Greater Dublin Drainage Project Addendum

Environmental Impact Assessment Report Addendum: Volume 3A Part B of 6

Appendix A10.1 Ornithology (Marine) Baseline Survey Report

Uisce Éireann

October 2023

Contents

1 INTRODUCTION 1
1.1 Purpose of this Document 1

2 ESTUARINE BIRD SURVEYS 2
2.1 Survey Methodology 2
2.2 Results 2

3 VANTAGE POINT SURVEYS 4
3.1 Survey Methodology 4
3.2 Results 6

4 KEY MATERIAL CHANGES IN BASELINE 7

5 REFERENCES 8

APPENDIX 1 – FIGURES 0

APPENDIX 2 – ESTUARINE BIRD SURVEY EFFORT AND WEATHER 12

APPENDIX 3 – ESTUARINE BIRD SURVEY DATA 16

APPENDIX 4 – VP SURVEY EFFORT AND WEATHER 23

APPENDIX 5 – VP RECORDS 33

APPENDIX 6 – VP GRAPHS 50

1 INTRODUCTION

1.1 Purpose of this Document

RPS was commissioned by Uisce Éireann (UÉ) to complete update ecology surveys to inform the Greater Dublin Drainage Project (hereafter referred to as the Proposed Project) Environmental Impact Assessment Report (EIAR) Addendum Report.

An EIAR was prepared for the Proposed Project and was submitted in the 2018 planning application. Chapter 10 of the EIAR considered Biodiversity (Marine Ornithology).

As detailed in Chapter 1a (Introduction) in Volume 2A of the EIAR Addendum Report, we have reviewed Chapter 10 (Biodiversity (Marine Ornithology)) and the associated appendices of the EIAR submitted with the original 2018 planning application in light of:

- Changes to the baseline environment;
- The requirement for updated surveys; and
- Any changes to the law, policy, or industry standards and guidance in the intervening period.

This Appendix documents the findings of the update ecology surveys and informs Chapter 10A Biodiversity (Marine Ornithology) of the EIAR Addendum Report.

In updating the baseline ecology information for the Proposed Project this was completed cognisant of the Chartered Institute of Ecology and Environmental Management (CIEEM) Guidelines for Ecological Impact Assessment in the UK and Ireland – Terrestrial, Freshwater, Coastal and Marine (hereafter referred to as the CIEEM Guideline) (CIEEM 2018), with respect to the validity of baseline data.

This Appendix is a factual account of the update surveys which have been completed for the Proposed Project between 2020 and 2023 (depending on the survey), and documents the methodology and findings of these surveys. The update surveys completed were:

- Coastal and Marine Vantage Point (VP) (Velvet Strand; VP1);
- Coastal and Marine VP (Ireland's Eye; VP2); and
- Estuarine Bird Surveys (Baldoyle Bay).

The data were collected between August 2020 and June 2023.

The bird species and designations related to land-based species are covered in the Appendix A11.2 (Terrestrial Ornithology Technical Report) in Volume 3A Part B of this EIAR Addendum. The coverage in this current Appendix is therefore for estuarine, coastal and marine based species only. The following ornithological elements of this Appendix therefore only consider these birds and their habitats.

In addition, the data have been compared with the relevant baseline in Chapter 10 (Biodiversity (Marine Ornithology)) in Volume 3 Part A of the EIAR submitted in the 2018 planning application, to identify any material changes to the baseline conditions in the intervening period. Any identified material changes have then been used to inform Chapter 10A (Biodiversity (Marine Ornithology)) in Volume 3A Part A of the EIAR Addendum.

2 ESTUARINE BIRD SURVEYS

2.1 Survey Methodology

2.1.1 Introduction

Estuarine walkover surveys were carried out based on the standard Wetland Bird Survey methods (Gilbert *et al*. 1998; BTO 2016a; BTO 2016b), using a more refined methodology involving the recording of locations of birds as well as their behaviour. Surveys aimed to count, map and record behaviour of wildfowl and waders using the estuarine habitat, in addition to other species of bird present.

2.1.2 Survey Location

The survey area covered the proposed outfall pipeline route to the proposed outfall where it will cross intertidal / estuarine habitat, and extended up to 1 km (kilometre) from the proposed outfall pipeline route across Baldoyle Bay Special Protection Area (SPA) and surrounding habitats. The size of the survey area was approximately 4.95km² (kilometres squared).

2.1.3 Target Species

The key species' groups were wildfowl, waders and seabirds. However, during the surveys, all birds were recorded. Priority was given to recording birds on the ground or on water within the survey area. Records of notable flying birds were made, for example raptors or flocks of waterfowl and waders.

2.1.4 Survey Timing and Effort

In each month, two estuarine survey counts were completed. Each survey was of six hours duration. If the survey area was covered before the allotted time had elapsed (which was possible at high tide), the remaining time was used to undertake repeat counts of any wader or wildfowl hotspots.

Timings of counts throughout the survey period were made so that the whole tidal cycle was equally covered. Counts were made during full daylight.

2.1.5 Field Recording

Species were recorded using standard British Trust for Ornithology (BTO) codes and the behaviour codes specified on the survey map. Information on the age and sex of target species was also considered, where notable and of assistance to the assessment. Notable observations that occurred outside the study area, but within sight of the surveyors inside the study area, were also recorded.

2.2 Results

2.2.1 Survey Effort

Survey effort and weather during the estuarine walkover surveys are presented in Appendix 2 (Table A10.1a and Table A10.1b).

2.2.2 Peak Counts

Peak counts from estuarine walkover surveys are presented in Appendix 3 (Table A10.2 to Table A10.4).

2.2.3 Figures

The distribution of the 77 species encountered during the estuarine walkover surveys is presented in Appendix 1, Figure A10.1 to Figure A10.74c. A figure was produced for species that were named on citations

of the Baldoyle Bay, Ireland's Eye or Howth Head Coast SPAs or North-West Irish Sea candidate SPA (cSPA), or if more than 10 records of the species were made during the surveys.

3 VANTAGE POINT SURVEYS

3.1 Survey Methodology

3.1.1 Introduction

VP surveys were carried out as per the methodology described in Section 3.1 of the 2018 EIAR. Six hours of survey effort per month were carried out from August 2020 to July 2021, and from January to June 2023. A reduced effort was undertaken between October and December 2022, comprising three hours in October, nine hours in November and three hours in December. Due to surveyor illness and poor weather conditions, a reduced survey effort was undertaken between October and December 2022. This does not affect the robustness of the assessment undertaken.

Surveys were not undertaken at VP2 in February or April 2023 due to poor weather conditions. Data were collected during all other survey months providing a robust dataset to inform analysis. Therefore this is not considered to be a limitation to the assessment.

Survey protocol was designed to count birds on the water (primary focus) and in flight (through snapshot recording).

3.1.2 Survey Location

One location on the mainland and one location on Ireland's Eye were used. The mainland coastal VP was positioned as in previous surveys for the 2018 EIAR, at the proposed landfall location at Portmarnock (IO250423, Lat. 53.41631, Long. -6.11966, mean viewing angle 70°). The Ireland's Eye VP was positioned at IO287415 (Lat. 53.40792, Long. -6.06387, mean viewing angle 0°).

The mainland coastal VP covered the area of the proposed outfall pipeline route out to sea using a 2km viewing arc. The Ireland's Eye VP covered the remaining proposed outfall pipeline route using a 2km viewing arc. In this way, a buffer around the proposed outfall pipeline route footprint and working area was achieved.

3.1.3 Target Species

Key species / species groups are as listed below. These are primarily seabirds which utilise the marine environment for breeding, foraging or roosting. All species listed were covered, but species marked in bold were considered priority as they are included as qualifying species of nearby SPAs.

At the time of the surveys, this did not include species cited as conservation objectives of the North-West Irish Sea cSPA, however reference is made to them in the results section.

- Seaducks;
- Divers;
- Grebes;
- **Fulmar** and other tubenoses (petrels, shearwaters);
- Gannet;
- **Cormorant**;
- **Shag;**
- Skuas;
- **Lesser black-backed gull**;
- **Herring gull**;
- Other large gulls;
- **Kittiwake**;
- Other small gulls (e.g. black-headed gull, common gull);

- **Roseate tern**;
- **Common tern**;
- **Arctic tern**; and
- **Auks**.

3.1.4 Survey Timings

From each VP, six hours of survey work were undertaken each month, timed to give coverage over a range of tide states, whilst ensuring a spread between neap and spring tides. Surveys commenced and ended no earlier than half an hour before sunrise and / or no later than half an hour after sunset. Each VP survey was three hours long, and a minimum of 30 minutes taken as a break between surveys.

3.1.5 Field Recording

The 2km 180° (degree) viewing arc was divided into six (30°) sections, labelled A to F. Each section was subdivided into 500m (metre) distance bands (numbered sequentially 1 to 4 away from the observer). Each section was identified using land features, rangefinders, and by measuring the compass bearing from the observer.

A full binocular / telescope (dependent on distance band) scan of the whole area was made every 10 minutes, with the surveyor working sequentially through the grid and distance bands and recording all birds observed on the water. Only birds on the sea surface, or birds in flight but using the sea (e.g. plunge diving or surface feeding, or clearly observing the sea surface in preparation to do so, or even, if not feeding, regularly dropping to the sea surface) were recorded during this scan. Flying birds were ignored as they are not interacting with the site. The location of each record was determined using bearings, angles of declination or with reference to static easily identifiable objects in the sea. Standardised protocols for dealing with recording of behaviours and associations were used.

At the end of each full scan, birds in flight were counted in each sector. To reduce / eliminate double counting, this was as near an instantaneous count as possible.

Throughout a day's observations, environmental conditions were recorded at hourly intervals using standard recording forms.

The following behaviour codes were used to describe birds on the water:

- SU: Surface feeding;
- PL: Plunge feeding;
- DP: Dip feeding;
- FE: Feeding (other);
- SC: Scavenging;
- SF: Scavenging at fishing vessel;
- KL: Kleptoparasitising;
- CN: Carrying nest material;
- CF: Carrying food;
- PR: Preening or bathing;
- ED: Escape diving from vessel;
- EF: Escape flight from vessel;
- RO: Roosting on water; and
- LO: Loafing.

3.2 Results

3.2.1 Survey Effort

Survey effort and weather during the VP surveys are presented in Appendix 4 (Table A10.5a and Table A10.5b).

3.2.2 Peak Counts

Peak counts from coastal and marine VP surveys are presented in Appendix 5 and 6. These are presented as tables and graphs which show:

- The species recorded during both the breeding (April to August) and passage / winter (September to March) seasons;
- The total number of times they were recorded during surveys (split by in flight or on sea); and
- The peak count of birds that were recorded during a single scan (split by in flight or on sea and combined).

Species have been split into tables based on SPA citation (i.e., Ireland's Eye SPA / Howth Head Coast SPA / North-West Irish Sea cSPA, Baldoyle Bay SPA and non-cited species).

4 KEY MATERIAL CHANGES IN BASELINE

The bird species present within the estuarine survey area during the surveys undertaken between 2020 and 2023 remain typical birds associated with the habitat types present, including wetted channels, the intertidal area and adjacent Velvet Strand beach and Portmarnock Golf Course. The species recorded, therefore, continue to be entirely in keeping with what would be anticipated, given the land uses and habitats.

Six species (bar-tailed godwit, Brent goose, golden plover, grey plover, ringed plover and shelduck) which are listed as Special Conservation Interests (SCIs) on the Baldoyle Bay SPA citation were recorded during the surveys undertaken between 2020 and 2023. Sixteen other named qualifying species of the Baldoyle Bay SPA were also recorded (black-tailed godwit, curlew, dunlin, great crested grebe, greenshank, grey heron, knot, lapwing, mallard, oystercatcher, pintail, red-breasted merganser, redshank, sanderling, teal and turnstone). The numbers and distribution of these species remains consistent with the findings reported in Chapter 10 (Biodiversity (Marine Ornithology)) in Volume 3 Part A of the EIAR in the 2018 planning application.

Other species of note, in conservation terms, are those listed under the Ireland's Eye SPA, Howth Head Coast SPA and North-West Irish Sea cSPA citations, which include herring gull, great black-backed gull, black guillemot, guillemot, kittiwake, shag, razorbill, peregrine falcon and fulmar. The numbers of species recorded between 2020 and 2023 are comparable, as would be expected given the relative consistency of habitats between these periods. Only fulmar, which was recorded as part of the baseline in Chapter 10 (Biodiversity (Marine Ornithology)) in Volume 3 Part A of the EIAR in the 2018 planning application, was not present during the surveys undertaken between 2020 and 2023.

The distribution of SPA qualifying marine bird species recorded from the Velvet Strand and Ireland's Eye VPs during the breeding season and wintering seasons are comparable to the results presented in Chapter 10 (Biodiversity (Marine Ornithology)) in Volume 3 Part A of the EIAR in the 2018 planning application. Species listed as SCIs of Ireland's Eye SPA, Howth Head Coast SPA and / or North-West Irish Sea cSPAs were observed during the breeding and wintering seasons, distributed across the VP viewing arcs.

The value of estuarine and marine bird features recorded along the Proposed Project therefore remains the same as presented in Chapter 10 (Biodiversity (Marine Ornithology)) in Volume 3 Part A of the EIAR in the 2018 planning application.

5 REFERENCES

BTO (2016a). WeBS Core Counts Method. Available at: http://www.bto.org/volunteer-surveys/webs/taking-part/core-counts-methods.

BTO (2016b). WeBS Low Tide Counts Method. Available at: http://www.bto.org/volunteer-surveys/webs/taking-part/low-tide-counts.

CIEEM (2018). Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater, Coastal and Marine. Chartered Institute of Ecology and Environmental Management, Winchester.

Gilbert G., Gibbons D.W. and Evans, J. (1998) Bird Monitoring Methods: A Manual of Techniques for Key UK Species. RSPB, Sandy.

APPENDIX 1 – FIGURES

Arctic Tern Records in Baldoyle Bay (Sep 2020 to Jun 2023)	Figure A10.1
Bar-tailed Godwit Records in Baldoyle Bay (Sep 2020 to Jun 2023)	Figure A10.2
Black Guillemot Records in Baldoyle Bay (Sep 2020 to Jun 2023)	Figure A10.3
Black-headed Gull Records in Baldoyle Bay (Sep 2020 to Jun 2023)	Figure A10.4
Black-tailed Godwit Records in Baldoyle Bay (Sep 2020 to Jun 2023)	Figure A10.5
Brent Goose Records in Baldoyle Bay (Sep 2020 to Jun 2023)	Figure A10.6
Buzzard Records in Baldoyle Bay (Sep 2020 to Jun 2023)	Figure A10.7
Carrion Crow Records in Baldoyle Bay (Sep 2020 to Jun 2023)	Figure A10.8
Chaffinch Records in Baldoyle Bay (Sep 2020 to Jun 2023)	Figure A10.9
Common Gull Records in Baldoyle Bay (Sep 2020 to Jun 2023)	Figure A10.10
Common Sandpiper Records in Baldoyle Bay (Sep 2020 to Jun 2023)	Figure A10.11
Common Scoter Records in Baldoyle Bay (Sep 2020 to Jun 2023)	Figure A10.12
Common Tern Records in Baldoyle Bay (Sep 2020 to Jun 2023)	Figure A10.13
Coot Records in Baldoyle Bay (Sep 2020 to Jun 2023)	Figure A10.14
Cormorant Records in Baldoyle Bay (Sep 2020 to Jun 2023)	Figure A10.15
Curlew Records in Baldoyle Bay (Sep 2020 to Jun 2023)	Figure A10.16
Dark-bellied Brent Goose Records in Baldoyle Bay (Sep 2020 to Jun 2023)	Figure A10.17
Dunlin Records in Baldoyle Bay (Sep 2020 to Jun 2023)	Figure A10.18
Feral Pigeon Records in Baldoyle Bay (Sep 2020 to Jun 2023)	Figure A10.19
Gannet Records in Baldoyle Bay (Sep 2020 to Jun 2023)	Figure A10.20
Golden Plover Records in Baldoyle Bay (Sep 2020 to Jun 2023)	Figure A10.21
Goldfinch Records in Baldoyle Bay (Sep 2020 to Jun 2023)	Figure A10.22
Great Black-backed gull Records in Baldoyle Bay (Sep 2020 to Jun 2023)	Figure A10.23
Great Crested Grebe Records in Baldoyle Bay (Sep 2020 to Jun 2023)	Figure A10.24
Greenshank Records in Baldoyle Bay (Sep 2020 to Jun 2023)	Figure A10.25
Grey Heron Records in Baldoyle Bay (Sep 2020 to Jun 2023)	Figure A10.26
Grey Plover Records in Baldoyle Bay (Sep 2020 to Jun 2023)	Figure A10.27
Guillemot Records in Baldoyle Bay (Sep 2020 to Jun 2023)	Figure A10.28
Herring Gull Records in Baldoyle Bay (Sep 2020 to Jun 2023)	Figure A10.29
Hooded Crow Records in Baldoyle Bay (Sep 2020 to Jun 2023)	Figure A10.30
House Martin Records in Baldoyle Bay (Sep 2020 to Jun 2023)	Figure A10.31
Jackdaw Records in Baldoyle Bay (Sep 2020 to Jun 2023)	Figure A10.32
Kestrel Records in Baldoyle Bay (Sep 2020 to Jun 2023)	Figure A10.33
Knot Records in Baldoyle Bay (Sep 2020 to Jun 2023)	Figure A10.34
Lapwing Records in Baldoyle Bay (Sep 2020 to Jun 2023)	Figure A10.35
Lesser Black-backed Gull Records in Baldoyle Bay (Sep 2020 to Jun 2023)	Figure A10.36
Linnet Records in Baldoyle Bay (Sep 2020 to Jun 2023)	Figure A10.37
Little Egret Records in Baldoyle Bay (Sep 2020 to Jun 2023)	Figure A10.38

Little Grebe Records in Baldoyle Bay (Sep 2020 to Jun 2023)	Figure A10.39
Magpie Records in Baldoyle Bay (Sep 2020 to Jun 2023)	Figure A10.40
Mallard Records in Baldoyle Bay (Sep 2020 to Jun 2023)	Figure A10.41
Meadow Pipit Records in Baldoyle Bay (Sep 2020 to Jun 2023)	Figure A10.42
Mediterranean Gull Records in Baldoyle Bay (Sep 2020 to Jun 2023)	Figure A10.43
Moorhen Records in Baldoyle Bay (Sep 2020 to Jun 2023)	Figure A10.44
Mute Swan Records in Baldoyle Bay (Sep 2020 to Jun 2023)	Figure A10.45
Oystercatcher Records in Baldoyle Bay (Sep 2020 to Jun 2023)	Figure A10.46
Pale-bellied Brent Goose Records in Baldoyle Bay (Sep 2020 to Jun 2023)	Figure A10.47
Pied Wagtail Records in Baldoyle Bay (Sep 2020 to Jun 2023)	Figure A10.48
Pintail Records in Baldoyle Bay (Sep 2020 to Jun 2023)	Figure A10.49
Pochard Records in Baldoyle Bay (Sep 2020 to Jun 2023)	Figure A10.50
Raven Records in Baldoyle Bay (Sep 2020 to Jun 2023)	Figure A10.51
Razorbill Records in Baldoyle Bay (Sep 2020 to Jun 2023)	Figure A10.52
Red-breasted Merganser Records in Baldoyle Bay (Sep 2020 to Jun 2023)	Figure A10.53
Redshank Records in Baldoyle Bay (Sep 2020 to Jun 2023)	Figure A10.54
Red-throated Diver Records in Baldoyle Bay (Sep 2020 to Jun 2023)	Figure A10.55
Reed Bunting Records in Baldoyle Bay (Sep 2020 to Jun 2023)	Figure A10.56
Ringed Plover Records in Baldoyle Bay (Sep 2020 to Jun 2023)	Figure A10.57
Rook Records in Baldoyle Bay (Sep 2020 to Jun 2023)	Figure A10.58
Ruff Records in Baldoyle Bay (Sep 2020 to Jun 2023)	Figure A10.59
Sand Martin Records in Baldoyle Bay (Sep 2020 to Jun 2023)	Figure A10.60
Sanderling Records in Baldoyle Bay (Sep 2020 to Jun 2023)	Figure A10.61
Sandwich Tern Records in Baldoyle Bay (Sep 2020 to Jun 2023)	Figure A10.62
Shag Records in Baldoyle Bay (Sep 2020 to Jun 2023)	Figure A10.63
Shelduck Records in Baldoyle Bay (Sep 2020 to Jun 2023)	Figure A10.64
Skylark Records in Baldoyle Bay (Sep 2020 to Jun 2023)	Figure A10.65
Snipe Records in Baldoyle Bay (Sep 2020 to Jun 2023)	Figure A10.66
Starling Records in Baldoyle Bay (Sep 2020 to Jun 2023)	Figure A10.67
Stonechat Records in Baldoyle Bay (Sep 2020 to Jun 2023)	Figure A10.68
Swallow Records in Baldoyle Bay (Sep 2020 to Jun 2023)	Figure A10.69
Teal Records in Baldoyle Bay (Sep 2020 to Jun 2023)	Figure A10.70
Turnstone Records in Baldoyle Bay (Sep 2020 to Jun 2023)	Figure A10.71
Whimbrel Records in Baldoyle Bay (Sep 2020 to Jun 2023)	Figure A10.72
Wigeon Records in Baldoyle Bay (Sep 2020 to Jun 2023)	Figure A10.73
Wood Pigeon Records in Baldoyle Bay (Sep 2020 to Jun 2023)	Figure A10.74
Arctic Tern Records in Baldoyle Bay (Sep 2020 to Jun 2023)	Figure 10.74A
Great Northern Diver Records in Baldoyle Bay (Sep 2020 to Jun 2023)	Figure 10.74B
Roseate Tern records in Baldoyle Bay (Sep 2020 to Jun 2023)	Figure 10.74C
Distribution of all on sea Black Guillemot records from Irelands' Eye VP during	

breeding season (March 2021 – June 2023) Figure A10.75
Distribution of all on sea Cormorant records from Irelands' Eye VP during breeding season (March 2021 – June 2023) Figure A10.76
Distribution of all on sea Fulmar records from Irelands' Eye VP during breeding season (March 2021 – June 2023) Figure A10.77
Distribution of all on sea Gannet records from Irelands' Eye VP during breeding season (March 2021 – June 2023) Figure A10.78
Distribution of all on sea Great Black-backed gull records from Irelands' Eye VP during breeding season (March 2021 – June 2023) Figure A10.79
Distribution of all on sea Guillemot records from Irelands' Eye VP during breeding season (March 2021 – June 2023) Figure A10.80
Distribution of all on sea Guillemot/Razorbill records from Irelands' Eye VP during breeding season (March 2021 – June 2023) Figure A10.81
Distribution of all on sea Herring Gull records from Irelands' Eye VP during breeding season (March 2021 – June 2023) Figure A10.82
Distribution of all on sea Kittiwake records from Irelands' Eye VP during breeding season (March 2021 – June 2023) Figure A10.83
Distribution of all on sea Puffin records from Irelands' Eye VP during breeding season (March 2021 – June 2023) Figure A10.84
Distribution of all on sea Razorbill records from Irelands' Eye VP during breeding season (March 2021 – June 2023) Figure A10.85
Distribution of all on sea Shag records from Irelands' Eye VP during breeding season (March 2021 – June 2023) Figure A10.86

N

0 0.1250.25 0.5 Kilometres

Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community

Legend

- Boundary
- Baldoyle Bay SPA
- RPS estuarine survey area
- Arctic Tern

Client

Uisce Éireann

Greater Dublin Drainage Project

Title

Figure A10.1
Arctic Tern
Records in Baldoyle Bay
(September 2020 to June 2023)

Atholl Exchange
6 Canning Street,
Edinburgh,
United Kingdom

T +44(0)131 555 5011
E rpsed2@rpsgroup.com
W rpsgroup.com

Issue Details

File Identifier: ECO02228-0023-01		
Status: S0	**Rev:** P01	**Model File Identifier:**
Drawn: KAG		**Date:** 05/07/2023
Checked: KT		**Scale:** 1:14,000 @A3
Approved: KT		**Projection:** ITM

NOTE:

1. This drawing is the property of RPS Group Ltd. It is a confidential document and must not be copied, used, or its contents divulged without prior written consent.
2. Ordnance Survey Ireland Licence CYAL50252391 © Ordnance Survey Ireland/Government of Ireland.

W:\ECO02228 - RPS Dublin GDD Ornithology Update\Technical\Graphics\GIS\MXDs\Figures\ECO02228-0023-01 EstuarineSurveyResults_Sep2020_June2023.mxd

N

0 0.1250.25 0.5 Kilometres

Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community

Legend

- Boundary
- Baldoyle Bay SPA
- RPS estuarine survey area
- Bar-tailed Godwit

Client

Uisce Éireann

Greater Dublin Drainage Project

Title

Figure A10.2
Bar-tailed Godwit
Records in Baldoyle Bay
(September 2020 to June 2023)

Atholl Exchange
6 Canning Street,
Edinburgh,
United Kingdom

T +44(0)131 555 5011
E rpsed2@rpsgroup.com
W rpsgroup.com

Issue Details

File Identifier:
ECO02228-0023-01

Status:	**Rev:**	**Model File Identifier:**
S0	P01	

Drawn: KAG	**Date:** 05/07/2023
Checked: KT	**Scale:** 1:14,000 @A3
Approved: KT	**Projection:** ITM

NOTE:

1. This drawing is the property of RPS Group Ltd. It is a confidential document and must not be copied, used, or its contents divulged without prior written consent.
2. Ordnance Survey Ireland Licence CYAL50252391 © Ordnance Survey Ireland/Government of Ireland.

W:\ECO02228 - RPS Dublin GDD Ornithology Update\Technical\Graphics\GIS\MXDs\Figures\ECO02228-0023-01 EstuarineSurveyResults_Sep2020_June2023.mxd

N

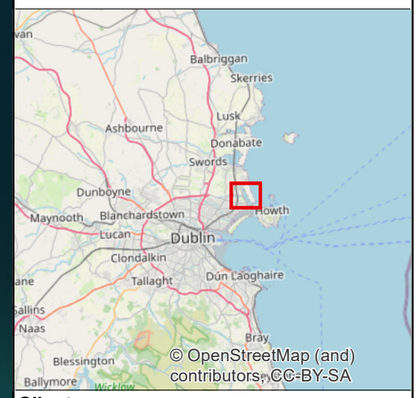
0 0.1250.25 0.5 Kilometres

Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community

W:\ECO02228 - RPS Dublin GDD Ornithology Update\Technical\Graphics\GIS\MXDs\Figures\ECO02228-0023-01 EstuarineSurveyResults_Sep2020_June2023.mxd

Legend

- Boundary
- Baldoyle Bay SPA
- RPS estuarine survey area
- Black Guillemot



Client

Uisce Éireann

Greater Dublin Drainage Project

Title

Figure A10.3
Black Guillemot
Records in Baldoyle Bay
(September 2020 to June 2023)

Atholl Exchange
6 Canning Street,
Edinburgh,
United Kingdom

T +44(0)131 555 5011
E rpsed2@rpsgroup.com
W rpsgroup.com

Issue Details

File Identifier:
ECO02228-0023-01

Status:	**Rev:**	**Model File Identifier:**
S0	P01	

Drawn: KAG	**Date:** 05/07/2023
Checked: KT	**Scale:** 1:14,000 @A3
Approved: KT	**Projection:** ITM

NOTE:

1. This drawing is the property of RPS Group Ltd. It is a confidential document and must not be copied, used, or its contents divulged without prior written consent.
2. Ordnance Survey Ireland Licence CYAL50252391 © Ordnance Survey Ireland/Government of Ireland.

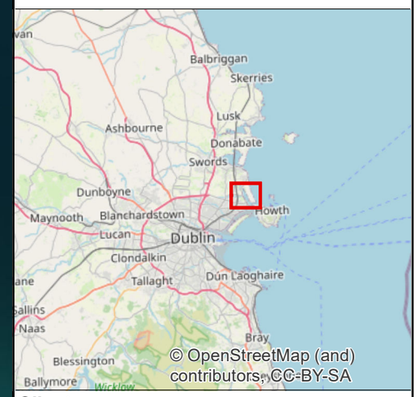
N

0 0.1250.25 0.5 Kilometres

Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community

Legend

- Boundary
- Baldoyle Bay SPA
- RPS estuarine survey area
- Black-headed Gull



Client

Uisce Éireann

Greater Dublin Drainage Project

Title

Figure A10.4
Black-headed Gull
Records in Baldoyle Bay
(September 2020 to June 2023)

Atholl Exchange
6 Canning Street,
Edinburgh,
United Kingdom

T +44(0)131 555 5011
E rpsed2@rpsgroup.com
W rpsgroup.com

Issue Details

File Identifier:
ECO02228-0023-01

Status:	**Rev:**	**Model File Identifier:**
S0	P01	
Drawn: KAG		**Date:** 05/07/2023
Checked: KT		**Scale:** 1:14,000 @A3
Approved: KT		**Projection:** ITM

NOTE:

1. This drawing is the property of RPS Group Ltd. It is a confidential document and must not be copied, used, or its contents divulged without prior written consent.
2. Ordnance Survey Ireland Licence CYAL50252391 © Ordnance Survey Ireland/Government of Ireland.

W:\ECO02228 - RPS Dublin GDD Ornithology Update\Technical\Graphics\GIS\MXDs\Figures\ECO02228-0023-01 EstuarineSurveyResults_Sep2020_June2023.mxd

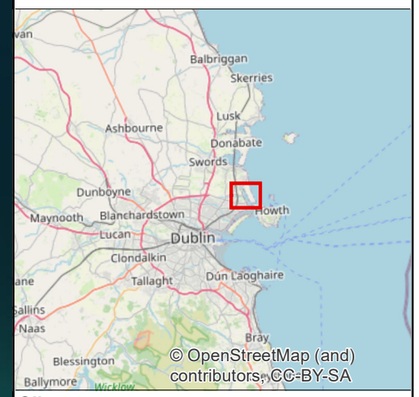
N

0 0.1250.25 0.5 Kilometres

Source: Esri, Maxar, Earthstar Geographies, and the GIS User Community

Legend

- Boundary
- Baldoyle Bay SPA
- RPS estuarine survey area
- Black-tailed Godwit



Client

Uisce Éireann

Greater Dublin Drainage Project

Title

Figure A10.5
Black-tailed Godwit
Records in Baldoyle Bay
(September 2020 to June 2023)

Atholl Exchange
6 Canning Street,
Edinburgh,
United Kingdom

T +44(0)131 555 5011
E rpsed2@rpsgroup.com
W rpsgroup.com

Issue Details

File Identifier:
ECO02228-0023-01

Status:	**Rev:**	**Model File Identifier:**
S0	P01	
Drawn: KAG		**Date:** 05/07/2023
Checked: KT		**Scale:** 1:14,000 @A3
Approved: KT		**Projection:** ITM

NOTE:

1. This drawing is the property of RPS Group Ltd. It is a confidential document and must not be copied, used, or its contents divulged without prior written consent.
2. Ordnance Survey Ireland Licence CYAL50252391 © Ordnance Survey Ireland/Government of Ireland.

W:\ECO02228 - RPS Dublin GDD Ornithology Update\Technical\Graphics\GIS\MXDs\Figures\ECO02228-0023-01 EstuarineSurveyResults_Sep2020_June2023.mxd

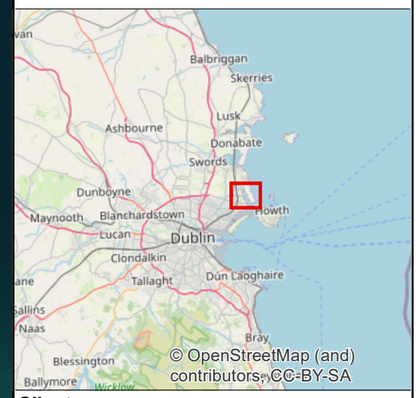
N

0 0.1250.25 0.5 Kilometres

Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community

Legend

- Boundary
- Baldoyle Bay SPA
- RPS estuarine survey area
- Brent Goose



Client

Uisce Éireann

Greater Dublin Drainage Project

Title

Figure A10.6
Brent Goose
Records in Baldoyle Bay
(September 2020 to June 2023)

Atholl Exchange
6 Canning Street,
Edinburgh,
United Kingdom

T +44(0)131 555 5011
E rpsed2@rpsgroup.com
W rpsgroup.com

Issue Details

File Identifier:
ECO02228-0023-01

Status:	**Rev:**	**Model File Identifier:**
S0	P01	

Drawn: KAG	**Date:** 05/07/2023
Checked: KT	**Scale:** 1:14,000 @A3
Approved: KT	**Projection:** ITM

NOTE:

1. This drawing is the property of RPS Group Ltd. It is a confidential document and must not be copied, used, or its contents divulged without prior written consent.
2. Ordnance Survey Ireland Licence CYAL50252391 © Ordnance Survey Ireland/Government of Ireland.

W:\ECO02228 - RPS Dublin GDD Ornithology Update\Technical\Graphics\GIS\MXDs\Figures\ECO02228-0023-01 EstuarineSurveyResults_Sep2020_June2023.mxd

N

0 0.1250.25 0.5 Kilometres

Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community

Legend

- Boundary
- Baldoyle Bay SPA
- RPS estuarine survey area
- Buzzard

Client

Uisce Éireann

Greater Dublin Drainage Project

Title

Figure A10.7
Buzzard
Records in Baldoyle Bay
(September 2020 to June 2023)

Atholl Exchange
6 Canning Street,
Edinburgh,
United Kingdom

T +44(0)131 555 5011
E rpsed2@rpsgroup.com
W rpsgroup.com

Issue Details

File Identifier: ECO02228-0023-01		
Status: S0	**Rev:** P01	**Model File Identifier:**
Drawn: KAG		**Date:** 05/07/2023
Checked: KT		**Scale:** 1:14,000 @A3
Approved: KT		**Projection:** ITM

NOTE:

1. This drawing is the property of RPS Group Ltd. It is a confidential document and must not be copied, used, or its contents divulged without prior written consent.
2. Ordnance Survey Ireland Licence CYAL50252391 © Ordnance Survey Ireland/Government of Ireland.

W:\ECO02228 - RPS Dublin GDD Ornithology Update\Technical\Graphics\GIS\MXDs\Figures\ECO02228-0023-01 EstuarineSurveyResults_Sep2020_June2023.mxd

N

0 0.1250.25 0.5 Kilometres

Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community

Legend

- Boundary
- Baldoyle Bay SPA
- RPS estuarine survey area
- Carrion Crow

Client

Uisce Éireann

Greater Dublin Drainage Project

Title

Figure A10.8
Carrion Crow
Records in Baldoyle Bay
(September 2020 to June 2023)

Atholl Exchange
6 Canning Street,
Edinburgh,
United Kingdom

T +44(0)131 555 5011
E rpsed2@rpsgroup.com
W rpsgroup.com

Issue Details

File Identifier:
ECO02228-0023-01

Status:	**Rev:**	**Model File Identifier:**
S0	P01	
Drawn: KAG		**Date:** 05/07/2023
Checked: KT		**Scale:** 1:14,000 @A3
Approved: KT		**Projection:** ITM

NOTE:

1. This drawing is the property of RPS Group Ltd. It is a confidential document and must not be copied, used, or its contents divulged without prior written consent.
2. Ordnance Survey Ireland Licence CYAL50252391 © Ordnance Survey Ireland/Government of Ireland.

W:\ECO02228 - RPS Dublin GDD Ornithology Update\Technical\Graphics\GIS\MXDs\Figures\ECO02228-0023-01 EstuarineSurveyResults_Sep2020_June2023.mxd

N

0 0.1250.25 0.5 Kilometres

Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community

Legend

- Boundary
- Baldoyle Bay SPA
- RPS estuarine survey area
- Chaffinch

Client

Uisce Éireann

Greater Dublin Drainage Project

Title

Figure A10.9
Chaffinch
Records in Baldoyle Bay
(September 2020 to June 2023)

Atholl Exchange
6 Canning Street,
Edinburgh,
United Kingdom

T +44(0)131 555 5011
E rpsed2@rpsgroup.com
W rpsgroup.com

Issue Details

File Identifier:
ECO02228-0023-01

Status:	**Rev:**	**Model File Identifier:**
S0	P01	
Drawn: KAG		**Date:** 05/07/2023
Checked: KT		**Scale:** 1:14,000 @A3
Approved: KT		**Projection:** ITM

NOTE:

1. This drawing is the property of RPS Group Ltd. It is a confidential document and must not be copied, used, or its contents divulged without prior written consent.
2. Ordnance Survey Ireland Licence CYAL50252391 © Ordnance Survey Ireland/Government of Ireland.

W:\ECO02228 - RPS Dublin GDD Ornithology Update\Technical\Graphics\GIS\MXDs\Figures\ECO02228-0023-01 EstuarineSurveyResults_Sep2020_June2023.mxd

N

0 0.1250.25 0.5 Kilometres

Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community

Legend

- Boundary
- Baldoyle Bay SPA
- RPS estuarine survey area
- Common Gull

Client

Uisce Éireann

Greater Dublin Drainage Project

Title

Figure A10.10
Common Gull
Records in Baldoyle Bay
(September 2020 to June 2023)

Atholl Exchange
6 Canning Street,
Edinburgh,
United Kingdom

T +44(0)131 555 5011
E rpsed2@rpsgroup.com
W rpsgroup.com

Issue Details

File Identifier:
ECO02228-0023-01

Status:	**Rev:**	**Model File Identifier:**
S0	P01	

Drawn: KAG	**Date:** 05/07/2023
Checked: KT	**Scale:** 1:14,000 @A3
Approved: KT	**Projection:** ITM

NOTE:

1. This drawing is the property of RPS Group Ltd. It is a confidential document and must not be copied, used, or its contents divulged without prior written consent.
2. Ordnance Survey Ireland Licence CYAL50252391 © Ordnance Survey Ireland/Government of Ireland.

W:\ECO02228 - RPS Dublin GDD Ornithology Update\Technical\Graphics\GIS\MXDs\Figures\ECO02228-0023-01 EstuarineSurveyResults_Sep2020_June2023.mxd

N

0 0.1250.25 0.5 Kilometres

Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community

Legend

- Boundary
- Baldoyle Bay SPA
- RPS estuarine survey area
- Common Sandpiper

Client

Uisce Éireann

Greater Dublin Drainage Project

Title

Figure A10.11
Common Sandpiper
Records in Baldoyle Bay
(September 2020 to June 2023)

Atholl Exchange
6 Canning Street,
Edinburgh,
United Kingdom

T +44(0)131 555 5011
E rpsed2@rpsgroup.com
W rpsgroup.com

Issue Details

File Identifier:
ECO02228-0023-01

Status:	**Rev:**	**Model File Identifier:**
S0	P01	
Drawn: KAG		**Date:** 05/07/2023
Checked: KT		**Scale:** 1:14,000 @A3
Approved: KT		**Projection:** ITM

NOTE:

1. This drawing is the property of RPS Group Ltd. It is a confidential document and must not be copied, used, or its contents divulged without prior written consent.
2. Ordnance Survey Ireland Licence CYAL50252391 © Ordnance Survey Ireland/Government of Ireland.

W:\ECO02228 - RPS Dublin GDD Ornithology Update\Technical\Graphics\GIS\MXDs\Figures\ECO02228-0023-01 EstuarineSurveyResults_Sep2020_June2023.mxd

N

0 0.1250.25 0.5 Kilometres

Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community

Legend

- Boundary
- Baldoyle Bay SPA
- RPS estuarine survey area
- Common Scoter

Client

Uisce Éireann

Greater Dublin Drainage Project

Title

Figure A10.12
Common Scoter
Records in Baldoyle Bay
(September 2020 to June 2023)

Atholl Exchange
6 Canning Street,
Edinburgh,
United Kingdom

T +44(0)131 555 5011
E rpsed2@rpsgroup.com
W rpsgroup.com

Issue Details

File Identifier:
ECO02228-0023-01

Status:	**Rev:**	**Model File Identifier:**
S0	P01	
Drawn: KAG		**Date:** 05/07/2023
Checked: KT		**Scale:** 1:14,000 @A3
Approved: KT		**Projection:** ITM

NOTE:

1. This drawing is the property of RPS Group Ltd. It is a confidential document and must not be copied, used, or its contents divulged without prior written consent.
2. Ordnance Survey Ireland Licence CYAL50252391 © Ordnance Survey Ireland/Government of Ireland.

W:\ECO02228 - RPS Dublin GDD Ornithology Update\Technical\Graphics\GIS\MXDs\Figures\ECO02228-0023-01 EstuarineSurveyResults_Sep2020_June2023.mxd

N

0 0.1250.25 0.5 Kilometres

Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community

Legend

- Boundary
- Baldoyle Bay SPA
- RPS estuarine survey area
- Common Tern

Client

Uisce Éireann

Greater Dublin Drainage Project

Title

Figure A10.13
Common Tern
Records in Baldoyle Bay
(September 2020 to June 2023)

Atholl Exchange
6 Canning Street,
Edinburgh,
United Kingdom

T +44(0)131 555 5011
E rpsed2@rpsgroup.com
W rpsgroup.com

Issue Details

File Identifier:
ECO02228-0023-01

Status:	**Rev:**	**Model File Identifier:**
S0	P01	
Drawn: KAG		**Date:** 05/07/2023
Checked: KT		**Scale:** 1:14,000 @A3
Approved: KT		**Projection:** ITM

NOTE:

1. This drawing is the property of RPS Group Ltd. It is a confidential document and must not be copied, used, or its contents divulged without prior written consent.
2. Ordnance Survey Ireland Licence CYAL50252391 © Ordnance Survey Ireland/Government of Ireland.

W:\ECO02228 - RPS Dublin GDD Ornithology Update\Technical\Graphics\GIS\MXDs\Figures\ECO02228-0023-01 EstuarineSurveyResults_Sep2020_June2023.mxd

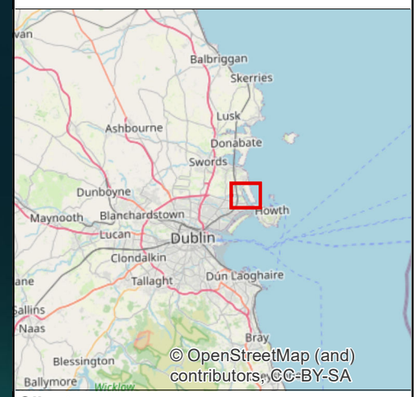
N

0 0.1250.25 0.5 Kilometres

Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community

Legend

- Boundary
- Baldoyle Bay SPA
- RPS estuarine survey area
- Coot



Client

Uisce Éireann

Greater Dublin Drainage Project

Title

Figure A10.14
Coot
Records in Baldoyle Bay
(September 2020 to June 2023)

Atholl Exchange
6 Canning Street,
Edinburgh,
United Kingdom

T +44(0)131 555 5011
E rpsed2@rpsgroup.com
W rpsgroup.com

Issue Details

File Identifier:
ECO02228-0023-01

Status:	**Rev:**	**Model File Identifier:**
S0	P01	

Drawn: KAG	**Date:** 05/07/2023
Checked: KT	**Scale:** 1:14,000 @A3
Approved: KT	**Projection:** ITM

NOTE:

1. This drawing is the property of RPS Group Ltd. It is a confidential document and must not be copied, used, or its contents divulged without prior written consent.
2. Ordnance Survey Ireland Licence CYAL50252391 © Ordnance Survey Ireland/Government of Ireland.

W:\ECO02228 - RPS Dublin GDD Ornithology Update\Technical\Graphics\GIS\MXDs\Figures\ECO02228-0023-01 EstuarineSurveyResults_Sep2020_June2023.mxd

N

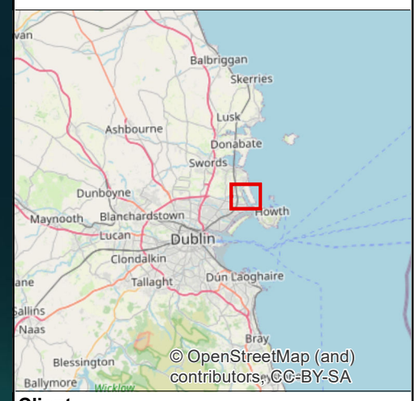
0 0.1250.25 0.5 Kilometres

Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community

W:\ECO02228 - RPS Dublin GDD Ornithology Update\Technical\Graphics\GIS\MXDs\Figures\ECO02228-0023-01 EstuarineSurvey\Results_Sep2020_June2023.mxd

Legend

- Boundary
- Baldoyle Bay SPA
- RPS estuarine survey area
- Cormorant



Client

Uisce Éireann

Greater Dublin Drainage Project

Title

Figure A10.15
Cormorant
Records in Baldoyle Bay
(September 2020 to June 2023)

Atholl Exchange
6 Canning Street,
Edinburgh,
United Kingdom

T +44(0)131 555 5011
E rpsed2@rpsgroup.com
W rpsgroup.com

Issue Details

File Identifier:
ECO02228-0023-01

Status:	**Rev:**	**Model File Identifier:**
S0	P01	

Drawn: KAG	**Date:** 05/07/2023
Checked: KT	**Scale:** 1:14,000 @A3
Approved: KT	**Projection:** ITM

NOTE:

1. This drawing is the property of RPS Group Ltd. It is a confidential document and must not be copied, used, or its contents divulged without prior written consent.
2. Ordnance Survey Ireland Licence CYAL50252391 © Ordnance Survey Ireland/Government of Ireland.

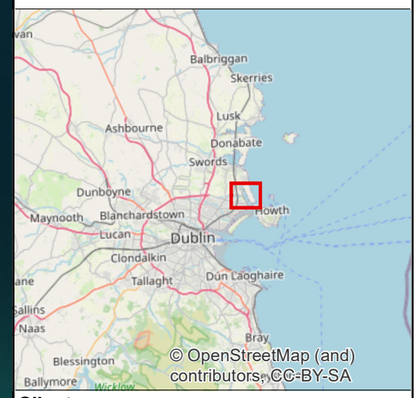
N

0 0.1250.25 0.5 Kilometres

Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community

Legend

- Boundary
- Baldoyle Bay SPA
- RPS estuarine survey area
- Curlew



Client

Uisce Éireann

Greater Dublin Drainage Project

Title

Figure A10.16
Curlew
Records in Baldoyle Bay
(September 2020 to June 2023)

Atholl Exchange
6 Canning Street,
Edinburgh,
United Kingdom

T +44(0)131 555 5011
E rpsed2@rpsgroup.com
W rpsgroup.com

Issue Details

File Identifier: ECO02228-0023-01		
Status: S0	**Rev:** P01	**Model File Identifier:**
Drawn: KAG		**Date:** 05/07/2023
Checked: KT		**Scale:** 1:14,000 @A3
Approved: KT		**Projection:** ITM

NOTE:

1. This drawing is the property of RPS Group Ltd. It is a confidential document and must not be copied, used, or its contents divulged without prior written consent.
2. Ordnance Survey Ireland Licence CYAL50252391 © Ordnance Survey Ireland/Government of Ireland.

W:\ECO02228 - RPS Dublin GDD Ornithology Update\Technical\Graphics\GIS\MXDs\Figures\ECO02228-0023-01 EstuarineSurveyResults_Sep2020_June2023.mxd

N

0 0.1250.25 0.5 Kilometres

Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community

Legend

- Boundary
- Baldoyle Bay SPA
- RPS estuarine survey area
- Dark-bellied Brent Goose

Client

Uisce Éireann

Greater Dublin Drainage Project

Title

Figure A10.17
Dark-bellied Brent Goose Records in Baldoyle Bay (September 2020 to June 2023)

Atholl Exchange
6 Canning Street,
Edinburgh,
United Kingdom

T +44(0)131 555 5011
E rpsed2@rpsgroup.com
W rpsgroup.com

Issue Details

File Identifier:
ECO02228-0023-01

Status:	Rev:	Model File Identifier:
S0	P01	

Drawn: KAG	**Date:** 05/07/2023
Checked: KT	**Scale:** 1:14,000 @A3
Approved: KT	**Projection:** ITM

NOTE:

1. This drawing is the property of RPS Group Ltd. It is a confidential document and must not be copied, used, or its contents divulged without prior written consent.
2. Ordnance Survey Ireland Licence CYAL50252391 © Ordnance Survey Ireland/Government of Ireland.

W:\ECO02228 - RPS Dublin GDD Ornithology Update\Technical\Graphics\GIS\MXDs\Figures\ECO02228-0023-01 EstuarineSurveyResults_Sep2020_June2023.mxd

N

0 0.1250.25 0.5 Kilometres

Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community

Legend

- Boundary
- Baldoyle Bay SPA
- RPS estuarine survey area
- Dunlin

Client

Uisce Éireann

Greater Dublin Drainage Project

Title

Figure A10.18
Dunlin
Records in Baldoyle Bay
(September 2020 to June 2023)

Atholl Exchange
6 Canning Street,
Edinburgh,
United Kingdom

T +44(0)131 555 5011
E rpsed2@rpsgroup.com
W rpsgroup.com

Issue Details

File Identifier:
ECO02228-0023-01

Status:	**Rev:**	**Model File Identifier:**
S0	P01	

Drawn: KAG	**Date:** 05/07/2023
Checked: KT	**Scale:** 1:14,000 @A3
Approved: KT	**Projection:** ITM

NOTE:

1. This drawing is the property of RPS Group Ltd. It is a confidential document and must not be copied, used, or its contents divulged without prior written consent.
2. Ordnance Survey Ireland Licence CYAL50252391 © Ordnance Survey Ireland/Government of Ireland.

W:\ECO02228 - RPS Dublin GDD Ornithology Update\Technical\Graphics\GIS\MXDs\Figures\ECO02228-0023-01 EstuarineSurveyResults_Sep2020_June2023.mxd

N

0 0.1250.25 0.5 Kilometres

Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community

Legend

- Boundary
- Baldoyle Bay SPA
- RPS estuarine survey area
- Feral Pigeon

Client

Uisce Éireann

Greater Dublin Drainage Project

Title

Figure A10.19
Feral Pigeon
Records in Baldoyle Bay
(September 2020 to June 2023)

Atholl Exchange
6 Canning Street,
Edinburgh,
United Kingdom

T +44(0)131 555 5011
E rpsed2@rpsgroup.com
W rpsgroup.com

Issue Details

File Identifier:
ECO02228-0023-01

Status:	**Rev:**	**Model File Identifier:**
S0	P01	
Drawn: KAG		**Date:** 05/07/2023
Checked: KT		**Scale:** 1:14,000 @A3
Approved: KT		**Projection:** ITM

NOTE:

1. This drawing is the property of RPS Group Ltd. It is a confidential document and must not be copied, used, or its contents divulged without prior written consent.
2. Ordnance Survey Ireland Licence CYAL50252391 © Ordnance Survey Ireland/Government of Ireland.

W:\ECO02228 - RPS Dublin GDD Ornithology Update\Technical\Graphics\GIS\MXDs\Figures\ECO02228-0023-01 EstuarineSurveyResults_Sep2020_June2023.mxd

N

0 0.1250.25 0.5 Kilometres

Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community

Legend

- Boundary
- Baldoyle Bay SPA
- RPS estuarine survey area
- Gannet

Client

Uisce Éireann

Greater Dublin Drainage Project

Title

Figure A10.20
Gannet
Records in Baldoyle Bay
(September 2020 to June 2023)

Atholl Exchange
6 Canning Street,
Edinburgh,
United Kingdom

T +44(0)131 555 5011
E rpsed2@rpsgroup.com
W rpsgroup.com

Issue Details

File Identifier:
ECO02228-0023-01

Status:	**Rev:**	**Model File Identifier:**
S0	P01	

Drawn: KAG	**Date:** 05/07/2023
Checked: KT	**Scale:** 1:14,000 @A3
Approved: KT	**Projection:** ITM

NOTE:

1. This drawing is the property of RPS Group Ltd. It is a confidential document and must not be copied, used, or its contents divulged without prior written consent.
2. Ordnance Survey Ireland Licence CYAL50252391 © Ordnance Survey Ireland/Government of Ireland.

W:\ECO02228 - RPS Dublin GDD Ornithology Update\Technical\Graphics\GIS\MXDs\Figures\ECO02228-0023-01 EstuarineSurveyResults_Sep2020_June2023.mxd

N

0 0.1250.25 0.5 Kilometres

Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community

Legend

- Boundary
- Baldoyle Bay SPA
- RPS estuarine survey area
- Golden Plover

Client

Uisce Éireann

Greater Dublin Drainage Project

Title

Figure A10.21
Golden Plover
Records in Baldoyle Bay
(September 2020 to June 2023)

Atholl Exchange
6 Canning Street,
Edinburgh,
United Kingdom

T +44(0)131 555 5011
E rpsed2@rpsgroup.com
W rpsgroup.com

Issue Details

File Identifier:
ECO02228-0023-01

Status:	**Rev:**	**Model File Identifier:**
S0	P01	

Drawn: KAG	**Date:** 05/07/2023
Checked: KT	**Scale:** 1:14,000 @A3
Approved: KT	**Projection:** ITM

NOTE:

1. This drawing is the property of RPS Group Ltd. It is a confidential document and must not be copied, used, or its contents divulged without prior written consent.
2. Ordnance Survey Ireland Licence CYAL50252391 © Ordnance Survey Ireland/Government of Ireland.

W:\ECO02228 - RPS Dublin GDD Ornithology Update\Technical\Graphics\GIS\MXDs\Figures\ECO02228-0023-01 EstuarineSurveyResults_Sep2020_June2023.mxd

N

0 0.1250.25 0.5 Kilometres

Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community

Legend

- Boundary
- Baldoyle Bay SPA
- RPS estuarine survey area
- Goldfinch

Client

Uisce Éireann

Greater Dublin Drainage Project

Title

Figure A10.22
Goldfinch
Records in Baldoyle Bay
(September 2020 to June 2023)

Atholl Exchange
6 Canning Street,
Edinburgh,
United Kingdom

T +44(0)131 555 5011
E rpsed2@rpsgroup.com
W rpsgroup.com

Issue Details

File Identifier:
ECO02228-0023-01

Status:	**Rev:**	**Model File Identifier:**
S0	P01	

Drawn: KAG	**Date:** 05/07/2023
Checked: KT	**Scale:** 1:14,000 @A3
Approved: KT	**Projection:** ITM

NOTE:

1. This drawing is the property of RPS Group Ltd. It is a confidential document and must not be copied, used, or its contents divulged without prior written consent.
2. Ordnance Survey Ireland Licence CYAL50252391 © Ordnance Survey Ireland/Government of Ireland.

W:\ECO02228 - RPS Dublin GDD Ornithology Update\Technical\Graphics\GIS\MXDs\Figures\ECO02228-0023-01 EstuarineSurveyResults_Sep2020_June2023.mxd

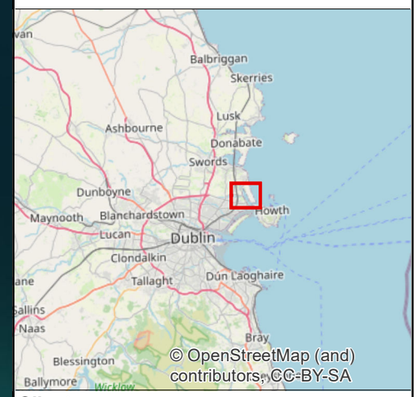
N

0 0.1250.25 0.5 Kilometres

Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community

Legend

- Boundary
- Baldoyle Bay SPA
- RPS estuarine survey area
- Great Black-backed Gull



Client

Uisce Éireann

Greater Dublin Drainage Project

Title

Figure A10.23
Great Black-backed Gull Records in Baldoyle Bay (September 2020 to June 2023)

Atholl Exchange
6 Canning Street,
Edinburgh,
United Kingdom

T +44(0)131 555 5011
E rpsed2@rpsgroup.com
W rpsgroup.com

Issue Details

File Identifier:
ECO02228-0023-01

Status:	**Rev:**	**Model File Identifier:**
S0	P01	

Drawn: KAG	**Date:** 05/07/2023
Checked: KT	**Scale:** 1:14,000 @A3
Approved: KT	**Projection:** ITM

NOTE:

1. This drawing is the property of RPS Group Ltd. It is a confidential document and must not be copied, used, or its contents divulged without prior written consent.
2. Ordnance Survey Ireland Licence CYAL50252391 © Ordnance Survey Ireland/Government of Ireland.

W:\ECO02228 - RPS Dublin GDD Ornithology Update\Technical\Graphics\GIS\MXDs\Figures\ECO02228-0023-01 EstuarineSurveyResults_Sep2020_June2023.mxd

N

0 0.1250.25 0.5 Kilometres

Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community

W:\ECO02228 - RPS Dublin GDD Ornithology Update\Technical\Graphics\GIS\MXDs\Figures\ECO02228-0023-01 EstuarineSurveyResults_Sep2020_June2023.mxd

Legend

- Boundary
- Baldoyle Bay SPA
- RPS estuarine survey area
- Great Crested Grebe

Client

Uisce Éireann

Greater Dublin Drainage Project

Title

Figure A10.24
Great Crested Grebe
Records in Baldoyle Bay
(September 2020 to June 2023)

Atholl Exchange
6 Canning Street,
Edinburgh,
United Kingdom

T +44(0)131 555 5011
E rpsed2@rpsgroup.com
W rpsgroup.com

Issue Details

File Identifier:
ECO02228-0023-01

Status:	**Rev:**	**Model File Identifier:**
S0	P01	
Drawn: KAG		**Date:** 05/07/2023
Checked: KT		**Scale:** 1:14,000 @A3
Approved: KT		**Projection:** ITM

NOTE:

1. This drawing is the property of RPS Group Ltd. It is a confidential document and must not be copied, used, or its contents divulged without prior written consent.
2. Ordnance Survey Ireland Licence CYAL50252391 © Ordnance Survey Ireland/Government of Ireland.

W:\ECO02228 - RPS Dublin GDD Ornithology Update\Technical\Graphics\GIS\MXDs\Figures\ECO02228-0023-01 EstuarineSurveyResults_Sep2020_June2023.mxd

Legend

- Boundary
- Baldoyle Bay SPA
- RPS estuarine survey area
- Greenshank

Client

Uisce Éireann

Greater Dublin Drainage Project

Title

Figure A10.25
Greenshank
Records in Baldoyle Bay
(September 2020 to June 2023)

Atholl Exchange
6 Canning Street,
Edinburgh,
United Kingdom

T +44(0)131 555 5011
E rpsed2@rpsgroup.com
W rpsgroup.com

Issue Details

File Identifier:
ECO02228-0023-01

Status:	**Rev:**	**Model File Identifier:**
S0	P01	

Drawn: KAG	**Date:** 05/07/2023
Checked: KT	**Scale:** 1:14,000 @A3
Approved: KT	**Projection:** ITM

NOTE:

1. This drawing is the property of RPS Group Ltd. It is a confidential document and must not be copied, used, or its contents divulged without prior written consent.
2. Ordnance Survey Ireland Licence CYAL50252391 © Ordnance Survey Ireland/Government of Ireland.

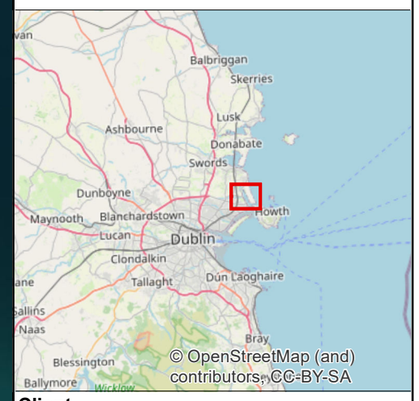
N

0 0.1250.25 0.5 Kilometres

Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community

Legend

- Boundary
- Baldoyle Bay SPA
- RPS estuarine survey area
- Grey Heron



Client

Uisce Éireann

Greater Dublin Drainage Project

Title

Figure A10.26
Grey Heron
Records in Baldoyle Bay
(September 2020 to June 2023)

Atholl Exchange
6 Canning Street,
Edinburgh,
United Kingdom

T +44(0)131 555 5011
E rpsed2@rpsgroup.com
W rpsgroup.com

Issue Details

File Identifier:
ECO02228-0023-01

Status:	**Rev:**	**Model File Identifier:**
S0	P01	

Drawn: KAG	**Date:** 05/07/2023
Checked: KT	**Scale:** 1:14,000 @A3
Approved: KT	**Projection:** ITM

NOTE:

1. This drawing is the property of RPS Group Ltd. It is a confidential document and must not be copied, used, or its contents divulged without prior written consent.
2. Ordnance Survey Ireland Licence CYAL50252391 © Ordnance Survey Ireland/Government of Ireland.

W:\ECO02228 - RPS Dublin GDD Ornithology Update\Technical\Graphics\GIS\MXDs\Figures\ECO02228-0023-01 EstuarineSurveyResults_Sep2020_June2023.mxd

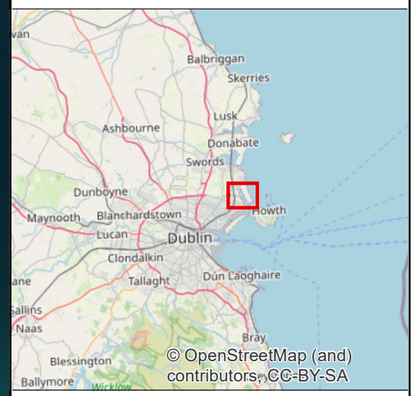
N

0 0.1250.25 0.5 Kilometres

Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community

Legend

- Boundary
- Baldoyle Bay SPA
- RPS estuarine survey area
- Grey Plover



Client

Uisce Éireann

Greater Dublin Drainage Project

Title

Figure A10.27
Grey Plover
Records in Baldoyle Bay
(September 2020 to June 2023)

Atholl Exchange
6 Canning Street,
Edinburgh,
United Kingdom

T +44(0)131 555 5011
E rpsed2@rpsgroup.com
W rpsgroup.com

Issue Details

File Identifier:
ECO02228-0023-01

Status:	**Rev:**	**Model File Identifier:**
S0	P01	
Drawn: KAG		**Date:** 05/07/2023
Checked: KT		**Scale:** 1:14,000 @A3
Approved: KT		**Projection:** ITM

NOTE:

W:\ECO02228 - RPS Dublin GDD Ornithology Update\Technical\Graphics\GIS\MXDs\Figures\ECO02228-0023-01 EstuarineSurveyResults_Sep2020_June2023.mxd

N

0 0.1250.25 0.5 Kilometres

Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community

Legend

- Boundary
- Baldoyle Bay SPA
- RPS estuarine survey area
- Guillemot

Client

Uisce Éireann

Greater Dublin Drainage Project

Title

Figure A10.28
Guillemot
Records in Baldoyle Bay
(September 2020 to June 2023)

Atholl Exchange
6 Canning Street,
Edinburgh,
United Kingdom

T +44(0)131 555 5011
E rpsed2@rpsgroup.com
W rpsgroup.com

Issue Details

File Identifier:
ECO02228-0023-01

Status:	**Rev:**	**Model File Identifier:**
S0	P01	

Drawn: KAG	**Date:** 05/07/2023
Checked: KT	**Scale:** 1:14,000 @A3
Approved: KT	**Projection:** ITM

NOTE:

1. This drawing is the property of RPS Group Ltd. It is a confidential document and must not be copied, used, or its contents divulged without prior written consent.
2. Ordnance Survey Ireland Licence CYAL50252391 © Ordnance Survey Ireland/Government of Ireland.

W:\ECO02228 - RPS Dublin GDD Ornithology Update\Technical\Graphics\GIS\MXDs\Figures\ECO02228-0023-01 EstuarineSurveyResults_Sep2020_June2023.mxd

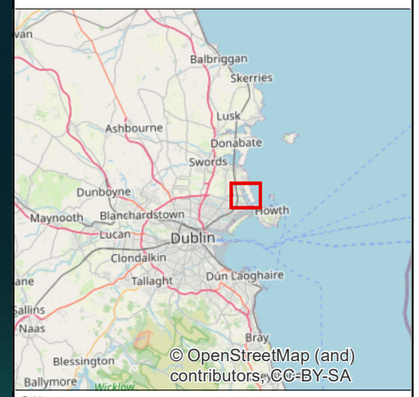
N

0 0.1250.25 0.5 Kilometres

Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community

Legend

- Boundary
- Baldoyle Bay SPA
- RPS estuarine survey area
- Herring Gull



Client

Uisce Éireann

Greater Dublin Drainage Project

Title

Figure A10.29
Herring Gull
Records in Baldoyle Bay
(September 2020 to June 2023)

Atholl Exchange
6 Canning Street,
Edinburgh,
United Kingdom

T +44(0)131 555 5011
E rpsed2@rpsgroup.com
W rpsgroup.com

Issue Details

File Identifier:
ECO02228-0023-01

Status:	**Rev:**	**Model File Identifier:**
S0	P01	

Drawn: KAG	**Date:** 05/07/2023
Checked: KT	**Scale:** 1:14,000 @A3
Approved: KT	**Projection:** ITM

NOTE:

1. This drawing is the property of RPS Group Ltd. It is a confidential document and must not be copied, used, or its contents divulged without prior written consent.
2. Ordnance Survey Ireland Licence CYAL50252391 © Ordnance Survey Ireland/Government of Ireland.

W:\ECO02228 - RPS Dublin GDD Ornithology Update\Technical\Graphics\GIS\MXDs\Figures\ECO02228-0023-01 EstuarineSurveyResults_Sep2020_June2023.mxd

Legend

- Boundary
- Baldoyle Bay SPA
- RPS estuarine survey area
- Hooded Crow

Client

Uisce Éireann

Greater Dublin Drainage Project

Title

Figure A10.30
Hooded Crow
Records in Baldoyle Bay
(September 2020 to June 2023)

Atholl Exchange
6 Canning Street,
Edinburgh,
United Kingdom

T +44(0)131 555 5011
E rpsed2@rpsgroup.com
W rpsgroup.com

Issue Details

File Identifier:
ECO02228-0023-01

Status:	**Rev:**	**Model File Identifier:**
S0	P01	

Drawn: KAG	**Date:** 05/07/2023
Checked: KT	**Scale:** 1:14,000 @A3
Approved: KT	**Projection:** ITM

NOTE:

1. This drawing is the property of RPS Group Ltd. It is a confidential document and must not be copied, used, or its contents divulged without prior written consent.
2. Ordnance Survey Ireland Licence CYAL50252391 © Ordnance Survey Ireland/Government of Ireland.

W:\ECO02228 - RPS Dublin GDD Ornithology Update\Technical\Graphics\GIS\MXDs\Figures\ECO02228-0023-01 EstuarineSurveyResults_Sep2020_June2023.mxd

N

0 0.1250.25 0.5 Kilometres

Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community

Legend

- Boundary
- Baldoyle Bay SPA
- RPS estuarine survey area
- House Martin

Client

Uisce Éireann

Greater Dublin Drainage Project

Title

Figure A10.31
House Martin
Records in Baldoyle Bay
(September 2020 to June 2023)

Atholl Exchange
6 Canning Street,
Edinburgh,
United Kingdom

T +44(0)131 555 5011
E rpsed2@rpsgroup.com
W rpsgroup.com

Issue Details

File Identifier:
ECO02228-0023-01

Status:	**Rev:**	**Model File Identifier:**
S0	P01	
Drawn: KAG		**Date:** 05/07/2023
Checked: KT		**Scale:** 1:14,000 @A3
Approved: KT		**Projection:** ITM

NOTE:

1. This drawing is the property of RPS Group Ltd. It is a confidential document and must not be copied, used, or its contents divulged without prior written consent.
2. Ordnance Survey Ireland Licence CYAL50252391 © Ordnance Survey Ireland/Government of Ireland.

W:\ECO02228 - RPS Dublin GDD Ornithology Update\Technical\Graphics\GIS\MXDs\Figures\ECO02228-0023-01 EstuarineSurveyResults_Sep2020_June2023.mxd

N

0 0.1250.25 0.5 Kilometres

Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community

Legend

- Boundary
- Baldoyle Bay SPA
- RPS estuarine survey area
- Jackdaw

Client

Uisce Éireann

Greater Dublin Drainage Project

Title

Figure A10.32
Jackdaw
Records in Baldoyle Bay
(September 2020 to June 2023)

Atholl Exchange
6 Canning Street,
Edinburgh,
United Kingdom

T +44(0)131 555 5011
E rpsed2@rpsgroup.com
W rpsgroup.com

Issue Details

File Identifier:
ECO02228-0023-01

Status:	**Rev:**	**Model File Identifier:**
S0	P01	

Drawn: KAG	**Date:** 05/07/2023
Checked: KT	**Scale:** 1:14,000 @A3
Approved: KT	**Projection:** ITM

NOTE:

1. This drawing is the property of RPS Group Ltd. It is a confidential document and must not be copied, used, or its contents divulged without prior written consent.
2. Ordnance Survey Ireland Licence CYAL50252391 © Ordnance Survey Ireland/Government of Ireland.

W:\ECO02228 - RPS Dublin GDD Ornithology Update\Technical\Graphics\GIS\MXDs\Figures\ECO02228-0023-01 EstuarineSurveyResults_Sep2020_June2023.mxd

N

0 0.1250.25 0.5 Kilometres

Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community

Legend

- Boundary
- Baldoyle Bay SPA
- RPS estuarine survey area
- Kestrel

Client

Uisce Éireann

Greater Dublin Drainage Project

Title

Figure A10.33
Kestrel
Records in Baldoyle Bay
(September 2020 to June 2023)

Atholl Exchange
6 Canning Street,
Edinburgh,
United Kingdom

T +44(0)131 555 5011
E rpsed2@rpsgroup.com
W rpsgroup.com

Issue Details

File Identifier: ECO02228-0023-01		
Status: S0	**Rev:** P01	**Model File Identifier:**
Drawn: KAG		**Date:** 05/07/2023
Checked: KT		**Scale:** 1:14,000 @A3
Approved: KT		**Projection:** ITM

NOTE:

1. This drawing is the property of RPS Group Ltd. It is a confidential document and must not be copied, used, or its contents divulged without prior written consent.
2. Ordnance Survey Ireland Licence CYAL50252391 © Ordnance Survey Ireland/Government of Ireland.

W:\ECO02228 - RPS Dublin GDD Ornithology Update\Technical\Graphics\GIS\MXDs\Figures\ECO02228-0023-01 EstuarineSurveyResults_Sep2020_June2023.mxd

N

0 0.1250.25 0.5 Kilometres

Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community

W:\ECO02228 - RPS Dublin GDD Ornithology Update\Technical\Graphics\GIS\MXDs\Figures\ECO02228-0023-01 EstuarineSurveyResults_Sep2020_June2023.mxd

Legend

- Boundary
- Baldoyle Bay SPA
- RPS estuarine survey area
- Knot

Client

Uisce Éireann

Greater Dublin Drainage Project

Title

Figure A10.34
Knot
Records in Baldoyle Bay
(September 2020 to June 2023)

Atholl Exchange
6 Canning Street,
Edinburgh,
United Kingdom

T +44(0)131 555 5011
E rpsed2@rpsgroup.com
W rpsgroup.com

Issue Details

File Identifier:
ECO02228-0023-01

Status:	**Rev:**	**Model File Identifier:**
S0	P01	

Drawn: KAG	**Date:** 05/07/2023
Checked: KT	**Scale:** 1:14,000 @A3
Approved: KT	**Projection:** ITM

NOTE:

1. This drawing is the property of RPS Group Ltd. It is a confidential document and must not be copied, used, or its contents divulged without prior written consent.
2. Ordnance Survey Ireland Licence CYAL50252391 © Ordnance Survey Ireland/Government of Ireland.

N

0 0.1250.25 0.5 Kilometres

Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community

Legend

- Boundary
- Baldoyle Bay SPA
- RPS estuarine survey area
- Lapwing

Client

Uisce Éireann

Greater Dublin Drainage Project

Title

Figure A10.35
Lapwing
Records in Baldoyle Bay
(September 2020 to June 2023)

Atholl Exchange
6 Canning Street,
Edinburgh,
United Kingdom

T +44(0)131 555 5011
E rpsed2@rpsgroup.com
W rpsgroup.com

Issue Details

File Identifier:
ECO02228-0023-01

Status:	**Rev:**	**Model File Identifier:**
S0	P01	

Drawn: KAG	**Date:** 05/07/2023
Checked: KT	**Scale:** 1:14,000 @A3
Approved: KT	**Projection:** ITM

NOTE:

1. This drawing is the property of RPS Group Ltd. It is a confidential document and must not be copied, used, or its contents divulged without prior written consent.
2. Ordnance Survey Ireland Licence CYAL50252391 © Ordnance Survey Ireland/Government of Ireland.

W:\ECO02228 - RPS Dublin GDD Ornithology Update\Technical\Graphics\GIS\MXDs\Figures\ECO02228-0023-01 EstuarineSurveyResults_Sep2020_June2023.mxd

N

0 0.1250.25 0.5 Kilometres

Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community

W:\ECO02228 - RPS Dublin GDD Ornithology Update\Technical\Graphics\GIS\MXDs\Figures\ECO02228-0023-01 EstuarineSurveyResults_Sep2020_June2023.mxd

Legend

- Boundary
- Baldoyle Bay SPA
- RPS estuarine survey area
- Lesser Black-backed Gull

Client

Uisce Éireann

Greater Dublin Drainage Project

Title

Figure A10.36
Lesser Black-backed Gull Records in Baldoyle Bay (September 2020 to June 2023)

Atholl Exchange
6 Canning Street,
Edinburgh,
United Kingdom

T +44(0)131 555 5011
E rpsed2@rpsgroup.com
W rpsgroup.com

Issue Details

File Identifier:
ECO02228-0023-01

Status:	**Rev:**	**Model File Identifier:**
S0	P01	

Drawn: KAG	**Date:** 05/07/2023
Checked: KT	**Scale:** 1:14,000 @A3
Approved: KT	**Projection:** ITM

NOTE:

N

0 0.1250.25 0.5 Kilometres

Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community

Legend

- Boundary
- Baldoyle Bay SPA
- RPS estuarine survey area
- Linnet

Client

Uisce Éireann

Greater Dublin Drainage Project

Title

Figure A10.37
Linnet
Records in Baldoyle Bay
(September 2020 to June 2023)

Atholl Exchange
6 Canning Street,
Edinburgh,
United Kingdom

T +44(0)131 555 5011
E rpsed2@rpsgroup.com
W rpsgroup.com

Issue Details

File Identifier:
ECO02228-0023-01

Status:	**Rev:**	**Model File Identifier:**
S0	P01	

Drawn: KAG	**Date:** 05/07/2023
Checked: KT	**Scale:** 1:14,000 @A3
Approved: KT	**Projection:** ITM

NOTE:

1. This drawing is the property of RPS Group Ltd. It is a confidential document and must not be copied, used, or its contents divulged without prior written consent.
2. Ordnance Survey Ireland Licence CYAL50252391 © Ordnance Survey Ireland/Government of Ireland.

W:\ECO02228 - RPS Dublin GDD Ornithology Update\Technical\Graphics\GIS\MXDs\Figures\ECO02228-0023-01 EstuarineSurveyResults_Sep2020_June2023.mxd

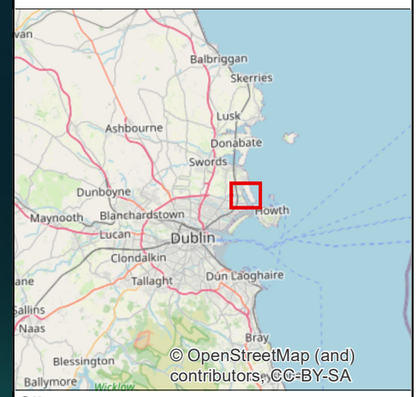
N

0 0.1250.25 0.5 Kilometres

Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community

Legend

- Boundary
- Baldoyle Bay SPA
- RPS estuarine survey area
- Little Egret



Client

Uisce Éireann

Greater Dublin Drainage Project

Title

Figure A10.38
Little Egret
Records in Baldoyle Bay
(September 2020 to June 2023)

Atholl Exchange
6 Canning Street,
Edinburgh,
United Kingdom

T +44(0)131 555 5011
E rpsed2@rpsgroup.com
W rpsgroup.com

Issue Details

File Identifier:
ECO02228-0023-01

Status:	**Rev:**	**Model File Identifier:**
S0	P01	
Drawn: KAG		**Date:** 05/07/2023
Checked: KT		**Scale:** 1:14,000 @A3
Approved: KT		**Projection:** ITM

NOTE:

1. This drawing is the property of RPS Group Ltd. It is a confidential document and must not be copied, used, or its contents divulged without prior written consent.
2. Ordnance Survey Ireland Licence CYAL50252391 © Ordnance Survey Ireland/Government of Ireland.

W:\ECO02228 - RPS Dublin GDD Ornithology Update\Technical\Graphics\GIS\MXDs\Figures\ECO02228-0023-01 EstuarineSurveyResults_Sep2020_June2023.mxd

N

0 0.1250.25 0.5 Kilometres

Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community

Legend

- Boundary
- Baldoyle Bay SPA
- RPS estuarine survey area
- Little Grebe

Client

Uisce Éireann

Greater Dublin Drainage Project

Title

Figure A10.39
Little Grebe
Records in Baldoyle Bay
(September 2020 to June 2023)

Atholl Exchange
6 Canning Street,
Edinburgh,
United Kingdom

T +44(0)131 555 5011
E rpsed2@rpsgroup.com
W rpsgroup.com

Issue Details

File Identifier:
ECO02228-0023-01

Status:	**Rev:**	**Model File Identifier:**
S0	P01	
Drawn: KAG		**Date:** 05/07/2023
Checked: KT		**Scale:** 1:14,000 @A3
Approved: KT		**Projection:** ITM

NOTE:

1. This drawing is the property of RPS Group Ltd. It is a confidential document and must not be copied, used, or its contents divulged without prior written consent.
2. Ordnance Survey Ireland Licence CYAL50252391 © Ordnance Survey Ireland/Government of Ireland.

W:\ECO02228 - RPS Dublin GDD Ornithology Update\Technical\Graphics\GIS\MXDs\Figures\ECO02228-0023-01 EstuarineSurveyResults_Sep2020_June2023.mxd

N

0 0.1250.25 0.5 Kilometres

Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community

Legend

- Boundary
- Baldoyle Bay SPA
- RPS estuarine survey area
- Magpie

Client

Uisce Éireann

Greater Dublin Drainage Project

Title

Figure A10.40
Magpie
Records in Baldoyle Bay
(September 2020 to June 2023)

Atholl Exchange
6 Canning Street,
Edinburgh,
United Kingdom

T +44(0)131 555 5011
E rpsed2@rpsgroup.com
W rpsgroup.com

Issue Details

File Identifier:
ECO02228-0023-01

Status:	Rev:	Model File Identifier:
S0	P01	

Drawn: KAG	**Date:** 05/07/2023
Checked: KT	**Scale:** 1:14,000 @A3
Approved: KT	**Projection:** ITM

NOTE:

1. This drawing is the property of RPS Group Ltd. It is a confidential document and must not be copied, used, or its contents divulged without prior written consent.
2. Ordnance Survey Ireland Licence CYAL50252391 © Ordnance Survey Ireland/Government of Ireland.

W:\ECO02228 - RPS Dublin GDD Ornithology Update\Technical\Graphics\GIS\MXDs\Figures\ECO02228-0023-01 EstuarineSurveyResults_Sep2020_June2023.mxd

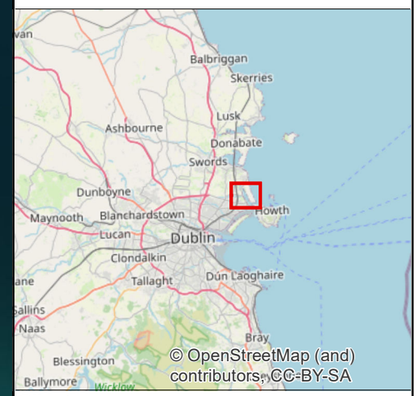
N

0 0.125 0.25 0.5 Kilometres

Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community

Legend

- Boundary
- Baldoyle Bay SPA
- RPS estuarine survey area
- Mallard



Client

Uisce Éireann

Greater Dublin Drainage Project

Title

Figure A10.41
Mallard
Records in Baldoyle Bay
(September 2020 to June 2023)

Atholl Exchange
6 Canning Street,
Edinburgh,
United Kingdom

T +44(0)131 555 5011
E rpsed2@rpsgroup.com
W rpsgroup.com

Issue Details

File Identifier:
ECO02228-0023-01

Status:	**Rev:**	**Model File Identifier:**
S0	P01	

Drawn: KAG	**Date:** 05/07/2023
Checked: KT	**Scale:** 1:14,000 @A3
Approved: KT	**Projection:** ITM

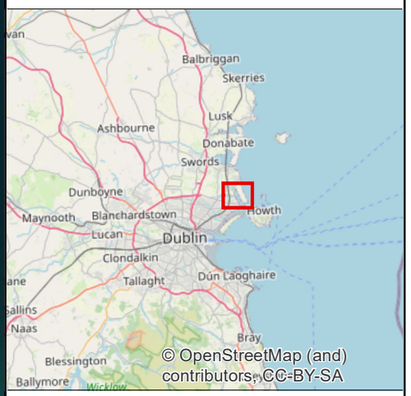
NOTE:

1. This drawing is the property of RPS Group Ltd. It is a confidential document and must not be copied, used, or its contents divulged without prior written consent.
2. Ordnance Survey Ireland Licence CYAL50252391 © Ordnance Survey Ireland/Government of Ireland.

W:\ECO02228 - RPS Dublin GDD Ornithology Update\Technical\Graphics\GIS\MXDs\Figures\ECO02228-0023-01 EstuarineSurveyResults_Sep2020_June2023.mxd

Legend

- Boundary
- Baldoyle Bay SPA
- RPS estuarine survey area
- Meadow Pipit



Client

Uisce Éireann

Greater Dublin Drainage Project

Title

Figure A10.42
Meadow Pipit
Records in Baldoyle Bay
(September 2020 to June 2023)

Atholl Exchange
6 Canning Street,
Edinburgh,
United Kingdom

T +44(0)131 555 5011
E rpsed2@rpsgroup.com
W rpsgroup.com

Issue Details

File Identifier:
ECO02228-0023-01

Status:	Rev:	Model File Identifier:
S0	P01	
Drawn: KAG		Date: 05/07/2023
Checked: KT		Scale: 1:14,000 @A3
Approved: KT		Projection: ITM

NOTE:

1. This drawing is the property of RPS Group Ltd. It is a confidential document and must not be copied, used, or its contents divulged without prior written consent.
2. Ordnance Survey Ireland Licence CYAL50252391 © Ordnance Survey Ireland/Government of Ireland.

W:\ECO02228 - RPS Dublin GDD Ornithology Update\Technical\Graphics\GIS\MXDs\Figures\ECO02228-0023-01 EstuarineSurveyResults_Sep2020_June2023.mxd

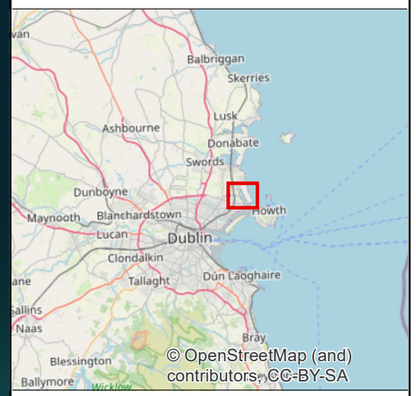
N

0 0.1250.25 0.5 Kilometres

Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community

Legend

- Boundary
- Baldoyle Bay SPA
- RPS estuarine survey area
- Mediterranean Gull



Client

Uisce Éireann

Greater Dublin Drainage Project

Title

Figure A10.43
Mediterranean Gull
Records in Baldoyle Bay
(September 2020 to June 2023)

Atholl Exchange
6 Canning Street,
Edinburgh,
United Kingdom

T +44(0)131 555 5011
E rpsed2@rpsgroup.com
W rpsgroup.com

Issue Details

File Identifier:
ECO02228-0023-01

Status:	**Rev:**	**Model File Identifier:**
S0	P01	
Drawn: KAG		**Date:** 05/07/2023
Checked: KT		**Scale:** 1:14,000 @A3
Approved: KT		**Projection:** ITM

NOTE:

1. This drawing is the property of RPS Group Ltd. It is a confidential document and must not be copied, used, or its contents divulged without prior written consent.
2. Ordnance Survey Ireland Licence CYAL50252391 © Ordnance Survey Ireland/Government of Ireland.

W:\ECO02228 - RPS Dublin GDD Ornithology Update\Technical\Graphics\GIS\MXDs\Figures\ECO02228-0023-01 EstuarineSurveyResults_Sep2020_June2023.mxd

N

0 0.1250.25 0.5 Kilometres

Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community

Legend

- Boundary
- Baldoyle Bay SPA
- RPS estuarine survey area
- Moorhen

Client

Uisce Éireann

Greater Dublin Drainage Project

Title

Figure A10.44
Moorhen
Records in Baldoyle Bay
(September 2020 to June 2023)

Atholl Exchange
6 Canning Street,
Edinburgh,
United Kingdom

T +44(0)131 555 5011
E rpsed2@rpsgroup.com
W rpsgroup.com

Issue Details

File Identifier:
ECO02228-0023-01

Status:	**Rev:**	**Model File Identifier:**
S0	P01	
Drawn: KAG		**Date:** 05/07/2023
Checked: KT		**Scale:** 1:14,000 @A3
Approved: KT		**Projection:** ITM

NOTE:

1. This drawing is the property of RPS Group Ltd. It is a confidential document and must not be copied, used, or its contents divulged without prior written consent.
2. Ordnance Survey Ireland Licence CYAL50252391 © Ordnance Survey Ireland/Government of Ireland.

W:\ECO02228 - RPS Dublin GDD Ornithology Update\Technical\Graphics\GIS\MXDs\Figures\ECO02228-0023-01 EstuarineSurveyResults_Sep2020_June2023.mxd

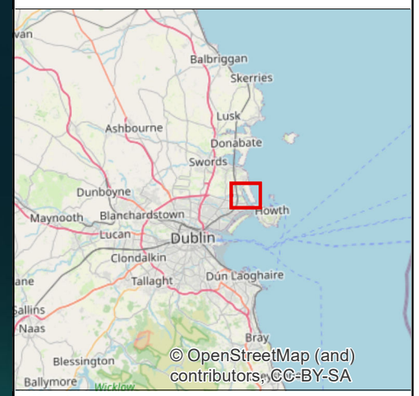
N

0 0.1250.25 0.5 Kilometres

Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community

Legend

- Boundary
- Baldoyle Bay SPA
- RPS estuarine survey area
- Mute Swan



Client

Uisce Éireann

Greater Dublin Drainage Project

Title

Figure A10.45
Mute Swan
Records in Baldoyle Bay
(September 2020 to June 2023)

Atholl Exchange
6 Canning Street,
Edinburgh,
United Kingdom

T +44(0)131 555 5011
E rpsed2@rpsgroup.com
W rpsgroup.com

Issue Details

File Identifier:
ECO02228-0023-01

Status:	**Rev:**	**Model File Identifier:**
S0	P01	
Drawn: KAG		**Date:** 05/07/2023
Checked: KT		**Scale:** 1:14,000 @A3
Approved: KT		**Projection:** ITM

NOTE:

1. This drawing is the property of RPS Group Ltd. It is a confidential document and must not be copied, used, or its contents divulged without prior written consent.
2. Ordnance Survey Ireland Licence CYAL50252391 © Ordnance Survey Ireland/Government of Ireland.

W:\ECO02228 - RPS Dublin GDD Ornithology Update\Technical\Graphics\GIS\MXDs\Figures\ECO02228-0023-01 EstuarineSurveyResults_Sep2020_June2023.mxd

N

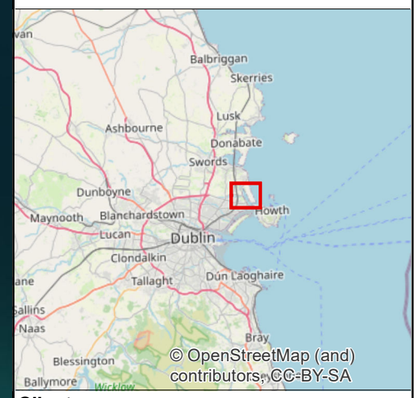
0 0.1250.25 0.5 Kilometres

Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community

W:\ECO02228 - RPS Dublin GDD Ornithology Update\Technical\Graphics\GIS\MXDs\Figures\ECO02228-0023-01 EstuarineSurveyResults_Sep2020_June2023.mxd

Legend

- Boundary
- Baldoyle Bay SPA
- RPS estuarine survey area
- Oystercatcher



Client

Uisce Éireann

Greater Dublin Drainage Project

Title

Figure A10.46
Oystercatcher
Records in Baldoyle Bay
(September 2020 to June 2023)

Atholl Exchange
6 Canning Street,
Edinburgh,
United Kingdom

T +44(0)131 555 5011
E rpsed2@rpsgroup.com
W rpsgroup.com

Issue Details

File Identifier:
ECO02228-0023-01

Status:	**Rev:**	**Model File Identifier:**
S0	P01	

Drawn: KAG	**Date:** 05/07/2023
Checked: KT	**Scale:** 1:14,000 @A3
Approved: KT	**Projection:** ITM

NOTE:

1. This drawing is the property of RPS Group Ltd. It is a confidential document and must not be copied, used, or its contents divulged without prior written consent.
2. Ordnance Survey Ireland Licence CYAL50252391 © Ordnance Survey Ireland/Government of Ireland.

N

0 0.1250.25 0.5 Kilometres

Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community

Legend

- Boundary
- Baldoyle Bay SPA
- RPS estuarine survey area
- Pale-bellied Brent Goose

Client

Uisce Éireann

Greater Dublin Drainage Project

Title

Figure A10.47
Pale-bellied Brent Goose Records in Baldoyle Bay (September 2020 to June 2023)

Atholl Exchange
6 Canning Street,
Edinburgh,
United Kingdom

T +44(0)131 555 5011
E rpsed2@rpsgroup.com
W rpsgroup.com

Issue Details

File Identifier:
ECO02228-0023-01

Status:	**Rev:**	**Model File Identifier:**
S0	P01	

Drawn: KAG	**Date:** 05/07/2023
Checked: KT	**Scale:** 1:14,000 @A3
Approved: KT	**Projection:** ITM

NOTE:

1. This drawing is the property of RPS Group Ltd. It is a confidential document and must not be copied, used, or its contents divulged without prior written consent.
2. Ordnance Survey Ireland Licence CYAL50252391 © Ordnance Survey Ireland/Government of Ireland.

W:\ECO02228 - RPS Dublin GDD Ornithology Update\Technical\Graphics\GIS\MXDs\Figures\ECO02228-0023-01 EstuarineSurveyResults_Sep2020_June2023.mxd

N

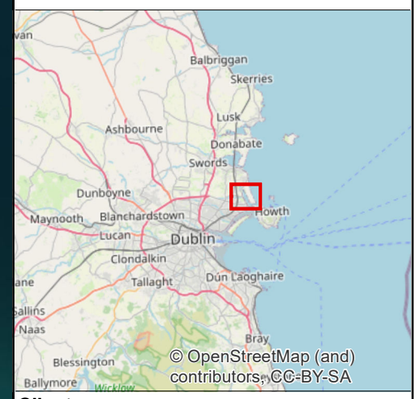
0 0.1250.25 0.5 Kilometres

Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community

W:\ECO02228 - RPS Dublin GDD Ornithology Update\Technical\Graphics\GIS\MXDs\Figures\ECO02228-0023-01 EstuarineSurveyResults_Sep2020_June2023.mxd

Legend

- Boundary
- Baldoyle Bay SPA
- RPS estuarine survey area
- Pied Wagtail



Client

Uisce Éireann

Greater Dublin Drainage Project

Title

Figure A10.48
Pied Wagtail
Records in Baldoyle Bay
(September 2020 to June 2023)

Atholl Exchange
6 Canning Street,
Edinburgh,
United Kingdom

T +44(0)131 555 5011
E rpsed2@rpsgroup.com
W rpsgroup.com

Issue Details

File Identifier:
ECO02228-0023-01

Status:	**Rev:**	**Model File Identifier:**
S0	P01	

Drawn: KAG	**Date:** 05/07/2023
Checked: KT	**Scale:** 1:14,000 @A3
Approved: KT	**Projection:** ITM

NOTE:

1. This drawing is the property of RPS Group Ltd. It is a confidential document and must not be copied, used, or its contents divulged without prior written consent.
2. Ordnance Survey Ireland Licence CYAL50252391 © Ordnance Survey Ireland/Government of Ireland.

N

0 0.1250.25 0.5 Kilometres

Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community

Legend

- Boundary
- Baldoyle Bay SPA
- RPS estuarine survey area
- Pintail

Client

Uisce Éireann

Greater Dublin Drainage Project

Title

Figure A10.49
Pintail
Records in Baldoyle Bay
(September 2020 to June 2023)

Atholl Exchange
6 Canning Street,
Edinburgh,
United Kingdom

T +44(0)131 555 5011
E rpsed2@rpsgroup.com
W rpsgroup.com

Issue Details

File Identifier:
ECO02228-0023-01

Status:	Rev:	Model File Identifier:
S0	P01	

Drawn: KAG	**Date:** 05/07/2023
Checked: KT	**Scale:** 1:14,000 @A3
Approved: KT	**Projection:** ITM

NOTE:

1. This drawing is the property of RPS Group Ltd. It is a confidential document and must not be copied, used, or its contents divulged without prior written consent.
2. Ordnance Survey Ireland Licence CYAL50252391 © Ordnance Survey Ireland/Government of Ireland.

W:\ECO02228 - RPS Dublin GDD Ornithology Update\Technical\Graphics\GIS\MXDs\Figures\ECO02228-0023-01 EstuarineSurveyResults_Sep2020_June2023.mxd

N

0 0.1250.25 0.5 Kilometres

Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community

Legend

- Boundary
- Baldoyle Bay SPA
- RPS estuarine survey area
- Pochard

Client

Uisce Éireann

Greater Dublin Drainage Project

Title

Figure A10.50
Pochard
Records in Baldoyle Bay
(September 2020 to June 2023)

Atholl Exchange
6 Canning Street,
Edinburgh,
United Kingdom

T +44(0)131 555 5011
E rpsed2@rpsgroup.com
W rpsgroup.com

Issue Details

File Identifier: ECO02228-0023-01		
Status: S0	**Rev:** P01	**Model File Identifier:**
Drawn: KAG		**Date:** 05/07/2023
Checked: KT		**Scale:** 1:14,000 @A3
Approved: KT		**Projection:** ITM

NOTE:

1. This drawing is the property of RPS Group Ltd. It is a confidential document and must not be copied, used, or its contents divulged without prior written consent.
2. Ordnance Survey Ireland Licence CYAL50252391 © Ordnance Survey Ireland/Government of Ireland.

W:\ECO02228 - RPS Dublin GDD Ornithology Update\Technical\Graphics\GIS\MXDs\Figures\ECO02228-0023-01 EstuarineSurveyResults_Sep2020_June2023.mxd

N

0 0.1250.25 0.5 Kilometres

Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community

Legend

- Boundary
- Baldoyle Bay SPA
- RPS estuarine survey area
- Raven

Client

Uisce Éireann

Greater Dublin Drainage Project

Title

Figure A10.51
Raven
Records in Baldoyle Bay
(September 2020 to June 2023)

Atholl Exchange
6 Canning Street,
Edinburgh,
United Kingdom

T +44(0)131 555 5011
E rpsed2@rpsgroup.com
W rpsgroup.com

Issue Details

File Identifier:
ECO02228-0023-01

Status:	Rev:	Model File Identifier:
S0	P01	

Drawn: KAG	**Date:** 05/07/2023
Checked: KT	**Scale:** 1:14,000 @A3
Approved: KT	**Projection:** ITM

NOTE:

1. This drawing is the property of RPS Group Ltd. It is a confidential document and must not be copied, used, or its contents divulged without prior written consent.
2. Ordnance Survey Ireland Licence CYAL50252391 © Ordnance Survey Ireland/Government of Ireland.

W:\ECO02228 - RPS Dublin GDD Ornithology Update\Technical\Graphics\GIS\MXDs\Figures\ECO02228-0023-01 EstuarineSurveyResults_Sep2020_June2023.mxd

N

0 0.1250.25 0.5 Kilometres

Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community

Legend

- Boundary
- Baldoyle Bay SPA
- RPS estuarine survey area
- Razorbill

Client

Uisce Éireann

Greater Dublin Drainage Project

Title

Figure A10.52
Razorbill
Records in Baldoyle Bay
(September 2020 to June 2023)

Atholl Exchange
6 Canning Street,
Edinburgh,
United Kingdom

T +44(0)131 555 5011
E rpsed2@rpsgroup.com
W rpsgroup.com

Issue Details

File Identifier:
ECO02228-0023-01

Status:	**Rev:**	**Model File Identifier:**
S0	P01	

Drawn: KAG	**Date:** 05/07/2023
Checked: KT	**Scale:** 1:14,000 @A3
Approved: KT	**Projection:** ITM

NOTE:

1. This drawing is the property of RPS Group Ltd. It is a confidential document and must not be copied, used, or its contents divulged without prior written consent.
2. Ordnance Survey Ireland Licence CYAL50252391 © Ordnance Survey Ireland/Government of Ireland.

W:\ECO02228 - RPS Dublin GDD Ornithology Update\Technical\Graphics\GIS\MXDs\Figures\ECO02228-0023-01 EstuarineSurveyResults_Sep2020_June2023.mxd

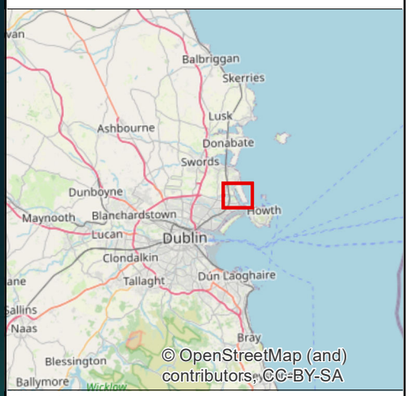
N

0 0.1250.25 0.5 Kilometres

Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community

Legend

- Boundary
- Baldoyle Bay SPA
- RPS estuarine survey area
- Red-breasted Merganser



Client

Uisce Éireann

Greater Dublin Drainage Project

Title

Figure A10.53
Red-breasted Merganser Records in Baldoyle Bay (September 2020 to June 2023)

Atholl Exchange
6 Canning Street,
Edinburgh,
United Kingdom

T +44(0)131 555 5011
E rpsed2@rpsgroup.com
W rpsgroup.com

Issue Details

File Identifier:
ECO02228-0023-01

Status:	Rev:	Model File Identifier:
S0	P01	

Drawn: KAG	**Date:** 05/07/2023
Checked: KT	**Scale:** 1:14,000 @A3
Approved: KT	**Projection:** ITM

NOTE:

W:\ECO02228 - RPS Dublin GDD Ornithology Update\Technical\Graphics\GIS\MXDs\Figures\ECO02228-0023-01 EstuarineSurveyResults_Sep2020_June2023.mxd

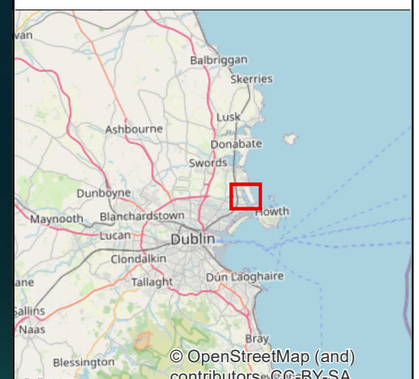
N

0 0.1250.25 0.5 Kilometres

Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community

Legend

- Boundary
- Baldoyle Bay SPA
- RPS estuarine survey area
- Redshank



Client

Uisce Éireann

Greater Dublin Drainage Project

Title

Figure A10.54
Redshank
Records in Baldoyle Bay
(September 2020 to June 2023)

Atholl Exchange
6 Canning Street,
Edinburgh,
United Kingdom

T +44(0)131 555 5011
E rpsed2@rpsgroup.com
W rpsgroup.com

Issue Details

File Identifier: ECO02228-0023-01		
Status: S0	**Rev:** P01	**Model File Identifier:**
Drawn: KAG		**Date:** 05/07/2023
Checked: KT		**Scale:** 1:14,000 @A3
Approved: KT		**Projection:** ITM

NOTE:

1. This drawing is the property of RPS Group Ltd. It is a confidential document and must not be copied, used, or its contents divulged without prior written consent.
2. Ordnance Survey Ireland Licence CYAL50252391 © Ordnance Survey Ireland/Government of Ireland.

W:\ECO02228 - RPS Dublin GDD Ornithology Update\Technical\Graphics\GIS\MXDs\Figures\ECO02228-0023-01 EstuarineSurveyResults_Sep2020_June2023.mxd

N

0 0.1250.25 0.5 Kilometres

Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community

Legend

- Boundary
- Baldoyle Bay SPA
- RPS estuarine survey area
- Red-throated Diver

Client

Uisce Éireann

Greater Dublin Drainage Project

Title

Figure A10.55
Red-throated Diver
Records in Baldoyle Bay
(September 2020 to June 2023)

Atholl Exchange
6 Canning Street,
Edinburgh,
United Kingdom

T +44(0)131 555 5011
E rpsed2@rpsgroup.com
W rpsgroup.com

Issue Details

File Identifier:
ECO02228-0023-01

Status:	**Rev:**	**Model File Identifier:**
S0	P01	
Drawn: KAG		**Date:** 05/07/2023
Checked: KT		**Scale:** 1:14,000 @A3
Approved: KT		**Projection:** ITM

NOTE:

1. This drawing is the property of RPS Group Ltd. It is a confidential document and must not be copied, used, or its contents divulged without prior written consent.
2. Ordnance Survey Ireland Licence CYAL50252391 © Ordnance Survey Ireland/Government of Ireland.

W:\ECO02228 - RPS Dublin GDD Ornithology Update\Technical\Graphics\GIS\MXDs\Figures\ECO02228-0023-01 EstuarineSurveyResults_Sep2020_June2023.mxd

N

0 0.1250.25 0.5 Kilometres

Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community

Legend

- Boundary
- Baldoyle Bay SPA
- RPS estuarine survey area
- Reed Bunting

Client

Uisce Éireann

Greater Dublin Drainage Project

Title

Figure A10.56
Reed Bunting
Records in Baldoyle Bay
(September 2020 to June 2023)

Atholl Exchange
6 Canning Street,
Edinburgh,
United Kingdom

T +44(0)131 555 5011
E rpsed2@rpsgroup.com
W rpsgroup.com

Issue Details

File Identifier:
ECO02228-0023-01

Status:	**Rev:**	**Model File Identifier:**
S0	P01	
Drawn: KAG		**Date:** 05/07/2023
Checked: KT		**Scale:** 1:14,000 @A3
Approved: KT		**Projection:** ITM

NOTE:

1. This drawing is the property of RPS Group Ltd. It is a confidential document and must not be copied, used, or its contents divulged without prior written consent.
2. Ordnance Survey Ireland Licence CYAL50252391 © Ordnance Survey Ireland/Government of Ireland.

W:\ECO02228 - RPS Dublin GDD Ornithology Update\Technical\Graphics\GIS\MXDs\Figures\ECO02228-0023-01 EstuarineSurveyResults_Sep2020_June2023.mxd

N

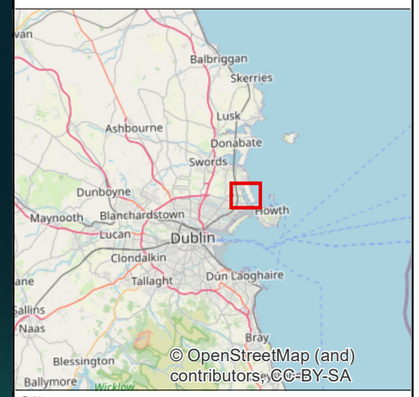
0 0.1250.25 0.5 Kilometres

Source: Esri, Maxar, Earthstar Geographies, and the GIS User Community

W:\ECO02228 - RPS Dublin GDD Ornithology Update\Technical\Graphics\GIS\MXDs\Figures\ECO02228-0023-01 EstuarineSurveyResults_Sep2020_June2023.mxd

Legend

- Boundary
- Baldoyle Bay SPA
- RPS estuarine survey area
- Ringed Plover



Client

Uisce Éireann

Greater Dublin Drainage Project

Title

Figure A10.57
Ringed Plover
Records in Baldoyle Bay
(September 2020 to June 2023)

Atholl Exchange
6 Canning Street,
Edinburgh,
United Kingdom

T +44(0)131 555 5011
E rpsed2@rpsgroup.com
W rpsgroup.com

Issue Details

File Identifier:
ECO02228-0023-01

Status:	**Rev:**	**Model File Identifier:**
S0	P01	
Drawn: KAG		**Date:** 05/07/2023
Checked: KT		**Scale:** 1:14,000 @A3
Approved: KT		**Projection:** ITM

NOTE:

1. This drawing is the property of RPS Group Ltd. It is a confidential document and must not be copied, used, or its contents divulged without prior written consent.
2. Ordnance Survey Ireland Licence CYAL50252391 © Ordnance Survey Ireland/Government of Ireland.

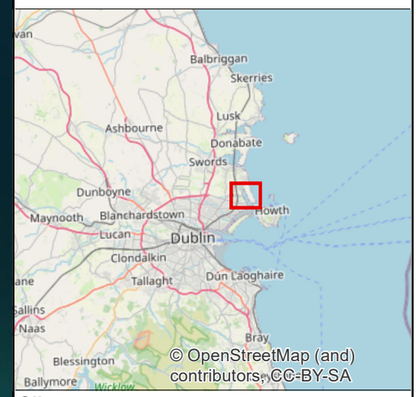
N

0 0.1250.25 0.5 Kilometres

Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community

Legend

- Boundary
- Baldoyle Bay SPA
- RPS estuarine survey area
- Rook



Client

Uisce Éireann

Greater Dublin Drainage Project

Title

Figure A10.58
Rook
Records in Baldoyle Bay
(September 2020 to June 2023)

Atholl Exchange
6 Canning Street,
Edinburgh,
United Kingdom

T +44(0)131 555 5011
E rpsed2@rpsgroup.com
W rpsgroup.com

Issue Details

File Identifier:
ECO02228-0023-01

Status:	**Rev:**	**Model File Identifier:**
S0	P01	
Drawn: KAG		**Date:** 05/07/2023
Checked: KT		**Scale:** 1:14,000 @A3
Approved: KT		**Projection:** ITM

NOTE:

1. This drawing is the property of RPS Group Ltd. It is a confidential document and must not be copied, used, or its contents divulged without prior written consent.
2. Ordnance Survey Ireland Licence CYAL50252391 © Ordnance Survey Ireland/Government of Ireland.

W:\ECO02228 - RPS Dublin GDD Ornithology Update\Technical\Graphics\GIS\MXDs\Figures\ECO02228-0023-01 EstuarineSurveyResults_Sep2020_June2023.mxd

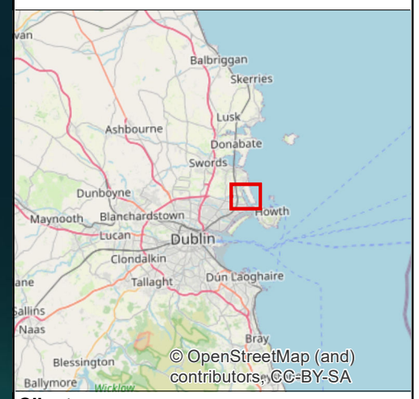
N

0 0.1250.25 0.5 Kilometres

Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community

Legend

- Boundary
- Baldoyle Bay SPA
- RPS estuarine survey area
- Ruff



Client

Uisce Éireann

Greater Dublin Drainage Project

Title

Figure A10.59
Ruff
Records in Baldoyle Bay
(September 2020 to June 2023)

Atholl Exchange
6 Canning Street,
Edinburgh,
United Kingdom

T +44(0)131 555 5011
E rpsed2@rpsgroup.com
W rpsgroup.com

Issue Details

File Identifier:
ECO02228-0023-01

Status:	**Rev:**	**Model File Identifier:**
S0	P01	

Drawn: KAG	**Date:** 05/07/2023
Checked: KT	**Scale:** 1:14,000 @A3
Approved: KT	**Projection:** ITM

NOTE:

1. This drawing is the property of RPS Group Ltd. It is a confidential document and must not be copied, used, or its contents divulged without prior written consent.
2. Ordnance Survey Ireland Licence CYAL50252391 © Ordnance Survey Ireland/Government of Ireland.

W:\ECO02228 - RPS Dublin GDD Ornithology Update\Technical\Graphics\GIS\MXDs\Figures\ECO02228-0023-01 EstuarineSurveyResults_Sep2020_June2023.mxd

N

0 0.1250.25 0.5 Kilometres

Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community

Legend

- Boundary
- Baldoyle Bay SPA
- RPS estuarine survey area
- Sand Martin

Client

Uisce Éireann

Greater Dublin Drainage Project

Title

Figure A10.60
Sand Martin
Records in Baldoyle Bay
(September 2020 to June 2023)

Atholl Exchange
6 Canning Street,
Edinburgh,
United Kingdom

T +44(0)131 555 5011
E rpsed2@rpsgroup.com
W rpsgroup.com

Issue Details

File Identifier:
ECO02228-0023-01

Status:	**Rev:**	**Model File Identifier:**
S0	P01	

Drawn: KAG	**Date:** 05/07/2023
Checked: KT	**Scale:** 1:14,000 @A3
Approved: KT	**Projection:** ITM

NOTE:

1. This drawing is the property of RPS Group Ltd. It is a confidential document and must not be copied, used, or its contents divulged without prior written consent.
2. Ordnance Survey Ireland Licence CYAL50252391 © Ordnance Survey Ireland/Government of Ireland.

W:\ECO02228 - RPS Dublin GDD Ornithology Update\Technical\Graphics\GIS\MXDs\Figures\ECO02228-0023-01 EstuarineSurveyResults_Sep2020_June2023.mxd

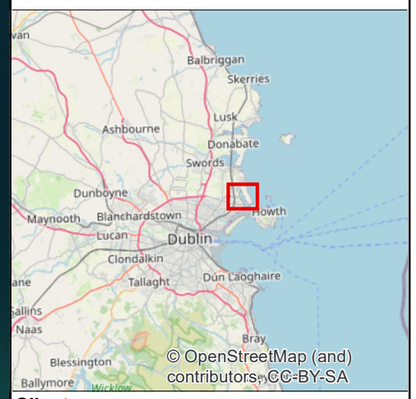
N

0 0.1250.25 0.5 Kilometres

Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community

Legend

- Boundary
- Baldoyle Bay SPA
- RPS estuarine survey area
- Sanderling



Client

Uisce Éireann

Greater Dublin Drainage Project

Title

Figure A10.61
Sanderling
Records in Baldoyle Bay
(September 2020 to June 2023)

Atholl Exchange
6 Canning Street,
Edinburgh,
United Kingdom

T +44(0)131 555 5011
E rpsed2@rpsgroup.com
W rpsgroup.com

Issue Details

File Identifier:
ECO02228-0023-01

Status:	**Rev:**	**Model File Identifier:**
S0	P01	

Drawn: KAG	**Date:** 05/07/2023
Checked: KT	**Scale:** 1:14,000 @A3
Approved: KT	**Projection:** ITM

NOTE:

1. This drawing is the property of RPS Group Ltd. It is a confidential document and must not be copied, used, or its contents divulged without prior written consent.
2. Ordnance Survey Ireland Licence CYAL50252391 © Ordnance Survey Ireland/Government of Ireland.

W:\ECO02228 - RPS Dublin GDD Ornithology Update\Technical\Graphics\GIS\MXDs\Figures\ECO02228-0023-01 EstuarineSurveyResults_Sep2020_June2023.mxd

N

0 0.1250.25 0.5 Kilometres

Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community

Legend

- Boundary
- Baldoyle Bay SPA
- RPS estuarine survey area
- Sandwich Tern

Client

Uisce Éireann

Greater Dublin Drainage Project

Title

Figure A10.62
Sandwich Tern
Records in Baldoyle Bay
(September 2020 to June 2023)

Atholl Exchange
6 Canning Street,
Edinburgh,
United Kingdom

T +44(0)131 555 5011
E rpsed2@rpsgroup.com
W rpsgroup.com

Issue Details

File Identifier:
ECO02228-0023-01

Status:	**Rev:**	**Model File Identifier:**
S0	P01	
Drawn: KAG		**Date:** 05/07/2023
Checked: KT		**Scale:** 1:14,000 @A3
Approved: KT		**Projection:** ITM

NOTE:

1. This drawing is the property of RPS Group Ltd. It is a confidential document and must not be copied, used, or its contents divulged without prior written consent.
2. Ordnance Survey Ireland Licence CYAL50252391 © Ordnance Survey Ireland/Government of Ireland.

W:\ECO02228 - RPS Dublin GDD Ornithology Update\Technical\Graphics\GIS\MXDs\Figures\ECO02228-0023-01 EstuarineSurveyResults_Sep2020_June2023.mxd

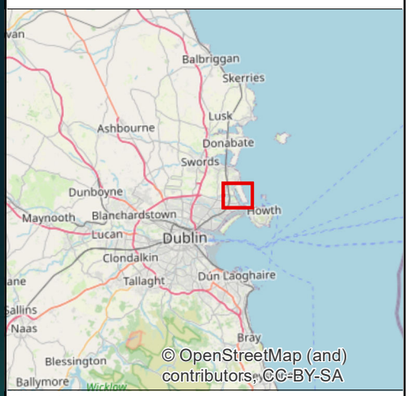
N

0 0.1250.25 0.5 Kilometres

Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community

Legend

- Boundary
- Baldoyle Bay SPA
- RPS estuarine survey area
- Shag



Client

Uisce Éireann

Greater Dublin Drainage Project

Title

Figure A10.63
Shag
Records in Baldoyle Bay
(September 2020 to June 2023)

Atholl Exchange
6 Canning Street,
Edinburgh,
United Kingdom

T +44(0)131 555 5011
E rpsed2@rpsgroup.com
W rpsgroup.com

Issue Details

File Identifier:
ECO02228-0023-01

Status:	Rev:	Model File Identifier:
S0	P01	

Drawn: KAG	**Date:** 05/07/2023
Checked: KT	**Scale:** 1:14,000 @A3
Approved: KT	**Projection:** ITM

NOTE:

W:\ECO02228 - RPS Dublin GDD Ornithology Update\Technical\Graphics\GIS\MXDs\Figures\ECO02228-0023-01 EstuarineSurveyResults_Sep2020_June2023.mxd

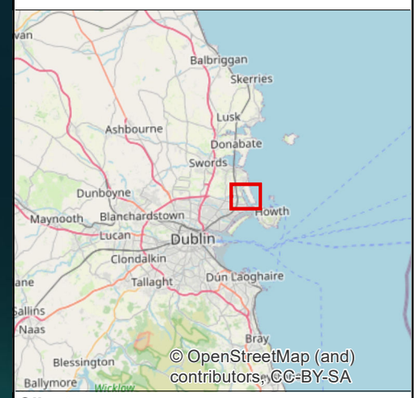
N

0 0.1250.25 0.5 Kilometres

Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community

Legend

- Boundary
- Baldoyle Bay SPA
- RPS estuarine survey area
- Shelduck



Client

Uisce Éireann

Greater Dublin Drainage Project

Title

Figure A10.64
Shelduck
Records in Baldoyle Bay
(September 2020 to June 2023)

Atholl Exchange
6 Canning Street,
Edinburgh,
United Kingdom

T +44(0)131 555 5011
E rpsed2@rpsgroup.com
W rpsgroup.com

Issue Details

File Identifier:
ECO02228-0023-01

Status:	**Rev:**	**Model File Identifier:**
S0	P01	

Drawn: KAG	**Date:** 05/07/2023
Checked: KT	**Scale:** 1:14,000 @A3
Approved: KT	**Projection:** ITM

NOTE:

1. This drawing is the property of RPS Group Ltd. It is a confidential document and must not be copied, used, or its contents divulged without prior written consent.
2. Ordnance Survey Ireland Licence CYAL50252391 © Ordnance Survey Ireland/Government of Ireland.

W:\ECO02228 - RPS Dublin GDD Ornithology Update\Technical\Graphics\GIS\MXDs\Figures\ECO02228-0023-01 EstuarineSurveyResults_Sep2020_June2023.mxd

N

0 0.1250.25 0.5 Kilometres

Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community

Legend

- Boundary
- Baldoyle Bay SPA
- RPS estuarine survey area
- Sky Lark
- Skylark

Client

Uisce Éireann

Greater Dublin Drainage Project

Title

Figure A10.65
Sky Lark
Records in Baldoyle Bay
(September 2020 to June 2023)

Atholl Exchange
6 Canning Street,
Edinburgh,
United Kingdom

T +44(0)131 555 5011
E rpsed2@rpsgroup.com
W rpsgroup.com

Issue Details

File Identifier:
ECO02228-0023-01

Status:	Rev:	Model File Identifier:
S0	P01	

Drawn: KAG	**Date:** 05/07/2023
Checked: KT	**Scale:** 1:14,000 @A3
Approved: KT	**Projection:** ITM

NOTE:

1. This drawing is the property of RPS Group Ltd. It is a confidential document and must not be copied, used, or its contents divulged without prior written consent.
2. Ordnance Survey Ireland Licence CYAL50252391 © Ordnance Survey Ireland/Government of Ireland.

W:\ECO02228 - RPS Dublin GDD Ornithology Update\Technical\Graphics\GIS\MXDs\Figures\ECO02228-0023-01 EstuarineSurveyResults_Sep2020_June2023.mxd

N

0 0.1250.25 0.5 Kilometres

Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community

Legend

- Boundary
- Baldoyle Bay SPA
- RPS estuarine survey area
- Snipe

Client

Uisce Éireann

Greater Dublin Drainage Project

Title

Figure A10.66
Snipe
Records in Baldoyle Bay
(September 2020 to June 2023)

Atholl Exchange
6 Canning Street,
Edinburgh,
United Kingdom

T +44(0)131 555 5011
E rpsed2@rpsgroup.com
W rpsgroup.com

Issue Details

File Identifier: ECO02228-0023-01		
Status: S0	**Rev:** P01	**Model File Identifier:**
Drawn: KAG		**Date:** 05/07/2023
Checked: KT		**Scale:** 1:14,000 @A3
Approved: KT		**Projection:** ITM

NOTE:

1. This drawing is the property of RPS Group Ltd. It is a confidential document and must not be copied, used, or its contents divulged without prior written consent.
2. Ordnance Survey Ireland Licence CYAL50252391 © Ordnance Survey Ireland/Government of Ireland.

W:\ECO02228 - RPS Dublin GDD Ornithology Update\Technical\Graphics\GIS\MXDs\Figures\ECO02228-0023-01 EstuarineSurveyResults_Sep2020_June2023.mxd

N

0 0.1250.25 0.5 Kilometres

Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community

Legend

- Boundary
- Baldoyle Bay SPA
- RPS estuarine survey area
- Starling

Client

Uisce Éireann

Greater Dublin Drainage Project

Title

Figure A10.67
Starling
Records in Baldoyle Bay
(September 2020 to June 2023)

Atholl Exchange
6 Canning Street,
Edinburgh,
United Kingdom

T +44(0)131 555 5011
E rpsed2@rpsgroup.com
W rpsgroup.com

Issue Details

File Identifier:
ECO02228-0023-01

Status:	Rev:	Model File Identifier:
S0	P01	

Drawn: KAG	**Date:** 05/07/2023
Checked: KT	**Scale:** 1:14,000 @A3
Approved: KT	**Projection:** ITM

NOTE:

1. This drawing is the property of RPS Group Ltd. It is a confidential document and must not be copied, used, or its contents divulged without prior written consent.
2. Ordnance Survey Ireland Licence CYAL50252391 © Ordnance Survey Ireland/Government of Ireland.

W:\ECO02228 - RPS Dublin GDD Ornithology Update\Technical\Graphics\GIS\MXDs\Figures\ECO02228-0023-01 EstuarineSurveyResults_Sep2020_June2023.mxd

N

0 0.1250.25 0.5 Kilometres

Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community

Legend

- Boundary
- Baldoyle Bay SPA
- RPS estuarine survey area
- Stonechat

Client

Uisce Éireann

Greater Dublin Drainage Project

Title

Figure A10.68
Stonechat
Records in Baldoyle Bay
(September 2020 to June 2023)

Atholl Exchange
6 Canning Street,
Edinburgh,
United Kingdom

T +44(0)131 555 5011
E rpsed2@rpsgroup.com
W rpsgroup.com

Issue Details

File Identifier:
ECO02228-0023-01

Status:	**Rev:**	**Model File Identifier:**
S0	P01	

Drawn: KAG	**Date:** 05/07/2023
Checked: KT	**Scale:** 1:14,000 @A3
Approved: KT	**Projection:** ITM

NOTE:

1. This drawing is the property of RPS Group Ltd. It is a confidential document and must not be copied, used, or its contents divulged without prior written consent.
2. Ordnance Survey Ireland Licence CYAL50252391 © Ordnance Survey Ireland/Government of Ireland.

W:\ECO02228 - RPS Dublin GDD Ornithology Update\Technical\Graphics\GIS\MXDs\Figures\ECO02228-0023-01 EstuarineSurveyResults_Sep2020_June2023.mxd

N

0 0.1250.25 0.5 Kilometres

Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community

Legend

- Boundary
- Baldoyle Bay SPA
- RPS estuarine survey area
- Swallow

Client

Uisce Éireann

Greater Dublin Drainage Project

Title

Figure A10.69
Swallow
Records in Baldoyle Bay
(September 2020 to June 2023)

Atholl Exchange
6 Canning Street,
Edinburgh,
United Kingdom

T +44(0)131 555 5011
E rpsed2@rpsgroup.com
W rpsgroup.com

Issue Details

File Identifier:
ECO02228-0023-01

Status:	Rev:	Model File Identifier:
S0	P01	

Drawn: KAG	**Date:** 05/07/2023
Checked: KT	**Scale:** 1:14,000 @A3
Approved: KT	**Projection:** ITM

NOTE:

1. This drawing is the property of RPS Group Ltd. It is a confidential document and must not be copied, used, or its contents divulged without prior written consent.
2. Ordnance Survey Ireland Licence CYAL50252391 © Ordnance Survey Ireland/Government of Ireland.

W:\ECO02228 - RPS Dublin GDD Ornithology Update\Technical\Graphics\GIS\MXDs\Figures\ECO02228-0023-01 EstuarineSurveyResults_Sep2020_June2023.mxd

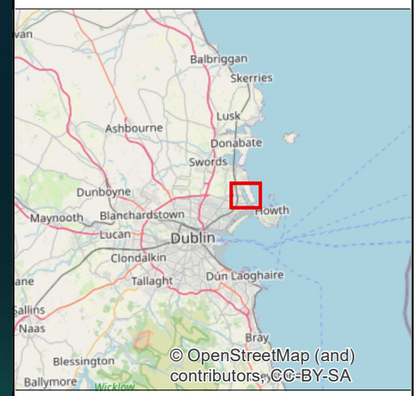
N

0 0.125 0.25 0.5 Kilometres

Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community

Legend

- Boundary
- Baldoyle Bay SPA
- RPS estuarine survey area
- Teal



Client

Uisce Éireann

Greater Dublin Drainage Project

Title

Figure A10.70
Teal
Records in Baldoyle Bay
(September 2020 to June 2023)

Atholl Exchange
6 Canning Street,
Edinburgh,
United Kingdom

T +44(0)131 555 5011
E rpsed2@rpsgroup.com
W rpsgroup.com

Issue Details

File Identifier:
ECO02228-0023-01

Status:	**Rev:**	**Model File Identifier:**
S0	P01	
Drawn: KAG		**Date:** 05/07/2023
Checked: KT		**Scale:** 1:14,000 @A3
Approved: KT		**Projection:** ITM

NOTE:

1. This drawing is the property of RPS Group Ltd. It is a confidential document and must not be copied, used, or its contents divulged without prior written consent.
2. Ordnance Survey Ireland Licence CYAL50252391 © Ordnance Survey Ireland/Government of Ireland.

W:\ECO02228 - RPS Dublin GDD Ornithology Update\Technical\Graphics\GIS\MXDs\Figures\ECO02228-0023-01 EstuarineSurveyResults_Sep2020_June2023.mxd

N

0 0.1250.25 0.5 Kilometres

Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community

Legend

- Boundary
- Baldoyle Bay SPA
- RPS estuarine survey area
- Turnstone

Client

Uisce Éireann

Greater Dublin Drainage Project

Title

Figure A10.71
Turnstone
Records in Baldoyle Bay
(September 2020 to June 2023)

Atholl Exchange
6 Canning Street,
Edinburgh,
United Kingdom

T +44(0)131 555 5011
E rpsed2@rpsgroup.com
W rpsgroup.com

Issue Details

File Identifier:
ECO02228-0023-01

Status:	**Rev:**	**Model File Identifier:**
S0	P01	
Drawn: KAG		**Date:** 05/07/2023
Checked: KT		**Scale:** 1:14,000 @A3
Approved: KT		**Projection:** ITM

NOTE:

1. This drawing is the property of RPS Group Ltd. It is a confidential document and must not be copied, used, or its contents divulged without prior written consent.
2. Ordnance Survey Ireland Licence CYAL50252391 © Ordnance Survey Ireland/Government of Ireland.

W:\ECO02228 - RPS Dublin GDD Ornithology Update\Technical\Graphics\GIS\MXDs\Figures\ECO02228-0023-01 EstuarineSurveyResults_Sep2020_June2023.mxd

N

0 0.1250.25 0.5 Kilometres

Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community

Legend

- Boundary
- Baldoyle Bay SPA
- RPS estuarine survey area
- Whimbrel

Client

Uisce Éireann

Greater Dublin Drainage Project

Title

Figure A10.72
Whimbrel
Records in Baldoyle Bay
(September 2020 to June 2023)

Atholl Exchange
6 Canning Street,
Edinburgh,
United Kingdom

T +44(0)131 555 5011
E rpsed2@rpsgroup.com
W rpsgroup.com

Issue Details

File Identifier: ECO02228-0023-01		
Status: S0	**Rev:** P01	**Model File Identifier:**
Drawn: KAG		**Date:** 05/07/2023
Checked: KT		**Scale:** 1:14,000 @A3
Approved: KT		**Projection:** ITM

NOTE:

1. This drawing is the property of RPS Group Ltd. It is a confidential document and must not be copied, used, or its contents divulged without prior written consent.
2. Ordnance Survey Ireland Licence CYAL50252391 © Ordnance Survey Ireland/Government of Ireland.

W:\ECO02228 - RPS Dublin GDD Ornithology Update\Technical\Graphics\GIS\MXDs\Figures\ECO02228-0023-01 EstuarineSurveyResults_Sep2020_June2023.mxd

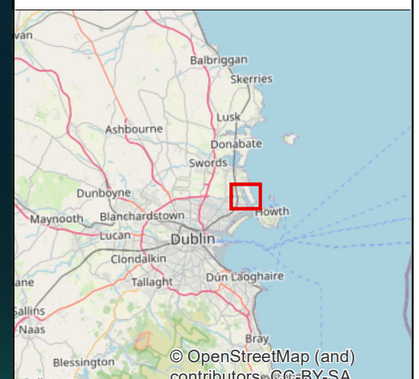
N

0 0.1250.25 0.5 Kilometres

Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community

Legend

- Boundary
- Baldoyle Bay SPA
- RPS estuarine survey area
- Wigeon



Client

Uisce Éireann

Greater Dublin Drainage Project

Title

Figure A10.73
Wigeon
Records in Baldoyle Bay
(September 2020 to June 2023)

Atholl Exchange
6 Canning Street,
Edinburgh,
United Kingdom

T +44(0)131 555 5011
E rpsed2@rpsgroup.com
W rpsgroup.com

Issue Details

File Identifier:
ECO02228-0023-01

Status:	**Rev:**	**Model File Identifier:**
S0	P01	

Drawn: KAG	**Date:** 05/07/2023
Checked: KT	**Scale:** 1:14,000 @A3
Approved: KT	**Projection:** ITM

NOTE:

1. This drawing is the property of RPS Group Ltd. It is a confidential document and must not be copied, used, or its contents divulged without prior written consent.
2. Ordnance Survey Ireland Licence CYAL50252391 © Ordnance Survey Ireland/Government of Ireland.

W:\ECO02228 - RPS Dublin GDD Ornithology Update\Technical\Graphics\GIS\MXDs\Figures\ECO02228-0023-01 EstuarineSurveyResults_Sep2020_June2023.mxd

N

0 0.1250.25 0.5 Kilometres

Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community

Legend

- Boundary
- Baldoyle Bay SPA
- RPS estuarine survey area
- Woodpigeon

Client

Uisce Éireann

Greater Dublin Drainage Project

Title

Figure A10.74
Woodpigeon
Records in Baldoyle Bay
(September 2020 to June 2023)

Atholl Exchange
6 Canning Street,
Edinburgh,
United Kingdom

T +44(0)131 555 5011
E rpsed2@rpsgroup.com
W rpsgroup.com

Issue Details

File Identifier:
ECO02228-0023-01

Status:	**Rev:**	**Model File Identifier:**
S0	P01	
Drawn: KAG		**Date:** 05/07/2023
Checked: KT		**Scale:** 1:14,000 @A3
Approved: KT		**Projection:** ITM

NOTE:

1. This drawing is the property of RPS Group Ltd. It is a confidential document and must not be copied, used, or its contents divulged without prior written consent.
2. Ordnance Survey Ireland Licence CYAL50252391 © Ordnance Survey Ireland/Government of Ireland.

W:\ECO02228 - RPS Dublin GDD Ornithology Update\Technical\Graphics\GIS\MXDs\Figures\ECO02228-0023-01 EstuarineSurveyResults_Sep2020_June2023.mxd

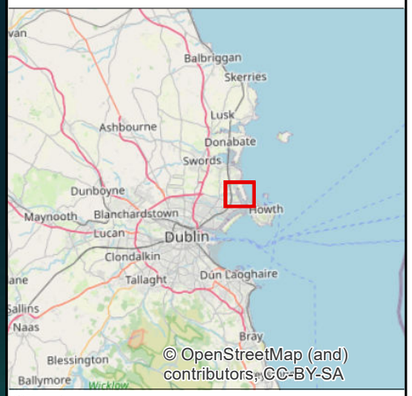
N

0 0.1250.25 0.5 Kilometres

Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community

Legend

- Boundary
- Baldoyle Bay SPA
- North West Irish Sea cSPA
- RPS Estuarine Survey
- Arctic Tern



Client

Uisce Éireann

Greater Dublin Drainage Project

Title

Figure A10.74A
Arctic Tern
Records in Baldoyle Bay
(September 2020 to June 2023)

RPS A TETRA TECH COMPANY

West Pier
Business Campus,
Dun Laoghaire,
Co Dublin, Ireland.

T +353 (0) 1 4882900
E ireland@rpsgroup.com
W rpsgroup.com/ireland

Issue Details

File Identifier:
IE000258-RPS-AG-XX-D-Z-0027

Status:	**Rev:**	**Model File Identifier:**
A1	C01	
Drawn: PK		**Date:** 16/10/2023
Checked: JF		**Scale:** 1:14,000 @A3
Approved: JF		**Projection:** ITM

NOTE:

1. This drawing is the property of RPS Group Ltd. It is a confidential document and must not be copied, used, or its contents divulged without prior written consent.
2. Ordnance Survey Ireland Licence CYAL50319610 © Ordnance Survey Ireland/Government of Ireland.

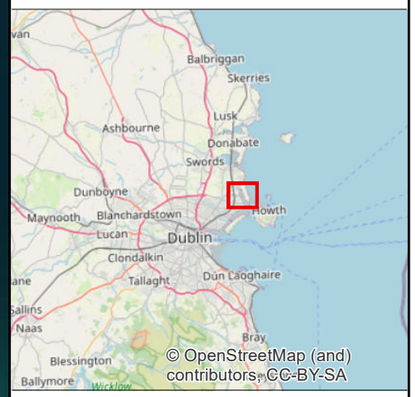
N

0 0.1250.25 0.5 Kilometres

Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community

Legend

- Boundary
- Baldoyle Bay SPA
- North West Irish Sea cSPA
- RPS Estuarine Survey Area
- Great Northern Diver



Client

Uisce Éireann

Greater Dublin Drainage Project

Title

Figure A10.74B
Great Northern Diver
Records in Baldoyle Bay
(September 2020 to June 2023)

RPS A TETRA TECH COMPANY

West Pier
Business Campus,
Dun Laoghaire,
Co Dublin, Ireland.

T +353 (0) 1 4882900
E ireland@rpsgroup.com
W rpsgroup.com/ireland

Issue Details

File Identifier:
IE000258-RPS-AG-XX-D-Z-0027

Status:	Rev:	Model File Identifier:
A1	C01	

Drawn: PK	**Date:** 16/10/2023
Checked: JF	**Scale:** 1:14,000 @A3
Approved: JF	**Projection:** ITM

NOTE:

1. This drawing is the property of RPS Group Ltd. It is a confidential document and must not be copied, used, or its contents divulged without prior written consent.
2. Ordnance Survey Ireland Licence CYAL50319610 © Ordnance Survey Ireland/Government of Ireland.

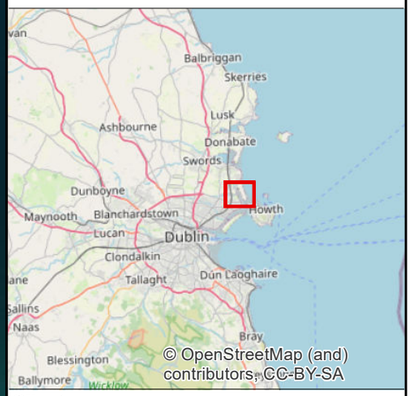
N

0 0.1250.25 0.5 Kilometres

Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community

Legend

- Boundary
- Baldoyle Bay SPA
- North West Irish Sea cSPA
- RPS Estuarine Survey Area
- Roseate Tern



Client

Uisce Éireann

Greater Dublin Drainage Project

Title

Figure A10.74C
Roseate Tern
Records in Baldoyle Bay
(September 2020 to June 2023)

RPS A TETRA TECH COMPANY

West Pier
Business Campus,
Dun Laoghaire,
Co Dublin, Ireland.

T +353 (0) 1 4882900
E ireland@rpsgroup.com
W rpsgroup.com/ireland

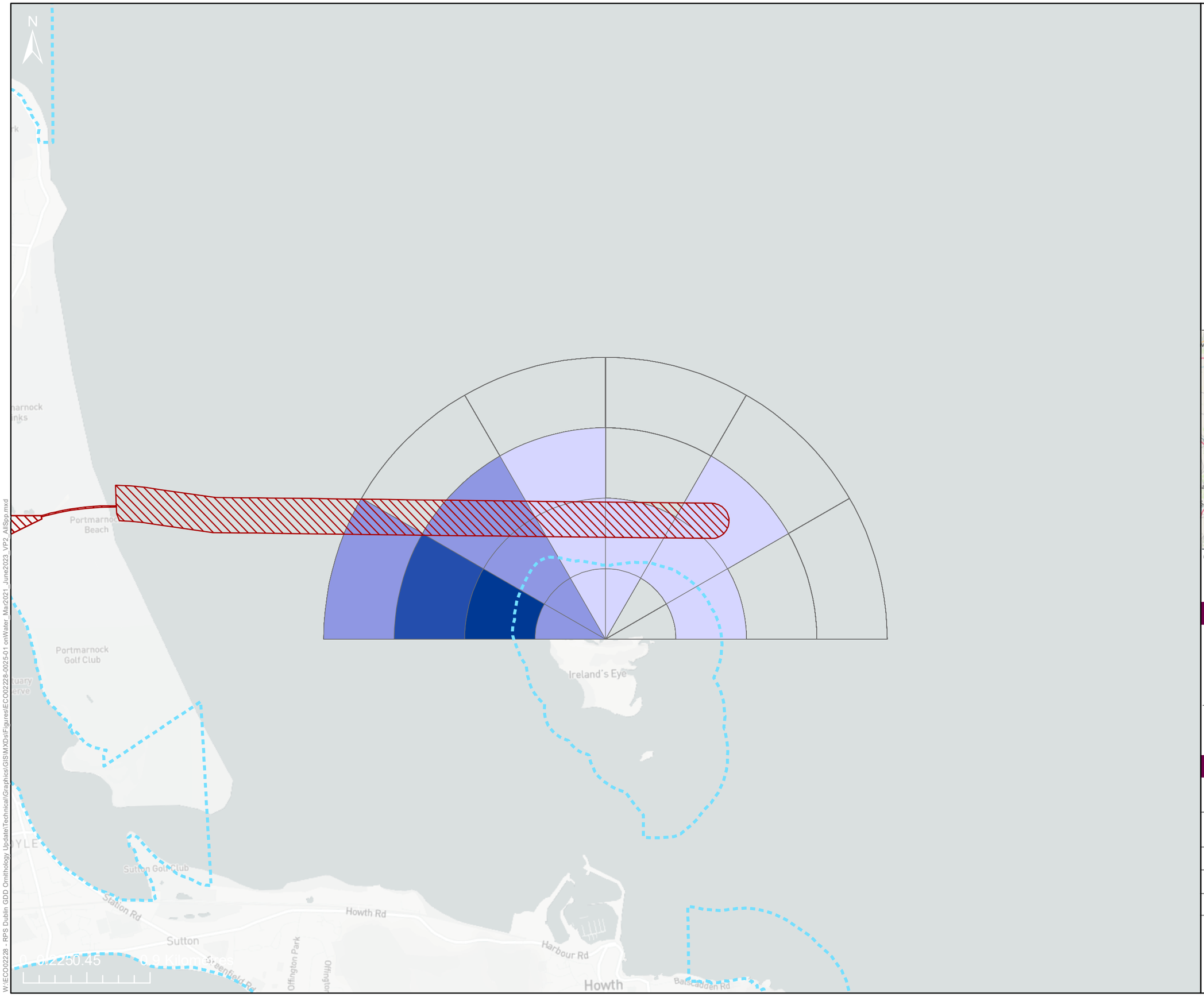
Issue Details

File Identifier:
IE000258-RPS-AG-XX-D-Z-0027

Status:	**Rev:**	**Model File Identifier:**
A1	C01	
Drawn: PK		**Date:** 17/10/2023
Checked: JF		**Scale:** 1:14,000 @A3
Approved: JF		**Projection:** ITM

NOTE:

1. This drawing is the property of RPS Group Ltd. It is a confidential document and must not be copied, used, or its contents divulged without prior written consent.
2. Ordnance Survey Ireland Licence CYAL50319610 © Ordnance Survey Ireland/Government of Ireland.



W:\ECO02228 - RPS Dublin GDD Ornithology Update\Technical\Graphics\GIS\MXDs\Figures\ECO02228-0025-01 onWater_Mar2021_June2023_VP2_AllSpp.mxd

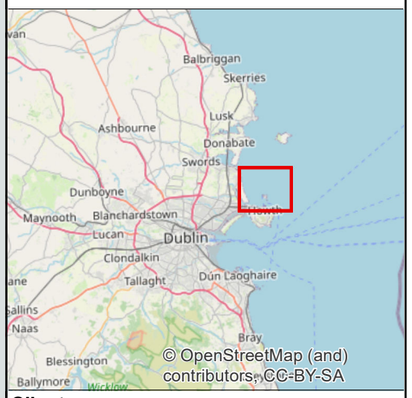
Legend

- Boundary
- SPA boundaries

Index of abundance

Black guillemot - all behaviours

- 1 - 4
- 5 - 8
- 13 - 16
- 17 - 18



Client

Uisce Éireann

Greater Dublin Drainage Project

Title

Figure A10.75 Distribution of all on sea Black Guillemot records from Ireland's Eye VP during August 2020 - June 2023

Atholl Exchange
6 Canning Street,
Edinburgh,
United Kingdom

T +44(0)131 555 5011
E rpsed2@rpsgroup.com
W rpsgroup.com

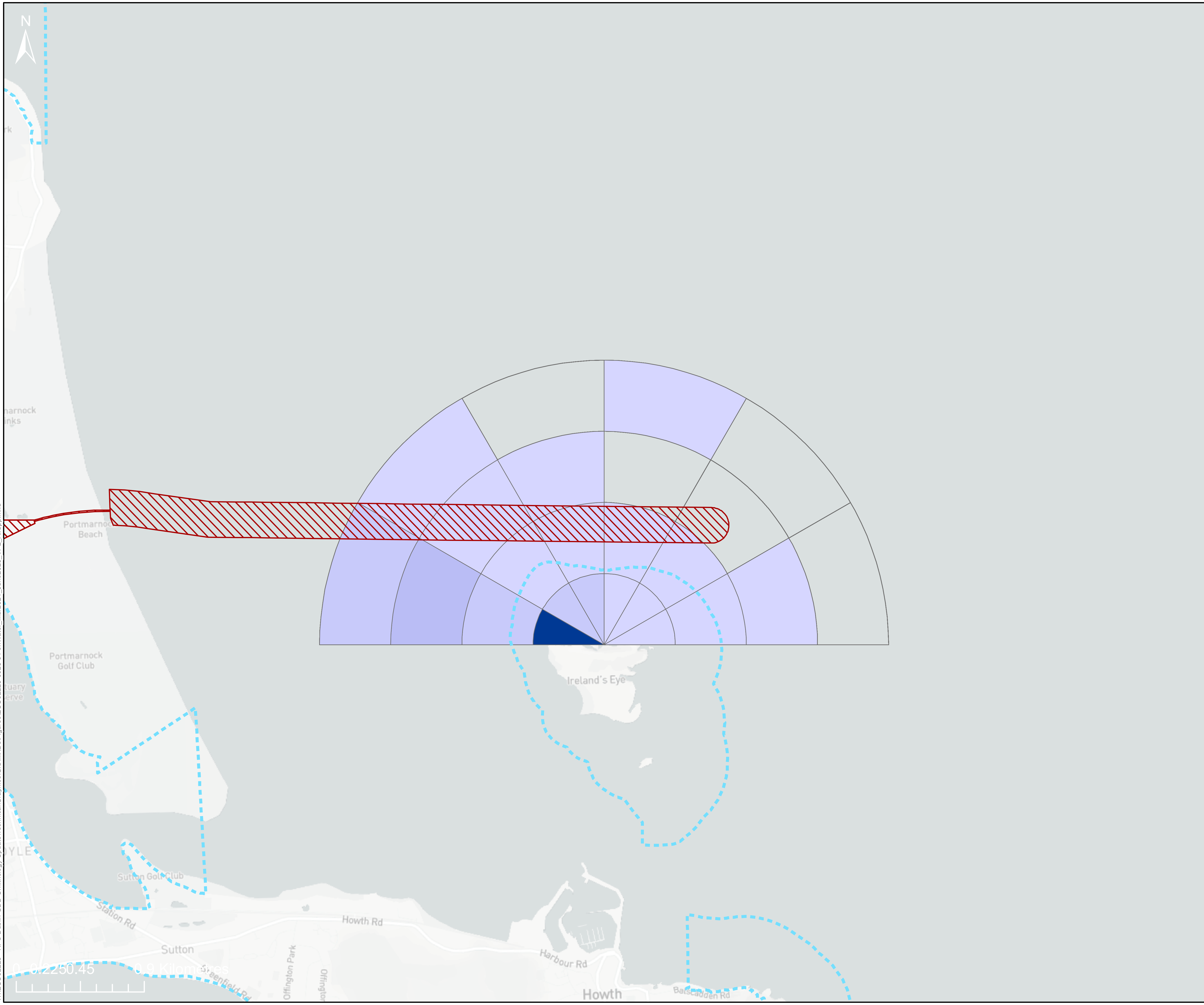
Issue Details

File Identifier:
ECO02228-0025-01

Status:	**Rev:**	**Model File Identifier:**
S0	P01	
Drawn: KAG		**Date:** 12/07/2023
Checked: KT		**Scale:** 1:25,000 @A3
Approved: KT		**Projection:** ITM

NOTE:

1. This drawing is the property of RPS Group Ltd. It is a confidential document and must not be copied, used, or its contents divulged without prior written consent.
2. Ordnance Survey Ireland Licence CYAL50252391 © Ordnance Survey Ireland/Government of Ireland.



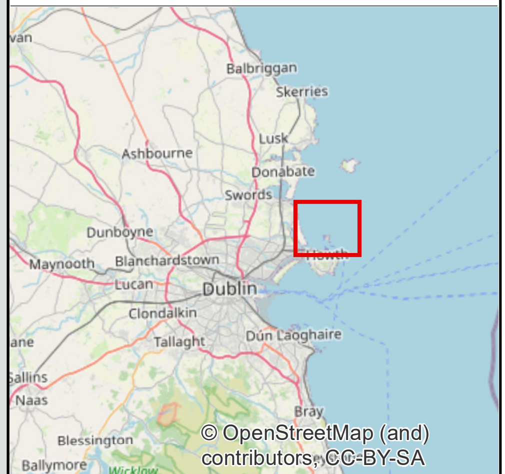
Legend

- Boundary
- SPA boundaries

Index of abundance

Cormorant - all behaviours

- 1 - 5
- 6 - 10
- 11 - 15
- 106 - 110



Client

Uisce Éireann

Greater Dublin Drainage Project

Title

Figure A10.76 Distribution of all on sea Cormorant records from Ireland's Eye VP during August 2020 - June 2023

Atholl Exchange
6 Canning Street,
Edinburgh,
United Kingdom

T +44(0)131 555 5011
E rpsed2@rpsgroup.com
W rpsgroup.com

Issue Details

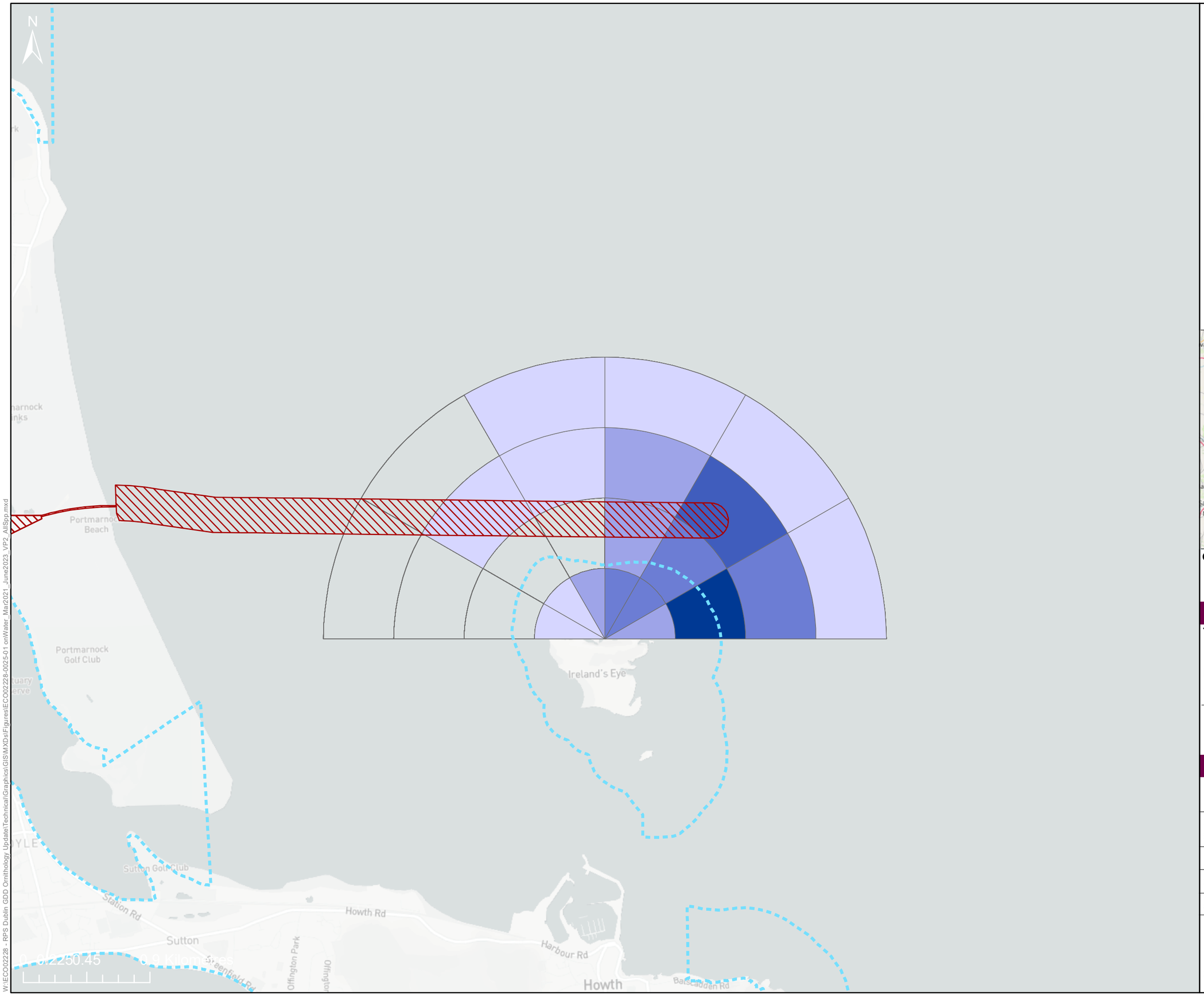
File Identifier: ECO02228-0025-01

Status:	**Rev:**	**Model File Identifier:**
S0	P01	

Drawn:	KAG	**Date:**	12/07/2023
Checked:	KT	**Scale:**	1:25,000 @A3
Approved:	KT	**Projection:**	ITM

NOTE:

W:\ECO02228 - RPS Dublin GDD Ornithology Update\Technical\Graphics\GIS\MXDs\Figures\ECO02228-0025-01 onWater_Mar2021_June2023_VP2_AllSpp.mxd



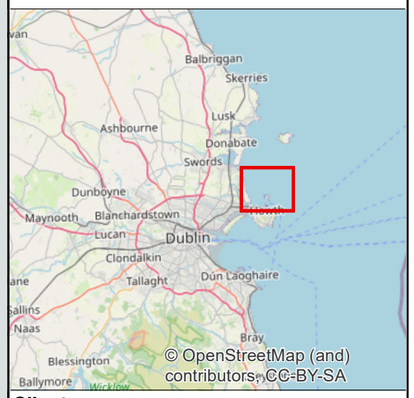
Legend

- Boundary
- SPA boundaries

Index of abundance

Fulmar - all behaviours

- 1 - 10
- 11 - 20
- 21 - 30
- 31 - 40
- 51 - 60



Client

Uisce Éireann

Greater Dublin Drainage Project

Title

Figure A10.77 Distribution of all on sea Fulmar records from Ireland's Eye VP during August 2020 - June 2023

Atholl Exchange
6 Canning Street,
Edinburgh,
United Kingdom

T +44(0)131 555 5011
E rpsed2@rpsgroup.com
W rpsgroup.com

Issue Details

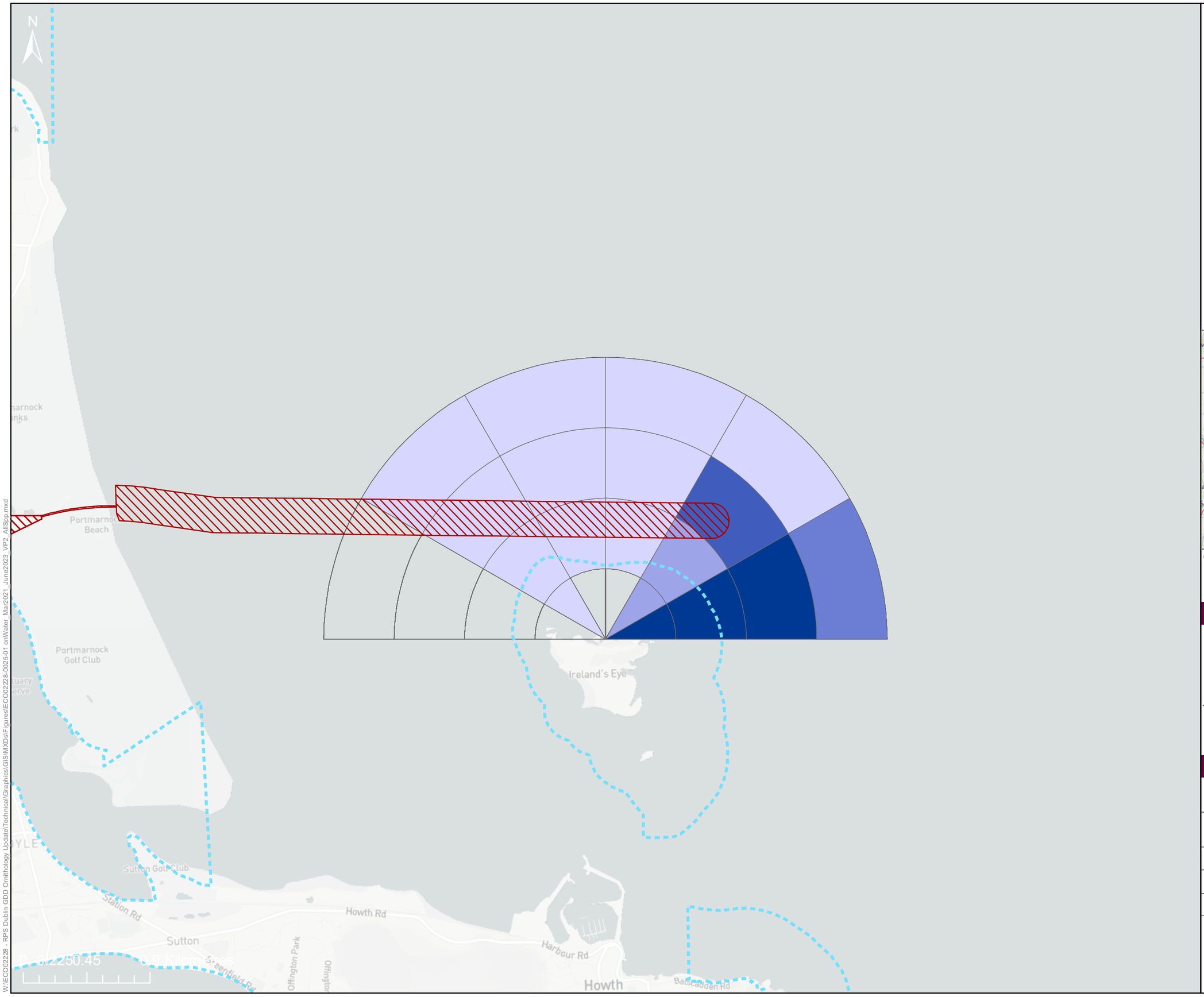
File Identifier:
ECO02228-0025-01

Status:	**Rev:**	**Model File Identifier:**
S0	P01	
Drawn: KAG		**Date:** 12/07/2023
Checked: KT		**Scale:** 1:25,000 @A3
Approved: KT		**Projection:** ITM

NOTE:

1. This drawing is the property of RPS Group Ltd. It is a confidential document and must not be copied, used, or its contents divulged without prior written consent.
2. Ordnance Survey Ireland Licence CYAL50252391 © Ordnance Survey Ireland/Government of Ireland.

W:\ECO02228 - RPS Dublin GDD Ornithology Update\Technical\Graphics\GIS\MXDs\Figures\ECO02228-0025-01 onWater_Mar2021_June2023_VP2_AllSpp.mxd



W:\ECO02228 - RPS Dublin GDD Ornithology Update\Technical\Graphics\GIS\MXDs\Figures\ECO02228-0025-01 onWater_Mar2021_June2023_VP2_AllSpp.mxd

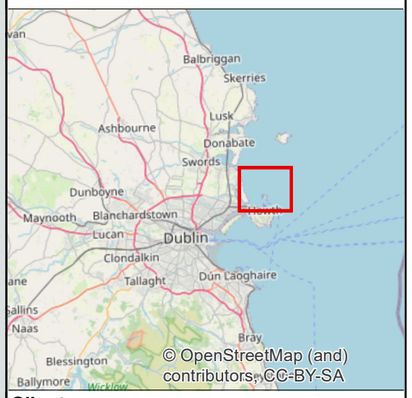
Legend

- Boundary
- SPA boundaries

Index of abundance

Gannet - all behaviours

- 1 - 25
- 26 - 50
- 51 - 75
- 76 - 100
- 126 - 150



Client

Uisce Éireann

Greater Dublin Drainage Project

Title

Figure A10.78 Distribution of all on sea Gannet records from Ireland's Eye VP during August 2020 - June 2023

Atholl Exchange
6 Canning Street,
Edinburgh,
United Kingdom

T +44(0)131 555 5011
E rpsed2@rpsgroup.com
W rpsgroup.com

Issue Details

File Identifier:
ECO02228-0025-01

Status:	Rev:	Model File Identifier:
S0	P01	
Drawn: KAG		**Date:** 12/07/2023
Checked: KT		**Scale:** 1:25,000 @A3
Approved: KT		**Projection:** ITM

NOTE:

1. This drawing is the property of RPS Group Ltd. It is a confidential document and must not be copied, used, or its contents divulged without prior written consent.
2. Ordnance Survey Ireland Licence CYAL50252391 © Ordnance Survey Ireland/Government of Ireland.

N

Portmarnock Beach

Portmarnock Golf Club

Ireland's Eye

Sutton Golf Club

Sutton Rd

Howth Rd

Sutton

Harbour Rd

Howth

Baileadden Rd

Offington Park

0 0.2 0.45 0.9 Kilometres

W:\ECO02228 - RPS Dublin GDD Ornithology Update\Technical\Graphics\GIS\MXDs\Figures\ECO02228-0025-01 onWater_Mar2021_June2023_VP2_AllSpp.mxd

Legend

- Boundary
- SPA boundaries

Index of abundance

Great Black-backed Gull - all behaviours

- 1 - 10
- 11 - 20
- 191 - 200

Client

Uisce Éireann

Greater Dublin Drainage Project

Title

Figure A10.79 Distribution of all on sea Great Black-backed Gull records from Ireland's Eye VP during August 2020 - June 2023

Atholl Exchange
6 Canning Street,
Edinburgh,
United Kingdom

T +44(0)131 555 5011
E rpsed2@rpsgroup.com
W rpsgroup.com

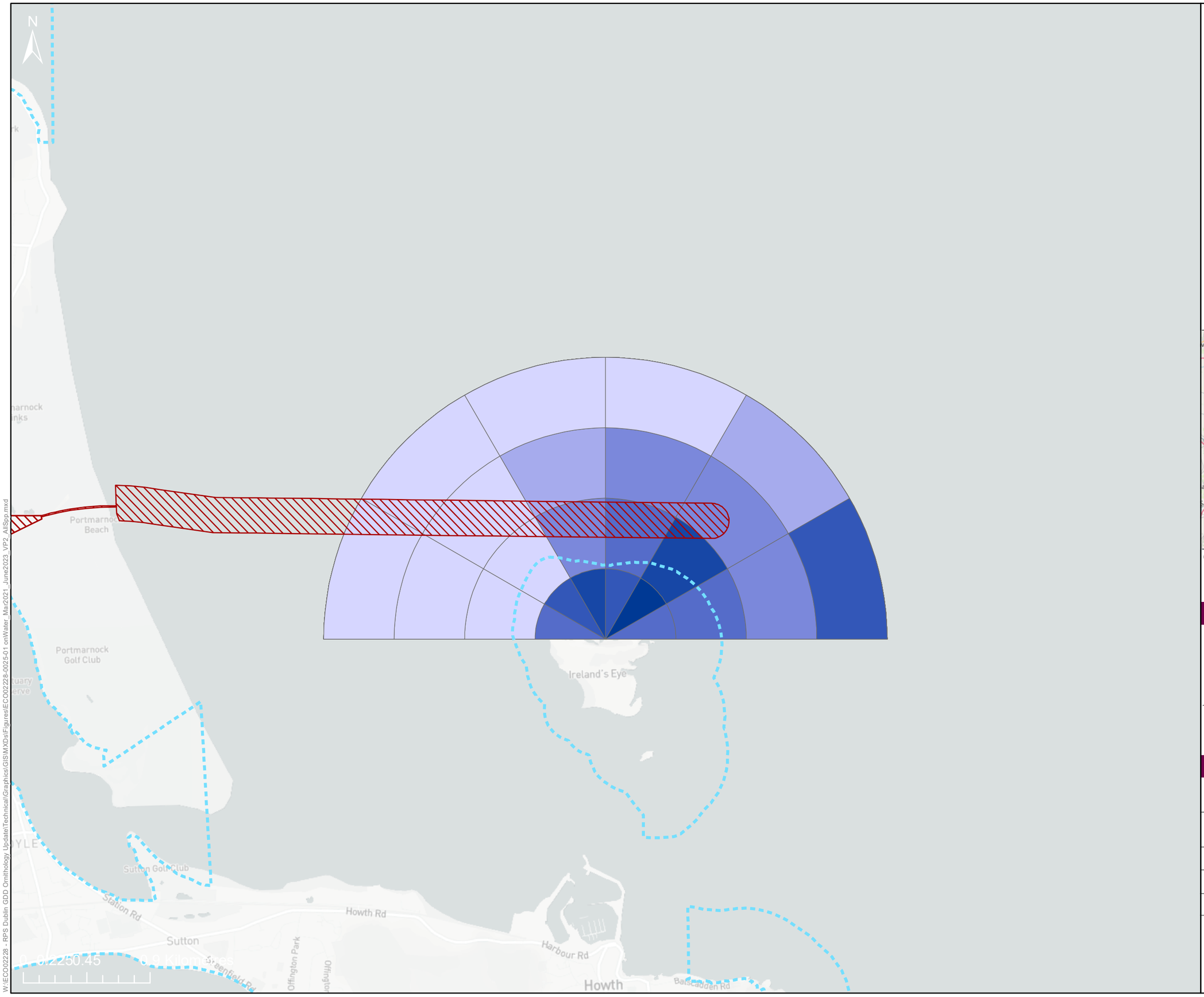
Issue Details

File Identifier:
ECO02228-0025-01

Status:	**Rev:**	**Model File Identifier:**
S0	P01	
Drawn: KAG		**Date:** 12/07/2023
Checked: KT		**Scale:** 1:25,000 @A3
Approved: KT		**Projection:** ITM

NOTE:

1. This drawing is the property of RPS Group Ltd. It is a confidential document and must not be copied, used, or its contents divulged without prior written consent.
2. Ordnance Survey Ireland Licence CYAL50252391 © Ordnance Survey Ireland/Government of Ireland.



W:\ECO02228 - RPS Dublin GDD Ornithology Update\Technical\Graphics\GIS\MXDs\Figures\ECO02228-0025-01 onWater_Mar2021_June2023_VP2_AllSpp.mxd

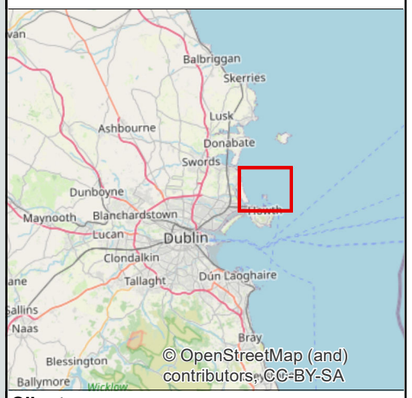
Legend

- Boundary
- SPA boundaries

Index of abundance

Guillemot - all behaviours

- 1 - 125
- 126 - 250
- 251 - 375
- 376 - 500
- 501 - 625
- 626 - 750
- 751 - 875



Client

Uisce Éireann

Greater Dublin Drainage Project

Title

Figure A10.80 Distribution of all on sea Guillemot records from Ireland's Eye VP during August 2020 - June 2023

Atholl Exchange
6 Canning Street,
Edinburgh,
United Kingdom

T +44(0)131 555 5011
E rpsed2@rpsgroup.com
W rpsgroup.com

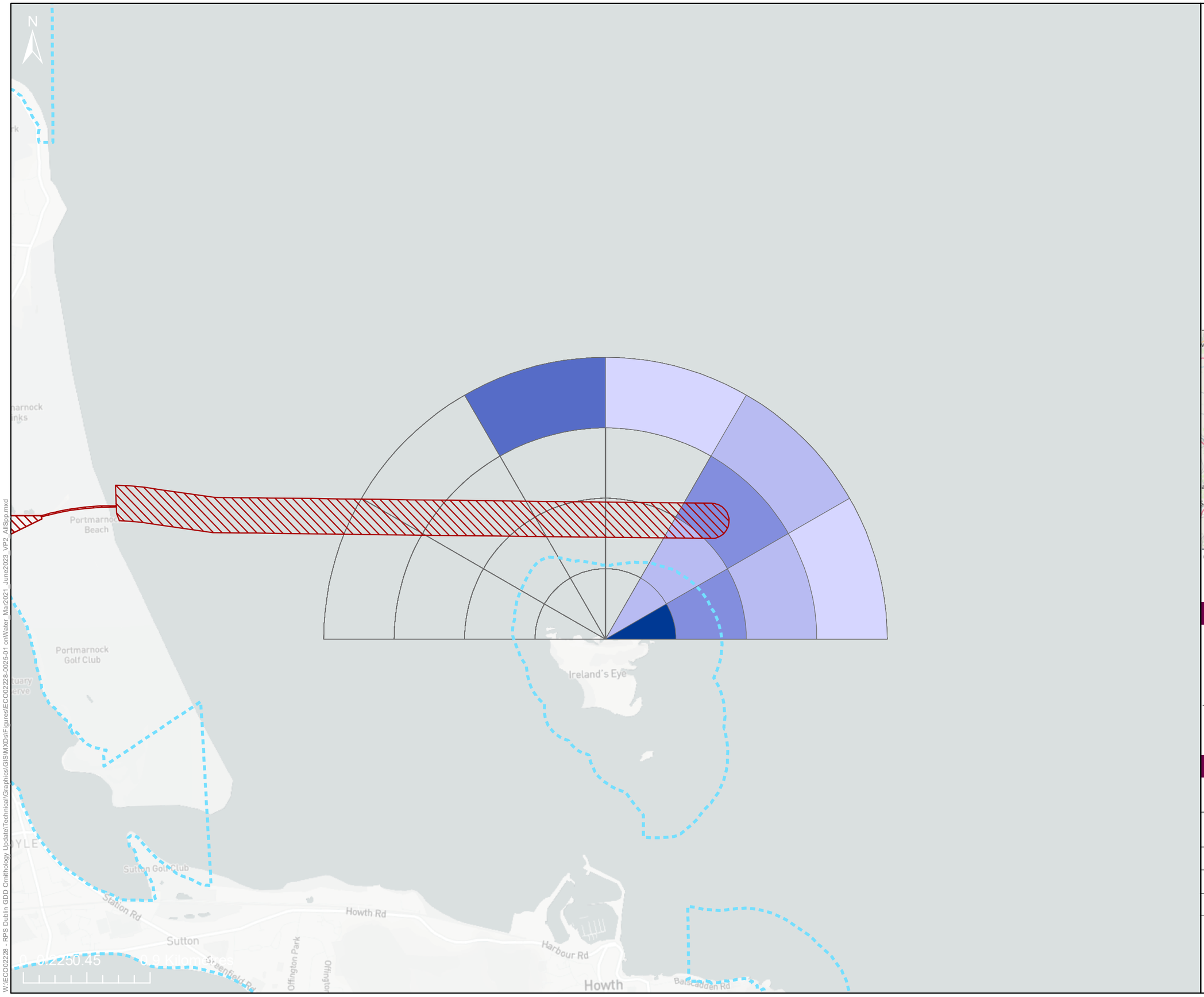
Issue Details

File Identifier:
ECO02228-0025-01

Status:	Rev:	Model File Identifier:
S0	P01	
Drawn: KAG		**Date:** 12/07/2023
Checked: KT		**Scale:** 1:25,000 @A3
Approved: KT		**Projection:** ITM

NOTE:

1. This drawing is the property of RPS Group Ltd. It is a confidential document and must not be copied, used, or its contents divulged without prior written consent.
2. Ordnance Survey Ireland Licence CYAL50252391 © Ordnance Survey Ireland/Government of Ireland.



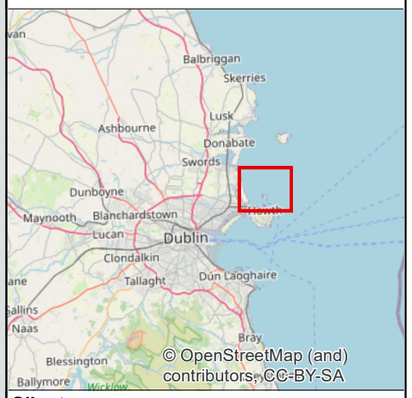
Legend

- Boundary
- SPA boundaries

Index of abundance

Guillemot/Razorbill - all behaviours

- 25 - 50
- 51 - 100
- 151 - 200
- 251 - 300
- 501 - 550



Client

Uisce Éireann

Greater Dublin Drainage Project

Title

Figure A10.81 Distribution of all on sea Guillemot/Razorbill records from Ireland's Eye VP during August 2020 - June 2023

Atholl Exchange
6 Canning Street,
Edinburgh,
United Kingdom

T +44(0)131 555 5011
E rpsed2@rpsgroup.com
W rpsgroup.com

Issue Details

File Identifier:
ECO02228-0025-01

Status:	Rev:	Model File Identifier:
S0	P01	
Drawn: KAG		**Date:** 12/07/2023
Checked: KT		**Scale:** 1:25,000 @A3
Approved: KT		**Projection:** ITM

NOTE:

1. This drawing is the property of RPS Group Ltd. It is a confidential document and must not be copied, used, or its contents divulged without prior written consent.
2. Ordnance Survey Ireland Licence CYAL50252391 © Ordnance Survey Ireland/Government of Ireland.

N

Portmarnock Beach

Portmarnock Golf Club

Ireland's Eye

Sutton Golf Club

Sutton Rd

Howth Rd

Sutton

Harbour Rd

Howth

Baileadden Rd

Offington Park

0 0.2 0.45 0.9 Kilometres

W:\ECO02228 - RPS Dublin GDD Ornithology Update\Technical\Graphics\GIS\MXDs\Figures\ECO02228-0025-01 onWater_Mar2021_June2023_VP2_AllSpp.mxd

Legend

- Boundary
- SPA boundaries

Index of abundance

Herring Gull - all behaviours

- 5 - 50
- 51 - 100
- 151 - 200
- 1751 - 1800

Client

Uisce Éireann

Greater Dublin Drainage Project

Title

Figure A10.82 Distribution of all on sea Herring Gull records from Ireland's Eye VP during August 2020 - June 2023

Atholl Exchange
6 Canning Street,
Edinburgh,
United Kingdom

T +44(0)131 555 5011
E rpsed2@rpsgroup.com
W rpsgroup.com

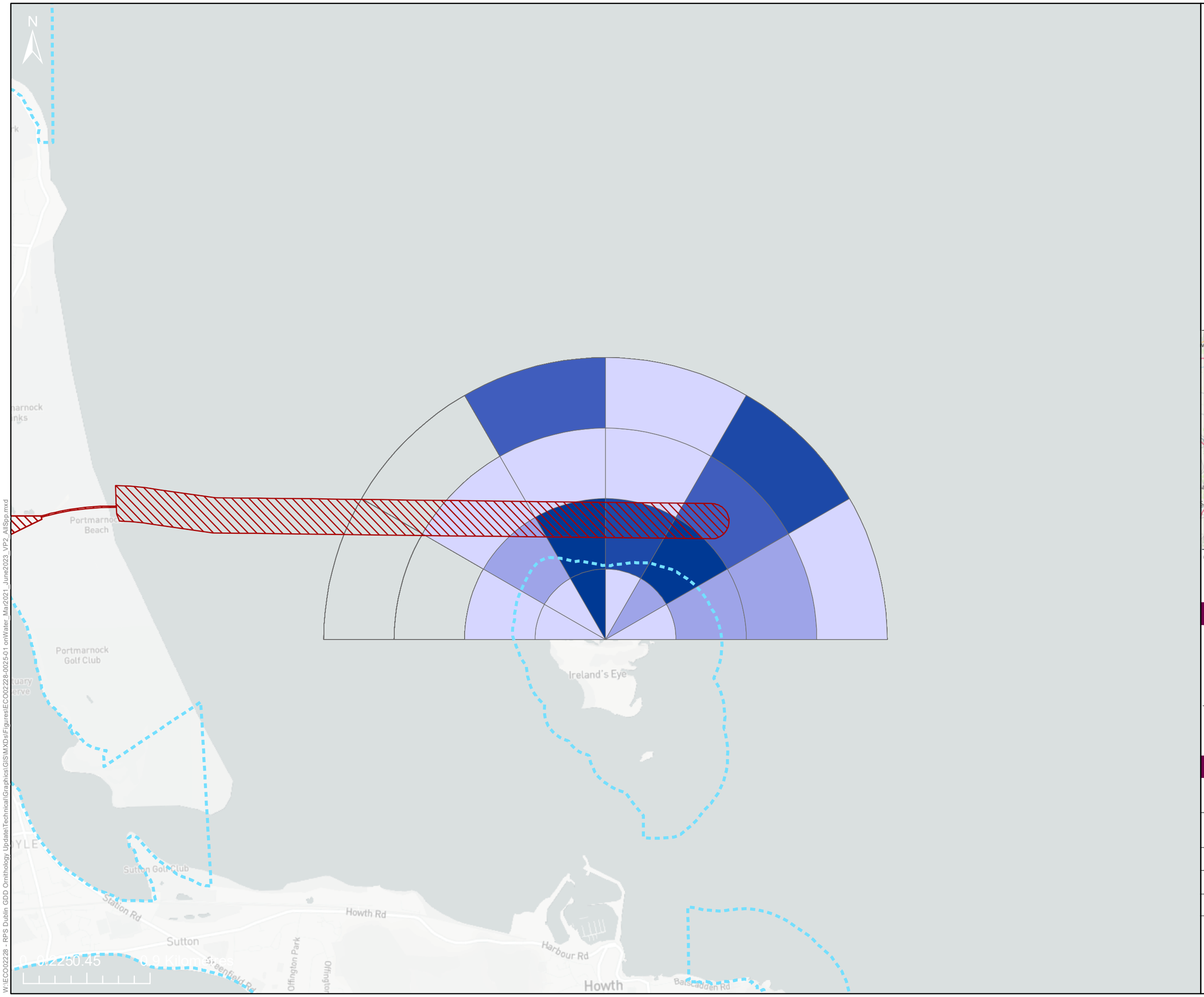
Issue Details

File Identifier:
ECO02228-0025-01

Status:	**Rev:**	**Model File Identifier:**
S0	P01	
Drawn: KAG		**Date:** 12/07/2023
Checked: KT		**Scale:** 1:25,000 @A3
Approved: KT		**Projection:** ITM

NOTE:

1. This drawing is the property of RPS Group Ltd. It is a confidential document and must not be copied, used, or its contents divulged without prior written consent.
2. Ordnance Survey Ireland Licence CYAL50252391 © Ordnance Survey Ireland/Government of Ireland.



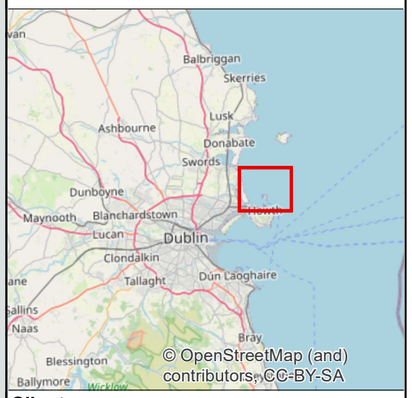
Legend

- Boundary
- SPA boundaries

Index of abundance

Kittiwake - all behaviours

- 2 - 50
- 51 - 100
- 151 - 200
- 201 - 250
- 251 - 300



Client

Uisce Éireann

Greater Dublin Drainage Project

Title

Figure A10.83 Distribution of all on sea Kittiwake records from Ireland's Eye VP during August 2020 - June 2023

Atholl Exchange
6 Canning Street,
Edinburgh,
United Kingdom

T +44(0)131 555 5011
E rpsed2@rpsgroup.com
W rpsgroup.com

Issue Details

File Identifier:
ECO02228-0025-01

Status:	**Rev:**	**Model File Identifier:**
S0	P01	
Drawn: KAG		**Date:** 12/07/2023
Checked: KT		**Scale:** 1:25,000 @A3
Approved: KT		**Projection:** ITM

NOTE:

1. This drawing is the property of RPS Group Ltd. It is a confidential document and must not be copied, used, or its contents divulged without prior written consent.
2. Ordnance Survey Ireland Licence CYAL50252391 © Ordnance Survey Ireland/Government of Ireland.

W:\ECO02228 - RPS Dublin GDD Ornithology Update\Technical\Graphics\GIS\MXDs\Figures\ECO02228-0025-01 onWater_Mar2021_June2023_VP2_AllSpp.mxd

N

Portmarnock Beach

Portmarnock Golf Club

Ireland's Eye

Sutton Golf Club

Sutton Rd

Howth Rd

Sutton

Harbour Rd

Howth

Baileadden Rd

Offington Park

0 0.2 0.45 0.9 Kilometres

W:\ECO02228 - RPS Dublin GDD Ornithology Update\Technical\Graphics\GIS\MXDs\Figures\ECO02228-0025-01 onWater_Mar2021_June2023_VP2_AllSpp.mxd

Legend

- Boundary
- SPA boundaries

Index of abundance

Puffin - all behaviours

- 1 - 10
- 11 - 20
- 21 - 30
- 31 - 40
- 51 - 60

Client

Uisce Éireann

Greater Dublin Drainage Project

Title

Figure A10.84 Distribution of all on sea Puffin records from Ireland's Eye VP during August 2020 - June 2023

Atholl Exchange
6 Canning Street,
Edinburgh,
United Kingdom

T +44(0)131 555 5011
E rpsed2@rpsgroup.com
W rpsgroup.com

Issue Details

File Identifier:
ECO02228-0025-01

Status:	**Rev:**	**Model File Identifier:**
S0	P01	
Drawn: KAG		**Date:** 12/07/2023
Checked: KT		**Scale:** 1:25,000 @A3
Approved: KT		**Projection:** ITM

NOTE:

1. This drawing is the property of RPS Group Ltd. It is a confidential document and must not be copied, used, or its contents divulged without prior written consent.
2. Ordnance Survey Ireland Licence CYAL50252391 © Ordnance Survey Ireland/Government of Ireland.

Legend

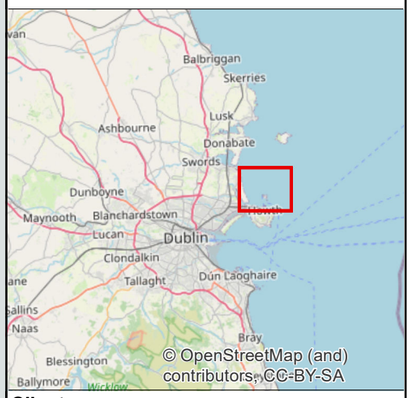
Boundary

SPA boundaries

Index of abundance

Razorbill - all behaviours

- 1 - 125
- 126 - 250
- 251 - 375
- 376 - 500
- 501 - 625
- 626 - 750



Client

Uisce Éireann

Greater Dublin Drainage Project

Title

Figure A10.85 Distribution of all on sea Razorbill records from Ireland's Eye VP during August 2020 - June 2023

Atholl Exchange
6 Canning Street,
Edinburgh,
United Kingdom

T +44(0)131 555 5011
E rpsed2@rpsgroup.com
W rpsgroup.com

Issue Details

File Identifier:
ECO02228-0025-01

Status:	**Rev:**	**Model File Identifier:**
S0	P01	
Drawn: KAG		**Date:** 12/07/2023
Checked: KT		**Scale:** 1:25,000 @A3
Approved: KT		**Projection:** ITM

NOTE:

1. This drawing is the property of RPS Group Ltd. It is a confidential document and must not be copied, used, or its contents divulged without prior written consent.
2. Ordnance Survey Ireland Licence CYAL50252391 © Ordnance Survey Ireland/Government of Ireland.

W:\ECO02228 - RPS Dublin GDD Ornithology Update\Technical\Graphics\GIS\MXDs\Figures\ECO02228-0025-01 onWater_Mar2021_June2023_VP2_AllSpp.mxd

N

Legend

Boundary

SPA boundaries

Index of abundance

Shag - all behaviours

2 - 20

21 - 40

41 - 60

421 - 440

Portmarnock Beach

Portmarnock Golf Club

Ireland's Eye

Sutton Golf Club

Station Rd

Howth Rd

Sutton

Harbour Rd

Howth

Balscadden Rd

0 0.2 0.45 0.9 Kilometres

Client

Uisce Éireann

Greater Dublin Drainage Project

Title

Figure A10.86 Distribution of all on sea Shag records from Ireland's Eye VP during August 2020 - June 2023

Atholl Exchange
6 Canning Street,
Edinburgh,
United Kingdom

T +44(0)131 555 5011
E rpsed2@rpsgroup.com
W rpsgroup.com

Issue Details

File Identifier:
ECO02228-0025-01

Status:	**Rev:**	**Model File Identifier:**
S0	P01	
Drawn: KAG		**Date:** 12/07/2023
Checked: KT		**Scale:** 1:25,000 @A3
Approved: KT		**Projection:** ITM

NOTE:

1. This drawing is the property of RPS Group Ltd. It is a confidential document and must not be copied, used, or its contents divulged without prior written consent.
2. Ordnance Survey Ireland Licence CYAL50252391 © Ordnance Survey Ireland/Government of Ireland.

W:\ECO02228 - RPS Dublin GDD Ornithology Update\Technical\Graphics\GIS\MXDs\Figures\ECO02228-0025-01 onWater_Mar2021_June2023_VP2_AllSpp.mxd

APPENDIX 2 – ESTUARINE BIRD SURVEY EFFORT AND WEATHER

Table A10.1a. Survey effort during estuarine walkover surveys

Survey date	Survey type	Surveyor	Start time	End time	Total time
17/09/20	Estuarine survey	Nick Veale	09:30	15:30	06:00
28/09/20	Estuarine survey	Nick Veale	09:05	15:05	06:00
13/10/20	Estuarine survey	Nick Veale	11:00	16:45	05:45
20/10/20	Estuarine survey	Nick Veale	09:30	15:30	06:00
02/11/20	Estuarine survey	Nick Veale	10:15	15:15	05:00
11/11/20	Estuarine survey	Nick Veale	11:50	15:05	03:15
07/12/20	Estuarine survey	Nick Veale	09:15	14:15	05:00
16/12/20	Estuarine survey	Nick Veale	11:15	14:40	03:25
14/01/21	Estuarine survey	Nick Veale	10:45	14:10	03:25
16/0121	Estuarine survey	Nick Veale	08:00	11:50	03:50
10/02/21	Estuarine survey	Nick Veale	09:30	13:40	04:10
15/02/21	Estuarine survey	Nick Veale	07:15	11:20	04:05
02/03/21	Estuarine survey	Nick Veale	10:00	14:15	04:15
22/03/21	Estuarine survey	Nick Veale	10:10	14:00	03:50
01/04/21	Estuarine survey	Nick Veale	08:05	12:15	04:10
12/04/21	Estuarine survey	Nick Veale	11:30	15:05	03:35
04/05/21	Estuarine survey	Nick Veale	11:00	13:45	02:45
19/05/21	Estuarine survey	Nick Veale	05:05	08:20	03:15
07/06/21	Estuarine survey	Nick Veale	09:10	12:15	03:05
24/06/21	Estuarine survey	Nick Veale	04:40	08:15	03:35
01/07/21	Estuarine survey	Nick Veale	04:40	08:50	04:10
14/07/21	Estuarine survey	Nick Veale	08:05	12:05	04:00
02/08/21	Estuarine survey	Nick Veale	06:05	10:05	04:00
09/08/21	Estuarine survey	Nick Veale	06:00	09:45	03:45
25/11/21	Estuarine survey Portmarnock project	Cian Cardiff	15:00	18:00	03:00
29/11/21	Estuarine survey Portmarnock project	Cian Cardiff	12:45	15:45	03:00
06/12/21	Estuarine survey Portmarnock project	Cian Cardiff	12:15	15:15	03:00
09/12/21	Estuarine survey Portmarnock project	Cian Cardiff	08:30	11:30	03:00
04/01/22	Estuarine survey Portmarnock project	Cian Cardiff	12:15	15:15	03:00
14/01/22	Estuarine survey Portmarnock project	Cian Cardiff	15:20	18:20	03:00
03/02/22	Estuarine survey Portmarnock project	Cian Cardiff	12:45	15:45	03:00
28/02/22	Estuarine survey Portmarnock project	Cian Cardiff	15:30	18:30	03:00
25/03/22	Estuarine survey Portmarnock project	Cian Cardiff	10:20	13:20	03:00

Survey date	Survey type	Surveyor	Start time	End time	Total time
31/03/22	Estuarine survey Portmarnock project	Cian Cardiff	12:00	15:00	03:00
20/10/22	Estuarine survey	Lorna Gill	12:18	18:18	06:00
22/10/22	Estuarine survey	Lorna Gill	08:03	14:03	06:00
23/11/22	Estuarine survey	Lorna Gill	08:00	14:00	06:00
28/11/22	Estuarine survey	Lorna Gill	12:00	15:00	03:00
30/11/22	Estuarine survey	Lorna Gill	08:14	14:14	06:00
13/12/22	Estuarine survey	Conor Maloney	13:06	16:06	03:00
15/12/22	Estuarine survey	Lorna Gill	08:30	14:30	06:00
19/12/22	Estuarine survey	Lorna Gill	08:36	14:36	06:00
11/01/23	Estuarine survey	Lorna Gill	10:29	16:29	06:00
18/01/23	Estuarine survey	Lorna Gill	09:47	15:47	06:00
16/02/23	Estuarine survey	Lorna Gill	10:26	16:26	06:00
22/02/23	Estuarine survey	Lorna Gill	09:46	15:46	06:00
21/03/23	Estuarine survey	Emma Ní Dhonnchadha	06:30	12:30	06:00
30/03/23	Estuarine survey	Emma Ní Dhonnchadha	10:08	16:08	06:00
04/04/23	Estuarine survey	Conor Maloney	07:26	13:26	06:00
26/04/23	Estuarine survey	William Lishman	07:30	13:30	06:00
11/05/23	Estuarine survey	Lorna Gill	07:06	13:06	06:00
25/05/23	Estuarine survey	Lorna Gill	11:59	17:59	06:00
23/06/23	Estuarine survey	Lorna Gill	12:55	18:55	06:00
26/06/23	Estuarine survey	Lorna Gill	09:58	15:58	06:00

Table A10.1b. Weather during estuarine walkover surveys

Survey date	Survey type	Surveyor	Start time	End time	Wind speed	Wind direction	Rain	Cloud cover	Cloud height	Visibility	Frost	Snow	Tidal cycle	Glare	Sea state	Swell height	Notes
17/09/20	Estuarine survey	Nick Veale	09:30	15:30	1	NE	0	1	2	4	0	0	L-M	-	-	-	New construction south of station road on maps 4-8. New greenway right through maps 5,9+14. (No physical access to either golf course by Erivia - gates shut.
17/09/20	Estuarine survey	Nick Veale	09:30	15:30	2	NE	0	2	2	4	0	0	M-H	-	-	-	-
17/09/20	Estuarine survey	Nick Veale	09:30	15:30	1	Various	0	2	2	4	0	0	M-H	-	-	-	-
17/09/20	Estuarine survey	Nick Veale	09:30	15:30	1	Various	0	2	2	4	0	0	H	-	-	-	-
17/09/20	Estuarine survey	Nick Veale	09:30	15:30	2	SE	0	2	2	4	0	0	H-M	-	-	-	-
17/09/20	Estuarine survey	Nick Veale	09:30	15:30	2	E	0	1	2	4	0	0	H-M	-	-	-	-
28/09/20	Estuarine survey	Nick Veale	09:05	15:05	1	SW	1	8	1	3	0	0	M-H	-	-	-	Drizzle all day.
28/09/20	Estuarine survey	Nick Veale	09:05	15:05	1	SW	1	8	1	3	0	0	M-H	-	-	-	-
28/09/20	Estuarine survey	Nick Veale	09:05	15:05	1	SW	1	8	1	3	0	0	H	-	-	-	-
28/09/20	Estuarine survey	Nick Veale	09:05	15:05	2	W	1	8	1	4	0	0	H-M	-	-	-	-
28/09/20	Estuarine survey	Nick Veale	09:05	15:05	2	W	0	8	1	4	0	0	H-M	-	-	-	-
28/09/20	Estuarine survey	Nick Veale	09:05	15:05	2	W	1	8	1	4	0	0	M	-	-	-	-
13/10/20	Estuarine survey	Nick Veale	11:00	16:45	3	NW	0	7	1	4	0	0	H-M	-	-	-	-
13/10/20	Estuarine survey	Nick Veale	11:00	16:45	4	N	2	7	1	4	0	0	M-L	-	-	-	-
13/10/20	Estuarine survey	Nick Veale	11:00	16:45	4	N	2	7	1	4	0	0	M-L	-	-	-	-
13/10/20	Estuarine survey	Nick Veale	11:00	16:45	3	N	0	6	1	4	0	0	M-L	-	-	-	-

APPENDIX A

Survey date	Survey type	Surveyor	Start time	End time	Wind speed	Wind direction	Rain	Cloud cover	Cloud height	Visibility	Frost	Snow	Tidal cycle	Glare	Sea state	Swell height	Notes
13/10/20	Estuarine survey	Nick Veale	11:00	16:45	4	NE	0	6	1	4	0	0	L	-	-	-	-
13/10/20	Estuarine survey	Nick Veale	11:00	16:45	3	NE	0	6	1	4	0	0	L	-	-	-	Hundreds of people on greenway and beach. High tide at 09:37. Low tide at 15:20.
20/10/20	Estuarine survey	Nick Veale	09:30	15:30	4	SE	2	8	1	3	0	0	L-M	-	-	-	-
20/10/20	Estuarine survey	Nick Veale	09:30	15:30	4	S	0	8	1	3	0	0	L-M	-	-	-	-
20/10/20	Estuarine survey	Nick Veale	09:30	15:30	4	S	0	7	1	3	0	0	M	-	-	-	-
20/10/20	Estuarine survey	Nick Veale	09:30	15:30	4	S	1	8	1	3	0	0	M-H	-	-	-	-
20/10/20	Estuarine survey	Nick Veale	09:30	15:30	4	S	1	8	1	3	0	0	M-H	-	-	-	-
20/10/20	Estuarine survey	Nick Veale	09:30	15:30	3	S	0	7	1	3	0	0	H	-	-	-	High tide at 14:32 - 4.12m.
02/11/20	Estuarine survey	Nick Veale	10:15	15:15	2	SW	0	6	1	2	0	0	M-H	-	-	-	-
02/11/20	Estuarine survey	Nick Veale	10:15	15:15	2	SW	0	6	1	2	0	0	M-H	-	-	-	High tide at 12:14
02/11/20	Estuarine survey	Nick Veale	10:15	15:15	2	SW	0	8	1	2	0	0	H	-	-	-	-
02/11/20	Estuarine survey	Nick Veale	10:15	15:15	3	SW	0	8	1	2	0	0	H-M	-	-	-	-
02/11/20	Estuarine survey	Nick Veale	10:15	15:15	2	SW	1	8	1	2	0	0	H-M	-	-	-	-
11/11/20	Estuarine survey	Nick Veale	11:50	15:05	2	SE	0	7	2	2	0	0	M-L	-	-	-	-
11/11/20	Estuarine survey	Nick Veale	11:50	15:05	3	SE	1	8	2	2	0	0	L	-	-	-	-
11/11/20	Estuarine survey	Nick Veale	11:50	15:05	2	SE	0	6	0	2	0	0	L-M	-	-	-	-
11/11/20	Estuarine survey	Nick Veale	11:50	15:05	3	SE	2	8	0	2	0	0	L-M	-	-	-	Low tide at 13:49
07/12/20	Estuarine survey	Nick Veale	09:15	14:15	1	NW	0	3	2	2	0	0	L	-	-	-	-

APPENDIX A

Survey date	Survey type	Surveyor	Start time	End time	Wind speed	Wind direction	Rain	Cloud cover	Cloud height	Visibility	Frost	Snow	Tidal cycle	Glare	Sea state	Swell height	Notes
07/12/20	Estuarine survey	Nick Veale	09:15	14:15	1	NW	0	3	2	2	0	0	L-M	-	-	-	Low tide at 09:46 / 1.30m neap
07/12/20	Estuarine survey	Nick Veale	09:15	14:15	1	NW	0	2	2	2	0	0	L-M	-	-	-	-
07/12/20	Estuarine survey	Nick Veale	09:15	14:15	2	NW	0	4	2	2	0	0	M	-	-	-	-
07/12/20	Estuarine survey	Nick Veale	09:15	14:15	1	NW	0	2	2	2	0	0	M-H	-	-	-	-
16/12/20	Estuarine survey	Nick Veale	11:15	14:40	3	SW	2	8	1	2	0	0	M-H	-	-	-	-
16/12/20	Estuarine survey	Nick Veale	11:15	14:40	3	SW	0	6	1	2	0	0	H	-	-	-	4.27m spring
16/12/20	Estuarine survey	Nick Veale	11:15	14:40	3	SW	2	8	1	2	0	0	H-M	-	-	-	-
16/12/20	Estuarine survey	Nick Veale	11:15	14:40	3	SW	0	8	1	2	0	0	H-M	-	-	-	High tide at 12:16
14/01/21	Estuarine survey	Nick Veale	10:45	14:10	2	NW	0	1	2	2	0	0	M-H	-	-	-	-
14/01/21	Estuarine survey	Nick Veale	10:45	14:10	3	NW	0	3	2	2	0	0	H	-	-	-	-
14/01/21	Estuarine survey	Nick Veale	10:45	14:10	3	NW	0	1	2	2	0	0	H-M	-	-	-	-
14/01/21	Estuarine survey	Nick Veale	10:45	14:10	3	NW	0	1	2	2	0	0	H-M	-	-	-	High tide at 12:06
16/01/21	Estuarine survey	Nick Veale	08:00	11:50	3	SW	0	6	1	2	0	0	L-M	-	-	-	-
16/01/21	Estuarine survey	Nick Veale	08:00	11:50	3	SW	0	6	1	2	0	0	L-M	-	-	-	-
16/01/21	Estuarine survey	Nick Veale	08:00	11:50	3	W	0	5	1	2	0	0	M	-	-	-	-
16/01/21	Estuarine survey	Nick Veale	08:00	11:50	4	W	0	7	1	2	0	0	M-H	-	-	-	-
10/02/21	Estuarine survey	Nick Veale	09:30	13:40	3	NE	0	5	1	2	0	0	H	-	-	-	-
10/02/21	Estuarine survey	Nick Veale	09:30	13:40	2	NE	2	6	1	2	0	0	H-M	-	-	-	-
10/02/21	Estuarine survey	Nick Veale	09:30	13:40	2	NE	2	6	1	2	0	0	H-M	-	-	-	Light snow flurries. Temperature 1°C all morning.

APPENDIX A

Survey date	Survey type	Surveyor	Start time	End time	Wind speed	Wind direction	Rain	Cloud cover	Cloud height	Visibility	Frost	Snow	Tidal cycle	Glare	Sea state	Swell height	Notes
10/02/21	Estuarine survey	Nick Veale	09:30	13:40	3	NE	2	7	1	2	0	0	H-M	-	-	-	-
15/02/21	Estuarine survey	Nick Veale	07:15	11:20	1	180	0	5	1	2	0	0	L	-	-	-	9-12°C.
15/02/21	Estuarine survey	Nick Veale	07:15	11:20	3	S	0	7	1	2	0	0	L-M	-	-	-	-
15/02/21	Estuarine survey	Nick Veale	07:15	11:20	3	SW	0	7	1	2	0	0	L-M	-	-	-	-
15/02/21	Estuarine survey	Nick Veale	07:15	11:20	2	SW	0	6	1	2	0	0	M	-	-	-	-
15/02/21	Estuarine survey	Nick Veale	07:15	11:20	2	SW	1	6	1	2	0	0	M-H	-	-	-	-
02/03/21	Estuarine survey	Nick Veale	10:00	14:15	0	Various	0	3	2	2	0	0	M	-	-	-	0°C at 10:00. Wind direction varying in HR1.
02/03/21	Estuarine survey	Nick Veale	10:00	14:15	2	E	0	6	2	2	0	0	M-H	-	-	-	-
02/03/21	Estuarine survey	Nick Veale	10:00	14:15	1	NE	0	4	2	2	0	0	M-H	-	-	-	-
02/03/21	Estuarine survey	Nick Veale	10:00	14:15	1	NE	0	4	2	2	0	0	H	-	-	-	-
02/03/21	Estuarine survey	Nick Veale	10:00	14:15	1	NE	0	4	2	2	0	0	H	-	-	-	-
22/03/21	Estuarine survey	Nick Veale	10:10	14:00	2	SW	0	8	1	2	0	0	M-L	-	-	-	-
22/03/21	Estuarine survey	Nick Veale	10:10	14:00	1	SW	0	7	1	2	0	0	L	-	-	-	-
22/03/21	Estuarine survey	Nick Veale	10:10	14:00	1	W	0	5	1	2	0	0	L	-	-	-	Low tide at 11:41. 1.33m (neap).
22/03/21	Estuarine survey	Nick Veale	10:10	14:00	2	W	0	8	1	2	0	0	L-M	-	-	-	-
01/04/21	Estuarine survey	Nick Veale	08:05	12:15	3	NE	0	6	2	2	0	0	L	-	-	-	-
01/04/21	Estuarine survey	Nick Veale	08:05	12:15	3	NE	0	5	2	2	0	0	L-M	-	-	-	-
01/04/21	Estuarine survey	Nick Veale	08:05	12:15	4	NE	0	6	2	2	0	0	L-M	-	-	-	-
01/04/21	Estuarine survey	Nick Veale	08:05	12:15	3	NE	0	5	2	2	0	0	M	-	-	-	Cool 8°C all morning.

APPENDIX A

Survey date	Survey type	Surveyor	Start time	End time	Wind speed	Wind direction	Rain	Cloud cover	Cloud height	Visibility	Frost	Snow	Tidal cycle	Glare	Sea state	Swell height	Notes
01/04/21	Estuarine survey	Nick Veale	08:05	12:15	4	E	0	5	2	2	0	0	M-H	-	-	-	-
12/04/21	Estuarine survey	Nick Veale	11:30	15:05	2	NW	2	7	1	2	0	0	M-H	-	-	-	-
12/04/21	Estuarine survey	Nick Veale	11:30	15:05	2	NW	0	6	1	2	0	0	H	-	-	-	-
12/04/21	Estuarine survey	Nick Veale	11:30	15:05	2	W	0	6	1	2	0	0	H-M	-	-	-	-
12/04/21	Estuarine survey	Nick Veale	11:30	15:05	2	NW	1	6	1	2	0	0	H-M	-	-	-	Cold 5-8°C. Very quiet.
04/05/21	Estuarine survey	Nick Veale	11:00	13:45	2	SW	0	4	2	2	0	0	M-L	-	-	-	15-17°C. Very quiet.
04/05/21	Estuarine survey	Nick Veale	11:0	13:45	3	SW	0	3	2	2	0	0	L	-	-	-	-
04/05/21	Estuarine survey	Nick Veale	11:00	13:45	3	SW	0	4	2	2	0	0	L-M	-	-	-	-
19/05/21	Estuarine survey	Nick Veale	05:05	08:20	2	W	0	1	2	2	0	0	H	-	-	-	-
19/05/21	Estuarine survey	Nick Veale	05:05	08:20	2	SW	0	1	2	2	0	0	H-M	-	-	-	-
19/05/21	Estuarine survey	Nick Veale	05:05	08:20	2	SW	0	1	2	2	0	0	H-M	-	-	-	-
19/05/21	Estuarine survey	Nick Veale	05:05	08:20	2	W	0	0	0	2	0	0	M	-	-	-	FAIR 14°C at dawn. Site very quiet - not much around.
07/06/21	Estuarine survey	Nick Veale	09:10	12:15	1	NW	0	2	2	2	0	0	M-H	-	-	-	-
07/06/21	Estuarine survey	Nick Veale	09:10	12:15	1	NW	0	2	2	2	0	0	H	-	-	-	-
07/06/21	Estuarine survey	Nick Veale	09:10	12:15	1	W	0	1	2	2	0	0	H-M	-	-	-	-
07/06/21	Estuarine survey	Nick Veale	09:10	12:15	1	W	0	1	2	2	0	0	H-M	-	-	-	Quiet.
24/06/21	Estuarine survey	Nick Veale	04:40	08:15	3	SW	0	5	2	2	0	0	L	-	-	-	-
24/06/21	Estuarine survey	Nick Veale	04:40	08:15	2	SW	0	4	2	2	0	0	L-M	-	-	-	Low-tide at 05:13 - 0.45m. Sunrise at 04:56.
24/06/21	Estuarine survey	Nick Veale	04:40	08:15	3	SW	0	5	2	2	0	0	L-M	-	-	-	-

APPENDIX A

Survey date	Survey type	Surveyor	Start time	End time	Wind speed	Wind direction	Rain	Cloud cover	Cloud height	Visibility	Frost	Snow	Tidal cycle	Glare	Sea state	Swell height	Notes
24/06/21	Estuarine survey	Nick Veale	04:40	08:15	3	SW	0	7	2	2	0	0	L-M	-	-	-	-
01/07/21	Estuarine survey	Nick Veale	04:40	08:50	0	None	0	1	2	1	0	0	M-H	-	-	-	-
01/07/21	Estuarine survey	Nick Veale	04:40	08:50	1	Various	0	1	2	2	0	0	H	-	-	-	-
01/07/21	Estuarine survey	Nick Veale	04:40	08:50	1	Various	0	2	2	2	0	0	H-M	-	-	-	-
01/07/21	Estuarine survey	Nick Veale	04:40	08:50	0	None	0	1	2	1	0	0	H-M	-	-	-	High-tide at 05:09 - 3.79m. Sunrise at 05:01. Wind direction varying HRS 3/4.
01/07/21	Estuarine survey	Nick Veale	04:40	08:50	1	E	0	1	2	2	0	0	M	-	-	-	-
14/07/21	Estuarine survey	Nick Veale	08:05	12:05	2	SW	0	3	2	2	0	0	M-L	-	-	-	-
14/07/21	Estuarine survey	Nick Veale	08:05	12:05	1	W	0	1	2	2	0	0	L	-	-	-	-
14/07/21	Estuarine survey	Nick Veale	08:05	12:05	1	W	0	0	0	2	0	0	L-M	-	-	-	Fair weather, 19°C at 08:00. Low-tide at 08:54 - 0.57m (neap).
14/07/21	Estuarine survey	Nick Veale	08:05	12:05	1	W	0	0	0	2	0	0	L-M	-	-	-	-
02/08/21	Estuarine survey	Nick Veale	06:05	10:05	1	W	0	2	2	2	0	0	M-L	-	-	-	-
02/08/21	Estuarine survey	Nick Veale	06:05	10:05	1	W	0	3	2	2	0	0	L	-	-	-	-
02/08/21	Estuarine survey	Nick Veale	06:05	10:05	1	NW	0	3	2	2	0	0	L-M	-	-	-	-
02/08/21	Estuarine survey	Nick Veale	06:05	10:05	1	NW	0	4	2	2	0	0	L-M	-	-	-	-
09/08/21	Estuarine survey	Nick Veale	06:00	09:45	2	SW	0	7	1	2	0	0	M-L	-	-	-	15-17°C. Light showers.
09/08/21	Estuarine survey	Nick Veale	06:00	09:45	2	SW	0	6	1	2	0	0	L	-	-	-	-
09/08/21	Estuarine survey	Nick Veale	06:00	09:45	2	SW	2	7	1	2	0	0	L-M	-	-	-	-
09/08/21	Estuarine survey	Nick Veale	06:00	09:45	2	SW	2	7	1	2	0	0	L-M	-	-	-	-

APPENDIX A

Survey date	Survey type	Surveyor	Start time	End time	Wind speed	Wind direction	Rain	Cloud cover	Cloud height	Visibility	Frost	Snow	Tidal cycle	Glare	Sea state	Swell height	Notes
25/11/21	Estuarine survey – Portmarnock project	Cian Cardiff	15:00	18:00	3	315	0	6	-	3	0	0	H-M	-	-	-	6°C
29/11/21	Estuarine survey – Portmarnock project	Cian Cardiff	12:45	15:45	4	N	0	6	-	3	0	0	M-L	-	-	-	9°C
06/12/21	Estuarine survey – Portmarnock project	Cian Cardiff	12:15	15:15	2	W	0	6	-	3	0	0	H-M	-	-	-	3°C
09/12/21	Estuarine survey – Portmarnock project	Cian Cardiff	08:30	11:30	4	W	2	7	-	3	0	0	M-L	-	-	-	9°C
04/01/22	Estuarine survey – Portmarnock project	Cian Cardiff	12:15	15:15	4	NW	0	4	-	2	0	0	H-M	-	-	-	6°C
14/01/22	Estuarine survey – Portmarnock project	Cian Cardiff	15:20	18:20	3	E	0	6	-	4	0	0	M-L	-	-	-	10°C
03/02/22	Estuarine survey – Portmarnock project	Cian Cardiff	12:45	15:45	4	SW	0	6	-	4	0	0	H-M	-	-	-	9°C
28/02/22	Estuarine survey – Portmarnock project	Cian Cardiff	15:30	18:30	4	SW	0	4	-	4	0	0	M-L	-	-	-	9°C
25/03/22	Estuarine survey – Portmarnock project	Cian Cardiff	10:20	13:20	2	E	0	4	-	3	0	0	M-L	-	-	-	Heat haze. 13°C
31/03/22	Estuarine survey – Portmarnock project	Cian Cardiff	12:00	15:00	4	NE	0	3	-	4	0	0	H-M	-	-	-	7°C
20/10/22	Estuarine survey	Lorna Gill	12:18	18:18	3	SE	0	7	-	3	0	0	H-L	-	-	-	-

APPENDIX A

Survey date	Survey type	Surveyor	Start time	End time	Wind speed	Wind direction	Rain	Cloud cover	Cloud height	Visibility	Frost	Snow	Tidal cycle	Glare	Sea state	Swell height	Notes
20/10/22	Estuarine survey	Lorna Gill	12:18	18:18	3	SE	0	3	-	3	0	0	L	-	-	-	Low tide 13:30
20/10/22	Estuarine survey	Lorna Gill	12:18	18:18	3	SE	0	7	-	3	0	0	L-H	-	-	-	-
20/10/22	Estuarine survey	Lorna Gill	12:18	18:18	3	SE	0	7	-	3	0	0	L-H	-	-	-	-
20/10/22	Estuarine survey	Lorna Gill	12:18	18:18	3	SE	0	5	-	3	0	0	L-H	-	-	-	-
20/10/22	Estuarine survey	Lorna Gill	12:18	18:18	3	SE	0	3	-	3	0	0	L-H	-	-	-	-
22/10/22	Estuarine survey	Lorna Gill	08:03	14:03	3	S	0	2	-	4	0	0	L-H	-	-	-	-
22/10/22	Estuarine survey	Lorna Gill	08:03	14:03	3	S	0	2	-	4	0	0	L-H	-	-	-	-
22/10/22	Estuarine survey	Lorna Gill	08:03	14:03	3	S	0	1	-	4	0	0	H	-	-	-	-
22/10/22	Estuarine survey	Lorna Gill	08:03	14:03	4	SW	0	1	-	4	0	0	H-L	-	-	-	-
22/10/22	Estuarine survey	Lorna Gill	08:03	14:03	4	SW	0	2	-	4	0	0	H-L	-	-	-	-
22/10/22	Estuarine survey	Lorna Gill	08:03	14:03	4	SW	0	1	-	4	0	0	H-L	-	-	-	-
23/11/22	Estuarine survey	Lorna Gill	08:00	14:00	4	SW	0	33	-	3	0	0	M-H	-	-	-	-
23/11/22	Estuarine survey	Lorna Gill	08:00	14:00	4	SW	0	3	-	3	0	0	M-H	-	-	-	-
23/11/22	Estuarine survey	Lorna Gill	08:00	14:00	4	SW	0	2	-	3	0	0	H	-	-	-	-
23/11/22	Estuarine survey	Lorna Gill	08:00	14:00	4	SW	0	1	-	3	0	0	H-M	-	-	-	HT 10:35
23/11/22	Estuarine survey	Lorna Gill	08:00	14:00	4	SW	0	1	-	3	0	0	H-M	-	-	-	-
23/11/22	Estuarine survey	Lorna Gill	08:00	14:00	4	SW	0	1	-	3	0	0	M	-	-	-	-
28/11/22	Estuarine survey	Lorna Gill	12:00	15:00	3	NW	0	8	-	4	0	0	M-H	-	-	-	-
28/11/22	Estuarine survey	Lorna Gill	12:00	15:00	4	NW	0	6	-	4	0	0	H	-	-	-	-

APPENDIX A

Survey date	Survey type	Surveyor	Start time	End time	Wind speed	Wind direction	Rain	Cloud cover	Cloud height	Visibility	Frost	Snow	Tidal cycle	Glare	Sea state	Swell height	Notes
28/11/22	Estuarine survey	Lorna Gill	12:00	15:00	3	NW	0	8	-	4	0	0	M-H	-	-	-	-
28/11/22	Estuarine survey	Lorna Gill	12:00	15:00	3	NW	0	8	-	4	0	0	M-H	-	-	-	-
28/11/22	Estuarine survey	Lorna Gill	12:00	15:00	3	NW	0	8	-	4	0	0	M-H	-	-	-	-
28/11/22	Estuarine survey	Lorna Gill	12:00	15:00	4	NW	0	7	-	4	0	0	H	-	-	-	-
30/11/22	Estuarine survey	Lorna Gill	08:14	14:14	4	SE	1	7	-	3	0	0	M	-	-	-	-
30/11/22	Estuarine survey	Lorna Gill	08:14	14:14	4	SE	1	8	-	3	0	0	M-L	-	-	-	-
30/11/22	Estuarine survey	Lorna Gill	08:14	14:14	3	SE	1	8	-	3	0	0	M-L	-	-	-	-
30/11/22	Estuarine survey	Lorna Gill	08:14	14:14	3	SE	1	7	-	3	0	0	M	-	-	-	-
30/11/22	Estuarine survey	Lorna Gill	08:14	14:14	3	SE	1	1	-	3	0	0	L-M	-	-	-	-
30/11/22	Estuarine survey	Lorna Gill	08:14	14:14	3	SE	1	7	-	3	0	0	M	-	-	-	LT 09:54
13/12/22	Estuarine survey	Conor Maloney	13:06	16:06	2	SW	1	8	0	5	0	3	M-H	-	-	-	-
13/12/22	Estuarine survey	Conor Maloney	13:06	16:06	1	SW	2	8	0	6	0	3	M-H	-	-	-	-
13/12/22	Estuarine survey	Conor Maloney	13:06	16:06	1	SW	1	8	0	7	0	3	H-M	-	-	-	-
13/12/22	Estuarine survey	Conor Maloney	13:06	16:06	2	SW	2	8	0	7	0	2	H-M	-	-	-	-
15/12/22	Estuarine survey	Lorna Gill	08:30	14:30	3	W	3	1	0	1	0	4	M-L	-	-	-	-
15/12/22	Estuarine survey	Lorna Gill	08:30	14:30	3	W	3	1	0	1	1	4	L	-	-	-	-
15/12/22	Estuarine survey	Lorna Gill	08:30	14:30	3	W	3	1	0	1	1	4	L-M	-	-	-	-
15/12/22	Estuarine survey	Lorna Gill	08:30	14:30	3	W	3	1	0	1	1	4	L-M	-	-	-	-

APPENDIX A

Survey date	Survey type	Surveyor	Start time	End time	Wind speed	Wind direction	Rain	Cloud cover	Cloud height	Visibility	Frost	Snow	Tidal cycle	Glare	Sea state	Swell height	Notes
15/12/22	Estuarine survey	Lorna Gill	08:30	14:30	3	W	3	1	0	1	1	4	L-M	-	-	-	-
15/12/22	Estuarine survey	Lorna Gill	08:30	14:30	3	W	3	1	0	1	1	4	L-M	-	-	-	-
19/12/22	Estuarine survey	Lorna Gill	08:36	14:36	4	S	4	6	1	6	0	2	H-M	-	-	-	-
19/12/22	Estuarine survey	Lorna Gill	08:36	14:36	5	SE	5	8	2	8	0	2	H-M	-	-	-	-
19/12/22	Estuarine survey	Lorna Gill	08:36	14:36	5	SE	5	7	3	7	0	3	H-M	-	-	-	-
19/12/22	Estuarine survey	Lorna Gill	08:36	14:36	5	SE	5	6	2	6	0	4	-	-	-	-	-
19/12/22	Estuarine survey	Lorna Gill	08:36	14:36	4	SW	4	5	1	5	0	4	-	-	-	-	-
19/12/22	Estuarine survey	Lorna Gill	08:36	14:36	4	SW	4	5	3	5	0	3	L	-	-	-	-
11/01/23	Estuarine survey	Lorna Gill	10:29	16:29	5	SW	2	8	-	3	0	0	L-M	-	-	-	-
11/01/23	Estuarine survey	Lorna Gill	10:29	16:29	5	SW	1	5	-	3	0	0	M	-	-	-	-
11/01/23	Estuarine survey	Lorna Gill	10:29	16:29	5	SW	3	7	-	3	0	0	M-H	-	-	-	-
11/01/23	Estuarine survey	Lorna Gill	10:29	16:29	5	W	1	5	-	3	0	0	M-H	-	-	-	-
11/01/23	Estuarine survey	Lorna Gill	10:29	16:29	5	SW	0	2	-	3	0	0	H	-	-	-	-
11/01/23	Estuarine survey	Lorna Gill	10:29	16:29	5	W	0	7	-	3	0	0	H-M	-	-	-	-
18/01/23	Estuarine survey	Lorna Gill	09:47	15:47	4	W	0	3	-	3	1	0	H-M	-	-	-	Constant activity from dogs and walkers on Velvet Strand. Dogs on Portmarnock side of estuary off-lead
18/01/23	Estuarine survey	Lorna Gill	09:47	15:47	4	W	0	6	-	3	1	0	M	-	-	-	-
18/01/23	Estuarine survey	Lorna Gill	09:47	15:47	4	W	0	5	-	3	0	0	M-L	-	-	-	-
18/01/23	Estuarine survey	Lorna Gill	09:47	15:47	4	NW	0	2	-	3	0	0	M-L	-	-	-	-

APPENDIX A

Survey date	Survey type	Surveyor	Start time	End time	Wind speed	Wind direction	Rain	Cloud cover	Cloud height	Visibility	Frost	Snow	Tidal cycle	Glare	Sea state	Swell height	Notes
18/01/23	Estuarine survey	Lorna Gill	09:47	15:47	4	NW	0	7	-	3	0	0	L	-	-	-	-
18/01/23	Estuarine survey	Lorna Gill	09:47	15:47	4	NW	0	4	-	3	0	0	L-M	-	-	-	-
16/02/23	Estuarine survey	Lorna Gill	10:26	16:26	3	W	0	8	-	3	0	0	M	-	-	-	-
16/02/23	Estuarine survey	Lorna Gill	10:26	16:26	4	W	0	7	-	3	0	0	M-L	-	-	-	-
16/02/23	Estuarine survey	Lorna Gill	10:26	16:26	4	W	0	4	-	3	0	0	M-L	-	-	-	-
16/02/23	Estuarine survey	Lorna Gill	10:26	16:26	4	W	0	7	-	3	0	0	L	-	-	-	-
16/02/23	Estuarine survey	Lorna Gill	10:26	16:26	3	SW	0	8	-	3	0	0	L-M	-	-	-	-
16/02/23	Estuarine survey	Lorna Gill	10:26	16:26	4	SW	0	8	-	3	0	0	L-M	-	-	-	-
22/02/23	Estuarine survey	Lorna Gill	09:46	15:46	4	NW	0	3	-	3	0	0	M	-	-	-	Constant aircraft and dogwalkers
22/02/23	Estuarine survey	Lorna Gill	09:46	15:46	4	NW	0	4	-	3	0	0	M-H	-	-	-	-
22/02/23	Estuarine survey	Lorna Gill	09:46	15:46	4	NW	0	7	-	3	0	0	M-H	-	-	-	-
22/02/23	Estuarine survey	Lorna Gill	09:46	15:46	4	NW	0	7	-	3	0	0	H	-	-	-	-
22/02/23	Estuarine survey	Lorna Gill	09:46	15:46	4	NW	0	4	-	3	0	0	H-M	-	-	-	-
22/02/23	Estuarine survey	Lorna Gill	09:46	15:46	4	NW	0	4	-	3	0	0	H-M	-	-	-	-
21/03/23	Estuarine survey	Emma Ní Dhonnchadha	06:30	12:30	3	SW	0	8	-	2	0	0	-	-	-	-	9°C
21/03/23	Estuarine survey	Emma Ní Dhonnchadha	06:30	12:30	3	SW	0	8	-	2	0	0	-	-	-	-	9°C
21/03/23	Estuarine survey	Emma Ní Dhonnchadha	06:30	12:30	3	SW	2	8	-	2	0	0	-	-	-	-	10°C

APPENDIX A

Survey date	Survey type	Surveyor	Start time	End time	Wind speed	Wind direction	Rain	Cloud cover	Cloud height	Visibility	Frost	Snow	Tidal cycle	Glare	Sea state	Swell height	Notes
21/03/23	Estuarine survey	Emma Ní Dhonnchadha	06:30	12:30	3	SW	1	8	-	2	0	0	-	-	-	-	10°C
21/03/23	Estuarine survey	Emma Ní Dhonnchadha	06:30	12:30	4	SW	0	6	-	2	0	0	-	-	-	-	11°C
21/03/23	Estuarine survey	Emma Ní Dhonnchadha	06:30	12:30	4	SW	0	5	-	2	0	0	-	-	-	-	12°C
30/03/23	Estuarine survey	Emma Ní Dhonnchadha	10:11	16:11	4	SW	0	4	-	4	0	0	H-L	-	-	-	-
30/03/23	Estuarine survey	Emma Ní Dhonnchadha	10:11	16:11	4	SW	0	6	-	4	0	0	H-L	-	-	-	-
30/03/23	Estuarine survey	Emma Ní Dhonnchadha	10:11	16:11	4	SW	0	3	-	4	0	0	H-L	-	-	-	-
30/03/23	Estuarine survey	Emma Ní Dhonnchadha	10:11	16:11	4	SW	0	3	-	4	0	0	L-M	-	-	-	-
30/03/23	Estuarine survey	Emma Ní Dhonnchadha	10:11	16:11	4	SW	0	4	-	3	0	0	L-M	-	-	-	-
30/03/23	Estuarine survey	Emma Ní Dhonnchadha	10:11	16:11	4	SW	0	4	-	3	0	0	L-M	-	-	-	-
04/04/23	Estuarine survey	Conor Maloney	07:26	13:26	5	SE	0	7	-	3	0	0	L-M	-	-	-	-
04/04/23	Estuarine survey	Conor Maloney	07:26	13:26	5	S	1	7	-	3	0	0	M-H	-	-	-	-
04/04/23	Estuarine survey	Conor Maloney	07:26	13:26	5	S	0	7	-	3	0	0	M-H	-	-	-	-
04/04/23	Estuarine survey	Conor Maloney	07:26	13:26	5	S	0	7	-	3	0	0	H-M	-	-	-	-
04/04/23	Estuarine survey	Conor Maloney	07:26	13:26	5	S	0	8	-	3	0	0	H-M	-	-	-	-
04/04/23	Estuarine survey	Conor Maloney	07:26	13:26	5	S	0	8	-	3	0	0	M-L	-	-	-	-

APPENDIX A10.1

Survey date	Survey type	Surveyor	Start time	End time	Wind speed	Wind direction	Rain	Cloud cover	Cloud height	Visibility	Frost	Snow	Tidal cycle	Glare	Sea state	Swell height	Notes
26/04/23	Estuarine survey	William Lishman	07:30	13:30	2	SW	0	5	2	2	0	0	-	-	-	-	Cool 6°C
26/04/23	Estuarine survey	William Lishman	07:30	13:30	2	SW	0	3	2	2	0	0	-	-	-	-	-
26/04/23	Estuarine survey	William Lishman	07:30	13:30	2	SW	0	3	2	2	0	0	-	-	-	-	-
26/04/23	Estuarine survey	William Lishman	07:30	13:30	3	SW	0	4	2	2	0	0	-	-	-	-	-
26/04/23	Estuarine survey	William Lishman	07:30	13:30	3	SW	0	4	2	2	0	0	-	-	-	-	-
26/04/23	Estuarine survey	William Lishman	07:30	13:30	4	SW	0	5	2	2	0	0	-	-	-	-	-
11/05/23	Estuarine survey	Emma Ní Dhonnchadha	07:06	13:06	3	W	0	7	-	3	0	0	M	-	-	-	-
11/05/23	Estuarine survey	Emma Ní Dhonnchadha	07:06	13:06	3	W	2	7	-	3	0	0	M-L	-	-	-	-
11/05/23	Estuarine survey	Emma Ní Dhonnchadha	07:06	13:06	3	W	1	7	-	3	0	0	M-L	-	-	-	-
11/05/23	Estuarine survey	Emma Ní Dhonnchadha	07:06	13:06	3	W	2	6	-	3	0	0	L	-	-	-	-
11/05/23	Estuarine survey	Emma Ní Dhonnchadha	07:06	13:06	2	W	0	5	-	3	0	0	L-M	-	-	-	-
11/05/23	Estuarine survey	Emma Ní Dhonnchadha	07:06	13:06	2	NW	0	4	-	3	0	0	L-M	-	-	-	-
25/05/23	Estuarine survey	Emma Ní Dhonnchadha	11:59	17:59	3	N	0	0	-	2	0	0	-	-	-	-	15°C
25/05/23	Estuarine survey	Emma Ní Dhonnchadha	11:59	17:59	3	N	0	0	-	2	0	0	-	-	-	-	16°C
25/05/23	Estuarine survey	Emma Ní Dhonnchadha	11:59	17:59	3	NE	0	0	-	2	0	0	-	-	-	-	17°C

APPENDIX A10.1

Survey date	Survey type	Surveyor	Start time	End time	Wind speed	Wind direction	Rain	Cloud cover	Cloud height	Visibility	Frost	Snow	Tidal cycle	Glare	Sea state	Swell height	Notes
25/05/23	Estuarine survey	Emma Ní Dhonnchadha	11:59	17:59	2	NE	0	1	2	2	0	0	-	-	-	-	18°C
25/05/23	Estuarine survey	Emma Ní Dhonnchadha	11:59	17:59	2	NE	0	3	1	2	0	0	-	-	-	-	17°C
25/05/23	Estuarine survey	Emma Ní Dhonnchadha	11:59	17:59	3	NE	0	3	1	2	0	0	-	-	-	-	18°C
23/06/23	Estuarine survey	Lorna Gill	12:55	18:55	3	S	1	7	-	2	0	0	M-H	-	-	-	-
23/06/23	Estuarine survey	Lorna Gill	12:55	18:55	3	S	2	7	-	2	0	0	M-H	-	-	-	-
23/06/23	Estuarine survey	Lorna Gill	12:55	18:55	3	S	0	8	-	2	0	0	M-H	-	-	-	-
23/06/23	Estuarine survey	Lorna Gill	12:55	18:55	3	S	2	8	-	2	0	0	H	-	-	-	-
23/06/23	Estuarine survey	Lorna Gill	12:55	18:55	3	SW	0	7	-	2	0	0	H-M	-	-	-	-
23/06/23	Estuarine survey	Lorna Gill	12:55	18:55	3	SW	1	8	-	2	0	0	H-M	-	-	-	-
26/06/23	Estuarine survey	Lorna Gill	09:58	15:58	4	SW	0	4	-	4	0	0	M-L	-	-	-	-
26/06/23	Estuarine survey	Lorna Gill	09:58	15:58	4	SW	0	5	-	4	0	0	M-L	-	-	-	-
26/06/23	Estuarine survey	Lorna Gill	09:58	15:58	4	W	1	6	-	4	0	0	L	-	-	-	-
26/06/23	Estuarine survey	Lorna Gill	09:58	15:58	4	SW	1	5	-	4	0	0	L-M	-	-	-	-
26/06/23	Estuarine survey	Lorna Gill	09:58	15:58	4	W	0	6	-	4	0	0	L-M	-	-	-	-
26/06/23	Estuarine survey	Lorna Gill	09:58	15:58	4	W	0	7	-	4	0	0	L-M	-	-	-	-

Abbreviations used in Table A10.1b: NE: North east; NW: North west; N: North; E: East; SE: South east; SW: South west; S: South; W: West; H: High; M: Medium; L: Low.

APPENDIX 3 – ESTUARINE BIRD SURVEY DATA

Table A10.2. Estuarine walkover peak monthly population estimates for bird species listed as Special Conservation Interests (SCIs) on Baldoyle Bay SPA citation

Species	Year	J	F	M	A	M	J	J	A	S	O	N	D	Original SPA citation*	Five-year peak mean**	Peak count***
Bar-tailed Godwit	2020									74	**205**	202	177	353	61	205
	2021	131	115	53	13	0	0	1	20	0	0	19	0			
	2022										129	33	5			
	2023	6	8	0	0	0	0									
Brent Goose (LB)	2020									0	282	315	277	726	521	321
	2021	**321**	254	231	50	0	0	0	0	0	0	0	0			
	2022										318	0	0			
	2023	0	0	0	0	0	0									
Golden Plover	2020									46	750	285	725	1810	707	945
	2021	**945**	800	135	0	0	0	0	13	0	0	0	0			
	2022										0	0	176			
	2023	400	32	0	0	0	0									
Grey Plover	2020									2	26	15	**31**	200	102	31
	2021	7	12	3	0	0	0	0	0	0	0	0	0			
	2022										2	0	5			
	2023	6	8	0	0	0	0									
Ringed Plover	2020									54	**86**	63	53	221	1	86
	2021	24	53	39	32	17	24	14	75	0	0	0	0			
	2022										0	0	0			
	2023	1	0	0	0	0	0									
Shelduck	2020									52	52	26	30	147	140	305
	2021	53	43	24	38	3	9	12	14	0	0	77	98			
	2022										32	64	59			
	2023	**305**	148	55	55	23	5									

*Five year mean peak counts for the period 1995/6-1999/00 (I-WeBS) except for light-bellied brent goose (Robinson *et al*., 2004).

**Five year mean peak for the period 20016/17-2020/21 (I-WeBS). ***Peak count based on collected data (underlined and in bold by species).

Table A10.3. Estuarine walkover peak monthly population estimates for other bird species (non-SCI) listed on Baldoyle Bay SPA citation

Species	Year	J	F	M	A	M	J	J	A	S	O	N	D	Original SPA citation*	Five-year peak mean**	Peak count***
Black-tailed Godwit	2020									62	**250**	154	228	72	172	250
	2021	214	186	142	17	0	0	0	34	0	0	0	19			
	2022										181	126	121			
	2023	84	108	62	5	0	0									
Curlew	2020									42	41	61	36	61	70	115
	2021	41	38	43	9	3	6	12	11	0	0	38	**115**			
	2022										84	44	7			
	2023	23	49	29	24	5	79									
Dunlin	2020									110	543	468	323	879	271	1006
	2021	336	205	113	60	14	0	0	43	0	0	60	112			
	2022										165	187	732			
	2023	**1006**	372	0	0	0	0									
Great Crested Grebe	2020									**25**	14	11	14	42	0	25
	2021	10	13	9	4	0	0	0	2	0	0	0	0			
	2022										0	3	6			
	2023	3	7	20	4	0	0									
Greenshank	2020									5	16	9	8	11	6	54
	2021	11	7	6	1	0	0	0	3	0	0	0	29			
	2022										3	3	2			
	2023	12	15	**54**	41	0	0									
Grey Heron	2020									10	**17**	15	15	16	5	17
	2021	14	7	7	10	5	6	5	8	0	0	10	0			
	2022										4	2	1			
	2023	2	4	2	4	2	4									
Knot	2020									0	**267**	202	48	115	320	267
	2021	51	121	22	0	0	0	0	0	0	0	13	0			
	2022										0	7	8			

Species	Year	J	F	M	A	M	J	J	A	S	O	N	D	Original SPA citation*	Five-year peak mean**	Peak count***
	2023	3	0	0	0	0	0									
Lapwing	2020									38	**263**	119	218	450	225	263
	2021	127	179	36	8	0	0	2	2	0	0	13	80			
	2022										135	166	131			
	2023	229	65	0	0	0	55									
Mallard	2020									**131**	62	94	**131**	46	93	131
	2021	112	53	61	53	23	36	46	57	0	0	12	13			
	2022										68	39	33			
	2023	49	103	62	40	39	42									
Oystercatcher	2020									302	284	200	212	531	235	348
	2021	139	224	193	33	2	62	39	38	0	0	0	57			
	2022										107	169	164			
	2023	128	**348**	125	247	135	25									
Pintail	2020									0	0	**2**	**2**	22	0	2
	2021	**2**	0	0	0	0	0	0	0	0	0	0	0			
	2022										0	0	0			
	2023	0	0	0	0	0	0									
Red-breasted Merganser	2020									**26**	14	13	11	14	5	26
	2021	13	13	6	6	0	0	2	3	0	0	12	13			
	2022										0	2	0			
	2023	1	0	0	0	0	0									
Redshank	2020									159	141	117	**197**	224	123	197
	2021	79	88	57	36	5	8	10	34	0	0	47	97			
	2022										71	75	21			
	2023	70	92	211	38	0	0									
Sanderling	2020									0	15	**76**	14	26	0	76
	2021	30	45	31	20	0	0	0	0	0	0	0	0			
	2022										2	55	5			
	2023	39	0	0	0	0	0									

APPENDIX A10.1

Species	Year	J	F	M	A	M	J	J	A	S	O	N	D	Original SPA citation*	Five-year peak mean**	Peak count***
Teal	2020									53	68	69	168	124	126	303
	2021	49	92	57	16	2	2	13	32	0	0	46	127			
	2022										39	132	147			
	2023	144	**303**	88	40	0	0									
Turnstone	2020									11	20	2	23	43	11	29
	2021	15	**29**	21	15	0	13	8	11	0	0	0	0			
	2022										11	12	5			
	2023	3	0	1	0	0	0									

*Five year mean peak counts for the period 1995/6-1999/00 (I-WeBS) except for light-bellied brent goose (Robinson *et al*., 2004).

**Five year mean peak for the period 2016/17-2020/21 (I-WeBS).

***Peak count based on collected data (underlined and in bold by species).

Table 10.4. Estuarine walkover peak monthly population estimates for bird species not listed on Baldoyle Bay SPA citation

Species	Category	J	F	M	A	M	J	J	A	S	O	N	D
Black Guillemot**	Auks	2	2	2	2	2	1	1	7	6	0	2	0
Guillemot*, ****, *****		3	4	2	2	1	0	1	1	2	7	3	2
Razorbill*, ****, *****		1	0	1	2	3	2	0	1	3	0	2	1
Great Northern Diver*****	Divers	0	0	0	0	0	0	0	0	0	0	1	0
Red-throated Diver*****		2	2	2	1	0	1	1	1	11	4	2	1
Dark-bellied Brent Goose	Geese and Swans	2	2	2	0	0	0	0	0	0	2	2	2
Mute Swan		6	6	4	6	2	6	5	6	8	13	15	7
Common Scoter*****	Grebes, Ducks and Rails	6	30	6	0	0	0	0	0	11	18	24	0
Coot		1	0	1	1	2	2	1	1	1	1	1	0
Eider		0	0	0	0	0	0	0	0	1	0	0	0
Goldeneye		0	0	0	0	0	0	0	0	2	2	0	0
Little Grebe		1	2	2	4	2	6	2	2	2	1	4	2
Moorhen		2	1	2	2	2	2	2	2	2	4	3	2
Pochard		27	0	0	0	0	0	0	0	0	0	0	0
Shoveler		0	0	0	0	0	0	0	0	0	1	0	1
Water Rail		1	1	1	1	1	0	1	0	0	0	0	0
Wigeon		21	27	32	4	0	0	0	0	10	141	247	103
Black-headed Gull*****	Gulls	31	87	34	26	3	45	18	32	27	175	112	122
Common Gull*****		18	31	22	5	6	8	5	16	8	14	11	28
Great Black-backed Gull**, *****		18	12	11	14	9	9	9	15	29	9	5	6
Herring Gull*, *****		53	42	139	39	203	67	33	47	30	105	152	52
Kittiwake*, ***, *****		0	2	0	0	0	0	0	0	0	0	0	5
Lesser Black-backed Gull*****		6	2	4	2	2	4	5	5	3	8	2	1
Mediterranean Gull		2	0	0	0	0	1	0	5	6	0	0	2
Blackbird	Other	0	2	3	0	1	1	0	0	0	0	0	0
Blue tit		0	0	0	0	0	1	0	0	0	0	0	0
Carrion Crow		0	0	0	0	0	0	0	0	0	0	0	11
Chaffinch		0	0	0	0	2	0	0	0	0	25	0	0

Species	Category	J	F	M	A	M	J	J	A	S	O	N	D
Corn Bunting		0	0	0	0	0	0	0	0	0	0	0	1
Dunnock		0	1	0	0	1	2	0	0	0	0	0	0
Goldfinch		0	3	3	8	0	32	0	0	0	15	3	0
Grasshopper warbler		0	0	1	0	0	0	0	0	0	0	0	0
Great tit		0	1	0	0	0	5	0	0	0	0	0	0
Grey Wagtail		0	0	0	0	0	0	0	0	2	0	0	0
Hooded Crow		0	11	11	2	7	13	0	0	0	0	2	6
House martin		0	0	0	0	13	15	0	0	0	0	0	0
House sparrow		0	0	0	0	0	1	0	0	0	0	0	0
Jackdaw		0	3	0	0	7	2	0	0	0	0	0	0
Linnet		0	7	0	0	2	1	0	0	0	9	0	0
Little Egret		5	9	9	8	6	21	1	2	3	9	4	7
Long-tailed tit		0	1	0	0	0	0	0	0	0	0	0	0
Magpie		0	0	0	0	0	1	0	0	0	0	0	0
Meadow Pipit		0	0	0	0	0	17	0	0	0	1	5	5
Mistle Thrush		0	0	1	0	7	1	0	0	0	0	1	0
Pheasant		0	2	1	0	1	0	0	0	0	1	0	1
Pied Wagtail		0	1	0	0	3	7	0	0	0	0	2	0
Raven		2	1	0	0	0	0	0	0	0	6	1	0
Red-legged Partridge		0	0	1	0	0	0	0	0	0	0	0	0
Redwing		0	0	0	0	0	0	0	0	0	0	0	4
Reed Bunting		0	1	1	0	0	0	0	0	0	0	2	4
Robin		1	1	1	0	0	0	0	0	0	1	0	0
Rock Pipit		2	0	0	0	0	0	0	0	0	0	0	0
Rook		0	5	2	0	5	3	0	0	0	0	0	0
Sand martin		0	0	0	0	0	9	0	0	0	0	0	0
Sedge warbler		0	0	0	0	0	1	0	0	0	0	0	0
Skylark		1	3	12	0	6	3	0	0	0	2	7	0
Song thrush		0	0	0	0	3	0	0	0	0	0	0	0
Starling		3	75	17	0	213	132	0	0	0	11	36	43

Species	Category	J	F	M	A	M	J	J	A	S	O	N	D
Stonechat		3	3	2	0	0	2	0	0	0	1	2	1
Swallow		0	0	0	0	8	30	0	0	0	0	0	0
Woodpigeon		0	52	13	0	6	32	0	0	0	0	0	53
Wren		0	1	2	0	1	0	0	0	0	1	1	0
Buzzard	Raptors	4	1	2	1	1	1	0	0	1	1	1	1
Kestrel		1	1	0	1	0	1	0	1	1	1	1	0
Peregrine Falcon**, ****		1	0	0	0	0	0	0	0	1	0	0	0
Cormorant*, *****	Shags and Cormorants	2	2	1	3	4	1	1	1	11	26	1	2
Shag**, *****		2	1	2	0	0	1	1	1	2	2	3	1
Arctic Tern*****	Terns	0	0	0	0	0	3	3	2	0	0	0	0
Common Tern*****		0	0	0	0	6	4	2	5	0	0	0	0
Roseate Tern*****		0	0	0	0	0	2	0	1	0	0	0	0
Sandwich Tern		0	0	0	0	3	3	5	6	0	0	0	0
Common Sandpiper	Waders	1	0	1	0	0	6	1	1	1	1	1	1
Common Snipe		3	4	3	2	0	0	2	1	3	3	6	6
Ruff		36	0	0	4	0	0	1	1	6	2	0	0
Whimbrel		4	0	12	29	0	0	0	4	2	2	2	0

*SCI of Ireland's Eye SPA

**Named bird species of Ireland's Eye SPA

***SCI of Howth Head Coast SPA

****Named bird species of Howth Head Coast SPA

***** SCI of North-West Irish Sea cSPA

APPENDIX 4 – VP SURVEY EFFORT AND WEATHER

Table A10.5a. VP survey effort August 2020 to June 2023

Survey date	Survey type	VP	Surveyor	Start time	End time	Total time
24/08/20	Coastal VP survey	2	Nick Veale	09:30	12:30	03:00
24/08/20	Coastal VP survey	1	Nick Veale	13:15	16:15	03:00
26/08/20	Coastal VP survey	2	Nick Veale	11:30	14:30	03:00
26/08/20	Coastal VP survey	1	Nick Veale	07:45	10:45	03:00
10/09/20	Coastal VP survey	1	Nick Veale	06:20	09:20	03:00
10/09/20	Coastal VP survey	2	Nick Veale	10:15	13:15	03:00
29/09/20	Coastal VP survey	2	Nick Veale	11:00	14:00	03:00
29/09/20	Coastal VP survey	1	Nick Veale	14:40	17:40	03:00
12/10/20	Coastal VP survey	2	Nick Veale	09:15	12:15	03:00
12/10/20	Coastal VP survey	1	Nick Veale	12:50	15:50	03:00
22/10/20	Coastal VP survey	2	Nick Veale	09:45	12:45	03:00
22/10/20	Coastal VP survey	1	Nick Veale	13:30	16:30	03:00
23/11/20	Coastal VP survey	2	Nick Veale	09:10	12:10	03:00
23/11/20	Coastal VP survey	1	Nick Veale	12:45	15:45	03:00
30/11/20	Coastal VP survey	1	Nick Veale	08:20	11:20	03:00
30/11/20	Coastal VP survey	2	Nick Veale	12:00	15:00	03:00
11/12/20	Coastal VP survey	1	Nick Veale	11:05	14:05	03:00
12/12/20	Coastal VP survey	2	Nick Veale	10:15	13:15	03:00
13/12/20	Coastal VP survey	1	Nick Veale	08:45	11:45	03:00
17/12/20	Coastal VP survey	2	Nick Veale	10:30	13:30	03:00
17/01/21	Coastal VP survey	1	Nick Veale	09:45	12:45	03:00
18/01/21	Coastal VP survey	2	Nick Veale	12:10	15:10	03:00
25/01/21	Coastal VP survey	2	Nick Veale	10:30	13:30	03:00
27/01/21	Coastal VP survey	1	Nick Veale	09:20	12:20	03:00
04/02/21	Coastal VP survey	2	Nick Veale	09:40	12:40	03:00
04/02/21	Coastal VP survey	1	Nick Veale	13:10	16:10	03:00
22/02/21	Coastal VP survey	2	Nick Veale	09:15	12:15	03:00
22/02/21	Coastal VP survey	1	Nick Veale	12:40	15:40	03:00
26/03/21	Coastal VP survey	2	Nick Veale	08:40	11:40	03:00
26/03/21	Coastal VP survey	1	Nick Veale	12:20	15:20	03:00
31/03/21	Coastal VP survey	2	Nick Veale	08:25	11:25	03:00
31/03/21	Coastal VP survey	1	Nick Veale	12:10	15:10	03:00
21/04/21	Coastal VP survey	1	Nick Veale	07:45	10:45	03:00
21/04/21	Coastal VP survey	2	Nick Veale	11:20	14:20	03:00
28/04/21	Coastal VP survey	1	Nick Veale	09:00	12:00	03:00
28/04/21	Coastal VP survey	2	Nick Veale	13:00	16:00	03:00
17/05/21	Coastal VP survey	2	Nick Veale	07:50	10:50	03:00
17/05/21	Coastal VP survey	1	Nick Veale	11:40	14:40	03:00
31/05/21	Coastal VP survey	1	Nick Veale	06:30	09:30	03:00
31/05/21	Coastal VP survey	2	Nick Veale	10:15	13:15	03:00
17/06/21	Coastal VP survey	1	Nick Veale	05:45	08:45	03:00

17/06/21	Coastal VP survey	2	Nick Veale	09:30	12:30	03:00
28/06/21	Coastal VP survey	1	Nick Veale	05:05	08:05	03:00
28/06/21	Coastal VP survey	2	Nick Veale	09:10	12:10	03:00
08/07/21	Coastal VP survey	1	Nick Veale	04:35	07:35	03:00
08/07/21	Coastal VP survey	2	Nick Veale	08:30	11:30	03:00
13/07/21	Coastal VP survey	1	Nick Veale	06:20	09:20	03:00
13/07/21	Coastal VP survey	2	Nick Veale	10:20	13:20	03:00
20/10/22	Coastal VP survey	1	Lorna Gill	08:30	11:30	03:00
25/10/22	Coastal VP survey	1	Lorna Gill	15:07	18:07	03:00
28/10/22	Coastal VP survey	2	Lorna Gill	10:45	13:45	03:00
03/11/22	Coastal VP survey	2	Lorna Gill	10:00	13:00	03:00
09/11/22	Coastal VP survey	2	Lorna Gill	10:30	13:30	03:00
16/11/22	Coastal VP survey	1	Lorna Gill	09:10	12:10	03:00
18/11/22	Coastal VP survey	2	Lorna Gill	10:15	13:15	03:00
22/11/22	Coastal VP survey	1	Lorna Gill	08:30	11:30	03:00
02/12/22	Coastal VP survey	1	Lorna Gill	10:48	13:48	03:00
14/12/22	Coastal VP survey	1	Lorna Gill	13:00	16:00	03:00
16/12/22	Coastal VP survey	2	Lorna Gill	10:15	13:15	03:00
16/01/23	Coastal VP survey	1	Lorna Gill	13:05	16:05	03:00
20/01/23	Coastal VP survey	2	Lorna Gill	12:15	15:15	03:00
24/01/23	Coastal VP survey	1	Lorna Gill	13:05	16:05	03:00
27/01/23	Coastal VP survey	2	Lorna Gill	09:45	12:45	03:00
13/02/23	Coastal VP survey	1	Lorna Gill	08:21	11:21	03:00
23/02/23	Coastal VP survey	1	Lorna Gill	11:59	14:59	03:00
06/03/23	Coastal VP survey	2	Lorna Gill	08:30	11:30	03:00
13/03/23	Coastal VP survey	1	Lorna Gill	10:00	13:00	03:00
20/03/23	Coastal VP survey	1	Lorna Gill	10:00	13:00	03:00
24/03/23	Coastal VP survey	2	Lorna Gill	08:30	11:30	03:00
14/04/23	Coastal VP survey	1	Lorna Gill	11:14	14:14	03:00
20/04/23	Coastal VP survey	1	Lorna Gill	10:58	13:58	03:00
04/05/23	Coastal VP survey	1	Lorna Gill	10:02	13:02	03:00
08/05/23	Coastal VP survey	2	Lorna Gill	09:30	12:30	03:00
23/05/23	Coastal VP survey	2	Lorna Gill	09:10	12:10	03:00
26/05/23	Coastal VP survey	1	Lorna Gill	09:26	12:26	03:00
09/06/23	Coastal VP survey	1	Lorna Gill	08:31	11:31	03:00
16/06/23	Coastal VP survey	2	Lorna Gill	13:50	16:50	03:00
29/06/23	Coastal VP survey	2	Lorna Gill	12:45	15:45	03:00
30/06/23	Coastal VP survey	1	Lorna Gill	08:07	11:07	03:00

Table A10.5b. VP survey weather August 2020 to June 2023

Survey date	VP ID	Surveyor	Start time	End time	Wind speed	Wind direction	Rain	Cloud cover	Cloud height	Visibility	Frost	Snow	Tidal cycle	Glare	Sea state	Swell height (m)	Notes
24/08/20	2	Nick Veale	09:30	12:30	2	SW	0	2	2	4	0	0	L	0	1	0	-
24/08/20	2	Nick Veale	09:30	12:30	2	SW	0	2	2	4	0	0	L-M	0	1	0	-
24/08/20	2	Nick Veale	09:30	12:30	3	SW	0	3	2	4	0	0	L-M	0	1	0	-
24/08/20	1	Nick Veale	13:15	16:15	3	SW	0	4	2	4	0	0	M	0	2	0.25	-
24/08/20	1	Nick Veale	13:15	16:15	3	SE	0	5	2	4	0	0	M-H	0	2	0.25	-
24/08/20	1	Nick Veale	13:15	16:15	3	SE	0	5	2	4	0	0	M-H	0	2	0.25	-
26/08/20	2	Nick Veale	07:45	10:45	3	W	1	8	1	4	0	0	H-M	0	2	0.25	-
26/08/20	2	Nick Veale	07:45	10:45	3	W	0	8	1	4	0	0	H-M	0	2	0.25	-
26/08/20	2	Nick Veale	07:45	10:45	3	SW	0	8	1	4	0	0	M	0	2	0.25	-
26/08/20	1	Nick Veale	11:30	14:30	3	SW	0	8	1	4	0	0	M-L	0	2	0.25	-
26/08/20	1	Nick Veale	11:30	14:30	3	W	0	7	1	4	0	0	M-L	0	2	0.25	-
26/08/20	1	Nick Veale	11:30	14:30	3	W	0	7	1	4	0	0	M-L	0	2	0.25	-
10/09/20	1	Nick Veale	06:20	09:20	1	-	0	5	2	4	0	0	M-L	1	1	0	-
10/09/20	1	Nick Veale	06:20	09:20	1	-	0	4	2	4	0	0	M-L	1	1	0	-
10/09/20	1	Nick Veale	06:20	09:20	2	SW	0	4	2	4	0	0	L	0	1	0	-
10/09/20	2	Nick Veale	10:15	13:15	2	SW	0	4	2	4	0	0	M-L	0	1	0	-
10/09/20	2	Nick Veale	10:15	13:15	2	SW	0	4	2	4	0	0	L	0	1	0	-
10/09/20	2	Nick Veale	10:15	13:15	2	SW	0	6	2	4	0	0	L-M	0	1	0	-
29/09/20	2	Nick Veale	11:00	14:00	2	SE	0	0	-	4	0	0	H	-	-	-	-
29/09/20	2	Nick Veale	11:00	14:00	2	SE	0	0	-	4	0	0	H-M	-	-	-	-
29/09/20	2	Nick Veale	11:00	14:00	2	S	0	1	2	4	0	0	H-M	-	-	-	-
29/09/20	1	Nick Veale	14:40	17:40	2	S	0	1	2	4	0	0	M-L	0	1	0	-
29/09/20	1	Nick Veale	14:40	17:40	2	SE	0	2	2	4	0	0	M-L	0	1	0	-
29/09/20	1	Nick Veale	14:40	17:40	2	SE	0	1	2	4	0	0	L	0	1	0	-
12/10/20	2	Nick Veale	09:15	12:15	3	W	0	6	2	4	0	0	H	1	3	1	-
12/10/20	2	Nick Veale	09:15	12:15	3	W	0	5	2	4	0	0	H-M	0	3	1	-
12/10/20	2	Nick Veale	09:15	12:15	4	NW	0	4	2	4	0	0	H-M	0	3	1	-

APPENDIX A10.1

Survey date	VP ID	Surveyor	Start time	End time	Wind speed	Wind direction	Rain	Cloud cover	Cloud height	Visibility	Frost	Snow	Tidal cycle	Glare	Sea state	Swell height (m)	Notes
12/10/20	1	Nick Veale	12:50	15:50	4	NW	0	4	2	4	0	0	M	0	3	1	-
12/10/20	1	Nick Veale	12:50	15:50	4	NW	0	5	2	4	0	0	M-L	0	3	1.25	-
12/10/20	1	Nick Veale	12:50	15:50	4	NW	2	5	1	4	0	0	M-L	0	3	1.25	-
22/10/20	2	Nick Veale	09:45	12:45	2	W	0	4	2	4	0	0	L	0	2	0.5	-
22/10/20	2	Nick Veale	09:45	12:45	3	W	0	3	2	4	0	0	L-M	0	3	0.5	-
22/10/20	2	Nick Veale	09:45	12:45	3	W	0	5	2	4	0	0	L-M	0	3	0.5	-
22/10/20	1	Nick Veale	13:30	16:30	3	W	0	6	2	4	0	0	M-H	0	2	0	-
22/10/20	1	Nick Veale	13:30	16:30	3	W	0	6	2	4	0	0	M-H	0	2	0	-
22/10/20	1	Nick Veale	13:30	16:30	3	W	0	5	2	4	0	0	H	0	2	0	-
23/11/20	2	Nick Veale	09:10	12:10	2	SW	0	6	2	4	0	0	-	0	1	0.1	-
23/11/20	2	Nick Veale	09:10	12:10	3	SW	0	5	2	4	0	0	-	0	2	0.1	-
23/11/20	2	Nick Veale	09:10	12:10	3	SW	0	5	2	4	0	0	-	0	2	0.1	-
23/11/20	1	Nick Veale	12:45	15:45	3	SW	0	5	2	4	0	0	-	1	1	-	-
23/11/20	1	Nick Veale	12:45	15:45	3	SW	0	6	2	4	0	0	-	0	1	-	-
23/11/20	1	Nick Veale	12:45	15:45	3	SW	0	6	2	4	0	0	-	0	1	-	-
30/11/20	1	Nick Veale	08:20	11:20	2	SW	0	5	1	4	0	0	-	1	1	0.25	-
30/11/20	1	Nick Veale	08:20	11:20	2	SW	0	7	1	4	0	0	-	1	1	0.25	-
30/11/20	1	Nick Veale	08:20	11:20	2	SW	2	7	1	4	0	0	-	0	1	0.25	-
30/11/20	2	Nick Veale	12:00	15:00	2	SW	0	7	1	4	0	0	-	0	2	0.5	-
30/11/20	2	Nick Veale	12:00	15:00	3	SW	2	7	1	3	0	0	-	0	2	0.5	-
30/11/20	2	Nick Veale	12:00	15:00	3	SW	2	6	1	3	0	0	-	0	2	0.5	-
11/12/20	1	Nick Veale	11:05	14:05	1	SW	0	4	2	4	0	0	-	1	1	-	-
11/12/20	1	Nick Veale	11:05	14:05	1	SW	0	5	2	4	0	0	-	0	1	-	-
11/12/20	1	Nick Veale	11:05	14:05	2	SW	0	7	2	4	0	0	-	0	1	-	-
12/12/20	2	Nick Veale	10:15	13:15	2	W	0	0	-	4	0	0	-	0	2	0.25	-
12/12/20	2	Nick Veale	10:15	13:15	3	SW	0	0	-	4	0	0	-	0	2	0.25	-
12/12/20	2	Nick Veale	10:15	13:15	3	SW	0	1	2	4	0	0	-	0	2	0.25	-
13/12/20	1	Nick Veale	08:45	11:45	2	SE	2	8	1	3	0	0	-	1	2	0.5	-
13/12/20	1	Nick Veale	08:45	11:45	3	SE	2	8	1	3	0	0	-	1	3	0.5	-

APPENDIX A10.1

Survey date	VP ID	Surveyor	Start time	End time	Wind speed	Wind direction	Rain	Cloud cover	Cloud height	Visibility	Frost	Snow	Tidal cycle	Glare	Sea state	Swell height (m)	Notes
13/12/20	1	Nick Veale	08:45	11:45	3	SE	2	8	1	3	0	0	-	0	3	0.5	-
17/12/20	2	Nick Veale	10:30	13:30	1	SW	0	0	-	4	0	0	-	0	1	-	-
17/12/20	2	Nick Veale	10:30	13:30	2	SW	0	1	2	4	0	0	-	0	1	-	-
17/12/20	2	Nick Veale	10:30	13:30	2	S	0	2	2	4	0	0	-	0	1	-	-
17/01/21	1	Nick Veale	09:45	12:45	2	SW	0	1	2	4	0	0	-	1	1	0	-
17/01/21	1	Nick Veale	09:45	12:45	2	SW	0	2	2	4	0	0	-	1	1	0	-
17/01/21	1	Nick Veale	09:45	12:45	3	SW	0	2	2	4	0	0	-	0	2	0	-
18/01/21	2	Nick Veale	12:10	15:10	1	SW	0	7	1	4	0	0	-	0	1	-	-
18/01/21	2	Nick Veale	12:10	15:10	1	SW	0	7	1	4	0	0	-	0	1	-	-
18/01/21	2	Nick Veale	12:10	15:10	2	SW	1	8	1	3	0	0	-	0	1	-	-
25/01/21	2	Nick Veale	10:30	13:30	2	W	0	0	-	4	0	0	-	1	1	0.25	-
25/01/21	2	Nick Veale	10:30	13:30	2	SW	0	0	-	4	0	0	-	0	1	0.25	-
25/01/21	2	Nick Veale	10:30	13:30	2	SW	0	1	2	4	0	0	-	0	2	0.25	-
27/01/21	1	Nick Veale	09:20	12:20	1	-	0	5	2	4	0	0	-	2	1	0.25	-
27/01/21	1	Nick Veale	09:20	12:20	1	-	0	4	2	4	0	0	-	1	1	0.25	-
27/01/21	1	Nick Veale	09:20	12:20	1	-	0	5	2	4	0	0	-	1	1	0.25	-
04/02/21	2	Nick Veale	09:40	12:40	3	SW	0	5	1	4	0	0	-	1	2	0.25	-
04/02/21	2	Nick Veale	09:40	12:40	2	SW	2	6	1	4	0	0	-	0	2	0.25	-
04/02/21	2	Nick Veale	09:40	12:40	2	SW	0	6	1	4	0	0	-	0	2	0.25	-
04/02/21	1	Nick Veale	13:10	16:10	2	SW	0	6	1	4	0	0	-	0	2	0.25	-
04/02/21	1	Nick Veale	13:10	16:10	2	SW	2	7	1	4	0	0	-	0	2	0	-
04/02/21	1	Nick Veale	13:10	16:10	2	SW	0	5	1	4	0	0	-	0	2	0	-
22/02/21	2	Nick Veale	09:15	12:15	1	S	0	0	-	4	0	0	-	1	1	0	-
22/02/21	2	Nick Veale	09:15	12:15	2	SW	0	0	-	4	0	0	-	0	1	0	-
22/02/21	2	Nick Veale	09:15	12:15	2	SW	0	0	-	4	0	0	-	0	1	0.25	-
22/02/21	1	Nick Veale	12:40	15:40	2	SW	0	0	-	4	0	0	-	0	1	0.25	-
22/02/21	1	Nick Veale	12:40	15:40	2	SW	0	1	2	4	0	0	-	0	2	0.25	-
22/02/21	1	Nick Veale	12:40	15:40	3	SW	0	3	2	4	0	0	-	0	2	0.25	-
26/03/21	2	Nick Veale	08:40	11:40	3	SW	1	5	2	4	0	0	-	0	2	0.5	-

APPENDIX A10.1

Survey date	VP ID	Surveyor	Start time	End time	Wind speed	Wind direction	Rain	Cloud cover	Cloud height	Visibility	Frost	Snow	Tidal cycle	Glare	Sea state	Swell height (m)	Notes
26/03/21	2	Nick Veale	08:40	11:40	3	SW	2	4	1	3	0	0	-	0	2	0.5	-
26/03/21	2	Nick Veale	08:40	11:40	3	SW	2	5	1	3	0	0	-	0	2	0.5	-
26/03/21	1	Nick Veale	12:20	15:20	3	SW	2	8	1	3	0	0	-	0	2	0.25	-
26/03/21	1	Nick Veale	12:20	15:20	3	SW	2	7	1	3	0	0	-	0	2	0.25	-
26/03/21	1	Nick Veale	12:20	15:20	3	SW	2	7	1	3	0	0	-	0	2	0.25	-
31/03/21	2	Nick Veale	08:25	11:25	2	W	0	5	1	4	0	0	-	1	1	0	-
31/03/21	2	Nick Veale	08:25	11:25	2	W	0	6	1	4	0	0	-	1	1	0	-
31/03/21	2	Nick Veale	08:25	11:25	2	SW	0	6	1	4	0	0	-	1	1	0	-
31/03/21	1	Nick Veale	12:10	15:10	2	W	0	6	1	4	0	0	-	1	1	0	-
31/03/21	1	Nick Veale	12:10	15:10	2	W	0	7	1	4	0	0	-	0	1	0	-
31/03/21	1	Nick Veale	12:10	15:10	2	SW	0	7	1	4	0	0	-	0	1	0	-
21/04/21	1	Nick Veale	12:10	10:45	2	NW	0	6	2	2	0	0	-	1	2	0.25	-
21/04/21	1	Nick Veale	12:10	10:45	2	NW	0	5	2	2	0	0	-	0	2	0.25	-
21/04/21	1	Nick Veale	12:10	10:45	2	NE	0	6	2	2	0	0	-	0	2	0.25	-
21/04/21	2	Nick Veale	11:20	14:20	2	NW	0	6	2	2	0	0	-	0	2	0.5	Quiet some auks on cliffs mainly RA.
21/04/21	2	Nick Veale	11:20	14:20	2	NW	0	6	2	2	0	0	-	0	2	0.5	-
21/04/21	2	Nick Veale	11:20	14:20	2	NE	0	7	2	2	0	0	-	0	2	0.5	-
28/04/21	1	Nick Veale	09:00	12:00	3	NE	0	3	2	2	0	0	M	0	2	0.5	-
28/04/21	1	Nick Veale	09:00	12:00	3	NE	0	4	2	2	0	0	M-H	0	3	0.5	-
28/04/21	1	Nick Veale	09:00	12:00	3	NE	0	5	2	2	0	0	M-H	0	3	0.5	-
28/04/21	2	Nick Veale	13:00	16:00	3	NE	0	3	2	2	0	0	-	0	3	0.5	High tide at 13:01. Very quiet. No auks on island despite 100s last visit.
28/04/21	2	Nick Veale	13:00	16:00	3	NE	0	3	2	2	0	0	-	0	3	0.5	-
28/04/21	2	Nick Veale	13:00	16:00	3	NE	0	4	2	2	0	0	-	0	2	0.5	-
17/05/21	2	Nick Veale	07:50	10:50	2	NW	0	2	2	2	0	0	-	0	2	0.25	-
17/05/21	2	Nick Veale	07:50	10:50	2	NW	0	3	2	2	0	0	-	0	2	0.25	-
17/05/21	2	Nick Veale	07:50	10:50	3	NW	0	3	2	2	0	0	-	0	2	0.25	-
17/05/21	1	Nick Veale	11:40	14:40	3	NW	0	6	2	2	0	0	-	0	2	0.25	-
17/05/21	1	Nick Veale	11:40	14:40	3	NW	0	5	2	2	0	0	-	0	2	0.25	-

APPENDIX A10.1

Survey date	VP ID	Surveyor	Start time	End time	Wind speed	Wind direction	Rain	Cloud cover	Cloud height	Visibility	Frost	Snow	Tidal cycle	Glare	Sea state	Swell height (m)	Notes
17/05/21	1	Nick Veale	11:40	14:40	2	W	0	6	2	2	0	0	-	0	2	0.25	-
31/05/22	1	Nick Veale	06:30	09:30	1	SE	0	0	0	2	0	0	-	1	1	0	-
31/05/22	1	Nick Veale	06:30	09:30	1	SE	0	0	0	2	0	0	-	0	1	0	-
31/05/22	1	Nick Veale	06:30	09:30	2	SE	0	1	2	2	0	0	-	0	1	0	-
31/05/22	2	Nick Veale	10:15	13:15	2	SE	0	2	2	2	0	0	-	0	1	0	-
31/05/22	2	Nick Veale	10:15	13:15	2	SE	0	4	2	2	0	0	-	0	1	0	-
31/05/22	2	Nick Veale	10:15	13:15	3	SE	0	4	2	2	0	0	-	0	2	0.25	-
17/06/21	1	Nick Veale	05:45	08:45	1	W	0	1	2	2	0	0	-	1	1	0.25	-
17/06/21	1	Nick Veale	05:45	08:45	2	NW	0	1	2	2	0	0	-	0	1	0.25	-
17/06/21	1	Nick Veale	05:45	08:45	2	NW	0	2	2	2	0	0	-	0	1	0.25	-
17/06/21	2	Nick Veale	09:30	12:30	2	W	0	0	2	2	0	0	-	0	1	-	-
17/06/21	2	Nick Veale	09:30	12:30	1	W	0	0	2	2	0	0	-	0	1	-	-
17/06/21	2	Nick Veale	09:30	12:30	2	NW	0	1	2	2	0	0	-	0	1	-	-
28/06/21	1	Nick Veale	05:05	08:05	1	W	0	5	2	2	0	0	-	2	1	0	-
28/06/21	1	Nick Veale	05:05	08:05	1	NW	0	6	2	2	0	0	-	0	1	0	-
28/06/21	1	Nick Veale	05:05	08:05	1	NW	0	6	2	2	0	0	-	0	1	0	-
28/06/21	2	Nick Veale	09:10	12:10	2	W	0	5	2	2	0	0	-	0	1	0.25	-
28/06/21	2	Nick Veale	09:10	12:10	1	NW	0	5	2	2	0	0	-	0	1	0.25	-
28/06/21	2	Nick Veale	09:10	12:10	1	NW	0	6	2	2	0	0	-	0	1	0.25	-
08/07/21	1	Nick Veale	04:35	07:35	1	W	0	0	0	2	0	0	-	2	1	0	-
08/07/21	1	Nick Veale	04:35	07:35	1	W	0	0	0	2	0	0	-	0	1	0	-
08/07/21	1	Nick Veale	04:35	07:35	2	W	0	1	2	2	0	0	-	0	1	0	-
08/07/21	2	Nick Veale	08:30	11:30	2	W	0	2	2	2	0	0	-	0	2	0	-
08/07/21	2	Nick Veale	08:30	11:30	2	W	0	1	2	2	0	0	-	0	2	0	-
08/07/21	2	Nick Veale	08:30	11:30	2	W	0	1	2	2	0	0	-	0	1	0	-
13/07/21	1	Nick Veale	06:20	09:20	2	W	0	7	1	2	0	0	-	1	1	0.25	-
13/07/21	1	Nick Veale	06:20	09:20	2	W	0	7	1	2	0	0	-	0	1	0.25	-
13/07/21	1	Nick Veale	06:20	09:20	2	NW	0	6	1	2	0	0	-	0	1	0.25	-
13/07/21	2	Nick Veale	10:20	13:20	2	W	0	5	1	2	0	0	-	0	2	0.25	-

APPENDIX A10.1

Survey date	VP ID	Surveyor	Start time	End time	Wind speed	Wind direction	Rain	Cloud cover	Cloud height	Visibility	Frost	Snow	Tidal cycle	Glare	Sea state	Swell height (m)	Notes
13/07/21	2	Nick Veale	10:20	13:20	2	W	0	6	1	2	0	0	-	0	2	0.25	-
13/07/21	2	Nick Veale	10:20	13:20	2	NW	0	6	1	2	0	0	-	0	2	0.25	-
20/10/22	1	Lorna Gill	08:30	11:30	2	SE	0	5	-	4	0	0	-	0	3	0.8	-
20/10/22	1	Lorna Gill	08:30	11:30	3	SE	0	6	-	4	0	0	-	0	3	0.5	-
20/10/22	1	Lorna Gill	08:30	11:30	3	SE	0	7	-	4	0	0	-	0	2	0.4	-
25/10/22	1	Lorna Gill	15:07	18:07	3	SE	2	8	-	3	0	0	-	0	3	0.7	-
25/10/22	1	Lorna Gill	15:07	18:07	3	SE	2	8	-	3	0	0	-	0	3	0.6	-
25/10/22	1	Lorna Gill	15:07	18:07	3	SE	0	7	-	4	0	0	-	0	2	0.3	-
28/10/22	2	Lorna Gill	10:45	13:45	4	S	0	1	-	3	0	0	-	0	1	0.2	-
28/10/22	2	Lorna Gill	10:45	13:45	4	S	0	1	-	3	0	0	-	0	1	0.2	-
28/10/22	2	Lorna Gill	10:45	13:45	4	S	0	2	-	3	0	0	-	0	1	0.1	-
03/11/22	2	Lorna Gill	10:00	13:00	2	SE	0	2	-	4	0	0	-	0	-	-	-
03/11/22	2	Lorna Gill	10:00	13:00	2	SE	0	2	-	4	0	0	-	0	-	-	-
03/11/22	2	Lorna Gill	10:00	13:00	2	S	0	1	-	4	0	0	-	0	-	-	-
09/11/22	2	Lorna Gill	10:30	13:30	3	SW	0	1	-	4	0	0	-	0	1	0.1	-
09/11/22	2	Lorna Gill	10:30	13:30	4	SW	0	2	-	4	0	0	-	0	2	0.3	LT 12:52
09/11/22	2	Lorna Gill	10:30	13:30	3	SW	0	2	-	4	0	0	-	0	2	0.5	-
16/11/22	1	Lorna Gill	09:10	12:10	2	SW	0	1	-	3	0	0	-	1	1	0.1	-
16/11/22	1	Lorna Gill	09:10	12:10	1	W	0	1	-	3	0	0	-	0	1	0.1	-
16/11/22	1	Lorna Gill	09:10	12:10	2	SW	0	1	-	3	0	0	-	1	1	0.1	-
18/11/22	2	Lorna Gill	10:15	13:15	4	W	0	2	-	3	0	0	-	0	3	1.1	-
18/11/22	2	Lorna Gill	10:15	13:15	4	W	0	3	-	3	0	0	-	0	3	1	-
18/11/22	2	Lorna Gill	10:15	13:15	4	W	0	2	-	3	0	0	-	0	4	1.3	LT 12:46
22/11/22	1	Lorna Gill	08:30	11:30	2	NW	0	8	-	3	0	0	-	0	2	0.1	
22/11/22	1	Lorna Gill	08:30	11:30	2	NW	1	7	-	3	0	0	-	0	3	0.5	
22/11/22	1	Lorna Gill	08:30	11:30	3	W	0	7	-	3	0	0	-	0	3	0.5	
02/12/21	1	Lorna Gill	10:48	13:48	2	SE	0	4	0	4	0	0	-	1	1	0.1	-
02/12/21	1	Lorna Gill	10:48	13:48	2	SE	0	5	0	4	0	0	-	0	1	0.1	-
02/12/21	1	Lorna Gill	10:48	13:48	2	SE	0	7	0	4	0	0	-	0	1	0.1	-

APPENDIX A10.1

Survey date	VP ID	Surveyor	Start time	End time	Wind speed	Wind direction	Rain	Cloud cover	Cloud height	Visibility	Frost	Snow	Tidal cycle	Glare	Sea state	Swell height (m)	Notes
14/12/21	1	Lorna Gill	13:00	16:00	5	SW	0	5	-	4	0	0	-	0	3	1	-
14/12/21	1	Lorna Gill	13:00	16:00	5	SW	0	4	-	4	0	0	-	0	3	1	-
14/12/21	1	Lorna Gill	13:00	16:00	5	SW	0	6	-	4	0	0	-	0	3	1	-
16/12/22	2	Lorna Gill	10:15	13:15	2	W	2	2	0	3	0	3	-	0	1	0.1	-
16/12/22	2	Lorna Gill	10:15	13:15	2	W	2	4	0	2	0	3	-	0	1	0.1	-
16/12/22	2	Lorna Gill	10:15	13:15	2	W	2	3	0	4	0	3	-	0	1	0.1	-
16/01/23	1	Lorna Gill	11:45	14:45	3	NW	0	1	-	4	0	0	L	0	4	1.25	-
16/01/23	1	Lorna Gill	11:45	14:45	3	NW	0	2	-	4	0	0	L-M	0	3	1	-
16/01/23	1	Lorna Gill	11:45	14:45	3	NW	0	2	-	4	0	0	L-M	0	3	1	-
20/01/23	2	Lorna Gill	12:15	15:15	2	SE	0	1	-	4	0	0	H-M	0	2	0.5	-
20/01/23	2	Lorna Gill	12:15	15:15	2	SE	0	0	-	4	0	0	M-L	0	2	0.5	-
20/01/23	2	Lorna Gill	12:15	15:15	2	SE	0	0	-	4	0	0	M-L	0	2	0.5	-
24/01/23	1	Lorna Gill	13:05	16:05	2	SW	0	3	-	4	0	0	H	0	1	0.1	-
24/01/23	1	Lorna Gill	13:05	16:05	2	SW	0	4	-	4	0	0	H-M	0	1	0.1	-
24/01/23	1	Lorna Gill	13:05	16:05	2	SW	0	4	-	4	0	0	H-M	0	1	0.1	-
27/01/23	2	Lorna Gill	09:45	12:45	2	W	0	8	-	3	0	0	L-M	0	2	0.2	-
27/01/23	2	Lorna Gill	09:45	12:45	2	W	0	7	-	3	0	0	L-M	0	2	0.2	-
27/01/23	2	Lorna Gill	09:45	12:45	2	W	0	7	-	3	0	0	L-M	0	2	0.2	-
13/02/23	1	Lorna Gill	08:21	11:21	3	S	0	6	-	4	0	0	-	0	3	1	-
13/02/23	1	Lorna Gill	08:21	11:21	3	S	0	7	-	4	0	0	-	0	3	1	-
13/02/23	1	Lorna Gill	08:21	11:21	3	S	0	8	-	4	0	0	-	0	3	1	-
23/02/23	1	Lorna Gill	11:59	14:59	3	N	0	2	-	4	0	0	M-H	0	1	0.5	-
23/02/23	1	Lorna Gill	11:59	14:59	3	N	0	3	-	4	0	0	M-H	0	3	0.8	-
23/02/23	1	Lorna Gill	11:59	14:59	2	N	0	3	-	4	0	0	H-M	0	3	0.6	-
06/03/23	2	Lorna Gill	08:30	11:30	3	W	0	6	-	4	0	0	-	0	2	0.5	-
06/03/23	2	Lorna Gill	08:30	11:30	3	W	0	7	-	4	0	0	-	0	2	0.5	-
06/03/23	2	Lorna Gill	08:30	11:30	3	W	1	8	-	4	0	0	-	0	3	1	-
13/03/23	1	Lorna Gill	10:00	13:00	4	SW	0	7	-	3	0	0	-	0	-	0.5	-
13/03/23	1	Lorna Gill	10:00	13:00	4	SW	0	8	-	3	0	0	-	0	-	0.5	-

APPENDIX A10.1

Survey date	VP ID	Surveyor	Start time	End time	Wind speed	Wind direction	Rain	Cloud cover	Cloud height	Visibility	Frost	Snow	Tidal cycle	Glare	Sea state	Swell height (m)	Notes
13/03/23	1	Lorna Gill	10:00	13:00	5	SW	0	5	-	3	0	0	-	0	-	0.7	-
20/03/23	1	Lorna Gill	10:00	13:00	3	S	0	6	-	4	0	0	-	0	2	0.2	-
20/03/23	1	Lorna Gill	10:00	13:00	3	SW	0	7	-	4	0	0	-	0	2	0.3	-
20/03/23	1	Lorna Gill	10:00	13:00	3	SW	0	7	-	4	0	0	-	0	2	0.3	-
24/03/23	2	Lorna Gill	08:30	11:30	4	SW	0	3	-	3	0	0	-	0	2	0.4	VP too close to FU and CA nests. VP stepped in by ~4m - peripheral view obstructed by rocks
24/03/23	2	Lorna Gill	08:30	11:30	5	SW	0	3	-	3	0	0	-	0	3	0.5	-
24/03/23	2	Lorna Gill	08:30	11:30	5	SW	0	7	-	3	0	0	-	0	3	0.6	-
14/04/23	1	Lorna Gill	11:14	14:14	3	NW	0	1	-	4	0	0	-	1	2	0.2	-
14/04/23	1	Lorna Gill	11:14	14:14	3	NW	0	2	-	4	0	0	-	0	2	0.3	-
14/04/23	1	Lorna Gill	11:14	14:14	3	NW	0	2	-	4	0	0	-	0	2	0.3	-
20/04/23	1	Lorna Gill	10:58	13:58	4	E	0	0	-	4	0	0	-	0	3	1	-
20/04/23	1	Lorna Gill	10:58	13:58	4	E	0	0	-	4	0	0	-	0	3	1	-
20/04/23	1	Lorna Gill	10:58	13:58	4	E	0	0	-	4	0	0	-	0	3	1	-
04/05/23	1	Lorna Gill	10:02	13:02	3	E	0	8	-	3	0	0	-	0	-	1	-
04/05/23	1	Lorna Gill	10:02	13:02	4	E	0	8	-	3	0	0	-	1	-	1	-
04/05/23	1	Lorna Gill	10:02	13:02	4	E	0	8	-	3	0	0	-	0	-	1.25	-
08/05/23	2	Lorna Gill	09:30	12:30	3	SW	0	7	-	3	0	0	-	0	2	0.25	-
08/05/23	2	Lorna Gill	09:30	12:30	3	SW	1	8	-	3	0	0	-	0	2	0.25	-
08/05/23	2	Lorna Gill	09:30	12:30	3	SW	0	7	-	3	0	0	-	0	2	0.25	-
23/05/23	2	Lorna Gill	09:10	12:10	2	NW	0	4	-	2	0	0	-	0	1	0.25	-
23/05/23	2	Lorna Gill	09:10	12:10	2	NW	0	4	-	2	0	0	-	0	1	0.25	-
23/05/23	2	Lorna Gill	09:10	12:10	2	NW	0	4	-	2	0	0	-	0	1	0.25	-
26/05/23	1	Lorna Gill	09:26	12:26	3	N	0	0	-	4	0	0	M-L	1	3	0.6	14°C
26/05/23	1	Lorna Gill	09:26	12:26	3	NE	0	0	-	4	0	0	M-L	1	3	0.6	-
26/05/23	1	Lorna Gill	09:26	12:26	2	NE	0	0	-	4	0	0	L-M	0	2	0.5	-

Abbreviations used in Table A10.1b: NE: North east; NW: North west; N: North; E: East; SE: South east; SW: South west; S: South; W: West; H: High; M: Medium; L: Low; m: metres.

APPENDIX 5 – VP RECORDS

Table A10.6. Frequency and number of species encounters and on sea/in flight/total peak counts from VP surveys during winter/passage season (species named in Ireland's Eye and/or Howth Head Coast SPA and/or North-West Irish Sea cSPA citations), sorted by peak VP count

Species	Number of surveys species present (49 surveys total)	Total number of individuals encountered on sea during VP surveys	Total number of individuals encountered in flight during VP surveys	Peak VP count (birds on sea in a single survey)	Peak VP count (birds in flight in a single survey)	Peak VP count (all birds in a single survey)	Peak VP month
Herring Gull	45	3577	709	996	112	1108	Jan
Guillemot	29	1382	299	917	182	1099	Jan
Kittiwake	19	802	125	761	22	783	Mar
Razorbill	23	485	49	286	20	316	Mar
Black-headed Gull	27	669	188	258	41	299	Oct
Fulmar	20	149	220	79	87	166	Jan
Common Scoter	26	402	214	93	65	151	Nov
Great Black-backed Gull	42	463	257	64	47	111	Jan
Shag	45	592	191	93	23	104	Jan
Common Gull	19	126	12	72	4	72	Oct
Red-throated Diver	33	227	27	62	4	62	Nov
Cormorant	44	243	283	34	53	55	Mar
Guillemot/razorbill	2	44	0	44	0	44	Jan
Gannet	17	109	151	42	34	42	Mar
Black Guillemot	26	91	41	34	4	34	Mar
Lesser Black-backed Gull	13	40	3	11	2	11	Nov
Black-throated Diver	1	3	0	3	0	3	Jan
Peregrine Falcon	8	0	13	0	3	3	Mar
Great northern diver	8	7	4	2	1	2	Dec

Table A10.7. Frequency and number of species encounters and on sea/in flight/total peak counts from VP surveys during winter/passage season (species named in Baldoyle Bay SPA citation), sorted by peak VP count

Species	Number of surveys species present (49 surveys total)	Total number of individuals encountered on sea during VP surveys	Total number of individuals encountered in flight during VP surveys	Peak VP count (birds on sea in a single survey)	Peak VP count (birds in flight in a single survey)	Peak VP count (all birds in a single survey)	Peak VP month
Oystercatcher	29	5879	289	4137	44	4139	Oct
Great Crested Grebe	33	4199	32	1648	15	1648	Dec
Dunlin	11	165	341	45	85	85	Mar
Bar-tailed godwit	12	293	46	77	32	77	Dec
Sanderling	9	114	113	27	65	65	Mar
Turnstone	12	124	33	43	11	43	Nov
Knot	1	0	32	0	32	32	Oct
Red-breasted Merganser	19	148	16	32	2	32	Nov

Species	Number of surveys species present (49 surveys total)	Total number of individuals encountered on sea during VP surveys	Total number of individuals encountered in flight during VP surveys	Peak VP count (birds on sea in a single survey)	Peak VP count (birds in flight in a single survey)	Peak VP count (all birds in a single survey)	Peak VP month
Curlew	14	59	19	21	5	21	Oct
Redshank	3	20	1	17	1	17	Sep
Shelduck	9	24	22	12	6	12	Mar
Brent Goose (LB)	13	40	3	11	2	11	Sep
Ringed plover	4	30	24	24	18	6	Nov
Grey heron*	6	3	3	3	3	1	Sep

*Listed as 'other important species' of Baldoyle Bay SPA

Table A10.8. Frequency and number of species encounters and on sea/in flight/total peak counts from VP surveys during winter/passage season (non-SPA species), sorted by peak VP count

Species	Number of surveys species present (49 surveys total)	Total number of individuals encountered on sea during VP surveys	Total number of individuals encountered in flight during VP surveys	Peak VP count (birds on sea in a single survey)	Peak VP count (birds in flight in a single survey)	Peak VP count (all birds in a single survey)	Peak VP month
Sandwich tern	3	25	51	18	29	40	Sep
Hooded Crow	4	0	15	0	7	7	Jan
Linnet	1	0	5	0	5	5	Oct
Meadow pipit	1	0	4	0	4	4	Mar
Purple sandpiper	4	8	0	8	0	4	Nov
Wren	1	0	2	0	2	2	Oct
Eider	3	3	2	2	1	2	Mar
Little grebe	1	1	0	1	0	1	Nov
Buzzard	1	0	1	0	1	1	Jan

Table A10.9. Number of partially identified bird encounters and on sea/in flight/total peak counts from VP surveys during winter/passage season, sorted by peak VP count

There were no partially identified bird encounters

Table A10.10. Frequency and number of species encounters from VP surveys during breeding season (species named in Ireland's Eye/Howth Head Coast SPA citations), sorted by peak VP count

Species	Number of surveys species present (30 surveys total)	Total number of individuals encountered on sea during VP surveys	Total number of individuals encountered in flight during VP surveys	Peak VP count (birds on sea in a single survey)	Peak VP count (birds in flight in a single survey)	Peak VP count (all birds in a single survey)	Peak VP month
Razorbill	20	6107	589	2562	86	2626	May
Herring Gull	30	3079	471	1638	55	1693	Jun
Guillemot	20	6021	567	1541	110	1572	May
Guillemot/Razorbill	7	1442	874	667	462	727	May
Kittiwake	15	1346	713	389	296	685	Jun

Species	Number of surveys species present (30 surveys total)	Total number of individuals encountered on sea during VP surveys	Total number of individuals encountered in flight during VP surveys	Peak VP count (birds on sea in a single survey)	Peak VP count (birds in flight in a single survey)	Peak VP count (all birds in a single survey)	Peak VP month
Gannet	21	640	664	170	209	379	Jun
Common tern	6	121	23	103	19	122	May
Puffin	9	245	23	103	14	103	Jun
Shag	29	471	148	43	16	45	May
Fulmar	18	90	117	29	23	45	Jun
Black-headed gull	10	53	28	16	12	27	Aug
Great Black-backed Gull	25	168	85	26	16	27	Jun
Cormorant	30	195	131	14	17	21	May
Black Guillemot	20	88	21	12	6	14	May
Manx Shearwater	2	7	8	7	6	9	Jun
Lesser black-backed gull	9	24	1	7	1	7	Jul
Common gull	7	18	2	6	2	6	Aug
Common tern or Sandwich tern	1	5	0	5	0	5	Jun
Red-throated Diver	4	6	2	2	2	2	Apr
Roseate tern	2	3	0	2	0	2	May
Peregrine Falcon	4	0	6	0	2	2	Apr

Table A10.11. Frequency and number of species encounters from VP surveys during breeding season (species named in Baldoyle Bay SPA citation), sorted by peak VP count

Species	Number of surveys species present (30 surveys total)	Total number of individuals encountered on sea during VP surveys	Total number of individuals encountered in flight during VP surveys	Peak VP count (birds on sea in a single survey)	Peak VP count (birds in flight in a single survey)	Peak VP count (all birds in a single survey)	Peak VP month
Oystercatcher	22	1993	177	945	42	945	Jun
Great crested grebe	4	48	7	35	7	42	Apr
Ringed plover	5	25	28	10	21	31	Aug
Bar-tailed godwit	3	41	0	24	0	24	Aug
Dunlin	1	23	0	23	0	23	Apr
Turnstone	2	11	18	11	12	17	Aug
Shelduck	12	12	23	4	4	6	Jun
Curlew	5	19	4	10	2	10	Aug
Grey heron*	6	4	5	2	1	2	Jun
Red-breasted merganser	2	4	0	2	0	2	Apr

*Listed as ‘other important species’ of Baldoyle Bay SPA

Table A10.12. Frequency and number of species encounters from VP surveys during breeding season (non-SPA species), sorted by peak VP count

Species	Number of surveys species present (30 surveys total)	Total number of individuals encountered on sea during VP surveys	Total number of individuals encountered in flight during VP surveys	Peak VP count (birds on sea in a single survey)	Peak VP count (birds in flight in a single survey)	Peak VP count (all birds in a single survey)	Peak VP month
Blackcap	1	0	47	0	47	47	May
Sandwich Tern	14	89	39	34	18	35	Apr
Sanderling	1	12	0	12	0	12	Apr
Greenfinch	1	0	4	0	4	4	May
Sand martin	1	0	4	0	4	4	Jun
Whimbrel	1	4	0	4	0	4	Sep
Canada goose	1	1	2	1	2	3	Jun
Lapwing	1	0	1	0	1	1	Jun

Table A10.13. Black guillemot behaviour and distance band distribution recorded during VP surveys (all months, all survey years)

VP number	Behaviour code	VP band 1	VP band 2	VP band 3	VP band 4	Total
1	FE	0	8	25	37	70
	FL	0	15	16	17	48
	LO	0	0	0	28	28
	RL	0	0	2	0	2
	Total	**0**	**23**	**43**	**82**	**148**
2	FE	8	26	18	8	60
	FL	2	8	2	2	14
	LO	7	4	7	0	18
	RO	0	1	0	0	1
	Total	**17**	**39**	**27**	**10**	**93**
Grand total		**17**	**62**	**70**	**92**	**241**

Table A10.14. Black-headed gull behaviour and distance band distribution recorded during VP surveys (all months, all survey years)

VP number	Behaviour code	VP band 1	VP band 2	VP band 3	VP band 4	Total
1	DP	7	1	0	0	8258
	FE	258	31	22	28	339
	FL	66	92	23	29	210
	LO	51	43	12	27	133
	RL	11	0	0	19	30
	RO	11	18	28	116	173
	SF	0	0	0	35	35
	Total	**404**	**185**	**85**	**254**	**928**
2	FL	1	0	1	4	6
	R	0	0	0	2	2
	SF	2	0	0	0	2
	Total	**3**	**0**	**1**	**6**	**10**

Grand total	**407**	**185**	**86**	**260**	**938**

Table A10.15. Black-throated diver behaviour and distance band distribution recorded during VP surveys (all months, all survey years)

VP number	Behaviour code	VP band 1	VP band 2	VP band 3	VP band 4	Total
2	FE	0	0	2	0	2
	LO	0	0	0	1	1
	Total	**0**	**0**	**2**	**1**	**3**
Grand total		**0**	**0**	**2**	**1**	**3**

Table A10.16. Brent goose (LB) behaviour and distance band distribution recorded during VP surveys (all months, all survey years)

VP number	Behaviour code	VP band 1	VP band 2	VP band 3	VP band 4	Total
1	FL	0	29	0	12	41
	RO	0	0	0	7	7
	Total	**0**	**29**	**0**	**19**	**48**
2	FE	18	0	0	0	18
	FL	14	9	0	0	23
	SI	9	0	0	0	9
	Total	**41**	**9**	**0**	**0**	**50**
Grand total		**41**	**38**	**0**	**19**	**98**

Table A10.17. Common gull behaviour and distance band distribution recorded during VP surveys (all months, all survey years)

VP number	Behaviour code	VP band 1	VP band 2	VP band 3	VP band 4	Total
1	FE	76	5	4	1	86
	FL	0	0	2	2	4
	KL	4	0	0	0	4
	LO	3	6	6	4	19
	RO	0	0	7	16	23
	Total	**83**	**11**	**19**	**23**	**136**
2	FL	0	0	10	0	10
	LO	0	0	0	1	1
	RL	4	0	0	0	4
	RO	2	0	0	0	2
	SI	3	2	0	0	5
	Total	**9**	**2**	**10**	**1**	**22**
Grand total		**92**	**13**	**29**	**24**	**158**

Table A10.18. Common scoter behaviour and distance band distribution recorded during VP surveys (all months, all survey years),

VP number	Behaviour code	VP band 1	VP band 2	VP band 3	VP band 4	Total
1	FE	0	0	0	80	80

	FL	0	0	3	169	172
	LO	0	0	32	144	176
	PL	0	0	0	1	1
	RO	0	0	14	13	27
	Total	**0**	**0**	**49**	**407**	**456**
2		0	0	0	4	4
	FE	0	0	19	0	19
	FL	0	5	12	25	42
	LO	0	7	46	40	93
	Total	**0**	**12**	**77**	**69**	**158**
Grand total		**0**	**12**	**126**	**476**	**614**

Table A10.19. Common tern behaviour and distance band distribution recorded during VP surveys (all months, all survey years)

VP number	Behaviour code	VP band 1	VP band 2	VP band 3	VP band 4	Total
1		0	0	0	7	7
	DP	0	8	0	0	8
	FL	0	1	11	8	20
	PL	1	1	16	88	106
	Total	**1**	**10**	**27**	**103**	**141**
2	FL	0	2	0	1	3
	Total	**0**	**2**	**0**	**1**	**3**
Grand total		**1**	**12**	**27**	**104**	**144**

Table A10.20. Cormorant behaviour and distance band distribution recorded during VP surveys (all months, all survey years)

VP number	Behaviour code	VP band 1	VP band 2	VP band 3	VP band 4	Total
1	CF	1	0	0	0	1
	FE	15	47	39	50	151
	FL	7	38	56	59	160
	LO	0	0	1	11	12
	PL	0	6	6	3	15
	PR	0	0	0	28	28
	RO	0	0	0	6	6
	SF	0	0	6	0	6
	Total	**23**	**92**	**112**	**173**	**400**
2		0	0	0	1	1
	CF	4	0	0	0	4
	CN	5	1	0	0	6
	ED	0	0	1	0	1
	EF	4	0	0	0	4
	FE	16	20	17	15	68
	FL	130	76	25	23	254
	LO	8	1	0	0	9
	PL	1	0	2	0	3

	PR	9	0	0	0	9
	RL	3	0	0	0	3
	RO	59	0	0	0	59
	SI	31	0	0	0	31
	Total	**270**	**98**	**45**	**39**	**452**
Grand total		**293**	**190**	**157**	**212**	**852**

Table A10.21. Curlew behaviour and distance band distribution recorded during VP surveys (all months, all survey years)

VP number	Behaviour code	VP band 1	VP band 2	VP band 3	VP band 4	Total
1		0	0	0	1	1
	FE	19	0	3	40	62
	FL	13	1	4	5	23
	RL	0	0	0	2	2
	RO	0	0	1	12	13
	Total	**32**	**1**	**8**	**60**	**101**
Grand total		**32**	**1**	**8**	**60**	**101**

Table A10.22. Dunlin behaviour and distance band distribution recorded during VP surveys (all months, all survey years)

VP number	Behaviour code	VP band 1	VP band 2	VP band 3	VP band 4	Total
1		0	0	0	6	6
	FE	0	0	0	159	159
	FL	86	45	26	207	364
	Total	**86**	**45**	**26**	**372**	**529**
Grand total		**86**	**45**	**26**	**372**	**529**

Table A10.23. Fulmar behaviour and distance band distribution recorded during VP surveys (all months, all survey years)

VP number	Behaviour code	VP band 1	VP band 2	VP band 3	VP band 4	Total
1	FL	0	2	1	3	6
	LO	0	0	1	1	2
	R	0	0	0	7	7
	Total	**0**	**2**	**2**	**11**	**15**
2	EF	0	1	0	0	1
	FE	0	5	0	0	5
	FL	284	18	13	16	331
	LO	29	90	47	9	175
	PR	0	3	2	0	5
	R	1	5	38	0	44
	Total	**314**	**122**	**100**	**25**	**561**
Grand total		**314**	**124**	**102**	**36**	**576**

Table A10.24. Gannet behaviour and distance band distribution recorded during VP surveys (all months, all survey years)

VP number	Behaviour code	VP band 1	VP band 2	VP band 3	VP band 4	Total
1	FE	0	0	0	1	1
	FL	0	3	18	47	68
	LO	0	0	2	23	25
	PL	0	0	25	51	76
	Total	**0**	**3**	**45**	**122**	**170**
2	CN	2	0	0	0	2
	FE	0	20	0	0	20
	FL	347	141	109	150	747
	LO	95	137	231	52	515
	PF	0	11	0	0	11
	PL	15	12	13	23	63
	PR	5	2	0	1	8
	R	0	0	0	21	21
	RO	0	0	0	1	1
	SC	6	0	0	0	0
	Total	**470**	**323**	**353**	**248**	**1394**
Grand total		**470**	**326**	**398**	**370**	**1564**

Table A10.25. Great black-backed gull behaviour and distance band distribution recorded during VP surveys (all months, all survey years)

VP number	Behaviour code	VP band 1	VP band 2	VP band 3	VP band 4	Total
1	FE	38	22	5	10	75
	FL	6	16	36	51	109
	LO	4	32	27	37	100
	R	0	0	0	3	3
	RL	0	0	0	44	44
	RO	3	0	6	64	73
	SC	0	0	0	7	7
	SF	0	0	0	13	13
	Total	**51**	**70**	**74**	**229**	**424**
2	EF	2	0	0	0	2
	FE	2	1	0	0	3
	FL	149	25	33	26	233
	KL	0	1	0	0	1
	LO	43	12	19	24	98
	PL	1	0	0	0	1
	R	0	0	2	2	4
	RL	2	0	0	0	2
	RO	7	5	2	0	14
	SC	6	1	1	1	9
	SF	34	0	4	4	42
	SI	133	6	0	1	140

VP number	Behaviour code	VP band 1	VP band 2	VP band 3	VP band 4	Total
	Total	**379**	**51**	**61**	**58**	**549**
Grand total						

Table A10.26. Great crested grebe behaviour and distance band distribution recorded during VP surveys (all months, all survey years)

VP number	Behaviour code	VP band 1	VP band 2	VP band 3	VP band 4	Total
1	FE	20	99	84	142	245
	FL	1	25	4	6	36
	LO	1	413	517	1685	2616
	PL	0	2	1	10	13
	PR	0	24	5	13	42
	R	0	0	1	449	450
	RO	0	10	113	607	730
	SI	0	0	2	8	10
	Total	**22**	**573**	**727**	**2920**	**4242**
2	FE	0	0	3	22	25
	FL	0	0	2	1	3
	LO	0	0	0	13	13
	PL	0	1	0	0	1
	RO	0	0	0	0	2
	Total	**0**	**1**	**5**	**2**	**44**
Grand total		**22**	**574**	**732**	**2958**	**4286**

Table A10.27. Grey heron behaviour and distance band distribution recorded during VP surveys (all months, all survey years)

VP number	Behaviour code	VP band 1	VP band 2	VP band 3	VP band 4	Total
1	FE	0	0	0	1	1
	FL	0	0	2	6	8
	RL	0	0	0	1	1
	RO	0	0	0	2	2
	Total	**0**	**0**	**2**	**10**	**12**
2	EF	1	0	0	0	1
	Total	**1**	**0**	**0**	**0**	**1**
Grand total		**1**	**0**	**2**	**10**	**13**

Table A10.28. Great northern diver behaviour and distance band distribution recorded during VP surveys (all months, all survey years)

VP number	Behaviour code	VP band 1	VP band 2	VP band 3	VP band 4	Total
1	FE	0	0	0	3	3
	Total	**0**	**0**	**0**	**3**	**3**
2	FE	0	0	2	2	4
	FL	0	0	2	2	4
	Total	**0**	**0**	**4**	**4**	**8**

VP number	Behaviour code	VP band 1	VP band 2	VP band 3	VP band 4	Total
Grand total		**0**	**0**	**4**	**7**	**11**

Table A10.29. Guillemot behaviour and distance band distribution recorded during VP surveys (all months, all survey years)

VP number	Behaviour code	VP band 1	VP band 2	VP band 3	VP band 4	Total
1		0	1	0	0	1
	FE	0	2	6	6	14
	FL	0	1	20	1	22
	LO	0	0	8	15	23
	PL	0	0	3	0	3
	RO	0	8	16	12	36
	Total	**0**	**12**	**53**	**34**	**99**
2	EF	13	4	2	0	19
	FE	1	214	11	1	227
	FL	592	54	70	128	844
	LO	3356	1674	1146	825	7001
	PL	0	0	1	1	2
	PR	1	9	6	3	19
	R	0	2	17	30	49
	RO	2	0	5	1	8
	Total	**3965**	**1957**	**1258**	**989**	**8169**
Grand total		**3965**	**1970**	**1311**	**1023**	**8268**

Table A10.30. Guillemot/razorbill behaviour and distance band distribution recorded during VP surveys (all months, all survey years)

VP number	Behaviour code	VP band 1	VP band 2	VP band 3	VP band 4	Total
2	EF	28	0	0	0	28
	FL	447	247	80	100	847
	LO	560	255	247	352	1414
	R	0	0	0	44	44
	Total	**1035**	**502**	**327**	**496**	**2360**
Grand total		**1035**	**502**	**327**	**496**	**2360**

Table A10.31. Herring gull behaviour and distance band distribution recorded during VP surveys (all months, all survey years)

VP number	Behaviour code	VP band 1	VP band 2	VP band 3	VP band 4	Total
1		0	0	2	0	2
	CF	0	0	1	0	1
	DP	0	0	7	14	21
	EF	12	0	0	0	12
	FE	1680	418	379	249	2726
	FL	166	123	147	139	575
	KL	5	3	0	0	8

VP number	Behaviour code	VP band 1	VP band 2	VP band 3	VP band 4	Total
	LO	79	267	180	174	700
	PR	0	0	1	0	1
	R	0	0	1	0	1
	RL	18	0	0	142	160
	RO	15	5	41	285	346
	SC	23	0	0	32	55
	SF	0	0	0	127	127
	SI	0	0	0	6	6
	Total	**1998**	**816**	**759**	**1168**	**4741**
2	EF	12	1	0	0	13
	FE	5	2	3	18	28
	FL	292	148	72	93	605
	KL	0	1	0	0	1
	LO	648	90	129	67	934
	PR	5	1	3	0	9
	R	2	0	4	0	6
	RL	35	0	0	0	35
	RO	96	1	1	4	102
	SC	92	3	2	24	121
	SF	11	2	36	28	77
	SI	1147	16	1	0	1164
	Total	**2345**	**265**	**251**	**234**	**3095**
Grand total		**4343**	**1081**	**1010**	**1402**	**7836**

Table A10.32. Kittiwake behaviour and distance band distribution recorded during VP surveys (all months, all survey years)

VP number	Behaviour code	VP band 1	VP band 2	VP band 3	VP band 4	Total
	FL	8	3	1	5	17
	Total	**8**	**3**	**1**	**5**	**17**
2		0	0	5	0	5
	DF	0	0	0	11	11
	DP	0	16	10	14	40
	EF	4	1	0	0	5
	FE	1	132	109	22	264
	FL	417	76	186	142	821
	LO	416	773	193	203	1585
	PR	11	10	7	0	28
	RE	0	0	0	210	210
	Total	**849**	**1008**	**510**	**602**	**2969**
Grand total		**857**	**1011**	**511**	**607**	**2986**

Table A10.33. Knot behaviour and distance band distribution recorded during VP surveys (all months, all survey years)

VP number	Behaviour code	VP band 1	VP band 2	VP band 3	VP band 4	Total
	FL	0	0	0	32	32
	Total	**0**	**0**	**0**	**32**	**32**
Grand total		**0**	**0**	**0**	**32**	**32**

Table A10.34. Lesser black-backed gull behaviour and distance band distribution recorded during VP surveys (all months, all survey years)

VP number	Behaviour code	VP band 1	VP band 2	VP band 3	VP band 4	Total
1	FE	1	3	2	1	7
	FL	0	0	1	0	1
	LO	5	3	0	1	9
	RO	0	0	7	21	28
	SC	0	0	0	1	1
	SF	0	0	0	2	2
	Total	**6**	**6**	**10**	**26**	**48**
2	FL	0	0	1	2	3
	LO	0	6	2	0	8
	RO	1	0	0	0	1
	SC	2	0	0	0	2
	SF	2	0	0	0	2
	SI	3	1	0	0	4
	Total	**8**	**7**	**3**	**2**	**20**
Grand total		**14**	**13**	**13**	**28**	**68**

Table A10.35. Manx shearwater behaviour and distance band distribution recorded during VP surveys (all months, all survey years)

VP number	Behaviour code	VP band 1	VP band 2	VP band 3	VP band 4	Total
1	FL	0	0	0	2	2
	PL	0	0	1	6	7
	Total	**0**	**0**	**1**	**8**	**9**
2	FL	0	0	6	11	17
	Total	**0**	**0**	**6**	**11**	**17**
Grand total		**0**	**0**	**7**	**19**	**26**

Table A10.36. Oystercatcher behaviour and distance band distribution recorded during VP surveys (all months, all survey years)

VP number	Behaviour code	VP band 1	VP band 2	VP band 3	VP band 4	Total
1		0	0	0	12	12
	FE	3803	2056	774	827	7460
	FL	182	76	34	119	411
	LO	0	0	6	0	6
	RL	0	0	14	91	105

VP number	Behaviour code	VP band 1	VP band 2	VP band 3	VP band 4	Total
	RO	5	5	50	211	271
	SI	0	0	0	6	6
	Total	**3990**	**2137**	**878**	**1266**	**8271**
2	FE	5	0	0	0	5
	FL	45	8	0	2	55
	RO	7	0	0	0	7
	Total	**57**	**8**	**0**	**2**	**67**
Grand total		**4047**	**2145**	**878**	**1268**	**8338**

Table A10.37. Peregrine behaviour and distance band distribution recorded during VP surveys (all months, all survey years)

VP number	Behaviour code	VP band 1	VP band 2	VP band 3	VP band 4	Total
	FL	18	1	0	0	19
	Total	**18**	**1**	**0**	**0**	**19**
Grand total		**18**	**1**	**0**	**0**	**19**

Table A10.38. Puffin behaviour and distance band distribution recorded during VP surveys (all months, all survey years)

VP number	Behaviour code	VP band 1	VP band 2	VP band 3	VP band 4	Total
2	FE	0	5	0	0	5
	FL	14	0	9	0	23
	LO	151	72	11	4	238
	PR	0	0	2	0	2
	Total	**165**	**77**	**22**	**4**	**268**
Grand total		**165**	**77**	**22**	**4**	**268**

Table A10.39. Razorbill behaviour and distance band distribution recorded during VP surveys (all months, all survey years)

VP number	Behaviour code	VP band 1	VP band 2	VP band 3	VP band 4	Total
1	FE	0	0	14	3	17
	FL	0	4	3	6	13
	LO	0	0	27	40	67
	PR	0	2	0	0	2
	RO	0	0	4	5	9
	Total	**0**	**6**	**48**	**54**	**108**
2		0	0	28	0	28
	EF	17	9	3	7	29
	FE	1	222	0	82	230
	FL	47	54	42	584	625
	LO	2943	1676	948	0	6154
	PR	5	0	0	0	5
	R	0	1	4	0	5
	SI	0	2	0	0	2

VP number	Behaviour code	VP band 1	VP band 2	VP band 3	VP band 4	Total
	Total	**3413**	**1964**	**1025**	**676**	**7078**
Grand total		**3413**	**1970**	**1073**	**730**	**7186**

Table A10.40. Redshank behaviour and distance band distribution recorded during VP surveys (all months, all survey years)

VP number	Behaviour code	VP band 1	VP band 2	VP band 3	VP band 4	Total
1	FE	0	3	0	19	22
	FL	1	0	0	0	1
	Total	**1**	**3**	**0**	**19**	**23**
Grand total		**1**	**3**	**0**	**19**	**23**

Table A10.41. Red-breasted merganser behaviour and distance band distribution recorded during VP surveys (all months, all survey years)

VP number	Behaviour code	VP band 1	VP band 2	VP band 3	VP band 4	Total
1		0	0	0	4	4
	FE	0	52	36	24	112
	FL	2	2	2	6	12
	LO	0	0	6	8	14
	Total	**2**	**54**	**44**	**42**	**142**
2	FE	0	0	0	22	22
	FL	0	0	2	2	4
	Total	**0**	**0**	**2**	**24**	**26**
Grand total		**2**	**54**	**46**	**46**	**168**

Table A10.42. Red-throated diver behaviour and distance band distribution recorded during VP surveys (all months, all survey years)

VP number	Behaviour code	VP band 1	VP band 2	VP band 3	VP band 4	Total
1		0	0	1	0	1
	FE	0	19	58	33	110
	FL	0	0	8	8	16
	LO	0	4	8	17	29
	PL	0	0	4	0	4
	PR	0	0	0	7	7
	RO	0	6	25	13	44
	Total	**0**	**29**	**104**	**78**	**211**
2	FE	1	1	6	27	35
	FL	0	0	5	8	13
	LO	0	0	3	0	3
	Total	**1**	**1**	**14**	**35**	**51**
Grand total		**1**	**30**	**118**	**113**	**262**

Table A10.43. Ringed plover behaviour and distance band distribution recorded during VP surveys (all months, all survey years)

VP number	Behaviour code	VP band 1	VP band 2	VP band 3	VP band 4	Total
1	FE	0	0	0	45	45
	FL	10	20	4	18	52
	RL	0	0	0	6	6
	RO	0	0	0	4	4
	Total	**10**	**20**	**4**	**73**	**107**
Grand total		**10**	**20**	**4**	**73**	**107**

Table A10.44. Roseate tern and distance band distribution recorded during VP surveys (all months, all survey years)

VP number	Behaviour code	VP band 1	VP band 2	VP band 3	VP band 4	Total
1	PL	0	0	2	0	2
	Total	**0**	**0**	**2**	**0**	**2**
2	PL	0	0	0	1	1
	Total	**0**	**0**	**0**	**1**	**1**
Grand total		**0**	**0**	**2**	**1**	**3**

Table A10.45. Sanderling behaviour and distance band distribution recorded during VP surveys (all months, all survey years)

VP number	Behaviour code	VP band 1	VP band 2	VP band 3	VP band 4	Total
1	FE	23	4	8	79	114
	FL	1	0	80	44	125
	Total	**24**	**4**	**88**	**123**	**239**
Grand total		**24**	**4**	**88**	**123**	**239**

Table A10.46. Sandwich tern behaviour and distance band distribution recorded during VP surveys (all months, all survey years)

VP number	Behaviour code	VP band 1	VP band 2	VP band 3	VP band 4	Total
1	DP	0	21	11	5	37
	FE	0	0	0	6	6
	FL	0	11	18	35	64
	LO	0	0	0	2	2
	PL	0	0	6	35	41
	RO	0	0	0	22	22
	Total	**0**	**32**	**35**	**105**	**172**
2	DP	0	0	6	0	6
	FL	0	0	8	18	26
	Total	**0**	**0**	**14**	**18**	**32**
Grand total		**0**	**32**	**49**	**123**	**204**

Table A10.47. Shag behaviour and distance band distribution recorded during VP surveys (all months, all survey years)

VP number	Behaviour code	VP band 1	VP band 2	VP band 3	VP band 4	Total
1	FE	23	97	69	70	259
	FL	7	27	46	25	105
	LO	0	0	4	0	4
	RO	0	1	0	5	6
	SF	0	0	7	0	7
	Total	**30**	**125**	**126**	**100**	**381**
2	CF	0	1	0	0	1
	CN	4	0	0	0	4
	EF	15	0	0	0	15
	FE	99	76	70	27	272
	FL	113	66	33	22	234
	LO	48	11	9	3	71
	PL	2	0	0	0	2
	PR	23	3	2	0	28
	RL	25	0	0	0	25
	RO	215	0	0	0	215
	SC	12	0	1	0	13
	SI	141	0	0	0	141
	Total	**697**	**157**	**115**	**51**	**1021**
Grand total		**727**	**282**	**241**	**152**	**1402**

Table A10.48. Shelduck behaviour and distance band distribution recorded during VP surveys (all months, all survey years)

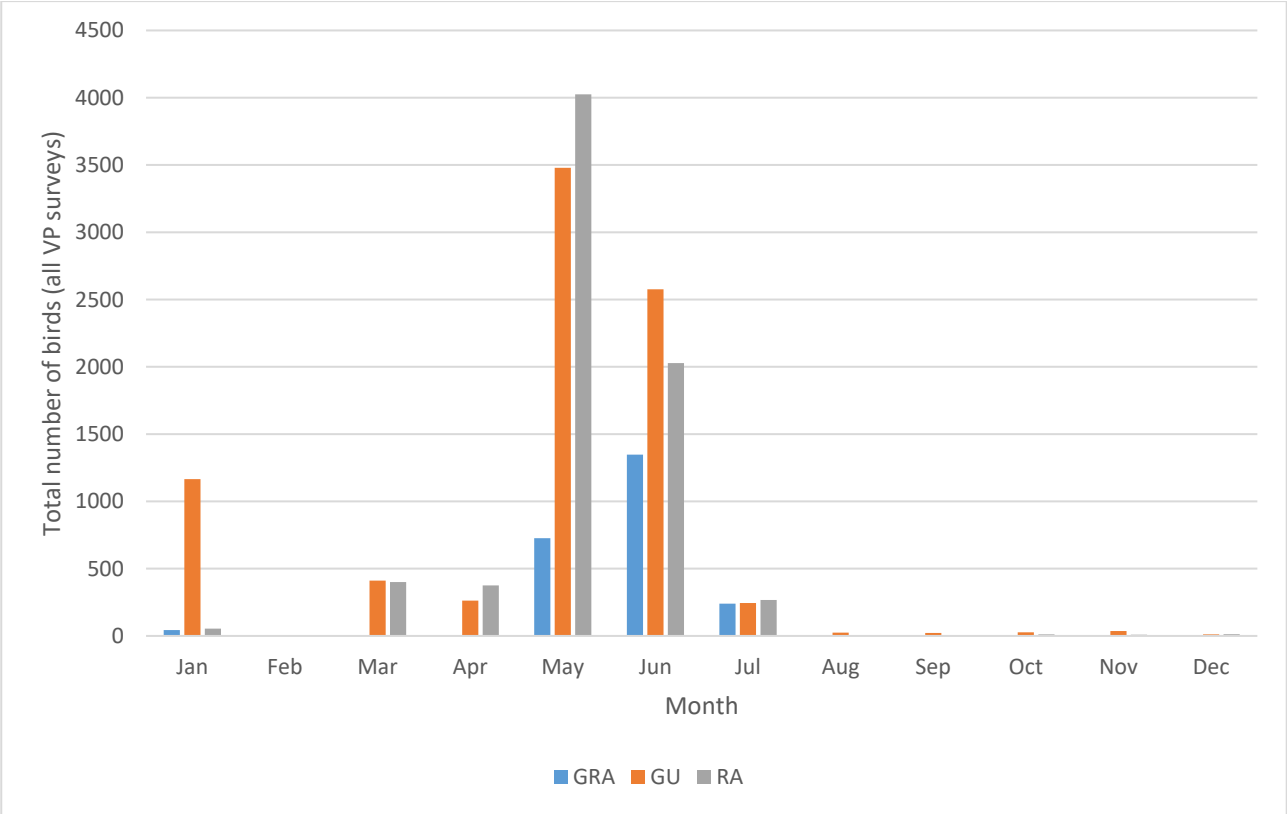
VP number	Behaviour code	VP band 1	VP band 2	VP band 3	VP band 4	Total
1	FE	0	0	0	4	4
	FL	0	6	2	32	40
	LO	0	0	0	2	2
	RL	0	0	0	6	6
	RO	0	0	0	4	4
	Total	**0**	**6**	**2**	**48**	**56**
2	FE	8	0	0	0	8
	FL	4	1	0	0	5
	LO	12	0	0	0	12
	Total	**24**	**1**	**0**	**0**	**25**
Grand total		**24**	**7**	**2**	**48**	**81**

Table A10.49. Turnstone behaviour and distance band distribution recorded during VP surveys (all months, all survey years)

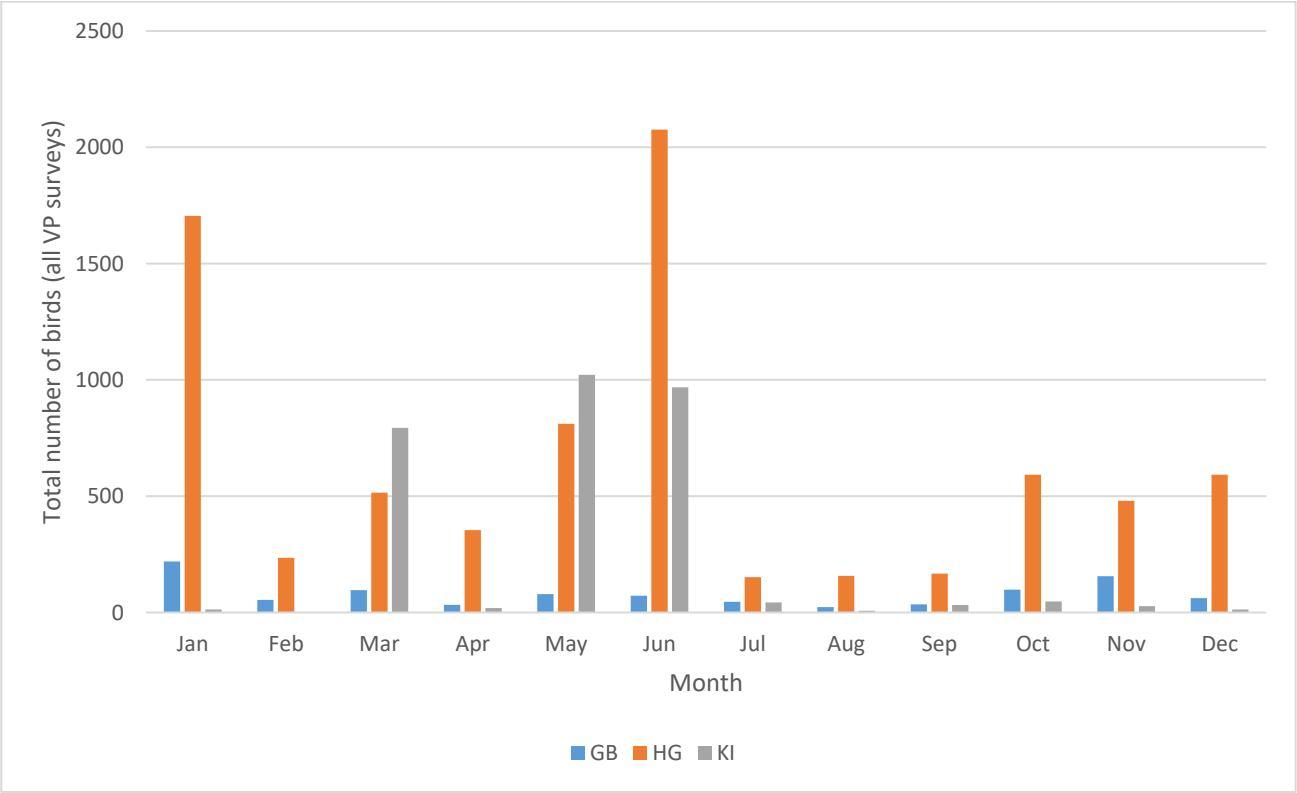
VP number	Behaviour code	VP band 1	VP band 2	VP band 3	VP band 4	Total
1	FE	24	0	0	229	253
	FL	5	14	6	12	37
	Total	**29**	**14**	**6**	**248**	**297**

VP number	Behaviour code	VP band 1	VP band 2	VP band 3	VP band 4	Total
2	FE	14	0	0	0	14
	FL	14	0	0	0	14
	Total	**28**	**0**	**0**	**0**	**28**
Grand total		**57**	**14**	**6**	**248**	**325**

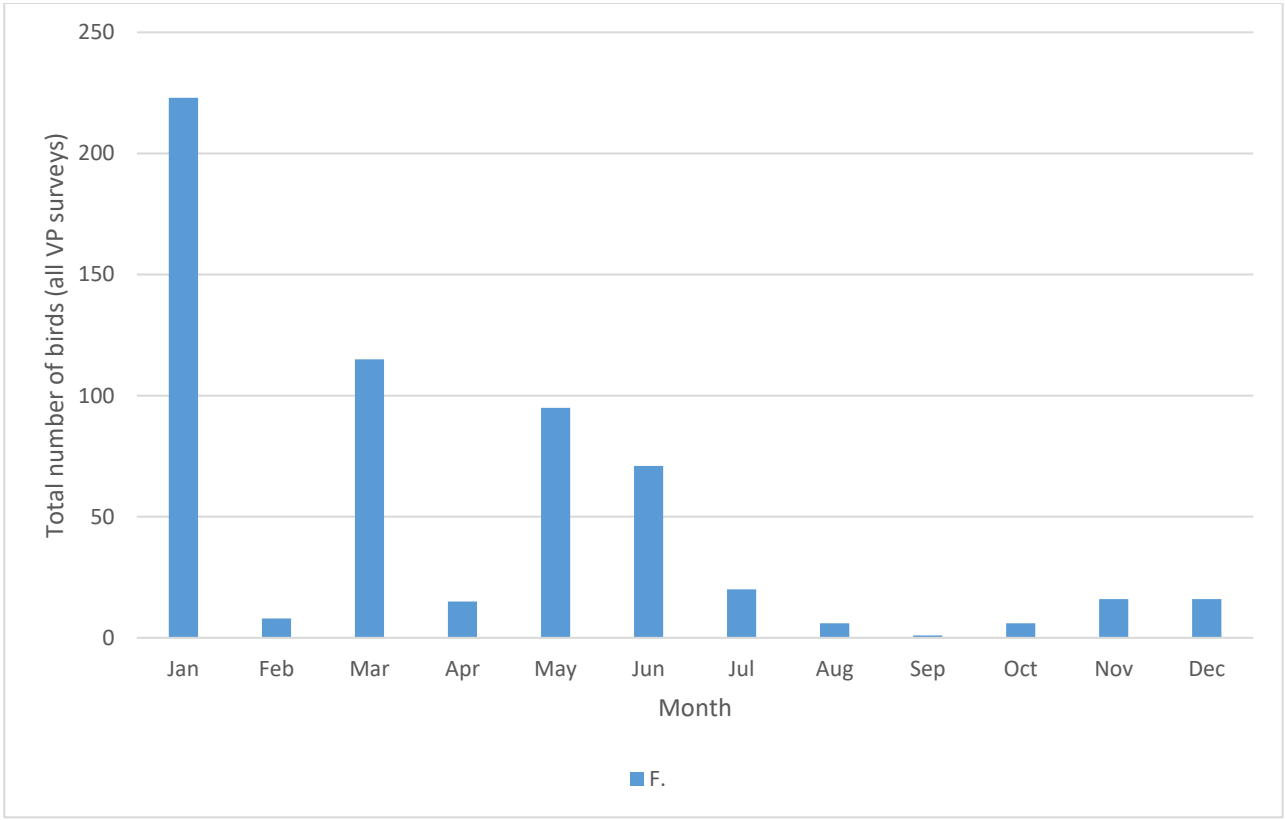
APPENDIX 6 – VP GRAPHS



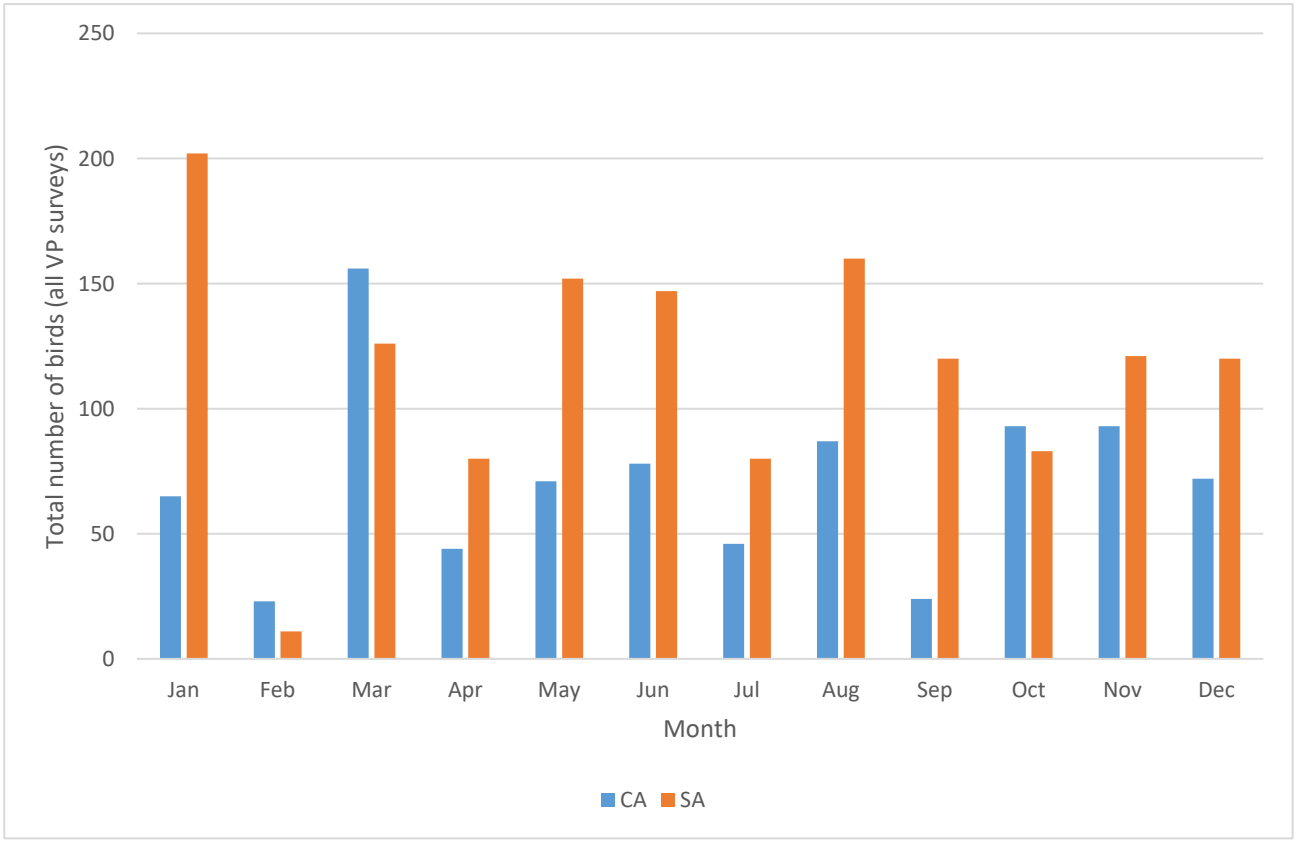
Graph A10.1: Total number of guillemots or razorbills (GRA), guillemots (GU) and razorbills (RA) recorded by month during VP surveys during entire survey programme



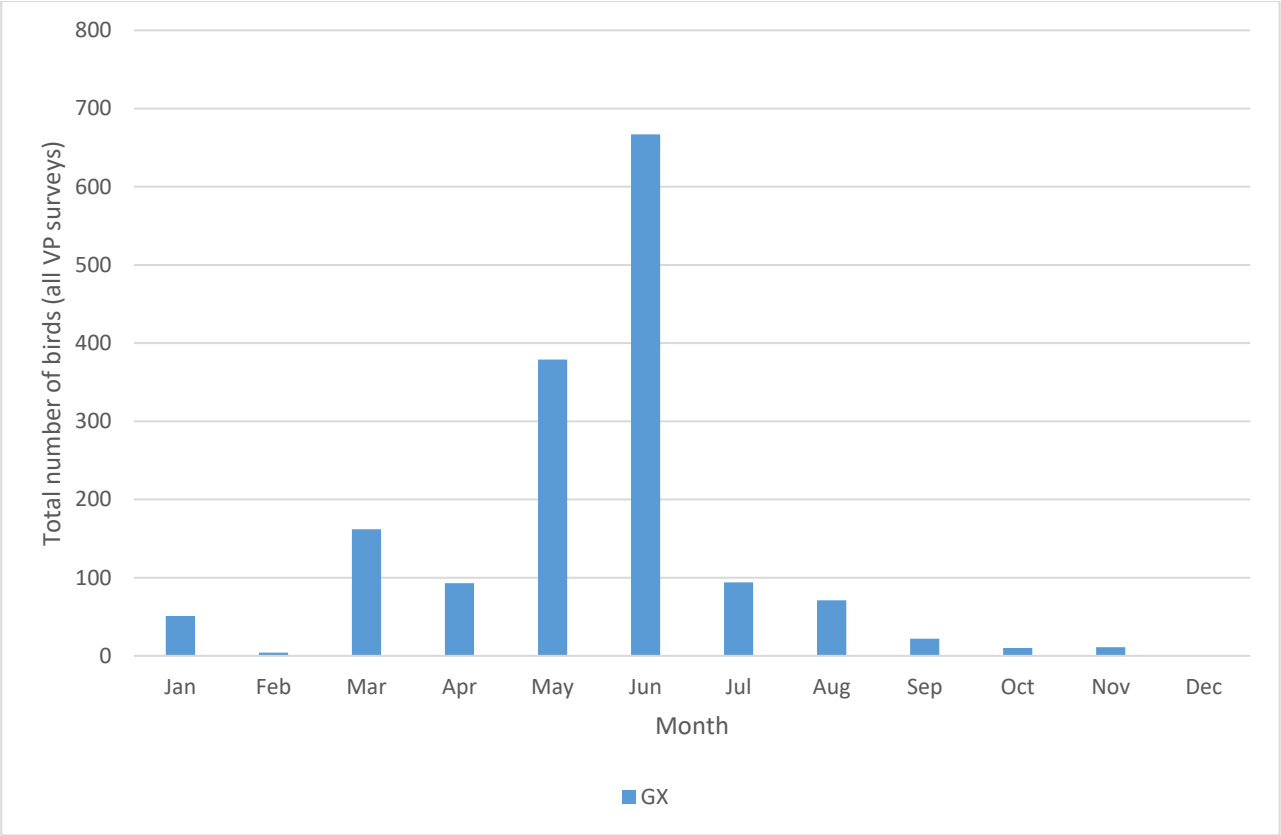
Graph A10.2: Total number of great black-backed gulls (GB), herring gulls (HG) and kittiwakes (KI) recorded by month during VP surveys during entire survey programme



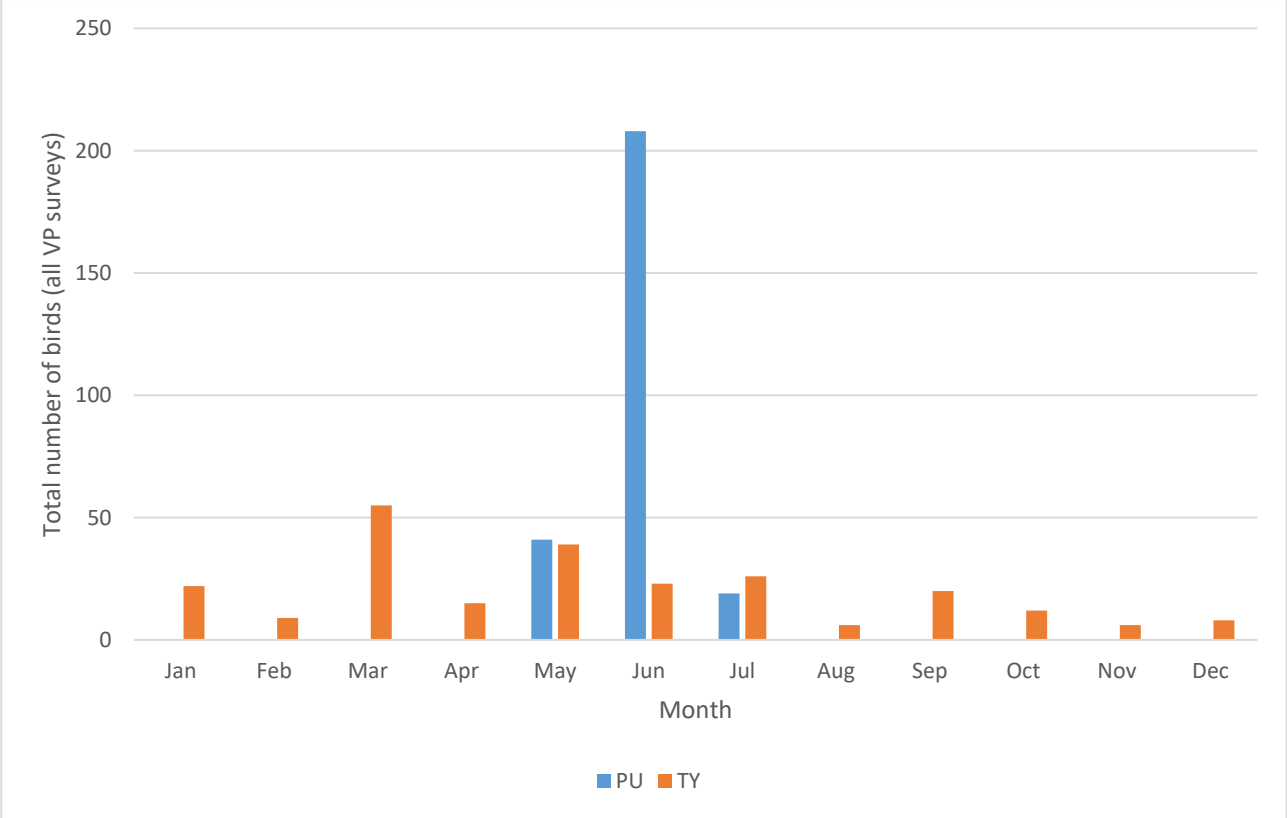
Graph A10.3: Total number of fulmars (F.) recorded by month during VP surveys during entire survey programme



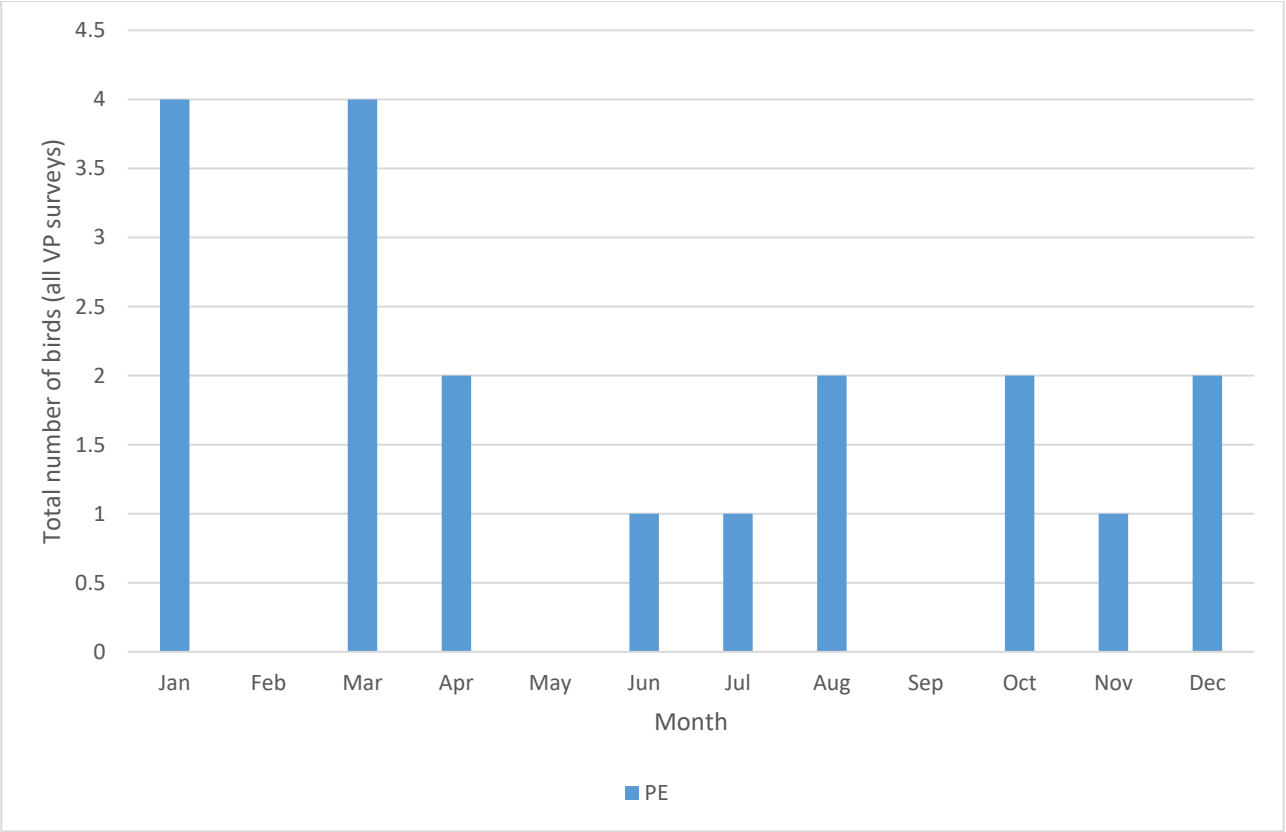
Graph A10.4: Total number of cormorants (CA) and shags (SA) recorded by month during VP surveys during entire survey programme



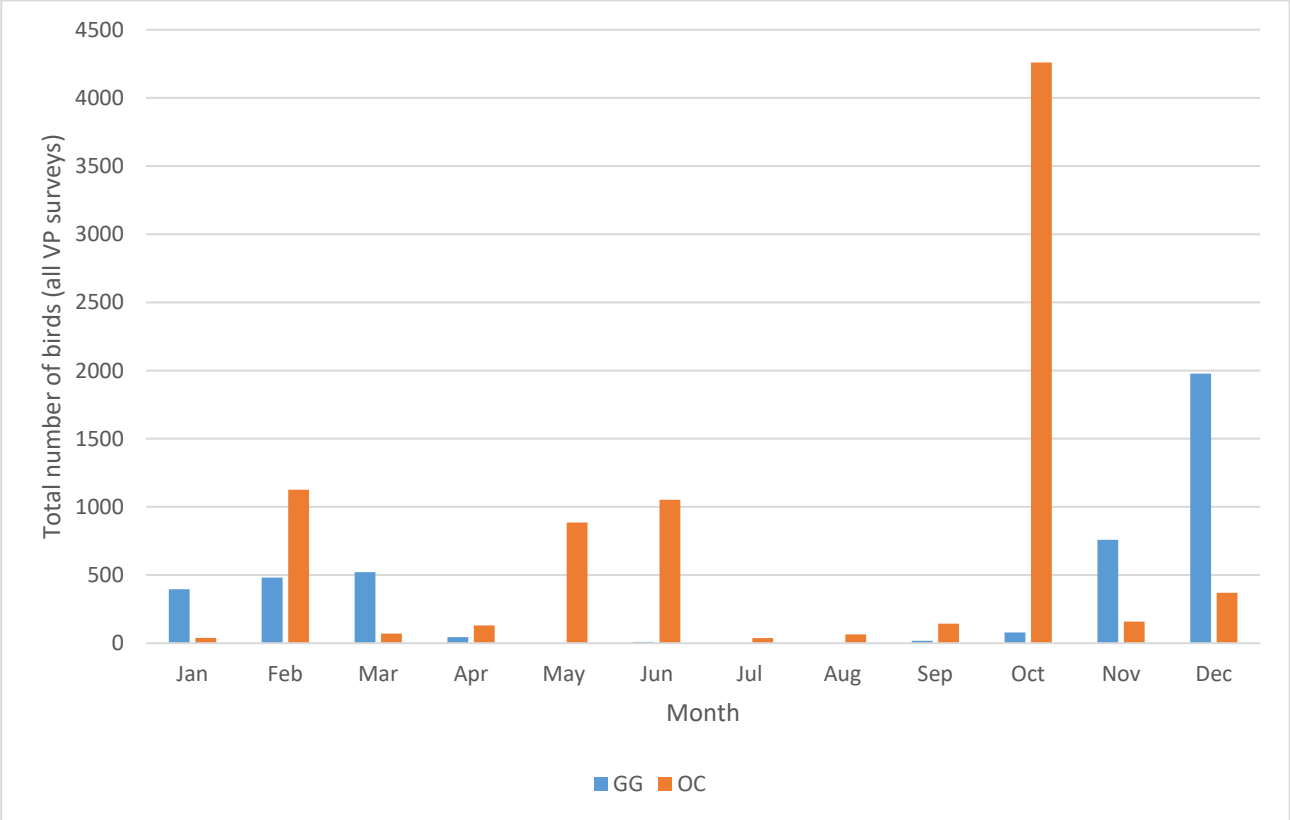
Graph A10.5: Total number of gannets (GX) recorded by month during VP surveys during entire survey programme



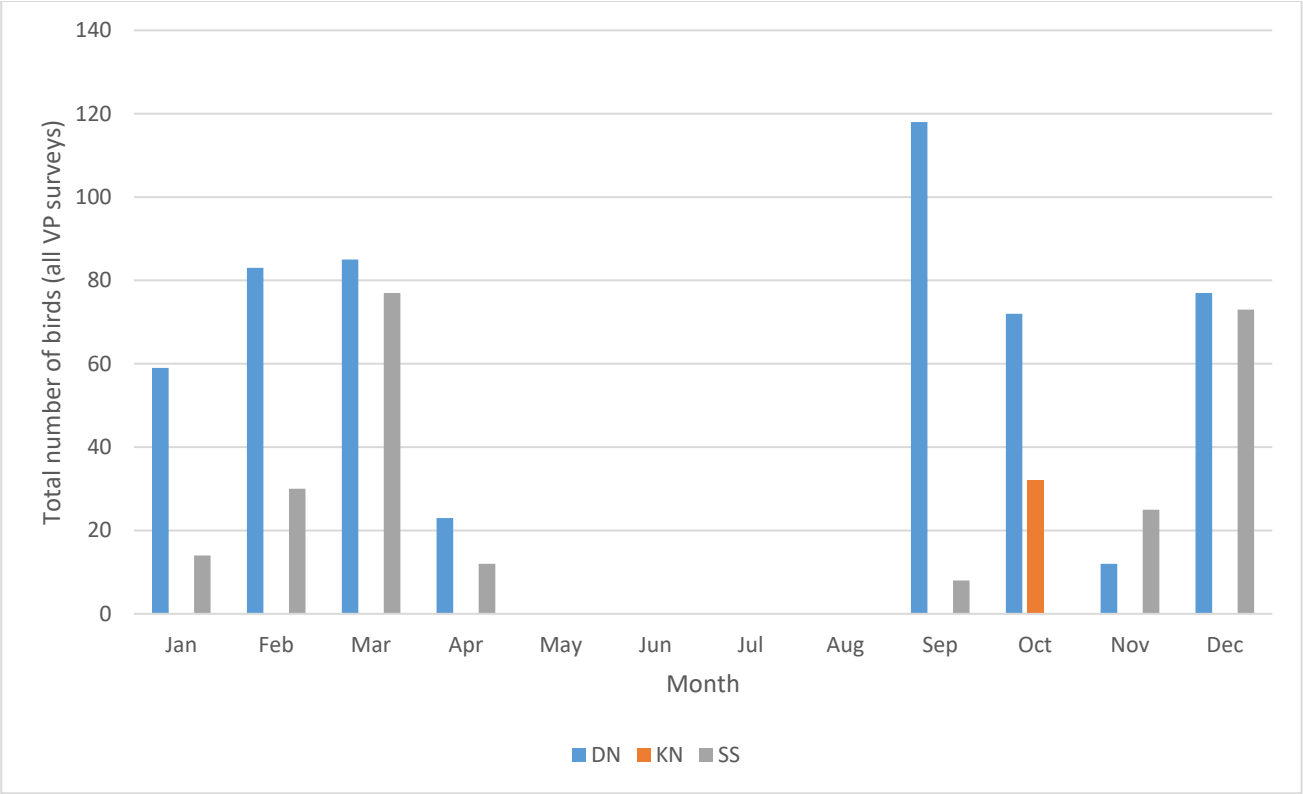
Graph A10.6: Total number of puffins (PU) and black guillemots (TY) recorded by month during VP surveys during entire survey programme



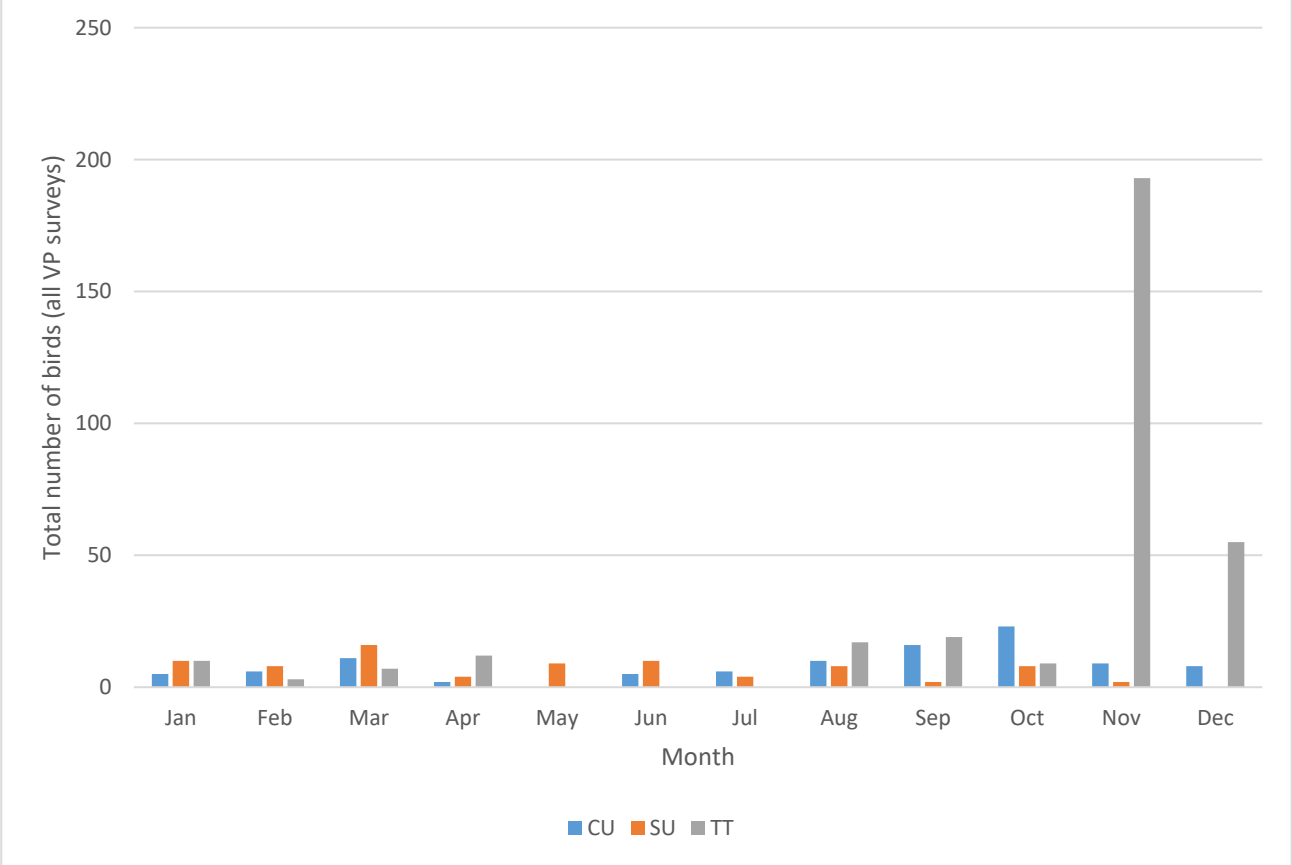
Graph A10.7: Total number of peregrines (PE) recorded by month during VP surveys during entire survey programme



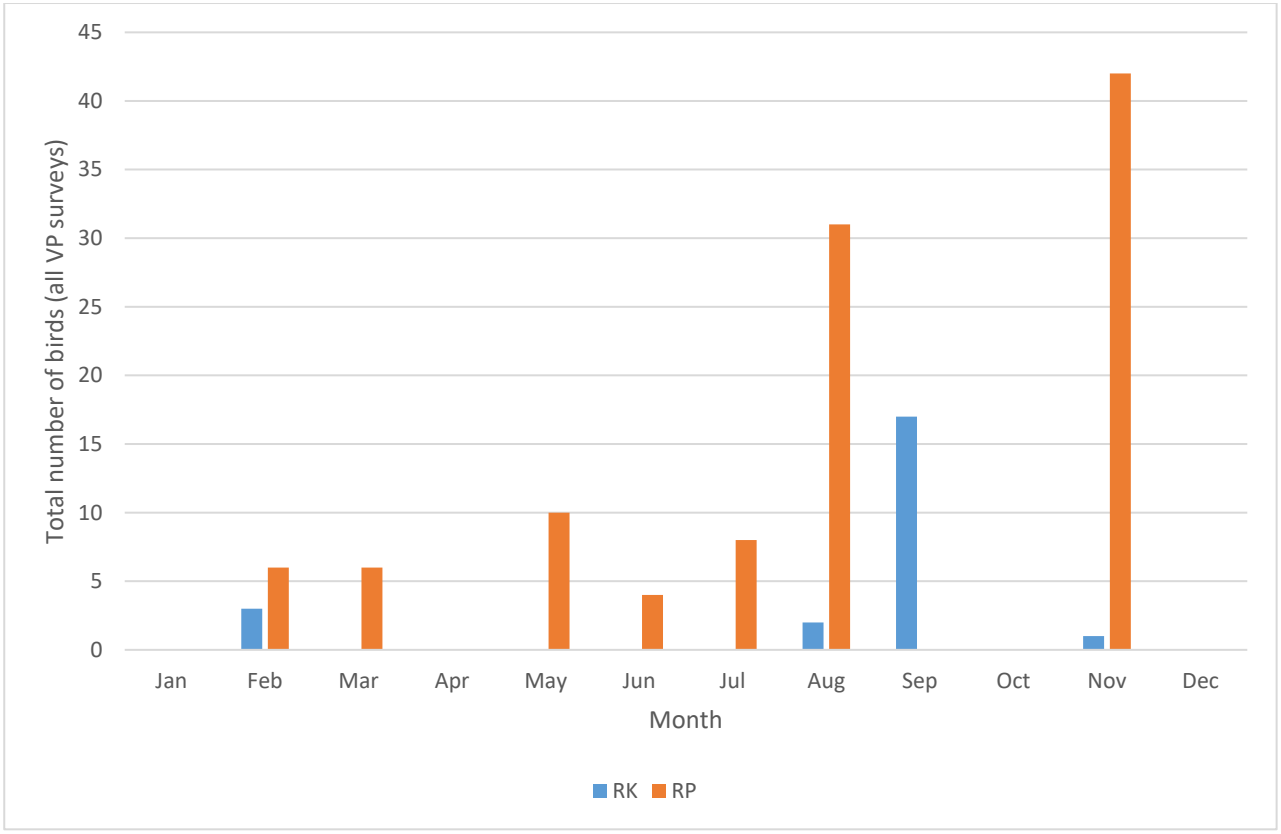
Graph A10.8: Total number of great crested grebes (GG) and oystercatchers (OC) recorded by month during VP surveys during entire survey programme



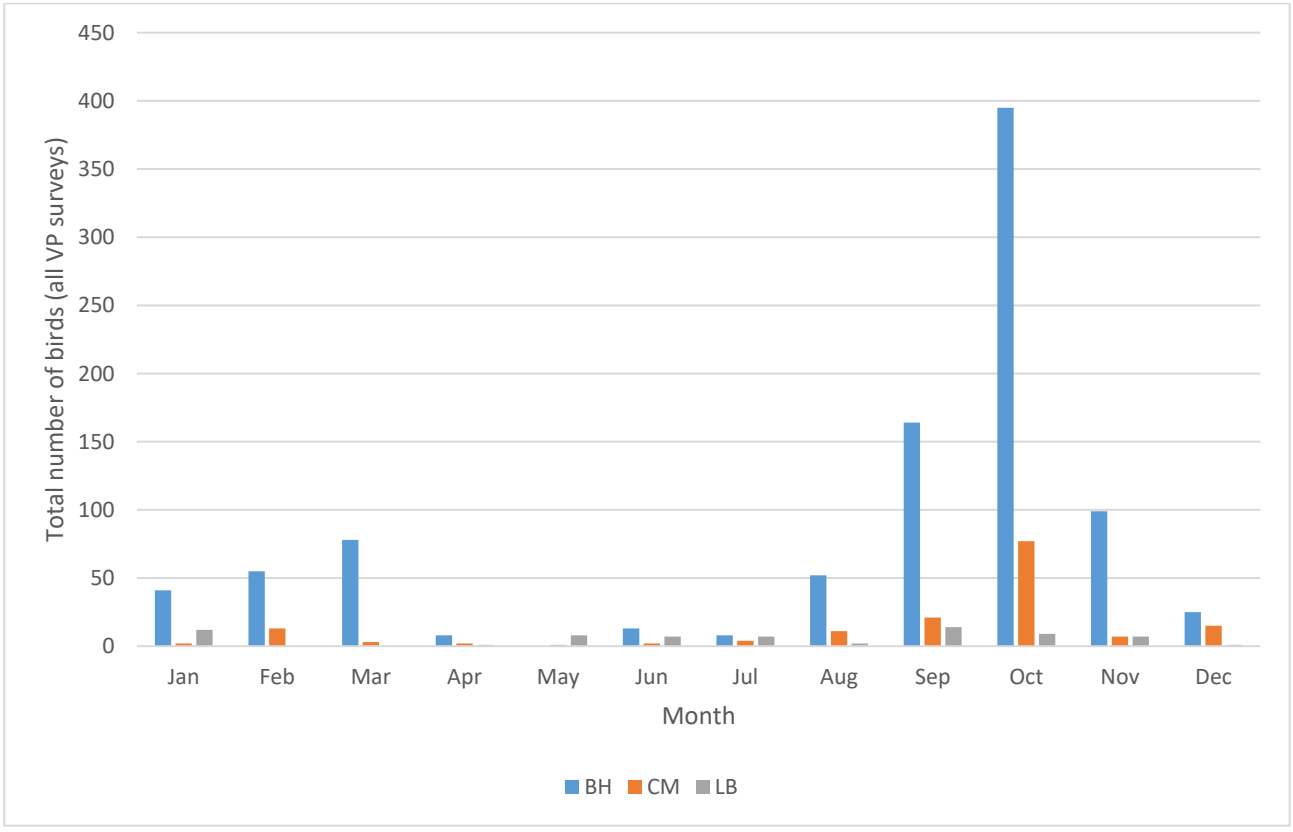
Graph A10.9: Total number of dunlins (DN), knot (KN) and sanderlings (SS) recorded by month during VP surveys during entire survey programme



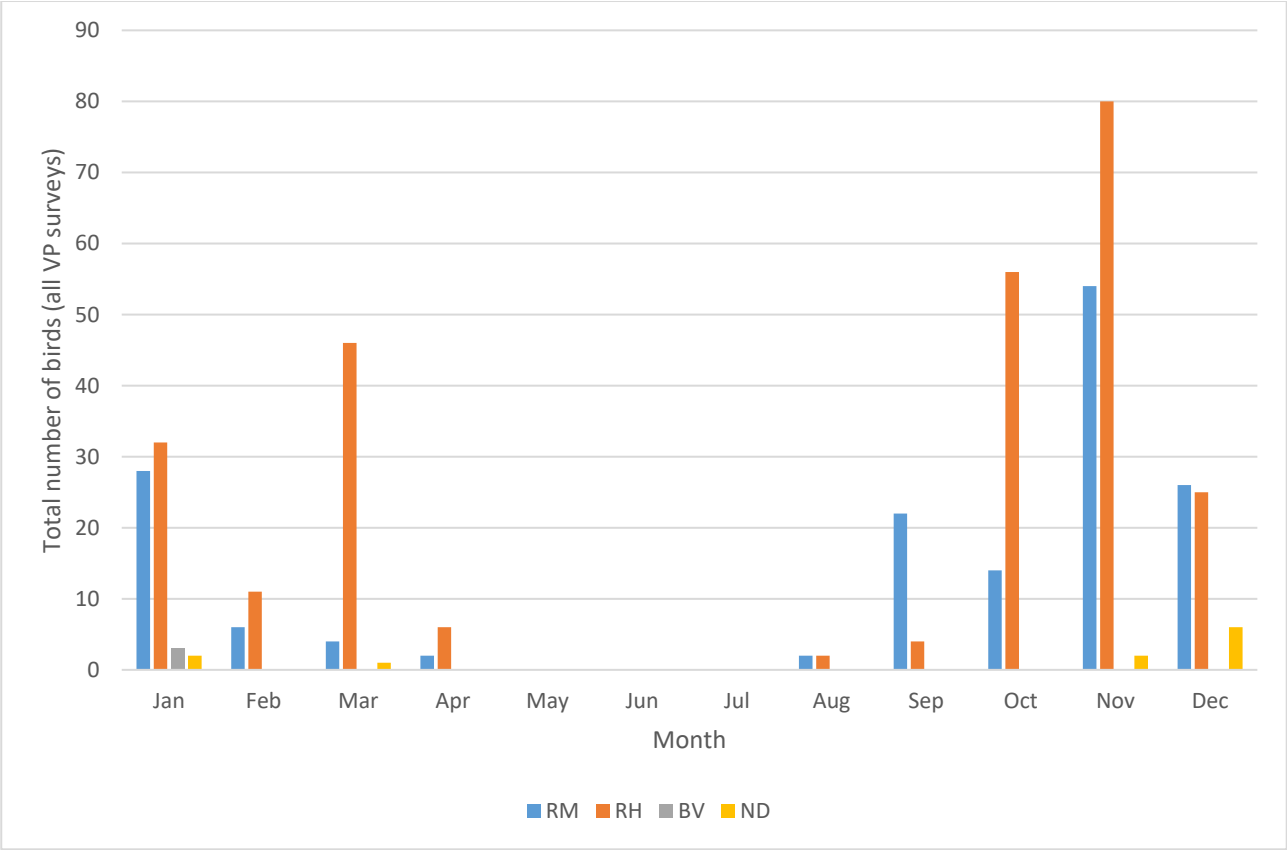
Graph A10.10: Total number of shelduck (SU) and turnstones (TT) recorded by month during VP surveys during entire survey programme



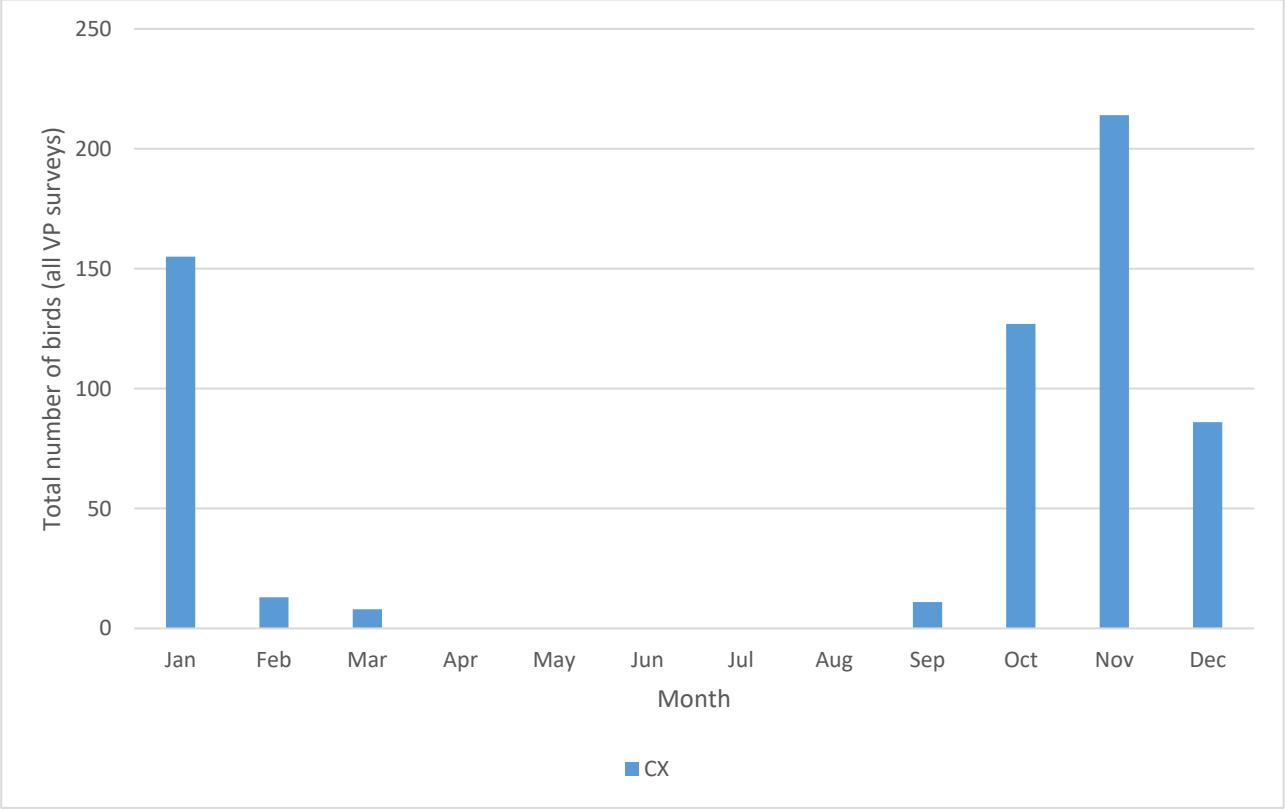
Graph A10.11: Total number of redshanks (RK) and ringed plovers (RP) recorded by month during VP surveys during entire survey programme



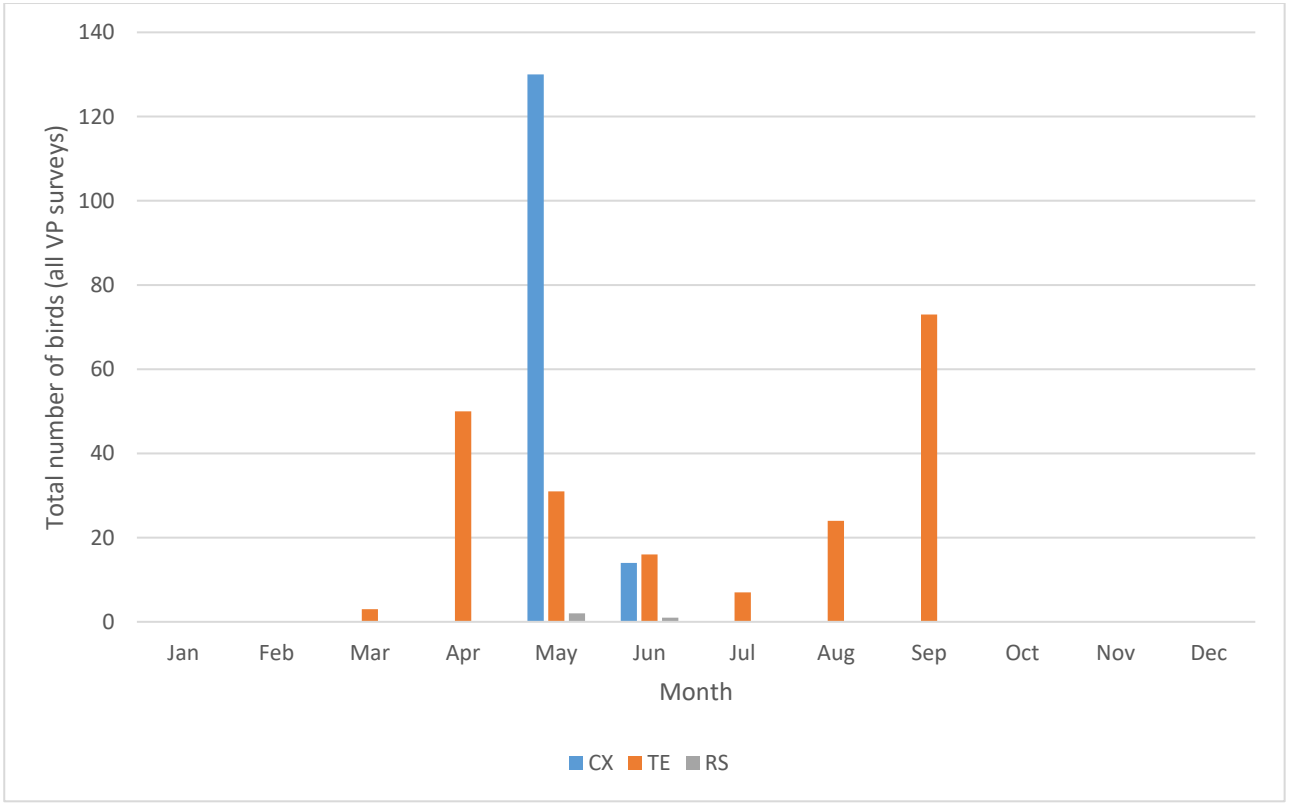
Graph A10.12: Total number of black-headed gulls (BH), common gulls (CM) and lesser black-backed gulls (LB) recorded by month during VP surveys during entire survey programme



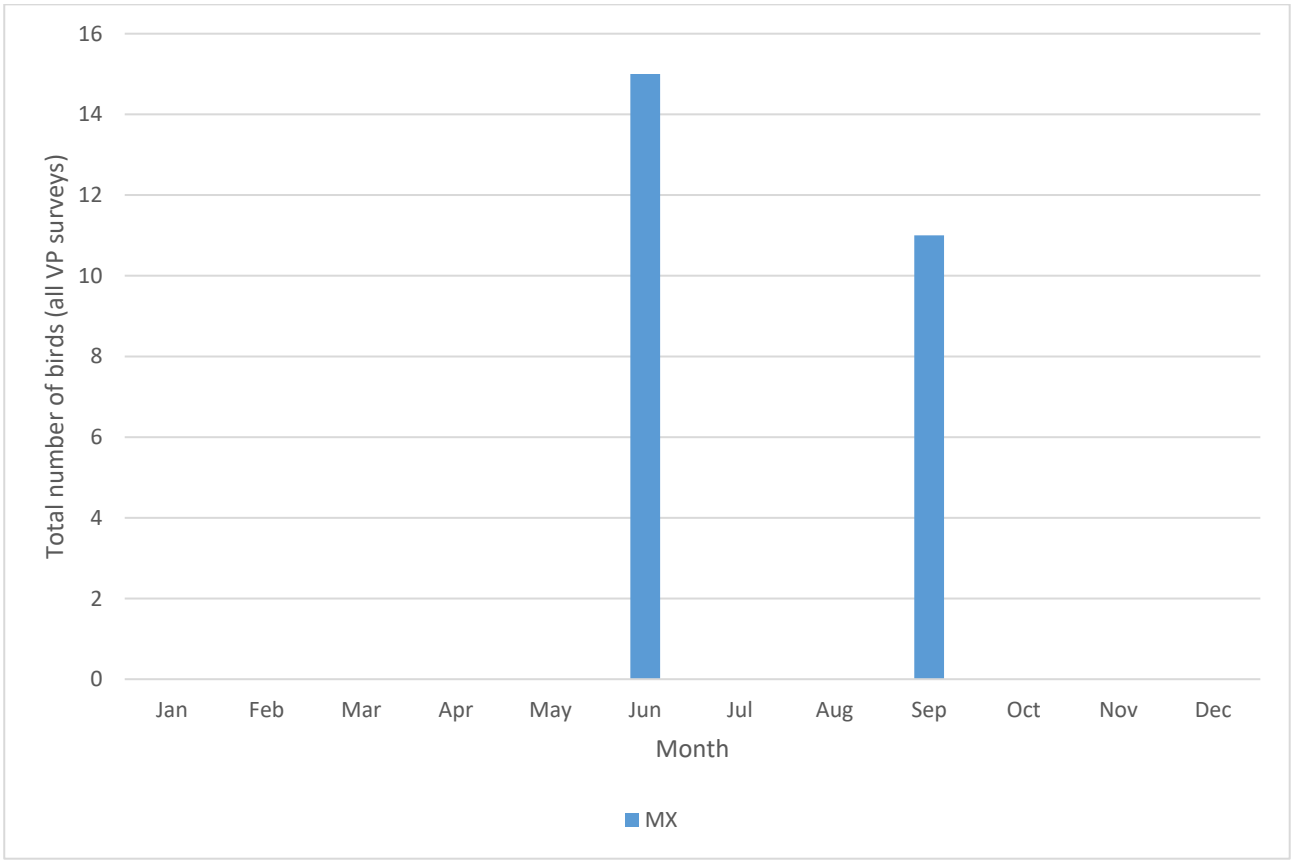
Graph A10.13: Total number of red-breasted mergansers, red-throated divers (RH), black-throated divers (BV) and great northern divers (ND) recorded by month during VP surveys during entire survey programme



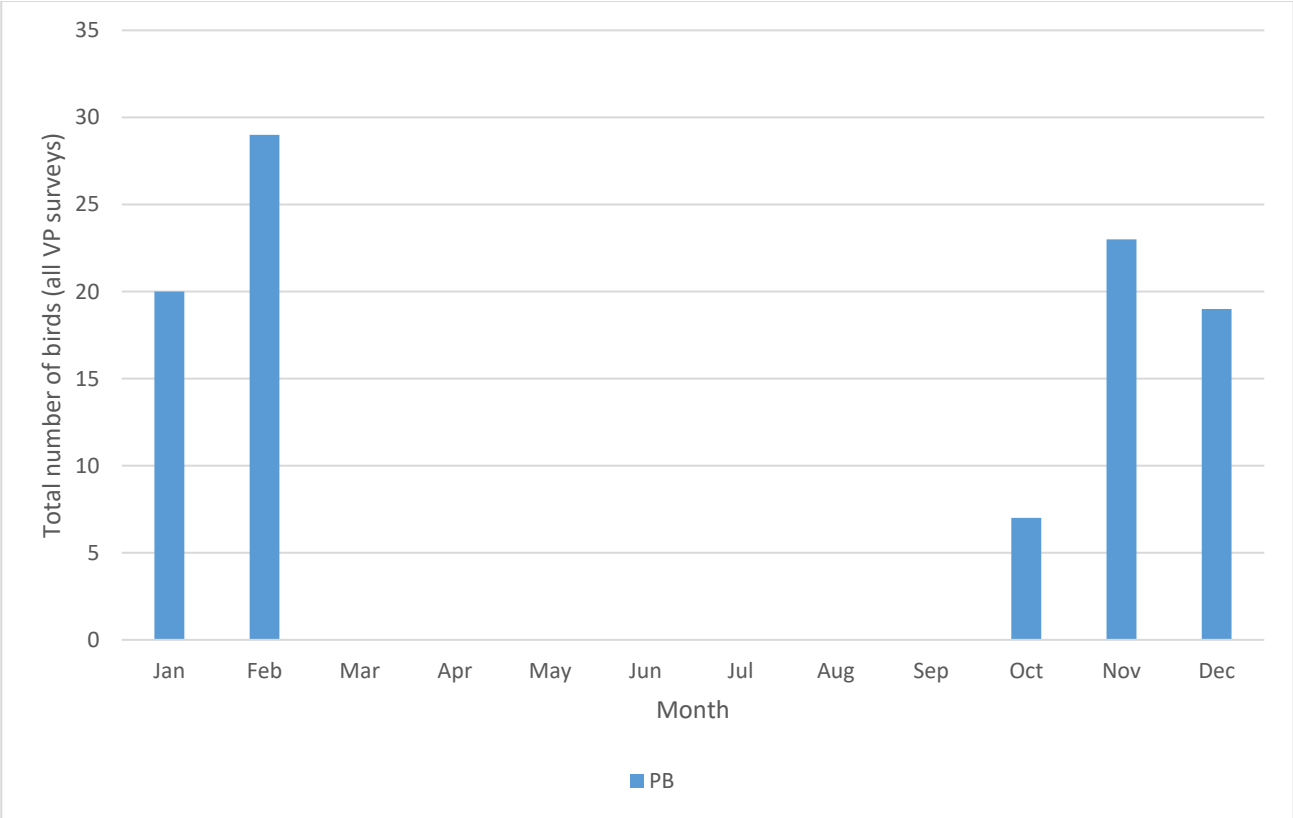
Graph A10.14: Total number of common scoters (CX) recorded by month during VP surveys during entire survey programme



Graph A10.15: Total number of common terns (CN), Sandwich terns (TE) and Roseate terns (RS) recorded by month during VP surveys during entire survey programme



Graph A10.16: Total number of Manx shearwaters (MX) recorded by month during VP surveys during entire survey programme



Graph A10.17: Total number of Light-bellied Brent geese (PB) recorded by month during VP surveys during entire survey programme