	15.64	0.38-76	0.65	46.51 (18.63)	46.64	15.5-85.27	0.40	54.26 (20.54)	54.12	15.5-100.77	0.38
Aug-2021	162.62 (40.72)	160.42	85.18-247.8	0.25	232.31 (45.1)	232.62	147.13-325.23	0.19	271.03 (46)	269.90	185.85-363.95	0.17
Sep-2021	116.22 (37.64)	116.93	54.24-193.7	0.32	147.21 (38.75)	149.34	77.48-232.44	0.26	193.7 (49.84)	189.27	100.73-294.43	0.26
Oct-2021	31.02 (14.67)	31.83	7.75-62.03	0.47	77.54 (25.5)	76.96	31.02-131.82	0.33	93.05 (26.02)	92.53	46.52-147.33	0.28
Nov-2021	69.66 (21.98)	69.53	30.96-116.11	0.32	92.88 (27.43)	94.90	46.44-154.81	0.30	92.88 (27.85)	92.27	46.44-154.81	0.30
Dec-2021	54.25 (20.78)	55.49	23.25-100.75	0.38	77.5 (24.19)	77.34	38.75-123.99	0.31	85.25 (24.58)	85.49	38.75-131.74	0.29
Feb-2022	7.75 (7.52)	8.08	0.23-25	0.97	7.75 (7.17)	7.87	0.23-25	0.93	7.75 (7.36)	7.86	0.23-25	0.95
Feb-2022	15.49 (9.77)	15.10	0.38-73	0.63	15.49 (9.91)	15.46	0.38-73	0.64	15.49 (9.83)	15.17	0.38-73	0.63
Mar-2022	0 (0)	0.00	0-0		7.75 (7.11)	7.38	0.23-26	0.92	7.75 (7.45)	7.93	0.23-26	0.96
Apr-2022	61.89 (23.84)	62.46	23.21-116.04	0.39	69.63 (24.62)	69.70	23.21-123.78	0.35	69.63 (24.34)	69.86	23.21-123.78	0.35
May-2022	46.58 (22.33)	47.73	7.76-93.17	0.48	93.17 (32.71)	94.73	38.82-163.23	0.35	155.28 (38.96)	156.84	85.21-233.11	0.25
Jun-2022	69.69 (30.4)	69.11	15.49-131.63	0.44	92.92 (31.49)	93.96	38.72-162.6	0.34	154.86 (36.31)	155.40	85.17-224.55	0.23
Jul-2022	253.81 (64.07)	245.92	134.83-380.71	0.25	317.26 (70.47)	315.83	190.35-452.29	0.22	436.23 (84.08)	431.14	285.53-594.86	0.19
Aug-2022	31.21 (17.25)	31.38	0.70-23	0.55	39.02 (18.85)	39.68	7.8-78.03	0.48	46.82 (20.69)	46.63	15.61-93.64	0.44
Sep-2022	110.67 (28.08)	112.67	63.24-173.9	0.25	158.09 (36.64)	158.29	94.86-237.14	0.23	173.9 (38.43)	173.44	102.76-252.95	0.22

1.4 Black-headed Gull

Table 4. Abundance of black-headed gull recorded in flight and on the sea in each survey, 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.

Survey	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
Jul-2020	o (o)	0.0	0-0		o (o)	0.00	0-0		o (o)	0.00	0-0	
Aug-2020	o (o)	0.0	0-0		o (o)	0.00	0-0		o (o)	0.00	0-0	
Sep-2020	o (o)	0.0	0-0		o (o)	0.00	0-0		o (o)	0.00	0-0	
Oct-2020	o (o)	0.0	0-0		o (o)	0.00	0-0		o (o)	0.00	0-0	
Nov-2020	o (o)	0.0	0-0		o (o)	0.00	0-0		o (o)	0.00	0-0	
Dec-2020	o (o)	0.0	0-0		o (o)	0.00	0-0		o (o)	0.00	0-0	
Jan-2021	o (o)	0.0	0-0		o (o)	0.00	0-0		o (o)	0.00	0-0	
Feb-2021	o (o)	0.0	0-0		o (o)	0.00	0-0		o (o)	0.00	0-0	
Mar-2021	o (o)	0.0	0-0		o (o)	0.00	0-0		o (o)	0.00	0-0	
Apr-2021	o (o)	0.0	0-0		o (o)	0.00	0-0		o (o)	0.00	0-0	
May-2021	o (o)	0.0	0-0		o (o)	0.00	0-0		o (o)	0.00	0-0	
Jun-2021	o (o)	0.0	0-0		o (o)	0.00	0-0		o (o)	0.00	0-0	
Jul-2021	o (o)	0.0	0-0		o (o)	0.00	0-0		o (o)	0.00	0-0	
Aug-2021	o (o)	0.0	0-0		o (o)	0.00	0-0		o (o)	0.00	0-0	
Sep-2021	o (o)	0.0	0-0		o (o)	0.00	0-0		o (o)	0.00	0-0	
Oct-2021	o (o)	0.0	0-0		o (o)	0.00	0-0		o (o)	0.00	0-0	
Nov-2021	o (o)	0.0	0-0		o (o)	0.00	0-0		o (o)	0.00	0-0	
Dec-2021	o (o)	0.0	0-0		o (o)	0.00	0-0		o (o)	0.00	0-0	
Feb-2022	o (o)	0.0	0-0		o (o)	0.00	0-0		o (o)	0.00	0-0	
Feb-2022	o (o)	0.0	0-0		o (o)	0.00	0-0		o (o)	0.00	0-0	
Mar-2022	o (o)	0.0	0-0		o (o)	0.00	0-0		o (o)	0.00	0-0	
Apr-2022	7.74 (7.29)	7.9	0-23.21	0.94	7.74 (7.44)	7.93	0-23.21	0.96	7.74 (6.93)	7.74	0-23.21	0.9
May-2022	o (o)	0.0	0-0		o (o)	0.00	0-0		o (o)	0.00	0-0	
Jun-2022	o (o)	0.0	0-0		o (o)	0.00	0-0		o (o)	0.00	0-0	
Jul-2022	o (o)	0.0	0-0		o (o)	0.00	0-0		o (o)	0.00	0-0	
Aug-2022	o (o)	0.0	0-0		o (o)	0.00	0-0		o (o)	0.00	0-0	
Sep-2022	o (o)	0.0	0-0		o (o)	0.00	0-0		o (o)	0.00	0-0	

1.5 Black Guillemot

Table 5. Abundance of black guillemot recorded in flight and on the sea in each survey, 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.

Survey	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
Jul-2020	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Aug-2020	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Sep-2020	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Oct-2020	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Nov-2020	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Dec-2020	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Jan-2021	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Feb-2021	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Mar-2021	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Apr-2021	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
May-2021	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Jun-2021	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Jul-2021	7.75 (7.04)	7.87	0-23.26	0.91	7.75 (6.94)	7.60	0-23.26	0.90	7.75 (7.28)	7.80	0-23.26	0.94
Aug-2021	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Sep-2021	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Oct-2021	7.75 (7.34)	7.65	0-23.26	0.95	7.75 (7.08)	7.98	0-23.26	0.91	7.75 (7.26)	7.87	0-23.26	0.94
Nov-2021	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Dec-2021	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Feb-2022	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Feb-2022	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Mar-2022	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Apr-2022	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
May-2022	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Jun-2022	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Jul-2022	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Aug-2022	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Sep-2022	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	

1.6 Common Gull

Table 6. Abundance of common gull recorded in flight and on the sea in each survey, 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.

Survey	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
Jul-2020	0 (0)	0	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Aug-2020	0 (0)	0	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Sep-2020	0 (0)	0	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Oct-2020	0 (0)	0	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Nov-2020	0 (0)	0	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Dec-2020	0 (0)	0	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Jan-2021	0 (0)	0	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Feb-2021	0 (0)	0	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Mar-2021	0 (0)	0	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Apr-2021	0 (0)	0	0-0		7.76 (7.15)	7.36	0-23.27	0.92	7.76 (7.36)	7.85	0-23.27	0.95
May-2021	0 (0)	0	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Jun-2021	0 (0)	0	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Jul-2021	0 (0)	0	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Aug-2021	0 (0)	0	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Sep-2021	0 (0)	0	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Oct-2021	0 (0)	0	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Nov-2021	0 (0)	0	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Dec-2021	0 (0)	0	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Feb-2022	0 (0)	0	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Feb-2022	0 (0)	0	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Mar-2022	0 (0)	0	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Apr-2022	0 (0)	0	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
May-2022	0 (0)	0	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Jun-2022	0 (0)	0	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Jul-2022	0 (0)	0	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Aug-2022	0 (0)	0	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Sep-2022	0 (0)	0	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	

1.7 Common Tern

Table 7. Abundance of common tern recorded in flight and on the sea in each survey, 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.

Survey	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
Jul-2020	0 (0)	0	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Aug-2020	0 (0)	0	0-0		7.96 (6.55)	8.12	0-23.89	0.82	15.92 (8.47)	15.81	0-31.85	0.53
Sep-2020	0 (0)	0	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Oct-2020	0 (0)	0	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Nov-2020	0 (0)	0	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Dec-2020	0 (0)	0	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Jan-2021	0 (0)	0	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Feb-2021	0 (0)	0	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Mar-2021	0 (0)	0	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Apr-2021	0 (0)	0	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
May-2021	0 (0)	0	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Jun-2021	0 (0)	0	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Jul-2021	0 (0)	0	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Aug-2021	0 (0)	0	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Sep-2021	0 (0)	0	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Oct-2021	0 (0)	0	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Nov-2021	0 (0)	0	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Dec-2021	0 (0)	0	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Feb-2022	0 (0)	0	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Feb-2022	0 (0)	0	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Mar-2022	0 (0)	0	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Apr-2022	0 (0)	0	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
May-2022	0 (0)	0	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Jun-2022	0 (0)	0	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Jul-2022	0 (0)	0	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Aug-2022	0 (0)	0	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Sep-2022	0 (0)	0	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	

1.8 Cory's Shearwater

Table 8. Abundance of Cory's shearwater recorded in flight and on the sea in each survey, 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.

Survey	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
Jul-2020	o (o)	0.00	0-0		o (o)	0.00	0-0		o (o)	0.00	0-0	
Aug-2020	o (o)	0.00	0-0		o (o)	0.00	0-0		o (o)	0.00	0-0	
Sep-2020	o (o)	0.00	0-0		o (o)	0.00	0-0		o (o)	0.00	0-0	
Oct-2020	o (o)	0.00	0-0		o (o)	0.00	0-0		o (o)	0.00	0-0	
Nov-2020	o (o)	0.00	0-0		o (o)	0.00	0-0		o (o)	0.00	0-0	
Dec-2020	o (o)	0.00	0-0		o (o)	0.00	0-0		o (o)	0.00	0-0	
Jan-2021	o (o)	0.00	0-0		o (o)	0.00	0-0		o (o)	0.00	0-0	
Feb-2021	o (o)	0.00	0-0		o (o)	0.00	0-0		o (o)	0.00	0-0	
Mar-2021	o (o)	0.00	0-0		o (o)	0.00	0-0		o (o)	0.00	0-0	
Apr-2021	o (o)	0.00	0-0		o (o)	0.00	0-0		o (o)	0.00	0-0	
May-2021	o (o)	0.00	0-0		o (o)	0.00	0-0		o (o)	0.00	0-0	
Jun-2021	o (o)	0.00	0-0		o (o)	0.00	0-0		o (o)	0.00	0-0	
Jul-2021	o (o)	0.00	0-0		o (o)	0.00	0-0		o (o)	0.00	0-0	
Aug-2021	7.74 (7.37)	7.57	0-23.23	0.95	7.74 (7.13)	7.71	0-23.23	0.92	7.74 (7.16)	7.95	0-23.23	0.92
Sep-2021	o (o)	0.00	0-0		o (o)	0.00	0-0		o (o)	0.00	0-0	
Oct-2021	o (o)	0.00	0-0		o (o)	0.00	0-0		o (o)	0.00	0-0	
Nov-2021	o (o)	0.00	0-0		o (o)	0.00	0-0		o (o)	0.00	0-0	
Dec-2021	o (o)	0.00	0-0		o (o)	0.00	0-0		o (o)	0.00	0-0	
Feb-2022	o (o)	0.00	0-0		o (o)	0.00	0-0		o (o)	0.00	0-0	
Feb-2022	o (o)	0.00	0-0		o (o)	0.00	0-0		o (o)	0.00	0-0	
Mar-2022	o (o)	0.00	0-0		o (o)	0.00	0-0		o (o)	0.00	0-0	
Apr-2022	o (o)	0.00	0-0		o (o)	0.00	0-0		o (o)	0.00	0-0	
May-2022	o (o)	0.00	0-0		o (o)	0.00	0-0		o (o)	0.00	0-0	
Jun-2022	o (o)	0.00	0-0		o (o)	0.00	0-0		o (o)	0.00	0-0	
Jul-2022	o (o)	0.00	0-0		o (o)	0.00	0-0		o (o)	0.00	0-0	
Aug-2022	o (o)	0.00	0-0		o (o)	0.00	0-0		o (o)	0.00	0-0	
Sep-2022	o (o)	0.00	0-0		o (o)	0.00	0-0		o (o)	0.00	0-0	

1.9 European Storm-petrel

Table 9. Abundance of European storm-petrel recorded in flight and on the sea in each survey, 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.

Survey	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
Jul-2020	o (o)	0.00	0-0		o (o)	0.00	0-0		o (o)	0.00	0-0	
Aug-2020	o (o)	0.00	0-0		o (o)	0.00	0-0		7.96 (7.01)	7.83	0-23.89	0.88
Sep-2020	o (o)	0.00	0-0		o (o)	0.00	0-0		85.22 (80.23)	87.09	0-255.66	0.94
Oct-2020	o (o)	0.00	0-0		o (o)	0.00	0-0		o (o)	0.00	0-0	
Nov-2020	o (o)	0.00	0-0		o (o)	0.00	0-0		o (o)	0.00	0-0	
Dec-2020	o (o)	0.00	0-0		o (o)	0.00	0-0		o (o)	0.00	0-0	
Jan-2021	o (o)	0.00	0-0		o (o)	0.00	0-0		o (o)	0.00	0-0	
Feb-2021	o (o)	0.00	0-0		o (o)	0.00	0-0		o (o)	0.00	0-0	
Mar-2021	o (o)	0.00	0-0		o (o)	0.00	0-0		o (o)	0.00	0-0	
Apr-2021	o (o)	0.00	0-0		o (o)	0.00	0-0		o (o)	0.00	0-0	
May-2021	o (o)	0.00	0-0		o (o)	0.00	0-0		o (o)	0.00	0-0	
Jun-2021	o (o)	0.00	0-0		o (o)	0.00	0-0		o (o)	0.00	0-0	
Jul-2021	o (o)	0.00	0-0		o (o)	0.00	0-0		o (o)	0.00	0-0	
Aug-2021	201.33 (74.88)	203.72	69.69-363.95	0.37	224.56 (76.77)	221.79	85.18-387.18	0.34	278.77 (81.43)	280.19	139.39-456.87	0.29
Sep-2021	30.99 (14.29)	30.52	7.75-61.98	0.46	38.74 (15.43)	39.24	15.5-69.73	0.40	38.74 (15.98)	39.00	7.75-69.73	0.41
Oct-2021	o (o)	0.00	0-0		o (o)	0.00	0-0		o (o)	0.00	0-0	
Nov-2021	o (o)	0.00	0-0		o (o)	0.00	0-0		o (o)	0.00	0-0	
Dec-2021	o (o)	0.00	0-0		o (o)	0.00	0-0		o (o)	0.00	0-0	
Feb-2022	o (o)	0.00	0-0		o (o)	0.00	0-0		o (o)	0.00	0-0	
Feb-2022	o (o)	0.00	0-0		o (o)	0.00	0-0		o (o)	0.00	0-0	
Mar-2022	o (o)	0.00	0-0		o (o)	0.00	0-0		o (o)	0.00	0-0	
Apr-2022	o (o)	0.00	0-0		o (o)	0.00	0-0		o (o)	0.00	0-0	
May-2022	o (o)	0.00	0-0		o (o)	0.00	0-0		o (o)	0.00	0-0	
Jun-2022	o (o)	0.00	0-0		o (o)	0.00	0-0		o (o)	0.00	0-0	
Jul-2022	o (o)	0.00	0-0		o (o)	0.00	0-0		o (o)	0.00	0-0	
Aug-2022	o (o)	0.00	0-0		o (o)	0.00	0-0		o (o)	0.00	0-0	
Sep-2022	o (o)	0.00	0-0		o (o)	0.00	0-0		o (o)	0.00	0-0	

1.10 Fulmar

Table 10. Abundance of fulmar recorded in flight and on the sea in each survey, 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.

Survey	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
Jul-2020	473.21 (110.43)	475.77	272.7-721.84	0.23	794.03 (128.17)	804.95	561.43-1058.9	0.16	1387.54 (194.83)	1,371.94	1018.6-1764.5	0.14
Aug-2020	1504.76 (767.31)	1,501.62	270.5-3137.3	0.51	1600.3 (749.27)	1,590.77	374.2-3201.39	0.47	1775.46 (772.63)	1,764.07	493.62-3455.57	0.44
Sep-2020	2742.53 (1405.37)	2,801.14	674.01-5872.62	0.51	3191.87 (1340.86)	3,189.46	1068.93-	0.42	3362.31 (1420.78)	3,331.92	1162.09-	0.42
Oct-2020	1163.09 (286.98)	1,150.96	659.09-1791.55	0.25	1752.39 (299.5)	1,741.05	1240.63-	0.17	3605.59 (786.47)	3,612.25	2217.63-5141.07	0.22
Nov-2020	907.35 (305.47)	917.76	442.04-1613.26	0.34	1085.72 (291.86)	1,093.46	620.41-1690.81	0.27	1915.51 (439.73)	1,912.28	1039.19-	0.23
Dec-2020	1549.82 (343.68)	1,545.52	945.2-2286.18	0.22	3463.86 (991.2)	3,462.96	1735.8-5548.56	0.29	4533.23	4,540.99	2673.25-	0.24
Jan-2021	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-2021	178.14 (46.77)	176.72	92.94-278.82	0.26	302.06 (49.96)	301.31	209.12-402.74	0.17	418.23 (60.86)	417.99	309.8-542.16	0.15
Mar-2021	797.76 (207.75)	796.73	464.52-1262.48	0.26	1099.83 (224.37)	1,095.63	712.57-1556.8	0.20	1386.41 (225.55)	1,376.20	968.16-1843.38	0.16
Apr-2021	294.73 (190.35)	298.33	62.05-705.8	0.65	356.78 (190.31)	348.59	116.34-783.36	0.53	465.36 (193.4)	459.50	193.71-876.62	0.42
May-2021	46.5 (18.09)	46.15	15.5-85.26	0.39	240.26 (67.99)	238.59	116.26-372.22	0.28	248.01 (70.69)	252.81	124.01-403.02	0.29
Jun-2021	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Jul-2021	162.79 (32.22)	163.35	100.77-224.8	0.20	201.55 (37.12)	204.54	131.78-271.31	0.18	341.08 (45.24)	343.36	255.81-434.1	0.13
Aug-2021	960.21 (116.42)	959.55	735.64-1184.77	0.12	1269.95 (120.58)	1,270.08	1029.9-1517.75	0.09	1657.13 (120.82)	1,659.22	1440.31-1905.12	0.07
Sep-2021	588.85 (92.05)	590.96	418.4-774.81	0.16	759.31 (92.27)	760.02	588.85-945.46	0.12	1038.24 (102.59)	1,034.26	829.04-	0.10
Oct-2021	1426.74 (643.87)	1,428.47	333.23-2845.73	0.45	1690.38 (611.4)	1,698.94	643.58-	0.36	2326.21 (654.07)	2,292.31	1178.42-3753.15	0.28
Nov-2021	356.06 (57.28)	353.60	247.69-472.16	0.16	541.83 (65.05)	541.56	410.24-658.12	0.12	2027.98 (598.11)	2,030.81	990.77-3274.37	0.29
Dec-2021	1720.42 (374.02)	1,714.50	1053.76-	0.22	2084.65 (381.46)	2,087.02	1410.24-	0.18	2332.64 (377.99)	2,328.09	1627.23-	0.16
Feb-2022	751.74 (92.8)	752.93	588.8-929.99	0.12	1108.24 (111.32)	1,116.43	898.99-	0.10	1573.23 (123.95)	1,576.05	1325.24-	0.08
Feb-2022	1014.75 (189.06)	1,016.89	658.42-1409.8	0.19	1518.25 (288.86)	1,536.58	1007-2114.9	0.19	2075.97 (283.14)	2,082.42	1572.47-	0.14
Mar-2022	1581.99 (180.38)	1,591.70	1248.34-	0.11	2264.42 (211.5)	2,258.71	1853.41-	0.09	2822.77 (222.73)	2,825.94	2404.01-	0.08
Apr-2022	448.7 (66.75)	451.06	324.92-587.96	0.15	541.54 (74.89)	540.67	394.55-688.53	0.14	673.06 (77.23)	672.57	526.07-835.52	0.11
May-2022	124.22 (27.85)	122.89	69.87-178.57	0.22	217.39 (36.9)	216.10	147.51-287.26	0.17	287.26 (40.91)	288.20	209.62-364.9	0.14
Jun-2022	123.89 (30.28)	124.52	69.69-185.83	0.24	170.35 (34.07)	170.39	108.4-240.03	0.20	209.06 (34.34)	208.87	139.37-278.75	0.16
Jul-2022	388.64 (88.22)	387.65	230.01-563.13	0.23	460.02 (89.19)	461.43	301.39-650.38	0.19	547.27 (96.85)	551.27	380.51-761.42	0.18
Aug-2022	327.74 (42.86)	329.10	249.71-413.57	0.13	444.79 (48.74)	445.94	351.15-546.23	0.11	639.87 (60.99)	640.29	522.82-756.92	0.10
Sep-2022	1367.51 (147.43)	1,377.24	1098.75-1683.7	0.11	1802.27 (156.39)	1,798.56	1493.79-	0.09	2213.32 (155.61)	2,211.51	1912.94-	0.07

1.11 Gannet

Table 11. Abundance of gannet recorded in flight and on the sea in each survey, 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.

Survey	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
Jul-2020	360.92 (185.1)	356.30	104.27-794.03	0.51	433.11 (195.53)	417.15	152.39-898.49	0.45	1002.56 (449.18)	1,032.18	304.78-	0.45
Aug-2020	1926.73 (1331.68)	1,925.22	262.74-	0.69	1974.5 (1332.67)	1,992.52	310.51-4912.36	0.67	2109.85	2,170.67	445.66-	0.62
Sep-2020	999.4 (147.81)	990.29	705-1270.75	0.15	1278.3 (158.33)	1,271.19	983.9-1626.93	0.12	1533.96 (176.7)	1,525.13	1200.83-	0.12
Oct-2020	759.89 (135.96)	759.90	519.52-1039.03	0.18	883.95 (133.5)	877.17	627.88-1155.34	0.15	1062.29 (139.19)	1,079.51	821.92-1356.94	0.13
Nov-2020	7.76 (7.52)	7.84	0-23.27	0.97	23.27 (15.87)	22.71	0-62.04	0.68	31.02 (16.84)	31.38	7.56-69.8	0.54
Dec-2020	54.24 (22.37)	53.72	15.5-100.74	0.41	69.74 (25.89)	68.86	23.25-123.99	0.37	69.74 (26.47)	69.70	23.25-123.99	0.38
Jan-2021	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-2021	61.96 (19.21)	61.78	30.79-100.69	0.31	77.45 (21.14)	77.20	38.73-116.18	0.27	92.94 (24.16)	92.35	46.47-139.41	0.26
Mar-2021	23.24 (12.05)	23.08	0-46.47	0.52	54.22 (17.77)	53.71	23.24-85.2	0.33	92.94 (26.86)	92.70	46.47-147.16	0.29
Apr-2021	263.7 (59.75)	265.19	162.68-387.8	0.23	395.56 (70.81)	398.78	271.46-535.17	0.18	511.9 (78.21)	512.22	364.53-674.77	0.15
May-2021	348.77 (80.53)	349.07	201.51-519.28	0.23	496.03 (99.55)	497.04	310.02-697.54	0.20	635.54 (112.58)	634.84	418.52-868.05	0.18
Jun-2021	170.53 (37.64)	171.96	108.33-255.8	0.22	240.3 (46.29)	240.11	155.03-325.76	0.19	294.56 (48.57)	294.83	209.1-387.58	0.16
Jul-2021	232.55 (48.99)	232.42	139.53-333.33	0.21	341.08 (67.13)	340.79	224.61-480.61	0.20	449.6 (80.93)	450.98	294.57-620.14	0.18
Aug-2021	495.59 (79.82)	497.76	348.46-658.4	0.16	689.18 (102.78)	689.93	503.33-898.26	0.15	1231.23 (376.91)	1,225.91	696.93-	0.31
Sep-2021	681.83 (97.17)	680.76	503.63-875.53	0.14	891.03 (110.62)	893.63	689.58-1123.47	0.12	1456.64 (227.57)	1,457.93	1069.24-	0.16
Oct-2021	1116.58 (156.49)	1,123.20	837.44-1450.2	0.14	1457.76 (146.11)	1,465.85	1201.88-1760.17	0.10	1736.9 (164.46)	1,739.20	1426.74-2039.5	0.09
Nov-2021	15.48 (9.92)	15.02	0-38.7	0.64	46.44 (16.93)	46.34	15.48-77.4	0.36	61.92 (19.5)	62.11	23.22-100.62	0.31
Dec-2021	7.75 (7.36)	7.97	0-23.25	0.95	15.5 (10.29)	15.87	0-38.75	0.66	23.25 (12.5)	23.14	0-46.5	0.54
Feb-2022	15.5 (14.51)	15.93	0-46.5	0.94	23.25 (16.55)	23.71	0-62	0.71	85.25 (36.63)	85.96	23.25-162.75	0.43
Feb-2022	69.72 (22.77)	70.68	30.98-116.19	0.33	77.46 (23.94)	78.27	30.98-131.68	0.31	92.95 (24.63)	93.55	46.48-139.62	0.27
Mar-2022	147.34 (34.66)	148.03	85.3-217.14	0.24	201.63 (37.5)	200.97	131.83-279.18	0.19	240.4 (41.67)	239.80	155.1-325.7	0.17
Apr-2022	626.64 (107.96)	623.72	417.76-843.26	0.17	812.31 (110.18)	813.76	611.17-1036.86	0.14	967.04 (113.93)	966.17	750.42-1199.13	0.12
May-2022	155.28 (35.16)	155.57	93.17-225.35	0.23	256.21 (49.86)	254.98	163.04-357.14	0.19	458.07 (95.77)	452.03	279.3-636.63	0.21
Jun-2022	356.18 (92.1)	356.77	193.38-549.95	0.26	433.61 (97.29)	431.09	263.07-627.19	0.22	518.78 (96.24)	517.22	340.69-720.3	0.19
Jul-2022	348.98 (66.16)	349.43	222.08-476.08	0.19	428.3 (66.88)	429.19	301.2-563.13	0.16	507.61 (70.15)	511.03	372.78-650.38	0.14
Aug-2022	132.66 (29.65)	132.70	78.03-195.08	0.22	210.69 (39.34)	210.84	140.46-296.53	0.19	343.35 (53.18)	344.12	249.71-452.59	0.15
Sep-2022	339.9 (56.9)	337.31	229.24-450.57	0.17	537.52 (86.7)	544.96	395.23-719.33	0.16	861.61 (122.52)	868.89	640.08-1114.56	0.14

1.12 Great Black-backed Gull

Table 12. Abundance of great black-backed gull recorded in flight and on the sea in each survey, 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.

Survey	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
Jul-2020	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Aug-2020	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Sep-2020	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Oct-2020	7.75 (7.57)	7.79	0-23.26	0.98	15.51 (10.18)	15.39	0-38.77	0.66	31.02 (20.9)	31.86	0-77.54	0.67
Nov-2020	108.57 (31.49)	109.14	46.53-170.81	0.29	124.08 (35.57)	124.31	61.85-193.88	0.29	124.08 (35.64)	123.69	62.04-201.63	0.29
Dec-2020	15.5 (10.51)	15.34	0-38.75	0.68	61.99 (26.5)	63.50	15.5-116.24	0.43	85.24 (28.4)	86.35	38.75-147.23	0.33
Jan-2021	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-2021	38.73 (16.87)	40.11	7.75-77.45	0.44	154.9 (99.62)	154.03	23.24-371.76	0.64	232.35 (137.46)	229.98	38.73-542.35	0.59
Mar-2021	15.49 (10.03)	15.40	0-38.73	0.65	23.24 (12.19)	23.50	0-46.47	0.52	30.98 (13.2)	30.62	7.75-61.96	0.43
Apr-2021	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
May-2021	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Jun-2021	15.5 (14.27)	16.06	0-46.51	0.92	15.5 (13.93)	14.54	0-46.51	0.90	15.5 (13.79)	15.57	0-46.51	0.89
Jul-2021	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Aug-2021	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Sep-2021	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Oct-2021	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Nov-2021	123.85 (34.45)	126.01	61.92-193.7	0.28	201.25 (40.31)	202.70	123.85-278.85	0.20	239.95 (44.36)	239.05	162.55-325.1	0.18
Dec-2021	263.49 (57.78)	264.29	162.74-387.48	0.22	379.73 (61.95)	380.89	263.49-503.73	0.16	464.98 (70.3)	464.57	340.98-604.47	0.15
Feb-2022	46.5 (21.68)	46.22	7.75-93	0.47	46.5 (20.03)	46.59	15.5-85.25	0.43	108.5 (31.81)	110.27	46.5-170.5	0.29
Feb-2022	131.68 (34.94)	130.17	69.72-201.4	0.27	147.18 (35.42)	144.45	77.46-216.89	0.24	170.42 (38.18)	171.21	100.7-247.88	0.22
Mar-2022	7.75 (6.9)	7.48	0-23.26	0.89	23.26 (12.19)	22.85	0-46.53	0.52	38.77 (14.76)	38.84	15.51-69.79	0.38
Apr-2022	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
May-2022	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Jun-2022	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Jul-2022	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Aug-2022	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Sep-2022	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	

1.13 Great Northern Diver

Table 13. Abundance of great northern diver recorded in flight and on the sea in each survey, 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.

Survey	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
Jul-2020	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Aug-2020	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Sep-2020	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Oct-2020	7.75 (7.01)	7.47	0-23.26	0.90	7.75 (7.05)	7.65	0-23.26	0.91	7.75 (6.98)	7.72	0-23.26	0.90
Nov-2020	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Dec-2020	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Jan-2021	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Feb-2021	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Mar-2021	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Apr-2021	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
May-2021	7.75 (7.16)	7.58	0-23.25	0.92	7.75 (6.98)	7.36	0-23.25	0.90	7.75 (7.21)	7.59	0-23.25	0.93
Jun-2021	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Jul-2021	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Aug-2021	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Sep-2021	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Oct-2021	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Nov-2021	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Dec-2021	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Feb-2022	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Feb-2022	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Mar-2022	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Apr-2022	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
May-2022	7.76 (7.06)	7.41	0-23.29	0.91	7.76 (6.72)	7.71	0-23.29	0.87	7.76 (6.95)	7.81	0-23.29	0.89
Jun-2022	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Jul-2022	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Aug-2022	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Sep-2022	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	

1.14 Great Shearwater

Table 14. Abundance of great shearwater recorded in flight and on the sea in each survey, 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.

Survey	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
Jul-2020	0 (0)	0	0-0		0 (0)	0	0-0		0 (0)	0.00	0-0	
Aug-2020	0 (0)	0	0-0		0 (0)	0	0-0		0 (0)	0.00	0-0	
Sep-2020	0 (0)	0	0-0		0 (0)	0	0-0		0 (0)	0.00	0-0	
Oct-2020	0 (0)	0	0-0		0 (0)	0	0-0		0 (0)	0.00	0-0	
Nov-2020	0 (0)	0	0-0		0 (0)	0	0-0		0 (0)	0.00	0-0	
Dec-2020	0 (0)	0	0-0		0 (0)	0	0-0		0 (0)	0.00	0-0	
Jan-2021	0 (0)	0	0-0		0 (0)	0	0-0		0 (0)	0.00	0-0	
Feb-2021	0 (0)	0	0-0		0 (0)	0	0-0		0 (0)	0.00	0-0	
Mar-2021	0 (0)	0	0-0		0 (0)	0	0-0		0 (0)	0.00	0-0	
Apr-2021	0 (0)	0	0-0		0 (0)	0	0-0		0 (0)	0.00	0-0	
May-2021	0 (0)	0	0-0		0 (0)	0	0-0		0 (0)	0.00	0-0	
Jun-2021	0 (0)	0	0-0		0 (0)	0	0-0		0 (0)	0.00	0-0	
Jul-2021	0 (0)	0	0-0		0 (0)	0	0-0		0 (0)	0.00	0-0	
Aug-2021	0 (0)	0	0-0		0 (0)	0	0-0		0 (0)	0.00	0-0	
Sep-2021	0 (0)	0	0-0		0 (0)	0	0-0		0 (0)	0.00	0-0	
Oct-2021	0 (0)	0	0-0		0 (0)	0	0-0		0 (0)	0.00	0-0	
Nov-2021	0 (0)	0	0-0		0 (0)	0	0-0		0 (0)	0.00	0-0	
Dec-2021	0 (0)	0	0-0		0 (0)	0	0-0		0 (0)	0.00	0-0	
Feb-2022	0 (0)	0	0-0		0 (0)	0	0-0		0 (0)	0.00	0-0	
Feb-2022	0 (0)	0	0-0		0 (0)	0	0-0		0 (0)	0.00	0-0	
Mar-2022	0 (0)	0	0-0		0 (0)	0	0-0		0 (0)	0.00	0-0	
Apr-2022	0 (0)	0	0-0		0 (0)	0	0-0		0 (0)	0.00	0-0	
May-2022	0 (0)	0	0-0		0 (0)	0	0-0		0 (0)	0.00	0-0	
Jun-2022	0 (0)	0	0-0		0 (0)	0	0-0		0 (0)	0.00	0-0	
Jul-2022	0 (0)	0	0-0		0 (0)	0	0-0		0 (0)	0.00	0-0	
Aug-2022	0 (0)	0	0-0		0 (0)	0	0-0		0 (0)	0.00	0-0	
Sep-2022	0 (0)	0	0-0		0 (0)	0	0-0		7.9 (6.95)	7.89	0-23.71	0.88

1.15 Great Skua

Table 15. Abundance of great skua recorded in flight and on the sea in each survey, 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.

Survey	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
Jul-2020	16.04 (10.28)	15.32	0-40.1	0.64	24.06 (11.3)	23.89	8.02-48.12	0.47	24.06 (11.69)	24.50	8.02-48.12	0.49
Aug-2020	302.54 (232.19)	291.24	7.96-835.98	0.77	302.54 (228.44)	295.47	7.96-835.98	0.76	302.54 (227.97)	312.45	7.96-812.29	0.75
Sep-2020	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Oct-2020	7.75 (6.89)	7.82	0-23.26	0.89	7.75 (6.94)	7.49	0-23.26	0.90	7.75 (7.52)	8.13	0-23.26	0.97
Nov-2020	7.76 (6.4)	7.27	0-23.27	0.83	7.76 (6.78)	7.82	0-23.27	0.87	7.76 (6.92)	7.99	0-23.27	0.89
Dec-2020	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Jan-2021	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Feb-2021	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Mar-2021	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Apr-2021	46.54 (17.2)	46.93	15.51-77.56	0.37	54.29 (17.95)	54.75	23.27-93.07	0.33	69.8 (19.8)	68.90	31.02-108.58	0.28
May-2021	7.75 (7.11)	7.49	0-23.25	0.92	15.5 (10.22)	15.64	0-38.75	0.66	23.25 (11.69)	22.79	0-46.5	0.50
Jun-2021	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Jul-2021	7.75 (6.76)	7.74	0-23.26	0.87	31.01 (13.28)	30.94	7.75-62.01	0.43	31.01 (13.65)	30.29	7.75-62.01	0.44
Aug-2021	23.23 (20.89)	23.42	0-69.69	0.90	23.23 (21.39)	24.37	0-69.69	0.92	23.23 (21.73)	23.95	0-69.69	0.94
Sep-2021	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Oct-2021	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Nov-2021	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Dec-2021	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Feb-2022	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Feb-2022	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Mar-2022	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Apr-2022	7.74 (7.19)	7.74	0-23.21	0.93	7.74 (7.06)	7.36	0-23.21	0.91	7.74 (7.08)	7.60	0-23.21	0.92
May-2022	0 (0)	0.00	0-0		7.76 (6.76)	7.52	0-23.29	0.87	15.53 (9.11)	15.81	0-31.06	0.59
Jun-2022	30.97 (14.65)	31.28	7.74-61.94	0.47	30.97 (14.64)	31.00	7.74-61.94	0.47	46.46 (17.03)	47.04	15.49-85.17	0.37
Jul-2022	0 (0)	0.00	0-0		7.93 (7.64)	8.30	0-23.79	0.96	23.79 (12.53)	23.72	0-47.59	0.53
Aug-2022	15.61 (10.34)	15.86	0-39.02	0.66	15.61 (10.08)	15.76	0-39.02	0.65	15.61 (10.38)	15.64	0-39.02	0.67
Sep-2022	0 (0)	0.00	0-0		0 (0)	0.00	0-0		7.9 (5.98)	7.61	0-15.81	0.76

1.16 Guillemot

Table 16. Abundance of guillemot recorded in flight and on the sea in each survey, 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.

Survey	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
Jul-2020	2045.22 (385.87)	2,053.21	1331.4-2783.3	0.19	2879.35 (380.43)	2,894.60	2197.41-	0.13	3537.03 (385.93)	3,530.51	2775.08-	0.11
Aug-2020	589.16 (101.31)	586.63	406.05-796.37	0.17	963.36 (137.59)	961.71	684.71-1242.02	0.14	1337.56 (154.8)	1,337.45	1035.02-1640.11	0.12
Sep-2020	2316.43 (301.47)	2,319.15	1727.64-2921.11	0.13	3385.55 (330.68)	3,369.10	2719.29-	0.10	4129.29 (335.86)	4,144.79	3478.33-	0.08
Oct-2020	1876.46 (303.89)	1,878.91	1302.66-	0.16	3078.32 (377.37)	3,091.82	2411.48-	0.12	3791.68 (366.12)	3,800.93	3155.67-	0.10
Nov-2020	201.63 (38.13)	201.59	131.84-279.38	0.19	387.76 (64.08)	386.05	263.67-519.59	0.17	496.33 (66.6)	497.21	379.81-635.92	0.13
Dec-2020	317.71 (60.36)	317.54	209.23-441.7	0.19	604.43 (90.32)	610.49	441.7-790.6	0.15	852.4 (93.19)	855.74	681.92-1038.38	0.11
Jan-2021	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-2021	1587.74 (412.22)	1,609.71	929.41-2478.82	0.26	1897.55 (395.08)	1,872.41	1246.96-	0.21	2424.21 (430.04)	2,415.87	1734.71-3361.37	0.18
Mar-2021	1425.13 (171.78)	1,421.36	1099.83-	0.12	2037.01 (206.83)	2,037.24	1657.3-2470.74	0.10	3012.91 (360.87)	3,008.31	2339.07-	0.12
Apr-2021	3373.87 (419.27)	3,395.71	2590.51-	0.12	4925.08 (469.33)	4,887.43	4087.43-	0.10	7011.45 (488.69)	6,995.70	6049.31-	0.07
May-2021	186.01 (55.78)	186.10	93.01-310.02	0.30	302.27 (98.56)	300.04	147.07-527.23	0.33	596.79 (174.21)	590.94	302.27-961.06	0.29
Jun-2021	612.37 (157.43)	611.28	333.12-953.44	0.26	775.16 (169.73)	773.95	472.85-1116.42	0.22	1077.47 (184.29)	1,093.41	775.16-1480.55	0.17
Jul-2021	666.65 (120)	667.33	441.85-922.46	0.18	1139.51 (199.43)	1,131.84	774.98-1550.36	0.18	1674.39 (208.23)	1,667.58	1263.54-	0.12
Aug-2021	1618.42 (177.69)	1,603.86	1285.25-	0.11	2439.24 (263.02)	2,435.37	1912.67-	0.11	3314.27 (256.11)	3,301.80	2787.31-	0.08
Sep-2021	2370.91 (241.37)	2,371.03	1921.52-	0.10	3099.23 (269.17)	3,103.24	2602.97-	0.09	4191.71 (287.28)	4,217.73	3664.65-	0.07
Oct-2021	1636.1 (194.73)	1,627.54	1271.66-	0.12	2434.77 (263.99)	2,432.10	1946.07-	0.11	3341.99 (289.86)	3,339.17	2806.77-	0.09
Nov-2021	619.23 (99.73)	618.41	425.72-812.74	0.16	774.04 (100.9)	779.01	588.27-967.55	0.13	1099.13 (113.21)	1,101.42	882.4-1323.6	0.10
Dec-2021	697.47 (92.78)	701.91	519.22-891.21	0.13	1154.69 (133.96)	1,153.56	906.71-1410.43	0.12	1619.67 (148.65)	1,616.20	1348.24-1921.91	0.09
Feb-2022	69.75 (21.1)	70.45	31-116.25	0.30	147.25 (30.21)	145.31	85.25-209.25	0.21	286.75 (43.79)	286.45	209.25-379.75	0.15
Feb-2022	278.86 (54.29)	279.38	178.16-395.05	0.19	410.55 (64.54)	411.83	286.61-542.23	0.16	534.49 (74.15)	534.15	402.8-689.41	0.14
Mar-2022	131.83 (44.4)	131.58	54.28-224.89	0.34	240.4 (51.06)	240.04	147.34-341.21	0.21	325.7 (55.41)	326.53	224.89-442.03	0.17
Apr-2022	951.56 (135.51)	953.23	688.53-1245.54	0.14	1291.96 (134.45)	1,289.97	1036.47-	0.10	1763.87 (159.48)	1,773.25	1469.9-2112.01	0.09
May-2022	1079.17 (164.49)	1,079.41	768.62-1428.55	0.15	1513.95 (210.55)	1,513.62	1125.56-	0.14	2600.89 (386.85)	2,615.88	1870.89-	0.15
Jun-2022	1595.07 (403.11)	1,599.20	936.91-	0.25	1881.56 (428.86)	1,870.60	1130.49-	0.23	2245.49 (427.48)	2,270.28	1501.96-	0.19
Jul-2022	4259.17 (693.52)	4,260.36	3021.67-	0.16	6678.26 (997.16)	6,645.53	4814.37-8582.2	0.15	7677.62 (898.24)	7,692.11	5979.7-	0.12
Aug-2022	1966.43 (426.43)	1,961.15	1193.9-2863.81	0.22	3285.19 (554.08)	3,302.64	2200.33-	0.17	5626.18 (701.9)	5,602.81	4229-7007.56	0.12
Sep-2022	1912.94 (330.22)	1,937.11	1327.79-	0.17	2901.02 (432.2)	2,889.28	2110.36-	0.15	4466.15 (609.23)	4,462.47	3367.4-5644.15	0.14

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

Survey	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
Jul-2020	2237.71 (422.19)	2,246.45	1456.71-	0.19	3144.02 (415.4)	3,160.68	2399.4-	0.13	3857.85 (420.94)	3,850.74	3026.79-	0.11
Aug-2020	636.93 (109.52)	634.19	438.97-860.94	0.17	1027.06 (146.69)	1,025.29	729.97-1324.14	0.14	1433.1 (165.86)	1,432.98	1108.95-	0.12
Sep-2020	2378.41 (309.53)	2,381.20	1773.86-	0.13	3463.03 (338.25)	3,446.20	2781.52-	0.10	4222.26 (343.43)	4,238.10	3556.64-	0.08
Oct-2020	1977.26 (320.21)	1,979.84	1372.64-	0.16	3241.15 (397.33)	3,255.37	2539.04-	0.12	3962.27 (382.59)	3,971.93	3297.64-	0.10
Nov-2020	255.92 (48.39)	255.87	167.33-354.6	0.19	480.82 (79.46)	478.70	326.96-644.3	0.17	604.9 (81.17)	605.98	462.89-775.03	0.13
Dec-2020	348.71 (66.24)	348.52	229.64-484.79	0.19	674.17 (100.75)	680.93	492.67-881.83	0.15	937.64 (102.5)	941.32	750.11-1142.22	0.11
Jan-2021	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-2021	1665.19 (432.33)	1,688.23	974.75-2599.73	0.26	1982.74 (412.82)	1,956.47	1302.95-	0.21	2524.9 (447.91)	2,516.21	1806.76-	0.18
Mar-2021	1525.82 (183.92)	1,521.78	1177.54-1899.19	0.12	2168.68 (220.2)	2,168.93	1764.42-	0.10	3167.82 (379.42)	3,162.97	2459.34-	0.12
Apr-2021	3637.58 (452.04)	3,661.12	2792.99-	0.12	5274.1 (502.59)	5,233.78	4377.09-	0.10	7492.32 (522.2)	7,475.49	6464.2-	0.07
May-2021	193.76 (58.1)	193.86	96.88-322.94	0.30	310.02 (101.08)	307.73	150.84-540.74	0.33	612.29 (178.74)	606.29	310.12-986.02	0.29
Jun-2021	620.13 (159.43)	619.02	337.34-965.51	0.26	782.91 (171.43)	781.69	477.57-1127.59	0.22	1085.22 (185.62)	1,101.27	780.73-1491.2	0.17
Jul-2021	674.41 (121.4)	675.09	446.99-933.19	0.18	1155.02 (202.14)	1,147.24	785.53-1571.45	0.18	1705.39 (212.08)	1,698.46	1286.94-	0.12
Aug-2021	1726.83 (189.59)	1,711.29	1371.34-	0.11	2594.11 (279.72)	2,590.00	2034.11-	0.11	3484.63 (269.27)	3,471.52	2930.59-	0.08
Sep-2021	2510.38 (255.57)	2,510.50	2034.56-	0.10	3261.94 (283.3)	3,266.16	2739.62-	0.09	4393.16 (301.09)	4,420.43	3840.77-	0.07
Oct-2021	1752.41 (208.57)	1,743.24	1362.06-	0.12	2613.11 (283.33)	2,610.25	2088.62-	0.11	3590.12 (311.38)	3,587.09	3015.16-	0.09
Nov-2021	727.59 (117.18)	726.63	500.22-954.97	0.16	921.1 (120.07)	927.03	700.04-1151.38	0.13	1253.94 (129.15)	1,256.54	1006.68-	0.10
Dec-2021	836.96 (111.34)	842.30	623.07-1069.45	0.13	1363.93 (158.23)	1,362.59	1071.01-1666.01	0.12	1852.16 (169.99)	1,848.19	1541.77-2197.78	0.09
Feb-2022	77.5 (23.45)	78.27	34.44-129.17	0.30	162.75 (33.39)	160.61	94.22-231.27	0.21	341 (52.07)	340.65	248.84-451.59	0.15
Feb-2022	325.34 (63.33)	325.94	207.86-460.9	0.19	495.75 (77.93)	497.31	346.09-654.77	0.16	627.44 (87.04)	627.05	472.85-809.31	0.14
Mar-2022	162.85 (54.85)	162.54	67.06-277.81	0.34	286.93 (60.94)	286.50	175.86-407.26	0.21	395.5 (67.28)	396.51	273.08-536.75	0.17
Apr-2022	990.25 (141.02)	991.98	716.52-1296.17	0.14	1346.11 (140.09)	1,344.04	1079.91-	0.10	1825.76 (165.08)	1,835.47	1521.47-2186.11	0.09
May-2022	1110.23 (169.23)	1,110.47	790.74-	0.15	1552.77 (215.95)	1,552.43	1154.42-	0.14	2694.05 (400.71)	2,709.58	1937.91-	0.15
Jun-2022	1633.78 (412.89)	1,638.02	959.65-	0.25	1920.28 (437.69)	1,909.09	1153.75-	0.23	2299.69 (437.8)	2,325.08	1538.21-3275.27	0.19
Jul-2022	4457.46 (725.8)	4,458.70	3162.35-	0.16	6963.79	6,929.67	5020.21-	0.15	8066.26 (943.71)	8,081.48	6282.39-	0.12
Aug-2022	1982.04 (429.81)	1,976.71	1203.38-	0.22	3308.6 (558.02)	3,326.18	2216.01-	0.17	5680.8 (708.72)	5,657.20	4270.05-	0.12
Sep-2022	2023.6 (349.32)	2,049.17	1404.61-	0.17	3090.74 (460.46)	3,078.22	2248.36-	0.15	4695.39 (640.5)	4,691.52	3540.24-	0.14

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

Survey	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
Jul-2020	2919.45 (550.81)	2,930.85	1900.51-	0.19	4106.48 (542.56)	4,128.24	3133.91-	0.13	5028.83 (548.71)	5,019.58	3945.53-	0.11
Aug-2020	828.02 (142.38)	824.45	570.66-1119.22	0.17	1337.56 (191.04)	1,335.26	950.66-	0.14	1863.03 (215.62)	1,862.88	1441.63-	0.12
Sep-2020	3106.65 (404.31)	3,110.30	2317-3917.6	0.13	4516.66 (441.16)	4,494.70	3627.79-	0.10	5508.31 (448.03)	5,528.97	4639.95-	0.08
Oct-2020	2574.31 (416.91)	2,577.67	1787.13-	0.16	4210.4 (516.15)	4,228.86	3298.32-	0.12	5148.63 (497.14)	5,161.18	4284.99-	0.10
Nov-2020	325.72 (61.59)	325.65	212.97-451.3	0.19	620.41 (102.54)	617.68	421.88-831.35	0.17	775.51 (104.06)	776.89	593.45-993.62	0.13
Dec-2020	441.7 (83.91)	441.46	290.88-614.07	0.19	860.15 (128.54)	868.78	628.57-1125.09	0.15	1201.11 (131.31)	1,205.82	960.89-1463.17	0.11
Jan-2021	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-2021	2137.65 (554.99)	2,167.22	1251.3-3337.33	0.26	2540.39 (528.93)	2,506.73	1669.4-3692.9	0.21	3206.47 (568.81)	3,195.43	2294.47-	0.18
Mar-2021	1951.81 (235.27)	1,946.64	1506.29-	0.12	2772.81 (281.54)	2,773.13	2255.94-	0.10	4074.02 (487.96)	4,067.79	3162.86-	0.12
Apr-2021	4762.2 (591.8)	4,793.03	3656.49-	0.12	6887.35 (656.33)	6,834.70	5715.96-	0.10	9788.1 (682.21)	9,766.11	8444.95-	0.07
May-2021	248.01 (74.37)	248.14	124.01-413.36	0.30	395.27 (128.88)	392.35	192.32-689.45	0.33	790.55 (230.78)	782.81	400.41-1273.09	0.29
Jun-2021	798.41 (205.26)	796.99	434.33-1243.1	0.26	999.95 (218.96)	998.39	609.97-1440.18	0.22	1395.28 (238.65)	1,415.92	1003.8-1917.26	0.17
Jul-2021	829.44 (149.3)	830.28	549.75-1147.71	0.18	1418.58 (248.27)	1,409.02	964.78-	0.18	2116.24 (263.18)	2,107.63	1596.97-	0.12
Aug-2021	2261.14 (248.25)	2,240.80	1795.66-	0.11	3399.45 (366.56)	3,394.06	2665.6-	0.11	4568.73 (353.04)	4,551.55	3842.33-	0.08
Sep-2021	3285.19 (334.45)	3,285.35	2662.5-3972.28	0.10	4269.19 (370.78)	4,274.71	3585.59-	0.09	5749.08 (394.01)	5,784.76	5026.19-	0.07
Oct-2021	2202.15 (262.1)	2,190.62	1711.62-2703.63	0.12	3248.94 (352.27)	3,245.38	2596.82-	0.11	4419.8 (383.35)	4,416.08	3711.96-5179.16	0.09
Nov-2021	936.58 (150.84)	935.34	643.9-1229.27	0.16	1192.02 (155.38)	1,199.68	905.93-	0.13	1610 (165.83)	1,613.34	1292.53-1938.8	0.10
Dec-2021	1092.7 (145.36)	1,099.67	813.45-1396.22	0.13	1782.41 (206.78)	1,780.66	1399.61-2177.18	0.12	2417.88 (221.91)	2,412.70	2012.69-	0.09
Feb-2022	100.75 (30.48)	101.76	44.78-167.91	0.30	217 (44.52)	214.14	125.63-308.37	0.21	449.5 (68.64)	449.03	328.01-595.28	0.15
Feb-2022	426.04 (82.94)	426.83	272.19-603.56	0.19	650.68 (102.29)	652.72	454.25-859.39	0.16	821.09 (113.91)	820.58	618.8-1059.09	0.14
Mar-2022	217.14 (73.13)	216.71	89.41-370.41	0.34	379.99 (80.7)	379.42	232.9-539.34	0.21	519.58 (88.39)	520.90	358.75-705.14	0.17
Apr-2022	1276.49 (181.78)	1,278.72	923.64-1670.85	0.14	1725.19 (179.54)	1,722.54	1384.03-	0.10	2336.36 (211.24)	2,348.78	1946.97-	0.09
May-2022	1327.62 (202.36)	1,327.90	945.57-1757.42	0.15	1871.09 (260.22)	1,870.68	1391.08-	0.14	3307.4 (491.93)	3,326.46	2379.1-4324.54	0.15
Jun-2022	2113.85 (534.22)	2,119.33	1241.63-3233.12	0.25	2462.29 (561.23)	2,447.94	1479.4-3638.97	0.23	2942.36 (560.15)	2,974.85	1968.08-	0.19
Jul-2022	5789.94 (942.77)	5,791.55	4107.68-	0.16	9057.69	9,013.30	6529.71-	0.15	10477.41 (1225.8)	10,497.19	8160.31-	0.12
Aug-2022	2598.5 (563.49)	2,591.52	1577.66-	0.22	4338.63 (731.75)	4,361.69	2905.9-	0.17	7444.34 (928.73)	7,413.42	5595.65-	0.12
Sep-2022	2640.17 (455.75)	2,673.53	1832.57-	0.17	4039.3 (601.78)	4,022.94	2938.4-5272.28	0.15	6141.95 (837.83)	6,136.88	4630.92-	0.14

1.17 Herring Gull

Table 19. Abundance of herring gull recorded in flight and on the sea in each survey, 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.

Survey	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
Jul-2020	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Aug-2020	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Sep-2020	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Oct-2020	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Nov-2020	23.27 (12.57)	23.13	0-46.53	0.54	23.27 (12.7)	23.02	0-54.29	0.55	31.02 (15.12)	30.35	7.76-62.04	0.49
Dec-2020	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Jan-2021	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-2021	0 (0)	0.00	0-0		0 (0)	0.00	0-0		7.75 (7.22)	7.78	0-23.24	0.93
Mar-2021	0 (0)	0.00	0-0		7.75 (6.99)	7.89	0-23.24	0.90	7.75 (7.1)	7.84	0-23.24	0.92
Apr-2021	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
May-2021	0 (0)	0.00	0-0		15.5 (13.34)	15.72	0-46.5	0.86	15.5 (13.62)	16.28	0-46.5	0.88
Jun-2021	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Jul-2021	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Aug-2021	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Sep-2021	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Oct-2021	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Nov-2021	7.74 (6.95)	7.51	0-23.22	0.90	7.74 (7.13)	7.94	0-23.22	0.92	7.74 (6.86)	7.63	0-23.22	0.89
Dec-2021	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Feb-2022	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Feb-2022	15.49 (10.06)	15.79	0-38.73	0.65	15.49 (9.91)	15.92	0-38.73	0.64	15.49 (9.96)	15.28	0-38.73	0.64
Mar-2022	7.75 (7.05)	7.70	0-23.26	0.91	7.75 (7.21)	7.80	0-23.26	0.93	7.75 (7.18)	7.69	0-23.26	0.93
Apr-2022	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
May-2022	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Jun-2022	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Jul-2022	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Aug-2022	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Sep-2022	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	

1.18 Kittiwake

Table 20. Abundance of kittiwake recorded in flight and on the sea in each survey, 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.

Survey	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
Jul-2020	184.47 (115.23)	183.05	24.06-449.15	0.62	240.61 (119.42)	246.32	64.16-513.31	0.50	296.76 (119.83)	301.63	120.31-561.63	0.40
Aug-2020	183.12 (44.9)	183.23	103.5-278.66	0.25	230.89 (47.42)	230.98	135.35-334.39	0.21	310.51 (54.16)	312.76	207-414.01	0.17
Sep-2020	7.75 (7.37)	7.76	0-23.24	0.95	15.49 (9.85)	15.62	0-38.74	0.64	15.49 (9.91)	16.11	0-38.74	0.64
Oct-2020	666.84 (165.29)	661.81	372.19-1023.52	0.25	1000.26 (186.59)	999.21	682.35-1403.47	0.19	1442.24 (250.87)	1,468.73	1046.59-	0.17
Nov-2020	193.88 (47.03)	192.89	100.82-286.94	0.24	232.65 (46.66)	234.80	147.35-333.47	0.20	232.65 (50.01)	236.16	147.35-333.66	0.21
Dec-2020	69.74 (30.57)	70.34	15.5-131.74	0.44	100.74 (36.69)	100.38	31-178.23	0.36	123.99 (38.43)	123.69	54.24-201.48	0.31
Jan-2021	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-2021	216.86 (55.71)	218.98	116.18-333.23	0.26	232.35 (57.35)	233.65	131.67-340.78	0.25	255.59 (56.49)	253.10	147.16-364.02	0.22
Mar-2021	844.24 (186.69)	839.48	503.44-1216.2	0.22	1185.03 (198.02)	1,198.31	828.75-1587.98	0.17	1587.78 (183.95)	1,591.28	1231.5-1959.56	0.12
Apr-2021	302.49 (57.92)	305.53	193.9-426.58	0.19	496.39 (83.56)	502.51	341.27-667.21	0.17	628.24 (89.54)	630.20	465.36-814.38	0.14
May-2021	38.75 (37.06)	39.60	0-116.26	0.96	69.75 (54.11)	69.14	0-193.76	0.78	77.5 (54.94)	77.60	0-201.71	0.71
Jun-2021	131.78 (81.93)	129.90	15.5-317.81	0.62	139.53 (84.48)	138.38	23.25-325.57	0.61	162.78 (87.41)	167.36	38.76-364.32	0.54
Jul-2021	77.52 (23.21)	76.13	31.01-124.03	0.30	100.77 (28.03)	100.90	46.51-155.04	0.28	131.78 (30.49)	132.44	77.52-193.79	0.23
Aug-2021	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Sep-2021	154.96 (54.3)	155.34	61.98-278.93	0.35	154.96 (53.31)	151.71	61.98-271.18	0.34	154.96 (52.94)	154.81	61.98-263.63	0.34
Oct-2021	504.01 (100.83)	504.72	317.92-705.81	0.20	597.06 (95.71)	596.53	418.72-783.16	0.16	829.68 (115.34)	832.89	604.81-1070.06	0.14
Nov-2021	85.14 (27.2)	84.60	38.7-147.07	0.32	108.37 (30.83)	108.26	53.99-170.29	0.28	123.85 (31.54)	122.89	61.92-185.77	0.25
Dec-2021	31 (14.34)	31.25	7.75-62	0.46	38.75 (14.91)	38.84	15.5-69.75	0.38	54.25 (17.74)	52.46	23.25-85.25	0.33
Feb-2022	54.25 (18.63)	53.93	23.25-93	0.34	85.25 (22.7)	85.07	46.5-131.75	0.27	124 (30.59)	124.94	62-186	0.25
Feb-2022	309.85 (64.83)	307.21	185.91-449.28	0.21	395.05 (69.8)	387.47	263.18-534.68	0.18	503.5 (80.36)	507.45	356.32-673.92	0.16
Mar-2022	1000.38 (215.83)	1,004.91	604.88-	0.22	1248.53 (217.97)	1,249.91	837.53-1698.51	0.17	1791.37 (245.46)	1,777.32	1357.1-2287.69	0.14
Apr-2022	92.84 (31.03)	93.96	38.68-154.73	0.33	139.25 (34.72)	139.11	69.63-208.88	0.25	201.14 (39.29)	200.71	123.78-278.7	0.20
May-2022	62.11 (23.24)	61.90	23.29-108.69	0.37	93.17 (26.14)	93.25	46.58-147.51	0.28	131.99 (33.84)	130.14	69.87-201.86	0.26
Jun-2022	77.43 (45.37)	76.38	15.49-178.09	0.59	77.43 (46.6)	76.31	7.74-185.83	0.60	85.17 (46.39)	88.72	23.23-193.58	0.54
Jul-2022	1395.93 (587.81)	1,416.40	380.71-2665.16	0.42	1729.05 (606.65)	1,687.69	610.32-2879.31	0.35	1879.75 (634.39)	1,873.66	785.01-3239	0.34
Aug-2022	15.61 (10.44)	15.56	0-39.02	0.67	23.41 (12.38)	23.69	0-46.82	0.53	54.62 (25.41)	53.44	15.61-109.25	0.47
Sep-2022	15.81 (10.79)	15.69	0-39.52	0.68	23.71 (12.15)	23.78	0-47.43	0.51	47.43 (17.15)	47.30	15.81-79.05	0.36

1.19 Large Auk sp.

Table 21. Abundance of large auk sp. recorded in flight and on the sea in each survey, 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.

Survey	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
Jul-2020	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Aug-2020	23.89 (14.86)	24.12	0-55.73	0.62	23.89 (16.01)	24.50	0-55.73	0.67	39.81 (18.81)	39.24	7.96-79.62	0.47
Sep-2020	38.74 (14.82)	38.40	15.49-69.73	0.38	46.48 (16.14)	46.47	15.49-77.47	0.35	54.23 (18.1)	54.50	23.24-92.97	0.33
Oct-2020	46.52 (17.88)	46.28	15.51-85.29	0.38	93.05 (29.39)	92.90	38.77-155.08	0.32	93.05 (27.86)	91.97	38.77-147.33	0.30
Nov-2020	15.51 (10.12)	15.05	0-38.78	0.65	31.02 (14.6)	31.42	7.76-62.04	0.47	38.78 (15.6)	37.72	7.76-69.8	0.40
Dec-2020	23.25 (15.31)	23.60	0-54.24	0.66	61.99 (23.2)	63.02	23.25-108.49	0.37	77.49 (24.31)	77.59	31-123.99	0.31
Jan-2021	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-2021	61.96 (25.39)	62.69	15.49-116.18	0.41	69.71 (25.2)	69.79	23.24-123.92	0.36	69.71 (25.32)	69.95	23.24-123.92	0.36
Mar-2021	69.71 (25.85)	70.10	23.24-123.92	0.37	92.94 (29.7)	93.51	38.73-154.91	0.32	108.43 (30.37)	109.09	54.22-170.4	0.28
Apr-2021	100.83 (28.78)	101.66	46.54-162.88	0.29	131.85 (30.68)	132.43	77.56-193.9	0.23	162.88 (33.36)	164.24	100.83-232.68	0.20
May-2021	0 (0)	0.00	0-0		0 (0)	0.00	0-0		7.75 (7.25)	7.94	0-23.25	0.94
Jun-2021	7.75 (7.28)	7.54	0-23.25	0.94	7.75 (7.63)	7.79	0-23.25	0.98	7.75 (7.41)	7.71	0-23.25	0.96
Jul-2021	0 (0)	0.00	0-0		0 (0)	0.00	0-0		7.75 (5.74)	7.99	0-15.5	0.74
Aug-2021	15.49 (10.22)	16.18	0-38.72	0.66	15.49 (10.07)	15.56	0-38.72	0.65	15.49 (10.08)	15.10	0-38.72	0.65
Sep-2021	77.48 (46.1)	78.67	7.75-185.95	0.59	77.48 (46.59)	77.23	7.75-185.95	0.60	85.23 (46.4)	86.63	15.5-185.95	0.54
Oct-2021	85.29 (24.79)	84.99	38.77-131.82	0.29	108.56 (27.05)	109.25	62.03-162.83	0.25	162.83 (30.97)	162.72	100.8-224.87	0.19
Nov-2021	38.7 (15.88)	39.17	7.74-69.66	0.41	54.18 (18.51)	54.73	23.22-92.88	0.34	61.92 (19.52)	62.08	23.22-100.62	0.32
Dec-2021	85.25 (29.16)	84.33	38.75-147.24	0.34	131.74 (39.37)	131.54	62-209.43	0.30	147.24 (41.48)	145.69	69.75-232.49	0.28
Feb-2022	0 (0)	0.00	0-0		7.75 (6.37)	7.87	0-23.25	0.82	46.5 (20.52)	46.73	7.75-93	0.44
Feb-2022	38.73 (18.54)	39.79	7.75-77.46	0.48	77.46 (24.22)	78.27	38.73-123.94	0.31	85.21 (25.63)	85.67	38.73-139.43	0.30
Mar-2022	46.53 (19.25)	45.51	15.51-85.3	0.41	62.04 (22.66)	60.40	23.26-108.57	0.37	93.06 (31.82)	93.86	38.77-162.85	0.34
Apr-2022	7.74 (7.39)	7.79	0-23.21	0.95	15.47 (10.39)	15.53	0-38.68	0.67	23.21 (13.01)	22.74	0-46.42	0.56
May-2022	15.53 (14.83)	15.42	0-46.58	0.95	15.53 (14.44)	15.98	0-46.58	0.93	46.58 (26.12)	47.76	0-93.17	0.56
Jun-2022	15.49 (15)	15.76	0-46.46	0.97	15.49 (14.13)	14.71	0-46.46	0.91	15.49 (13.96)	15.49	0-46.46	0.90
Jul-2022	47.59 (25.48)	47.63	7.93-103.11	0.54	95.18 (33.02)	95.90	31.73-166.56	0.35	142.77 (42.51)	144.72	63.45-230.01	0.30
Aug-2022	0 (0)	0.00	0-0		7.8 (7.2)	7.65	0-23.41	0.92	31.21 (13.79)	31.08	7.8-62.43	0.44
Sep-2022	23.71 (16.46)	24.15	0-63.24	0.69	71.14 (39.94)	71.77	7.9-158.09	0.56	94.86 (41.84)	95.46	31.62-189.71	0.44

1.20 Lesser Black-backed Gull

Table 22. Abundance of lesser black-backed gull recorded in flight and on the sea in each survey, 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.

Survey	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
Jul-2020	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.0	0-0	
Aug-2020	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.0	0-0	
Sep-2020	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.0	0-0	
Oct-2020	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.0	0-0	
Nov-2020	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.0	0-0	
Dec-2020	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.0	0-0	
Jan-2021	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.0	0-0	
Feb-2021	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.0	0-0	
Mar-2021	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.0	0-0	
Apr-2021	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.0	0-0	
May-2021	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.0	0-0	
Jun-2021	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.0	0-0	
Jul-2021	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.0	0-0	
Aug-2021	7.74 (7.17)	7.34	0-23.23	0.93	7.74 (7.16)	7.88	0-23.23	0.92	15.49 (10.51)	15.8	0-38.72	0.68
Sep-2021	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.0	0-0	
Oct-2021	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.0	0-0	
Nov-2021	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.0	0-0	
Dec-2021	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.0	0-0	
Feb-2022	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.0	0-0	
Feb-2022	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.0	0-0	
Mar-2022	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.0	0-0	
Apr-2022	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.0	0-0	
May-2022	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.0	0-0	
Jun-2022	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.0	0-0	
Jul-2022	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.0	0-0	
Aug-2022	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.0	0-0	
Sep-2022	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.0	0-0	

1.21 Little Auk

Table 23. Abundance of little auk recorded in flight and on the sea in each survey, 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.

Survey	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
Jul-2020	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Aug-2020	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Sep-2020	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Oct-2020	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Nov-2020	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Dec-2020	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Jan-2021	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Feb-2021	7.75 (7.6)	7.66	0-23.24	0.98	7.75 (7.1)	7.68	0-23.24	0.92	7.75 (6.97)	7.43	0-23.24	0.90
Mar-2021	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Apr-2021	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
May-2021	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Jun-2021	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Jul-2021	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Aug-2021	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Sep-2021	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Oct-2021	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Nov-2021	7.74 (7.15)	7.79	0-23.22	0.92	23.22 (12.19)	23.18	0-46.44	0.53	38.7 (15.73)	38.19	7.74-69.66	0.41
Dec-2021	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Feb-2022	0 (0)	0.00	0-0		7.75 (7.08)	7.93	0-23.25	0.91	15.5 (9.89)	15.38	0-38.75	0.64
Feb-2022	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Mar-2022	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Apr-2022	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
May-2022	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Jun-2022	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Jul-2022	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Aug-2022	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Sep-2022	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	

1.22 Little Gull

Table 24. Abundance of little gull recorded in flight and on the sea in each survey, 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.

Survey	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
Jul-2020	0 (0)	0.0	0-0		0 (0)	0.00	0-0		0 (0)	0.0	0-0	
Aug-2020	0 (0)	0.0	0-0		0 (0)	0.00	0-0		0 (0)	0.0	0-0	
Sep-2020	7.75 (7.16)	7.4	0-23.24	0.92	7.75 (7.51)	7.89	0-23.24	0.97	7.75 (7.17)	7.8	0-23.24	0.93
Oct-2020	0 (0)	0.0	0-0		0 (0)	0.00	0-0		0 (0)	0.0	0-0	
Nov-2020	0 (0)	0.0	0-0		0 (0)	0.00	0-0		0 (0)	0.0	0-0	
Dec-2020	0 (0)	0.0	0-0		0 (0)	0.00	0-0		0 (0)	0.0	0-0	
Jan-2021	0 (0)	0.0	0-0		0 (0)	0.00	0-0		0 (0)	0.0	0-0	
Feb-2021	0 (0)	0.0	0-0		0 (0)	0.00	0-0		0 (0)	0.0	0-0	
Mar-2021	0 (0)	0.0	0-0		0 (0)	0.00	0-0		0 (0)	0.0	0-0	
Apr-2021	0 (0)	0.0	0-0		0 (0)	0.00	0-0		0 (0)	0.0	0-0	
May-2021	0 (0)	0.0	0-0		0 (0)	0.00	0-0		0 (0)	0.0	0-0	
Jun-2021	0 (0)	0.0	0-0		0 (0)	0.00	0-0		0 (0)	0.0	0-0	
Jul-2021	0 (0)	0.0	0-0		0 (0)	0.00	0-0		0 (0)	0.0	0-0	
Aug-2021	0 (0)	0.0	0-0		0 (0)	0.00	0-0		0 (0)	0.0	0-0	
Sep-2021	0 (0)	0.0	0-0		0 (0)	0.00	0-0		0 (0)	0.0	0-0	
Oct-2021	0 (0)	0.0	0-0		0 (0)	0.00	0-0		0 (0)	0.0	0-0	
Nov-2021	0 (0)	0.0	0-0		0 (0)	0.00	0-0		0 (0)	0.0	0-0	
Dec-2021	0 (0)	0.0	0-0		0 (0)	0.00	0-0		0 (0)	0.0	0-0	
Feb-2022	0 (0)	0.0	0-0		0 (0)	0.00	0-0		0 (0)	0.0	0-0	
Feb-2022	0 (0)	0.0	0-0		0 (0)	0.00	0-0		0 (0)	0.0	0-0	
Mar-2022	0 (0)	0.0	0-0		0 (0)	0.00	0-0		0 (0)	0.0	0-0	
Apr-2022	0 (0)	0.0	0-0		0 (0)	0.00	0-0		0 (0)	0.0	0-0	
May-2022	0 (0)	0.0	0-0		0 (0)	0.00	0-0		0 (0)	0.0	0-0	
Jun-2022	0 (0)	0.0	0-0		0 (0)	0.00	0-0		0 (0)	0.0	0-0	
Jul-2022	0 (0)	0.0	0-0		0 (0)	0.00	0-0		0 (0)	0.0	0-0	
Aug-2022	0 (0)	0.0	0-0		0 (0)	0.00	0-0		0 (0)	0.0	0-0	
Sep-2022	0 (0)	0.0	0-0		0 (0)	0.00	0-0		0 (0)	0.0	0-0	

1.23 Manx Shearwater

Table 25. Abundance of Manx shearwater recorded in flight and on the sea in each survey, 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.

Survey	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
Jul-2020	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Aug-2020	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Sep-2020	0 (0)	0.00	0-0		0 (0)	0.00	0-0		7.75 (7.13)	7.48	0-23.24	0.92
Oct-2020	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Nov-2020	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Dec-2020	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Jan-2021	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Feb-2021	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Mar-2021	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Apr-2021	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
May-2021	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Jun-2021	7.75 (7.44)	7.84	0-23.25	0.96	15.5 (10.2)	15.63	0-38.76	0.66	15.5 (10.05)	15.79	0-38.76	0.65
Jul-2021	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Aug-2021	0 (0)	0.00	0-0		0 (0)	0.00	0-0		7.74 (6.32)	7.67	0-23.23	0.82
Sep-2021	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Oct-2021	0 (0)	0.00	0-0		0 (0)	0.00	0-0		7.75 (7.3)	7.54	0-23.26	0.94
Nov-2021	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Dec-2021	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Feb-2022	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Feb-2022	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Mar-2022	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Apr-2022	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
May-2022	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Jun-2022	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Jul-2022	7.93 (7.38)	7.88	0-23.79	0.93	7.93 (7.23)	7.76	0-23.79	0.91	23.79 (12.3)	23.89	0-47.79	0.52
Aug-2022	7.8 (6.17)	7.83	0-23.41	0.79	7.8 (6.33)	7.83	0-23.41	0.81	15.61 (9.4)	15.76	0-39.02	0.60
Sep-2022	7.9 (7.32)	7.93	0-23.71	0.93	7.9 (7.41)	7.98	0-23.71	0.94	15.81 (10.09)	16.31	0-39.52	0.64

1.24 Puffin

Table 26. Abundance of puffin recorded in flight and on the sea in each survey, 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.

Survey	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
Jul-2020	721.84 (103.1)	719.71	529.35-946.42	0.14	1259.21 (169.64)	1,250.28	946.42-	0.13	2582.59 (693.79)	2,573.64	1539.73-	0.27
Aug-2020	740.44 (125.04)	733.92	509.55-987.25	0.17	1281.83 (193)	1,282.80	931.32-1656.03	0.15	2261.12 (350.99)	2,241.02	1600.3-2969.91	0.16
Sep-2020	108.46 (31.24)	108.21	54.23-178.19	0.29	139.45 (33.6)	139.46	77.47-209.18	0.24	201.43 (37.9)	201.72	131.7-278.9	0.19
Oct-2020	77.54 (24.61)	78.56	38.77-131.82	0.32	100.8 (26.03)	101.74	54.28-155.08	0.26	124.06 (28.64)	125.41	69.79-186.09	0.23
Nov-2020	0 (0)	0.00	0-0		0 (0)	0.00	0-0		7.76 (7.21)	7.84	0-23.27	0.93
Dec-2020	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Jan-2021	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-2021	7.75 (7.03)	7.61	0-23.24	0.91	7.75 (6.87)	7.77	0-23.24	0.89	7.75 (6.83)	7.83	0-23.24	0.88
Mar-2021	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Apr-2021	837.65 (134.98)	845.06	604.97-1109.11	0.16	1085.84 (135.45)	1,068.86	814.19-1349.55	0.12	1349.55 (137.56)	1,341.16	1078.09-	0.10
May-2021	100.76 (35.56)	103.61	46.5-178.26	0.35	201.51 (49.01)	200.51	116.26-302.27	0.24	403.02 (90.8)	400.73	240.26-589.04	0.23
Jun-2021	3441.7 (529.84)	3,435.80	2472.75-	0.15	4278.87 (544.93)	4,319.02	3317.68-	0.13	5526.88 (639.56)	5,551.93	4356.19-	0.12
Jul-2021	1178.27 (173.95)	1,182.40	860.45-1558.11	0.15	1875.93 (220.35)	1,865.54	1472.84-	0.12	2697.62 (276.21)	2,695.59	2177.86-	0.10
Aug-2021	1107.34 (157.38)	1,090.77	797.59-1409.34	0.14	1641.65 (177.87)	1,636.66	1277.7-1982.37	0.11	2292.11 (223.31)	2,284.25	1873.95-	0.10
Sep-2021	1805.3 (264.97)	1,810.35	1316.98-	0.15	2277.94 (260.35)	2,285.38	1812.86-	0.11	2766.07 (257.01)	2,777.18	2301.18-3316.18	0.09
Oct-2021	155.08 (37.54)	155.40	85.29-225.06	0.24	186.1 (40.12)	187.47	116.31-263.83	0.22	209.36 (40.89)	209.09	139.57-294.65	0.20
Nov-2021	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Dec-2021	7.75 (7.25)	7.94	0-23.25	0.94	7.75 (7.3)	7.55	0-23.25	0.94	15.5 (9.25)	15.83	0-38.75	0.60
Feb-2022	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Feb-2022	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Mar-2022	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Apr-2022	967.04 (131.16)	967.15	727.21-1237.81	0.14	1214.6 (137.25)	1,220.41	951.56-1493.1	0.11	1353.85 (133.54)	1,358.15	1098.55-	0.10
May-2022	2554.3 (454.11)	2,540.13	1762.39-3517.21	0.18	4021.67 (535.25)	4,026.27	3004.41-	0.13	5916.05 (595.51)	5,936.54	4891.03-	0.10
Jun-2022	3770.87 (841.8)	3,764.32	2284.2-5575.58	0.22	4761.98 (827.38)	4,768.41	3298.35-	0.17	6109.27 (860.93)	6,087.45	4614.86-7913.4	0.14
Jul-2022	2847.38 (406.71)	2,808.98	2014.58-	0.14	4211.59 (534.97)	4,226.68	3243.56-	0.13	5591.65 (684.05)	5,576.60	4259.17-	0.12
Aug-2022	1786.95 (381.18)	1,770.52	1084.66-	0.21	3776.8 (738.51)	3,760.63	2411.02-5228.6	0.20	5314.04 (868.23)	5,258.30	3690.76-	0.16
Sep-2022	458.47 (83.73)	451.03	292.47-608.86	0.18	529.61 (94.04)	525.98	355.71-711.62	0.18	679.8 (97)	682.24	505.7-893.23	0.14

Table 27. Abundance of puffin (including unidentified auks apportioned using identified auk ratios) recorded in flight and on the sea in each survey, 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.

Survey	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
Jul-2020	786.01 (112.27)	783.68	576.4-1030.54	0.14	1379.52 (185.85)	1,369.73	1036.84-	0.13	2815.18 (756.28)	2,805.43	1678.4-4520.47	0.27
Aug-2020	764.32 (129.08)	757.60	525.99-1019.1	0.17	1337.56 (201.39)	1,338.58	971.81-1728.03	0.15	2364.62 (367.06)	2,343.60	1673.55-	0.16
Sep-2020	108.46 (31.24)	108.21	54.23-178.19	0.29	139.45 (33.6)	139.46	77.47-209.18	0.24	201.43 (37.9)	201.72	131.7-278.9	0.19
Oct-2020	77.54 (24.61)	78.56	38.77-131.82	0.32	100.8 (26.03)	101.74	54.28-155.08	0.26	124.06 (28.64)	125.41	69.79-186.09	0.23
Nov-2020	0 (0)	0.00	0-0		0 (0)	0.00	0-0		7.76 (7.21)	7.84	0-23.27	0.93
Dec-2020	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Jan-2021	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-2021	7.75 (7.03)	7.61	0-23.24	0.91	7.75 (6.87)	7.77	0-23.24	0.89	7.75 (6.83)	7.83	0-23.24	0.88
Mar-2021	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Apr-2021	876.43 (141.22)	884.18	632.98-1160.46	0.16	1132.38 (141.25)	1,114.67	849.08-	0.12	1411.6 (143.88)	1,402.83	1127.65-	0.10
May-2021	100.76 (35.56)	103.61	46.5-178.26	0.35	201.51 (49.01)	200.51	116.26-302.27	0.24	410.77 (92.54)	408.44	244.88-600.36	0.23
Jun-2021	3449.45 (531.03)	3,443.54	2478.32-	0.15	4286.62 (545.92)	4,326.84	3323.69-	0.13	5542.38 (641.36)	5,567.50	4368.41-	0.12
Jul-2021	1186.02 (175.1)	1,190.18	866.11-1568.36	0.15	1906.94 (223.99)	1,896.38	1497.18-	0.12	2728.63 (279.39)	2,726.57	2202.9-3262	0.10
Aug-2021	1169.29 (166.19)	1,151.79	842.21-1488.18	0.14	1734.57 (187.94)	1,729.30	1350.02-	0.11	2400.52 (233.87)	2,392.29	1962.59-2879	0.10
Sep-2021	1851.79 (271.79)	1,856.97	1350.89-	0.15	2339.92 (267.43)	2,347.57	1862.19-2905	0.11	2843.55 (264.21)	2,854.98	2365.64-	0.09
Oct-2021	155.08 (37.54)	155.40	85.29-225.06	0.24	193.85 (41.79)	195.28	121.16-274.82	0.22	217.11 (42.41)	216.83	144.74-305.57	0.20
Nov-2021	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Dec-2021	7.75 (7.25)	7.94	0-23.25	0.94	7.75 (7.3)	7.55	0-23.25	0.94	15.5 (9.25)	15.83	0-38.75	0.60
Feb-2022	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Feb-2022	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Mar-2022	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Apr-2022	997.98 (135.36)	998.10	750.48-1277.42	0.14	1245.54 (140.75)	1,251.50	975.81-1531.15	0.11	1384.8 (136.6)	1,389.20	1123.66-	0.10
May-2022	2585.36 (459.63)	2,571.01	1783.82-	0.18	4091.54 (544.55)	4,096.22	3056.61-	0.13	6024.74 (606.45)	6,045.61	4980.89-	0.10
Jun-2022	3817.33 (852.17)	3,810.70	2312.34-	0.22	4831.67 (839.49)	4,838.19	3346.62-	0.17	6225.42 (877.3)	6,203.18	4702.6-	0.14
Jul-2022	2950.49 (421.44)	2,910.70	2087.53-	0.14	4330.56 (550.08)	4,346.08	3335.18-	0.13	5774.08 (706.37)	5,758.53	4398.13-	0.12
Aug-2022	1802.56 (384.51)	1,785.98	1094.13-	0.21	3800.21 (743.09)	3,783.94	2425.97-	0.20	5337.45 (872.06)	5,281.46	3707.02-	0.16
Sep-2022	482.19 (88.07)	474.36	307.6-640.35	0.18	553.33 (98.25)	549.53	371.64-743.48	0.18	703.52 (100.38)	706.04	523.34-924.39	0.14

Table 28. Abundance of puffin (including unidentified auks apportioned using identified auk ratios and accounting for availability bias) recorded in flight and on the sea in each survey, 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.

Survey	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
Jul-2020	914.33 (130.6)	911.63	670.51-1198.79	0.14	1604.09 (216.1)	1,592.71	1205.62-	0.13	3280.37 (881.24)	3,269.00	1955.74-	0.27
Aug-2020	891.71 (150.59)	883.87	613.65-1188.95	0.17	1544.57 (232.56)	1,545.74	1122.21-1995.47	0.15	2722.9 (422.68)	2,698.69	1927.12-	0.16
Sep-2020	123.96 (35.71)	123.67	61.98-203.64	0.29	162.69 (39.2)	162.70	90.38-244.04	0.24	232.42 (43.73)	232.76	151.97-321.81	0.19
Oct-2020	93.05 (29.53)	94.28	46.52-158.18	0.32	116.31 (30.03)	117.39	62.63-178.94	0.26	147.33 (34.01)	148.93	82.87-220.99	0.23
Nov-2020	0 (0)	0.00	0-0		0 (0)	0.00	0-0		7.76 (7.21)	7.84	0-23.27	0.93
Dec-2020	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Jan-2021	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-2021	7.75 (7.03)	7.61	0-23.24	0.91	7.75 (6.87)	7.77	0-23.24	0.89	7.75 (6.83)	7.83	0-23.24	0.88
Mar-2021	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Apr-2021	1016.04 (163.72)	1,025.02	733.81-1345.31	0.16	1318.52 (164.47)	1,297.90	988.66-	0.12	1644.28 (167.6)	1,634.06	1313.53-1975.02	0.10
May-2021	116.26 (41.03)	119.55	53.66-205.69	0.35	232.51 (56.55)	231.36	134.14-348.77	0.24	480.53 (108.26)	477.79	286.47-702.31	0.23
Jun-2021	3976.56 (612.18)	3,969.74	2857.03-	0.15	4930 (627.86)	4,976.26	3822.54-	0.13	6364.05 (736.44)	6,392.89	5016.04-	0.12
Jul-2021	1364.31 (201.42)	1,369.10	996.31-1804.13	0.15	2201.51 (258.59)	2,189.32	1728.46-	0.12	3139.47 (321.45)	3,137.11	2534.58-	0.10
Aug-2021	1362.88 (193.7)	1,342.48	981.65-1734.57	0.14	2021.08 (218.98)	2,014.94	1573.01-	0.11	2795.44 (272.34)	2,785.86	2285.46-	0.10
Sep-2021	2153.97 (316.14)	2,159.98	1571.33-2801.31	0.15	2727.32 (311.71)	2,736.24	2170.5-3385.96	0.11	3308.43 (307.41)	3,321.73	2752.39-	0.09
Oct-2021	178.34 (43.17)	178.71	98.09-258.82	0.24	224.87 (48.47)	226.53	140.54-318.8	0.22	248.13 (48.46)	247.81	165.42-349.22	0.20
Nov-2021	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Dec-2021	7.75 (7.25)	7.94	0-23.25	0.94	7.75 (7.3)	7.55	0-23.25	0.94	15.5 (9.25)	15.83	0-38.75	0.60
Feb-2022	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Feb-2022	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Mar-2022	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Apr-2022	1114.03 (151.09)	1,114.16	837.75-1425.95	0.14	1392.53 (157.36)	1,399.19	1090.96-	0.11	1554.99 (153.38)	1,559.94	1261.77-	0.10
May-2022	2965.79 (527.26)	2,949.33	2046.3-	0.18	4689.36 (624.12)	4,694.72	3503.21-	0.13	6894.29	6,918.17	5699.78-	0.10
Jun-2022	4444.51 (992.18)	4,436.80	2692.26-	0.22	5613.71 (975.37)	5,621.30	3888.3-7713.38	0.17	7224.27 (1018.06)	7,198.47	5457.12-	0.14
Jul-2022	3426.38 (489.41)	3,380.16	2424.23-	0.14	5020.59 (637.74)	5,038.58	3866.61-	0.13	6670.33 (816.01)	6,652.37	5080.8-8317.33	0.12
Aug-2022	2091.28 (446.1)	2,072.05	1269.38-	0.21	4424.47 (865.16)	4,405.54	2824.48-	0.20	6211.42 (1014.85)	6,146.26	4314.02-	0.16
Sep-2022	561.23 (102.5)	552.13	358.03-745.33	0.18	640.28 (113.69)	635.88	430.04-860.32	0.18	814.18 (116.17)	817.10	605.67-1069.8	0.14

1.25 Razorbill

Table 29. Abundance of razorbill recorded in flight and on the sea in each survey, 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.

Survey	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
Jul-2020	16.04 (14.86)	15.99	0-48.12	0.93	16.04 (14.25)	16.44	0-48.12	0.89	16.04 (14.46)	16.14	0-48.12	0.90
Aug-2020	15.92 (13.68)	15.16	0-47.77	0.86	15.92 (14.34)	16.69	0-47.77	0.90	15.92 (14.03)	16.42	0-47.77	0.88
Sep-2020	61.98 (28.99)	61.67	15.49-123.96	0.47	77.47 (29.71)	77.77	30.99-139.45	0.38	92.97 (32.29)	91.98	38.74-162.69	0.35
Oct-2020	0 (0)	0.00	0-0		0 (0)	0.00	0-0		15.51 (14.22)	15.63	0-46.52	0.92
Nov-2020	0 (0)	0.00	0-0		7.76 (7.01)	7.72	0-23.27	0.90	7.76 (7.18)	7.55	0-23.27	0.93
Dec-2020	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Jan-2021	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Feb-2021	54.22 (25.92)	53.22	7.75-108.43	0.48	77.45 (29.75)	78.41	30.98-139.41	0.38	77.45 (28.81)	78.24	23.24-139.41	0.37
Mar-2021	7.75 (7.69)	7.79	0-23.24	0.99	23.24 (11.9)	23.04	0-46.47	0.51	69.71 (28.52)	70.59	15.49-131.67	0.41
Apr-2021	54.29 (18.12)	54.43	23.27-93.07	0.33	108.58 (30.2)	109.55	54.29-170.63	0.28	162.88 (36.3)	162.57	93.07-232.68	0.22
May-2021	0 (0)	0.00	0-0		0 (0)	0.00	0-0		23.25 (13.09)	23.58	0-46.5	0.56
Jun-2021	38.76 (15.63)	38.91	15.5-69.76	0.40	38.76 (15.42)	39.04	7.75-69.76	0.40	93.02 (35.85)	94.24	31.01-170.53	0.39
Jul-2021	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Aug-2021	92.92 (44.08)	92.28	23.23-185.85	0.47	100.67 (41.62)	99.58	30.97-185.85	0.41	123.9 (44.93)	125.40	46.46-216.82	0.36
Sep-2021	54.24 (35.88)	52.79	0-131.91	0.66	54.24 (35.57)	53.75	0-131.72	0.66	77.48 (39.55)	75.37	7.75-154.96	0.51
Oct-2021	15.51 (9.66)	15.55	0-38.77	0.62	23.26 (12.32)	23.38	0-46.52	0.53	23.26 (12.45)	23.23	0-46.52	0.54
Nov-2021	7.74 (7.14)	7.46	0-23.22	0.92	7.74 (7.26)	7.56	0-23.22	0.94	7.74 (7.26)	7.86	0-23.22	0.94
Dec-2021	15.5 (9.76)	15.48	0-38.75	0.63	23.25 (12.68)	23.41	0-46.69	0.55	23.25 (12.52)	23.10	0-46.5	0.54
Feb-2022	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Feb-2022	38.73 (21.71)	39.18	0-85.21	0.56	38.73 (22.17)	39.07	0-85.21	0.57	38.73 (22.4)	39.99	0-92.95	0.58
Mar-2022	69.79 (29.55)	70.40	23.07-131.83	0.42	116.32 (42.82)	115.08	38.77-201.63	0.37	139.59 (44.51)	138.90	62.04-232.65	0.32
Apr-2022	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
May-2022	7.76 (6.5)	7.98	0-23.29	0.84	7.76 (6.44)	7.60	0-23.29	0.83	7.76 (6.3)	7.80	0-23.29	0.81
Jun-2022	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Jul-2022	79.31 (47.31)	80.38	7.93-182.62	0.60	118.97 (55.52)	117.51	23.79-237.94	0.47	182.42 (64.15)	182.22	71.38-317.26	0.35
Aug-2022	7.8 (6.79)	7.99	0-23.41	0.87	39.02 (22.09)	40.47	0-85.84	0.57	39.02 (21.71)	37.99	0-85.84	0.56
Sep-2022	79.05 (30.18)	79.21	23.71-142.28	0.38	213.43 (96.85)	211.21	47.43-419.15	0.45	347.81 (130.78)	352.08	118.57-624.47	0.38

Table 30. Abundance of razorbill (including unidentified auks apportioned using identified auk ratios) recorded in flight and on the sea in each survey, 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.

Survey	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
Jul-2020	16.04 (14.86)	15.99	0-48.12	0.93	16.04 (14.25)	16.44	0-48.12	0.89	16.04 (14.46)	16.14	0-48.12	0.90
Aug-2020	15.92 (13.68)	15.16	0-47.77	0.86	15.92 (14.34)	16.69	0-47.77	0.90	15.92 (14.03)	16.42	0-47.77	0.88
Sep-2020	61.98 (28.99)	61.67	15.49-123.96	0.47	77.47 (29.71)	77.77	30.99-139.45	0.38	92.97 (32.29)	91.98	38.74-162.69	0.35
Oct-2020	0 (0)	0.00	0-0		0 (0)	0.00	0-0		15.51 (14.22)	15.63	0-46.52	0.92
Nov-2020	0 (0)	0.00	0-0		7.76 (7.01)	7.72	0-23.27	0.90	7.76 (7.18)	7.55	0-23.27	0.93
Dec-2020	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Jan-2021	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Feb-2021	54.22 (25.92)	53.22	7.75-108.43	0.48	77.45 (29.75)	78.41	30.98-139.41	0.38	77.45 (28.81)	78.24	23.24-139.41	0.37
Mar-2021	7.75 (7.69)	7.79	0-23.24	0.99	23.24 (11.9)	23.04	0-46.47	0.51	69.71 (28.52)	70.59	15.49-131.67	0.41
Apr-2021	54.29 (18.12)	54.43	23.27-93.07	0.33	116.34 (32.35)	117.38	58.17-182.82	0.28	170.63 (38.03)	170.32	97.5-243.76	0.22
May-2021	0 (0)	0.00	0-0		0 (0)	0.00	0-0		23.25 (13.09)	23.58	0-46.5	0.56
Jun-2021	38.76 (15.63)	38.91	15.5-69.76	0.40	38.76 (15.42)	39.04	7.75-69.76	0.40	93.02 (35.85)	94.24	31.01-170.53	0.39
Jul-2021	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Aug-2021	100.67 (47.75)	99.97	25.17-201.33	0.47	108.41 (44.82)	107.24	33.36-200.14	0.41	131.64 (47.74)	133.24	49.37-230.37	0.36
Sep-2021	54.24 (35.88)	52.79	0-131.91	0.66	54.24 (35.57)	53.75	0-131.72	0.66	77.48 (39.55)	75.37	7.75-154.96	0.51
Oct-2021	15.51 (9.66)	15.55	0-38.77	0.62	23.26 (12.32)	23.38	0-46.52	0.53	23.26 (12.45)	23.23	0-46.52	0.54
Nov-2021	7.74 (7.14)	7.46	0-23.22	0.92	7.74 (7.26)	7.56	0-23.22	0.94	7.74 (7.26)	7.86	0-23.22	0.94
Dec-2021	15.5 (9.76)	15.48	0-38.75	0.63	23.25 (12.68)	23.41	0-46.69	0.55	23.25 (12.52)	23.10	0-46.5	0.54
Feb-2022	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Feb-2022	46.48 (26.06)	47.02	0-102.25	0.56	46.48 (26.61)	46.89	0-102.25	0.57	46.48 (26.88)	47.99	0-111.54	0.58
Mar-2022	85.3 (36.11)	86.04	28.2-161.13	0.42	139.59 (51.38)	138.10	46.53-241.95	0.37	170.61 (54.4)	169.76	75.83-284.35	0.32
Apr-2022	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
May-2022	7.76 (6.5)	7.98	0-23.29	0.84	7.76 (6.44)	7.60	0-23.29	0.83	7.76 (6.3)	7.80	0-23.29	0.81
Jun-2022	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Jul-2022	79.31 (47.31)	80.38	7.93-182.62	0.60	118.97 (55.52)	117.51	23.79-237.94	0.47	190.35 (66.94)	190.15	74.49-331.05	0.35
Aug-2022	7.8 (6.79)	7.99	0-23.41	0.87	39.02 (22.09)	40.47	0-85.84	0.57	39.02 (21.71)	37.99	0-85.84	0.56
Sep-2022	79.05 (30.18)	79.21	23.71-142.28	0.38	229.24 (104.03)	226.85	50.94-450.19	0.45	363.62 (136.72)	368.08	123.96-652.86	0.38

Table 31. Abundance of razorbill (including unidentified auks apportioned using identified auk ratios and accounting for availability bias) recorded in flight and on the sea in each survey, 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.

Survey	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
Jul-2020	16.04 (14.86)	15.99	0-48.12	0.93	16.04 (14.25)	16.44	0-48.12	0.89	16.04 (14.46)	16.14	0-48.12	0.90
Aug-2020	15.92 (13.68)	15.16	0-47.77	0.86	15.92 (14.34)	16.69	0-47.77	0.90	15.92 (14.03)	16.42	0-47.77	0.88
Sep-2020	77.47 (36.24)	77.09	19.37-154.95	0.47	92.97 (35.66)	93.33	37.19-167.34	0.38	116.21 (40.36)	114.97	48.42-203.37	0.35
Oct-2020	0 (0)	0.00	0-0		0 (0)	0.00	0-0		15.51 (14.22)	15.63	0-46.52	0.92
Nov-2020	0 (0)	0.00	0-0		7.76 (7.01)	7.72	0-23.27	0.90	7.76 (7.18)	7.55	0-23.27	0.93
Dec-2020	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Jan-2021	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Feb-2021	61.96 (29.63)	60.83	8.85-123.92	0.48	92.94 (35.7)	94.09	37.18-167.29	0.38	92.94 (34.57)	93.89	27.88-167.29	0.37
Mar-2021	7.75 (7.69)	7.79	0-23.24	0.99	23.24 (11.9)	23.04	0-46.47	0.51	85.2 (34.86)	86.28	18.93-160.93	0.41
Apr-2021	62.05 (20.71)	62.21	26.59-106.37	0.33	139.61 (38.82)	140.85	69.8-219.38	0.28	201.66 (44.94)	201.28	115.23-288.08	0.22
May-2021	0 (0)	0.00	0-0		0 (0)	0.00	0-0		31 (17.46)	31.44	0-62	0.56
Jun-2021	46.51 (18.76)	46.69	18.6-83.72	0.40	46.51 (18.51)	46.84	9.3-83.72	0.40	108.52 (41.83)	109.95	36.17-198.96	0.39
Jul-2021	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Aug-2021	123.9 (58.77)	123.04	30.97-247.8	0.47	131.64 (54.43)	130.22	40.51-243.03	0.41	154.87 (56.17)	156.75	58.08-271.03	0.36
Sep-2021	61.98 (41.01)	60.33	0-150.76	0.66	61.98 (40.65)	61.43	0-150.53	0.66	92.98 (47.46)	90.44	9.3-185.95	0.51
Oct-2021	15.51 (9.66)	15.55	0-38.77	0.62	23.26 (12.32)	23.38	0-46.52	0.53	23.26 (12.45)	23.23	0-46.52	0.54
Nov-2021	7.74 (7.14)	7.46	0-23.22	0.92	7.74 (7.26)	7.56	0-23.22	0.94	7.74 (7.26)	7.86	0-23.22	0.94
Dec-2021	15.5 (9.76)	15.48	0-38.75	0.63	31 (16.9)	31.22	0-62.26	0.55	31 (16.69)	30.80	0-62	0.54
Feb-2022	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Feb-2022	54.22 (30.4)	54.85	0-119.29	0.56	54.22 (31.04)	54.70	0-119.29	0.57	54.22 (31.36)	55.99	0-130.14	0.58
Mar-2022	100.81 (42.68)	101.69	33.32-190.43	0.42	170.61 (62.8)	168.79	56.87-295.72	0.37	201.63 (64.29)	200.63	89.61-336.04	0.32
Apr-2022	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
May-2022	7.76 (6.5)	7.98	0-23.29	0.84	7.76 (6.44)	7.60	0-23.29	0.83	7.76 (6.3)	7.80	0-23.29	0.81
Jun-2022	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Jul-2022	95.18 (56.77)	96.46	9.52-219.15	0.60	142.77 (66.63)	141.01	28.55-285.53	0.47	230.01 (80.89)	229.76	90-400.02	0.35
Aug-2022	7.8 (6.79)	7.99	0-23.41	0.87	46.82 (26.51)	48.56	0-103	0.57	46.82 (26.06)	45.59	0-103	0.56
Sep-2022	94.86 (36.21)	95.06	28.46-170.74	0.38	276.66 (125.55)	273.79	61.48-543.34	0.45	442.66 (166.44)	448.10	150.91-794.78	0.38

1.26 Red-throated Diver

Table 32. Abundance of red-throated diver recorded in flight and on the sea in each survey, 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.

Survey	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
Jul-2020	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Aug-2020	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Sep-2020	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Oct-2020	7.75 (7.55)	7.95	0-23.26	0.97	7.75 (7.19)	7.96	0-23.26	0.93	7.75 (7.45)	8.11	0-23.26	0.96
Nov-2020	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Dec-2020	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Jan-2021	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Feb-2021	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Mar-2021	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Apr-2021	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
May-2021	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Jun-2021	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Jul-2021	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Aug-2021	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Sep-2021	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Oct-2021	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Nov-2021	0 (0)	0.00	0-0		7.74 (6.51)	7.18	0-23.22	0.84	7.74 (6.93)	7.91	0-23.22	0.90
Dec-2021	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Feb-2022	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Feb-2022	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Mar-2022	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Apr-2022	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
May-2022	0 (0)	0.00	0-0		7.76 (6.2)	7.54	0-23.29	0.80	7.76 (6.46)	7.66	0-23.29	0.83
Jun-2022	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Jul-2022	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Aug-2022	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	
Sep-2022	0 (0)	0.00	0-0		0 (0)	0.00	0-0		0 (0)	0.00	0-0	

1.27 Shag

Table 33. Abundance of shag recorded in flight and on the sea in each survey, 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.

Survey	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
Jul-2020	o (o)	0.00	0-0		o (o)	0.00	0-0		o (o)	0.00	0-0	
Aug-2020	o (o)	0.00	0-0		o (o)	0.00	0-0		o (o)	0.00	0-0	
Sep-2020	o (o)	0.00	0-0		o (o)	0.00	0-0		o (o)	0.00	0-0	
Oct-2020	o (o)	0.00	0-0		o (o)	0.00	0-0		o (o)	0.00	0-0	
Nov-2020	o (o)	0.00	0-0		o (o)	0.00	0-0		o (o)	0.00	0-0	
Dec-2020	o (o)	0.00	0-0		o (o)	0.00	0-0		o (o)	0.00	0-0	
Jan-2021	o (o)	0.00	0-0		o (o)	0.00	0-0		o (o)	0.00	0-0	
Feb-2021	o (o)	0.00	0-0		o (o)	0.00	0-0		o (o)	0.00	0-0	
Mar-2021	o (o)	0.00	0-0		o (o)	0.00	0-0		o (o)	0.00	0-0	
Apr-2021	7.76 (7.13)	7.69	0-23.27	0.92	15.51 (10.35)	15.62	0-38.78	0.67	23.27 (12.76)	23.00	0-54.29	0.55
May-2021	o (o)	0.00	0-0		o (o)	0.00	0-0		o (o)	0.00	0-0	
Jun-2021	o (o)	0.00	0-0		o (o)	0.00	0-0		o (o)	0.00	0-0	
Jul-2021	o (o)	0.00	0-0		o (o)	0.00	0-0		o (o)	0.00	0-0	
Aug-2021	o (o)	0.00	0-0		o (o)	0.00	0-0		o (o)	0.00	0-0	
Sep-2021	o (o)	0.00	0-0		o (o)	0.00	0-0		o (o)	0.00	0-0	
Oct-2021	o (o)	0.00	0-0		o (o)	0.00	0-0		o (o)	0.00	0-0	
Nov-2021	o (o)	0.00	0-0		o (o)	0.00	0-0		o (o)	0.00	0-0	
Dec-2021	o (o)	0.00	0-0		o (o)	0.00	0-0		o (o)	0.00	0-0	
Feb-2022	o (o)	0.00	0-0		o (o)	0.00	0-0		7.75 (7.42)	8.12	0-23.25	0.96
Feb-2022	o (o)	0.00	0-0		o (o)	0.00	0-0		o (o)	0.00	0-0	
Mar-2022	o (o)	0.00	0-0		o (o)	0.00	0-0		o (o)	0.00	0-0	
Apr-2022	o (o)	0.00	0-0		o (o)	0.00	0-0		o (o)	0.00	0-0	
May-2022	o (o)	0.00	0-0		o (o)	0.00	0-0		o (o)	0.00	0-0	
Jun-2022	o (o)	0.00	0-0		o (o)	0.00	0-0		o (o)	0.00	0-0	
Jul-2022	o (o)	0.00	0-0		o (o)	0.00	0-0		o (o)	0.00	0-0	
Aug-2022	o (o)	0.00	0-0		o (o)	0.00	0-0		o (o)	0.00	0-0	
Sep-2022	o (o)	0.00	0-0		o (o)	0.00	0-0		o (o)	0.00	0-0	

1.28 Sooty Shearwater

Table 34. Abundance of sooty shearwater recorded in flight and on the sea in each survey, 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.

Survey	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
Jul-2020	o (o)	0.00	0-0		o (o)	0.00	0-0		o (o)	0.00	0-0	
Aug-2020	o (o)	0.00	0-0		o (o)	0.00	0-0		o (o)	0.00	0-0	
Sep-2020	o (o)	0.00	0-0		o (o)	0.00	0-0		o (o)	0.00	0-0	
Oct-2020	o (o)	0.00	0-0		o (o)	0.00	0-0		o (o)	0.00	0-0	
Nov-2020	o (o)	0.00	0-0		o (o)	0.00	0-0		o (o)	0.00	0-0	
Dec-2020	o (o)	0.00	0-0		o (o)	0.00	0-0		o (o)	0.00	0-0	
Jan-2021	o (o)	0.00	0-0		o (o)	0.00	0-0		o (o)	0.00	0-0	
Feb-2021	o (o)	0.00	0-0		o (o)	0.00	0-0		o (o)	0.00	0-0	
Mar-2021	o (o)	0.00	0-0		o (o)	0.00	0-0		o (o)	0.00	0-0	
Apr-2021	o (o)	0.00	0-0		o (o)	0.00	0-0		o (o)	0.00	0-0	
May-2021	o (o)	0.00	0-0		o (o)	0.00	0-0		o (o)	0.00	0-0	
Jun-2021	o (o)	0.00	0-0		o (o)	0.00	0-0		o (o)	0.00	0-0	
Jul-2021	o (o)	0.00	0-0		o (o)	0.00	0-0		o (o)	0.00	0-0	
Aug-2021	7.74 (6.87)	7.45	0-23.23	0.89	15.49 (9.94)	15.36	0-38.72	0.64	15.49 (10.83)	15.82	0-38.72	0.70
Sep-2021	o (o)	0.00	0-0		7.75 (6.71)	7.78	0-23.24	0.87	7.75 (6.78)	7.97	0-23.24	0.88
Oct-2021	o (o)	0.00	0-0		o (o)	0.00	0-0		o (o)	0.00	0-0	
Nov-2021	o (o)	0.00	0-0		o (o)	0.00	0-0		o (o)	0.00	0-0	
Dec-2021	o (o)	0.00	0-0		o (o)	0.00	0-0		o (o)	0.00	0-0	
Feb-2022	o (o)	0.00	0-0		o (o)	0.00	0-0		o (o)	0.00	0-0	
Feb-2022	o (o)	0.00	0-0		o (o)	0.00	0-0		o (o)	0.00	0-0	
Mar-2022	o (o)	0.00	0-0		o (o)	0.00	0-0		o (o)	0.00	0-0	
Apr-2022	o (o)	0.00	0-0		o (o)	0.00	0-0		o (o)	0.00	0-0	
May-2022	o (o)	0.00	0-0		o (o)	0.00	0-0		o (o)	0.00	0-0	
Jun-2022	o (o)	0.00	0-0		o (o)	0.00	0-0		o (o)	0.00	0-0	
Jul-2022	o (o)	0.00	0-0		o (o)	0.00	0-0		o (o)	0.00	0-0	
Aug-2022	o (o)	0.00	0-0		o (o)	0.00	0-0		o (o)	0.00	0-0	
Sep-2022	o (o)	0.00	0-0		o (o)	0.00	0-0		o (o)	0.00	0-0	