

Connectivity between Norwich Quay and Naval Point in Lyttelton

How the increase in walking and cycling connectivity will affect the community

Cheyenne McKee, Ellen Williamson, Kelsey Handley, Maximillian van Stom, Michael Lang

Word count: 4480

Table of Contents

1. Executive Summary.....	2
2. Introduction.....	4
3. Literature review.....	5
3.1. Pedestrian Safety.....	5
3.2. Social Capital.....	5
3.3. Public Health.....	6
3.4. Conclusions.....	6
4. Methodology.....	7
4.1. Preliminary Research	7
4.2. Christchurch City Council Interview.....	7
4.3. Online survey	8
4.4. Lyttelton Primary School (LPS) Focus group and Interview.....	8
4.5. Data analysis	9
5. Results.....	10
5.1. Christchurch City Council interview.....	10
5.2. Interview with Lyttelton Primary School teacher.....	10
5.3. Focus group.....	11
5.4. Online survey.....	11
6. Discussion & Recommendations	15
6.1. Analysis.....	15
6.2. Limitations.....	16
6.3. Future Recommendation.....	17
7. Conclusions.....	18
8. Acknowledgements.....	18
9. References	19
10. Appendices.....	21

1. Executive Summary

Research Question

- How would the increase in connectivity between Lyttelton and Naval Point impact the Lyttelton community?

Context

- There is interest from the Lyttelton public to have a multipurpose pathway from Norwich Quay (in the Lyttelton Township) to Naval Point (south west of the township).
- Staff at the Christchurch City Council (CCC) have informed the project group that this pathway will be developed in the near future.
- The goal of this research is to see how this increased connectivity will affect the community.

Methods

- Consultation with members of the CCC to gain insight into the development projects proposed for Lyttelton.
- Online survey for the Lyttelton community.
- Focus group with Lyttelton Primary School children.
- Interview with year seven and eight teacher at Lyttelton Primary School.
- In depth study of literature relating to the research topic.

Limitations

- The short duration of the course meant that research was rushed and results are shallow.
- The survey was conducted with convenience in mind rather than random sampling of Lyttelton residents.
- Changing the focus of the research midway through the semester meant that there was less time to gather data.
- Due to difficulty of not getting in contact with certain parties of interest the results are therefore not as conclusive as anticipated.

Key Findings

- The majority of participants surveyed during the research said that they would make use a pathway from Norwich Quay to Naval Point when it's provided.
- Survey findings suggested that residents will use the recreation grounds at Naval Point more often when safer connectivity is provided.
- Residents of Lyttelton would opt to walk and cycle more often if the pathway was considered safer and had a greater means of accessibility.

Recommendations

- Future research should be conducted to gain a further understanding of the desires and needs of the community. This report should be used to challenge any proposals that do not favour the views of the community.

2. Introduction

Since the 2010 - 2011 Canterbury earthquake sequence, the greater Christchurch region has been given a rare opportunity upon which to modernise and restructure its urban infrastructure and layout (Southworth, 2005). Lyttelton bears a great example of this. It is a small town to the south of Christchurch that is dominated by the respective activities of the Lyttelton Port Company (LPC). Along with this, the flow of heavy machinery traffic in and out of Lyttelton is a major part of the LPC's operations and requirements for its upkeep. The one and only route for this traffic is state highway 74 (SH74). Coincidentally, SH74 doubles as the main road for the township. It also provides the only pathway that can be used and shared by pedestrians and cyclists alike.

Because of this, it is widely regarded in the local community that there is a need for change. Therefore, our group was approached by the community based, non-profit organisation Project Lyttelton (PL). PL instructed that our group ascertain the feasibility of a much needed quayside pathway. This pathway would intend to increase the safety and connectivity for the pedestrians and cyclists of Lyttelton and its visitors. However, shortly after undertaking this task, our course of action was halted by the Christchurch City Council (CCC). Developments of this nature were already in progress with respect to the 'Lyttelton Master Plan'. With this in mind, the overall research approach developed in to bringing forth this detailed report on *how the increase in connectivity from these developments would impact the local Lyttelton community*.

Due to the time constraints that were faced, our main focus was to gain as much qualitative and quantitative data from the community members as possible. It came to our knowledge that the CCC had previously asked the local community for their insights on the proposed Lyttelton developments (Christchurch City Council, 2017). This data was collected six years ago, meaning the views and feelings of the community may differ to the present day. With respect to this, it was a priority of ours to discover and present the current insights of the local community on the topic of the Lyttelton developments.

This report provides an insight into the relevant literature that outlines the aspects of what makes a pathway safe and beneficial to a community. Our methodologies and findings will be presented at length. This includes an overall discussion that ties our discoveries, the current CCC Lyttelton development plans, and the relevant literature together. Our recommendations to PL regarding the future use of this data have also been presented with the conclusion.

3. Literature Review

3.1. Pedestrian Safety

From a thorough review of the applicable literature it is evident that there is a sufficient amount of external research to supplement the main question of our project. This literature review will focus on the key themes that have assisted our research. A prominent and recurring theme regards safety (Pucher & Dijkstra, 2000). In order to ensure a new pathway is used, safety for the users of the pathway is regarded as the aspect with the highest priority.

“Making Walking and Cycling Safer: Lessons from Europe”, by John Pucher and Lewis Dijkstra (2000), has a primary focus of looking at the levels of pedestrian and cyclist safety in Germany and the Netherlands. Pucher and Dijkstra (2000) draw on their research of walking and cycling in Europe throughout their analysis. They use this information to explain how the United States (U.S) could adopt some of the same technologies to improve safety for their cyclists and pedestrians. The article discusses at great length what they perceive to be the best way to improve pedestrian safety. Some of the techniques they discuss involve making improvements to the pedestrian infrastructure and urban design.

Although this article is mainly targeted at how examples from Europe can be applied to the U.S, their methods of improving pedestrian safety was used in conjunction with our own project. This is because New Zealand and the U.S have similar levels of neglect for pedestrian and cyclist safety when compared to Europe (Ministry of Transport, 2011).

3.2. Social Capital

Another core theme to our project was social capital. Leyden (2003) describes social capital as the social networks and interactions that are associated with the trust and cooperation between people. The main hypothesis going into this study was that a better built urban environment led to higher levels of social capital. Therefore, the more walkable infrastructure an area has, the more likely it is that the local community will take to the use of this infrastructure. Infrastructure of this nature includes making sure the area is safe, the inclusion of lighting, and also having some necessary facilities that people can make use of (toilets, rubbish bins).

Leyden (2003) states that there is a need for a walkable urban design in the cities of today. This is because it is currently widely accepted that people use automobiles. Leyden (2003) argues that with a better urban design, more people would get out and walk. This heavily relates to Lyttelton as there is currently no real walkable design, most people tend to drive their cars around the township.

3.3. Public Health

The encouragement for widespread physical activity in the urban environment is a way to maintain adequate levels of public health in society (Lopez, 2006). Although Lopez's studies are conducted in the United States, its themes and idealisms still relate to public health issues that surround the Lyttelton developments. Lopez (2006) suggests that the ever increasing sprawl of the built environment is contributing to a growing problem of health risk in the United States - such as obesity. Lopez (2006) argues that this is because more people are turning to the use motor vehicles to transport themselves. He suggests there are many stresses and factors that relate to this, but he believes that a key contributor lies in the design and urban planning of cities (Lopez, 2006).

Like Southworth (2005) suggests in his paper "Designing the Walkable City", Lopez also states that in the design of cities there must be direct action to reduce the amount of obstacles to physical activity. He argues that these obstacles must be reduced in an effort to encourage those to make use of pathways by walking and cycling (Lopez, 2006). Not only do these obstacles need to be minimised, but certain aspects of land use need to be implemented - such as playgrounds, information points and park benches. Lopez (2006) states that this type of land use best entices people to make the most of out of walking by creating feelings of self-betterment and/or achievement (Lopez, 2006). Lopez's (2006) statement is valid as people will be much more inclined to make use of pathways if there is easy access to them, especially when the pull factors of land use increase the level of enticement.

3.4. Conclusions

Throughout the research process, our team has analysed many pieces of literature. The vast majority of these support and provide evidence for the overwhelmingly positive impacts that the proposed Lyttelton quayside developments could provide.

4. Methodology

4.1. Preliminary Research

Prior to the initiation of data collection and analysis, significant background research was conducted. This included reading all relevant available literature regarding the current and futures states of the Lyttelton Township. The most significant reports that assisted in shaping the research were the 'Christchurch 2012 - 2042 Transport Plan' (Christchurch City Council, 2012a), the 'Lyttelton Master Plan' (Christchurch City Council, 2012b), and the 'Lyttelton Port Recovery Plan' (Canterbury Earthquake Recovery Authority, 2015). All of these reports feature some sort information regarding the future connectivity plans for Lyttelton. Alongside this, parties that have a close interest in the Lyttelton developments were contacted in an attempt to conduct interviews. The LPC, various community groups, and the Christchurch City Council are the parties of interest that the group made contact with.

A trip to the township was arranged where Wendy Everingham (PL), and Jillian Frater (University of Canterbury [UC]) worked with the project team to survey the area of interest. This was done to gain a comprehensive understanding of both the region and the community. The time spent in the township also provided as an opportunity for the project group to develop a stronger understanding of PL. The reinforcement of this 'community part - student' relationship is significantly important when participating in a project of this manner (Viswanathan, Ammerman, Eng, et al, 2004).

4.2. CCC Interview

The relevant literature covered above alluded to the initiation of a pathway which would increase connectivity. Therefore, a meeting with the CCC was arranged as connectivity seemed to be an important part of the CCC plans. Our contact with the CCC was the Senior Greenspace Planner, Mr. Eric Banks. However, to our dismay there was only a sparse amount information provided to the project group. It was the expectation of our group that this meeting would expand on the findings of preliminary research. The meeting confirmed that a pathway connecting Naval Point, Dampier Bay, and Lyttelton was in the late planning period. Stage one was said to be well underway, with stage two remaining fluid. The specifics of this are unavailable as the project is currently publically excluded.

In addition to gathering information about some physical attributes of the project, our meeting with the CCC provided the group with an opportunity to understand the CCC's

perspectives in relation to the developments. It was great to gain a perspective that was different to that of the general community.

4.3. Online survey

Due to time restraints and the general nature of the research project, social based methods of qualitative and quantitative information gathering were deemed the most appropriate. Both methods are generally cost and time efficient (Cresswell, 2009). The majority of the quantitative data was sourced using a short online survey created for Lyttelton residents (*appendix A*). The survey regarded the potential impacts increased connectivity would have on individuals within the community. Facebook groups and pages, peer circulation, and distributions by email are examples of the snowball technique used to share the survey. This snowball technique relies on existing participants recruiting future participants. This method does contain a level of selection bias, however through appropriate distribution this has been mitigated (Atkinson & Flint, 2001).

The survey was available for seven days and asked participants a variety of questions. These questions included; how often they currently used the recreation grounds and Naval Point, what they used these areas for, and how they currently travelled there. Comparative questions included; how often, how they would use, and what their means of transport to these facilities would be if there was a safe pathway constructed. The majority of surveys produced quantitative data, except for a section of the survey that allowed participants to voice their opinions, which produced qualitative data. From the dataset, potential changes of the participants' behaviour pre and post survey were created to compare and analyse.

4.4. Lyttelton Primary School focus group and interview

A focus group targeting the youth perspective was held with students from Lyttelton Primary School (LPS). Five students who were willing to participate were randomly selected from the year seven and eight class by their teacher. The students were asked a variety of questions including; whether they regularly use the recreation grounds and/or Naval Point, how they get there, and if this method of transport would change in there was a safe pathway connecting these areas to Lyttelton.

While at LPS an interview was conducted with the year 7 and 8 teacher Ms. Eve Poff. The interview focused on the concerns the school had regarding current connectivity to and from Naval Point and the recreation grounds. Poff mentioned the impact this had on the school,

its students, and its teachers. The data collected during these interviews provided qualitative data to be used in our analysis.

4.5. Data analysis

The data from the survey was exported into Excel where graphs were created. These graphs provided analysis about the demographic data, the comparison of the current pedestrian situation and how this change after a safer pathway is developed. The data within the graphs has been displayed as a percentage representing the participants that answered that particular question.

5. Results

5.1. Christchurch City Council interview

As part of the Lyttelton Master Plan the CCC has plans in development for the general Lyttelton area. Stage one of the plan is underway and it covers the accessibility between Lyttelton and Dampier Bay. Stage two will assess certain aspects of accessibility between Lyttelton and Naval Point. The CCC could not inform our group about any specific details of the pathway as it is publically excluded. The CCC mentioned that the Lyttelton Community Board will be informed of the specific details and a report will be released to the public by February - March 2018. They did inform us however that they do not plan on including lighting for the pathway.

Alongside this provided information, they also discussed how the LPC plans to move their storage east in the next few years. They mentioned this could have an impact on public accessibility and safety, but said this was still a long way off. The move has multiple stages that do not have definite dates due to the nature of the high security area. The issue the CCC staff raised about the LPC was that they do not wish to give up the land they own in case they need to expand in the future. The CCC staff mentioned plans that had been made years ago to realign the LPC road to provide trucks with an alternative route. This would have made it a lot safer for pedestrians. The LPC turned this down as they were happy using SH74.

5.2. Interview with Lyttelton Primary School teacher

Year seven and eight teacher Eve Poff answered a variety of questions in regards to how the school currently uses the recreation grounds and Naval Point (*appendix C*). She discussed the positive benefits of having safe accessibility from the school to the recreation grounds. She described this would have a great impact on the school and would change the way they make use of these facilities.

Currently the school only uses the recreation grounds for cross country once a year, as they do not have enough green space to hold the event at the school. This year the principal of LPS paid approximately \$500 to hire buses in order to transport the junior children to the recreation grounds. He felt the need for this as he stated it is not safe allowing the children to walk in the current pedestrian environment. He did however allow the senior students to walk.

If there was both a safe and cheap method of transport to the recreation grounds, Eve stated that she would host a running club, as well as the opportunity to involve the students in swimming and sailing.

5.3. Focus group

Five members of the year seven and eight class at LPS were asked a range of questions on their opinions of the current pedestrian environment in Lyttelton. They were also asked how they would feel about a safer path being implemented (*appendix B*). From this it was found that a lot of children walk, skate or cycle to school from the south-western side of Lyttelton. All of the children voiced concerns that they felt unsafe due to the high density of trucks, the narrow footpaths, and the lack of designated cycle-ways. The students currently get to these locations by either walking or are driven by their parents. They stated that if there was a safer pathway, they would prefer to cycle.

5.4. Online survey

The survey was split into two parts. The first showcased questions regarding Naval Point, and the second showcased questions regarding the recreation grounds. Both parts covered how often people visited the locations, what they used the locations for, and then if these would change if there was a safer pathway developed.

The survey received 57 responses and out of these (for those that specified), there was an even number of males and females (*fig. 5.4.1[b]*). This gives a very accurate representation of the population of Lyttelton as according to the 2013 census, the population of Lyttelton is 51% female and 49% male (Statistics New Zealand, 2013).

Figure 5.4.1(a) shows the ages of the survey respondents. The survey missed those aged under 19 and over 69. There was a large representation for those in the 45 - 49 age range.

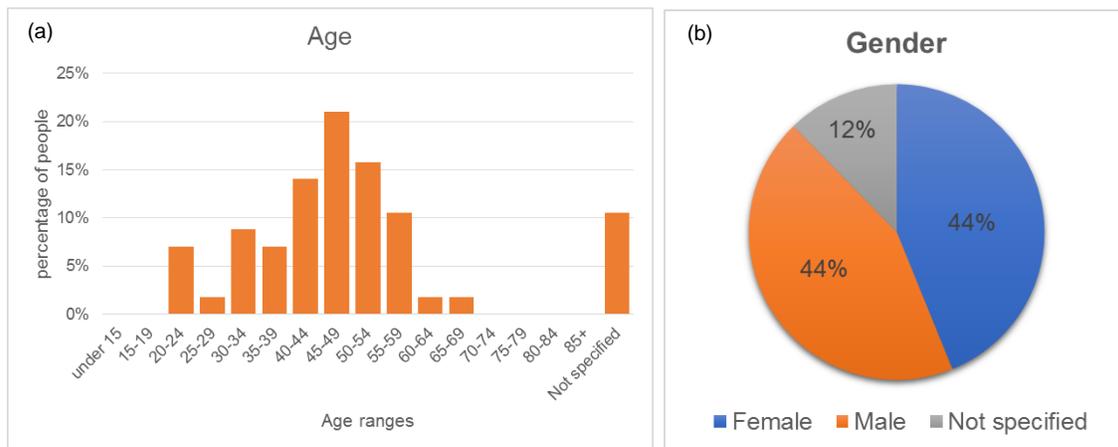


Figure 5.4.1. Demographics of the survey respondents. (a) Ages, (b) Gender.

To understand the current accessibility to Naval Point and the recreation grounds, the question was asked; what is your main mode of transport to Naval Point? The results of this are displayed in *figure 5.4.2*. 64% (n=36) of the sample size stated they currently drove and only 4% (n=2) currently cycle. For the recreation grounds 59% (n=29) drove and 6% (n=3) cycle.

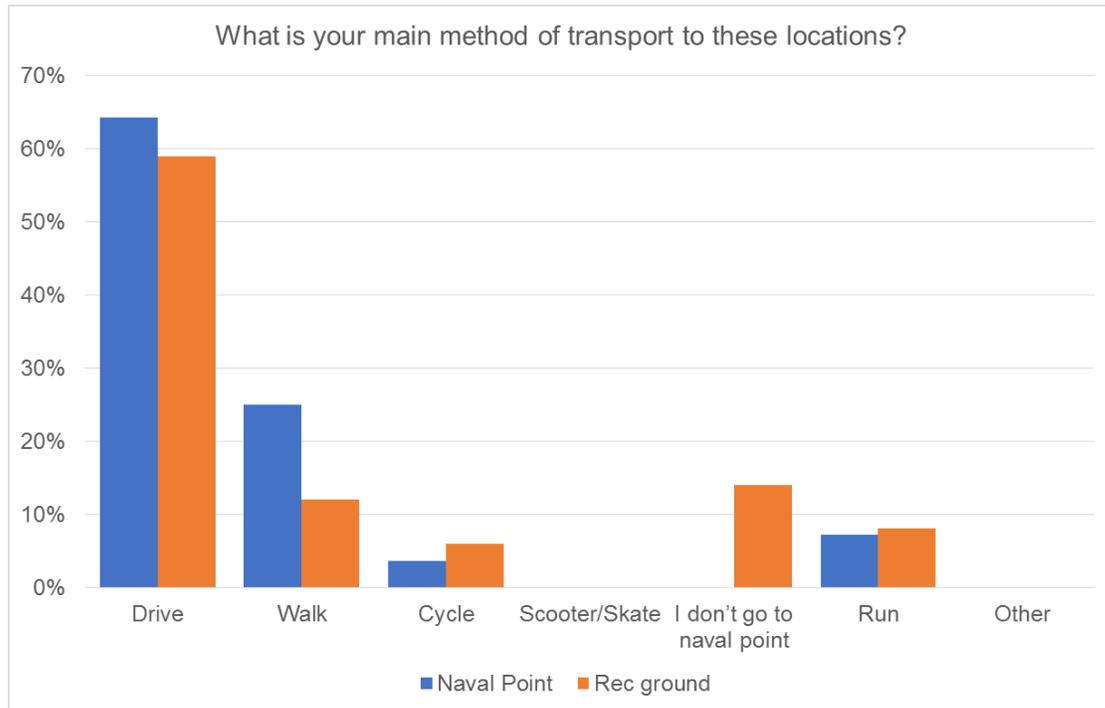


Figure 5.4.2. Participants current main method of transport to Naval Point and the recreation grounds.

The main hypothesis for a safer pathway was that it would increase the use of Naval Point and the recreation grounds. To verify this, two questions were asked in regard to both locations. How often do you visit these places now and how often would you visit if there was a safer pathway? For Naval Point (*fig. 5.4.3[a]*), currently the majority of the survey respondents (35% [n=20]) use it at least once every three months and the most frequent option, (at least once a week) only 19% (n=11). With a safer pathway this will change to 46% (n=26) of people visiting it at least once a week.

For the recreation grounds (*fig. 5.4.3(b)*), currently the majority of the survey respondents (26% [n=13]) use it at least once every three months. The most frequent option, at least once a week had only 20% (n=10) of the respondents. With a safer path this will change to 39% (n=19) of people visiting the recreation grounds at least once a week.

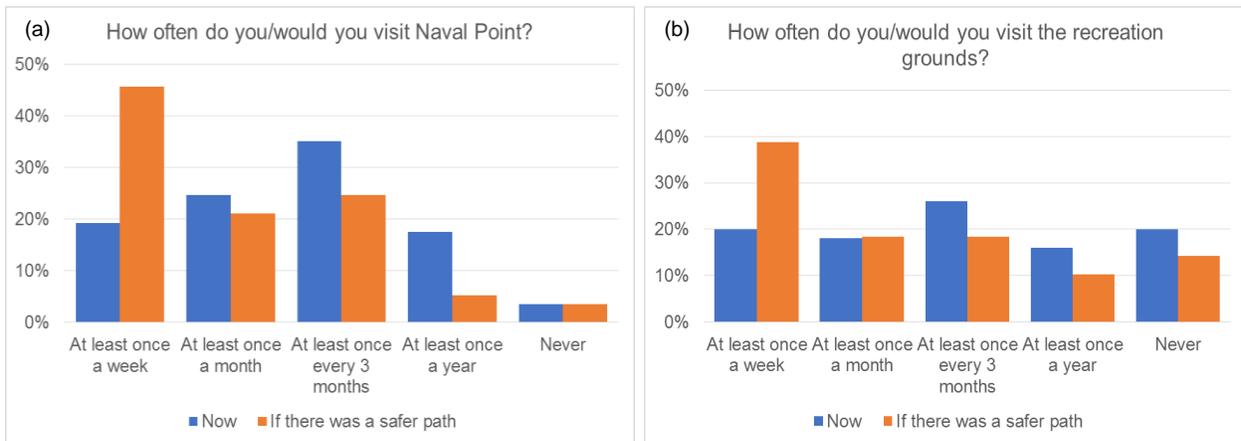


Figure 5.4.3. Current frequency of visits and estimated frequency of visits after a safer path is developed for (a) Naval Point and (b) the recreation grounds.

The second point of interest for the survey was to investigate what people used Naval Point and the recreation grounds for, and if this use would change with safer accessibility. The survey participants could choose more than one option. For Naval Point (fig. 5.4.4[a]) the most popular option was 'leisure' with 40% (n=23) of the 57 participants choosing this option. This was very closely followed by 'dog walking' with 35% (n=20). With a safer pathway, 'leisure' was still the most popular, but increased to 65% (n=37). Swimming was the second most popular, with a large increase from 21% (n=12) to 39% (n=22).

For the recreation grounds (fig 5.4.4(b)) the most popular option was 'leisure activities' with 49% (n=18) of the 57 participants, dog walking had 21% (n=12), and organised recreational sport had 19% (n=11). If there was a safer pathway, 'leisure activities' increased to 49% (n=18), but dog walking only increased to 26% (n=12) and organised recreational sport to 22% (n=11).

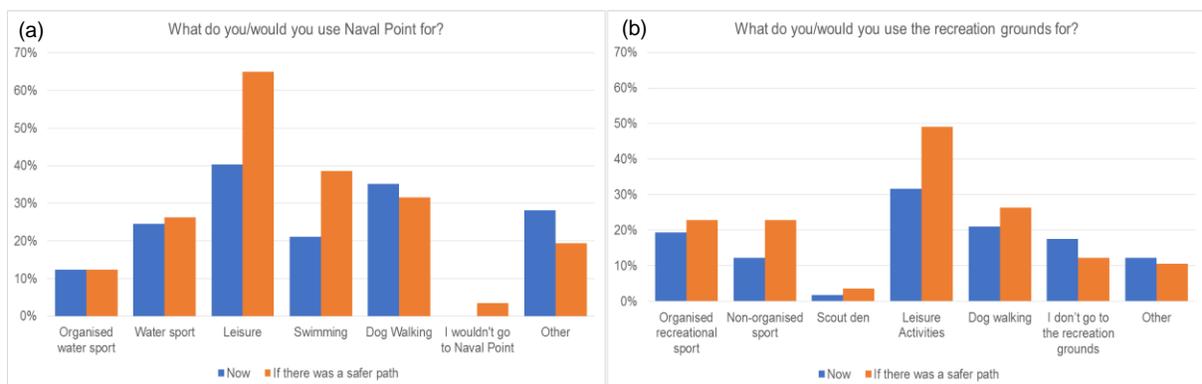


Figure 5.4.4. Current use and estimated use after a safer path is developed for (a) Naval Point and (b) the recreation grounds.

The final part of the survey asked residents what amenities they would like to see on a pathway. *Figure 5.4.5* shows that the most chosen amenity is 'lighting' with 66% (n=38) of the 57 participants choosing this. This was followed by 'information points' and 'rubbish bins' at 60% (n=34). The least important were 'toilets' (40% [n=23]) and 'heritage sites' (28% [n=16]).

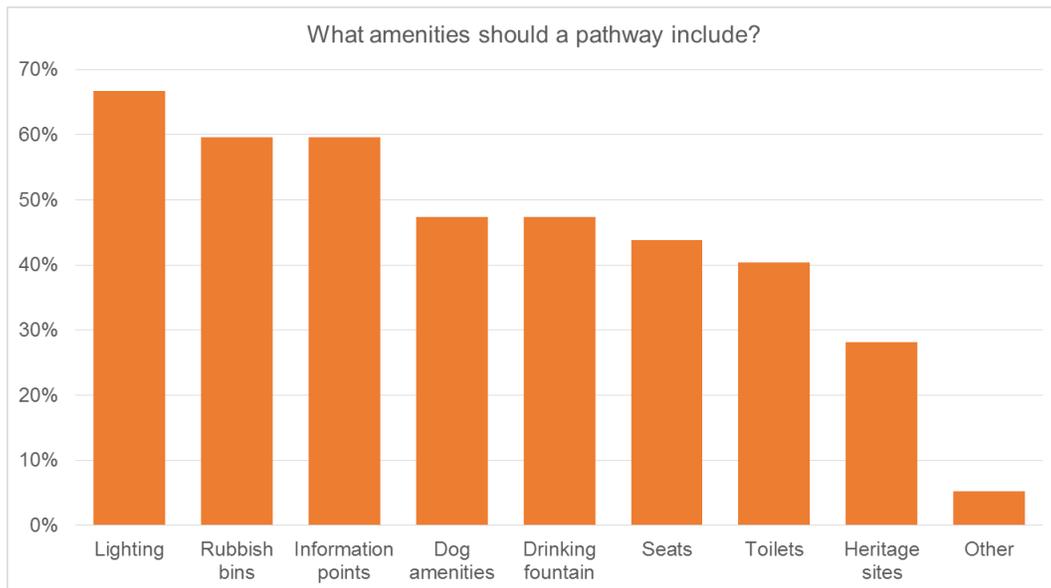


Figure 5.4.5. Amenities Lyttelton residents would like a pathway to include. Survey respondents could choose more than one option.

We asked the respondents for their general comments. Overall the majority were favourably positive, supporting the fact that a safer pathway in this area would encourage families to walk or cycle rather than drive.

6. Discussion

6.1. Analysis

The research results show that the general consensus is that the proposed area for development will be used more frequently if there was a shared pathway that connected the Lyttelton township to Naval Point. Naval Point and the recreation grounds are two areas used by a majority of the public and wider community bodies. Safety and accessibility were the main concerns of the survey participants, our focus groups, and the CCC. The results conclude that if the current issue of 'connectivity' is addressed with a new shared pathway, the area would likely be used more frequently.

The majority of comments received regarding the developments were largely positive and supportive from the local community members. Respondents acknowledged that with an increase of safer developments in this area they would opt to walk and/or cycle, rather than drive. The local school children discussed in an interview that they would feel more comfortable using a pathway that kept them at a distance from the continual flow of heavy trucks to and from the LPC. Participants from the survey stated that with increased levels of safety and accessibility, they would use the area for dog walking, leisure activities, and swimming. This could increase the levels of physical activity in the Lyttelton community, which Lopez (2006) argues has positive effects for an individual's health, as well as the environment. According to Lopez (2006), the encouragement for widespread physical activity in the urban environment is a way to maintain adequate levels of public health in society. The increase in connectivity will also allow residents to be more active, gain more social capital and form stronger community bonds. The results conclude that the community of Lyttelton will be positively impacted overall by the increase in connectivity.

The survey results show that the respondents considered certain amenities as important or necessary for these developments. Popular amenities included lighting, rubbish bins, and information sites. The most important amenity desired was lighting, with 66% respondents selecting it. The least selected amenity was heritage sites, with 33%. In our meeting with the CCC, it was mentioned that lighting would not be included along many parts of the pathway. This is in direct conflict with what is desired by the respondents of the survey. They argue that lighting will encourage people to enter areas where the CCC cannot guarantee their personal safety. The danger referred to here by the CCC is that potentially antisocial night-time gatherings of people in certain areas along the pathway mean that the safety of path users

cannot be assured. This is a problem that is currently being experienced in Lyttelton where people congregate in certain areas at night. This problem does not want to be reciprocated by them with the arrival of these new developments. However, this is also in direct conflict with our literature review. Southworth (2005) argues that pathways need to be safe from traffic but also social crime. A key point he raised was that pathways should be well lit at all times to provide people with the comfort and knowledge that they are safe. Southworth (2005) mentions that it is particularly important for women and children in to feel safe in public areas. 51% of the population in Lyttelton according to the census data are women which reinforces this importance. This means further discussions and debate on the topic of lighting will need to take place before a final decision can be made on the matter.

6.2. Limitations

There were a range of limitations that have possibly made an impact on the results. Whilst the CCC were able to disclose that a pathway is being developed, they were not able to disclose any other specific information about it. This forced us to change our entire scope of research. It also hindered us as our research surveys could not be molded to ask more specific questions that related directly to the pathway itself. Instead the questions were designed to be broader in nature. As the CCC are already developing a pathway for Lyttelton, our research question had to be changed, and thus our research method was changed. This led to time constraints, which resulted in our surveys not reaching as many people as was expected. Our group was also not able to use a more accurate method of sampling, as the snowball technique was used for convenience rather than accuracy.

Time was also a factor in our ability to organise a larger variety of focus groups within the community, therefore a large sample size to more representative of the population was not obtained. Due to the nature of the survey, our group cannot be sure that people will actually do what they mentioned they would in the surveys. This is unfortunate as there is usually a lack of connection between what people say they'll do and what they actually do (Aday, Cornelius, 2006). This is commonly seen in human behaviour and what it means for this research is that people may not use the pathway even if they said they would in the survey. Because of this, our research group cannot completely guarantee that the pathway will be used to the levels our group has discussed.

Parties of interest to the developments provided the group with useful contributions to the project. However, not all parties were easy to get in contact with. The LPC is an example of

one organisation that proved difficult in this regard. Therefore, because the group could not get in contact with certain parties of interest, the results were not as conclusive as anticipated.

6.2. Future Recommendations

It is by our recommendation that the findings of this report be used by our community partner PL. Our findings can be used to add weight to the argument for the inclusion of certain amenities in the current CCC developments. This is because the qualitative and quantitative data collected shows what is actually desired by the community.

This is especially important as the Lyttelton development plans are still publically excluded. This means that at this point the general public and PL are unsure of the CCC's intentions. By using the survey data it will give the CCC further aspects to consider once the developments become publically available and debatable.

Something else that this report raises is the issue surrounding lighting in the developments. Therefore, as the inclusion of lighting is contested by the CCC, this report may spark an interest in reconsidering its inclusion in the developments.

Overall, our report may be used as a starting point upon which future research can be added to. PL can use this report to build a stronger position of influence for themselves and the Lyttelton community. This is especially important as the CCC Lyttelton development plans are soon to become publically available.

7. Conclusion

It is evident from our findings that there is a real desire from the Lyttelton community for a multipurpose pathway that increases the connectivity between Norwich Quay and Naval point. Expressed by the community is a real concern for their safety, with lighting being one of the main amenities stressed as necessary for these new developments.

This report provides a valuable insight into the relevant literature that outlines the aspects of what makes a pathway safe and beneficial to a community. There is now the opportunity to use this report in conjunction with any new council plans to be released in the near future.

8. Acknowledgements

Wendy Everingham (Project Lyttelton)
Eve Poff (Lyttelton Primary School)
Jillian Frater (University of Canterbury)
Simon Kingham (University of Canterbury)
Eric Banks (Christchurch City Council)
Lyttelton township and community
Lyttelton Primary School

9. References

- Aday, L. A., & Cornelius, L. J. (2006). *Designing and conducting health surveys: a comprehensive guide*. John Wiley & Sons.
- Atkinson, R., & Flint, J. (2001). Accessing Hidden and Hard-to-Reach Populations: Snowball Research Strategies. *Sociology at Surrey*. 33. Retrieved from <http://sru.soc.surrey.ac.uk/SRU33.pdf>
- Canterbury Earthquake Recovery Authority (2015). Lyttelton Port Recovery Plan. Christchurch: Canterbury Earthquake Recovery Authority. Retrieved from <http://ceraarchive.dpmc.govt.nz/sites/default/files/Documents/lyttelton-port-recovery-plan-november-2015.pdf>
- Christchurch City Council. (2012a). Christchurch Transport Strategic Plan 2012–2042. Retrieved from <http://resources.ccc.govt.nz/files/TheCouncil/policiesreportsstrategies/transportplan/ChristchurchStrategyTransportPlan2012.pdf>
- Christchurch City Council. (2012b). Suburban Centres Programme, Lyttelton Master Plan, June 2012. Retrieved from <https://www.ccc.govt.nz/assets/Documents/The-Council/Plans-Strategies-Policies-Bylaws/Plans/suburban-plans/LytteltonMasterPlan.pdf>
- Cresswell, J. W. (2009). *Research Design: Qualitative, Quantitative and Mixed Approaches*, 3rd ed. Sage, Thousand Oaks
- Leyden, K. M. (2003). Social capital and the built environment: the importance of walkable neighborhoods. *American journal of public health*, 93(9), 1546-1551.
- Lopez, R. P., & Hynes, H. P. (2006). Obesity, physical activity, and the urban environment: public health research needs. *Environmental Health*, 5(1), 25.

Pucher, J., & Dijkstra, L. (2003). Promoting safe walking and cycling to improve public health: lessons from the Netherlands and Germany. *American journal of public health*, 93(9), 1509-1516.

Southworth, M. (2005). Designing the walkable city. *Journal of urban planning and development*, 131(4), 246-257.

Statistics New Zealand. (2013). *2013 Census QuickStats about a place: Lyttelton*. Retrieved from http://www.stats.govt.nz/Census/2013-census/profile-and-summary-reports/quickstats-about-a-place.aspx?request_value=14876&parent_id=14758&tabname=

Viswanathan M, Ammerman A, Eng E, et al. (2004) Community-Based Participatory Research: Assessing the Evidence: Summary. *AHRQ Evidence Report Summaries*, 99. Retrieved from <https://www.ncbi.nlm.nih.gov/books/NBK11852/>

10. Appendices

10.1 Appendix A: Online survey

Lyttelton shared cycle/walkway survey

Start of Block: Ethics

Intro Welcome. A group of students from the University of Canterbury are conducting this survey as part of a course on research methods in Geography. The purpose of this survey is to understand how the increase in connectivity between Lyttelton and Naval Point will impact the Lyttelton community. The data collected from this survey will be included in a presentation and final report, made available to project Lyttelton. Answering this survey is completely voluntary and by completing this survey you will be giving consent for your answers to be used. The data you provide will remain anonymous. We appreciate you taking the time to complete this survey. Any questions or concerns regarding this survey can be addressed to the project tutor, Jillian Frater. Email: jillian.frater@canterbury.ac.nz

Intro Please refer to the map below for the referenced locations:



Intro I have read the project information above and I understand the aims of the project and that my participation is voluntary. I understand that all information I provide will be completely anonymous. And that I am under no obligation to answer all questions. If I have any questions or concerns about the project, I can contact the project supervisor, Jillian Frater by email (jillian.frater@canterbury.ac.nz). I understand that the project has been reviewed and approved by the Department of Geography at the University of Canterbury. I confirm that I understand my rights as a participant in this study, as outlined above, and that I am willing to participate on this basis.

I agree to the above terms (1)

End of Block: Ethics

Start of Block: Naval Point

S1 The map below indicates the area meant by Naval Point and the recreation grounds



Q1 How often do you go to Naval point?

- At least once a week (4)
- At least once a month (5)
- At least once every 3 months (6)
- At least once a year (7)
- Never (8)

Q2 If you go to Naval point, what is your main mode of transport?

- Drive (4)
 - Walk (5)
 - Cycle (6)
 - Scooter/Skate (7)
 - I don't go to Naval Point (9)
 - Other (specify) (8) _____
-

Q3 Why do you go to Naval point? Select all that apply.

- Organised water sport (4)
 - Water sport (5)
 - Leisure (6)
 - Swimming (7)
 - Dog walking (8)
 - I don't go to Naval Point (10)
 - Other (specify) (9) _____
-

Q4 If there was a safe shared cycle and walkway connecting Norwich Quay to Naval Point, do you think you would be more likely to go to Naval Point?

- Yes (1)
 - No (3)
-

Q5 How often do you think you would go to Naval point if there was a safe shared cycle and walkway?

- At least once a week (4)
- At least once a month (5)
- At least once every 3 months (6)
- At least once a year (7)
- Never (8)

Q6 What would you go to Naval point for if there was a safe shared cycle and walkway? Select all that apply.

- Organised water sport (4)
 - Water sport (5)
 - Leisure (6)
 - Swimming (7)
 - Dog walking (8)
 - I wouldn't go to Naval Point (10)
 - Other (specify) (9) _____
-

Q7 What amenities do you think a shared cycle and walkway connecting Norwich Quay to Naval Point needs? Select all that apply

- Rubbish bins (4)
 - Lighting (5)
 - Seats (6)
 - Toilets (7)
 - Dog amenities (8)
 - Heritage sites (9)
 - Drinking fountains (10)
 - Information points (11)
 - Other (specify) (12) _____
-

Q8 Are there any other comments you would like to make?

End of Block: Naval Point

Start of Block: Main Questions

S2 The map below indicates the area meant by Naval Point and the recreation grounds



Q9 How often do you go to the recreational grounds?

- At least once a week (1)
- At least once a month (2)
- At least once every 3 months (3)
- At least once a year (4)
- Never (5)

Q10 If you go to the recreation grounds, what is your main mode of transport?

- Drive (1)
- Walk (2)
- Cycle (3)
- Scooter/Skate (4)
- I don't go to the recreation grounds (6)
- Other (specify) (5) _____

Q11 Why do you go to the recreation grounds? Select all that apply.

- Organised recreational sport (1)
 - Non-organised sport (2)
 - Scout den (3)
 - Leisure activities (4)
 - Dog walking (5)
 - I don't go to the recreation grounds (7)
 - Other (specify) (6) _____
-

Q12 If there was a safe shared cycle and walkway connecting Norwich Quay to the recreation grounds, do you think you would be more likely to go to the recreation grounds?

- Yes (1)
 - No (2)
-

Q13 How often do you think you would go to the recreation grounds if there was a safe shared cycle and walkway?

- At least once a week (1)
 - At least once a month (2)
 - At least once every 3 months (3)
 - At least once a year (4)
 - Never (5)
-

Q14 What would you go to the recreation grounds for if there was a safe shared cycle and walkway? Select all that apply.

- Organised recreational sport (1)
 - Non-organised sport (2)
 - Scout den (3)
 - Leisure activities (4)
 - Dog walking (5)
 - I wouldn't go to the recreation grounds (7)
 - Other (specify) (6) _____
-

Q15 Are there any other comments you would like to make?

End of Block: Main Questions

Start of Block: Demographics

Q16 Do you live in Lyttelton?

- Yes (1)
- No (3)
- No, but I work there (4)

Q17 What age range do you belong to?

under 15 (1)

15-19 (2)

20-24 (3)

25-29 (4)

30-34 (5)

35-39 (6)

40-44 (7)

45-49 (8)

50-54 (9)

55-59 (10)

60-64 (11)

65-69 (12)

70-74 (13)

75-79 (14)

80-84 (15)

85+ (16)

Q18 What gender do you identify with?

Female (1)

Male (2)

Other (3)

End of Block: Demographics

10.2 Appendix B: Focus group with Lyttelton Primary School

Lyttelton School Focus group questions:

Focus group: year 7 and 8

5 kids (3 boys, 2 girls)

- How do you get to school (walk/bike/car/bus/ferry/skate/scooter)?
- Do you use the rec grounds regularly?
- How do you get there?
- If there was a safe path connecting Lyttelton to the rec ground and naval point, would this change your method of transport?
- Would you use a path that connected Navel Point to Lyttelton?
- How would you use it?
- Other comments:

10.3 Appendix C: Interview with Lyttelton Primary School teacher

Year seven and eight teacher: Eve Poff

- How often does the school use the rec grounds?
- How often does the school use navel point?
- If there is a safer route do you think the school would use the rec grounds and navel point more often?
- Other comments: