

# Transportation in Halswell

Celeste Claridge Marcus Rodger Danni Robson Matthew Taylor Kathryn Moore

# Figures and tables

Figure 1: Key Community Facili Figure 2: Four types of cyclists

Figure 3: Total journ

Figure 4: Transport to school Figure 5: Perceived barriers to a Figure 6: Changes to encourage activ

Figure 7: Specific

Table 1: Total number of visits to each key community facility

### 1. Introduction

Halswell is a suburb of Christchurch that has some of the lowest walking and cycling rates in the city (Statistics New Zealand, 2013). One explanation that seeks to explain this is the presence of perceived barriers. This report aims to answer the question:

There were four objectives that were used in order to answer this question: a) to identify the barriers of active transport within Halswell, b) to map the barriers and key community facilities within Halswell, c) to compare levels of active transport of two different schools within Halswell; and d) to establish the best mitigation options for the barriers identified in order to increase the current walking and cycling rates. To gather this information a variety of methods were used. This included a questionnaire and a focus group. In addition to this, an analysis of the wider literature was necessitated.

Due to the size of the population and the time constraints of this research it was appropriate to identify an area that was representative of the Halswell Community. This encompassed the two main arterial roads (Halswell Road and Halswell Junction Road), and Nichols Road. This area has majority of the Key Community Facilities located in it. A Key Community Facility can be defined as

### 2. Literature review

A consistent finding throughout the literature is that walking and cycling are under used means of transport despite the individual and public health benefits they provide. The reasons for this are varied and often complex, however, a common finding is the presence of perceived barriers. Research has sought to explain this taking a variety of approaches and often suggests possible policy interventions to minimize the existence of barriers. This area of research is of particular significance to the Halswell Community as its will provide pertinent information and intervention strategies that will help increase walking and cycling rates in the area, and this literature review is highlighting some research that is of particular relevance to this research in Halswell.

Pucher & Buehler (2010) argue that traffic danger is the most significant deterrent to participation in active transport. They base this on national aggregate data and various case studies, which commonly cite the United States and Australia as counties with low walking and cycling rates. To help address this problem possible policy interventions are suggested that have been successful in increasing walking and cycling rates in The Netherlands, Denmark and Germany. This includes auto-free and traffic-calming zones, segregated cycles way, well-lit side walks, refugee island crossings, pedestrian-activated crossing signals,

Frank (2003) based on over 70 studies argue that the urban layout of an area essentially determines the walking and cycling rates. They note that recent urban and transport designs have resulted in sprawling and exclusively residential areas, and suggest as a consequence physical activi

automobiles has become inevitable. Policies suggested focus on building communities that accommodate high population density, that are well connected, and combine land-use purposes. H

problem, and the policy suggestions are particularly relevant given the recent population increase and potential development resulting from the Christchurch earthquakes.

### Timper

local neighbourhood and walking and cycling rates among children. This article is particularly valuable given the existence of two large primary schools in the Halswell Community. The results indicated that parental perceptions of the environment were directly related to their

neighbourhood were road safety, how many times their child had to cross the road, whether they were likely to come across a stranger, and whether their destination was considered -1.6km). This information was gathered by a survey that was given to all parents who had children under the age of 12 in one of the selected 19 schools in Australia. Policies suggested that would improve the parents perception of the local neighbourhood were aimed at improving pedestrian and cycling features in particular crossing facilities to schools.

Leden, Carder & Johansson (2005) suggest a number of strategies that have been specifically designed to make pedestrian crossings safer for children and elderly. This includes the implementation of speed cushions (most effective 9 metres from the crossing), narrowing the street at pedestrian crossings, refuge islands, elevating the crossing, and reducing the speed in the crossing area. It is, however, important to be aware of the difficulties of such interventions in Halswell given that one of the schools is located on a main highway.

Benjamin, Schwebel & Morrongiello (2006) while not contesting the effectiveness of engineering solutions to improve crossing safety, argue that basic crossing training should not be ignored. This study employed 85 children aged 5 to 8 to participate in basic pedestrian crossing training, and results indicated that as little as fifteen minutes of individual training

Of particular relevance is the work of Roger Geller, an influential cycling academic

bicycle

Expanding on this, he argues that there are four different types of cyclists (Fig 2

unrelated reasons. It is important to note that our research in the C

the overall safety of cycling.

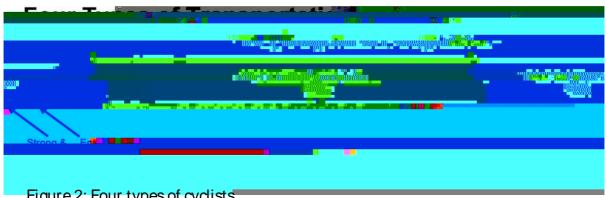


Figure 2: Four types of cyclists

All of the above literature helps explain the reasons why people chose not to walk or bike. In addition to this they outline policy suggestions that are likely to increase rates of active transport. This is expedient information that will be considered through out this project.

# 3. Methods

A variety of methods were used to address the research question and the objectives: questionnaires, a focus group and census data. To analyse the data gathered, it required mapping and inputting the data into excel to produce graphs and percentages. The data was collected via random sampling within our research area.

As Figure 3 shows that the most common mode of transport used by Halswell residents is the motor vehicle. However, walking and cycling rates indicate that active transport is not as low as was anticipated based on census data.
Looking specifically at active modes of transport Table 1 indicates that the vast majority of trips to Key Community Facilities were completed on foot. This could potentially be due to the generally older age of the survey participants (44% of respondents were older than 60) but is likely to indicate very low cycling rates for the community as a whole. Partici are likely to be misrepresented in the sample due to the extremely low number of journeys made to any facility that was not listed in the survey. This indicates that the facilities chosen were accurate in representing the vast majority of journeys completed within the suburb. Overall,

The popularity of walking as a mode of transport is not consistent with 2013 Census figures indicating more prominent active transport use from our survey respondents than the greater Halswell community.

To answer this question, it is necessary to

significant in reducing active transport rates, the majority mentioned the lack of uniform footpaths or specific regions (such as the Sparks Road intersection). Though it should be noted that influencing active transport use. Results in these columns are likely to have been influenced by the presence of outlying values.

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stated that infrastructure changes would have a positive impact on active transport use, it is likely that inner Halswell is poorly designed for active transport use.

# 5. Mitigation

## 6. Limitations

There were several limitations to the research process and study of active transport in Halswell. Time was a major constraint, so the amount of work that could be attempted was limited and due to the nature of random sampling not all age groups were incorporated into

### <u>Acknowledgements</u>

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g6

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