



**AQUIND Limited**

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# **AQUIND INTERCONNECTOR**

## **Environmental Statement – Volume 3 – Appendix 16.13 Wintering Bird Survey Report**

The Planning Act 2008

The Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009 – Regulation 5(2)(a)

The Infrastructure Planning (Environmental Impact Assessment) Regulations 2017

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Appendix 16.13 Wintering Bird Survey Report

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# CONTENTS

## EXECUTIVE SUMMARY

## APPENDIX 16.13 WINTERING BIRD SURVEY REPORT

1.1.	INTRODUCTION	1
2.	METHODS	3
2.1.	DESK STUDY	3
2.2.	WINTERING BIRD SURVEY	3
2.3.	DATES OF SURVEY AND PERSONNEL	8
2.4.	NOTES AND LIMITATIONS	9
3.	RESULTS AND EVALUATION	10
3.1.	WINTERING BIRD SURVEYS	10
3.2.	DISTURBANCE EVENTS	36
3.3.	IMPORTANT SITES FOR WINTERING BIRDS	36
4.	LEGAL AND PLANNING POLICY CONTEXT	43
4.1.	LEGISLATION	43
4.2.	OTHER CONSIDERATIONS	44
5.	DISCUSSION AND RECOMMENDATIONS	46

## TABLES

Table 1 - Methods used during wintering bird surveys	4
Table 2 - Dates of survey and weather conditions	8
Table 3 - Descriptions of SWBGS sites from the 2010 and 2019 strategy and associated desk study results	12
Table 4 - Results of intertidal field surveys by month and tidal phase	20
Table 5 - Results of vantage point surveys	27

Table 6 - Results of terrestrial bird surveys	31
Table 7 - Description of BGSS from field survey, summary of Brent geese ('BG') counts, and evaluation of the sites after combining desk study data and field survey results	38

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## ***PLATES***

Plate 1 - Wintering Bird Survey Area	5
Plate 2 - Locations of SWBGS within or close to the Onshore Cable Corridor	7
Plate 3 - Peak counts from intertidal surveys at low and high tide*	23
Plate 4 - Rose plot showing total number of birds observed at the southern vantage point (Eastney Beach)	25
Plate 5 - Rose plot showing total number of birds observed at the southern vantage point (Eastney Beach)	26
Plate 6 - Map showing the results of the compilation of disturbance events. Red corresponds with the most frequently disturbed areas, orange those with intermediate disturbance, and yellow areas have least disturbance	42

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## ***APPENDICES***

Appendix 1 – Scoping Opinion Responses
Appendix 2 – Summary of Field Survey Data
Appendix 3 – Wintering Bird Survey Maps

## EXECUTIVE SUMMARY

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This report has been prepared on behalf of AQUIND Limited (the 'Applicant') to support an application (the 'Application') for a Development Consent Order ('DCO'). AQUIND Interconnector is a proposed electricity Interconnector between France and the UK. The Application for the DCO is made in respect of the UK elements of AQUIND Interconnector (referred to as the 'Proposed Development').

WSP was commissioned to complete Wintering Birds Surveys on behalf of the Applicant to support the planning application for the Proposed Development.

WSP was appointed to provide baseline data regarding the bird community using wetland and terrestrial habitats within and around Site, areas likely to be subjected to disturbance during the next stages of the Proposed Development. Also, to provide an evaluation of the value of the Site for wintering birds, highlighting especially important areas within the Site, and recommendations as to how proposals should account for wintering birds in relation to legislation, planning and biodiversity policy.

A total of 86 species were recorded on or over the Site during the wintering bird survey. Of these species, a high number are legally protected or species of conservation concern, including 11 Schedule 1 species, 11 Species of Principal Importance ('SPI') under the Natural Environment and Rural Communities ('NERC') Act 2006, 12 Birds of Conservation Concern ('BoCC') red list species and 30 BoCC amber list species.

# APPENDIX 16.13 WINTERING BIRD SURVEY REPORT

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## 1.1. INTRODUCTION

### 1.1.1. PROJECT BACKGROUND

- 1.1.1.1. This report has been prepared on behalf of AQUIND Limited (the ‘Applicant’) to support an application (the ‘Application’) for a Development Consent Order (‘DCO’). AQUIND Interconnector is a proposed electricity Interconnector between France and the UK. The Application for the DCO is made in respect of the UK elements of AQUIND Interconnector (referred to as the ‘Proposed Development’).
- 1.1.1.2. The Proposed Development is described in detail in Chapter 3 (Description of the Proposed Development) of the Environmental Statement (‘ES’) Volume 1 (document reference 6.1.3).
- 1.1.1.3. WSP has been commissioned by the Applicant to undertake a breeding bird survey.

### 1.1.2. ECOLOGICAL BACKGROUND

- 1.1.2.1. A Phase 1 survey and subsequent Preliminary Ecological Appraisal (‘PEA’) (Appendix 16.2 (PEA/Phase 1 Habitat Survey) of the ES Volume 3 (document reference 6.3.16.2)) of the Proposed Development was commissioned by the Applicant in August 2017 and updated in June 2019. The PEA identified ecological constraints associated with the Proposed Development, including potential effects on wintering birds with further surveys being recommended.
- 1.1.2.2. The Onshore Cable Corridor would also run adjacent to Langstone Harbour Site of Special Scientific Interest (‘SSSI’), that is a component of Chichester and Langstone Harbours Ramsar and Special Protection Areas (‘SPA’) and Solent Maritime Special Area of Conservation (‘SAC’). The three harbours of Portsmouth, Langstone and Chichester, when considered as a single unit, rank about twelfth in overall ornithological importance in Europe ( A.J. Prater, T & AD Poyser, 1981).

### 1.1.3. BRIEF AND OBJECTIVES

- 1.1.3.1. WSP was commissioned to complete a survey to inform the assessment of impacts of the Proposed Development on wintering birds. To achieve this, the following objectives were set:

- Collect baseline data describing the wintering bird community using wetland and terrestrial habitats surrounding the Onshore Cable Corridor and Landfall, focussing both on areas supporting important bird species (including black-tailed godwit, dark-bellied brent goose, dunlin, grey plover, redshank, ringed plover, little egret, bar-tailed godwit, shelduck which have been highlighted as important by previous work) and those likely to be subjected to disturbance during the next phases of the Proposed Development;
- Assess the use of terrestrial habitats by brent geese, specifically those sites identified as important for the conservation of these birds by the Solent Waders and Brent Goose Strategy Steering Group (Whitfield, D, 2017); Brent Geese Strategy Site ('SWBGS'); and
- Provide an evaluation, highlighting important areas for wintering birds, and make recommendations as to how proposals should account for wintering birds in relation to legislation, planning and biodiversity policy.



## 2. METHODS

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### 2.1. DESK STUDY

2.1.1.1. This was undertaken to support the PEA (Appendix 16.2 (PEA/ Phase 1 Habitat Survey)) and comprised a review of designated sites and habitats with potential to support wetland/coastal bird species. In addition, records of bird observations between 2000 and 2017 (earlier records deemed not representative of the current bird community) from the Hampshire Biodiversity Information Centre ('HBIC') were collated.

### 2.2. WINTERING BIRD SURVEY

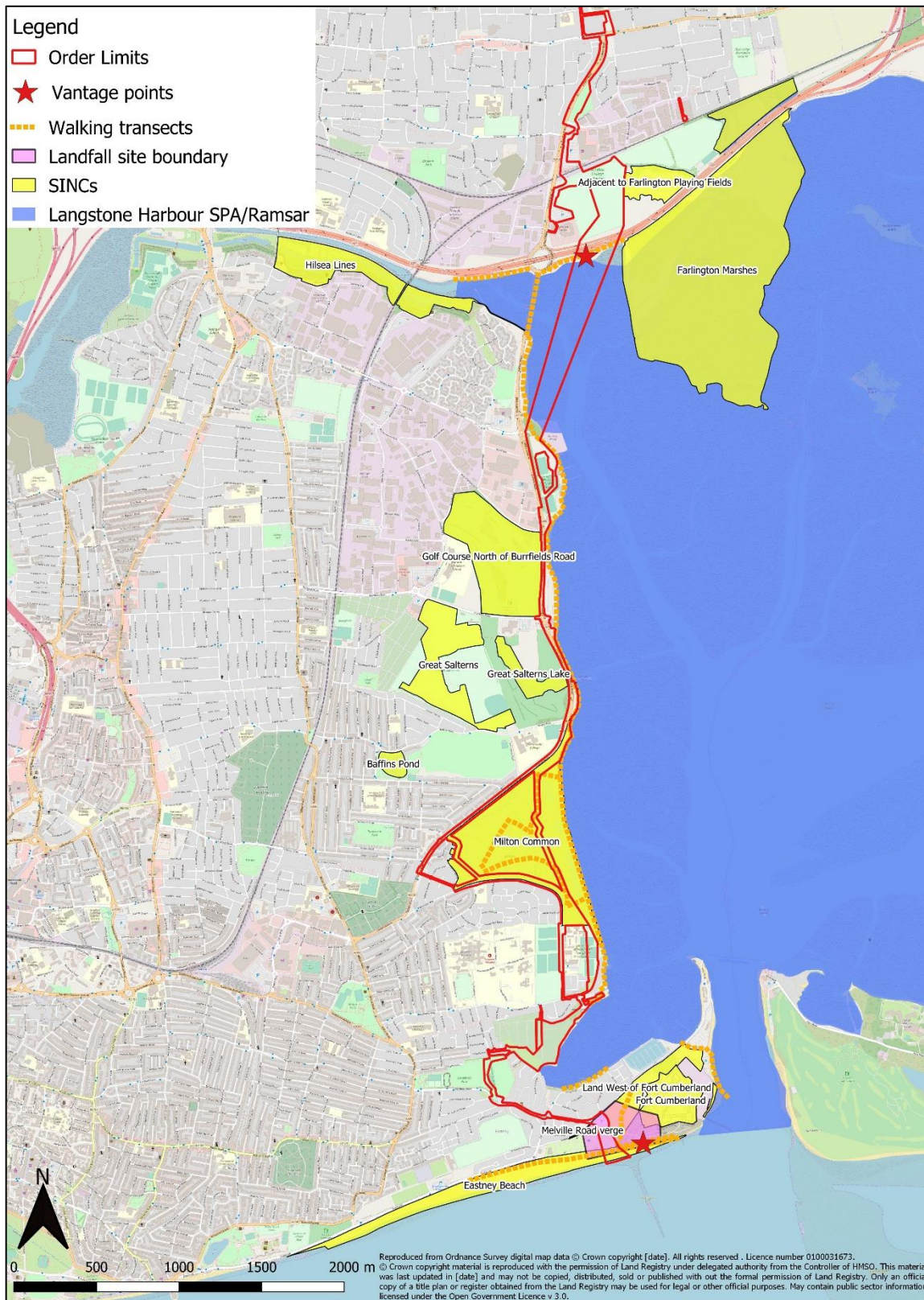
2.2.1.1. Surveys focussed on habitats surrounding Chichester and Langstone Harbours SPA as well as wetland and open water within the SPA itself.

2.2.1.2. To determine the composition of the wintering bird community in and around Chichester and Langstone Harbour SPA, six monthly survey visits were completed between October 2017 and March 2018.

2.2.1.3. Four different survey types covering different habitats were undertaken as described in Table 1, using modified standard methods defined by the British Trust for Ornithology ('BTO').

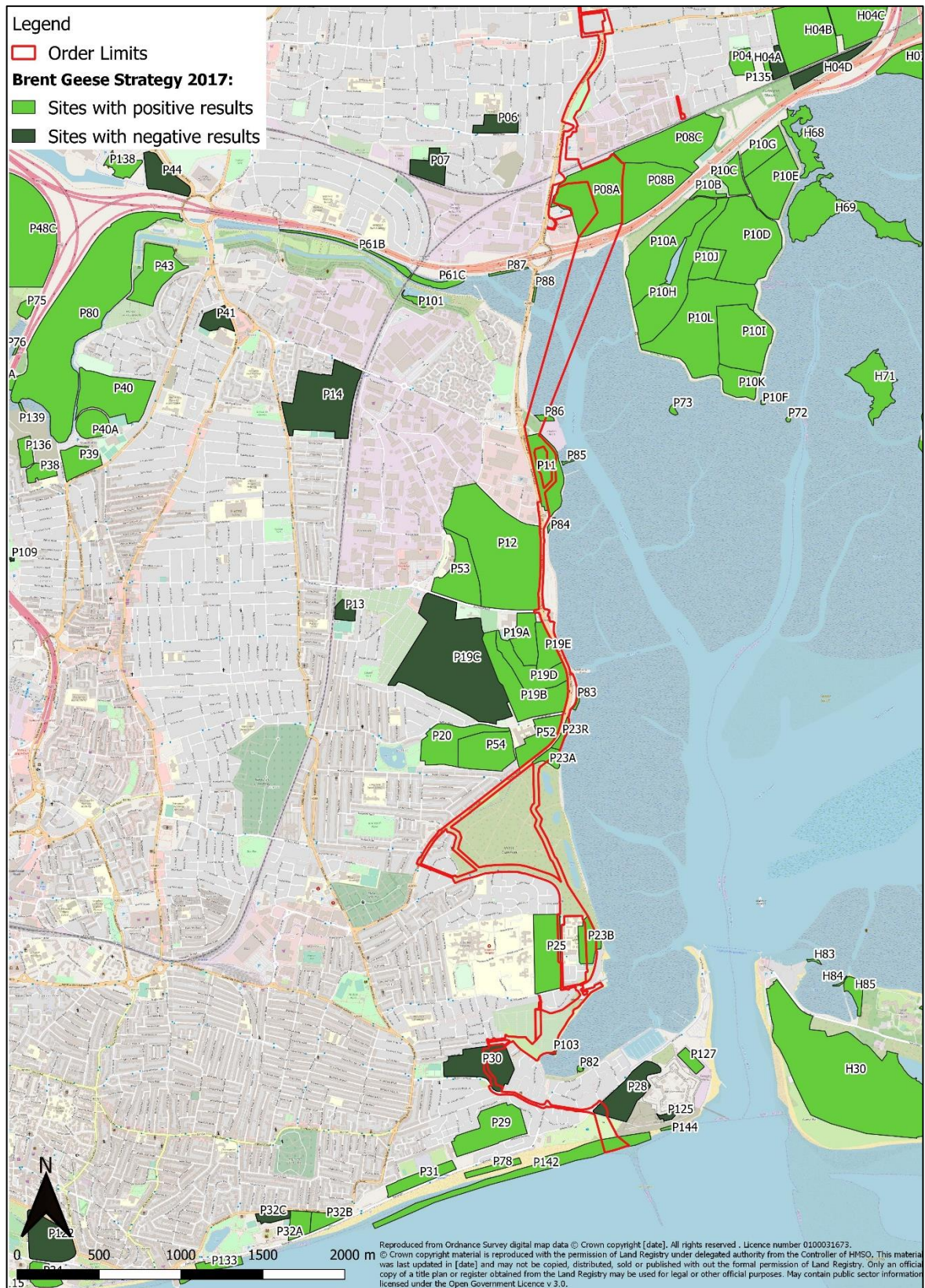
**Table 1 - Methods used during wintering bird surveys**

<b>Survey Type</b>	<b>Description</b>
<b>Intertidal survey</b>	<p>This survey methodology used was an adapted version of the standard BTO's Wetland Bird Survey ('WeBS') (BTO, 2010), incorporating the direct counts methodology (Bibby, C.J., Burgess, N.D., Hill, D.A., and Mustoe, S.H, 2000). It involved two surveyors walking the western perimeter of the Chichester and Langstone Harbours SPA from Farlington Marshes to Fort Cumberland, the SPA's closest point to the Onshore Cable Corridor. Surveyors made frequent stops at suitable places to count birds seen and to record their location, taking notes of their behaviour (foraging, loafing, sleeping, preening etc). Plate 1 shows route of the transects and the defined survey area which was defined applying a 500 m buffer from the Order Limits.</p> <p>The survey was undertaken twice per visit, once at low tide and once at high tide, in order to determine species usage depending on tidal cycle (i.e. foraging areas during low tide, roosts during high tide).</p>
<b>Vantage points at low and high tides</b>	<p>In addition to the above, surveyors spent one hour around high tide and low tide in two locations, one in the north of the estuary at Farlington Marshes (467786, 104341) and another in the south at Eastney Beach (468108, 98993) counting birds flying over these sites. Surveyors recorded the species, flight direction and number of individuals that passed. The aim was describing the exchange of birds between the Survey Area and the surrounding (Plate 2.1 shows the location of the VPs).</p>
<b>SWBGS</b>	<p>Surveyors visited 22 sites identified in the Brent Goose Strategy South East Hampshire Coast (Plate 2)<sup>2</sup>. Using direct counts, brent geese, gulls and other species were identified and their numbers and behaviour recorded.</p>
<b>Terrestrial survey</b>	<p>To determine the importance of Land at Fort Cumberland Nature Reserve and Milton Common Sites Important for Nature conservation ('SINCs') to wintering terrestrial birds, transects were walked through them to identify species and count their numbers. Their locations are shown in Plate 1.</p>



**Plate 1 - Winterring Bird Survey Area**

- 2.2.1.4. Plate 1 shows the location of the Survey Area defined using a buffer of 500m from the Proposed Developments scope as defined in 2017. Plate 1 also shows, designated sites (blue comprises Chichester and Langstone Harbours SPA/Ramsar and SSSI, yellow identifies SINCs). Walking transects of the intertidal and terrestrial surveys and vantage points are also indicated. Plate 2 presents the SWBGS sites within or adjacent to the survey area.



**Plate 2 - Locations of SWBGS within or close to the Onshore Cable Corridor**

2.2.1.5. Each of the survey visits was of approximately seven hours in duration. The surveyors used binoculars and a telescope to identify bird species present within all survey areas. Field observations from all survey visits were combined in a Geographical Information System ('GIS') to facilitate subsequent analyses.

2.2.1.6. During all visits and surveys notes regarding disturbance events on birds were taken. Observed disturbance events (e.g. dogs on intertidal mudflats chasing birds) and potential disturbance factors (such as loose dogs/ boats etc.) were recorded. These observations were also combined in a GIS in order to elaborate a map showing the level of disturbance in the surveyed areas.

### 2.3. DATES OF SURVEY AND PERSONNEL

2.3.1.1. Dates of survey and weather conditions are given in Table 2 below. The breeding bird survey visits were completed by two competent surveyors with more than 10 years' experience of ecological survey, including bird surveys. A third surveyor was responsible for checking the SWBGS sites; their experience was not as extensive but they were trained to identify and count brent geese beforehand and as such were deemed competent to undertake this task.

**Table 2 - Dates of survey and weather conditions**

Survey Visit	Date	Duration	Weather Conditions
1	21/10/2017	9 hours	Temp: 15, Cc: 8, BF: 3, Vis: moderate, Rain: drizzle
2	08/11/2017	9 hours	Temp: 5, Cc: 4, BF: 2, Vis: excellent, Rain: none.
3	20/12/2017	7 hours	Temp: 8, Cc: 8, BF: 2, Vis: moderate (fog), Rain: light drizzle
4	29/01/2018	7 hours	Temp: 10, Cc: 8, BF: 5, Vis: moderate, Rain: no
5	21/02/2018	7 hours	Temp: 5, Cc: 1, BF: 3, Vis: excellent, Rain: no
6	12/03/2018	7 hours	Temp: 10, Cc: 8, BF: 2, Vis: moderate, Rain: intermittent drizzle

**\* Weather condition key:**

**Temp = Temperature in Degrees Celsius**

**Cc = Cloud cover in Otkas (0 no cloud and 8 full cloud cover)**

**BF = Wind measured by Beaufort scale**

**Vis = Visibility by standard visibility index Fog-Very Good**

**Rain = Current rainfall**

## **2.4. NOTES AND LIMITATIONS**

- 2.4.1.1. Although visibility was moderate during survey visit 3 due to the fog, visibility was sufficient to identify birds within the boundaries of the Survey Area when viewed from a distance. Weather conditions were suitable during the rest of the surveys and therefore, weather is not considered to have posed a limitation to the interpretation of the results of the surveys.
- 2.4.1.2. No further site specific limitations were applicable to this survey. Whilst every effort has been made to detect all species present some bird species are more difficult to detect due to their shy or secretive nature and therefore may have gone undetected by this survey. As a constraint applicable to all bird surveys this is not considered to place significant constraints upon interpretation of the results.

## 3. RESULTS AND EVALUATION

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### 3.1. WINTERING BIRD SURVEYS

#### 3.1.1. OVERVIEW

3.1.1.1. The four field survey methods applied (intertidal surveys, vantage points, terrestrial surveys and SWBGS site checks) revealed the presence of 86 species of bird. During all field surveys significant sources of disturbance were noted during daylight hours, including the presence of people, dogs, movement of vehicles (cars, boats etc.) and noise from urban and sub-urban development.

3.1.1.2. The numbers of birds in desk study and field surveys, along with protections and conservation designations, are listed below in Appendices 1 and 2 respectively. It should be noted designations are not exclusive and a species can have a variety of protections or conservation listings (for example listed as both a Species of Principal Importance ('SPI') in accordance with the Natural Environment and Rural Communities ('NERC') Act 2006 and as either a red or amber list Bird of Conservation Concern ('BoCC') (Eaton, M. A. et al. , 2015)).

3.1.1.3. The bird community on the Site is considered of conservation importance, due to internationally significant wintering and breeding habitat within Chichester and Langstone Harbour. The presence of terrestrial areas (playing fields, parks etc) used by brent geese as foraging areas is of particular note in reference to the Proposed Development as this represents a potential pathway for effects.

#### 3.1.2. DESK STUDY RESULTS

3.1.2.1. HBIC returned records of 133 species of bird from the desk study area, however the search was not restricted to wintering birds and includes birds recorded throughout the year. The species list is found within Appendix 1, and 13 of the 18 qualifying species from Chichester and Langstone Harbours SPA/Ramsar were represented.

3.1.2.2. Records are primarily of water birds including ducks and geese, waders, gulls and other shore birds, and pelagic bird species such as divers. There are a number of vagrant species recorded only once, or on relatively few occasions.

3.1.2.3. The status of species identified during desk study can be summarised as follows:

- 56 species listed on Schedule 1 of the Wildlife and Countryside Act 1981 and an additional 15 species that are listed on Annex 1 of the EU Birds Directive;
- 30 that are Species of Principal Importance for Nature Conservation (Section 41 of the NERC Act 2006); and
- 100 are considered Birds of Conservation Concern (49 red listed and 51 amber listed).



3.1.2.4. In addition, using IUCN Red List classifications<sup>1</sup>, 2 are considered endangered, 1 vulnerable, 4 near threatened; however, the clear majority of birds recorded, 126 species, receive the lowest Red List classification, least concern. Finally, of the 133 species found in records, 45 were observed during field survey.

3.1.2.5. Table 3 lists SWBGS sites within or adjacent to the Survey Area, indicated if and which is the name of the Designated Sites they are part of, together with information supplied by HBIC.

### 3.1.3. FIELD SURVEY RESULTS

#### Summary

3.1.3.1. The total number of species identified during the four types of field survey was 86, and the total number of individual observations was 26,721 (Appendix 2). Thirteen of the 18 qualifying species from Chichester and Langstone Harbours SPA/Ramsar were represented (although 11 species are listed within Annexe 1 of the Birds Directive, bird species which can form the basis for protection of a site with SPA status).

3.1.3.2. Designations of species identified during field survey can be summarised as follows:

- 11 species listed on Schedule 1 of the Wildlife and Countryside Act 1981;
- 8 that are Species of Principal Importance for Nature Conservation (Section 41 of the NERC Act 2006);
- 42 are considered Birds of Conservation Concern (30 Amber listed, and 12 Red listed); and
- IUCN Red List classification of species identified comprised 3 classed as near threatened and 83, with the clear majority are classed as least concern.

3.1.3.3. Results of the four individual field survey methods are discussed below.

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<sup>1</sup> International Union for Conservation of Nature; a worldwide group with consultative status with the United Nations, which monitors all world biological species broadly for their conservation status.

**Table 3 - Descriptions of SWBGS sites from the 2010 and 2019 strategy and associated desk study results**

<b>Site name</b>	<b>Easting</b>	<b>Northing</b>	<b>Part of Designated Site</b>	<b>Area</b>	<b>Max count BG</b>	<b>Importance for BG</b>	<b>Max count waders</b>	<b>Importance for waders</b>
<b>P06</b>	467194	105150	No	2.7	0	No recorded use	0	No recorded use
<b>P08A</b>	467793	104702	No	14.11	2400	Important	1600	Very important, core area
<b>P08B</b>	468125	104760	Comprises Playing Fields Adjacent to Farlington Marshes SINC	9.72	625	Uncertain	2	Important for BG
<b>P08C</b>	468294	105021	No	12.17	1500	Very important, core area	0	No recorded use
<b>P103</b>	467549	99479	Langstone Harbour SSSI, Chichester and Langstone Harbours Ramsar and SPAs, Solent Maritime SAC	0.10	203	Important, secondary support area	19	Important

Site name	Easting	Northing	Part of Designated Site	Area	Max count BG	Importance for BG	Max count waders	Importance for waders
<b>P10A</b>	468207	104407	Farlington Marshes SINC and LNR; Langstone Harbour SSSI, Chichester and Langstone Harbours Ramsar and SPAs	16.31	350	Important	500	Important
<b>P11</b>	467507	103018	No	6.87	1000	Very important	10	Important
<b>P12</b>	467209	102545	Golf Course North of Burrfields Road SINC	28.48	4070	Very important	2	Uncertain
<b>P19A</b>	467381	101998	No	3.98	4	Uncertain	0	No recorded use
<b>P19B</b>	467369	101704	No	9.24	450	Important, secondary support area	3	Slightly important
<b>P19C</b>	466917	101880	Great Salterns SINC	30.94	0	No recorded use	0	No recorded use

Site name	Easting	Northing	Part of Designated Site	Area	Max count BG	Importance for BG	Max count waders	Importance for waders
<b>P19D</b>	467407	101814	Great Salterns Lake SINC	5.31	187	Important, primary support area	214	Very important, primary support area
<b>P19E</b>	467498	101927	No	2.98	0	Uncertain	1	Little importance
<b>P20</b>	466919	101376	No	5.93	245	Important, core area	1	Slight importance
<b>P23A</b>	467379	100804	Milton Common SINC	45.00	350	Important, core area	15	Important
<b>P23B</b>	467769	1001163	No	2.81	682	Important, core area	16	Slight importance
<b>P23R</b>	467602	101407	Milton Common SINC	0.73	140	Important, core area	33	Uncertain
<b>P25</b>	467520	100231	No	2.81	0	No recorded use	4	Slight importance, secondary support area

Site name	Easting	Northing	Part of Designated Site	Area	Max count BG	Importance for BG	Max count waders	Importance for waders
<b>P28</b>	468003	99226	Land West of Fort Cumberland SINC	6.12	0	No recorded use	0	No recorded use
<b>P29</b>	467171	99006	No	7.75	1342	Important, core area	0	No information available
<b>P30</b>	467115	99397	No	7.59	0	No recorded use	0	No recorded use
<b>P31</b>	466733	98706	No	2.95	1000	Very important, core area	0	Uncertain
<b>P52</b>	467459	101389	No	4.26	1194	Important	36	Important
<b>P53</b>	466979	102388	No	7.04	0	No recorded use	6	Slight importance
<b>P54</b>	467116	101311	No	7.78	1027	Very important, core area	29	Important
<b>P55</b>	467254	103558	No	2.82	0	No recorded use	0	Uncertain

Site name	Easting	Northing	Part of Designated Site	Area	Max count BG	Importance for BG	Max count waders	Importance for waders
<b>P61C</b>	466851	104180	Langstone Harbour SSSI, Chichester and Langstone Harbours Ramsar and SPAs, Solent Maritime SAC	1.36	22	Important	2	Slight importance
<b>P78</b>	467179	98769	Eastney Beach SINC	1.24	300	Important, primary support area	633	Important, primary support area
<b>P82</b>	467711	99373	Langstone Harbour SSSI, Chichester and Langstone Harbours Ramsar and SPAs, Solent Maritime SAC	0.13	13	Uncertain	112	Important
<b>P83</b>	467692	101634	Langstone Harbour SSSI, Chichester and Langstone Harbours Ramsar and SPAs, Solent Maritime SAC	0.27	26	Uncertain	0	Uncertain
<b>P84</b>	467531	102699	Langstone Harbour SSSI, Chichester and Langstone	0.14	8	Slight importance	9	Important

Site name	Easting	Northing	Part of Designated Site	Area	Max count BG	Importance for BG	Max count waders	Importance for waders
			Harbours Ramsar and SPAs, Solent Maritime SAC					
<b>P85</b>	467631	103080	Langstone Harbour SSSI, Chichester and Langstone Harbours Ramsar and SPAs, Solent Maritime SAC	0.09	100	Important	0	Uncertain
<b>P86</b>	467495	103348	Langstone Harbour SSSI, Chichester and Langstone Harbours Ramsar and SPAs, Solent Maritime SAC	0.32	46	Slight importance	270	Very important
<b>P87</b>	467263	104246	Langstone Harbour SSSI, Chichester and Langstone Harbours Ramsar and SPAs, Solent Maritime SAC	0.44	8	Slight importance	0	No recorded use
<b>P88</b>	467438	104142	Langstone Harbour SSSI, Chichester and Langstone Harbours Ramsar and SPAs, Solent Maritime SAC	0.22	27	Important	29	Important

Site name	Easting	Northing	Part of Designated Site	Area	Max count BG	Importance for BG	Max count waders	Importance for waders
P127	468426	99394	No	1.13	230	Important, secondary support area	9	Slight importance
P125	468238	99089	No	0.38	0	No recorded use	0	No recorded use
P144	468268	99020	No	0.25	0	No recorded use	2	Slight importance
P142	467770	98844	Eastney Beach SINC	9.24	0	No recorded use	48	Important, primary support area



### Intertidal Survey Results

- 3.1.3.4. Forty-five species of bird were identified during intertidal surveys, and the observations collected over the six visits are included in a Table 4 below and mapped in Appendix 3. Peak counts (the highest number of observations of each species encountered on an individual survey visit) at low and high tide are shown in Plate 3. Peak counts highlight differences in the abundance of bird species across the whole Survey Area, and identify those species which are dominant in the winter bird community, separating them from those which are represented only by small numbers or by single birds. The data show there are three highly abundant species (Brent goose, dunlin and black-headed gull), with numbers of observations significantly greater than the remaining 42 species.
- 3.1.3.5. At low tide birds used the survey area to feed, foraging on the intertidal mudflats exposed by receding water for prey living in the mud and amongst small patches of rocky ground. As the tide came in, most species were observed leaving the survey area to find protection in high tide roosts elsewhere in the local area. Counts of birds were lower at high tide than at low tide for this reason (some species, e.g. dunlin, lapwing, black-tailed godwit) were only observed at low tide and vacated the area completely during high tide), and few if any high tide roosts were observed. This is likely a function of the man-made seawalls that border Chichester and Langstone Harbour along its western side and the high levels of disturbance along the seawall, it having a popular pedestrian footpath used by the public for leisure, dog walking and running/fitness pursuits. However, some species more tolerant of disturbance and also that forage on more rocky substrates were more abundant at high tide. Sanderling, turnstone and redshank fell into this category, all being more abundant along the western side of the harbour during high tide.
- 3.1.3.6. Although low-tide is key for many species, both tide phases support foraging intertidal birds and there are few high tide roosting opportunities along the western side of the estuary. Results are discussed below, with related species being grouped to simplify interpretation of the data where possible. The three highly abundant species have been discussed independently however.

- **Brent goose** – this was the most abundant species recorded during survey, and an important winter visitor as over 1% of the world population of the dark-bellied subspecies (*Branta bernicla bernicla*) (Carboneras, C., Christie, D.A. & Kirwan, G.M., 2018). This species overwinters in in the Solent area with Chichester and Langstone Harbour being a favoured site. Geese were observed foraging on mudflats at low-tide, loafing in large groups on the water at high tide, and at both tides flying to/from and foraging terrestrial foraging sites. The number of observations of this species is inflated by its high mobility, with birds frequently flying to and from the harbour causing repeated counting of the same birds. However, using counts intertidal counts and counts SWBGS Sites it is possible to safely conclude several thousand individual brent geese use the intertidal survey area. Brent goose is a BoCC amber listed species and one of the qualifying features of the Chichester and Langstone Harbours SPA.
- **Dunlin** – a highly abundant small wader with peak counts of 2,000 birds within the intertidal survey area at low tide; however, this species almost completely vacates mudflats within the survey area at high tide to roost elsewhere. The intertidal survey area is clearly an important foraging area for this species in winter. Dunlin is BoCC amber listed and one of the qualifying features of the Chichester and Langstone Harbours SPA.
- **Black-headed gull** – this was the most abundant and widespread gull species encountered during surveys, and as an opportunistic and omnivorous shorebird was found throughout the intertidal survey area at both low and high tide. Analysis of peak counts shows similar numbers (~350 birds) in both tide phases. Black-headed gull is a BoCC amber listed species.
- **Black-throated diver** – a single individual was observed within the estuary at high tide in December 2017. Although this species appears regularly in desk study data, it is rare within the intertidal survey area and likely spends its time feeding in deeper water within the harbour away from sources of human disturbance. Black-throated diver is a Wildlife and Countryside Act 1981 Schedule 1 species, an Annex 1 Birds Directive species (although it is not a qualifying feature of Chichester and Langstone Harbour SPA).

- Ducks and geese** – ten species; mute swan, Canada goose, shelduck, teal, mallard, pintail, shoveler, tufted duck, red-breasted merganser, goosander (Brent goose considered separately above). Shelduck and pintail were most abundant species, with the former present with peak counts of between 50 and 60 individuals at both tide phases, and distributed throughout intertidal survey area within the harbour. Pintail were more abundant at low tide (a peak count of 75 individuals vs. 6 a high tide), and localised to the area around the A2030 bridge and Farlington Marshes in the north of the survey area. Teal were the next abundant species with a tendency to higher numbers at low tide than high tide (peak counts of 50 and 33 individuals respectively), with the majority of sightings in on ponds in Milton Common and within the adjacent area of the harbour. Other species were seen in relatively low numbers, peak counts between 1 and 13 individuals. Tufted duck and red-breasted merganser, both diving ducks, were more abundant at high tide when open water was available to them whereas there was no discernible difference in numbers at different tide phases for other species. Lastly, a family of mute swan (two adults and juveniles) was regularly seen in the south of the survey area at Eastney Lake, along with sightings on the ponds at Milton Common and adjacent to the A2030 bridge. Shelduck, shoveler and red-breasted merganser are qualifying features of the Chichester and Langstone Harbour SPA, and six species (mute swan, shelduck, teal, mallard, pintail and shoveler) are BoCC amber listed.
- Oystercatcher and avocet** – The former species was a common bird during surveys, feeding on mudflats, but with a tendency to higher numbers during low tide when more such habitat was available. Avocet was a mid-winter visitor, present at both low-tide and high tide mainly close to Farlington Marshes in January and February. Avocet is a Wildlife and Countryside Act 1981 Schedule 1 species, while both species are BoCC amber listed.
- Plovers** – four species; ringed plover, golden plover, grey plover and lapwing. Ringed plover was the most common of these species (peak counts of 38 at low tide and 58 at high tide), and was able to feed on open mudflats at low tide and close to the harbour wall amongst shingle at high tide. Grey plover and lapwing however were restricted to low tide (peak count of 19 and 70 respectively), with only 1 sighting of grey plover at high tide. Both species were seen on mudflats, lapwing in the north of the survey area adjacent to the A2030 bridge, and grey plover mainly in the south. Lastly, with peak counts of 1, golden plover is considered a vagrant in the area during winter. Ringed plover and grey plover are qualifying features of the Chichester and Langstone Harbour SPA, and are BoCC red and Amber listed respectively. Lapwing is a Species of Principal Importance for Nature Conservation and BoCC red listed.

- **Small waders** – four species; sanderling, redshank, common sandpiper, turnstone. Redshank and turnstone were common wading birds observed during surveys but occupied opposite tide phases; redshank was more abundant at low tide (peak count 103) than high tide (peak count 6) as it feeds on mudflat, whereas turnstone was more abundant at high tide (peak count 66) than low tide (peak count 34) as it prefers to feed around shingle and more individuals are pushed towards the harbour wall by the rising tide. Sanderling was abundant but only found on Eastney Beach, and almost exclusively at high tide (peak count of 200 high tide vs 4 low tide), and did not stray into the harbour. Common sandpiper was observed in small numbers (peak count 2) likely indicating vagrant birds. Sanderling, redshank and turnstone are qualifying features of the Chichester and Langstone Harbour SPA, and all four species are BoCC amber listed.
- **Large waders** – three species; bar-tailed godwit, black-tailed godwit, curlew. Both black-tailed godwit and curlew were common low tide species (low tide peak counts of 75 and 61 respectively) with very few sightings at high tide (peak counts of 0 and 2 respectively), indicating that as the tide rises and obscures the mudflat, these species fly out of the survey area to find high tide roosts elsewhere. Bar-tailed godwit was represented by only a single sighting in January, and thus is likely a vagrant record. Curlew and bar-tailed godwit are qualifying features of the Chichester and Langstone Harbour SPA, and black-tailed godwit is a Wildlife and Countryside Act 1981 Schedule 1 species. Black-tailed godwit and curlew are BoCC Red listed, and bar-tailed godwit is BoCC Amber listed.
- **Gulls** – five species; Mediterranean gull, common gull, lesser black-backed gull, herring gull, greater black-backed gull. Herring and common gull were frequently encountered during surveys at both tide phases, and highly mobile, flying over the harbour as well as alighting on the water to rest. Great black-backed gull was common at low tide (peak count of 29) but absent from high tide counts, suggesting it comes into the harbour to feed at this time and vacates the area when the tide comes in. This was also true of lesser black-backed gull, although some individuals were seen at high tide. Counts of both these species were highest in mid-winter (January, February) when weather conditions are at their worst, and likely use the harbour as a refuge during these times. Mediterranean gull is a Wildlife and Countryside Act 1981 Schedule 1 species.
- **Sandwich tern** – This migratory species is a qualifying feature of the Chichester and Langstone Harbour SPA as a breeding species, and was seen early in the survey period (October, November) before vacating the area for its winter quarters. It was observed only at low tide, with a peak count of 6 individuals. Sandwich tern is BoCC amber listed.

- **Kingfisher** – This normally inland species comes to the coast to forage during mid-winter (Woodall, P.F., 2018), and this accounts for the two individuals seen at high tide during January. Kingfisher is a Wildlife and Countryside Act 1981 Schedule 1 species, and a BoCC Amber listed species.

**Table 4 - Results of intertidal field surveys by month and tidal phase**

Common name	Latin name	Oct		Nov		Dec		Jan		Feb		Mar		Low Tide Peak Count	High Tide Peak Count	Total Obs.
		Low Tide	High Tide	Low Tide	High Tide	Low Tide	High Tide	Low Tide	High Tide	Low Tide	High Tide	Low Tide	High Tide			
<b>Black-throated Diver</b>	<i>Gavia arctica</i>	0	0	0	0	0	1	0	0	0	0	0	0	0	1	1
<b>Little Grebe</b>	<i>Tachybaptus ruficollis</i>	1	1	1	0	5	0	0	1	5	4	0	6	5	6	24
<b>Great Crested Grebe</b>	<i>Podiceps cristatus</i>	0	2	0	0	1	2	1	0	0	0	1	3	1	3	10
<b>Cormorant</b>	<i>Phalacrocorax carbo</i>	5	1	3	0	2	4	1	0	2	1	0	1	5	4	20
<b>Little Egret</b>	<i>Egretta garzetta</i>	12	0	8	7	1	1	3	0	0	0	0	0	12	7	32
<b>Grey Heron</b>	<i>Ardea cinerea</i>	1	0	2	0	0	0	0	1	0	0	0	0	2	1	4
<b>Mute Swan</b>	<i>Cygnus olor</i>	5	4	1	1	4	1	6	8	5	4	0	5	6	8	44
<b>Canada Goose</b>	<i>Branta canadensis</i>	0	0	0	0	0	1	0	7	0	0	0	0	0	7	8
<b>Brent Goose</b>	<i>Branta bernicla</i>	408	172	617	333	970	95	667	795	1598	946	715	967	1598	967	8283
<b>Shelduck</b>	<i>Tadorna</i>	0	0	6	45	38	7	45	19	66	0	29	5	66	45	260
<b>Teal</b>	<i>Anas crecca</i>	1	0	23	0	46	33	2	8	50	27	0	16	50	33	206
<b>Mallard</b>	<i>Anas platyrhynchos</i>	4	0	6	4	3	0	0	3	5	2	1	9	6	9	37
<b>Pintail</b>	<i>Anas acuta</i>	0	0	0	0	18	4	0	1	75	2	53	6	75	6	159
<b>Shoveler</b>	<i>Spatula clypeata</i>	0	0	0	0	2	0	0	0	0	0	0	0	2	0	2
<b>Tufted Duck</b>	<i>Aythya fuligula</i>	0	0	2	0	3	0	0	2	2	0	0	13	3	13	22
<b>Red-breasted Merganser</b>	<i>Mergus serrator</i>	0	2	3	12	1	2	4	0	2	5	0	0	4	12	31
<b>Goosander</b>	<i>Mergus merganser</i>	1	0	0	0	0	0	0	0	0	0	0	0	1	0	1

Common name	Latin name	Oct		Nov		Dec		Jan		Feb		Mar		Low Tide Peak Count	High Tide Peak Count	Total Obs.
		Low Tide	High Tide	Low Tide	High Tide	Low Tide	High Tide	Low Tide	High Tide	Low Tide	High Tide	Low Tide	High Tide			
<b>Water Rail</b>	<i>Rallus aquaticus</i>	0	0	2	0	2	0	0	2	1	0	0	0	2	2	7
<b>Moorhen</b>	<i>Gallinula chloropus</i>	6	0	3	0	1	0	0	7	0	0	0	4	6	7	21
<b>Coot</b>	<i>Fulica atra</i>	2	1	4	1	3	0	0	7	1	0	0	4	4	7	23
<b>Oystercatcher</b>	<i>Haematopus ostralegus</i>	127	0	93	0	26	55	86	40	80	2	33	33	127	55	575
<b>Avocet</b>	<i>Recurvirostra avosetta</i>	0	0	0	0	3	0	19	25	15	0	4	0	19	25	66
<b>Ringed Plover</b>	<i>Charadrius hiaticula</i>	5	58	12	24	1	0	0	19	31	50	0	0	31	58	200
<b>Golden Plover</b>	<i>Pluvialis apricaria</i>	0	0	0	0	0	0	0	0	1	0	0	0	1	0	1
<b>Grey Plover</b>	<i>Pluvialis squatarola</i>	10	0	9	0	4	0	19	0	4	1	3	0	19	1	50
<b>Lapwing</b>	<i>Vanellus</i>	0	0	11	0	9	0	70	0	0	0	0	0	70	0	90
<b>Sanderling</b>	<i>Calidris alba</i>	0	0	0	2	4	2	0	0	0	0	0	200	4	200	208
<b>Dunlin</b>	<i>Calidris alpina</i>	398	1	22	1	404	0	66	0	2014	9	167	0	2014	9	3082
<b>Black-tailed Godwit</b>	<i>Limosa</i>	75	0	2	0	3	0	0	0	0	0	27	0	75	0	107
<b>Bar-tailed Godwit</b>	<i>Limosa lapponica</i>	0	0	0	0	0	0	1	0	0	0	0	0	1	0	1
<b>Curlew</b>	<i>Numenius arquata</i>	18	0	15	0	16	0	24	0	61	0	15	2	61	2	151
<b>Redshank</b>	<i>Tringa totanus</i>	75	0	10 3	0	51	3	16	5	47	0	25	6	103	6	331
<b>Common Sandpiper</b>	<i>Actitis hypoleucos</i>	0	0	0	0	2	0	2	0	0	0	0	0	2	0	4
<b>Turnstone</b>	<i>Arenaria interpres</i>	34	0	11	0	17	1	6	66	0	3	1	49	34	66	188

Common name	Latin name	Oct		Nov		Dec		Jan		Feb		Mar		Low Tide Peak Count	High Tide Peak Count	Total Obs.
		Low Tide	High Tide	Low Tide	High Tide	Low Tide	High Tide	Low Tide	High Tide	Low Tide	High Tide	Low Tide	High Tide			
<b>Mediterranean Gull</b>	<i>Larus melanocephalus</i>	0	0	0	0	0	0	0	1	0	0	0	5	0	5	6
<b>Black-headed Gull</b>	<i>Larus ridibundus</i>	318	26	361	143	166	110	251	324	215	66	61	207	361	324	2248
<b>Common Gull</b>	<i>Larus canus</i>	0	43	9	10	6	5	75	131	78	19	33	46	78	131	455
<b>Lesser Black-backed Gull</b>	<i>Larus fuscus</i>	5	1	0	0	1	0	3	1	11	0	2	3	11	3	27
<b>Herring Gull</b>	<i>Larus argentatus</i>	23	35	27	38	25	26	7	12	20	37	24	17	27	38	291
<b>Great Black-backed Gull</b>	<i>Larus marinus</i>	0	0	0	0	29	0	11	0	18	0	0	0	29	0	58
<b>Sandwich Tern</b>	<i>Thalasseus sandvicensis</i>	6	0	2	0	0	0	0	0	0	0	0	0	6	0	8
<b>Kingfisher</b>	<i>Alcedo atthis</i>	0	0	0	0	0	0	0	2	0	0	0	0	0	2	2
<b>Totals</b>		1611	347	1433	624	1925	355	1392	1522	4501	1178	1194	1666	5057	2127	17748



\*Highly abundant species have been split to preserve useful scales

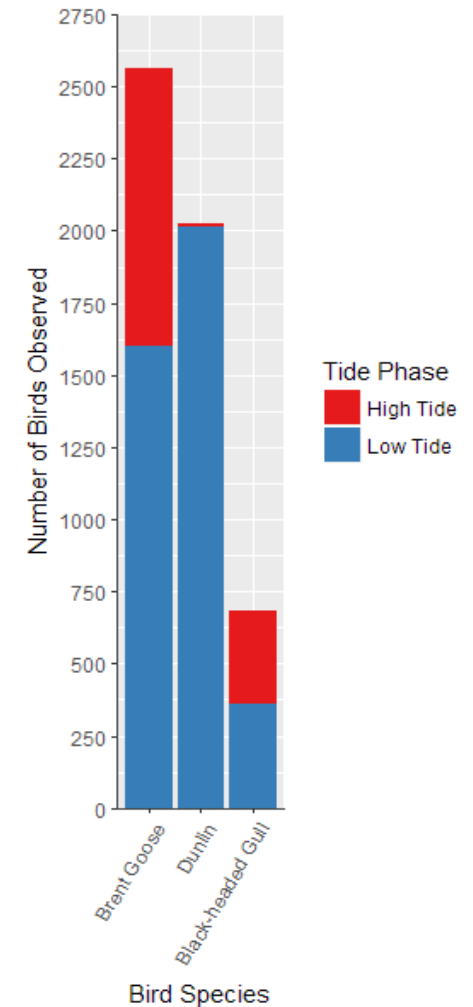
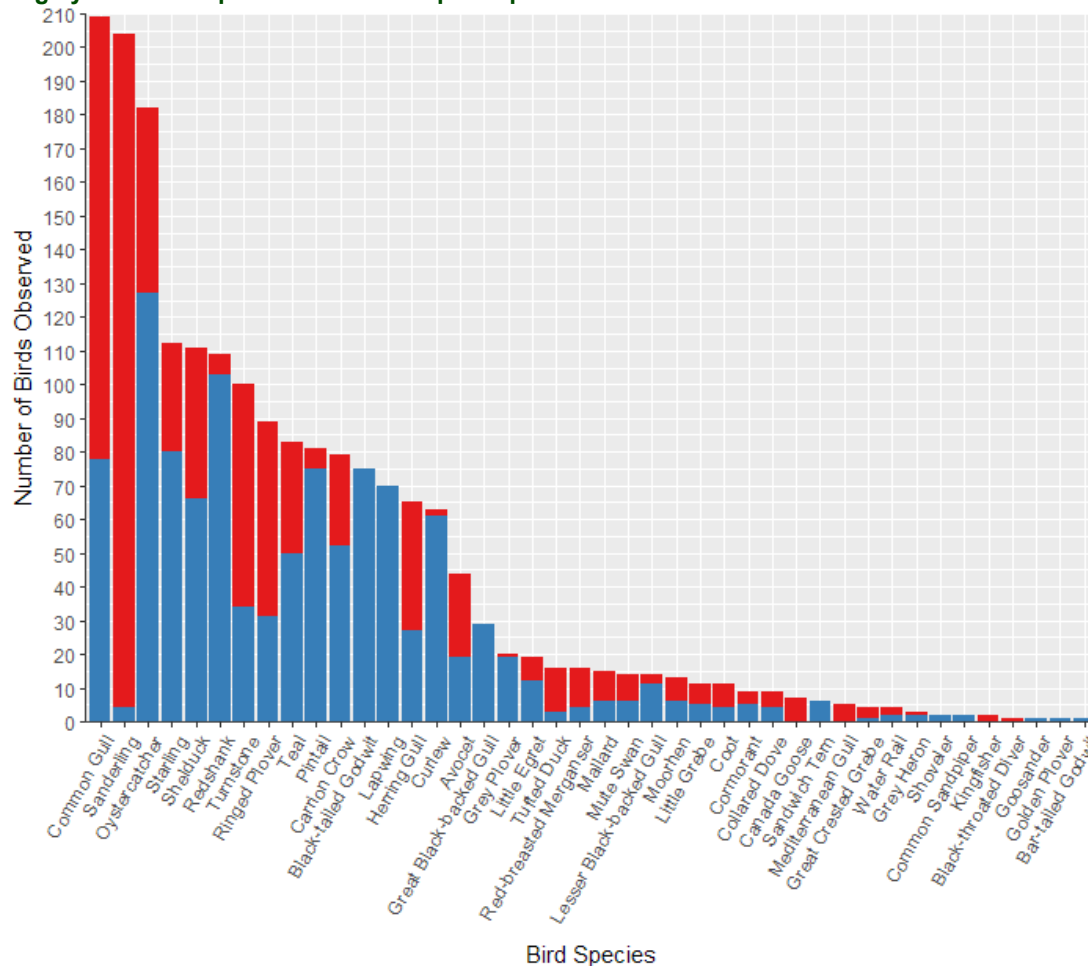
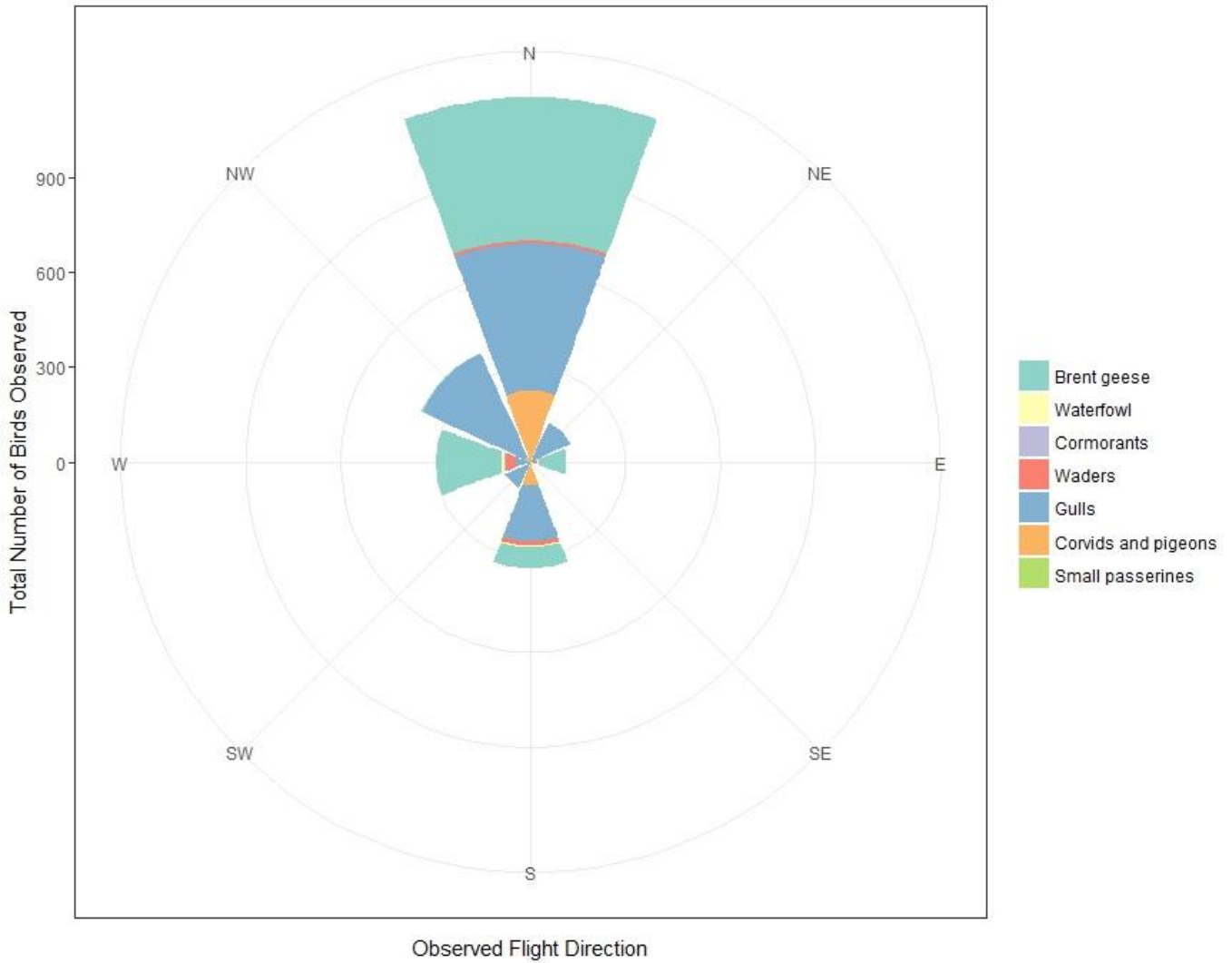


Plate 3 - Peak counts from intertidal surveys at low and high tide\*

### Vantage Point Survey Results

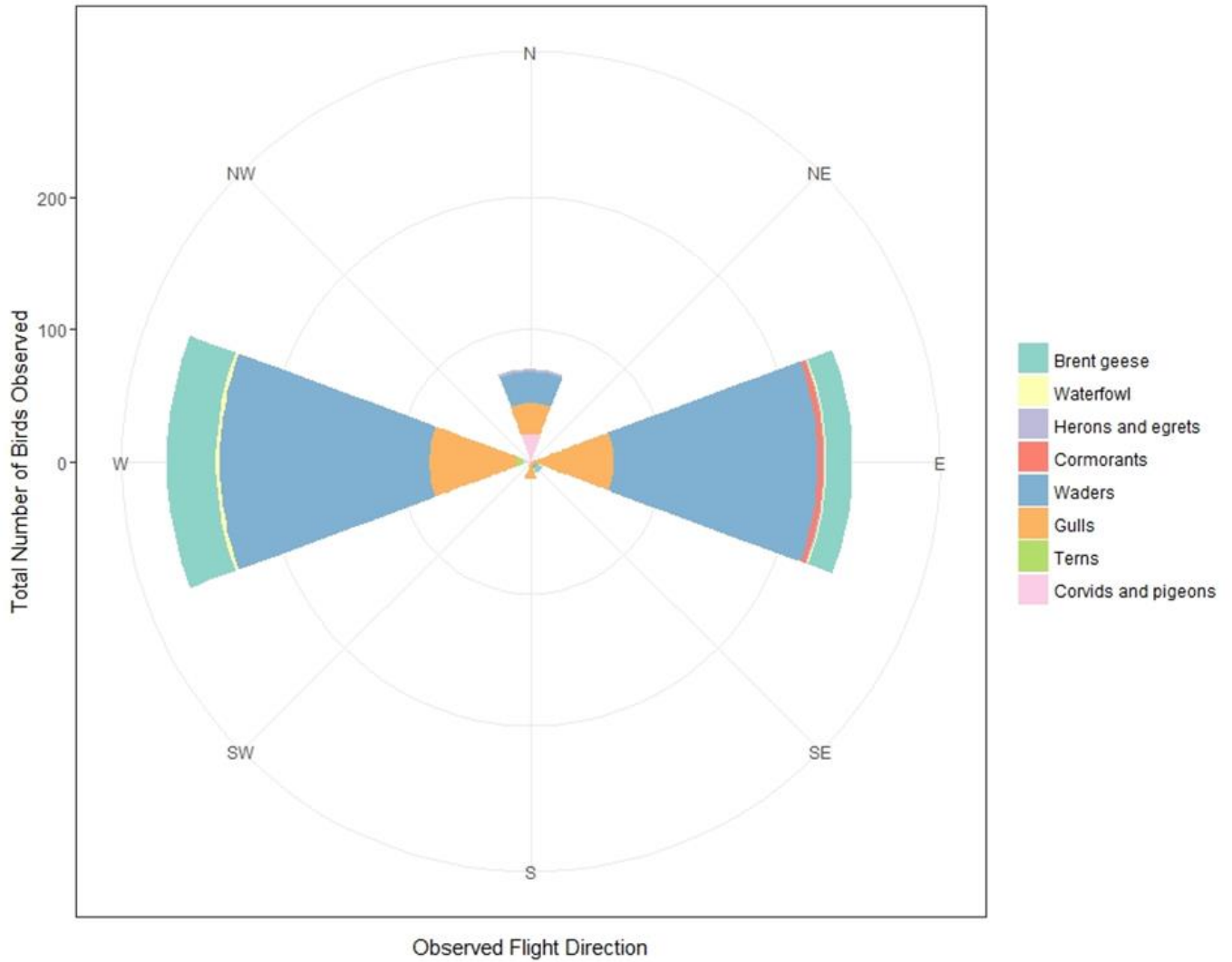
- 3.1.3.7. Twenty-nine species of bird were observed at the vantage points and counts are shown in **Error! Reference source not found.**, comprising 3515 individual bird observations. Broadly, the community of birds in flight was dominated by Brent geese, gulls and waders, with other birds represented in significantly lower numbers. Plate 4 and Plate 5 show the total numbers of birds across all survey visits (the 6 months at high tide and low tide) to vantage points as rose plots where the size of each segment at each of the 8 compass points represents numbers of birds observed.
- 3.1.3.8. At the northern vantage (Farlington Marshes) point the majority of birds were observed flying north out of the harbour, with Brent geese and gulls the dominant bird groups. This is likely due to a strong northerly movement of these birds to roost sites within the harbour at dawn to feeding sites inland to the north. Data does not indicate a return flight into the estuary as few of the vantage point counts were undertaken at dusk, whereas one was always undertaken at close to dawn. The northerly movement takes birds across the A27, a busy carriageway.
- 3.1.3.9. The southern vantage point showed that a roughly equal east-west movement of birds along Eastney Beach, with the bird community dominated by Brent geese and waders (namely large groups of dunlin), with a significant passage of gulls also. The data show that although some birds fly across the beach to reach the harbour behind, most prefer to follow the coastline to access the harbour via Fort Cumberland/Gunner Point.

3.1.3.10. Plot shows their flight direction, grouped into related bird families. The area of each coloured segment is proportional to the number of birds observed.



**Plate 4 - Rose plot showing total number of birds observed at the southern vantage point (Eastney Beach)**

3.1.3.11. Plot shows their flight direction, grouped into related bird families. The area of each coloured segment is proportional to the number of birds observed.



**Plate 5 - Rose plot showing total number of birds observed at the southern vantage point (Eastney Beach)**

**Table 5 - Results of vantage point surveys**

Common name	Latin name	Oct		Nov		Dec		Jan		Feb		March		V P N or th Total	V P S o ut h Total	T ot al
		V P N or th	V P S o ut h	V P N or th	V P S o ut h	V P N or th	V P S o ut h	V P N or th	V P S o ut h	V P N or th	V P S o ut h					
<b>Brent Goose</b>	<i>Branta bernicla</i>	1		5	6	4	1	8		1		2		1	63	11
				8	2	3	8	9		8		7		0	4	5
<b>Black-headed Gull</b>	<i>Larus ridibundus</i>	1	1		1	7	1	2	1	5	1	6	2	1	34	12
		9	0		9	6		2				3		2	4	5
<b>Cormorant</b>	<i>Phalacrocorax carbo</i>	2		1		1	2		1		1			4	4	8
<b>Common Gull</b>	<i>Larus canus</i>						6	4	4		4	2	6	6	20	26
<b>Coot</b>	<i>Fulica atra</i>				1		1						1		3	3
<b>Curlew</b>	<i>Numenius arquata</i>	1												1		1
<b>Dunlin</b>	<i>Calidris alpina</i>								1		1		7	0	30	30
									5		5				7	7
									0		0					
<b>Little Egret</b>	<i>Egretta garzetta</i>			6	5									6	5	11
<b>Great Black-backed Gull</b>	<i>Larus marinus</i>		1			5			1		1		2	5	5	10

<b>Herring Gull</b>	<i>Larus argentatus</i>	2	1	2	2	1	3	1	1	2	9		2	6	11	18
			2	5	0	2	7		0	7			5	7	3	0
<b>Lapwing</b>	<i>Vanellus</i>	3		1	1									3	1	36
		4												5		
<b>Lesser Black-backed Gull</b>	<i>Larus fuscus</i>							1		9		2		2		29
								8						9		
<b>Mallard</b>	<i>Anas platyrhynchos</i>	4								1				5		5
<b>Mute Swan</b>	<i>Cygnus olor</i>												1		1	1
<b>Oystercatcher</b>	<i>Haematopus ostralegus</i>	3				4	1	7	2	8	2		1	2	6	28
														2		
<b>Ringed Plover</b>	<i>Charadrius hiaticula</i>									4				4		45
										5				5		
<b>Starling</b>	<i>Sturnus vulgaris</i>	1		2	2			1						3	22	33
		6		2	2			2						1		3
		0						9						1		
<b>Snipe</b>	<i>Gallinago</i>								1		1				24	24
									2		2					
<b>Sanderling</b>	<i>Calidris alba</i>			5	1									5	1	6
<b>Shelduck</b>	<i>Tadorna</i>					1								1		10
						0								0		
<b>Teal</b>	<i>Anas crecca</i>					4								4		4
<b>Sandwich Tern</b>	<i>Thalasseus sandvicensis</i>		4										1		5	5

### Terrestrial Survey Results

- 3.1.3.12. Forty-two species of terrestrial bird were observed within Milton Common, Land at Fort Cumberland Nature Reserve and in terrestrial habitats along the intertidal bird survey transect route. Milton Common comprises a mix of small patches of grassland and scrub with scattered trees, and Fort Cumberland consists of gorse heathland and semi-improved grassland; both sites are heavily disturbed by the public (e.g. runners, dog walkers) throughout the day.
- 3.1.3.13. The species identified, counts from each visit, peak counts and totals are shown in Table 6, and mapped in Appendix 3 alongside results of the intertidal bird survey.
- 3.1.3.14. The majority of birds encountered were common and widespread wintering bird species often found in semi-natural habitats, such as suburban development. However, there were a number of important species which could represent a constraint to development, and these are discussed below:
- **Black redstart:** One individual (a male) was observed around derelict buildings along the eastern end of Eastney Beach. Black redstart is a scarce species in the UK, resident only in urban areas of the midlands and southern England where it favours derelict areas which mimic its rocky natural habitat. There is the potential this species could breed close to the Proposed Development. Black redstart is a Wildlife and Countryside Act 1981 Schedule 1 species and BoCC red listed.
  - **Dartford warbler:** A single individual was seen within Land at Fort Cumberland Nature Reserve, and site descriptions for this area indicate it likely breeds there. This is a scarce species restricted to heathlands in the south of England, and is also classified as Near Threatened by the IUCN red list. It is a Wildlife and Countryside Act 1981 Schedule 1 species, an Annex 1 species on the Birds Directive, and BoCC amber listed.
  - **Stonechat:** This species receives no conservation designations or special legislative protection, but is a heathland specialist and thus subject to restricted habitat availability within the survey area, being isolated to Land at Fort Cumberland Nature Reserve.
  - **Cetti's warbler:** This species is a Wildlife and Countryside Act 1981 Schedule 1 species and was heard regularly calling from marginal vegetation around the ponds at Milton Common. This species is unlikely to come into contact with the Proposed Development as these ponds are far from the Onshore Cable Corridor.

- **House sparrow:** Once common throughout the UK, this species has seen marked decline in recent decades, making its relative abundance in the survey data (it was the most common terrestrial passerines with peak counts of 56 individuals) significant. It was common at the Land at Fort Cumberland Nature Reserve. House sparrow is a Species of Principal Importance for Nature Conservation, and is BoCC red listed.
- **Other species:** starling, dunnock, linnets, meadow pipit, kestrel, song thrush, redwing, skylark. These are variously listed as BoCC amber and red species (see Appendix B) but remain common and widespread breeding birds in the UK, and thus may be sensitive to effects of the scheme. Redwing is listed on Schedule 1 of the Wildlife and Countryside Act but for its small UK breeding population in northern Scotland. It is a common and widespread winter visitor to lowland England.



**Table 6 - Results of terrestrial bird surveys**

Common Name	Latin Name	October	November	December	January	February	March	Peak Count	Total
<b>Sparrowhawk</b>	<i>Accipiter nisus</i>	0	0	1	0	0	0	1	1
<b>Buzzard</b>	<i>Buteo</i>	0	2	1	2	2	0	2	7
<b>Kestrel</b>	<i>Falco tinnunculus</i>	3	2	3	2	1	0	3	11
<b>Peregrine</b>	<i>Falco peregrinus</i>	0	0	0	1	0	0	1	1
<b>Wood pigeon</b>	<i>Columba palumbus</i>	4	0	20	17	20	11	20	72
<b>Feral pigeon</b>	<i>Columba livia</i>	22	6	92	46	8	17	92	191
<b>Green woodpecker</b>	<i>Picus viridis</i>	1	0	1	0	1	1	1	4
<b>Great spotted woodpecker</b>	<i>Dendrocopos major</i>	1	0	0	0	0	0	1	1
<b>Skylark</b>	<i>Alauda arvensis</i>	0	3	0	0	0	0	3	3

Common Name	Latin Name	October	November	December	January	February	March	Peak Count	Total
<b>Swallow</b>	<i>Hirundo rustica</i>	8	0	0	0	0	0	8	8
<b>Meadow pipit</b>	<i>Anthus pratensis</i>	22	13	5	2	1	0	22	43
<b>Rock pipit</b>	<i>Anthus petrosus</i>	0	0	0	0	1	0	1	1
<b>Pied wagtail</b>	<i>Motacilla alba</i>	12	7	9	3	1	2	12	34
<b>Wren</b>	<i>Troglodytes</i>	5	3	6	0	3	9	9	26
<b>Dunnock</b>	<i>Prunella modularis</i>	14	6	8	3	16	28	28	75
<b>Robin</b>	<i>Erithacus rubecula</i>	11	12	17	6	13	15	17	74
<b>Black redstart</b>	<i>Phoenicurus ochruros</i>	0	0	0	0	0	1	1	1
<b>Redstart</b>	<i>Phoenicurus</i>	1	0	0	0	0	0	1	1

Common Name	Latin Name	October	November	December	January	February	March	Peak Count	Total
<b>Stonechat</b>	<i>Saxicola torquatus</i>	0	1	1	0	1	1	1	4
<b>Wheatear</b>	<i>Oenanthe</i>	1	1	0	0	0	0	1	2
<b>Blackbird</b>	<i>Turdus merula</i>	6	15	22	7	17	15	22	82
<b>Song thrush</b>	<i>Turdus philomelos</i>	0	0	1	0	2	1	2	4
<b>Redwing</b>	<i>Turdus iliacus</i>	0	0	0	0	0	4	4	4
<b>Cetti's warbler</b>	<i>Cettia cetti</i>	3	2	1	2	5	5	5	18
<b>Dartford warbler</b>	<i>Sylvia undata</i>	0	1	0	0	0	0	1	1
<b>Chiffchaff</b>	<i>Phylloscopus collybita</i>	1	2	1	0	0	0	2	4
<b>Goldcrest</b>	<i>Regulus</i>	3	11	2	1	0	1	11	18
<b>Long-tailed tit</b>	<i>Aegithalos caudatus</i>	8	3	0	1	2	0	8	14
<b>Coal tit</b>	<i>Parus ater</i>	0	0	0	0	1	0	1	1

Common Name	Latin Name	October	November	December	January	February	March	Peak Count	Total
<b>Blue tit</b>	<i>Parus caeruleus</i>	4	8	3	3	3	8	8	29
<b>Great tit</b>	<i>Parus major</i>	3	4	7	3	6	14	14	37
<b>Jay</b>	<i>Garrulus glandarius</i>	2	0	0	0	0	0	2	2
<b>Magpie</b>	<i>Pica pica</i>	6	2	5	11	8	9	11	41
<b>Jackdaw</b>	<i>Corvus monedula</i>	0	0	0	0	4	0	4	4
<b>Carrion crow</b>	<i>Corvus corone</i>	52	35	38	34	12	22	52	193
<b>Starling</b>	<i>Sturnus vulgaris</i>	19	43	18	8	80	32	80	200
<b>House sparrow</b>	<i>Passer domesticus</i>	47	56	55	22	30	25	56	235
<b>Chaffinch</b>	<i>Fringilla coelebs</i>	10	2	0	0	1	0	10	13

Common Name	Latin Name	October	November	December	January	February	March	Peak Count	Total
<b>Greenfinch</b>	<i>Carduelis chloris</i>	5	14	8	17	44	38	44	126
<b>Goldfinch</b>	<i>Carduelis</i>	68	33	16	19	21	41	68	198
<b>Siskin</b>	<i>Carduelis spinus</i>	0	0	3	0	0	0	3	3
<b>Linnet</b>	<i>Carduelis cannabina</i>	24	2	2	15	1	2	24	46

### **SWBGS Site Checks**

- 3.1.3.15. **Error! Reference source not found.** summarises background data regarding S WBGs including their identification, established counts of Brent geese from previous surveys and their relative importance for this species within the strategy.
- 3.1.3.16. Field surveys of SWBGS sites revealed five were repeatedly used by Brent geese, with the remainder either heavily disturbed, now developed and unsuitable for Brent goose grazing, or in the minority of cases inaccessible for counts. These were:
- P23R – peak count of 91.
  - P127 – peak count of 115.
  - P29 – peak count of 500.
  - P54 – peak count of 650.
  - P23R – peak count of 800.

## **3.2. DISTURBANCE EVENTS**

- 3.2.1.1. Table 7 categorises areas surveyed by the level of disturbance they received whilst bird observations were being recorded (e.g. dogs on intertidal mudflats chasing birds, runners or other man-made disturbance events). Open parks that consist of grassland are frequently disturbed by dog walkers, as is the edge of the harbour (where there is a public footpath, the Solent Way) and Eastney Beach. P29 and P54 have already been identified as being free from frequent disturbance as they are not open to the public, and thus they provide the most frequently used foraging areas for Brent goose.

## **3.3. IMPORTANT SITES FOR WINTERING BIRDS**

### **3.3.1. MUDFLATS**

Chichester and Langstone Harbour SPA is an internationally important site for wintering waterfowl and waders. The mudflats of the Site are used by birds both during low tide, mainly for foraging, with fewer birds using this area at high tide, with birds present at this tide phase mainly resting on the water. The SPA within the survey area hosts a high proportion of the UK wintering population of certain species, including black and bar-tailed godwit, common redshank, common ringed plover, dunlin, grey plover, ruddy turnstone and sanderling. The Site is visited by a high number of species of conservation concern, in most cases due to a recent declining trend in their numbers, as in the case of northern lapwing. However, due to the location of the Onshore Cable Corridor, it is unlikely mudflats will be disturbed by the Proposed Development.

### 3.3.2. TERRESTRIAL HABITAT

3.3.2.1. Milton Common Park (P23A) and Land at Fort Cumberland Nature Reserve (P28; the TJB) are important areas for terrestrial birds, although the former site's value mainly comes from the ponds on its eastern side. Gorse heathland in Land at Fort Cumberland Nature Reserve supports a number of scarce species including Dartford warbler and Black redstart (although this was found in derelict buildings adjacent to the reserve). Both species are likely breeding in the area and could be disturbed by works

### 3.3.3. BRENT GEESE AND WADER SITES

3.3.3.1. The information from the desk study and from field surveys was combined. The description of the sites and the evaluation of its importance for BG and waders is summarised in Table 7. It was determined that the most important sites for BG and waders are:

- P08A
- P10A
- P11
- P12
- P127
- P19D
- P23B
- P23R
- P54
- P29
- P31
- P52
- P54
- P78
- P82
- P85
- P86

**Table 7 - Description of BGSS from field survey, summary of Brent geese ('BG') counts, and evaluation of the sites after combining desk study data and field survey results**

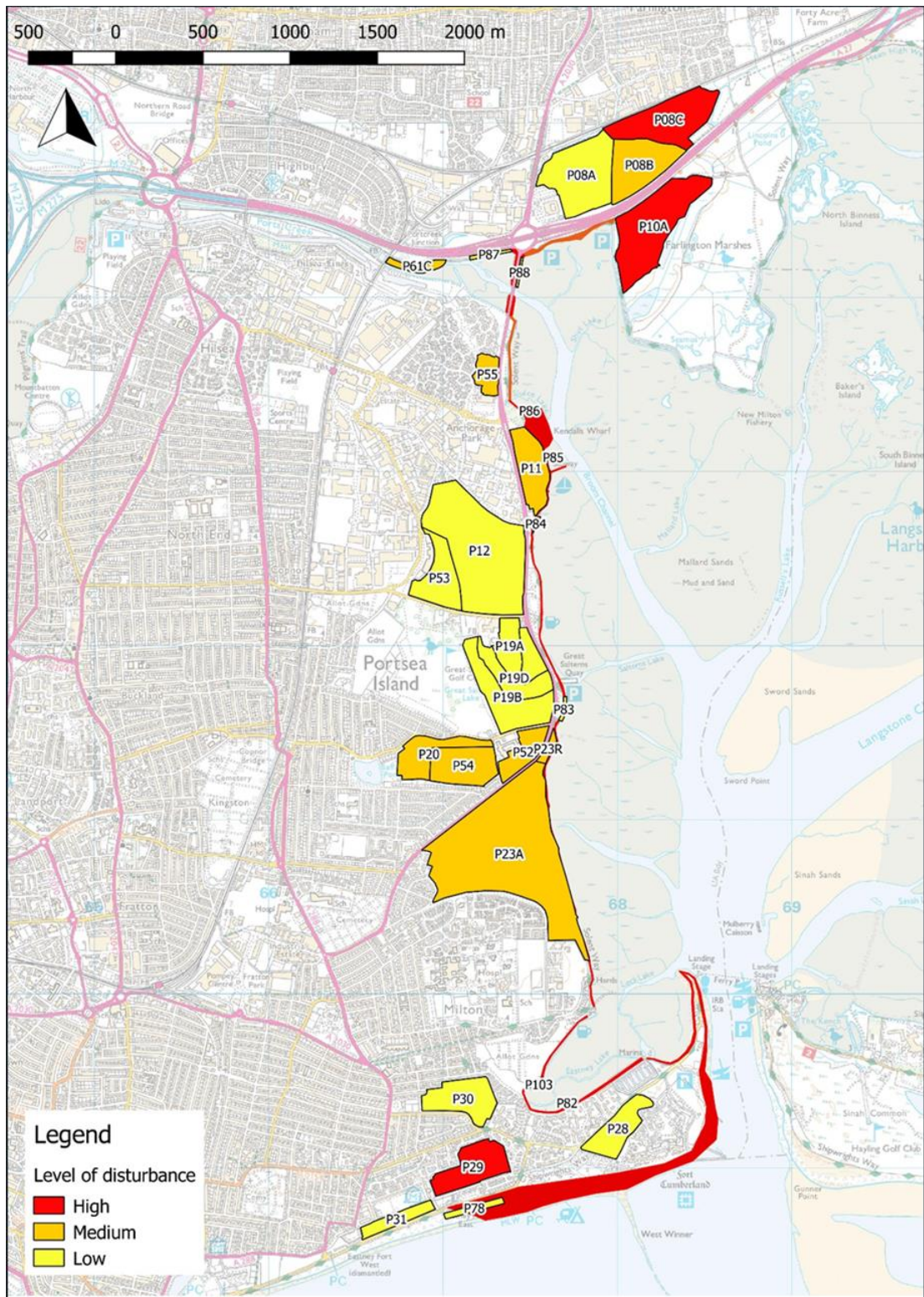
<b>Name of the BGSS</b>	<b>Description and Results</b>	<b>Importance after Combining Survey &amp; Desk Study Data</b>
<b>P06</b>	Springfield School football pitches. Not surveyed	No recorded use by BG or waders.
<b>P08A</b>	Football pitches. No BG or waders were detected.	Important site for BG and waders.
<b>P08B</b>	Site mostly out of 500 m buffer, consisting on a scrub land, which is not the optimal habitat for BG or waders during this time of the year. Hence, not surveyed.	Important for BG.
<b>P08C</b>	Football pitches in school grounds. No BG or waders were detected.	Important for BG.
<b>P103</b>	Shore by the estuary. No BG or waders were detected.	Important for BG.
<b>P10A</b>	Site mostly out of buffer, consisting on a scrub land. BG observed using the area of Farlington Marshes outside of P10A, which has a habitat more suitable for BG and waders.	Important for both BG and waders.
<b>P11</b>	Football pitches. No BG or waders were detected.	Important for BG and waders.
<b>P12</b>	Part of a golf course in constant use. 50 BG were recorded in January and 2 in February. No waders were recorded during the surveys.	Important for BG and waders.
<b>P125</b>	Not surveyed.	No recorded use.
<b>P127</b>	Peak of 115 BG in March.	Important for BG and waders.
<b>P142</b>	Part of Eastney beach. No BG were detected,	Important for waders.
<b>P144</b>	Not surveyed.	Slight importance for waders.



Name of the BGSS	Description and Results	Importance after Combining Survey & Desk Study Data
<b>P19A</b>	Part of a golf course in constant use. No BG or waders were recorded during the surveys.	Not important.
<b>P19B</b>	Part of a golf course in constant use. No BG or waders were recorded during the surveys.	Important specially for BG.
<b>P19D</b>	Part of a golf course in constant use. No BG or waders were recorded during the surveys.	Important for both BG and waders.
<b>P19E</b>	Part of a golf course in constant use. 6 BG were recorded during the December visit.	Not important.
<b>P20</b>	Football pitches. No BG or waders were recorded during the surveys.	Important for BG.
<b>P23A</b>	Milton Common Park. It mostly consists of a scrubland, therefore it was surveyed using terrestrial survey techniques. No BG or waders were recorded during the wintering surveys, just passerines.	Important for BG.
<b>P23B</b>	Peak of 800 BG in February.	Important for BG.
<b>P23R</b>	3 BG were detected in the visit during December.	Important for BG..
<b>P28</b>	No BG or waders were detected.	No recorded use by BG or waders.
<b>P29</b>	BG refuge. High amounts of BG were detected during several visits, but no waders were recorded. 240 BG in December, 170 BG in January and 500 BG in March.	Important for BG.
<b>P30</b>	Football pitches. No BG or waders were recorded during the surveys.	No recorded use.
<b>P31</b>	Football pitches. No BG or waders were recorded during the surveys.	Important for BG.

Name of the BGSS	Description and Results	Importance after Combining Survey & Desk Study Data
P52	Football pitches. No BG or waders were recorded during the wintering surveys.	Important for BG.
P53	Football pitches with some parkland. Neither BG nor waders were recorded during the wintering surveys.	Slight importance for waders.
P54	Football pitches in school grounds, close to normal public. 650 BG were detected during the visit of December, but no waders were recorded.	Important for BG and waders.
P55	Football pitches. No BG or waders were recorded during the surveys.	No recorded use.
P61C	Shore of canal connecting Portsmouth Harbour with Chichester and Langstone Harbour. Just 1 BG was detected during the first survey, in October.	Slight importance for BG and waders.
P78	Part of Eastney beach. No BG was detected during the wintering surveys, but two species waders: 200 Sanderling and 10 turnstone in March.	Slight importance for BG and waders
P82	Shore and a small pond by the estuary. No BG or waders were recorded during the surveys.	Important for waders.
P83	Wall and part of shore by a parking. No BG or waders were recorded during the surveys.	Not important.
P84	Shingle with vegetation, by the shore of the estuary. No BG or waders were recorded during the surveys.	Slight importance for BG.
P85	Dock of sailing school. No BG or waders were recorded during the surveys.	Importance for BG.
P86	Cement wall and part of shore by the estuary.	Important for waders.

<b>Name of the BGSS</b>	<b>Description and Results</b>	<b>Importance after Combining Survey &amp; Desk Study Data</b>
<b>P87</b>	Cement wall and part of shore by the estuary. 12 BG were recorded using the site in March.	Slight importance.
<b>P88</b>	Cement wall and part of shore by the estuary. A small flock of wader species were recorded during one of the surveys.	Important for both BG and waders.



**Plate 6 - Map showing the results of the compilation of disturbance events. Red corresponds with the most frequently disturbed areas, orange those with intermediate disturbance, and yellow areas have least disturbance**

## 4. LEGAL AND PLANNING POLICY CONTEXT

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### 4.1. LEGISLATION

#### 4.1.1. HABITATS REGULATIONS 2017

4.1.1.1. Under the amendments to the Habitats Regulations (16th August 2012) Reg 9A(2) & (3) state that local authorities

*“must take such steps in the exercise of their functions as they consider appropriate to contribute to...the preservation, maintenance and re-establishment of a sufficient diversity and area of habitat for wild birds in the UK including by means of the upkeep, management and creation of such habitat...”*

4.1.1.2. The legislation continues to state that economic and recreation requirements must be taken into consideration in considering which measures are appropriate.

#### 4.1.2. WILDLIFE AND COUNTRYSIDE ACT 1981 (AS AMENDED)

4.1.2.1. Under the Wildlife and Countryside Act 1981 (as amended) all wild birds are protected from killing and injury, and their nests and eggs protected from taking, damage and destruction whilst in use; therefore, recommendations to avoid contravention of this legislation are included within Section 5.

4.1.2.2. Additional protection is extended to species listed under Schedule 1 of the Act, meaning it is also an offence to disturb these species at or near the nest, or whilst they have dependent young. 32 species that have been recorded in the Site are listed under Schedule 1 of the Act.

4.1.2.3. A male of Black redstart *Phoenicurus ochruros*, was detected singing during the visit in March, in abandoned buildings between Fort Cumberland and Eastney Beach SINC.

4.1.2.4. Dartford warbler *Sylvia undata* is also listed under Schedule 1 of the Act. An individual of unknown sex was visually detected during one of the surveys in Land West of Fort Cumberland SINC, and it has been previously recorded breeding in the area.

#### 4.1.3. NATURAL ENVIRONMENT AND RURAL COMMUNITIES ACT 2006

4.1.3.1. The NERC Act 2006 reinforces the duty upon all public authorities, including planning authorities, to have regard for the conservation of biodiversity when discharging their duties. The Act refines the definition of biodiversity conservation, stating that it includes restoring or enhancing a population or habitat. Section 41 of the NERC Act requires the Secretary of State to list habitats and species of principal importance (HPIs and SPIs) for the conservation of biodiversity in England. The habitats and species listed in accordance with Section 41 largely replicate those listed on the UK Biodiversity Action Plan (BAP) which occur in England (however there are exceptions). 8 SPI (also UKBAP species) were recorded on the Site.

4.1.3.2. The national BAP is supplemented by local BAPs which identify habitats and species of particular value or concern at the local level. Hampshire Biodiversity Partnership developed a Biodiversity Action Plan <sup>2</sup> that suggested Priority Species and Habitats, and developed Action Plans for some of them.

## **4.2. OTHER CONSIDERATIONS**

### **4.2.1. BIRDS OF CONSERVATION CONCERN RED AND AMBER LISTS**

4.2.1.1. The UK's leading bird conservation organisations reviewed the most up to date information on the status of birds in the UK and elsewhere in their range to produce the third review of the status of birds which occur regularly in the UK. This is presented as the Birds of Conservation Concern 4 (Eaton, M. A. et al. , 2015), comprising a 'red list' of species of high conservation concern, an 'amber' list of species of moderate conservation concern, with other species that do not qualify under red or amber list criteria on the green list.

4.2.1.2. To qualify on the red list species may be listed as globally threatened by IUCN, have suffered a historical decline without substantial recent recovery, or a decline of more than 50% in breeding or non-breeding populations, or a 50% contraction in breeding range over 25 years (or the longer term). Amber list species can be those listed as Species of European Conservation Concern, those which have suffered a historical decline but shown significant recent recovery, have shown a decline of between 25 and 50% in breeding or non-breeding populations, or a contraction in breeding range of between 25 and 50% over 25 years (or the longer term) or be rare or localised breeders in the UK, or be species for which 20% of the breeding or non-breeding population is found in the UK.

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<sup>2</sup> Hampshire Biodiversity Partnership (2001).

- 4.2.1.3. Red or amber listing does not confer additional protection under legislation or planning policy, however it provides a basis for informing evaluation of a Site and for targeting conservation effort and is a widely used resource for interpreting bird populations.

## 5. DISCUSSION AND RECOMMENDATIONS

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- 5.1.1.1. The Survey Area contains several locations that support important wintering populations of several species, especially waterfowl and waders. Mudflats along the estuary are within Chichester and Langstone Harbour SPA, and mainly used by birds at low tide for foraging, with fewer birds using this area at high tide, their behaviour at this tide phase mainly resting on the water.
- 5.1.1.2. The Survey Area is frequented by a high number of species of conservation concern, in most cases due to a recent declining trend in their numbers, as in the case of northern lapwing. The mudflats form part of the wider estuary which hosts a part of the UK wintering population of certain species, including black and bar-tailed godwit, common redshank, ringed plover, dunlin, grey plover, turnstone and sanderling, these species forming part of the designated features of the SPA. However, due to the location of the Onshore Cable Corridor, it is unlikely mudflats and the species which use them will be disturbed by the Proposed Development.
- 5.1.1.3. Chichester and Langstone Harbour also is a favoured winter foraging area for brent geese. This was the most abundant waterbird recorded during the surveys, and an important winter visitor as over 1% of the world population of the dark-bellied subspecies used Chichester and Langstone Harbour SPA to pass the winter. In the first visits, BG were observed mainly feeding in the grass patches within the estuary, during the low tide. However, from December onwards, several parklands and playgrounds nearby support even thousands of BG, specifically those identified as BGSS P08A, P10A, P11, P12, P19D, P23B, P23R, P29, P31, P52, P54, P78, P82, P85, P86, P127.
- 5.1.1.4. The location of the Onshore Cable Corridor is unlikely to disturb this wintering species in a permanent way, as the Cables will be underground and will not interfere with their flight pathways between feeding and resting areas. However, even if the Proposed Development does not directly affect their sites, the works could disturb them: (Owens, N.W. , 1977) stated that unexpected loud noises usually put brent geese to flight, and they become more sensitive to disturbance as the frequency increases. Brent geese also avoid heavily disturbed feeding sites in early winter but used all such areas later, as food stocks become depleted elsewhere. Should the works take place close to important feeding sites on land, they could be planned to happen early in the Autumn to finish before brent geese start to use more those places around December.



- 5.1.1.5. Milton Common Park and Land at Fort Cumberland Nature Reserve are of value for terrestrial birds, although the former site's value mainly comes from the ponds on its eastern side. Gorse heathland in Land at Fort Cumberland Nature Reserve supports Dartford warbler (in winter at least) which is Schedule 1 listed and therefore of conservation importance. While the derelict buildings adjacent to the reserve support black redstart, also Schedule 1 listed. These Schedule 1 species potentially breed in the area and could be disturbed by works if they take place within their breeding season, particularly evidenced by one male of black restart singing in March. Further consideration of breeding birds is presented in Appendix 16.12 (Breeding Bird Report) of the ES Volume 3 (document reference 6.3.16.12).

# Appendix 1 – Desk Study Data

# DESK STUDY DATA



Table 1 – Desk Study Data

Common name	Latin name	WCA 1981 Schedule 1	Annex I Birds	Section NERC Act	BoCC List	IUCN Red List 2014	SPA Qualifying Feature	Priority Species in Hampshire BAP	Identified During Field Survey	Num. of records	Individuals Observed	Date Range	Notes and Importance
Red-throated Diver	<i>Gavia stellata</i>	X	X			LC				12	7	2002-2015	
Black-throated Diver	<i>Gavia arctica</i>	X	X		Amb er	LC			X	5	3	2006-2015	Internationally important wintering area for this species
Great Northern Diver	<i>Gavia immer</i>	X	X		Amb er	LC				61	27	2001-2015	
Great Crested Grebe	<i>Podiceps cristatus</i>					LC			X	60	156	2007-2015	
Red-necked Grebe	<i>Podiceps grisegena</i>				Red	LC				14	6	2009-2015	
Slavonian Grebe	<i>Podiceps auritus</i>	X	X		Red	LC		X		51	38	2006-2015	
Black-necked Grebe	<i>Podiceps nigricollis</i>	X			Amb er	LC		X		25	28	2013-2014	
Leach's Storm-petrel	<i>Hydrobates leucorhous</i>	X	X		Amb er	LC				2	2	2005-2014	Vagrant records
Shag	<i>Phalacrocorax aristotelis</i>				Red	LC				67	32	2001-2015	
Bittern	<i>Botaurus stellaris</i>	X	X	X	Amb er	LC		X		21	2	2002-2014	
Little Egret	<i>Egretta garzetta</i>		X			LC		X	X	101	288	2001-2015	
Grey Heron	<i>Ardea cinerea</i>					LC			X	80	41	2001-2015	
Purple Heron	<i>Ardea purpurea</i>	X	X			LC				4	1	2001-2015	Vagrant records
Glossy Ibis	<i>Plegadis falcinellus</i>		X			LC				24	3	2006-2015	
Spoonbill	<i>Platalea leucorodia</i>	X	X		Amb er	LC				133	11	2009-2009	
Bewick's Swan	<i>Cygnus columbianus</i>	X	X	X	Amb er	LC		X		2	6	2001-2015	Internationally important wintering area for this species

Common name	Latin name	WCA 1981 Schedule 1	Annex I Birds	Section NERC Act	BoCC List	IUCN Red List 2014	SPA Qualifying Feature	Priority Species in Hampshire BAP	Identified During Field Survey	Num. of records	Individuals Observed	Date Range	Notes and Importance
Whooper Swan	<i>Cygnus</i>	X	X		Amb er	LC				6	1	2012-2013	Several records of a single vagrant individual
White-fronted Goose	<i>Anser albifrons</i>				Red	LC		X		14	6	2001-2015	
Barnacle Goose	<i>Branta leucopsis</i>		X		Amb er	LC				36	48	2011-2013	
Brent Goose	<i>Branta bernicla</i>				Amb er	LC	Winter	X	x	299	27722	2004-2015	Internationally important wintering area. Over 1 % of the world population of the dark-bellied subspecies winters in the Solent area
Red-breasted Goose	<i>Branta ruficollis</i>		X			EN				89	5	2002-2015	Vagrant records, number of records high due to interest of bird watchers, but now number of individuals
Ruddy Shelduck	<i>Tadorna ferruginea</i>		X			LC				5	2	2013-2015	Vagrant records
Shelduck	<i>Tadorna tadorna</i>				Amb er	LC	Winter		x	88	1269	2012-2012	Nationally important numbers
Gadwall	<i>Mareca strepera</i>				Amb er	LC		X		122	300	2002-2015	Regionally important wintering area
Garganey	<i>Spatula querquedula</i>	X			Amb er	LC				16	5	2002-2015	
Shoveler	<i>Spatula clypeata</i>				Amb er	LC	Winter	X	X	149	367	2003-2015	
Pochard	<i>Aythya ferina</i>				Red	LC		X		17	35	2001-2015	The area is a national stronghold for this species
Scaup	<i>Aythya marila</i>	X		X	Red	LC				12	7	2004-2013	
Long-tailed Duck	<i>Clangula hyemalis</i>	X			Red	VU				4	1	2001-2015	
Common Scoter	<i>Melanitta nigra</i>	X		X	Red	LC		X		23	46	2009-2015	
Velvet Scoter	<i>Melanitta fusca</i>	X			Red	EN				6	2	2002-2015	
Red-breasted Merganser	<i>Mergus serrator</i>					LC	Winter	X	X	117	640	2012-2014	Regionally important wintering area
Goosander	<i>Mergus merganser</i>					LC		X	X	1	2	2001-2015	Regionally important wintering area

Common name	Latin name	WCA 1981 Schedule 1	Annex I Birds	Section NERC Act	BoCC List	IUCN Red List 2014	SPA Qualifying Feature	Priority Species in Hampshire BAP	Identified During Field Survey	Num. of records	Individuals Observed	Date Range	Notes and Importance
Honey Buzzard	<i>Pernis apivorus</i>	X	X		Amb er	LC		X		2	2	2001-2001	
Red Kite	<i>Milvus milvus</i>	X	X			NT		X		7	6	2002-2015	
Marsh Harrier	<i>Circus aeruginosus</i>	X	X		Amb er	LC				89	4	2001-2015	
Hen Harrier	<i>Circus cyaneus</i>	X	X	X	Red	LC		X		16	1	2000-2015	
Osprey	<i>Pandion haliaetus</i>	X	X		Amb er	LC				168	15	2001-2015	Regular visitor but non-breeding in the area
Merlin	<i>Falco columbarius</i>	X	X		Red	LC		X		29	3	2009-2015	
Hobby	<i>Falco subbuteo</i>	X				LC		X		16	4	2000-2007	
Peregrine	<i>Falco peregrinus</i>	X	X			LC			X	152	33	2003-2015	
Partridge	<i>Perdix perdix</i>			X	Red	LC		X		1	14	2005-2015	
Water Rail	<i>Rallus aquaticus</i>					LC			X	136	56	2004-2004	
Crane	<i>Grus grus</i>		X		Amb er	LC				2	1	2002-2015	Vagrant record
Oystercatcher	<i>Haematopus ostralegus</i>				Amb er	LC			X	215	6144	2001-2015	
Avocet	<i>Recurvirostra avosetta</i>	X	X		Amb er	LC			X	206	693	2010-2015	Internationally important wintering area
Stone Curlew	<i>Burhinus oedicephalus</i>	X	X	X	Amb er	LC		X		1	1	2002-2015	Vagrant record
Collared Pratincole	<i>Glareola pratincola</i>		X			LC				1	1	2006-2015	
Little Ringed Plover	<i>Charadrius dubius</i>	X				LC				23	6	2008-2012	
Ringed Plover	<i>Charadrius hiaticula</i>				Red	LC	Winter		X	82	1151	2006-2015	The area is of national and international significance as wintering and stop-over site, respectively. The species roosts at high tide often in single-species flocks on sand or shingle bars, for example at Eastney Beach and Gilkicker Point. The population trend in the area is downwards in line with the national picture

Common name	Latin name	WCA 1981 Schedule 1	Annex I Birds	Section NERC Act	BoCC List	IUCN Red List 2014	SPA Qualifying Feature	Priority Species in Hampshire BAP	Identified During Field Survey	Num. of records	Individuals Observed	Date Range	Notes and Importance
<b>Golden Plover</b>	<i>Pluvialis apricaria</i>		X			LC		X	X	19	204	2002-2015	Internationally important wintering area
<b>Grey Plover</b>	<i>Pluvialis squatarola</i>				Amb er	LC	Winter	X	X	207	2957	2002-2014	Internationally important wintering area. Hampshire currently holds about 8% of the UK total as counted by WeBs. Increasing trend
<b>Lapwing</b>	<i>Vanellus vanellus</i>			X	Red	LC		X	X	108	1248	2001-2015	It breeds in grasslands in Hampshire, and use the estuary during winter. Dramatic decreasing trend
<b>Knot</b>	<i>Calidris canutus</i>				Amb er	LC		X		117	1873	2010-2010	Regionally important wintering area. Hampshire currently holds less than 1200 birds representing only a small percentage (0.4%) of the UK wintering population. Declining trend
<b>Sanderling</b>	<i>Calidris alba</i>				Amb er	LC	Winter	X	X	37	1259	2006-2015	Regionally important. Numbers fluctuate from year to year but, in mid winter, are typically around 300 or 4% of the UK WeBs count total. Stable trend
<b>Purple Sandpiper</b>	<i>Calidris maritima</i>	X			Amb er	LC				7	46	2001-2001	
<b>Dunlin</b>	<i>Calidris alpina</i>				Amb er	LC	Winter	X	X	222	32387	2005-2015	Internationally important wintering area. Hampshire currently holds, on average, 4.9% of the East Atlantic Flyway winter population and about 8% of the UK WeBS count total. Declining trend
<b>Ruff</b>	<i>Calidris pugnax</i>	X	X		Red	LC				13	9	2004-2015	
<b>Snipe</b>	<i>Gallinago gallinago</i>				Amb er	LC		X	X	75	181	2004-2015	
<b>Woodcock</b>	<i>Scolopax rusticola</i>				Red	LC				2	1	2002-2015	
<b>Black-tailed Godwit</b>	<i>Limosa limosa</i>	X		X	Red	NT		X	X	193	2517	2002-2015	Internationally important. Hampshire currently holds approximately 12% of the UK mid winter total. Increasing trend
<b>Bar-tailed Godwit</b>	<i>Limosa lapponica</i>		X		Amb er	LC	Winter	X	X	75	1003	2010-2015	Internationally important wintering area. Numbers in Langstone Harbour sometime

Common name	Latin name	WCA 1981 Schedule 1	Annex I Birds	Section NERC Act	BoCC List	IUCN Red List 2014	SPA Qualifying Feature	Priority Species in Hampshire BAP	Identified During Field Survey	Num. of records	Individuals Observed	Date Range	Notes and Importance
													exceed the nationally important threshold but the population trend is downwards.
<b>Whimbrel</b>	<i>Numenius phaeopus</i>	X			Red	LC				141	288	2004-2015	
<b>Curlew</b>	<i>Numenius arquata</i>			X	Red	NT	Winter		X	130	4142	2013-2013	
<b>Redshank</b>	<i>Tringa totanus</i>				Amb er	LC	Winter	X	X	118	2326	2010-2014	Nationally important numbers. Hampshire currently holds around 3% of the UK population as measured by mid winter WeBs counts. It breeds in the area, with some pairs in Farlington Marshes. Stable trend
<b>Greenshank</b>	<i>Tringa nebularia</i>	X			Amb er	LC				129	206	2009-2015	
<b>Green Sandpiper</b>	<i>Tringa ochropus</i>	X			Amb er	LC				46	10	2001-2015	
<b>Wood Sandpiper</b>	<i>Tringa glareola</i>	X	X		Amb er	LC				5	3	2002-2015	
<b>Turnstone</b>	<i>Arenaria interpres</i>				Amb er	LC	Winter	X	X	111	3364	2007-2014	Regionally important. Hampshire currently holds about 3% of the UK winter totals although larger numbers are recorded on passage. Stable trend
<b>Red-necked Phalarope</b>	<i>Phalaropus lobatus</i>	X	X		Red	LC				1	1	2010-2013	Vagrant record
<b>Arctic Skua</b>	<i>Stercorarius parasiticus</i>				Red	LC				15	12	2008-2015	
<b>Mediterranean Gull</b>	<i>Larus melanocephalus</i>	X	X		Amb er	LC		X	X	118	335	2002-2015	The area is a national stronghold. Scarce breeding bird in the area Increasing trend.
<b>Little Gull</b>	<i>Hydrocoloeus minutus</i>	X	X			LC				15	17	2000-2015	
<b>Black-headed Gull</b>	<i>Larus ridibundus</i>				Amb er	LC			X	103	6470	2001-2015	
<b>Lesser Black-backed Gull</b>	<i>Larus fuscus</i>				Amb er	LC			X	27	21	2003-2015	
<b>Herring Gull</b>	<i>Larus argentatus</i>			X	Red	LC			X	55	1123	2012-2015	

Common name	Latin name	WCA 1981 Schedule 1	Annex I Birds	Section NERC Act	BoCC List	IUCN Red List 2014	SPA Qualifying Feature	Priority Species in Hampshire BAP	Identified During Field Survey	Num. of records	Individuals Observed	Date Range	Notes and Importance
Great Black-backed Gull	<i>Larus marinus</i>				Amb er	LC			X	59	112	2001-2002	
Kittiwake	<i>Rissa tridactyla</i>				Red	LC				9	13	2009-2015	
Sandwich Tern	<i>Thalasseus sandvicensis</i>		X		Amb er	LC	Breed		X	117	231	2007-2015	Internationally important area
Roseate Tern	<i>Sterna dougallii</i>	X	X	X	Red	LC		X		9	5	2012-2013	Scarce breeding bird. Declining trend
Common Tern	<i>Sterna hirundo</i>		X		Amb er	LC	Breed			113	3584	2004-2015	Nationally important numbers. Breeding in the area
Arctic Tern	<i>Sterna paradisaea</i>		X		Amb er	LC				14	10	2002-2014	
Little Tern	<i>Sternula albifrons</i>	X	X		Amb er	LC	Breed	X		50	99	2008-2008	
Black Tern	<i>Chlidonias niger</i>	X	X			LC				17	13	2001-2015	
Turtle Dove	<i>Streptopelia turtur</i>			X	Red	LC		X		1	1	2003-2015	
Cuckoo	<i>Cuculus canorus</i>			X	Red	LC				14	6	2002-2015	
Long-eared Owl	<i>Asio otus</i>					LC				1	1	2007-2015	
Short-eared Owl	<i>Asio flammeus</i>		X		Amb er	LC				101	8	2004-2015	
Nightjar	<i>Caprimulgus europaeus</i>		X	X	Amb er	LC		X		2	2	2006-2015	
Kingfisher	<i>Alcedo atthis</i>	X	X		Amb er	LC			X	57	22	2003-2015	
Wryneck	<i>Jynx torquilla</i>	X				LC				19	4	2003-2015	
Woodlark	<i>Lullula arborea</i>	X	X	X		LC		X		6	6	2000-2015	
Skylark	<i>Alauda arvensis</i>				Red	LC		X	X	77	255	2002-2013	
Sand Martin	<i>Riparia riparia</i>					LC				36	56	2010-2013	
Tree Pipit	<i>Anthus trivialis</i>			X	Red	LC				10	11	2009-2015	
Water Pipit	<i>Anthus spinoletta</i>				Amb er	LC				31	3	2006-2015	
Rock Pipit	<i>Anthus petrosus</i>					LC			X	78	37	2002-2015	
Yellow Wagtail	<i>Motacilla flava</i>			X	Red	LC		X		101	136	2002-2015	Conservation importance. Rapid decline; likely used primarily on migration.



Common name	Latin name	WCA 1981 Schedule 1	Annex I Birds	Section NERC Act	BoCC List	IUCN Red List 2014	SPA Qualifying Feature	Priority Species in Hampshire BAP	Identified During Field Survey	Num. of records	Individuals Observed	Date Range	Notes and Importance
Grey Wagtail	<i>Motacilla cinerea</i>				Red	LC				37	27	2001-2011	
Nightingale	<i>Luscinia megarhynchos</i>				Red	LC		X		3	1	2001-2013	
Black Redstart	<i>Phoenicurus ochruros</i>	X			Red	LC			X	32	14	2004-2004	
Redstart	<i>Phoenicurus phoenicurus</i>				Amb er	LC			X	26	54	2002-2015	
Whinchat	<i>Saxicola rubetra</i>				Red	LC		X		109	33	2006-2015	
Wheatear	<i>Oenanthe oenanthe</i>					LC			X	202	82	2009-2015	
Spotted Flycatcher	<i>Muscicapa striata</i>			X	Red	LC		X		34	16	2001-2015	
Pied Flycatcher	<i>Ficedula hypoleuca</i>				Red	LC				5	3	2005-2015	
Ring Ouzel	<i>Turdus torquatus</i>			X	Red	LC				11	3	2002-2015	
Fieldfare	<i>Turdus pilaris</i>	X			Red	LC				20	2230	2002-2015	
Song Thrush	<i>Turdus philomelos</i>			X	Red	LC		X	X	38	54	2005-2015	
Redwing	<i>Turdus iliacus</i>	X			Red	LC			X	13	92	2006-2006	
Mistle Thrush	<i>Turdus viscivorus</i>				Red	LC				9	16	2005-2015	
Cetti's Warbler	<i>Cettia cetti</i>	X				LC		X	X	215	104	2008-2015	The area is a national stronghold of this species which is expanding its range
Grasshopper Warbler	<i>Locustella naevia</i>			X	Red	LC		X		9	5	2009-2015	
Savi's Warbler	<i>Locustella luscinioides</i>	X		X	Red	LC				6	1	2001-2015	
Reed Warbler	<i>Acrocephalus scirpaceus</i>					LC		X		90	108	2002-2002	
Dartford Warbler	<i>Sylvia undata</i>	X	X		Amb er	NT		X	X	62	22	2005-2015	
Firecrest	<i>Regulus ignicapilla</i>	X				LC		X		18	14	2001-2015	

# Appendix 2 – Summary of Field Survey Data

# SUMMARY OF FIELD SURVEY DATA

**Table 1 - Summary of Field Survey Data**

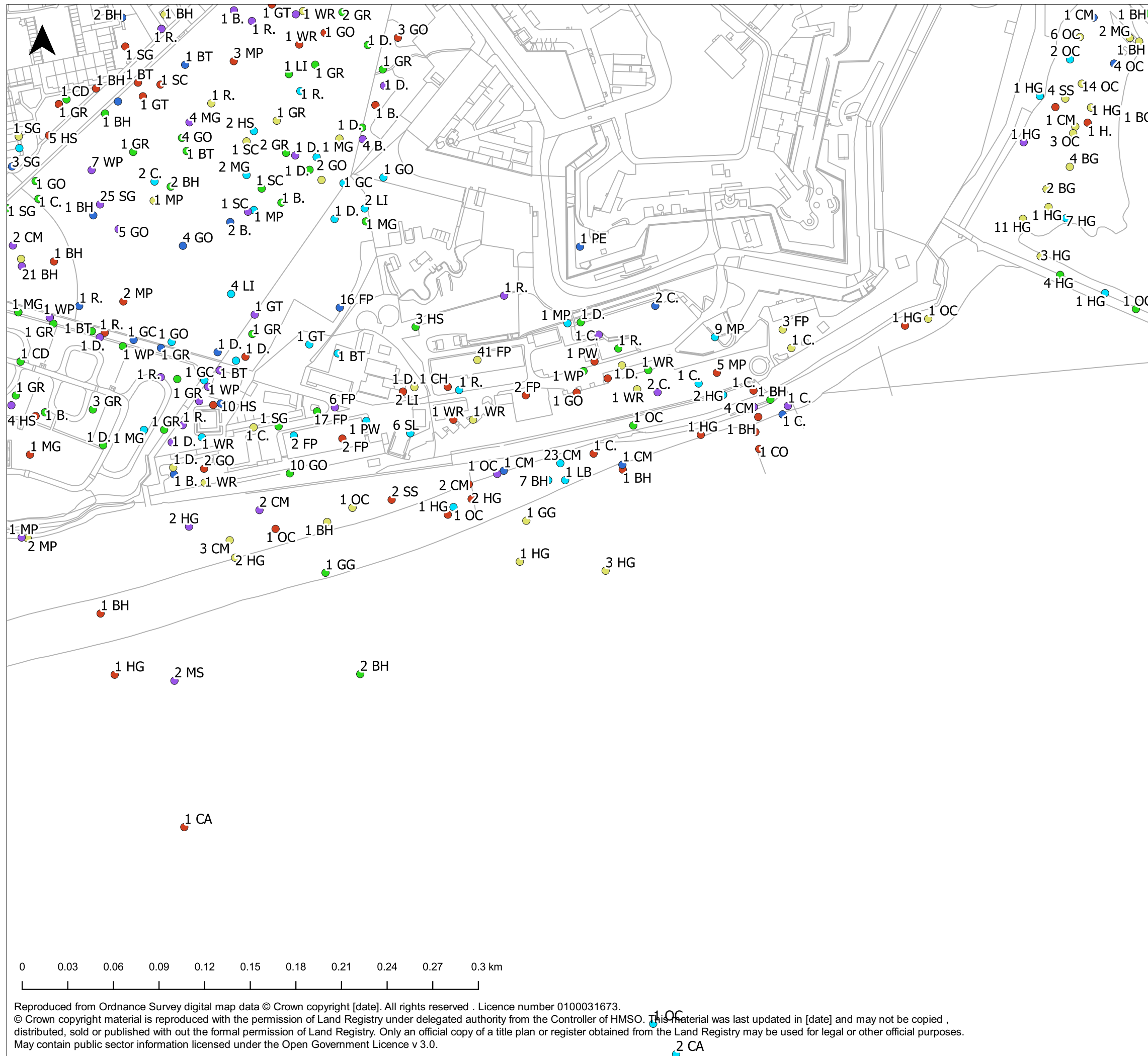
Common name	Latin name	WaCA 1981 Schedule 1	Annex I Birds Directive 1992	Section NERC Act 2006	BoCC List	IUCN Red List 2014	SPA Qualifying Feature	Surveys	Total Obs.	Notes and Importance
<b>Black-throated Diver</b>	<i>Gavia arctica</i>	X	X		Amber	LC		Intertidal	1	
<b>Little Grebe</b>	<i>Tachybaptus ruficollis</i>					LC		Intertidal	24	
<b>Great Crested Grebe</b>	<i>Podiceps cristatus</i>					LC		Intertidal	10	
<b>Cormorant</b>	<i>Phalacrocorax carbo</i>					LC		Intertidal, VP	27	
<b>Little Egret</b>	<i>Egretta garzetta</i>		X			LC		Intertidal, VP	37	
<b>Grey Heron</b>	<i>Ardea cinerea</i>					LC		Intertidal	4	
<b>Mute Swan</b>	<i>Cygnus olor</i>				Amber	LC		Intertidal, VP	45	
<b>Canada Goose</b>	<i>Branta canadensis</i>					LC		Intertidal	8	
<b>Brent Goose</b>	<i>Branta bernicla</i>				Amber	LC	Winter	Intertidal, VP, BGSS	13483	
<b>Shelduck</b>	<i>Tadorna tadorna</i>				Amber	LC	Winter	Intertidal, VP	270	
<b>Teal</b>	<i>Anas crecca</i>				Amber	LC		Intertidal, VP	210	
<b>Mallard</b>	<i>Anas platyrhynchos</i>				Amber	LC		Intertidal, VP	42	
<b>Pintail</b>	<i>Anas acuta</i>	X			Amber	LC		Intertidal	159	
<b>Shoveler</b>	<i>Spatula clypeata</i>				Amber	LC	Winter	Intertidal	2	
<b>Tufted Duck</b>	<i>Aythya fuligula</i>					LC		Intertidal	22	
<b>Red-breasted Merganser</b>	<i>Mergus serrator</i>					LC	Winter	Intertidal	31	
<b>Goosander</b>	<i>Mergus merganser</i>					LC		Intertidal	1	
<b>Sparrowhawk</b>	<i>Accipiter nisus</i>					LC		Terrestrial	1	
<b>Buzzard</b>	<i>Buteo buteo</i>					LC		Terrestrial	7	
<b>Kestrel</b>	<i>Falco tinnunculus</i>				Amber	LC		Intertidal, VP	13	
<b>Peregrine</b>	<i>Falco peregrinus</i>	X	X			LC		Terrestrial	1	

<b>Water Rail</b>	<i>Rallus aquaticus</i>					LC		Intertidal	7	
<b>Moorhen</b>	<i>Gallinula chloropus</i>					LC		Intertidal	21	
<b>Coot</b>	<i>Fulica atra</i>					LC		Intertidal, VP	26	
<b>Oystercatcher</b>	<i>Haematopus ostralegus</i>					Amber	LC	Intertidal, VP	603	
<b>Avocet</b>	<i>Recurvirostra avosetta</i>	X	X			Amber	LC	Intertidal	66	
<b>Ringed Plover</b>	<i>Charadrius hiaticula</i>					Red	LC	Winter	Intertidal, VP	245
<b>Golden Plover</b>	<i>Pluvialis apricaria</i>		X				LC		Intertidal	1
<b>Grey Plover</b>	<i>Pluvialis squatarola</i>					Amber	LC	Winter	Intertidal	50
<b>Lapwing</b>	<i>Vanellus vanellus</i>			X		Red	LC		Intertidal, VP	125
<b>Sanderling</b>	<i>Calidris alba</i>					Amber	LC	Winter	Intertidal, VP	209
<b>Dunlin</b>	<i>Calidris alpina</i>		X			Amber	LC	Winter	Intertidal, VP	3389
<b>Snipe</b>	<i>Gallinago gallinago</i>					Amber	LC		VP Only	24
<b>Black-tailed Godwit</b>	<i>Limosa limosa</i>	X		X		Red	NT		Intertidal	107
<b>Bar-tailed Godwit</b>	<i>Limosa lapponica</i>		X			Amber	LC	Winter	Intertidal	1
<b>Curlew</b>	<i>Numenius arquata</i>			X		Red	NT	Winter	Intertidal, VP	152
<b>Redshank</b>	<i>Tringa totanus</i>					Amber	LC	Winter	Intertidal	331
<b>Common Sandpiper</b>	<i>Actitis hypoleucos</i>					Amber	LC		Intertidal	4
<b>Turnstone</b>	<i>Arenaria interpres</i>					Amber	LC	Winter	Intertidal	188
<b>Mediterranean Gull</b>	<i>Larus melanocephalus</i>	X	X			Amber	LC		Intertidal	6
<b>Black-headed Gull</b>	<i>Larus ridibundus</i>					Amber	LC		Intertidal, VP	3527
<b>Common Gull</b>	<i>Larus canus</i>					Amber	LC		Intertidal, VP	481
<b>Lesser Black-backed Gull</b>	<i>Larus fuscus</i>					Amber	LC		Intertidal, VP	56
<b>Herring Gull</b>	<i>Larus argentatus</i>			X		Red	LC		Intertidal, VP	441
<b>Great Black-backed Gull</b>	<i>Larus marinus</i>					Amber	LC		Intertidal, VP	68
<b>Sandwich Tern</b>	<i>Thalasseus sandvicensis</i>		X			Amber	LC	Breed	Intertidal, VP	13
<b>Feral Pigeon</b>	<i>Columba livia</i>						LC		Terrestrial, VP	197
<b>Wood Pigeon</b>	<i>Columba palumbus</i>						LC		Terrestrial	72
<b>Collared Dove</b>	<i>Streptopelia decaocto</i>						LC		Intertidal	11

<b>Kingfisher</b>	<i>Alcedo atthis</i>	X	X		Amber	LC		Intertidal	2	
<b>Green Woodpecker</b>	<i>Picus viridis</i>					LC		Terrestrial	4	
<b>Great Spotted Woodpecker</b>	<i>Dendrocopos major</i>					LC		Terrestrial	1	
<b>Skylark</b>	<i>Alauda arvensis</i>				Red	LC		Terrestrial, VP	5	
<b>Swallow</b>	<i>Hirundo rustica</i>					LC		Terrestrial	8	
<b>Meadow Pipit</b>	<i>Anthus pratensis</i>				Amber	LC		Terrestrial	43	
<b>Rock Pipit</b>	<i>Anthus petrosus</i>					LC		Terrestrial	1	
<b>Pied Wagtail</b>	<i>Motacilla alba</i>					LC		Terrestrial, VP	55	
<b>Wren</b>	<i>Troglodytes troglodytes</i>					LC		Terrestrial	26	
<b>Dunnock</b>	<i>Prunella modularis</i>			X	Amber	LC		Terrestrial	75	
<b>Robin</b>	<i>Erithacus rubecula</i>					LC		Terrestrial	74	
<b>Black Redstart</b>	<i>Phoenicurus ochruros</i>	X			Red	LC		Terrestrial	1	
<b>Redstart</b>	<i>Phoenicurus phoenicurus</i>				Amber	LC		Terrestrial	1	
<b>Stonechat</b>	<i>Saxicola torquatus</i>					LC		Terrestrial	4	
<b>Wheatear</b>	<i>Oenanthe oenanthe</i>					LC		Terrestrial	2	
<b>Blackbird</b>	<i>Turdus merula</i>					LC		Terrestrial	82	
<b>Song Thrush</b>	<i>Turdus philomelos</i>			X	Red	LC		Terrestrial	4	
<b>Redwing</b>	<i>Turdus iliacus</i>	X			Red	LC		Terrestrial	4	
<b>Cetti's Warbler</b>	<i>Cettia cetti</i>	X				LC		Terrestrial	18	
<b>Dartford Warbler</b>	<i>Sylvia undata</i>	X	X		Amber	NT		Terrestrial	1	
<b>Chiffchaff</b>	<i>Phylloscopus collybita</i>					LC		Terrestrial	4	
<b>Goldcrest</b>	<i>Regulus regulus</i>					LC		Terrestrial	18	
<b>Long-tailed Tit</b>	<i>Aegithalos caudatus</i>					LC		Terrestrial	14	
<b>Coal Tit</b>	<i>Parus ater</i>					LC		Terrestrial	1	
<b>Blue Tit</b>	<i>Parus caeruleus</i>					LC		Terrestrial	29	
<b>Great Tit</b>	<i>Parus major</i>					LC		Terrestrial	37	
<b>Jay</b>	<i>Garrulus glandarius</i>					LC		Terrestrial	2	
<b>Magpie</b>	<i>Pica pica</i>					LC		Terrestrial, VP	42	

<b>Jackdaw</b>	<i>Corvus monedula</i>					LC		Terrestrial	4	
<b>Carrion Crow</b>	<i>Corvus corone</i>					LC		Terrestrial, Intertidal, VP	205	
<b>Starling</b>	<i>Sturnus vulgaris</i>			X	Red	LC		Terrestrial, Intertidal, VP	511	
<b>House Sparrow</b>	<i>Passer domesticus</i>			X	Red	LC		Terrestrial	235	
<b>Chaffinch</b>	<i>Fringilla coelebs</i>					LC		Terrestrial	13	
<b>Greenfinch</b>	<i>Carduelis chloris</i>					LC		Terrestrial, VP	129	
<b>Goldfinch</b>	<i>Carduelis carduelis</i>					LC		Terrestrial	198	
<b>Siskin</b>	<i>Carduelis spinus</i>					LC		Terrestrial	3	
<b>Linnet</b>	<i>Carduelis cannabina</i>				Red	LC		Terrestrial	46	

# **Appendix 3 – Wintering Bird Survey Maps**



- Legend**
- October 2017
  - November 2017
  - December 2017
  - January 2018
  - February 2018
  - March 2018

Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009 - Regulation 5(2)(i)

REV	DATE	BY	DESCRIPTION	CHK	APP
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TITLE:

**Breeding Bird Survey Report Appendix 3:  
Winter Bird Survey Data  
Sheet 1 of 20**

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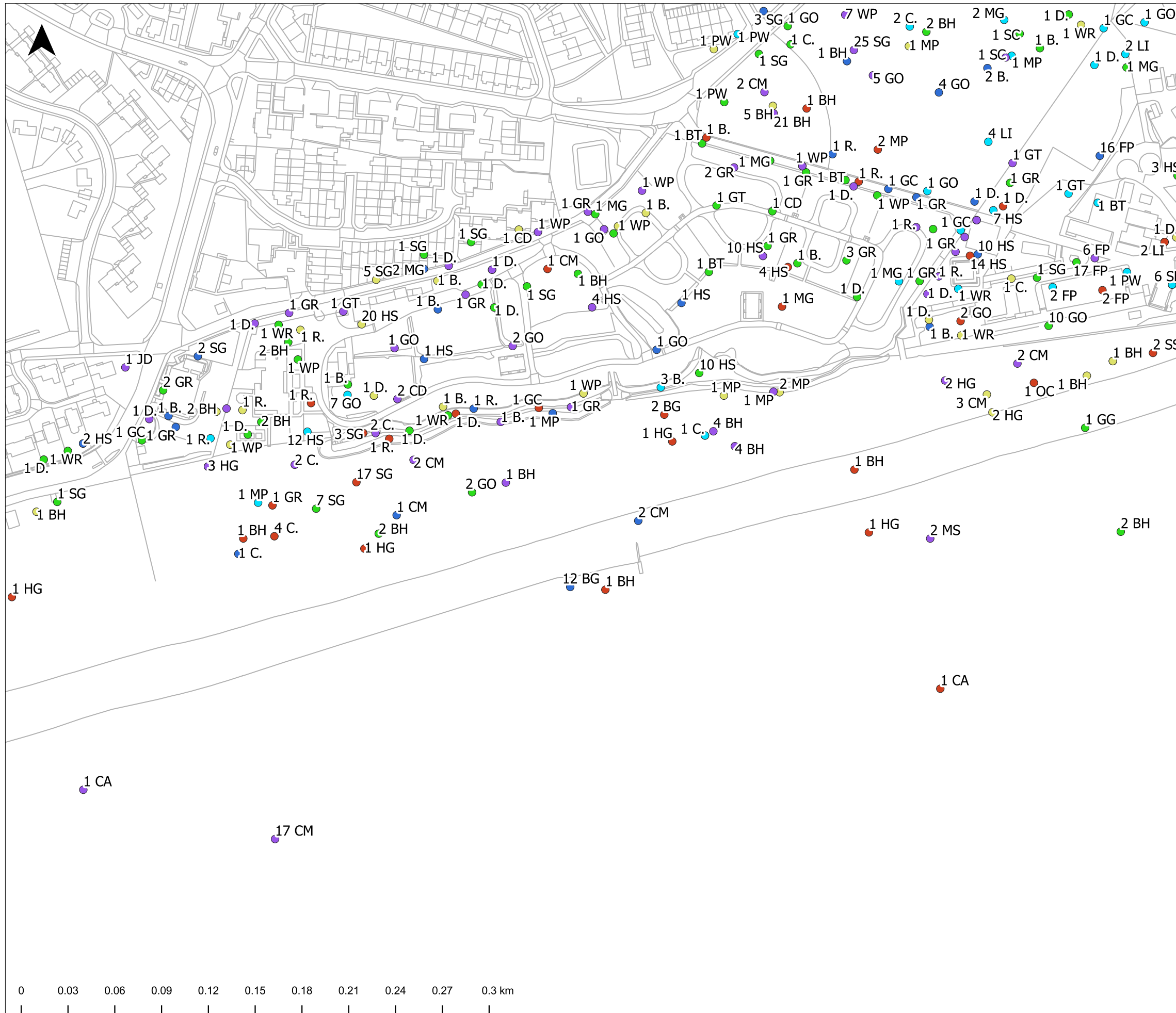
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- Legend**
- October 2017
  - November 2017
  - December 2017
  - January 2018
  - February 2018
  - March 2018

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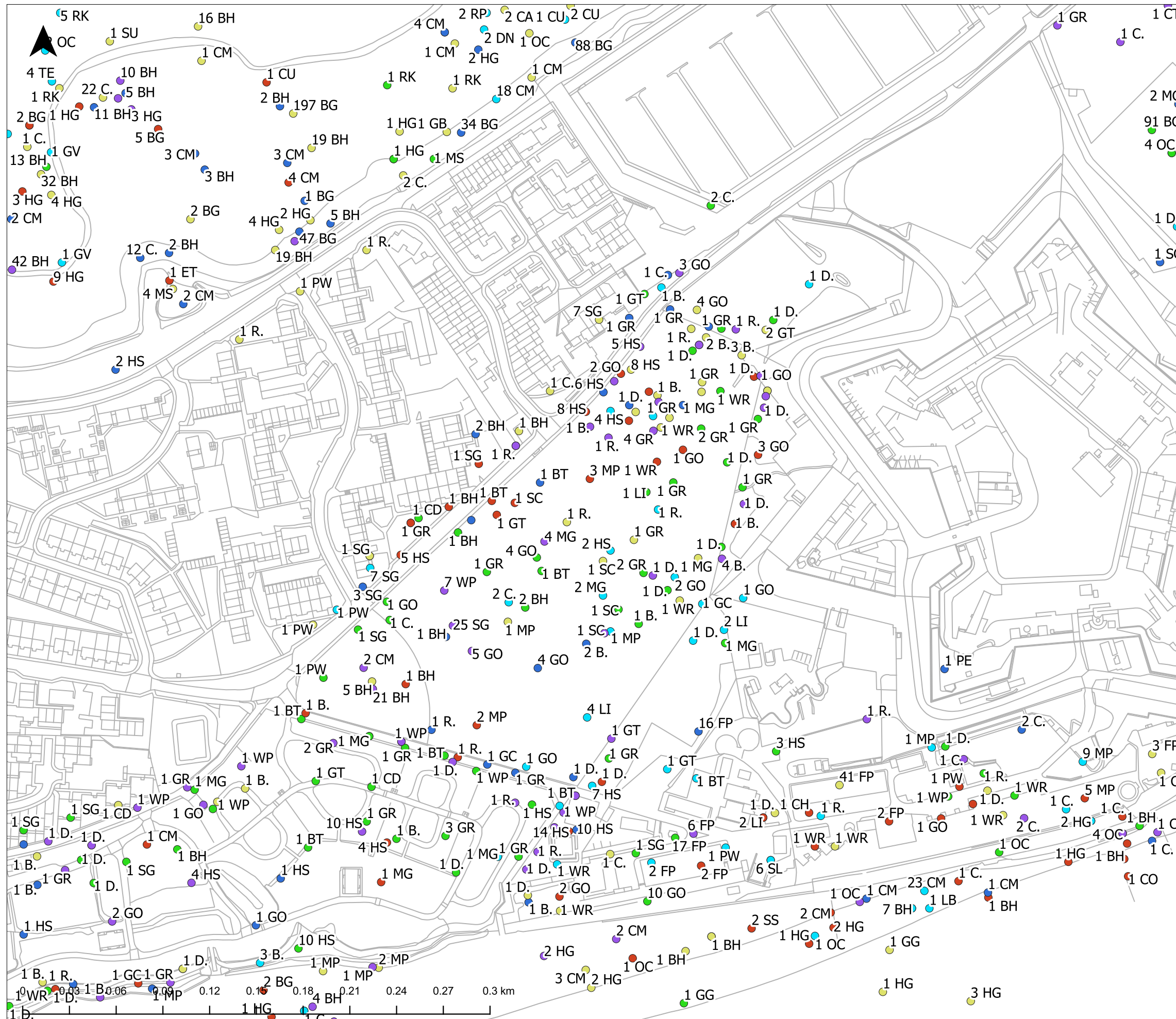
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Breeding Bird Survey Report Appendix 3:  
Winter Bird Survey Data  
Sheet 2 of 20

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**Legend**

- October 2017
- November 2017
- December 2017
- January 2018
- February 2018
- March 2018

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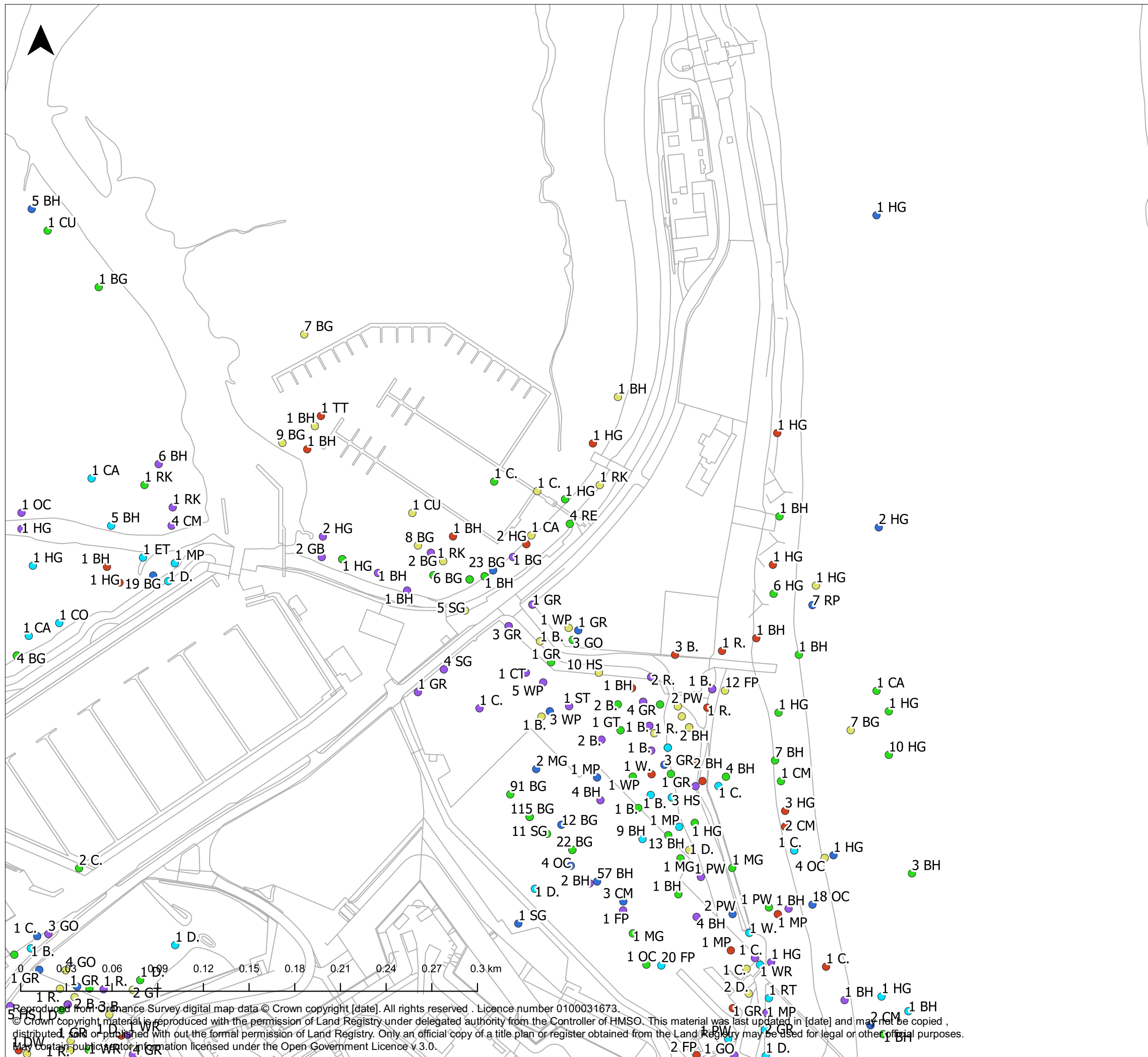


PROJECT: **AQUIND Interconnector**

TITLE: **Breeding Bird Survey Report Appendix 3:  
Winter Bird Survey Data  
Sheet 4 of 20**

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**Legend**

- October 2017
- November 2017
- December 2017
- January 2018
- February 2018
- March 2018

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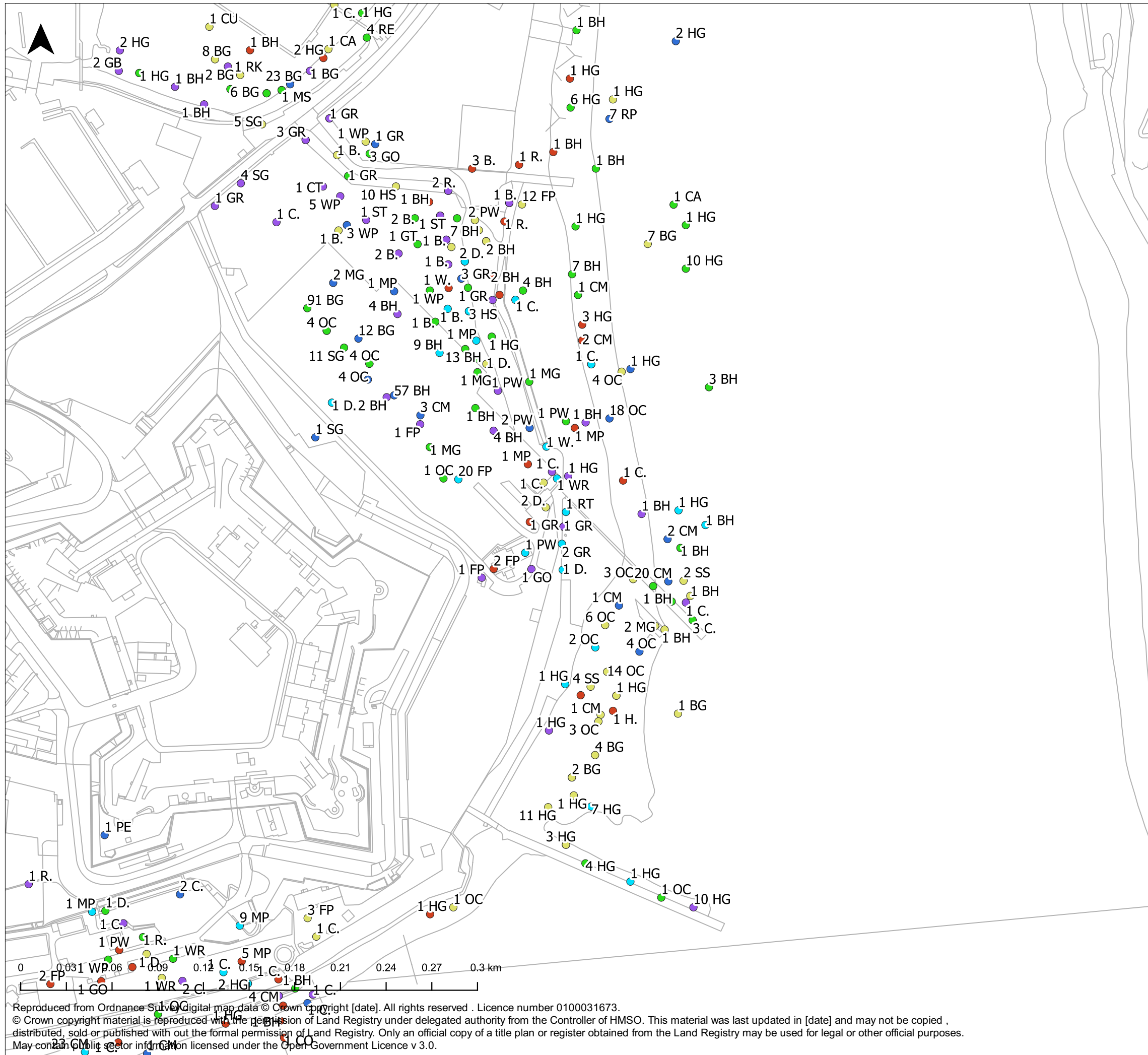
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**Breeding Bird Survey Report Appendix 3:  
Winter Bird Survey Data  
Sheet 5 of 20**

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- October 2017
- November 2017
- December 2017
- January 2018
- February 2018
- March 2018

Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009 - Regulation 5(2)(i)

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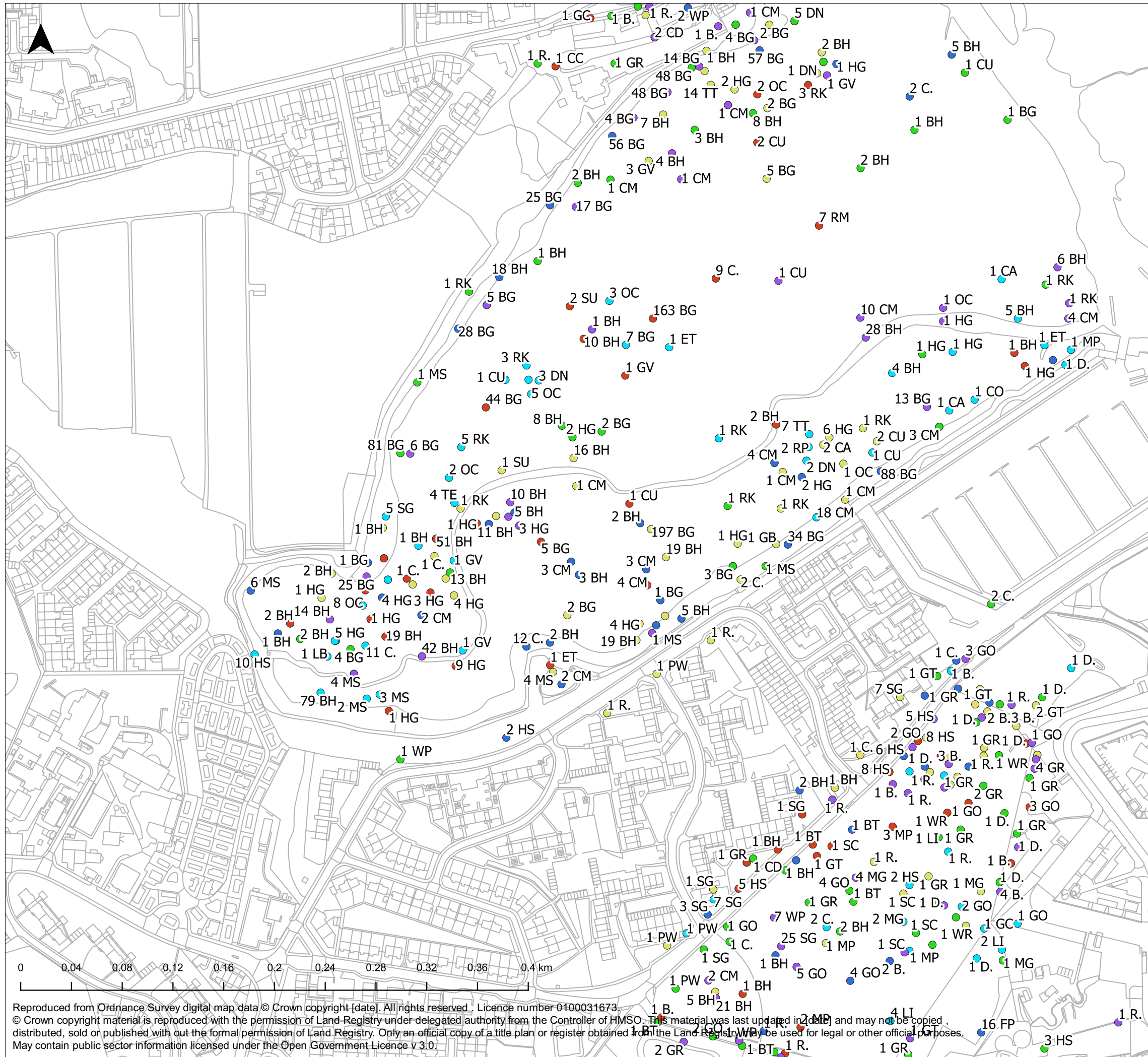
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Winter Bird Survey Data  
Sheet 6 of 20**

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		DATE: 27/04/18

DRAWING NO: <b>EN020022-ES-APP-16.13-3</b>	REV NO: <b>01</b>
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  - December 2017
  - January 2018
  - February 2018
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Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009 - Regulation 5(2)(i)

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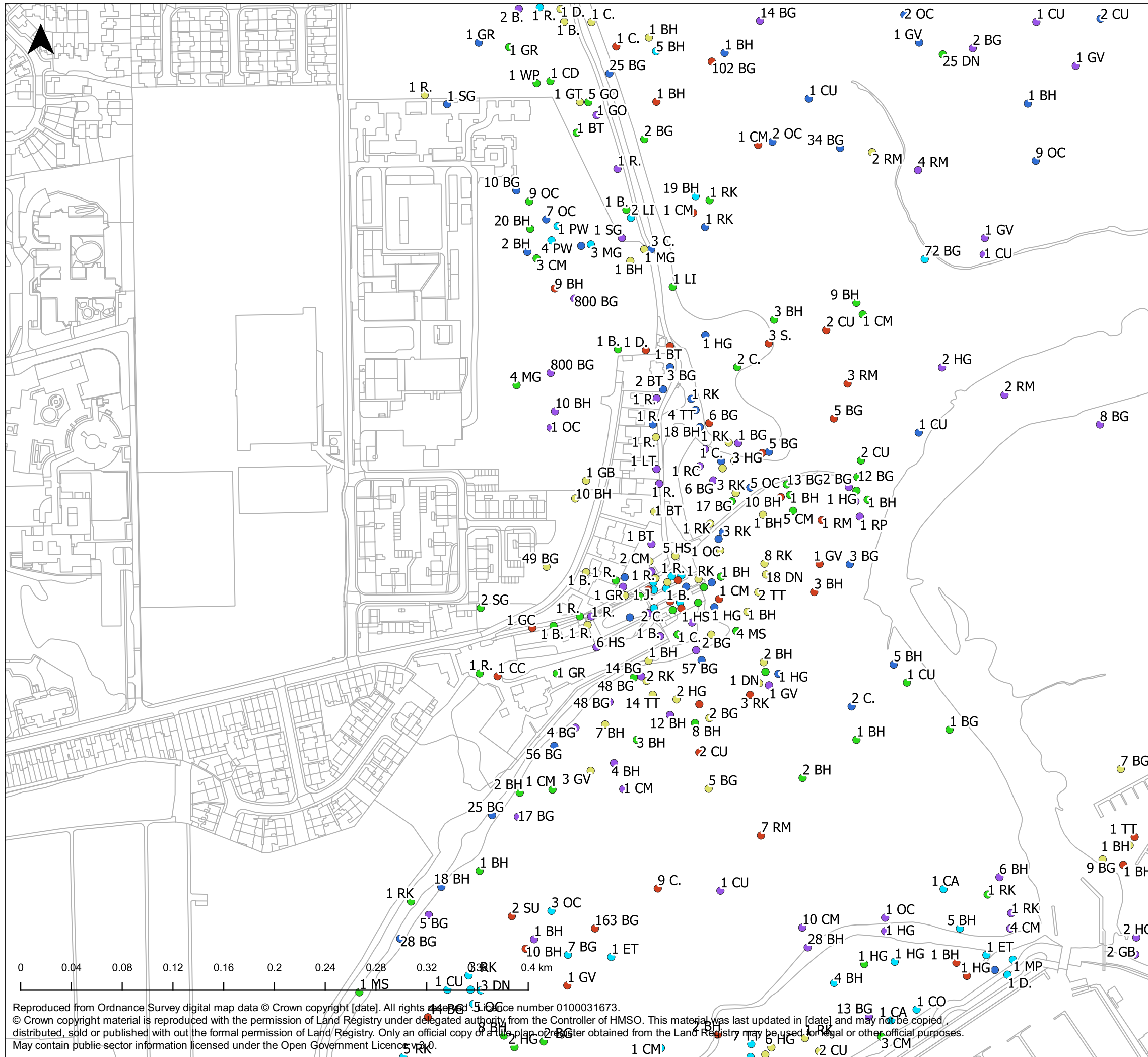


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Winter Bird Survey Data  
Sheet 7 of 20**

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- October 2017
  - November 2017
  - December 2017
  - January 2018
  - February 2018
  - March 2018

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Winter Bird Survey Data  
Sheet 8 of 20**

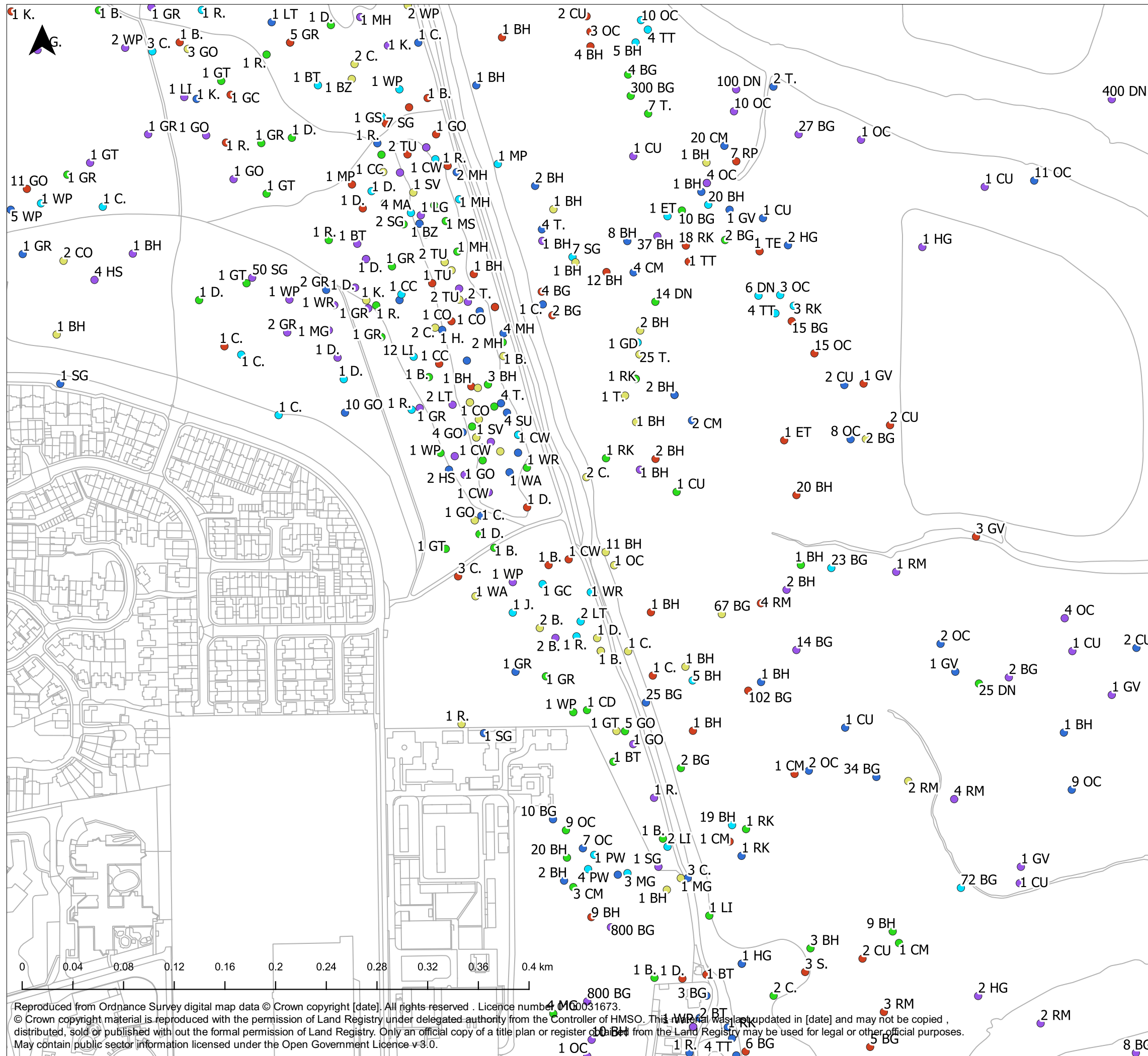
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  - November 2017
  - December 2017
  - January 2018
  - February 2018
  - March 2018

Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009 - Regulation 5(2)(i)

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Winter Bird Survey Data  
Sheet 9 of 20**

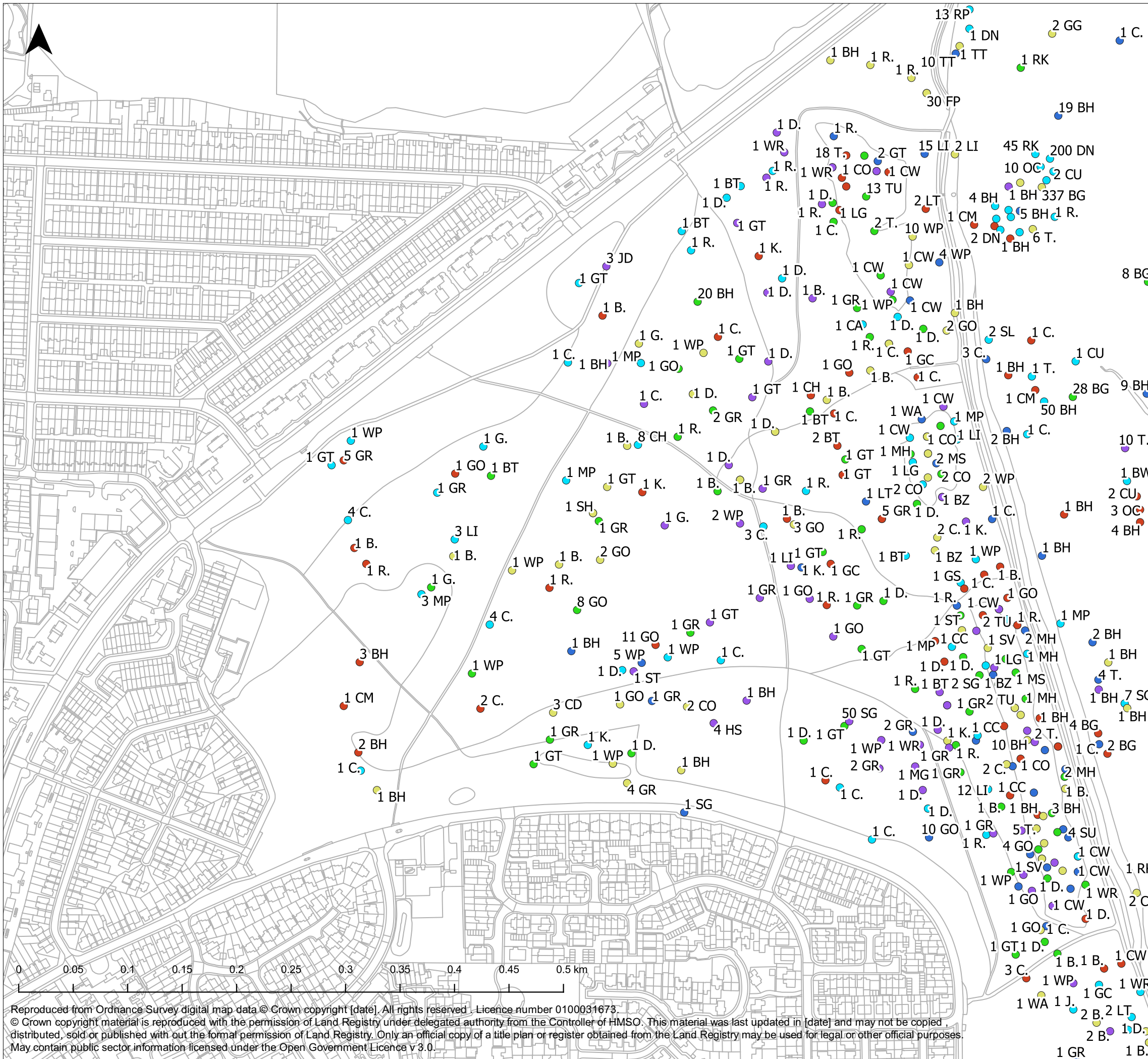
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- October 2017
- November 2017
- December 2017
- January 2018
- February 2018
- March 2018

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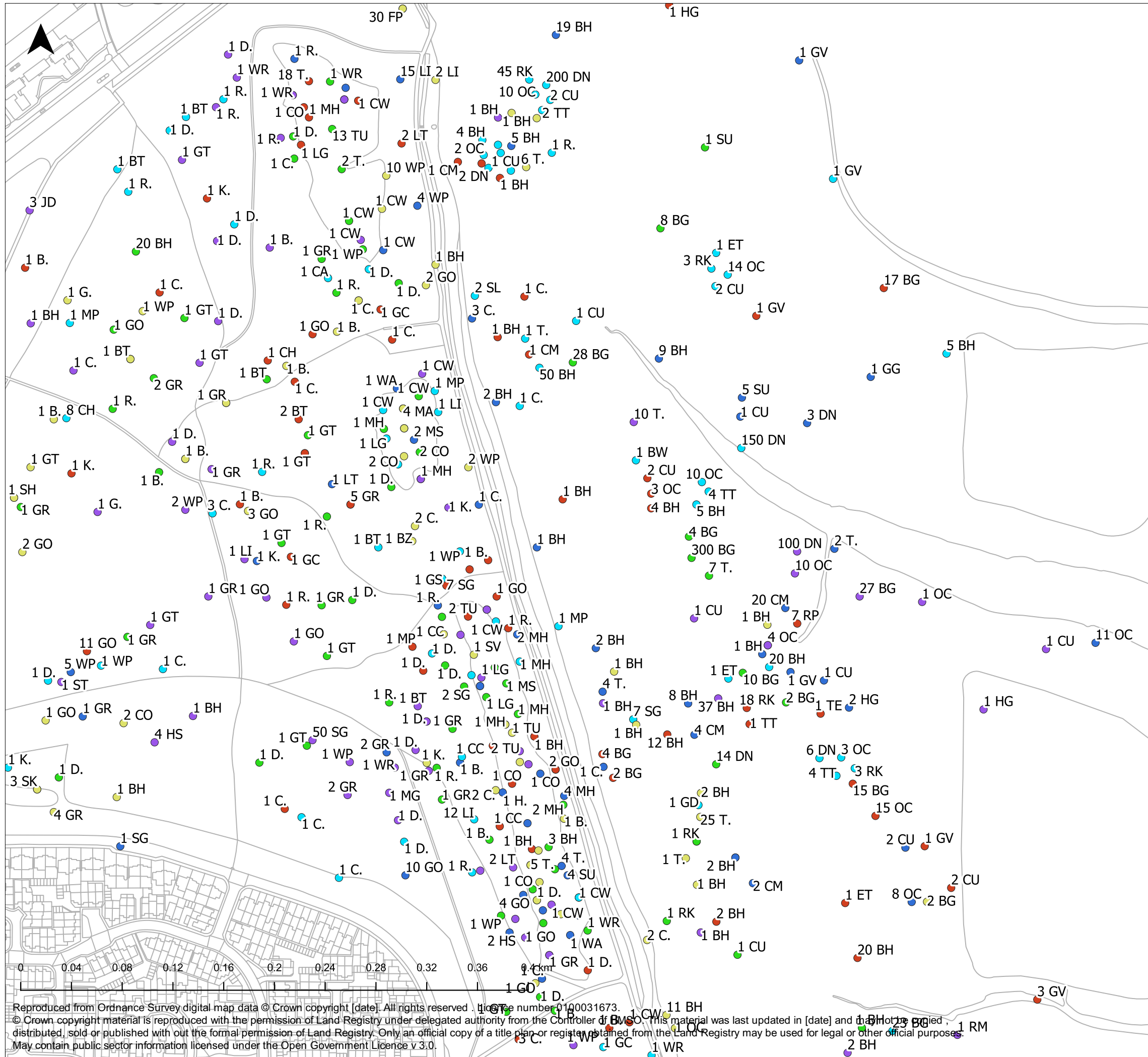
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Winter Bird Survey Data  
Sheet 10 of 20**

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DRAWING NO: EN020022-ES-APP-16.13-3	DATE: 27/04/18	REV NO: 01

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- November 2017
- December 2017
- January 2018
- February 2018
- March 2018

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01	27/04/18	AT	WBS Appendix 3	PJ	IE
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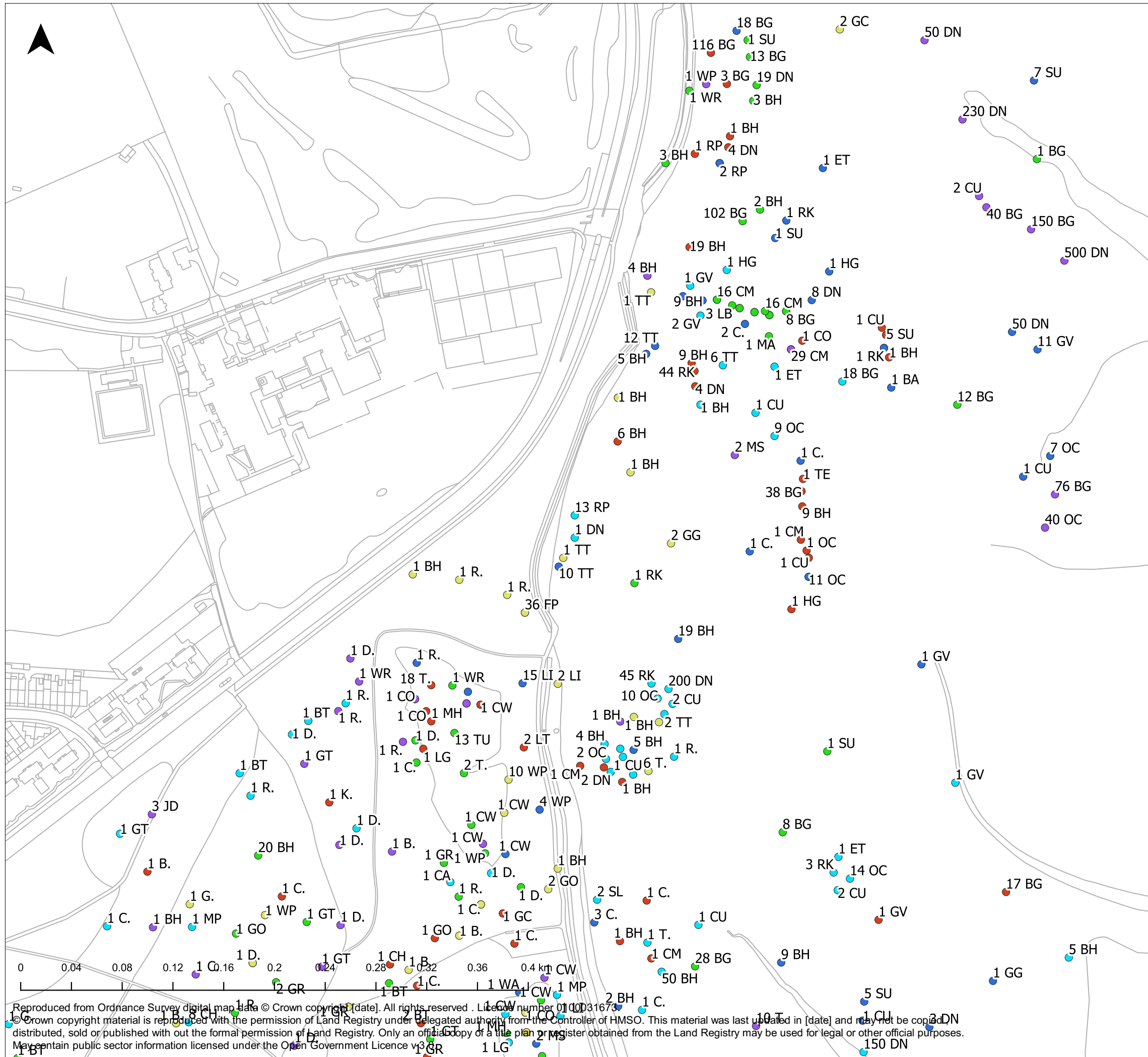
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TITLE: **Breeding Bird Survey Report Appendix 3:  
Winter Bird Survey Data  
Sheet 11 of 20**

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PROJECT NO: 62100616	DESIGNED: AT	DRAWN: AT
DRAWING NO: EN020022-ES-APP-16.13-3		REV NO: 01

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- November 2017
- December 2017
- January 2018
- February 2018
- March 2018

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01	27/04/18	AT	WBS Appendix 3	PJ	IE
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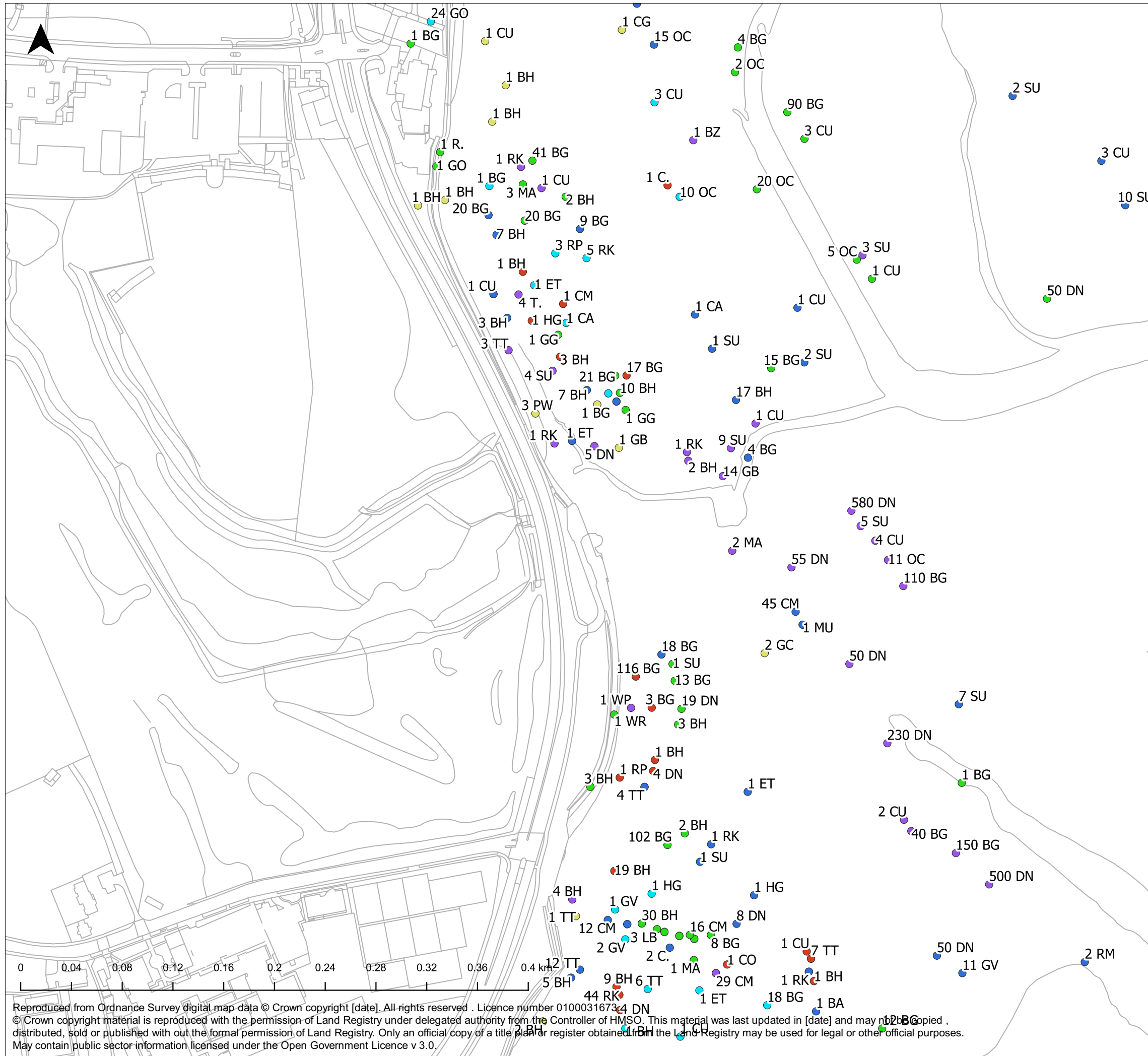
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Winter Bird Survey Data  
Sheet 12 of 20

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DRAWING NO: EN020022-ES-APP-16.13-3		REV NO. 01

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- October 2017
  - November 2017
  - December 2017
  - January 2018
  - February 2018
  - March 2018

Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009 - Regulation 5(2)(i)

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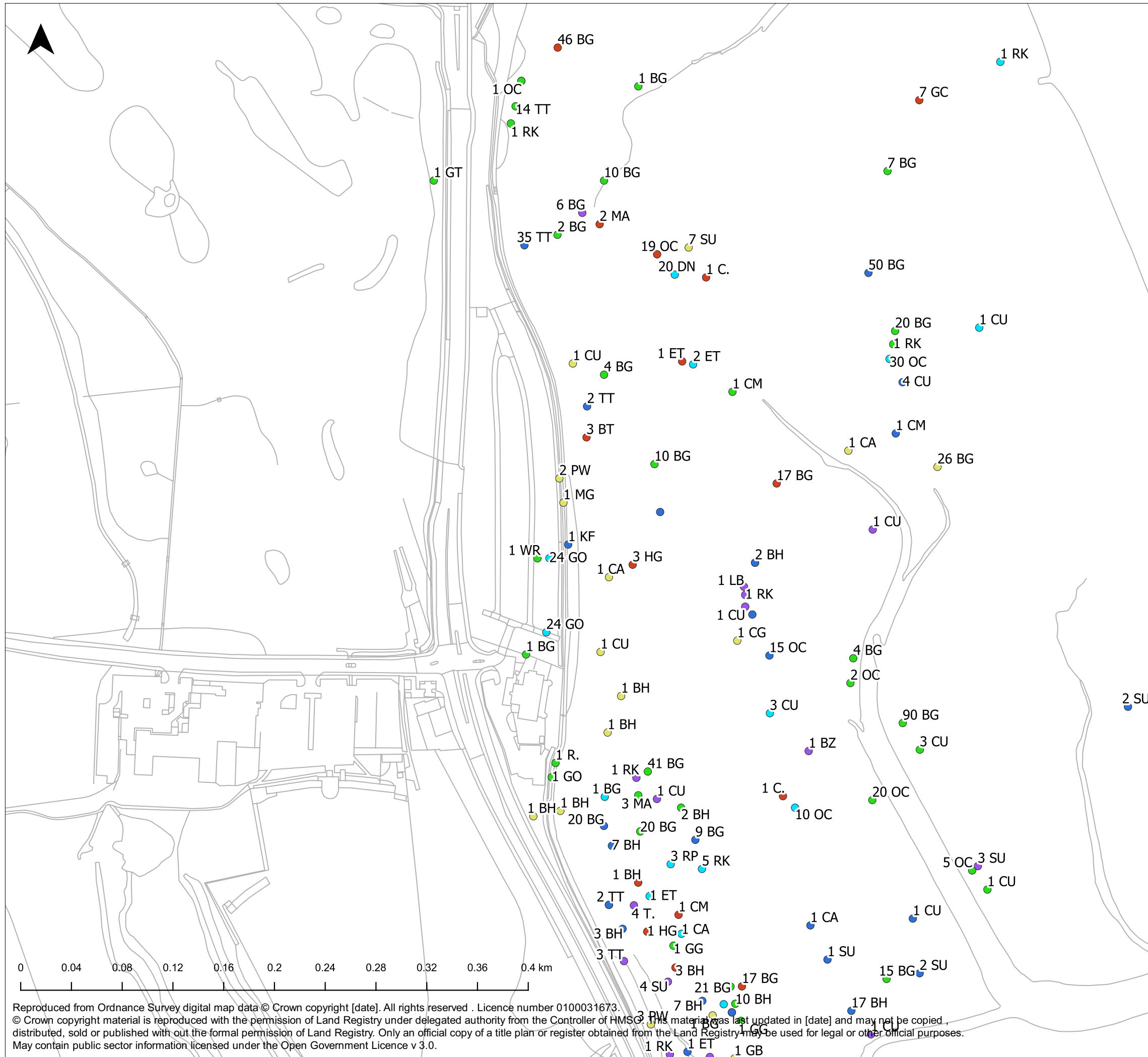
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Breeding Bird Survey Report Appendix 3:  
Winter Bird Survey Data  
Sheet 13 of 20

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DRAWING NO: EN020022-ES-APP-16.13-3		DATE: 27/04/18
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- October 2017
- November 2017
- December 2017
- January 2018
- February 2018
- March 2018

Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009 - Regulation 5(2)(i)

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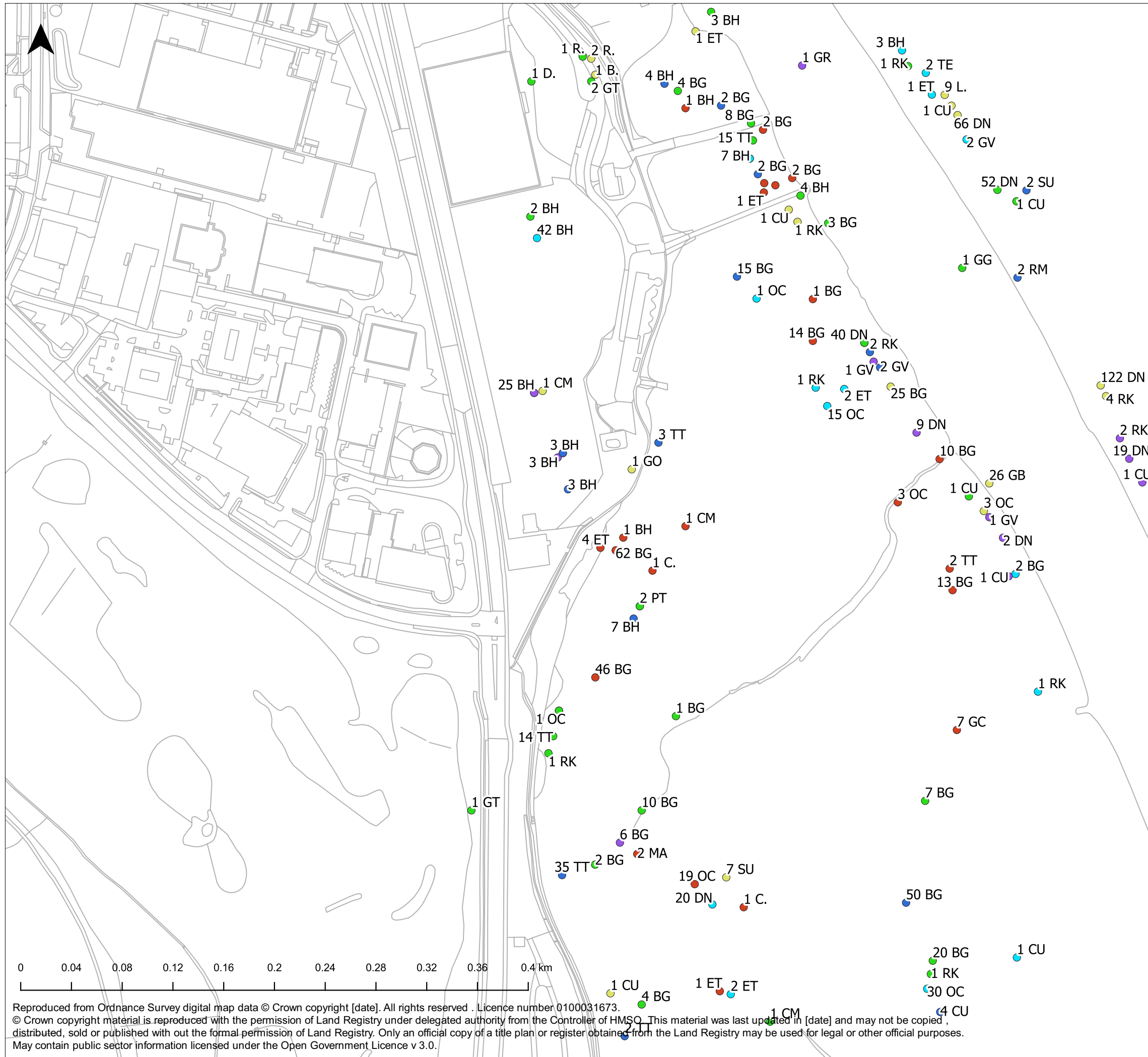
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TITLE: **Breeding Bird Survey Report Appendix 3:  
Winter Bird Survey Data  
Sheet 14 of 20**

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PROJECT NO: 62100616	DESIGNED: AT	DRAWN: AT
DRAWING NO: EN020022-ES-APP-16.13-3		REV NO: 01

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- October 2017
- November 2017
- December 2017
- January 2018
- February 2018
- March 2018

Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009 - Regulation 5(2)(i)

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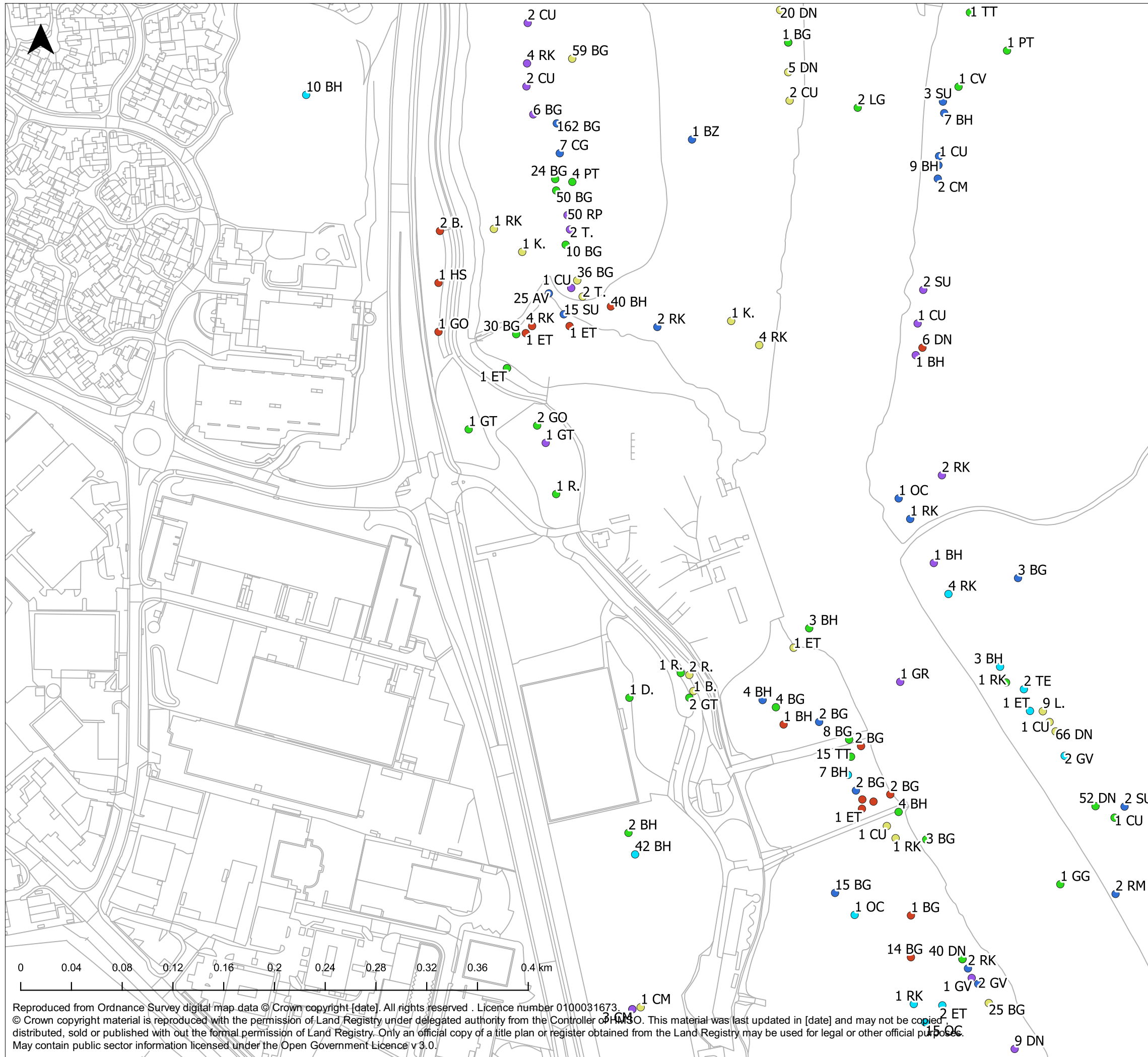
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TITLE: **Breeding Bird Survey Report Appendix 3:  
Winter Bird Survey Data  
Sheet 15 of 20**

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PROJECT NO: 62100616	DESIGNED: AT	DRAWN: AT
DRAWING NO: EN020022-ES-APP-16.13-3		REV NO. 01

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- October 2017
- November 2017
- December 2017
- January 2018
- February 2018
- March 2018

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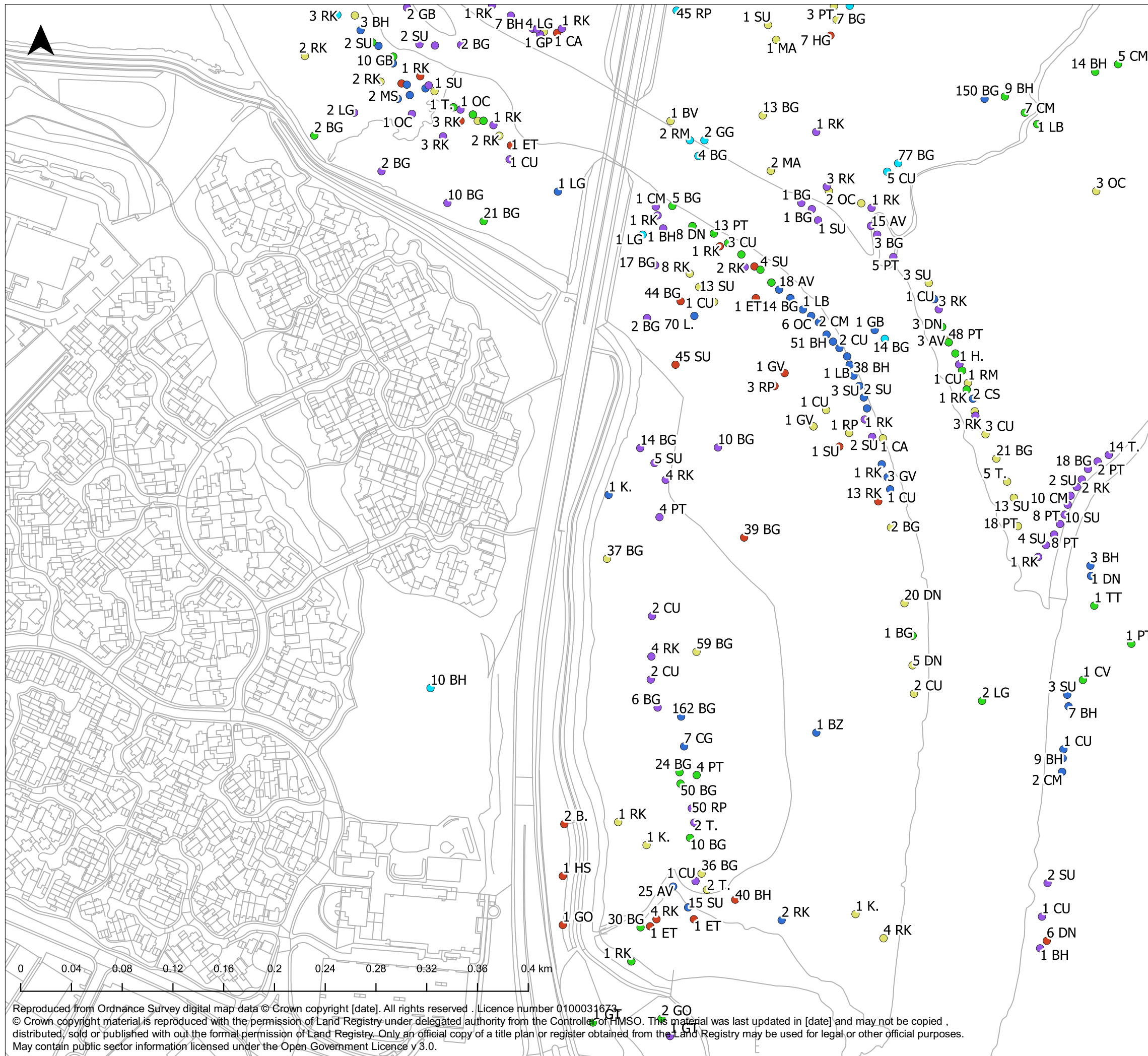
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TITLE: **Breeding Bird Survey Report Appendix 3:  
Winter Bird Survey Data  
Sheet 16 of 20**

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PROJECT NO: 62100616	DESIGNED: AT	DRAWN: AT
DRAWING NO: EN020022-ES-APP-16.13-3		REV NO. 01

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- October 2017
- November 2017
- December 2017
- January 2018
- February 2018
- March 2018


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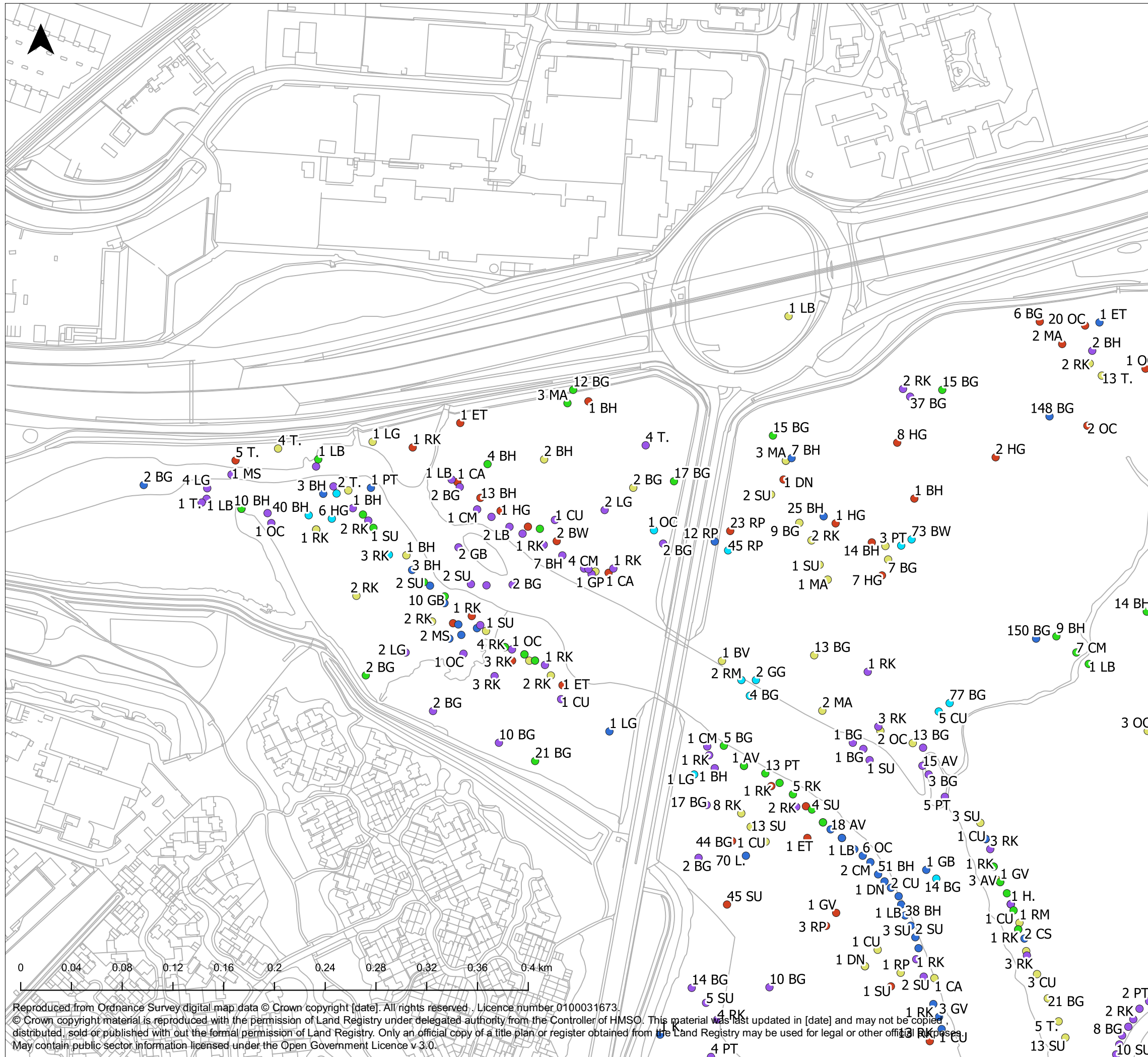
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TITLE: **Breeding Bird Survey Report Appendix 3:  
 Winter Bird Survey Data  
 Sheet 17 of 20**

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PROJECT NO: 62100616	DESIGNED: AT	DRAWN: AT
DRAWING NO: EN020022-ES-APP-16.13-3		DATE: 27/04/18
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  - November 2017
  - December 2017
  - January 2018
  - February 2018
  - March 2018

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Winter Bird Survey Data  
Sheet 18 of 20**

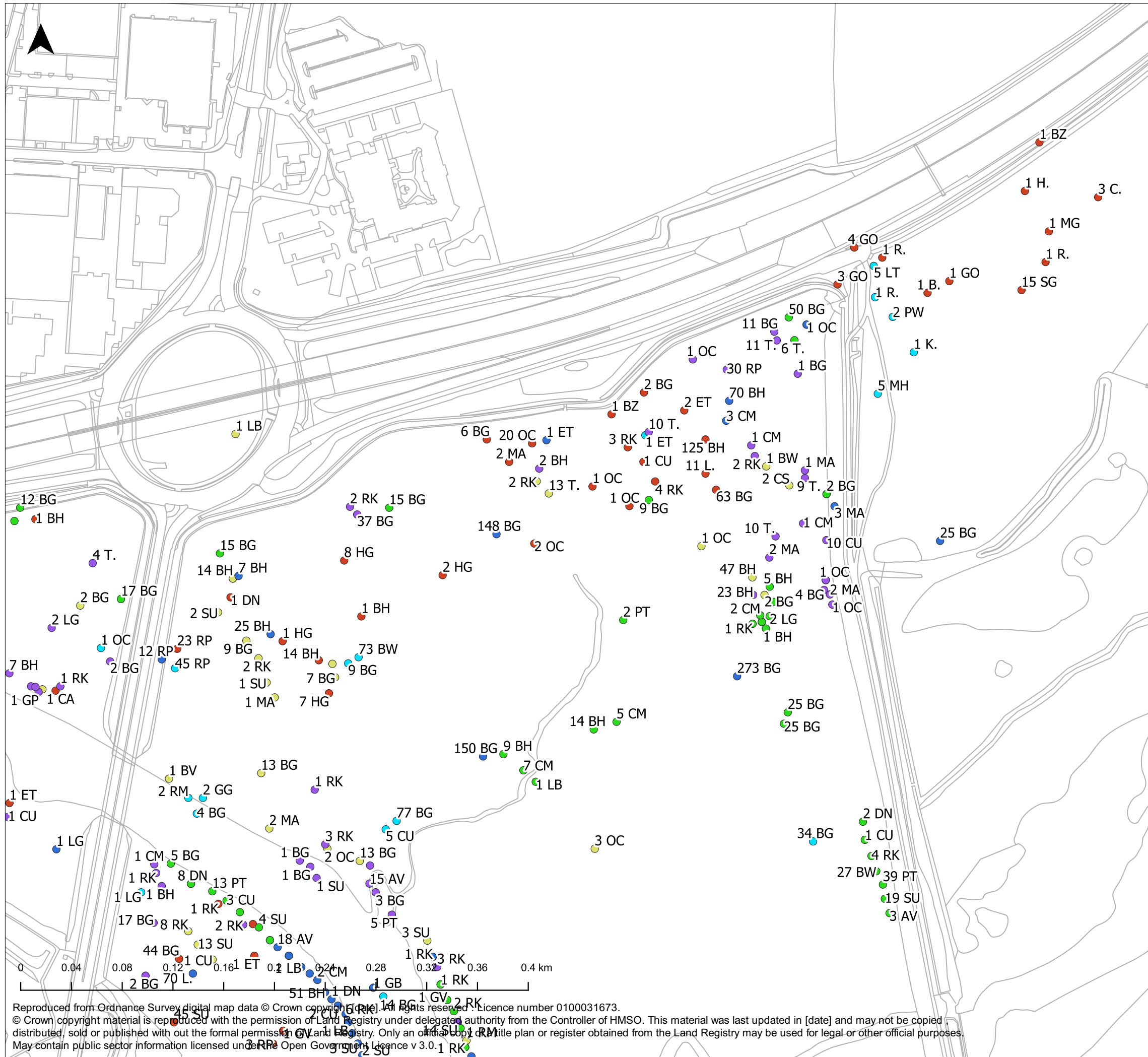
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  - November 2017
  - December 2017
  - January 2018
  - February 2018
  - March 2018

Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009 - Regulation 5(2)(i)

01	27/04/18	AT	WBS Appendix 3	PJ	IE
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Winter Bird Survey Data  
Sheet 19 of 20**

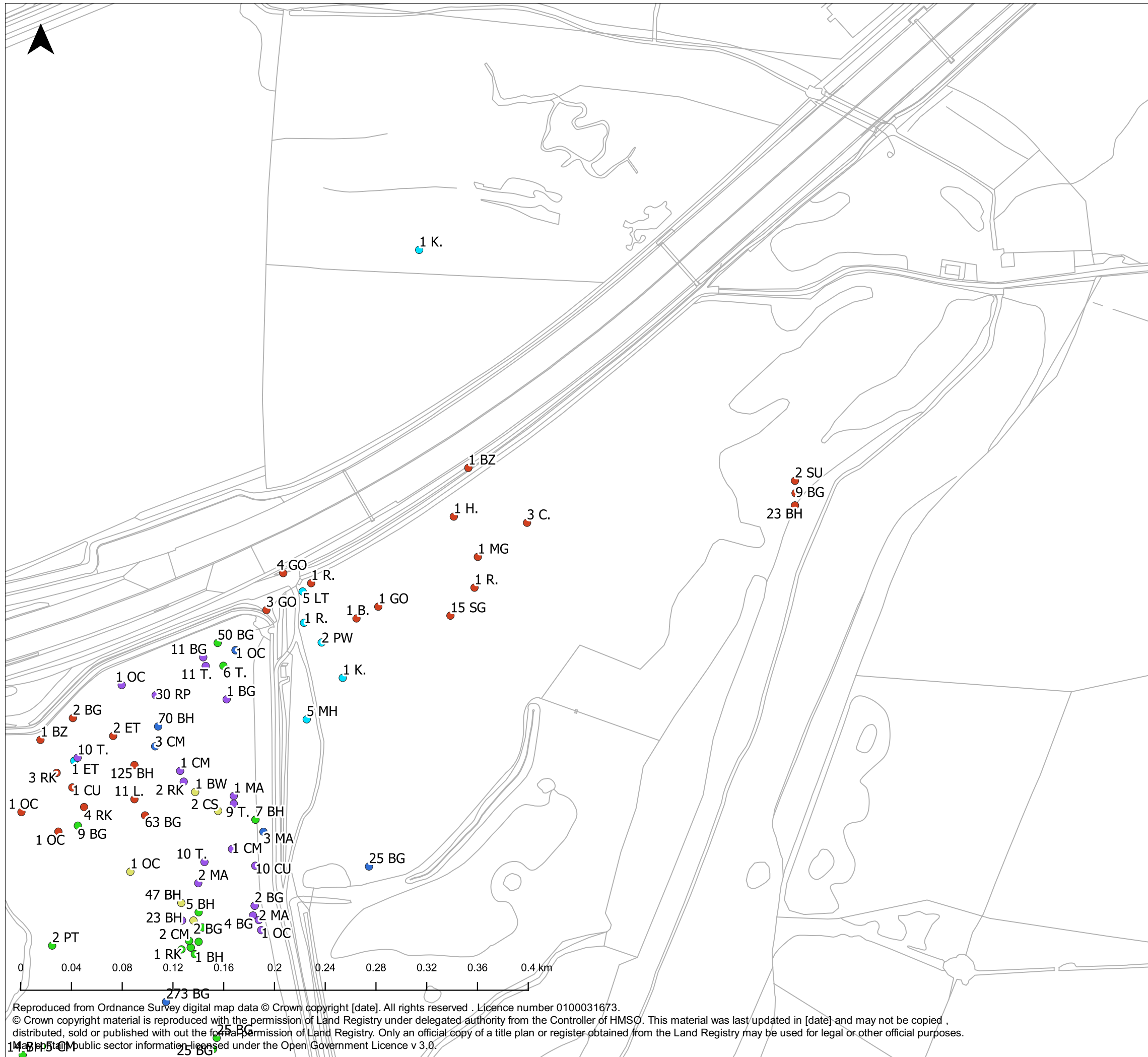
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- November 2017
- December 2017
- January 2018
- February 2018
- March 2018

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TITLE:  
**Breeding Bird Survey Report Appendix 3:  
Winter Bird Survey Data  
Sheet 20 of 20**

SCALE AT A3: 1:3000	CHECKED: PJ	APPROVED: IE
PROJECT NO: 62100616	DESIGNED: AT	DRAWN: AT
DRAWING NO: EN020022-ES-APP-16.13-3		DATE: 27/04/18
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