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Poole Harbour Visitor Survey 2016

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Cover image: Kite surfers and dog walker at Whitley Lake © Footprint Ecology

Summary

Visitor surveys were conducted at five locations (Sandbanks, Baiter, Ham Common, Lytchett Bay and Holes Bay) around Poole Harbour Special Protection Area (SPA). The five locations represent a good geographic spread within and around the Borough of Poole and cover a range of locations where people have access to the shore and/or the water. Surveys consisted of tally counts of people and interviews with a random subset of these people during late November/early December 2016.

In total, 80 hours of surveying were conducted along the shoreline, split evenly between five survey locations and split evenly between weekdays and weekends. During the 80 hours of survey a total of 1,626 people were counted along the shoreline (or entering onto the shore/water). There were statistically significant differences between survey points in the number of people recorded. The busiest location was Baiter Park with an averaged 42 people per hour passing along the shore. The fewest people were recorded at the Holes Bay and Lytchett Bay survey locations (approximately 3.1 - 4.6 people per hour).

Tally counts also recorded separately any notable groups, e.g. those accessing the water, bait diggers and cyclists. Cyclists accounted for up to 16% of the individuals recorded in the tally at Baiter and 36% at Holes Bay. At Sandbanks 39% of individuals counted in the tally were either along the shoreline, intertidal or water, rather than the roadside pavement along the shore (Banks Rd). Most of these people stayed on the sand along the edge of the shore, with 7% further out onto the intertidal (bait diggers), and 21% entering the water (people on watersports/boat hire).

We conducted 238 interviews. Overall the majority were dog walkers, however there were some clear differences between survey points. At three locations dog walkers dominated (>70%), while at the two other locations (Sandbanks and Holes Bay) the activities were slightly more varied and the largest group were walkers. Visits were often short, with the majority (81%) visiting for less than an hour. Interviewees most commonly suggested they visited one to three times a week (29% of interviewees) or daily (27%). Interviewees were also asked to describe their reasons for visiting and most people, just under half (47%), felt 'close to home' was an important factor.

Surveyors asked the interviewees to consider what proportion of their visits as a whole for their current activity took place at Poole Harbour. Nearly two-thirds (65%) of interviewees said that most of their visits for their current activity took place at Poole Harbour or other coastal sites. A wide range of alternative destinations were named by interviewees with Upton Country Park the most frequently mentioned single site.

Postcode data was used to extract information on where interviewees lived in relation to the location where interviewed. For those interviewees who had visited from home (i.e. excluding the 4% of interviewees that were on holiday or staying with friends/family), half of all interviewees lived within a 1.7 km radius of the survey point (median value) and three quarters within 4.8 km. Median values differed significantly by survey point, with half of the interviewees from Sandbanks living within a 3.8 km radius, while at Lytchett Bay this value was just 0.4 km. There were also significant differences between these distances depending on the interviewee's activity, their mode of transport, their visit frequency to the site and the proportion of visits which take place at the site

where interviewed. Half of the interviewees who visited daily lived within a 0.66 km radius (median value), and half of those who suggested that all their visits took place at the current site lived within a 0.91 km radius.

A brief summary of the survey points is detailed below:

- Sandbanks (Survey point 1): The tally and interview data recorded a relatively small proportion of visitors accessing below mean high water and few into the water. Visitors to this location had often travelled particularly large distances, covering much of Poole, but few beyond Broadstone.
- Baiter (Survey point 2): There was a relatively high number of people already approached, which when combined with small distances to visitors postcodes suggest a small user group around central Poole and Parkstone. Dog walkers dominated, but there were also people meeting with friends/family, jogging and cycling.
- Holes Bay (Survey point 3): The survey point had a relatively wide catchment of northern Poole, extending as far as Creekmoor, north to the edge of Wimborne Minister, and east to Branksome, (95% of interviewees). Tally data suggests a third of people passing were cyclists. This survey point had the lowest proportion of daily visitors, and lowest proportion who visit only Poole Harbour/the coast for their visits, suggesting these are infrequent visitors, who more commonly use other sites.
- Lytchett Bay (Survey point 4): This location was the most distinct, with a very small catchment of very local, mostly daily, dog walkers (often visiting in the early morning). The high number of people already approached suggests a small user group and the postcode data shows three quarters of interviewees lived within 600 metres.
- Ham Common (Survey point 5): This site was most similar to Sandbanks in terms of a wide catchment which covered much of Poole Borough, as far as Lytchett Matravers and Wareham (95% of interviewees). Many people were walking along the shore for short distances and then also using Ham Common.

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1. Introduction

- 1.1 This report has been commissioned by Borough of Poole to inform Habitats Regulations Assessment work being undertaken alongside the Local Plan Review.
- 1.2 Poole Harbour is a Special Protection Area (SPA) and Ramsar site, classified for breeding and wintering waterbirds. A particular issue for wintering waterbirds on estuaries is recreational disturbance (Liley & Fearnley 2012; Ross et al. 2014). Recreational use within Poole Harbour is varied and includes dog walking, walking, cycling and other activities along the shore as well as a range of water-based activities, including watersports such as kitesurfing. While there are detailed studies on the impacts of recreational disturbance for birds within the Harbour (e.g. Liley et al. 2009; Liley & Fearnley 2012; Morrison 2015), there is little information on recreational use around Poole and in particular where visitors using the Harbour come from. Existing visitor survey data comes from the Purbeck shoreline and the Studland Ferry (Cruickshanks & Floyd 2014).
- 1.3 Additional growth in Poole could potentially result in increased recreational use and there is therefore a risk of increased disturbance. This may necessitate the need for the Plan Review to incorporate mitigation measures proportionate to the impacts. Visitor surveys were therefore commissioned by the Borough of Poole and targeted to locations around the Poole side of the Harbour. The surveys involved face to face interviews with visitors to ascertain where they lived and information about the activities undertaken, choice of location etc. Surveys were undertaken in mid-winter to coincide with the time of year when the wintering waterbird interest is present.

2. Methods

Overview

2.1 Five survey points were selected to be surveyed. Each was surveyed on a weekday and a weekend, with eight hours of survey each day, following our standard surveying methodology. Surveys were conducted between late November and early December 2016. This totalled 40 hours of surveying, which consisted of simultaneous tally counts of people in the area and interviews of a subset of these people.

Survey locations

2.2 Survey locations were identified as areas with high numbers of people to ensure a sufficient number of interviews, and where recreation was known to have the potential to cause disturbance. The choice of points aimed to achieve a good geographic spread around different parts of the Poole Harbour SPA, within/close to the Borough of Poole. Suggested locations were also confirmed with Natural England before undertaking the field work. The selected locations are shown in Map 1 and details given in Table 1.

Table 1: Details of the survey point locations.

Location ID	Location Name	Location Details
1	Sandbanks/ Whitley Lake	Surveyor roaming along the roadside where people have parked and are accessing to/from the mudflats (popular with Kite surfing).
2	Baiter/ Whitecliff Park	Surveyor between Baiter and Whitecliff park and therefore at a pinchpoint to intercept the most people.
3	Holes Bay	Surveyor located at the footpath/cycleway alongside Holes Bay Road (roaming to intercept).
4	Lytchett Bay	Surveyor at the new Lytchett Bay viewing point.
5	Ham Common/ Lake Beach	Surveyor at the Lake Drive car park focusing on those leaving the car park heading west along the shore (Lake Beach).

Interview and tally counts methodology

2.3 Surveyors counted all visitors entering/leaving the water/shore or moving alongside, as appropriate for each location, in order to provide basic information on the visitor flows (number of people, groups and dogs) passing each point, in addition to conducting the interviews.

2.4 A random sample of people passing were interviewed – achieved by surveyors approaching the next person seen when not already interviewing. No unaccompanied minors were approached or interviewed, but were recorded separately during the tallies.

2.5 Two survey days were conducted at each survey point, covering a weekend day and a weekday, with eight hours on each day. The eight hours of surveying followed our standard surveying window for the winter period of: 07.30-09.30; 10.00-12.00; 12.30-14.30; 15.00-17.00. These survey hours ensured coverage over the day, while allowing the surveyor comfort breaks.

- 2.6 Our surveyors carried a photo ID and wore hi-vis tabards with the Footprint Ecology logo. Each surveyor carried a photo ID badge and cards to give out in case members of the public wished to see identification or request further information. Where parking was available nearby, interviewers clearly displayed a poster in their car-window to indicate that the visitor surveys were taking place.
- 2.7 The questionnaire process was completed by the surveyors on a tablet using dedicated interviewing software¹. Tally counts and routes were recorded on paper. Routes involved drawing a line on a map reflecting the route taken (or anticipated route) for each interviewee. Routes were subsequently digitised within GIS, allowing data on route length etc. to be summarised. Interviewees were asked to provide their home postcode during the surveys and these were georeferenced in GIS, allowing us to calculate linear (Euclidean) distances between the interviewee’s home and the survey point at which they were interviewed.

Timings of survey

- 2.8 Surveys were undertaken between the 25th November and the 5th of December 2015. Any later than this and the surveys would have been undertaken in the run up to Christmas, when behaviours of people become more atypical. An individual weekend or weekday surveying day could be undertaken over a single day or split over two days (e.g. morning survey sessions one day and afternoon sessions completed on a following day). Splitting these survey days was conducted particularly when surveys were in bad weather. This allowed the surveyor to switch to another survey point for the remaining half of the day and complete the outstanding half day of survey when it may be more favourable. However at some locations this was not possible due to longer travel times between survey points.
- 2.9 Full details of survey dates are presented in Table 2.

Table 2: Dates of surveying.

Location ID	Location Name	Weekday	Weekend
1	Sandbanks/ Whitley Lake	28/11/2016	26/11/2016
2	Baiter/Whitecliff Park	29 & 30/11/2016	26 & 27/11/2016
3	Holes Bay	02 & 05/12/2016	27/11 & 04/12/2016
4	Lytchett Bay	02 & 05/12/2016	03 & 04/12/2016
5	Ham Common/Lake Beach	25/11/2016	27/11/2016

¹ <http://www.snapsurveys.com/>

Map 1: The location of survey points around Poole Harbour.



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3. Results

Weather

3.1 After mild conditions earlier in November the weather conditions turned particularly cold during late November at the start of the surveys. This cold spell continued through the entire surveying period, until early December, warming up as the surveys came to a close². Cold conditions meant some people, particularly runners, were often reluctant to stop to be interviewed. Despite the relatively cold conditions no rain was recorded during any of the survey periods. Furthermore, with the exception of surveys at Holes Bay (survey point 3) which was particularly overcast, the surveys were mostly undertaken under sunny, clear skies.

Tally data

3.2 In total, 1,626 people were counted during the 80 hours of surveying (Table 3), equating to approximately 20.3 people per hour. However there were differences between locations. The number of people per two hour session differed significantly between survey locations (Kruskal-Wallis; $H = 18.85$, $DF = 4$, $P = 0.001$), the busiest location by some margin was at Baiter (survey point 2), with 668 people passing, equivalent to 42 people per hour. The number of people recorded at Holes Bay and Lytchett Bay (survey points 3 and 4) were notably the quietest locations, equating to just 3.1 and 4.6 people per hour respectively.

3.3 There were marginally significant differences in the number of people per 2 hour session between weekdays and weekends across all locations ($H = 4.01$, $DF = 1$, $P = 0.045$). Weekend totals were usually just under double the totals observed during the week, and this pattern was consistent between most survey points. Although at Sandbanks (survey point 1) the number of people at weekends was only 1.3 times the number recorded on the weekdays. All other surveys points were between 1.6 and 2.6 times greater at weekends than weekdays.

² <http://www.metoffice.gov.uk/climate/uk/summaries/2016/november>
<http://www.metoffice.gov.uk/climate/uk/summaries/2016/december>

Table 3: Number of people passing recorded at each survey point for each time period

Survey point ID	Survey point Name	Time period				Total
		07:30-09:30	10:00-12:00	12:30-14:30	15:00-17:00	
Weekday						
1	Sandbanks/ Whitley Lake	13	32	30	28	103
2	Baiter/Whitecliff Park	83	65	37	50	235
3	Holes Bay	19	17	26	12	74
4	Lytchett Bay	21	7	7	15	50
5	Ham Common/Lake Beach	25	28	16	38	107
Weekend total		161	149	116	143	569
Weekend						
1	Sandbanks/ Whitley Lake	15	52	41	27	135
2	Baiter/Whitecliff Park	60	227	84	62	433
3	Holes Bay	19	44	34	23	120
4	Lytchett Bay	20	26	31	14	91
5	Ham Common/Lake Beach	16	112	108	42	278
Weekend total		130	461	298	168	1057
Weekday and Weekend Total		291	610	414	311	1626

3.4 Figure 1 shows the relative number of people recorded during the different time periods across the five survey points and between weekdays and weekends. Weekdays often had greater numbers of people passing during early mornings (07:30-09:30) and late afternoon (15:00-17:00).

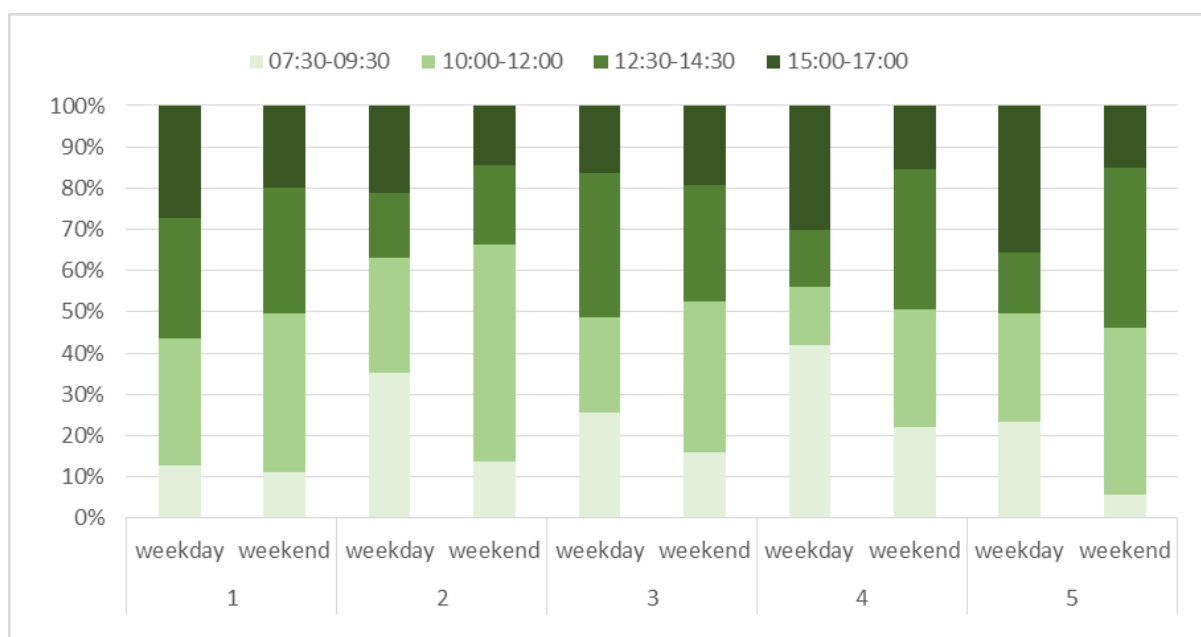


Figure 1: The proportions of people observed passing during the different times of day at each of the survey locations, shown separately for weekdays and weekends.

- 3.5 Tally counts also recorded the number of people entering/leaving below the mean high water mark either into the water or the intertidal, depending on the tide state. At only the Sandbanks and Ham Common survey points (1 and 5), where these locations coincide with well-used access to the water (e.g. advertised locations for watersports), were these tally counts used. However only at Sandbanks (survey point 1) were people recorded going below the roadside pavement and onto the sand at the shoreline, the intertidal mud or in the water. No individuals were recorded in the tally as entering the water at the Ham Common survey point, but some were recorded from the interviews as having access the water (individuals accessed the water away from the survey point and therefore were not seen in the tally).
- 3.6 Table 4 shows the breakdown of the numbers of people recorded at Sandbanks (survey point 1), who were either entering the shore/intertidal/water and those who were passing along the pavement. The majority of people recorded in the tally count were passing along the shore on the pavement (61%, Table 4). Of those who were entering below the pavement, most were staying on the sand along the shore line, 72%, compared to 7% on the intertidal (all bait diggers) and 21% entering the water. In total, there were five individuals observed bait digging and 15 individuals on the water, many of which were on a regular boat hire.

Table 4: The proportion of people recorded from tally at Sandbanks (survey point 1) entering onto the shore, onto the intertidal (all bait digging), entering the water and those just passing along the pavement.

% of tally entering onto shore	% of tally entering bait digging	% of tally entering water (watersports/boats)	% of tally passing along pavement
28.0	2.7	8.2	61.0

- 3.7 At two survey points, Baiter and Holes Bay (survey points 2 and 3), the numbers of cyclists were recorded separately as these made a reasonable proportion of those passing along the shoreline. Cyclists at these locations were on shared foot paths, alongside the shoreline, rather than in general road traffic (as at survey point 1). Cyclists can be more difficult to stop for interviewing and therefore it is useful to record numbers separately rather than relying on interview data for information on cycling usage. At Baiter, cyclists made up 16% of the individuals recorded in the tally, while at Holes Bay, cyclists accounted for 36%.

Interviews

- 3.8 In total, 238 interviews were conducted during the surveying (Table 5). These were overall fairly evenly split between weekday and weekends. Although there was a slight difference between survey points, with relatively few surveys undertaken at Holes Bay and Lytchett Bay (survey points 3 and 4) compared to the other locations.

Table 5: The number of interviews completed at each survey location, shown separately for weekdays and weekends.

Location ID	Location Name	Weekday	Weekend	Total
1	Sandbanks/ Whitley Lake	32	21	53
2	Baiter/Whitecliff Park	28	35	63
3	Holes Bay	15	15	30
4	Lytchett Bay	10	19	29
5	Ham Common/Lake Beach	28	35	63
Total		113	125	238

3.9 In total 39 individuals/groups were approached for interview but had already been interviewed at the location either earlier that day or a previous day. This accounted for 11% of all the people approached to be interviewed. The highest number of these was at Lytchett Bay (survey point 4, 19 individuals/groups), followed by Baiter (survey point 2, 12), suggesting a regular group of visitors at these locations.

3.10 The number of refusals during the survey was relatively high compared with many of our other interview based surveys. Seventy five individuals/groups refused to be interviewed, approximately 21% of all those approached to be interviewed. This is thought to be due to the particularly sudden cold conditions, which meant people, particularly runners, were reluctant to stop in the cold weather. Numbers of refusals were particularly high at Sandbanks (survey point 1) and this seemed to be due to the cold conditions, wind direction and the more urban nature of this location with people commuting, shopping etc. and therefore with less time than those visiting areas for pleasure/recreation.

3.11 Almost all interviewees 96% (228) were on a day trip to the site, coming directly from home. The remaining interviewees were either on a short trip, staying away from home (4 interviewees, 1.7%), or were on holiday in the area (6, 2.5%). Those who were coming directly from home were usually very local. Half of all those interviewed who were travelling directly from home (and provided a postcode), lived within 1.72 km (median value) of the survey point they were at. Postcode data are discussed in more detail later on.

3.12 Interviewees were accompanied by 195 dogs, of which 144 (74%) were noted by the surveyors as being off-lead.

Activities

3.13 The most common activity, undertaken by the majority of respondents (58%), was dog walking, with 138 interviewees conducting this activity (Table 6). This was followed by walking, which 23% of interviewees (54) were conducting. Other activities, including those jogging and cycling (mostly for pleasure, some commuting, but most of these could not stopped to be interviewed) were also relatively common, amounting to 11% and 7% respectively. Those conducting waterbased activities, such as paddleboarding,

kayaking etc. accounted for just 2% of interviews (five interviewees). Two interviewees at Sandbanks (survey point 1) were paddleboarding and kite/windsurfing, while the four interviewees at Ham Common (survey point 4) were all kayaking.

3.14 Table 6 also shows proportions by weekday and weekends, however there were no significant differences between weekdays and weekends (Table 6 categories collapsed to top four only for accurate analysis; Dog walking, Walking, Jogging/power walking, all other categories pooled; Chi-squared, DF=3, $\chi^2=1.87$, P=0.600). Certain activities were only recorded on weekdays (fishing, kite/windsurfing, meeting with friends), or conversely more frequently on weekends (e.g. bird/wildlife watching), however these activities occurred at such low frequencies that differences were not examined in detail.

Table 6: The number of interviewees (percentages in brackets) recorded for each activity, also separated by weekend and weekend. Data table sorted by the number of interviewees for each activity.

Activity	Weekday	Weekend	Total
Dog walking	66 (58)	72 (58)	138 (58)
Walking	26 (23)	28 (22)	54 (23)
Jogging/power walking	4 (4)	7 (6)	11 (5)
Cycling/Mountain Biking	5 (4)	2 (2)	7 (3)
Other	2 (2)	4 (3)	6 (3)
Outing with family	2 (2)	4 (3)	6 (3)
Bird/Wildlife watching	1 (1)	4 (3)	5 (2)
Canoe/kayak/Surfing/Paddleboarding	1 (1)	3 (2)	4 (2)
Photography	3 (3)	1 (1)	4 (2)
Fishing	1 (1)	(0)	1 (0)
Kitesurfing/Windsurfing	1 (1)	(0)	1 (0)
Meet up with friends	1 (1)	(0)	1 (0)
Total	113 (100)	125 (100)	238 (100)

3.15 There were some clear differences in the activities being undertaken at each survey point. Figure 2 shows the proportion of different activities (recorded from interviews) being conducted at each of the survey locations. At Baiter, Lytchett Bay and Ham Common (survey points 2, 4 and 5), the majority of interviewees were dog walking, accounting for between 70% and 83% of interviewees. At Sandbanks and Holes Bay (survey point 1 and 3) walking was the most frequent activity, with 45% and 43% respectively. Joggers/runners and cyclists were recorded only at the more urban survey points, in and around Poole (survey points 1-3), while bird/wildlife watchers were only recorded at the Upton side of Poole Harbour (survey points 4 and 5). Those undertaking watersports were only recorded at Sandbanks and Ham Common, where there is easy access to the water for these activities (survey points 1 and 5).

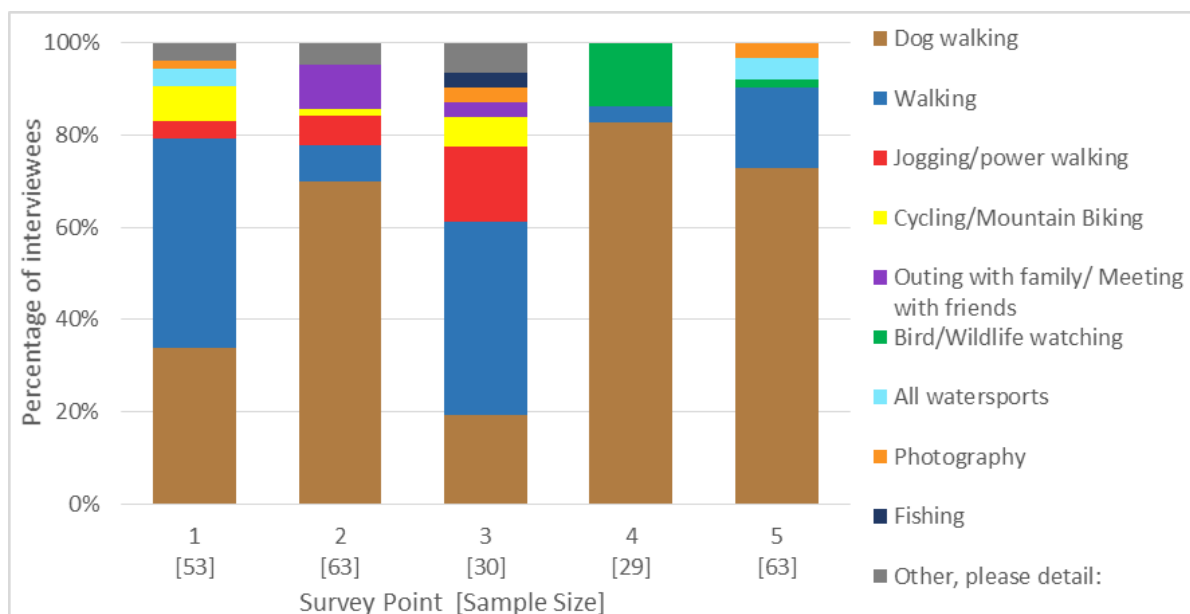


Figure 2: The proportion of interviewees conducting different activities at each survey point location.

3.16 Figure 2 shows cycling accounted for roughly 7% of interviewees at Sandbanks and Holes Bay (survey points 1 and 3), and 2% at Baiter (survey point 2). However it is known from the tally data that the actual proportion of cyclists is likely to be greater (e.g. roughly a third of the tally count at survey point 3).

3.17 In addition, these results describe the main activities being undertaken, however a number of interviewees noted additional activities, and included six respondents whose main activity was not dog walking, but were also walking a dog. This included a range of activities including; a photographer, a bird watcher, two groups on family outings etc.

3.18 There was generally little difference in group sizes observed for different activities, with most groups consisting of one or two people (total average of 1.6 people per group). Only one large group of six people all dog walking were observed. The main difference was in the typical large group size for those on a family outing, compared to others.

Visit characteristics

3.19 Visits to the area were often quite short, 81% of interviewees were visiting for an hour or less, and only 5% visiting for 2 hours or more. The overall most commonly reported visit class was 30 minutes to 1 hour, with 62% of interviewees visiting this length of time. The average visit time was estimated to be around 80 minutes (an approximation based on frequencies from categorical choices). There was generally little difference between survey points, and there was also little pattern in these with regards to activities. The single interviewee undertaking a visit of more than 4 hours was conducting watersports. However, the other interviewees conducting this activity were undertaking short to moderate visits (4 interviewees visiting for 30 mins to 1 hour and 1 interviewee visiting for 2-3 hours).

3.20 During the surveys, interviewees were asked how often they visited the sites. Typically visits were quite frequent; around three quarters of interviewees were visiting for at a

minimum of one to three times a week. Respondents most commonly suggested they visited one to three times a week (e.g. 40-180 visits a year), with 29% of interviewees selecting this class. This was closely followed by 27% of interviewees saying they visited daily. Approximately 15% of interviewees suggested they visited infrequently, e.g. once a month or less (equivalent to less than 15 visits a year).

3.21 Averaging the categorical values, by assigning an average number of visits for each group we estimated the typical number of visits to be in the order of 170 visits a year (a rough approximation based on frequencies from categorical choices).

3.22 Figure 3 shows the percentage of interviewees recorded for each of the visit frequency classes at each survey point location. It was notable that the highest proportion of daily visitors (69%) was observed at Lytchett Bay (survey point 4). Survey points at Sandbanks, Holes Bay and Ham Common (1, 3, and 5) had a relatively high proportion of infrequent visitors; approximately 30% (averaged across the three points) visiting less than 40 times a year (blue bars, Figure 3). Conversely at Baiter and Lytchett Bay (survey points 2 and 4), the infrequent visitors (<40 visits a year) were estimated to account for 9% of interviewees (averaged across the two points).

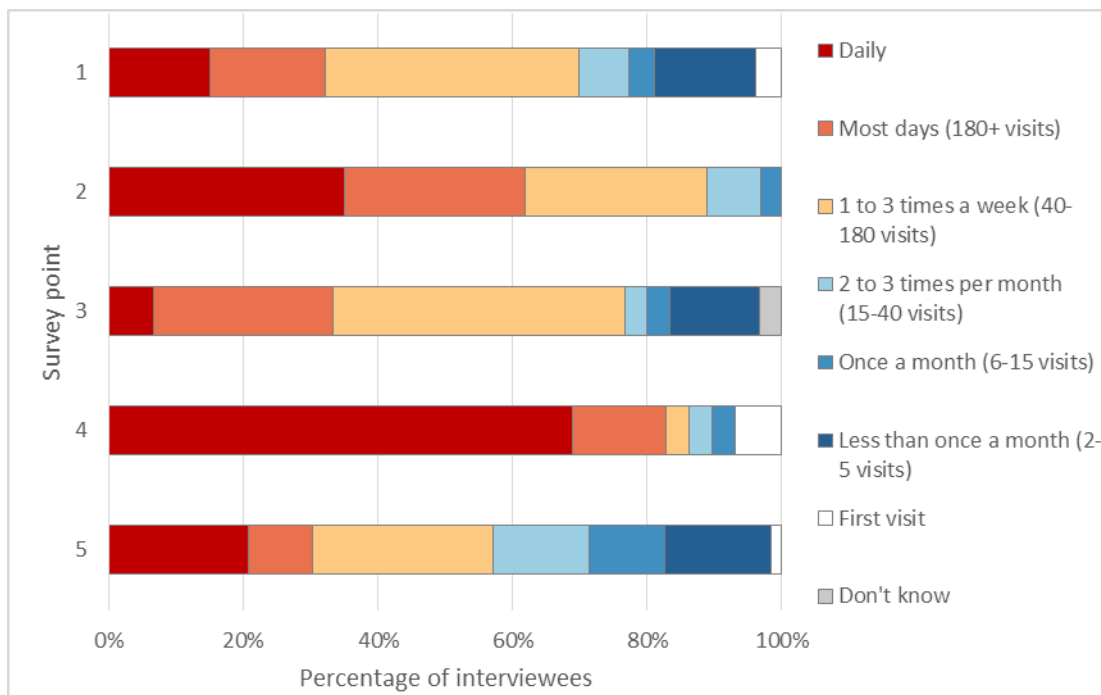


Figure 3: The percentage of interviewees selecting each visit frequency class for each of the five survey point locations.

3.23 Interviewees were asked if they tended to visit the area at a certain time of day or certain time of the year. For both these questions interviewees' responses were categorised, and multiple seasons/times of day could be selected, or 'equally across the year' or 'times varies' could simply be selected. On the whole, most interviewees were categorised as visiting equally across the year, with 71% assigned to this category. Those who did suggest a season/seasons, tended to select spring, autumn or winter (c.

30% each), with noticeably fewer suggesting visits tended to be in summer, only 7%. The largest proportion of interviewees suggested that they did not have a particular time of day which they visited, 32% overall (Figure 4). For individual time periods which were selected, the early mornings (i.e. before 9:00) tended to be most popular, with 32% of those selecting. The fewest interviewees selected early afternoon (i.e. between 12:00 and 14:00), only 10% of interviewees. It is notable from Figure 4 that Lytchett Bay (survey point 4) tended to have the highest proportion of interviewees categorised to the early mornings.

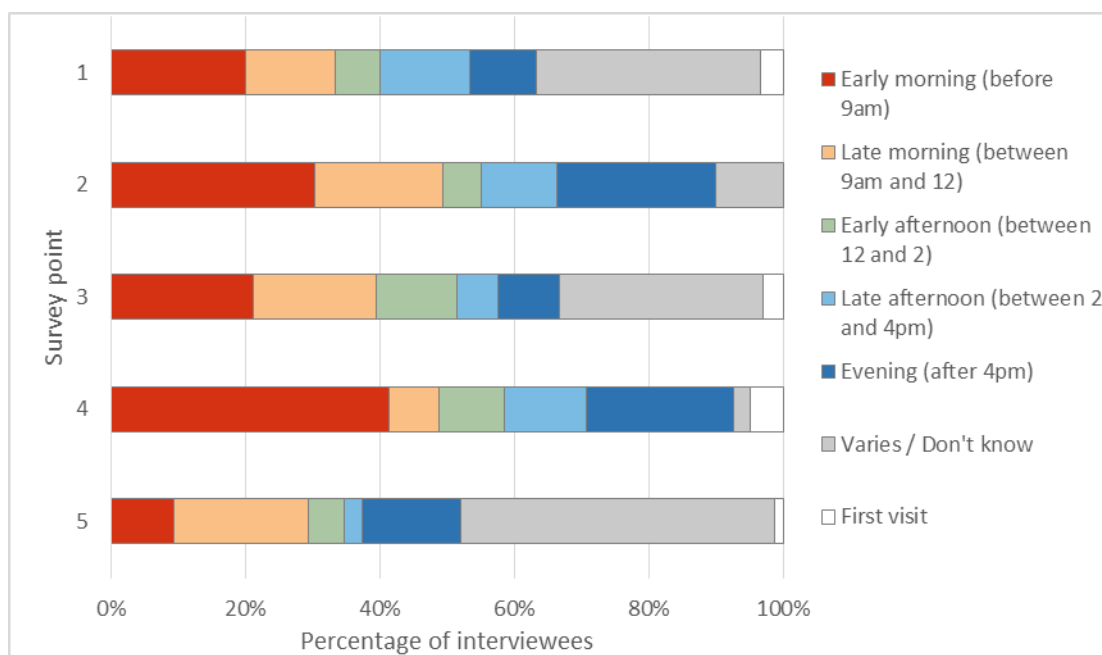


Figure 4: The percentage of interviewees selecting each period of the day.

Site Choice

3.24 Our surveyors asked the participants to describe their reasons for choosing this site in particular for their activity that day. Responses were categorised by the surveyor and interviewees were subsequently asked to select a single main reason from their list they had provided. These were examined as a single 'main' reason for each interviewee and a number of 'other' secondary reasons. These reasons across all survey points are categorised in Figure 5.

3.25 The site being close to home was the most frequent other and main reason, with 47% of interviewees categorised as suggesting it as a reason, and 32% actively selecting it as a their main reason. The second highest ranked reason for visiting the area, related to the scenery/variety of views, both overall (24%) and as a main reason (15%).

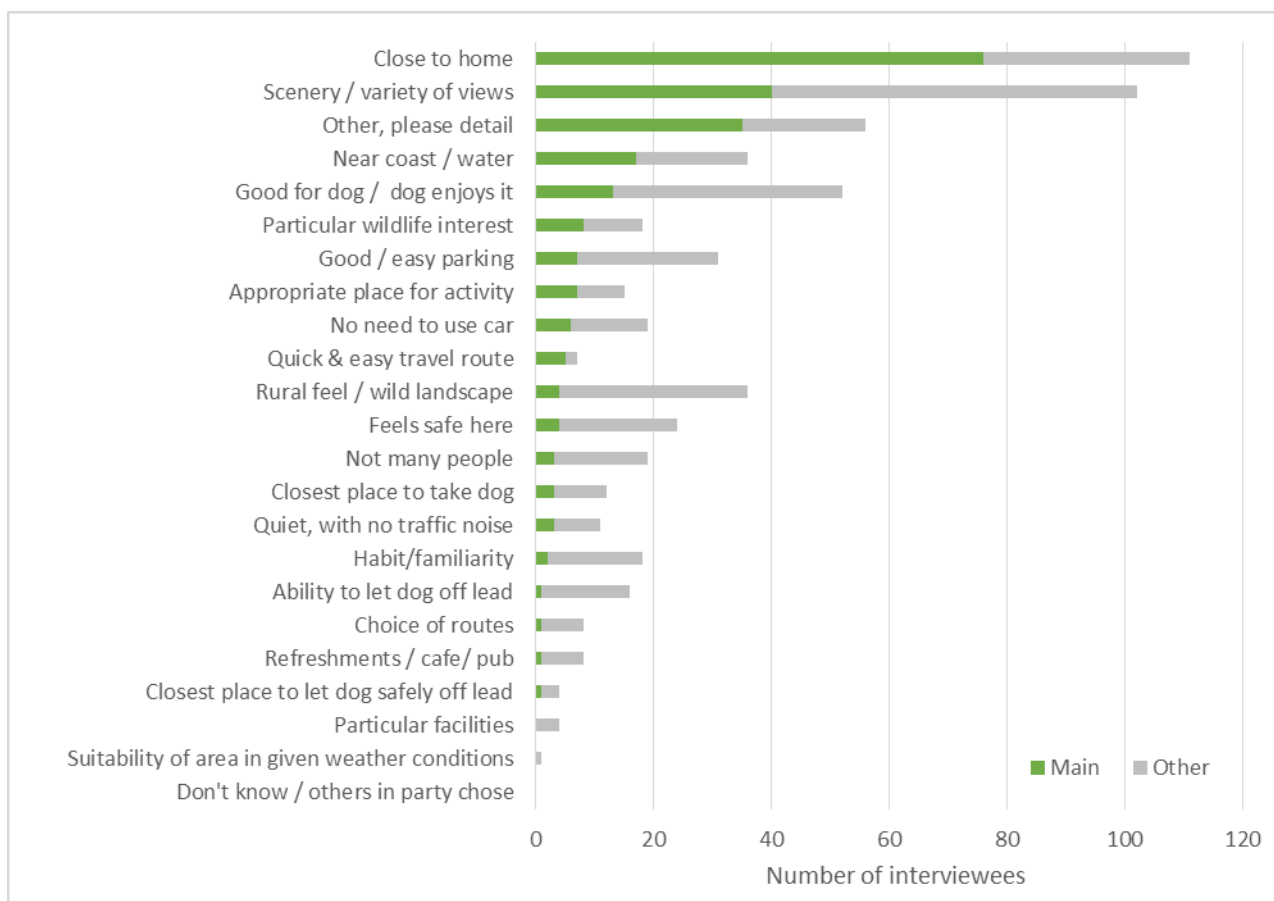


Figure 5: The number of interviewees selecting their reasons for visiting the site. Those which were considered main reasons and those which were considered secondary ('other') shown separately. Reasons sorted by the number of interviewees selecting the reason as their main choice. Note that each interviewee could only select one main reason, but multiple other reasons.

Alternative sites

3.26 Interviewees were asked to think about what proportion of visits take place at Poole Harbour and other coastal areas relative to visits to other inland sites. Overall, 65% (155) of interviewees said that most (e.g. three quarters or more) of their visits for their current activity take place at coastal sites. Seventy of those (30% of all interviewees) suggested that all their visits take place at Poole Harbour or other similar coastal sites. Just 9% felt that less than half of their visits for their current activity took place at Poole Harbour/other coastal locations. While some activities, e.g. watersports and fishing, will only be possible at coastal sites, this still suggests a high proportion of the walkers, dog walkers, cyclists etc. are actively choosing to focus visits to Poole Harbour/the coast.

- 3.28 Often a wide range of ideal locations are listed by respondents, however the realities of time constraints, proximities etc. mean these sites would not actually have been visited if interviewees could not have made it to their current site. To ascertain this information, the next question (Q14), asked interviewees to name a specific site they would have visited on the day for their current activity, if they not have been able to visit the interview location.
- 3.29 Just over half were unable to name an alternative location (141 interviewees, 60%), either as they not sure (13) or there was nowhere else, or they wouldn't have visited anywhere (128). Of those who did select a site, responses included approximately 45 named sites, listed in Figure 8. Popular sites were Upton (8%), Whitecliff (7%), Sandbanks (7%), Hamworthy (6%) and local areas (e.g. local roads, 6%)



Figure 8: Word cloud of the single alternative site choices, which would have been visited instead of the current site (Q14). The size of the word reflects its relative frequency in the surveys.

- 3.30 Named single alternative site choices were examined separately for differences between survey points. Named locations were often local to the survey point, however the proportion of individuals naming sites differed quite considerably between survey points. At Ham Common (survey point 5), most interviewees were able to name alternative sites (76%) and at Sandbanks (survey point 1) around half were able to name sites (49%). At the three other survey points the majority (78-87%) were unable to name an alternative site.

Table 7: The responses to Q14 (“Which one location would you have visited today if you could not visit here?”), to show the number and proportion of interviewees who would not have visited any other site had they been unable to visit the site they were interviewed at, and the top three ranked sites by those interviewees who were able to name a site.

Survey Point ID	Number of interviewees	Interviewees visiting nowhere else (%)	Top ranked alternative site	Second ranked alternative site	Third ranked alternative site
1	53	26 (49%)	Whitecliff (5)	Local (3)	Upton, Canford cliffs (2)
2	63	49 (78%)	Seafront (4)	Poole park (2)	Sandbanks seafront (2)
3	30	27 (87%)	Baiter (2)	Upton (1)	
4	29	24 (83%)	Lytchett Fields (2)	Upton, Upton Country Park, Upton Heath (1)	
5	63	15 (24%)	Hamworthy (6)	Upton (5)	Local, Sandbanks, Upton Country Park, Whitecliff (3)

Postcodes

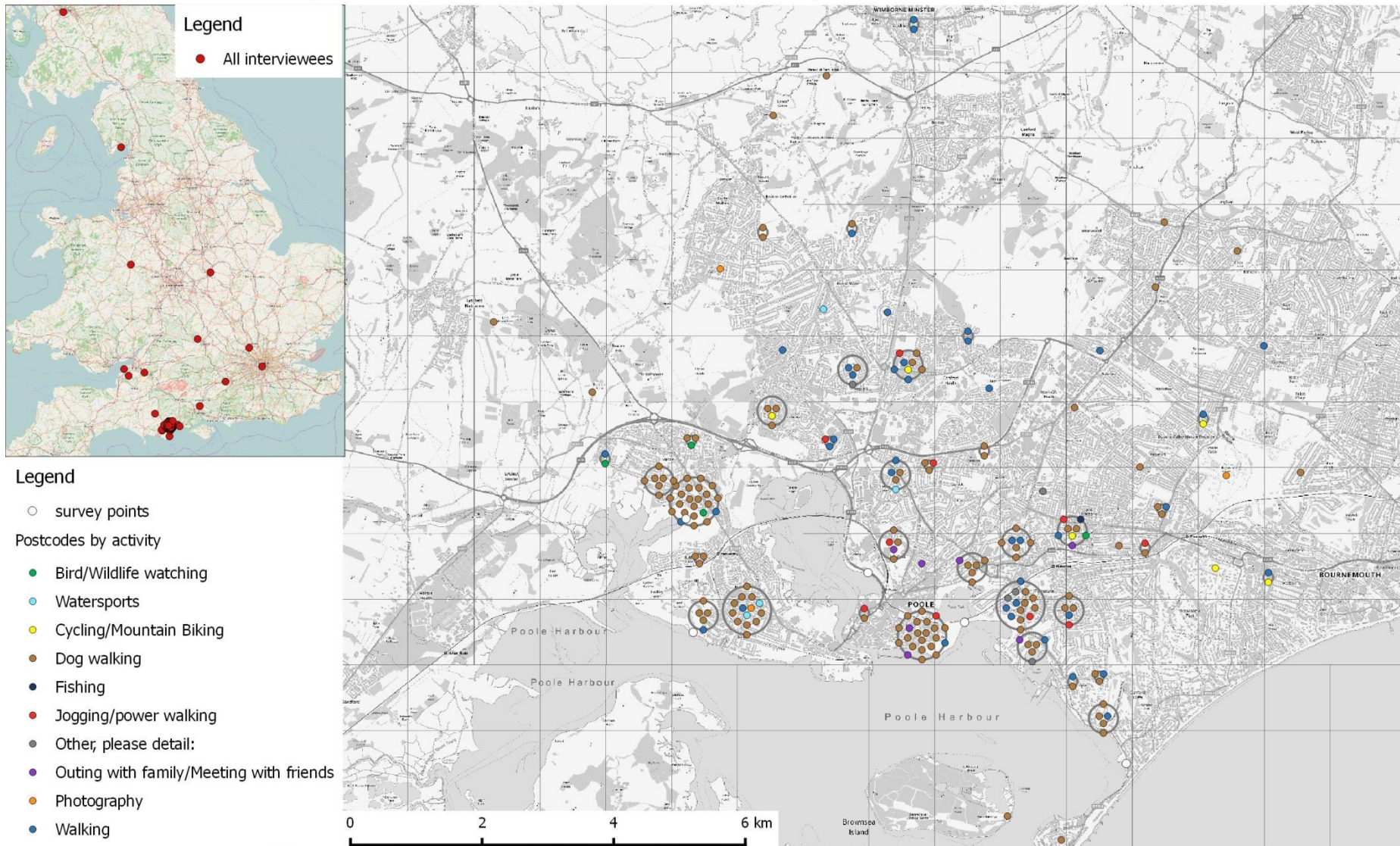
3.31 In total, 233 valid and georeferenced home postcodes were obtained from interviewees (98% of interviewees). These were mapped in GIS and allowed us to calculate the linear distance between each interviewee’s home and the survey point they were interviewed at. While these calculations do not account for transport distance and time, which will be longer for routes around the bays and inlets of Poole Harbours, these serve as guide for visitors’ proximity to the sites. The distribution of all interviewee postcodes across the UK is shown on the inset map in Map 2.

3.32 The distances for interviewees were initially examined by survey point and showed highly significant differences between survey points in median values (KW, H = 86.41, df = 4, P < 0.001), as shown in Table 8. The smallest distance was observed at Lytchett Bay (survey point 4), where half of all interviewees lived within 370 metres of the survey point (median value). Baiter (survey point 2) also had very local catchment with a median value of 880 metres. All other sites had a median value of around 3 km or greater.

Table 8: The median and average linear distances between survey points and interviewees’ home postcodes separated by the survey locations.

Survey ID	Survey location	Number of postcodes	Median Distance (km)	Average Distance and SE (km)	3 rd Quartile (75% of interviewees) (km)
1	Sandbanks/ Whitley Lake	49	3.76	37.55 (±15.11)	7.54
2	Baiter/Whitecliff Park	63	0.88	1.36 (±0.14)	1.47
3	Holes Bay	30	2.94	3.25 (±0.45)	3.79
4	Lytchett Bay	29	0.37	5.04 (±4.41)	0.57
5	Ham Common/Lake Beach	62	3.63	12.83 (±4.71)	6.77
Overall		233	1.72	12.73 (±3.55)	4.81

Map 2: The distribution of all postcodes (inset map) and in the Poole area, categorised by activity.



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3.33 The linear distances were also examined by activity, as shown in Map 2 (overlapping postcodes offset as concentric rings), and showed significant differences in the median distances for activities (KW, $H = 41.07$, $df = 11$, $P < 0.001$). The shortest median values were observed for those fishing, on a family outing and dog walking (all less than 1km), presented in Figure 9. Although it should be noted that the differences between some activities are not considered robust, such as fishing, due to the very small sample sizes considered.

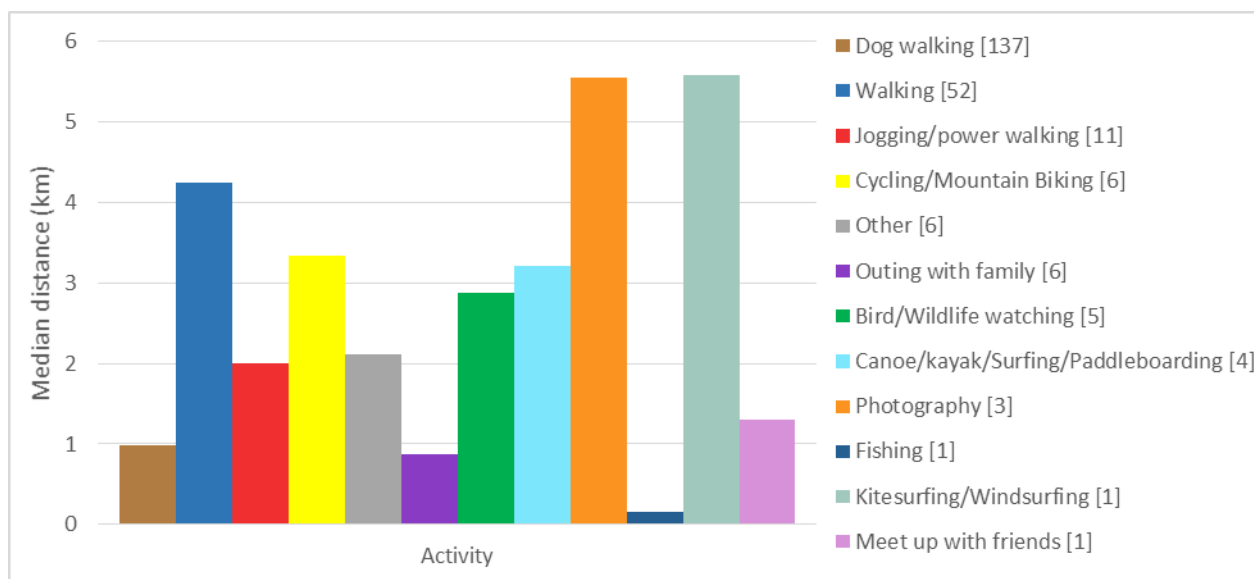


Figure 9: Median distances between interviewee's home postcode and the survey point for each activity. Note the small sample sizes for certain activities.

3.34 One of the key factors in the distances interviewees travelled would be the mode of transport. There was a fairly even split between those travelling by car/van and those on foot, and a small number using bicycles or public transport (Table 9). Significant differences were observed in the distances for mode of transport (KW, $H = 85.79$, $df = 3$, $P < 0.001$). For those visiting on foot, half lived within a 740 metre radius of the survey points they were interviewed at, much shorter than the median distance for those travelling by car/van (3.7km).

Table 9: The median and average linear distances between survey points and interviewees' home postcodes, separated by the mode of transport interviewees used.

	Number of postcodes	Median Distance (km)	Average Distance and SE (km)
Bicycle	7	3.28	3.08 (± 0.45)
Car / van	115	3.73	12.44 (± 3.41)
On foot	106	0.74	8.95 (± 5.70)
Public transport	5	9.21	112.73 (± 75.85)

3.35 The distance to survey point was considered likely to have a bearing on how frequently interviewees visited the sites and this was also tested. We observed significant differences between the frequency of visit and distance to survey point (KW, $H =$

107.41, $df = 7$, $P < 0.001$), presented in Table 10. Ranking of the median distance values was the same as the ranking of frequency classes; those who visited daily typically lived within a very small radius (median = 660 metres).

Table 10: The median and average linear distances between survey points and interviewees' home postcodes separated by the interviewee's frequency of visit to the survey location.

	Number of interviewees	Median Distance (km)	Average Distance and SE (km)
Daily (or more frequently, c. 360 visits)	63	0.66	1.04 (± 0.23)
Most days (180+ visits)	44	1.34	1.68 (± 0.21)
1 to 3 times a week (41-180 visits)	67	2.70	3.53 (± 0.34)
2 to 3 times per month (16-40 visits)	19	3.73	16.93 (± 9.49)
Once a month (6-15 visits)	13	5.54	19.8 (± 11.73)
Less than once a month (2-5 visits)	21	6.37	79.54 (± 34.04)
First visit	5	86.70	66.7 (± 25.44)
Don't know	1	5.98	5.98

3.36 Distances to the survey point were also significant in relation to the proportion of visits interviewees made to Poole Harbour/coastal sites (KW, $H = 37.98$, $df = 6$, $P < 0.001$, Table 11). Furthermore, the ranking of these classes closely matched the ranking of median distance values. Those interviewees who suggested almost all their visits to Poole harbour/coastal sites took place at the survey point mostly lived within a 1 km radius (median = 910 metres).

Table 11: The median and average linear distances between survey points and interviewees' home postcodes separated by the proportion of visits interviewees made to Poole Harbour/other coastal sites for their current activity.

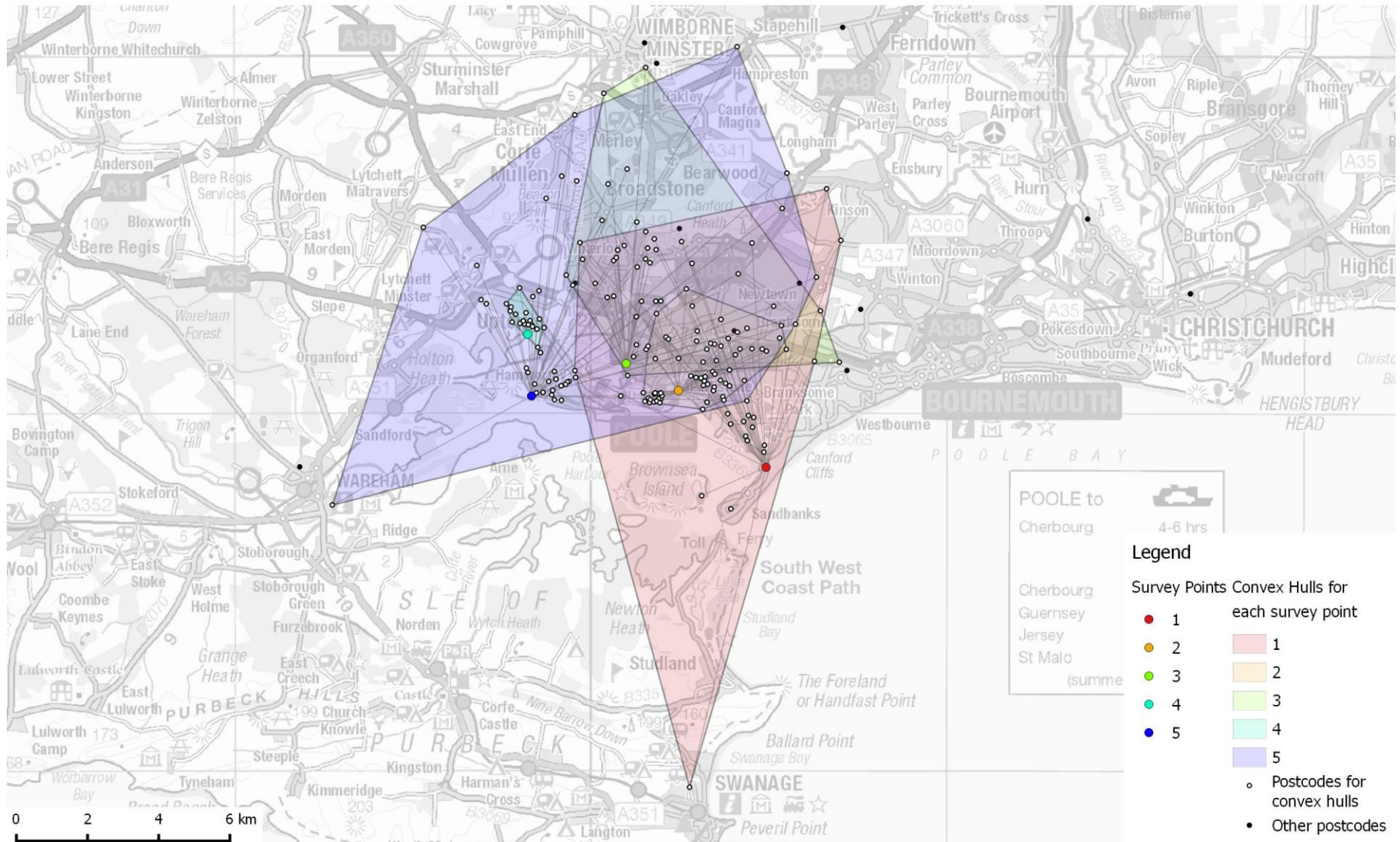
This or other coastal	Number of postcodes	Median Distance (km)	Average Distance and SE (km)
virtually all take place here / 100%	67	0.91	12.97 (± 5.44)
most / 75% or more	85	1.85	9.28 (± 4.92)
over half / 50-74%	31	1.34	2.13 (± 0.36)
about half / 45-55%	24	3.88	4.63 (± 0.72)
under half / 25-49%	11	3.97	4.40 (± 1.04)
few / less than 25%	10	5.88	19.91 (± 12.34)
Not sure / Don't know / First visit	5	94.29	176.59 (± 105.44)

3.37 Distance calculations also showed those interviewees who selected reasons related to the site being close to home as their main reason, typically lived within 611 metres (median value for 74 interviewees). While those selecting near coast/water as their main reason came from a much wider area, with a median value of 3.2 km (17 interviewees).

3.38 The distribution of interviewees is summarised in Map 3 and Map 4, with the postcodes of the 95% and 75% nearest postcodes of visitors from home mapped using convex

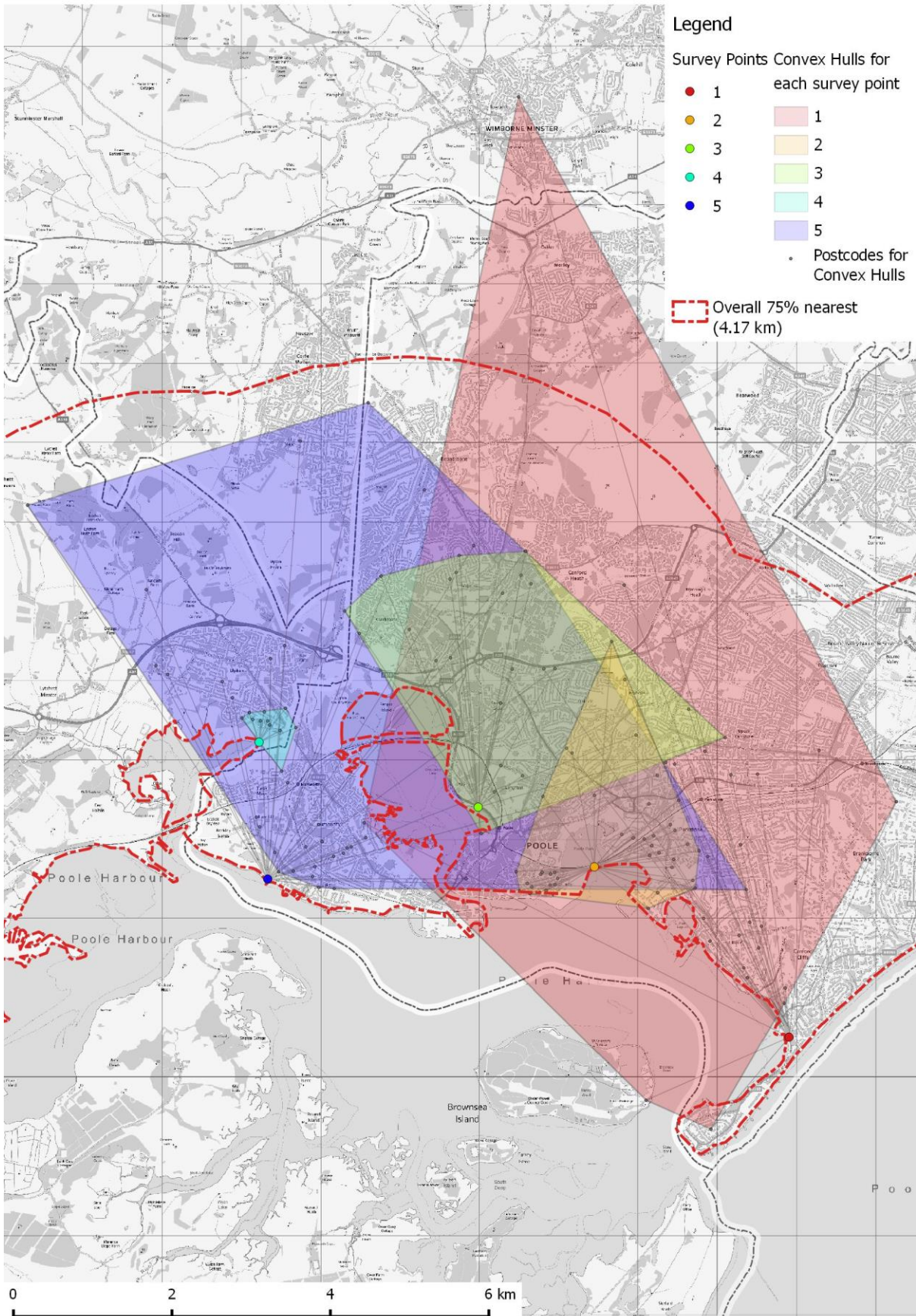
hulls. These indicate the approximate catchment which cover each survey point. Map 4 also shows the overall value for the 75th percentile, across all survey points, a distance of 4.17km. This distance has been mapped as a buffer from the shoreline to indicate an overall catchment for the whole SPA shoreline.

Map 3: Convex Hull to show the area covered by the 95% nearest postcodes (from home).



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Map 4: Convex Hull to show the area covered by the 75% nearest postcodes (from home).



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Routes

- 3.39 Surveyors asked interviewees to indicate the route they had taken in proximity to Poole Harbour. These were recorded using paper maps and digitised into GIS for analysis.
- 3.40 Map 5 shows the density of routes recorded around or on Poole Harbour. Five routes were recorded onto the water in Poole Harbour, all those conducting watersports. Routes for these individuals have a low level of confidence and are considered approximate, due to the difficulties of mapping these routes on paper. Most of these the routes were not widely dispersed across the Harbour, and the average route length was 3.8km. Adjoining land, such as the heathland at Ham Common, urban greenspaces of Baiter/Whitecliff Park and Turlin Moor Recreation are used in conjunction with access along the shore.
- 3.41 Route lengths are also summarised in Table 12. Routes were typically shortest at Lytchett Bay (survey point 4), average of 1.5 km. The longest routes were recorded at Holes Bay with many people walking long distances along the footpath/cycleway which runs much of the length of the eastern shoreline.
- 3.42 Two routes were recorded for interviewees at the Holes Bay survey point as having travelled around the whole Bay (one walker, one cyclist, c. 8.5km route). These were the longest routes recorded in the whole survey. Some of the highest densities of people were recorded at Baiter and Ham Common (survey points 2 and 5).

Table 12: Summary of the range of route lengths recorded at each survey point.

Survey point ID	Survey location	Minimum route length (km)	Average route length (km)	Maximum route length (km)
1	Sandbanks/ Whitley Lake	0.38	3.03	7.22
2	Baiter/Whitecliff Park	1.10	2.52	4.20
3	Holes Bay	0.12	3.49	8.59
4	Lytchett Bay	0.48	1.52	2.27
5	Ham Common/Lake Beach	0.39	2.05	7.00
Overall		0.12	2.51	8.59

Map 5: The density of visitors routes recorded in and around Poole Harbour.



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4. Discussion

Limitations

- 4.1 Overall, surveys reflect only winter use and activities such as watersports were recorded relatively infrequently. Surveys at different times of year may well have recorded different activities or proportions of activities. In addition, surveys were undertaken during a sudden spell of cold weather, in an otherwise unseasonably warm period. It was therefore potentially harder to get people, particularly runners (as they quickly became cold), to stop to be interviewed.
- 4.2 Our survey approach is perhaps slightly biased towards interviews with activities on the shore and that are easy to intercept. Those undertaking watersports who are out on the water for most of their visit or who pass at high speed (such as cyclists) were potentially under-represented in the surveys, however the tally data do provide some information on overall visitor numbers.
- 4.3 During summer it is known that there would be a greater proportion of tourists in addition to those locally visiting. However there is the suggestion that the locals who were visiting in the winter were visiting less in the summer, possibly to avoid busy tourist areas.
- 4.4 Surveys covered only the shoreline of Poole Harbour SPA which lies in and around the Borough of Poole (including Upton). Visits by people from Poole and the surrounding settlements within the district may also be made to parts of the SPA which lie outside of the Borough of Poole. These surveys do not account for visits to these parts by residents of Poole (but see Cruickshanks & Floyd 2014).

Implications

- 4.5 The results suggest different levels of recreational use of Poole Harbour from different parts of Poole. In particular the wards of Hamworthy West, Parkstone and Poole Town featured among the postcodes of interviewees. The results suggest comparatively low levels of use from Merley and Bearwood and Branksome East and in general from those wards further from the Harbour (see Table 13). This would suggest that development in these locations is potentially of less concern (in relation to recreation impacts to Poole Harbour). These overall patterns are confirmed from the 4.17 km distance buffer from the shore, shown in Map 4.

Table 13: Total numbers of interviewees by ward. The table also gives total number of residential properties (drawn from 2016 postcode data), allowing the number of interviewee postcodes to be expressed as a percentage of the number of residential properties (4th column from left) while the 5th column gives the percentage of all interviewee postcodes (i.e. 233=100%).

Ward	Total number residential properties	Number of interviewees	Postcodes as a % of residential properties	% of all postcodes from survey within ward
Hamworthy West	3053	23	0.007534	10
Parkstone	5622	35	0.006226	15
Poole Town	5920	27	0.004561	12
Canford Heath West	2909	10	0.003438	4
Oakdale	4872	15	0.003079	6
Penn Hill	5276	15	0.002843	6
Creekmoor	4169	11	0.002639	5
Hamworthy East	2939	7	0.238176	3
Broadstone	4309	6	0.139243	3
Branksome West	3291	3	0.091158	1
Newtown	5600	5	0.089286	2
Canford Cliffs	5627	5	0.088857	2
Alderney	4705	4	0.085016	2
Canford Heath East	2938	2	0.068074	1
Branksome East	2768	1	0.036127	0
Merley and Bearwood	4213	1	0.023736	0

4.6 The data on visitor numbers suggests comparatively low levels of use around the survey point at Lytchett Bay, near Turlin Moor. This is one area where new development is likely to come forward within the Plan review. While visitor rates here were lowest of all the survey sites, a total of 141 people were still counted passing the survey point, indicating a reasonable volume of use. The home postcodes of visitors here were particularly local, suggesting that further development within that local catchment may result in increased recreational use.

4.7 Proximity to home is one of the key factors influencing visitors’ choice of site, and the range of activities, predominantly dog walking, but also including walking, cycling and jogging, indicates visitors are using the Poole Harbour shore as their local greenspace. This would suggest that successful mitigation measures are likely to involve awareness raising, additional infrastructure (such as screening or setting paths back from the shore), signage etc. Any mitigation should be focussed on the activities particularly linked to disturbance, for example dogs off-leads, access on the intertidal and watersports.

5. References

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