

# **Bellrock Offshore Wind Farm**

## **Offshore Transmission Development Area**

**Scoping Report - Volume 1**

**Appendix E: Wintering Bird Survey at Cowie Landfall Area of**

**Search 2025/2026 Technical Report**

Document Number: RHDV\_BEL\_CST\_REP\_0034

Revision Number: 1

Classification: Public

*This page is intentionally blank*



# **Bellrock Offshore Wind Farm**

## **Wintering Bird Survey at Cowie Landfall Area of Search 2025/2026 Technical Report**



*Coast at Cowie Winter Bird Survey Area, 21 November 2025*

**Author: Digger Jackson**  
**August 2026**

## Citation

The preferred citation of this report is:

Atlantic Ecology (2026). *Bellrock Offshore Wind Farm: Wintering Bird Survey at Cowie Landfall Area of Search 2025/2026 Technical Report*. Report prepared by Atlantic Ecology on behalf of Bellrock Offshore Wind Farm Limited.

## Copyright Atlantic Ecology Limited

No part of this report may be copied or reproduced by any means without the written permission of Atlantic Ecology Limited. This report has been prepared and produced for the exclusive use of the client(s) and no third party may make use of the report. Atlantic Ecology Limited has used all reasonable skill, care and diligence in this reports preparation and no additional warranty is provided. There has been no independent verification undertaken of any of the third party information supplied to Atlantic Ecology Limited and used as background material in this report.



# Contents

|                                                             |     |
|-------------------------------------------------------------|-----|
| Contents .....                                              | ii  |
| List of Tables .....                                        | ii  |
| List of Figures (Appendix B) .....                          | iii |
| 1 Introduction .....                                        | 1   |
| 2 Survey Aims .....                                         | 1   |
| 3 Survey Area and Habitats .....                            | 1   |
| 4 Survey Effort and Conditions.....                         | 2   |
| 5 Methods .....                                             | 3   |
| 5.1 Field methodology .....                                 | 3   |
| 5.2 Limitations.....                                        | 4   |
| 5.3 Data management and analysis .....                      | 5   |
| 6 Results .....                                             | 6   |
| 6.1 Birds overview .....                                    | 6   |
| 6.2 Wader and heron species .....                           | 7   |
| 6.3 Wildfowl species .....                                  | 8   |
| 6.4 Seabird species.....                                    | 8   |
| 6.5 Raptors, raven and Red List farmland bird species ..... | 10  |
| 6.6 Marine mammal species .....                             | 11  |
| 7 Discussion .....                                          | 11  |
| 8 References .....                                          | 14  |
| Appendix A: Results tables .....                            | 15  |
| Appendix B: Figures .....                                   | 19  |
| Appendix C: List of Species .....                           | 44  |

## List of Tables

|                                                                                                                                                  |    |
|--------------------------------------------------------------------------------------------------------------------------------------------------|----|
| Table 1. Dates, times and weather conditions of wintering bird survey visits .....                                                               | 3  |
| Table 2. The main ornithological interests of the Survey Area based on the results of the October 2025 to March 2026 wintering bird survey ..... | 13 |

## List of Figures (Appendix B)

|                                                                                                                                    |    |
|------------------------------------------------------------------------------------------------------------------------------------|----|
| Figure 1. Location of the Cowie Survey Area.....                                                                                   | 20 |
| Figure 2. Cowie wintering bird Survey Area 200 x 200 meter grid superimposed on aerial image .....                                 | 21 |
| Figure 3. Distribution of oystercatchers recorded during twice monthly surveys between October 2025 and March 2026.....            | 22 |
| Figure 4. Distribution of curlews recorded during twice monthly surveys between October 2025 and March 2026.....                   | 23 |
| Figure 5. Distribution of redshanks recorded during twice monthly surveys between October 2025 and March 2026.....                 | 24 |
| Figure 6. Distribution of turnstones recorded during twice monthly surveys between October 2025 and March 2026.....                | 25 |
| Figure 7. Distribution of purple sandpipers recorded during twice monthly surveys between October 2025 and March 2026.....         | 26 |
| Figure 8. Distribution of grey herons recorded during twice monthly surveys between October 2025 and March 2026.....               | 27 |
| Figure 9. Distribution of wigeon and teal recorded during twice monthly surveys between October 2025 and March 2026.....           | 28 |
| Figure 10. Distribution of mallard recorded during twice monthly surveys between October 2025 and March 2026.....                  | 29 |
| Figure 11. Distribution of eider ducks recorded during twice monthly surveys between October 2025 and March 2026.....              | 30 |
| Figure 12. Distribution of other wildfowl species recorded during twice monthly surveys between October 2025 and March 2026.....   | 31 |
| Figure 13. Distribution of red-throated divers recorded during twice monthly surveys between October 2025 and March 2026.....      | 32 |
| Figure 14. Distribution of cormorants recorded during twice monthly surveys between October 2025 and March 2026.....               | 33 |
| Figure 15. Distribution of European shags recorded during twice monthly surveys between October 2025 and March 2026.....           | 34 |
| Figure 16. Distribution of common guillemots recorded during twice monthly surveys between October 2025 and March 2026.....        | 35 |
| Figure 17. Distribution of razorbills recorded during twice monthly surveys between October 2025 and March 2026.....               | 36 |
| Figure 18. Distribution of herring gulls recorded during twice monthly surveys between October 2025 and March 2026.....            | 37 |
| Figure 19. Distribution of great black-backed gulls recorded during twice monthly surveys between October 2025 and March 2026..... | 38 |
| Figure 20. Distribution of common gulls recorded during twice monthly surveys between October 2025 and March 2026.....             | 39 |

|                                                                                                                                          |    |
|------------------------------------------------------------------------------------------------------------------------------------------|----|
| Figure 21. Distribution of black-headed gulls recorded during twice monthly surveys between October 2025 and March 2026.....             | 40 |
| Figure 22. Distribution raptor species and raven recorded during twice monthly surveys between October 2025 and March 2026.....          | 41 |
| Figure 23. Distribution of Red List farmland bird species recorded during twice monthly surveys between October 2025 and March 2026..... | 42 |
| Figure 24. Distribution of marine mammal species recorded during twice monthly bird surveys between October 2025 and March 2026.....     | 43 |

## 1 Introduction

- 1 This report presents the results of a wintering bird survey centred on the landfall Area of Search for the Bellrock Offshore Wind Farm (the Bellrock Project) located by Cowie on the coast of Aberdeenshire, Scotland. The wintering bird survey was undertaken by Atlantic Ecology Limited between October 2025 and March 2026. The wintering bird survey was commissioned by Haskoning UK Limited on behalf of Bellrock Offshore Wind Farm Limited. The purpose of the wintering bird survey was to provide quantitative baseline ornithological survey information for the autumn and winter period (i.e., the non-breeding season for most birds) to inform the Bellrock Offshore Transmission Development Area (OfTDA) and Bellrock Onshore Transmission Development Area (OnTDA) Environmental Impact Assessments.
- 2 The wintering bird survey targeted bird species utilising coastal habitats, inshore marine waters and adjacent farmland including shorebirds and seabirds. All the marine mammal species observed during the course of the survey were also recorded. The scientific names of all species referred to in the report are present in **Appendix C: List of Species**.

## 2 Survey Aims

- 3 The aims of the wintering bird survey were:
  - To undertake surveys on a twice-monthly basis, from October 2025 to March 2026, of the landfall area of search at Cowie plus a 500 m buffer, the 'Survey Area' (**Figure 1 (Appendix B)**), with one survey count undertaken during the high tide part of the tidal cycle and the other during the low tide period.
  - To quantify and map all shorebird and waterbird species (e.g., waders, wildfowl and seabirds) within the Survey Area.
  - To record raptor species, raven and farmland bird species of high conservation importance (defined as UK Red List species according to the most recent UK Birds of Conservation Concern (BoCC) assessment<sup>1</sup>) encountered during the wintering bird survey.
- 4 During the bird surveys, all incidental observations of marine mammals were also recorded, and these observations are detailed in this report.

## 3 Survey Area and Habitats

- 5 The boundaries of the Survey Area are broadly based on the landfall area of search at Cowie plus a 500 m buffer (**Figure 1 (Appendix B)**). The northern boundary of the Survey Area corresponds to the A90 road as areas to the north of the A90 were excluded from the area of search and, therefore, are not considered to be relevant. The western boundary of the Survey Area was drawn to exclude built-up parts of Stonehaven town centre.

---

<sup>1</sup> BoCC is the periodic assessment of conservation priority of UK bird species. 'Green List' species have a favourable UK conservation status, 'Amber List' species have a moderately unfavourable status and Red List species have a strongly unfavourable status (Stanbury *et al.*, 2021).

6 The Survey Area has a wide range of coastal and inshore marine habitats as listed below:

- The sea;
- Intertidal rocky coast with rock pools;
- Rock and vegetated coastal cliffs;
- Shingle and sand beaches;
- Farmland (comprising cereal and pasture fields with surrounding walls and hedges);
- Golf course;
- Buildings and gardens;
- Woodland and scrub vegetation; and
- Roads and associated verges.

7 The Survey Area includes the sea out to approximately 1 km from the coast (MHWS). The marine sections of the Survey Area contain both rocky and soft seabed habitats, and water depths of up to approximately 20 m.

## 4 Survey Effort and Conditions

8 The survey visits were undertaken at twice-monthly intervals between October 2025 and March 2026, with one of the monthly visits timed to target the low tide period and the other visit targeting the high tide period. During the non-breeding months, it is common for some bird species to move between different locations. Therefore, the range of bird species using the Survey Area and their associated abundances were expected to vary through the autumn and winter. Many coastal birds, especially wader and gull species, use intertidal habitats for some or all of their foraging. Therefore, it was also to be expected that the spatial use of the Survey Area by these species would show changes in relation to the tidal cycle. The programme of multiple survey visits spread through the autumn and winter months and equally targeting high and low tide conditions was designed to provide a representative data set to quantify the bird species distribution and abundance in the Survey Area.

9 Local weather forecast information and tide tables were consulted ahead of all survey visits. Survey work avoided days with poor visibility (e.g. fog) or with persistent rain or snow, or gale force winds. Visits were also timed such that it was possible to complete counts during conditions of good daylight, essentially the period between sunrise and sunset. The timings and weather conditions for each survey visit are summarised in **Table 1**.

10 The high tide period was defined as the period two hours before and two hours after the predicted time of a high tide. The low tide period was defined as the period two hours before and two hours after the predicted time of a low tide.



**Table 1. Dates, times and weather conditions of wintering bird survey visits**

| Date                                                                                                                                                                                                           | Tide state | Survey start time | Tide time | Tide height (m) | Temp (°C) | Wind force <sup>1</sup> and direction | Rain          | Visibility | Sea state <sup>2</sup> |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|-------------------|-----------|-----------------|-----------|---------------------------------------|---------------|------------|------------------------|
| 05/10/2025                                                                                                                                                                                                     | High       | 12:12             | 12:54     | 3.4             | 13        | F2-3 NW                               | None          | Very good  | 1 - 2                  |
| 23/10/2025                                                                                                                                                                                                     | Low        | 08:34             | 09:03     | 0.8             | 7         | F1-3 NW                               | None          | Very good  | 1 - 2                  |
| 10/11/2025                                                                                                                                                                                                     | High       | 15:42             | 16:36     | 4.0             | 10        | F3 S                                  | None          | Very good  | 3                      |
| 21/11/2025                                                                                                                                                                                                     | Low        | 07:59             | 07:40     | 1.0             | -3        | F1-2 W                                | None          | Very good  | 1 - 2                  |
| 08/12/2025                                                                                                                                                                                                     | High       | 15:17             | 15:31     | 4.3             | 7         | F2-4 SW>SE                            | None          | Very good  | 1 - 2                  |
| 14/12/2025                                                                                                                                                                                                     | Low        | 13:25             | 15:15     | 1.9             | 10        | F5 S                                  | drizzle       | Good       | 5                      |
| 20/01/2026                                                                                                                                                                                                     | Low        | 08:57             | 08:05     | 1.2             | 7         | F3 SSE                                | drizzle       | Poor (1km) | 3                      |
| 30/01/2026                                                                                                                                                                                                     | High       | 10:55             | 11:09     | 3.5             | 3         | F6 SE                                 | Light showers | Good       | 6                      |
| 13/02/2026                                                                                                                                                                                                     | High       | 10:00             | 10:30     | 3.4             | 2         | F2 NW                                 | None          | Very good  | 3                      |
| 19/02/2026                                                                                                                                                                                                     | Low        | 09:00             | 08:17     | 0.9             | 3         | F5 SE                                 | None          | Very good  | 5 - 6                  |
| 06/03/2026                                                                                                                                                                                                     | Low        | 08:24             | 08:58     | 0.9             | 2         | F2 NNW                                | None          | Very good  | 1                      |
| 19/03/2026                                                                                                                                                                                                     | High       | 13:30             | 13:29     | 4.4             | 14        | F1 SE                                 | None          | Very good  | 1                      |
| <b>Notes:</b><br><sup>1</sup> Wind force rated on Beaufort Scale, ranging from 0 (calm) to 12 (hurricane)<br><sup>2</sup> Sea state rated on Douglas Sea Scale, ranging from 0 (calm-glassy) to 9 (phenomenal) |            |                   |           |                 |           |                                       |               |            |                        |

## 5 Methods

### 5.1 Field methodology

- 11 The survey broadly adopted the field methods used for the national Wetland and Estuary Bird Survey coordinated by the British Trust for Ornithology (BTO) (Gilbert *et al.*, 1998), but with improvements to the precision of spatial recording (see below).
- 12 On each survey date, a count was undertaken of the target bird species within the Survey Area. The target bird species were all wildfowl, seabird, wader, raptor and raven species. In addition, farmland bird species listed on the UK BoCC Red List were also recorded (**Table 1**). Other farmland and woodland bird species were not recorded. Birds that were only seen flying through the Survey Area and not

interacting with it (e.g. not foraging) were not recorded. Although incidental to the aim of the survey, the opportunity was taken to record all marine mammal species seen whilst undertaking the bird counts.

- 13 Counts were undertaken from a series of vantage points along the coastline that provided good views across the Survey Area (**Figure 1, Appendix B**). The vantage points were spaced approximately 300 m apart. Additional counts of geese, wader and gull species using farmland habitats inland from the coast and in parts not visible from the coastal vantage points were obtained by scanning these areas from a vehicle parked in farm gateways and other safe access places along public roads and farm tracks.
- 14 Counts were made with the aid of a tripod-mounted 25-60x spotting scope; this allowed birds up to at least 1 km away to be detected, identified and quantified. The number and behaviour of birds observed within the Survey Area were recorded on a bespoke recording form using the British Trust for Ornithology species codes (see **Appendix C: List of Species**). Additional information was noted for each record concerning the birds' behaviour (e.g. feeding, roosting) and gross habitat (e.g., sea, beach, tide edge, cliffs, farmland). To facilitate the recording of where birds were observed, the Survey Area was divided into a grid of 200 m x 200 m squares based on the Ordnance Survey British National Grid (**Figure 2 (Appendix B)**). Each 200 m grid cell was referred to by an individual identifier code (or 'address') based on the cell's position north to south (indicated by numbers 1-16) and west to east (indicated by letters A-Q) in the grid. The appropriate 200 m square for a record was identified with the aid of a large-scale aerial image of the Survey Area, overlaid with a labelled grid (**Figure 2 (Appendix B)**). If a bird was using a notable habitat feature within the 200 m grid cells, such as a particular skerry, cliff face or freshwater feature, this was noted so that these records could be more accurately mapped. Some areas were visible from more than one vantage point; therefore, great care was taken to ensure that the same individuals were not recorded more than once during any single count session. Care was also taken not to disturb birds.
- 15 The surveys were undertaken by Digger Jackson and Karen Yearsley of Atlantic Ecology Limited who have over fifty years of combined experience in undertaking wetland and coastal bird surveys in Scotland, both professionally and in a voluntary capacity for the national monthly WeBS counts.

## 5.2 Limitations

- 16 In some circumstances some species were potentially under recorded. The species likely to have been affected by under recording and the reasons for this are discussed below.
- 17 In dull conditions purple sandpipers and turnstones feeding in low tide conditions on the extensive intertidal rocky shore habitat were generally hard to detect due to their small size, dark colouration and undemonstrative behaviour. Therefore, for these two species, it is possible that some of the low-tide surveys under recorded the actual number of birds present. These species were not likely to be under recorded in high tide conditions, when they aggregate into communal roosts with other species and the area of intertidal habitat is much reduced.
- 18 Surface diving seabirds, in particular relatively small dark-coloured species that spend a good proportion of their time diving underwater, can be hard to detect unless sea conditions are relatively calm (i.e., below sea state 4) and there is good light. Even in favourable observation conditions, there

was potential for auk species such as common guillemot and razorbill to be under recorded if they were more than approximately 600 m out from the shore.

- 19 On three occasions sea conditions exceeded sea state 3 (14<sup>th</sup> December, 30<sup>th</sup> January and 19<sup>th</sup> February), increasing the potential for under recording surface diving seabirds which is more challenging in higher sea states. On these surveys it is likely that auk species, red-throated diver, European shag and cormorant on the sea surface were under recorded, especially in parts of the Survey Area that are more than 500 m from the vantage points. The same potential for under recording in conditions of higher sea states also affected marine mammal species.
- 20 There was potential for under recording of small farmland passerine species at distances greater than approximately 200 m from the walking route taken along the coast to access the vantage points used for recording other bird species (**Figure 1 (Appendix B)**). For this reason it is likely there was under recording of small passerine species using the farmland within the Survey Area that is further inland (in particular north of the railway).
- 21 No practical difficulty was experienced preventing double counting within a count session because the numbers of birds present were generally low with most birds in flocks, and because the birds tended not to redistribute to any great extent in the short period of time between counting from one vantage point and the next.

### **5.3 Data management and analysis**

- 22 Count data from each survey visit was entered into a bespoke Excel spreadsheet database set up to mimic the layout of the field recording form. Data quality checking included using data field validation routines, the automated conversion of codes to their corresponding species name or behaviour description and visual checks of field forms against data on screen.
- 23 Excel pivot table routines were used to produce summary statistics of the total numbers of a species present in the Survey Area for each survey visit. Summary metrics were derived for the following:
  - The total count for each survey visit;
  - Mean total count for all survey visits;
  - Peak count across all survey visits (peak total count for any one survey visit);
  - Mean total count for all survey visits during high tide period; and
  - Mean total count for all survey visits during low tide period.
- 24 Dot maps were produced to illustrate the utilisation of the Survey Area by species. The 200 m grid cell identifier code (i.e., the grid cell address) for each record was converted into a grid reference value corresponding to the centre of the 200 m grid cell. GIS software (QGIS Geographic Information System (Version 3.22) was used to produce species maps showing distribution and abundance across the Survey Area (**Appendix B**). In the species distribution maps, the individual records of a species (i.e., the map dots) within a grid cell were arranged to avoid or minimise overlap, and to ensure they were in habitat-appropriate locations. For the species whose behaviour was likely to be influenced by tide state (e.g., waders, gulls, cormorant, shag, and some wildfowl species) the species maps distinguish between high tide records and low tide records.

## 6 Results

### 6.1 Birds overview

- 25 The total number of each species recorded in the Survey Area on each survey visit is presented in **Table A.1 (Appendix A: Results tables)**.
- 26 The mean and peak numbers of each species recorded across all survey visits are presented in **Table A.2 (Appendix A: Results tables)**. The estimated locations of where birds were seen are mapped in **Figures 3 to 24 (Appendix B)**. In these map figures the record's dot size varies according to the number of individuals observed, as detailed in the figure legend. The species distribution maps show that spatial use of the Survey Area varied between species, with differences reflecting habitat preferences.
- 27 The survey recorded a wide range of bird species within the Survey Area, with a total of 40 species observed (this total excludes non-target species). The species recorded include seven wader species, 13 seabird species, four raptor species, and five red-listed farmland bird species. The majority of species were recorded multiple times through the survey period, but some were irregularly present, being recorded on only one or two occasions. There was a large variation in abundance between species. A few of the most common species were regularly present in numbers exceeding 100 individuals, but most species were typically present in smaller numbers (10-100), and for some others only one or two individuals were typically recorded on a survey visit. In the species accounts below, 'low numbers' is defined as ten or less individuals, 'moderate numbers' as 11 to 100 individuals and 'high numbers' as greater than 100 individuals.
- 28 The following sections present results for species in more detail in terms of their abundance and distribution. Additional information on the habitat uses and the behaviour of commonly occurring species is also presented. In the species summary accounts below, mean counts are rounded to the nearest integer (mean values are presented to one decimal place in **Table A.2 (Appendix A: Results tables)**).
- 29 In the accounts below, birds are generally referred to as wintering. However, this should not be taken to imply that the birds were necessarily resident in the vicinity of the Survey Area through the winter period. Where this is likely to be broadly the case for most species, some species (especially some seabird species) are known to move between sites throughout the winter, for example in response to changing weather conditions (Wernham *et al.*, 2002). The survey period included October and March, times of year when many species are migrating (Wernham *et al.*, 2002). Thus, for some species, it is likely that some or all the individuals recorded in these months were passage birds that wintered elsewhere. These passage species included gannet, Sandwich tern, dunlin, teal, whooper swan and pink-footed goose (all of which were only recorded in October), and kittiwake and red-throated diver (observations of these two species peaked in October and March). By February and March, some resident species exhibited breeding behaviour such as song flights and nest building, and this is noted in the accounts where relevant.

## 6.2 *Wader and heron species*

- 30 The Survey Area supported five species of wintering waders that were regularly present (i.e., recorded on at least two-thirds of the survey dates) in generally moderate numbers (**Table A.1** and **Table A.2 (Appendix A: Results tables)**). The peak and mean counts of these species were as follows:
- Oystercatcher, peak count 167 birds and mean count 70 birds;
  - Curlew, peak count 36 birds and mean count 16 birds;
  - Redshank, peak count 87 birds and mean count 39 birds;
  - Turnstone, peak count 65 birds and mean count 20 birds; and
  - Purple sandpiper, peak count 64 birds and mean count 17 birds.
- 31 These five wader species mainly used the intertidal rocky shore habitat for feeding during the low tide period, in particular along the stretch of coast from Cowie north to Craigeven Bay. The distribution maps for these species (**Figures 3 to 7** respectively (**Appendix B**)) show differences in the distribution between high and low tide conditions, reflecting the availability of low-tide intertidal feeding habitat and the use of high tide roosts.
- 32 Curlews and oystercatchers also used coastal farmland habitat, and to a smaller extent the grassland of Stonehaven golf course, for feeding (during both low and high tide periods) (**Figure 3** and **Figure 4 (Appendix B)**). Despite there being extensive areas of farmland within the Survey Area further inland, almost all records of curlew and oystercatcher feeding on farmland were of birds using the large cereal field between the coast and Cowie House (**Figure 3** and **Figure 4 (Appendix B)**). At the time of the survey, this field was cereal stubble under-sown with grass.
- 33 The five regularly occurring wader species showed a strong tendency to spend the high tide period resting at communal roost sites. Most of the individuals present in the Survey Area shared the same regular high tide roost located in Craigeven Bay. There were also smaller high tide roost gatherings noted on the rocks just north of Cowie. The numbers of waders recorded in the low-tide period counts tended to be lower than the numbers counted in high-tide period counts (**Table A.2 (Appendix A: Results tables)**). This suggests that individuals from local feeding areas outside the Survey Area sometimes move into the Survey Area to roost over the high tide period. Purple sandpiper and turnstone, feeding on the extensive intertidal rocky shore areas during low tide conditions, were generally hard to detect. Therefore, it is possible that some of the low-tide period counts of these two species underestimated the actual number of birds present.
- 34 The reduction in numbers of some wader species (e.g. redshank and oystercatcher) in March compared to earlier in the winter was likely caused by some wintering birds departing and moving to their breeding grounds.
- 35 The Survey Area has negligible importance for other wader species. The only other species recorded were a single ringed plover observed in February and a group of four dunlin observed in October (**Table A.1 (Appendix A: Results tables)**). Ringed plover and dunlin are both relatively common wintering species in the wider region, and in winter they are mainly found on beach and intertidal mud flat habitats respectively.

36 Grey heron was the only heron species encountered and was regularly present in small numbers. The peak count was eight birds, and the mean count was three birds. Like the wintering wader species, grey herons were mainly observed along the rocky shore habitat which they used for both feeding and roosting (**Figure 8 (Appendix B)**). During some high tide periods, grey herons were seen roosting communally close to the high tide wader roost site at Craigeven Bay, with a peak roost count of seven birds.

### 6.3 *Wildfowl species*

37 The only duck species that was regularly observed in the Survey Area in moderate numbers were eider and mallard (**Table A.1 (Appendix A: Results tables)**).

38 Mallard mainly occurred in the sheltered parts of the intertidal rocky coast habitat between Cowie and Craigeven Bay (**Figure 10 (Appendix B)**). The mean number of mallards observed was 33 and the peak count was 70 birds (**Table A.2 (Appendix A: Results tables)**). The reduction in numbers of mallard in March compared to earlier in the winter was likely caused by wintering birds departing and moving to their breeding grounds.

39 Eiders were mainly observed at sea, with records well distributed in the coastal waters within approximately 500 m from the coast (**Figure 11 (Appendix B)**). Eiders were also sometimes seen resting on rocks close to the tide edges. The areas around Craigeven Bay and Garron Point, located in the northern part of the Survey Area, were particularly favoured by eider (**Figure 11 (Appendix B)**). The mean number of eiders counted was 18 birds and the peak count was 55 birds (**Table A.2 (Appendix A: Results tables)**).

40 Long-tailed ducks were recorded on three of the survey visits only, with between one and 25 birds observed (**Table A.1 and Table A.2 (Appendix A: Results tables)**). All the long-tailed ducks observed were on the sea in Stonehaven Bay (**Figure 12 (Appendix B)**).

41 Five other duck species were irregularly present (most were recorded on only one occasion), namely teal, wigeon, goldeneye, red-breasted merganser and goosander (**Table A.1, Table A.2 (Appendix A: Results tables)** and **Figure 12 (Appendix B)**).

42 Whooper swans were recorded within the Survey Area on one occasion only, on the 5<sup>th</sup> of October survey visit. On this date, 15 birds flew in to rest at sea in Stonehaven Bay (**Table A.1, Table A.2 (Appendix A: Results tables)** and **Figure 12 (Appendix B)**). Given the date and location, these were likely to be passage birds resting on their southerly autumn migration.

43 No geese species were recorded within the Survey Area. However, migrating skeins of pink-footed geese totalling several hundred birds were seen flying south over the Survey Area during the October survey visits.

### 6.4 *Seabird species*

44 The Project Survey Area supported nine species of wintering seabird and all of these were regularly present (i.e., recorded on at least two-thirds of the survey dates) in low to moderate numbers (**Table A.1 and Table A.2 (Appendix A: Results tables)**). These are as follows:

- Red-throated diver;
- Cormorant;
- European shag;
- Common guillemot;
- Razorbill;
- Herring gull;
- Great black-backed gull;
- Common gull; and
- Black-headed gull.

- 45 Red-throated divers were present in small numbers throughout the survey period, with a peak count of eight birds, and mean count four birds (**Table A.1** and **Table A.2 (Appendix A: Results tables)**). Although no red-throated divers were seen on two survey dates (14 December and 30 January) this is likely to reflect the difficulty of detecting this species during high sea states (see **Table 1**) rather than their absence.
- 46 Records of red-throated diver were rather evenly distributed at sea, with most records being between approximately 200 m and 600 m out from the coast (**Figure 13 (Appendix B)**).
- 47 Cormorants used the Survey Area throughout the survey period with a peak count of 19 birds and a mean count eight birds (**Table A.1** and **Table A.2 (Appendix A: Results tables)**). The numbers of individuals present were notably lower during the winter months compared to October and March (**Table A.1 (Appendix A)**). Records of cormorants were distributed along the coast and on sea up to approximately 400 m out from the shoreline (**Figure 14 (Appendix B)**). Cormorants foraged in inshore waters and roosted on rocks and skerries along the shoreline. In **Figure 14 (Appendix B)**, all the dots plotted on the rocks (shaded beige) were roosting, whereas all those plotted at sea (shaded blue) were foraging birds.
- 48 European shags were observed within the Survey Area throughout the survey period with a peak count of 46 birds and a mean count 12 birds (**Table A.1** and **Table A.2 (Appendix A: Results tables)**). The numbers present were notably higher during October (peak of 46 birds) compared to all the other survey months (peak of 14 birds) (**Table A.1 (Appendix A: Results tables)**). Records of shags were distributed all along the coast and inshore waters up to 600 m out from the coast (**Figure 15 (Appendix B)**). The greatest concentrations were observed in Stonehaven Bay and off Cowie. The great majority (12%, n=66) of shag records were of foraging birds at sea. In **Figure 15 (Appendix B)** these records are plotted on the sea (shaded blue). The other records were of birds roosting on rocks, including a flock of 24 birds; in **Figure 15 (Appendix B)** these records are plotted on the rock habitat (shaded beige).
- 49 Common guillemot and razorbill were both present in small to moderate numbers throughout the survey period (**Table A.1** and **Table A.2 (Appendix A: Results tables)**). Both species exhibited broadly similar trends in occurrence, habitat choice, and behaviour. In the case of common guillemot, the peak count was 40 birds, and the mean count was 10 birds. For razorbill the peak count was 88 birds, and the mean count was 15 birds.
- 50 It is likely that common guillemot and razorbill were undercounted on survey dates with relatively high sea states (i.e., above sea state 3) due to the difficulty of detecting these species when the sea



is not relatively calm (see **Table 1**). Records of both species were widely spread across the marine parts of the Survey Area up to approximately 800 m out from the coast (**Figure 16** and **Figure 17 (Appendix B)**). For common guillemot, a notable concentration of records was observed in the vicinity of Garron Point, located towards the northern end of the Survey Area.

- 51 Common guillemot and razorbill are both relatively small in size species which are dark in colour. As a result, detecting and reliably identifying them becomes increasingly difficult with increasing distance from a surveyor's vantage point. Given that both species are known to forage in waters of all depths, it is considered likely that the lack of records beyond approximately one km out from the coast reflects under detection rather than avoidance.
- 52 Four species of gulls were commonly recorded within the Survey Area: herring gull, common gull and black-headed gull and great black-backed gull, with the first three species being the most abundant.
- 53 The peak and mean counts of these gull species were as follows:
- Herring gull, peak count 740 birds, and mean count 171 birds;
  - Common gull, peak count 705 birds, and mean count 119 birds;
  - Black-headed gull, peak count 353 birds, and mean count 67 birds; and
  - Great black-backed gull, peak count 28 birds, and mean count seven birds.
- 54 These four gull species were observed widely across the Survey Area, foraging and resting at sea and along the coastal habitats. Herring gulls (**Figure 18 (Appendix B)**), common gulls (**Figure 20 (Appendix B)**), and black-headed gulls (**Figure 21 (Appendix B)**) showed a particular association with Stonehaven Bay and the rocky shore at Cowie. Great black-backed gulls were mainly recorded on rocky headland and skerries (**Figure 19 (Appendix B)**).
- 55 The numbers of herring gull, common gull and black-headed gull were greatest in counts undertaken in the afternoon shortly before dusk when these species formed large overnight roost gatherings in Stonehaven Bay. Large numbers of individuals were observed flying into Stonehaven Bay from remote day-time foraging areas. The actual numbers of gulls roosting in Stonehaven Bay on these occasions could not be accurately determined as individuals continued to fly in and join the roost after it was too dark to count and reliably identify them. Therefore, it is likely that the counts underestimated to a certain degree the total number of gulls at Stonehaven Bay.
- 56 A fifth species of gull, kittiwake, was occasionally recorded, mainly in the offshore parts of the Survey Area (i.e. more than 500 m from the coast) (**Table A.1** and **Table A.2 (Appendix A: Results tables)**). Apart from a single bird observed in January, kittiwakes were only recorded in October and March. The peak kittiwake count was 29 birds, and the mean count was three birds.
- 57 A single Sandwich tern was observed resting on the rocks near Cowie on the 5<sup>th</sup> of October (**Table A.1 (Appendix A: Results tables)**).

## 6.5 *Raptors, raven and Red List farmland bird species*

- 58 There were relatively few sightings of raptor species during the surveys, with just four species being recorded: buzzard, sparrowhawk, peregrine and kestrel. These species were recorded irregularly and in low numbers only (**Table A.1 (Appendix A: Results tables)**). All records were of birds in flight, either

over farmland or the coast (**Figure 22 (Appendix B)**). There was no evidence of raptors roosting or nesting on the sections of coastal cliff in the Survey Area.

59 Two ravens were regularly observed frequenting the coast in the northern half of the study area (**Table A.1 (Appendix A: Results tables)** and **Figure 22 (Appendix B)**). In March these ravens had an active nest on the cliffs forming the headland at the south end of Craigeven Bay.

60 Five species of BoCC Red List farmland bird species were recorded wintering in the Survey Area: linnet, yellowhammer, tree sparrow, skylark and grey partridge (**Table A.1, Table A.2 (Appendix A: Results tables)** and **Figure 23 (Appendix B)**).

61 The peak counts of these species were as follows:

- Linnet, peak count 90 birds;
- Yellowhammer, peak count 30;
- Tree sparrow, peak count approximately 30;
- Skylark, peak count one bird; and
- Grey partridge peak count two birds.

62 Almost all the records of yellowhammer, tree sparrow, skylark and grey partridge were from the large field of cereal stubble and its surrounding hedgerows that is located between Cowie House and the coast (**Figure 23 (Appendix B)**) (this is the same field that was frequented by curlew and oystercatchers). The records of linnet were more widely spread, with most being seen on the vegetated coastal cliff habitat along the southern edge of the golf course (Figure 23).

## 6.6 Marine mammal species

63 The records of marine mammal species observed incidentally during the survey are presented in **Table A.3 (Appendix A: Results tables)** and summarised below.

64 Single harbour seals and grey seals were recorded in the Survey Area swimming in the sea on four occasions (**Table A.3 (Appendix A: Results tables)**). The four seal sightings were all in the northern part of the Survey Area and all were within approximately 300 m of the coast (**Figure 24 (Appendix B)**).

65 Bottlenose dolphins were seen on two occasions: a pod of two individuals seen on the 5<sup>th</sup> of October, and a pod of five individuals seen on the 6<sup>th</sup> of March (**Table A.3**). Both pods were in the northern part of the Survey Area and estimated to pass within 400 m of the coast.

66 The presence of marine mammals in the Survey Area during surveys with relatively high sea states (see **Table 1**) was potentially underestimated due to reduced detectability under non favourable observation conditions.

## 7 Discussion

67 The range of species recorded during the Bellrock Project's survey from October 2025 to March 2026 were in line with expectations based on published literature (e.g., Balmer *et al.*, 2013; Forrester and Andrews, 2007; Frost *et al.*, 2026). The relatively high diversity of birds recorded reflects the wide variety of habitat types within the Survey Area, ranging from farmland, sub-urban and golf course

habitats inland, to cliffs (rock and vegetated), rocky shore and beaches along the coast, and marine habitats including sheltered bays, and the open sea.

- 68 There is reasonably good knowledge about the status of bird species wintering in Scotland, in terms of their geographic distribution and relative density, and in some cases, their population size (e.g. Forrester and Andrews, 2007; Balmer *et al.*, 2013; Frost *et al.*, 2026). Based on this information an indication of the value of the Survey Area to a species can be inferred, for example in terms of its potential importance in a local or regional geographic context (CIEEM, 2018).
- 69 For most of the bird species recorded, it appears that the Survey Area has potential to be of no more than local importance. However, the numbers of some species using the Survey Area, on some occasions at least, potentially approach or meet the criteria to be considered important in a regional context<sup>2</sup>, taken here to approximate to Aberdeenshire (**Table 1**). In no case did the numbers of a species recorded meet the criteria for the Survey Area to be considered important in a national context<sup>3</sup>.
- 70 The bird species observed within the Survey Area include a number of species of high conservation importance, either because they are on the BoCC UK Red List (Stanbury *et al.*, 2021) or receive an enhanced level of legal protection under (e.g., Wildlife and Countryside Act 1981 (as amended) Schedule 1 (S1) species, and EU Birds Directive Annex 1 (A1) species). In addition to the five Red List farmland bird species, other Red List species that regularly use the Survey Area are curlew, long-tailed duck, purple sandpiper, herring gull and great black-backed gull. Species with enhanced legal protection that were recorded in the Survey Area are red-throated diver (S1 and A1), peregrine (S1 and A1) and whooper swan (S1 and A1).
- 71 The main ornithological interests of the Survey Area are identified in **Table 2**.

---

<sup>2</sup> By convention, a site is considered to have regional importance for a species if it regularly holds 1% or more of the regional total.

<sup>3</sup> A site is considered to have national importance for a species if it regularly holds 1% or more of the national population total (Ramsar Resolution VI.4).

**Table 2. The main ornithological interests of the Survey Area based on the results of the October 2025 to March 2026 wintering bird survey**

| Receptor/feature                                     | Peak number recorded     | Potential Importance of Survey Area | Comment                                                                                            |
|------------------------------------------------------|--------------------------|-------------------------------------|----------------------------------------------------------------------------------------------------|
| Wintering oystercatcher                              | 167                      | Potentially regionally important    | N/A                                                                                                |
| Wintering curlew                                     | 36                       | Potentially locally important       | BoCC Red List species                                                                              |
| Wintering redshank                                   | 87                       | Potentially regionally important    | N/A                                                                                                |
| Wintering turnstone                                  | 65                       | Potentially regionally important    | N/A                                                                                                |
| Wintering purple sandpiper                           | 64                       | Potentially regionally important    | BoCC Red List species                                                                              |
| Mixed species high-tide wader roost at Craigeven Bay | 346                      | Potentially regionally important    | Used by curlew, oystercatcher, redshank, turnstone and purple sandpiper.                           |
| Wintering/passage red-throated diver                 | 6 wintering<br>8 passage | Potentially regionally important    | Schedule 1 and Annex 1 species                                                                     |
| Wintering/passage long-tailed duck                   | 25                       | Potentially regionally important    | BoCC Red List species                                                                              |
| Winter over-night gull roost in Stonehaven Bay       | >2000                    | Potentially regionally important    | N/A                                                                                                |
| Wintering farmland bird community:                   | >100                     | Potentially locally important       | Five BoCC Red List species present: grey partridge, linnet, skylark yellowhammer and tree sparrow. |

## 8 References

- Balmer, D.E., Gillings, S., Caffrey, B.J., Swann, R.L., Downie, I.S., Fuller, R.J. (eds) (2013) Bird Atlas 2007–11: The Breeding and Wintering Birds of Britain and Ireland. BTO Books, Thetford.
- CIEEM (2018). Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater, Coastal and Marine version 1.3 (updated September 2024). Chartered Institute of Ecology and Environmental Management, Winchester.
- Forrester, R., and Andrews, I. (eds), (2007). The Birds of Scotland. Scottish Ornithologists Club. Aberlady.
- Frost, T.M, Calbrade, N.A., Birtles, G.A., Feather, A., Hiza, B.M., Caulfield, E.B., Balmer, D.E., Peck, K., Wotton, S.R., Shaw, J.M. & Woodward, I.D. (2026). Waterbirds in the UK 2024/25. BTO/RSPB/JNCC/NatureScot British Trust for Ornithology, Thetford, Norfolk.
- Gilbert, G., Gibbons, D.W., and Evans, J. (1998). Bird Monitoring Methods: A Manual of Techniques for Key UK Species. Sandy: Royal Society for the Protection of Birds (RSPB), Sandy.
- Stanbury, A.J., Eaton, M.A., Aebischer, N.J., Balmer, D., Brown, A.F., Douse, A., Lindley, P., McCulloch, N., Noble, D.G. & Win, I. (2021). The Status of Our Bird Populations: The Fifth Birds of Conservation Concern in the United Kingdom, Channel Islands and Isle of Man and Second IUCN Red List Assessment of Extinction Risk for Great Britain. British Birds 114 114, 723 –747.
- Wernham, C.V., Toms, M.P., Marchant, J.H., Clark, J.A., Siriwardena, G.M. and Baillie, S.R. eds (2002). The Migration Atlas: Movements of the Birds of Britain and Ireland. T. & A.D. Poyser, London.

## Appendix A: Results tables

Table A.1. Total Numbers of Birds Observed on Each Survey Visit in the Survey Area

| Survey Visit >          | 1     | 2      | 4      | 5      | 7     | 8      | 9      | 10     | 11     | 12     | 13    | 14     |
|-------------------------|-------|--------|--------|--------|-------|--------|--------|--------|--------|--------|-------|--------|
| Date >                  | 5 Oct | 23 Oct | 10 Nov | 21 Nov | 8 Dec | 14 Dec | 20 Jan | 30 Jan | 13 Feb | 19 Feb | 6 Mar | 19 Mar |
| Tide conditions >       | High  | Low    | High   | Low    | High  | Low    | Low    | High   | High   | Low    | Low   | High   |
| <b>Wader species</b>    |       |        |        |        |       |        |        |        |        |        |       |        |
| Oystercatcher           | 107   | 26     | 167    | 28     | 134   | 38     | 33     | 98     | 60     | 32     | 61    | 56     |
| Ringed plover           | 0     | 0      | 0      | 0      | 0     | 0      | 0      | 0      | 1      | 0      | 0     | 0      |
| Purple sandpiper        | 0     | 0      | 14     | 0      | 14    | 1      | 6      | 64     | 7      | 1      | 38    | 60     |
| Dunlin                  | 1     | 0      | 0      | 0      | 0     | 0      | 0      | 0      | 0      | 0      | 0     | 0      |
| Curlew                  | 8     | 14     | 32     | 15     | 36    | 11     | 6      | 15     | 31     | 3      | 5     | 18     |
| Redshank                | 60    | 13     | 68     | 5      | 63    | 22     | 8      | 87     | 61     | 7      | 28    | 46     |
| Turnstone               | 23    | 11     | 65     | 11     | 39    | 6      | 4      | 6      | 24     | 3      | 14    | 29     |
| Grey heron              | 0     | 6      | 2      | 5      | 1     | 8      | 1      | 1      | 5      | 3      | 1     | 1      |
| <b>Wildfowl species</b> |       |        |        |        |       |        |        |        |        |        |       |        |
| Whooper swan            | 15    | 0      | 0      | 0      | 0     | 0      | 0      | 0      | 0      | 0      | 0     | 0      |
| Wigeon                  | 0     | 0      | 16     | 0      | 0     | 0      | 0      | 0      | 1      | 0      | 0     | 0      |
| Teal                    | 0     | 4      | 0      | 0      | 0     | 0      | 0      | 0      | 0      | 0      | 0     | 0      |
| Mallard                 | 30    | 33     | 70     | 65     | 23    | 24     | 32     | 12     | 67     | 38     | 2     | 4      |
| Eider                   | 5     | 1      | 1      | 4      | 8     | 23     | 17     | 6      | 16     | 32     | 52    | 55     |
| Long-tailed duck        | 0     | 0      | 0      | 0      | 1     | 0      | 0      | 0      | 0      | 0      | 9     | 25     |
| Goldeneye               | 0     | 0      | 0      | 1      | 0     | 0      | 0      | 0      | 0      | 0      | 0     | 0      |
| Red-breasted merganser  | 2     | 0      | 0      | 0      | 0     | 0      | 0      | 0      | 0      | 0      | 0     | 0      |
| Goosander               | 0     | 0      | 0      | 3      | 0     | 0      | 1      | 0      | 0      | 0      | 0     | 0      |
| <b>Seabird species</b>  |       |        |        |        |       |        |        |        |        |        |       |        |
| Red-throated diver      | 6     | 8      | 2      | 3      | 6     | 0      | 1      | 0      | 2      | 3      | 7     | 4      |
| Fulmar                  | 0     | 0      | 0      | 0      | 1     | 0      | 1      | 0      | 0      | 3      | 0     | 2      |
| Gannet                  | 17    | 7      | 0      | 0      | 0     | 0      | 0      | 0      | 0      | 0      | 0     | 0      |
| Cormorant               | 17    | 19     | 4      | 6      | 3     | 4      | 5      | 0      | 6      | 1      | 13    | 5      |

| Survey Visit >                                  | 1     | 2      | 4      | 5      | 7     | 8      | 9      | 10     | 11     | 12     | 13    | 14     |
|-------------------------------------------------|-------|--------|--------|--------|-------|--------|--------|--------|--------|--------|-------|--------|
| Date >                                          | 5 Oct | 23 Oct | 10 Nov | 21 Nov | 8 Dec | 14 Dec | 20 Jan | 30 Jan | 13 Feb | 19 Feb | 6 Mar | 19 Mar |
| Tide conditions >                               | High  | Low    | High   | Low    | High  | Low    | Low    | High   | High   | Low    | Low   | High   |
| Shag                                            | 39    | 46     | 3      | 6      | 14    | 4      | 2      | 3      | 6      | 8      | 8     | 10     |
| Guillemot                                       | 14    | 9      | 3      | 3      | 3     | 1      | 40     | 5      | 14     | 10     | 1     | 22     |
| Razorbill                                       | 16    | 20     | 2      | 2      | 1     | 0      | 0      | 0      | 2      | 0      | 88    | 43     |
| Black-headed gull                               | 256   | 5      | 353    | 60     | 24    | 100    | 0      | 1      | 5      | 1      | 0     | 0      |
| Common gull                                     | 44    | 25     | 0      | 350    | 150   | 705    | 0      | 0      | 104    | 1      | 5     | 40     |
| Herring gull                                    | 58    | 76     | 504    | 84     | 445   | 740    | 2      | 7      | 16     | 7      | 44    | 65     |
| Great b-b. gull                                 | 28    | 10     | 3      | 16     | 1     | 2      | 2      | 3      | 3      | 2      | 6     | 4      |
| Kittiwake                                       | 5     | 0      | 0      | 0      | 0     | 0      | 0      | 1      | 0      | 0      | 0     | 29     |
| Sandwich tern                                   | 1     | 0      | 0      | 0      | 0     | 0      | 0      | 0      | 0      | 0      | 0     | 0      |
| <b>Raptors, raven and farmland bird species</b> |       |        |        |        |       |        |        |        |        |        |       |        |
| Sparrowhawk                                     | 0     | 0      | 0      | 0      | 1     | 0      | 0      | 1      | 1      | 0      | 0     | 0      |
| Buzzard                                         | 0     | 0      | 0      | 1      | 0     | 1      | 0      | 0      | 0      | 3      | 0     | 0      |
| Peregrine                                       | 0     | 0      | 0      | 0      | 0     | 0      | 1      | 0      | 0      | 0      | 0     | 0      |
| Kestrel                                         | 0     | 0      | 0      | 0      | 0     | 0      | 1      | 0      | 0      | 0      | 0     | 0      |
| Raven                                           | 0     | 0      | 0      | 0      | 0     | 0      | 2      | 2      | 0      | 1      | 1     | 1      |
| Grey partridge                                  | 0     | 0      | 0      | 0      | 0     | 1      | 0      | 0      | 0      | 0      | 0     | 2      |
| Skylark                                         | 0     | 0      | 0      | 0      | 0     | 0      | 0      | 0      | 1      | 0      | 1     | 0      |
| Linnet                                          | 65    | 40     | 0      | 0      | 0     | 0      | 0      | 0      | 90     | 0      | 20    | 0      |
| Tree sparrow                                    | 0     | 0      | 0      | 30     | 0     | 12     | 0      | 0      | 10     | 6      | 0     | 0      |
| Yellowhammer                                    | 0     | 0      | 0      | 10     | 0     | 0      | 0      | 0      | 1      | 30     | 0     | 2      |



Table A.2. Summary Metrics of Bird Abundance for the Twelve Survey Visits

| Species                 | Mean count | Peak count | Mean of low tide counts | Mean of high tide counts |
|-------------------------|------------|------------|-------------------------|--------------------------|
| <b>Wader species</b>    |            |            |                         |                          |
| Oystercatcher           | 70.0       | 167        | 36.3                    | 103.7                    |
| Ringed plover           | 0.1        | 1          | 0.0                     | 0.2                      |
| Purple sandpiper        | 17.1       | 64         | 7.7                     | 26.5                     |
| Dunlin                  | 0.1        | 1          | 0.0                     | 0.2                      |
| Curlew                  | 16.2       | 36         | 9.0                     | 23.3                     |
| Redshank                | 39.0       | 87         | 13.8                    | 64.2                     |
| Turnstone               | 19.6       | 65         | 8.2                     | 31.0                     |
| Grey heron              | 2.8        | 8          | 4.0                     | 1.7                      |
| <b>Wildfowl species</b> |            |            |                         |                          |
| Whooper swan            | 1.3        | 15         | 0.0                     | 2.5                      |
| Wigeon                  | 1.4        | 16         | 0.0                     | 2.8                      |
| Teal                    | 0.3        | 4          | 0.7                     | 0.0                      |
| Mallard                 | 33.3       | 70         | 32.3                    | 34.3                     |
| Eider                   | 18.3       | 55         | 21.5                    | 15.2                     |
| Long-tailed duck        | 2.9        | 25         | 1.5                     | 4.3                      |
| Goldeneye               | 0.1        | 1          | 0.2                     | 0.0                      |
| Red-breasted merganser  | 0.2        | 2          | 0.0                     | 0.3                      |
| Goosander               | 0.3        | 3          | 0.7                     | 0.0                      |
| <b>Seabird species</b>  |            |            |                         |                          |
| Red-throated diver      | 3.5        | 8          | 3.7                     | 3.3                      |
| Fulmar                  | 0.6        | 3          | 0.7                     | 0.5                      |
| Gannet                  | 2.0        | 17         | 1.2                     | 2.8                      |
| Cormorant               | 6.9        | 19         | 8.0                     | 5.8                      |
| Shag                    | 12.4       | 46         | 12.3                    | 12.5                     |
| Guillemot               | 10.4       | 40         | 10.7                    | 10.2                     |
| Razorbill               | 14.5       | 88         | 18.3                    | 10.7                     |
| Black-headed gull       | 67.1       | 353        | 27.7                    | 106.5                    |
| Common gull             | 118.7      | 705        | 181.0                   | 56.3                     |

| Species                                         | Mean count | Peak count | Mean of low tide counts | Mean of high tide counts |
|-------------------------------------------------|------------|------------|-------------------------|--------------------------|
| Herring gull                                    | 170.7      | 740        | 158.8                   | 182.5                    |
| Great black-backed gull                         | 6.7        | 28         | 6.3                     | 7.0                      |
| Kittiwake                                       | 2.9        | 29         | 0.0                     | 5.8                      |
| Sandwich tern                                   | 0.1        | 1          | 0.0                     | 0.2                      |
| <b>Raptors, raven and farmland bird species</b> |            |            |                         |                          |
| Sparrowhawk                                     | 0.3        | 1          | 0.0                     | 0.5                      |
| Buzzard                                         | 0.4        | 3          | 0.8                     | 0.0                      |
| Peregrine                                       | 0.1        | 1          | 0.2                     | 0.0                      |
| Kestrel                                         | 0.1        | 1          | 0.2                     | 0.0                      |
| Raven                                           | 0.6        | 2          | 0.7                     | 0.5                      |
| Grey partridge                                  | 0.3        | 2          | 0.2                     | 0.3                      |
| Skylark                                         | 0.2        | 1          | 0.2                     | 0.2                      |
| Linnet                                          | 17.9       | 90         | 10.0                    | 25.8                     |
| Tree sparrow                                    | 4.8        | 30         | 8.0                     | 1.7                      |
| Yellowhammer                                    | 3.6        | 30         | 6.7                     | 0.5                      |

**Table A.3. Total Numbers of Marine Mammals Observed on Each Survey Visit in the Survey Area**

| Survey Visit >     | 1     | 2      | 4      | 5      | 7     | 8      | 9      | 10     | 11     | 12     | 13    | 14     |
|--------------------|-------|--------|--------|--------|-------|--------|--------|--------|--------|--------|-------|--------|
| Date >             | 5 Oct | 23 Oct | 10 Nov | 12 Nov | 8 Dec | 14 Dec | 20 Jan | 30 Jan | 13 Feb | 19 Feb | 6 Mar | 19 Mar |
| Tide conditions >  | High  | Low    | High   | Low    | High  | Low    | Low    | High   | High   | Low    | Low   | High   |
| Bottlenose dolphin | 2     | 0      | 0      | 0      | 0     | 0      | 0      | 0      | 0      | 0      | 5     | 0      |
| Common seal        | 1     | 0      | 0      | 0      | 0     | 0      | 0      | 0      | 0      | 0      | 0     | 0      |
| Grey seal          | 0     | 0      | 0      | 2      | 0     | 0      | 0      | 0      | 0      | 0      | 0     | 1      |

## Appendix B: Figures

Figure 1. Location of the Cowie Survey Area

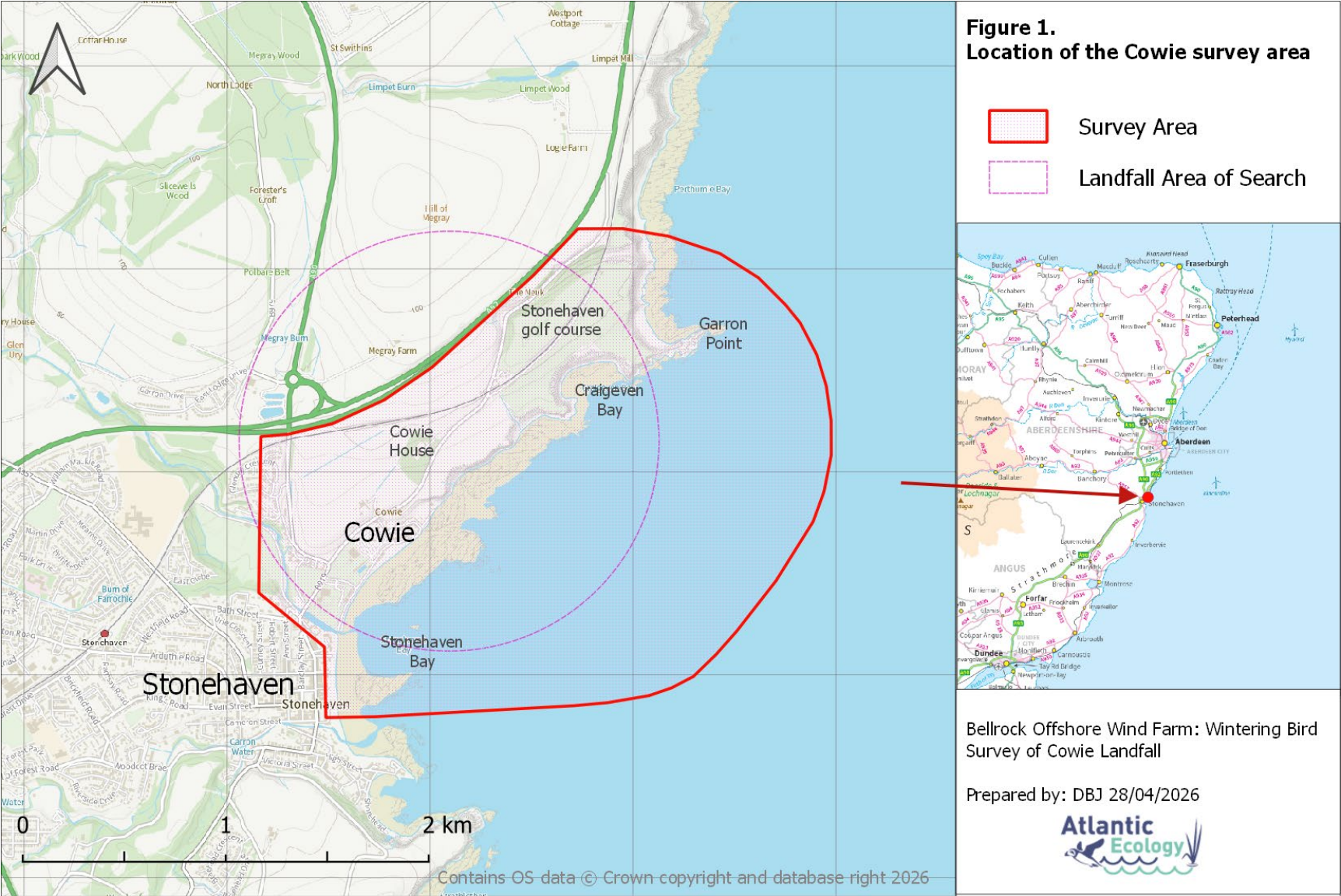




Figure 2. Cowie wintering bird Survey Area 200 x 200 meter grid superimposed on aerial image

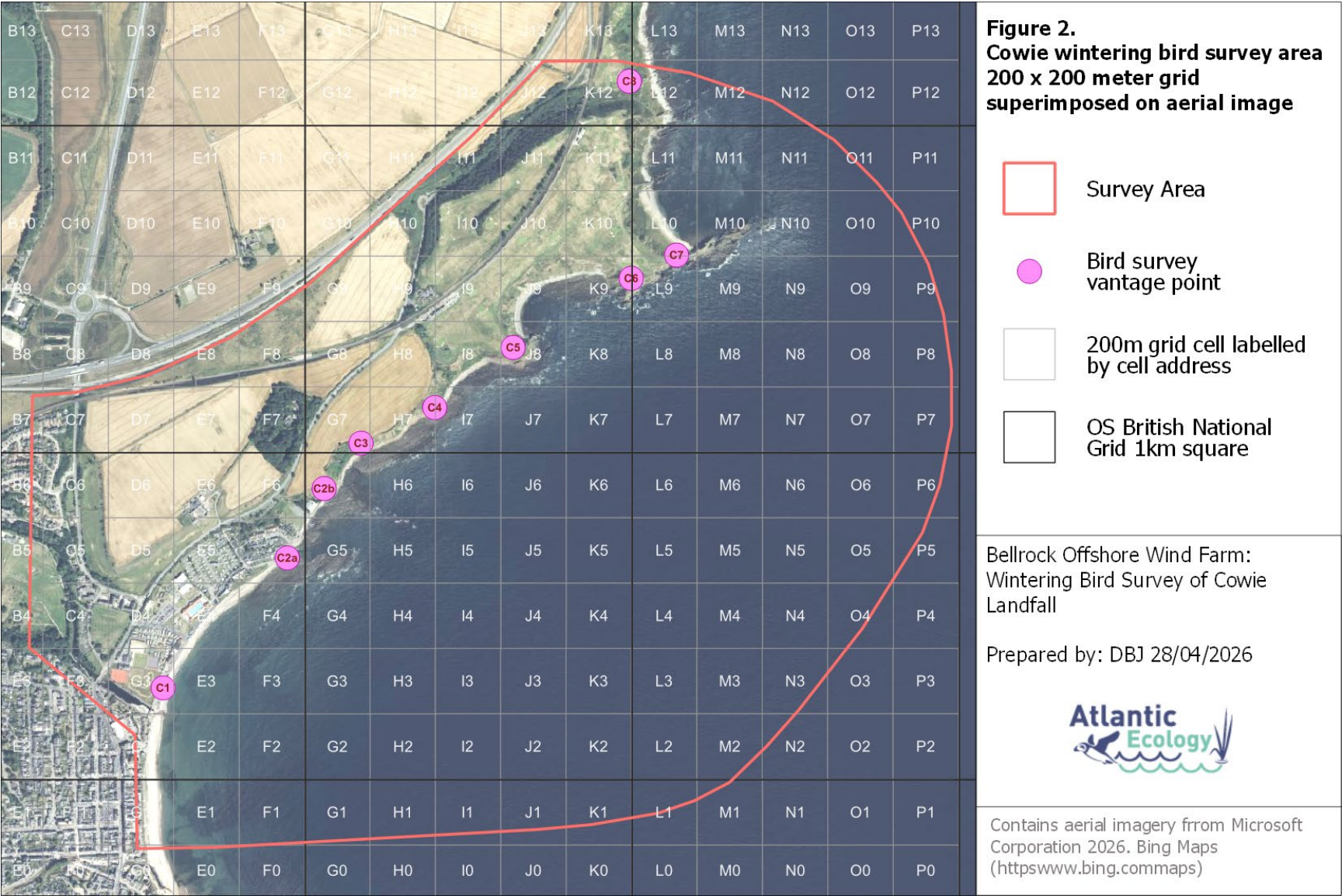


Figure 3. Distribution of oystercatchers recorded during twice monthly surveys between October 2025 and March 2026

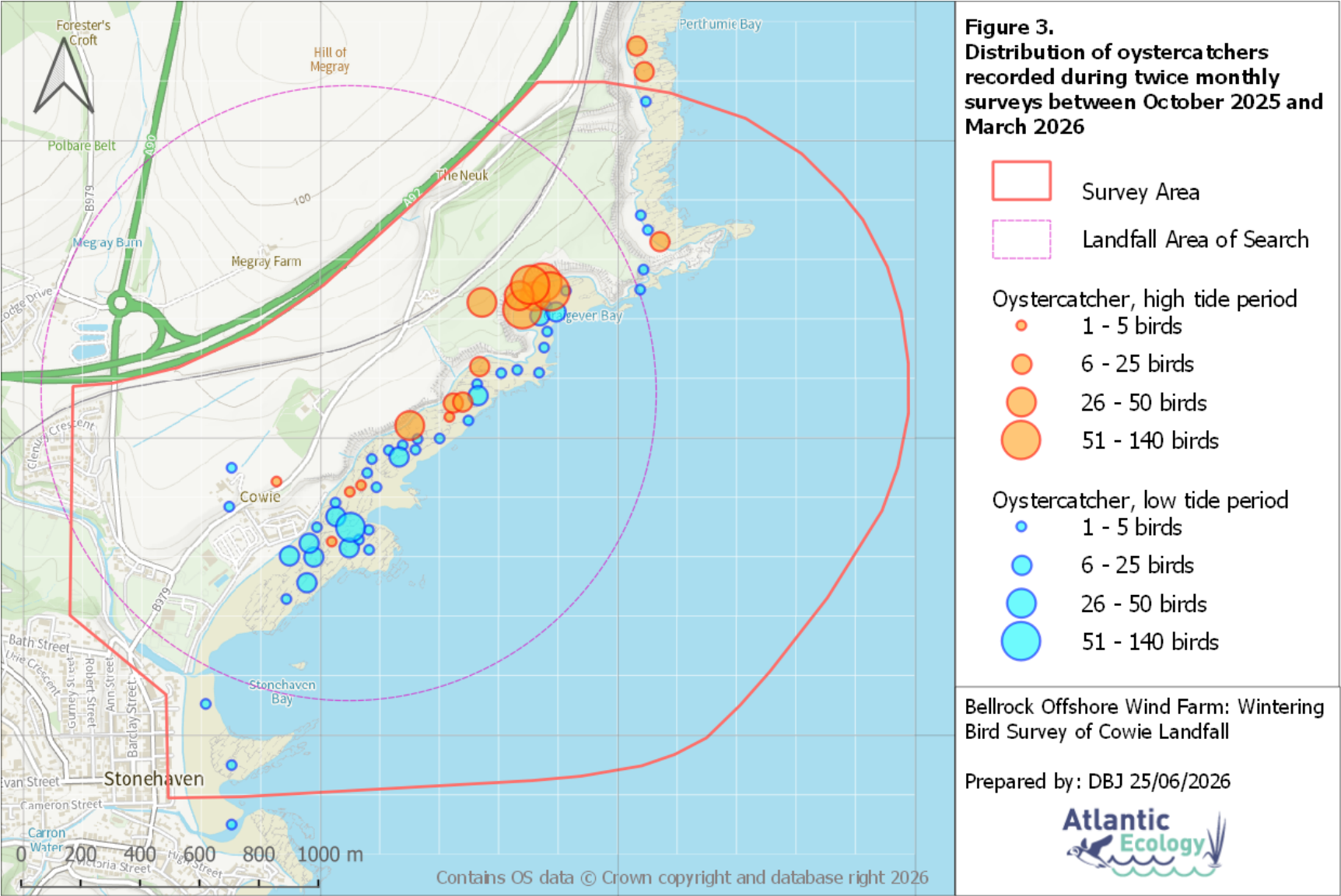




Figure 4. Distribution of curlews recorded during twice monthly surveys between October 2025 and March 2026

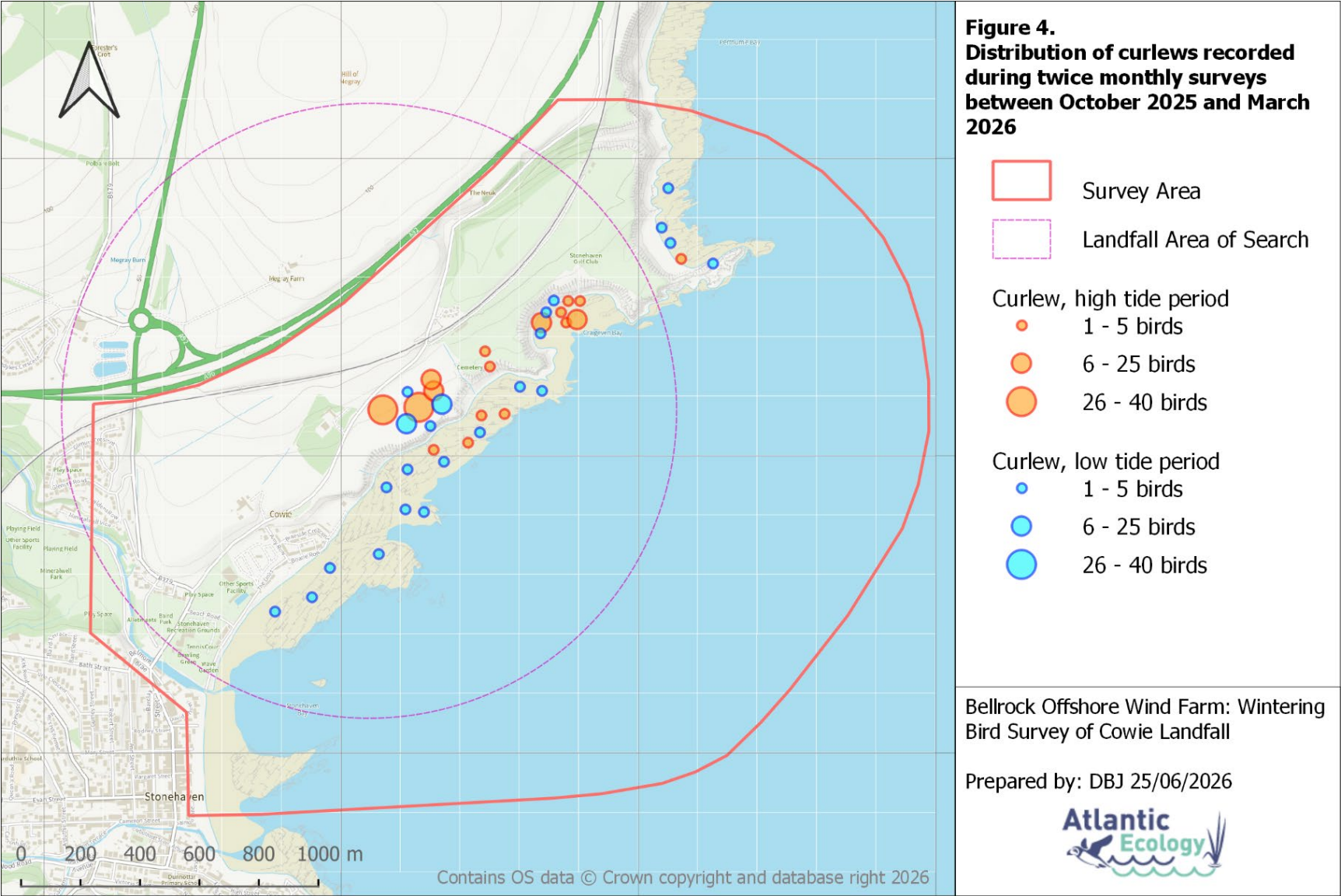


Figure 5. Distribution of redshanks recorded during twice monthly surveys between October 2025 and March 2026

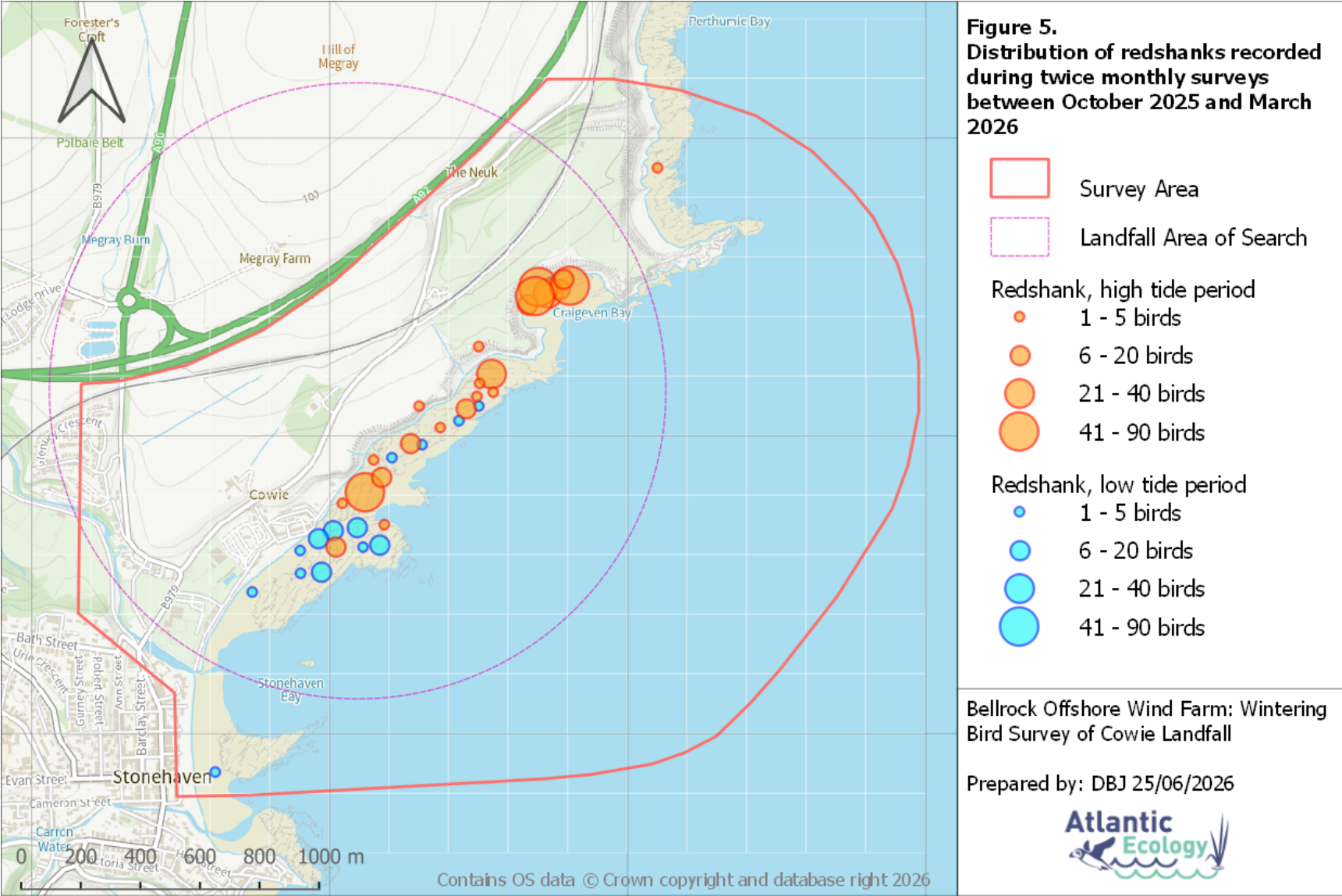




Figure 6. Distribution of turnstones recorded during twice monthly surveys between October 2025 and March 2026

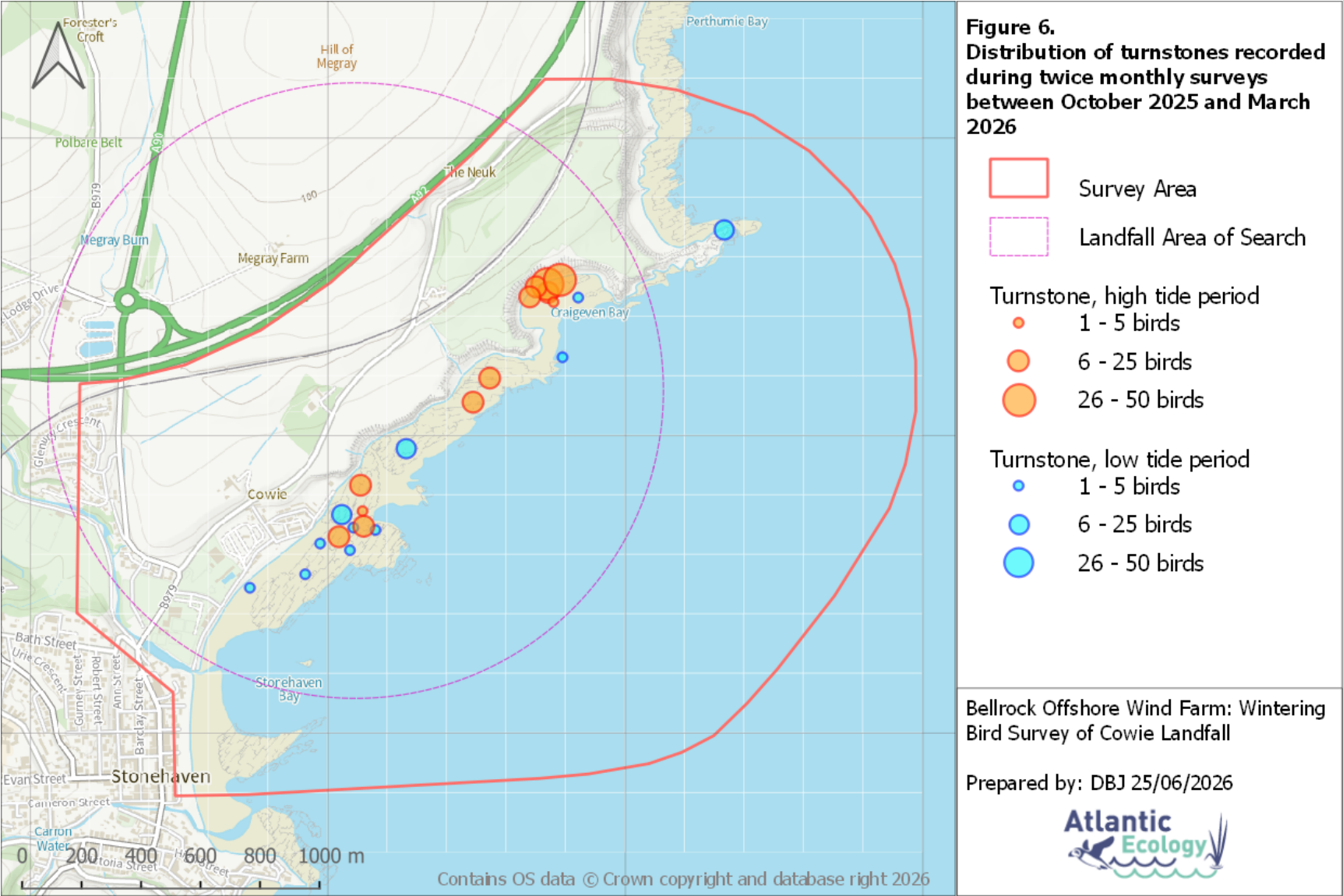


Figure 7. Distribution of purple sandpipers recorded during twice monthly surveys between October 2025 and March 2026

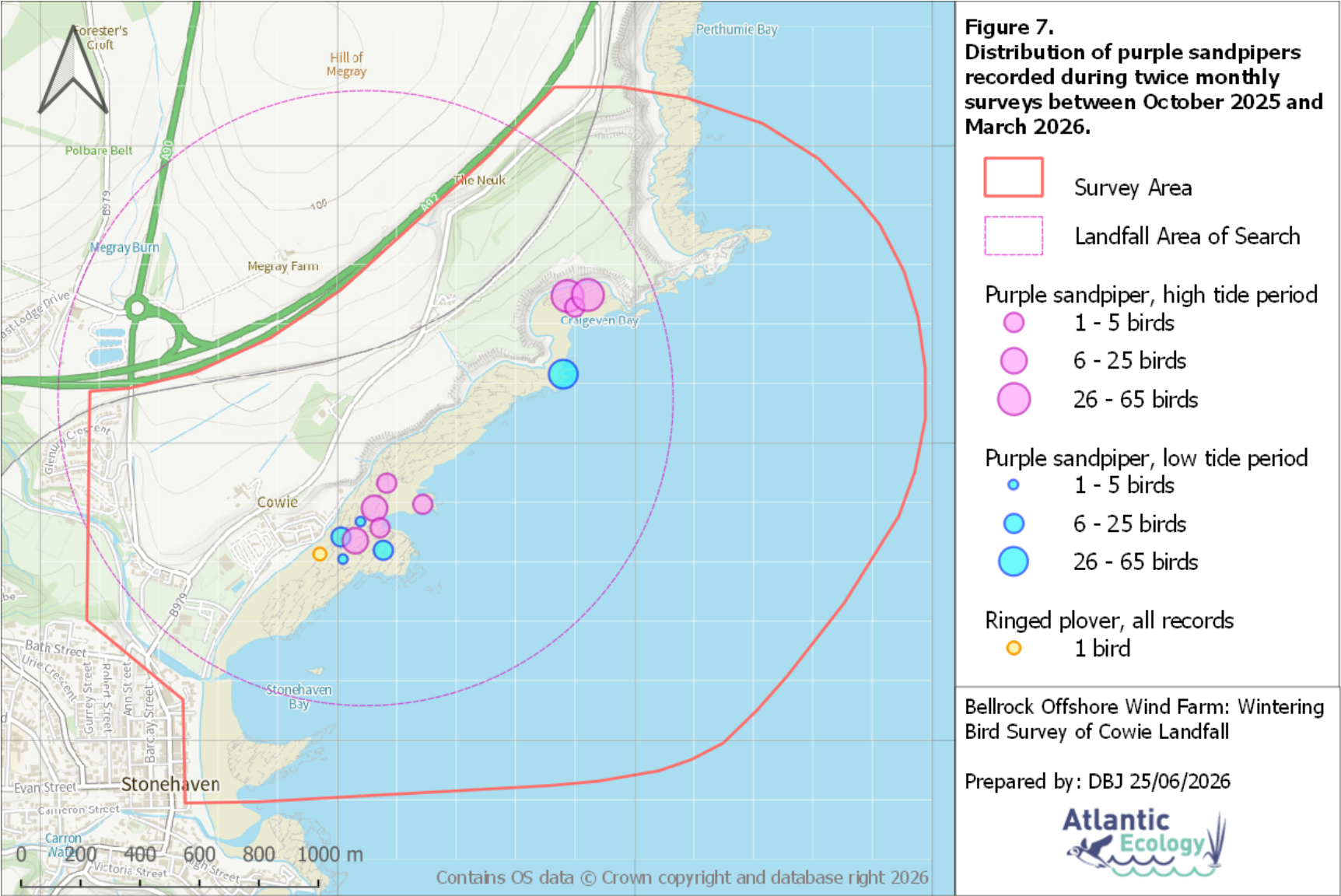


Figure 8. Distribution of grey herons recorded during twice monthly surveys between October 2025 and March 2026

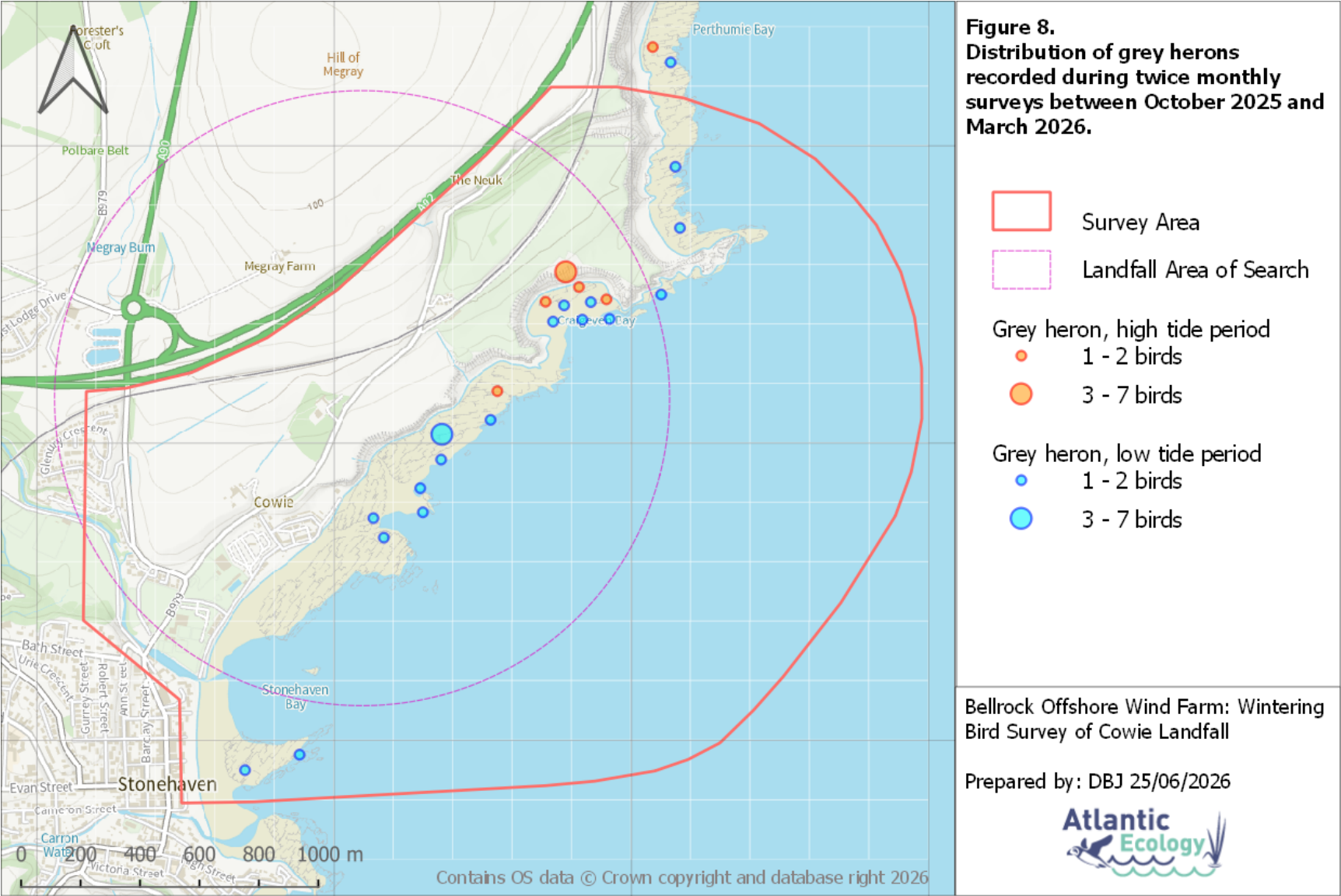


Figure 9. Distribution of wigeon and teal recorded during twice monthly surveys between October 2025 and March 2026

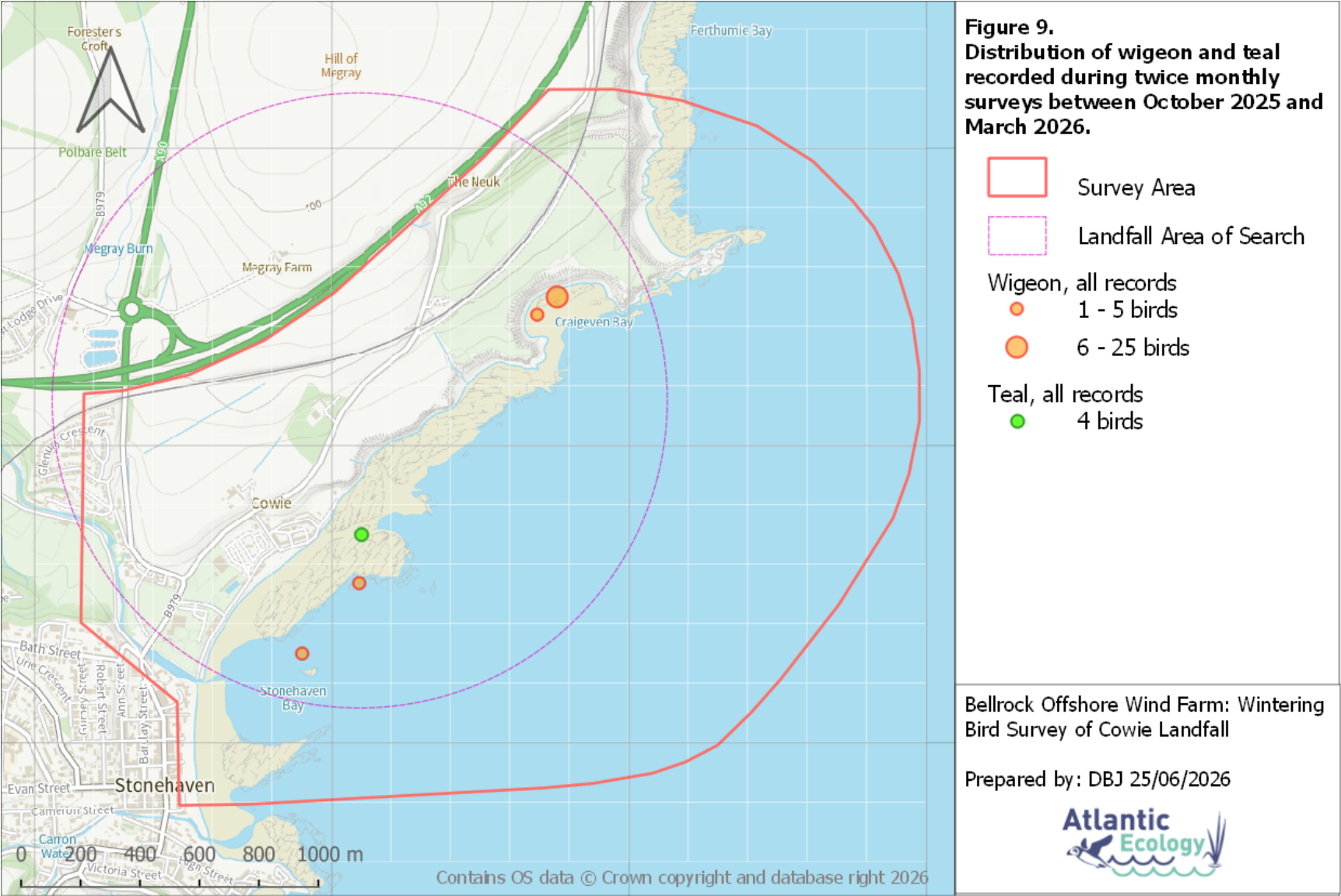




Figure 10. Distribution of mallard recorded during twice monthly surveys between October 2025 and March 2026

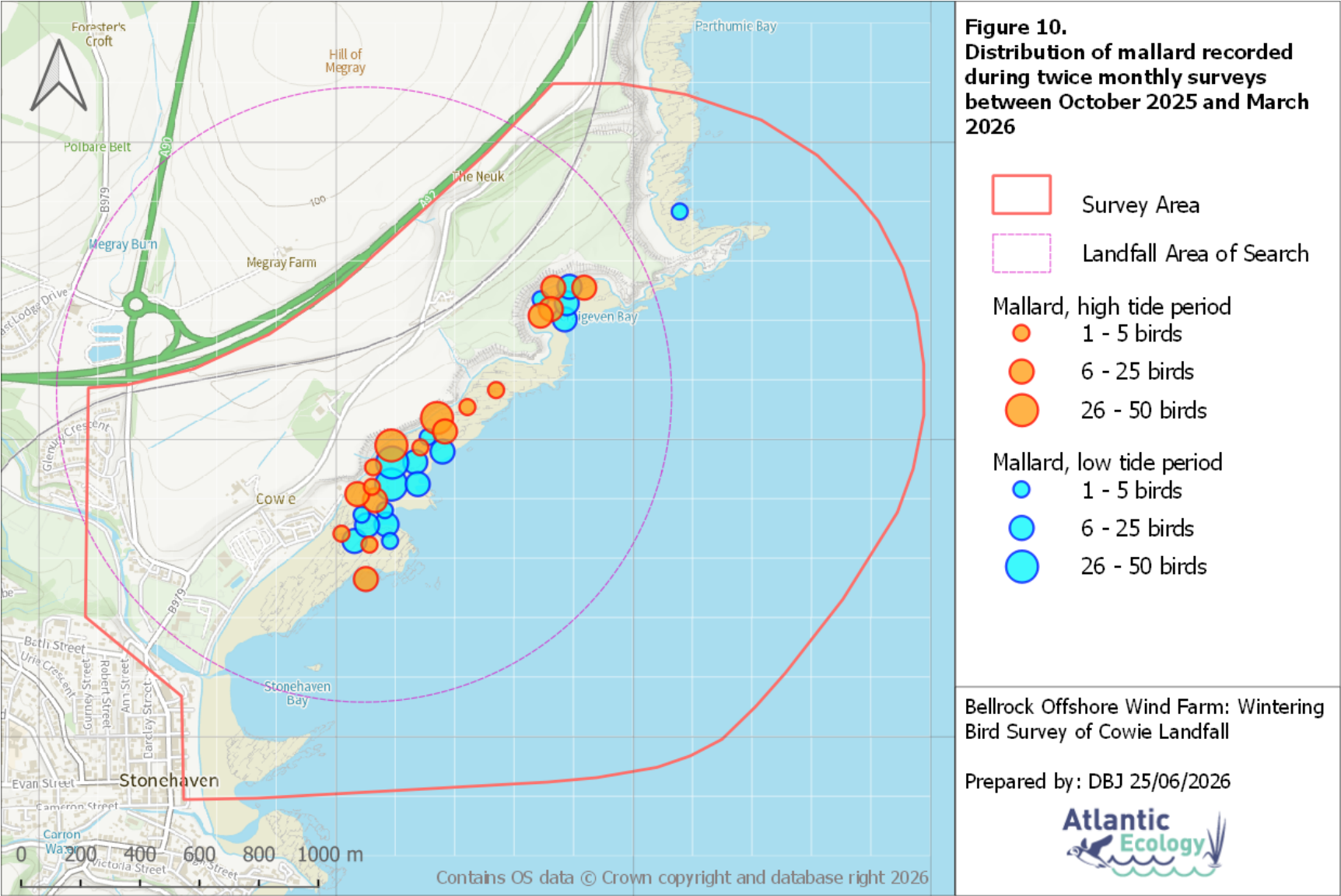


Figure 11. Distribution of eider ducks recorded during twice monthly surveys between October 2025 and March 2026

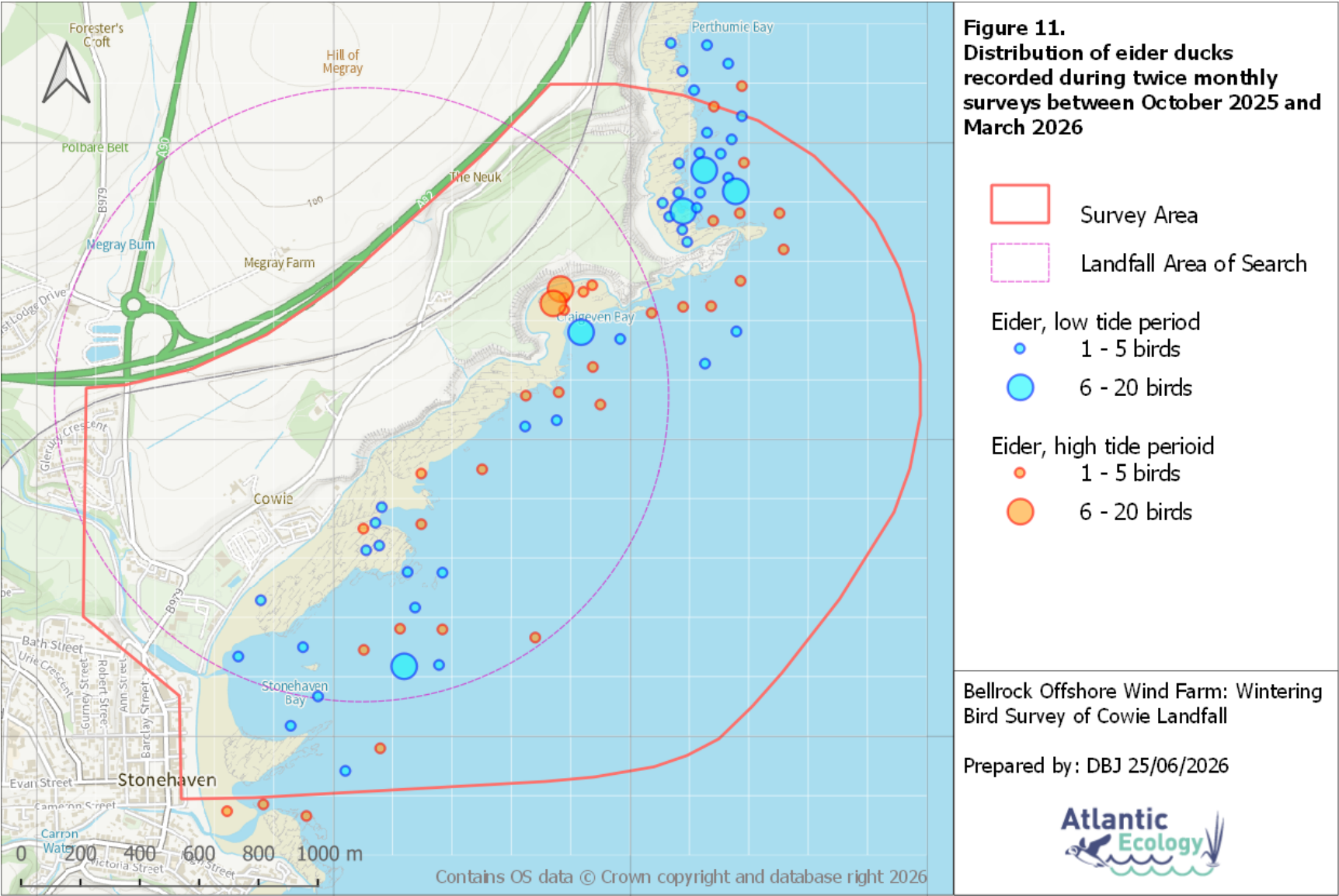




Figure 12. Distribution of other wildfowl species recorded during twice monthly surveys between October 2025 and March 2026

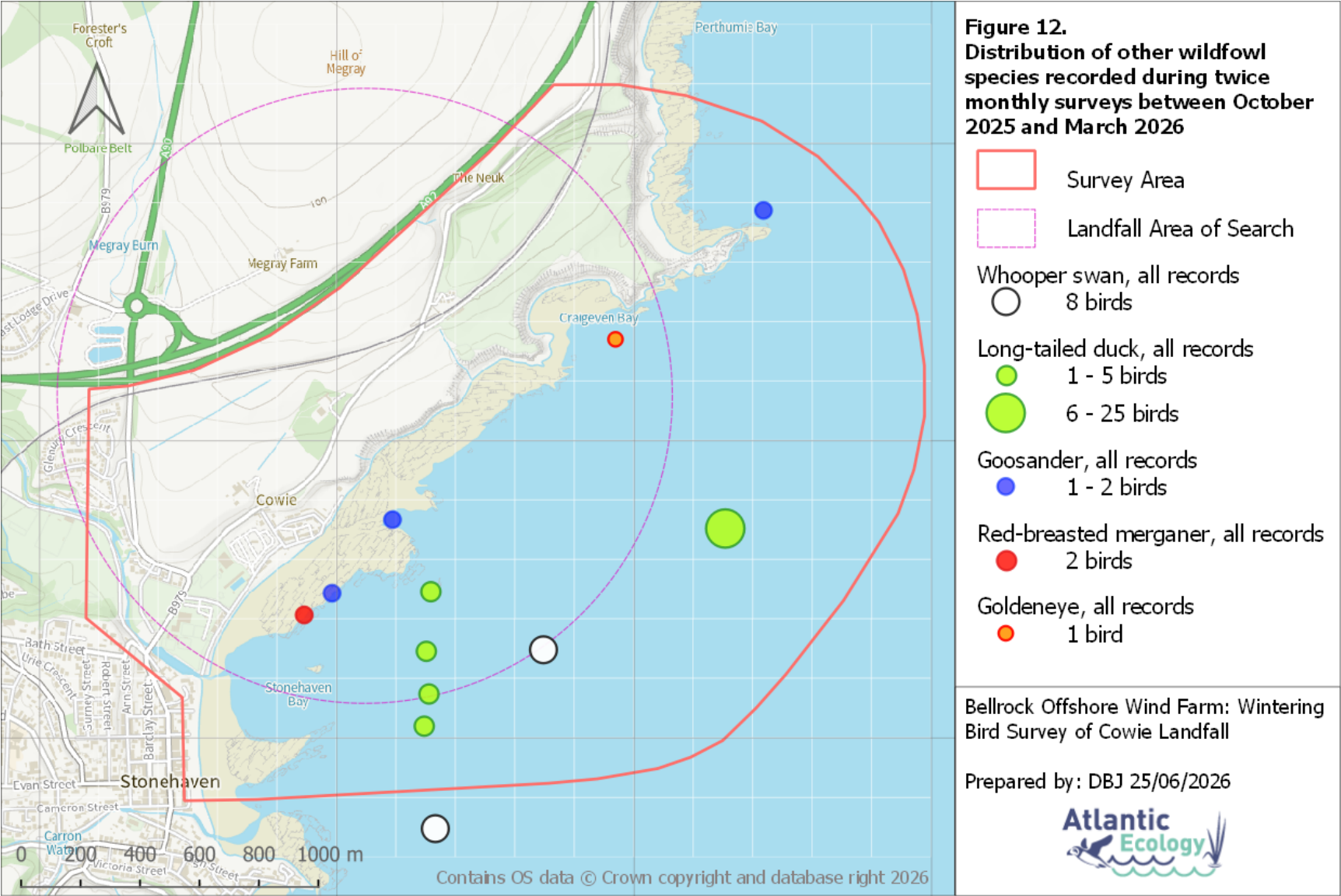


Figure 13. Distribution of red-throated divers recorded during twice monthly surveys between October 2025 and March 2026

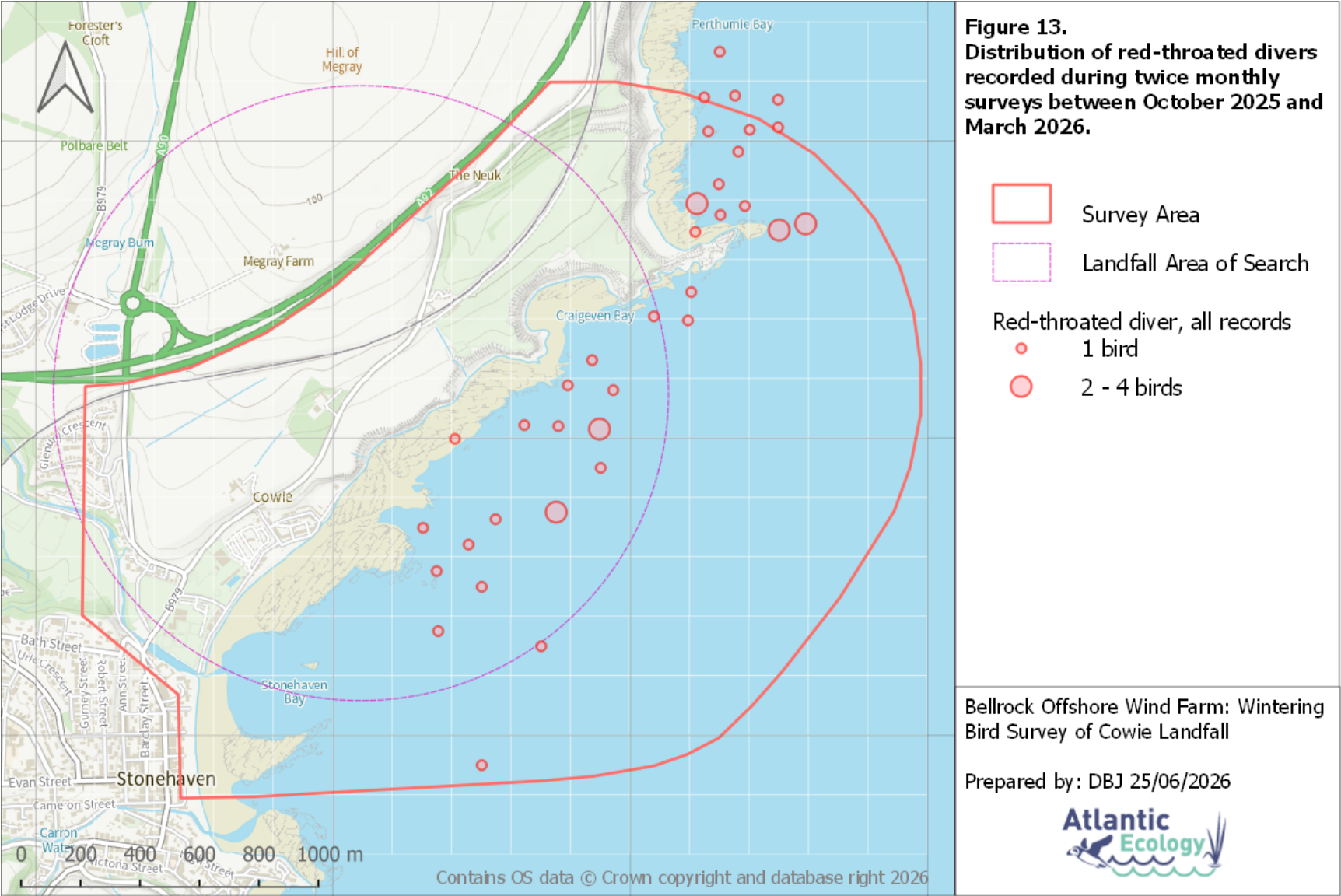


Figure 14. Distribution of cormorants recorded during twice monthly surveys between October 2025 and March 2026

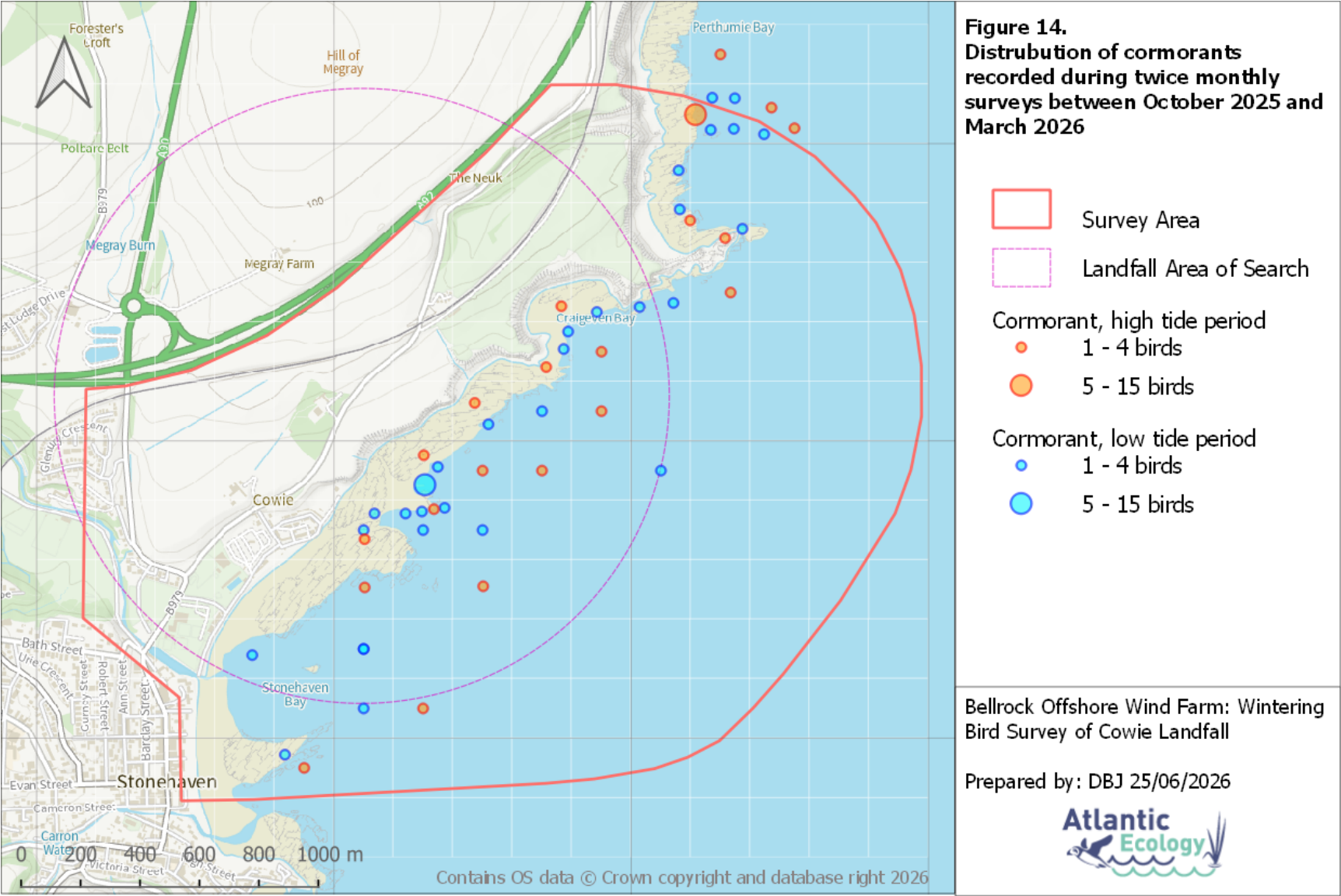


Figure 15. Distribution of European shags recorded during twice monthly surveys between October 2025 and March 2026

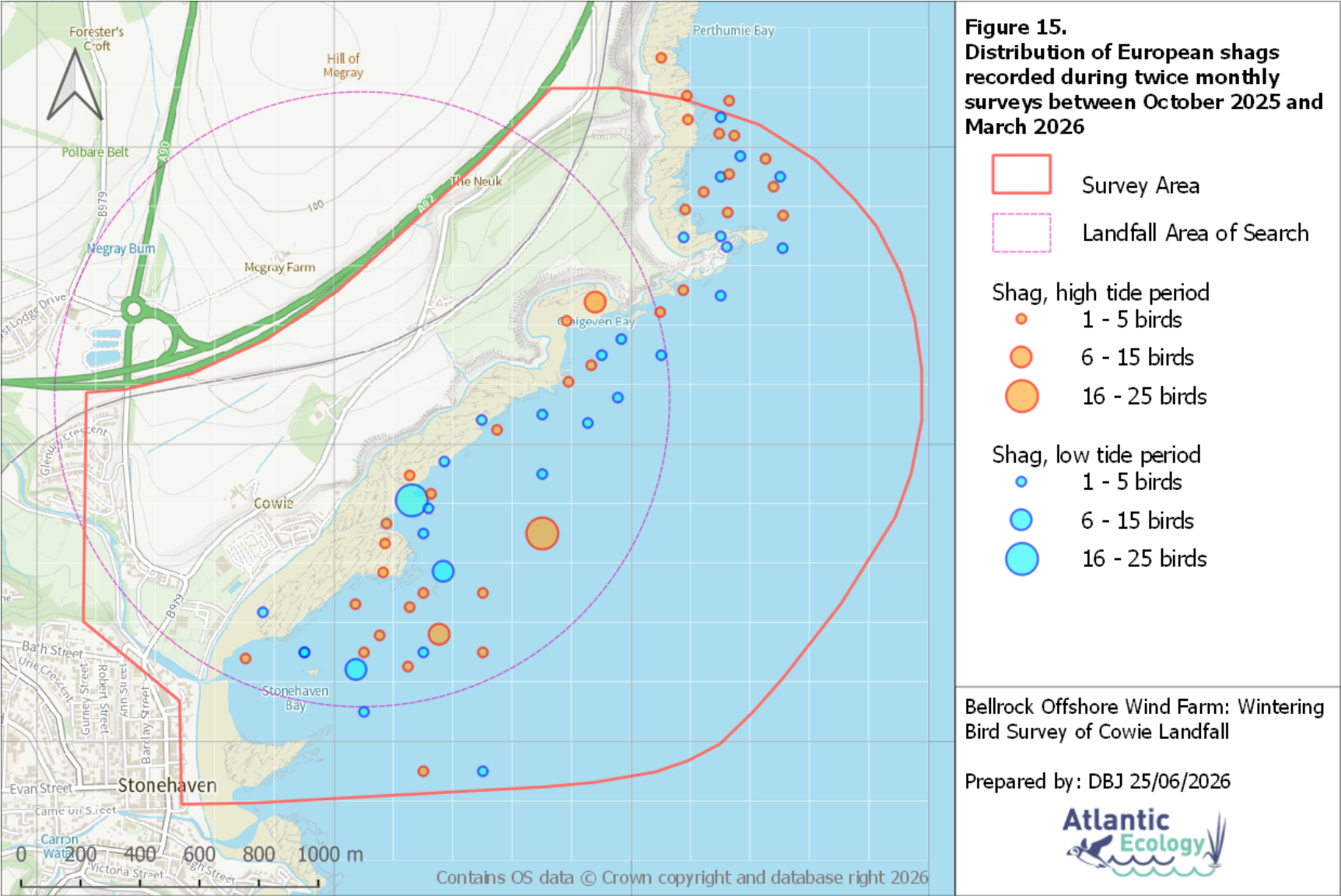




Figure 16. Distribution of common guillemots recorded during twice monthly surveys between October 2025 and March 2026

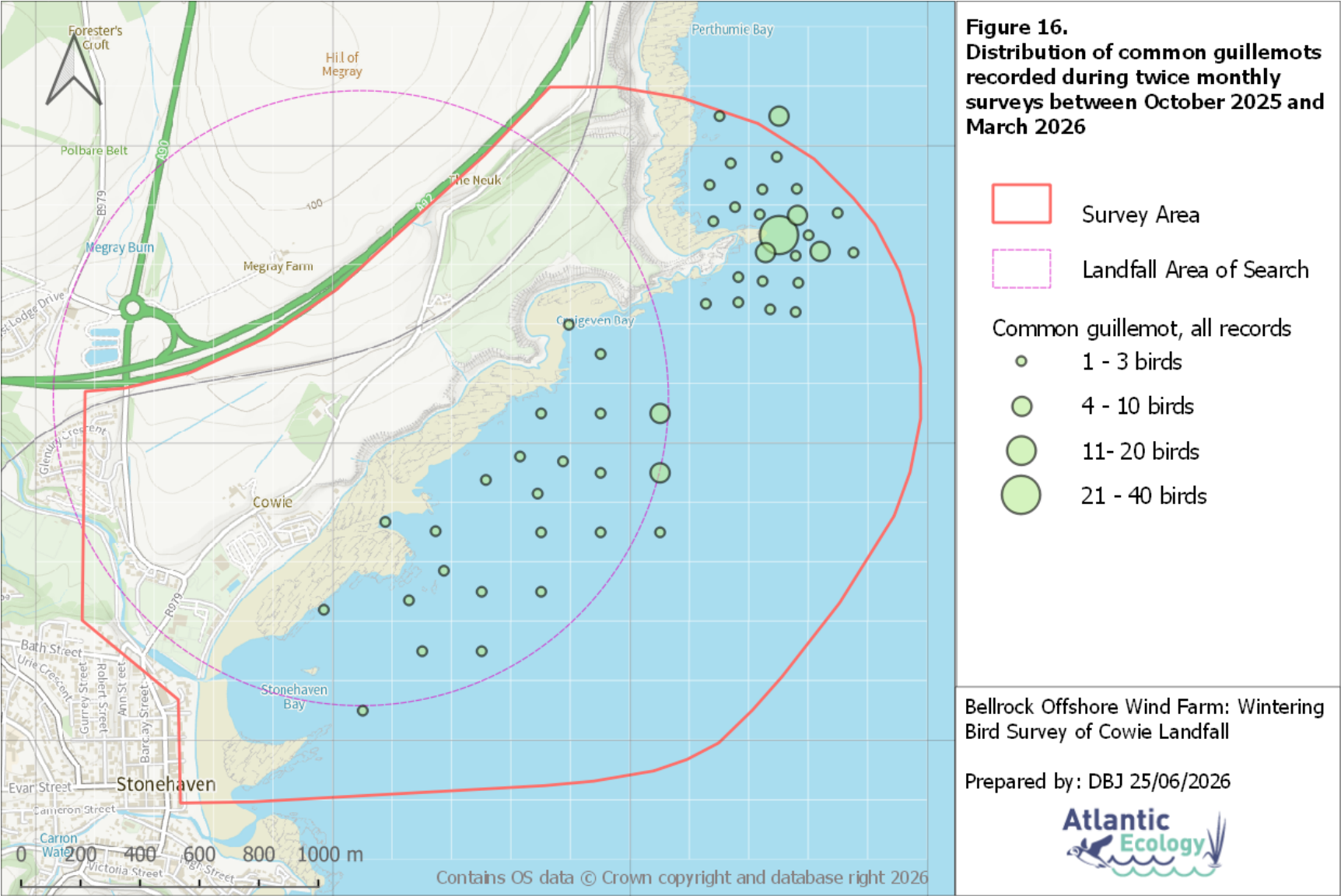


Figure 17. Distribution of razorbills recorded during twice monthly surveys between October 2025 and March 2026

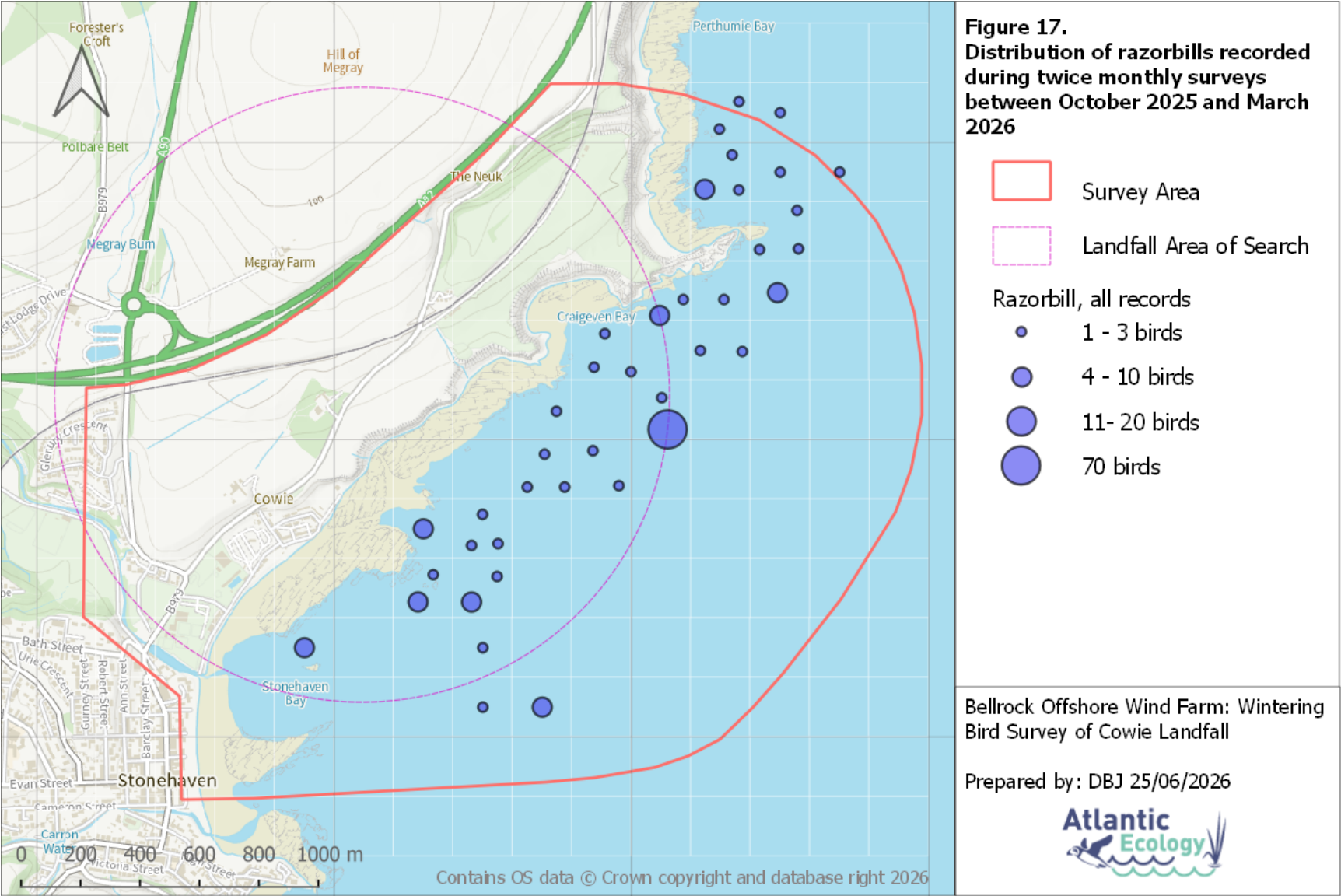




Figure 18. Distribution of herring gulls recorded during twice monthly surveys between October 2025 and March 2026

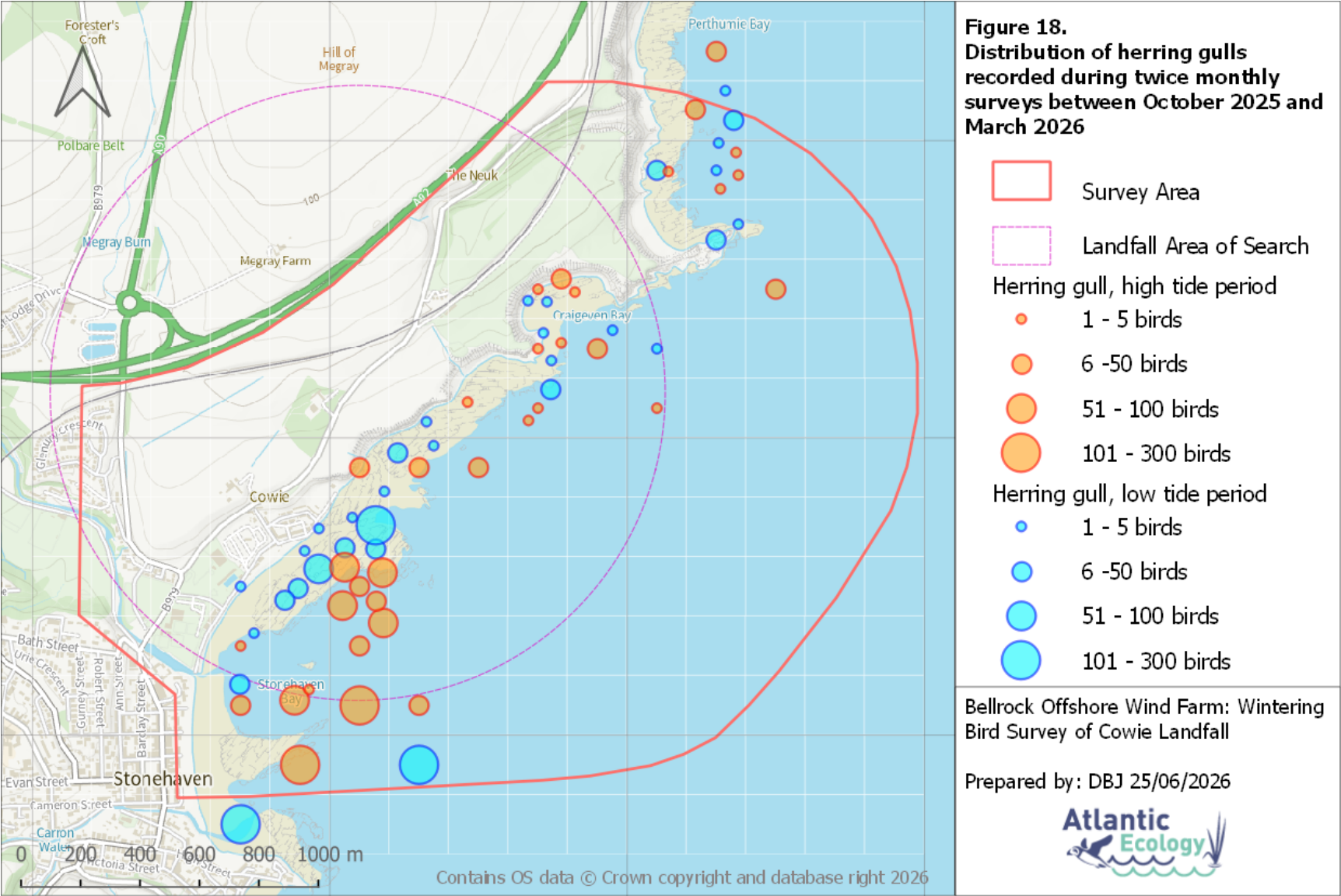


Figure 19. Distribution of great black-backed gulls recorded during twice monthly surveys between October 2025 and March 2026

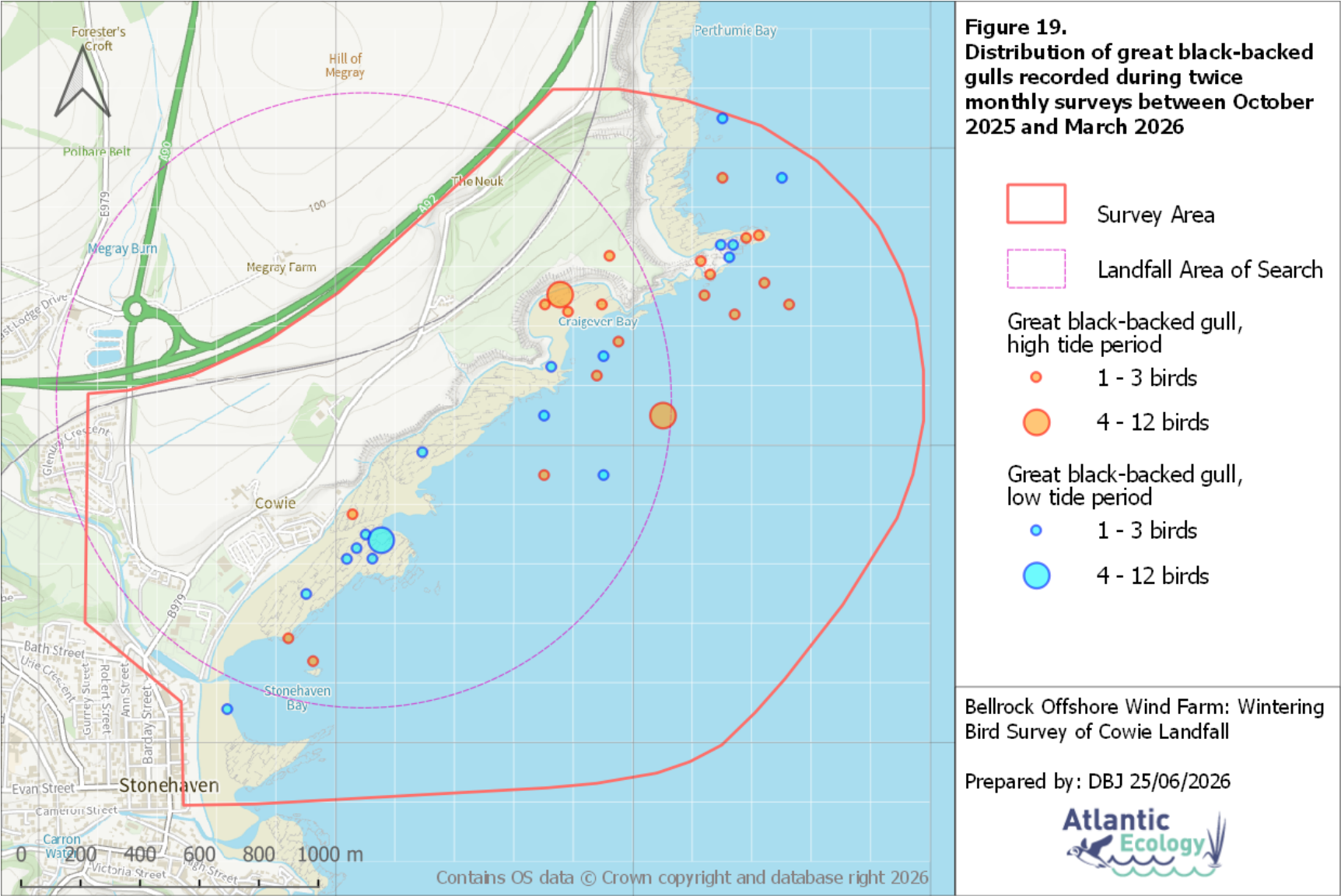


Figure 20. Distribution of common gulls recorded during twice monthly surveys between October 2025 and March 2026

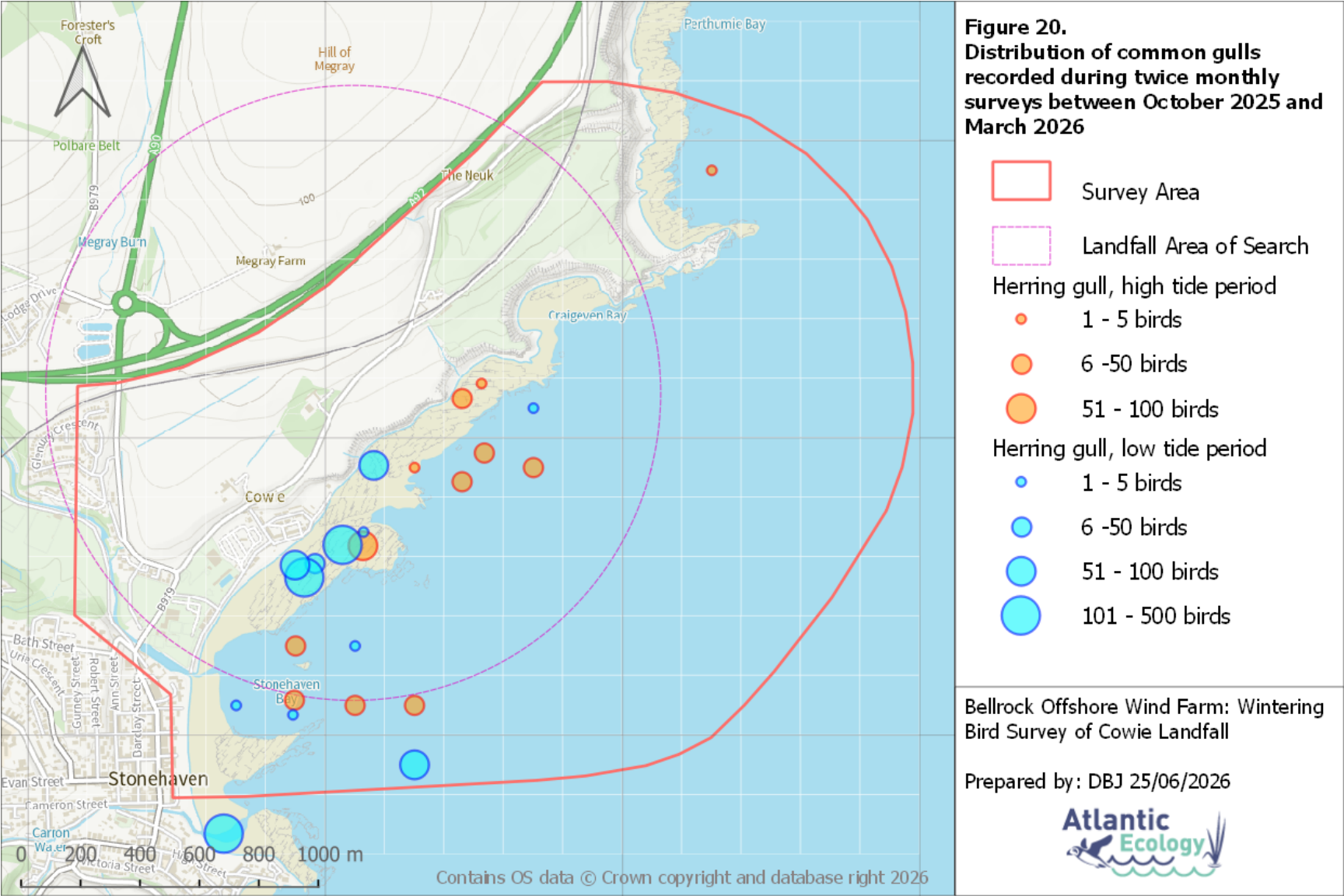


Figure 21. Distribution of black-headed gulls recorded during twice monthly surveys between October 2025 and March 2026

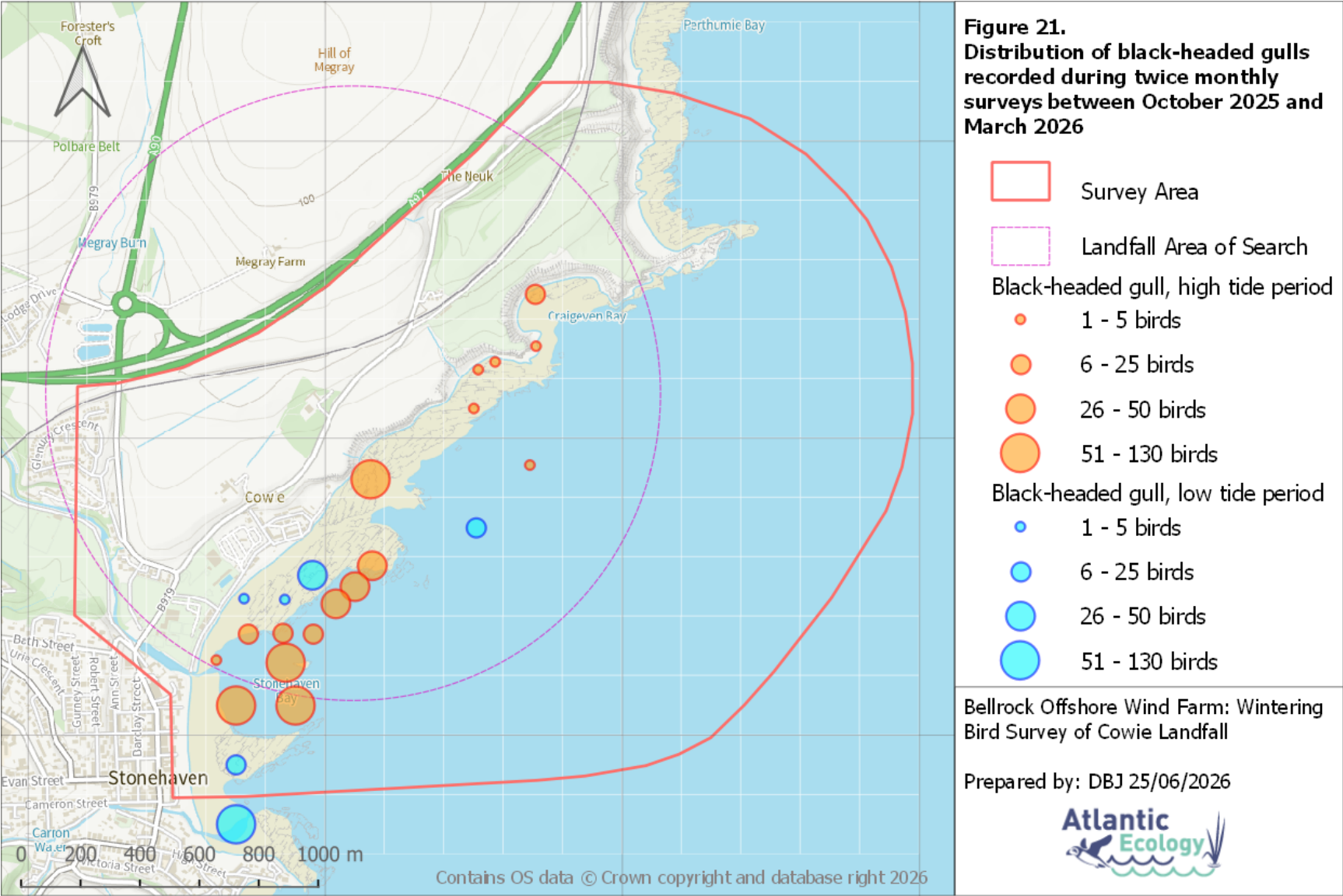




Figure 22. Distribution raptor species and raven recorded during twice monthly surveys between October 2025 and March 2026

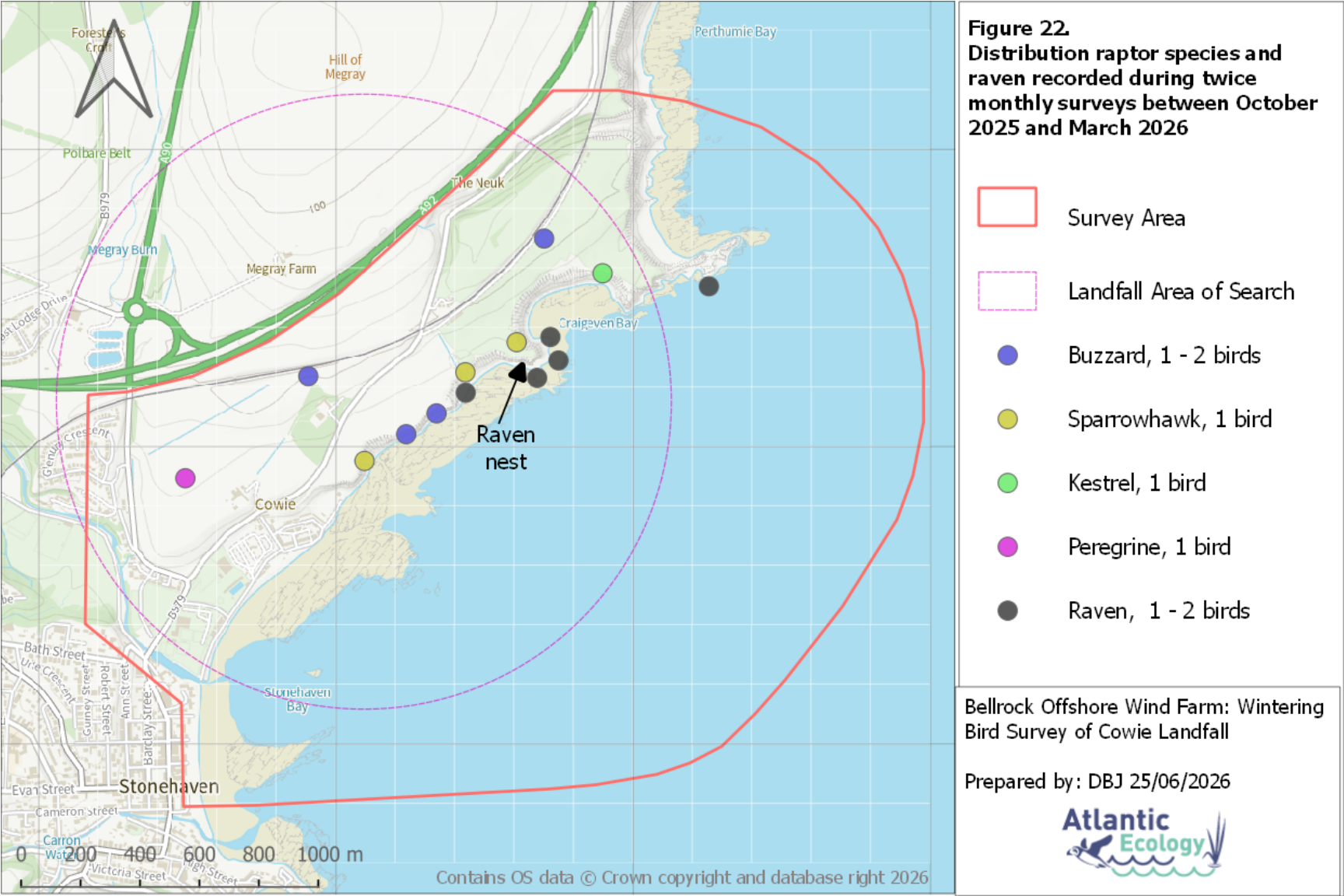




Figure 23. Distribution of Red List farmland bird species recorded during twice monthly surveys between October 2025 and March 2026

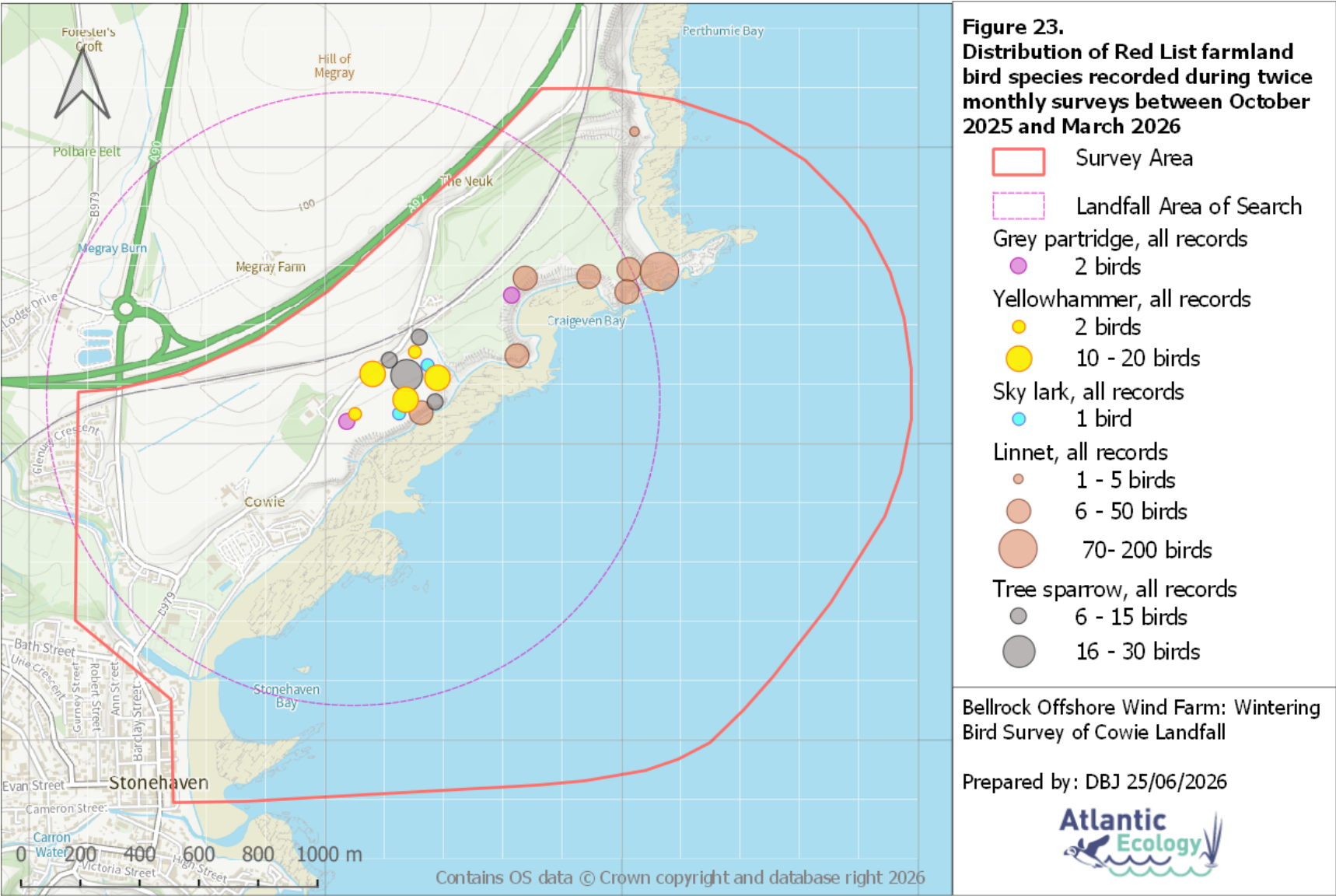
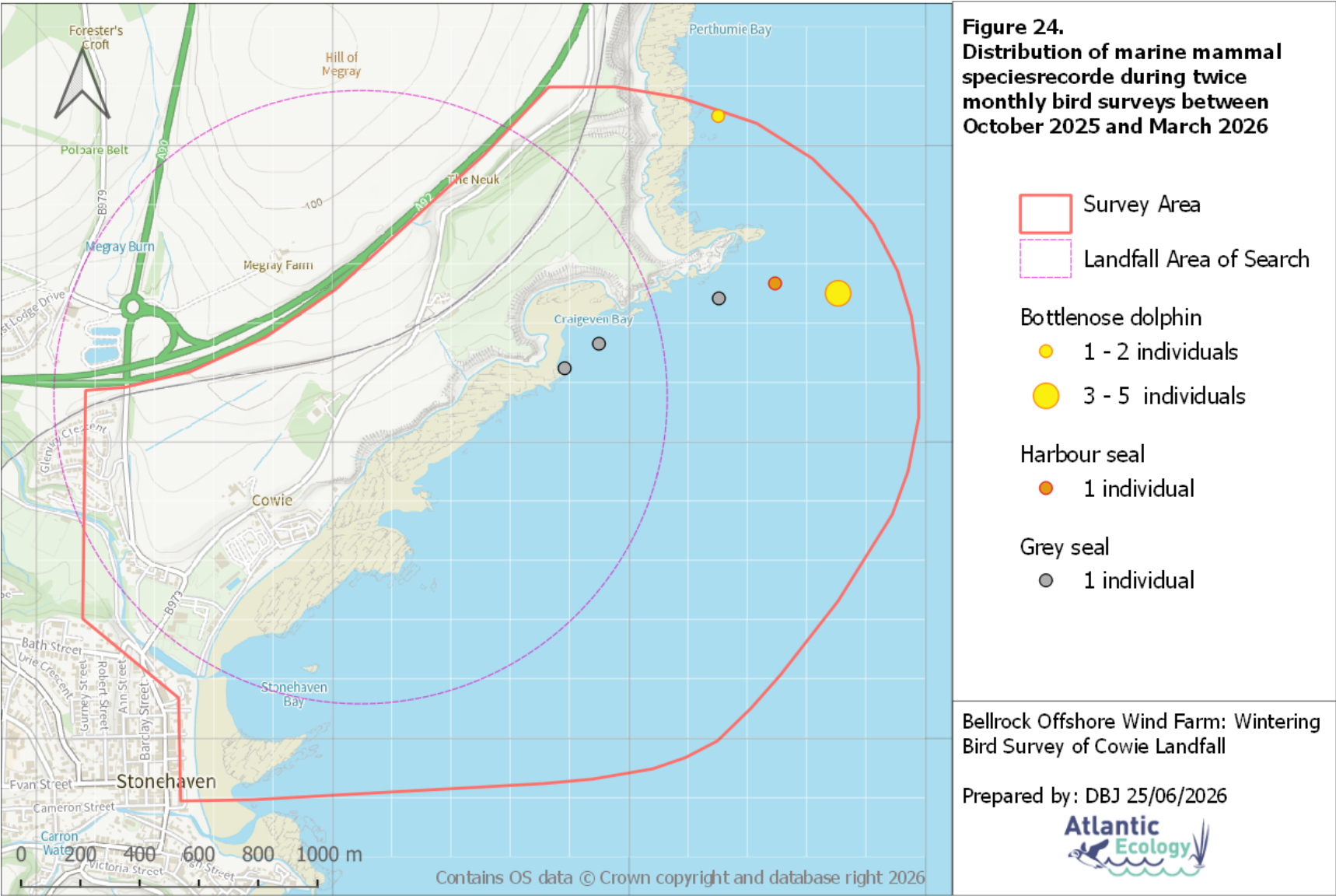


Figure 24. Distribution of marine mammal species recorded during twice monthly bird surveys between October 2025 and March 2026



## Appendix C: List of Species

| Group   | English name            | Scientific name                | Species code |
|---------|-------------------------|--------------------------------|--------------|
| Birds   | Red-throated diver      | <i>Gavia stellata</i>          | RH           |
|         | Fulmar                  | <i>Fulmarus glacialis</i>      | F.           |
|         | Gannet                  | <i>Morus bassanus</i>          | GX           |
|         | Cormorant               | <i>Phalacrocorax carbo</i>     | CA           |
|         | European shag           | <i>Gulosus aristotelis</i>     | SA           |
|         | Grey heron              | <i>Ardea cinerea</i>           | H.           |
|         | Whooper swan            | <i>Cygnus cygnus</i>           | WS           |
|         | Wigeon                  | <i>Mareca penelope</i>         | WN           |
|         | Teal                    | <i>Anas crecca</i>             | T.           |
|         | Mallard                 | <i>Anas platyrhynchos</i>      | MA           |
|         | Eider                   | <i>Somateria mollissima</i>    | E.           |
|         | Long-tailed duck        | <i>Clangula hyemalis</i>       | LN           |
|         | Goldeneye               | <i>Bucephala clangula</i>      | GN           |
|         | Red-breasted merganser  | <i>Mergus serrator</i>         | RM           |
|         | Goosander               | <i>Mergus merganser</i>        | GD           |
|         | Sparrowhawk             | <i>Accipiter nisus</i>         | SH           |
|         | Buzzard                 | <i>Buteo buteo</i>             | BZ           |
|         | Kestrel                 | <i>Falco tinnunculus</i>       | K.           |
|         | Peregrine               | <i>Falco peregrinus</i>        | PE           |
|         | Grey partridge          | <i>Perdix perdix</i>           | P.           |
|         | Oystercatcher           | <i>Haematopus ostralegus</i>   | OC           |
|         | Ringed plover           | <i>Charadrius hiaticula</i>    | RP           |
|         | Purple sandpiper        | <i>Calidris maritima</i>       | PS           |
|         | Dunlin                  | <i>Calidris alpina</i>         | DN           |
|         | Curlew                  | <i>Numenius arquata</i>        | CU           |
|         | Redshank                | <i>Tringa totanus</i>          | RK           |
|         | Turnstone               | <i>Arenaria interpres</i>      | TT           |
|         | Black-headed gull       | <i>Larus ridibundus</i>        | BH           |
|         | Common gull             | <i>Larus canus</i>             | CM           |
|         | Herring gull            | <i>Larus argentatus</i>        | HG           |
|         | Great black-backed gull | <i>Larus marinus</i>           | GB           |
|         | Kittiwake               | <i>Rissa tridactyla</i>        | KI           |
|         | Sandwich tern           | <i>Thalasseus sandvicensis</i> | TE           |
|         | Common guillemot        | <i>Uria aalge</i>              | GU           |
|         | Razorbill               | <i>Alca torda</i>              | RA           |
|         | Skylark                 | <i>Alauda arvensis</i>         | S.           |
|         | Raven                   | <i>Corvus corax</i>            | RN           |
|         | Tree sparrow            | <i>Passer montanus</i>         | TS           |
|         | Linnet                  | <i>Carduelis cannabina</i>     | LI           |
|         | Yellowhammer            | <i>Emberiza citrinella</i>     | Y.           |
| Mammals | Bottlenose dolphin      | <i>Tursiops truncatus</i>      | BND          |
|         | Harbour seal            | <i>Phoca vitulina</i>          | CSE          |
|         | Grey Seal               | <i>Halichoerus grypus</i>      | GSE          |





[www.bellrockwind.co.uk](http://www.bellrockwind.co.uk)