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Thanet Coast & Sandwich Bay SPA bird and visitor surveys (January to February 2019).

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Footprint Contract Reference: 509
Date: 31st July 2019
Version: Final vers.2
Recommended Citation: Saunders, P. & Liley, D. (2019). Thanet Coast & Sandwich Bay SPA bird and visitor surveys (January to February 2019). Unpublished report by Footprint Ecology.

Summary

This report, commissioned by Canterbury City Council (on behalf of both themselves and Thanet District Council), presents the results of bird and visitor surveys within the Thanet Coast and Sandwich Bay Special Protection Area (SPA). Surveys took place in January and February 2019, with a small team of surveyors covering the whole coastline between Pegwell Bay and Whitstable around high tide in each month, with each survey bout taking place across two consecutive days. The survey results describe the distribution of high tide winter wader roosts, particularly those of Turnstone *Arenaria interpres* and Golden Plover *Pluvialis apricaria*, and the number of birds identified at each roost. A measure of potential disturbance is provided for each roost, and information on wader numbers at a selection of key sites within the survey area during the low tide period is also included. Monitoring of Turnstones within the SPA carries on from previous surveys carried out over several winters in the period encompassing 2001 to 2018. We follow the convention established in these previous surveys, with the coastline split into 21 roughly equally sized sectors, numbered from 1 (north end of Pegwell Bay) to 21 (Whitstable).

Key findings from the surveys are:

- A total of 11 species of wader were recorded using the 21 survey sectors during the January and February 2019 high tide survey visits;
- During the January survey visit the number of waders of all species recorded within individual survey sectors varied from 0 to 419, with a mean of 88.4 individuals per sector. Survey sectors 6, 14, and 20 each contained >300 individual waders;
- During the February 2019 survey visit the number of waders of all species recorded within individual survey sectors varied from 1 to 483, with a mean of 97.0 individuals per sector. Survey sectors 9, 14, and 20 each contained >300 individual waders;
- Across both survey visits, sectors 14 and 20 consistently supported both the largest number of individual waders and the greatest number of species (with 8 and 7 species recorded from each, respectively, in both January and February);
- A total of 30 high tide roosts containing >10 individual waders were identified during the January survey visit, with 29 roosts identified in February;
- Survey sectors 6 and 20 incorporated the largest number of high tide roosts in January, with 8 and 6 roosts respectively, whilst no roosts were observed in sectors 1, 3, 4, 10 to 12, and 16;
- Survey sectors 20, 6, and 3 incorporated the largest number of high tide roosts in February, with 5, 4 and 4 roosts respectively, whilst no roosts were observed in sectors 2 to 5, 10 to 12, and 15;
- The largest roost recorded during the January survey visit was in sector 14, with another large roost located in sector 8. The two largest roosts recorded during the February survey visit were located in sectors 9 and 14;
- During the January bird survey visit 17 of the 30 high tide wader roosts (56.7%) were identified as being easy to access on foot (i.e. greater risk of disturbance);

- During the February survey visit 21 of the 29 roosts (72.4%) were identified as being easy to access on foot;
- A total of 363 Turnstones were recorded across the survey area during the January survey visit, with 372 recorded in February;
- Survey sector 20 held >20% of the total number of Turnstones recorded during both of the survey visits. Sectors 6 and 13 each held >10% of the remainder in January, with sectors 9, 13, and 21 each doing so in February. Survey sectors 13, 20, and 21 therefore remain particularly important for high tide roosting Turnstones;
- No Turnstones were recorded in sectors 1, 11, or 12 during either of the survey visits;
- 18 individual Turnstone roost locations were identified during the January survey visit, with 12 of these assessed as being easy to access on foot;
- Concentrations of Turnstone roosts were located in sector 20 (5 roosts) and sector 6 (4 roosts) during the January survey visit. All of these were assessed as having high potential for disturbance;
- Sector 20 supported 4 roosts during the February survey visit, with all exhibiting high disturbance potential, and sectors 16 and 13 each supported 3 roosts (with 2 of these in sector 13 exhibiting moderate potential for disturbance, whilst the rest exhibited high disturbance potential);
- A single roosting flock of Golden Plover was recorded from sector 14 in January, with the location assessed as exhibiting moderate disturbance potential;
- A total of nine species of wader were recorded from the six low tide count locations during January and February 2019.
- Relatively small numbers of waders (7 to 50 individuals) were recorded at most of the low tide count locations, with no waders recorded in the upper reaches of survey sector 1 (Pegwell Bay) during the February survey visit.
- Survey sector 20 (Tankerton Beach east of Swalecliffe) consistently supported large numbers of waders at low tide during both of the survey visits (197 and 240 individuals, respectively).
- Oystercatcher was the most abundant species at the majority of locations during the low tide surveys.

Visitor interviews, tally counts, and vantage point surveys show the level of recreational use and current access patterns at key sites within the SPA. Vantage points involved snapshot counts around high tide within each survey section, as part of the bird counts. Further, more detailed, visitor survey work involved counts of people and interviews with a random sample of visitors at eight locations around the coastline. These locations were all in areas important for Turnstone.

Key findings from the surveys are:

- 10 distinct activity categories were identified during the vantage point surveys;
- Survey sector 19 recorded the largest number of groups/individuals over the two survey visits (16% across all activity categories), whilst sectors 6 and 12 recorded the joint lowest (1% each);
- Walkers (46%) and dog walkers (41%) comprised the most frequently recorded groups across all sectors during the vantage point surveys;

- The majority of people observed during the vantage point surveys were on the promenade or seawall (86%), although a significant number (13%) were recorded using the beach;
- A total of 135 dogs were counted during the vantage point surveys, and the number of dogs recorded from each of the survey sectors varied between 0 (sector 8) and 17 (sectors 13 and 20). The majority of dogs observed across all sectors (78%) were off the lead;
- The tally data varies between interview locations, with the largest number of groups (570) seen at Plum Pudding Island, and the smallest (20) at Kingsgate;
- Plum Pudding Island and Kingsgate also spanned the extremes of the individual people counts (totals of 971 and 47 recorded respectively), and dog counts (totals of 438 and 13 recorded, respectively);
- Long Rock also recorded a relatively higher number of people (627) and dogs (233) than the rest of the remaining interview locations;
- A total of 274 visitor interviews were conducted, with the largest number carried out at Plum Pudding Island (22%) and Long Rock (17%);
- Virtually all (95%) of interviews were with those who had undertaken a day trip/short visit directly from home that day;
- The average interview duration was 9.4 minutes, with interviews ranging in length from 3.2 minutes to 29.3 minutes;
- The most frequently recorded activity across all interview survey locations was dog walking (68% of interviewees), and this was the case at all survey locations;
- Around a third (39%) of all interviewees were visiting daily;
- The majority of visits were short, with most interviewees (66%) spending less than an hour on the site;
- Most interviewees (72%) indicated that they visited equally all year round;
- More than half (54%) of interviewees had travelled by car, with most of the remainder (46%) arriving on foot;
- Proximity of the interview location to home (39% of interviewees) was the most commonly given reason for location choice;
- For half (50%) of interviewees, 75% or more of their visits were to the location where interviewed rather than anywhere else;
- A total of 254 interviewee postcodes could be accurately mapped;
- The distribution of postcodes largely reflects interviewees living in Thanet and the neighbouring North Kent coast;
- The majority of interviewees at Westgate Bay, Botany Bay, Kingsgate, and Cliffs End (Pegwell) were of local origin. Studd Hill exerted more of a draw for several kilometres to the east and west, whereas Long Rock and Plum Pudding Island attracted people from up to 10km away;
- St Mary's, Reculver draws visitors from a particulalry wide area, with the 75th percentile of visitor origin postcode distance for that locality being approximately 30km;
- Interviewee activities were dominated by dog walking and walking;
- The majority of frequent repeat visitors to the interview survey locations, and those that use the interview location as the main site for the relevant activity, originate from postcodes in relative proximity to them;
- For 73% of interviewees the route they took was reflective of their normal route;

- A range of factors influenced the interviewees' choice of routes, with weather being the most commonly given response (64 interviewees, 21%);
- Mean route length varied between 1.9km and 5.2km across the eight interview locations, and median route length varied from 1.1km to 4.4km;
- More than 50% of those interviewees who responded (134 interviewees) across all eight interview locations were unaware of any wildlife value at the site they were visiting;
- Interviewees expressed the following key concerns/recommendations:

    - Dog fouling (22 interviewees);
    - The amount of litter and the inadequate number of bins (34 interviewees);
    - Parking fees, or the likelihood of their inception (23 interviewees), and;
    - The speed of cyclists on shared footpaths/proms (29 interviewees).

We make the following suggestions for future monitoring:

- It is recommended that bird monitoring continues on at least a biennial basis, allowing any further changes in wader numbers/roost sites to be identified, and;
- It is recommended that the visitor interview surveys and tally counts are repeated either once every five years to monitor mid-term changes in visitor activity, or after any interventions to change or manage access (e.g. extensive changes to parking, wardening, interpretation, etc).

Contents

Acknowledgements

This report was commissioned by Canterbury City Council on behalf of themselves and Thanet District Council, and we are grateful to Matthew Young for his support, useful discussion, and comment. All data was collected by Footprint Ecology. Bird survey data were collected by Dave Chown, Durwyn Liley, James Lowen, Phil Saunders and Will Soar; visitor survey data were collected by Jackie Lake, Jen Price, and Jack Rawlings. Data were entered by Durwyn Liley, Phil Saunders, and Charlie Wilson of Footprint Ecology. Fenella Lewin (Footprint Ecology) read and commented on an early draft.

Cover photograph: Groyne-roosting Turnstone, Redshank, and Sanderling within the Thanet Coast and Sandwich Bay SPA, Durwyn Liley.

1. Introduction

Overview

1.1 This report relates to standardised, systematic surveys for wading birds and human visitors on the Canterbury and Thanet coast during January and February 2019, within the Thanet Coast and Sandwich Bay Special Protection Area (SPA; see Map 1). The SPA is an area of international conservation importance, designated for the large numbers of Turnstone *Arenaria interpres* and Golden Plover *Pluvialis apricaria* which winter within its boundary, and its breeding population of Little Terns *Sternula albifrons*.

1.2 These surveys were commissioned to inform the in-combination recreational effects of new housing development, detailed in the Canterbury District and Thanet Local Plans, upon those sections of the Thanet Coast and Sandwich Bay SPA located within Canterbury and Thanet District and previously identified in the 'Strategic Access Management and Monitoring Plan' 2014 (Bayne & Hyland, 2014).

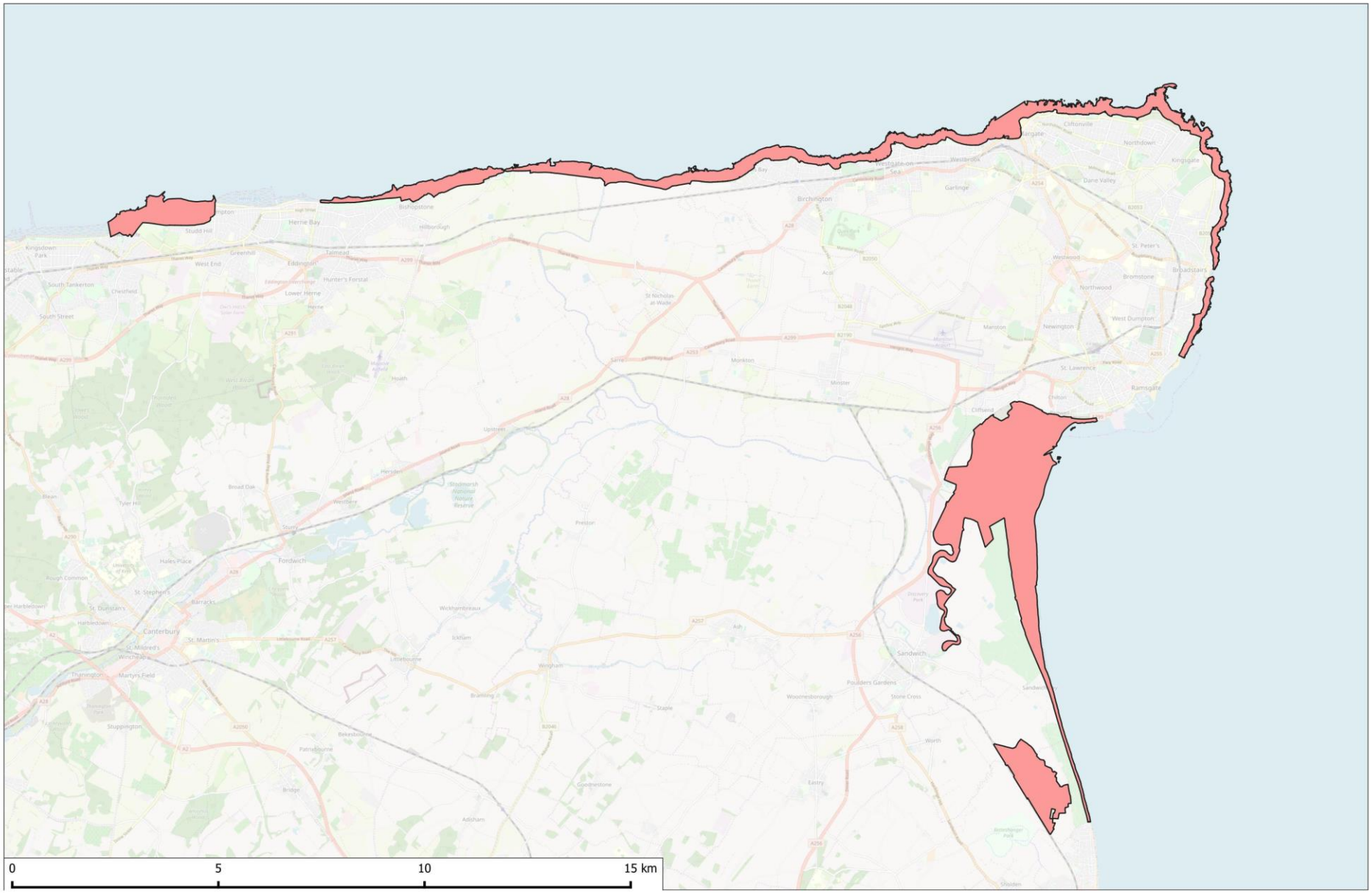
1.3 The bird surveys were carried out to provide information on the numbers and distribution of roosting wading bird species within the survey area over high tide, and foraging waders at low tide, with particular focus placed upon the qualifying features of the SPA (Turnstone and Golden Plover).

1.4 Visitor surveys and interviews were undertaken to identify both the number and distribution of recreational users, as well as details of their origins, activities, awareness of the nature conservation interest of the site, and their level of engagement with the site and its nature conservation interest.

Previous monitoring within the SPA

1.5 The wintering Turnstone population within the SPA was monitored in 6 surveys between 2001 and 2010, and was found to vary between 1,087 and 1,335 individuals, with a mean of 1,227 (Hodgson, 2016). This monitoring was repeated in five additional surveys between 2013 and 2018, during which much lower Turnstone numbers were recorded (range of 527 to 664, with a mean of 600 birds) (Walton & Hodgson, 2018). The reasons for the observed

Map 1: Thanet Coast and Sandwich Bay Special Protection Area.



decline are unclear, and the declines in Turnstone numbers on the SPA have also been flagged in the British Trust for Ornithology's Wetland Bird Survey alerts for the site (Cook et al., 2013). This indicates that site-specific issues are likely to be affecting the site as the decline does not match that of the region or Britain as a whole.

Aim of this report

1.6 This report aims to further inform the previous monitoring of roosting Turnstone numbers carried out within the survey area in the winter months between 2001 and 2018. It also aims to provide detailed information on the location, species composition, and size of all wading bird high tide roosts identified within the survey area during two visits carried out in January and February 2019.

1.7 The report aims to provide a measure of potential disturbance at each roost site, in the form of each roost's accessibility, and to provide an additional 'snapshot' of real-time visitor pressure within each survey sector observed during each of the high tide bird survey visits.

1.8 Another aim of the report is to provide information on the number and species composition of feeding wading bird flocks observed at low tide within the survey area, in specific locations historically identified as supporting larger numbers of foraging Golden Plover and other wader species.

1.9 The report aims to provide detailed observations on the number and distribution of visitors within the survey area, and to identify their points of origin, reasons for utilising the area, and their knowledge and behaviour towards the nature conservation value of the site and existing mitigation practices.

1.10 Finally, the report provides recommendations for further monitoring of wading birds and visitor patterns within the survey area, based upon the results of the surveys detailed in this report.

2. Methods

Survey sectors

2.1 The 21 survey sectors used during the current surveys, each approximately 2km in length, are identical to those used during the previous Turnstone monitoring carried out within the SPA boundary (Hodgson, 2016) (see Map 2). They incorporate the majority of the area within the SPA but, as in previous years, exclude those areas south of Pegwell Bay. Topography and substrate vary between each survey sector, with some sectors viewed from adjoining clifftop footpaths, and others accessed via the beach or man-made promenade.

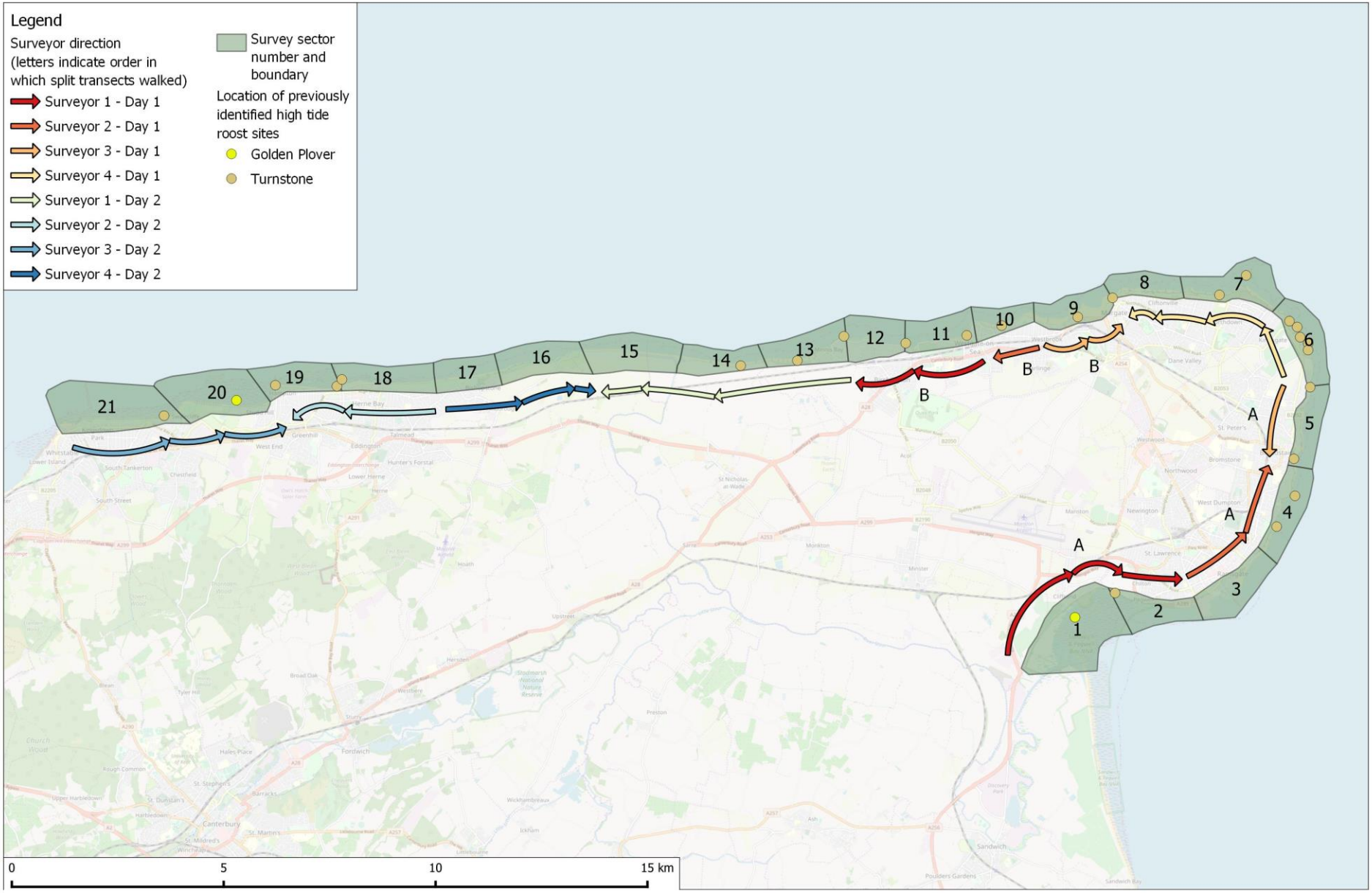
Bird surveys

2.2 The entire coastline within the survey area was surveyed twice, with separate survey visits carried out in January and February 2019. During each of the two survey visits, the coastline was walked/cycled by four experienced bird surveyors over a two-day window (21st/22nd January and 4th/5th February, respectively). Survey visits were timed to cover the high tide period, with all survey sectors visited within two hours of high tide. The survey dates were carefully chosen to avoid extreme spring and neap tides, and all surveys were carried out during daylight hours.

2.3 The order in which each of the survey sectors was walked was kept constant during both the January and February survey visits, with the direction walked by the four surveyors in each sector depicted on Map 2. Each surveyor used aerial photographs and field maps showing the area to be covered, both of which had been annotated to highlight known roosts that have been used previously (see Map 2). Any areas where it was not possible to view/check (e.g. undercliffs where tide cuts off access) were also systematically recorded.

2.4 Surveyors counted all wading birds observed within each sector and mapped any roosting flock of more than 10 individuals. A record was also made of the substrate/structure used by each roost, and an assessment made of the roosts' vulnerability to disturbance. Surveyors used their professional judgement to identify the latter, taking into account the roost's proximity to public rights of way, and its' accessibility over high tide (i.e. whether locate within isolated bay, offshore reef, alongside promenade, etc).

Map 2: Survey sector boundaries, direction of surveyor travel, and locations of previously identified Turnstone and Golden Plover high tide winter roosts.



2.5 On the same days that the high tide counts were undertaken, targeted low tide checks were made of two historically key areas for Golden Plover, in survey sectors 1 and 20 (i.e. sections of Pegwell Bay and along Tankerton Beach east of Swalecliffe). Four other key locations, where flocks of foraging waders were present in sectors 7, 13, and 21 (i.e. Sections of Botany and Palm Bays (both in sector 7), Minnis Bay (sector 13), and Tankerton Beach west of Swalecliffe (sector 21)), were also checked.

2.6 These low tide counts were all undertaken at least three hours after high tide, and lasted approximately half an hour, with the relevant areas observed from key promontories by teams of two surveyors. All waders present along the shoreline within each of the relevant areas (including beach, offshore rocks, and exposed reefs) were identified to species and counted.

Vantage point surveys

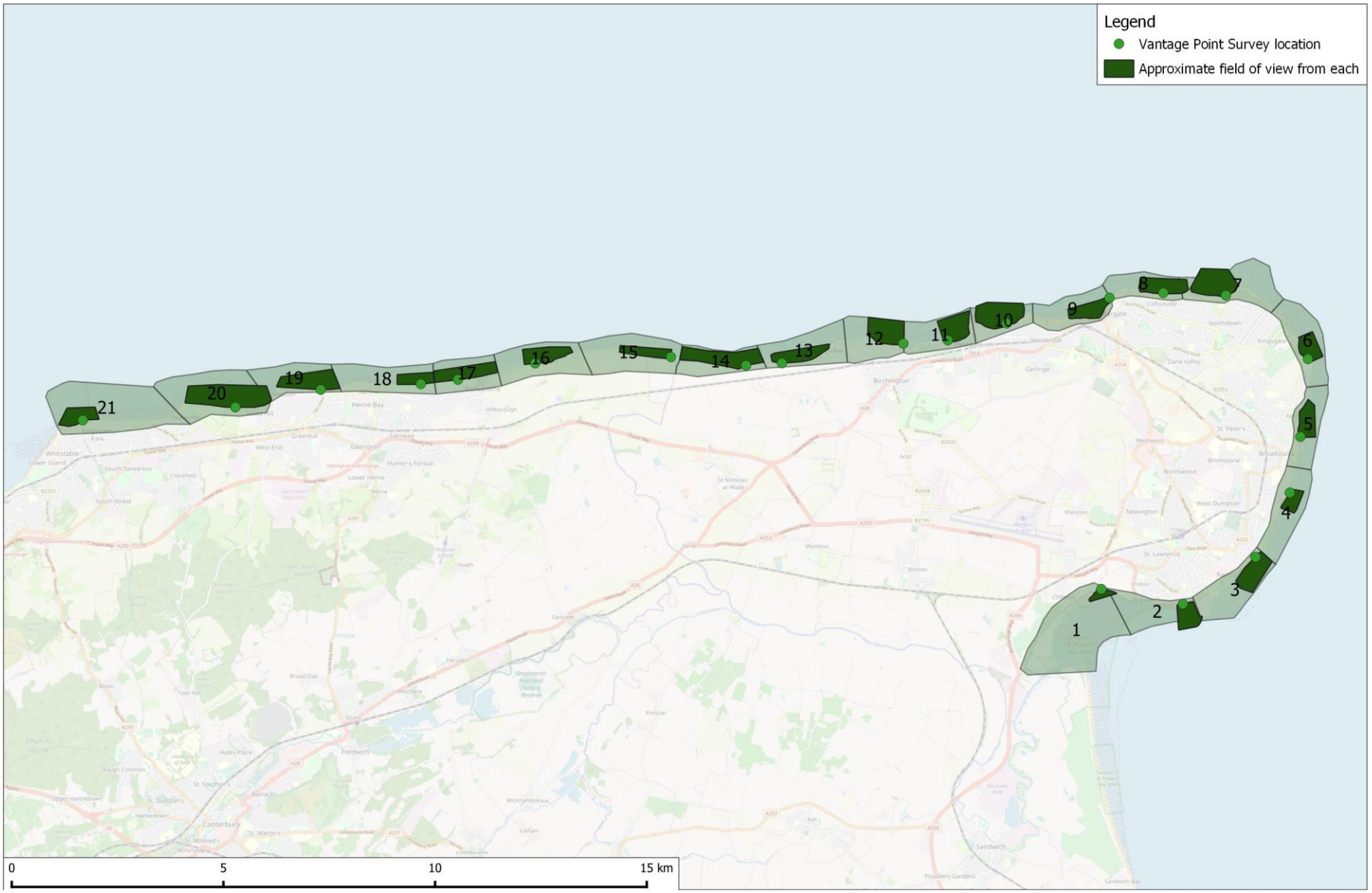
2.7 Vantage point counts of human activity were undertaken during the bird survey visits, with a single count carried out within each of the survey sectors. Each vantage point sought to maximise the view across larger bays and beaches, with their locations identified during the initial survey visit. The same vantage point locations were used during both the January and February bird survey visits. The location of each of the vantage points is provided in Map 3, in addition to an indicative field of view for each.

2.8 During each of the bird survey visits, the surveyors carried out a 'snapshot' survey at each of the vantage point locations. This comprised of quickly scanning across all areas within their field of view, and then recording all visible people/activities. Each individual or group of people were logged, with a record made of the number of people in each group, the number of dogs present, how many of those dogs were off the lead, and the type of activity being undertaken.

Visitor interviews and direct counts

2.9 Visitor interviews and direct counts were carried out at eight locations within the survey area (see Map 4). The locations were selected to give a good geographic spread and were at points where visitors could be easily intercepted (for example at pinch points or near car parks). They were all also within, or close to, survey sectors which had previously been identified as being key areas for wading birds within the SPA.

Map 3: Vantage Point Survey locations within each sector and the approximate field of view from each.



Map 4: Visitor interview and direct count locations within each survey sector.

2.10 All visitor interviews and counts were conducted by three trained, experienced, Footprint Ecology visitor surveyors. Each surveyor kept a tally of visitors using the site whilst they conducted interviews. They recorded the numbers of groups, people, cyclists, and dogs entering, leaving, or passing through.

2.11 Face to face interviews were carried out with a random selection of visitors, with the surveyor interviewing the first person/s they saw after completing the previous interview. When groups were encountered, only one person within each was interviewed, and no unaccompanied minors were approached.

2.12 Interviewees were asked to identify their point of origin, describe their reasons for using the area, and their knowledge and behaviour towards the nature conservation value of the site and existing mitigation practices.

2.13 Surveys were conducted on tablets hosting SNAP survey software, a dedicated market research software which allows surveys to be done on mobile devices. The software allowed the questionnaire to be tailored, e.g. only asking dog-walkers about dog related behaviour. A GPS facility ensured that the surveyor was standing in the correct place, and each questionnaire took <10 minutes to complete.

2.14 Surveyors spent 16 hours at each of the survey points in early February, with this period split evenly between a weekday and weekend day. Surveys were carried out within the following time periods: 0700-0900hrs; 0930-1130hrs; 1230-1430hrs, and; 1500-1700hrs, and were all completed in daylight hours and during periods of clement weather.

3. Results

Bird surveys

Survey area accessibility

3.1 The majority of the coastline incorporated within the survey area was accessible to the four surveyors (see Map 5). Small areas of beach below the clifftop were however not viewable in survey sectors 4 to 7 and 11. Parts of Ramsgate Harbour (in sector 3) were initially inaccessible, although better coverage and access was achieved on the second visit. No counts were conducted in the area south of the Heliport in Pegwell Bay (sectors 1 and 2), as it also proved inaccessible during the survey visits.

3.2 These areas comprised only a small percentage of the total coastline extent within the survey area. Nevertheless, they incorporate locations where single Golden Plover (sector 1) and Turnstone (sector 5) high tide roosts have been identified in the past. It is therefore possible that small numbers of birds present at these localities may have been missed during the bird survey visits.

High tide wader counts

3.3 A total of 11 species of wader were recorded using the 21 survey sectors during the January and February 2019 high tide survey visits, comprising;

- Oystercatcher *Haematopus ostralegus*;
- Lapwing *Vanellus vanellus*;
- Golden Plover;
- Grey Plover *Pluvialis squatarola*;
- Ringed Plover *Charadrius hiaticula*;
- Curlew *Numenius arquata*;
- Turnstone;
- Sanderling *Calidris alba*;
- Dunlin *C. alpina*;
- Purple Sandpiper *C. maritima*, and;
- Redshank *Tringa totanus.*

3.4 Individual counts of each species within each survey sector, total counts of all individuals across species within each sector, and total counts of individual species across all survey sectors are provided separately for the January and February survey visits, in Table 1 and Table 2.

Map 5: Non-viewable and/or inaccessible areas identified during January and February 2019 wader roost surveys.

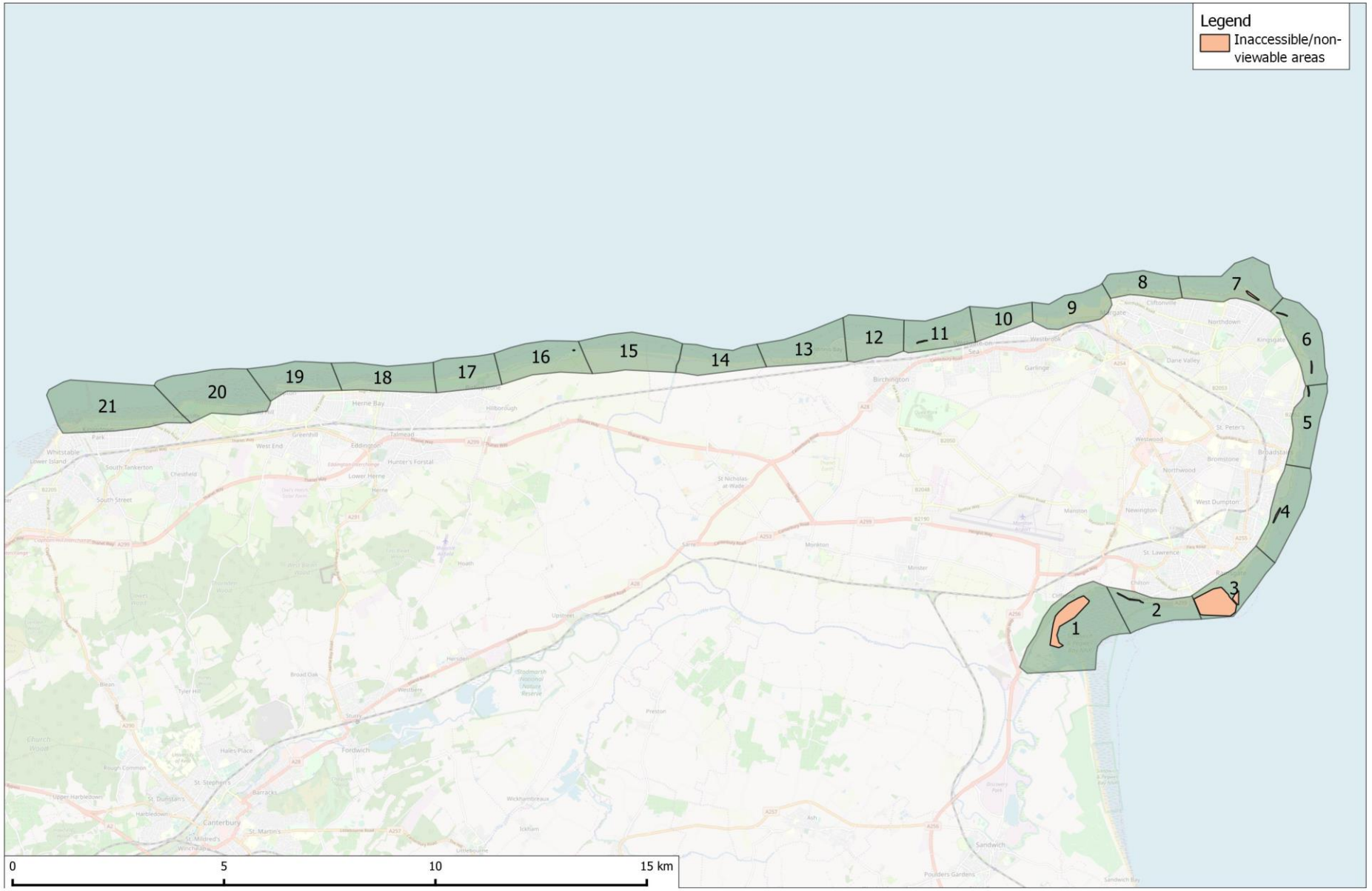


Table 1: Total wader counts (and %) recorded in each survey sector during January 2019 bird survey visit

Survey sector	Individual species counts											Total
	Turnstone	Golden Plover	Redshank	Ringed Plover	Sanderling	Oystercatcher	Purple Sandpiper	Curlew	Grey Plover	Lapwing	Dunlin	
1	0 (0)	0 (0)	3 (2)	0 (0)	0 (0)	2 (1)	0 (0)	3 (4)	1 (2)	0 (0)	0 (0)	**9 (0)**
2	0 (0)	0 (0)	19 (10)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	**19 (1)**
3	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	**0 (0)**
4	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	**0 (0)**
5	13 (4)	0 (0)	0 (0)	0 (0)	0 (0)	1 (0)	11 (32)	2 (3)	0 (0)	0 (0)	0 (0)	**27 (1)**
6	46 (13)	0 (0)	0 (0)	65 (29)	54 (15)	112 (30)	0 (0)	52 (73)	9 (16)	0 (0)	0 (0)	**338 (18)**
7	3 (1)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	11 (32)	0 (0)	0 (0)	0 (0)	0 (0)	**14 (1)**
8	2 (1)	0 (0)	0 (0)	7 (3)	189 (51)	0 (0)	6 (18)	0 (0)	0 (0)	0 (0)	0 (0)	**204 (11)**
9	33 (9)	0 (0)	49 (26)	0 (0)	0 (0)	0 (0)	4 (12)	0 (0)	0 (0)	0 (0)	0 (0)	**86 (5)**
10	1 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	**1 (0)**
11	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	**0 (0)**
12	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	**0 (0)**
13	57 (16)	0 (0)	52 (27)	0 (0)	51 (14)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	**160 (9)**
14	7 (2)	31 (100)	1 (1)	41 (18)	0 (0)	220 (58)	0 (0)	14 (20)	45 (80)	0 (0)	60 (44)	**419 (23)**
15	3 (1)	0 (0)	2 (1)	42 (19)	36 (10)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	**83 (4)**
16	10 (3)	0 (0)	1 (1)	0 (0)	3 (1)	0 (0)	0 (0)	0 (0)	1 (2)	0 (0)	0 (0)	**15 (1)**
17	7 (2)	0 (0)	19 (10)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	**26 (1)**
18	6 (2)	0 (0)	11 (6)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	1 (1)	**18 (1)**
19	15 (4)	0 (0)	1 (1)	0 (0)	0 (0)	0 (0)	2 (6)	0 (0)	0 (0)	0 (0)	0 (0)	**18 (1)**
20	125 (34)	0 (0)	34 (18)	68 (30)	36 (10)	44 (12)	0 (0)	0 (0)	0 (0)	3 (100)	75 (55)	**385 (21)**
21	35 (10)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	**35 (2)**
Total	**363 (100)**	**31 (100)**	**192 (100)**	**223 (100)**	**369 (100)**	**379 (100)**	**34 (100)**	**71 (100)**	**56 (100)**	**3 (100)**	**136 (100)**	**1857 (100)**

Table 2: Total wader counts (and %) recorded in each survey sector during February 2019 bird survey visit

Survey sector	Individual species counts											Total
	Turnstone	Golden Plover	Redshank	Ringed Plover	Sanderling	Oystercatcher	Purple Sandpiper	Curlew	Grey Plover	Lapwing	Dunlin	
1	0 (0)	0 (0)	9 (4)	0 (0)	0 (0)	7 (3)	0 (0)	4 (8)	0 (0)	0 (0)	0 (0)	**20 (1)**
2	0 (0)	0 (0)	1 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	**1 (0)**
3	5 (1)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	**5 (0)**
4	1 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	13 (42)	0 (0)	0 (0)	0 (0)	0 (0)	**14 (1)**
5	13 (3)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	1 (2)	0 (0)	0 (0)	0 (0)	**14 (1)**
6	24 (6)	0 (0)	0 (0)	46 (15)	0 (0)	33 (15)	0 (0)	24 (48)	1 (1)	0 (0)	0 (0)	**128 (6)**
7	15 (4)	0 (0)	0 (0)	3 (1)	7 (1)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	**25 (1)**
8	3 (1)	0 (0)	5 (2)	18 (6)	0 (0)	0 (0)	6 (19)	0 (0)	0 (0)	0 (0)	0 (0)	**32 (2)**
9	43 (12)	0 (0)	66 (27)	3 (1)	362 (65)	0 (0)	9 (29)	0 (0)	0 (0)	0 (0)	0 (0)	**483 (24)**
10	1 (0)	0 (0)	7 (3)	0 (0)	0 (0)	0 (0)	1 (3)	0 (0)	0 (0)	0 (0)	0 (0)	**9 (0)**
11	0 (0)	0 (0)	14 (6)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	**14 (1)**
12	0 (0)	0 (0)	1 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	**1 (0)**
13	54 (15)	0 (0)	40 (16)	0 (0)	69 (12)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	**163 (8)**
14	21 (6)	0 (0)	18 (7)	79 (26)	4 (1)	150 (66)	0 (0)	21 (42)	75 (93)	0 (0)	59 (34)	**427 (21)**
15	0 (0)	0 (0)	9 (4)	20 (7)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	**29 (1)**
16	6 (2)	0 (0)	8 (3)	0 (0)	32 (6)	0 (0)	0 (0)	0 (0)	5 (6)	0 (0)	0 (0)	**51 (3)**
17	12 (3)	0 (0)	17 (7)	0 (0)	15 (3)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	**44 (2)**
18	9 (2)	0 (0)	18 (7)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	**27 (1)**
19	33 (9)	0 (0)	3 (1)	0 (0)	0 (0)	0 (0)	2 (6)	0 (0)	0 (0)	0 (0)	0 (0)	**38 (2)**
20	88 (24)	0 (0)	32 (13)	131 (44)	66 (12)	36 (16)	0 (0)	0 (0)	0 (0)	3 (100)	113 (66)	**469 (23)**
21	44 (12)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	**44 (2)**
Total	**372 (100)**	**0 (100)**	**248 (100)**	**300 (100)**	**555 (100)**	**226 (100)**	**31 (100)**	**50 (100)**	**81 (100)**	**3 (100)**	**172 (100)**	**2038 (100)**

3.5 During the January 2019 survey visit the number of waders of all species recorded within individual survey sectors varied from 0 (sectors 3, 4, 11, and 12) to 419 (sector 14), with a mean of 88.4 individuals per sector. Survey sectors 6, 14, and 20 each contained >300 individual waders.

3.6 Oystercatcher (379 individuals across 5 sectors), Sanderling (369 individuals across 6 sectors), and Turnstone (363 individuals across 15 sectors) were the most abundant species across all sectors, whilst Golden Plover (31 individuals in 1 sector) and Lapwing (3 individuals in 1 sector) were the least abundant.

3.7 During the February 2019 survey visit the number of waders of all species recorded within individual survey sectors varied from 1 (sectors 2 and 12) to 483 (sector 9), with a mean of 97.0 individuals per sector. Survey sectors 9, 14, and 20 each contained >300 individual waders.

3.8 Sanderling (555 individuals across seven sectors), Turnstone (372 individuals across 16 sectors), and Ringed Plover (300 individuals across 7 sectors) were the most abundant species across all sectors, whilst Lapwing (3 individuals in 1 sector) was again the least abundant. Golden Plover were not recorded from any of the sectors during the February bird survey visit.

3.9 Oystercatcher, Dunlin and Sanderling comprised three of the most abundant wader species combined across the 21 survey sectors. Nevertheless, these three species were generally recorded in larger flocks only from a relatively small number of sectors. Of the 11 species identified in total, only Turnstone and Redshank were recorded from >10 of the survey sectors during both the January and February survey visits.

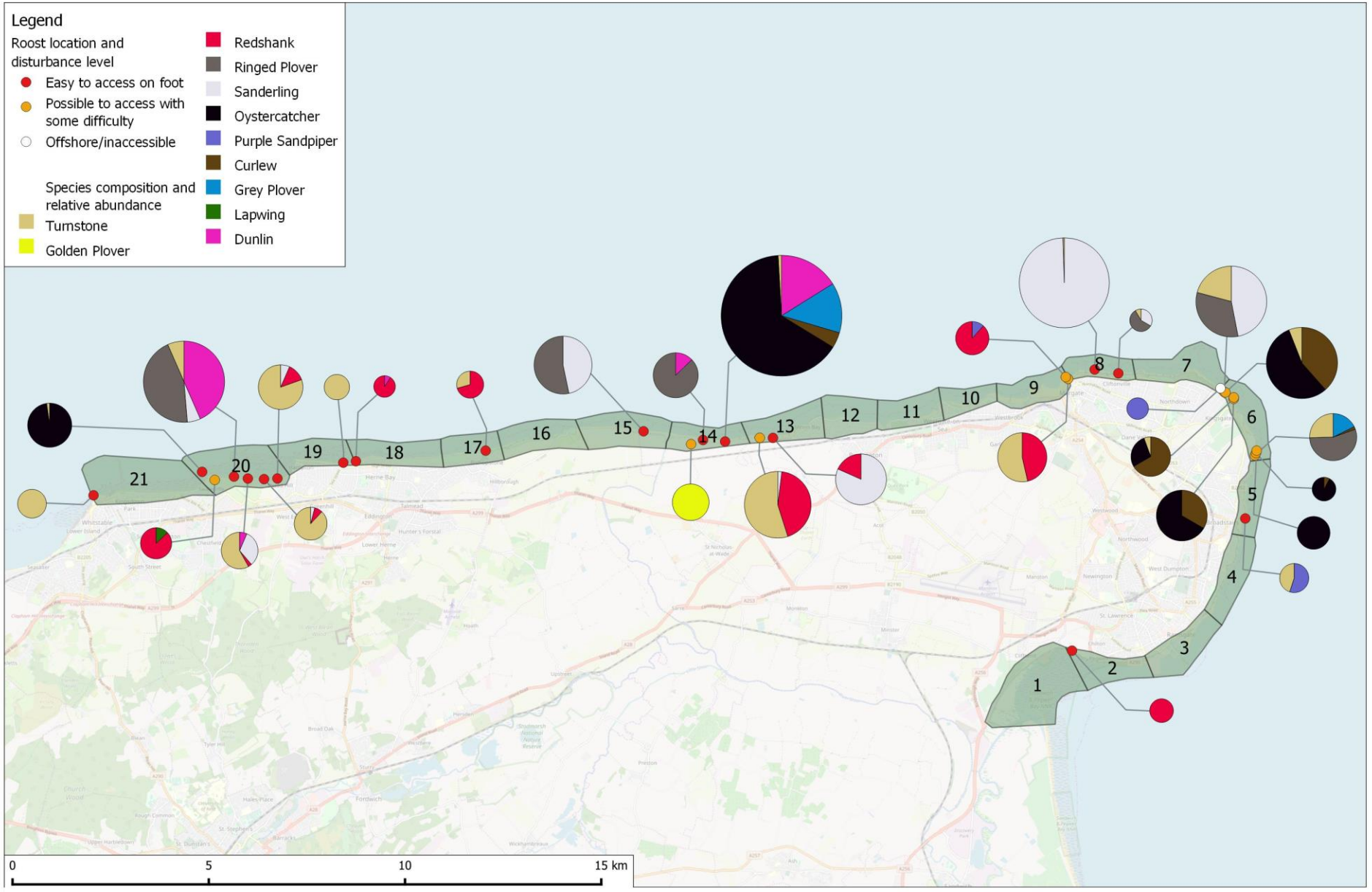
3.10 Across both survey visits sectors 14 and 20 consistently supported both the largest number of individual waders and the greatest number of species (with 8 and 7 species recorded from each, respectively, in both January and February).

Wader roost counts

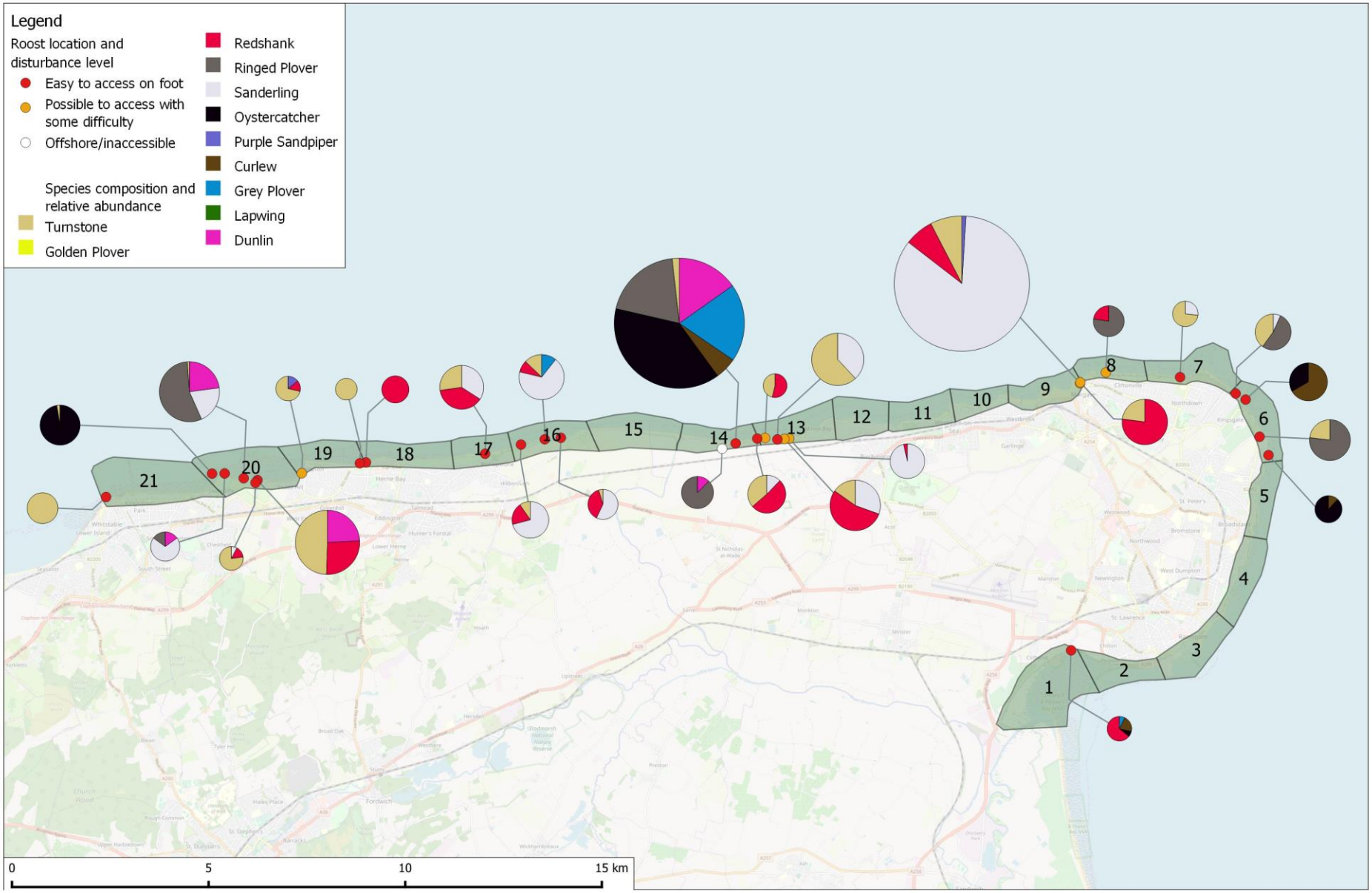
3.11 A total of 30 high tide roosts containing >10 individuals were identified during the January survey visit (see Map 6). Sectors 6 and 20 incorporated the largest number of high tide roosts in January, with 8 and 6 roosts respectively, whilst no roosts were observed in sectors 1, 3, 4, 10 to 12, and 16.

3.12 A total of 29 high tide roosts were identified in February (see Map 7). Sectors 20, 6, and 3 incorporated the largest number, with 5, 4 and 4 roosts respectively, whilst no roosts were observed in sectors 2 to 5, 10 to 12, and 15.

Map 6: January 2019 wader roost locations, species composition and relative abundance, and potential for disturbance.



Map 7: February 2019 wader roost locations, species composition and relative abundance, and potential for disturbance.



3.13 The largest roost recorded during the January survey visit was in sector 14, although it was mostly comprised of a large number of Oystercatchers. Another large roost, dominated by Sanderling, was located in sector 8, with similarly sized mixed-species roosts recorded in sectors 6 and 20.

3.14 The two largest roosts recorded during the February survey visit were of an approximately similar size, and were located in sectors 9 (comprising mainly Sanderling) and 14 (a mixed flock largely comprising of Oystercatcher, Grey and Ringed Plovers, and Dunlin). Most of the other roosts were relatively small, although moderately sized mixed species flocks were present in sectors 13 and 20.

Potential for disturbance at roost sites

3.15 During the January bird survey visit 17 of the 30 high tide wader roosts (56.7%) were identified as being easy to access on foot, and therefore potentially susceptible to higher levels of disturbance (see Map 6). Of the remaining 13 roosts, only one was identified as being inaccessible, with the others (40.0%) being potentially accessible (and therefore of moderate disturbance potential). Only sectors 6 and 9 incorporated no easily accessible roosts.

3.16 During the February survey visit 21 of the 29 roosts (72.4%) were identified as being easy to access on foot (see Map 7), with only one of the remaining 8 roosts again identified as being inaccessible. Only sectors 8 and 9 incorporated no easily accessible roosts.

Turnstone and Golden Plover

3.17 A total of 363 Turnstones were recorded across the entire survey area during the January 2019 survey visit, with 372 recorded in February (See Table 3). These numbers are indicative of the continuing decline of wintering Turnstone numbers within the survey area (with 574 and 498 birds recorded during the 2018 surveys; Walton & Hodgson, 2018). The numbers recorded in 2019 are similar to the total of 373 recorded during one of the 2015 survey visits, although coverage was incomplete for that particular survey.

3.18 As during the 2018 surveys, sector 20 held >20% of the total number of Turnstones recorded during both of the 2019 survey visits (see Table 3 and Figure 1). Sectors 6 and 13 each held >10% of the remainder in January, with sectors 9, 13, and 21 each doing so in February. Sectors 13 and 21 both also held >10% of the Turnstones recorded during each of the 2018 surveys.

Table 3: Total high tide Turnstone counts within each survey sector 2001 - 2019 (historical data from Walton & Hodgson, 2018)

Year	Survey sector																				Total
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	
2019a	0	0	5	1	13	24	15	3	43	1	0	0	54	21	0	6	12	9	33	88	44	**372**
2019b	0	0	0	0	13	46	3	2	33	1	0	0	57	7	3	10	7	6	15	125	35	**363**
2018a	0	13	16	1	22	0	58	13	20	5	0	0	86	18	0	25	10	3	25	168	91	**574**
2018b	0	3	8	0	20	17	31	30	31	2	0	0	56	30	5	25	1	21	5	162	51	**498**
2016a	0	14	8	5	16	34	25	15	22	16	0	48	3	101	0	0	8	5	21	67	37	**445**
2016b	0	34	12	2	16	5	125	0	27	16	0	8	0	92	10	3	0	9	18	120	40	**537**
2015a	37	21	18	3	6	18	18	47	19	9	3	18	26	0	0	18	15	16	37	-	44	**373**
2015b	0	28	10	2	17	6	21	15	29	8	0	21	72	7	7	7	0	0	42	180	55	**527**
2014a	0	25	11	2	5	11	34	3	14	10	1	148	1	0	0	16	4	25	19	112	142	**583**
2014b	0	88	9	2	18	7	32	6	19	0	-	110	10	23	6	0	17	22	42	106	147	**664**
2013	43	70	11	6	21	9	20	22	59	1	15	13	32	19	6	2	52	38	31	97	53	**620**
2010	0	927	0	2	16	14	0	0	0	0	37	12	0	21	0	8	13	0	8	187	2	**1247**
2008	0	117	13	14	62	56	177	20	47	41	6	83	20	22	20	17	16	47	32	168	109	**1087**
2006	133	67	24	0	17	53	120	56	36	2	8	62	102	125	40	4	0	33	61	108	284	**1335**
2003	171	11	3	0	31	157	37	0	53	74	0	65	19	278	39	82	0	70	0	136	35	**1261**
2002	165	2	0	0	0	131	38	2	28	6	56	0	100	309	76	14	0	4	26	225	19	**1201**
2001	66	14	0	7	12	79	41	18	86	51	5	93	19	366	28	103	33	50	2	4	154	**1231**

Those years in which two survey visits were carried out are indicated with the letters a and b. Cells highlighted in dark grey comprise >20% of the individual survey total, and those highlighted in light grey comprise >10% of the individual survey total.

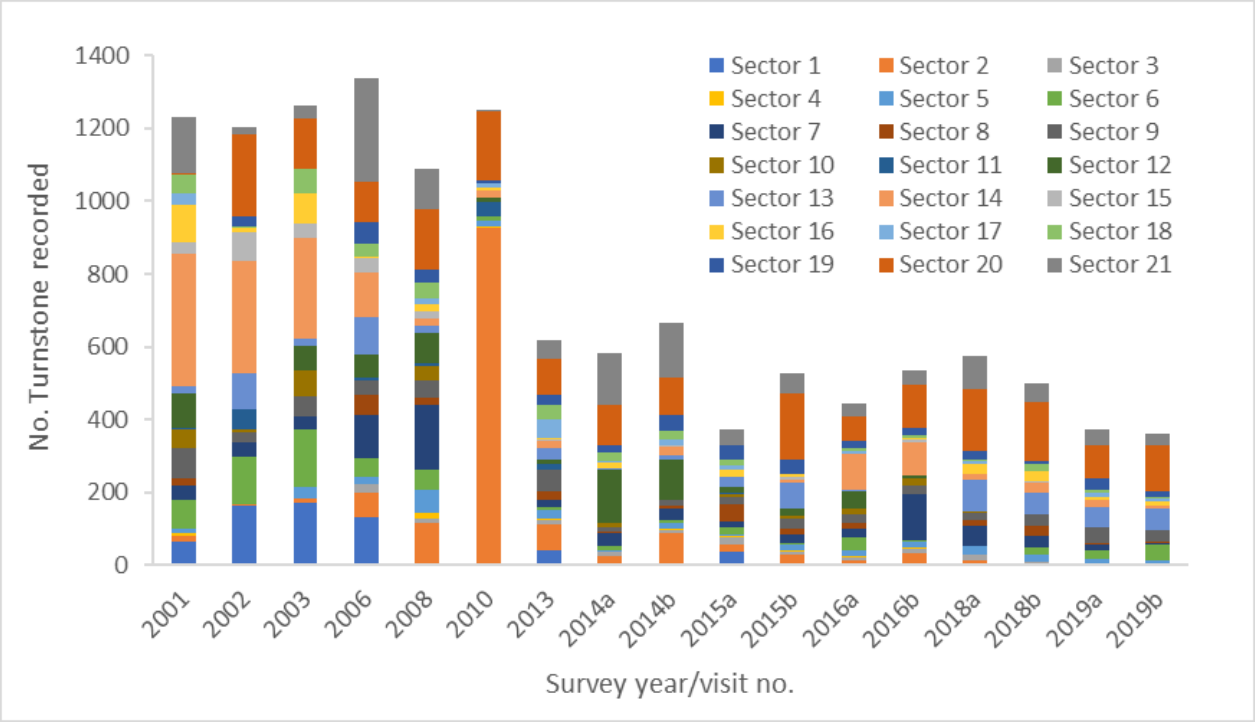


Figure 1: Total high tide Turnstone counts within each survey sector 2001 - 2019 (historical data from Walton & Hodgson, 2018)

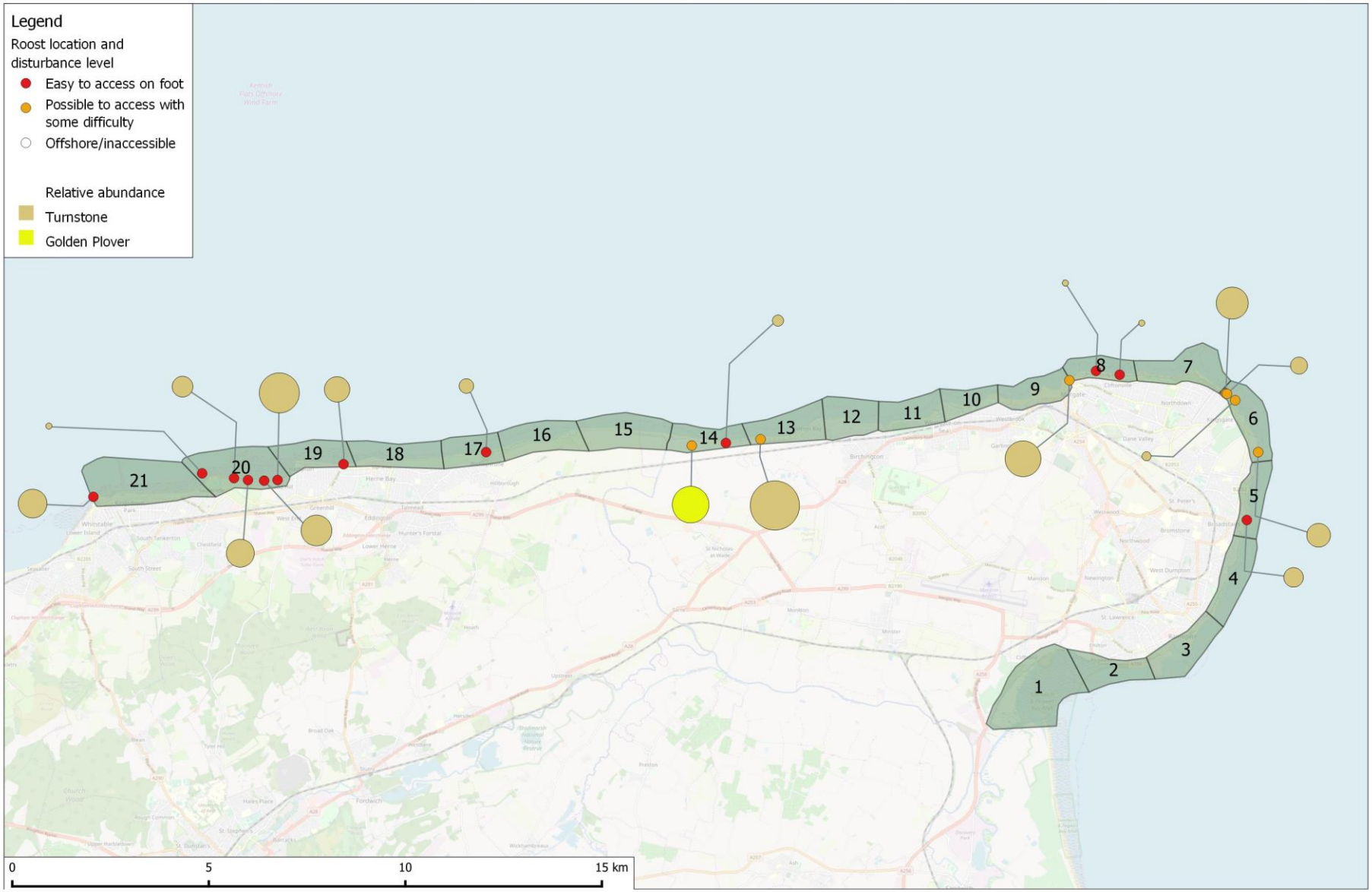
Sectors 13, 20, and 21 therefore remain particularly important for high tide roosting Turnstones.

3.19 No Turnstones were recorded in sectors 1, 11, or 12 during either of the 2019 survey visits, which was also the situation in 2018. Sectors 3, 4, 8, 10, and 15 each supported low numbers of Turnstones during the 2019 survey visits. With the exceptions of sectors 3 and 8, each of these sectors also supported low numbers in 2018.

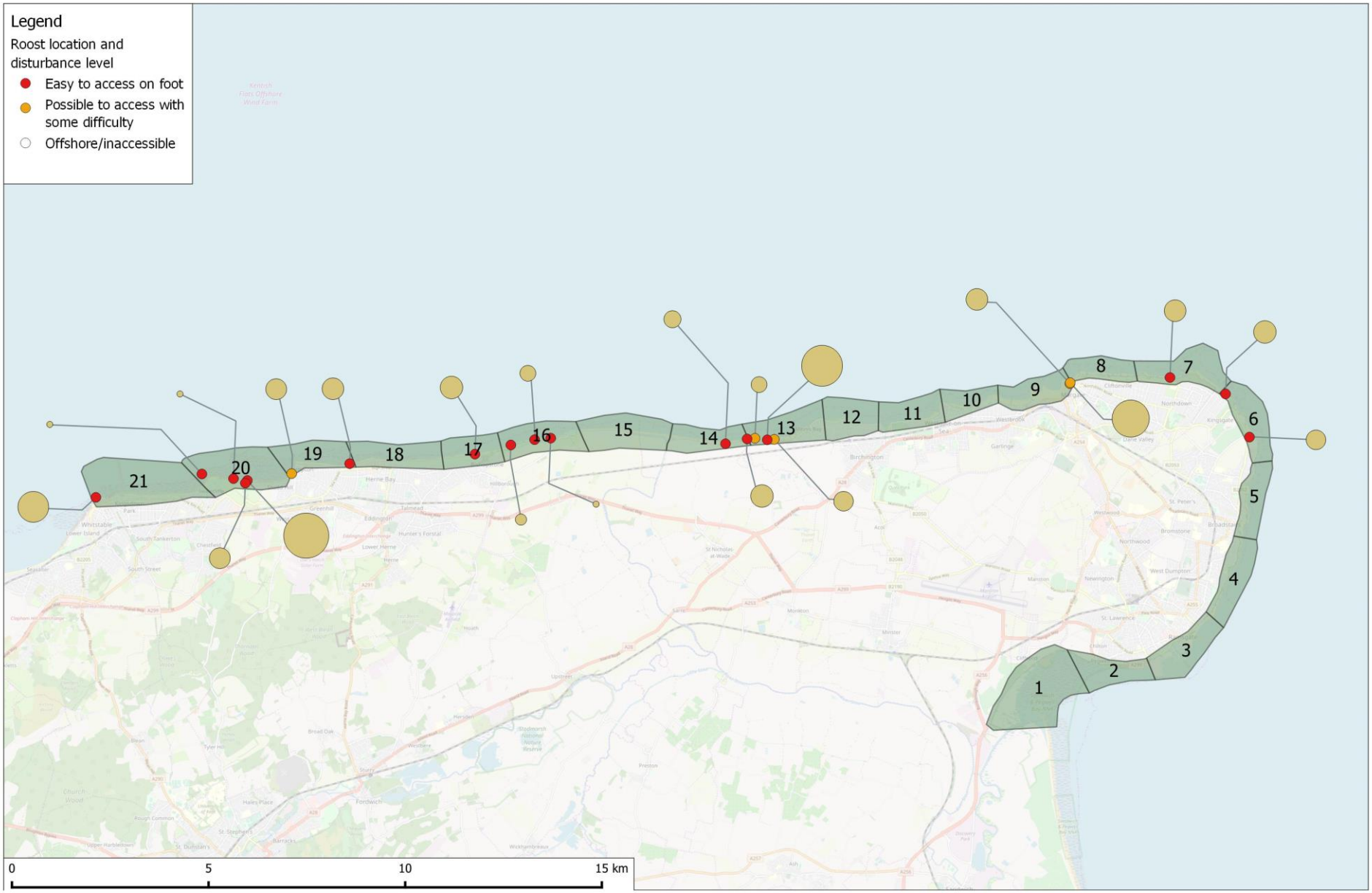
3.20 18 individual Turnstone roost locations were identified during the January 2019 survey visit (see Map 8), with 12 of these assessed as being easy to access on foot, and therefore potentially liable to higher levels of disturbance. The remaining 6 roosts were assessed as exhibiting moderate disturbance potential. 21 roost locations were identified during the February visit (see Map 9), with 16 of these exhibiting high, and 5 exhibiting moderate, disturbance potential.

3.21 Concentrations of Turnstone roosts were located in sector 20 (5 roosts) and sector 6 (4 roosts) during the January 2019 survey visit. All of these were assessed as having high potential for disturbance. Sector 20 supported 4 roosts during the February survey visit, with all exhibiting high disturbance

Map 8: January 2019 Turnstone and Golden Plover roost locations, relative abundance, and potential for disturbance.



Map 9: February 2019 Turnstone roost locations, relative abundance, and potential for disturbance.



potential, and sectors 16 and 13 each supported 3 roosts. All of those in sector 16 were of high disturbance potential, whereas only one of those in sector 13 was (the others exhibiting moderate potential).

3.22 A single roosting flock of Golden Plover was recorded from sector 14 in January (see Map 8), with the location assessed as exhibiting moderate disturbance potential. This was the only record of the species made during the 2019 high tide surveys.

Low tide counts

3.23 A total of nine species of wader were recorded from the six low tide count locations during January and February 2019 (see Table 4). These comprised the same species recorded within the high tide roosts, with the exception of Lapwing and Dunlin.

3.24 Relatively small numbers of waders (7 to 50 individuals) were recorded at most of the low tide count locations, with no waders recorded in the upper reaches of Sector 1 (Pegwell Bay) during the February survey visit. However, Sector 20 (Tankerton Beach east of Swalecliffe) consistently supported large numbers of waders at low tide during both of the 2019 survey visits (197 and 240 individuals, respectively).

3.25 Oystercatcher was the most abundant species at the majority of locations, although both Redshank and Ringed Plover were abundant in sector 20. Turnstone numbers were low in all of the locations, again with the exception of sector 20 (where 71 were recorded during the February survey visit).

Vantage point surveys

3.26 10 distinct activity categories were identified during the vantage point surveys, with the 'all other people' classification including people chatting in a car park alongside the promenade, and a metal detector on the beach (Figure 2). Note that counts for dog walkers, walkers without dogs, joggers, and bird/wildlife watchers are expressed as number of groups, whereas all other categories are counts of individuals.

Table 4: Low tide wader counts from selected locations within the 2019 survey area

Location	Date	Individual species count									Total
		Turnstone	Golden Plover	Redshank	Ringed Plover	Sanderling	Oystercatcher	Purple Sandpiper	Curlew	Grey Plover	
Sector 1 (Pegwell Bay)	21/01	0	0	0	0	0	0	0	0	50	50
	04/02	0	0	0	0	0	0	0	0	0	0
Sector 7 (Botany Bay)	21/01	1	0	0	0	0	20	0	3	0	24
	04/02	5	0	1	0	0	9	0	1	0	16
Sector 7 (Palm Bay)	21/01	9	0	0	0	0	29	0	3	0	41
	04/02	5	0	0	1	0	12	5	6	0	29
Sector 13 (Minnis Bay)	21/01	0	0	0	0	0	5	0	2	0	7
	05/02	1	0	8	0	0	4	0	2	5	20
Sector 20 (Tankerton Beach east)	22/01	15	35*	45	75	0	25	0	0	2	197
	05/02	71	0	121	89	2	36	0	19	2	240
Sector 21 (Tankerton Beach west)	22/01	6	0	0	0	0	15	0	3	0	24
	05/02	9	0	3	0	0	8	0	1	0	21

**Golden Plover flock observed in flight only, but still included in overall total.*

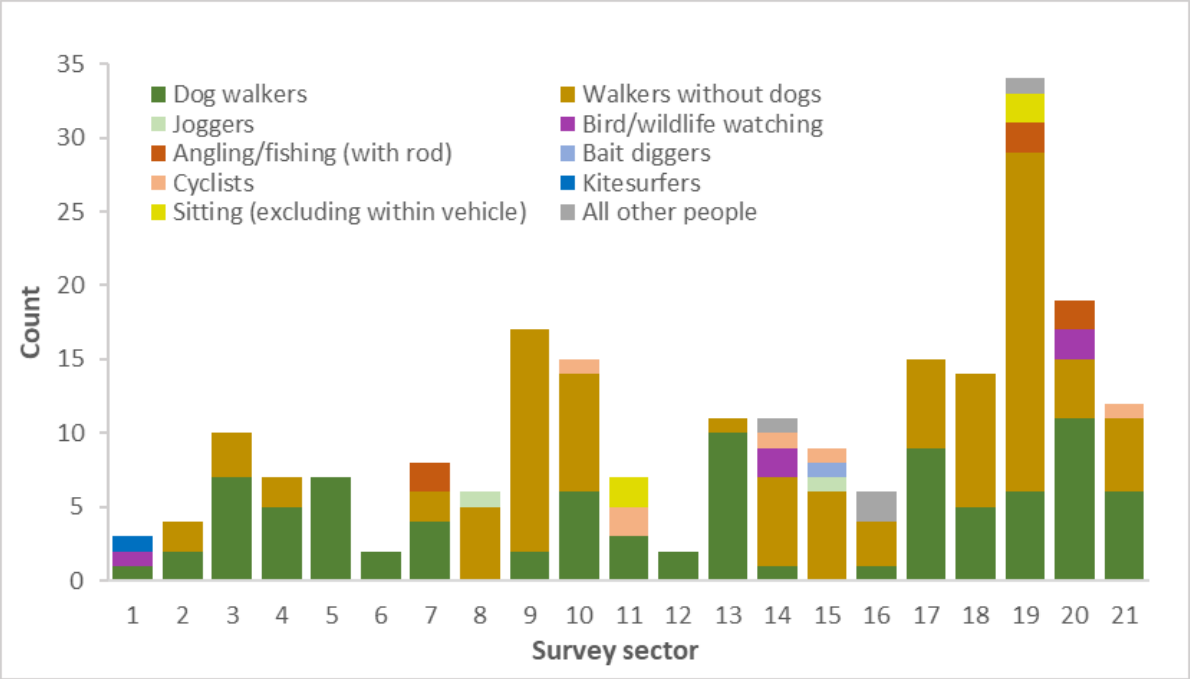


Figure 2: Cumulative January and February 2019 vantage point counts of main activities observed within each survey sector during high tide bird surveys.

3.27 Sector 19 recorded the largest number of groups/individuals over the two survey visits (16% across all activity categories), whilst sectors 6 and 12 recorded the joint lowest (1% each). Walkers (46%) and dog walkers (41%) comprised by far the most frequently recorded groups across all sectors during the surveys, with dog walkers the most abundant category in 13 of the 21 sectors (62% of sectors). The greatest number of dog walkers were recorded in sectors 13, 17, and 20 (with 11%, 10%, and 12% of all dog-walking groups observed, respectively). The small number of other activities observed were spread across approximately half of the survey sectors.

3.28 The majority of people observed during the vantage point surveys were on the promenade or seawall (86%), although a significant number (13%) were recorded using the beach (Figure 3). Of those people using the beach over the high tide period, 59% comprised dog walkers.

3.29 A total of 135 dogs were counted during the vantage point surveys, and the number of dogs recorded from each of the sectors varied between 0 (sector 8) and 17 (sectors 13 and 20) (Figure 4). The majority of dogs observed across all sectors (78%) were off the lead, with 100% off the lead within sectors 2, 5, 15, 17, and 20. Nevertheless, more dogs were observed on the lead than off in sectors 1, 9, 13, 14, 16, 19, and 21.

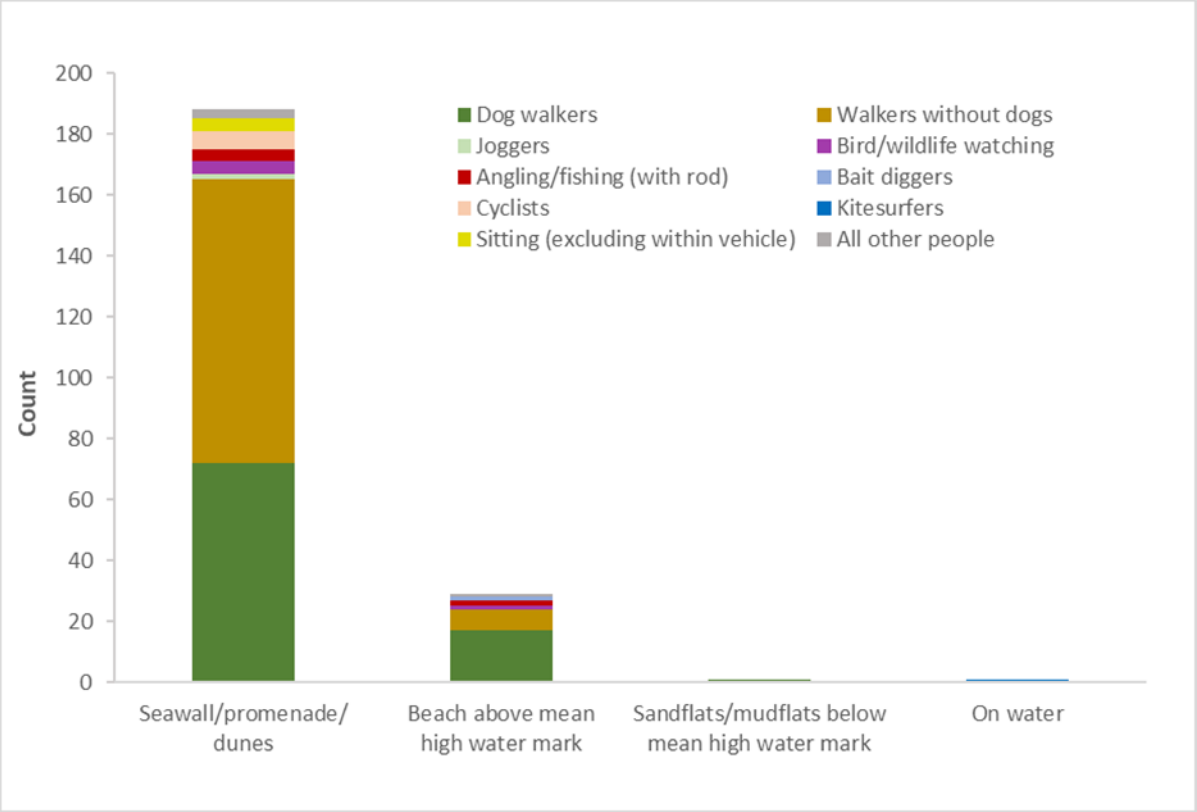


Figure 3: Cumulative January and February 2019 vantage point counts of main activities observed across all survey sectors, stratified by distance from mean high water mark (*count units as in Figure 1*).

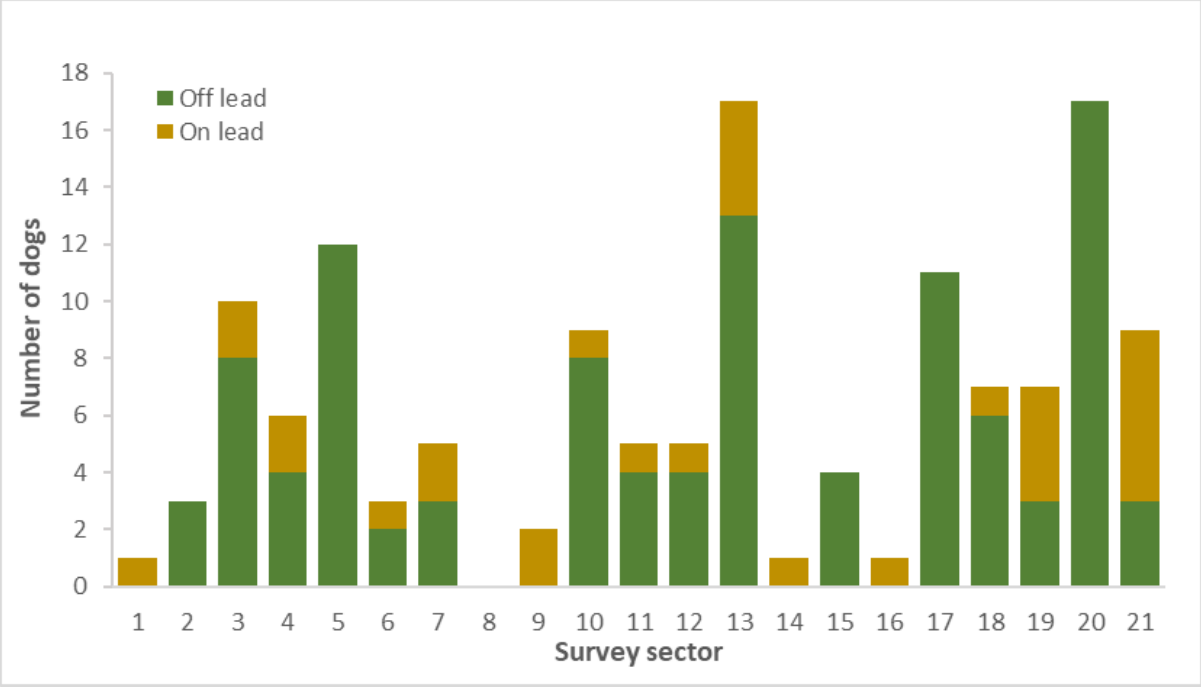


Figure 4: Cumulative January and February 2019 vantage point counts of the number of dogs on and off the lead observed within each survey sector during high tide bird surveys.

Direct counts of people: tally counts

3.30 Tally counts were maintained by the surveyors when on-site conducting interviews. These tallies reflected the number of people entering or leaving at the survey point.

3.31 Data are summarised in Table 5, which gives the total numbers of groups, people and dogs "entering" on each date. The days are directly comparable in terms of the amount of hours and times that the surveyor was recording.

3.32 The tally data varies between interview locations, with the largest number of groups (570) seen at Plum Pudding Island, and the smallest (20) at Kingsgate. These two localities also spanned the extremes of the individual people counts (totals of 971 and 47 recorded respectively), and dog counts (totals of 438 and 13 recorded, respectively). Long Rock also recorded a relatively higher number of people (627) and dogs (233) than the rest of the remaining interview locations.

3.33 The figures in Table 5 can be used to calculate ratios of people and dog numbers with respect to groups size at each of the interview locations. These are provided in Table 6.

Table 5: Tally data of groups, people, and dogs entering each of the interview locations. Weekend days are shaded grey (please note that each interview location was surveyed for 8 hours on a weekday and 8 hours on a weekend, although these hours were split over more than 1 day at some interview locations).

Date	Day	Total groups								Total people								Total dogs							
		1 - Long Rock	2 - Studd Hill	3 - St Marys, Reculver	4 - Plum Pudding Island	5 - Westgate Bay	6 - Botany Bay	7 - Kingsgate	8 - Cliffs End, Pegwell	1 - Long Rock	2 - Studd Hill	3 - St Marys, Reculver	4 - Plum Pudding Island	5 - Westgate Bay	6 - Botany Bay	7 - Kingsgate	8 - Cliffs End, Pegwell	1 - Long Rock	2 - Studd Hill	3 - St Marys, Reculver	4 - Plum Pudding Island	5 - Westgate Bay	6 - Botany Bay	7 - Kingsgate	8 - Cliffs End, Pegwell
01-Feb	Fri	84								102								78							
02-Feb	Sat		146	69							204	134							80	33					
03-Feb	Sun				400								757								268				
04-Feb	Mon			30								52								19					
05-Feb	Tues				170								214								170				
06-Feb	Weds			13								13								12					
08-Feb	Fri		86								109								88						
09-Feb	Sat	259				35	23			525				61	58			155				34	13		
10-Feb	Sun					11	5							24	6							10	13		
11-Feb	Mon							5								7								4	
12-Feb	Tues								38								54								21
14-Feb	Thurs					52								80								38			
15-Feb	Fri						30								65								37		
16-Feb	Sat							15								40								9	
17-Feb	Sun								62								111								15
Total		**343**	**232**	**112**	**570**	**98**	**58**	**20**	**100**	**627**	**313**	**199**	**971**	**165**	**129**	**47**	**165**	**233**	**168**	**64**	**438**	**82**	**63**	**13**	**36**

Table 6: Mean number of people and dogs per group across all survey dates.

Location	Mean no. of people per group	Mean no. of dogs per group
1 - Long Rock	1.83	0.68
2 - Studd Hill	1.35	0.72
3 - St Mary's, Reculver	1.78	0.57
4 - Plum Pudding Island	1.70	0.77
5 - Westgate Bay	1.68	0.84
6 - Botany Bay	2.22	1.09
7 - Kingsgate	2.35	0.65
8 - Cliffs End, Pegwell	1.65	0.36

3.34 Most of the interview locations had a similar mean number of people per group, ranging between 1.35 (Studd Hill) and 1.83 (Long Rock). Botany Bay and Kingsgate both had larger mean numbers of people per group however, with 2.22 and 2.35, respectively. The mean number of dogs per group varied between 0.36 (Cliffs End, Pegwell) and 1.09 (Botany Bay).

Visitor interviews

Overview

3.35 A total of 274 interviews were conducted, with the largest number carried out at Plum Pudding Island (22%) and Long Rock (17%) (Table 7). 55% of interviews across the eight interview locations were carried out at the weekend, although a larger number of weekday interviews were carried out at Plum Pudding Island, Botany Bay, and Cliffs End, Pegwell.

3.36 Virtually all (95%) of interviews were with those who had undertaken a day trip/short visit directly from home that day; 1% of interviews were with people staying away from home with friends/family and some 4% were on holiday or staying in a second home/mobile home.

3.37 The average interview duration was 9.4 minutes, with interviews ranging in length from 3.2 minutes to 29.3 minutes. In 132 interviews (49%) the sex of the interviewee was female; 137 of interviews (51%) were with men. Group size (i.e. the total number of people with the interviewee, including the interviewee), ranged from 1 to 7, although more than half (52%) of interviewees were visiting on their own (i.e. group size of 1), with a further third (34%) visiting as a pair.

Table 7: Number (and % rounded to nearest whole number) of interviews at each location, categorised by visit type (from Q1).

Visit type	1 - Long Rock	2 - Studd Hill	3 - St Mary's, Reculver	4 - Plum Pudding Island	5 - Westgate Bay	6 - Botany Bay	7 - Kingsgate	8 - Cliffs End, Pegwell	Total
Day trip/short visit, travelling directly from home that day	42 (15)	38 (14)	31 (11)	56 (20)	24 (9)	32 (12)	12 (4)	24 (9)	259 (95)
Day trip/short visit, staying away from home with friends/family	0 (0)	0 (0)	0 (0)	1 (1)	2 (1)	0 (0)	0 (0)	0 (0)	3 (1)
Staying away from home, e.g. second home, mobile home or on holiday	4 (2)	2 (1)	1 (1)	2 (1)	0 (0)	0 (0)	2 (1)	0 (0)	11 (4)
None of the above	0 (0)	1 (1)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	1 (1)
Total	**46 (17)**	**41 (15)**	**32 (12)**	**59 (21)**	**26 (9)**	**32 (12)**	**14 (5)**	**24 (9)**	**274 (100)**

Activities undertaken (Q2)

3.38 The most frequently recorded activity across all survey points was dog walking (68% of interviewees) (Figure 5), and this was the case at all survey locations (Table 8). Walking was the next most common activity (22% of interviewees). Westgate Bay and Cliffs End, Pegwell, held a lower proportion of walkers (1% of interviewees each) compared to the other locations, although it should be noted that fewer interviews were also carried out at these locations.

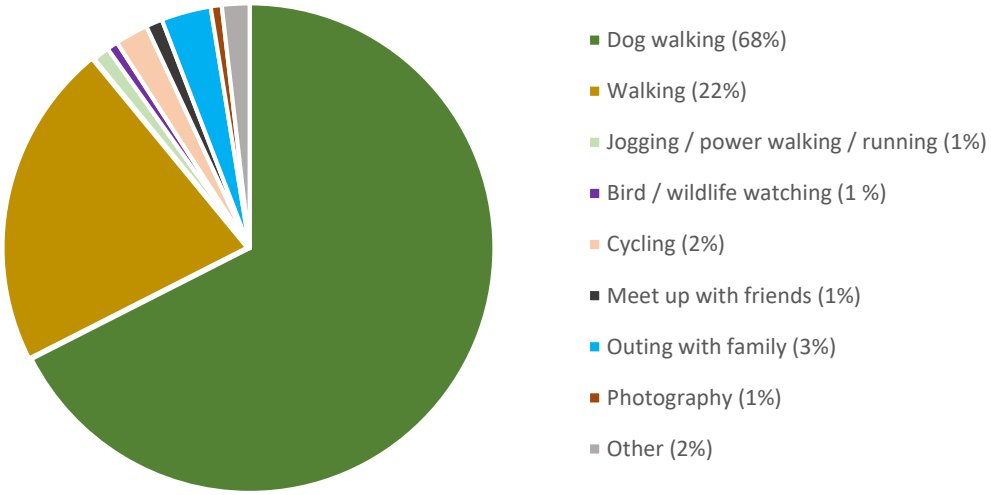


Figure 5: Activities undertaken (all 274 interviewees); from Q2.

3.39 Other activities were relatively infrequent but included family outings, jogging/power walking, cycling, meeting up with friends, photography and bird/wildlife watching. 'Other' activities (which did not fit with the standard categories on the questionnaire) accounted for 2% of interviewees. These comprised individual interviewees making a delivery to a nearby cafe, house-hunting in the area, undertaking the school run, enjoying the scenery, and bait digging.

Temporal visiting patterns, frequency of visit, time of year etc. (Q3-5)

3.40 Around a third (39%) of all interviewees were visiting daily (Table 9). Dog walkers were the group who visited the most frequently, with 54% visiting daily and a further 16% visiting most days. The majority of walkers visited once a month (22%), although a relatively large proportion (19%) also visited

Table 8: Number (and % rounded to nearest whole number) of interviewees by activity and survey point.

Activity	1 - Long Rock	2 - Studd Hill	3 - St Mary's, Reculver	4 - Plum Pudding Island	5 - Westgate Bay	6 - Botany Bay	7 - Kingsgate	8 - Cliffs End, Pegwell	Total
Dog walking	32 (12)	29 (11)	13 (5)	40 (15)	23 (9)	21 (8)	7 (3)	20 (8)	**185 (68)**
Walking	10 (4)	9 (4)	13 (5)	14 (6)	1 (1)	4 (2)	6 (3)	2 (1)	**59 (22)**
Jogging/power walking	0 (0)	1 (1)	0 (0)	2 (1)	0 (0)	0 (0)	0 (0)	0 (0)	**3 (2)**
Bird/wildlife watching	2 (1)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	**2 (1)**
Cycling	1 (1)	2 (1)	0 (0)	1 (1)	0 (0)	1 (1)	0 (0)	1 (1)	**6 (3)**
Meet up with friends	0 (0)	0 (0)	1 (1)	1 (1)	0 (0)	1 (1)	0 (0)	0 (0)	**3 (2)**
Outing with family	1 (1)	0 (0)	1 (1)	1 (1)	0 (0)	5 (2)	0 (0)	1 (1)	**9 (4)**
Photography	0 (0)	0 (0)	4 (2)	0 (0)	1 (1)	0 (0)	0 (0)	0 (0)	**5 (2)**
Other	0 (0)	0 (0)	0 (0)	0 (0)	1 (1)	0 (0)	1 (1)	0 (0)	**2 (1)**
Total	**46 (17)**	**41 (15)**	**32 (12)**	**59 (22)**	**26 (10)**	**32 (12)**	**14 (6)**	**24 (9)**	**274 (100)**

Table 9: Numbers (row %) of interviewees and frequency of visit (Q3) by activity. Grey shading reflects the highest two values in each row, with the darker shading highlighting the highest row value.

Activity	Daily (300-365 visits)	Most days (180-300 visits)	1 to 3 times a week (40-180 visits)	2 to 3 times per month (15-40 visits)	Once a month (6-15 visits)	Less than once a month (2-5 visits)	First visit	Other	Total
Dog walking	100 (54)	30 (16)	26 (14)	15 (8)	9 (5)	3 (2)	2 (1)	0 (0)	**185 (100)**
Walking	7 (12)	5 (8)	11 (19)	3 (5)	13 (22)	9 (15)	11 (19)	0 (0)	**59 (100)**
Jogging/power walking	1 (33)	0 (0)	2 (67)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	**3 (100)**
Bird/wildlife watching	0 (0)	2 (100)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	**2 (100)**
Cycling	0 (0)	0 (0)	0 (0)	4 (67)	0 (0)	1 (17)	1 (17)	0 (0)	**6 (100)**
Meet up with friends	0 (0)	0 (0)	1 (33)	0 (0)	1 (33)	1 (33)	0 (0)	0 (0)	**3 (100)**
Outing with family	0 (0)	1 (11)	1 (11)	4 (44)	0 (0)	2 (22)	1 (11)	0 (0)	**9 (100)**
Photography	0 (0)	1 (20)	1 (20)	0 (0)	0 (0)	1 (20)	1 (20)	1 (20)	**5 (100)**
Other	0 (0)	1 (50)	1 (50)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	**2 (100)**
Total	**108 (39)**	**40 (15)**	**43 (16)**	**26 (9)**	**23 (8)**	**17 (6)**	**16 (6)**	**1 (0)**	**274 (100)**

more frequently (1-3 times a week), whilst an additional 19% were making their first visit to the location. Cyclists and those on an outing with the family tended to visit less regularly (2-3 times a month).

3.41 The majority of visits were short, with most (66%) spending less than an hour on the site (Table 10). Nevertheless, approximately a fifth of interviewees spent 1-2 hours on site (22%).

Table 10: Numbers (row %) of interviewees and visit duration (Q4). Grey shading reflects the highest two values in the row, with darker shading highlighting the largest row value.

Activity	Less than 30 minutes	Between 30 minutes and 1 hour	1-2 hours	2-3 hours	3-4 hours	4 hours +	Total
Dog walking	27 (15)	106 (57)	38 (21)	11 (6)	2 (1)	1 (1)	**185 (100)**
Walking	7 (12)	23 (39)	15 (25)	5 (8)	7 (12)	2 (3)	**59 (100)**
Jogging/power walking	0 (0)	3 (100)	0 (0)	0 (0)	0 (0)	0 (0)	**3 (100)**
Bird/wildlife watching	0 (0)	0 (0)	0 (0)	0 (0)	1 (50)	1 (50)	**2 (100)**
Cycling	1 (17)	0 (0)	2 (33)	2 (33)	1 (17)	0 (0)	**6 (100)**
Meet up with friends	0 (0)	1 (33)	2 (67)	0 (0)	0 (0)	0 (0)	**3 (100)**
Outing with family	0 (0)	7 (78)	1 (11)	0 (0)	1 (11)	0 (0)	**9 (100)**
Photography	0 (0)	0 (0)	0 (0)	2 (100)	0 (0)	0 (0)	**2 (100)**
Other	2 (40)	2 (40)	1 (20)	0 (0)	0 (0)	0 (0)	**5 (100)**
Total	**37 (14)**	**142 (52)**	**59 (22)**	**20 (7)**	**12 (4)**	**4 (1)**	**274 (100)**

3.42 Most interviewees (72%) indicated that they visited equally all year round (Table 11). Of those interviewees who identified particular seasons when they tended to visit, the summer months were more popular (13%) across all activities. Those dog walkers who did had a seasonal preference preferred to visit equally in the summer and winter months (10% each), with spring and autumn being less attractive (5% and 4% respectively).

Table 11: Numbers (% row) of interviewees and time of year (Q5) that they tend to visit by activity. Grey shading reflects the highest two values in each row, with the darker shading highlighting the largest row value. Interviewees could give multiple responses and the percentages, based on the row totals, can therefore total >100.

Activity	Spring (Mar-May)	Summer (Jun-Aug)	Autumn (Sept-Nov)	Winter (Dec-Feb)	Equally all year	First visit	Don't know	Total
Dog walking	9 (5)	18 (10)	8 (4)	18 (10)	150 (81)	2 (1)	0 (0)	**185 (100)**
Walking	2 (3)	11 (19)	2 (3)	2 (3)	34 (58)	11 (19)	0 (0)	**59 (100)**
Jogging/power walking	0 (0)	0 (0)	0 (0)	0 (0)	3 (100)	0 (0)	0 (0)	**3 (100)**
Bird/wildlife watching	1 (50)	0 (0)	1 (50)	0 (0)	1 (50)	0 (0)	0 (0)	**2 (100)**
Cycling	1 (17)	3 (50)	1 (17)	1 (17)	1 (17)	1 (17)	0 (0)	**6 (100)**
Meet up with friends	0 (0)	2 (67)	0 (0)	0 (0)	1 (33)	0 (0)	0 (0)	**3 (100)**
Outing with family	0 (0)	2 (22)	0 (0)	0 (0)	6 (67)	1 (11)	0 (0)	**9 (100)**
Photography	1 (50)	0 (0)	1 (50)	1 (50)	0 (0)	0 (0)	0 (0)	**2 (100)**
Other	1 (20)	0 (0)	1 (20)	1 (20)	1 (20)	2 (40)	1 (20)	**5 (100)**
Total	**15 (5)**	**36 (13)**	**14 (5)**	**23 (8)**	**197 (72)**	**17 (6)**	**1 (1)**	**274 (100)**

Mode of transport (Q6)

3.43 Overall, more than half (54%) of interviewees had travelled by car, with most of the remainder (46%) arriving on foot (Table 12). Four interviewees (1%) arrived by bicycle, two by public transport (1%), and two by other means (1%; mobility scoter and motorhome, respectively). Comparing between survey points (Figure 6), car and on foot where the commonest recorded forms of transport at all locations. Plum Pudding Island had the largest number of interviewees that arrived by car, although the largest proportion relative to other transport options recorded at an individual locality was seen at the car park survey location of St Mary's, Reculver.

Table 12: Number (row %) of interviewees and mode of transport (Q6) by activity. Grey shading reflects the highest two values in each row, with the darker shading highlighting the largest row value. Interviewees could give multiple responses and the percentages, based on the row totals, can therefore total >100.

Activity	Car/van	On foot	Bicycle	Train	Bus	Other	Total
Dog walking	93 (50)	91 (49)	0 (0)	0 (0)	0 (0)	2 (1)	**185 (100)**
Walking	35 (59)	26 (44)	1 (2)	1 (2)	2 (3)	0 (0)	**59 (100)**
Jogging/power walking	1 (33)	2 (67)	0 (0)	0 (0)	0 (0)	0 (0)	**3 (100)**
Bird/wildlife watching	1 (50)	1 (50)	0 (0)	0 (0)	0 (0)	0 (0)	**2 (100)**
Cycling	3 (50)	0 (0)	3 (50)	0 (0)	0 (0)	0 (0)	**6 (100)**
Meet up with friends	3 (100)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	**3 (100)**
Outing with family	6 (67)	3 (33)	0 (0)	0 (0)	0 (0)	0 (0)	**9 (100)**
Photography	1 (50)	1 (50)	0 (0)	0 (0)	0 (0)	0 (0)	**2 (100)**
Other	4 (80)	1 (20)	0 (0)	0 (0)	0 (0)	0 (0)	**5 (100)**
Total	**147 (54)**	**125 (46)**	**4 (1)**	**1 (1)**	**2 (1)**	**2 (1)**	**274 (100)**

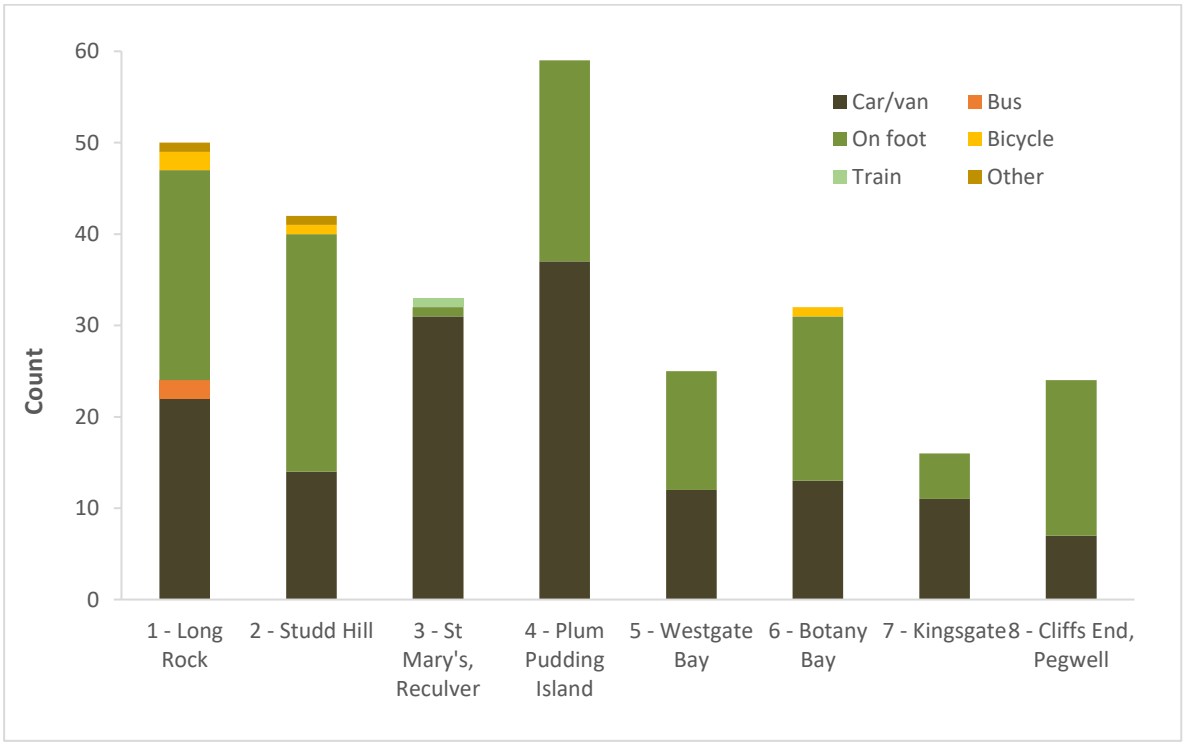


Figure 6: Number of interviewees by mode of transport (Q6) and survey location.

Reasons for site choice (Q7)

3.44 Reasons for site choice are summarised in Figure 7. Interviewees were asked why they chose to visit the specific location where interviewed, rather than another local site, with answers categorised by the surveyor, using pre-determined categories which were not shown to the interviewee.

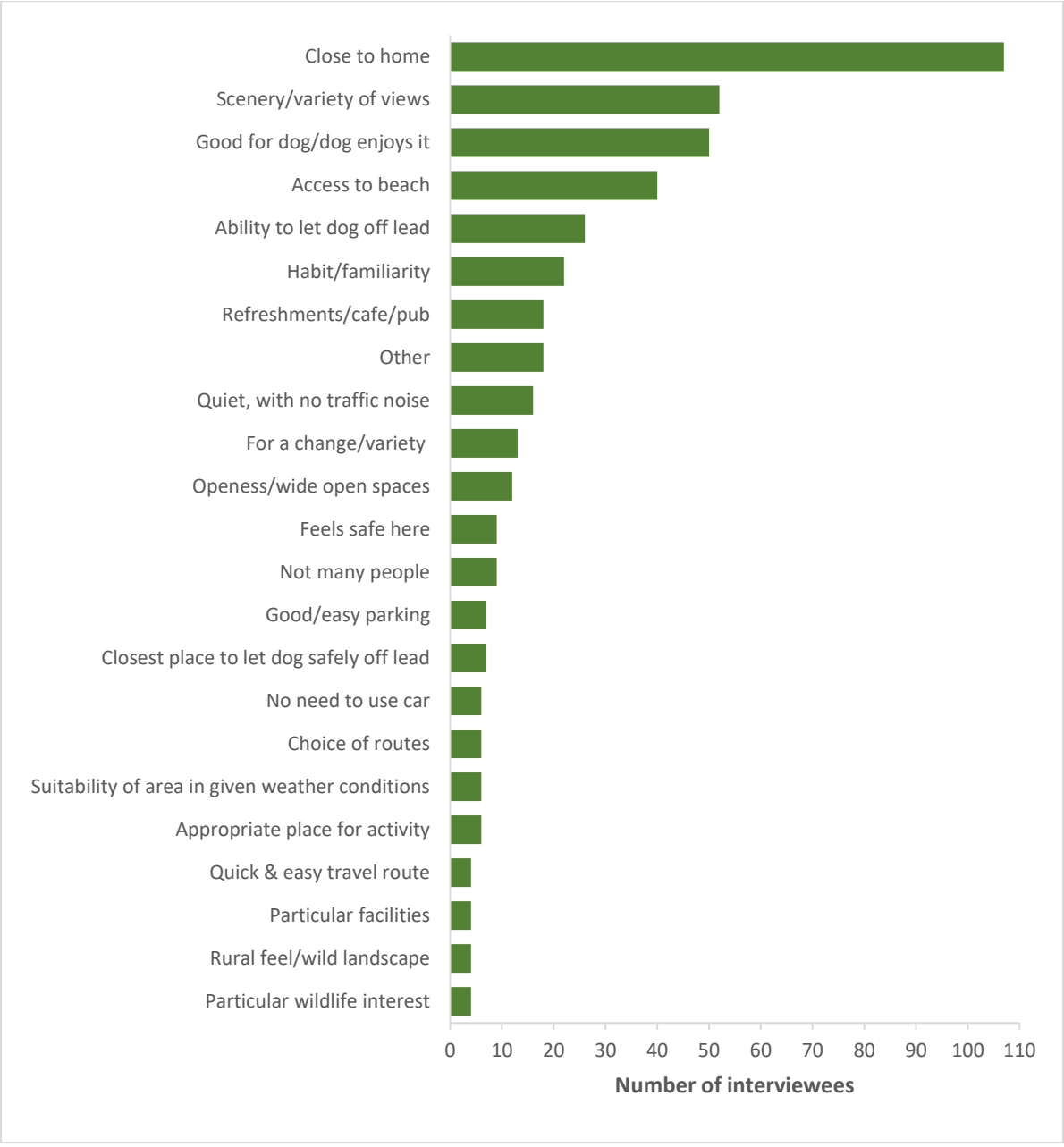


Figure 7: Reasons for site choice (Q7). Note that interviewees could give multiple responses.

3.45 Overall closeness of the location to home was clearly the most commonly given reason, cited by 39% of interviewees. Scenery and being good for the dog were also important reasons (19% and 18% of interviewees, respectively),

and an approximate seventh (15%) of responses cited access to the beach as being important also. The relative importance of being able to let the dog off the lead (9% of interviewees) and the low frequency with which the importance of the site's wildlife interest were cited (1% of interviewees) are also of note.

3.46 18 interviewees (7%) gave other reasons for their choice, including "peaceful"; "on route to elsewhere/passing through/way to work"; "recommended by others"; "likes a rough sea"; "safe, off-road, route"; "good level path/easy path for the buggy", and; "favourite walk".

Use of other sites (Q11-14)

3.47 It is to be expected that people will tend to visit a range of greenspace sites for recreation. A sixth (17%) of interviewees stated that all their visits (for the activity they were undertaking when interviewed) took place at the interview location (Table 13). A further third (33%) of interviewees said that 75% or more of their weekly visits were to the survey locations. Therefore, for half (50%) of interviewees, 75% or more of their visits were to the location where interviewed, suggesting a strong degree of site faithfulness among visitors.

Table 13: Number (row %) of interviewees and proportion of weekly visits at the interview locations (Q11) by activity. Grey shading reflects the highest value in each row, with the darker shading highlighting the largest row value.

Activity	All take place here	75% or more	50-74%	25-49%	less than 25%	Not sure/don't know/first visit/no response	Total
Dog walking	35 (19)	76 (41)	21 (11)	14 (8)	29 (16)	10 (5)	**185 (100)**
Walking	7 (12)	12 (20)	2 (3)	7 (12)	14 (24)	17 (29)	**59 (100)**
Jogging/power walking	2 (67)	0 (0)	0 (0)	0 (0)	1 (33)	0 (0)	**3 (100)**
Bird/wildlife watching	1 (50)	0 (0)	1 (50)	0 (0)	0 (0)	0 (0)	**2 (100)**
Cycling	0 (0)	1 (17)	0 (0)	1 (17)	2 (33)	2 (33)	**6 (100)**
Meet up with friends	0 (0)	0 (0)	1 (33)	1 (33)	0 (0)	1 (33)	**3 (100)**
Outing with family	1 (11)	2 (22)	3 (33)	1 (11)	1 (11)	1 (11)	**9 (100)**
Photography	0 (0)	0 (0)	1 (50)	1 (50)	0 (0)	0 (0)	**2 (100)**
Other	1 (20)	0 (0)	1 (20)	0 (0)	1 (20)	2 (40)	**5 (100)**
Total	**47 (17)**	**91 (33)**	**30 (11)**	**25 (9)**	**48 (18)**	**33 (12)**	**274 (100)**

3.48 Nevertheless, a wide variety of other sites were regularly visited by interviewees (Figure 8), with Minnis Bay, Reculver, Ramsgate, Blean Woods, and Margate being the most common responses across the eight interview locations (Table 14). It is important to note that several of the localities identified by interviewees are either discrete areas within the wider Thanet conurbations or synonyms for other localities, so some duplication may be present in the combined list of alternative sites.

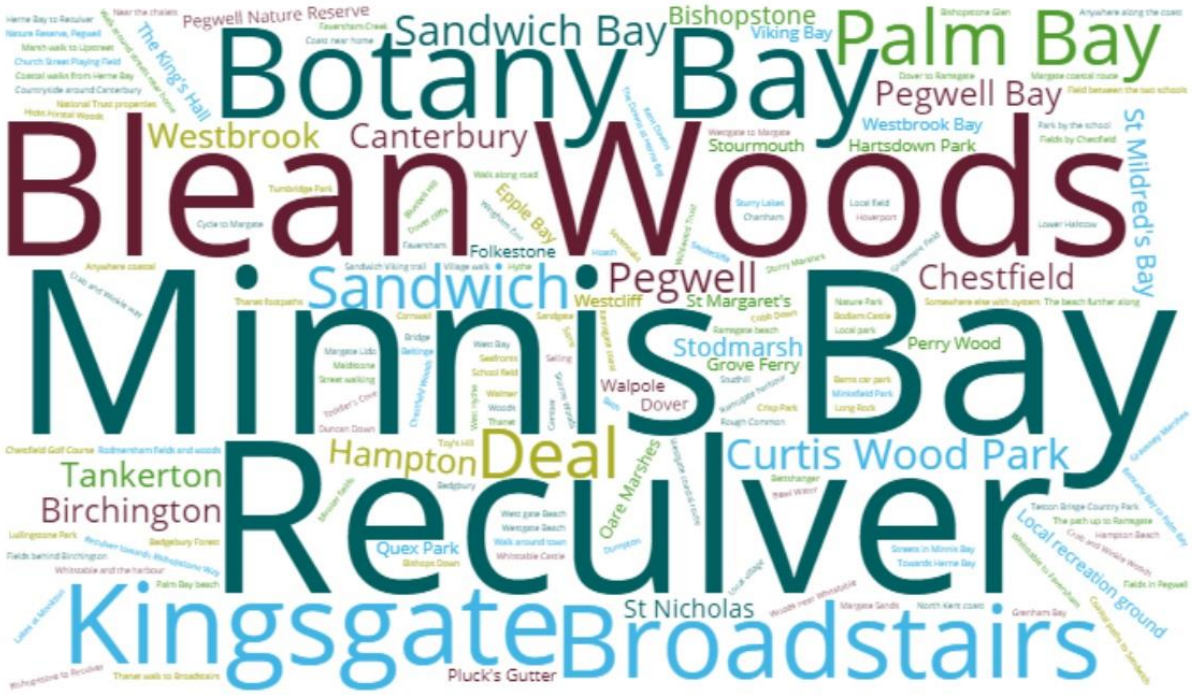


Figure 8: Word cloud detailing other sites given by interviewees (from Q13 & 14). Graphic created using the Wordclouds app.

Table 14: Other sites named by three or more interviewees (number of respondents in parentheses).

Site name			
Minnis Bay (32)	Clowes Wood (13)	Pegwell (6)	"Nature Reserve" (4)
Reculver (29)	Kingsgate (13)	Sandwich Bay (6)	Pegwell Bay (4)
Ramsgate (27)	Palm Bay (13)	The Downs (6)	Tankerton (4)
Blean Woods (26)	Broadstairs (12)	Canterbury (5)	Victory Woods (4)
Margate (25)	Seasalter (11)	Curtis Wood Park (5)	Westbrook (4)
Whitstable (20)	Joss Bay (10)	East Blean Woods (5)	Dover (3)
Botany Bay (16)	Northdown Park (9)	Hampton (5)	St Mildred's Bay (3)
Westgate (16)	Deal (8)	Birchington (4)	St Nicholas (3)
Herne Bay (15)	Sandwich (8)	Bishopstone (4)	St Nicholas Marshes (3)

Visitor origins (Q16)

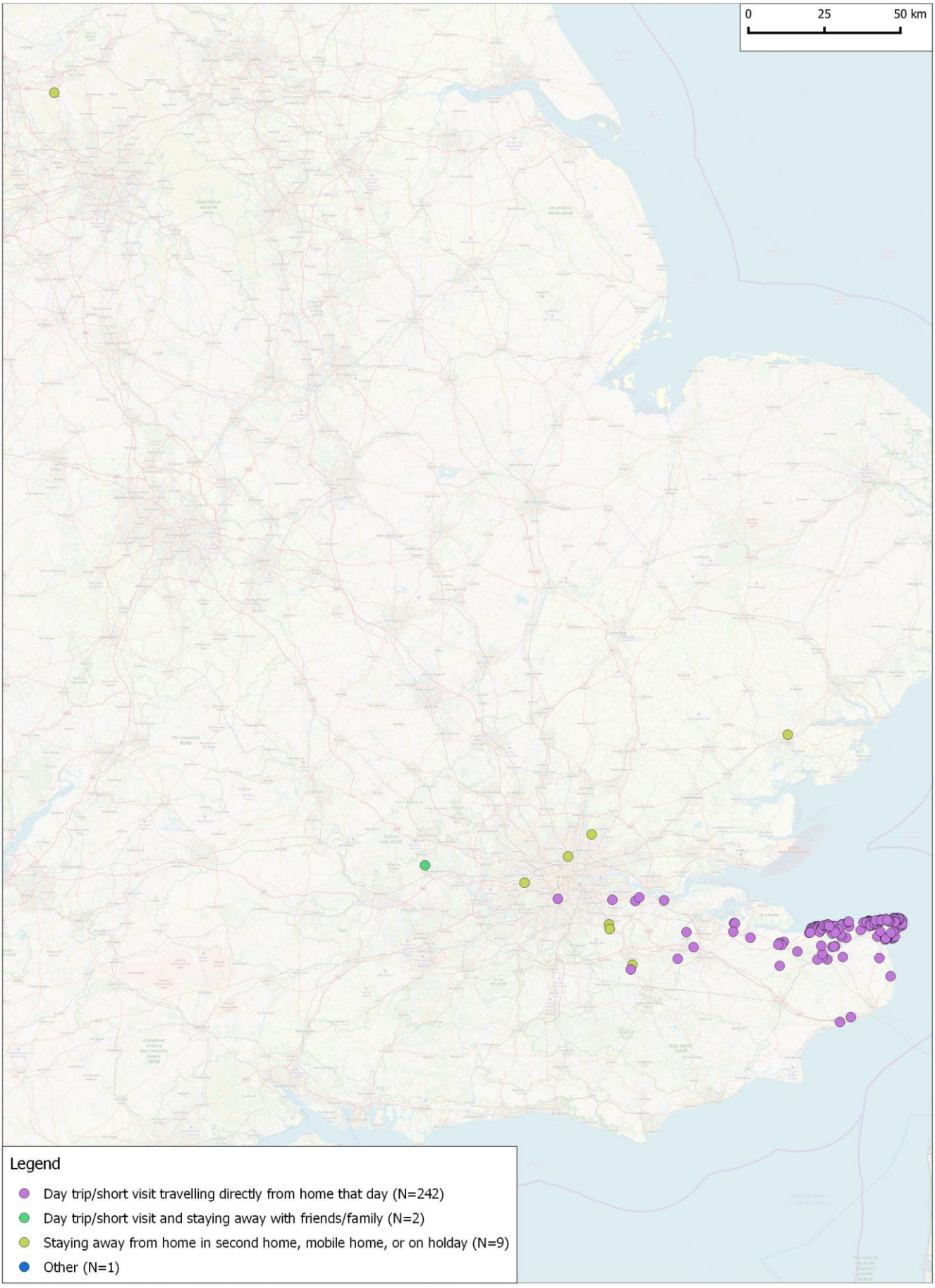
3.49 A total of 254 interviewee postcodes could be accurately mapped, with the full postcode given in the interview matching the standard national postcode database. An additional postcode was accurately mapped from the Channel Islands, but it was excluded from further analysis. A total of 19 (7%) of interviews were therefore not assigned to a home postcode.

3.50 Postcode data are presented in Maps 10-14, with Map 10 showing all visitor postcodes. Maps 11-14 show a smaller geographic area than Map 10 (and as such exclude 18 interviewee postcodes which lie outside the area shown). In Map 11 the 75th percentile minimum convex polygons of straight-line home postcode visitor distance for each of the eight interview survey locations have been individually coloured. These show the area in which the closest three-quarters of visitors originated and provide a good way to summarise where most visitors to each survey point come from. In Map 12 the colours show the main activity undertaken by interviewees from each of the depicted home postcodes. The colours in Map 13 display the frequency of visit, and in Map 14 the shading reflects the percentage of weekly visits made across all interview survey locations (for the given activity).

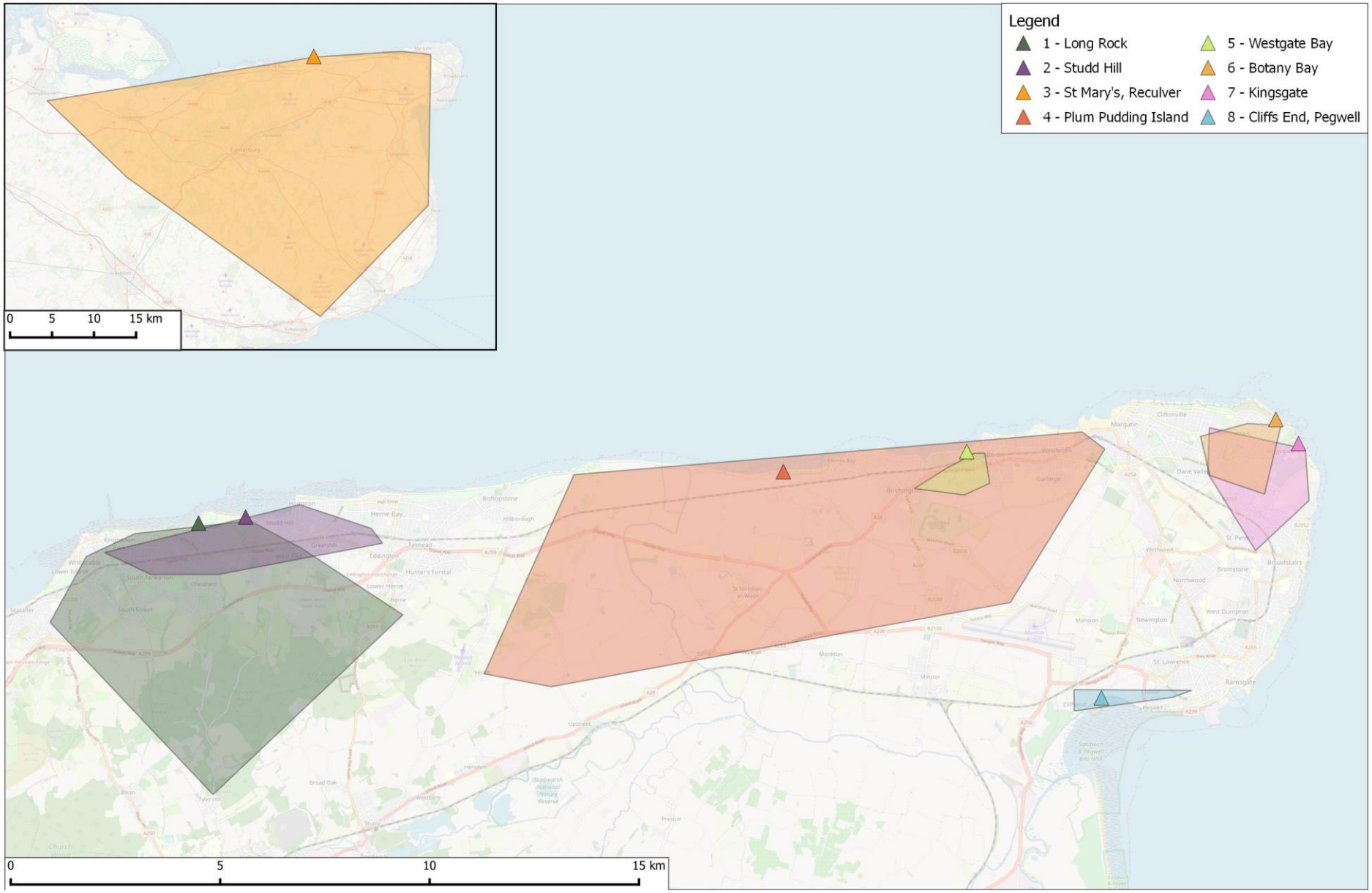
3.51 It can be seen that the distribution of postcodes largely reflects interviewees living in Thanet and the neighbouring North Kent coast, including areas within the Canterbury District boundary (see Map 10). Postcodes are concentrated around three key areas: Whitstable to Hampton; the Minnis Bay, Birchington, and Westgate area, and; the Margate conurbation (including Northdown and Kingsgate). There are also a smaller number of postcodes clustered within Canterbury and the Stour Valley, Faversham, and the Medway towns.

3.52 The 75th percentile envelope of straight-line travel distance at Westgate Bay (location 5), Botany Bay (interview location 6), Kingsgate (location 7), and Cliffs End, Pegwell (location 8) all indicate that the majority of interviewees at those sites were of local origin (see Map 11). Studd Hill (location 2) exerted more of a draw for several kilometres to the east and west, whereas Long Rock (location 1) and Plum Pudding Island (location 4) attracted people from up to 10km away. St Mary's, Reculver (location 3) clearly exerts an increased attraction to visitors, with the 75th percentile for that locality being approximately 30km. This may be due to the presence of Reculver Towers and the associated Country Park, both potentially attractive to visitors/tourists elsewhere in Kent, and the presence of a large and easily accessible car park at the site.

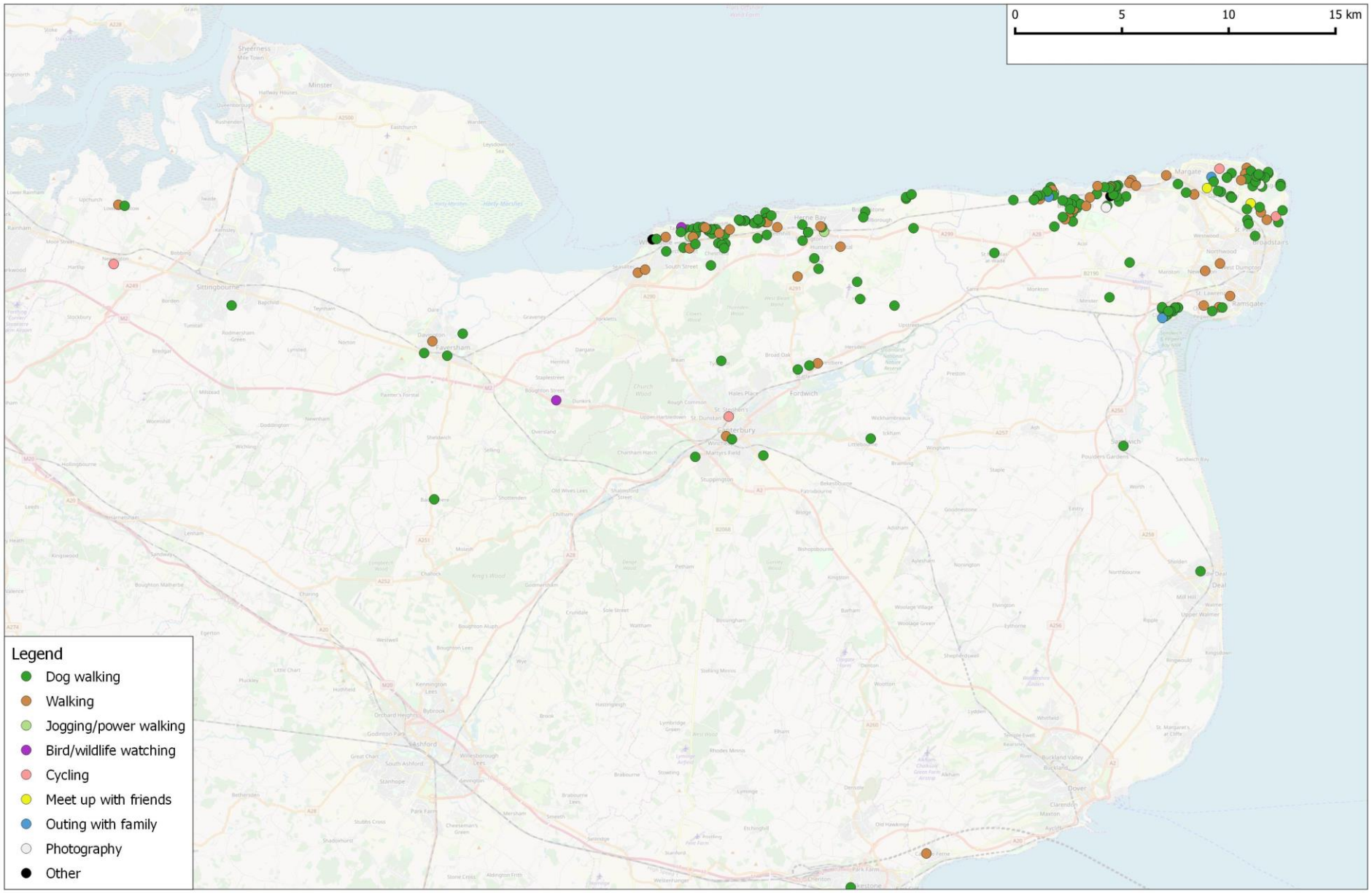
Map 10: Home postcodes (all).



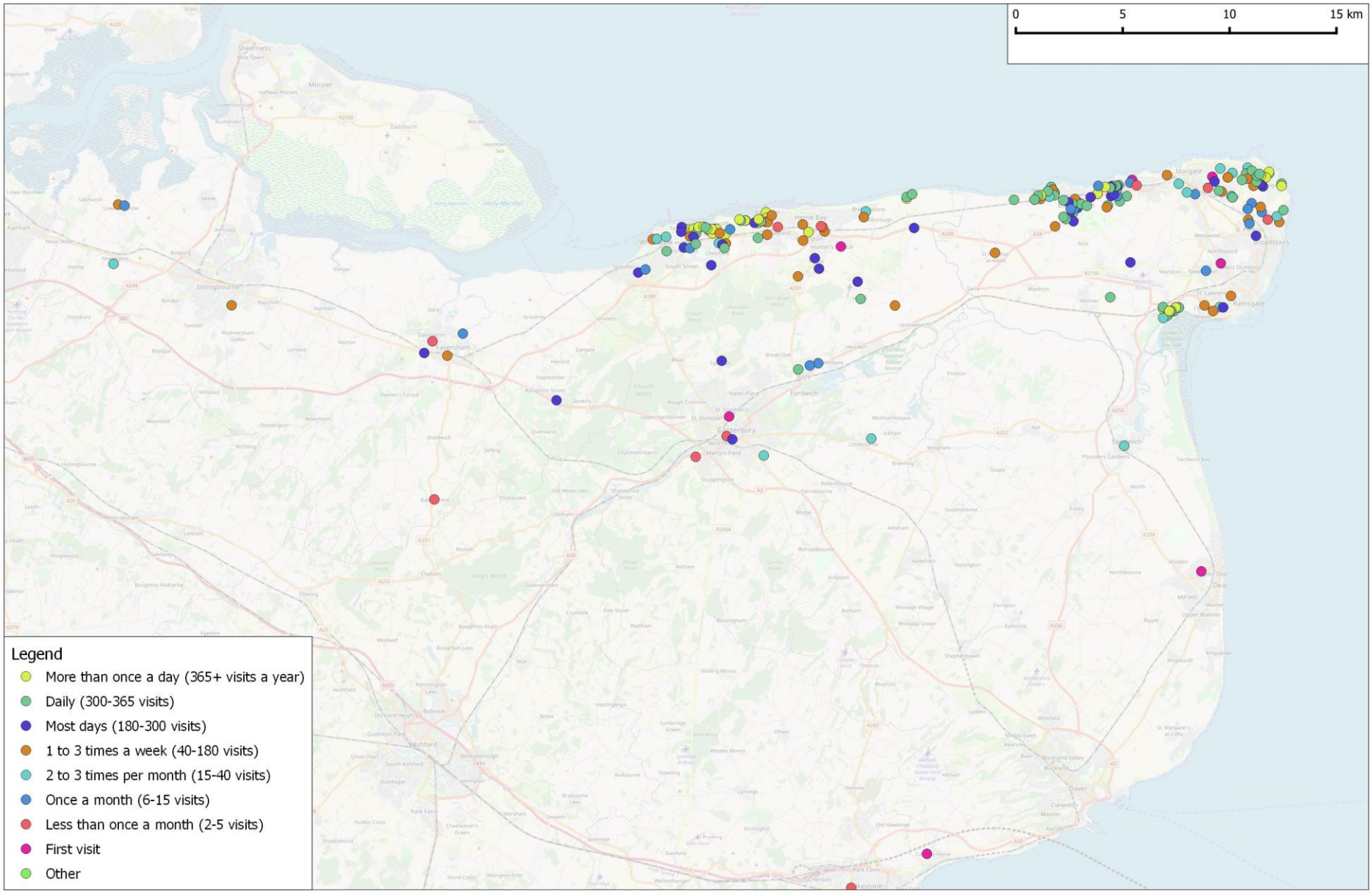
Map 11: Interview survey locations and 75th percentile Minimum Convex Polygons of straight-line travel distances from interviewee postcode to each. Information for interview location 3 - St Mary's, Reculver, is provided as a separate map.



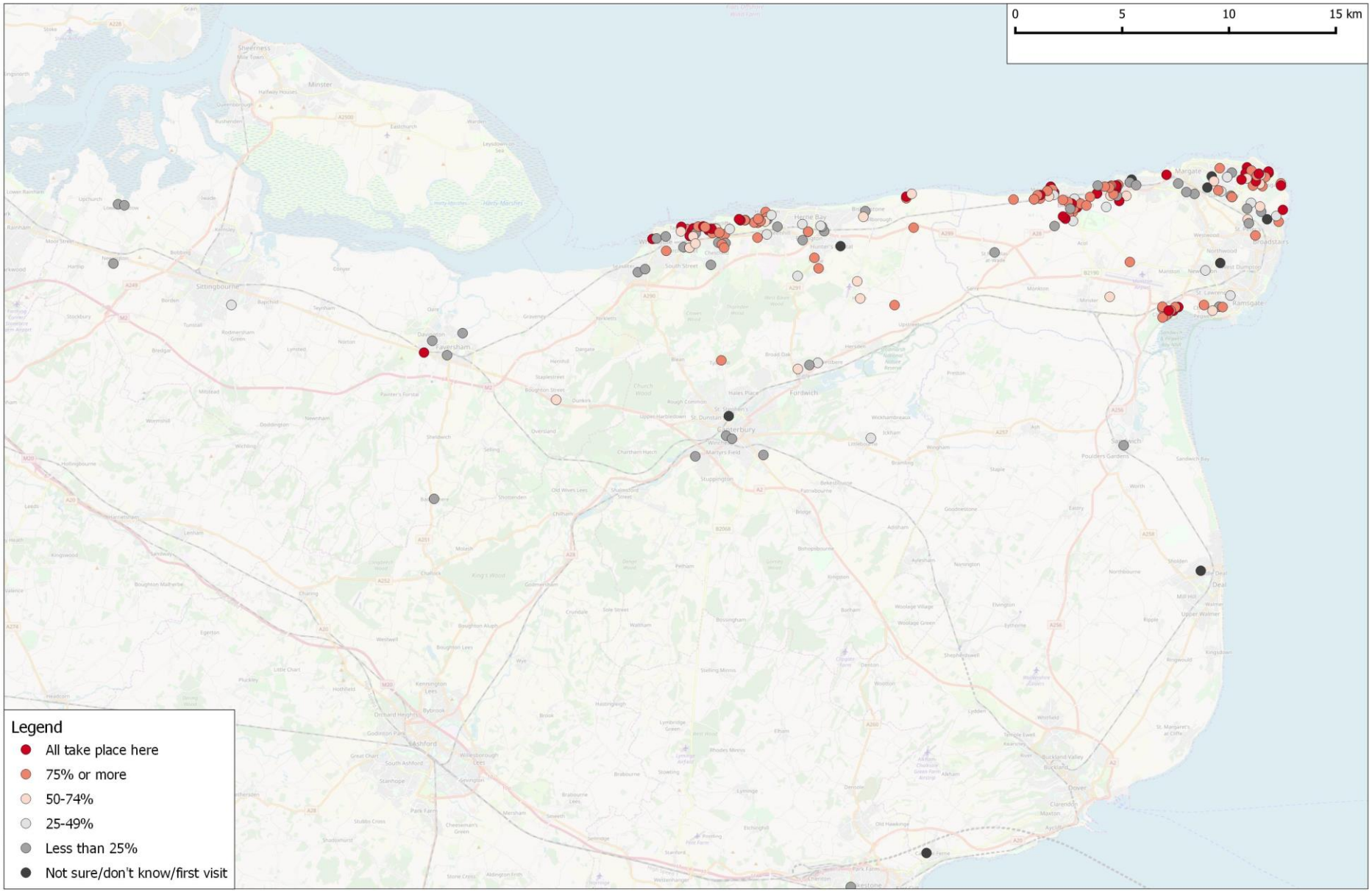
Map 12: Home postcodes by activity (18 postcodes outside of map extent).



Map 13: Home postcodes by frequency of visit (18 postcodes outside of map extent).



Map 14: Home postcodes and percentage of visits across all interview locations (18 postcodes outside of map extent).



3.53 Activities were dominated by dog walking and walking, with the majority of postcodes both within proximity to the interview locations and those from further afield falling into these categories (see Map 12). There is some indication that both cyclists and bird/wildlife watchers are more likely to travel further to access the interview locations, with individuals visiting from Canterbury and the Medway towns, although this is based on a relatively small number of interviewees.

3.54 As is perhaps expected, the majority of frequent repeat visitors to the interview survey locations, and those that use the interview location as the main site for the relevant activity, originate from postcodes in relative proximity to them (see Maps 13 and 14). Nevertheless, several individuals indicated that they visited their respective interview locations very frequently from both Canterbury and Faversham, with one dog walker from Faversham indicating that they walk their dog at the interview location on an almost daily basis.

3.55 The straight-line distance ('as the crow-flies') from each interviewee's home postcode to the relevant interview location, in addition to the pooled distances for all interviewees across all eight interview locations, was calculated, and the data are summarised in Table 15. It can be seen that across all the data (254 interviewees) the mean distance was 10.4km and the median was 1.9km, i.e. 50% of all interviewees had come from a radius of <1.9km around the survey points. The mean is so much higher than the median as there are a few large values (up to 354.1km) that skew the data. The third quartile (75th percentile) was 5.4km; 75% of all interviewees lived within this distance of the survey points.

3.56 These statistics varied considerably between the interviewees at each of the eight interview locations (see Table 15). Visitors to St Mary's Island, Reculver, travelled a mean distance of 24.0km, with a median distance of 10.4km. Long Rock and Plum Pudding Island also attracted visitors from further afield (mean distances of 18.3 and 11.5km, and median distances of 1.6 and 3.0km, respectively). Nevertheless, the majority of interviewees at those two locations (approximately 75%) had travelled from postcodes within 7.5km and 8.7km of the site, respectively, as evidenced by the 75th per centile values in Table 15. Interviewees at all of the other interview locations were mostly of more local origin, with the majority visiting from within 3.7km of each locality.

3.57 Dog walkers were more likely to have travelled from nearby postcodes, with walkers visiting from further afield (see Table 16). This disparity is reflected in

Table 15: Summary statistics for the straight-line distances between the home postcode of each interviewee and their respective interview location. Shading and dark lines separate different types of grouping. N is the sample size (number of valid postcodes) and Q3 is the 75th percentile.

Location	N	Distance (km)				
		Mean (+ 1SE)	Min	Median	Q3	Maximum
All interviewees across the 8 locations with valid postcode	254	10.43 (+1.86)	0.07	1.89	5.37	354.10
1 - Long Rock	44	18.29 (+8.44)	0.36	1.58	7.54	354.10
2 - Studd Hill	37	6.44 (+2.86)	0.07	1.37	3.67	97.13
3 - St Mary's, Reculver	28	23.95 (+4.79)	0.12	10.44	35.42	93.77
4 - Plum Pudding Island	58	11.47 (+3.19)	0.21	3.02	8.70	142.00
5 - Westgate Bay	22	1.23 (+0.29)	0.15	0.64	1.77	5.30
6 - Botany Bay	28	1.30 (+0.16)	0.20	0.99	2.07	2.56
7 - Kingsgate	13	9.17 (+7.09)	0.21	1.86	3.33	94.02
8 - Cliffs End, Pegwell	24	3.66 (+2.10)	0.15	0.49	2.28	49.55

Table 16: Summary statistics for the straight-line distances between the home postcode of interviewees engaged in the two most commonly recorded activities and their respective interview location. Shading and dark lines separate different types of grouping. N is the sample size (number of valid postcodes) and Q3 is the 75th percentile.

Location	Activity	N	Distance (km)				
			Mean (+ 1SE)	Min	Median	Q3	Maximum
1 - Long Rock	Dog walking	30	3.66 (+1.18)	0.36	1.26	2.66	31.66
2 - Studd Hill	Dog walking	26	2.17 (+0.62)	0.07	1.13	1.93	13.89
3 - St Mary's, Reculver	Dog walking	12	18.58 (+6.04)	0.12	9.47	30.6	71.84
4 - Plum Pudding Island	Dog walking	39	8.31 (+2.75)	0.21	2.84	7.54	81.93
5 - Westgate Bay	Dog walking	19	1.14 (+0.32)	0.16	0.64	2.06	5.30
6 - Botany Bay	Dog walking	18	1.20 (+0.21)	0.20	0.81	2.07	2.56
7 - Kingsgate	Dog walking	7	1.50 (+0.37)	0.21	1.44	2.28	2.75
8 - Cliffs End, Pegwell	Dog walking	20	1.64 (+0.79)	0.15	0.37	1.43	15.43
1 - Long Rock	Walking	10	59.6 (+34.6)	0.49	4.08	80.21	354.10
2 - Studd Hill	Walking	8	21.1 (+12.21)	1.38	3.67	38.74	97.13
3 - St Mary's, Reculver	Walking	11	24.6 (+7.42)	4.09	10.34	52.29	67.72
4 - Plum Pudding Island	Walking	14	18.67 (+9.98)	1.25	3.76	14.65	142.00
5 - Westgate Bay	Walking	1	0.15 (+0.00)	0.15	0.15	na	0.15
6 - Botany Bay	Walking	4	1.29 (+0.27)	0.88	1.11	1.87	2.07
7 - Kingsgate	Walking	5	21.57 (+18.14)	1.63	3.91	50.24	94.02
8 - Cliffs End, Pegwell	Walking	2	2.47 (+0.15)	2.32	2.47	na	2.61

both the mean and 75th percentile values for each of the eight interview locations, although it should be noted that fewer walkers were interviewed at each locality.

3.58 Interviewees who visited at least once a week were more likely to originate from closer postcodes than those who visited less frequently (see Table 17), with a 75th percentile range of 0.7 to 17.1km and 2.1 to 70.3km, respectively.

Table 17: Summary statistics for the straight-line distances between the home postcode of interviewees at their respective interview locations and the regularity of their visits to the locality. Shading and dark lines separate different types of grouping. N is the sample size (number of interviewees) and Q3 is the 75th percentile.

Location	Visit regularity	N	Distance (km)				
			Mean (+ 1SE)	Min	Median	Q3	Maximum
1 - Long Rock	Visiting at least once a week	33	2.83 (+0.67)	0.36	1.20	2.58	14.82
2 - Studd Hill	Visiting at least once a week	28	1.79 (+0.39)	0.07	1.24	2.19	10.26
3 - St Mary's, Reculver	Visiting at least once a week	6	9.51 (+4.8)	0.12	5.14	17.14	32.01
4 - Plum Pudding Island	Visiting at least once a week	46	7.22 (+3.13)	0.21	2.75	5.00	142.00
5 - Westgate Bay	Visiting at least once a week	20	1.07 (+0.28)	0.15	0.58	1.41	5.30
6 - Botany Bay	Visiting at least once a week	21	1.16 (+0.18)	0.20	0.85	1.96	2.56
7 - Kingsgate	Visiting at least once a week	6	1.15 (+0.39)	0.21	1.11	1.76	2.75
8 - Cliffs End, Pegwell	Visiting at least once a week	19	0.77 (+0.22)	0.15	0.37	0.69	3.18
1 - Long Rock	Visiting < than once a week	10	62.72 (+33.69)	1.01	28.92	70.25	354.10
2 - Studd Hill	Visiting < than once a week	7	11.67 (+6.36)	1.37	3.47	13.89	48.28
3 - St Mary's, Reculver	Visiting < than once a week	14	19.09 (+5.28)	2.25	9.94	28.91	67.72
4 - Plum Pudding Island	Visiting < than once a week	11	29.36 (+9)	2.87	16.79	6.50	81.93
5 - Westgate Bay	Visiting < than once a week	2	2.87 (+0.82)	2.06	2.87	3.28	3.69
6 - Botany Bay	Visiting < than once a week	6	1.61 (+0.23)	0.88	1.80	2.09	2.15
7 - Kingsgate	Visiting < than once a week	6	3.05 (+0.76)	1.63	2.22	4.55	6.46
8 - Cliffs End, Pegwell	Visiting < than once a week	5	14.66 (+9.09)	0.72	5.29	32.49	49.55

3.59 Those interviewees who travelled to the interview location on foot were more likely to have travelled from a closer postcode than those who have travelled by car, with 75th percentile ranges of 0.5km to 2.8km (excluding St Mary's, Reculver) and 2.4km to 32.0km, respectively (see Table 18). The single on foot response for St Mary's, Reculver, as well as several of the maximum on foot distances recorded from the other seven locations, can be excluded, as these refer to holidaymakers staying nearby who gave their home postcodes to the interviewer.

Table 18: Summary statistics for the straight-line distances between the home postcode of interviewees at their respective interview locations and their mode of transport to the locality. Shading and dark lines separate different types of grouping. N is the sample size (number of interviewees) and Q3 is the 75th percentile.

Location	Mode of transport	N	Distance (km)				
			Mean (+ 1SE)	Min	Median	Q3	Maximum
1 - Long Rock	On foot	21	25.48 (+17.26)	0.36	1.01	1.29	354.1
2 - Studd Hill	On foot	23	5.35 (+4.18)	0.07	1.06	1.47	97.13
3 - St Mary's, Reculver	On foot	1	67.72 (+0.00)	67.72	67.72	67.72	67.72
4 - Plum Pudding Island	On foot	21	5.87 (+3.82)	0.21	1.79	2.81	81.93
5 - Westgate Bay	On foot	11	0.47 (+0.10)	0.15	0.43	0.64	1.04
6 - Botany Bay	On foot	15	0.76 (+0.15)	0.20	0.69	0.88	2.56
7 - Kingsgate	On foot	2	0.8 (+0.59)	0.21	0.80	1.09	1.38
8 - Cliffs End, Pegwell	On foot	12	0.36 (+0.07)	0.15	0.28	0.54	0.72
1 - Long Rock	By car	21	11.4 (+4.12)	1.01	2.61	12.49	67.35
2 - Studd Hill	By car	11	10.11 (+4.01)	1.28	4.01	10.26	48.28
3 - St Mary's, Reculver	By car	27	22.33 (+4.68)	0.12	10.34	32.01	93.77
4 - Plum Pudding Island	By car	37	14.65 (+4.45)	1.78	5.25	10.18	142.00
5 - Westgate Bay	By car	10	2.15 (+0.48)	0.45	1.87	3.27	5.30
6 - Botany Bay	By car	12	1.91 (+0.15)	0.97	1.96	2.35	2.55
7 - Kingsgate	By car	8	13.89 (+11.47)	0.83	2.01	5.53	94.02
8 - Cliffs End, Pegwell	By car	7	11.51 (+6.59)	2.16	3.18	15.43	49.55
1 - Long Rock	Both	1	3.90 (+0.00)	3.90	3.90	3.90	3.90
2 - Studd Hill	Both	1	1.52 (+0.00)	1.52	1.52	1.52	1.52
3 - St Mary's, Reculver	Both	0	na	na	na	na	na
4 - Plum Pudding Island	Both	0	na	na	na	na	na
5 - Westgate Bay	Both	0	na	na	na	na	na
6 - Botany Bay	Both	0	na	na	na	na	na
7 - Kingsgate	Both	3	2.16 (+1.05)	0.29	2.28	3.09	3.91
8 - Cliffs End, Pegwell	Both	5	0.61 (+0.28)	0.18	0.44	0.55	1.68

Visitor routes during their visit (Q8-9)

3.60 For 73% of interviewees the route they took was reflective of their normal route (Q8); a further 2% did not have a typical visit and 6% were on their first visit. Of those whose route was not reflective of a typical route, 43 interviewees (16%) indicated it was much shorter than normal and 10 interviewees (4%) indicated their route was much longer than normal.

3.61 A range of factors influenced the interviewees' choice of routes (Figure 9). Weather was the most commonly given response (64 interviewees, 21%). The state of the tide, and previous knowledge/experience were also common reasons (56 (20%) and 45 (16%) interviewees, respectively). 'Other' reasons provided varied with respondent, although 2 interviewees did identify the presence of stones and pebbles on the promenade as a diversionary factor.

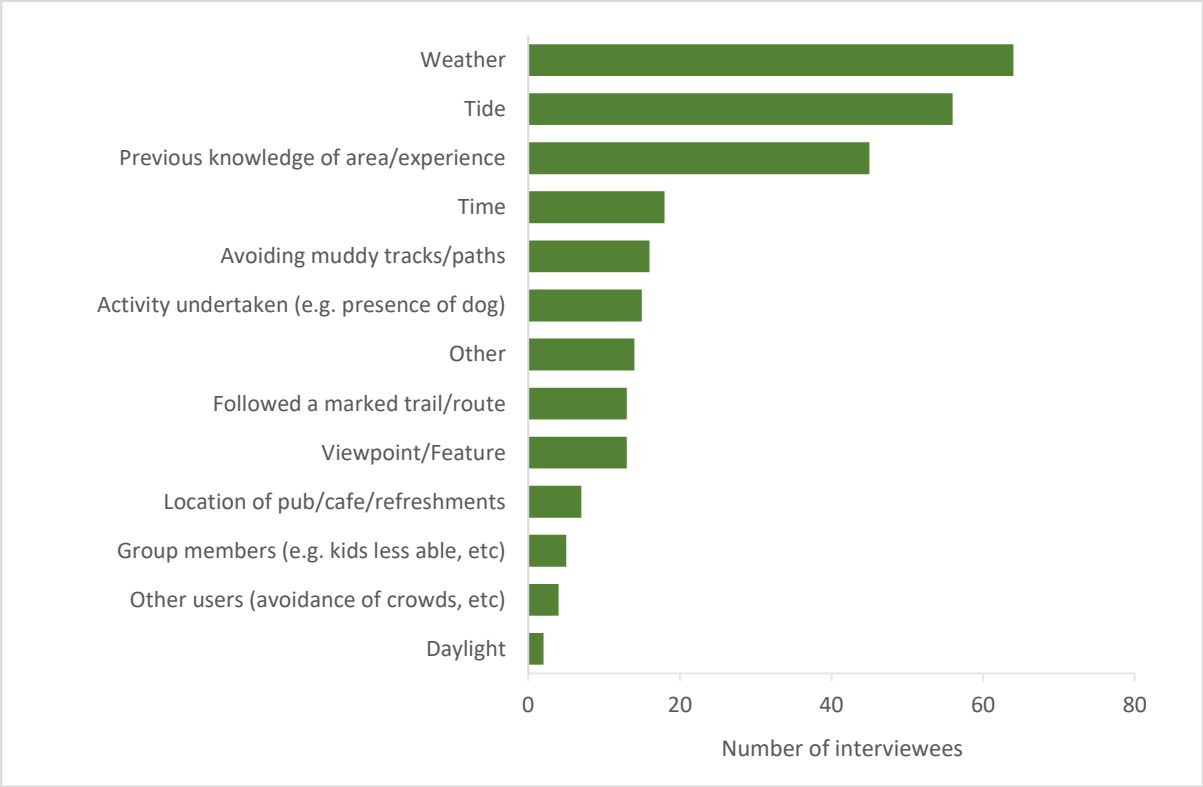


Figure 9: Factors influencing choice of route (Q8). Note that interviewees could give multiple responses.

3.62 A total of 270 routes were mapped.(based upon median values), tended to take longer routes than those at the other locations. The routes taken by interviewees at Long Rock and Studd Hill, and those at Botany Bay and Kingsgate, tended to overlap, whilst those at the other localities were more discrete.

3.63 Table 19 provides summary route length data for each of the eight interview locations. Mean route length varied between 1.9km and 5.2km across the eight localities, and median route length varied from 1.1km to 4.4km. Interviewees at Studd Hill, and Plum Pudding Island to a lesser extent (based upon median values), tended to take longer routes than those at the other locations. The routes taken by interviewees at Long Rock and Studd Hill, and those at Botany Bay and Kingsgate, tended to overlap, whilst those at the other localities were more discrete.

Table 19: Summary statistics of interviewee route length for each of the interview locations. N is the sample size (number of interviewees) and Q3 is the 75th percentile.

Location	N	Length (km)				
		Mean (+ 1SE)	Min	Median	Q3	Maximum
1 - Long Rock	47	3.79 (+0.40)	0.64	2.91	4.48	15.78
2 - Studd Hill	40	5.13 (+0.53)	0.76	4.41	6.50	14.85
3 - St Mary's, Reculver	34	2.96 (+0.53)	0.49	2.33	3.86	14.17
4 - Plum Pudding Island	55	5.22 (+0.53)	1.84	3.42	7.05	20.19
5 - Westgate Bay	25	2.03 (+0.38)	0.71	1.16	2.79	8.60
6 - Botany Bay	33	2.63 (+0.28)	0.20	2.40	3.74	6.46
7 - Kingsgate	13	1.86 (+0.22)	0.36	2.02	2.41	3.06
8 - Cliffs End, Pegwell	23	4.01 (+1.36)	0.73	2.28	3.60	32.4

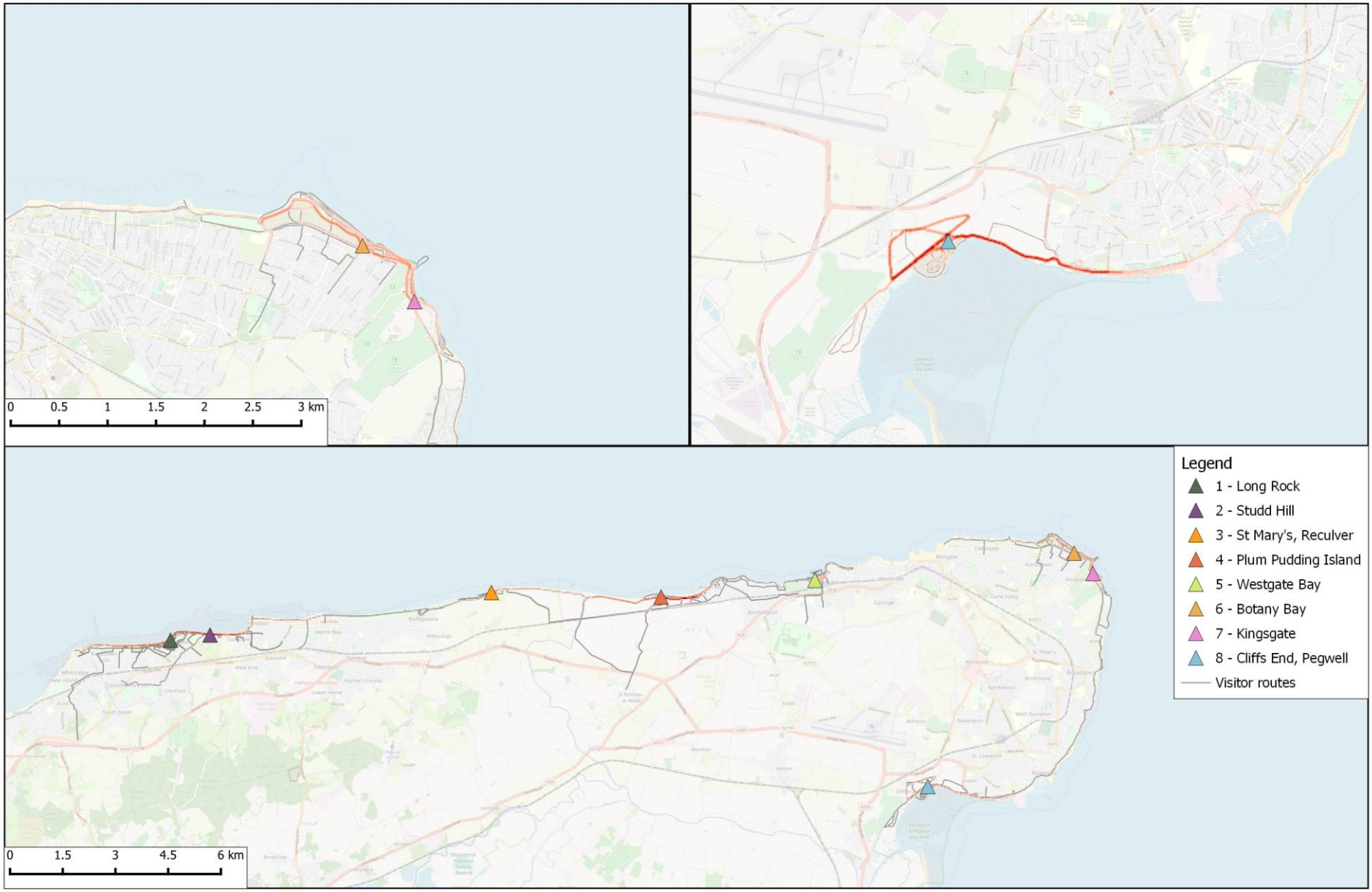
3.64 The mapped routes are shown in Maps 15a and 15b, within which route density is indicated through the use of a heat map (with colour intensity congruous with route density). We have summarised them as a way of highlighting areas with the most use and broadly indicating where the most footfall (of the interviewees) occurs. Most footfall at all of the locations is parallel to the shoreline, although the length of more heavily used areas differs between localities.

Awareness of sites value for wildlife (Q10)

3.65 Of the 272 respondents to Q10, more than 50% (134 interviewees) across all eight interview locations were unaware of any wildlife value at the site they were visiting (see Figure 10). 15% of respondents (40 interviewees) were aware of the site's value, but couldn't identify any particular receptor. Wading birds were mentioned by 11% of respondents (29 interviewees), although only one interviewee identified the sites' value for Turnstone, and no one mentioned its value for Golden Plover. The presence of other bird species was mentioned by

Map 15a: Route densities (from interviewed visitors) for interview locations 1 to 5. Note that the densities for locations 1 and 2 are combined in the same inset.

Map 15b: Route densities (from interviewed visitors) for interview locations 6 to 8 (insets) and overview of routes across all interview locations. Note that the densities for locations 6 and 7 are combined in the same inset.



12% of respondents (32 interviewees), whilst offshore reefs were only mentioned a single respondent.

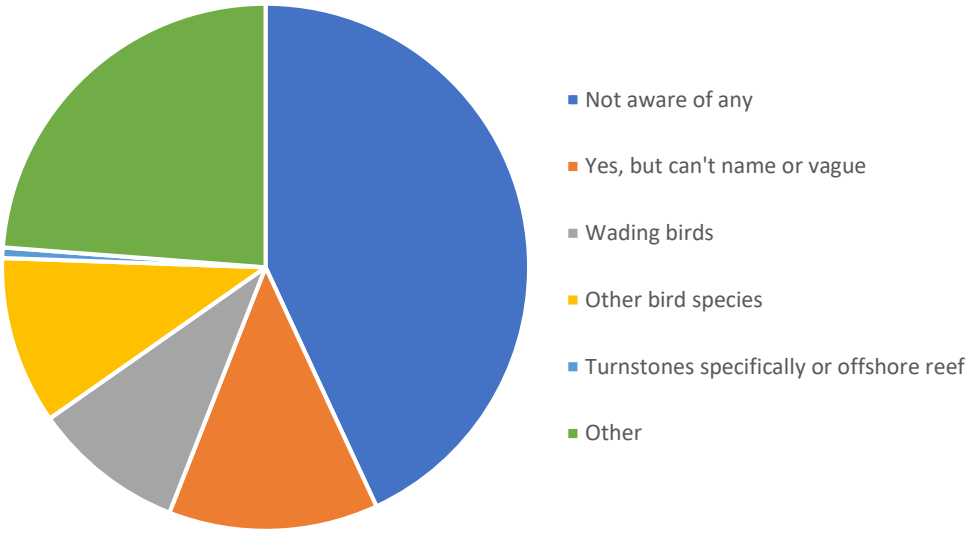


Figure 10: Awareness of site value for wildlife (272 interviewees giving multiple responses): from Q10.

3.66 Over a quarter of respondents (27% of interviewees) identified the presence of other wildlife value not specifically listed in the questionnaire options. The majority of these responses referred to the presence of ground nesting birds, seabirds, seals, Brent Geese *Branta bernicl*a, Water Voles *Arvicola amphibius*, egrets, gulls, Kestrels *Falco tinnunculus*, and rare plants (with Hog's Fennel *Peucedanum officinale* specifically mentioned by several respondents).

Comments/views on recreation management (Q15 & 19)

3.67 The last part of the questionnaire included free text boxes for the surveyors to log any changes interviewees would like to see regarding how the site is managed for recreation and people (Q15). The subsequent question asked for any further comments or feedback about the interviewee's visit (Q19). Key themes identified across all comments are tabulated in Appendices 2 and 3.

3.68 We also summarise the combined comments to both questions in Figure 11. Key themes included:

- Dog fouling (22 interviewees);

- The amount of litter and the inadequate number of bins (34 interviewees);
- Parking fees, or the likelihood of their inception (23 interviewees), and;
- The speed of cyclists on shared footpaths/proms (29 interviewees).

Figure 11: Word cloud giving free text responses to Q15. Graphic created using the wordclouds app.

4. Discussion

Turnstone numbers and status

4.1 The Turnstone numbers recorded represent virtually the lowest count in recent years and highlight a continuing decline in Turnstone numbers. Survey coverage was good, with a highly competent team systematically covering the shore, and counts were conducted over a limited time window.

4.2 The most recent population estimate for Turnstone wintering in Great Britain (covering the period 2012/13 to 2016/17) is 40,000 birds (Frost et al., 2019), with the estimate for January being 36,000. This would suggest that the population is currently close to the 1% Great British threshold, which is used to identify and designate key sites.

4.3 As such the current status of Turnstone is of key concern and it is important to understand the issues behind the decline, ensure that proactive measures are in place to minimise further pressures, and ultimately to reverse their decline.

Golden Plover numbers and status

4.4 A very small number of Golden Plovers were recorded during the surveys, with single flocks observed at different locations during individual high and low tide counts, with a maximum of 66 individuals recorded.

4.5 Nevertheless, the paucity of records is perhaps more indicative of the unsuitability of shoreline-focussed survey methods to accurately record this species, despite the extensive survey coverage and use of experienced surveyors (Musgrove et al., 2011).

4.6 Wintering Golden Plover are more reliant on agricultural fields in coastal areas, and inland wetland sites (Musgrove et al., 2011), potentially leading to their under-recording during the current surveys, but also potentially making them less susceptible to coastal recreational disturbance.

Recommendation for future surveys

Bird surveys

4.7 This is the first time that co-ordinated counts of all wader species within the survey area across discrete two-day periods has been carried out. In light of

the apparent continued decline in Turnstone numbers within the SPA boundary, and the large number of other wader species utilising key high tide roosts, it is recommended that monitoring continues on at least a biennial basis. Future surveys will allow any further changes in wader numbers, and Turnstone numbers in particular, to be identified, in addition to any changes in the use of specific roost areas.

4.8 A similar methodology should be applied, although it is recommended that the direction that the bird surveyors take within their survey sectors could alternate between the two different survey bouts. This will mean that each survey sector is surveyed at a different point over the rising/lowering tide during each bout, and therefore minimise any potential temporal effect upon wader numbers at any given point.

4.9 Generally, only small numbers of waders were identified during the low tide counts carried out in 2019, with birds apparently dispersed over a wide area. These birds are less susceptible to disturbance from the majority of promenade/high-tide line human activity and are harder to count accurately. We included the counts to provide some additional counts of Golden Plovers (which can gather on open flats at low tide), however given that so few were recorded, there is little merit in repeating these counts.

Visitor interviews and tally counts

4.10 The detailed information gathered during the 2019 visitor interviews provides a wealth of information on the distances travelled by interviewees, and their reasons for using the site, whilst the tally counts give an indication of the level of relative use of each survey sector.

4.11 This data can potentially be used to identify particular areas where visitor pressure may be impacting upon roosting Turnstone, and other wader species, and suggest ways in which further mitigation/management could be undertaken. It is recommended that these surveys are repeated either once every five years to monitor mid-term changes in visitor activity, or post institution/construction of any changes to local infrastructure (e.g. extensive changes to parking, wardening, interpretation, etc).

References

Bayne, S., & Hyland, V. (2014). *Strategic Access Management and Monitoring Plan - In respect to Canterbury section of the Thanet Coast and Sandwich Bay SPA.* V. Hyland Associates Ltd & Blackwood Bayne Ltd.

Cook, A. S. C. P., Barimore, C., Holt, C. A., Read, W. J., & Austin, G. E. (2013). *Changes in numbers of wintering waterbirds in the Constituent Countries of the United Kingdom, Special Protection Areas (SPAs) and Sites of Specific Scientific Interest (SSSIs)* (BTO Research Report No. 641). Retrieved from BTO website: http://www.bto.org/volunteer-surveys/webs/publications/webs-alerts

Frost, T., Austin, G., Hearn, R., McAvoy, S., Robinson, A., Stroud, D., … Wotton, S. (2019). Population estimates of wintering waterbirds in Great Britain. *British Birds*, *112*, 130–145.

Hodgson, I. (2016). *Thanet Coast Turnstone Arenaria interpres Monitoring January-February 2016*. Unpublished report by the Sandwich Bay Observatory Trust for Natural England.

Musgrove, A. J., Austin, G. E., Hearn, R., Holt, C. A., Stroud, D. A., & Wotton, S. R. (2011). Overwinter population estimates of British waterbirds. *British Birds*, *104*, 364–397.

Walton, S., & Hodgson, I. (2018). *Thanet Coast Turnstone (Arenaria interpres) Monitoring: January-February 2018* [Unpublished report by the Sandwich Bay Observatory Trust for Natural England and Thanet Coast Project (Thanet Council)].

Appendix 1: Questionnaire

FOOTPRINT ECOLOGY

www.footprint-ecology.co.uk

Good morning/afternoon. I am conducting a survey on behalf of Canterbury City Council and Thanet District Council, who are interested in finding out more about how people use the coast for recreation. Can you spare me a few minutes please?

Q1 ...

- ◯ **Have you travelled directly from your home today**... *if no*
- ◯ **Are staying away from home with friends or family** ... *if no*
- ◯ **Are you staying away from home, for example in a 2nd home, mobile home, camping or on holiday**
- ◯ If none of the above, **How would you describe your visit today?**

Further details

Q2 **What is the main activity you are undertaking today?** *Tick closest answer. Do not prompt. Single response only. Select activity rather than reason for undertaking (e.g. health, relaxing)*

- ◯ Dog walking
- ◯ Walking
- ◯ Jogging / power walking
- ◯ Outing with family (including kids)
- ◯ Cycling
- ◯ Wildlife / bird watching
- ◯ Photography
- ◯ Meet up with friends
- ◯ Watersports (canoeing, paddleboarding, kite surfing, windsurfing)
- ◯ Other, please detail:

Further details:

Q3 **Over the past year, roughly how often have you visited this specific location?** *Tick closest answer, single response only. Do not prompt..*

- ◯ More than once a day (365+ visits a year)
- ◯ Daily (300-365 visits)
- ◯ Most days (180-300 visits)
- ◯ 1 to 3 times a week (40-180 visits)
- ◯ 2 to 3 times per month (15-40 visits)
- ◯ Once a month (6-15 visits)
- ◯ Less than once a month (2-5 visits)
- ◯ Don't know
- ◯ First visit
- ◯ Other, please detail

Further details:

Q4 **How long have you spent / will you spend in this area today?** *Single response only. Tick closest.*

- ◯ Less than 30 minutes
- ◯ Between 30 minutes and 1 hour
- ◯ 1-2 hours
- ◯ 2-3 hours
- ◯ 3-4 hours
- ◯ 4 hours +

Further details

Q5 **Do you tend to visit this location more at a particular time of year for [***insert given activity***]?** *Multiple answers ok.*

- [ ] Spring (Mar-May)
- [ ] Summer (Jun-Aug)
- [ ] Autumn (Sept-Nov)
- [ ] Winter (Dec-Feb)
- [ ] Equally all year
- [ ] Don't know
- [ ] First visit

Q6 **What form of transport did you used to get here today?** *Multiple responses possible. Record all transport used (e.g. train and bike)*

- [ ] Car / van
- [ ] On foot
- [ ] Bicycle
- [ ] Train
- [ ] Bus
- [ ] Other, please detail

Further details:

Q7 **Why did you choose to visit this specific location today, rather than location?** *Tick all responses given. Do not prompt, tick closest answers. Use text box for answers that cannot be categorised and for further information.*

- Don't know / others in party chose ○
- Close to home ○
- No need to use car ○
- Quick & easy travel route ○
- Good/easy parking ○
- Particular facilities ○
- Refreshments/cafe/pub ○
- Choice of routes ○
- Feels safe here ○
- Quiet, with no traffic noise ○
- Not many people ○
- Scenery / variety of views ○
- Rural feel / wild landscape ○
- Openess/wide open spaces ○
- Habit / familiarity/previous experience ○
- Good for dog/ dog enjoys it ○
- Ability to let dog off lead ○
- Closest place to take dog ○
- Closest place to let dog safely off lead ○
- Appropriate place for activity ○
- Suitability of area in given weather conditions ○
- Particular wildlife interest ○
- Access to beach ○
- For a change / variety ○
- Other, please detail ○

Further details:

Now I'd like to ask you about your route today. Looking at the area shown on this map, can you show me where you started your visit today, the finish point and your route please. Probe to ensure route is accurately documented. *Use **P** to indicate where the visitor parked, **E** to indicate the start point and **X** to indicate the exit. Mark the route with a line; a solid line for the actual route and a dotted line for the expected or remaining route. If walking from home/holiday accomodation etc. then start the route at that point. Ensure you map the routes accurately enough to record whether the route is on the beach, a seawall/promenade or cliff top/inland.*

Q8 **Is / was your route today the normal length when you visit here for [***insert given activity***]?** *Tick closest answer, do not prompt. Single response only.*

- ◯ Yes, normal
- ◯ Much longer than normal
- ◯ Much shorter than normal
- ◯ Not sure / no typical visit
- ◯ First visit

Q9 **What, if anything, determined your route today?** *Tick closest answers. Multiple responses ok. If interviewee struggles, prompt with: "***What influenced where you went today?***"*

- ☐ Weather
- ☐ Daylight
- ☐ Time
- ☐ Other users (avoiding crowds etc)
- ☐ Group members (eg kids, less able)
- ☐ Tide
- ☐ Avoiding muddy tracks / paths
- ☐ Followed a marked trail/route
- ☐ Previous knowledge of area / experience
- ☐ Activity undertaken (eg presence of dog or needing to stick to cycle trails, add details)
- ☐ Location of pub/cafe/refreshments
- ☐ Passing public toilets
- ☐ Viewpoint / Feature
- ☐ Other, please detail

Further details:

Q10 **Are you aware of any wildlife habitats or species that could be affected by people coming here? If so, can you name them?** *Do not prompt. Tick any groups mentioned.*

- [ ] Not aware of any
- [ ] Yes, but can't name or vague
- [ ] wading birds mentioned
- [ ] Turnstone mentioned
- [ ] Golden Plover mentioned
- [ ] Other bird species mentioned (e.g. oystercatcher)
- [ ] seaweeds mentioned
- [ ] reef mentioned
- [ ] Other (give details)

Further details:

I would now like to ask about other places that you also visit for [*given activity*].

Q11 **What proportion of your weekly visits for [given activity] take place here, compared to other places?. Can you give a rough percentage?** *Do not prompt. Only asked of those on a day visit/short visit from home.*

- ◯ All take place here
- ◯ 75% or more
- ◯ 50-74%
- ◯ 25-49%
- ◯ less than 25%
- ◯ Not sure/don't know/first visit

Q12 **Which one location would you have visited today if you could not visit here?** *Do not prompt, tick closest answer.*

- ◯ Not sure/Don't know
- ◯ Nowhere/wouldn't have visited anywhere
- ◯ Site Named

Record site name:

Are there any other locations you also might visit for [*given activity*]? *Record up to two additional site names, recording the ones given first/visited most frequently. Spell carefully and check the spelling with the interviewee if necessary.*

Q13 Name of Site 1

Q14 Name of Site 2

Q15 Are there any changes you would like to see as to how this area is managed for recreation?

Q16 **Finally, what is your full home postcode?** *This is an important piece of information, please make every effort to record correctly.*

Q17 *If visitor is unable or refuses to give postcode:* **What is the name of the town or village village where you live?**

Q18 *If visitor is on holiday ask:* **Which town/village are you staying in?** *[Routed from above Q]*

Q19 **Do you have any further comments or general feedback about your visit and access to this area?**

That is the end. Thank you very much indeed for your time.

Q20 **TO BE COMPLETED AFTER INTERVIEW FINISHED.**

Surveyor initials	
Survey location code	
Map Reference Number	
Gender of respondent	
Total number in interviewed group	
Total males	
Total females	
Total minors (under 18)	
Total number of dogs	
Number of dogs seen off lead	

Q21 **Did the interviewee appear to be part of an organised group, e.g. a tour, guided party, group walk, DoE etc.**

- ◯ Yes, interviewee part of an organised group

Q22 **Did the interviewee struggle with answering questions because English was not their first language?** Tick yes if you feel this may have influenced the responses.

- ◯ Yes, interviewee struggled because English was not their first language

Q23 **Surveyor comments**. *Note anything that may be relevant to the survey, including any changes to the survey entry that are necessary, eg typos/mistakes/changes to answers/additional information.*

Appendix 2: Responses to Q15; are there any changes you would like to see here with regards to how this area is managed for recreation and people?

Summary data for key/recurrent topics included in the responses, split by interview location, are provided in the table below.

Survey location	No. of respondents	No. with additional comments	No. mentioning dogs	No. mentioning dog fouling	No. mentioning rubbish/litter	No. mentioning bins	No. mentioning cyclists	No. mentioning roads	No. mentioning toilets	No. mentioning parking	No. mentioning car parks
1 - Long Rock	46	32	11	4	5	7	2	1	2	3	0
2 - Studd Hill	41	29	7	3	4	7	8	1	1	2	1
3 - St Mary's, Reculver	32	12	4	1	1	2	2	0	1	0	0
4 - Plum Pudding Island	58	31	11	2	6	8	2	0	0	2	0
5 - Westgate Bay	35	26	4	1	4	3	1	1	0	0	0
6 - Botany Bay	32	21	9	5	6	8	1	1	0	2	1
7 - Kingsgate	14	11	4	1	3	1	0	2	0	0	1
8 - Cliff's End, Pegwell	24	14	2	1	5	4	1	1	1	1	2

Appendix 3: Responses to Q19; Do you have any further comments or general feedback about your visit and access to this area?

Summary data for key/recurrent topics included in the responses, split by interview location, are provided in the table below.

Survey location	No. of respondents	No. with additional comments	No. mentioning dogs	No. mentioning dog fouling	No. mentioning rubbish/litter	No. mentioning bins	No. mentioning cyclists	No. mentioning roads	No. mentioning toilets	No. mentioning parking	No.mentioning car parks
1 - Long Rock	46	18	2	0	1	0	2	1	0	1	0
2 - Studd Hill	41	20	6	3	4	0	0	2	1	0	0
3 - St Mary's, Reculver	32	14	2	0	1	0	0	0	0	3	2
4 - Plum Pudding Island	58	42	7	1	6	7	4	1	1	10	9
5 - Westgate Bay	35	4	0	0	1	0	0	0	0	0	0
6 - Botany Bay	32	0	0	0	0	0	0	0	0	0	0
7 - Kingsgate	14	0	0	0	0	0	0	0	0	0	0
8 - Cliff's End, Pegwell	24	1	1	0	0	0	0	0	0	0	0