

**RWE**

MASDAR 

**RWE Renewables UK Dogger Bank  
South (West) Limited**

**RWE Renewables UK Dogger Bank  
South (East) Limited**

# **Dogger Bank South Offshore Wind Farms**

**Environmental Statement**

**Volume 7**

**Appendix 12-6a Seasonal Peak Density (All)**

**Appendix 12-6b Seasonal Peak Density (Sitting)**

**Appendix 12-6c Seasonal Peak Density (Flying)**

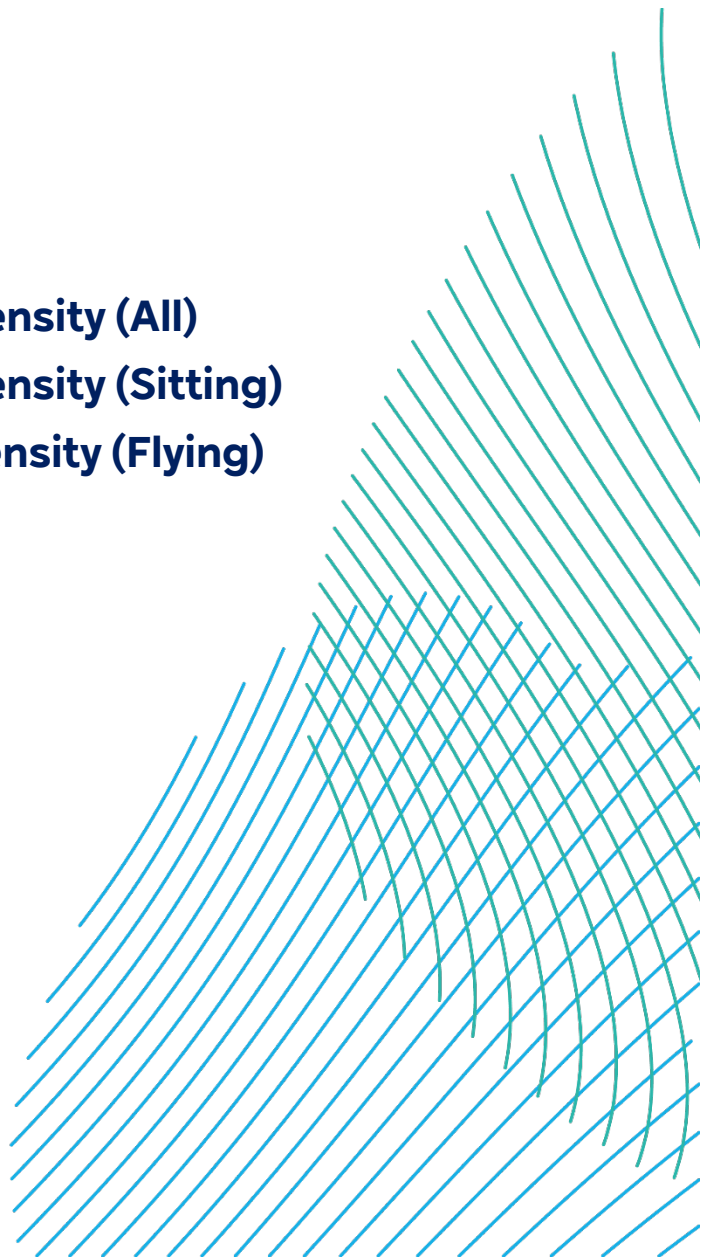
**June 2024**

**Application Reference: 7.12.12.6**

**APFP Regulation: 5(2)(a)**

**Revision: 01**

**Unrestricted**



Company:	<b>RWE Renewables UK Dogger Bank South (West) Limited and RWE Renewables UK Dogger Bank South (East) Limited</b>	Asset:	<b>Development</b>		
Project:	<b>Dogger Bank South Offshore Wind Farms</b>	Sub Project/Package:	<b>Consents</b>		
Document Title or Description:	Environmental Statement – Appendix 12-6a-c Seasonal Peak Density (All, Sitting, Flying)				
Document Number:	004300153-01	Contractor Reference Number:	PC2340-RHD-OF-ZZ-AX-Z-0094		
<p><i>COPYRIGHT © RWE Renewables UK Dogger Bank South (West) Limited and RWE Renewables UK Dogger Bank South (East) Limited, 2024. All rights reserved.</i></p> <p><i>This document is supplied on and subject to the terms and conditions of the Contractual Agreement relating to this work, under which this document has been supplied, in particular:</i></p> <p><b>LIABILITY</b></p> <p><i>In preparation of this document RWE Renewables UK Dogger Bank South (West) Limited and RWE Renewables UK Dogger Bank South (East) Limited has made reasonable efforts to ensure that the content is accurate, up to date and complete for the purpose for which it was contracted. RWE Renewables UK Dogger Bank South (West) Limited and RWE Renewables UK Dogger Bank South (East) Limited makes no warranty as to the accuracy or completeness of material supplied by the client or their agent.</i></p> <p><i>Other than any liability on RWE Renewables UK Dogger Bank South (West) Limited and RWE Renewables UK Dogger Bank South (East) Limited detailed in the contracts between the parties for this work RWE Renewables UK Dogger Bank South (West) Limited and RWE Renewables UK Dogger Bank South (East) Limited shall have no liability for any loss, damage, injury, claim, expense, cost or other consequence arising as a result of use or reliance upon any information contained in or omitted from this document.</i></p> <p><i>Any persons intending to use this document should satisfy themselves as to its applicability for their intended purpose.</i></p> <p><i>The user of this document has the obligation to employ safe working practices for any activities referred to and to adopt specific practices appropriate to local conditions.</i></p>					
<b>Rev No.</b>	<b>Date</b>	<b>Status/Reason for Issue</b>	<b>Author</b>	<b>Checked by</b>	<b>Approved by</b>
01	June 2024	Final for DCO Application	MacArthur Green	RWE	RWE



MacArthur  
Green

# Dogger Bank South Offshore Windfarm

## Ornithology Technical Appendix 12-6a Seabird peak seasonal densities: birds in flight and on the sea

---

**Date:** 18/03/2024

**Tel:** 0141 342 5404

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

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

---

## Document Quality Record

Version	Status	Person Responsible	Date
0.1	Draft	Dr Mark Trinder	16/10/2023
0.2	Reviewed	Dr Shirley Raveh	31/10/2023
1	Updated and approved	Dr Mark Trinder	18/03/2024

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



## 1 INTRODUCTION

This appendix provides tables of seabird peak densities in each species-specific season, as defined in Furness (2015)<sup>1</sup> for each species recorded during baseline surveys for the DBS East and West Offshore Wind Farm Projects (March 2021 – February 2023).

Densities were estimated using design-based methods and are summarised as central estimate (i.e. extrapolated from the number seen in the surveyed area to the whole area) and 95% confidence range, derived from 1,000 nonparametric bootstrap samples.

This appendix (a) provides the combined peak density in each species-specific season on the water and in flight.

Appendix (b) provides the peak density in each species-specific season on the water.

Appendix (c) provides the peak density in each species-specific season in flight.

---

<sup>1</sup> Furness, R.W. 2015. Non-breeding season populations of seabirds in UK waters: Population sizes for Biologically Defined Minimum Population Scales (BDMPS). Natural England Commissioned Report Number 164. 389 pp.

Table 1. DBS - East. Seasonal peak density (birds per square km) of Arctic skua recorded in flight and on the sea, S.D. and 95% confidence intervals, in the Array Areas, Array Areas and 2km buffer and Array Areas and 4km buffer.

Season	Density					
	Array Areas		Array Areas & 2km buffer		Array Areas and 4km buffer	
	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.
Spring migration	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Breeding (full)	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Autumn migration	0.01 (0.02)	0-0.07	0.01 (0.01)	0-0.05	0.01 (0.01)	0-0.04
Winter	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Non-breeding	0.01 (0.02)	0-0.07	0.01 (0.01)	0-0.05	0.01 (0.01)	0-0.04

Table 2. DBS - East. Seasonal peak density (birds per square km) of Arctic tern recorded in flight and on the sea, S.D. and 95% confidence intervals, in the Array Areas, Array Areas and 2km buffer and Array Areas and 4km buffer.

Season	Density					
	Array Areas		Array Areas & 2km buffer		Array Areas and 4km buffer	
	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.
Spring migration	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Breeding (full)	0.11 (0.12)	0-0.36	0.11 (0.11)	0-0.31	0.12 (0.13)	0-0.35
Autumn migration	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Winter	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Non-breeding	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0

Table 3. DBS - East. Seasonal peak density (birds per square km) of Common gull recorded in flight and on the sea, S.D. and 95% confidence intervals, in the Array Areas, Array Areas and 2km buffer and Array Areas and 4km buffer.

Season	Density					
	Array Areas		Array Areas & 2km buffer		Array Areas and 4km buffer	
	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.
Spring migration	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Breeding (full)	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Autumn migration	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Winter	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Non-breeding	0.06 (0.07)	0-0.24	0.04 (0.04)	0-0.16	0.04 (0.04)	0-0.12

Table 4. DBS - East. Seasonal peak density (birds per square km) of Common tern recorded in flight and on the sea, S.D. and 95% confidence intervals, in the Array Areas, Array Areas and 2km buffer and Array Areas and 4km buffer.

Season	Density					
	Array Areas		Array Areas & 2km buffer		Array Areas and 4km buffer	
	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.
Spring migration	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Breeding (full)	0.01 (0.02)	0-0.07	0.02 (0.02)	0-0.08	0.01 (0.02)	0-0.06
Autumn migration	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Winter	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Non-breeding	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0

Table 5. DBS - East. Seasonal peak density (birds per square km) of Fulmar recorded in flight and on the sea, S.D. and 95% confidence intervals, in the Array Areas, Array Areas and 2km buffer and Array Areas and 4km buffer.

Season	Density					
	Array Areas		Array Areas & 2km buffer		Array Areas and 4km buffer	
	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.
Spring migration	0.06 (0.05)	0-0.19	0.06 (0.06)	0-0.18	0.08 (0.07)	0-0.21
Breeding (full)	0.32 (0.27)	0.05-1.06	0.27 (0.18)	0.08-0.74	0.23 (0.15)	0.06-0.59
Autumn migration	0.28 (0.2)	0.02-0.65	0.46 (0.43)	0.02-1.26	0.55 (0.51)	0.01-1.39
Winter	0.15 (0.16)	0-0.44	0.15 (0.16)	0-0.42	0.16 (0.15)	0-0.4
Non-breeding	0.28 (0.2)	0.02-0.65	0.46 (0.43)	0.02-1.26	0.55 (0.51)	0.01-1.39

Table 6. DBS - East. Seasonal peak density (birds per square km) of Gannet recorded in flight and on the sea, S.D. and 95% confidence intervals, in the Array Areas, Array Areas and 2km buffer and Array Areas and 4km buffer.

Season	Density					
	Array Areas		Array Areas & 2km buffer		Array Areas and 4km buffer	
	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.
Spring migration	0.2 (0.28)	0-0.93	0.15 (0.2)	0-0.7	0.12 (0.15)	0-0.5
Breeding (full)	1.71 (0.39)	0.97-2.48	1.48 (0.4)	0.8-2.39	1.76 (0.9)	0.83-4.07
Autumn migration	1.37 (0.49)	0.74-2.47	1.52 (0.65)	0.75-2.89	1.4 (0.46)	0.81-2.42
Winter	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Non-breeding	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0



Table 7. DBS - East. Seasonal peak density (birds per square km) of Great black-backed gull recorded in flight and on the sea, S.D. and 95% confidence intervals, in the Array Areas, Array Areas and 2km buffer and Array Areas and 4km buffer.

Season	Density					
	Array Areas		Array Areas & 2km buffer		Array Areas and 4km buffer	
	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.
Spring migration	0.26 (0.16)	0.05-0.67	0.21 (0.1)	0.07-0.46	0.25 (0.09)	0.08-0.46
Breeding (full)	0.12 (0.14)	0-0.44	0.12 (0.13)	0-0.37	0.13 (0.14)	0-0.41
Autumn migration	0.01 (0.02)	0-0.07	0.05 (0.08)	0-0.26	0.05 (0.03)	0-0.11
Winter	0.01 (0.02)	0-0.07	0.03 (0.03)	0-0.11	0.05 (0.04)	0-0.15
Non-breeding	0.26 (0.16)	0.05-0.67	0.21 (0.1)	0.07-0.46	0.25 (0.09)	0.08-0.46

Table 8. DBS - East. Seasonal peak density (birds per square km) of Great skua recorded in flight and on the sea, S.D. and 95% confidence intervals, in the Array Areas, Array Areas and 2km buffer and Array Areas and 4km buffer.

Season	Density					
	Array Areas		Array Areas & 2km buffer		Array Areas and 4km buffer	
	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.
Spring migration	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Breeding (full)	0 (0)	0-0	0.01 (0.01)	0-0.05	0.01 (0.01)	0-0.04
Autumn migration	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Winter	0.01 (0.02)	0-0.07	0.01 (0.01)	0-0.05	0.01 (0.01)	0-0.04
Non-breeding	0.01 (0.02)	0-0.07	0.01 (0.01)	0-0.05	0.01 (0.01)	0-0.04

Table 9. DBS - East. Seasonal peak density (birds per square km) of Guillemot recorded in flight and on the sea, S.D. and 95% confidence intervals, in the Array Areas, Array Areas and 2km buffer and Array Areas and 4km buffer.

Season	Density					
	Array Areas		Array Areas & 2km buffer		Array Areas and 4km buffer	
	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.
Spring migration	5.23 (3.61)	1.21-10.92	5.16 (2.09)	2.55-8.59	5.44 (2.5)	2.6-9.64
Breeding (full)	7.96 (3.03)	3.05-13.01	7.3 (2.84)	3.07-11.78	7.24 (0.85)	5.72-9.05
Autumn migration	11.54 (9.98)	1.85-31.92	10.47 (8.48)	1.8-26.11	10.78 (8.33)	2.24-25.65
Winter	15.01 (1.78)	11.71-18.88	14.44 (1.3)	11.76-17.06	13.83 (1.24)	11.28-15.95
Non-breeding	15.01 (1.78)	11.71-18.88	14.44 (1.3)	11.76-17.06	13.83 (1.24)	11.28-15.95

Table 10. DBS - East. Seasonal peak density (birds per square km) of Guillemot (including unidentified auks apportioned using identified auk ratios) recorded in flight and on the sea, S.D. and 95% confidence intervals, in the Array Areas, Array Areas and 2km buffer and Array Areas and 4km buffer.

Season	Density					
	Array Areas		Array Areas & 2km buffer		Array Areas and 4km buffer	
	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.
Spring migration	8.02 (2.85)	4.17-13.07	7.98 (3.23)	3.95-13.28	8.13 (3.73)	3.89-14.41
Breeding (full)	14.96 (5.69)	5.73-24.44	13.78 (5.36)	5.79-22.24	13.26 (4.97)	5.93-20.8
Autumn migration	12.7 (10.98)	2.03-35.12	11.49 (9.3)	1.97-28.63	12.05 (9.32)	2.51-28.69
Winter	19.2 (2.28)	14.98-24.15	18.85 (1.7)	15.36-22.28	18.17 (1.62)	14.81-20.95
Non-breeding	19.2 (2.28)	14.98-24.15	18.85 (1.7)	15.36-22.28	18.17 (1.62)	14.81-20.95

Table 11. DBS - East. Seasonal peak density (birds per square km) of Guillemot (including unidentified auks apportioned using identified auk ratios and accounting for availability bias) recorded in flight and on the sea, S.D. and 95% confidence intervals, in the Array Areas, Array Areas and 2km buffer and Array Areas and 4km buffer.

Season	Density					
	Array Areas		Array Areas & 2km buffer		Array Areas and 4km buffer	
	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.
Spring migration	10.5 (3.73)	5.46-17.11	10.45 (4.23)	5.16-17.38	10.64 (4.88)	5.1-18.86
Breeding (full)	19.19 (7.3)	7.35-31.35	17.71 (6.9)	7.45-28.59	17.07 (6.4)	7.64-26.78
Autumn migration	16.65 (14.4)	2.67-46.05	15.06 (12.2)	2.58-37.54	15.8 (12.21)	3.29-37.61
Winter	25.1 (2.98)	19.58-31.58	24.62 (2.22)	20.06-29.1	23.73 (2.12)	19.35-27.36
Non-breeding	25.1 (2.98)	19.58-31.58	24.62 (2.22)	20.06-29.1	23.73 (2.12)	19.35-27.36

Table 12. DBS - East. Seasonal peak density (birds per square km) of Herring gull recorded in flight and on the sea, S.D. and 95% confidence intervals, in the Array Areas, Array Areas and 2km buffer and Array Areas and 4km buffer.

Season	Density					
	Array Areas		Array Areas & 2km buffer		Array Areas and 4km buffer	
	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.
Spring migration	0.02 (0.04)	0-0.14	0.02 (0.03)	0-0.1	0.01 (0.02)	0-0.07
Breeding (full)	0.04 (0.05)	0-0.14	0.03 (0.04)	0-0.12	0.02 (0.03)	0-0.1
Autumn migration	0.01 (0.02)	0-0.07	0.02 (0.02)	0-0.05	0.02 (0.02)	0-0.09
Winter	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Non-breeding	0.02 (0.04)	0-0.14	0.02 (0.03)	0-0.1	0.02 (0.02)	0-0.09

Table 13. DBS - East. Seasonal peak density (birds per square km) of Kittiwake recorded in flight and on the sea, S.D. and 95% confidence intervals, in the Array Areas, Array Areas and 2km buffer and Array Areas and 4km buffer.

Season	Density					
	Array Areas		Array Areas & 2km buffer		Array Areas and 4km buffer	
	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.
Spring migration	2.71 (1.19)	1.34-5.62	2.64 (0.93)	1.52-4.98	2.88 (1.13)	1.57-5.29
Breeding (full)	16.48 (6.81)	6.14-28.49	14.89 (5.04)	6.95-23.65	13.88 (3.58)	8.14-20.41
Autumn migration	4.78 (3.37)	1.11-10.65	4.81 (3.61)	1.13-11.41	6.06 (6.16)	0.12-16.55
Winter	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Non-breeding	4.78 (3.37)	1.11-10.65	4.81 (3.61)	1.13-11.41	6.06 (6.16)	0.12-16.55

Table 14. DBS - East. Seasonal peak density (birds per square km) of Lesser black-backed gull recorded in flight and on the sea, S.D. and 95% confidence intervals, in the Array Areas, Array Areas and 2km buffer and Array Areas and 4km buffer.

Season	Density					
	Array Areas		Array Areas & 2km buffer		Array Areas and 4km buffer	
	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.
Spring migration	0.01 (0.02)	0-0.07	0.01 (0.01)	0-0.05	0.01 (0.01)	0-0.04
Breeding (full)	0.02 (0.04)	0-0.14	0.02 (0.02)	0-0.05	0.02 (0.02)	0-0.06
Autumn migration	0 (0)	0-0	0 (0)	0-0	0.01 (0.01)	0-0.04
Winter	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Non-breeding	0.01 (0.02)	0-0.07	0.01 (0.01)	0-0.05	0.01 (0.01)	0-0.04

Table 15. DBS - East. Seasonal peak density (birds per square km) of Little gull recorded in flight and on the sea, S.D. and 95% confidence intervals, in the Array Areas, Array Areas and 2km buffer and Array Areas and 4km buffer.

Season	Density					
	Array Areas		Array Areas & 2km buffer		Array Areas and 4km buffer	
	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.
Spring migration	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Breeding (full)	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Autumn migration	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Winter	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Non-breeding	0 (0)	0-0	0.2 (0.31)	0-1.14	0.18 (0.25)	0-0.76

Table 16. DBS - East. Seasonal peak density (birds per square km) of Manx shearwater recorded in flight and on the sea, S.D. and 95% confidence intervals, in the Array Areas, Array Areas and 2km buffer and Array Areas and 4km buffer.

Season	Density					
	Array Areas		Array Areas & 2km buffer		Array Areas and 4km buffer	
	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.
Spring migration	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Breeding (full)	0.01 (0.02)	0-0.07	0.01 (0.01)	0-0.05	0.01 (0.01)	0-0.04
Autumn migration	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Winter	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Non-breeding	0.01 (0.02)	0-0.07	0.01 (0.01)	0-0.05	0.01 (0.01)	0-0.04

Table 17. DBS - East. Seasonal peak density (birds per square km) of Puffin recorded in flight and on the sea, S.D. and 95% confidence intervals, in the Array Areas, Array Areas and 2km buffer and Array Areas and 4km buffer.

Season	Density					
	Array Areas		Array Areas & 2km buffer		Array Areas and 4km buffer	
	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.
Spring migration	0.06 (0.07)	0-0.22	0.06 (0.06)	0-0.18	0.07 (0.08)	0-0.23
Breeding (full)	0.12 (0.12)	0-0.31	0.11 (0.11)	0-0.29	0.1 (0.11)	0-0.3
Autumn migration	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Winter	0.27 (0.27)	0-0.81	0.26 (0.24)	0-0.68	0.27 (0.25)	0.01-0.68
Non-breeding	0.27 (0.27)	0-0.81	0.26 (0.24)	0-0.68	0.27 (0.25)	0.01-0.68

Table 18. DBS - East. Seasonal peak density (birds per square km) of Puffin (including unidentified auks apportioned using identified auk ratios) recorded in flight and on the sea, S.D. and 95% confidence intervals, in the Array Areas, Array Areas and 2km buffer and Array Areas and 4km buffer.

Season	Density					
	Array Areas		Array Areas & 2km buffer		Array Areas and 4km buffer	
	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.
Spring migration	0.06 (0.07)	0-0.22	0.06 (0.06)	0-0.18	0.07 (0.08)	0-0.23
Breeding (full)	0.12 (0.12)	0-0.31	0.11 (0.11)	0-0.29	0.1 (0.11)	0-0.3
Autumn migration	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Winter	0.3 (0.3)	0-0.88	0.3 (0.28)	0-0.79	0.31 (0.28)	0.01-0.79
Non-breeding	0.3 (0.3)	0-0.88	0.3 (0.28)	0-0.79	0.31 (0.28)	0.01-0.79

Table 19. DBS - East. Seasonal peak density (birds per square km) of Puffin (including unidentified auks apportioned using identified auk ratios and accounting for availability bias) recorded in flight and on the sea, S.D. and 95% confidence intervals, in the Array Areas, Array Areas and 2km buffer and Array Areas and 4km buffer.

Season	Density					
	Array Areas		Array Areas & 2km buffer		Array Areas and 4km buffer	
	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.
Spring migration	0.07 (0.09)	0-0.26	0.07 (0.07)	0-0.21	0.08 (0.09)	0-0.27
Breeding (full)	0.14 (0.15)	0-0.37	0.12 (0.13)	0-0.34	0.12 (0.13)	0-0.35
Autumn migration	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Winter	0.35 (0.35)	0-1.02	0.35 (0.33)	0-0.92	0.36 (0.33)	0.02-0.91
Non-breeding	0.35 (0.35)	0-1.02	0.35 (0.33)	0-0.92	0.36 (0.33)	0.02-0.91

Table 20. DBS - East. Seasonal peak density (birds per square km) of Razorbill recorded in flight and on the sea, S.D. and 95% confidence intervals, in the Array Areas, Array Areas and 2km buffer and Array Areas and 4km buffer.

Season	Density					
	Array Areas		Array Areas & 2km buffer		Array Areas and 4km buffer	
	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.
Spring migration	3.13 (1.94)	0.56-6.54	3.25 (2.04)	0.5-6.41	3.16 (1.97)	0.58-5.96
Breeding (full)	0.57 (0.21)	0.24-1.05	0.61 (0.23)	0.25-1.11	0.87 (0.49)	0.34-1.98
Autumn migration	7.72 (8.69)	0-25.52	7.17 (7.83)	0.08-22.33	6.18 (6.56)	0.06-18.04
Winter	4.55 (0.74)	3.1-5.9	4.26 (0.6)	3.26-5.46	4 (0.59)	3.02-5.16
Non-breeding	7.72 (8.69)	0-25.52	7.17 (7.83)	0.08-22.33	6.18 (6.56)	0.06-18.04

Table 21. DBS - East. Seasonal peak density (birds per square km) of Razorbill (including unidentified auks apportioned using identified auk ratios) recorded in flight and on the sea, S.D. and 95% confidence intervals, in the Array Areas, Array Areas and 2km buffer and Array Areas and 4km buffer.

Season	Density					
	Array Areas		Array Areas & 2km buffer		Array Areas and 4km buffer	
	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.
Spring migration	5.66 (3.52)	1.01-11.83	5.84 (3.66)	0.89-11.51	5.7 (3.55)	1.05-10.76
Breeding (full)	0.82 (0.3)	0.34-1.51	0.91 (0.35)	0.36-1.65	1.29 (0.72)	0.5-2.93
Autumn migration	8.25 (9.3)	0-27.3	7.59 (8.3)	0.09-23.66	6.56 (6.97)	0.06-19.16
Winter	5.76 (0.93)	3.92-7.47	5.47 (0.78)	4.18-7.01	5.14 (0.76)	3.88-6.63
Non-breeding	8.25 (9.3)	0-27.3	7.59 (8.3)	0.09-23.66	6.56 (6.97)	0.06-19.16

Table 22. DBS - East. Seasonal peak density (birds per square km) of Razorbill (including unidentified auks apportioned using identified auk ratios and accounting for availability bias) recorded in flight and on the sea, S.D. and 95% confidence intervals, in the Array Areas, Array Areas and 2km buffer and Array Areas and 4km buffer.

Season	Density					
	Array Areas		Array Areas & 2km buffer		Array Areas and 4km buffer	
	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.
Spring migration	6.82 (4.23)	1.21-14.25	7.02 (4.41)	1.07-13.84	6.87 (4.28)	1.27-12.96
Breeding (full)	0.98 (0.36)	0.41-1.79	1.09 (0.42)	0.44-1.97	1.55 (0.86)	0.59-3.51
Autumn migration	9.99 (11.26)	0-33.06	9.19 (10.05)	0.11-28.63	7.95 (8.44)	0.08-23.2
Winter	6.96 (1.13)	4.74-9.04	6.62 (0.94)	5.06-8.48	6.23 (0.92)	4.69-8.03
Non-breeding	9.99 (11.26)	0-33.06	9.19 (10.05)	0.11-28.63	7.95 (8.44)	0.08-23.2



Table 23. DBS - West. Seasonal peak density (birds per square km) of Arctic skua recorded in flight and on the sea, S.D. and 95% confidence intervals, in the wind farm, wind farm and 2km buffer and wind farm and 4km buffer.

Season	Density					
	Array Areas		Array Areas & 2km buffer		Array Areas and 4km buffer	
	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.
Spring migration	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Breeding (full)	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Autumn migration	0.01 (0.02)	0-0.07	0.01 (0.01)	0-0.05	0.01 (0.01)	0-0.04
Winter	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Non-breeding	0.01 (0.02)	0-0.07	0.01 (0.01)	0-0.05	0.01 (0.01)	0-0.04

Table 24. DBS - West. Seasonal peak density (birds per square km) of Arctic tern recorded in flight and on the sea, S.D. and 95% confidence intervals, in the wind farm, wind farm and 2km buffer and wind farm and 4km buffer.

Season	Density					
	Array Areas		Array Areas & 2km buffer		Array Areas and 4km buffer	
	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.
Spring migration	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Breeding (full)	0.06 (0.08)	0-0.26	0.07 (0.07)	0-0.2	0.08 (0.09)	0-0.26
Autumn migration	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Winter	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Non-breeding	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0

Table 25. DBS - West. Seasonal peak density (birds per square km) of Common gull recorded in flight and on the sea, S.D. and 95% confidence intervals, in the wind farm, wind farm and 2km buffer and wind farm and 4km buffer.

Season	Density					
	Array Areas		Array Areas & 2km buffer		Array Areas and 4km buffer	
	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.
Spring migration	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Breeding (full)	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Autumn migration	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Winter	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Non-breeding	0.16 (0.19)	0-0.58	0.13 (0.14)	0-0.38	0.11 (0.12)	0-0.32

Table 26. DBS - West. Seasonal peak density (birds per square km) of Common tern recorded in flight and on the sea, S.D. and 95% confidence intervals, in the wind farm, wind farm and 2km buffer and wind farm and 4km buffer.

Season	Density					
	Array Areas		Array Areas & 2km buffer		Array Areas and 4km buffer	
	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.
Spring migration	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Breeding (full)	0.02 (0.02)	0-0.07	0.02 (0.02)	0-0.05	0.01 (0.01)	0-0.04
Autumn migration	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Winter	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Non-breeding	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0

Table 27. DBS - West. Seasonal peak density (birds per square km) of Fulmar recorded in flight and on the sea, S.D. and 95% confidence intervals, in the wind farm, wind farm and 2km buffer and wind farm and 4km buffer.

Season	Density					
	Array Areas		Array Areas & 2km buffer		Array Areas and 4km buffer	
	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.
Spring migration	0.02 (0.03)	0-0.1	0.04 (0.03)	0-0.1	0.11 (0.11)	0-0.35
Breeding (full)	0.53 (0.45)	0.05-1.37	0.56 (0.44)	0.06-1.27	0.53 (0.43)	0.07-1.15
Autumn migration	0.15 (0.09)	0.02-0.36	0.17 (0.12)	0.02-0.39	0.15 (0.11)	0.01-0.31
Winter	0.11 (0.08)	0-0.28	0.18 (0.15)	0.02-0.51	0.22 (0.18)	0.02-0.54
Non-breeding	0.15 (0.09)	0.02-0.36	0.18 (0.15)	0.02-0.51	0.22 (0.18)	0.02-0.54

Table 28. DBS - West. Seasonal peak density (birds per square km) of Gannet recorded in flight and on the sea, S.D. and 95% confidence intervals, in the wind farm, wind farm and 2km buffer and wind farm and 4km buffer.

Season	Density					
	Array Areas		Array Areas & 2km buffer		Array Areas and 4km buffer	
	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.
Spring migration	0.18 (0.19)	0-0.51	0.17 (0.18)	0-0.46	0.2 (0.21)	0-0.59
Breeding (full)	1.61 (0.48)	0.78-2.56	1.55 (0.49)	0.83-2.53	1.4 (0.51)	0.73-2.35
Autumn migration	1.74 (1.06)	0.5-3.41	1.54 (0.95)	0.39-2.98	1.34 (0.81)	0.38-2.53
Winter	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Non-breeding	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0

Table 29. DBS - West. Seasonal peak density (birds per square km) of Great black-backed gull recorded in flight and on the sea, S.D. and 95% confidence intervals, in the wind farm, wind farm and 2km buffer and wind farm and 4km buffer.

Season	Density					
	Array Areas		Array Areas & 2km buffer		Array Areas and 4km buffer	
	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.
Spring migration	0.05 (0.03)	0-0.12	0.1 (0.08)	0-0.32	0.09 (0.06)	0.01-0.25
Breeding (full)	0.02 (0.04)	0-0.14	0.03 (0.06)	0-0.2	0.02 (0.04)	0-0.15
Autumn migration	0.05 (0.07)	0-0.22	0.11 (0.15)	0-0.46	0.08 (0.11)	0-0.35
Winter	0.08 (0.08)	0-0.29	0.07 (0.06)	0-0.21	0.08 (0.05)	0-0.18
Non-breeding	0.08 (0.08)	0-0.29	0.11 (0.15)	0-0.46	0.09 (0.06)	0.01-0.25

Table 30. DBS - West. Seasonal peak density (birds per square km) of Great northern diver recorded in flight and on the sea, S.D. and 95% confidence intervals, in the wind farm, wind farm and 2km buffer and wind farm and 4km buffer.

Season	Density					
	Array Areas		Array Areas & 2km buffer		Array Areas and 4km buffer	
	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.
Spring migration	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Breeding (full)	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Autumn migration	0 (0)	0-0	0 (0)	0-0	0.01 (0.01)	0-0.04
Winter	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Non-breeding	0 (0)	0-0	0 (0)	0-0	0.01 (0.01)	0-0.04

Table 31. DBS - West. Seasonal peak density (birds per square km) of Great skua recorded in flight and on the sea, S.D. and 95% confidence intervals, in the wind farm, wind farm and 2km buffer and wind farm and 4km buffer.

Season	Density					
	Array Areas		Array Areas & 2km buffer		Array Areas and 4km buffer	
	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.
Spring migration	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Breeding (full)	0 (0)	0-0	0 (0)	0-0	0.01 (0.02)	0-0.07
Autumn migration	0.01 (0.02)	0-0.07	0.02 (0.02)	0-0.05	0.01 (0.01)	0-0.04
Winter	0.01 (0.02)	0-0.08	0.01 (0.02)	0-0.06	0.02 (0.02)	0-0.07
Non-breeding	0.01 (0.02)	0-0.08	0.02 (0.02)	0-0.05	0.02 (0.02)	0-0.07

Table 32. DBS - West. Seasonal peak density (birds per square km) of Guillemot recorded in flight and on the sea, S.D. and 95% confidence intervals, in the wind farm, wind farm and 2km buffer and wind farm and 4km buffer.

Season	Density					
	Array Areas		Array Areas & 2km buffer		Array Areas and 4km buffer	
	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.
Spring migration	12.22 (9.8)	2.07-26.73	11.4 (8.77)	2.01-23.55	11.23 (8.24)	2.49-22.06
Breeding (full)	9 (1.64)	5.61-12.65	9.06 (1.51)	6.17-12.68	8.77 (1.31)	5.7-11.17
Autumn migration	19.61 (17.64)	2.15-49.19	17.08 (15.06)	2.4-42.64	17.07 (14.9)	2.6-44.32
Winter	7.49 (1.02)	5.56-9.47	7.34 (0.84)	5.73-9.01	7.46 (0.71)	6.04-8.84
Non-breeding	19.61 (17.64)	2.15-49.19	17.08 (15.06)	2.4-42.64	17.07 (14.9)	2.6-44.32

Table 33. DBS - West. Seasonal peak density (birds per square km) of Guillemot (including unidentified auks apportioned using identified auk ratios) recorded in flight and on the sea, S.D. and 95% confidence intervals, in the wind farm, wind farm and 2km buffer and wind farm and 4km buffer.

Season	Density					
	Array Areas		Array Areas & 2km buffer		Array Areas and 4km buffer	
	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.
Spring migration	15.4 (12.35)	2.6-33.68	14.6 (11.23)	2.57-30.17	14.49 (10.63)	3.22-28.46
Breeding (full)	13.33 (3.38)	8.27-19.64	13.03 (2.71)	8.69-18.2	12.34 (1.86)	8.93-16.04
Autumn migration	20.54 (18.47)	2.25-51.52	18.37 (16.2)	2.58-45.85	18.38 (16.04)	2.79-47.73
Winter	9.51 (1.29)	7.05-12.03	9.4 (1.08)	7.35-11.55	9.73 (0.93)	7.87-11.54
Non-breeding	20.54 (18.47)	2.25-51.52	18.37 (16.2)	2.58-45.85	18.38 (16.04)	2.79-47.73

Table 34. DBS - West. Seasonal peak density (birds per square km) of Guillemot (including unidentified auks apportioned using identified auk ratios and accounting for availability bias) recorded in flight and on the sea, S.D. and 95% confidence intervals, in the wind farm, wind farm and 2km buffer and wind farm and 4km buffer.

Season	Density					
	Array Areas		Array Areas & 2km buffer		Array Areas and 4km buffer	
	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.
Spring migration	20.09 (16.12)	3.4-43.95	19.06 (14.67)	3.36-39.4	18.91 (13.87)	4.2-37.13
Breeding (full)	17.32 (4.39)	10.75-25.52	16.92 (3.51)	11.28-23.64	16.02 (2.42)	11.59-20.82
Autumn migration	26.92 (24.21)	2.95-67.53	24.08 (21.23)	3.38-60.1	24.1 (21.04)	3.66-62.58
Winter	12.31 (1.67)	9.14-15.58	12.17 (1.4)	9.51-14.95	12.62 (1.21)	10.21-14.96
Non-breeding	26.92 (24.21)	2.95-67.53	24.08 (21.23)	3.38-60.1	24.1 (21.04)	3.66-62.58

Table 35. DBS - West. Seasonal peak density (birds per square km) of Herring gull recorded in flight and on the sea, S.D. and 95% confidence intervals, in the wind farm, wind farm and 2km buffer and wind farm and 4km buffer.

Season	Density					
	Array Areas		Array Areas & 2km buffer		Array Areas and 4km buffer	
	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.
Spring migration	0.01 (0.02)	0-0.07	0.01 (0.01)	0-0.05	0.01 (0.01)	0-0.04
Breeding (full)	0.02 (0.03)	0-0.12	0.02 (0.02)	0-0.07	0.02 (0.03)	0-0.1
Autumn migration	0.02 (0.03)	0-0.1	0.02 (0.02)	0-0.07	0.03 (0.03)	0-0.1
Winter	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Non-breeding	0.02 (0.03)	0-0.1	0.02 (0.02)	0-0.07	0.03 (0.03)	0-0.1

Table 36. DBS - West. Seasonal peak density (birds per square km) of Kittiwake recorded in flight and on the sea, S.D. and 95% confidence intervals, in the wind farm, wind farm and 2km buffer and wind farm and 4km buffer.

Season	Density					
	Array Areas		Array Areas & 2km buffer		Array Areas and 4km buffer	
	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.
Spring migration	3.66 (2.95)	0.77-9.87	3.16 (2.34)	0.75-7.89	2.84 (1.94)	0.85-6.57
Breeding (full)	11.99 (15.41)	0-48.53	10.64 (12.91)	0.02-39.86	9.2 (10.3)	0.05-31.46
Autumn migration	9.8 (14.38)	0.19-50.34	8.61 (11.23)	0.2-37.3	6.71 (8.46)	0.36-27.48
Winter	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Non-breeding	9.8 (14.38)	0.19-50.34	8.61 (11.23)	0.2-37.3	6.71 (8.46)	0.36-27.48

Table 37. DBS - West. Seasonal peak density (birds per square km) of Lesser black-backed gull recorded in flight and on the sea, S.D. and 95% confidence intervals, in the wind farm, wind farm and 2km buffer and wind farm and 4km buffer.

Season	Density					
	Array Areas		Array Areas & 2km buffer		Array Areas and 4km buffer	
	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.
Spring migration	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Breeding (full)	0.01 (0.02)	0-0.07	0.02 (0.04)	0-0.15	0.02 (0.03)	0-0.11
Autumn migration	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Winter	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Non-breeding	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0

Table 38. DBS - West. Seasonal peak density (birds per square km) of Little gull recorded in flight and on the sea, S.D. and 95% confidence intervals, in the wind farm, wind farm and 2km buffer and wind farm and 4km buffer.

Season	Density					
	Array Areas		Array Areas & 2km buffer		Array Areas and 4km buffer	
	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.
Spring migration	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Breeding (full)	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Autumn migration	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Winter	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Non-breeding	0.01 (0.02)	0-0.07	0.04 (0.05)	0-0.2	0.03 (0.04)	0-0.14



Table 39. DBS - West. Seasonal peak density (birds per square km) of Puffin recorded in flight and on the sea, S.D. and 95% confidence intervals, in the wind farm, wind farm and 2km buffer and wind farm and 4km buffer.

Season	Density					
	Array Areas		Array Areas & 2km buffer		Array Areas and 4km buffer	
	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.
Spring migration	0.08 (0.09)	0-0.27	0.07 (0.07)	0-0.2	0.06 (0.06)	0-0.17
Breeding (full)	0.2 (0.21)	0-0.5	0.18 (0.18)	0-0.42	0.17 (0.18)	0-0.42
Autumn migration	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Winter	0.24 (0.19)	0.02-0.62	0.31 (0.17)	0.05-0.62	0.32 (0.17)	0.07-0.63
Non-breeding	0.24 (0.19)	0.02-0.62	0.31 (0.17)	0.05-0.62	0.32 (0.17)	0.07-0.63

Table 40. DBS - West. Seasonal peak density (birds per square km) of Puffin (including unidentified auks apportioned using identified auk ratios) recorded in flight and on the sea, S.D. and 95% confidence intervals, in the wind farm, wind farm and 2km buffer and wind farm and 4km buffer.

Season	Density					
	Array Areas		Array Areas & 2km buffer		Array Areas and 4km buffer	
	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.
Spring migration	0.08 (0.09)	0-0.27	0.07 (0.07)	0-0.2	0.06 (0.06)	0-0.17
Breeding (full)	0.2 (0.21)	0-0.5	0.18 (0.18)	0-0.42	0.17 (0.18)	0-0.42
Autumn migration	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Winter	0.25 (0.2)	0.03-0.65	0.32 (0.18)	0.05-0.65	0.34 (0.18)	0.08-0.67
Non-breeding	0.25 (0.2)	0.03-0.65	0.32 (0.18)	0.05-0.65	0.34 (0.18)	0.08-0.67

Table 41. DBS - West. Seasonal peak density (birds per square km) of Puffin (including unidentified auks apportioned using identified auk ratios and accounting for availability bias) recorded in flight and on the sea, S.D. and 95% confidence intervals, in the wind farm, wind farm and 2km buffer and wind farm and 4km buffer.

Season	Density					
	Array Areas		Array Areas & 2km buffer		Array Areas and 4km buffer	
	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.
Spring migration	0.1 (0.11)	0-0.3	0.08 (0.08)	0-0.23	0.07 (0.08)	0-0.2
Breeding (full)	0.24 (0.24)	0-0.58	0.21 (0.21)	0-0.5	0.2 (0.21)	0-0.49
Autumn migration	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Winter	0.29 (0.22)	0.03-0.74	0.38 (0.21)	0.06-0.76	0.39 (0.2)	0.09-0.77
Non-breeding	0.29 (0.22)	0.03-0.74	0.38 (0.21)	0.06-0.76	0.39 (0.2)	0.09-0.77

Table 42. DBS - West. Seasonal peak density (birds per square km) of Razorbill recorded in flight and on the sea, S.D. and 95% confidence intervals, in the wind farm, wind farm and 2km buffer and wind farm and 4km buffer.

Season	Density					
	Array Areas		Array Areas & 2km buffer		Array Areas and 4km buffer	
	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.
Spring migration	5.5 (4.59)	0.59-12.81	5.24 (3.95)	0.75-11.22	5.25 (3.83)	0.94-10.89
Breeding (full)	2.6 (1.13)	0.88-4.9	2.35 (1.06)	0.74-4.23	2.01 (0.88)	0.63-3.59
Autumn migration	7.14 (10.21)	0.02-35.3	5.92 (7.65)	0.05-24.94	4.89 (6.57)	0.07-21.43
Winter	6.12 (5)	0.72-14.22	6.28 (5.23)	0.72-14.23	5.86 (5.09)	0.52-13.54
Non-breeding	7.14 (10.21)	0.02-35.3	6.28 (5.23)	0.72-14.23	5.86 (5.09)	0.52-13.54

Table 43. DBS - West. Seasonal peak density (birds per square km) of Razorbill (including unidentified auks apportioned using identified auk ratios) recorded in flight and on the sea, S.D. and 95% confidence intervals, in the wind farm, wind farm and 2km buffer and wind farm and 4km buffer.

Season	Density					
	Array Areas		Array Areas & 2km buffer		Array Areas and 4km buffer	
	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.
Spring migration	7.15 (5.96)	0.77-16.65	7.09 (5.34)	1.02-15.19	7.06 (5.14)	1.26-14.64
Breeding (full)	3.97 (1.72)	1.34-7.49	3.65 (1.66)	1.16-6.58	3.16 (1.38)	0.99-5.64
Autumn migration	8.6 (12.29)	0.03-42.51	7.79 (10.06)	0.06-32.79	6.38 (8.57)	0.09-27.95
Winter	7.76 (6.34)	0.92-18.03	8.07 (6.72)	0.93-18.29	7.43 (6.46)	0.66-17.19
Non-breeding	8.6 (12.29)	0.03-42.51	8.07 (6.72)	0.93-18.29	7.43 (6.46)	0.66-17.19

Table 44. DBS - West. Seasonal peak density (birds per square km) of Razorbill (including unidentified auks apportioned using identified auk ratios and accounting for availability bias) recorded in flight and on the sea, S.D. and 95% confidence intervals, in the wind farm, wind farm and 2km buffer and wind farm and 4km buffer.

Season	Density					
	Array Areas		Array Areas & 2km buffer		Array Areas and 4km buffer	
	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.
Spring migration	8.65 (7.22)	0.93-20.14	8.58 (6.46)	1.23-18.38	8.55 (6.22)	1.53-17.72
Breeding (full)	4.76 (2.06)	1.61-8.98	4.39 (1.99)	1.39-7.92	3.79 (1.66)	1.19-6.78
Autumn migration	10.4 (14.88)	0.03-51.44	9.41 (12.16)	0.08-39.64	7.71 (10.36)	0.11-33.79
Winter	9.39 (7.67)	1.11-21.81	9.76 (8.13)	1.12-22.13	9 (7.81)	0.79-20.81
Non-breeding	10.4 (14.88)	0.03-51.44	9.76 (8.13)	1.12-22.13	9 (7.81)	0.79-20.81

Table 45. DBS - West. Seasonal peak density (birds per square km) of Red-throated diver recorded in flight and on the sea, S.D. and 95% confidence intervals, in the wind farm, wind farm and 2km buffer and wind farm and 4km buffer.

Season	Density					
	Array Areas		Array Areas & 2km buffer		Array Areas and 4km buffer	
	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.
Spring migration	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Breeding (full)	0 (0)	0-0	0 (0)	0-0	0.01 (0.01)	0-0.04
Autumn migration	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Winter	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Non-breeding	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0

Table 46. DBS - East & West. Seasonal peak density (birds per square km) of Arctic skua recorded in flight and on the sea, S.D. and 95% confidence intervals, in the Array Areas, Array Areas and 2km buffers and Array Areas and 4km buffers.

Season	Density					
	Array Areas		Array Areas & 2km buffer		Array Areas and 4km buffer	
	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.
Spring migration	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Breeding (full)	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Autumn migration	0.01 (0.01)	0-0.04	0 (0.01)	0-0.02	0.01 (0.01)	0-0.02
Winter	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Non-breeding	0.01 (0.01)	0-0.04	0 (0.01)	0-0.02	0.01 (0.01)	0-0.02

Table 47. DBS - East & West. Seasonal peak density (birds per square km) of Arctic tern recorded in flight and on the sea, S.D. and 95% confidence intervals, in the Array Areas, Array Areas and 2km buffers and Array Areas and 4km buffers.

Season	Density					
	Array Areas		Array Areas & 2km buffer		Array Areas and 4km buffer	
	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.
Spring migration	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Breeding (full)	0.08 (0.09)	0-0.28	0.09 (0.09)	0-0.23	0.1 (0.11)	0-0.27
Autumn migration	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Winter	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Non-breeding	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0

Table 48. DBS - East & West. Seasonal peak density (birds per square km) of Common gull recorded in flight and on the sea, S.D. and 95% confidence intervals, in the Array Areas, Array Areas and 2km buffers and Array Areas and 4km buffers.

Season	Density					
	Array Areas		Array Areas & 2km buffer		Array Areas and 4km buffer	
	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.
Spring migration	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Breeding (full)	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Autumn migration	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Winter	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Non-breeding	0.11 (0.11)	0-0.35	0.09 (0.08)	0-0.24	0.08 (0.07)	0-0.2

Table 49. DBS - East & West. Seasonal peak density (birds per square km) of Common tern recorded in flight and on the sea, S.D. and 95% confidence intervals, in the Array Areas, Array Areas and 2km buffers and Array Areas and 4km buffers.

Season	Density					
	Array Areas		Array Areas & 2km buffer		Array Areas and 4km buffer	
	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.
Spring migration	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Breeding (full)	0.01 (0.01)	0-0.04	0.01 (0.01)	0-0.02	0.01 (0.01)	0-0.03
Autumn migration	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Winter	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Non-breeding	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0

Table 50. DBS - East & West. Seasonal peak density (birds per square km) of Fulmar recorded in flight and on the sea, S.D. and 95% confidence intervals, in the Array Areas, Array Areas and 2km buffers and Array Areas and 4km buffers.

Season	Density					
	Array Areas		Array Areas & 2km buffer		Array Areas and 4km buffer	
	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.
Spring migration	0.04 (0.04)	0-0.12	0.05 (0.03)	0-0.12	0.1 (0.09)	0-0.26
Breeding (full)	0.39 (0.3)	0.07-0.91	0.39 (0.28)	0.06-0.84	0.37 (0.26)	0.07-0.74
Autumn migration	0.21 (0.13)	0.05-0.44	0.31 (0.26)	0.03-0.78	0.35 (0.31)	0.02-0.83
Winter	0.13 (0.11)	0-0.32	0.16 (0.15)	0.01-0.43	0.19 (0.16)	0.02-0.44
Non-breeding	0.21 (0.13)	0.05-0.44	0.31 (0.26)	0.03-0.78	0.35 (0.31)	0.02-0.83

Table 51. DBS - East & West. Seasonal peak density (birds per square km) of Gannet recorded in flight and on the sea, S.D. and 95% confidence intervals, in the Array Areas, Array Areas and 2km buffers and Array Areas and 4km buffers.

Season	Density					
	Array Areas		Array Areas & 2km buffer		Array Areas and 4km buffer	
	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.
Spring migration	0.15 (0.15)	0-0.43	0.13 (0.13)	0-0.36	0.15 (0.15)	0-0.42
Breeding (full)	1.32 (0.39)	0.73-2.05	1.3 (0.4)	0.74-2.02	1.25 (0.49)	0.65-2.03
Autumn migration	1.56 (0.73)	0.69-2.73	1.53 (0.76)	0.63-2.74	1.37 (0.61)	0.66-2.32
Winter	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Non-breeding	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0

Table 52. DBS - East & West. Seasonal peak density (birds per square km) of Great black-backed gull recorded in flight and on the sea, S.D. and 95% confidence intervals, in the Array Areas, Array Areas and 2km buffers and Array Areas and 4km buffers.

Season	Density					
	Array Areas		Array Areas & 2km buffer		Array Areas and 4km buffer	
	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.
Spring migration	0.15 (0.09)	0.04-0.38	0.14 (0.05)	0.06-0.27	0.16 (0.05)	0.07-0.27
Breeding (full)	0.06 (0.07)	0-0.21	0.06 (0.06)	0-0.18	0.08 (0.08)	0-0.23
Autumn migration	0.02 (0.03)	0-0.11	0.06 (0.08)	0-0.25	0.04 (0.06)	0-0.19
Winter	0.05 (0.04)	0-0.16	0.05 (0.03)	0-0.12	0.07 (0.04)	0.01-0.14
Non-breeding	0.15 (0.09)	0.04-0.38	0.14 (0.05)	0.06-0.27	0.16 (0.05)	0.07-0.27

Table 53. DBS - East & West. Seasonal peak density (birds per square km) of Great northern diver recorded in flight and on the sea, S.D. and 95% confidence intervals, in the Array Areas, Array Areas and 2km buffers and Array Areas and 4km buffers.

Season	Density					
	Array Areas		Array Areas & 2km buffer		Array Areas and 4km buffer	
	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.
Spring migration	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Breeding (full)	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Autumn migration	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0.02
Winter	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Non-breeding	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0.02

Table 54. DBS - East & West. Seasonal peak density (birds per square km) of Great skua recorded in flight and on the sea, S.D. and 95% confidence intervals, in the Array Areas, Array Areas and 2km buffers and Array Areas and 4km buffers.

Season	Density					
	Array Areas		Array Areas & 2km buffer		Array Areas and 4km buffer	
	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.
Spring migration	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Breeding (full)	0 (0)	0-0	0 (0.01)	0-0.02	0.01 (0.01)	0-0.04
Autumn migration	0.01 (0.01)	0-0.04	0.01 (0.01)	0-0.03	0.01 (0.01)	0-0.02
Winter	0.01 (0.01)	0-0.04	0.01 (0.01)	0-0.03	0.01 (0.01)	0-0.03
Non-breeding	0.01 (0.01)	0-0.04	0.01 (0.01)	0-0.03	0.01 (0.01)	0-0.03



Table 55. DBS - East & West. Seasonal peak density (birds per square km) of Guillemot recorded in flight and on the sea, S.D. and 95% confidence intervals, in the Array Areas, Array Areas and 2km buffers and Array Areas and 4km buffers.

Season	Density					
	Array Areas		Array Areas & 2km buffer		Array Areas and 4km buffer	
	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.
Spring migration	8.66 (5.74)	2.55-16.89	8.3 (5.4)	2.49-15.57	8.34 (5.32)	2.7-15.23
Breeding (full)	7.76 (0.99)	5.9-9.98	7.8 (0.86)	6.08-9.73	8.01 (0.77)	6.3-9.48
Autumn migration	15.61 (13.24)	2.2-37.1	13.78 (11.4)	2.24-31.76	13.92 (11.25)	2.64-32.39
Winter	11.22 (1.01)	9.48-13.53	11.04 (0.77)	9.48-12.59	10.78 (0.84)	9.07-12.22
Non-breeding	15.61 (13.24)	2.2-37.1	13.78 (11.4)	2.24-31.76	13.92 (11.25)	2.64-32.39

Table 56. DBS - East & West. Seasonal peak density (birds per square km) of Guillemot (including unidentified auks apportioned using identified auk ratios) recorded in flight and on the sea, S.D. and 95% confidence intervals, in the Array Areas, Array Areas and 2km buffers and Array Areas and 4km buffers.

Season	Density					
	Array Areas		Array Areas & 2km buffer		Array Areas and 4km buffer	
	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.
Spring migration	11.74 (7.78)	3.46-22.91	11.32 (7.36)	3.39-21.23	11.32 (7.22)	3.67-20.66
Breeding (full)	11.21 (5.05)	4.27-18.64	11.29 (5.26)	4.62-18.6	12.71 (5.35)	5.63-20.15
Autumn migration	16.65 (14.13)	2.35-39.58	14.93 (12.35)	2.43-34.41	15.21 (12.29)	2.89-35.38
Winter	14.31 (1.29)	12.09-17.26	14.36 (1)	12.34-16.38	14.14 (1.11)	11.9-16.04
Non-breeding	16.65 (14.13)	2.35-39.58	14.93 (12.35)	2.43-34.41	15.21 (12.29)	2.89-35.38

Table 57. DBS - East & West. Seasonal peak density (birds per square km) of Guillemot (including unidentified auks apportioned using identified auk ratios and accounting for availability bias) recorded in flight and on the sea, S.D. and 95% confidence intervals, in the Array Areas, Array Areas and 2km buffers and Array Areas and 4km buffers.

Season	Density					
	Array Areas		Array Areas & 2km buffer		Array Areas and 4km buffer	
	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.
Spring migration	15.33 (10.16)	4.52-29.93	14.79 (9.61)	4.43-27.75	14.78 (9.43)	4.79-26.98
Breeding (full)	14.36 (6.47)	5.47-23.89	14.51 (6.76)	5.94-23.9	16.38 (6.89)	7.26-25.97
Autumn migration	21.82 (18.52)	3.08-51.88	19.57 (16.19)	3.18-45.11	19.93 (16.11)	3.78-46.38
Winter	18.65 (1.69)	15.76-22.5	18.7 (1.31)	16.07-21.33	18.43 (1.44)	15.51-20.9
Non-breeding	21.82 (18.52)	3.08-51.88	19.57 (16.19)	3.18-45.11	19.93 (16.11)	3.78-46.38

Table 58. DBS - East & West. Seasonal peak density (birds per square km) of Herring gull recorded in flight and on the sea, S.D. and 95% confidence intervals, in the Array Areas, Array Areas and 2km buffers and Array Areas and 4km buffers.

Season	Density					
	Array Areas		Array Areas & 2km buffer		Array Areas and 4km buffer	
	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.
Spring migration	0.02 (0.02)	0-0.07	0.01 (0.01)	0-0.05	0.01 (0.01)	0-0.04
Breeding (full)	0.02 (0.02)	0-0.07	0.02 (0.02)	0-0.06	0.02 (0.02)	0-0.05
Autumn migration	0.02 (0.02)	0-0.05	0.02 (0.01)	0-0.05	0.03 (0.02)	0-0.08
Winter	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Non-breeding	0.02 (0.02)	0-0.05	0.02 (0.01)	0-0.05	0.03 (0.02)	0-0.08

Table 59. DBS - East & West. Seasonal peak density (birds per square km) of Kittiwake recorded in flight and on the sea, S.D. and 95% confidence intervals, in the Array Areas, Array Areas and 2km buffers and Array Areas and 4km buffers.

Season	Density					
	Array Areas		Array Areas & 2km buffer		Array Areas and 4km buffer	
	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.
Spring migration	2.98 (2.15)	0.8-7.19	2.68 (1.83)	0.77-5.87	2.83 (0.95)	1.66-4.65
Breeding (full)	9.99 (4.12)	3.99-16.88	10.09 (2.69)	5.3-14.69	9.88 (1.96)	6.29-13.29
Autumn migration	5.34 (7.4)	0.49-26.4	5.07 (4.91)	0.12-11.92	6.2 (6.12)	0.13-15.05
Winter	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Non-breeding	5.34 (7.4)	0.49-26.4	5.07 (4.91)	0.12-11.92	6.2 (6.12)	0.13-15.05

Table 60. DBS - East & West. Seasonal peak density (birds per square km) of Lesser black-backed gull recorded in flight and on the sea, S.D. and 95% confidence intervals, in the Array Areas, Array Areas and 2km buffers and Array Areas and 4km buffers.

Season	Density					
	Array Areas		Array Areas & 2km buffer		Array Areas and 4km buffer	
	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.
Spring migration	0.01 (0.01)	0-0.04	0 (0.01)	0-0.02	0 (0.01)	0-0.02
Breeding (full)	0.01 (0.02)	0-0.07	0.01 (0.02)	0-0.07	0.01 (0.01)	0-0.03
Autumn migration	0 (0)	0-0	0 (0)	0-0	0 (0.01)	0-0.02
Winter	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Non-breeding	0.01 (0.01)	0-0.04	0 (0.01)	0-0.02	0 (0.01)	0-0.02

Table 61. DBS - East & West. Seasonal peak density (birds per square km) of Little gull recorded in flight and on the sea, S.D. and 95% confidence intervals, in the Array Areas, Array Areas and 2km buffers and Array Areas and 4km buffers.

Season	Density					
	Array Areas		Array Areas & 2km buffer		Array Areas and 4km buffer	
	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.
Spring migration	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Breeding (full)	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Autumn migration	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Winter	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Non-breeding	0.01 (0.01)	0-0.04	0.12 (0.16)	0-0.57	0.11 (0.13)	0-0.43

Table 62. DBS - East & West. Seasonal peak density (birds per square km) of Manx shearwater recorded in flight and on the sea, S.D. and 95% confidence intervals, in the Array Areas, Array Areas and 2km buffers and Array Areas and 4km buffers.

Season	Density					
	Array Areas		Array Areas & 2km buffer		Array Areas and 4km buffer	
	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.
Spring migration	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Breeding (full)	0.01 (0.01)	0-0.04	0 (0.01)	0-0.02	0 (0.01)	0-0.02
Autumn migration	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Winter	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Non-breeding	0.01 (0.01)	0-0.04	0 (0.01)	0-0.02	0 (0)	0-0.02

Table 63. DBS - East & West. Seasonal peak density (birds per square km) of Puffin recorded in flight and on the sea, S.D. and 95% confidence intervals, in the Array Areas, Array Areas and 2km buffers and Array Areas and 4km buffers.

Season	Density					
	Array Areas		Array Areas & 2km buffer		Array Areas and 4km buffer	
	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.
Spring migration	0.07 (0.08)	0-0.22	0.06 (0.07)	0-0.17	0.07 (0.07)	0-0.18
Breeding (full)	0.14 (0.13)	0-0.34	0.12 (0.12)	0-0.28	0.12 (0.12)	0-0.28
Autumn migration	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Winter	0.26 (0.22)	0.02-0.63	0.28 (0.19)	0.03-0.59	0.3 (0.2)	0.05-0.6
Non-breeding	0.26 (0.22)	0.02-0.63	0.28 (0.19)	0.03-0.59	0.3 (0.2)	0.05-0.6

Table 64. DBS - East & West. Seasonal peak density (birds per square km) of Puffin (including unidentified auks apportioned using identified auk ratios) recorded in flight and on the sea, S.D. and 95% confidence intervals, in the Array Areas, Array Areas and 2km buffers and Array Areas and 4km buffers.

Season	Density					
	Array Areas		Array Areas & 2km buffer		Array Areas and 4km buffer	
	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.
Spring migration	0.07 (0.08)	0-0.22	0.06 (0.07)	0-0.17	0.07 (0.07)	0-0.18
Breeding (full)	0.14 (0.13)	0-0.34	0.12 (0.12)	0-0.28	0.12 (0.12)	0-0.28
Autumn migration	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Winter	0.27 (0.23)	0.03-0.67	0.31 (0.21)	0.04-0.64	0.32 (0.22)	0.06-0.65
Non-breeding	0.27 (0.23)	0.03-0.67	0.31 (0.21)	0.04-0.64	0.32 (0.22)	0.06-0.65

Table 65. DBS - East & West. Seasonal peak density (birds per square km) of Puffin (including unidentified auks apportioned using identified auk ratios and accounting for availability bias) recorded in flight and on the sea, S.D. and 95% confidence intervals, in the Array Areas, Array Areas and 2km buffers and Array Areas and 4km buffers.

Season	Density					
	Array Areas		Array Areas & 2km buffer		Array Areas and 4km buffer	
	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.
Spring migration	0.08 (0.09)	0-0.25	0.07 (0.07)	0-0.19	0.08 (0.08)	0-0.21
Breeding (full)	0.17 (0.16)	0-0.4	0.14 (0.14)	0-0.33	0.14 (0.13)	0-0.32
Autumn migration	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Winter	0.32 (0.27)	0.03-0.78	0.36 (0.25)	0.04-0.76	0.38 (0.25)	0.07-0.76
Non-breeding	0.32 (0.27)	0.03-0.78	0.36 (0.25)	0.04-0.76	0.38 (0.25)	0.07-0.76

Table 66. DBS - East & West. Seasonal peak density (birds per square km) of Razorbill recorded in flight and on the sea, S.D. and 95% confidence intervals, in the Array Areas, Array Areas and 2km buffers and Array Areas and 4km buffers.

Season	Density					
	Array Areas		Array Areas & 2km buffer		Array Areas and 4km buffer	
	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.
Spring migration	3.86 (3.19)	0.49-8.71	3.71 (2.82)	0.61-7.74	3.72 (2.73)	0.71-7.54
Breeding (full)	1.59 (0.6)	0.68-2.8	1.49 (0.61)	0.55-2.55	1.44 (0.63)	0.55-2.57
Autumn migration	5.22 (5.7)	0.01-15.97	4.81 (5.1)	0.05-14.01	4.5 (4.61)	0.08-12.25
Winter	3.73 (3.06)	0.4-8.31	3.68 (3.08)	0.42-8.2	3.62 (3.12)	0.35-8.07
Non-breeding	5.22 (5.7)	0.01-15.97	4.81 (5.1)	0.05-14.01	4.5 (4.61)	0.08-12.25

Table 67. DBS - East & West. Seasonal peak density (birds per square km) of Razorbill (including unidentified auks apportioned using identified auk ratios) recorded in flight and on the sea, S.D. and 95% confidence intervals, in the Array Areas, Array Areas and 2km buffers and Array Areas and 4km buffers.

Season	Density					
	Array Areas		Array Areas & 2km buffer		Array Areas and 4km buffer	
	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.
Spring migration	5.01 (4.14)	0.63-11.3	5.09 (1.78)	1.53-7.73	4.98 (3.66)	0.95-10.1
Breeding (full)	2.41 (0.91)	1.02-4.23	2.28 (0.94)	0.85-3.92	2.21 (0.96)	0.85-3.94
Autumn migration	5.54 (6.05)	0.01-16.95	5.09 (5.4)	0.05-14.83	4.77 (4.89)	0.08-13
Winter	4.67 (3.83)	0.5-10.4	4.68 (3.92)	0.54-10.45	4.62 (3.98)	0.45-10.31
Non-breeding	5.54 (6.05)	0.01-16.95	5.09 (5.4)	0.05-14.83	4.98 (3.66)	0.95-10.1

Table 68. DBS - East & West. Seasonal peak density (birds per square km) of Razorbill (including unidentified auks apportioned using identified auk ratios and accounting for availability bias) recorded in flight and on the sea, S.D. and 95% confidence intervals, in the Array Areas, Array Areas and 2km buffers and Array Areas and 4km buffers.

Season	Density					
	Array Areas		Array Areas & 2km buffer		Array Areas and 4km buffer	
	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.
Spring migration	6.06 (5)	0.77-13.67	6.13 (2.15)	1.84-9.31	6.02 (4.42)	1.15-12.22
Breeding (full)	2.88 (1.09)	1.22-5.06	2.75 (1.14)	1.02-4.71	2.65 (1.15)	1.02-4.73
Autumn migration	6.7 (7.32)	0.02-20.52	6.17 (6.54)	0.06-17.96	5.78 (5.93)	0.1-15.74
Winter	5.64 (4.62)	0.6-12.56	5.66 (4.74)	0.65-12.62	5.58 (4.81)	0.54-12.47
Non-breeding	6.7 (7.32)	0.02-20.52	6.17 (6.54)	0.06-17.96	6.02 (4.42)	1.15-12.22

Table 69. DBS - East & West. Seasonal peak density (birds per square km) of Red-throated diver recorded in flight and on the sea, S.D. and 95% confidence intervals, in the Array Areas, Array Areas and 2km buffers and Array Areas and 4km buffers.

Season	Density					
	Array Areas		Array Areas & 2km buffer		Array Areas and 4km buffer	
	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.
Spring migration	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Breeding (full)	0 (0)	0-0	0 (0)	0-0	0 (0.01)	0-0.02
Autumn migration	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Winter	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Non-breeding	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0





MacArthur  
Green

# Dogger Bank South Offshore Windfarm

## Ornithology Technical Appendix 12-6b Seabird peak seasonal densities: birds on the sea

---

**Date:** 18/03/2024

**Tel:** 0141 342 5404

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

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

---

## Document Quality Record

Version	Status	Person Responsible	Date
0.1	Draft	Dr Mark Trinder	16/10/2023
0.2	Reviewed	Dr Shirley Raveh	31/10/2023
1	Updated and approved	Dr Mark Trinder	18/03/2024

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



## 1 INTRODUCTION

This appendix provides tables of seabird peak densities in each species-specific season, as defined in Furness (2015)<sup>1</sup> for each species recorded during baseline surveys for the DBS East and West Offshore Wind Farm Projects (March 2021 – February 2023).

Densities were estimated using design-based methods and are summarised as central estimate (i.e. extrapolated from the number seen in the surveyed area to the whole area) and 95% confidence range, derived from 1,000 nonparametric bootstrap samples.

Appendix (a) provides the combined peak density in each species-specific season on the water and in flight.

This appendix (b) provides the peak density in each species-specific season on the water.

Appendix (c) provides the peak density in each species-specific season in flight.

---

<sup>1</sup> Furness, R.W. 2015. Non-breeding season populations of seabirds in UK waters: Population sizes for Biologically Defined Minimum Population Scales (BDMPS). Natural England Commissioned Report Number 164. 389 pp.

Table 1. DBS - East. Seasonal peak density (birds per square km) of Arctic skua recorded on the sea, S.D. and 95% confidence intervals, in the Array Areas, Array Areas and 2km buffer and Array Areas and 4km buffer.

Season	Density					
	Array Areas		Array Areas & 2km buffer		Array Areas and 4km buffer	
	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.
Spring migration	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Breeding (full)	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Autumn migration	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Winter	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Non-breeding	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0

Table 2. DBS - East. Seasonal peak density (birds per square km) of Arctic tern recorded on the sea, S.D. and 95% confidence intervals, in the Array Areas, Array Areas and 2km buffer and Array Areas and 4km buffer.

Season	Density					
	Array Areas		Array Areas & 2km buffer		Array Areas and 4km buffer	
	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.
Spring migration	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Breeding (full)	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Autumn migration	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Winter	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Non-breeding	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0

Table 3. DBS - East. Seasonal peak density (birds per square km) of Common gull recorded on the sea, S.D. and 95% confidence intervals, in the Array Areas, Array Areas and 2km buffer and Array Areas and 4km buffer.

Season	Density					
	Array Areas		Array Areas & 2km buffer		Array Areas and 4km buffer	
	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.
Spring migration	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Breeding (full)	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Autumn migration	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Winter	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Non-breeding	0.02 (0.04)	0-0.14	0.02 (0.03)	0-0.1	0.01 (0.02)	0-0.07

Table 4. DBS - East. Seasonal peak density (birds per square km) of Common tern recorded on the sea, S.D. and 95% confidence intervals, in the Array Areas, Array Areas and 2km buffer and Array Areas and 4km buffer.

Season	Density					
	Array Areas		Array Areas & 2km buffer		Array Areas and 4km buffer	
	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.
Spring migration	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Breeding (full)	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Autumn migration	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Winter	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Non-breeding	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0

Table 5. DBS - East. Seasonal peak density (birds per square km) of Fulmar recorded on the sea, S.D. and 95% confidence intervals, in the Array Areas, Array Areas and 2km buffer and Array Areas and 4km buffer.

Season	Density					
	Array Areas		Array Areas & 2km buffer		Array Areas and 4km buffer	
	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.
Spring migration	0.01 (0.02)	0-0.07	0.02 (0.02)	0-0.05	0.04 (0.03)	0-0.09
Breeding (full)	0.17 (0.18)	0-0.65	0.13 (0.13)	0-0.38	0.11 (0.12)	0-0.37
Autumn migration	0.18 (0.17)	0-0.53	0.3 (0.28)	0-0.77	0.4 (0.38)	0-0.97
Winter	0.04 (0.05)	0-0.15	0.02 (0.03)	0-0.1	0.05 (0.04)	0-0.13
Non-breeding	0.18 (0.17)	0-0.53	0.3 (0.28)	0-0.77	0.4 (0.38)	0-0.97

Table 6. DBS - East. Seasonal peak density (birds per square km) of Gannet recorded on the sea, S.D. and 95% confidence intervals, in the Array Areas, Array Areas and 2km buffer and Array Areas and 4km buffer.

Season	Density					
	Array Areas		Array Areas & 2km buffer		Array Areas and 4km buffer	
	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.
Spring migration	0.17 (0.26)	0-0.93	0.11 (0.18)	0-0.65	0.08 (0.13)	0-0.48
Breeding (full)	1.51 (0.39)	0.82-2.37	1.25 (0.45)	0.6-2.32	1.54 (1)	0.52-3.97
Autumn migration	0.84 (0.63)	0.14-1.99	0.98 (0.71)	0.21-2.23	0.85 (0.53)	0.25-1.84
Winter	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Non-breeding	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0

Table 7. DBS - East. Seasonal peak density (birds per square km) of Great black-backed gull recorded on the sea, S.D. and 95% confidence intervals, in the Array Areas, Array Areas and 2km buffer and Array Areas and 4km buffer.

Season	Density					
	Array Areas		Array Areas & 2km buffer		Array Areas and 4km buffer	
	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.
Spring migration	0.2 (0.13)	0.02-0.55	0.15 (0.09)	0.03-0.38	0.2 (0.08)	0.06-0.38
Breeding (full)	0.12 (0.14)	0-0.41	0.09 (0.1)	0-0.3	0.11 (0.12)	0-0.34
Autumn migration	0 (0)	0-0	0.04 (0.07)	0-0.25	0.03 (0.05)	0-0.18
Winter	0.01 (0.02)	0-0.07	0.02 (0.03)	0-0.1	0.03 (0.02)	0-0.08
Non-breeding	0.2 (0.13)	0.02-0.55	0.15 (0.09)	0.03-0.38	0.2 (0.08)	0.06-0.38

Table 8. DBS - East. Seasonal peak density (birds per square km) of Great skua recorded on the sea, S.D. and 95% confidence intervals, in the Array Areas, Array Areas and 2km buffer and Array Areas and 4km buffer.

Season	Density					
	Array Areas		Array Areas & 2km buffer		Array Areas and 4km buffer	
	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.
Spring migration	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Breeding (full)	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Autumn migration	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Winter	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Non-breeding	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0

Table 9. DBS - East. Seasonal peak density (birds per square km) of Guillemot recorded on the sea, S.D. and 95% confidence intervals, in the Array Areas, Array Areas and 2km buffer and Array Areas and 4km buffer.

Season	Density					
	Array Areas		Array Areas & 2km buffer		Array Areas and 4km buffer	
	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.
Spring migration	5.19 (3.61)	1.17-10.98	5.12 (2.08)	2.62-8.57	5.39 (2.49)	2.57-9.46
Breeding (full)	7.2 (2.62)	2.93-11.71	6.67 (2.4)	2.95-10.5	7.12 (0.82)	5.61-8.83
Autumn migration	11.54 (10.24)	1.85-32.2	10.47 (8.87)	1.78-27.26	10.78 (8.17)	2.3-25.21
Winter	14.83 (1.83)	11.61-18.71	14.22 (1.27)	11.57-16.65	13.61 (1.29)	11.03-15.78
Non-breeding	14.83 (1.83)	11.61-18.71	14.22 (1.27)	11.57-16.65	13.61 (1.29)	11.03-15.78

Table 10. DBS - East. Seasonal peak density (birds per square km) of Guillemot (including unidentified auks apportioned using identified auk ratios) recorded on the sea, S.D. and 95% confidence intervals, in the Array Areas, Array Areas and 2km buffer and Array Areas and 4km buffer.

Season	Density					
	Array Areas		Array Areas & 2km buffer		Array Areas and 4km buffer	
	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.
Spring migration	7.96 (2.87)	4.18-13.02	7.94 (3.22)	4.06-13.29	8.09 (3.73)	3.86-14.21
Breeding (full)	13.87 (5.04)	5.64-22.55	12.9 (4.64)	5.72-20.32	12.46 (4.32)	5.82-19.21
Autumn migration	12.7 (11.27)	2.03-35.44	11.49 (9.72)	1.95-29.89	12.05 (9.14)	2.58-28.2
Winter	18.94 (2.34)	14.83-23.9	18.55 (1.66)	15.1-21.72	17.84 (1.69)	14.45-20.68
Non-breeding	18.94 (2.34)	14.83-23.9	18.55 (1.66)	15.1-21.72	17.84 (1.69)	14.45-20.68



Table 11. DBS - East. Seasonal peak density (birds per square km) of Guillemot (including unidentified auks apportioned using identified auk ratios and accounting for availability bias) recorded on the sea, S.D. and 95% confidence intervals, in the Array Areas, Array Areas and 2km buffer and Array Areas and 4km buffer.

Season	Density					
	Array Areas		Array Areas & 2km buffer		Array Areas and 4km buffer	
	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.
Spring migration	10.44 (3.76)	5.48-17.08	10.42 (4.23)	5.33-17.44	10.61 (4.9)	5.05-18.62
Breeding (full)	18.19 (6.6)	7.39-29.56	16.91 (6.08)	7.5-26.64	16.34 (5.66)	7.63-25.18
Autumn migration	16.65 (14.77)	2.67-46.46	15.06 (12.75)	2.56-39.19	15.8 (11.98)	3.38-36.96
Winter	24.83 (3.06)	19.45-31.34	24.32 (2.18)	19.79-28.48	23.39 (2.21)	18.95-27.11
Non-breeding	24.83 (3.06)	19.45-31.34	24.32 (2.18)	19.79-28.48	23.39 (2.21)	18.95-27.11

Table 12. DBS - East. Seasonal peak density (birds per square km) of Herring gull recorded on the sea, S.D. and 95% confidence intervals, in the Array Areas, Array Areas and 2km buffer and Array Areas and 4km buffer.

Season	Density					
	Array Areas		Array Areas & 2km buffer		Array Areas and 4km buffer	
	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.
Spring migration	0.01 (0.02)	0-0.07	0.01 (0.01)	0-0.05	0.01 (0.01)	0-0.04
Breeding (full)	0.04 (0.04)	0-0.14	0.03 (0.04)	0-0.12	0.02 (0.03)	0-0.08
Autumn migration	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Winter	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Non-breeding	0.01 (0.02)	0-0.07	0.01 (0.01)	0-0.05	0.01 (0.01)	0-0.04

Table 13. DBS - East. Seasonal peak density (birds per square km) of Kittiwake recorded on the sea, S.D. and 95% confidence intervals, in the Array Areas, Array Areas and 2km buffer and Array Areas and 4km buffer.

Season	Density					
	Array Areas		Array Areas & 2km buffer		Array Areas and 4km buffer	
	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.
Spring migration	1.44 (0.71)	0.65-3.24	1.44 (0.51)	0.69-2.7	1.6 (0.66)	0.8-3.1
Breeding (full)	11.97 (5.01)	4.26-21.18	10.32 (3.69)	4.28-17.04	9.13 (2.73)	4.6-13.67
Autumn migration	2.14 (2.12)	0.07-6.34	2.22 (2.2)	0.07-6.33	3.92 (4.08)	0.06-11.77
Winter	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Non-breeding	2.14 (2.12)	0.07-6.34	2.22 (2.2)	0.07-6.33	3.92 (4.08)	0.06-11.77

Table 14. DBS - East. Seasonal peak density (birds per square km) of Lesser black-backed gull recorded on the sea, S.D. and 95% confidence intervals, in the Array Areas, Array Areas and 2km buffer and Array Areas and 4km buffer.

Season	Density					
	Array Areas		Array Areas & 2km buffer		Array Areas and 4km buffer	
	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.
Spring migration	0.01 (0.02)	0-0.07	0.01 (0.01)	0-0.05	0.01 (0.01)	0-0.04
Breeding (full)	0 (0)	0-0	0 (0)	0-0	0.01 (0.01)	0-0.04
Autumn migration	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Winter	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Non-breeding	0.01 (0.02)	0-0.07	0.01 (0.01)	0-0.05	0.01 (0.01)	0-0.04

Table 15. DBS - East. Seasonal peak density (birds per square km) of Little gull recorded on the sea, S.D. and 95% confidence intervals, in the Array Areas, Array Areas and 2km buffer and Array Areas and 4km buffer.

Season	Density					
	Array Areas		Array Areas & 2km buffer		Array Areas and 4km buffer	
	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.
Spring migration	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Breeding (full)	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Autumn migration	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Winter	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Non-breeding	0 (0)	0-0	0.13 (0.22)	0-0.79	0.13 (0.19)	0-0.65

Table 16. DBS - East. Seasonal peak density (birds per square km) of Manx shearwater recorded on the sea, S.D. and 95% confidence intervals, in the Array Areas, Array Areas and 2km buffer and Array Areas and 4km buffer.

Season	Density					
	Array Areas		Array Areas & 2km buffer		Array Areas and 4km buffer	
	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.
Spring migration	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Breeding (full)	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Autumn migration	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Winter	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Non-breeding	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0

Table 17. DBS - East. Seasonal peak density (birds per square km) of Puffin recorded on the sea, S.D. and 95% confidence intervals, in the Array Areas, Array Areas and 2km buffer and Array Areas and 4km buffer.

Season	Density					
	Array Areas		Array Areas & 2km buffer		Array Areas and 4km buffer	
	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.
Spring migration	0.05 (0.06)	0-0.17	0.05 (0.05)	0-0.15	0.07 (0.07)	0-0.21
Breeding (full)	0.12 (0.13)	0-0.33	0.11 (0.11)	0-0.31	0.1 (0.11)	0-0.29
Autumn migration	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Winter	0.27 (0.27)	0-0.78	0.26 (0.24)	0-0.67	0.27 (0.24)	0.01-0.66
Non-breeding	0.27 (0.27)	0-0.78	0.26 (0.24)	0-0.67	0.27 (0.24)	0.01-0.66

Table 18. DBS - East. Seasonal peak density (birds per square km) of Puffin (including unidentified auks apportioned using identified auk ratios) recorded on the sea, S.D. and 95% confidence intervals, in the Array Areas, Array Areas and 2km buffer and Array Areas and 4km buffer.

Season	Density					
	Array Areas		Array Areas & 2km buffer		Array Areas and 4km buffer	
	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.
Spring migration	0.05 (0.06)	0-0.17	0.05 (0.05)	0-0.15	0.07 (0.07)	0-0.21
Breeding (full)	0.12 (0.13)	0-0.33	0.11 (0.11)	0-0.31	0.1 (0.11)	0-0.29
Autumn migration	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Winter	0.3 (0.3)	0-0.85	0.3 (0.28)	0-0.77	0.31 (0.28)	0.01-0.76
Non-breeding	0.3 (0.3)	0-0.85	0.3 (0.28)	0-0.77	0.31 (0.28)	0.01-0.76

Table 19. DBS - East. Seasonal peak density (birds per square km) of Puffin (including unidentified auks apportioned using identified auk ratios and accounting for availability bias) recorded on the sea, S.D. and 95% confidence intervals, in the Array Areas, Array Areas and 2km buffer and Array Areas and 4km buffer.

Season	Density					
	Array Areas		Array Areas & 2km buffer		Array Areas and 4km buffer	
	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.
Spring migration	0.06 (0.07)	0-0.21	0.06 (0.06)	0-0.17	0.08 (0.09)	0-0.24
Breeding (full)	0.14 (0.15)	0-0.4	0.12 (0.13)	0-0.36	0.12 (0.13)	0-0.34
Autumn migration	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Winter	0.35 (0.35)	0-0.99	0.35 (0.33)	0-0.9	0.36 (0.32)	0.02-0.88
Non-breeding	0.35 (0.35)	0-0.99	0.35 (0.33)	0-0.9	0.36 (0.32)	0.02-0.88

Table 20. DBS - East. Seasonal peak density (birds per square km) of Razorbill recorded on the sea, S.D. and 95% confidence intervals, in the Array Areas, Array Areas and 2km buffer and Array Areas and 4km buffer.

Season	Density					
	Array Areas		Array Areas & 2km buffer		Array Areas and 4km buffer	
	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.
Spring migration	3.03 (1.87)	0.51-6.35	3.12 (1.89)	0.46-6.16	3.05 (1.85)	0.56-5.65
Breeding (full)	0.53 (0.18)	0.24-0.93	0.57 (0.25)	0.18-1.11	0.82 (0.5)	0.24-1.99
Autumn migration	7.72 (8.4)	0-24.57	7.17 (7.72)	0.08-21.31	6.18 (6.56)	0.05-17.8
Winter	4.52 (0.71)	3.17-5.88	4.25 (0.6)	3.21-5.44	3.97 (0.57)	2.98-5.14
Non-breeding	7.72 (8.4)	0-24.57	7.17 (7.72)	0.08-21.31	6.18 (6.56)	0.05-17.8

Table 21. DBS - East. Seasonal peak density (birds per square km) of Razorbill (including unidentified auks apportioned using identified auk ratios) recorded on the sea, S.D. and 95% confidence intervals, in the Array Areas, Array Areas and 2km buffer and Array Areas and 4km buffer.

Season	Density					
	Array Areas		Array Areas & 2km buffer		Array Areas and 4km buffer	
	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.
Spring migration	5.59 (3.44)	0.94-11.69	5.72 (3.46)	0.85-11.31	5.62 (3.41)	1.03-10.42
Breeding (full)	0.76 (0.34)	0.21-1.49	0.87 (0.38)	0.27-1.69	1.24 (0.76)	0.36-3.01
Autumn migration	8.25 (8.99)	0-26.28	7.59 (8.18)	0.09-22.58	6.56 (6.96)	0.05-18.91
Winter	5.7 (0.9)	3.99-7.41	5.45 (0.77)	4.11-6.98	5.09 (0.74)	3.82-6.59
Non-breeding	8.25 (8.99)	0-26.28	7.59 (8.18)	0.09-22.58	6.56 (6.96)	0.05-18.91

Table 22. DBS - East. Seasonal peak density (birds per square km) of Razorbill (including unidentified auks apportioned using identified auk ratios and accounting for availability bias) recorded on the sea, S.D. and 95% confidence intervals, in the Array Areas, Array Areas and 2km buffer and Array Areas and 4km buffer.

Season	Density					
	Array Areas		Array Areas & 2km buffer		Array Areas and 4km buffer	
	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.
Spring migration	6.77 (4.17)	1.13-14.16	6.93 (4.19)	1.03-13.69	6.8 (4.13)	1.25-12.62
Breeding (full)	0.93 (0.41)	0.26-1.82	1.05 (0.46)	0.33-2.04	1.5 (0.91)	0.44-3.63
Autumn migration	9.99 (10.89)	0-31.82	9.19 (9.9)	0.11-27.33	7.95 (8.43)	0.06-22.9
Winter	6.89 (1.08)	4.83-8.96	6.6 (0.94)	4.98-8.46	6.17 (0.89)	4.63-7.99
Non-breeding	9.99 (10.89)	0-31.82	9.19 (9.9)	0.11-27.33	7.95 (8.43)	0.06-22.9

Table 23. DBS - West. Seasonal peak density (birds per square km) of Arctic skua recorded on the sea, S.D. and 95% confidence intervals, in the wind farm, wind farm and 2km buffer and wind farm and 4km buffer.

Season	Density					
	Array Areas		Array Areas & 2km buffer		Array Areas and 4km buffer	
	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.
Spring migration	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Breeding (full)	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Autumn migration	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Winter	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Non-breeding	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0

Table 24. DBS - West. Seasonal peak density (birds per square km) of Arctic tern recorded on the sea, S.D. and 95% confidence intervals, in the wind farm, wind farm and 2km buffer and wind farm and 4km buffer.

Season	Density					
	Array Areas		Array Areas & 2km buffer		Array Areas and 4km buffer	
	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.
Spring migration	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Breeding (full)	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Autumn migration	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Winter	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Non-breeding	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0

Table 25. DBS - West. Seasonal peak density (birds per square km) of Common gull recorded on the sea, S.D. and 95% confidence intervals, in the wind farm, wind farm and 2km buffer and wind farm and 4km buffer.

Season	Density					
	Array Areas		Array Areas & 2km buffer		Array Areas and 4km buffer	
	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.
Spring migration	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Breeding (full)	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Autumn migration	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Winter	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Non-breeding	0.05 (0.07)	0-0.24	0.04 (0.05)	0-0.16	0.03 (0.04)	0-0.12

Table 26. DBS - West. Seasonal peak density (birds per square km) of Common tern recorded on the sea, S.D. and 95% confidence intervals, in the wind farm, wind farm and 2km buffer and wind farm and 4km buffer.

Season	Density					
	Array Areas		Array Areas & 2km buffer		Array Areas and 4km buffer	
	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.
Spring migration	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Breeding (full)	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Autumn migration	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Winter	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Non-breeding	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0



Table 27. DBS - West. Seasonal peak density (birds per square km) of Fulmar recorded on the sea, S.D. and 95% confidence intervals, in the wind farm, wind farm and 2km buffer and wind farm and 4km buffer.

Season	Density					
	Array Areas		Array Areas & 2km buffer		Array Areas and 4km buffer	
	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.
Spring migration	0 (0)	0-0	0 (0)	0-0	0.07 (0.09)	0-0.29
Breeding (full)	0.41 (0.36)	0.02-1.11	0.44 (0.37)	0.03-0.98	0.4 (0.35)	0.04-0.88
Autumn migration	0.1 (0.07)	0-0.24	0.07 (0.05)	0-0.18	0.06 (0.04)	0.01-0.13
Winter	0.04 (0.05)	0-0.17	0.1 (0.11)	0-0.34	0.1 (0.11)	0-0.31
Non-breeding	0.1 (0.07)	0-0.24	0.1 (0.11)	0-0.34	0.1 (0.11)	0-0.31

Table 28. DBS - West. Seasonal peak density (birds per square km) of Gannet recorded on the sea, S.D. and 95% confidence intervals, in the wind farm, wind farm and 2km buffer and wind farm and 4km buffer.

Season	Density					
	Array Areas		Array Areas & 2km buffer		Array Areas and 4km buffer	
	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.
Spring migration	0.11 (0.12)	0-0.31	0.07 (0.08)	0-0.23	0.12 (0.13)	0-0.38
Breeding (full)	0.65 (0.23)	0.31-1.16	0.58 (0.16)	0.31-0.91	0.48 (0.11)	0.28-0.73
Autumn migration	1.12 (0.82)	0.17-2.58	0.98 (0.75)	0.1-2.1	0.81 (0.61)	0.1-1.72
Winter	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Non-breeding	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0

Table 29. DBS - West. Seasonal peak density (birds per square km) of Great black-backed gull recorded on the sea, S.D. and 95% confidence intervals, in the wind farm, wind farm and 2km buffer and wind farm and 4km buffer.

Season	Density					
	Array Areas		Array Areas & 2km buffer		Array Areas and 4km buffer	
	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.
Spring migration	0.05 (0.06)	0-0.19	0.08 (0.08)	0-0.31	0.08 (0.06)	0-0.23
Breeding (full)	0.02 (0.04)	0-0.14	0.02 (0.03)	0-0.1	0.01 (0.02)	0-0.07
Autumn migration	0.04 (0.05)	0-0.17	0.08 (0.12)	0-0.39	0.06 (0.08)	0-0.28
Winter	0.08 (0.08)	0-0.29	0.07 (0.06)	0-0.21	0.05 (0.04)	0-0.16
Non-breeding	0.08 (0.08)	0-0.29	0.08 (0.12)	0-0.39	0.08 (0.06)	0-0.23

Table 30. DBS - West. Seasonal peak density (birds per square km) of Great northern diver recorded on the sea, S.D. and 95% confidence intervals, in the wind farm, wind farm and 2km buffer and wind farm and 4km buffer.

Season	Density					
	Array Areas		Array Areas & 2km buffer		Array Areas and 4km buffer	
	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.
Spring migration	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Breeding (full)	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Autumn migration	0 (0)	0-0	0 (0)	0-0	0.01 (0.01)	0-0.04
Winter	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Non-breeding	0 (0)	0-0	0 (0)	0-0	0.01 (0.01)	0-0.04

Table 31. DBS - West. Seasonal peak density (birds per square km) of Great skua recorded on the sea, S.D. and 95% confidence intervals, in the wind farm, wind farm and 2km buffer and wind farm and 4km buffer.

Season	Density					
	Array Areas		Array Areas & 2km buffer		Array Areas and 4km buffer	
	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.
Spring migration	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Breeding (full)	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Autumn migration	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Winter	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Non-breeding	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0

Table 32. DBS - West. Seasonal peak density (birds per square km) of Guillemot recorded on the sea, S.D. and 95% confidence intervals, in the wind farm, wind farm and 2km buffer and wind farm and 4km buffer.

Season	Density					
	Array Areas		Array Areas & 2km buffer		Array Areas and 4km buffer	
	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.
Spring migration	11.98 (9.5)	1.95-26.16	11.21 (8.65)	1.93-23.25	10.99 (8)	2.53-21.85
Breeding (full)	8.93 (1.64)	5.58-12.55	9 (1.48)	6.01-12.49	8.67 (1.25)	5.87-11.15
Autumn migration	19.61 (17.93)	2.15-50.13	17.08 (15.23)	2.33-42.48	17.07 (14.95)	2.6-44.25
Winter	7.06 (0.99)	5.08-8.92	6.93 (0.81)	5.36-8.54	7.1 (0.77)	5.6-8.62
Non-breeding	19.61 (17.93)	2.15-50.13	17.08 (15.23)	2.33-42.48	17.07 (14.95)	2.6-44.25

Table 33. DBS - West. Seasonal peak density (birds per square km) of Guillemot (including unidentified auks apportioned using identified auk ratios) recorded on the sea, S.D. and 95% confidence intervals, in the wind farm, wind farm and 2km buffer and wind farm and 4km buffer.

Season	Density					
	Array Areas		Array Areas & 2km buffer		Array Areas and 4km buffer	
	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.
Spring migration	15.09 (11.97)	2.46-32.94	14.36 (11.08)	2.47-29.77	14.18 (10.33)	3.26-28.21
Breeding (full)	12.91 (3.76)	7.37-19.84	12.56 (3.08)	7.62-18.49	11.89 (2.26)	7.69-15.98
Autumn migration	20.54 (18.78)	2.25-52.5	18.37 (16.38)	2.51-45.67	18.38 (16.1)	2.79-47.65
Winter	8.95 (1.25)	6.45-11.31	8.93 (1.05)	6.9-11	9.28 (1.01)	7.32-11.26
Non-breeding	20.54 (18.78)	2.25-52.5	18.37 (16.38)	2.51-45.67	18.38 (16.1)	2.79-47.65

Table 34. DBS - West. Seasonal peak density (birds per square km) of Guillemot (including unidentified auks apportioned using identified auk ratios and accounting for availability bias) recorded on the sea, S.D. and 95% confidence intervals, in the wind farm, wind farm and 2km buffer and wind farm and 4km buffer.

Season	Density					
	Array Areas		Array Areas & 2km buffer		Array Areas and 4km buffer	
	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.
Spring migration	19.78 (15.68)	3.22-43.17	18.82 (14.52)	3.24-39.03	18.6 (13.54)	4.28-36.98
Breeding (full)	16.93 (4.93)	9.66-26.01	16.47 (4.04)	9.99-24.24	15.58 (2.96)	10.08-20.95
Autumn migration	26.92 (24.61)	2.95-68.81	24.08 (21.47)	3.29-59.88	24.1 (21.11)	3.66-62.48
Winter	11.75 (1.64)	8.46-14.84	11.7 (1.37)	9.05-14.42	12.16 (1.32)	9.6-14.76
Non-breeding	26.92 (24.61)	2.95-68.81	24.08 (21.47)	3.29-59.88	24.1 (21.11)	3.66-62.48

Table 35. DBS - West. Seasonal peak density (birds per square km) of Herring gull recorded on the sea, S.D. and 95% confidence intervals, in the wind farm, wind farm and 2km buffer and wind farm and 4km buffer.

Season	Density					
	Array Areas		Array Areas & 2km buffer		Array Areas and 4km buffer	
	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.
Spring migration	0 (0)	0-0	0 (0)	0-0	0.01 (0.01)	0-0.04
Breeding (full)	0.01 (0.02)	0-0.07	0.01 (0.01)	0-0.05	0.01 (0.01)	0-0.04
Autumn migration	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Winter	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Non-breeding	0 (0)	0-0	0 (0)	0-0	0.01 (0.01)	0-0.04

Table 36. DBS - West. Seasonal peak density (birds per square km) of Kittiwake recorded on the sea, S.D. and 95% confidence intervals, in the wind farm, wind farm and 2km buffer and wind farm and 4km buffer.

Season	Density					
	Array Areas		Array Areas & 2km buffer		Array Areas and 4km buffer	
	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.
Spring migration	2.45 (2.69)	0.12-8.41	1.87 (1.86)	0.14-5.99	1.67 (0.94)	0.49-3.6
Breeding (full)	7.33 (9.11)	0-28.45	6.86 (8.01)	0-25.1	5.61 (6.48)	0-19.24
Autumn migration	9.17 (13.26)	0.1-44.4	7.77 (10.88)	0.05-36.17	5.85 (7.99)	0.18-26.42
Winter	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Non-breeding	9.17 (13.26)	0.1-44.4	7.77 (10.88)	0.05-36.17	5.85 (7.99)	0.18-26.42

Table 37. DBS - West. Seasonal peak density (birds per square km) of Lesser black-backed gull recorded on the sea, S.D. and 95% confidence intervals, in the wind farm, wind farm and 2km buffer and wind farm and 4km buffer.

Season	Density					
	Array Areas		Array Areas & 2km buffer		Array Areas and 4km buffer	
	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.
Spring migration	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Breeding (full)	0 (0)	0-0	0.02 (0.04)	0-0.15	0.02 (0.03)	0-0.11
Autumn migration	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Winter	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Non-breeding	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0

Table 38. DBS - West. Seasonal peak density (birds per square km) of Little gull recorded on the sea, S.D. and 95% confidence intervals, in the wind farm, wind farm and 2km buffer and wind farm and 4km buffer.

Season	Density					
	Array Areas		Array Areas & 2km buffer		Array Areas and 4km buffer	
	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.
Spring migration	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Breeding (full)	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Autumn migration	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Winter	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Non-breeding	0.01 (0.02)	0-0.07	0.01 (0.01)	0-0.05	0.01 (0.01)	0-0.04

Table 39. DBS - West. Seasonal peak density (birds per square km) of Puffin recorded on the sea, S.D. and 95% confidence intervals, in the wind farm, wind farm and 2km buffer and wind farm and 4km buffer.

Season	Density					
	Array Areas		Array Areas & 2km buffer		Array Areas and 4km buffer	
	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.
Spring migration	0.08 (0.09)	0-0.27	0.07 (0.07)	0-0.2	0.06 (0.06)	0-0.17
Breeding (full)	0.2 (0.2)	0-0.5	0.18 (0.18)	0-0.42	0.17 (0.18)	0-0.42
Autumn migration	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Winter	0.24 (0.19)	0.02-0.62	0.31 (0.17)	0.05-0.62	0.31 (0.18)	0.06-0.62
Non-breeding	0.24 (0.19)	0.02-0.62	0.31 (0.17)	0.05-0.62	0.31 (0.18)	0.06-0.62

Table 40. DBS - West. Seasonal peak density (birds per square km) of Puffin (including unidentified auks apportioned using identified auk ratios) recorded on the sea, S.D. and 95% confidence intervals, in the wind farm, wind farm and 2km buffer and wind farm and 4km buffer.

Season	Density					
	Array Areas		Array Areas & 2km buffer		Array Areas and 4km buffer	
	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.
Spring migration	0.08 (0.09)	0-0.27	0.07 (0.07)	0-0.2	0.06 (0.06)	0-0.17
Breeding (full)	0.2 (0.2)	0-0.5	0.18 (0.18)	0-0.42	0.17 (0.18)	0-0.42
Autumn migration	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Winter	0.25 (0.2)	0.03-0.65	0.32 (0.18)	0.05-0.65	0.33 (0.19)	0.06-0.66
Non-breeding	0.25 (0.2)	0.03-0.65	0.32 (0.18)	0.05-0.65	0.33 (0.19)	0.06-0.66

Table 41. DBS - West. Seasonal peak density (birds per square km) of Puffin (including unidentified auks apportioned using identified auk ratios and accounting for availability bias) recorded on the sea, S.D. and 95% confidence intervals, in the wind farm, wind farm and 2km buffer and wind farm and 4km buffer.

Season	Density					
	Array Areas		Array Areas & 2km buffer		Array Areas and 4km buffer	
	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.
Spring migration	0.1 (0.11)	0-0.3	0.08 (0.08)	0-0.23	0.07 (0.08)	0-0.2
Breeding (full)	0.24 (0.24)	0-0.58	0.21 (0.22)	0-0.5	0.2 (0.21)	0-0.49
Autumn migration	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Winter	0.29 (0.23)	0.03-0.74	0.38 (0.21)	0.06-0.76	0.38 (0.22)	0.07-0.76
Non-breeding	0.29 (0.23)	0.03-0.74	0.38 (0.21)	0.06-0.76	0.38 (0.22)	0.07-0.76

Table 42. DBS - West. Seasonal peak density (birds per square km) of Razorbill recorded on the sea, S.D. and 95% confidence intervals, in the wind farm, wind farm and 2km buffer and wind farm and 4km buffer.

Season	Density					
	Array Areas		Array Areas & 2km buffer		Array Areas and 4km buffer	
	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.
Spring migration	5.45 (4.59)	0.59-12.76	5.21 (3.89)	0.75-11.09	5.23 (3.81)	0.93-10.95
Breeding (full)	2.42 (1.23)	0.64-4.9	2.22 (1.14)	0.63-4.15	1.9 (0.96)	0.5-3.56
Autumn migration	7.13 (10.27)	0.02-35.1	5.86 (7.92)	0.05-25.09	4.84 (6.36)	0.06-21.45
Winter	6.09 (5.03)	0.67-14.29	6.24 (5.23)	0.74-14.07	5.83 (5.05)	0.52-13.65
Non-breeding	7.13 (10.27)	0.02-35.1	6.24 (5.23)	0.74-14.07	5.83 (5.05)	0.52-13.65



Table 43. DBS - West. Seasonal peak density (birds per square km) of Razorbill (including unidentified auks apportioned using identified auk ratios) recorded on the sea, S.D. and 95% confidence intervals, in the wind farm, wind farm and 2km buffer and wind farm and 4km buffer.

Season	Density					
	Array Areas		Array Areas & 2km buffer		Array Areas and 4km buffer	
	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.
Spring migration	7.09 (5.97)	0.77-16.59	7.03 (5.25)	1.01-14.98	7.01 (5.1)	1.24-14.67
Breeding (full)	3.78 (1.92)	1-7.65	3.51 (1.79)	0.99-6.54	3.04 (1.54)	0.8-5.7
Autumn migration	8.55 (12.32)	0.03-42.11	7.71 (10.41)	0.06-33	6.31 (8.29)	0.08-27.96
Winter	7.72 (6.38)	0.86-18.14	8.04 (6.73)	0.95-18.1	7.41 (6.42)	0.66-17.36
Non-breeding	8.55 (12.32)	0.03-42.11	8.04 (6.73)	0.95-18.1	7.41 (6.42)	0.66-17.36

Table 44. DBS - West. Seasonal peak density (birds per square km) of Razorbill (including unidentified auks apportioned using identified auk ratios and accounting for availability bias) recorded on the sea, S.D. and 95% confidence intervals, in the wind farm, wind farm and 2km buffer and wind farm and 4km buffer.

Season	Density					
	Array Areas		Array Areas & 2km buffer		Array Areas and 4km buffer	
	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.
Spring migration	8.59 (7.23)	0.93-20.1	8.51 (6.36)	1.23-18.13	8.49 (6.18)	1.51-17.77
Breeding (full)	4.58 (2.33)	1.21-9.28	4.26 (2.17)	1.2-7.93	3.67 (1.87)	0.96-6.9
Autumn migration	10.35 (14.93)	0.03-51.01	9.33 (12.61)	0.08-39.96	7.64 (10.04)	0.1-33.86
Winter	9.35 (7.73)	1.04-21.96	9.73 (8.15)	1.15-21.91	8.98 (7.77)	0.8-21.02
Non-breeding	10.35 (14.93)	0.03-51.01	9.73 (8.15)	1.15-21.91	8.98 (7.77)	0.8-21.02

Table 45. DBS - West. Seasonal peak density (birds per square km) of Red-throated diver recorded on the sea, S.D. and 95% confidence intervals, in the wind farm, wind farm and 2km buffer and wind farm and 4km buffer.

Season	Density					
	Array Areas		Array Areas & 2km buffer		Array Areas and 4km buffer	
	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.
Spring migration	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Breeding (full)	0 (0)	0-0	0 (0)	0-0	0.01 (0.01)	0-0.04
Autumn migration	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Winter	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Non-breeding	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0

Table 46. DBS - East & West. Seasonal peak density (birds per square km) of Arctic skua recorded on the sea, S.D. and 95% confidence intervals, in the Array Areas, Array Areas and 2km buffers and Array Areas and 4km buffers.

Season	Density					
	Array Areas		Array Areas & 2km buffer		Array Areas and 4km buffer	
	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.
Spring migration	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Breeding (full)	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Autumn migration	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Winter	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Non-breeding	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0

Table 47. DBS - East & West. Seasonal peak density (birds per square km) of Arctic tern recorded on the sea, S.D. and 95% confidence intervals, in the Array Areas, Array Areas and 2km buffers and Array Areas and 4km buffers.

Season	Density					
	Array Areas		Array Areas & 2km buffer		Array Areas and 4km buffer	
	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.
Spring migration	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Breeding (full)	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Autumn migration	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Winter	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Non-breeding	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0

Table 48. DBS - East & West. Seasonal peak density (birds per square km) of Common gull recorded on the sea, S.D. and 95% confidence intervals, in the Array Areas, Array Areas and 2km buffers and Array Areas and 4km buffers.

Season	Density					
	Array Areas		Array Areas & 2km buffer		Array Areas and 4km buffer	
	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.
Spring migration	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Breeding (full)	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Autumn migration	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Winter	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Non-breeding	0.03 (0.04)	0-0.12	0.03 (0.03)	0-0.11	0.02 (0.03)	0-0.08

Table 49. DBS - East & West. Seasonal peak density (birds per square km) of Common tern recorded on the sea, S.D. and 95% confidence intervals, in the Array Areas, Array Areas and 2km buffers and Array Areas and 4km buffers.

Season	Density					
	Array Areas		Array Areas & 2km buffer		Array Areas and 4km buffer	
	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.
Spring migration	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Breeding (full)	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Autumn migration	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Winter	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Non-breeding	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0

Table 50. DBS - East & West. Seasonal peak density (birds per square km) of Fulmar recorded on the sea, S.D. and 95% confidence intervals, in the Array Areas, Array Areas and 2km buffers and Array Areas and 4km buffers.

Season	Density					
	Array Areas		Array Areas & 2km buffer		Array Areas and 4km buffer	
	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.
Spring migration	0.01 (0.01)	0-0.04	0.01 (0.01)	0-0.02	0.05 (0.06)	0-0.18
Breeding (full)	0.28 (0.24)	0.01-0.7	0.28 (0.24)	0.02-0.63	0.26 (0.22)	0.02-0.56
Autumn migration	0.14 (0.1)	0.01-0.36	0.18 (0.16)	0.01-0.44	0.23 (0.21)	0.01-0.53
Winter	0.04 (0.04)	0-0.13	0.06 (0.07)	0-0.19	0.07 (0.07)	0-0.2
Non-breeding	0.14 (0.1)	0.01-0.36	0.18 (0.16)	0.01-0.44	0.23 (0.21)	0.01-0.53

Table 51. DBS - East & West. Seasonal peak density (birds per square km) of Gannet recorded on the sea, S.D. and 95% confidence intervals, in the Array Areas, Array Areas and 2km buffers and Array Areas and 4km buffers.

Season	Density					
	Array Areas		Array Areas & 2km buffer		Array Areas and 4km buffer	
	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.
Spring migration	0.1 (0.1)	0-0.31	0.07 (0.07)	0-0.21	0.09 (0.09)	0-0.27
Breeding (full)	0.76 (0.19)	0.42-1.16	0.69 (0.25)	0.34-1.26	0.87 (0.55)	0.29-2.13
Autumn migration	0.98 (0.7)	0.2-2.13	0.98 (0.71)	0.2-2.03	0.83 (0.55)	0.21-1.65
Winter	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Non-breeding	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0

Table 52. DBS - East & West. Seasonal peak density (birds per square km) of Great black-backed gull recorded on the sea, S.D. and 95% confidence intervals, in the Array Areas, Array Areas and 2km buffers and Array Areas and 4km buffers.

Season	Density					
	Array Areas		Array Areas & 2km buffer		Array Areas and 4km buffer	
	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.
Spring migration	0.12 (0.08)	0.02-0.32	0.09 (0.05)	0.02-0.22	0.12 (0.04)	0.05-0.21
Breeding (full)	0.06 (0.07)	0-0.2	0.05 (0.05)	0-0.15	0.06 (0.06)	0-0.18
Autumn migration	0.02 (0.03)	0-0.09	0.04 (0.06)	0-0.2	0.03 (0.04)	0-0.14
Winter	0.05 (0.04)	0-0.16	0.05 (0.03)	0-0.12	0.04 (0.02)	0.01-0.1
Non-breeding	0.12 (0.08)	0.02-0.32	0.09 (0.05)	0.02-0.22	0.12 (0.04)	0.05-0.21

Table 53. DBS - East & West. Seasonal peak density (birds per square km) of Great northern diver recorded on the sea, S.D. and 95% confidence intervals, in the Array Areas, Array Areas and 2km buffers and Array Areas and 4km buffers.

Season	Density					
	Array Areas		Array Areas & 2km buffer		Array Areas and 4km buffer	
	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.
Spring migration	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Breeding (full)	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Autumn migration	0 (0)	0-0	0 (0)	0-0	0 (0.01)	0-0.02
Winter	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Non-breeding	0 (0)	0-0	0 (0)	0-0	0 (0.01)	0-0.02

Table 54. DBS - East & West. Seasonal peak density (birds per square km) of Great skua recorded on the sea, S.D. and 95% confidence intervals, in the Array Areas, Array Areas and 2km buffers and Array Areas and 4km buffers.

Season	Density					
	Array Areas		Array Areas & 2km buffer		Array Areas and 4km buffer	
	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.
Spring migration	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Breeding (full)	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Autumn migration	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Winter	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Non-breeding	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0

Table 55. DBS - East & West. Seasonal peak density (birds per square km) of Guillemot recorded on the sea, S.D. and 95% confidence intervals, in the Array Areas, Array Areas and 2km buffers and Array Areas and 4km buffers.

Season	Density					
	Array Areas		Array Areas & 2km buffer		Array Areas and 4km buffer	
	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.
Spring migration	8.51 (5.58)	2.47-16.56	8.19 (5.33)	2.44-15.39	8.2 (5.2)	2.7-15.02
Breeding (full)	7.67 (0.97)	5.97-9.99	7.72 (0.84)	5.98-9.53	7.9 (0.74)	6.33-9.3
Autumn migration	15.61 (13.49)	2.21-37.52	13.78 (11.67)	2.24-31.63	13.92 (11.18)	2.66-31.49
Winter	10.91 (1.03)	9.06-13.1	10.72 (0.78)	9.11-12.16	10.49 (0.94)	8.71-12.11
Non-breeding	15.61 (13.49)	2.21-37.52	13.78 (11.67)	2.24-31.63	13.92 (11.18)	2.66-31.49

Table 56. DBS - East & West. Seasonal peak density (birds per square km) of Guillemot (including unidentified auks apportioned using identified auk ratios) recorded on the sea, S.D. and 95% confidence intervals, in the Array Areas, Array Areas and 2km buffers and Array Areas and 4km buffers.

Season	Density					
	Array Areas		Array Areas & 2km buffer		Array Areas and 4km buffer	
	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.
Spring migration	11.55 (7.58)	3.35-22.48	11.18 (7.27)	3.33-21.01	11.15 (7.07)	3.67-20.42
Breeding (full)	10.41 (4.47)	4.04-17.33	10.56 (4.66)	4.53-17.09	12.05 (4.86)	5.59-18.91
Autumn migration	16.65 (14.39)	2.36-40.03	14.93 (12.64)	2.43-34.26	15.21 (12.22)	2.91-34.41
Winter	13.91 (1.32)	11.55-16.7	13.97 (1.02)	11.87-15.85	13.75 (1.24)	11.43-15.88
Non-breeding	16.65 (14.39)	2.36-40.03	14.93 (12.64)	2.43-34.26	15.21 (12.22)	2.91-34.41

Table 57. DBS - East & West. Seasonal peak density (birds per square km) of Guillemot (including unidentified auks apportioned using identified auk ratios and accounting for availability bias) recorded on the sea, S.D. and 95% confidence intervals, in the Array Areas, Array Areas and 2km buffers and Array Areas and 4km buffers.

Season	Density					
	Array Areas		Array Areas & 2km buffer		Array Areas and 4km buffer	
	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.
Spring migration	15.14 (9.93)	4.39-29.46	14.66 (9.53)	4.36-27.54	14.61 (9.27)	4.82-26.77
Breeding (full)	13.65 (5.85)	5.29-22.72	13.85 (6.11)	5.94-22.41	15.8 (6.37)	7.32-24.78
Autumn migration	21.82 (18.87)	3.1-52.47	19.57 (16.57)	3.18-44.92	19.93 (16.02)	3.81-45.1
Winter	18.24 (1.73)	15.14-21.9	18.31 (1.34)	15.55-20.77	18.03 (1.62)	14.98-20.82
Non-breeding	21.82 (18.87)	3.1-52.47	19.57 (16.57)	3.18-44.92	19.93 (16.02)	3.81-45.1

Table 58. DBS - East & West. Seasonal peak density (birds per square km) of Herring gull recorded on the sea, S.D. and 95% confidence intervals, in the Array Areas, Array Areas and 2km buffers and Array Areas and 4km buffers.

Season	Density					
	Array Areas		Array Areas & 2km buffer		Array Areas and 4km buffer	
	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.
Spring migration	0.01 (0.01)	0-0.04	0 (0.01)	0-0.02	0.01 (0.01)	0-0.03
Breeding (full)	0.02 (0.02)	0-0.07	0.02 (0.02)	0-0.06	0.02 (0.02)	0-0.05
Autumn migration	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Winter	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Non-breeding	0.01 (0.01)	0-0.04	0 (0.01)	0-0.02	0.01 (0.01)	0-0.03



Table 59. DBS - East & West. Seasonal peak density (birds per square km) of Kittiwake recorded on the sea, S.D. and 95% confidence intervals, in the Array Areas, Array Areas and 2km buffers and Array Areas and 4km buffers.

Season	Density					
	Array Areas		Array Areas & 2km buffer		Array Areas and 4km buffer	
	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.
Spring migration	1.88 (1.84)	0.17-5.58	1.5 (1.41)	0.13-4.31	1.64 (0.73)	0.74-3.08
Breeding (full)	6.77 (2.84)	2.59-11.78	6.76 (1.73)	3.34-9.73	6.25 (1.38)	3.55-8.52
Autumn migration	4.76 (6.85)	0.18-23.16	4.19 (5.58)	0.22-18.82	4.48 (4.5)	0.05-11.59
Winter	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Non-breeding	4.76 (6.85)	0.18-23.16	4.19 (5.58)	0.22-18.82	4.48 (4.5)	0.05-11.59

Table 60. DBS - East & West. Seasonal peak density (birds per square km) of Lesser black-backed gull recorded on the sea, S.D. and 95% confidence intervals, in the Array Areas, Array Areas and 2km buffers and Array Areas and 4km buffers.

Season	Density					
	Array Areas		Array Areas & 2km buffer		Array Areas and 4km buffer	
	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.
Spring migration	0.01 (0.01)	0-0.04	0 (0.01)	0-0.02	0 (0.01)	0-0.02
Breeding (full)	0 (0)	0-0	0.01 (0.02)	0-0.07	0.01 (0.02)	0-0.05
Autumn migration	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Winter	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Non-breeding	0.01 (0.01)	0-0.04	0 (0.01)	0-0.02	0 (0.01)	0-0.02

Table 61. DBS - East & West. Seasonal peak density (birds per square km) of Little gull recorded on the sea, S.D. and 95% confidence intervals, in the Array Areas, Array Areas and 2km buffers and Array Areas and 4km buffers.

Season	Density					
	Array Areas		Array Areas & 2km buffer		Array Areas and 4km buffer	
	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.
Spring migration	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Breeding (full)	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Autumn migration	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Winter	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Non-breeding	0.01 (0.01)	0-0.04	0.07 (0.11)	0-0.39	0.07 (0.09)	0-0.33

Table 62. DBS - East & West. Seasonal peak density (birds per square km) of Manx shearwater recorded on the sea, S.D. and 95% confidence intervals, in the Array Areas, Array Areas and 2km buffers and Array Areas and 4km buffers.

Season	Density					
	Array Areas		Array Areas & 2km buffer		Array Areas and 4km buffer	
	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.
Spring migration	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Breeding (full)	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Autumn migration	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Winter	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Non-breeding	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0

Table 63. DBS - East & West. Seasonal peak density (birds per square km) of Puffin recorded on the sea, S.D. and 95% confidence intervals, in the Array Areas, Array Areas and 2km buffers and Array Areas and 4km buffers.

Season	Density					
	Array Areas		Array Areas & 2km buffer		Array Areas and 4km buffer	
	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.
Spring migration	0.07 (0.07)	0-0.19	0.06 (0.06)	0-0.15	0.06 (0.07)	0-0.17
Breeding (full)	0.14 (0.13)	0-0.34	0.12 (0.12)	0-0.29	0.12 (0.12)	0-0.28
Autumn migration	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Winter	0.26 (0.22)	0.02-0.62	0.28 (0.2)	0.04-0.59	0.29 (0.2)	0.05-0.59
Non-breeding	0.26 (0.22)	0.02-0.62	0.28 (0.2)	0.04-0.59	0.29 (0.2)	0.05-0.59

Table 64. DBS - East & West. Seasonal peak density (birds per square km) of Puffin (including unidentified auks apportioned using identified auk ratios) recorded on the sea, S.D. and 95% confidence intervals, in the Array Areas, Array Areas and 2km buffers and Array Areas and 4km buffers.

Season	Density					
	Array Areas		Array Areas & 2km buffer		Array Areas and 4km buffer	
	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.
Spring migration	0.07 (0.07)	0-0.19	0.06 (0.06)	0-0.15	0.06 (0.07)	0-0.17
Breeding (full)	0.14 (0.13)	0-0.34	0.12 (0.12)	0-0.29	0.12 (0.12)	0-0.28
Autumn migration	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Winter	0.27 (0.24)	0.03-0.66	0.31 (0.21)	0.04-0.64	0.32 (0.22)	0.05-0.65
Non-breeding	0.27 (0.24)	0.03-0.66	0.31 (0.21)	0.04-0.64	0.32 (0.22)	0.05-0.65

Table 65. DBS - East & West. Seasonal peak density (birds per square km) of Puffin (including unidentified auks apportioned using identified auk ratios and accounting for availability bias) recorded on the sea, S.D. and 95% confidence intervals, in the Array Areas, Array Areas and 2km buffers and Array Areas and 4km buffers.

Season	Density					
	Array Areas		Array Areas & 2km buffer		Array Areas and 4km buffer	
	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.
Spring migration	0.08 (0.09)	0-0.23	0.07 (0.07)	0-0.17	0.07 (0.08)	0-0.19
Breeding (full)	0.17 (0.16)	0-0.4	0.14 (0.14)	0-0.33	0.14 (0.13)	0-0.32
Autumn migration	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Winter	0.32 (0.27)	0.03-0.76	0.36 (0.25)	0.05-0.76	0.37 (0.26)	0.06-0.76
Non-breeding	0.32 (0.27)	0.03-0.76	0.36 (0.25)	0.05-0.76	0.37 (0.26)	0.06-0.76

Table 66. DBS - East & West. Seasonal peak density (birds per square km) of Razorbill recorded on the sea, S.D. and 95% confidence intervals, in the Array Areas, Array Areas and 2km buffers and Array Areas and 4km buffers.

Season	Density					
	Array Areas		Array Areas & 2km buffer		Array Areas and 4km buffer	
	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.
Spring migration	3.83 (3.2)	0.49-8.77	3.69 (2.8)	0.59-7.7	3.69 (2.76)	0.67-7.61
Breeding (full)	1.47 (0.68)	0.46-2.77	1.4 (0.66)	0.49-2.51	1.36 (0.68)	0.43-2.53
Autumn migration	5.22 (5.54)	0.01-15.23	4.81 (5.03)	0.05-13.47	4.5 (4.63)	0.07-12.42
Winter	3.67 (3.03)	0.39-8.32	3.63 (3.04)	0.44-7.97	3.57 (3.07)	0.35-8.03
Non-breeding	5.22 (5.54)	0.01-15.23	4.81 (5.03)	0.05-13.47	4.5 (4.63)	0.07-12.42

Table 67. DBS - East & West. Seasonal peak density (birds per square km) of Razorbill (including unidentified auks apportioned using identified auk ratios) recorded on the sea, S.D. and 95% confidence intervals, in the Array Areas, Array Areas and 2km buffers and Array Areas and 4km buffers.

Season	Density					
	Array Areas		Array Areas & 2km buffer		Array Areas and 4km buffer	
	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.
Spring migration	4.99 (4.17)	0.64-11.43	5.01 (1.76)	1.44-7.83	4.95 (3.7)	0.9-10.2
Breeding (full)	2.28 (1.06)	0.72-4.29	2.2 (1.04)	0.76-3.93	2.12 (1.06)	0.67-3.94
Autumn migration	5.54 (5.88)	0.01-16.16	5.09 (5.32)	0.05-14.27	4.77 (4.91)	0.08-13.18
Winter	4.61 (3.8)	0.49-10.44	4.63 (3.88)	0.56-10.18	4.57 (3.92)	0.45-10.27
Non-breeding	5.54 (5.88)	0.01-16.16	5.09 (5.32)	0.05-14.27	4.95 (3.7)	0.9-10.2

Table 68. DBS - East & West. Seasonal peak density (birds per square km) of Razorbill (including unidentified auks apportioned using identified auk ratios and accounting for availability bias) recorded on the sea, S.D. and 95% confidence intervals, in the Array Areas, Array Areas and 2km buffers and Array Areas and 4km buffers.

Season	Density					
	Array Areas		Array Areas & 2km buffer		Array Areas and 4km buffer	
	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.
Spring migration	6.05 (5.06)	0.77-13.85	6.07 (2.13)	1.75-9.48	5.99 (4.48)	1.09-12.34
Breeding (full)	2.77 (1.28)	0.87-5.21	2.66 (1.26)	0.92-4.75	2.57 (1.28)	0.81-4.77
Autumn migration	6.7 (7.11)	0.02-19.57	6.17 (6.45)	0.06-17.28	5.78 (5.95)	0.09-15.97
Winter	5.58 (4.6)	0.59-12.64	5.61 (4.7)	0.68-12.32	5.54 (4.75)	0.54-12.44
Non-breeding	6.7 (7.11)	0.02-19.57	6.17 (6.45)	0.06-17.28	5.99 (4.48)	1.09-12.34

Table 69. DBS - East & West. Seasonal peak density (birds per square km) of Red-throated diver recorded on the sea, S.D. and 95% confidence intervals, in the Array Areas, Array Areas and 2km buffers and Array Areas and 4km buffers.

Season	Density					
	Array Areas		Array Areas & 2km buffer		Array Areas and 4km buffer	
	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.
Spring migration	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Breeding (full)	0 (0)	0-0	0 (0)	0-0	0 (0.01)	0-0.02
Autumn migration	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Winter	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Non-breeding	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0



MacArthur  
Green

# Dogger Bank South Offshore Windfarm

## Ornithology Technical Appendix 12-6c Seabird peak seasonal densities: birds in flight

---

**Date:** 18/03/2024

**Tel:** 0141 342 5404

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

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

---

## Document Quality Record

Version	Status	Person Responsible	Date
0.1	Draft	Dr Mark Trinder	16/10/2023
0.2	Reviewed	Dr Shirley Raveh	31/10/2023
1	Updated and approved	Dr Mark Trinder	18/03/2024

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





## 1 INTRODUCTION

This appendix provides tables of seabird peak densities in each species-specific season, as defined in Furness (2015)<sup>1</sup> for each species recorded during baseline surveys for the DBS East and West Offshore Wind Farm Projects (March 2021 – February 2023).

Densities were estimated using design-based methods and are summarised as central estimate (i.e. extrapolated from the number seen in the surveyed area to the whole area) and 95% confidence range, derived from 1,000 nonparametric bootstrap samples.

Appendix (a) provides the combined peak density in each species-specific season on the water and in flight.

Appendix (b) provides the peak density in each species-specific season on the water.

This appendix (c) provides the peak density in each species-specific season in flight.

---

<sup>1</sup> Furness, R.W. 2015. Non-breeding season populations of seabirds in UK waters: Population sizes for Biologically Defined Minimum Population Scales (BDMPS). Natural England Commissioned Report Number 164. 389 pp.

Table 1. DBS - East. Seasonal peak density (birds per square km) of Arctic skua recorded in flight, S.D. and 95% confidence intervals, in the Array Areas, Array Areas and 2km buffer and Array Areas and 4km buffer.

Season	Density					
	Array Areas		Array Areas & 2km buffer		Array Areas and 4km buffer	
	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.
Spring migration	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Breeding (full)	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Autumn migration	0.01 (0.02)	0-0.07	0.01 (0.01)	0-0.05	0.01 (0.01)	0-0.04
Winter	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Non-breeding	0.01 (0.02)	0-0.07	0.01 (0.01)	0-0.05	0.01 (0.01)	0-0.04

Table 2. DBS - East. Seasonal peak density (birds per square km) of Arctic tern recorded in flight, S.D. and 95% confidence intervals, in the Array Areas, Array Areas and 2km buffer and Array Areas and 4km buffer.

Season	Density					
	Array Areas		Array Areas & 2km buffer		Array Areas and 4km buffer	
	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.
Spring migration	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Breeding (full)	0.11 (0.12)	0-0.36	0.11 (0.11)	0-0.31	0.12 (0.13)	0-0.34
Autumn migration	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Winter	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Non-breeding	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0

Table 3. DBS - East. Seasonal peak density (birds per square km) of Common gull recorded in flight, S.D. and 95% confidence intervals, in the Array Areas, Array Areas and 2km buffer and Array Areas and 4km buffer.

Season	Density					
	Array Areas		Array Areas & 2km buffer		Array Areas and 4km buffer	
	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.
Spring migration	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Breeding (full)	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Autumn migration	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Winter	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Non-breeding	0.04 (0.03)	0-0.12	0.02 (0.04)	0-0.12	0.02 (0.02)	0-0.07

Table 4. DBS - East. Seasonal peak density (birds per square km) of Common tern recorded in flight, S.D. and 95% confidence intervals, in the Array Areas, Array Areas and 2km buffer and Array Areas and 4km buffer.

Season	Density					
	Array Areas		Array Areas & 2km buffer		Array Areas and 4km buffer	
	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.
Spring migration	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Breeding (full)	0.01 (0.02)	0-0.07	0.02 (0.02)	0-0.07	0.01 (0.02)	0-0.06
Autumn migration	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Winter	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Non-breeding	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0

Table 5. DBS - East. Seasonal peak density (birds per square km) of Fulmar recorded in flight, S.D. and 95% confidence intervals, in the Array Areas, Array Areas and 2km buffer and Array Areas and 4km buffer.

Season	Density					
	Array Areas		Array Areas & 2km buffer		Array Areas and 4km buffer	
	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.
Spring migration	0.05 (0.06)	0-0.16	0.05 (0.06)	0-0.18	0.05 (0.05)	0-0.15
Breeding (full)	0.16 (0.09)	0.02-0.36	0.16 (0.08)	0.03-0.33	0.11 (0.06)	0.02-0.24
Autumn migration	0.1 (0.06)	0-0.22	0.16 (0.18)	0-0.64	0.15 (0.16)	0-0.5
Winter	0.11 (0.12)	0-0.34	0.12 (0.13)	0-0.37	0.12 (0.11)	0-0.3
Non-breeding	0.11 (0.12)	0-0.34	0.16 (0.18)	0-0.64	0.15 (0.16)	0-0.5

Table 6. DBS - East. Seasonal peak density (birds per square km) of Gannet recorded in flight, S.D. and 95% confidence intervals, in the Array Areas, Array Areas and 2km buffer and Array Areas and 4km buffer.

Season	Density					
	Array Areas		Array Areas & 2km buffer		Array Areas and 4km buffer	
	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.
Spring migration	0.04 (0.05)	0-0.14	0.03 (0.04)	0-0.13	0.05 (0.05)	0-0.15
Breeding (full)	0.6 (0.19)	0.31-1	0.64 (0.25)	0.29-1.11	0.72 (0.37)	0.29-1.35
Autumn migration	0.54 (0.23)	0.17-0.93	0.54 (0.15)	0.25-0.8	0.54 (0.14)	0.26-0.78
Winter	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Non-breeding	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0

Table 7. DBS - East. Seasonal peak density (birds per square km) of Great black-backed gull recorded in flight, S.D. and 95% confidence intervals, in the Array Areas, Array Areas and 2km buffer and Array Areas and 4km buffer.

Season	Density					
	Array Areas		Array Areas & 2km buffer		Array Areas and 4km buffer	
	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.
Spring migration	0.06 (0.06)	0-0.22	0.06 (0.04)	0-0.17	0.05 (0.03)	0-0.13
Breeding (full)	0.02 (0.03)	0-0.1	0.02 (0.04)	0-0.12	0.02 (0.03)	0-0.1
Autumn migration	0.01 (0.02)	0-0.07	0.01 (0.02)	0-0.05	0.04 (0.02)	0-0.09
Winter	0 (0)	0-0	0.01 (0.01)	0-0.05	0.02 (0.03)	0-0.09
Non-breeding	0.06 (0.06)	0-0.22	0.06 (0.04)	0-0.17	0.05 (0.03)	0-0.13

Table 8. DBS - East. Seasonal peak density (birds per square km) of Great skua recorded in flight, S.D. and 95% confidence intervals, in the Array Areas, Array Areas and 2km buffer and Array Areas and 4km buffer.

Season	Density					
	Array Areas		Array Areas & 2km buffer		Array Areas and 4km buffer	
	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.
Spring migration	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Breeding (full)	0 (0)	0-0	0.01 (0.01)	0-0.05	0.01 (0.01)	0-0.04
Autumn migration	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Winter	0.01 (0.02)	0-0.07	0.01 (0.01)	0-0.05	0.01 (0.01)	0-0.04
Non-breeding	0.01 (0.02)	0-0.07	0.01 (0.01)	0-0.05	0.01 (0.01)	0-0.04

Table 9. DBS - East. Seasonal peak density (birds per square km) of Guillemot recorded in flight, S.D. and 95% confidence intervals, in the Array Areas, Array Areas and 2km buffer and Array Areas and 4km buffer.

Season	Density					
	Array Areas		Array Areas & 2km buffer		Array Areas and 4km buffer	
	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.
Spring migration	0.19 (0.09)	0.02-0.38	0.2 (0.12)	0.02-0.43	0.2 (0.13)	0.02-0.42
Breeding (full)	0.76 (0.53)	0.1-1.71	0.64 (0.45)	0.08-1.43	0.57 (0.42)	0.09-1.27
Autumn migration	0.19 (0.2)	0-0.62	0.18 (0.19)	0-0.56	0.2 (0.2)	0-0.59
Winter	0.18 (0.04)	0.1-0.27	0.22 (0.06)	0.11-0.37	0.22 (0.07)	0.1-0.35
Non-breeding	0.19 (0.09)	0.02-0.38	0.22 (0.06)	0.11-0.37	0.22 (0.07)	0.1-0.35

Table 10. DBS - East. Seasonal peak density (birds per square km) of Guillemot (including unidentified auks apportioned using identified auk ratios) recorded in flight, S.D. and 95% confidence intervals, in the Array Areas, Array Areas and 2km buffer and Array Areas and 4km buffer.

Season	Density					
	Array Areas		Array Areas & 2km buffer		Array Areas and 4km buffer	
	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.
Spring migration	0.19 (0.09)	0.02-0.38	0.21 (0.13)	0.02-0.45	0.21 (0.13)	0.02-0.44
Breeding (full)	1.02 (0.72)	0.13-2.3	0.82 (0.58)	0.11-1.84	0.73 (0.53)	0.11-1.61
Autumn migration	0.22 (0.22)	0-0.7	0.19 (0.19)	0-0.58	0.22 (0.22)	0-0.64
Winter	0.27 (0.07)	0.15-0.41	0.3 (0.08)	0.15-0.5	0.33 (0.1)	0.14-0.52
Non-breeding	0.27 (0.07)	0.15-0.41	0.3 (0.08)	0.15-0.5	0.33 (0.1)	0.14-0.52

Table 11. DBS - East. Seasonal peak density (birds per square km) of Guillemot (including unidentified auks apportioned using identified auk ratios and accounting for availability bias) recorded in flight, S.D. and 95% confidence intervals, in the Array Areas, Array Areas and 2km buffer and Array Areas and 4km buffer.

Season	Density					
	Array Areas		Array Areas & 2km buffer		Array Areas and 4km buffer	
	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.
Spring migration	0.19 (0.09)	0.02-0.38	0.21 (0.13)	0.02-0.45	0.21 (0.13)	0.02-0.44
Breeding (full)	1.02 (0.72)	0.13-2.3	0.82 (0.58)	0.11-1.84	0.73 (0.53)	0.11-1.61
Autumn migration	0.22 (0.22)	0-0.7	0.19 (0.19)	0-0.58	0.22 (0.22)	0-0.64
Winter	0.27 (0.07)	0.15-0.41	0.3 (0.08)	0.15-0.5	0.33 (0.1)	0.14-0.52
Non-breeding	0.27 (0.07)	0.15-0.41	0.3 (0.08)	0.15-0.5	0.33 (0.1)	0.14-0.52

Table 12. DBS - East. Seasonal peak density (birds per square km) of Herring gull recorded in flight, S.D. and 95% confidence intervals, in the Array Areas, Array Areas and 2km buffer and Array Areas and 4km buffer.

Season	Density					
	Array Areas		Array Areas & 2km buffer		Array Areas and 4km buffer	
	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.
Spring migration	0.01 (0.02)	0-0.07	0.01 (0.01)	0-0.05	0.01 (0.01)	0-0.04
Breeding (full)	0 (0)	0-0	0 (0)	0-0	0.01 (0.01)	0-0.04
Autumn migration	0.01 (0.02)	0-0.07	0.02 (0.02)	0-0.05	0.02 (0.02)	0-0.09
Winter	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Non-breeding	0.01 (0.02)	0-0.07	0.02 (0.02)	0-0.05	0.02 (0.02)	0-0.09

Table 13. DBS - East. Seasonal peak density (birds per square km) of Kittiwake recorded in flight, S.D. and 95% confidence intervals, in the Array Areas, Array Areas and 2km buffer and Array Areas and 4km buffer.

Season	Density					
	Array Areas		Array Areas & 2km buffer		Array Areas and 4km buffer	
	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.
Spring migration	1.27 (0.54)	0.6-2.64	1.2 (0.43)	0.64-2.23	1.28 (0.53)	0.66-2.44
Breeding (full)	4.51 (1.9)	1.67-7.6	4.57 (1.31)	2.42-6.91	4.75 (0.92)	3.1-6.44
Autumn migration	3.52 (2.26)	1.02-7.24	3.55 (2.36)	1.03-7.72	3.47 (2.26)	1.07-7.22
Winter	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Non-breeding	3.52 (2.26)	1.02-7.24	3.55 (2.36)	1.03-7.72	3.47 (2.26)	1.07-7.22

Table 14. DBS - East. Seasonal peak density (birds per square km) of Lesser black-backed gull recorded in flight, S.D. and 95% confidence intervals, in the Array Areas, Array Areas and 2km buffer and Array Areas and 4km buffer.

Season	Density					
	Array Areas		Array Areas & 2km buffer		Array Areas and 4km buffer	
	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.
Spring migration	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Breeding (full)	0.02 (0.04)	0-0.14	0.02 (0.02)	0-0.05	0.01 (0.01)	0-0.04
Autumn migration	0 (0)	0-0	0 (0)	0-0	0.01 (0.01)	0-0.04
Winter	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Non-breeding	0 (0)	0-0	0 (0)	0-0	0.01 (0.01)	0-0.04



Table 15. DBS - East. Seasonal peak density (birds per square km) of Little gull recorded in flight, S.D. and 95% confidence intervals, in the Array Areas, Array Areas and 2km buffer and Array Areas and 4km buffer.

Season	Density					
	Array Areas		Array Areas & 2km buffer		Array Areas and 4km buffer	
	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.
Spring migration	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Breeding (full)	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Autumn migration	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Winter	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Non-breeding	0 (0)	0-0	0.07 (0.1)	0-0.28	0.05 (0.07)	0-0.2

Table 16. DBS - East. Seasonal peak density (birds per square km) of Manx shearwater recorded in flight, S.D. and 95% confidence intervals, in the Array Areas, Array Areas and 2km buffer and Array Areas and 4km buffer.

Season	Density					
	Array Areas		Array Areas & 2km buffer		Array Areas and 4km buffer	
	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.
Spring migration	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Breeding (full)	0.01 (0.02)	0-0.07	0.01 (0.01)	0-0.05	0.01 (0.01)	0-0.04
Autumn migration	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Winter	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Non-breeding	0.01 (0.02)	0-0.07	0.01 (0.01)	0-0.05	0.01 (0.01)	0-0.04

Table 17. DBS - East. Seasonal peak density (birds per square km) of Puffin recorded in flight, S.D. and 95% confidence intervals, in the Array Areas, Array Areas and 2km buffer and Array Areas and 4km buffer.

Season	Density					
	Array Areas		Array Areas & 2km buffer		Array Areas and 4km buffer	
	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.
Spring migration	0.01 (0.02)	0-0.07	0.01 (0.01)	0-0.05	0.01 (0.01)	0-0.04
Breeding (full)	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Autumn migration	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Winter	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Non-breeding	0.01 (0.02)	0-0.07	0.01 (0.01)	0-0.05	0.01 (0.01)	0-0.04

Table 18. DBS - East. Seasonal peak density (birds per square km) of Puffin (including unidentified auks apportioned using identified auk ratios) recorded in flight, S.D. and 95% confidence intervals, in the Array Areas, Array Areas and 2km buffer and Array Areas and 4km buffer.

Season	Density					
	Array Areas		Array Areas & 2km buffer		Array Areas and 4km buffer	
	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.
Spring migration	0.01 (0.02)	0-0.07	0.01 (0.01)	0-0.05	0.01 (0.01)	0-0.04
Breeding (full)	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Autumn migration	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Winter	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Non-breeding	0.01 (0.02)	0-0.07	0.01 (0.01)	0-0.05	0.01 (0.01)	0-0.04

Table 19. DBS - East. Seasonal peak density (birds per square km) of Puffin (including unidentified auks apportioned using identified auk ratios and accounting for availability bias) recorded in flight, S.D. and 95% confidence intervals, in the Array Areas, Array Areas and 2km buffer and Array Areas and 4km buffer.

Season	Density					
	Array Areas		Array Areas & 2km buffer		Array Areas and 4km buffer	
	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.
Spring migration	0.01 (0.02)	0-0.07	0.01 (0.01)	0-0.05	0.01 (0.01)	0-0.04
Breeding (full)	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Autumn migration	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Winter	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Non-breeding	0.01 (0.02)	0-0.07	0.01 (0.01)	0-0.05	0.01 (0.01)	0-0.04

Table 20. DBS - East. Seasonal peak density (birds per square km) of Razorbill recorded in flight, S.D. and 95% confidence intervals, in the Array Areas, Array Areas and 2km buffer and Array Areas and 4km buffer.

Season	Density					
	Array Areas		Array Areas & 2km buffer		Array Areas and 4km buffer	
	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.
Spring migration	0.1 (0.11)	0-0.31	0.13 (0.16)	0-0.49	0.11 (0.13)	0-0.34
Breeding (full)	0.06 (0.07)	0-0.19	0.04 (0.05)	0-0.16	0.05 (0.04)	0.01-0.14
Autumn migration	0.46 (0.5)	0-1.32	0.89 (1)	0-2.92	0.9 (0.9)	0-2.27
Winter	0.08 (0.1)	0-0.28	0.06 (0.08)	0-0.24	0.06 (0.06)	0-0.19
Non-breeding	0.46 (0.5)	0-1.32	0.89 (1)	0-2.92	0.9 (0.9)	0-2.27

Table 21. DBS - East. Seasonal peak density (birds per square km) of Razorbill (including unidentified auks apportioned using identified auk ratios) recorded in flight, S.D. and 95% confidence intervals, in the Array Areas, Array Areas and 2km buffer and Array Areas and 4km buffer.

Season	Density					
	Array Areas		Array Areas & 2km buffer		Array Areas and 4km buffer	
	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.
Spring migration	0.13 (0.15)	0-0.43	0.17 (0.21)	0-0.65	0.15 (0.16)	0-0.44
Breeding (full)	0.06 (0.07)	0-0.19	0.04 (0.05)	0-0.16	0.06 (0.04)	0.01-0.16
Autumn migration	0.5 (0.55)	0-1.46	0.94 (1.06)	0-3.11	0.95 (0.95)	0-2.39
Winter	0.08 (0.1)	0-0.28	0.07 (0.09)	0-0.27	0.07 (0.08)	0-0.22
Non-breeding	0.5 (0.55)	0-1.46	0.94 (1.06)	0-3.11	0.95 (0.95)	0-2.39

Table 22. DBS - East. Seasonal peak density (birds per square km) of Razorbill (including unidentified auks apportioned using identified auk ratios and accounting for availability bias) recorded in flight, S.D. and 95% confidence intervals, in the Array Areas, Array Areas and 2km buffer and Array Areas and 4km buffer.

Season	Density					
	Array Areas		Array Areas & 2km buffer		Array Areas and 4km buffer	
	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.
Spring migration	0.13 (0.15)	0-0.43	0.17 (0.21)	0-0.65	0.15 (0.16)	0-0.44
Breeding (full)	0.06 (0.07)	0-0.19	0.04 (0.05)	0-0.16	0.06 (0.04)	0.01-0.16
Autumn migration	0.5 (0.55)	0-1.46	0.94 (1.06)	0-3.11	0.95 (0.95)	0-2.39
Winter	0.08 (0.1)	0-0.28	0.07 (0.09)	0-0.27	0.07 (0.08)	0-0.22
Non-breeding	0.5 (0.55)	0-1.46	0.94 (1.06)	0-3.11	0.95 (0.95)	0-2.39

Table 23. DBS - West. Seasonal peak density (birds per square km) of Arctic skua recorded in flight, S.D. and 95% confidence intervals, in the wind farm, wind farm and 2km buffer and wind farm and 4km buffer.

Season	Density					
	Array Areas		Array Areas & 2km buffer		Array Areas and 4km buffer	
	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.
Spring migration	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Breeding (full)	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Autumn migration	0.01 (0.02)	0-0.07	0.01 (0.01)	0-0.05	0.01 (0.01)	0-0.04
Winter	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Non-breeding	0.01 (0.02)	0-0.07	0.01 (0.01)	0-0.05	0.01 (0.01)	0-0.04

Table 24. DBS - West. Seasonal peak density (birds per square km) of Arctic tern recorded in flight, S.D. and 95% confidence intervals, in the wind farm, wind farm and 2km buffer and wind farm and 4km buffer.

Season	Density					
	Array Areas		Array Areas & 2km buffer		Array Areas and 4km buffer	
	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.
Spring migration	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Breeding (full)	0.06 (0.09)	0-0.26	0.07 (0.07)	0-0.2	0.08 (0.1)	0-0.26
Autumn migration	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Winter	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Non-breeding	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0

Table 25. DBS - West. Seasonal peak density (birds per square km) of Common gull recorded in flight, S.D. and 95% confidence intervals, in the wind farm, wind farm and 2km buffer and wind farm and 4km buffer.

Season	Density					
	Array Areas		Array Areas & 2km buffer		Array Areas and 4km buffer	
	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.
Spring migration	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Breeding (full)	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Autumn migration	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Winter	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Non-breeding	0.12 (0.15)	0-0.48	0.09 (0.11)	0-0.34	0.08 (0.1)	0-0.29

Table 26. DBS - West. Seasonal peak density (birds per square km) of Common tern recorded in flight, S.D. and 95% confidence intervals, in the wind farm, wind farm and 2km buffer and wind farm and 4km buffer.

Season	Density					
	Array Areas		Array Areas & 2km buffer		Array Areas and 4km buffer	
	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.
Spring migration	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Breeding (full)	0.02 (0.02)	0-0.07	0.02 (0.02)	0-0.05	0.01 (0.01)	0-0.04
Autumn migration	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Winter	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Non-breeding	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0

Table 27. DBS - West. Seasonal peak density (birds per square km) of Fulmar recorded in flight, S.D. and 95% confidence intervals, in the wind farm, wind farm and 2km buffer and wind farm and 4km buffer.

Season	Density					
	Array Areas		Array Areas & 2km buffer		Array Areas and 4km buffer	
	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.
Spring migration	0.02 (0.03)	0-0.1	0.04 (0.02)	0-0.08	0.04 (0.03)	0-0.1
Breeding (full)	0.12 (0.11)	0-0.33	0.12 (0.08)	0.02-0.26	0.13 (0.08)	0.01-0.28
Autumn migration	0.06 (0.04)	0-0.14	0.1 (0.08)	0-0.24	0.09 (0.07)	0-0.24
Winter	0.07 (0.04)	0-0.17	0.08 (0.05)	0.02-0.17	0.11 (0.08)	0.01-0.28
Non-breeding	0.07 (0.04)	0-0.17	0.1 (0.08)	0-0.24	0.11 (0.08)	0.01-0.28

Table 28. DBS - West. Seasonal peak density (birds per square km) of Gannet recorded in flight, S.D. and 95% confidence intervals, in the wind farm, wind farm and 2km buffer and wind farm and 4km buffer.

Season	Density					
	Array Areas		Array Areas & 2km buffer		Array Areas and 4km buffer	
	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.
Spring migration	0.07 (0.08)	0-0.24	0.09 (0.1)	0-0.28	0.08 (0.08)	0-0.23
Breeding (full)	0.96 (0.58)	0.26-2.01	0.97 (0.57)	0.32-2.05	0.92 (0.53)	0.32-1.8
Autumn migration	0.62 (0.25)	0.19-1.07	0.63 (0.33)	0.15-1.2	0.53 (0.2)	0.24-0.86
Winter	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Non-breeding	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0

Table 29. DBS - West. Seasonal peak density (birds per square km) of Great black-backed gull recorded in flight, S.D. and 95% confidence intervals, in the wind farm, wind farm and 2km buffer and wind farm and 4km buffer.

Season	Density					
	Array Areas		Array Areas & 2km buffer		Array Areas and 4km buffer	
	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.
Spring migration	0.01 (0.02)	0-0.07	0.03 (0.04)	0-0.16	0.03 (0.04)	0-0.13
Breeding (full)	0 (0)	0-0	0.03 (0.06)	0-0.2	0.02 (0.04)	0-0.15
Autumn migration	0.01 (0.02)	0-0.07	0.02 (0.03)	0-0.1	0.02 (0.02)	0-0.07
Winter	0 (0)	0-0	0 (0)	0-0	0.02 (0.03)	0-0.12
Non-breeding	0.01 (0.02)	0-0.07	0.03 (0.04)	0-0.16	0.03 (0.04)	0-0.13

Table 30. DBS - West. Seasonal peak density (birds per square km) of Great northern diver recorded in flight, S.D. and 95% confidence intervals, in the wind farm, wind farm and 2km buffer and wind farm and 4km buffer.

Season	Density					
	Array Areas		Array Areas & 2km buffer		Array Areas and 4km buffer	
	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.
Spring migration	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Breeding (full)	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Autumn migration	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Winter	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Non-breeding	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0



Table 31. DBS - West. Seasonal peak density (birds per square km) of Great skua recorded in flight, S.D. and 95% confidence intervals, in the wind farm, wind farm and 2km buffer and wind farm and 4km buffer.

Season	Density					
	Array Areas		Array Areas & 2km buffer		Array Areas and 4km buffer	
	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.
Spring migration	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Breeding (full)	0 (0)	0-0	0 (0)	0-0	0.01 (0.02)	0-0.07
Autumn migration	0.01 (0.02)	0-0.07	0.02 (0.02)	0-0.05	0.01 (0.01)	0-0.04
Winter	0.01 (0.03)	0-0.08	0.01 (0.02)	0-0.06	0.02 (0.02)	0-0.06
Non-breeding	0.01 (0.03)	0-0.08	0.02 (0.02)	0-0.05	0.02 (0.02)	0-0.06

Table 32. DBS - West. Seasonal peak density (birds per square km) of Guillemot recorded in flight, S.D. and 95% confidence intervals, in the wind farm, wind farm and 2km buffer and wind farm and 4km buffer.

Season	Density					
	Array Areas		Array Areas & 2km buffer		Array Areas and 4km buffer	
	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.
Spring migration	0.24 (0.22)	0-0.68	0.21 (0.14)	0.03-0.48	0.24 (0.24)	0-0.68
Breeding (full)	0.44 (0.38)	0.02-1.23	0.45 (0.37)	0.03-1.13	0.47 (0.33)	0.06-1.02
Autumn migration	0.1 (0.11)	0-0.33	0.11 (0.11)	0-0.31	0.09 (0.1)	0-0.3
Winter	0.43 (0.32)	0.03-1.09	0.41 (0.25)	0.08-0.87	0.36 (0.21)	0.08-0.73
Non-breeding	0.43 (0.32)	0.03-1.09	0.41 (0.25)	0.08-0.87	0.36 (0.21)	0.08-0.73

Table 33. DBS - West. Seasonal peak density (birds per square km) of Guillemot (including unidentified auks apportioned using identified auk ratios) recorded in flight, S.D. and 95% confidence intervals, in the wind farm, wind farm and 2km buffer and wind farm and 4km buffer.

Season	Density					
	Array Areas		Array Areas & 2km buffer		Array Areas and 4km buffer	
	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.
Spring migration	0.29 (0.28)	0-0.85	0.3 (0.21)	0.05-0.7	0.32 (0.25)	0.04-0.78
Breeding (full)	0.54 (0.46)	0.03-1.49	0.55 (0.45)	0.04-1.39	0.54 (0.38)	0.07-1.18
Autumn migration	0.17 (0.2)	0-0.58	0.17 (0.18)	0-0.5	0.13 (0.15)	0-0.44
Winter	0.54 (0.4)	0.04-1.38	0.49 (0.3)	0.09-1.06	0.45 (0.27)	0.1-0.92
Non-breeding	0.54 (0.4)	0.04-1.38	0.49 (0.3)	0.09-1.06	0.45 (0.27)	0.1-0.92

Table 34. DBS - West. Seasonal peak density (birds per square km) of Guillemot (including unidentified auks apportioned using identified auk ratios and accounting for availability bias) recorded in flight, S.D. and 95% confidence intervals, in the wind farm, wind farm and 2km buffer and wind farm and 4km buffer.

Season	Density					
	Array Areas		Array Areas & 2km buffer		Array Areas and 4km buffer	
	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.
Spring migration	0.29 (0.28)	0-0.85	0.3 (0.21)	0.05-0.7	0.32 (0.25)	0.04-0.78
Breeding (full)	0.54 (0.46)	0.03-1.49	0.55 (0.45)	0.04-1.39	0.54 (0.38)	0.07-1.18
Autumn migration	0.17 (0.2)	0-0.58	0.17 (0.18)	0-0.5	0.13 (0.15)	0-0.44
Winter	0.54 (0.4)	0.04-1.38	0.49 (0.3)	0.09-1.06	0.45 (0.27)	0.1-0.92
Non-breeding	0.54 (0.4)	0.04-1.38	0.49 (0.3)	0.09-1.06	0.45 (0.27)	0.1-0.92

Table 35. DBS - West. Seasonal peak density (birds per square km) of Herring gull recorded in flight, S.D. and 95% confidence intervals, in the wind farm, wind farm and 2km buffer and wind farm and 4km buffer.

Season	Density					
	Array Areas		Array Areas & 2km buffer		Array Areas and 4km buffer	
	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.
Spring migration	0.01 (0.02)	0-0.07	0.01 (0.01)	0-0.05	0.01 (0.01)	0-0.04
Breeding (full)	0.01 (0.02)	0-0.07	0.02 (0.03)	0-0.1	0.02 (0.03)	0-0.08
Autumn migration	0.02 (0.03)	0-0.1	0.02 (0.02)	0-0.08	0.03 (0.03)	0-0.1
Winter	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Non-breeding	0.02 (0.03)	0-0.1	0.02 (0.02)	0-0.08	0.03 (0.03)	0-0.1

Table 36. DBS - West. Seasonal peak density (birds per square km) of Kittiwake recorded in flight, S.D. and 95% confidence intervals, in the wind farm, wind farm and 2km buffer and wind farm and 4km buffer.

Season	Density					
	Array Areas		Array Areas & 2km buffer		Array Areas and 4km buffer	
	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.
Spring migration	1.21 (0.48)	0.51-2.17	1.29 (0.57)	0.56-2.31	1.32 (0.48)	0.66-2.12
Breeding (full)	4.66 (6.39)	0-22.22	3.98 (1.77)	1.7-7.99	3.67 (1.66)	1.47-7.02
Autumn migration	2.49 (1.75)	0.53-5.18	2.91 (2.34)	0.46-6.51	2.85 (2.17)	0.54-5.96
Winter	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Non-breeding	2.49 (1.75)	0.53-5.18	2.91 (2.34)	0.46-6.51	2.85 (2.17)	0.54-5.96

Table 37. DBS - West. Seasonal peak density (birds per square km) of Lesser black-backed gull recorded in flight, S.D. and 95% confidence intervals, in the wind farm, wind farm and 2km buffer and wind farm and 4km buffer.

Season	Density					
	Array Areas		Array Areas & 2km buffer		Array Areas and 4km buffer	
	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.
Spring migration	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Breeding (full)	0.01 (0.02)	0-0.07	0.01 (0.01)	0-0.05	0.01 (0.01)	0-0.04
Autumn migration	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Winter	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Non-breeding	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0

Table 38. DBS - West. Seasonal peak density (birds per square km) of Little gull recorded in flight, S.D. and 95% confidence intervals, in the wind farm, wind farm and 2km buffer and wind farm and 4km buffer.

Season	Density					
	Array Areas		Array Areas & 2km buffer		Array Areas and 4km buffer	
	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.
Spring migration	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Breeding (full)	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Autumn migration	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Winter	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Non-breeding	0 (0)	0-0	0.03 (0.06)	0-0.2	0.02 (0.04)	0-0.14

Table 39. DBS - West. Seasonal peak density (birds per square km) of Puffin recorded in flight, S.D. and 95% confidence intervals, in the wind farm, wind farm and 2km buffer and wind farm and 4km buffer.

Season	Density					
	Array Areas		Array Areas & 2km buffer		Array Areas and 4km buffer	
	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.
Spring migration	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Breeding (full)	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Autumn migration	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Winter	0 (0)	0-0	0 (0)	0-0	0.01 (0.02)	0-0.07
Non-breeding	0 (0)	0-0	0 (0)	0-0	0.01 (0.02)	0-0.07

Table 40. DBS - West. Seasonal peak density (birds per square km) of Puffin (including unidentified auks apportioned using identified auk ratios) recorded in flight, S.D. and 95% confidence intervals, in the wind farm, wind farm and 2km buffer and wind farm and 4km buffer.

Season	Density					
	Array Areas		Array Areas & 2km buffer		Array Areas and 4km buffer	
	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.
Spring migration	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Breeding (full)	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Autumn migration	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Winter	0 (0)	0-0	0 (0)	0-0	0.01 (0.02)	0-0.07
Non-breeding	0 (0)	0-0	0 (0)	0-0	0.01 (0.02)	0-0.07

Table 41. DBS - West. Seasonal peak density (birds per square km) of Puffin (including unidentified auks apportioned using identified auk ratios and accounting for availability bias) recorded in flight, S.D. and 95% confidence intervals, in the wind farm, wind farm and 2km buffer and wind farm and 4km buffer.

Season	Density					
	Array Areas		Array Areas & 2km buffer		Array Areas and 4km buffer	
	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.
Spring migration	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Breeding (full)	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Autumn migration	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Winter	0 (0)	0-0	0 (0)	0-0	0.01 (0.02)	0-0.07
Non-breeding	0 (0)	0-0	0 (0)	0-0	0.01 (0.02)	0-0.07

Table 42. DBS - West. Seasonal peak density (birds per square km) of Razorbill recorded in flight, S.D. and 95% confidence intervals, in the wind farm, wind farm and 2km buffer and wind farm and 4km buffer.

Season	Density					
	Array Areas		Array Areas & 2km buffer		Array Areas and 4km buffer	
	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.
Spring migration	0.18 (0.17)	0-0.57	0.13 (0.11)	0-0.35	0.14 (0.07)	0.01-0.31
Breeding (full)	0.18 (0.23)	0-0.76	0.12 (0.15)	0-0.45	0.11 (0.12)	0-0.38
Autumn migration	0.47 (0.62)	0-1.98	0.33 (0.43)	0-1.35	0.32 (0.36)	0-1.03
Winter	0.17 (0.2)	0-0.59	0.18 (0.16)	0-0.53	0.16 (0.15)	0-0.44
Non-breeding	0.47 (0.62)	0-1.98	0.33 (0.43)	0-1.35	0.32 (0.36)	0-1.03

Table 43. DBS - West. Seasonal peak density (birds per square km) of Razorbill (including unidentified auks apportioned using identified auk ratios) recorded in flight, S.D. and 95% confidence intervals, in the wind farm, wind farm and 2km buffer and wind farm and 4km buffer.

Season	Density					
	Array Areas		Array Areas & 2km buffer		Array Areas and 4km buffer	
	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.
Spring migration	0.22 (0.21)	0-0.72	0.17 (0.15)	0-0.46	0.17 (0.09)	0.01-0.37
Breeding (full)	0.18 (0.23)	0-0.76	0.13 (0.16)	0-0.48	0.11 (0.13)	0-0.4
Autumn migration	0.79 (1.05)	0-3.35	0.54 (0.69)	0-2.17	0.47 (0.53)	0-1.53
Winter	0.2 (0.24)	0-0.72	0.2 (0.19)	0-0.6	0.19 (0.18)	0-0.55
Non-breeding	0.79 (1.05)	0-3.35	0.54 (0.69)	0-2.17	0.47 (0.53)	0-1.53

Table 44. DBS - West. Seasonal peak density (birds per square km) of Razorbill (including unidentified auks apportioned using identified auk ratios and accounting for availability bias) recorded in flight, S.D. and 95% confidence intervals, in the wind farm, wind farm and 2km buffer and wind farm and 4km buffer.

Season	Density					
	Array Areas		Array Areas & 2km buffer		Array Areas and 4km buffer	
	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.
Spring migration	0.22 (0.21)	0-0.72	0.17 (0.15)	0-0.46	0.17 (0.09)	0.01-0.37
Breeding (full)	0.18 (0.23)	0-0.76	0.13 (0.16)	0-0.48	0.11 (0.13)	0-0.4
Autumn migration	0.79 (1.05)	0-3.35	0.54 (0.69)	0-2.17	0.47 (0.53)	0-1.53
Winter	0.2 (0.24)	0-0.72	0.2 (0.19)	0-0.6	0.19 (0.18)	0-0.55
Non-breeding	0.79 (1.05)	0-3.35	0.54 (0.69)	0-2.17	0.47 (0.53)	0-1.53

Table 45. DBS - West. Seasonal peak density (birds per square km) of Red-throated diver recorded in flight, S.D. and 95% confidence intervals, in the wind farm, wind farm and 2km buffer and wind farm and 4km buffer.

Season	Density					
	Array Areas		Array Areas & 2km buffer		Array Areas and 4km buffer	
	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.
Spring migration	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Breeding (full)	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Autumn migration	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Winter	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Non-breeding	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0

Table 46. DBS - East & West. Seasonal peak density (birds per square km) of Arctic skua recorded in flight, S.D. and 95% confidence intervals, in the Array Areas, Array Areas and 2km buffers and Array Areas and 4km buffers.

Season	Density					
	Array Areas		Array Areas & 2km buffer		Array Areas and 4km buffer	
	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.
Spring migration	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Breeding (full)	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Autumn migration	0.01 (0.01)	0-0.04	0 (0.01)	0-0.02	0.01 (0.01)	0-0.02
Winter	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Non-breeding	0.01 (0.01)	0-0.04	0 (0.01)	0-0.02	0.01 (0.01)	0-0.02



Table 47. DBS - East & West. Seasonal peak density (birds per square km) of Arctic tern recorded in flight, S.D. and 95% confidence intervals, in the Array Areas, Array Areas and 2km buffers and Array Areas and 4km buffers.

Season	Density					
	Array Areas		Array Areas & 2km buffer		Array Areas and 4km buffer	
	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.
Spring migration	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Breeding (full)	0.08 (0.09)	0-0.26	0.09 (0.09)	0-0.23	0.1 (0.11)	0-0.27
Autumn migration	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Winter	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Non-breeding	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0

Table 48. DBS - East & West. Seasonal peak density (birds per square km) of Common gull recorded in flight, S.D. and 95% confidence intervals, in the Array Areas, Array Areas and 2km buffers and Array Areas and 4km buffers.

Season	Density					
	Array Areas		Array Areas & 2km buffer		Array Areas and 4km buffer	
	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.
Spring migration	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Breeding (full)	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Autumn migration	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Winter	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Non-breeding	0.08 (0.08)	0-0.26	0.06 (0.06)	0-0.19	0.05 (0.05)	0-0.16

Table 49. DBS - East & West. Seasonal peak density (birds per square km) of Common tern recorded in flight, S.D. and 95% confidence intervals, in the Array Areas, Array Areas and 2km buffers and Array Areas and 4km buffers.

Season	Density					
	Array Areas		Array Areas & 2km buffer		Array Areas and 4km buffer	
	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.
Spring migration	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Breeding (full)	0.01 (0.01)	0-0.04	0.01 (0.01)	0-0.02	0.01 (0.01)	0-0.03
Autumn migration	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Winter	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Non-breeding	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0

Table 50. DBS - East & West. Seasonal peak density (birds per square km) of Fulmar recorded in flight, S.D. and 95% confidence intervals, in the Array Areas, Array Areas and 2km buffers and Array Areas and 4km buffers.

Season	Density					
	Array Areas		Array Areas & 2km buffer		Array Areas and 4km buffer	
	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.
Spring migration	0.04 (0.04)	0-0.12	0.04 (0.03)	0-0.11	0.04 (0.03)	0-0.11
Breeding (full)	0.12 (0.05)	0.04-0.24	0.12 (0.04)	0.05-0.22	0.11 (0.05)	0.04-0.2
Autumn migration	0.08 (0.04)	0.01-0.16	0.13 (0.12)	0.01-0.4	0.12 (0.11)	0.01-0.34
Winter	0.09 (0.07)	0-0.23	0.11 (0.09)	0.01-0.26	0.12 (0.09)	0.01-0.27
Non-breeding	0.09 (0.07)	0-0.23	0.13 (0.12)	0.01-0.4	0.12 (0.11)	0.01-0.34

Table 51. DBS - East & West. Seasonal peak density (birds per square km) of Gannet recorded in flight, S.D. and 95% confidence intervals, in the Array Areas, Array Areas and 2km buffers and Array Areas and 4km buffers.

Season	Density					
	Array Areas		Array Areas & 2km buffer		Array Areas and 4km buffer	
	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.
Spring migration	0.05 (0.06)	0-0.15	0.06 (0.07)	0-0.18	0.06 (0.07)	0-0.17
Breeding (full)	0.78 (0.36)	0.33-1.4	0.8 (0.4)	0.34-1.49	0.82 (0.43)	0.33-1.48
Autumn migration	0.58 (0.08)	0.44-0.73	0.55 (0.08)	0.39-0.72	0.54 (0.08)	0.41-0.71
Winter	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Non-breeding	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0

Table 52. DBS - East & West. Seasonal peak density (birds per square km) of Great black-backed gull recorded in flight, S.D. and 95% confidence intervals, in the Array Areas, Array Areas and 2km buffers and Array Areas and 4km buffers.

Season	Density					
	Array Areas		Array Areas & 2km buffer		Array Areas and 4km buffer	
	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.
Spring migration	0.03 (0.03)	0-0.11	0.04 (0.03)	0-0.11	0.04 (0.02)	0.01-0.1
Breeding (full)	0.01 (0.02)	0-0.05	0.02 (0.03)	0-0.1	0.02 (0.02)	0-0.07
Autumn migration	0.01 (0.01)	0-0.04	0.02 (0.02)	0-0.06	0.02 (0.01)	0-0.05
Winter	0 (0)	0-0	0 (0.01)	0-0.02	0.02 (0.03)	0-0.09
Non-breeding	0.03 (0.03)	0-0.11	0.04 (0.03)	0-0.11	0.04 (0.02)	0.01-0.1

Table 53. DBS - East & West. Seasonal peak density (birds per square km) of Great northern diver recorded in flight, S.D. and 95% confidence intervals, in the Array Areas, Array Areas and 2km buffers and Array Areas and 4km buffers.

Season	Density					
	Array Areas		Array Areas & 2km buffer		Array Areas and 4km buffer	
	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.
Spring migration	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Breeding (full)	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Autumn migration	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Winter	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Non-breeding	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0

Table 54. DBS - East & West. Seasonal peak density (birds per square km) of Great skua recorded in flight, S.D. and 95% confidence intervals, in the Array Areas, Array Areas and 2km buffers and Array Areas and 4km buffers.

Season	Density					
	Array Areas		Array Areas & 2km buffer		Array Areas and 4km buffer	
	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.
Spring migration	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Breeding (full)	0 (0)	0-0	0 (0.01)	0-0.02	0.01 (0.01)	0-0.04
Autumn migration	0.01 (0.01)	0-0.04	0.01 (0.01)	0-0.03	0.01 (0.01)	0-0.02
Winter	0.01 (0.01)	0-0.04	0.01 (0.01)	0-0.03	0.01 (0.01)	0-0.03
Non-breeding	0.01 (0.01)	0-0.04	0.01 (0.01)	0-0.03	0.01 (0.01)	0-0.03

Table 55. DBS - East & West. Seasonal peak density (birds per square km) of Guillemot recorded in flight, S.D. and 95% confidence intervals, in the Array Areas, Array Areas and 2km buffers and Array Areas and 4km buffers.

Season	Density					
	Array Areas		Array Areas & 2km buffer		Array Areas and 4km buffer	
	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.
Spring migration	0.18 (0.1)	0.02-0.37	0.2 (0.12)	0.04-0.41	0.21 (0.14)	0.03-0.44
Breeding (full)	0.6 (0.43)	0.09-1.34	0.54 (0.39)	0.09-1.18	0.52 (0.36)	0.1-1.07
Autumn migration	0.14 (0.14)	0-0.42	0.14 (0.14)	0-0.4	0.14 (0.15)	0-0.4
Winter	0.3 (0.15)	0.1-0.63	0.31 (0.12)	0.13-0.54	0.29 (0.13)	0.12-0.51
Non-breeding	0.3 (0.15)	0.1-0.63	0.31 (0.12)	0.13-0.54	0.29 (0.13)	0.12-0.51

Table 56. DBS - East & West. Seasonal peak density (birds per square km) of Guillemot (including unidentified auks apportioned using identified auk ratios) recorded in flight, S.D. and 95% confidence intervals, in the Array Areas, Array Areas and 2km buffers and Array Areas and 4km buffers.

Season	Density					
	Array Areas		Array Areas & 2km buffer		Array Areas and 4km buffer	
	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.
Spring migration	0.2 (0.11)	0.03-0.41	0.26 (0.16)	0.05-0.53	0.26 (0.18)	0.04-0.56
Breeding (full)	0.78 (0.56)	0.12-1.74	0.69 (0.5)	0.11-1.5	0.64 (0.45)	0.12-1.31
Autumn migration	0.19 (0.19)	0-0.56	0.18 (0.18)	0-0.49	0.17 (0.17)	0-0.47
Winter	0.41 (0.21)	0.14-0.84	0.39 (0.15)	0.16-0.68	0.39 (0.18)	0.16-0.69
Non-breeding	0.41 (0.21)	0.14-0.84	0.39 (0.15)	0.16-0.68	0.39 (0.18)	0.16-0.69

Table 57. DBS - East & West. Seasonal peak density (birds per square km) of Guillemot (including unidentified auks apportioned using identified auk ratios and accounting for availability bias) recorded in flight, S.D. and 95% confidence intervals, in the Array Areas, Array Areas and 2km buffers and Array Areas and 4km buffers.

Season	Density					
	Array Areas		Array Areas & 2km buffer		Array Areas and 4km buffer	
	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.
Spring migration	0.2 (0.11)	0.03-0.41	0.26 (0.16)	0.05-0.53	0.26 (0.18)	0.04-0.56
Breeding (full)	0.78 (0.56)	0.12-1.74	0.69 (0.5)	0.11-1.5	0.64 (0.45)	0.12-1.31
Autumn migration	0.19 (0.19)	0-0.56	0.18 (0.18)	0-0.49	0.17 (0.17)	0-0.47
Winter	0.41 (0.21)	0.14-0.84	0.39 (0.15)	0.16-0.68	0.39 (0.18)	0.16-0.69
Non-breeding	0.41 (0.21)	0.14-0.84	0.39 (0.15)	0.16-0.68	0.39 (0.18)	0.16-0.69

Table 58. DBS - East & West. Seasonal peak density (birds per square km) of Herring gull recorded in flight, S.D. and 95% confidence intervals, in the Array Areas, Array Areas and 2km buffers and Array Areas and 4km buffers.

Season	Density					
	Array Areas		Array Areas & 2km buffer		Array Areas and 4km buffer	
	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.
Spring migration	0.01 (0.01)	0-0.04	0.01 (0.01)	0-0.02	0.01 (0.01)	0-0.02
Breeding (full)	0.01 (0.01)	0-0.04	0.01 (0.01)	0-0.05	0.01 (0.01)	0-0.04
Autumn migration	0.02 (0.02)	0-0.05	0.02 (0.01)	0-0.05	0.03 (0.02)	0-0.08
Winter	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Non-breeding	0.02 (0.02)	0-0.05	0.02 (0.01)	0-0.05	0.03 (0.02)	0-0.08

Table 59. DBS - East & West. Seasonal peak density (birds per square km) of Kittiwake recorded in flight, S.D. and 95% confidence intervals, in the Array Areas, Array Areas and 2km buffers and Array Areas and 4km buffers.

Season	Density					
	Array Areas		Array Areas & 2km buffer		Array Areas and 4km buffer	
	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.
Spring migration	1.19 (0.34)	0.73-1.98	1.18 (0.46)	0.59-1.93	1.22 (0.42)	0.67-1.87
Breeding (full)	3.84 (4.51)	0.02-14.21	3.34 (1.11)	1.76-5.27	3.63 (0.71)	2.46-5.01
Autumn migration	3 (1.95)	0.87-5.87	3.24 (2.29)	0.82-6.58	3.17 (2.17)	0.88-6.25
Winter	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Non-breeding	3 (1.95)	0.87-5.87	3.24 (2.29)	0.82-6.58	3.17 (2.17)	0.88-6.25

Table 60. DBS - East & West. Seasonal peak density (birds per square km) of Lesser black-backed gull recorded in flight, S.D. and 95% confidence intervals, in the Array Areas, Array Areas and 2km buffers and Array Areas and 4km buffers.

Season	Density					
	Array Areas		Array Areas & 2km buffer		Array Areas and 4km buffer	
	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.
Spring migration	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Breeding (full)	0.01 (0.02)	0-0.07	0.01 (0.01)	0-0.02	0.01 (0.01)	0-0.02
Autumn migration	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0.02
Winter	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Non-breeding	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0.02

Table 61. DBS - East & West. Seasonal peak density (birds per square km) of Little gull recorded in flight, S.D. and 95% confidence intervals, in the Array Areas, Array Areas and 2km buffers and Array Areas and 4km buffers.

Season	Density					
	Array Areas		Array Areas & 2km buffer		Array Areas and 4km buffer	
	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.
Spring migration	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Breeding (full)	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Autumn migration	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Winter	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Non-breeding	0 (0)	0-0	0.05 (0.07)	0-0.2	0.04 (0.05)	0-0.15

Table 62. DBS - East & West. Seasonal peak density (birds per square km) of Manx shearwater recorded in flight, S.D. and 95% confidence intervals, in the Array Areas, Array Areas and 2km buffers and Array Areas and 4km buffers.

Season	Density					
	Array Areas		Array Areas & 2km buffer		Array Areas and 4km buffer	
	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.
Spring migration	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Breeding (full)	0.01 (0.01)	0-0.04	0 (0.01)	0-0.02	0 (0.01)	0-0.02
Autumn migration	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Winter	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Non-breeding	0.01 (0.01)	0-0.04	0 (0.01)	0-0.02	0 (0.01)	0-0.02



Table 63. DBS - East & West. Seasonal peak density (birds per square km) of Puffin recorded in flight, S.D. and 95% confidence intervals, in the Array Areas, Array Areas and 2km buffers and Array Areas and 4km buffers.

Season	Density					
	Array Areas		Array Areas & 2km buffer		Array Areas and 4km buffer	
	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.
Spring migration	0.01 (0.01)	0-0.04	0 (0.01)	0-0.02	0 (0.01)	0-0.02
Breeding (full)	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Autumn migration	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Winter	0 (0)	0-0	0 (0)	0-0	0.01 (0.01)	0-0.04
Non-breeding	0.01 (0.01)	0-0.04	0 (0.01)	0-0.02	0.01 (0.01)	0-0.04

Table 64. DBS - East & West. Seasonal peak density (birds per square km) of Puffin (including unidentified auks apportioned using identified auk ratios) recorded in flight, S.D. and 95% confidence intervals, in the Array Areas, Array Areas and 2km buffers and Array Areas and 4km buffers.

Season	Density					
	Array Areas		Array Areas & 2km buffer		Array Areas and 4km buffer	
	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.
Spring migration	0.01 (0.01)	0-0.04	0 (0.01)	0-0.02	0 (0.01)	0-0.02
Breeding (full)	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Autumn migration	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Winter	0 (0)	0-0	0 (0)	0-0	0.01 (0.01)	0-0.04
Non-breeding	0.01 (0.01)	0-0.04	0 (0.01)	0-0.02	0.01 (0.01)	0-0.04

Table 65. DBS - East & West. Seasonal peak density (birds per square km) of Puffin (including unidentified auks apportioned using identified auk ratios and accounting for availability bias) recorded in flight, S.D. and 95% confidence intervals, in the Array Areas, Array Areas and 2km buffers and Array Areas and 4km buffers.

Season	Density					
	Array Areas		Array Areas & 2km buffer		Array Areas and 4km buffer	
	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.
Spring migration	0.01 (0.01)	0-0.04	0 (0.01)	0-0.02	0 (0.01)	0-0.02
Breeding (full)	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Autumn migration	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Winter	0 (0)	0-0	0 (0)	0-0	0.01 (0.01)	0-0.04
Non-breeding	0.01 (0.01)	0-0.04	0 (0.01)	0-0.02	0.01 (0.01)	0-0.04

Table 66. DBS - East & West. Seasonal peak density (birds per square km) of Razorbill recorded in flight, S.D. and 95% confidence intervals, in the Array Areas, Array Areas and 2km buffers and Array Areas and 4km buffers.

Season	Density					
	Array Areas		Array Areas & 2km buffer		Array Areas and 4km buffer	
	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.
Spring migration	0.11 (0.1)	0-0.32	0.09 (0.07)	0-0.26	0.13 (0.07)	0.01-0.24
Breeding (full)	0.12 (0.14)	0-0.44	0.08 (0.09)	0-0.28	0.08 (0.07)	0.01-0.24
Autumn migration	0.46 (0.51)	0-1.49	0.61 (0.66)	0-1.84	0.61 (0.61)	0-1.53
Winter	0.1 (0.11)	0-0.32	0.09 (0.09)	0-0.28	0.1 (0.09)	0-0.26
Non-breeding	0.46 (0.51)	0-1.49	0.61 (0.66)	0-1.84	0.61 (0.61)	0-1.53

Table 67. DBS - East & West. Seasonal peak density (birds per square km) of Razorbill (including unidentified auks apportioned using identified auk ratios) recorded in flight, S.D. and 95% confidence intervals, in the Array Areas, Array Areas and 2km buffers and Array Areas and 4km buffers.

Season	Density					
	Array Areas		Array Areas & 2km buffer		Array Areas and 4km buffer	
	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.
Spring migration	0.13 (0.12)	0-0.39	0.12 (0.09)	0-0.33	0.16 (0.08)	0.01-0.3
Breeding (full)	0.12 (0.14)	0-0.44	0.09 (0.1)	0-0.3	0.09 (0.08)	0.01-0.26
Autumn migration	0.65 (0.72)	0-2.1	0.74 (0.81)	0-2.24	0.71 (0.72)	0-1.79
Winter	0.13 (0.14)	0-0.42	0.12 (0.11)	0-0.35	0.13 (0.12)	0-0.34
Non-breeding	0.65 (0.72)	0-2.1	0.74 (0.81)	0-2.24	0.71 (0.72)	0-1.79

Table 68. DBS - East & West. Seasonal peak density (birds per square km) of Razorbill (including unidentified auks apportioned using identified auk ratios and accounting for availability bias) recorded in flight, S.D. and 95% confidence intervals, in the Array Areas, Array Areas and 2km buffers and Array Areas and 4km buffers.

Season	Density					
	Array Areas		Array Areas & 2km buffer		Array Areas and 4km buffer	
	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.
Spring migration	0.13 (0.12)	0-0.39	0.12 (0.09)	0-0.33	0.16 (0.08)	0.01-0.3
Breeding (full)	0.12 (0.14)	0-0.44	0.09 (0.1)	0-0.3	0.09 (0.08)	0.01-0.26
Autumn migration	0.65 (0.72)	0-2.1	0.74 (0.81)	0-2.24	0.71 (0.72)	0-1.79
Winter	0.13 (0.14)	0-0.42	0.12 (0.11)	0-0.35	0.13 (0.12)	0-0.34
Non-breeding	0.65 (0.72)	0-2.1	0.74 (0.81)	0-2.24	0.71 (0.72)	0-1.79

Table 69. DBS - East & West. Seasonal peak density (birds per square km) of Red-throated diver recorded in flight, S.D. and 95% confidence intervals, in the Array Areas, Array Areas and 2km buffers and Array Areas and 4km buffers.

Season	Density					
	Array Areas		Array Areas & 2km buffer		Array Areas and 4km buffer	
	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.	Estimate (S.D.)	95% c.i.
Spring migration	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Breeding (full)	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Autumn migration	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Winter	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0
Non-breeding	0 (0)	0-0	0 (0)	0-0	0 (0)	0-0