

# Community development in Little River

Identifying the wants and needs for community  
transport through accessibility, mobility and wellbeing.

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## Abstract

In today's consistently liquid society the umbrella of transport is recognised as a fundamental infrastructure. Mobility and accessibility are issues faced in every rural region across the urbanising world. The level of connectedness and accessibility a person feels can crucially impact a range of social outcomes including mental and physical health. Located in Banks Peninsula, the Wairewa area is composed of several small communities, with a total of 465 occupied dwellings. The physical geography favours isolation, hindering access to everyday services. Even if Little River "city-centre" facilitates a small service hub, key services such as supermarkets and primary health care are found some 40-50 km away. The research project explored whether there is a need, and more importantly a want for implementing a community transport system in Wairewa. Our research was a combination of an online/paper survey and Geographical Information Systems (GIS) data analysis. We received responses from 19% of the households in the Wairewa area, thus giving us a basis for our recommendation. The main results showed that although most people (81%) always had access to a motor vehicle, the majority (66%) were still interested in a form of community transport.

## Key words

Mobility, Community Transport, Rural Area, Survey, Geographic Information System.

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# 1. Introduction

## 1.1. Context and question

Mitigating the effects of rural isolation is necessary for the development of such centres, as well as the wellbeing of inhabitants. Feeling connected to an area and having accessibility through mobility have been directly correlated with wellbeing, and this is especially evident in the relationship between rural isolation and the depreciation of mental health (Stanley et al, 2018; Walker, 2012). Differences in transport mobility and access is inherent to living in rural places, especially rural New Zealand, so it is imperative to understand the population composition and the physical geography of the area.

The composition of the rural Little River and Wairewa area (LR&WA) is likely to be very diverse. Statistics NZ (2018) states, *“Included under the rural umbrella today are a diversity of groups – farmers and farm workers, forestry workers, ‘alternative lifestylers’ and craftspeople, among others”*, implying that variations in the socio-economic status of LR&WA residents are likely, therefore there will be variations in transport mobility and access options. The geography of LR&WA can also hinder mobility and accessibility as it can restrict those without a means of transport. The community is scattered over a large rural area divided by steep hills, as well as being approximately 40-50 kilometres away from key services such as supermarkets, health services, pharmacies and more. Due to this, the geographical isolation of rural communities may affect the overall wellbeing of its inhabitants as mobility and therefore access to these services may be restricted. The purpose of this study is to analyse the level of connectedness that rural populations have to key services (such as health services, food & drink, government services etc) and whether the implementation of a community transport is needed, and more importantly wanted. The study was undertaken in the LR&WA.

## 1.2. Literature Review

Mobility and transport are one of the most important factors that greatly impact rural populations. Mobility is a basic necessity in a developing region to meet the populations basic needs (Šipuš & Abramović, 2017). Lack of transport has knock-on effects to the population affected; social exclusion, dependency on others, health, employment and many other factors of life can be affected by poor mobility (Stanley et al, 2018). Rural areas feature in all corners of the world, with some being more disconnected from urban areas than others. Little River is one such area. According to Šipuš & Abramović (2017), the importance of transport services in rural regions is crucial to the economic and social development of an area, increasing the wellbeing of inhabitants and aiding in the reduction of adverse effects that may arise due to isolation.

Stanley et al (2018), O’Shaughnessy et al (2011), and Šipuš & Abramović (2017) have investigated the importance of transport mobility to see whether a lack of transport affects the wellbeing of a community. In all three papers a similar conclusion can be made – the increased mobility of individuals, by way of community transport, increases social interactions and therefore combats against social exclusion and the mental illnesses that may arise from exclusion, for example, depression (National Forum for Assertive Outreach [NFAO], 2004). This conclusion can be examined further, and possibly strengthened, through examination of the current rural transport options in LR&WA and gauging the resident’s opinion of a transport service for the area.

Work done by Johnstone, Zant and Kingham (2004), showed that there is a ‘strong desire’ among young people in Christchurch (New Zealand) to be independent when it comes to transport. Although they did not find a discrepancy between urban and rural students, they managed to build a foundation into further study into the topic. Another study by Skelton (2013) revealed the effects of mobility on the identity formation of young people. Although this study was conducted in Auckland, a rather

different cosmopolitan and urban city compared to the LR&WA, the findings are very applicable to young people globally. Skelton's conclusions showed the significance of mobility for young people and the importance accessible mobility for spatial and social development and identity formation. The study revealed that although people with personal vehicles felt more mobile, respondents also often spoke highly of the connections made on public transportation and their importance. However, many young people cannot afford cars and petrol, thus creating a basis for one of the target demographics of our study – the most impacted by our study is the youth under 25. Subsequently the second age bracket to fall within the bounds of vulnerability are those above 65. O'Shaughnessy et al (2011) take a social approach to rural transport in peripheral rural areas in their study. Their primary research demographic were elderly females living alone in rural areas who had eventuated there due to varying circumstances. Most individuals in this group had lived in these locations for a long duration of time, with family members moving away to less isolated areas with higher employment options. The paper focuses on the growth rate of the economy as well as the service provisions and depopulation of rural areas. This concludes that mobility can result in employment and the creation of social networks producing a higher quality of life. Public transport creates more than just mobility, it allows for further access to economic growth and more importantly it creates a social occasion and community connectivity. O'Shaughnessy et al (2011) discovered that many elderly do not like to ask for assistance for matters less than urgent (e.g. healthcare), therefore the analysis of this age group becomes of high importance.

Scientific literature suggests that there are many ways to conduct geographic research. The objective is to involve successful research methods that will motivate a community to participate (Hoven & Trell, 2010). A range of methodologies are possible for research, including GIS analysis, surveys, walks, interviews and photography, mental mapping, video (Hoven & Trell, 2010). Creative and interactive methods were found to be more insightful and deepen knowledge of a place (Hoven & Trell, 2010). GIS methods appear to be the best option to quantify accessibility and show visual data results to communicate findings. Surveying methodology seems to be an effective way to collect qualitative data quickly with the consideration of ethics during construction. Surveying can have creative questions to engage the participant and to answer the research question and gather insights. GIS and surveying are appropriate methods to gather relevant and appropriate data for geographical research. These methods were chosen to conduct this project.

With this background information in mind, our study focused on the implications of life in a semi-isolated rural area for the LR&WA residents. More specifically, we addressed the following two issues: GIS accessibility quantification and qualitative survey. With advancing technology, particularly in GIS measuring access to health services is now achievable. To evaluate whether there is a need and more importantly a want for the implementation of community transport in the LR&WA. Finally, the results were presented to the community trust on the 1<sup>st</sup> of October 2018. The feedback of the research findings and future proposals are found in the discussion section of this report.

## 2. Material and method

### 2.1. Study site

The LR&WA is found on the South Island of *Aotearoa* (New Zealand), in the Banks peninsula, between Christchurch (the main city of the South Island, with around 400,000 inhabitants according to the last census in 2013. Figure 1 circled in yellow) and Akaroa a French-style tourist destination – which is completely remote and a cul-de-sac (Figure 1 circled in orange). The LR&WA has 465 occupied dwellings (according to the 2013 census) and has several key services. Key services found in LR&WA are: a primary school, Marae, library, rugby club, café and store, bed and breakfast, museum, post office, and fuel station. The key services that are lacking are primarily health services, but also include others such as: primary health care, pharmacy, supermarket, and government services. LR&WA is an example of a rural area with scarce transport options for those with poor access to services. The location of LR&WA may have negative consequences to the population that inhabit the area, so it is necessary to investigate whether this town needs a form of community transport, other than privately-owned vehicles, to counteract any negative effects of living in an isolated area.

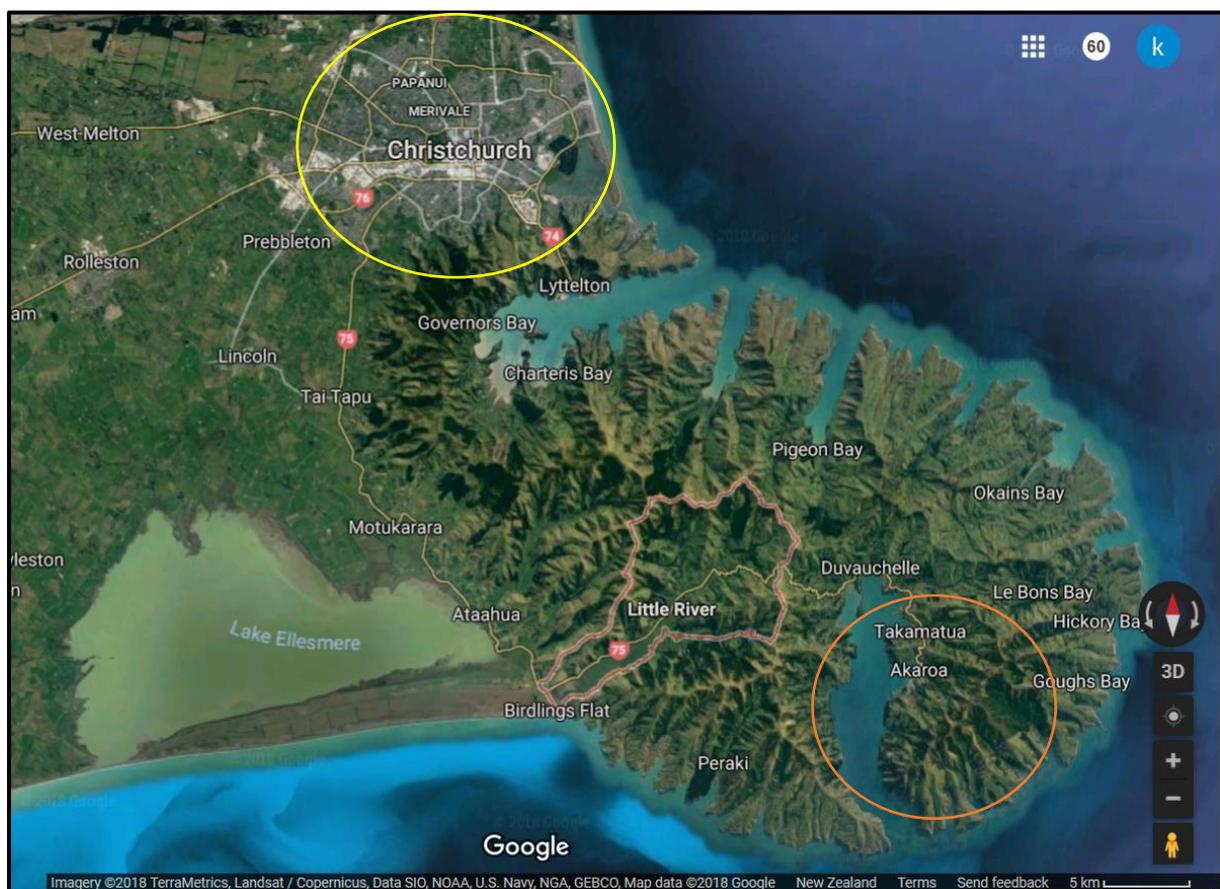


Figure 1: Little River catchment area outlined in red, Christchurch located in yellow circle, and Akaroa located in orange circle.

### 2.2. Data collection

A quantitative GIS analysis of the accessibility to primary services, and a survey that included qualitative and semi-quantitative data was carried out to gain a better understanding of the

population composition of the area, and to gauge residents' opinions of a potential form of community transport.

### 2.2.1. GIS data and methods

Several GIS data sources were used from the Ministry of Health (MoH) and Ministry for the Environment (MfE) in New Zealand, the Community Information Christchurch (CINCH), Open Street Map (OSM), Land Information New Zealand (LINZ), and Statistics New Zealand. The obtained data covers the Christchurch catchment area and Banks Peninsula. They were organised into four categories:

- People: point data of residential areas in Okuti Valley, Puaha/Cooptown, Bachelor's/Montgomery's Road, Little River, and Birdlings Flat. Points were created using a Polygon Centroid tool in QGIS using the outlined perimeters of each area.
- Health and welfare: location of General Practitioners (GPs), hospitals and medical centres, pharmacies, ambulances, and other health services, as well as welfare places like parenting, single mothers, older peoples etc.
- Socio-cultural places: location of community groups (worship and ethnics, lodges, associations, society and clubs, trusts and trustees, other social groups, marae, etc.), cultural groups (art, dance, drama, music, heritage, museums, etc.), education places (preschools, kindergarten schools, colleges, high-schools, university, etc.), sport and recreation places, food and drink facilities (restaurants, supermarkets, fast-food, café, bar, etc.).
- Government services: data consisting of the locations of Work and Income New Zealand (WINZ) in Canterbury. This was input manually.

A New Zealand road network data was collected, developed by Beere (2016). A GIS accessibility analysis was computed using ArcGIS 10.4.1. software (©ESRI Inc.). The accessibility analysis was performed between (i) the living places (demand determined by house places) and (ii) the service locations (facilities determined by collected data). The household points were then used to calculate the distances between each residential place and where people travel to using a Network Analysis tool in ArcMap to calculate the best route between the residential areas on LR&WA and travelled places. Distances and times take to reach places was completed using a road network dataset that includes the speed limits and is based on driving minutes by motor vehicle (Beere, 2016).

### 2.2.2. Survey methods

As LR&WA is very sparsely populated, to ensure the validity of our data we used three different data retrieval methods; an electronic survey (via SurveyMonkey), a paper survey, and door-knocking (to reach individuals who did not have access to the electronic or paper surveys) were implemented. The same survey was used for all three methods (see supplementary material 1).

The survey comprised of a mixture of 9 qualitative and semi-quantitative questions to identify the wants and needs for a community transport system of LR&WA residents. The electronic survey was shared to the Little River and Birdlings Flat community Facebook groups and regular updates about completing the survey were posted. The online survey was also sent out to the teaching staff and parents of the Little River School (see supplementary material 2), and the Wairewa Marae to ensure cultural inclusiveness.

To reach those in the community who may not have access to a computer, the internet or to the Facebook group, paper versions of the electronic survey were created and dropped off at four locations in the LR&WA. Collection points were established with the community partner and located at the Little River School, the Little River Café & Store, the Little River Library, and at a property of a resident in Birdlings Flat who offered their letterbox as a place to collect and drop-off paper surveys. Door knocking was the last methodology used for the circulation of the survey. Some areas in Little River were chosen for door-knocking as they had been identified by our community partner as the “harder-to-reach” areas. They were identified as the remote houses of Birdlings Flat, Okuti Valley, Bachelor’s/Montgomery’s Road, and Puaha/Cooptown (see supplementary material 3). For the door knocking method we chose to approach every fifth house to create an unbiased and random method to select houses. We reached 30 houses in total.

The survey was open for the duration of a 21-day period in the LR&WA community. It was open from the 27<sup>th</sup> of August 2018 to the 16<sup>th</sup> of September 2018 on internet, the hard copies and door-knocking responses were also collected on the 16<sup>th</sup> of September 2018. The collected surveys from these 3 methods were then entered in an Excel document to create statistics and graphs.

### 3. Results

Firstly, the results show a GIS analysis of accessibility, distance in time and distance in kilometres. Second to this, the question of accessibility is comparatively analysed with the perceived connectedness by the LR&WA resident respondents. Following on from this, the results move to a quantitative analysis of age group categories and access to a motor vehicle, and furthermore the age group categories and how important they rank the issue of community transport. Finally, an overall thematic analysis of the qualitative data into categories of negative and positive respondents when asked their opinions of the implication of a community transport in the area.

#### 3.1. Accessibility analysis and connectedness perception

Through the GIS Network analysis, we were able to come up with the distance in minutes and kilometres to key services from LR&WA. The result correlate with the answers of Question 7 in the survey (see supplementary material 1). The findings of table 1 shows people who answered, "very connected" to primary resources marked with a green field, people who answered, "reasonably connected" with an orange field and those who answered, "not really connected" with a red field.

Results show that participants gave more positive responses to the question when the distances between services and LR&WA were smaller, and more negative responses to services that were further away. For example, this is evident in the responses for the Food and Drink option; this option had the most replies of ‘feeling connected’ and had a smaller average distance. Compared to the higher number of “reasonably connected” and “not really connected” replies to feeling connected to GPs and other services that are greater distances away, we can conclude that isolation from services due to geographical distance may well be a factor in the forefront of these discrepancies between levels of ‘connectedness’.

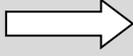
Activities	Average distance from LR&WA (km)	Average time from LR&WA (min)	Highest number of replies		Least number of replies
GPs	29.6	31.8	Not really connected	Reasonably connected	Very connected
Health Services	28.4	27.8	Not really connected	Reasonably connected	Very connected
Food/Drink	6.96	6.6	Reasonably connected	Not really connected	Very connected
Govt Services (WINZ)	53.2	50	Not really connected	Reasonably connected	Very connected
Cultural/Religious	10.84	9.8	Not really connected	Reasonably connected	Very connected
Education	6.8	7.4	Not really connected	Reasonably connected	Very connected
Recreational	4.18	4.6	Reasonably connected	Not really connected	Very connected

Table 1. Table showing average distance and time to activities (left), and levels of connectedness (right).

### 3.2. Survey results

We collected a total of 88 responses through the survey, (67 by internet, 17 by paper form, and 4 by door-knocking). This gave a representation of 19% of the overall households in the LR&WA, thus a fair representation and making the results significant and relevant for analysis.

The findings of table 2 present the analysis of car accessibility by age groups, referring to question 2 and 4 of the survey (see supplementary material 1). The results show that 0% of respondents were under the age of 15, 8% were 15-24 years of age, 31.8% responded as 25-44, 56.8% of respondents were aged 45-6 and 3.4% responded as 65+. These results showed that all of the age groups combined of the survey respondents 80.7% “always” had access to a motor vehicle in their daily lives, 12.5% responded with “usually” and 4.6% responded with “sometimes”.

The age brackets (>15, 15-24, 65>) are the most vulnerable when it comes to mobility and the outcome of this research would arguably impact them the most. When focusing on these categories (youth under 25 and elderly over 65 years old), results showed that only 57.1% of youth participants “always” had access to a motor vehicle (i.e. -23.6% less than the whole research population), 14.3% “usually” had access to a motor vehicle and 28.6% “sometimes” had access to a motor vehicle. This means that across that age bracket (15-25) no one “never” had access to a motor vehicle.

The results also showed that elderly people (65+) 100% “always” had access to a motor vehicle. Although, when analysing the qualitative answers of those over 65 (table 3, survey question: “If a mode of community transport were to be implemented in the future, how would this affect your life?”), 66.7% (2/3 respondents who were 65+) expressed concern for when they get older. For example, one person wrote “Direct correlation to age. As one ages there is more of a need for such a vehicle to enable this age bracket to continue to live in Little River”. However, only 3 people (3.4%) of respondents were aged 65+ which is not a fair representation of this age demographic. This is significant when looking at the limitations of our analysis. When comparing our results to the 2013 census we can note that 19.7% of the Little River community are aged less than 15 years, and 13.4% of people were aged 65+ (Stats NZ, 2013).

Table 4 shows the level of importance that people hold about the topic of community transport taken from question 2 and 8 of the survey (see supplementary material 1). Of all the age groups of participants combined, only 20.7% answered “a great deal”, 13.8% answered “a lot”, 24.1% answered “a moderate amount”, 17.2% answered “a little”, and finally 10.3% answered “not at all”. When we analysed the qualitative data associated (table 4, survey question 9: “*If a mode of community transport were to be implemented in the future, how would this affect your life?*”), we discovered quite a different outcome. A thematic analysis of the potential impacts of a community transport implementation for respondents (Table 4) showed that 28.5% of participants responded positively on behalf of someone other than themselves. Many of these qualitative answers were aimed at either younger or older family members. One respondent said, “*As my children get older their ability to get to and from Christchurch independently*”. If a community transport was implemented; “*For our family it would mean our teenage children would be able to get to and from activities and also choose to do more based on the knowledge that they can catch a bus home*”.

Where many of these people responded that it wouldn’t impact them personally in the categorised question about how the issue of an implementation of a community transport is important their qualitative answers showed that their concern was rather on the behalf of those most vulnerable in terms of mobility in the community. Thus, showing that although only 20.7% of participants answered that community transport mattered to them ‘a great deal’, 65.5% of the qualitative answered showed positive interest in the topic.

Table 2: Analysis of access to motor vehicle for respondents dependent on age (survey question 2 and 4, see supplementary material 1). Results are presented in percentage of participant responses and number of participant responses are indicated in brackets.

Age group	Survey question: “Do you have access to a motor vehicle?”	Participant responses
All age groups combined 100% (88)	Always	80.7% (71)
	Usually	12.5% (11)
	Sometimes	4.6% (4)
	Rarely	-
	Never	1.1% (1)
	Other	1.1% (1)
	Total	100% (88)
“Under 15” years of age 0% (0)	-	-
“15-24” years of age 8% (7)	Always	57.1% (4)
	Usually	14.3% (1)
	Sometimes	28.6% (2)
	Rarely	-
	Never	-
	Other	-
	Total	100% (7)
“25-44” years of age 31.8% (28)	Always	92.9% (26)
	Usually	-
	Sometimes	3.6% (1)
	Rarely	-
	Never	-
	Other	3.6% (1)
	Total	100% (28)
“45-64” years of age 56.8% (50)	Always	76% (38)
	Usually	20% (10)
	Sometimes	2% (1)
	Rarely	-
	Never	2% (0)
	Other	-
	Total	100% (50)
“65+” years of age 3.4% (3)	Always	100% (3)
	Usually	-
	Sometimes	-
	Rarely	-
	Never	-
	Other	-
	Total	100% (3)
“Prefer not to say” 0% (0)	-	-

Table 3: Analysis of the importance of a community transport implementation for respondents dependent on age (survey question 2 and 8, see supplementary material 1). Results are presented in percentage of participant responses and number of participant responses are indicated in brackets.

Age group	Survey question: “How important is this issue of community transport to you personally? (e.g. Volunteer-driven van or bus)”	Participant responses
All age groups combined 98.9% (87)	A great deal	20.7% (18)
	A lot	13.8% (12)
	A moderate amount	24.1% (21)
	A little	17.2% (15)
	Not at all	10.3% (9)
	Additional comments	13.8% (12)
	Total	98% (87)
“Under 15” years of age 0% (0)	-	-
“15-24” years of age 7.0% (6)	A great deal	33.3% (2)
	A lot	-
	A moderate amount	50% (3)
	A little	-
	Not at all	16.7% (1)
	Additional comments	-
	Total	100% (6)
“25-44” years of age 32.2% (28)	A great deal	25% (7)
	A lot	21.4% (6)
	A moderate amount	10.7% (3)
	A little	14.3% (4)
	Not at all	10.7% (3)
	Additional comments	17.9% (5)
	Total	100% (6)
“45-64” years of age 57.5% (50)	A great deal	18% (9)
	A lot	10% (5)
	A moderate amount	30% (15)
	A little	22% (11)
	Not at all	6% (3)
	Additional comments	14% (7)
	Total	100% (50)
“65+” years of age 3.5% (3)	A great deal	-
	A lot	33.33% (1)
	A moderate amount	-
	A little	-
	Not at all	66.7% (2)
	Additional comments	-
	Total	100% (3)
“Prefer not to say” 0% (0)	-	-

Table 4: Analysis of the potential impacts of a community transport implementation for respondents (survey question 9, see supplementary material 1). Results are presented in percentage of participant responses and number of participant responses are indicated in brackets.

Survey question:	Identified group sections	Participant responses
"If a mode of community transport were to be implemented in the future, how would this affect your life? (please detail e.g. "would you use a transport service? How often would you use one?")"	Total respondent of the question	100% (81)
	1. "Not interested"	14.8% (12)
	2. "Dependent" (time, cost etc.)	19.8% (16)
	3. "Yes interested"	37% (30)
	4. "Yes on behalf of someone else but personally no"	23.5% (19)
	5. "Yes on behalf of someone else and on behalf of self"	5% (4)
	<b>Combined positive interest (Points 3+4+5)</b>	<b>65.5% (53)</b>

## 4. Discussion

### *Survey Results*

From the above results, we have showed that residents of the LR&WA have a greater want rather than a need for a form of community transport. This greatly influences the future decisions by the LR&WA Trust as they can now decide whether this will be a necessary factor to improve the overall wellbeing of the community, due to its rural isolation. Questions 8 and 9 (see supplementary material 1) from the survey revealed to us that only 20.7% of the participants felt strongly about the issue, whereas 65.5% showed an interest and curiosity into the potential implementation of community transport. Additionally, results from the network analysis using GIS software showed that there was a correlation between the distances and how connected residents felt to services and locations (see table 1 in section 3.1). This further strengthened our recommendation to the LR&WA Trust to investigate a potential form of community transport.

To assess the validity of our survey results, we compared survey results to the results of network analyses of the study area. GIS software was utilised to determine this; QGIS was used to visualise the LR&WA (where residents live and where they travel to), and ArcGIS to calculate the average distances and times taken to travel from the LR&WA to different locations. Questions from the survey that were used were: Q1) What area best describes where you live?, Q5) Where do you typically travel to?, Q6) And for what reasons?, and Q7) How connected to these places do you feel?. These questions were used to reveal where the closest facilities to LR&WA are (i.e General Practitioners (GPs), Health Services, Government Services etc), using network analysis.

### *Limitations*

The limitations of this report were mostly based around resource availability – more specifically, time and finance. As the research was done over two months, the survey was only open to responses for 21 days. For a better overall representation of the LR&WA community, it would have been beneficial for the survey to be available for a longer period of time. The time limit also prevented the further development and definition of our methods. Increased time would have allowed for us to undertake door-knocking on a larger scale (e.g go to more houses and over more than one day) and given us the opportunity to organise focus groups with residents and members of the Community Trust to discuss their needs, wants and opinions about this issue.

### *Recommendation*

Finance is also a hindrance – however, it is not directly to our research. This is because the purpose of our project was to investigate the needs and wants of residents for a potential transport service, rather than creating and implementing one. Financial availability will be a limitation for the LR&WA Community Trust when they receive the findings of this report to decide how to address transport issues in their community. We discovered this limitation during the evaluation meeting with the Community Trust on Monday the 1st of October, as they signalled that they'd like an analysis of fuel prices and their trajectories. This then lead on to the concern of the sustainability of a petrol-fuelled vehicle and its environmental and economic effects on the community. If the Community Trust were to opt for a community vehicle, different modes (e.g. electric vehicle) should be considered with

caution to the increase in fuel prices as well as the drawbacks that come with alternative vehicles; for example, an electric vehicle's inability to tow trailers, which is something that is widely used in rural the LR&WA.

This brings us to our recommendation for the LR&WA Trust, where the results show that there is a void to be filled in the place of community transport. Keeping this in mind the interest and desirability for a fixed structure such as an Environment Canterbury (ECan) subsidised bus route would not be a wise decision. The system that would be worth looking into should incorporate reliability, safety, inclusiveness, cost effectiveness and flexibility. Flexibility in this sense refers to temporal and spatial variance. Henceforth we can see the positive benefits of a shared community vehicle – which could be available to residents through an online app and paper sign-up forms in key areas of the community.

To elaborate on this, a result of our survey was that 97.7% of participants had access to the internet at home (see supplementary material 4), therefore an online app would be acceptable for the community. However, since not all residents of LR&WA responded to the survey, we cannot assume that most residents have internet access at home, hence the suggestion of using paper forms at key locations to organise transport. The inspiration for this app came from the French app Blablacar (Blablacar, 2018). The app for the community could include popular driving times allowing for people to sign on and signal when they'd like to travel into the city. As well as this the forms in locations such as café that could be physically filled out by members of the community without internet access. The vehicle would also available to be booked out for semi-private occasions such as sports teams travelling to the same location. This and other fluid modes of community transport is what we would suggest for the future recommendations for the LR&WA Community Trust.

Another limitation is that the responses from LR&WA were most likely from those who already feel a high sense of connectedness to their community. This is because generally those who feel a higher sense of community connectedness are more likely to be a part of their community (e.g being a member of the LR&WA Residents Facebook group) and are more likely to use the key services provided in the centres. Keeping this in mind, the 19% representation of households is very significant, but it is still not representative of the whole community and should be considered for any future recommendations and decisions.

## *Conclusion*

The premise of project was to investigate if there was a need or want for community transport by the residents of the rural LR&WA. We believe this successfully determined through use of our methodology and analysis of the results. Our recommendation to the LR&WA Community Trust is to focus the establishment of a carpooling network, rather than providing a shared community vehicle as it will enable residents to communicate with one another, building on the social connectedness of the area. Upon discussion with the LR&WA Trust, we discovered they were not interested in this idea as they wanted a more structured system. Bearing in mind, our proposed research was to gauge the needs and wants of the community for a transport system instead of creating a structured solution.

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## Supplementary materials

*Supplementary Material 1: Paper copy of the survey*

### Community Transport for residents of the Little River and Wairewa River area



Hello!

We are a group of students from the University of Canterbury working with the Little River Wairewa Community Trust (<http://littleriver.org.nz/>) to determine whether there is a need to implement a community transport service (e.g. Volunteer-driven van or bus). This survey will help us to gauge the needs and wants of your community, so please add as much detail as needed! There will also be paper copies of this survey available at the Little River School, the Library, the Little River Café & Store.

Please only fill out this survey **ONCE** and return it by the **15<sup>th</sup> September**.

For further enquiries please feel free to contact Ambika at [adm138@uclive.ac.nz](mailto:adm138@uclive.ac.nz)

*The completion of the questionnaire implies consent. This questionnaire is confidential. Results of the questionnaire and the study will be available online from the University of Canterbury Website*

1. What area best describes where you primarily live? (e.g. Permanent residence)

- |  |  |
|--|--|
| <input type="radio"/> Little River           | <input type="radio"/> Montgomery's/Bachelor's Road |
| <input type="radio"/> Okuti/Reynold's Valley | <input type="radio"/> Puaha/Cooptown               |
| <input type="radio"/> Birdlings Flat         | <input type="radio"/> Prefer not to say            |
| <input type="radio"/> Other (please specify) |  |



6. And for what reasons? Please check all that apply.

	Always	Usually	Sometimes	Rarely	Never
Health services	<input type="radio"/>				
Work	<input type="radio"/>				
Education	<input type="radio"/>				
Cultural / religious purposes	<input type="radio"/>				
Food / drink (including supermarkets)	<input type="radio"/>				
Recreational (including sport, shopping or any other leisurely activities)	<input type="radio"/>				
Government Services (e.g Work and Income New Zealand)	<input type="radio"/>				

Other (please specify)

7. How connected to these places do you feel?

	Very connected	Reasonably connected	Not really connected	No need to be connected
Health Services	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Work	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Education	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Cultural / religious purposes	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Food / drink (including supermarket)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Recreational (including sport, shopping or any other leisurely activity)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Government Services (e.g Work and Income New Zealand)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Other (please specify)

8. How important is this issue of community transport to you personally? (e.g. Volunteer-driven van or bus)

A great deal

A little

A lot

Not at all

A moderate amount

Additional comments e.g. "Why?"

9. If a mode of community transport were to be implemented in the future, how would this affect your life? (Please detail e.g. "Would you use a transport service? How often would you use one?")

# LITTLE RIVER SCHOOL



## NEWSLETTER TO THE COMMUNITY

DATE: 30<sup>th</sup> August 2018

Issue No: Five

### **Cancer Society - Daffodil Day**

Senior pupils are keeping Georgie Latham's fundraising initiative going, selling bunches of Daffodils at the school gates before and after school on Thursday and Friday.

<https://www.daffodilday.org.nz/>



*Thanks to the Latham family, once again, for their daffodils.*

### **UOC Students – Little River Transport Survey**

In conjunction with the LRWCT, a group of students is working on a project to gauge transport needs of LR residents and needs your opinions via an anonymous survey. There are also paper copies available at the School, Service Centre and Café & Store. The link to the electronic survey can also be found at: <https://www.surveymonkey.com/r/XZSS5BK>

Results of the findings will be reported back to the LR Trust who will then discuss the details of a potential community transport system and whether one will need to be implemented. Please feel free to share this with as many of your neighbours, friends and family who reside in Little River and the Wairewa area!

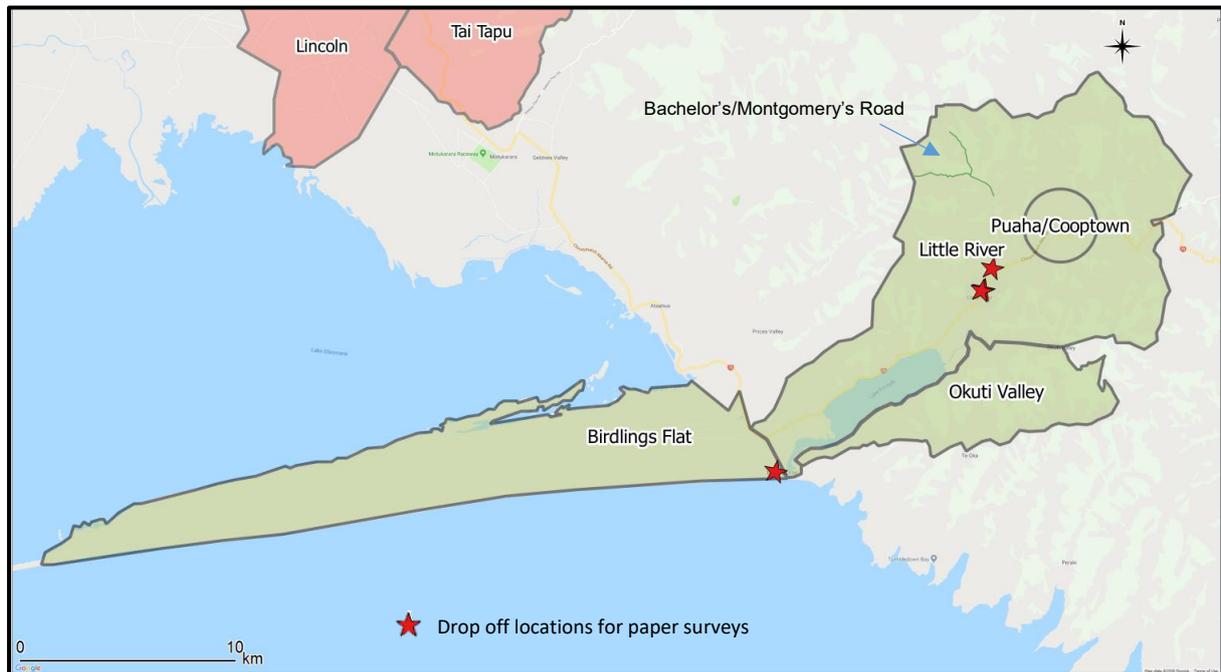
### **Automated External Defibrillator, AED –**

The BOT has purchased an AED to support the response in an emergency for those in our school community.

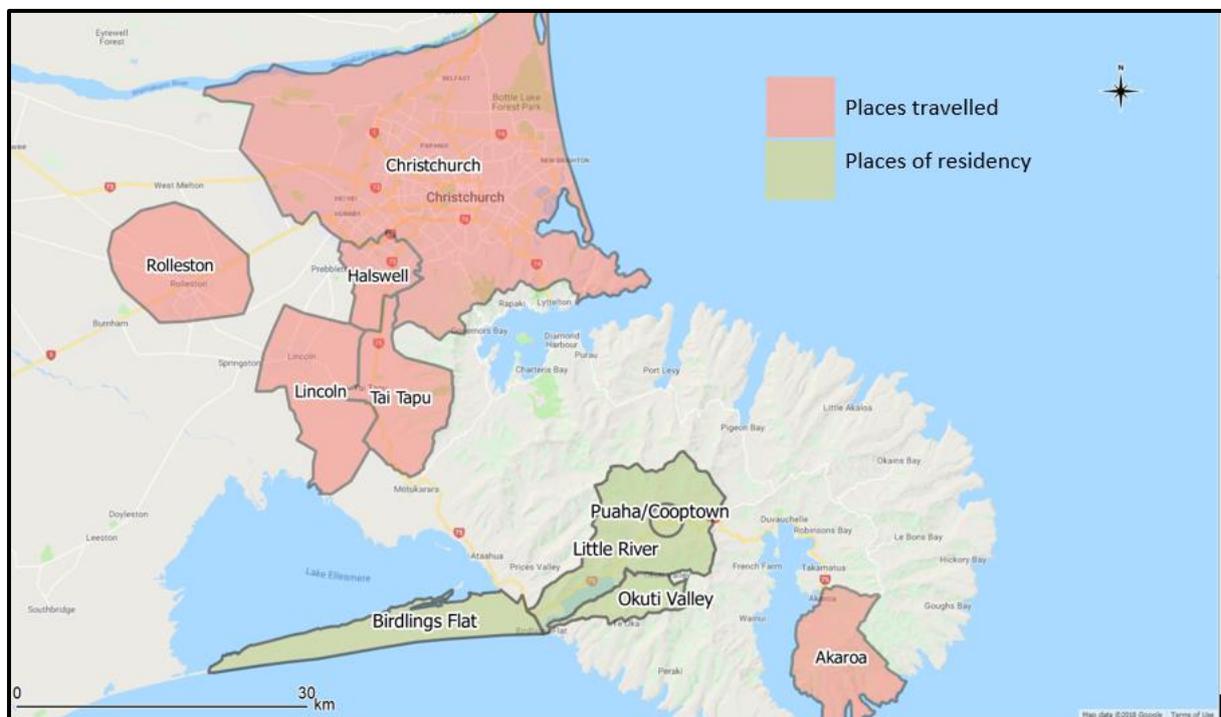


It has been installed on the wall near the office, outside the library. Recently staff received training to revalidate their first aid certification, which included use of AED devices.

Supplementary Material 3: Maps of the study area



An overview of the LR&WA.



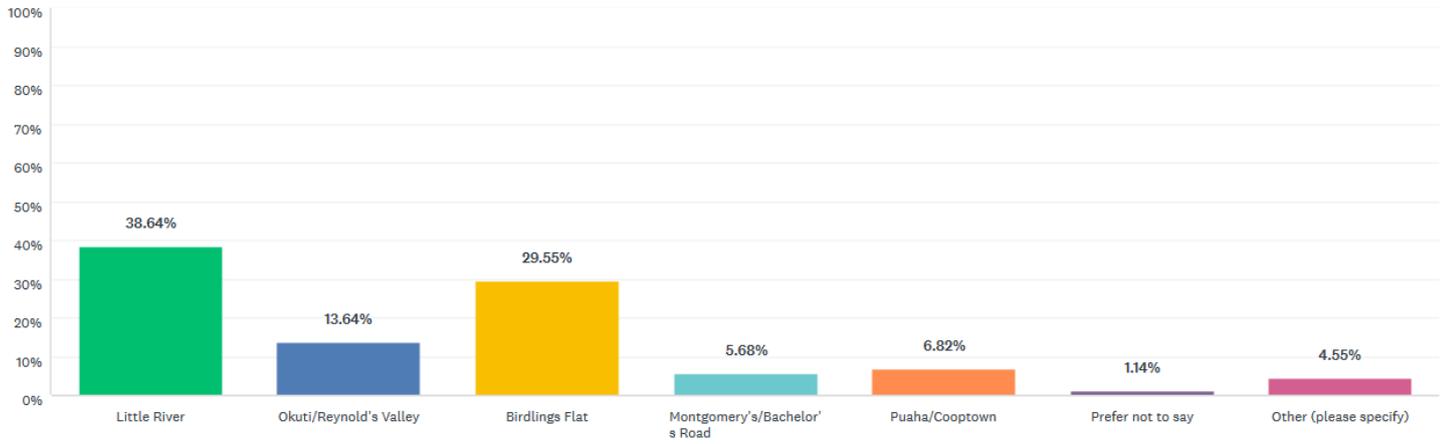
An overview of the overall study site.

## Supplementary Material 1: Survey Monkey results

Q1:

What area best describes where you primarily live? (e.g. Permanent residence)

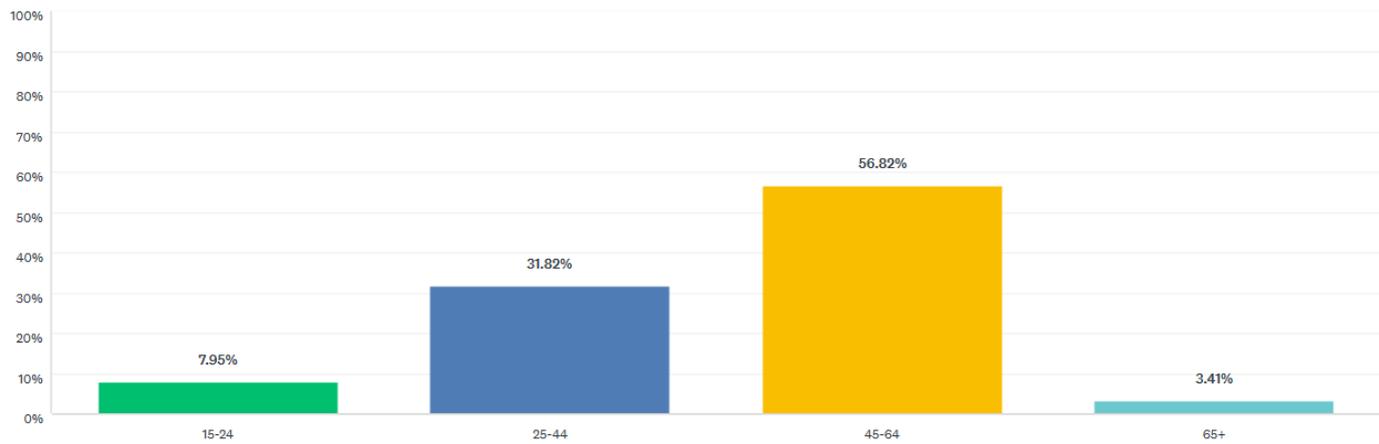
Answered: 88 Skipped: 0



Q2:

What age group do you belong to?

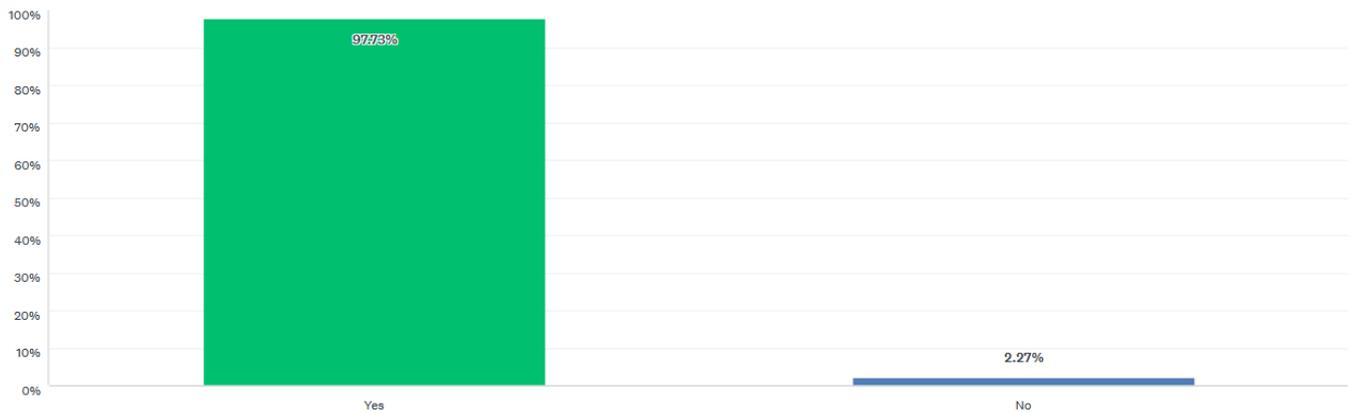
Answered: 88 Skipped: 0



Q3:

Do you have internet access at home?

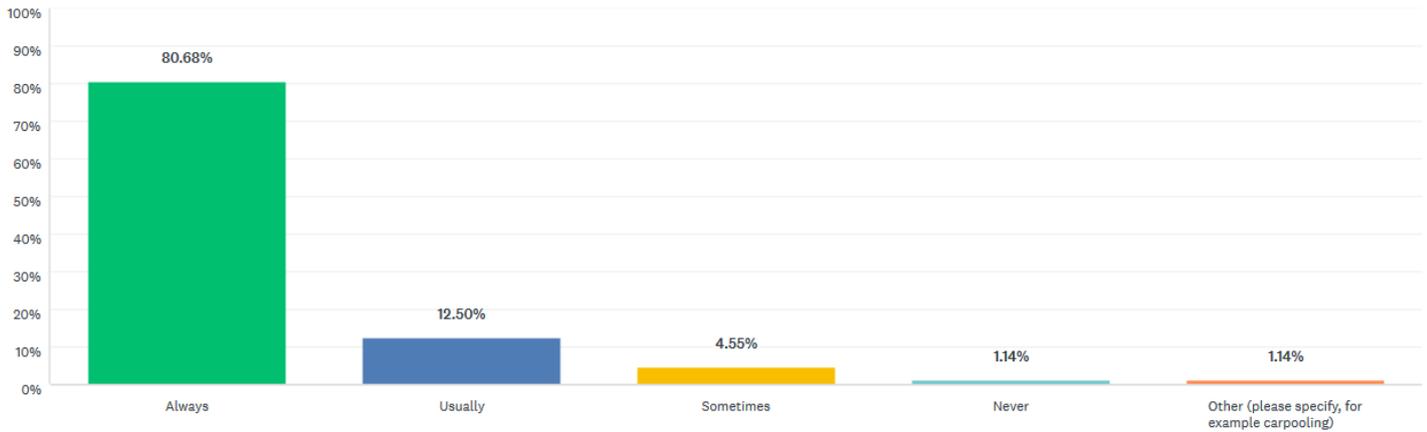
Answered: 88 Skipped: 0



Q4:

**Do you have access to a motor vehicle?**

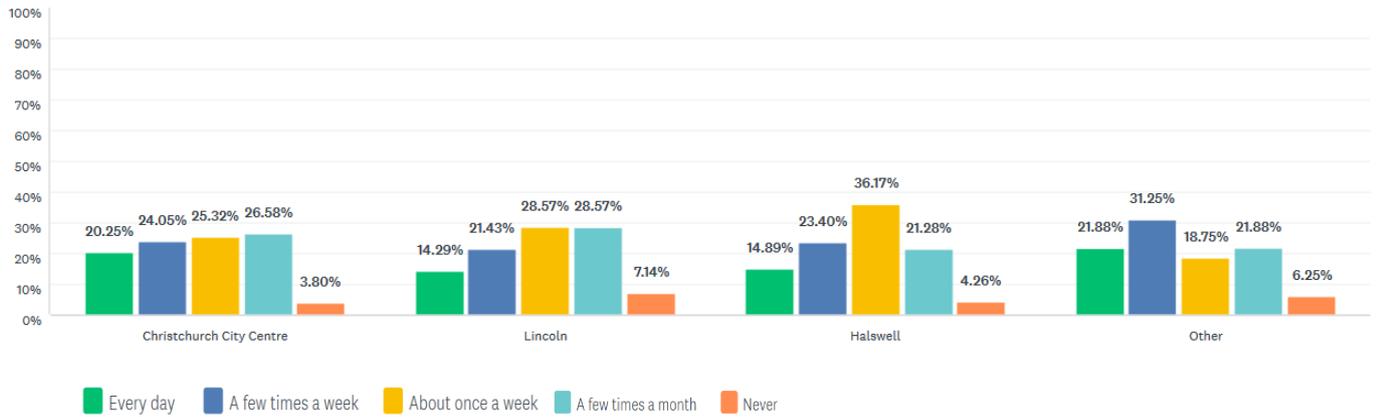
Answered: 88 Skipped: 0



Q5:

**Where do you typically travel to? Please check all that apply.**

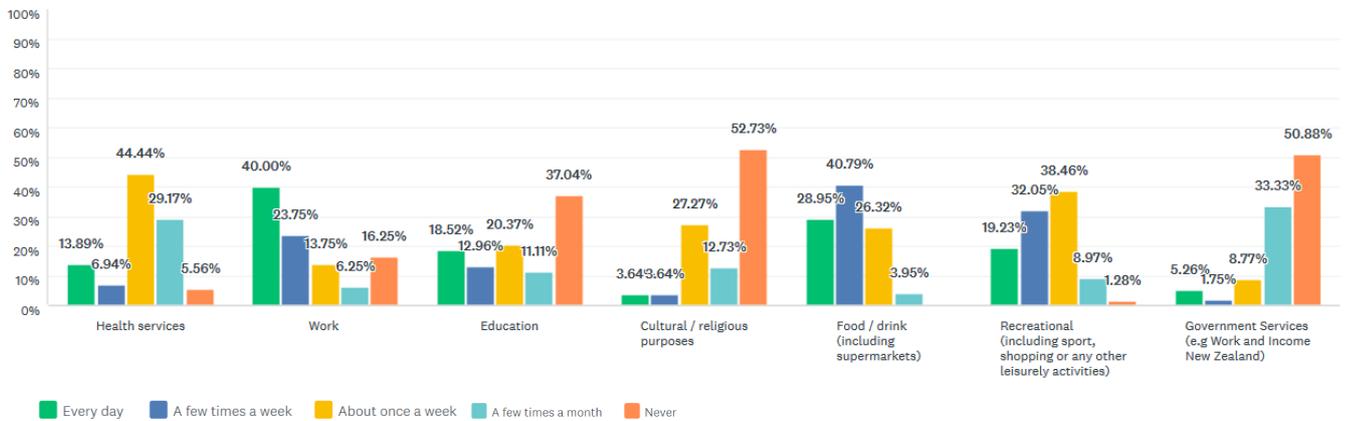
Answered: 87 Skipped: 1



Q6:

**And for what reasons? Please check all that apply.**

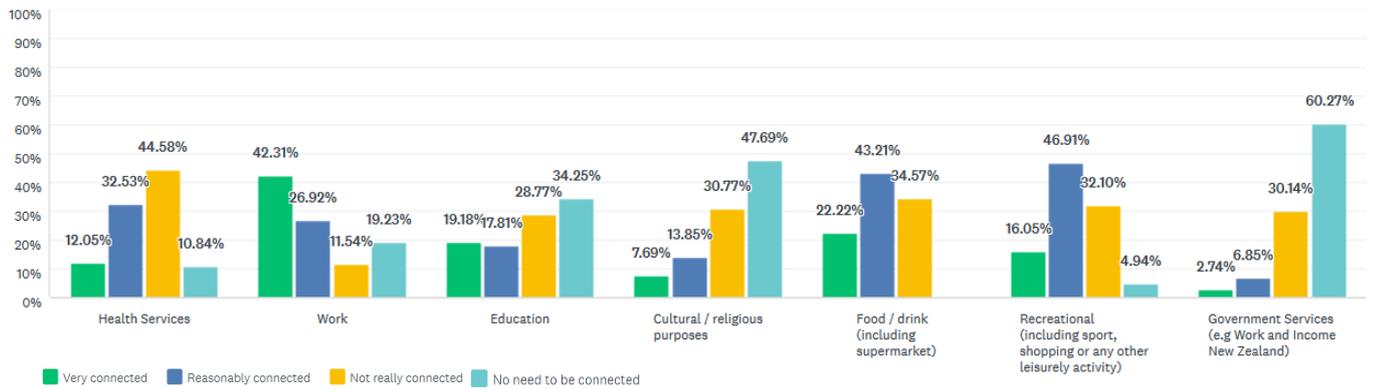
Answered: 88 Skipped: 0



Q7:

**How connected to these places do you feel?**

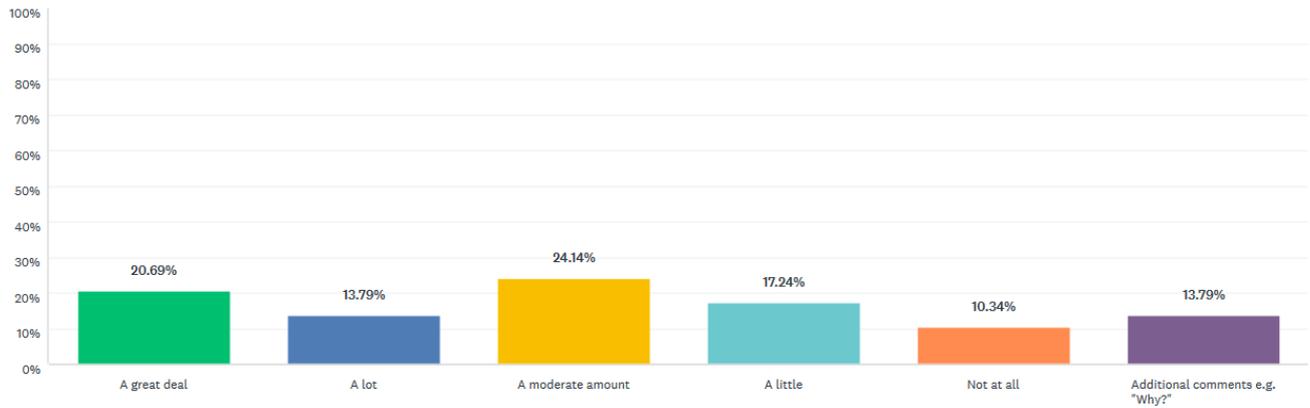
Answered: 86 Skipped: 2



Q8:

**How important is this issue of community transport to you personally? (e.g. Volunteer-driven van or bus)**

Answered: 87 Skipped: 1



Q9:

**If a mode of community transport were to be implemented in the future, how would this affect your life? (Please detail e.g. "Would you use a transport...**

Answered: 81 Skipped: 7

- Unlikely to use as have own vehicle and time is more important to be than travel costs, so getting home quickly and when I want, rather than by timetable.
- Yes - to the city 7am returning by 6pm With a coffee and paper! would be fantastic.
- Direct correlation to age. As one ages there is more of a need for such a vehicle to enable this age bracket to continue to live in Little River.
- Me not at all, but when my children are a little older, they might use it.
- I would use this service instead of using my car as it would be less of an environmental impact, Also my daughter is getting older and I would love for her to have the opportunity to get into town with relying on me when she is older.
- I probably wouldn't use it to be fair as I have so many varied places to get to. If I were employed in Chch on a regular basis I definitely would use it,
- Would be good for teenage kids
- Only if something happened to my car or if I lost my licence.
- Organised carpooling with a place to park my car in town, and share the journey in/out.
- I would use it twice a week
- It would make me safer and I would like to use if needed and could volunteer Friday afternoons or the weekends to drive.
- ..would depend on type of transport / availability / frequency.

It would be used by me at least three times a month for going to the mall or wherever it took us

I know a lot of people who would definitely use it if it was available. There are a lot of older kids as well that need transport to and from town and Lincoln as there are a lot of activities ie: sports, groups, art, swimming, social events that they would be able to attend if there was a transport system in place.

Depends on the timing. I have tried a number of times to ride share, but that depends on an exact match in start/finish times and so doesn't always work out. There are currently three people in my car to, so I'd be unlikely to use public transport right now. That'll change though, depending on children's schooling.

It wouldn't affect my life much at all. I usually need my car when I go into town (to do jobs), or I have a car full of kids to go to sport, or I carpool. However, I understand that it would be beneficial to others and if we could reduce carbon emissions by having 'public transport' into town, that would be great. Or we could also put into place a formalised carpool scheme perhaps????

We have a small car pool already, used as frequently as possible. And about to have another person join us.

Yes we would use it, depending on the frequency and cost

not at all

I am travelling am to birdlings pm back to Lincoln so the reverse of locals. I think the community has enough connectedness to share a large van small bus

Possibly use, but rarely, perhaps when relatives come from airport

With petrol sky rocketing like it is if times and days suited I would certainly look at an alternative.

Occasionally

Its would be helpful as sometimes the car breaks down and have family that are elderly who cant drive.

I advocate for people that don't have access to vehicles, and would use one myself occasionally if it was feasible. There is a DVD short film of community trusts running vans that Ecan have. The person running the programme is based in Timaru but has been to Little River to discuss a community van proposal a few years back.

Probably wouldn't use a transport service but think it would be a great service to have for the community

My teenaged son would definitely use it to travel to town and also to Lincoln to see friends. I would use a service between Birdlings Flat and Little River if the cost was lower than using my car.

A transport service would change my life as I'd regain my independence by having the choice of travelling into the city (on my days off work) at a later time in the day, rather than having to leave at 7am to travel with my husband to his work & then have to fill in the whole day with appointments, etc. until he finishes work to come back home. We'd also have the option at the weekends to be able to travel into town or local towns to dine, etc. and be able to get back home safely after a few drinks.

Yes we would use it if times were suitable to our work

Group trips to town with friends

Work currently offer flexible start/end times. May reduce costs if not running two cars. Reduce fuel consumption. Driver would have to have proven competency. I am fussy who I get in the car with. Currently drive to work three days per week.

Difficult to say. Have to get to and from work at difficult times and do shopping when going for work so I doubt if it would help me.

I can imagine my children using it when they get a bit older.

My son (and his friends from Gebbies Valley, Tai Tapu and Lincoln area) would use this to get into town

I think it would be nice for people out here who are sick/elderly or those without transport

Maybe but not often

It would be great, would not have to rely on a car. I would use it once a week

Yes I would use a public bus service 5 days a week

Every day for work if timings are appropriate, especially since parking in the city is atrocious

For our family it would mean our teenage children would be able to get to and from activities and also choose to do more based on the knowledge that they can catch a bus home

Bus. / usually.

Would probably use sometimes if car wasn't working or being used elsewhere.

I travel to work alone each day and very aware that at the same time as I leave there are at least 4 other LR residents all leaving at the same time. We all go different ways once we reach Haswell. It would be great to have something that may take us into town closer for public transport or shopping library.

Would use for shared trips for children's sport, possibly work if timings were sensible

Would not affect my life

It would be a useful addition for giving independence to our kids as they get older...

usually I use my own car but sometimes it would be helpful not to have to drive and the option of getting a bus instead depending on the cost.

work

I would possibly use it on the rare occasion.

Very useful for teenagers without driving license. Also for Halswell supermarket runs

My daughter would use it and save me a trip in to town. Think it would be great for those less fortunate with transport and happily put my hand up for trips into town as a driver.

Would use going to and from work Mon Fri

Son could catch a lift out or back with me and I way public transport. It would transform our family dynamic & relationship

Possibly 4 x per week mostly for work purposes. The times would have to work though. Also sending the kids in for sports trainings to Lincoln - again dependent on times.

I would use this to cut down my carbon footprint, to get groceries done, and to help limit my driving so my injury can heal

I would use one from time to time. If the service was regular I would use it more frequently - ie, I would use it in conjunction with my car.

I would help with one.

Huge time and money saver and less mileage on vehicles

I think it's a brilliant idea. Take some of the traffic off the roads, which at peak times is so busy and dangerous. A lot of seasonal workers out our way too. I think it's a fantastic idea, all for it.

Not likely but could consider using to get to and from the airport

I believe there should be a public transport option available to us, just as I believe there should be a local GP and nurse available in this area. I have written a submission to Ecan 4 years ago to ask why there was no service available and they responded by saying that there was a service - I have not yet been able to discover any details about how to access this service. I now have children, so am less likely to use public transport, but I would try to support it if it was available. There are a number of people in this community (Birdlings Flat) who are elderly or physically disabled and rely on others to drive them into town. A public transport service would enable them to be more independent. Birdlings Flat is also significantly lower socio-economically and a number of people here do not work - I do not know how these people can afford the cost of petrol and car to go to the supermarket each week. Even a small service between Little River and Birdlings Flat would be helpful.

At present would not use it but as getting older this could change with age and health

would use as often as possible to commute to work + socialise

I might use it to go into Chch as finding a park can be a pain especially when it comes to hospital appointments.

maybe not

Would have to have details of the service before I could say. Very unlikely to use it at present

It would give us more options to travel, especially if it accommodated late(r) night travel.

as much as possible

Not really, I did recently post on the little river and birdlings flat Facebook pages about carpooling to work as there are a number of us that go similar times and locations and seems a waste of petrol