Waitakiri Ecosanctuary Feasibility Report

Measuring social support for the Waitakiri Ecosanctuary Proposal

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Executive Summary

Context

The Waitakiri Ecosanctuary is proposed as a 180 hectare area including Travis Wetland and 30 hectares of Christchurch's residential red-zoned land. The sanctuary would house New Zealand's endangered species, and aims to give people in Canterbury the opportunity to interact with these species. It is hoped this will increase connections between people and native New Zealand environments, while conserving these habitats.

Research questions

What factors of feasibility are important to the Waitakiri Ecosanctuary Proposal?
Is there social support for the ecosanctuary proposal in Christchurch?

Methods

A literature review assessing factors of feasibility was conducted to answer our first research question. To measure social support, a survey and two interviews with prominent locals with interests in the proposal were conducted. The survey was distributed online, through mailing to suburbs near Travis Wetland, and by face-to-face polling in Travis Wetland.

Key results

Interviews highlighted some potential issues for the project that were discussed in relation to the aims of the proposal. The survey indicates majority social support, with 91% of respondents actively supporting the sanctuary proposal, and that respondents value the opportunity to interact with native New Zealand environments.

Limitations

Interview discussion could have been continued beyond two interviewees to add scope.

The Ilam electorate was is over-represented in our sample, but this has been balanced by purposive sampling of suburbs near Travis Wetland. This may pose issues for applicability (See Appendix 3).

Future research/action suggestions

To advance social support, it is recommended that further information about the proposal is widely distributed in Christchurch and to relevant tourist agencies. After this information has been distributed, it would be beneficial to re-examine social support to determine the longevity of the support this report identified.

Introduction

Our research has focussed on assessing feasibility of the Waitakiri Ecosanctuary Proposal. The Waitakiri Ecosanctuary is proposed as a 180 hectare area including Travis Wetland and 30 hectares of Christchurch's residential red-zoned land (See Appendix 1 for full proposal details). The sanctuary would house some of New Zealand's most endangered native species, including kiwi, white heron, stitchbird and eventually takahe (New Zealand Department of Conservation, 2014). The goal of the proposal, as expressed by Travis Wetland Trust President, Colin Meurk, is to encourage Cantabrians to engage with New Zealand's native environment, promoting connections with New Zealand nature. Social support is therefore a very important part of this proposal, and crucial to the project's success.

To inform the Travis Wetland Trust, we conducted research into feasibility. Aspects included physical and financial resources, ecology, and social support. This research aimed to answer the question: What factors of feasibility are important to the Waitakiri Ecosanctuary Proposal? Resources and ecology were analysed through a literature review and interviews with interested parties. To focus on social support, we set out to answer the question: Is there social support for the ecosanctuary proposal in Christchurch? To answer this, we conducted a survey of Christchurch residents and those living outside Christchurch.

By conducting feasibility analysis, we inform on the Waitakiri Ecosanctuary Proposal's likelihood of being successful. Our social support survey addresses whether or not the public support Waitakiri Ecosanctuary, and hence conclude how the sanctuary will impact public engagement with New Zealand wildlife. These two analyses will answer our research questions.

Academic Literature Review

To answer our first question, we investigated different aspects of feasibility for an ecosanctuary: ecological benefit, physical resources, financial resources, and social support. Fencing Travis Wetland protects a particularly valuable ecosystem in New Zealand. Major drainage, damming, diversion of water and discharge of nutrients have damaged and destroyed New Zealand's wetlands, meaning less than 10% of New Zealand's original wetland area remains. As well as protecting native species, preserving the wetland will also have spill-over effects into surrounding ecosystems, reducing predator numbers and supporting native populations (New Zealand Department of Conservation, 2014). Protecting Christchurch's wetland ecosystem protects a valuable ecosystem, and provides opportunities for Christchurch to interact with native New Zealand wildlife.

Next, we investigated the Waitakiri Sanctuary predator fence. There are three main options available for reducing predator numbers in the area; having a full fence, a leaky fence, through which small predators can enter, or no fence and extensively trapping (Norbury et al., 2014). We determined that leaky fencing and extensive trapping were inappropriate for the Travis Wetland Ecosanctuary, despite having lower cost than full pest fencing. Leaky fencing and trapping does not eliminate all predators, and so species such as kiwi and takahe that have a close to zero predator tolerance would not be able to survive (Norbury, et al., 2014). Therefore, to introduce iconic New Zealand species to Canterbury, a full predator fence with continued trapping is required.

Our financial assessment was in two parts. Firstly, we calculated the financial value of the protected ecosystem using a paper valuing ecosystem services that natural areas provide. We found that the water quality improvements, flood abatement and carbon emission management provided by the wetland are valued at approximately 6.6 million New Zealand dollars per year (de Groot, et al., 2012; Clarkson, et al., 2013). Against the cost of the project, officially estimated at $7 million, the project's long-term benefits appear to outweigh the costs.

The second part of our financial assessment was to do with maintenance funding. One of the major problems with 6 ecosanctuaries studied by Campbell-Hunt and Campbell-Hunt (2013) is that none of the sanctuaries have become financially self-reliant, despite increasing tourism numbers and providing education centres. Therefore, we determined that the

sanctuary needs to be socially or publicly funded, and to get access to this funding would need a large amount of social support.

Context

EVOSPACE Quantitative Analysis

Previous assessments of social support completed by EVOSPACE (Eastern Vision's Online Spatial Planning Application for Community Engagement*)* have returned results in support of Waitakiri Ecosanctuary. EVOSPACE lists over 40 proposals for Eastern Christchurch rejuvenation projects. 730 people or groups provided feedback on at least one proposal, and 121 responses were received on the 'Ecosanctuary' proposal (Smith, 2015),

Projects were ranked for community support, with responses on a five-point likert scale from strongly agree to strongly disagree. The Waitakiri Proposal was ranked 5th for community support (See Figure A), but ranked first of those area specific projects not encompassing the whole red zone. The ecosanctuary also received the 2nd highest percentage of people prepared to donate. These results indicate high levels of support for the ecosanctuary. In results, we discuss qualitative feedback from EVOSPACE and compare these results to our own qualitative feedback.

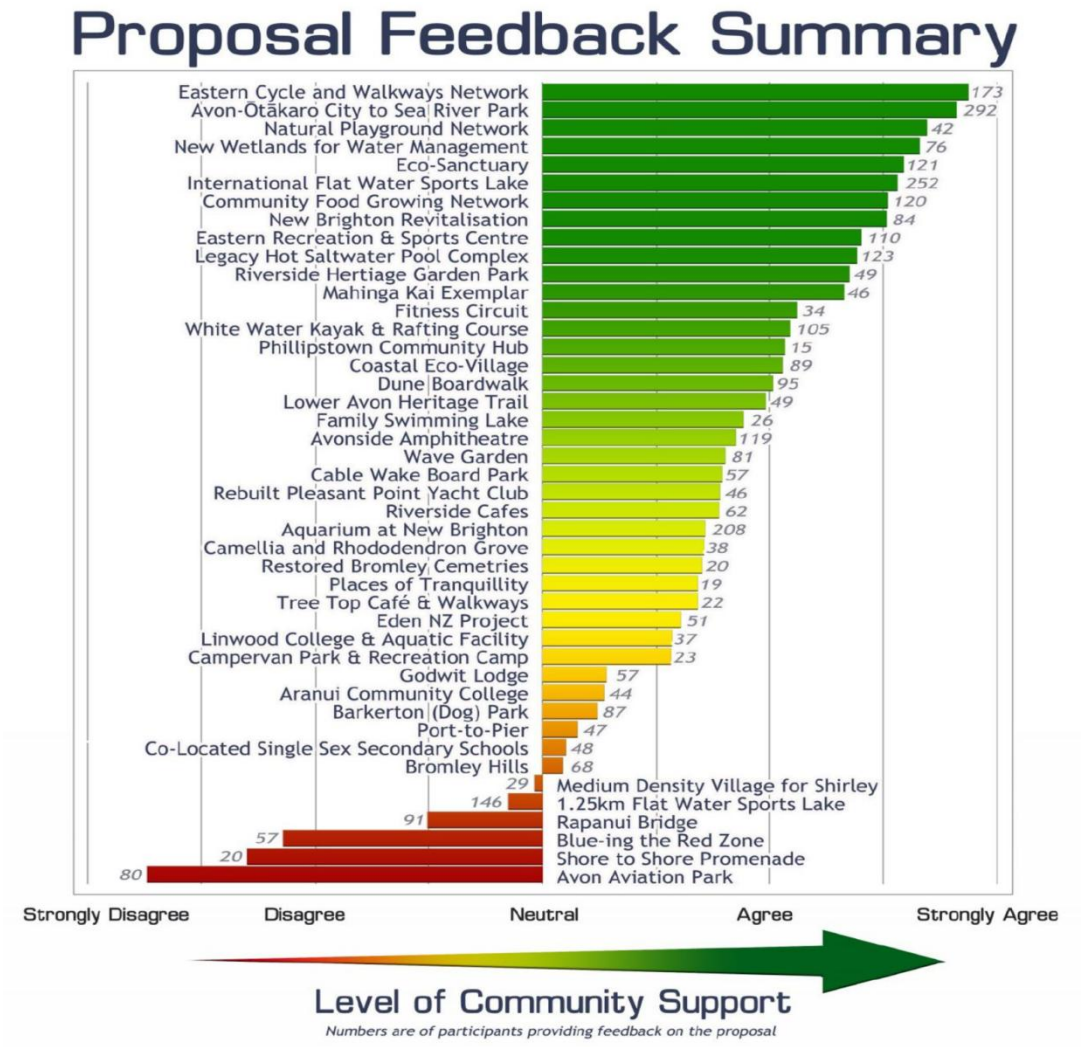

Figure A, EVO::SPACE results for support of their proposals.

Methods & Methodology

Initial Methodology

Initially, the research process stemmed from an investigation into the theoretical principles behind the success of existing ecosanctuaries, and the relevance of these to a wetland environment. Research also investigated the possibility of a predator free New Zealand as the ultimate goal of conservation efforts throughout the country. The aim of this research was to inform feasibility of the Waitakiri Ecosanctuary.

Interviews

Methods

Two people with knowledge of the Waitakiri Ecosanctuary proposal and its implications were interviewed to inform researchers on the project through different perspectives. These were one of the Avon-Otakaro network co-chairs and the current Travis Wetland Park Ranger. To conduct these interviews, we used a conversational style to gather a range of potential factors, obstacles and opportunities relevant to the Waitakiri Ecosanctuary Proposal. Conversational interview styles allowed our interviews to proceed organically, and gain unanticipated insights (de Vaus, 2002). Some of these then informed the selection of questions for our survey.

Feedback into Survey Methods

The issues raised in the interviews included funding concerns and the visual effects of the fence on surrounding residents. This resulted in creating a question on funding options to assess general public trends on where funds should originate. Also, a question assessing what the public thinks about the visual aspects of the fence was included.

Survey

Methodology

To assess social support, a survey was developed on the University of Canterbury's Qualtrics Online Surveys page. This survey covered many fields of interest including place of residence, opinion on a variety of viewpoints, present usage of the site and a variety of demographics. Stratifying according to demographics will allow future actions to target specific areas according to their interest, support, or lack of either.

Methods

The survey aimed to collect information about views on conservation, provide information to respondents on the proposed ecosanctuary, and then assess public support for the proposal. Data was predominantly measured on a five point likert scale with responses ranging from strongly agree to strongly disagree (See Appendix 1 for the complete survey). Our final question asked for voluntary qualitative input, to compare similar results gathered from EVOSPACE.

The survey was distributed in three ways; via the internet (social media, email), letterbox drop and face-to-face polling. Online distribution via social media and emailing to Canterbury schools and local groups were conducted first. Online distribution meant we gathered almost exclusively data from respondents that use the internet, restricting our sample (Allen, 2009). Emails were sent out over the next two weeks, including the survey link. This produced 230 responses. However, when comparing the sample gathered to New Zealand census data for Christchurch, we found that university aged respondents and those living in the Ilam electorate were over-represented. In response to this imbalance, respondents living near Travis Wetland were targeted.

500 information sheets and survey links were mailed into letterboxes on Tuesday 15th September in the Travis County subdivision and streets in close proximity to the wetland (See Appendix 4 for the mailing distribution route). A second mailing of a further 400 information sheets on Thursday 17th September targeted wider impacted suburbs in Burwood and Parklands. This was to ensure we represented the opinion of those who are likely to see the most benefit or cost from the sanctuary.

The remaining 100 information sheets were distributed face-to-face and at a planting day at Travis Wetland on Saturday 19th September. Overall, this distribution method returned approximately 150-250 responses.

Finally, we conducted face-to-face interviews in Travis Wetland to gather data from those who do not use the internet and resulted in roughly 45 responses. Face-to-face polling was conducted on Wednesday 16th September between 1-3.30pm and Friday 18th September 3-5pm. This approach allowed respondents to ask questions while increasing our demographic range (Floyd & Fowler, 2009).

All of these distribution techniques have advantages and disadvantages. Distribution via the internet allowed us to easily pipe our questions, for example only displaying questions aimed at local residents to local residents, and was much more time-efficient as a survey distribution method (de Vaus, 2002). The mailing stage allowed us to target suburbs near Travis Wetland relatively quickly and efficiently. However, respondents may have been less likely to respond due to lack of supervision and limited access to computers (de Vaus, 2002). Finally, our face-to-face polling despite being time consuming allowed us to prompt for feedback in our qualitative question.

Results and Discussion

Interviews

The two interviews conducted raised potential issues around financial cost, access to political funding, and short-term damage to existing habitat in Travis Wetland.
The cost of the ecosanctuary will be higher with a full surrounding fence, as opposed to partially fencing the area and not constructing the wildlife bridge. Interviews highlighted that higher financial costs may be an obstacle to gaining political funding for the project.

However, the aim of the Waitakiri ecosanctuary is to protect New Zealand's native species and provide Canterbury with the opportunity to interact with native wildlife. Many of the species proposed to be introduced have a zero predation tolerance (New Zealand Department of Conservation, 2014), and these species require a full predator fence to survive (Norbury, et al., 2014). Also, fencing the entire area allows for the introduction of species and increases the ecological and social value of the sanctuary. Therefore, under the aim of introducing endangered native species to the Waitakiri Ecosanctuary, a full surrounding fence is necessary.

One interviewee noted the implementation of the fence will cause short-term damage to existing vegetation, reducing the ecological value of the existing habitat. However, as part of the aim of the fenced sanctuary is to protect the ecological value of Travis Wetland and the adjacent red-zone area, it is likely that the long-term benefits to the area will outweigh the shorter-term costs. Therefore, the ecological value of the fenced area is likely to increase overall.

Qualitative EVOSPACE Submissions

To assess continuity of local opinions, EVOSPACE feedback comments were compared with our own qualitative feedback. From this we produced figure B, a graphic representation of perceived benefits of the project by our survey respondents. The relative size of the text indicates the frequency of the theme. Percentage of respondents referring to a particular theme or idea varied from 2 - 51 %. Native birdlife conservation, tourism and education were leading themes, and many people referred to benefits or experiences at other NZ ecosanctuaries.

Figure B. Common themes from the 2014 EVO::SPACE feedback.

Our Qualitative Survey Submissions

The same analysis was applied to our own feedback results. The themes are relatively similar. The major difference is our survey respondents indicated the sanctuary would be an excellent use of red-zoned land. Wetland protection also featured more strongly in our responses, and the reason for both these differences could be the specific red-zone and wetland related questions earlier in our survey, but perhaps also the perspectives of near-Travis residents.

Figure C. Common themes from feedback gathered by the Qualtrics 2015 survey.

Our qualitative question asked for suggestions as well as feedback. These are all incorporated in Figure B below (See appendix 2 for further discussion). Even though these will not all be useful for the implementation of the project, it could be useful to show examples of public suggestions being incorporated.

Figure B. Suggestions provided in the 2015 Qualtrics Survey.

Our Quantitative Survey Results

i. Representativeness of respondents

To measure the representativeness of our sample, we compared our demographics with those gathered during the 2013 Census. It is important to note that respondents did not have to live in Christchurch (as we were interested in tourists' opinions), so using Census data specific to the Christchurch region is limited when applied to our sample.

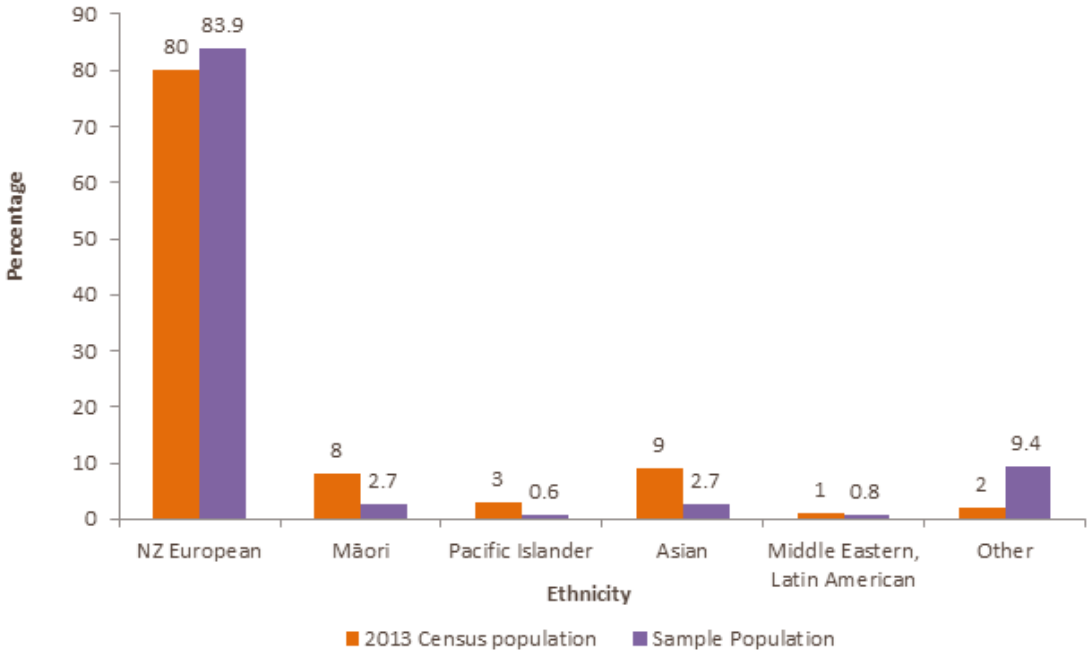

Figure 1. Ethnicity of respondents

Figure 1 above shows our sample is broadly representative when ethnicities are compared to the Christchurch profile. NZ European respondents formed the majority as expected (Sample population: 83.0%, Census population: 80%), however, ethnic minorities were underrepresented; Māori (Sample pop: 2.7%, Census pop: 8%), Asian (Sample pop: 2.7%, Census pop: 9%) and Pacific Islander (Sample pop: 0.6%, Census pop: 3%). 9.4% of people identified as 'other', compared to the Census value of 2%, which may account for some of the underrepresented groups or tourists.

Figure 2. Income bracket of respondents

As an additional demographic measure we asked respondents to indicate their individual income. Figure 2 shows individual income distribution is slightly positively skewed, which is similar to the 2013 Christchurch city census data.

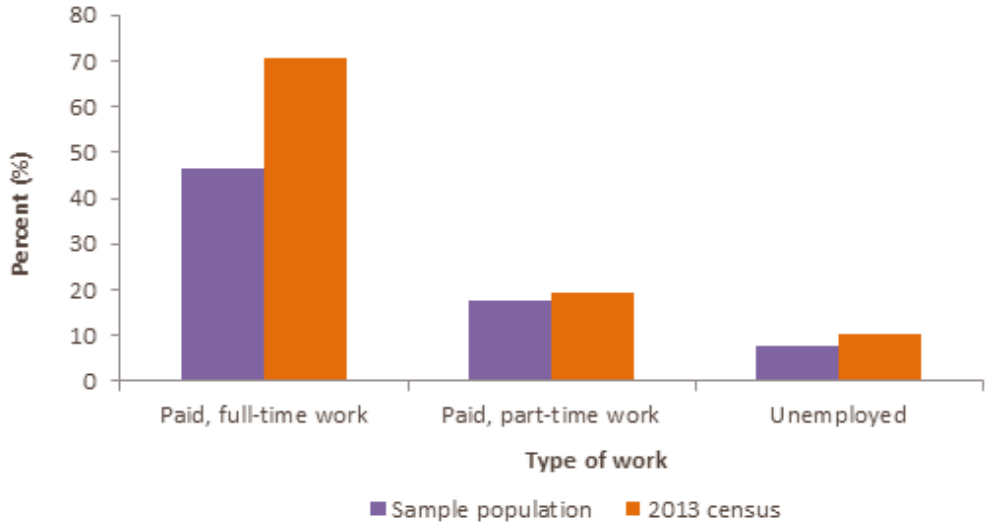

Figure 3. Occupational status of respondents

Figure 3 shows the proportion of the sample that indicated they were full time workers was 46.4%, compared with the 70.7% indicated in the 2013 Census. Underrepresentation of this group is likely due to the higher than average proportion of students (Sample pop: 24.1%, figure 3) gathered in the first phase of data collection. There

wasunder-representation in both rates of unemployment at 7.7% compared with 10.2%, (2013 Census), and working part time (17.4% compared with 19.2% from Census data).

ii. Residential profile on conservation

To help understand the views and opinions of Christchurch residents, we built a residential profile that more broadly describes attitudes towards conservation efforts in New Zealand. Figures 4 and 5 below summarise the views held by respondents.

Data was recoded such that strongly agree and agree were combined as a measure of active agreement, and strongly disagree and disagree indicated active disagreement. During survey construction, we opted to have both neutral and don't know options. This was so we could gauge true neutrality, as opposed to those who were genuinely unsure.

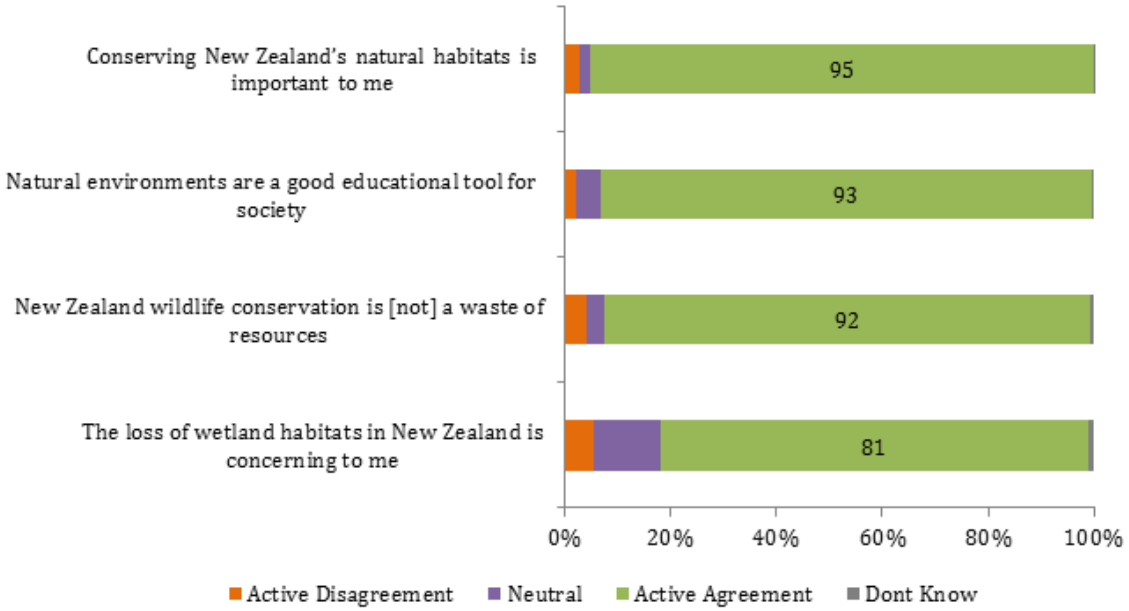

Figure 4. Respondent rates of agreement to a range of statements associated with conservation.

Figure 4 indicates that respondents highly value New Zealand's natural habitats, and recognise that natural environments can be useful for education purposes. The strong trend in these results is encouraging, but may be partly due to self-report bias, where individuals subconsciously fear that their results may reflect badly on them (Donaldson & Grant-Vallone, 2002). This is unlikely to affect the majority of results as over 90% of respondents completed

this survey without pollster supervision (Donaldson & Grant-Vallone, 2002). Therefore, these results indicate that the majority of respondents value natural environments.

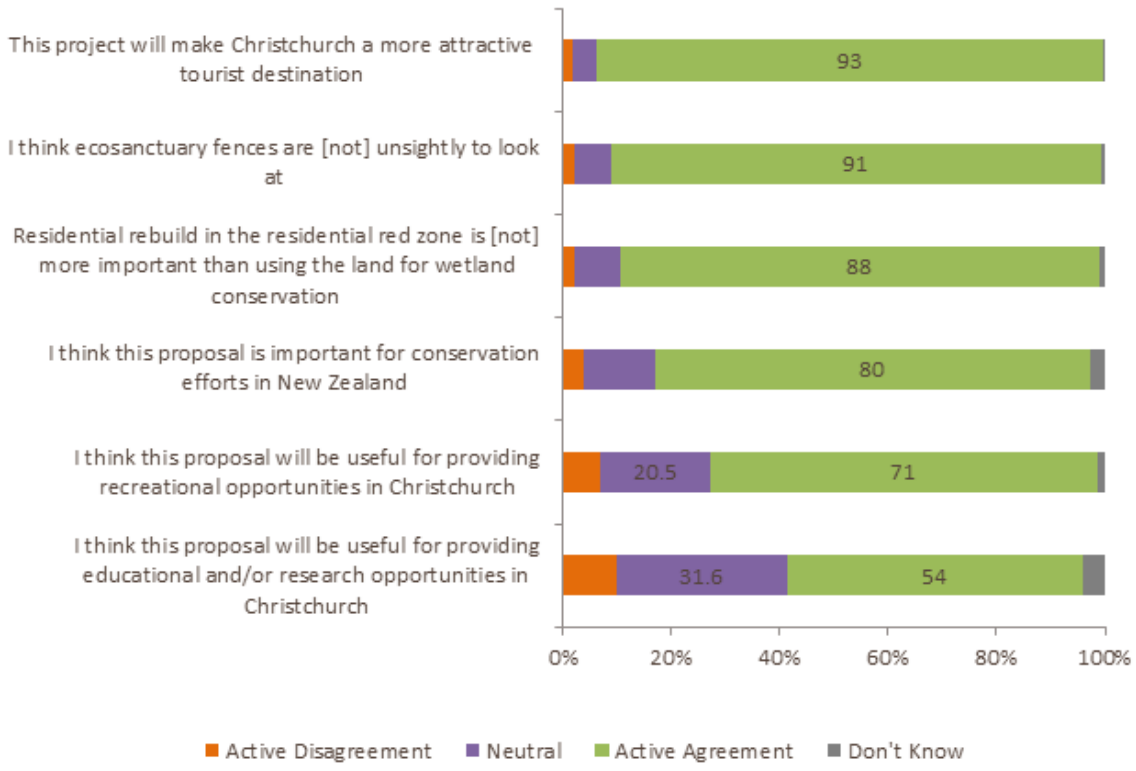

Figure 5. Respondent opinion to a range of items relating to the proposed ecosanctuary (n=526).

Figure 5 displays our inquiry into respondents' thoughts on aspects of the proposal. It was a way of gauging what people thought the proposal might add to Christchurch, including questions on red-zone land use. There is an overall theme of positivity among respondents on issues regarding the proposal, the most important being 90.7% of people disagreeing that ecosanctuary fences are unsightly. This is important for the proposal, as we identified that ecosanctuaries can meet opposition due to their unsightly fences.

We felt it was important to determine what people thought of using red-zone land for an ecosanctuary, since discussions around this can be polarizing. It was interesting to see that 88% of people actively disagreed with the statement that residential rebuild is more important than the wetland proposal. The statement with the least amount of agreement was that the proposal would enhance educational/research opportunities in Christchurch. The reason for this may be because there is no plan for educational facilities in the diagram we provided, which would also help to explain the high proportion of people indicating they don't know.

iii. Travis Wetland and Waitakiri Sanctuary usage

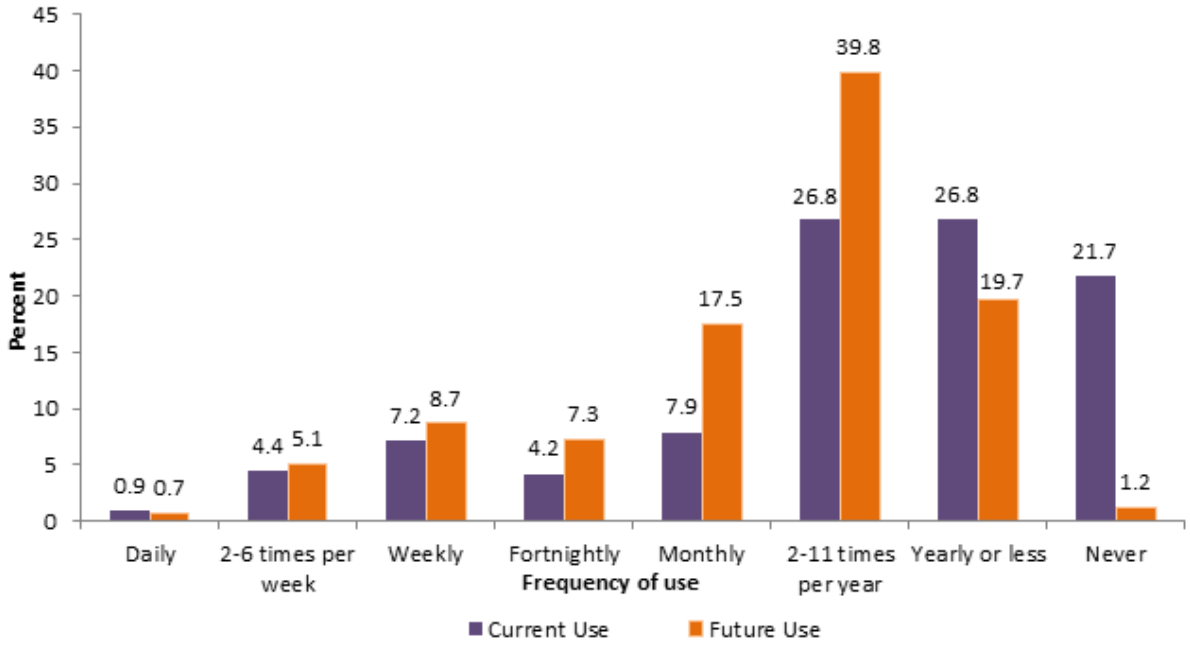

Figure 6. Current usage of Travis Wetland vs. self-predicted future usage of Waitakiri Sanctuary

Respondents' current rates of usage of Travis wetland and predicted usage of the new proposed ecosanctuary were explored to estimate the effect of Waitakiri Sanctuary on visitation rates. Figure 6 suggests that after viewing the details of the proposed ecosanctuary, there is a large decrease in those who indicated they would never use Travis Wetland and a smaller reduction in those who indicated they would use it yearly or less. The rate of future usage across all frequencies increased to compensate. This indicates that the proposed ecosanctuary is likely to generate an increase in the number of unique visitors, even if they only visit the ecosanctuary annually.

One limitation of this analysis is the fact that we are comparing actual visitation rates with future predictions. Self-predictions tend to be biased based on current behaviour (Donaldson & Grant-Vallone, 2002). However, responses indicate a decrease in numbers that do not visit the sanctuary, in contradiction to this theory. It is important to be cautious in making conclusions from this data; however it does indicate that the ecosanctuary is highly likely to boost visitation rates.

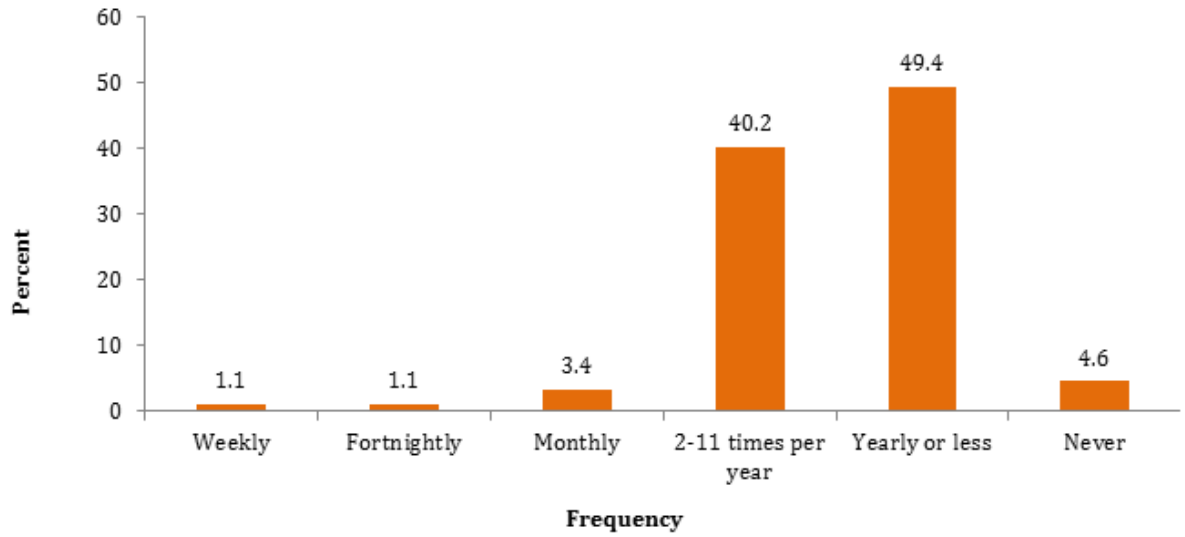

Figure 7. Self-predicted changes in those stating they never visit Travis Wetland after Waitakiri Sanctuary is built (n=87).

Of those who originally stated they currently never use Travis, 49% said they would use it yearly or less, and 40% stated they would use it 2-11 times per year. The indicated increases in visitor numbers support the idea that the Waitakiri Sanctuary will increase engagement with New Zealand's native wildlife in Canterbury. This supports the idea the ecosanctuary is likely to be highly valued.

iv. Tourist opinions on the proposed ecosanctuary

As the rebuild in Christchurch continues, value-adding developments are in demand. It was therefore necessary to include the views of potential tourists and those people who didn't live in Christchurch, to predict the potential tourism value of the ecosanctuary. We wanted to determine whether or not the establishment of the ecosanctuary would increase tourists desire to visit Christchurch (see Figure 9 below).

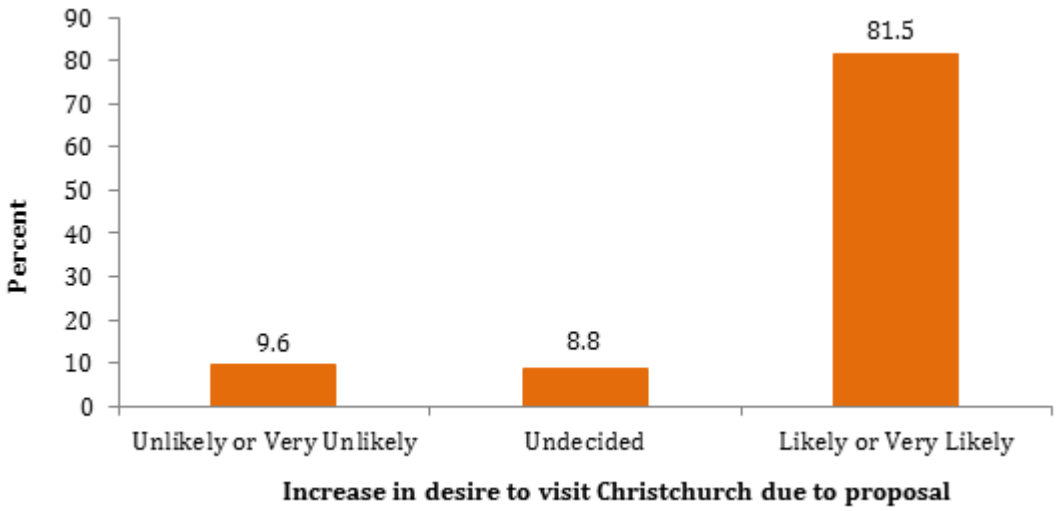

Figure 8. Tourist desire to visit Christchurch in the future, due to proposed ecosanctuary (n=114)

We received a significant amount of responses from outside the Christchurch region (n=114), and the overwhelming majority stated it would in fact increase their desire to visit Christchurch (figure 8). This result indicates that the sanctuary is likely to add value to Christchurch for tourists, and generate additional income for the region.

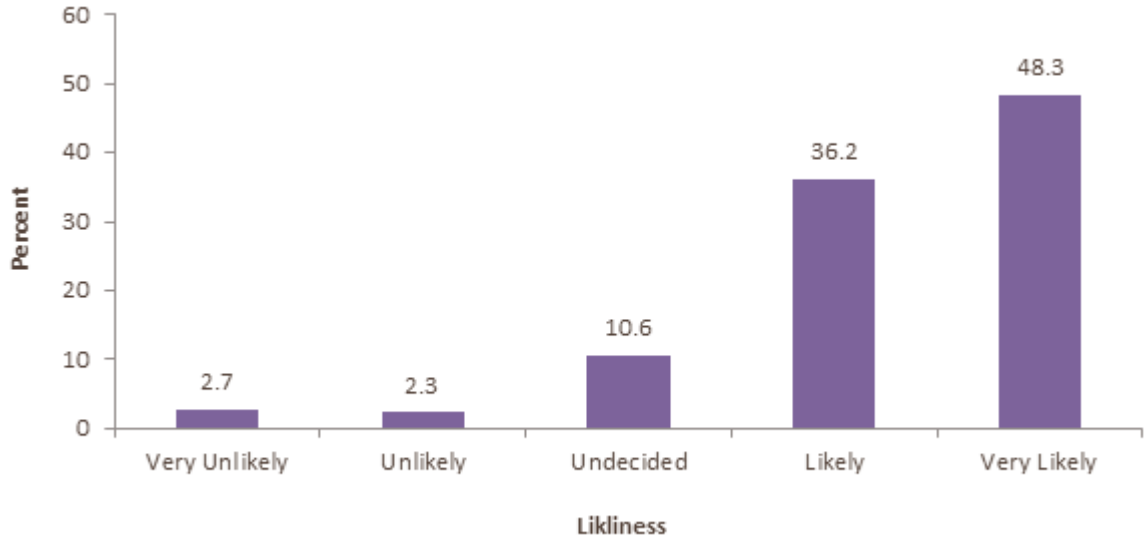

Figure 9. Responses to whether respondents would be more or less likely to visit Travis wetland ecosanctuary over another natural area in Christchurch

A majority of respondents indicated they would be more likely to visit Waitakiri Ecosanctuary over another natural area in Christchurch. 84.5% of respondents indicated they

were likely or very likely to visit the area over another natural area. This illustrates that the sanctuary will be highly valued by both all respondents.

v. Funding, maintenance and contributions

To investigate public opinion regarding responsibility for supporting such a project, we asked respondents to select any of the funding options detailed in figure 10. Respondents were able to pick more than one, hence the total number of responses will be higher than the number of respondents.

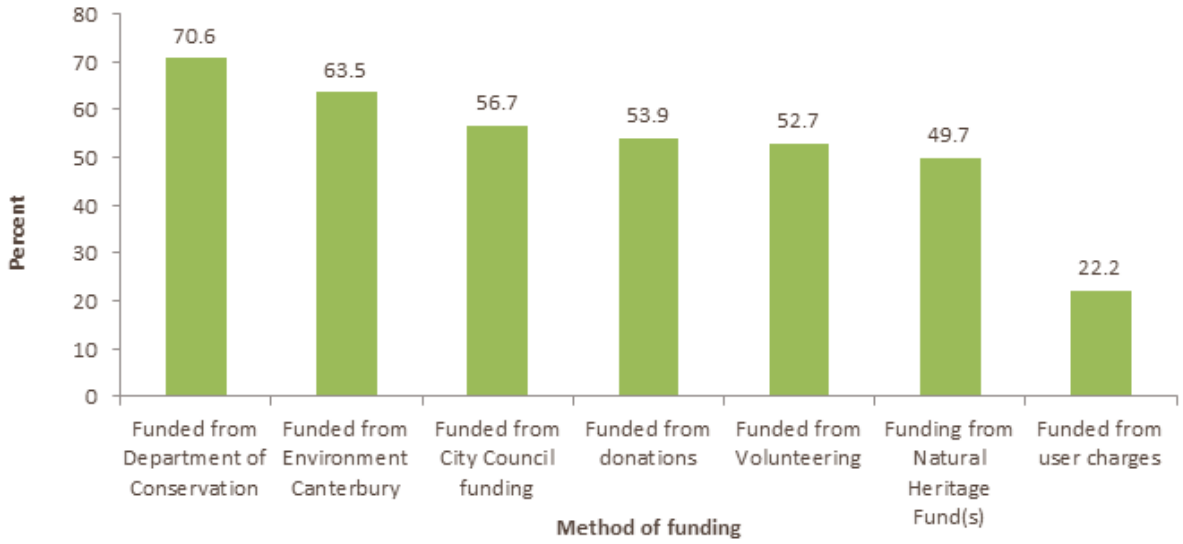

Figure 10. Respondent's opinion on how the ecosanctuary should be funded

Figure 10 shows a large number of people believe the Department of Conservation should offer financial support, with Environment Canterbury and the City Council also receiving large amounts of votes. As popularity of funding methods decreases, the methods become more individual. This shows a theme that respondents believe it is the role of central government and associated agencies to fund proposals such as Waitakiri Ecosanctuary. It is also interesting to note that respondents seem to value voluntary community input as well, with a large number of votes for donations and volunteering.

It is helpful to note that the least popular form of funding was user charges. It seems to be important to residents that the area remains free of user charges. This is the way the current plan aims to run – free of charge – a decision that will be welcomed by local residents and users.

However, future work assessing wider New Zealand's response to funding the project may find more emphasis on user-funding, as wider New Zealanders may not frequent the ecosanctuary as often. As a policy consideration, it is the view of the authors that those spatially closer to the sanctuary (and thus more likely to be affected) be given more weight in this case.

Another area of enquiry relates to public perception regarding respondent contribution to the sanctuary. A range of questions were posed in an attempt to understand how residents would be willing to help initialize and/or maintain the sanctuary (provided they stated they would be willing to contribute to the ecosanctuary, n=329). Figure 12 below shows the preference for different forms of contribution.

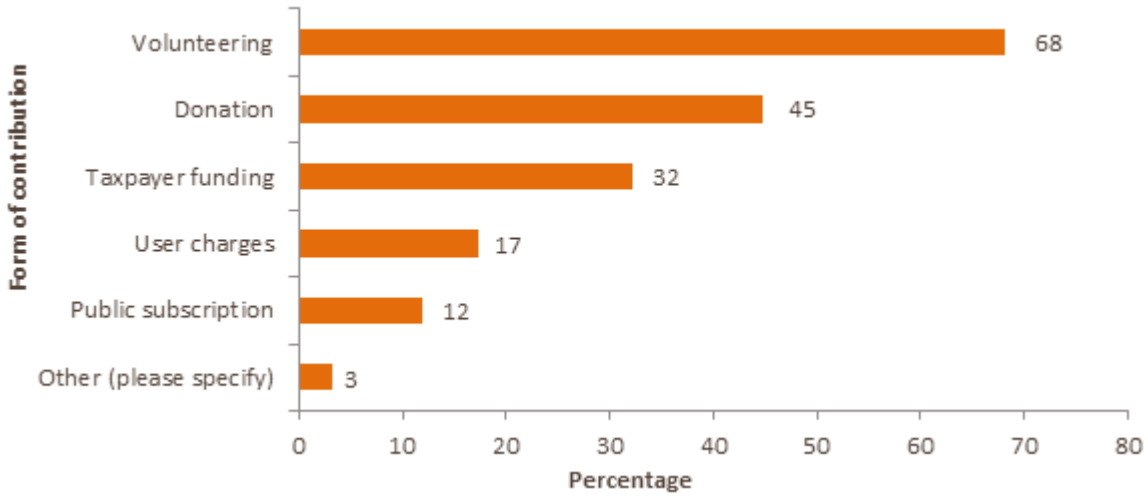

Figure 11. Popularity of personal contribution methods (n=329) [*]

This set of questions has helped develop an understanding of how residents feel such a proposal should be funded, and - if they are willing to contribute - how they would do so. Overall, respondents indicate that they would prefer to volunteer time over financial contributions, with voluntary donations scoring the highest after volunteering time with our 329 potential contributors. This indicates that people value the freedom to choose how they contribute, and that many respondents were willing to contribute if asked.

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[*]Participants were able to select more than one method; hence the total percentage is greater than 100.

vi. Local support for the ecosanctuary

This final section answers our second research question: Is there social support for the Waitakiri Ecosanctuary in Christchurch? From previous survey questions we have developed an understanding and appreciation for public views on conservation, funding, predator proof fences, and the use of red-zone land. These final figures address social support as an aspect of feasibility for the sanctuary, and show majority support. Therefore, we can conclude that respondents surveyed are likely to highly value the proposed Waitakiri Ecosanctuary, and support its implementation process.

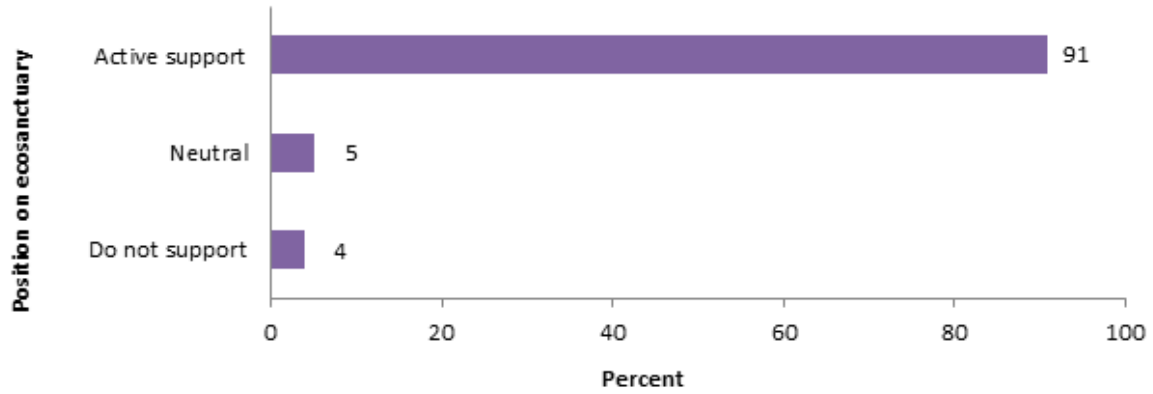

Figure 12. Levels of support of those who indicated they lived in Parklands, Burwood or North New Brighton (n=153).

Given local residents' proximity to the proposal, we wanted to also see what levels of support were in the neighbourhoods surrounding the current wetlands (We considered these to be Parklands, Burwood and North New Brighton). Figure 13 demonstrates 91% support from those that indicated that they reside in one of these suburbs.

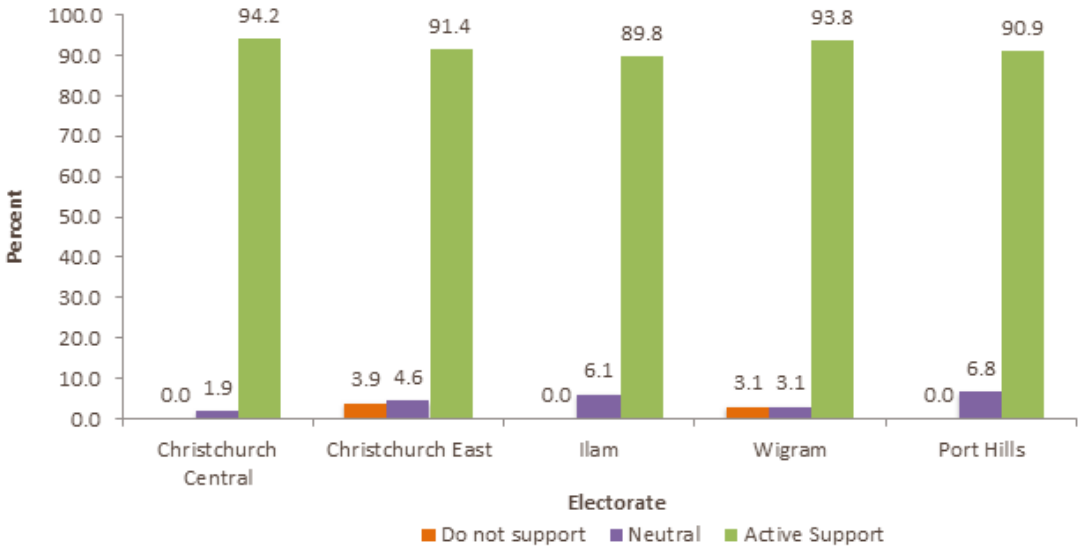

Figure 13. Levels of support for the ecosanctuary, filtered by electorate

We were also interested to know if there was any difference if we separated the responses by electorate. We wanted to make sure that living in the immediate vicinity (those in Christchurch East) had their opinions heard. As shown in figure 13, the highest support is seen in Christchurch central (94.2%), with the lowest proportion of active support coming from the Ilam electorate (89.8%) The most neutral electorate was the Port Hills (6.8% neutral), and the electorate with the most people not supporting the proposal was Christchurch east. Almost all the electorates displayed an active support percentage of over 90%, with the Ilam electorate outlying at 89.8% active support.

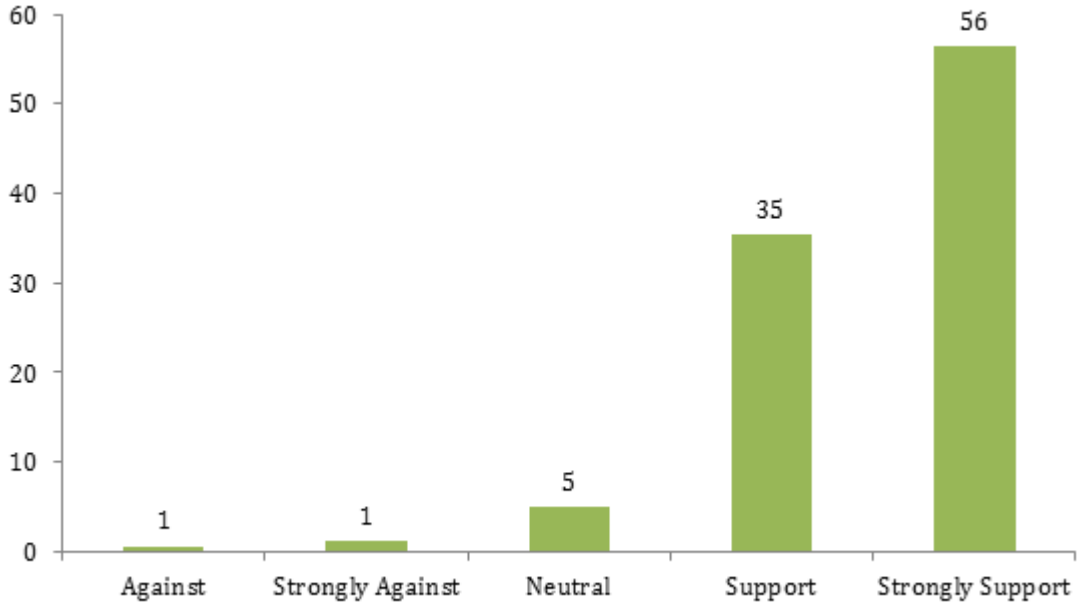

Figure 14. Residential views on the proposal

Figure 14 indicates the view of all 521 respondents, with 91% of people either supporting or strongly supporting the proposal. This high level of active support indicates that Waitakiri Ecosanctuary has potential to be a highly valued social asset in Christchurch

Conclusions

In summary, the first research question: "What factors of feasibility are important to the Waitakiri Ecosanctuary Proposal?", is answered by the literature review and interviews. The information gathered indicates that the Waitakiri Ecosanctuary needs a full pest fence to protect New Zealand native wildlife that have low predation tolerance (Norbury, et al, 2014). The sanctuary will protect an ecosystem and its services with a higher long-term value than the official estimate of financial costs (de Groot, et al, 2012; Clarkson, et al., 2013). Ecologically, the sanctuary will protect our native species, giving Cantabrians a chance to interact with them, and is likely to create spill-over effects in the red-zone areas surrounding the wetland (Clarkson, et al, 2013).

Answering the second research question: "Is there social support for the Waitakiri Ecosanctuary in Christchurch?", our survey indicated that the sanctuary was supported. This social support is likely to generate political support, and the feedback from our survey indicates that people are likely to be readily engaged in the proposal. Political support and community engagement open up opportunities for funding to support the sanctuary, and public views seem to be that central and local government should be major contributors to the project. Also, having more people involved with the proposal increases the chances of more people visiting the finished sanctuary, and experiencing New Zealand's native wildlife.

Limitations

Positionality was one research limitation. As university researchers, we had particular perspectives, and tried to capture what we may have missed with our interviews. This informed the decisions on what questions to include in the survey. In addition, we attempted to follow de Vaus (2002) in eliminating leading questions, mitigating our positionality effect.

Self-report bias may affect our survey results. Respondents may have indicated positively for the proposal to prevent their true opinions reflecting badly on them (Donaldson & Grant-Vallone, 2002). However, without supervision this is less likely, and only 45 of our responses were supervised. Therefore, this is unlikely to have a large impact on results.

Also, we could have extended our interview discussions by interviewing other interest groups. For example, better representation of tourists could give a new element to our findings as they may bring in a significant amount of foot traffic to the sanctuary. Also, involving local iwi could provide cultural perspective and highlight impacts on Canterbury's cultural heritage. However, due to communication issues and time constraints, we could not continue this discussion.

As approximately half of our respondents were gathered via social media and email, and the mailing method also used the internet, many of our respondents were internet users. This was partially offset by the 45 face-to-face respondents, but overall has influenced respondent selection.

Also, the Ilam electorate was over-represented in our sample due to our online distribution methods. This was somewhat balanced by purposive sampling of suburbs near Travis Wetland, but is still a potential limitation when applying our findings to wider Christchurch (See Appendix 3 for graph of respondents by electorate).

Suggested Future Research & Action

It is recommended that community involvement projects through consultation and information distribution be undertaken to advance social support. Many people who had not heard of the sanctuary before this survey came to support the idea after it was explained. Therefore, this is a logical next step to make the Waitakiri Sanctuary socially feasible. It is also recommended that further surveying be done to assess long-term social attitudes towards the project, particularly after information has been distributed widely.

Finally, it is recommended to continue the interview discussion started here to inform on potential problems and successes with the proposal and gain the perspectives of relevant persons. If common concerns are addressed, and successes highlighted, social support will likely increase further.

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Appendices

Appendix 1: Further Waitakiri Ecosanctuary details *(Retrieved from: http://www.avonotakaronetwork.co.nz/f/4e49b4cfc0729be1.pdf)*

Appendix 2: Further EVOSPACE analysis

4 of the best-written and compelling supportive comments from Travis area residents are listed below, which show awareness of the education and community opportunities, as well as the ecological need. Comments such as these could be used in promotion of the proposal.

> "My children already use the wetlands. I would love to get them to help, to teach them about conservation."

> "The entire red zone land should never be built on. I would like to see communities get together and look after this land."

> "Bring back the wildlife and leave a lasting legacy, especially for those whom have been through the quakes."

> "Travis Wetland needs to be predator fenced as domestic cats currently have free access"

Although less supportive, the quotes below do provide insight into possible concerns of locals, that our community partner or other project organisations may have to address in consultation with Travis-area locals. We also see that some level of information may need to be provided about other local issues such as the roading repair programme, and how funding for conservation is separate to roading, and perhaps the potential effect on property value around the Ecosanctuary.

> "My property borders proposed sanctuary. I will have to look at unsightly fences & be unable to walk my dog in my neighbourhood."

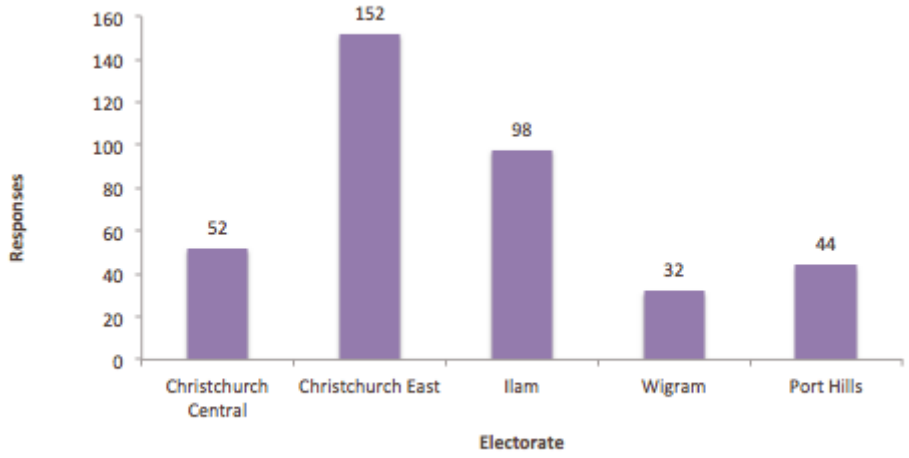
> "I would rather see New Brighton Rd repaired and walking and activity tracks in that area. The road is more important than swamps to our area. Some swamp land is attractive, but Travis Swamp is ample."

> "People live near the wetland to enjoy walking & running the wetland circuit as part of their regular lifestyle. Any move to limit access or to make access by payment would be very strongly opposed."

Future EVOSPACE Results

CTV is running a series called Eyes East, from 24th September - 5th November 2015. This is focused on the Christchurch rebuild, and features the Waitakiri Ecosanctuary proposal among the many others. The programme will direct viewers to EVOSPACE for a 2nd round of submissions, with the aim of gathering a larger representation of Christchurch residents' views.

Appendix 3: Total sample numbers split by electorate



This graph indicates that Christchurch East (the suburbs nearest Travis Wetland) are most highly represented (152 respondents), followed by Ilam electorate (98 respondents).

Appendix 4: Route taken for survey distribution by mail