

Tourism and recreation around the Avon-
Heathcote Estuary/Ihutai: Current usage,
awareness and perceptions of tourism and
recreational opportunities

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Executive Summary

The purpose of this research is to assess the current usage, awareness and perceptions of tourism and recreational opportunities of the Avon Heathcote Estuary of visitors to the Estuary and of Christchurch residents in general. The research was commissioned by Environment Canterbury in association with Avon-Heathcote Estuary Ihutai Trust and Lincoln University.

- Two surveys were completed over the summer of 2009/10; a face-to-face survey of 140 visitors to the Avon Heathcote Estuary was conducted at 12 locations around the Estuary. This survey asked about purpose of visit, habits regarding the Estuary and opinions on the Estuary. A second survey was conducted by telephone with 385 Christchurch residents randomly selected by phone numbers from the Christchurch White Pages. Participants in this survey were asked their opinions regarding the Estuary regardless of whether they had visited. If they had visited they were asked the same questions as those surveyed at the Estuary.
- In many ways visitors to the Estuary reflected the population of Christchurch as a whole. They were predominantly European/Pakeha and from a wide age range. They were somewhat more likely than the population as a whole to be male, and to have a tertiary qualification. In terms of place of residence, they were most likely to live in suburbs within fairly close proximity to the Estuary.
- The most common purpose for visiting the Estuary was for exercise or walking a dog followed by taking children there for various activities (e.g. playing at the playground or playing games with them). Estuary visitors tended to visit frequently; over a third (39.1%) visited daily and a further 23.1 percent visited weekly. Most Estuary users visited alone or with a partner/spouse, and generally drove or walked to the site.
- The most popular places for people to visit at the Estuary were the Estuary walkway, The Spit and South New Brighton Park. Over half (51.6%) of users had a favourite place around the Estuary. The most popular place was the Spit for its views, tranquillity and nice walking track.
- A number of suggestions for improvements to the Estuary were made by current users. Most of these suggestions related to improving water quality, maintaining the

tracks and surrounds to a higher standard and getting rid of the sea lettuce and therefore the smell.

- Close to two-thirds (63.1%) of Estuary visitors had heard something about the Estuary in the previous 12 months, compared to only 18.4 percent of non-visitors. The most common information that was recalled was about the outfall pipe. The most common source of information for non-visitors was news items, while Estuary visitors reported a much wider range of information sources, including newsletters and word of mouth.
- Estuary visitors in general had quite strong opinions about the value of the Estuary to Christchurch. Visitors to the Estuary almost unanimously agreed that the Estuary is a great recreation resource for Christchurch residents, and more than three quarters of regular visitors agreed that the Estuary is a wetland of national significance, however, a similar proportion believe also that the water is polluted. The majority agree that the Estuary should be promoted to Christchurch residents (69.7%) and visitors to Christchurch (66.2%), but generally did not want to see too much in the way of development of facilities (51.6% disagreeing) or improved access (71.1% disagreeing). By comparison, non-visitors were much more likely to state no opinion on many issues, however half of non-visitors (50.7%) agreed that the Estuary was a wetland of national significance and that it should be better promoted to Christchurch residents (69.7%) with more information available about the facilities (71.1%) and activities (68.5%) available.
- Very few Estuary visitors undertook seafood gathering or fishing in the Estuary; almost half (43.1%) stated that this was because they believe it to be unsafe. Seafood warning signs, along with warning signs about swimming, were the most commonly cited forms of signage described by the 62.2 percent of visitors who reported seeing signs at the Estuary.
- The development of the outfall pipe is unlikely to change the recreational behaviour patterns of most users and non-users of the Estuary.

Introduction

The current research project is part of a larger social science project looking at the history, use and potential use of the Estuary and surrounds.² The purpose of this research is to assess the current usage, awareness and perceptions of tourism and recreational opportunities of the Avon Heathcote Estuary of visitors to the Estuary and of Christchurch residents in general.

The Avon-Heathcote Estuary Ihutai Trust (AHEIT) is seeking to register the Avon-Heathcote Estuary on the *Ramsar List of Wetlands of International Importance*. Part of this application requires information about the current and potential use of the Estuary for tourism purposes. At the present time, little is known about the users and usage of the Estuary for recreational and tourism; the extent and level of awareness and knowledge amongst Christchurch residents in general about tourism and recreational opportunities at the Estuary is lacking also. The objectives of the current project, therefore, have been:

- To investigate the current activity patterns of visitors to the Avon-Heathcote Estuary
 - To investigate Christchurch residents' awareness and usage of the Estuary for recreational purposes
 - To explore the perceptions and attitudes of current visitors and Christchurch residents towards the Estuary
- To identify areas for improvement to the Estuary.

¹² Tourism and the Avon-Heathcote Estuary/Ihutai: the perspectives of key stakeholders regarding current and future demands; a historical assessment of its recreational and social history; tourism and recreation around the Avon-Heathcote Estuary/Ihutai.

Background to the research

The Avon-Heathcote Estuary has long been an important resource for the people of Christchurch. Prior to European settlement, Maori throughout the South Island used the Estuary as a *mahinga kai* (seafood gathering) source. As European settlers began to arrive, the Estuary became a key transport route and then, as the city grew, a popular area for many different types of recreational activities. The suburbs around the Estuary were among some of the first to be developed by settlers due to the proximity to the sea. Since the beginning of settlement in Christchurch, the Estuary has been subjected to high levels of pollution. In the late 19th Century and early 20th Century, waste from industrial areas and factories was drained into the Heathcote and Avon rivers, making the Estuary water increasingly more polluted (Boyd, 2010).

By mid-20th century, the Avon-Heathcote Estuary was regarded by many as nothing but a waste water discharge area; the construction of the Bromley Waste Water Treatment Plant did little to enhance the area (Boyd, 2010). However, since the 1960s there have been a number of concerted efforts to improve the water quality of the Estuary and enhance the conservation and recreation values of the area (Boyd, 2010). There has also been resurgence in recreational activities on and around the Estuary and it is regarded as one of New Zealand's most important wetlands due to a number of migratory birds making the Estuary their home for parts of the year (Boyd, 2010).

A great deal of research has been conducted on the Avon Heathcote Estuary but this has been primarily ecological, geographical and biological in nature with little research conducted by social scientists. One of the key objectives of AHEIT is; 'To pursue for the Avon-Heathcote Estuary Ihutai (the Estuary) the preservation of its natural and historic resources to maintain their intrinsic values, and to seek the protection of these resources, including restoration and enhancement, for their appreciation and recreational enjoyment by present and future generations' (AHEIT, 2008). In order to achieve this objective, understanding how users and potential users view and use the Estuary currently and what they would like to see in the future is essential. Similarly, gaining an understanding of what

the users and potential users of the Estuary feel about any potential tourism development in the area will be important in future tourism considerations.

One of the few social science research projects about the Estuary was conducted by Rob Greenaway and Associates in 2006/2007, which provides a useful reference and comparative point for the current research. The aim of their study was to 'assist in the identification of the recreational values of the Avon Heathcote Estuary area, and the built and natural resources which support those activities, with access being of particular interest'. (Greenaway, 2007, p.8). Interviewer-led surveys were carried out in nine locations around the Estuary from October 2006 to February 2007. The research revealed that the demographics of the people that visited the Estuary generally paralleled that of the Christchurch population. The primary recreation activities identified by the survey were walking, dog walking, cycling, wind / kite surfing and sailing. The most popular entry points to the Estuary were South New Brighton and the Windsurf Reserve, with the highest levels of activity recorded between South New Brighton Park and the Spit. Respondents were asked if they had ever visited the Estuary and been dissatisfied with their experience; 46 percent had never been dissatisfied but 54 percent had been dissatisfied in some way, most predominantly by rubbish and litter (25%) and poor water quality (23%). Participants were asked their opinions of the most important feature of the Estuary; 20 percent stated that it was the beautiful scenery and views, while 19 percent stated that proximity to their home was an important consideration. In terms of possible improvements that could be made to the Estuary, 59 percent of respondents had suggestions, including improved water quality (25%) and the removal of rubbish, litter and graffiti (23%).

Methodology

For the purpose of the current research the Estuary has been defined as the area encompassed by the Spit in Southshore to Shag Rock in Moncks Bay (see Figure 1). Two surveys were created to achieve the objectives set. The first survey was an interviewer-completed survey (Appendix I). This survey consisted of face-to-face interviews conducted onsite at the Estuary over a period of two months from the end of November 2009 to the end of January 2010. People were intercepted and interviewed at a range of locations around the Estuary, with a total of 140 people being interviewed.

While there were eight main locations used to conduct the surveys, at times the interviewers walked from these locations to other sites in an attempt to encounter more visitors. Table 1 and Figure 1 shows the locations of interviews and the number of respondents interviewed at each location.

Table 1. Onsite interview locations

Location	Frequency	Percent
The Spit	18	12.2
South New Brighton Park	19	13.1
South New Brighton Caravan Park	1	0.7
South New Brighton Walkway	23	17
Pleasant Point Yacht Club	3	2.1
Windsurfing Reserve (Humphreys Dr)	14	10.2
Tidal View	5	3.6
Mt Pleasant Yacht Club	7	5.1
Beachville Road	23	17.0
Moncks Bay	11	8.1
Christchurch Yacht Club	4	2.8
Shag Rock	11	8.1
TOTAL	140	100.0

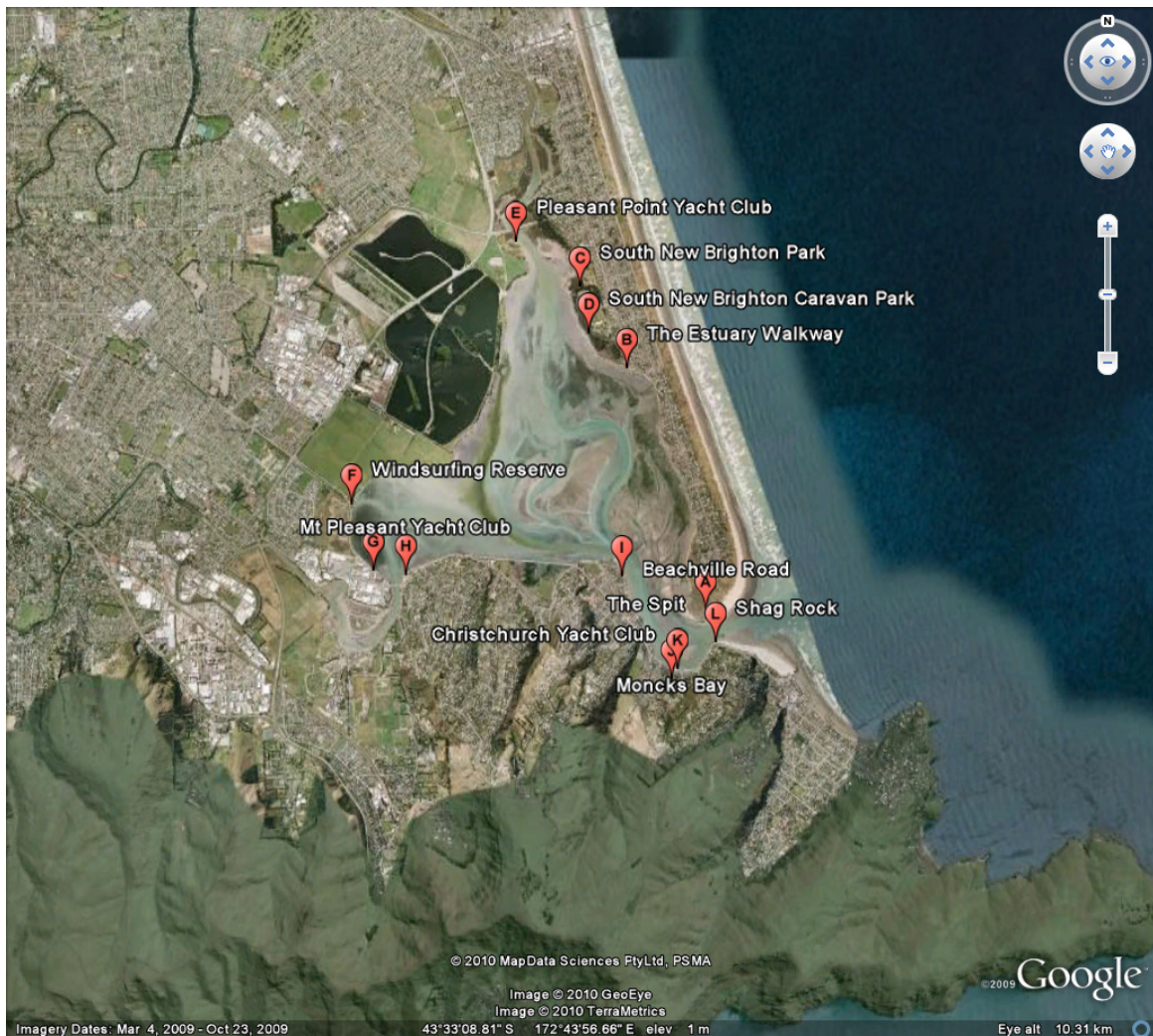


Figure 1: Map of Estuary and survey locations

No specific quotas were set in terms of gender and age but there was a general aim to interview a broad range of visitors to the Estuary. The different locations were selected in order to gain responses from major user groups of the Estuary, for example visiting yacht clubs, the windsurfing reserve and the walkways. The major user groups were identified from the Greenaway report (2007), which highlighted the most popular locations and activities around the Estuary. Therefore the results are not a random sample of all visitors to the Estuary rather the respondents represent certain values and experiences. Towards the end of the research period it was felt that few interviews had been conducted with kayakers but many with walkers, therefore the following weeks were spent around locations that were known to be popular with kayakers rather than on popular walking tracks.

The second survey was telephone based (Appendix II). A calling schedule was formulated by using the Christchurch White Pages and choosing the first and last number on a randomly selected page. Phone surveys were conducted by two interviewers at different times of the day, on both weekdays and weekends, over the Christmas and New Year period. The respondent interviewed in each household was determined by the person who was 18 years or over and who had the most recent birthday. In total, 385 phone surveys were conducted, enabling statistically significant analysis generalisable to the population of Christchurch as a whole. The telephone survey also enabled the research to potentially identify respondents who do not use the Estuary in summer during daylight hours, which is when the onsite survey was conducted.

Before completing either survey, interviewers ensured that the potential respondent was at least 18 years of age and, in the case of the telephone survey, had at least heard of the Estuary. Participants were also informed that the surveys were anonymous and voluntary. Data gathered from the survey was analysed using SPSS (Statistics Package for the Social Sciences).

In total 986 potential respondents were called; 385 agreed to participate in the telephone survey and 601 declined giving a response rate of 39 percent. Refusal rate for the onsite surveys was much lower, with most people willing to participate, although there were difficulties in getting interviews with shellfish gatherers as they seemed reluctant to participate. The most common reasons shellfish gatherers gave for not wanting to participate was lack of time or poor English language skills.

Results

Profile of telephone survey respondents

Most findings from the telephone survey will be reported alongside findings of the onsite survey, however the profile of all the telephone survey respondents is presented below.

Table 2 shows a summary of the suburbs where the telephone survey respondents resided; a full table of all responses is provided in Appendix III. As stated above, the phone numbers were selected randomly, so a broad cross section of suburbs is represented. There was a tendency for people who lived closer to the Estuary to be more interested in the topic and they were more likely to agree to participate; 38.5 percent of respondents were from the Eastern suburbs in closest proximity to the Estuary (Southshore, New Brighton, Bromley, Ferrymead, Redcliffs, Mt Pleasant, Sumner and Heathcote Valley).

Table 2: Residential suburb of telephone survey respondents (%)

	% of respondents
Eastern Suburbs (Shirley, Dallington, Burwood, Parklands, Avondale, New Brighton, Bexley, Aranui, South Brighton, Southshore, Bromley, Mt Pleasant, Redcliffs, Sumner, Ferrymead, Heathcote Valley, Wainoni)	38.6
Southern Suburbs (Woolston, Opawa, Waltham, St Martins, Beckenham, Sydenham, Somerfield, Spreydon, Hillsborough, Cashmere, Westmorland, Hillmorton, Halswell, Oakland)	17.4
Western Suburbs (Riccarton, Ilam, Burnside, Fendalton, Bryndwr, Sockburn, Hornby, Islington, Yaldhurst, Russley, Avonhead, Hei Hei)	16.7
Central Suburbs (Mairehau, Richmond, Avonside, Linwood, Addington, Merrivale, St Albans, Edgeware, Phillipstown)	13.5
Northern Suburbs (Bishopdale, Casebrook, Redwood, Northwood, Belfast)	7.3
Outer/Rural Suburbs (Spencerville, Brooklands, Rolleston, Halkett, Tai Tapu, Lincoln, Springston, Woodend)	6.5

There was a fairly even spread of ages amongst the telephone survey respondents with the mode being 40-49 year olds (20.5%), followed by 30-39 year olds (18.7%; Table 3). The gender distribution of the respondents was somewhat uneven, with 43.6% being male and 55.8% of respondents being female.

The ethnicity of the telephone survey respondents in comparison to the Census data from the Canterbury region collected in 2006 is shown in Table 4. There was a difference in

wording between the survey and the Census which has resulted in a difference between people classing themselves as a European or a New Zealander. So for the purpose of this research the categories 'New Zealander' and 'European' were combined. This aside it can be seen that ethnicity of the telephone survey participants is similar to that of the ethnicity of Canterbury residents. This suggests that the telephone survey reached a good cross-section of the Christchurch population.

Table 3: Age of telephone survey respondents (%)

	Frequency	Percent
18-19	9	2.3
20-29	63	16.4
30-39	72	18.7
40-49	79	20.6
50-59	68	17.7
60-69	49	12.8
70 and over	44	11.5
TOTAL	384	100.0

Table 4: Ethnicity of telephone survey respondents compared to 2006 Census (%)

	2006 Census (Canterbury)	Telephone Survey
European/New Zealander	91.2	80.8
Maori	7.2	11.4
Pacific peoples	2.1	1.3
Asian (including Indian)	5.7	4.0
Middle Eastern/Latin American/African	0.6	1.0
Australian	0	0.8
American	0	0.8

Participants were asked their highest education qualification and the results are displayed in Table 5, again in comparison with Canterbury resident's data collected in the 2006 Census. The Census data does not include a 'trade qualification' category, so for comparative purposes the 13.5 percent of telephone respondents who reported a trade have been incorporated in 'other tertiary qualification'. There are some noticeable differences between the results of the survey and the results of the Census, with there being far fewer people with no formal qualifications and more people with degrees and higher degrees in

the survey population. Interviewers reported that often, when requesting to conduct a telephone survey, respondents would mention that they had experience with conducting surveys whilst studying so that they were more willing to participate.

Table 5: Highest qualification: telephone survey respondents and 2006 Census (%)

	2006 Census (Canterbury)	Telephone Survey
No formal qualification	23.5	7.0
High school qualification	45.7	36.9
Degree	9.2	26.0
Higher degree	3.2	8.8
Other tertiary qualification	17.7	21.3

More than half (230 respondents, or 59.7%) of telephone survey respondents had visited the Estuary in the past. There were a number of interesting differences in likelihood of visitation by age, gender, ethnicity and educational qualifications (see Table 6). Firstly, males were much more likely to have visited the Estuary than females (66.7% of males interviewed compared to 56.1% of females) and New Zealand European/Pakeha were substantially more likely to have visited than Maori (66.8%; 42.1%). In terms of educational qualifications, those with trade or higher degree qualifications were more likely to visit than those with other qualifications or no qualifications. Older people were also much more likely to report that they visited the Estuary. Over two-thirds of those over 50-59 years of age had visited the Estuary, and more than four-fifths of those over 60 had visited, compared with less than half of those 20-29 years (41.7%).

Table 6: Likelihood of visited the Estuary: differences by gender, age, ethnicity and qualification (%)

Ever visited the Estuary		Ever visited the Estuary	
Male	66.7	NZ European/Pakeha	66.8
Female	56.1	Maori	42.1
20-29 yrs	41.7	No qualification	51.9
30- 39 yrs	54.3	High school	56.4
40- 49 yrs	51.3	Trade	70.6
50-59 yrs	69.1	Degree	56.7
60 – 69 yrs	81.6	Higher degree	76.5
70 yrs and over	81.8	OVERALL	59.7

It might be thought that the likelihood of having visited the Estuary would clearly rise as one ages, however if patterns of visitation are considered, those 60 years and over are still most likely to visit the Estuary on a regular basis. While the 50-59 year olds were most likely to have visited the Estuary in the past year (76.6%), those 60 and over are most likely to have visited in the past week; 40 percent of 60-69 year olds and 36.1 percent of those 70 and over had visited within the last seven days (Table 7).

Table 7: Last visit to the Estuary by age (%)

	Visited Estuary in past year	Visited Estuary in past week
20-29 yrs	61.5	26.9
30- 39 yrs	65.8	23.7
40- 49 yrs	68.3	19.5
50-59 yrs	76.6	16.7
60 – 69 yrs	65.0	40.0
70 yrs and over	61.0	36.1
OVERALL	67.3	26.3

It is interesting to note that amongst those who have ever visited the Estuary visitation is relatively frequent (Figure 2). Over a quarter of respondents had visited within the last week (26.3%) and 44 percent had visited within the last month. Two-thirds (67.3%) of the sample had visited within the last year and only 18.9 percent stated that they hadn't visited in five years or more.

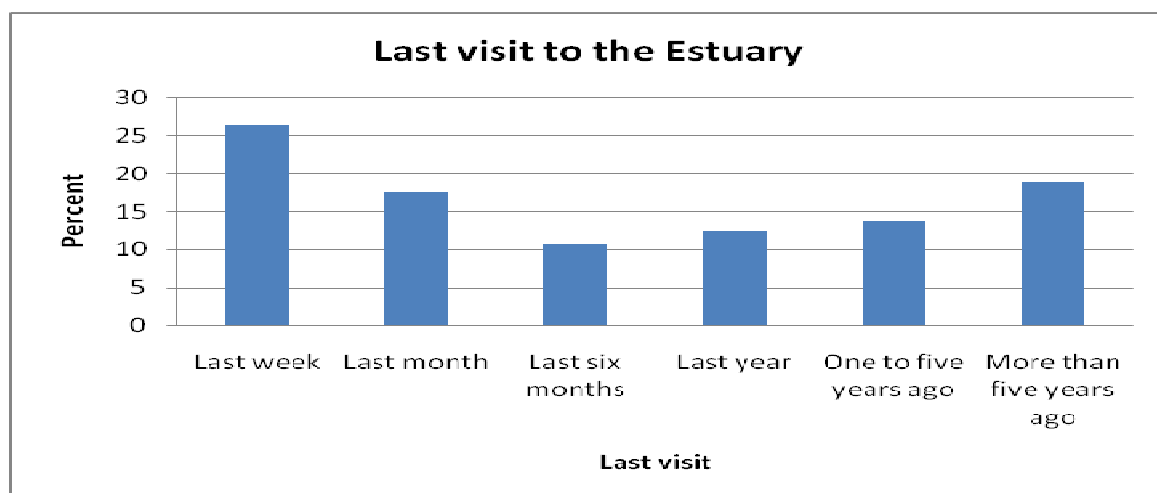


Figure 2: Last visit to the Estuary

The remainder of visitation patterns and activities of the telephone respondents, as well as their knowledge and attitudes towards the Estuary, will be discussed in the following sections alongside the onsite respondents.

Profile of Estuary visitors

The following section discusses Estuary visitors, incorporating data from both the onsite and telephone surveys.

Greenaway's report (2007) found that one of the main reasons people enjoyed visiting the Estuary was because it was in close proximity to their homes which suggests that the majority of the users would be residing in suburbs within close proximity to the Estuary. The suburbs in which the Estuary users lived were more widespread than might be expected, however, generally the suburbs closer to the Estuary had much higher percentages of participants living there; these are summarised in Table 8 (see also Appendix IV).

Table 8: Place of residence of Estuary users: onsite and telephone survey (%)

	Onsite	Frequent visitors: Telephone
Eastern Suburbs (Shirley, Dallington, Burwood, Parklands, Avondale, New Brighton, Bexley, Aranui, South Brighton, Southshore, Bromley, Mt Pleasant, Redcliffs, Sumner, Ferrymead, Heathcote Valley, Wainoni)	64.2	73.6
Southern Suburbs (Woolston, Opawa, Waltham, St Martins, Beckenham, Sydenham, Somerfield, Spreydon, Hillsborough, Cashmere, Westmorland, Hillmorton, Halswell, Oakland)	13.7	10.9
Western Suburbs (Riccarton, Ilam, Burnside, Fendalton, Bryndwr, Sockburn, Hornby, Islington, Yaldhurst, Russley, Avonhead, Hei Hei)	6.1	4.9
Northern Suburbs (Bishopdale, Casebrook, Redwood, Northwood, Belfast)	4.2	5.8
Central Suburbs (Mairehau, Richmond, Avonside, Linwood, Addington, Merrivale, St Albans, Edgeware, Phillipstown)	4.2	4.8
Canterbury other	1.8	0
New Zealand other	2.2	0
International	3.6	0

There is little overall difference between those interviewed onsite and those frequent Estuary visitors interviewed by telephone (visiting at least fortnightly), with the highest percentage in both groups coming from the Eastern suburbs. Close to three-quarters of telephone respondents reporting frequent visitation to the Estuary lived in the Eastern suburbs.

Table 9: Age of Estuary visitors: onsite and telephone surveys

	Onsite visitors		Telephone visitors	
	Frequency	Percent	Frequency	Percent
18-19	2	1.4	3	1.3
20-29	20	14.3	25	10.9
30-39	40	28.6	38	16.6
40-49	24	17.1	40	17.5
50-59	24	17.1	47	20.5
60-69	21	15.0	40	17.5
70 and over	9	6.4	36	15.7

The ages of the Estuary visitors from each survey type and in total are presented in Table 9 and Figure 3. It is clear that there are a wide range of age groups using the Estuary, however, overall the largest proportion of people were interviewed in the 30-39 age group. This was most apparent in the onsite surveys, where 28.6 percent of those surveyed were in the 30-39 age group, followed by 40-49 year olds and 50-59 year olds (17.1% each). Onsite only 15.7 percent of respondents were under 30 years of age. There are some differences in the telephone survey, where over half (53.7%) of the visitors interviewed were 50 years of age and over (compared with 38.5% on site); again, respondents under 30 years of age were underrepresented amongst Estuary visitors interviewed by telephone (12.2%).

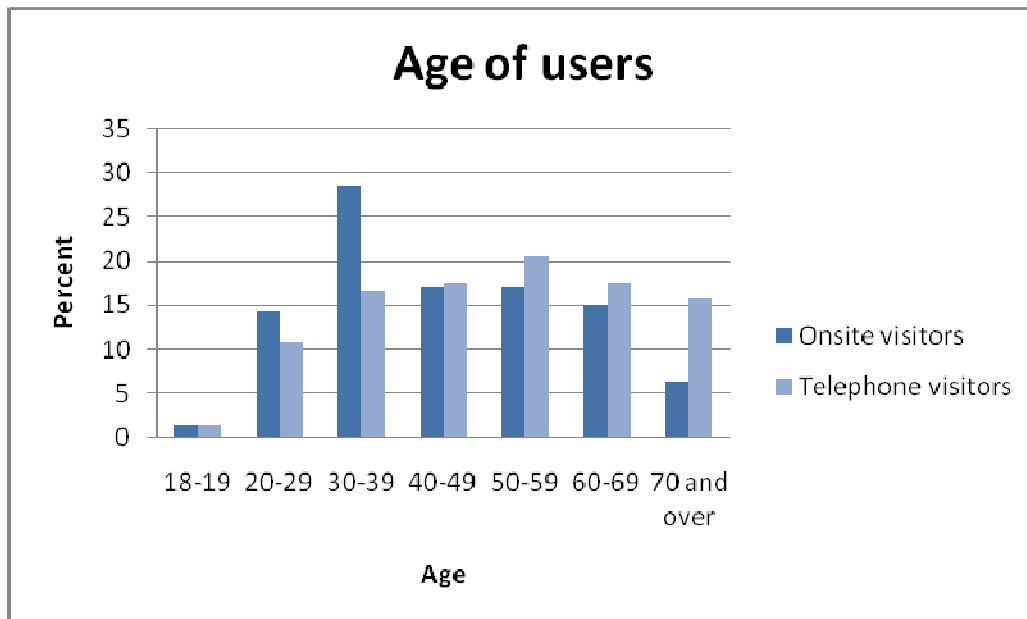


Figure 3: Age of Estuary users (%)

In the onsite survey there were significantly more male respondents than female respondents. Amongst telephone respondents there was a slight dominance of females over males who had visited the Estuary, however this is due to the sample being skewed towards females (55.8 % of those interviewed in the telephone survey were female). As stated above, males who responded to the telephone survey were more likely than females to visit the Estuary (see Table 10).

Table 10: Gender of Estuary visitors: onsite and telephone survey

	Onsite users		Telephone visitors	
	Frequency	%	Frequency	%
Male	82	58.6	110	48.0
Female	58	41.4	119	52.0

The educational qualifications of the onsite and telephone Estuary visitors are relatively similar (Table 11). In neither sample did many respondents report no formal qualifications, and in each sample the largest proportion of respondents reported that their highest qualification was a high school qualification. Approximately a quarter of each sample had a degree (26.6% onsite and 23.9% telephone), however overall the telephone sample were more likely to have a tertiary qualification (59.6%) than the onsite sample (52.5%), the difference being most apparent in higher degrees and other tertiary qualifications.

Table 11: Highest qualification of Estuary visitors: onsite and telephone survey

	Onsite visitors		Telephone visitors	
	Frequency	Percent	Frequency	Percent
No formal qualification	9	6.5	14	6.1
High school qualification	57	41.0	79	34.3
Trade qualification	25	18.0	36	15.7
Degree	37	26.6	55	23.9
Higher degree	7	5.0	26	11.3
Other tertiary qualification	4	2.9	20	8.7

Examination of the ethnic profile of Estuary visitors reveals that the ethnic groups that use the Estuary are similar to the overall spread and percentage of ethnic groups in the Canterbury region as highlighted by the 2006 Census data (Table 12). This distribution differs from Greenaway (2007), particularly in the higher proportion of Maori and Polynesian and the smaller proportion of British and other European or North American respondents. Of note also is the much higher proportion of Maori interviewed by telephone than onsite in this study (9.4% vs 3.6%).

Table 12: Ethnicity of Estuary users: onsite and telephone survey and overall

	Onsite visitors		Telephone visitors	
	Frequency	Percent	Frequency	Percent
NZ European/Pakeha	110	78.6	287	74.5
Maori	5	3.6	42	10.9
Polynesian	4	2.9	7	1.8
Chinese	3	2.1	8	2.1
Other Asian	3	2.1	5	1.3
British	7	5	12	3.1
Other European	2	1.4	13	3.4
American	1	0.7	1	0.3
South African	4	2.9	5	1.3
Other	1	0.7	5	1.3

The experiences and activities of Estuary visitors

Purpose for visiting the Estuary

Participants were asked about the main purpose of their trip to Estuary on the day of the interview, or in the case of the telephone survey, on their most recent visit (Table 13; Figure 4). They were asked also about any other activities in which they participated on that day. Exercise was most frequently mentioned as the main purpose of visiting the Estuary by both onsite (27.9%) and telephone respondents (30.9%). This was followed by ‘walking the dog’ for both samples, although onsite respondents were much more likely to mention this than telephone respondents. Although not originally included in the categories of responses, activities involving children (e.g. visiting a playground, playing games in a park) was an important response category for both samples, with 11.4% of onsite visitors stating this was the main purpose for their visit. Telephone respondents were more likely to say they were visiting for a picnic (6.4% compared to 2.9%) and general sightseeing (11.2%; 2.1%). By contrast, significantly more onsite respondents stated that they were at the Estuary primarily for seafood gathering (7.1% compared to 1.3%), which reflects the fact that this group were specifically targeting by onsite interviewers. A full list of the other reasons for visiting the Estuary can be found in Appendix V. The results of this question are similar to that of Greenaway and Associates (2007) which suggest that people do predominantly enjoy using the area for exercise purposes, the exception being the importance of the Estuary for children’s activities.

Table 13: Main purpose of visiting the Estuary: onsite and telephone visitors (%)

	Onsite	Telephone
Walking dog	22.1	11.2
Exercise	27.9	30.9
Visiting with children	11.4	6.5
Bird watching	0.0	3.0
Picnicking	2.9	6.4
Kayaking	0.7	2.6
Sailing	1.4	1.7
Windsurfing	2.9	2.1
Kitesurfing	2.9	0.9
Sightseeing	2.1	11.2
Seafood gathering	7.1	1.3
Other	18.6	22.3

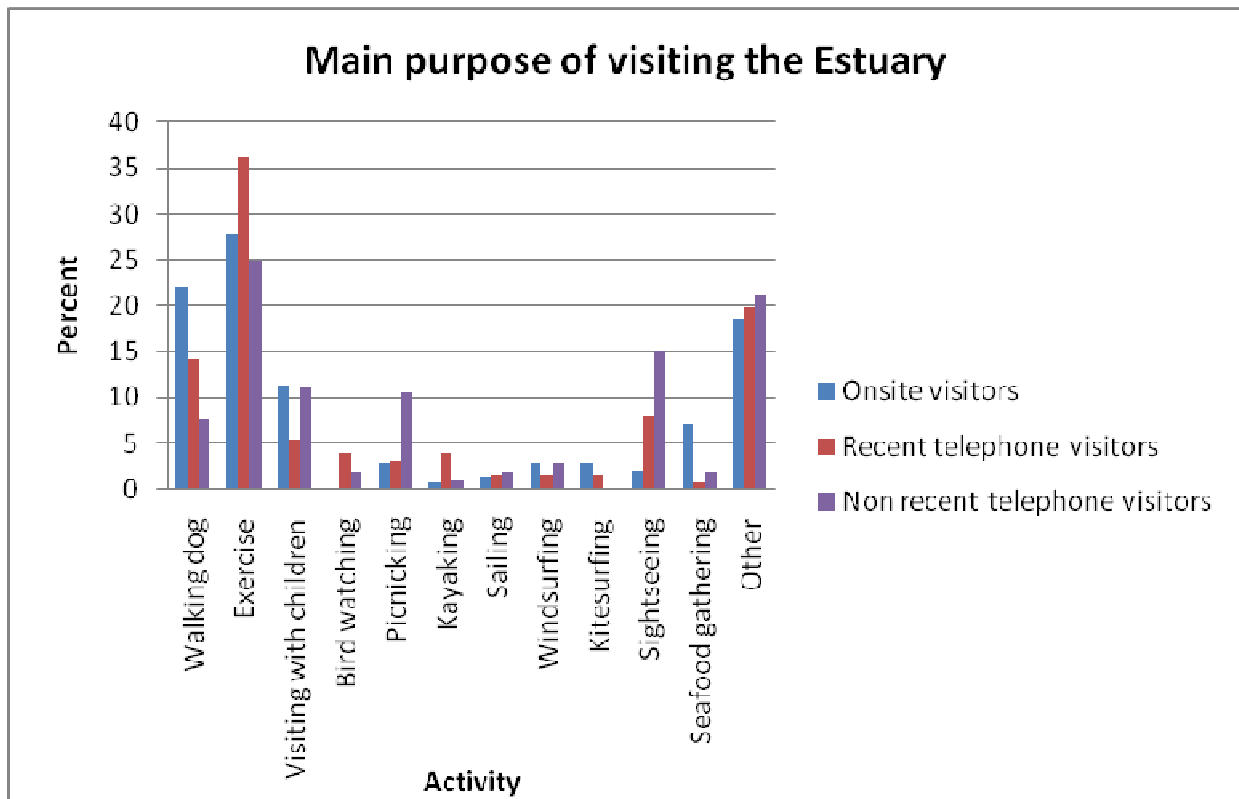


Figure 4: Main purpose of trip to the Estuary

There are some differences apparent between recent (within the past twelve months) and non-recent Estuary visitors amongst telephone respondents (Table 14). Recent visitors were more likely to have been participating in dog walking, exercise and birdwatching as the main purpose of their trip, whereas non-recent visitors were more likely to have been picnicking, visiting for children's activities, and for general sightseeing. Non-recent visitors were more likely also to report seafood gathering, windsurfing and sailing as the purpose of their last trip. It must be noted, however, that more than a third of non-recent visitors reported the main purpose of their trip as being for 'other' purposes.

A list of additional activities was provided and participants were asked to choose as many as they were participating in on that visit or on their last visit. It is clear from the results that the activities that were important as main activities were important also as secondary activities; exercise was the most popular additional activity for both samples and dog walking was a popular activity also (Table 15; Figure 5). There were some activities that seemed much more important as secondary activities than as the main purpose of a trip.

Table 14: Main purpose of visiting the Estuary: recent and non-recent visitors (%)

	Onsite visitors	Telephone visitors	
		Recent	Non recent
Walking dog	22.1	14.2	7.6
Exercise	27.9	36.2	24.8
Visiting with children	11.4	5.4	11.2
Bird watching	0.0	3.9	1.9
Picnicking	2.9	3.1	10.5
Kayaking	0.7	3.9	1.0
Sailing	1.4	1.6	1.9
Windsurfing	2.9	1.6	2.9
Kitesurfing	2.9	1.6	0.0
Sightseeing	2.1	7.9	15.2
Seafood gathering	7.1	0.8	1.9
Other	18.6	19.8	21.2

For onsite visitors, seafood gathering was mentioned as an additional activity by 10 percent of respondents, while 14.2 percent of telephone respondents stated that on their previous visit they had participated in some bird watching; 7.9% of onsite visitors also mentioned birdwatching. General sightseeing was another important secondary activity for close to a third of telephone respondents and 16.4 percent of onsite visitors. Coming to the Estuary for children's activities, an important main purpose of visit identified, was not included in this list of additional activities.

Table 15: Additional purpose of visiting the Estuary: onsite and telephone visitors (%)

	Onsite visitors	Telephone visitors
Walking dog	20.7	11.6
Exercise	44.3	44.4
Bird watching	7.9	14.2
Picnicking	4.3	8.2
Kayaking	1.4	3.4
Sailing	2.9	2.6
Windsurfing	1.4	1.7
Kitesurfing	2.1	1.3
Sightseeing	16.4	30.2
Seafood gathering	10.0	2.2
Other	1.1	1.3

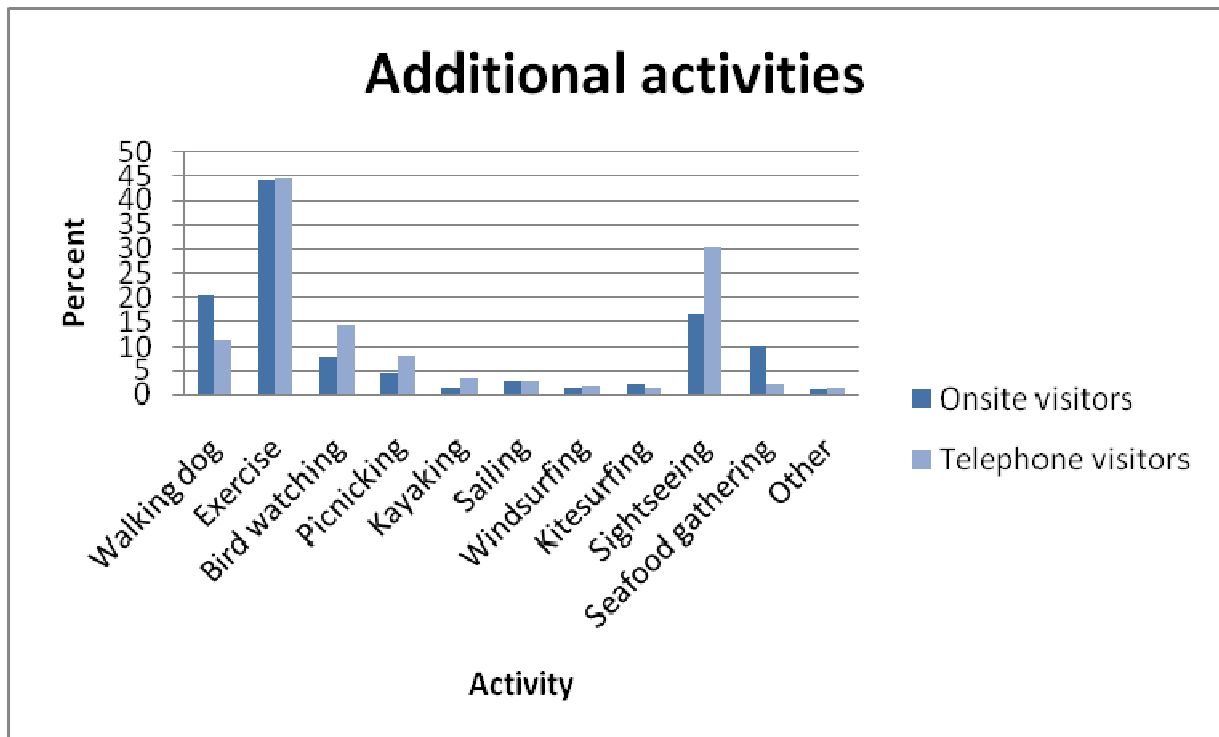


Figure 5. Other activities respondents were participating in at the Estuary

As Table 16 demonstrates, there were some differences in the use of the Estuary by gender, although these differences were not necessarily similar between onsite and telephone respondents. For example, 70.2 percent of females interviewed onsite gave the main purpose of their trip as either exercise or walking the dog, compared to 36.6 percent of the males onsite. However in the telephone survey males and females were quite similar in reporting these activities (40.0% males, 43.4% females). In both samples, however, males were much more likely to mention some form of water-based sport (seafood gathering, kitesurfing, windsurfing, sailing or kayaking) than women. For example, in the telephone survey 16.2 percent of males mentioned these activities compared to 1.6 percent of females; onsite this difference was still present, but not quite as extreme, except in the case of seafood gathering (11.0% compared to 1.8%). An area where females dominated was in the category of visiting with children, particularly amongst those interviewed onsite (9.3% females compared to 2.1% males).

Table 16: Main purpose of visiting the Estuary by gender (%)

	Onsite survey		Telephone survey	
	Males	Females	Males	Females
Walking dog	15.9	31.6	9.1	12.3
Exercise	20.7	38.6	30.9	31.1
Bird watching	0.0	0.0	1.8	4.1
Visiting with children	2.1	9.3	2.6	3.9
Picnicking	3.7	1.8	3.6	9.0
Kayaking	1.2	0.0	4.5	0.8
Sailing	3.7	1.8	3.6	0.0
Windsurfing	1.2	1.8	4.5	0.0
Kitesurfing	3.7	1.8	1.8	0.0
Sightseeing	2.4	1.8	9.1	13.1
Seafood gathering	11.0	1.8	1.8	0.8
Other	34.5	10.3	26.5	34.8

Seafood gathering/fishing at the Estuary

As stated above, in the past the Estuary has been an extremely important source for *mahinga kai*. Therefore to establish whether this is still the case all visitors were asked if they had ever fished or gathered seafood from around or in the Estuary. The research found that only 28 people (12.4%) had fished or gathered seafood in the Estuary and the remainder had not. With 11.8% of onsite visitors stating that they had and only 2.6% of telephone visitors.

If participants had never fished or gathered seafood they were asked their reasons for not participating in this activity. The responses given by onsite respondents and visitors identified by telephone were very similar (Table 17). The reason given by more than half of all visitors being that the Estuary seafood was unsafe to eat (onsite 52.6%; telephone 51.2%). A further quarter of all respondents stated they were not interested in seafood gathering or fishing or they did not have time. Further details relating to seafood gathering at the Estuary can be found in a report that was based on the same findings from this study titled Food gathering Practices at the Avon-Heathcote Estuary Ihutai, Canterbury, Aotearoa/New Zealand (Fisher & Vallance, 2010).

Table 17: Why people don't fish/gather seafood at the Estuary (%)

	Onsite	Telephone visitors
Estuary seafood unsafe	52.6	51.2
Not interested/don't have time	26.7	25.5
Don't eat seafood	12.9	12.8
Don't have the equipment	6.0	7.4
Don't know how to	9.5	8.3
Don't know what's available	0.0	3.4
Don't know the regulations	0.9	1.0

Patterns of visitation

All onsite respondents who were not visiting for the first time, as well as telephone respondents who reported visiting the Estuary within the last year, were asked a series of questions about their patterns of visitation to the Estuary, including their frequency of visitation, and when they visited (time of the day, day of the week, time of the year).

As can be seen in Table 18, close to half of onsite visitors (43.1%) stated they visited daily, with a further 28.5 percent reporting that they visited weekly; none of the onsite respondents reported visiting less than once a month. Telephone respondents were less frequent visitors, but a quarter (25.2%) still reported that they visited daily, and the majority visited once a month or more often.

Table 18: Frequency of visits (%)

	Onsite	Telephone visitors
Daily	43.1	25.2
Weekly	28.5	11.0
Fortnightly	13.8	16.8
Monthly	14.6	29.7
Less than once a month	0.0	17.4

Visitors to the Estuary were asked also what time of the day they normally visited (Table 19, Figure 6). The modal response to this question from both onsite and telephone visitors was 'no regular time to visit' (52.8% and 36.0% respectively).⁴ Of those who did give a

⁴ A design error resulted in telephone participants being given the option of stating that visitation was dependent on time but onsite participants were not given this option

preferred time to visit, the afternoon was most frequently mentioned by both onsite and telephone respondents. Telephone respondents were more likely to visit in the early morning (17.4%) than onsite visitors (9.4%) and sometime in the evening (21.0% compared with 10.2%). This is not surprising, given the onsite interviews were generally conducted between the hours of 9am and 5pm.

Table 19: Time of visits (%)

	Onsite	Telephone visitors
Early morning	9.4	17.4
mid-late morning	18.1	9.3
Afternoon	21.3	20.9
Early evening	7.1	14.0
Late evening	3.1	7.0
No regular time	52.8	36.0
Depends on tides	0.0	22.1

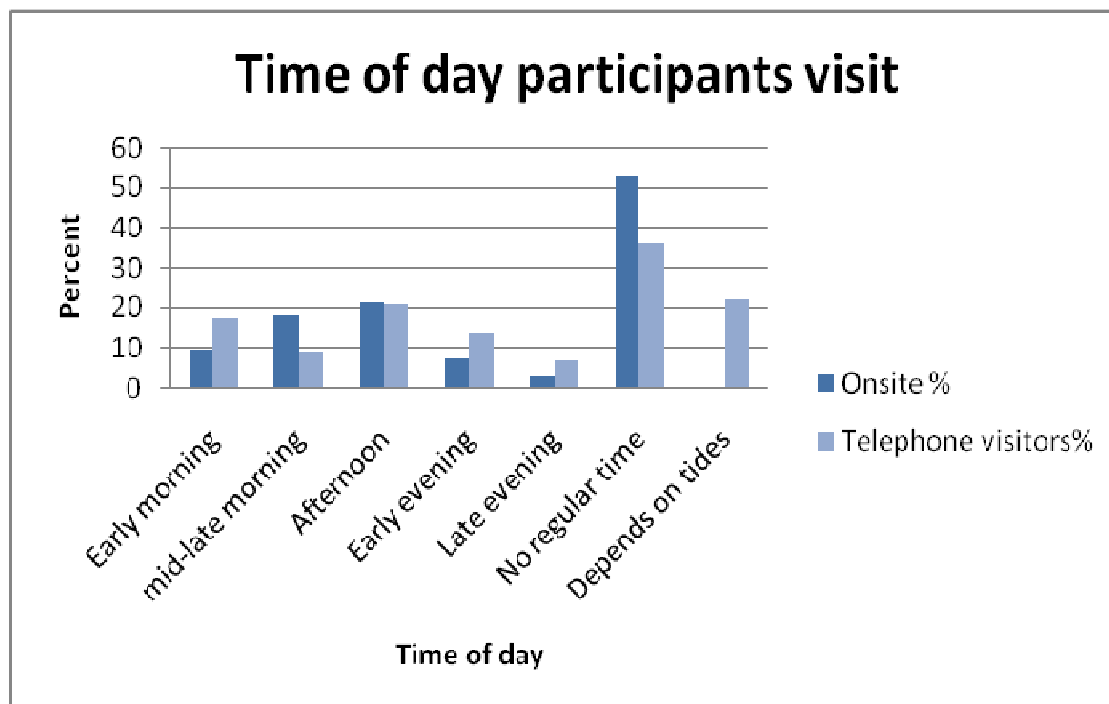


Figure 6: Time of day of visit of Estuary users: onsite and telephone survey

As Table 20 demonstrates, the majority of both onsite and telephone respondents indicated that they visited the Estuary on both weekdays and the weekend. This is perhaps unsurprising given the proportion of respondents indicating that they visited daily. However there are some differences between the respondents when a preference of weekdays or

weekends are given, with telephone respondents more likely to report weekend visits than onsite visitors (18.6% vs 13.4%) and onsite visitors more likely to report weekday visits (24.4% vs 18.6%).

Table 20. Day of week of visit of Estuary visitors: onsite and telephone survey (%)

	Onsite	Telephone visitors
Weekdays	24.4	18.6
Weekends	13.4	18.6
Both	62.2	62.8

Seasonal variations in visitation patterns were explored also, with respondents being given the choice to indicate whether they visited in particular seasons or all year round. More than two-thirds of onsite and telephone visitors stated that they visited all year round, with summer and spring being the most popular seasons to visit (Table 21, Figure 7). It was envisaged that those interviewed by telephone might show some differences in seasonal visitation to the onsite respondents, who were being interviewed during the summer months. In fact slightly more of the telephone respondents than the onsite respondents stated that they mostly visited in summer. Those interviewed by telephone were more likely also to report visitation predominantly in spring.

Table 21. Seasonal patterns of visitation of Estuary users: onsite and telephone survey (%)

	Onsite	Telephone visitors
All year round	72.4	70.2
Spring	11.0	15.3
Summer	26.8	27.4
Autumn	2.4	2.4
Winter	0.0	0.0

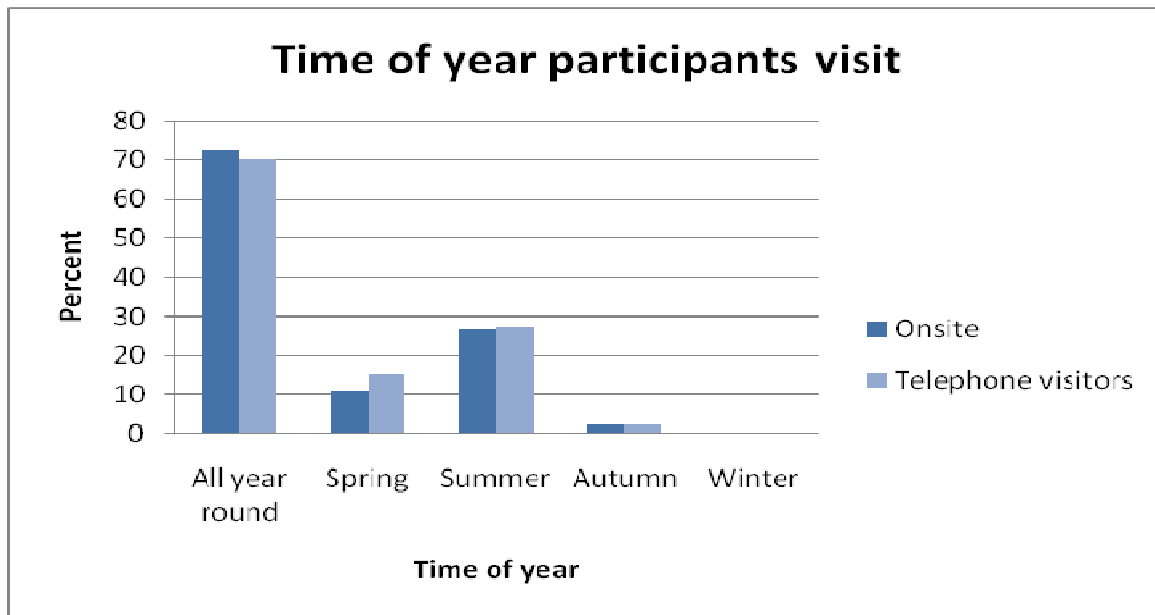


Figure 7: Time of year participants visit

It was thought that there may be some differences in visitation patterns between males and females; in general, there are no clear patterns in these findings. Table 22 shows that females were more likely to report that they visited in the evening than males; the early evening was the most frequently mentioned time to visit amongst females interviewed by telephone (22.2%). Females were more likely than males to visit in the afternoons, although this difference is most notable amongst telephone respondents. Amongst onsite respondents, males were much more like than females to report that they visited in the morning, whereas the opposite was the case amongst the telephone respondents.

Table 22: Visitation times to the Estuary: onsite and telephone survey (%)

	Onsite survey		Telephone visitors	
	Males	Females	Males	Females
Early morning	12.2	5.8	16.3	19.4
mid-late morning	20.3	13.5	6.1	13.9
Afternoon	20.3	23.1	12.2	30.4
Early evening	6.8	7.7	8.2	22.2
Late evening	2.2	3.8	6.1	8.3
No regular time	52.7	53.8	38.8	33.3
Tide dependent	0.0	0.0	28.6	13.9

Visitation habits of Estuary users

Participants were asked a series of questions regarding who they visit the Estuary with, how they travel there and the specific locations they visit. Table 23 and Figure 8 shows that the largest proportion of Estuary visitors intercepted onsite were visiting alone (37.9%), whereas amongst telephone respondents a quarter (24.9%) each reported visiting alone or with a partner or spouse; much fewer of those interviewed onsite were visiting with a partner/spouse (14.3%). Visitors interviewed onsite and by telephone were quite likely to visit with their family (onsite 23.1% telephone 21.9%), or with friends (onsite 12.9% telephone 15.0%).

There were some safety concerns reported by a few of the female participants and it was felt that this might impact upon the likelihood of them visiting the Estuary alone. As can be seen from Table 24, females were less likely than males to visit the Estuary on their own, although this difference is most apparent in the telephone survey, where 34.5 percent of males visited on their own, compared with only 16.4 percent of females. By comparison, a third of females interviewed onsite were on their own (35.1%) compared to 39.0 percent of males. Females were significantly more likely than males in each sample to be visiting the Estuary with their family.

Table 23: Travel party: onsite and telephone survey (%)

	Onsite	Telephone visitors
Visit alone	37.9	24.9
Partner/spouse	14.3	24.9
Friends	12.9	15.0
Family	23.1	21.9
Friends & family	7.1	9.0
Special interest group	2.1	3.9
Other	2.1	0.4

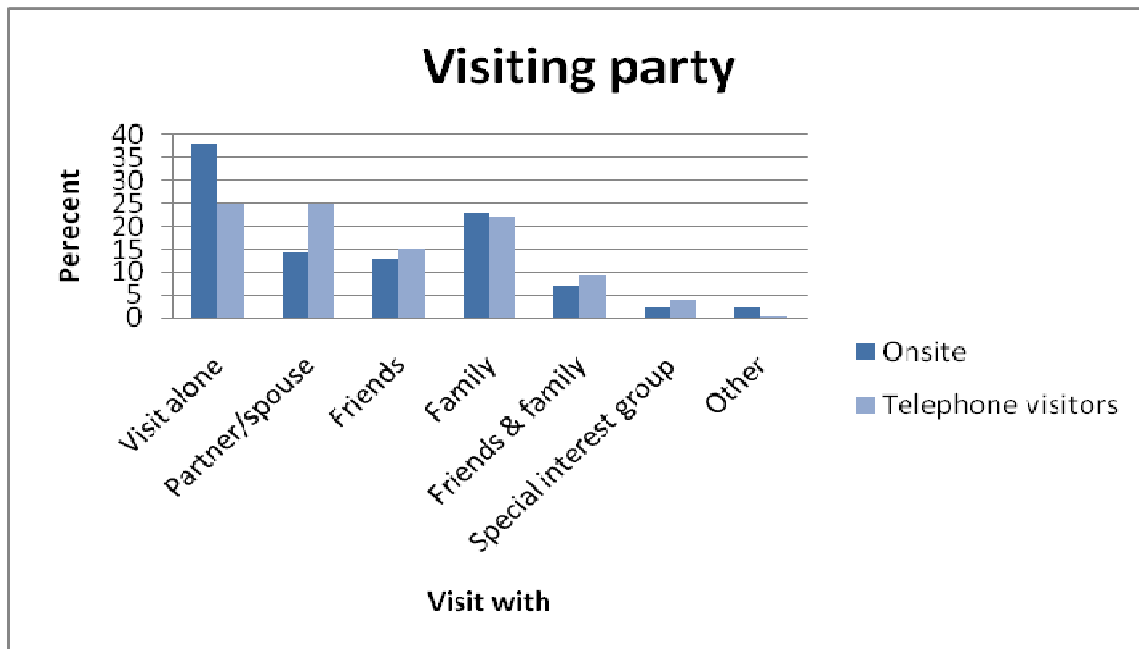


Figure 8: Travel party

Table 24: Travel party: comparison by gender (%)

	Onsite survey		Telephone visitors	
	Males	Females	Males	Females
Visit alone	39.0	35.1	34.5	16.4
Partner/spouse	17.1	10.5	21.8	27.0
Friends	15.9	8.8	14.5	15.6
Family	17.1	33.3	17.3	26.2
Friends & family	6.1	8.8	9.1	9.0
Special interest group	1.2	3.5	1.8	5.7

There were few differences between onsite and telephone visitors regarding means of travel to the Estuary (Table 25). The most common form of transportation for both groups was private car, following by walking, with onsite respondents more likely to walk (27.0% compared to 17.9%) and telephone respondents more likely to take the car (73.7% compared to 62.8%). Only a small proportion took any other form of transportation, including bicycle or by rental car. Perhaps a surprising finding is the very small proportion of respondents who had travelled to the Estuary on a public bus, despite a number of locations around the Estuary being on a bus route.

Table 25: Mode of transport: onsite and telephone respondents (%)

	Onsite	Telephone visitors
Private car	62.8	73.7
Public bus	1.5	2.2
Rental car	2.9	0.4
Walked	27.0	17.9
Bicycle	5.1	4.0
Tour bus	0.0	1.8
Other	0.7	0.0

Locations visited

Estuary visitors were asked to identify on a map (Appendix VI) if they were onsite or simply recall if they were being interviewed over the telephone which locations around the Estuary they visited most often. Appendix VII shows a full list of the answers given and Table 26 shows a summary of the results of this question. The Spit and the Estuary walkway (49 respondents each) were the most frequently mentioned locations, followed by South New Brighton Park (46 respondents) and other locations around South New Brighton (24 respondents). It is interesting to note that when given relative freedom to discuss where they had been around the Estuary some participants stated areas that were not considered part of the Estuary for the purpose of this research. For example 11 people included visiting part of Sumner as the locations they visit around the Estuary. In general, the locations identified by respondents are similar to those identified by Greenaway (2007).

Table 26: Most frequently visited locations

Location	no.	Location	no.
The Spit	49	Whole of Estuary	18
Estuary walkway	49	Moncks Bay	12
South New Brighton Park	46	Sumner	11
South New Brighton side	24	Pleasant Point yacht club	9
Shag Rock	21	Mt Pleasant yacht club	8
Windsurf reserve	25	Tidal view	6
South New Brighton Jetty	24	Christchurch yacht club	5
Beachville Road	16	Humphreys Drive	6
Port Hills side	15	McCormacks Bay	5

Favourite places at the Estuary

Estuary visitors were asked to talk about their favourite place around the Estuary and 124 respondents nominated a favourite place. Table 27 shows the most frequently mentioned favourite places and the most common reasons given for their choices. The Spit was the most frequently mentioned favourite spot; nominated by 25.8 percent of those with a favourite place (32 respondents). Other popular sites were South Brighton Park (20 respondents), South Brighton walkway (16 respondents), the kite-surfing and windsurfing reserve (11 respondents) and Shag Rock (11 respondents). When asked what they liked most about their favourite spot, most responses identify the appeal of the natural setting and the peacefulness of the area.

Table 27: Favourite place around the Estuary

Favourite Place	no.	Explanation
The Spit	32	The views, surf, tides and changing landscapes; The views and the birds in the area; Estuary and the ocean meeting; isolated and natural. Nice view over to the other side and its sandy so its nice to sit by the water; it's the ocean and the Estuary together, isolated and peaceful, the view and the birdlife; can sit on the bench and look across, it's very peaceful and quiet; deep flowing water; isolated and quiet - it's apart from the city; memories of fishing and playing there as a child - it's a lovely place; quiet and peaceful; food gathering and wharf; used to fish there when it was good; very scenic and one of the best view of Christchurch from ground level; feeling I get there
South Brighton Park	20	Kids love playing there; it's refreshing; Nice sheltered spot, it's nice to sit and relax there; nice trees so the dogs can sit in the shade, it's great for kids as there is a lot of space to run around, sheltered and peaceful, great for kids; sheltered and has memories of my childhood; lots for kids to do there -playground, shell hunting and playing in the trees; it's sheltered and the dog can run around; Kids like digging in the sand for shells and crabs; relaxing and nice view.
South Brighton walkway	16	The track and the birdlife; good place to walk; quiet time for reflection; it's sheltered, shady and quiet, it's a nice place for the dogs to rest and read a book, can sit and look out over the Estuary; quiet and tranquil; the birds and it's peaceful; mainly because it is such a peaceful and relaxing walk, so handy to home and a beautiful resource; fresh air and lots to show and entertain the kids; walking along at high tide it's peaceful and pretty
Wind/Kite surf area	11	Fun to watch; fun and sociable; when conditions are right it's fantastic for kite surfing; can watch water sports; great to watch activities; fantastic conditions; fun, sociable and safe conditions; fantastic conditions; observing; it's fun and safe.
Shag Rock	11	Dog friendly and relaxing; easy parking and close to the beach; always changing; nice view out to the ocean; sandy so it's a nice place to walk and the views change; beautiful sunrise in the early morning; significant Maori history

Beachville road	7	Close to work and quiet for lunch; can watch the water and have lunch; love it there - the outlook, water and fresh air; no noise or traffic and there are seats; good views of the Estuary; used to fish with cousin there; grew up around there and it's nice for a walk
South New Brighton park jetty	8	watch the birds at low tide; sit and watch the birds, can read a book there it's peaceful; got everything, hills/water/trees; view; good spot for lunch; great for photographing birds; calming view
Moncks Bay	6	Peaceful and looks out to sea; secluded safe beach and it's safe for kids to run around; can see tidal flow; beautiful view, good for fishing as it has flowing water; channel flows through it; just a lovely place to stop, can see the Estuary and the ocean
Humphreys Dive	5	Great place to launch the kite; good place to launch the kite as there is lots of space; nice café after walking; stop for morning tea and lunch; restaurant for dining
Christchurch yacht club	5	Look at boats and beach depending on the tide; friends and activities; sociable and fun place; friends, boats and fun events;
Out on the water	3	In the right conditions it can be absolutely fantastic for kite surfing; calming; marks the end of the Avon and can go fast

Awareness of Estuary information

All participants were asked if they had heard anything about the Estuary in the past 12 months, whether they had visited the Estuary or not. Table 28 shows that respondents who had visited the Estuary were much more likely to report hearing something than those who had never visited. While 52,1 percent of those interviewed onsite reported hearing something in the past twelve months, this figure was 62.2 percent amongst telephone respondents who had ever visited the Estuary. Only 18.4 percent of non-visitors reported hearing anything about the Estuary in the previous 12 months. This suggests that there has been information available about the Estuary but perhaps non-visitors are just not that interested in the Estuary and therefore ignore information, whereas visitors are generally actively interested in information about the Estuary because they can relate to the place that the information is about. Alternatively, as this research has shown, visitors to the Estuary frequently come from suburbs nearby, so may just be more interested in events or activities in their 'backyard' or are exposed to more information in local newspapers and locally-available newsletters.

Table 28: Heard something about the Estuary in the past 12 months

	Onsite	Telephone	
		Visitors	Non-visitors
Heard something recently	52.1	62.2	18.2
Have not heard anything recently	47.9	37.8	81.8

Table 29 summarises the top responses from Estuary visitors regarding the information they had heard over the previous twelve months. It is apparent that telephone respondents were more likely to have heard information on a broad range of topics than onsite respondents. By far the most common topic of information reported by both groups of visitors regarded the progress and plans for the new outfall pipe. Many telephone respondents mentioned water quality issues, stories and information about birdlife and information regarding native plantings in the area; all these topics were raised by onsite visitors also, but by fewer people.

Table 29: Information heard about the Estuary: Estuary visitors

	Onsite visitors n=140	Telephone visitors n=230
	Frequency	Frequency
Information about the outfall pipe (How far it has got, people died making it, what it will do for the area etc.)	37	79
Water quality (Poor quality but improving, Ecan's work etc).	9	46
Birdlife (Endangered, Godwit event, problem with dogs etc)	9	30
Native plantings (Heard it was happening in area, involved, what has been planted etc)	1	10
Other	5	34

Table 30 shows a summary of what the non-users had heard about the Estuary. Again, the largest topic of information concerned the outfall pipe, with 13 respondents having heard something about this. Other topics mentioned included the Godwit welcoming event, developments in the area, and pollution of the Estuary and rivers.

Table 30: Information heard about the Estuary: non visitors (telephone survey)

	Number of respondents
Outfall pipe development	13
Godwit event	4
Developments in the area	3
Pollution in the Estuary	2
Polluted rivers	2
Turning 'something' into fuel	1
Clean up area and restore Island	1

Source of information regarding the Estuary

Visitors and non-visitors to the Estuary were asked about their main source of information about the Estuary (Table 31). For those who had never visited the Estuary, a news item was the source of information for more than half of all respondents (57.1%), followed by news advertising (14.3%). Visitors to the Estuary had heard information from a much wider array of sources. Onsite visitors were most likely to mention previous visits (25.5%), word of mouth (19.1%) and a news item (13.6%), while Estuary visitors responding to the telephone survey gave a news item (25.2%), word of mouth (19.6%) and news advertising (18.9%) as their main sources of information.

Table 31. Main source of information

	Visitors		Non visitors
	Onsite	telephone	
Previous visits	25.5	8.4	0.0
Signage on site	7.3	0.0	3.6
Word of mouth	19.1	19.6	7.1
Driving past	6.4	4.9	7.2
News item	13.6	25.2	57.1
News Advertisement	6.4	18.9	14.3
Forecast/tides	1.8	7.0	0.0
Website	3.6	2.8	7.1
Brochure/pamphlet	7.3	5.6	3.6
Newsletter	8.2	7.7	0.0
Other	0.9	0.0	0.0

Signage at the Estuary

Respondents who had visited the Estuary were asked if they had seen any information or warning signs around the Estuary. In answer to this question there were very different responses between the telephone and onsite Estuary visitors. While half (51.0%) of telephone respondents reported seeing signage, only 12.7 percent of onsite visitors could recall any signage. Table 32 shows a summary of what respondents reported seeing in the way of signage. While there were many different responses given, the majority mentioned warning signs about seafood or swimming in the Estuary. A lot of people also stated that they recalled seeing signs about keeping dogs on leads at certain times of the year and information about birds nesting.

Table 32. Signs users had seen around the Estuary

	Frequency
Seafood warnings	79
Swimming warnings	19
Information about boats	15
General information	15
Information/Restrictions for birds	14
Information about dogs	14

Respondents' perceptions and attitudes towards the Estuary

All participants were asked the same attitudinal statement questions regardless of whether they had visited the Estuary or not. This was intended to assess visitor and non-visitors attitudes towards the Estuary and their perceptions of the resource. These perceptions and attitudes were tested by reading out a series of statements and asking respondents to rate them on a scale of one to five, where one was strongly agree and five was strongly disagree to the statement. A response of three meant the respondent neither agreed nor disagreed with the statement. Table 33 shows the mean responses for four categories of respondents; onsite visitors and three groups of telephone respondents – recent visitors (within the last 12 months), non-recent visitors and non-visitors. What is not apparent from these mean responses is the fact that visitors to the Estuary were much more likely to state an opinion – either agreeing or disagreeing, while those who had never visited the Estuary were much

more likely to give 'no opinion' (that is 'neither agree nor disagree'). For this reason, Table 34 has been included here also, to show the percentages in three categories of respondent (onsite visitor, telephone visitor and non-visitor) who agreed or disagreed with each statement. Looking at Tables 33 and 34 there are some interesting differences between visitors to the Estuary and non-visitors regarding their perceptions of the resource, although overall, even those who have never visited the Estuary are generally fairly positive about most aspects of the resource (For more information see Appendix VIII).

In terms of the first statement 'The Estuary is a great recreation resource for Christchurch residents' the strongest support of this statement came from onsite visitors (mean 1.69) and telephone respondents who had visited within the last twelve months (mean 1.67), however even non-visitors were slightly positive on average regarding this statement (mean 2.77). Over 90 percent of the recent visitors (onsite and telephone) agreed or strongly agreed with this statement, compared with only 43.7 percent of the non-visitors. Perhaps even more importantly, no more than three percent in any respondent category disagreed with this statement, suggesting that generally Christchurch residents are relatively positive about the resource.

There were similar responses to the statement 'The Estuary is a wetland of national significance'; the strongest support for this statement came from people who had visited the Estuary recently, with recent visitors interviewed by telephone (mean 1.78) slightly more positive than those interviewed onsite (mean 1.93). Telephone respondents who had not visited within the last year were also positive about this statement (mean 2.01) as were those who had never visited the Estuary (mean 2.51). Half of non-visitors (50.7%) supported this statement, as did four-fifths of onsite visitors (81.3%) and telephone visitors (84.8%).

In terms of promotion of the Estuary to either visitors to Christchurch or Christchurch residents the means for all groups to these statements suggest agreement, with all groups agreeing more strongly with the need to promote the resource to Christchurch residents than to visitors to Christchurch. The exception to this was non-visitors to the Estuary who were neutral about whether the resource should be promoted to visitors to Christchurch (mean 3.02) but the most positive of all the groups about the need for the Estuary to be

promoted to Christchurch residents (mean 2.11). What is not apparent from the presentation of mean results is that on these two questions there was quite a split in attitudes within the three cohorts. For example, while over 60 percent of onsite respondents agreed that there needed to be more promotion to both Christchurch residents and visitors, a quarter of the sample disagreed with each of these statements; this was similar amongst telephone respondents who had visited the Estuary, although this group were more likely to agree with the statements, particularly regarding promotion to Christchurch residents (79.8% in agreement), and less likely to disagree. The biggest division can be seen in the responses of the non-visitors to the Estuary. While 36 percent agreed that the Estuary should be promoted to visitors to Christchurch, a greater proportion (41.3%) disagreed. By comparison, 78 percent of this sample agreed that the Estuary should be better promoted to Christchurch visitors, and only 10.7 percent disagreed with this statement.

The following two statements about the need for more information about activities or facilities available at the Estuary reveal similar patterns. Onsite visitors were fairly neutral about whether there needed to be more information available about activities available at the Estuary (mean 2.91) compared to the other three categories of respondents, with the non-visitors being most likely to agree with the statement (mean 1.83) – 91.3 percent of respondents agreeing with this statement. Similarly while onsite visitors were somewhat supportive of the need for more information about the facilities available at the Estuary (mean 2.46), non-visitors were strongly in agreement about the need for more information about the facilities available at the Estuary (mean 1.81), followed by non-recent visitors (mean 2.04); again, 91.9 percent of non-visitors agreed with this statement, while over one-fifth of recent visitors onsite (23.9%) and telephone respondents (20.4%) disagreed with this statement.

In terms of whether there was a need for more facilities to be available at the Estuary there was quite a mixed result, with the relatively neutral means amongst recent visitors (3.09 onsite; 2.95 telephone) not really reflecting the diversity of opinion on this issue. While non-recent visitors and those who had never visited the Estuary were generally more likely to agree with these statements, this does not reflect that fact that half of all non-visitors did

not have any opinion on this matter, lacking knowledge about what is currently available. In terms of onsite visitors half of all respondents (51.0%) disagreed with the need for more facilities, while 40.3 percent were in agreement. While telephone respondents were slightly more positive, only just over half of those who had visited the Estuary (52.1%) agreed with the need for more facilities at the Estuary.

This finding was even more apparent with regards to the statement 'Access to the Estuary needs to be improved'. Recent visitors interviewed on site (mean 3.53) and by telephone (mean 3.60) in general disagreed with the need for better access; two-thirds of onsite respondents (66.9%) and more than half of telephone visitors (58.3%) disagreed with this statement, while the non-visitors were relatively neutral, mainly due to a lack of knowledge about the issue (64.5% were 'neutral' on this question).

While there were somewhat mixed messages from respondents regarding the need for more promotion of the Estuary to Christchurch residents and visitors, the mean from all categories of respondents suggest some disagreement with the statement 'I do not want to see more people using the Estuary'. Disagreement to this statement was strongest amongst telephone Estuary visitors (72.1%), followed by onsite visitors (57.6%). Having said this, however, 16.5 percent of onsite visitors, and 14.3 percent of telephone visitors agreed that they didn't want to see more people using the Estuary. More than half of non-visitors had no opinion on the issues, but 40.3 percent disagreed with the statement.

In general recent users of the Estuary were happy for the Estuary to 'be kept as it is' (onsite mean 2.47; telephone 2.54), while those who had never visited were in slight disagreement on this statement (mean 3.44), although close to half of these respondents again gave a neutral response. Onsite visitors were most likely to agree with this statement (60.4%).

There were a number of attitude statements included which explored respondents' perception of the natural environment of the Estuary. Three of these statements explored issues of water quality. The first statement related to whether respondents felt that the Estuary water was polluted. All categories of respondents agreed that it was, with little difference in means on this issue. Telephone visitors were the most likely to agree with this statement (77.4%), followed by onsite visitors (71.9%), with those who have never visited

the Estuary *least* likely to agree that the Estuary water is polluted (56.7%), although 40 percent of this group had no opinion. Only 12 percent of those who had visited the Estuary disagreed with this statement.

When asked if contact with Estuary water would be bad for one's health, the mean for recent visitors to the Estuary (both onsite and telephone respondents) suggests relative neutrality (onsite 2.88; telephone 2.84), while there appears to be more agreement to the statement amongst non-recent visitors (mean 2.62) and non visitors (mean 2.59). However on this statement there was a high degree of disagreement amongst users. While 42.7 percent of onsite respondents and 48.2 percent of telephone respondents agreed with this statement, a further third disagreed (31.9% onsite; 38.2% telephone).

In terms of recent improvements to the Estuary waters and surrounds, in general recent visitors to the Estuary expressed some agreement with the statement 'the water quality in the Estuary has improved in the last few years' (onsite 2.50; telephone 2.72), while those who had not visited in the past 12 months or who had never visited were more neutral. Onsite visitors were most likely to agree with the statement (63.0%) while the majority of those who had never visited had no opinion. In relation to the statement 'current restoration work has improved the shore surrounding the Estuary' all categories of respondents reported a positive mean on this question, however, the majority of onsite visitors (56.6%) and those who had never visited the Estuary (79.3%) neither agreed or disagreed with the statement. In total 34 percent of onsite visitors and 45 percent of telephone respondents who had visited the Estuary agreed with the statement.

Table 33: Attitudes towards the Estuary: mean responses

	Onsite visitors	Telephone		
		Recent visitor	Non-recent visitor	Non visitor
The Estuary is a great recreation resource for Christchurch residents	1.69	1.67	2.16	2.77
The Estuary is a wetland of national significance	1.93	1.78	2.01	2.51
The Estuary should be promoted to visitors to Christchurch	2.53	2.37	2.58	3.02
The Estuary needs to be better promoted to Christchurch residents	2.50	2.17	2.22	2.11
There needs to be more information about what activities are available at the Estuary	2.91	2.22	2.04	1.83
There needs to be more information about what facilities are available at the Estuary	2.46	2.24	2.04	1.81
There should be more facilities for visitors around the Estuary shoreline	3.09	2.95	2.48	2.60
Access to the Estuary needs to be improved	3.53	3.60	3.04	2.90
I do not want to see more people using the Estuary	3.46	3.69	3.83	3.40
The Estuary should be kept as it is	2.47	2.54	2.90	3.44
The Estuary water is polluted	2.29	2.19	2.04	2.30
Contact with the Estuary water would be bad for my health	2.88	2.84	2.62	2.59
Water quality in the Estuary has improved in the last few years	2.50	2.72	3.01	3.01
Current restoration work has improved the shore surrounding the Estuary	2.72	2.63	2.73	2.90

Table 34: Attitudes towards the Estuary

	Visitors				Non-visitors	
	Onsite		Telephone		Agree %	Disagree %
	Agree %	disagree %	Agree %	Disagree %		
The Estuary is a great recreation resource for Christchurch residents	93.5	2.9	95.2	2.6	42.7	3.0
The Estuary is a wetland of national significance	81.3	5.0	84.8	5.7	50.7	8.7
The Estuary should be promoted to visitors to Christchurch	60.4	26.6	68.3	25.7	36.0	41.3
The Estuary needs to be better promoted to Christchurch residents	64.0	25.9	79.6	17.0	78.0	10.7
There needs to be more information about what activities are available at the Estuary	21.0	11.6	76.6	20.4	91.3	4.0
There needs to be more information about what facilities are available at the Estuary	68.1	23.9	76.5	20.4	91.9	2.7
There should be more facilities for visitors around the Estuary shoreline	40.3	51.0	52.1	38.7	39.6	10.7
Access to the Estuary needs to be improved	19.4	66.9	25.7	58.3	20.1	15.4
I do not want to see more people using the Estuary	16.5	57.6	14.3	72.1	7.4	40.3
The Estuary should be kept as it is	60.4	18.7	55.2	31.8	18.1	35.6
The Estuary water is polluted	71.9	12.2	77.4	12.1	56.7	3.3
Contact with the Estuary water would be bad for my health	42.7	31.9	48.2	38.3	48.0	10.6
Water quality in the Estuary has improved in the last few years	63.0	23.9	36.0	16.2	11.4	12.1
Current restoration work has improved the shore surrounding the Estuary	34.0	9.4	45.0	13.6	16.0	4.7

Participants were asked how likely they were to visit the Estuary in the next 12 months. The results, shown in Table 35, indicate that the vast majority of recent visitors stated that they would be returning to the Estuary in the next 12 months. In the case of onsite respondents 85.7 percent of respondents stated that would definitely or very likely return, as did 78.9 percent of telephone respondents who had visited in the past twelve months. Interestingly, nearly two thirds (62.4%) of those who had visited the Estuary but not in the last twelve months indicated a reasonable likelihood of visiting in the next twelve months, being quite likely, very likely or definitely likely to return.

Table 35: Likelihood of a return visit to the Estuary

	Onsite visitors	Telephone		
		Recent visitor	Non-recent visitor	Non visitor
Definitely	67.1	51.3	5.2	0.0
Very likely	18.6	27.6	15.6	2.0
Quite likely	8.6	17.3	41.6	21.2
Not very likely	3.6	1.3	19.5	29.8
Not at all likely	2.1	1.9	11.7	35.1
Don't know/unsure	0.0	0.6	6.5	11.9

Suggestions for improvements

Respondents in each survey who had visited the Estuary were asked if there was anything they would like to see improved about the Estuary; Appendix IX shows all the improvements that were suggested by respondents. There were a few general themes running through the suggested improvements and these are summarised in Table 36. The top priority for improvement was water quality improvement (42 respondents), followed by better maintenance of the walkways and area in general (26 respondents). Issues of smell (25 respondents) and sea lettuce (23 respondents) were frequently mentioned also. Concerns over the behaviour of other users was apparent also, with better dog control (21 respondents), litter issues (19 respondents) and problems with 'boy racers' in the area (14 respondents) all being mentioned as well. Ten respondents felt there was a need for more cafes or other facilities in the vicinity of the Estuary.

Table 36: Suggestions for improvements

Improvement	Number of respondents
Water quality improved	42
Better maintenance of the walkway/area	26
Smell	25
Sea lettuce issues	23
Better control over dogs	21
Litter	19
Problems with boy racers in the area	14
Improve signage in the area (warnings and information)	13
More cafés/other developments	10
More native planting	6
Control graffiti in the area	6
Improved tracks	3

Change in all participants' behaviour due to the outfall pipe development

Survey respondents were told the following information:

“The Christchurch City Council’s ocean outfall project is currently under construction. This will take the city’s treated wastewater from the oxidation ponds at the Christchurch Wastewater Treatment Plant and transport it by an underground pipe three kilometres out into Pegasus Bay instead of discharging it into the Avon-Heathcote Estuary“

They were then asked if it would change the participation rate in any of the following activities: gathering seafood/fishing in the Estuary, gathering seafood/fishing along the coast, kayaking, windsurfing, sailing, and kite-surfing.

The results, as shown in Table 37, indicate that the majority of non-visitors report that the outfall pipe would make no difference to their behaviour with only two people saying that they would fish more at the Estuary and along the coastline and one person each saying they would kayak or sail more. Two people did note that they would gather seafood/fish less often along the coast once the outfall pipe was operational. While the majority of Estuary visitors said they would not significantly change their behaviour as a result of the

outfall pipe, there were some people who reported they would use the Estuary more often for water based activities. For example, 12.1 percent of onsite visitors, and 10.9 percent of telephone respondents who had visited the Estuary said that they would gather seafood more often at the Estuary. Similar findings apply to kayaking (7.9% onsite; 10.4% telephone), windsurfing (3.6% onsite; 7.8% telephone), sailing (5.0% onsite; 6.5% telephone) and kite-surfing (4.3% onsite; 4.8% telephone). The completion of the outfall pipe saw a small proportion of respondents state that they would reduce how often they gather seafood/fish along the coast (2.1% onsite; 3.9% telephone) however a *greater* proportion stated that the outfall pipe with *increase* how often they participated in this activity (7.1% onsite; 8.7% telephone).

Table 37. Change in participant’s behaviour with the development of the new outfall pipe

	Visitors				Non-visitors	
	Onsite		Telephone			
	More often %	Less often %	More often %	Less often %	More often %	Less often %
Change in gathering seafood at the Estuary	12.1	0.0	10.9	0.0	1.3	0.0
Change in gathering seafood at the coast	7.1	2.1	8.7	3.9	1.3	1.3
Change in kayaking	7.9	1.4	10.4	0.0	0.7	0.0
Change in windsurfing	3.6	1.4	7.8	0.0	0.0	0.0
Change in sailing	5.0	1.4	6.5	0.0	0.7	0.0
Change in kite-surfing	4.3	1.4	4.8	0.0	0.0	0.0

Discussion and Conclusions

The purpose of this research has been to assess the current patterns of visitation and usage of the Avon-Heathcote Estuary by Christchurch residents and to explore the perceptions and attitudes of all Christchurch residents towards this resource, whether they have visited the Estuary or not. Through these findings it has been possible to make some specific suggestions of areas for improvement for the managers of the Avon-Heathcote Estuary.

Firstly, it is apparent from the findings reported here that the Estuary is a well-loved and well-used resource for those who visit it, with close to half of all of those interviewed onsite visiting daily and two-thirds visiting at least weekly. A quarter of telephone respondents who had visited the Estuary within the past year also reported that they visited daily. This appreciation of the Estuary is apparent also in Estuary visitors' responses to a series of attitude statements, in which they very strongly agreed that the Estuary was a great recreation resource for Christchurch residents and a wetland of national significance. Generally Estuary users were satisfied with access to the Estuary and a majority felt that the Estuary should be kept as it is. These findings suggest that there is much to be positive about regarding the Estuary's current role as a recreational resource.

In terms of the characteristics of visitors, it is clear that the Estuary caters to a wide range of users, however there is a tendency for visitors to live in relatively close proximity to the Estuary. Males are significantly more likely than females to visit the Estuary, and it is an area much more frequently visited by New Zealand European/Pakeha than Maori. In the telephone survey, only 42 percent of Maori interviewed had visited the Estuary, compared with 67 percent of Pakeha interviewed. The onsite survey interviewed more 30 to 39 year olds than any other age group, however the telephone survey revealed that those 60 years and over were the most likely to have visited the Estuary, with over 80 percent of this age group stated that they had visited the Estuary, and more than a third of those having visited in the past week.

The key activities for the majority of visitors to the Estuary are land-based; exercise, dog walking and visiting with children were the main reasons mentioned by both onsite and

telephone respondent for visiting the Estuary. Having said this, water based activities, including kayaking, windsurfing, sailing, seafood gathering and kite-surfing, were important to a sizeable minority of visitors. The vast majority of visitors travel either by private car or walk to the Estuary, with very few using the public transport that is available to the area.

The favourite places for visiting, including the Spit, South Brighton Park and the Estuary walkway, all contained features and opportunities that made the Estuary a special place for many people. These qualities include the views and the natural and peaceful setting in which to exercise or relax. In light of this, suggestions for improvements to the maintenance of tracks and the Estuary surrounds are important.

It is clear in responses to the attitude statements and in discussion about suggested improvements that water quality is an area of concern for many visitors, with the majority of users expressing the opinion that the Estuary water was polluted and close to half of all visitors believing contact with Estuary water would be bad for their health, although many current visitors also disagreed with this statement. Many of the unsolicited suggestions regarding improvements to the Estuary related to water quality, or the associated issues of sea lettuce and smell. On a positive note, those who had visited the Estuary within the last twelve months had some agreement that the water quality of the Estuary had improved in recent years and there is some evidence that the new outfall pipe might increase Estuary usage for water based activities.

Unlike previous research on the use of the Estuary for recreational purposes (eg Greenaway, 2007), this project explored the opinions of those who had never visited the Estuary also. Generally, these people were more likely to live further away from the Estuary, be under 30 years of age, female, Maori, and to have lower levels of educational achievement. It seems that the majority of these non-visitors had limited knowledge about what was available at the Estuary, and over 90 percent of this group would like to see more information about the activities and facilities available. Less than 20 percent of non-visitors to the Estuary reported hearing anything about the resource in the previous 12 months, compared to more than 50 percent of those who had visited the Estuary. Three quarters of this sample also agreed that the Estuary needed to be better promoted to Christchurch residents, although

there was less agreement about whether it should be promoted to Christchurch visitors. Despite the lack of knowledge about the Estuary, 43 percent of these respondents agreed that the Estuary was a great recreation resource for Christchurch residents and half agreed that the Estuary was a wetland of national significance. This suggests that there is good potential to attract some of this group to the Estuary in the future.

This observation must be made with some caution, however, as it was apparent amongst current users that there are mixed feelings about what, if any, changes should be made at the Estuary. While there was general agreement that water quality and general maintenance should be improved, a quarter of all recent visitors to the Estuary interviewed onsite and by telephone disagreed that the Estuary should be promoted to visitors or residents of Christchurch; similarly there was disagreement about whether more information should be available about the Estuary. Perhaps most significantly, half of all onsite visitors and more than a third of telephone respondents who had visited the Estuary *disagreed* that there should be more facilities for visitors around the shoreline. This suggests that the managers of the Avon-Heathcote Estuary need to carefully consider any 'improvements' that are to be made to the area, as what might appeal to current non-visitors could alienate current users.

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Appendix I - VISITOR SURVEY ONSITE

Hi, my name is _____, and I am currently conducting research on behalf of Lincoln University, ECan and the Avon Heathcote Estuary Ihutai Trust with visitors to the Estuary, finding out what they think about the Estuary and what they do when visiting here.

The survey will take from 5 to 15 minutes of your time to complete, depending on your responses. The questionnaire is anonymous, and you will not be identified as a respondent. Your participation in this survey is completely voluntary and you may refuse to answer any question or stop the survey at any time. The results of this survey may be published. If you complete the questionnaire it will be understood that you have consented to participate in the project and consent to publication of the results of the project with the understanding that anonymity will be preserved.

Would you be willing to participate? *[If No: thank them; If Yes: thank them and continue]*
If time doesn't suit ask: Is there a better time I could complete the survey?

1. Firstly, where do you usually live?

Christchurch: (suburb: _____)	1
Other Canterbury (specify: _____)	2
Other Domestic: (specify: _____)	3
International: (specify: _____)	4

2a. What is the main purpose of your trip to the Estuary today?

2b. What other activities will you do while you are here today?

	2a.	2b.
Walking dog	1	1
Exercise (walking, bike riding)	2	2
Bird watching	3	3
Picnicking	4	4
Kayaking	5	5
Windsurfing	6	6
Sailing	7	7
Kite-surfing	8	8
General sightseeing	9	9
Seafood gathering	10	10
Other (specify: _____)	11	11

3. Have you visited the Estuary before today? [definition of 'visited': travelled to, and stopped at]

Yes	1
No	2 Skip to seafood gathering (Q.11)

4. What times do you usually visit the Estuary? (multiple response)

Early mornings (before 9am)	1
Mid-late mornings	2
Afternoons	3
Early evenings (5-7pm)	4
Later evenings (after 7pm)	5
No regular time	

5. Do you usually visit the Estuary on week days, the weekend or both?

Weekdays	1
Weekend	2
Both	3

6. Do you visit the Estuary all year round, or in particular seasons? (multiple response)

All year round	1
Spring	2
Summer	3
Autumn	4
Winter	5

7. On average, how often do you visit the Estuary?

Daily	1
Weekly	1
Fortnightly	2
Monthly	3
Less than once a month	4

8. Which locations around the Estuary do you visit most often? [*Show map with locations numbered*]

9 Do you have a favourite place around the Estuary?

Yes	1 <i>continue</i>
No	2 <i>skip to Q.10a</i>

What is your favourite place? Why is it your favourite place? [*PROMPTS: What do you do there? What memories do you have of this place? Anything else that makes it special for you?*]

Place: _____

10a. I'm going to read out a list of reasons why people might visit the Estuary. Which of these activities *have you ever participated* in at the Estuary?

10b. *For each participated in:* how often to you participate in this activity there?
[SHOWCARD 1]

	10a.	used to	daily	weekly	monthly	yearly +	other
Walking dog							
Exercise (walking, bike riding)							
Bird watching							
Picnicking							
Kayaking							
Windsurfing							
Sailing							
Kite-surfing							
General sightseeing							
Seafood gathering / fishing							

10c. Are there any other activities that you participate in regularly at the Estuary?

Seafood gathering

I've now got some questions about fishing and seafood gathering.

Check response to 'seafood gathering' in Q.10 (or Q.2 for first time visitors). If first visit and no seafood gathering, skip to Q.17:

11. *If never fished/gathered at Q.10b:* Why have you never gathered seafood/fished in the Estuary? (multiple response)

Don't eat seafood	1	Don't know what seafood is available	2
Don't know how to collect/catch seafood	3	The estuary seafood is unsafe to eat	4
Don't know about the regulations	5	Don't have the equipment	6
Not interested in gathering seafood/fishing/don't have time			7
Other: _____			8

12. *If at Q. 10b answered 'used to gather seafood, but do not anymore';* Why did you stop gathering seafood/fishing at the Estuary?

Go to Q.17

13. When was the last time you gathered seafood/fished in the Estuary?

14. What do/did you (try) to collect/catch?

15. Where do/did you collect (each species) from? [*Try to ascertain as well as possible, using marked map for guidance*]

16. How often do/did you gather seafood/fish in the Estuary?

Daily	1	Weekly	2
Monthly	3	Yearly	4
Less than yearly	5	Other (Specify:	6

ALL:

17. Have you ever fished or gathered seafood from the Christchurch coastline outside the Estuary (from North New Brighton to Taylor's Mistake)?

Yes	1 <i>Skip to Q.19</i>
No	2

18. Why have you never fished or gathered seafood from along the Christchurch coastline? (multiple response)

Don't eat seafood	1	Don't know what seafood is available	2
Don't know how to collect/catch seafood	3	The seafood is unsafe to eat	4
Don't know about the regulations	5	Don't have the equipment	6
Not interested in gathering seafood/fishing/don't have time			7
Other: _____			8

Go to Q.23

19. When was the last time you gathered seafood/fished along the coast?

20. How often do you gather seafood/fish along the coast?

Daily	1	Weekly	2
Monthly	3	Yearly	4
Less than yearly	5	Other (Specify: _____)	6

21. What do/did you (try) to collect/catch?

22. Where do/did you collect (each species) from? [*Try to ascertain as well as possible, using marked map for guidance*]

23. I'm going to read out a list of statements regarding the Estuary. I'd like you to tell me to what extent you agree or disagree with each statement. [SHOWCARD 2]

	Strongly agree	2	Neither	3	Strongly disagree	5	N/A
The Estuary is a great recreation resource for Christchurch residents	1	2	3	4	5	0	
The Estuary water is polluted	1	2	3	4	5	0	
There should be more facilities for visitors around the Estuary shoreline	1	2	3	4	5	0	
The Estuary is a wetland of national significance	1	2	3	4	5	0	
The Estuary should be promoted to visitors to Christchurch	1	2	3	4	5	0	
The Estuary should be kept as it is	1	2	3	4	5	0	
There needs to be more information about what activities are available at the Estuary	1	2	3	4	5	0	
Current restoration work has improved the shore surrounding the Estuary	1	2	3	4	5	0	
Water quality in the Estuary has improved in the last few years	1	2	3	4	5	0	
There needs to be more information about what facilities are available at the Estuary	1	2	3	4	5	0	
Contact with the Estuary water would be bad for my health	1	2	3	4	5	0	
The Estuary needs to be better promoted to Christchurch residents	1	2	3	4	5	0	
I do not want to see more people using the Estuary	1	2	3	4	5	0	
Access to the Estuary needs to be improved	1	2	3	4	5	0	

24. What, if anything, have you heard about the Estuary in the past twelve months?

25a. Thinking about the things you know about the Estuary, where do you get your information from? (multiple response)

25b. *If more than one answer given:* What is your main source of information about the Estuary? (single response)

	25a.	25b.
Previous visits	1	1
Signage on site	2	2
Word of mouth (friends/relatives etc)	3	3
Driving past	4	4
News item (TV, newspaper etc)	5	5
Newspaper/radio advertising	6	6
Newspaper – forecast/tides	7	7
Website (Specify: _____)	8	8
Brochure/Pamphlet (Specify: _____)	9	9
Christchurch Visitor Information Centre	10	10
Other (specify: _____)	11	11

26. What do you like best about the Estuary?

27. Are there any things you would like to see improved about the Estuary?

28. How likely is it that you will visit the Estuary again in the next twelve months?

Definitely	1
Very likely	2
Quite likely	3
Not very likely	4
Not at all likely	5
Don't know/Unsure	6

29. Can you recall seeing any information or warning signs around the Estuary? *If yes:*
Ask them to describe the signs/locations etc

30. The Christchurch City Council's ocean outfall project is currently under construction. This will take the city's treated wastewater from the oxidation ponds at the Christchurch Wastewater Treatment Plant and transport it by an underground pipe three kilometres out into Pegasus Bay instead of discharging it into the Avon-Heathcote Estuary.

How will this affect how often you participate in the following activities. Would you participate more often, less often, or would there be no change?

	more often	less often	no change
Gather seafood/fish in the estuary			
Gather seafood/fish along the coast outside the estuary			
Kayaking			
Windsurfing			
Sailing			
Kite-surfing			

Finally just a couple of questions to help us analyse our results.

31. Who did you visit the estuary with today? (*circle one only*)

Visiting alone	1	Partner/spouse	2
Friends	3	Family	4
Family and friends	5	Part of special interest group	6
Other: _____			7

32. How did you get to the Estuary today? (*circle one only*)

Private Car	1	Public Bus	2
Rental Car/ Campervan	3	Walked	4
Bicycle	5	Tour bus	6
Other: _____			7

33. Which age group do you belong to? [SHOWCARD 3]

18-19	1	20-29	2
30-39	3	40-49	4
50-59	5	60-69	6
70 and over			7

34. What is your highest educational qualification? [SHOWCARD 4]

No formal qualification	1	High school qualification	2
Trade qualification	3	Degree	4
Higher degree			5
Other tertiary qualification (Specify: _____)			6

35. What is your ethnicity?

Pakeha/NZ European	1	Maori	2
Polynesian	3	Chinese	4
Other Asian (Specify: _____)			5
Other: _____			6

36. *Don't ask: record correct response*

Male	1
Female	2

That is the end of the survey, I would like to thank you very much for your participation, it has been a great help. If you have any questions about this research or the findings, you are welcome to contact Dr Joanna Fountain at Lincoln University, on 3253 838.

For seafood gatherers -Ask if they would be willing to talk with us in more detail about their past and/or recent experiences seafood gathering in the estuary and note name and telephone number on separate piece of paper

Appendix II - Telephone: CHRISTCHURCH RESIDENTS' SURVEY**Recruitment script: Telephone Survey: Christchurch Residents' awareness and use of the Avon-Heathcote Estuary**

Hi, my name is _____, and I am currently conducting research on behalf of Lincoln University, ECan and the Avon Heathcote Estuary Trust with Christchurch residents, finding out what they think about the Estuary and whether they visit there.

Ask to speak to the person in the household who is 18 or over who had the last birthday. If they are not available, ask if there would be a convenient time to ring back.

If available: Reintroduce yourself (as above)

Firstly: establish that they know where the Estuary is and give description if unsure. Check they have heard of the Estuary, if not THANK and TERMINATE.

The survey will take from 5 to 10 minutes of your time to complete, depending on your responses. This project is being funded by the Tertiary Education Committee (TEC) and ECan and has been reviewed and approved by Lincoln University's Human Ethics Committee.

The questionnaire is anonymous, and you will not be identified as a respondent. Your participation in this survey is completely voluntary and you may refuse to answer any question or stop the survey at any time. If you complete the questionnaire it will be understood that you have consented to participate in the project and consent to publication of the results of the project with the understanding that anonymity will be preserved.

Would you be willing to participate? *[If No: thank them; If Yes: thank them and continue]*

If time doesn't suit ask: Is there a better time I could ring and complete the survey?

CHRISTCHURCH RESIDENTS' SURVEY **Date:** _____ **Time:** _____ **Suburb** _____

1. What, if anything, have you heard about the Estuary in the past twelve months?

If 'Nothing' skip to Q.3

2a. What sources have you heard about the Estuary from in the past twelve months?
(multiple)

2b. *If more than one answer given:* What is your main source of information about the Estuary? (single response)

	2a.	2b.
Previous visits	1	1
Signage on site	2	2
Word of mouth (friends/relatives etc)	3	3
Driving past	4	4
News item (TV, newspaper etc)	5	5
Newspaper/radio advertising	6	6
Newspaper – forecast/tides	7	7
Website (Specify: _____)	8	8
Brochure/Pamphlet (Specify: _____)	9	9
Other (specify: _____)	11	11

3. Have you ever visited the Estuary? [definition of 'visited': travelled to & stopped at]

Yes	1
No	2 <i>Skip to Q.23</i>

4. When did you last visit the Estuary?

Within the last week	1
Within the last month	2
Within the last six months	3
Within the last year	4
One to five years ago <i>Skip to Q.9a</i>	5
More than five years ago <i>Skip to Q.9a</i>	6

5. On average, how often do you visit the Estuary?

Daily	1
Weekly	1
Fortnightly	2
Monthly	3
Less than once a month <i>Skip to Q.9a</i>	4

6. What time of the day do you usually visit the Estuary? (multiple response)

Early mornings (before 9am)	1
Mid-late mornings	2
Afternoons	3
Early evenings (5-7pm)	4
Later evenings (after 7pm)	5
No regular time	6
Depends on the tide	7

7. Do you usually visit the Estuary on week days, the weekend or both? (single response)

Weekdays	1
Weekend	2
Both	3

8. Do you visit the Estuary all year round, or in particular seasons? (multiple response)

All year round	1
Spring	2
Summer	3
Autumn	4
Winter	5
Season (e.g. whitebaiting, godwits)	6
Specify_____	

9a. Thinking about your last trip to the Estuary, what was the main purpose of your trip?

9b. What other activities did you do at the Estuary on that trip?

	9a.	9b.
Walking dog	1	1
Exercise (walking, bike riding)	2	2
Bird watching	3	3
Picnicking	4	4
Kayaking	5	5
Windsurfing	6	6
Sailing	7	7
Kite-surfing	8	8
General sightseeing	9	9
Seafood gathering/fishing	10	10
Other (specify: _____)	11	11

10. Thinking of your last trip, who did you visit the Estuary with? (*single response*)

Visiting alone	1
Partner/spouse	2
Friends	3
Family	4
Family and friends	5
Visiting as part of a special interest group	6
Other, Specify:	7

11. How did you get to the Estuary on that trip? (*single response*)

Private Car	1	Public Bus	2
Rental Car/ Campervan	3	Walked	4
Bicycle	5	Tour bus	6
Other: _____			7

12. Which location or locations around the Estuary did you visit on your last trip? [*Try to ascertain as well as possible, using marked map for guidance*]

13. Do you have a favourite place around the Estuary?

Yes	1 <i>continue</i>
No	2 <i>skip to Q.14</i>

What is your favourite place? Why is it your favourite place? [*PROMPTS: What do you do there? What memories do you have of this place? Anything else that makes it special for you?*]

Place: _____

14a. I'm going to read out a list of reasons why people might visit the Estuary. Which of these activities *have you ever participated* in at the Estuary?

14b. *For each participated in:* how often to you participate in this activity there?

	14a.	used to	daily	weekly	monthly	yearly +	other
Walking dog							
Exercise (walking, bike riding)							
Bird watching							
Picnicking							
Kayaking							
Windsurfing							
Sailing							
Kite-surfing							
General sightseeing							
Seafood gathering / fishing							

14c. Are there any other activities that you participate in regularly at the Estuary?

15. What do you like best about the Estuary?

16. Are there any things you would like to see improved about the Estuary?

I've now got some questions about seafood gathering. *Check response to 'seafood gathering' in Qu.14 above:*

17. *If never fished/gathered at Q.14:* Why have you never gathered seafood/fished in the Estuary? (multiple response)

Don't eat seafood	1	Don't know what seafood is available	2
Don't know how to collect/catch seafood	3	The estuary seafood is unsafe to eat	4
Don't know about the regulations	5	Don't have the equipment	6
Not interested in gathering seafood/fishing/don't have time			7
Other: _____			8

18. *If at Q. 14 answered 'used to gather seafood, but do not anymore';* Why did you stop gathering seafood/fishing at the Estuary?

Go to Qu.23

19. When was the last time you gathered seafood/fished in the Estuary?

20. What do/did you (try) to collect/catch?

21. Where do/did you collect (each species) from? [*Try to ascertain as well as possible, using marked map for guidance*]

22. How often do/did you gather seafood/fish in the Estuary?

Daily	1	Weekly	2
Monthly	3	Yearly	4
Less than yearly	5	Other (Specify:	6

ALL:

23. Have you ever fished or gathered seafood from the Christchurch coastline outside the Estuary (from North New Brighton to Taylor's Mistake)?

Yes	1 <i>Skip to Q.25</i>
No	2

24. Why have you never fished or gathered seafood from along the Christchurch coastline? (multiple response)

Don't eat seafood	1	Don't know what seafood is available	2
Don't know how to collect/catch seafood	3	The seafood is unsafe to eat	4
Don't know about the regulations	5	Don't have the equipment	6
Not interested in gathering seafood/fishing/don't have time			7
Other: _____			8

Go to Q.29

25. When was the last time you gathered seafood/fished along the coast?

26. How often do you gather seafood/fish along the coast?

Daily	1	Weekly	2
Monthly	3	Yearly	4
Less than yearly	5	Other (Specify:	6

27. What do/did you (try) to collect/catch?

28. Where do/did you collect (each species) from? [*Try to ascertain as well as possible, using marked map for guidance*]

29. I'm going to read out a list of statements regarding the Estuary. I'd like you to tell me if you strongly agree (1), agree, disagree, strongly disagree (5) or have no opinion about the statement

	Strongly agree	Neither	Strongly disagree	N/A		
The Estuary is a great recreation resource for Christchurch residents	1	2	3	4	5	0
The Estuary water is polluted	1	2	3	4	5	0
There should be more facilities for visitors around the Estuary shoreline	1	2	3	4	5	0
The Estuary is a wetland of national significance	1	2	3	4	5	0
The Estuary should be promoted to visitors to Christchurch	1	2	3	4	5	0
The Estuary should be kept as it is	1	2	3	4	5	0
Water quality in the Estuary has improved in the last few years	1	2	3	4	5	0
Current restoration work has improved the shore surrounding the Estuary	1	2	3	4	5	0
There needs to be more information about what activities are available at the Estuary	1	2	3	4	5	0
There needs to be more information about what facilities are available at the Estuary	1	2	3	4	5	0
Contact with the Estuary water would be bad for my health	1	2	3	4	5	0
The Estuary needs to be better promoted to Christchurch residents	1	2	3	4	5	0
I do not want to see more people using the Estuary	1	2	3	4	5	0
Access to the Estuary needs to be improved	1	2	3	4	5	0

30. How likely is it that you will visit the Estuary in the next twelve months?

Definitely	1
Very likely	2
Quite likely	3
Not very likely	4
Not at all likely	5
Don't know/Unsure	6

31. *Ask only for those who have visited:* Can you recall seeing any information or warning signs around the Estuary? *If yes:* Ask them to describe the signs/locations etc

32. The Christchurch City Council's ocean outfall project is currently under construction. This will take the city's treated wastewater from the oxidation ponds at the Christchurch Wastewater Treatment Plant and transport it by an underground pipe three kilometres out into Pegasus Bay instead of discharging it into the Avon-Heathcote Estuary.

How will this affect how often you participate in the following activities. Would you participate more often, less often, or would there be no change?

	more often	less often	no change
Gather seafood/fish in the estuary			
Gather seafood/fish along the coast outside the estuary			
Kayaking			
Windsurfing			
Sailing			
Kite-surfing			

Finally a couple of questions to help us analyse our results

33. How old are you?

18-19	1	20-29	2
30-39	3	40-49	4
50-59	5	60-69	6
70 and over	7		

34. What is your highest educational qualification?

No formal qualification	1
High school qualification	2
Trade qualification	3
Degree	4
Higher degree	5
Other tertiary qualification Specify: _____	6

35. What is your ethnicity?

Pakeha/NZ European	1	Maori	2
Polynesian	3	Chinese	4
Other Asian (Specify: _____)			5
Other: _____			6

36. *Don't ask: record correct response*

Male	1
Female	2

For seafood gatherers -Ask if they would be willing to talk with us in more detail about their past and/or recent experiences seafood gathering in the estuary and note name and telephone number on separate piece of paper

That is the end of the survey, I would like to thank you very much for your participation, it has been a great help. If you have any questions about this research or the findings, you are welcome to contact Dr Joanna Fountain or Dr Suzanne Vallance at Lincoln University, on 3253 838.

Appendix III – List of suburbs in which telephone respondents live

Suburb	Frequency	Percent	Suburb	Frequency	Percent
New Brighton	32	8.3	Hei Hei	3	.8
Riccarton	17	4.4	Richmond	2	.5
Cashmere	16	4.2	Waltham	2	.5
St Albans	14	3.6	St Martins	2	.5
South Brighton	13	3.4	Ferrymead	2	.5
Papanui	11	2.9	Heathcote	2	.5
Burwood	11	2.9	Oaklands	2	.5
Linwood	10	2.6	Wigram	2	.5
Woolston	10	2.6	Yaldhurst	2	.5
Parklands	10	2.6	Bishopdale	2	.5
Southshore	10	2.6	Casebrook	2	.5
Fendalton	9	2.3	Northwood	2	.5
Redcliffs	9	2.3	Kaiapoi	2	.5
Sydenham	8	2.1	Springston	2	.5
Sumner	8	2.1	Somerfield	1	.3
Shirley	7	1.8	Addington	1	.3
Bromley	7	1.8	Hillsborough	1	.3
Mt Pleasant	7	1.8	Hoon Hay	1	.3
Harewood	7	1.8	Sockburn	1	.3
Wainoni	7	1.8	Islington	1	.3
Opawa	6	1.6	Spencerville	1	.3
Spreydon	6	1.6	Brooklands	1	.3
Bryndwr	6	1.6	Halkett	1	.3
Merivale	6	1.6	West Melton	1	.3
Halswell	6	1.6	Edgware	1	.3
Hornby	6	1.6	Woodend	1	.3
Avonhead	6	1.6	Phillipstown	1	.3
Central City	6	1.6	Broomfield	1	.3
Ilam	5	1.3			
Burnside	5	1.3			
Avondale	5	1.3			
Mairehau	4	1.0			
Bexley	4	1.0			
Aranui	4	1.0			
Russley	4	1.0			
Redwood	4	1.0			
Rolleston	4	1.0			
Lincoln	4	1.0			
Dallington	3	.8			
Avonside	3	.8			
Beckenham	3	.8			
Westmorland	3	.8			
Hillmorton	3	.8			
Belfast	3	.8			
Tai Tapu	3	.8			

Appendix IV – List of suburbs onsite participants live in

	Frequency	Percent
Sth Brighton	25	11.1
New Brighton	22	9.8
Southshore	16	7.1
Redcliffs	16	7.1
Linwood	11	4.9
Sumner	11	4.9
Bromley	9	4.0
Riccarton	8	3.6
International	8	3.6
Mt Pleasant	7	3.1
Papanui	5	2.2
Burwood	5	2.2
Cashmere	5	2.2
NZ other	5	2.2
Woolston	4	1.8
Canterbury	4	1.8
Richmond	3	1.3
Opawa	3	1.3
Sydenham	3	1.3
St Albans	3	1.3
Parklands	3	1.3
Avondale	3	1.3
Bexley	3	1.3
Aranui	3	1.3
Ferrymead	3	1.3
Heathcote	3	1.3
Hoon Hay	3	1.3
Wainoni	3	1.3
Shirley	2	.9
St Martins	2	.9
Spreydon	2	.9
Fendalton	2	.9
Halswell	2	.9
Avonhead	2	.9
Bishopdale	2	.9
Waltham	1	.4
Addington	1	.4
Ilam	1	.4
Bryndwr	1	.4
Hillmorton	1	.4
Sockburn	1	.4
Hornby	1	.4
Redwood	1	.4
Belfast	1	.4
Central City	1	.4
Barrington	1	.4
Phillipstown	1	.4

Appendix V – ‘Other’ reasons why people visited the Estuary

Reasons for visiting	No.
Going to the playground	11
Watching kite surfers	5
Get kids outdoors	7
Beach combing	1
Spend time with friends	2
Selling whitebait	1
Bike ride, stopped for lunch	1
Selling cherries	1
Lunch in car	9
Kids swimming	2
Boat there	1
Boat restoration	2
On way to appointment	1
Painting a picture	2
With friend who is painting	1
recreation	1
Cleaning bike on grass	1
Meeting mates to go surfing	2
Resting in car	1
Spending time with kids	1
Collecting bait	2
Toilet stop	1
Out with family	1
Sit, look at the water & think	1
Recreation	3
Plant trees	1
Visiting friend	1
Drive past and look a lot	1
Taking grandkids out for walk and to play	1
Visit significant Ngai tahu sites	1
Just driving past	2
Fresh air	1
Coffee in Sumner, stopped along the way	1
meal at restaurant overlooking estuary	1
School trip	1
Cycle past	1
Just to observe	1
Watch sunset	1
Photography	1
Café/ drinks	1
Take Harley out for a ride	1
Pine coning	1
Take new raft out	1

Appendix VI – Map shown to onsite participants



Appendix VII –Where participants visit at the Estuary

Locations	Number of people
South Brighton Park, Estuary Walkway and South Brighton Park Jetty	6
The Spit and streets coming off Rockinghorse road	8
Windsurf reserve	13
The Spit, streets coming off Rockinghouse road and the Estuary Walkway	5
Whole of South Brighton side (From Bridge St to the Spit)	24
Estuary walkway and South Brighton Park Jetty	6
Pleasant Point Yacht Club and on the water	2
South Brighton Park and the Estuary Walkway	8
The Spit	9
The Estuary Walkway	11
South Brighton Park and South Brighton Park jetty	4
The Spit, streets coming off Rockinghouse road and South Brighton Park	2
Tidal view and out on the water	2
Pleasant Point Yacht Club	4
Port Hills side (Ferryroad to Shag Rock) and The Spit	1
Humphreys Drive, Mt Pleasant Yacht Club, The Spit, streets off Rockinghorse road, Tidal view and Shag Rock	1
Port Hills side (Ferryroad to Shag Rock, The Spit, South Brighton Park and out on the water	1
Mt Pleasant Yacht Club, The Spit, Humphreys Drive and South Brighton Park	1
Shag Rock and streets of Rockinghorse road	1
Shag Rock, Sumner, South Brighton Park	1
Mt Pleasant Yacht Club and Christchurch Yacht Club	1
Moncks Bay and Shag Rock	3
Shag Rock, Beachville road and McCormacks Bay	2
Shag Rock, The Spit and South Brighton Park	1
Beachville Road	6
Beach to Cave Rock	2
Port Hills side (Ferryroad to Shag Rock)	13
Moncks Bay and The Spit	1
Beachville Road and Moncks Bay	2
Christchurch Yacht Club	2
Beachville Road and The Estuary walkway	1
All around the Estuary	13
Windsurf Reserve and Sumner	2
Port Hills side (Ferryroad to Shag Rock), Sumner and streets coming off Rockinghorse road	1
South Brighton Park	7
Windsurf reserve and The Spit	1
Sandy Point and Windsurf reserve	1

Port Hills Side (Ferrymead to Shag Rock), Causeway, The Spit and streets coming off Rockinghorse road	1
Beachville Road, Moncks Bay, Shag Rock	1
Beachville Road and Shag Rock	3
McCormacks Bay Reserve and Moncks Bay	1
Mt Pleasant Yacht Club, Moncks Bay, Sumner	1
Christchurch Yacht Club and Sumner	2
Shag Rock	1
McCormacks Bay and Beachville Road	1
Tidal View and Port Hills side (Ferrymead to Shag Rock)	1
Moncks Bay, Shag Rock and Heathcote Mouth	1
Causeway and Beachville Road	1
Causeway and Shag Rock	1
Mt Pleasant Yacht Club, Moncks Bay, Sumner	1
Port Hills side (Ferrymead to Shag Rock) and out on the water	2
Estuary walkway, Avon Mouth and Sumner	1
Humphreys Drive	2
Out on the water	3
Walkway and The Spit	4
Causeway	1
South Brighton Park and The Spit	6
McCormacks Bay Reserve	2
Heathcote Mouth	1
Streets off Rockinghorse road	7
Sumner	2
Moncks Bay	2
Pleasant Point Yacht Club and Mt Pleasant Yacht Club	3
Windsurf Reserve and Humphreys Drive	1
Bexley Wetlands	1
Avon Mouth	2

Appendix VII – Full attitudinal statements

Opinion statements from Estuary visitors (onsite)

	Strongly agree	Agree	Neither	Disagree	Strongly disagree
The Estuary is a great recreation resource for Christchurch residents	41.0	52.5	3.6	2.2	0.7
The Estuary is a wetland of national significance	30.9	50.4	13.7	5.0	0.0
The Estuary should be promoted to visitors to Christchurch	14.4	46.0	12.9	25.9	0.7
The Estuary needs to be better promoted to Christchurch residents	12.9	51.1	10.1	25.2	0.7
There needs to be more information about what activities are available at the Estuary	0.7	20.3	67.4	10.9	0.7
There needs to be more information about what facilities are available at the Estuary	10.9	57.2	8.0	23.2	0.7
There should be more facilities for visitors around the Estuary shoreline	7.2	33.1	8.6	46.0	5.0
Access to the Estuary needs to be improved	3.6	15.8	13.7	58.3	8.6
I do not want to see more people using the Estuary	0.7	15.8	25.9	51.8	5.8
The Estuary should be kept as it is	12.2	48.2	20.9	17.3	1.4
The Estuary water is polluted	11.5	60.4	15.8	12.2	0.0
Contact with the Estuary water would be bad for my health	4.3	38.4	25.4	29.0	2.9
Water quality in the Estuary has improved in the last few years	13.0	50.0	13.0	21.7	2.2
Current restoration work has improved the shore surrounding the Estuary	4.3	29.7	56.5	8.0	1.4

Opinion statements from Estuary visitors (telephone)

	Strongly agree	Agree	Neither	Disagree	Strongly disagree
The Estuary is a great recreation resource for Christchurch residents	32.6	62.6	1.7	2.6	0.4
The Estuary is a wetland of national significance	37.0	47.8	9.6	5.7	0.0
The Estuary should be promoted to visitors to Christchurch	18.3	50.0	6.1	20.9	4.8
The Estuary needs to be better promoted to Christchurch residents	21.3	58.3	3.5	16.1	0.9
There needs to be more information about what activities are available at the Estuary	27.0	49.6	3.0	20.4	0.0
There needs to be more information about what facilities are available at the Estuary	26.1	50.4	3.0	20.4	0.0
There should be more facilities for visitors around the Estuary shoreline	11.7	40.4	9.1	34.8	3.9
Access to the Estuary needs to be improved	3.5	22.2	16.1	46.1	12.2
I do not want to see more people using the Estuary	1.3	13.0	13.5	54.3	17.8
The Estuary should be kept as it is	14.8	40.4	13.0	28.3	3.5
The Estuary water is polluted	20.0	57.4	10.4	11.7	0.4
Contact with the Estuary water would be bad for my health	13.0	35.2	13.5	37.0	1.3
Water quality in the Estuary has improved in the last few years	1.8	34.2	47.8	12.7	3.5
Current restoration work has improved the shore surrounding the Estuary	4.4	40.6	41.5	11.4	2.2

Opinion statements from non-visitors

	Strongly agree	Agree	Neither	Disagree	Strongly disagree
The Estuary is a great recreation resource for Christchurch residents	4.7	38.0	32.7	2.6	0.4
The Estuary is a wetland of national significance	6.7	44.0	40.7	6.7	2.0
The Estuary should be promoted to visitors to Christchurch	4.7	31.3	22.0	37.3	4.0
The Estuary needs to be better promoted to Christchurch residents	18.7	59.3	11.3	10.7	0.0
There needs to be more information about what activities are available at the Estuary	29.3	62.0	4.7	4.0	0.0
There needs to be more information about what facilities are available at the Estuary	29.5	62.4	5.4	2.7	0.0
There should be more facilities for visitors around the Estuary shoreline	6.3	33.3	49.3	10.7	0.0
Access to the Estuary needs to be improved	4.7	15.4	64.4	13.4	2.0
I do not want to see more people using the Estuary	0.7	6.7	52.3	34.9	5.4
The Estuary should be kept as it is	4.0	14.1	46.3	32.2	3.4
The Estuary water is polluted	18.7	38.0	40.0	3.3	0.0
Contact with the Estuary water would be bad for my health	7.3	40.7	41.3	9.3	1.3
Water quality in the Estuary has improved in the last few years	1.3	10.1	76.5	11.4	0.7
Current restoration work has improved the shore surrounding the Estuary	0.7	15.3	79.3	2.7	2.0

Appendix IX – Improvements suggested by users of the Estuary

Suggested improvements
Better maintained toilets
water quality
Control dogs, especially in vulnerable areas
Need to enforce dogs on lead rules, and picking up after them
Cars driving on the estuary and need simpler signs for info on dogs
Water quality and picking up litter
Cleaner better maintained toilets
The walkway could be improved in some areas, some of it is looking very rundown
Native planting in forest
Dog litter bins, better toilets at the park
Keep it cleaner
Benches past the park up to bridge street
water quality
Graffiti on signs, buildings and benches around the estuary
Sea lettuce cleaned up more in some areas
boy racers around the area
Smell at low tide
People need to clean up after themselves
Water quality - smell
More info about what is there and what they can do. Better signage along the road
Café along walkway
More enforcement on dogs on leads around spit
Footbridge over to Sumner from the spit
Water quality
Smell and wind
Track to go around the whole estuary
Smell
sea lettuce and dogs on leads enforced
Dogs on leads enforced
Café, boy racers in car park disturbs peace and dangerous
Need a semi permanent ranger to control dogs and what actually goes on around here
sea lettuce
Dogs- need to keep them on a lead pick up after them and seats between park and bridge street
Park car park - boy racers, don't feel safe, need to do it up put tarmac in etc
More warnings
Better look after picnic area, litter etc and car park area at the park needs restrictions and control, people in cars smoking ruins it
Park can feel unsafe at times with people just 'hanging around
Boy racers around and people driving onto the estuary
Water quality
Car park - cars speeding around not safe to have kids
Trees along track make it very isolated don't feel safe sometimes

Native planting instead of pines
A lot of dog poo around, signage about what's where and tracks
Car park floods every time it rains
Nice to have tearooms on the shoreline somewhere and water quality improved
More maintenance
More dog poo bins encourages picking up
water quality and smell
more facilities for windsurfers
sea lettuce removed
Water quality
more signs bout birds and no dogs, no Asians collecting pipis, stronger penalties for dogs
Waste management, smell
Wall of causeway fixed, bring jet boat races back
cleaned up, tidier
Sea lettuce removed
Better access and more things to do for kids like fun days
Rubbish can be a problem
McCormacks Bay loose gravel, raised beds of native plantings would be good
Mooring charges and regulations, greater control on kite and windsurfers...especially when yachting races on, they do not know the rules of the sea
Rubbish and maintenance
Water quality, rubbish
Maintenance
Walkability around the entire estuary, water quality
Parking, fix potholes, judder bars to stop hoons
Should be more places to drive up onto sand hills, a slow road for sightseers, better driving access to enjoy view of the coast, and fix potholes because they damage your car
Swing policy from risk to access, no dogs or cats in entire city, improved access that doesn't harm birds/ fish, clarity about activates safe for animals, Clean up both rivers, stronger penalties for polluting, more plantings on western side and walkways and cycleway improved
smell
Better walking tracks, more connected
Rubbish bins are sometimes overflowing
Worried about high rise development
Rubbish, tyres, clean up rocks and concrete blocks on walkway
water quality and rubbish
Leave it natural
Concrete blocks taken away from Sandy point
Rubbish
Sea lettuce removal
Seawall constructed out by Brighton spit, would improve washout and provide better fishing
Walkways
Water quality up to scratch
Water quality improved so you can swim

Fish populations, water purity
water quality improved
increase fish populations
water quality
People should clean up after their dogs better
Better cycle access
Sea lettuce removal
the smell
Collection of rubbish, general maintenance
the smell
Water quality, terrible up by South New Brighton Park. Cycle/ driver tensions need to be better managed- friend recently broke her jaw
Sea lettuce problem
Access for people, pointed out the housing cutting off access at high tide, fishing spots with trays
Water quality
Water quality, Avon as well - is annoyed by what he sees coming down the rivers
Water slime/ froth
water quality, sea lettuce removed, so something about the smell
Better water quality, sea lettuce removed. Better walkways to sandy point more info about wildlife
More facilities for kite surfers, e.g. Pump, clubrooms
Do something about the sea lettuce
clean graffiti, better paths on new Brighton side, clean up
Sea lettuce
smell
Signs about what birds are around
Graffiti
A lot of litter around, re-do pathways, graffiti, more clear signs
Pathways for pushchairs, broader but not tarmac and keep dogs on leads around children's park area.
smell
More enforcement of not letting dogs off leads
Smell, more bins along the track for dog waste
Smell at low tide is very off putting and would be good if there was a walkway all around the estuary for a good day walk
Signage about what someone can do where to go
There is a lot of graffiti around; it would be nice to have more signs about birds etc but probably not a good idea. Would be good to clean up the area and make it more respectable
smell and a walkway way more around the port hills side
Smell
sea lettuce removed and smell
Water quality - it would be nice to swim and paddle
smell at low tide makes me not want to go there
would be nice if water was safe to swim in
water quality can always be improved
water quality and rubbish in the area
more signs about what is around and info

Tidy up walkway
people doing drugs in the car park - not really a nice area sometimes
grafetti on signs, would be lovely to have more info about birds
water quality
rubbish around and boy racers screwing up the car park
Issues with kits surfers don't always understand rules. On important sailing days they shouldn't be in the water
Nothing, don't change it!
water quality
Greater awareness by locals that we should treasure it. Improved water quality
1 Collect rubbish more often, drinking fountains
1 Move sewer treatment plant, give him the creeps, odour
Tracks, more signs about history
Get rid of sea lettuce
Need better walkway along causeway
Sea lettuce, smell0
Outfall operational, get rid of pollution, fish returned, flounder, sole, cod
Management and parking
Maintenance, maintain channel and water movement
water quality good enough to swim
Water quality, sea lettuce to get better
Ecoli, walkways need improving as every time it rains they become unpassable
Be good to have a bridge from Southshore spit to Sumner, shagrock
Amonia content, remove the self introduced White Heron as they eat the baby flounder. Water quality, less nutrients. Increase fish populations, e.g. hearing. Once caught 100 between 3 people...drop due to ammonia
60 instead of 50 over causeway (speed limit)
Sea lettuce, smell. Too slippery on boardwalk after rain. People need to take their rubbish, papers and bottles the worst
All plantings around edge-100m. Revert back to native plantings. True to local planting. Complete removal of exotic plants on govt land
Leave it natural
General clean up. Natural resource as it is, leave it in its natural state. Could be deeper. Native plantings around the perimeter
Smell
Mud upstream from Brighton Bridge. Smell at low tide
Sea lettuce removal
Sea lettuce
Too many idiots
Bird sanctuary at McCormacks Bay has been successful, encourage more flora and fauna, native plantings, re-establish habitat, keep it pristine
Water quality
more activities
Better dog controls
Water quality- will happen
greater community awareness and initiatives
Maintainance, sea lettuce removal, smell

