UNIVERSITY OF CANTERBURY 2016 TRAVEL SURVEY REPORT

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UNIVERSITY OF CANTERBURY (2017)

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UC Sustainability Office (Lead authors Hayden Slaughter and Dr Helen Fitt, with Matt Morris)
Thanks to Dr Angela Curl (Geography) for her oversight of this analysis.
July 2017

Introduction and method

The following report contains the results from a four yearly transport survey conducted at the University of Canterbury. The survey always takes place in July, and in 2016 was launched on Tuesday 12 July. It was initially intended to run for one single day; however, given a low number of initial responses, the duration of the survey was extended until the following Tuesday 19 July. The survey was conducted on-line using Qualtrics software.

The survey link was distributed to all staff and students at the University of Canterbury via an email sent in the Vice Chancellor's name. The UCSA president also informed students of the survey, encouraging them to check their University email accounts to receive the link to the survey. Similar prompts were made through the Sustainability Office's Facebook page. Other methods included campus-wide postering, chalking, talking to students, and speaking in lecture theatres to encourage the completion of the survey. In total, there were 2,718 responses[1]. This is lower than the 2012 survey, which gained 4,102. This number is smaller because the survey was run in the first week of semester two. The UCSA did not promote this to the same extent as usual, because of Re O-Week event promotion and other communications clashes, and the generally busy nature of the first week back. Also, students may not have had the opportunity to be exposed to the survey for similar reasons. It is also noteworthy that this was during the school holidays, which can affect some aspects of daily travel patterns.

This survey was sent out two weeks earlier than usual in order to meet a timeline for consultation set for the forthcoming Transport Master Plan. We would recommend running the survey in the third week of term when it is run again in 2020.

This report includes the results from the survey, and a discussion of these results. The report has been written in stages. The first analysis, presented as a draft report, was completed in November 2016 by Honours student Hayden Slaughter. The subsequent analysis to test representativeness, mapping of travel modes and availability of direct bus routes for those within possible walking distance (who tend to drive), were all undertaken by Dr Helen Fitt and completed in May 2017. Dr Matt Morris of the Sustainability Office compiled and edited the final report and provided the analysis of the final, open-ended survey question. Dr Angela Curl (Geography) supported the editing and additional analysis. A final test regarding change over time for student travel behaviour was undertaken by Prof. Dave Kelly, which bore out statements made in this report.

This report has been reviewed by the University's Transport Advisory Panel, and the Panel's recommendations have been included in the Appendix.

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[1] The initial analysis was based on responses as of the closing date of the survey. However, when more detailed analysis was undertaken an additional seven surveys which were still open when the survey closed but had since been completed, were included. The discrepancy is inconsequential in terms of the percentage of responses to individual questions.

Representativeness

Survey representativeness

The survey cohort was broadly representative of the University of Canterbury's staff and student populations. Some differences in data collection methods between the survey and the University make direct comparisons difficult[2], and there are a couple of areas of concern in terms of the representation of specific groups (detailed below), however, the assessment of representativeness provides confidence that further analysis is appropriate. In total, 928 survey respondents described themselves as University staff, 1,596 described themselves as students, and 194 did not disclose their staff or student status. Based on this, we can say that 49% of staff responded to the survey, whereas only 13% of students did so.

Staff cohort

Table 1 shows a comparison between the survey respondents who noted their status as 'Staff' and University figures on the demographics of the staff population. The survey shows slight under-representations of males, younger staff, part-time workers, and academic staff. Some caution would be prudent with regard to these slight biases in the survey cohort, but they are insufficient to invalidate further analysis.

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[2] For example the university records EFTS by college, whereas the survey data uses head counts

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Table 1: Demographic characteristics of staff travel survey respondents compared to UC population

Characteristic	Respondents (%)	University of Canterbury (%)
Gender (n=912)		
Male	44	50
Female	56	50
Age (n=924)		
Younger than 18 years	0	0
18-24	1	4
25-34	13	15
35-44	27	25
45-54	32	29
55-64	22	22
Older than 65 years[a]	5	6
Working hours (n=927)		
Full time	81	76
Part time	19	24
Work category (n=925)		
Academic	32	38
General staff	66	62
Associate or visitor[b]	2	-

[a]The University data category is '65+' (thus including those aged 65); the survey answer category is 'Older than 65 years' (thus not including those aged 65). Survey answer categories do not appear to have included an option for respondents who were 65 years old. This is unlikely to cause problems for analysis but ideally should be corrected in the next survey.

[b]The University is unable to provide figures on associates or visitors present at the time of the survey. The low percentage of respondents in this category means that this is unlikely to cause problems in terms of representativeness.

Student cohort

Table 2 shows a comparison between the survey respondents who noted their status as 'Student' and University figures on the demographics of the student population. Females are similarly overrepresented in student figures to in staff figures. Overrepresentation of females in surveys is common.[3] There is also some overrepresentation of students in the 18-24 age group. Some caution would be prudent with regard to these slight biases in the survey cohort, but they are insufficient to invalidate further analysis.

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[3] Moore, D. L., & Tarnai, J. (2002). Evaluating nonresponse error in mail surveys. In: Groves, R. M., Dillman, D. A., Eltinge, J. L., and Little, R. J. A. (eds.), Survey Nonresponse, John Wiley & Sons, New York, pp. 197–211.

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Differences in the full time and part time status of students are more concerning. Thirty-five percent of University students are studying part time whereas only 7% of student respondents to the survey reported that they were studying part time. This may be a result of the survey being initially presented as a one day survey and of some students not being engaged in their studies on that day. It should be noted that further analyses are not likely to adequately represent the views of part time students and (as their travel needs may be substantially different to those of full time students) further supplementary research may be needed.

Comparisons of students' year of study are complicated by differences in the way data are collected in the UC Travel Survey compared to the University's student records. University students may be engaged in more than one course of study and may be in a different year of study in their different courses. This means that in University records, students may be represented in two different years of study at the same time. In the Travel Survey, students were asked to select one option from a drop down list, meaning they could only choose one year of study. While this is a concern, a large majority of students are only recorded once in University figures (15,220 students have 16,008 years of study), meaning that this difference in the way results are calculated is unlikely to invalidate the comparison of the two sets of figures.

Comparisons of year of study figures show students in the second and third year of undergraduate courses are overrepresented in the survey and students in fourth and subsequent years of undergraduate courses, and students enrolled in postgraduate courses are underrepresented. While this is less concerning than the bias towards full time students, it should inform the interpretation of later results.

Finally, figures concerning the college in which students are studying also pose some difficulty in terms of comparisons. Again, students may be studying in more than one college. The Travel Survey did take some account of this, for example providing students completing double degrees with an opportunity to specify the different colleges in which they were studying. However, the figures clearly indicate the Travel Survey did not take full account of students studying in more than one college. In University figures, each student was studying in an average of 1.5 colleges. In Travel Survey figures, each student was studying in an average of 1.1 colleges. This means that Travel Survey figures do not fully represent the diversity of students' college affiliations. It is, however, likely that they broadly reflect what students' see as being their main college affiliation.

In Table 2, we can see that all of the colleges, except Education, Health and Human Development, are fairly evenly represented both in figures from the Travel Survey and from the University. This can give us some confidence that Travel Survey figures are broadly representative for these colleges. We should be more concerned about the figures for the College of Education, Health and Human Development as this college is not well represented in Travel Survey figures. Further research may be needed to ensure that the views of these students are adequately incorporated into any future decision making.

Table 2: Demographic characteristics of student travel survey respondents compared to UC population

Characteristic	Respondents (%)	University of Canterbury (%)
Gender (n=1,581)		
Male	42	50
Female	58	50
Age (n=1,595)		
Younger than 18 years	1	2
18-24	75	69
25-34	16	16
35-44	5	7
45-54	3	4
55-64	1	1
Older than 65 years[4]	0	0
Working hours (n=1,593)		
Full time	93	65
Part time	7	35
Year of study (n=1,592)[5]		
First year	25	25
Second year	22	17
Third year	18	13
Fourth and subsequent years	11	16
Postgraduate	24	27
University preparation and other	1	2
School (n=1,685)[6]		
Arts	20	21
Business and law	24	20
Education, health and human development	6	12
Engineering	23	24
Science	26	13

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[4] The University data category is '65+' (thus including those aged 65); the survey answer category is 'Older than 65 years' (thus not including those aged 65). Survey answer categories do not appear to have included an option for respondents who were 65 years old. This is unlikely to cause problems for analysis but ideally should be corrected in the next survey.
[5] University of Canterbury data allow students to be enrolled in more than one year of study at the same time; Travel Survey data only include each student once according to the main year of study they have selected. This leads to some inconsistency between figures.
[6] University of Canterbury data include students in each College in which they are enrolled for any courses, many students are enrolled in more than one College. Travel Survey data do allow students to specify more than one College but most did not. Respondents doing double degrees or who noted 'Other', and then provided further details, have been allocated to colleges as far as possible. Some students did not provide sufficient information to allow an allocation to a college (for example, a student who wrote only "BA" or "BSc" could not be allocated to a college as several colleges offer these qualifications).

General

Of staff, 66% indicated they were general staff, 32% were academic staff, and 2% were associates or visitors. For students, Figure 1 expands on the details of Table 2 above.

Finally, the majority of respondents make one journey to university a day at around 70%, and 24% make two (Figure 2).
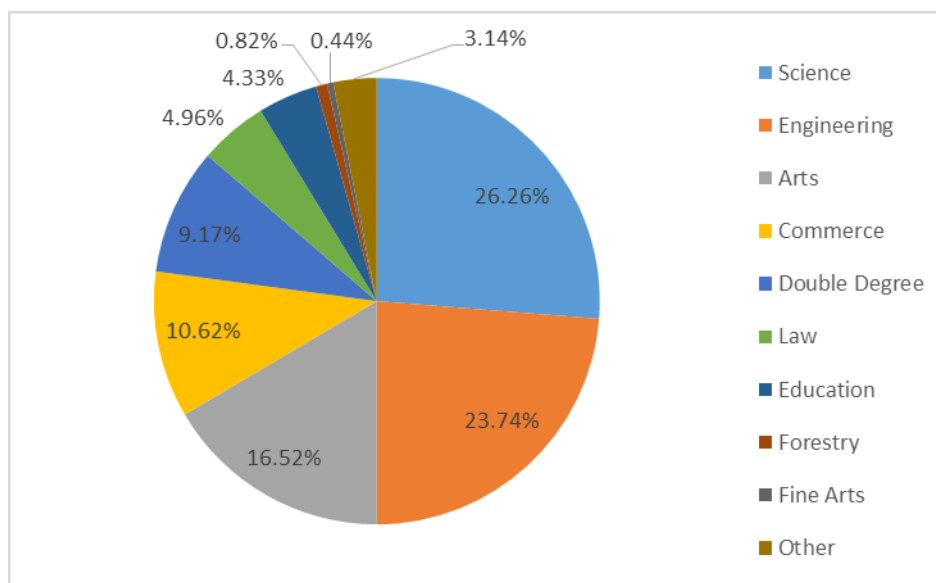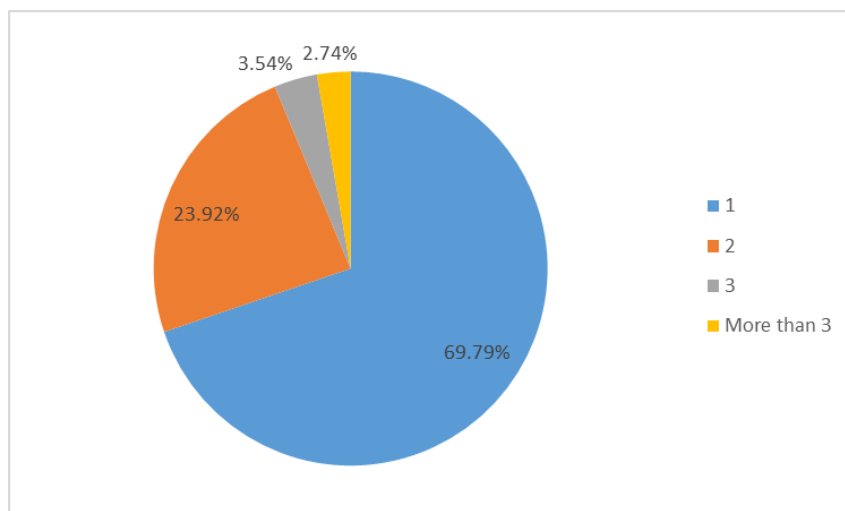

Figure 1: Students' current area of study[7]

Figure 2: Usual number of journeys to University each day

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[7] Note that these figures are slightly different to those reported in Table 2. For Table 2, survey data were reallocated (where possible) to the categories reported in University of Canterbury student data to allow comparison between two datasets with slightly different ways of allocating students to areas of study (see note under Table 2 for an explanation of this process). In this figure, data are shown, as reported by survey respondents.

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General Travel Behaviour

Usual travel to university remains car dominant for both students (41%) (Figure 4) and staff (64%) (Figure 5), as in the 2012 survey (Figure 6 and 7). Overall, 49% of respondents usually drive, 19% walk and 18% cycle (Figure 3). Students drive (41%) to University less than staff (64%), and more students (26%) than staff (6%) walk to university. A similar proportion of students and staff cycle to University (Figure 4 and 5).
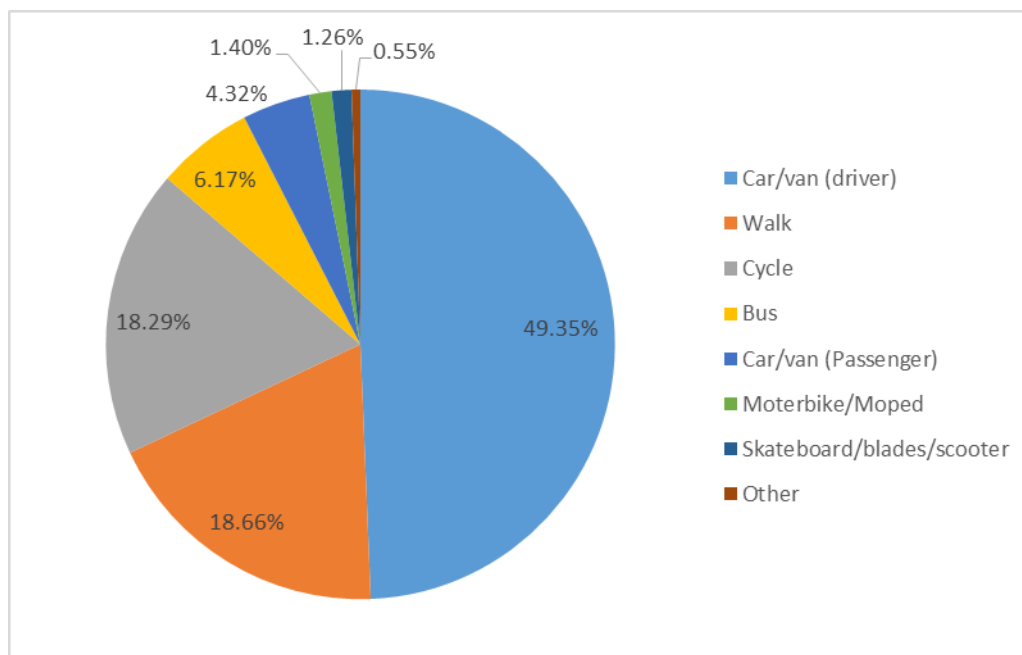

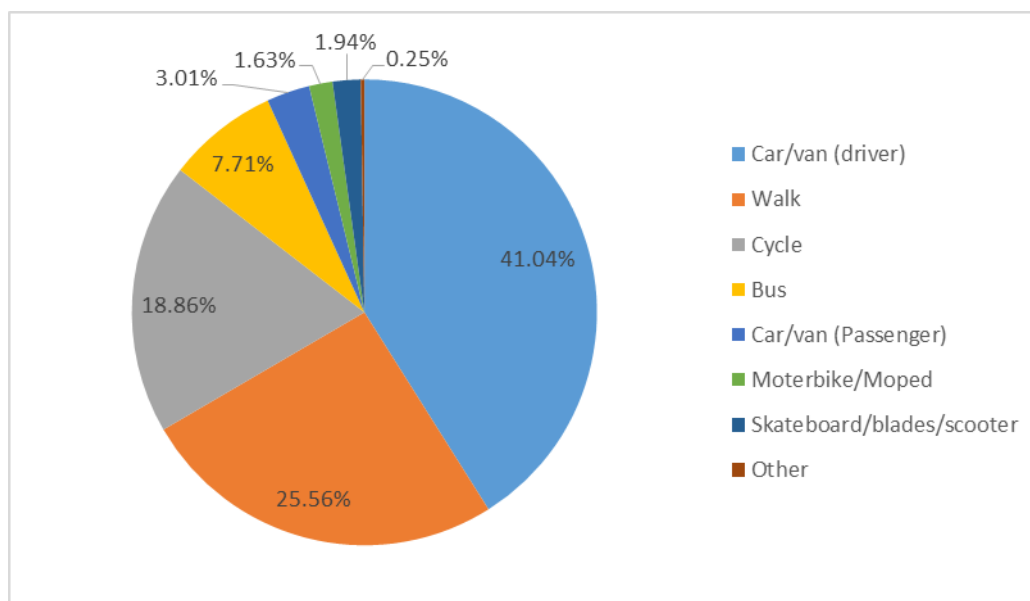*Figure 3: Respondents' usual mode of transport to University*

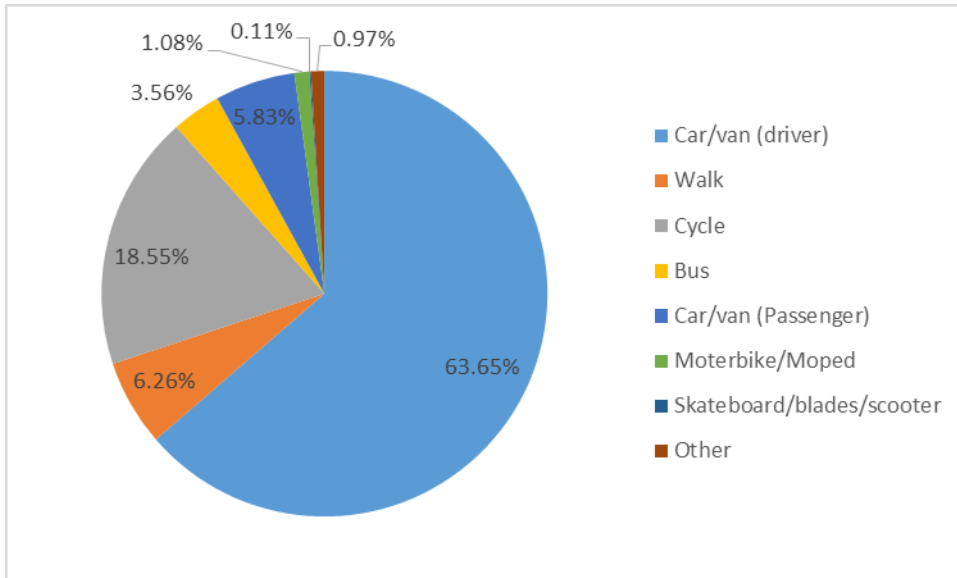*Figure 4: Students' usual mode of transport to University*

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Figure 5: Staff usual mode of transport to University

Travel distances

Where possible, survey respondents' journeys to University have been mapped to show the geographic distribution of users of different transport modes and to allow the calculation of average travel distances using different transport modes. The following bullet points provide details of the mapping process, with results presented subsequently.

- Of 2718 survey responses, 2291 respondents' journeys have been mapped. 427 respondents have been excluded from this analysis because:
  - 417 respondents provided insufficient home address data to allow mapping.
  - A further 4 respondents did not provide data on their usual travel mode.
  - A further 6 respondents who lived outside Canterbury were excluded because their inclusion strongly skewed average travel distances. Of respondents living outside Canterbury, 3 lived in Auckland, 1 in Rotorua, 1 in Wellington, and 1 in Blenheim.
- Some home address corrections have been applied to survey data. This includes correction of likely typos and addition of details like 'Christchurch' or 'Canterbury' for addresses that have exact duplicates overseas and so return unlikely coordinates in a geocoding exercise.
- Some of the home addresses provided by respondents were more precise than others. For example, some survey respondents gave a full postal address while others only gave a suburb or town. The addresses have been used as provided by respondents and so include generalised locations for respondents who were less precise in the information they gave.
- All travel distances are network distances (i.e. road distances rather than straight line or 'as the crow flies' distances) from a home address to the University's postal address at 20 Kirkwood Avenue, Ilam.
- Some travel mode corrections were applied to survey data. This includes interpretation of 'other' into major categories where a respondent had provided sufficient details to allow this. For example, where a respondent had described a multi-mode journey, the mode used for the largest distance has been used (as per survey instructions).

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- The road network used only includes roads; it does not include footpaths or cycle paths through, for example, Riccarton Bush, Ilam Fields, or under the motorway connecting the north and south ends of Annex Road. This means average distances for walkers and cyclists may be shorter than estimated here.

Table 3 shows the usual mode of travel for the survey respondents included in this analysis. The percentage of users using each mode is very similar to that shown in Figure 4 (all respondents), suggesting that this mapping exercise adequately includes users of each mode.

*Table 3: Main mode of travel of mapped respondents*

Travel mode	Number of users	Percentage of users
Car/ Van (driver)	1126	49
Car/ Van (passenger)	96	4
Cycle	439	19
Walk	419	18
Skateboard/ Blades/ Scooter	31	1
Bus	148	6
Motorbike/ Moped	32	1

Average distances for the different modes of travel are shown in Table 4. Unsurprisingly, people travelling by car are commuting the longest distances, and those walking are travelling the shortest distances.

Table 4: Average travel distances by mode of travel

| Mode	Average (mean) distance (km)
Driver or passenger (car or van)	11.8
Cyclist	4.4
Walker, skateboarder, blader, or scooterer	1.5
Bus passenger	9.5
Motocyclist or moped rider	7.3

The maps below show the geographic distribution of people who travel to University using different modes of transport, darker colours represent more people and the University is shown as a large white star. Looking at the different scale maps for the different modes shows how home location is connected to travel mode.
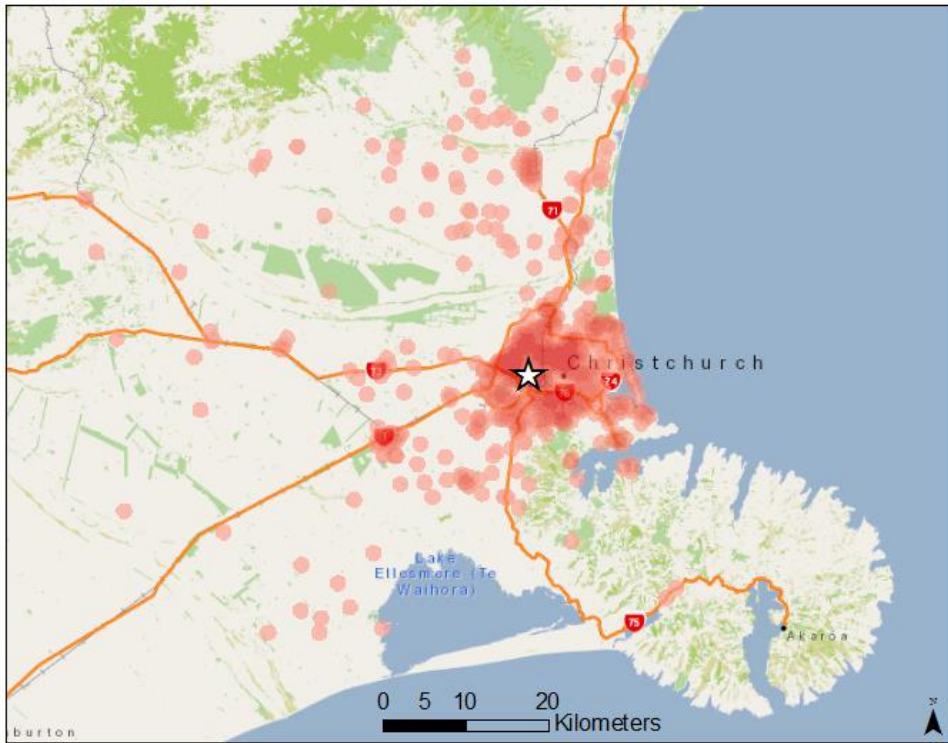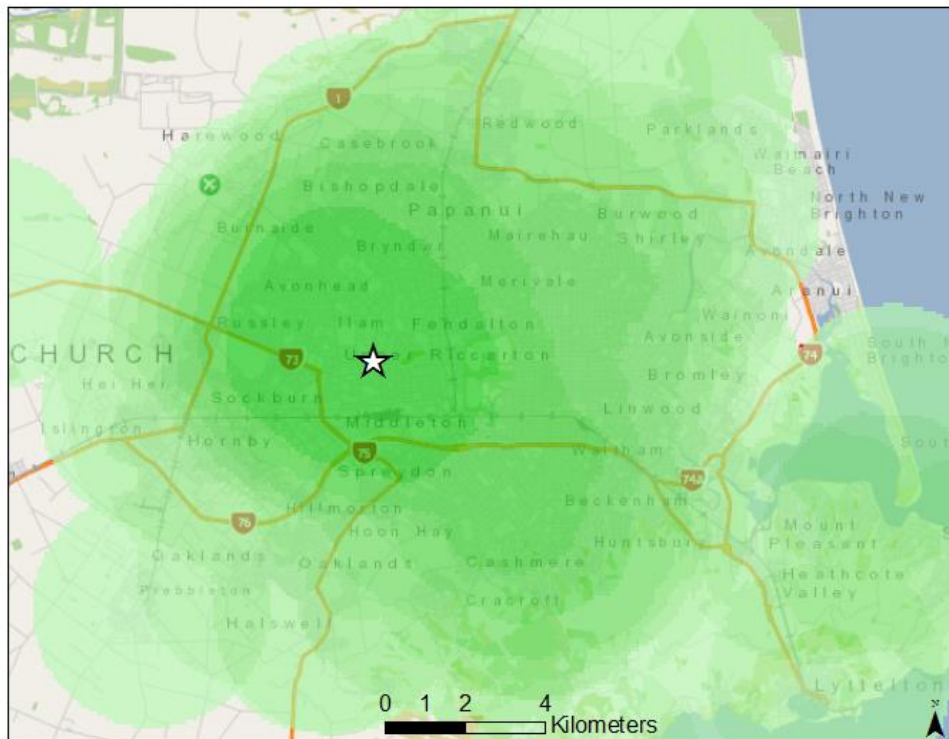
Map 1: Geographic distribution of car drivers and passengers (regional)
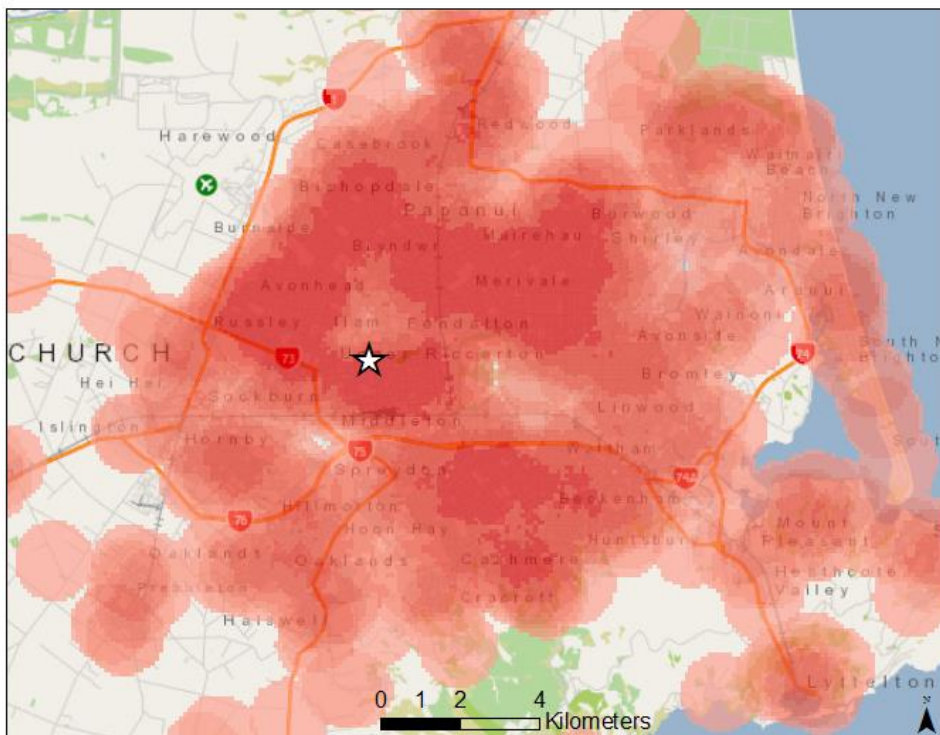
Map 2: Geographic distribution of car drivers and passengers (urban)

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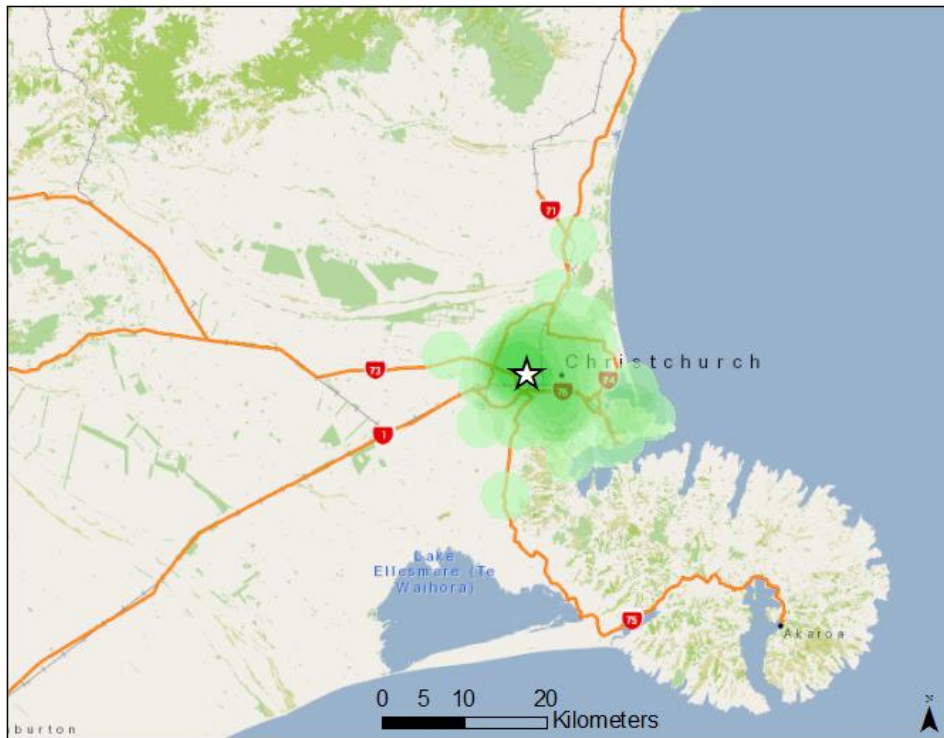
Map 3: Geographic distribution of cyclists (regional)

Map 4: Geographic distribution of cyclists (urban)

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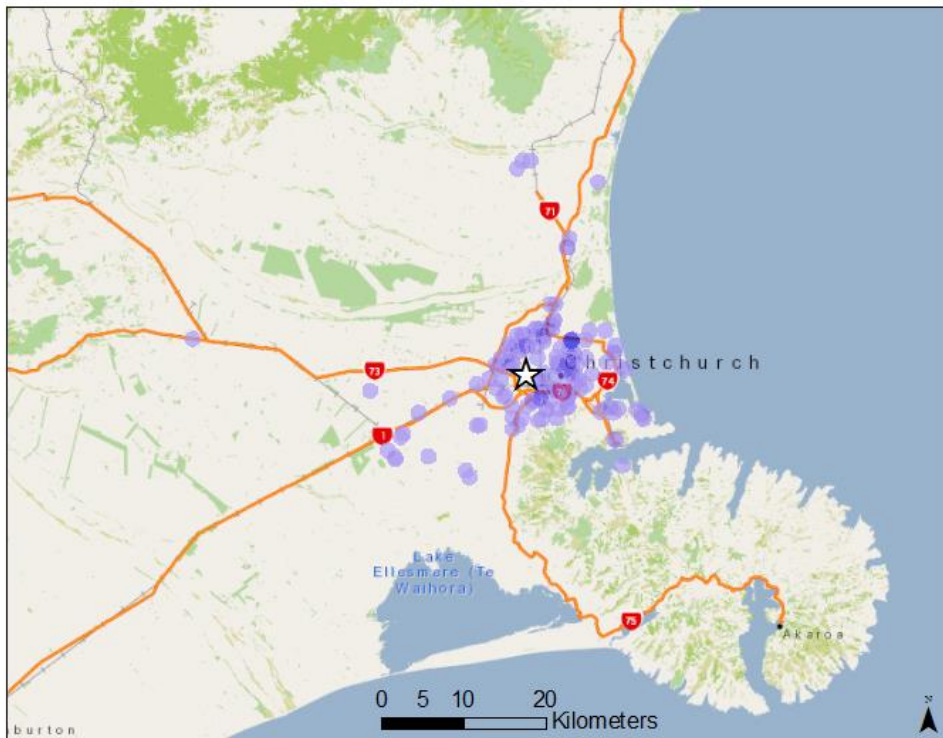
Map 5: Geographic distribution of bus users (regional)
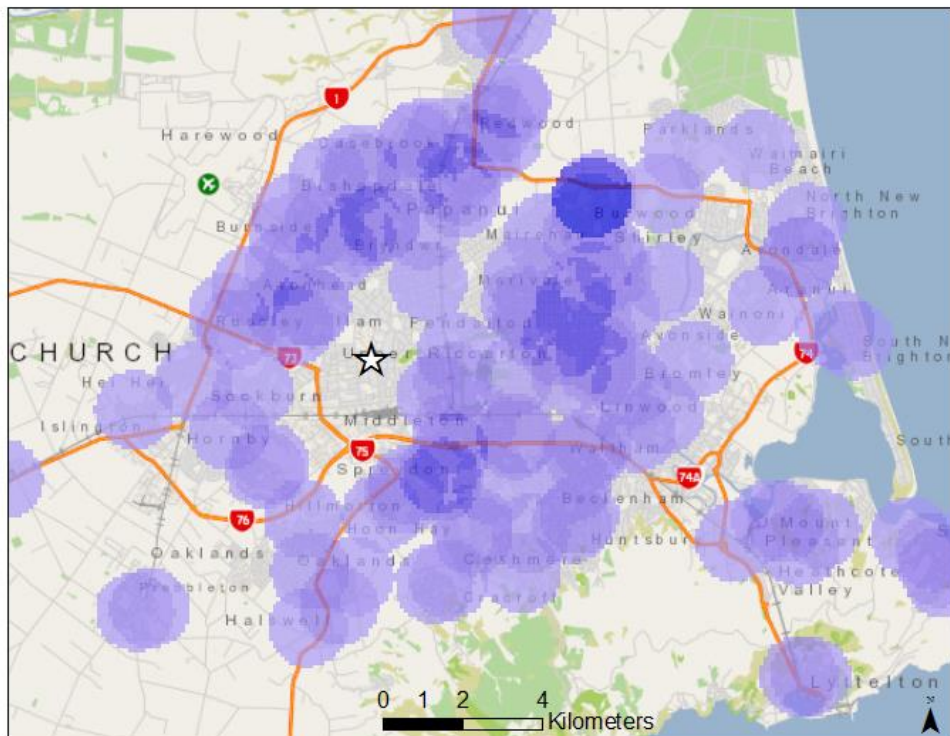
Map 6: Geographic distribution of bus users (urban)

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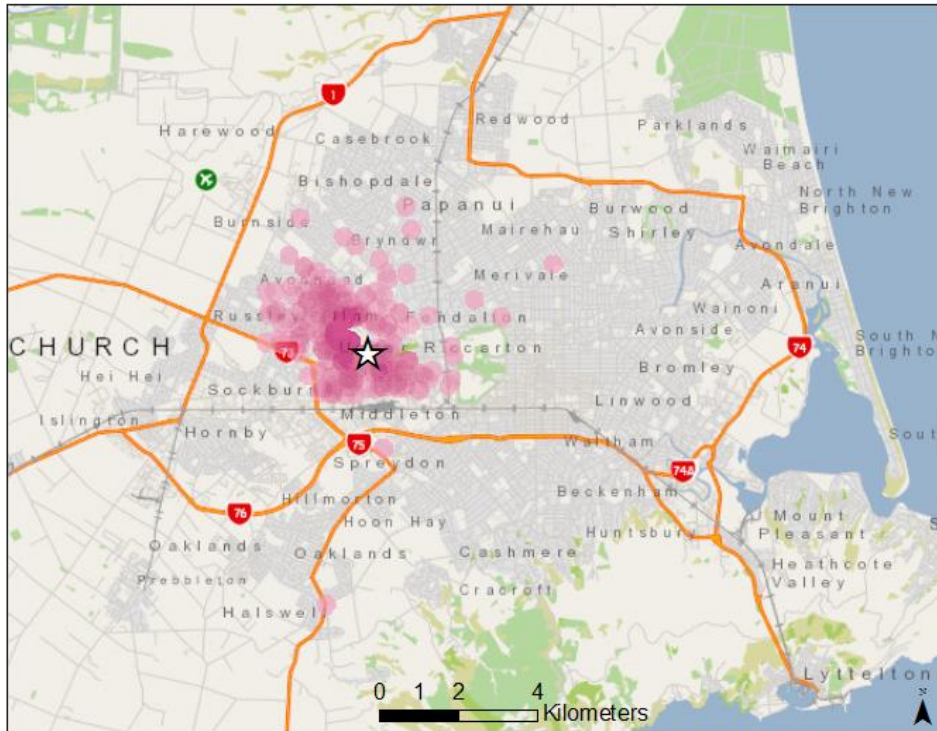
Map 7: Geographic distribution of walkers, skateboarders, bladers, and scooterers (urban)

Map 8: Geographic distribution of walkers, skateboarders, bladers, and scooterers (local)

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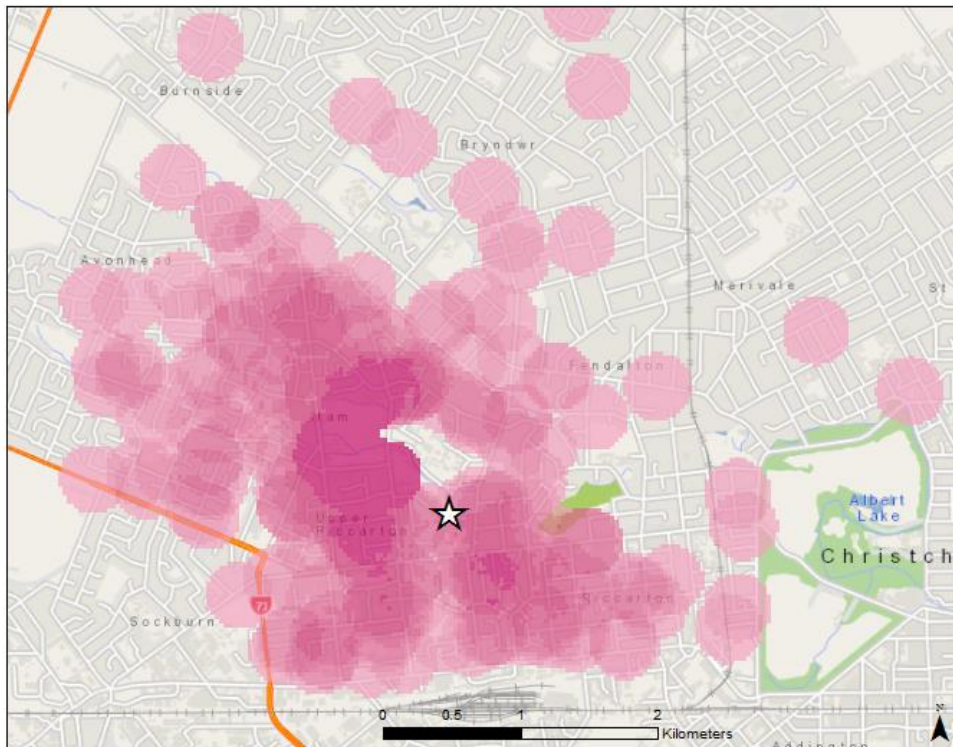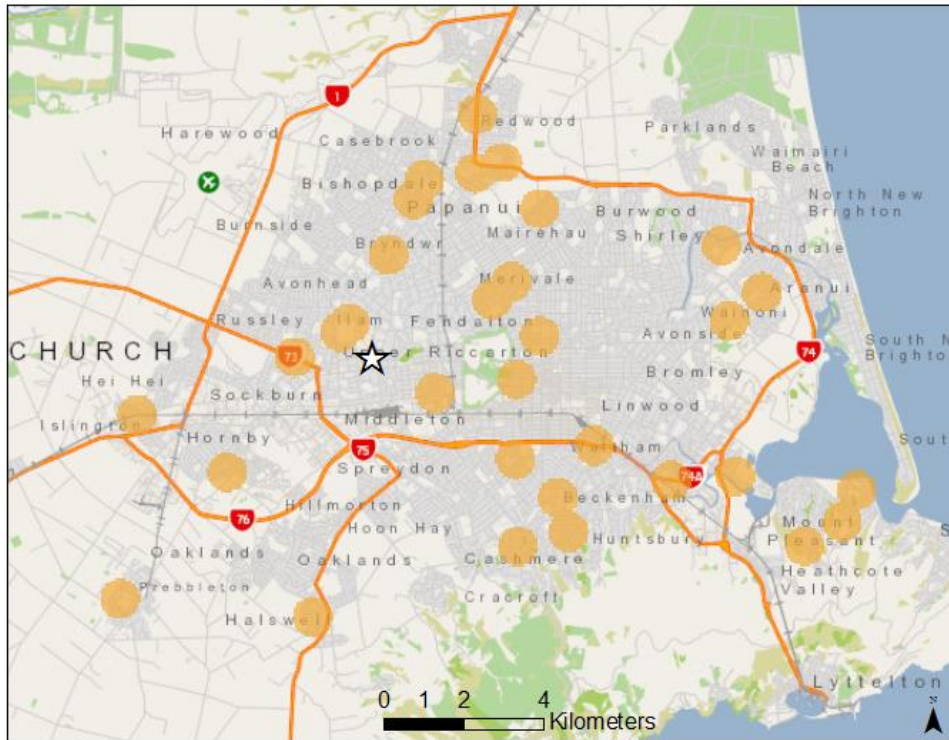
Map 9: Geographic distribution of motorcylists and moped riders (urban)

We know from the earlier analysis that staff and student respondents reported different travel practices, so we mapped the journeys of these two groups separately. Table 5 shows the percentage of staff and students (whose journeys were able to be mapped) travelling by each travel mode.[8] As with the full survey cohort, more staff than students travelled by car or van, more students than staff walked or travelled by bus.

Table 5: Usual travel modes of staff and students whose journeys were mapped

Travel mode	Percentage of staff users	Percentage of student users
Driver or passenger (car or van)	70	44
Cyclist	19	19
Walker, skateboarder, blader, or scooterer	6	27
Bus passenger	4	8
Motocyclist or moped rider	1	1

The mapping revealed that the average (mean) distance travelled to the University was higher for staff than for students for every travel mode. Table 6 shows travel distances by mode for both staff and students.

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[8] Five respondents whose journeys were initially mapped are excluded from this further analysis because they did not indicate whether they were staff or students.

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Table 6: Travel distances by mode for staff and students

Mode	Average (mean) distance (km)		
	Staff	**Students**	**All respondents**
Driver or passenger (car or van)	12.3	11.6	11.8
Cyclist	6.2	3.3	4.4
Walker, skateboarder, blader, or scooterer	2.2	1.5	1.5
Bus passenger	11.7	8.9	9.5
Motocyclist or moped rider	9.9	6.5	7.3

Travel trends

There has been fairly significant change in travel patterns since the University began collecting travel data in 1966. Specifically, students' mode of travel has varied. Car driving reached a high in 2000 at around 41%, and this has once again been met in 2016. Walking, cycling and bussing have been decreasing since around 2008 (Figure 6).

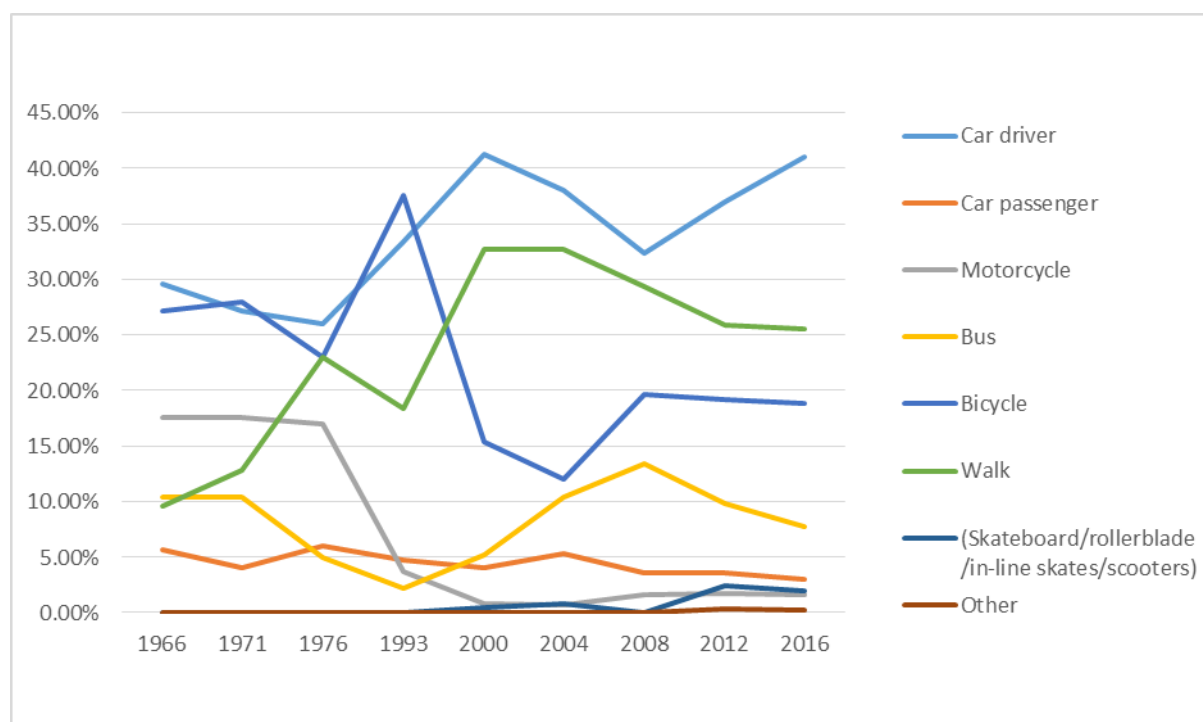*Figure 6: Student travel behaviour, 1966-2016*

Staff travel behaviours remain slightly more stable: car/van driving has decreased slightly since 2012, and no significant difference can be seen in the other modes of transport. This reflects the usual nature of staff members' lifestyles, a long-term commitment with little major fluctuation year to year (Figure 7).
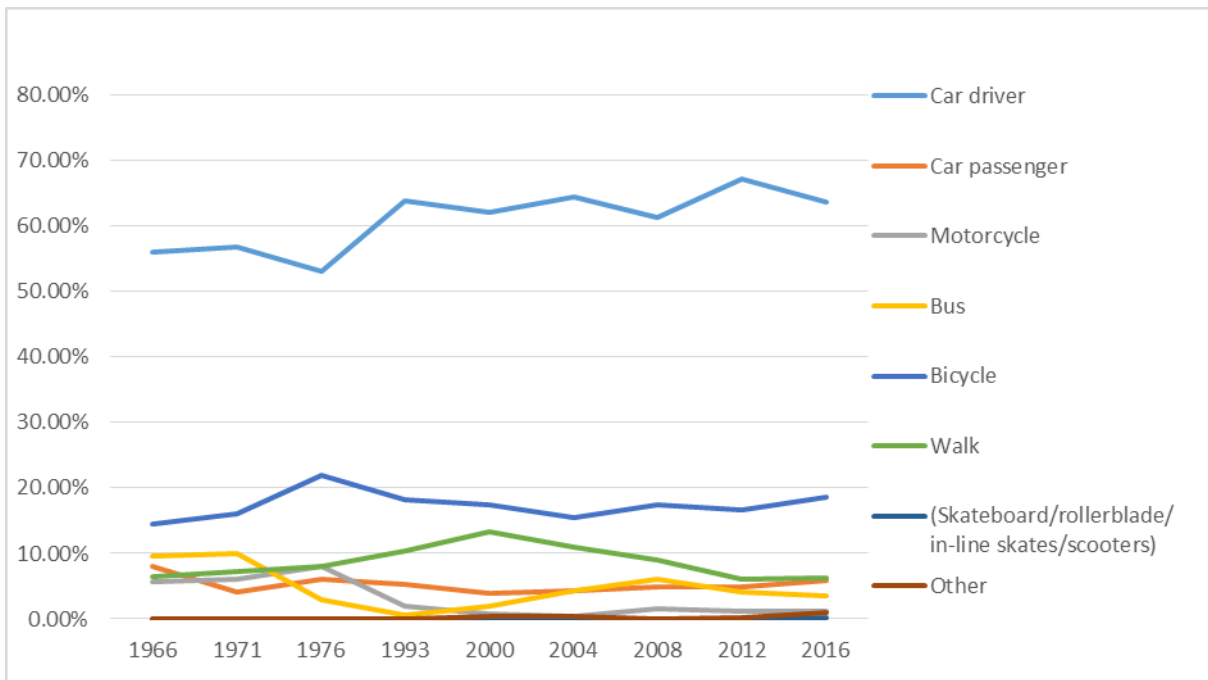
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Figure 7: Staff travel behaviour, 1966-2016

33% of people indicated that the weather affects how they travel to university, and 64% indicated it did not. 3% responded with other, with reasons including; if the rain or wind is especially bad for cyclists they would change their mode, if there is extreme weather like flooding or snow, or it does affect their choice but they have no other option.

The increasing number of students driving to university is an area that should be understood in more detail. Understanding incentives for respondents to utilise other forms of transport will be integral in lowering the number of staff and students driving to university. This report looks at these reasons, and offers suggestions to reduce the proportion of staff and students at the University traveling via car or van.

Respondents were asked about reasons for their current mode of transport, and were able to tick as many reasons as they believed to be important. 60% indicated that they take their current mode of transport because it is quicker, 41% because it is cheaper, and 34% because they enjoy the way they travel (Figure 8).
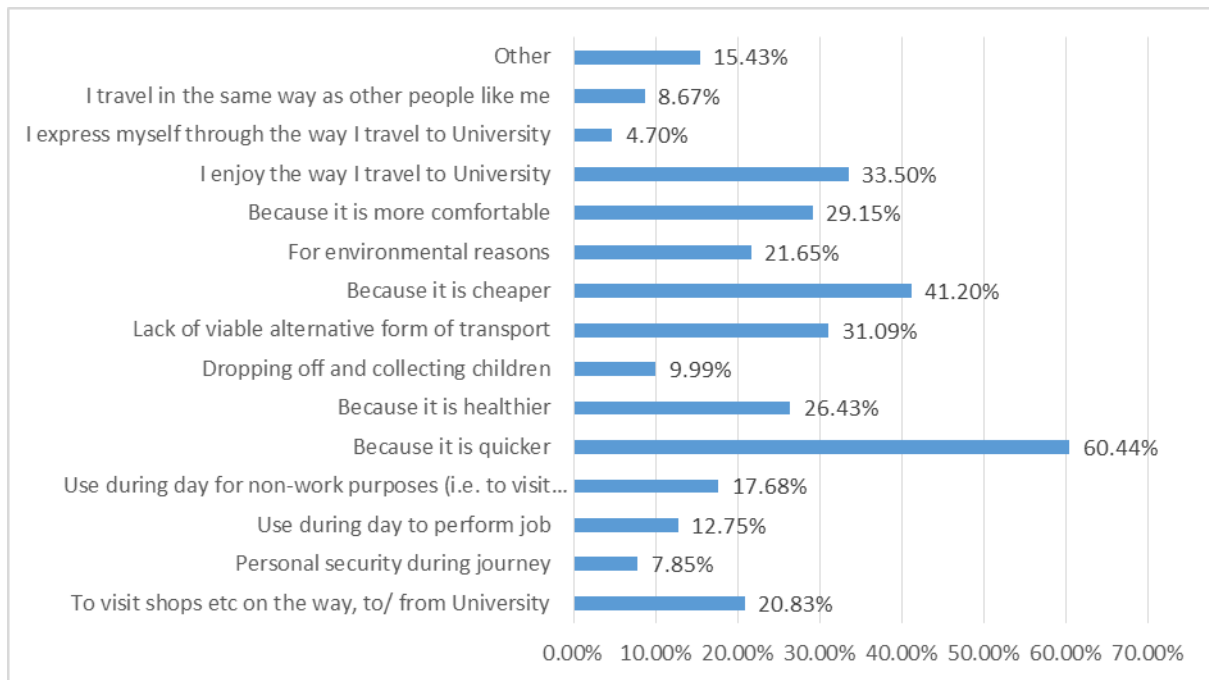
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Figure 8: Reasons for respondents' travel choice

Then, respondents were asked about *their main reason for their travel choice*, and asked to pick only one of the above reasons they consider to be most important. The majority of respondents indicated that their main reason for their chosen form of transport is that it is quicker (29%), they have a lack of alternatives (15%) and it is cheaper (14%) (Figure 9). The main reasons for people ticking the 'other' category included; health reasons limiting their transport options, parking inconvenience around campus and steep prices on campus meaning some would not drive, many responded as hall students stating that they live too close to warrant other forms of transport (presumably they walk or skateboard into University), and some indicated they would have different main reasons depending on the season, among other reasons.

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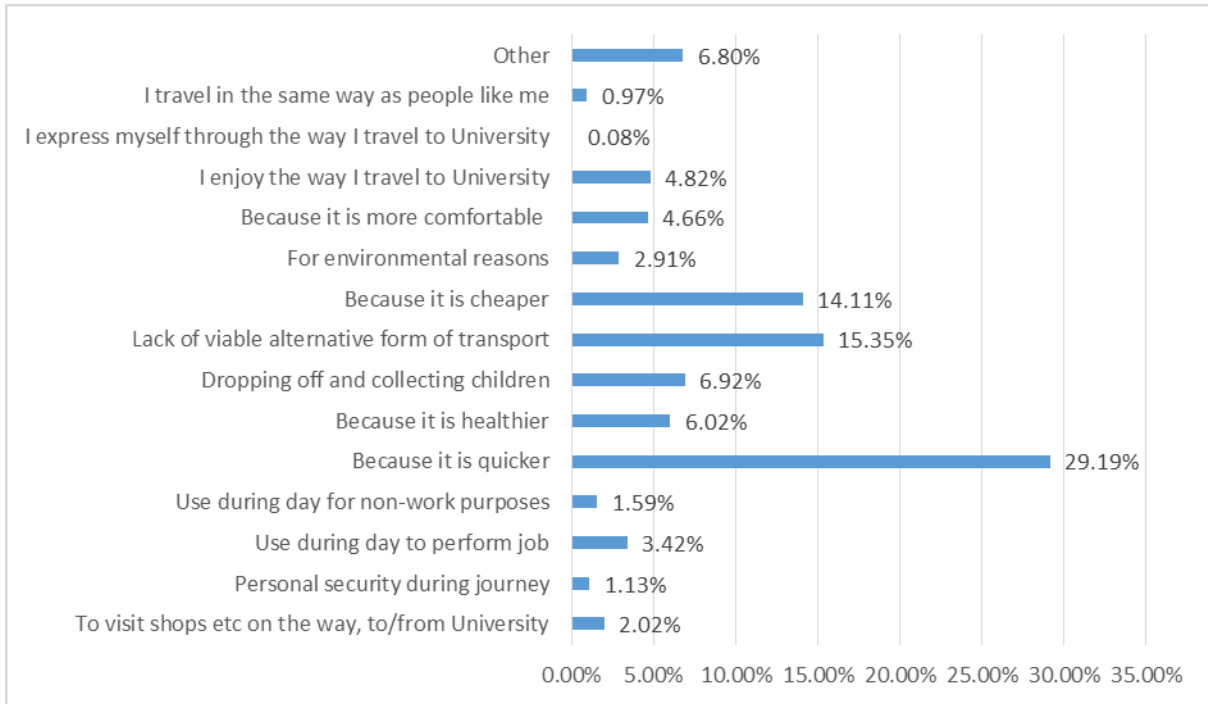
Figure 9: Main reason for respondents' travel choice

Respondents were asked if they would consider using any alternative forms of transport. They were able to choose more than one. This is considered by many as the form of transport they would use if their usual was not available, or due to other reasons like good weather making walking or cycling more attractive. 27% indicated they would not use any other form, 25% that they would passenger a car/van, and 20% would bus (Figure 10).

Figure 10: Alternative modes of transport for respondents

Parking Permits

The question about purchasing of parking permits seems to have revealed a bias in the survey. We asked respondents whether they had purchased a parking permit, and compared the result with actual sales figures. We know that 35% of the University population purchased a permit in 2016, which compares favourably with the survey result of 34%. Figures for student purchases of parking permits 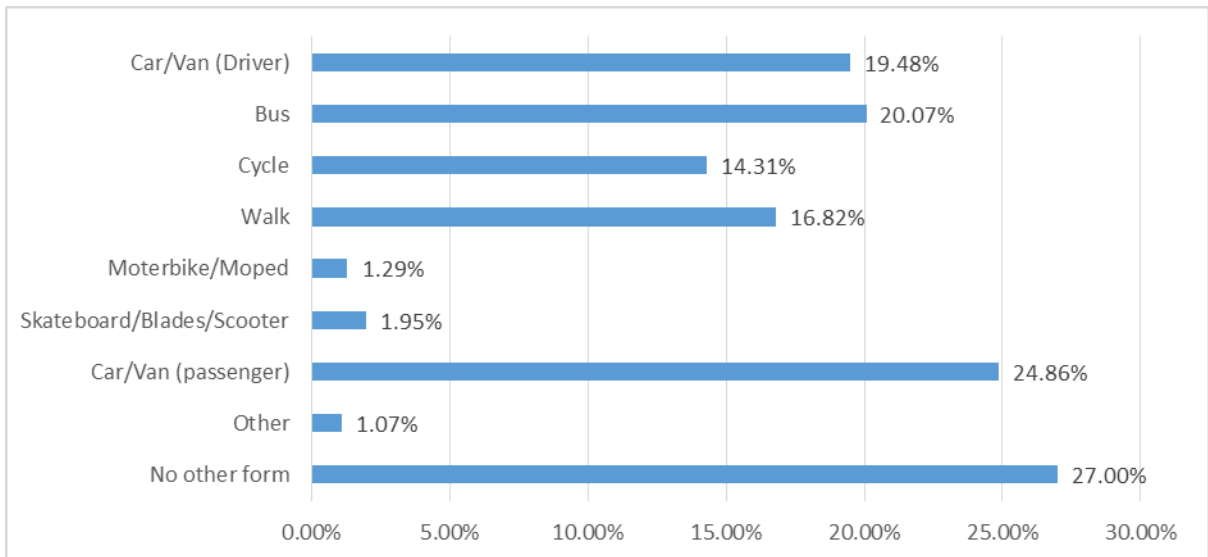were fairly accurate: 20% in the survey compared to 29% for actual sales. However, whereas 65% of staff actually purchased a parking permit, only 49% (457) of survey respondents who were staff had done so.[9] Data referring to parking permit sales amongst staff and staff car parking should therefore be read with this in mind.

Of those respondents who usually drive a car to campus, 64% specified they park on campus, 35% indicated they do not, and 1% said 'other', indicating they usually alternate between the two. Of those that park off campus, respondents were asked to indicate how long it takes them to walk into University. 35% said it takes around five minutes, 48% said 10 minutes, 15% said 15 Minutes, 2% said 20 minutes, and less than 1% indicated it would take more than 20 minutes.

The idea of removing parking permits was proposed, being replaced by one dollar per day campus parking fees. If this was the case, 40% of staff and 53% of students indicated that this would influence where they would park, 32% of staff indicating they would park within the University, and 8% would park outside. 42% of students said they would park at the University more often, and 11% said they would park outside (Table 7).

The effect of this change was also analysed in relation to travel mode. 12% of staff and 26% of students indicated they would travel by car/van more often. A much smaller portion said they would travel by car/van less often, or not at all (Table 8).

Table 7: Staff and student response to removing parking permits, on parking

If one dollar per day parking at University was introduced, would this affect where you park?	Staff	Student	Grand Total
I would park in University more often	31.58%	42.18%	38.27%
I would park outside University	8.22%	10.64%	9.75%
It wouldn't	60.20%	47.18%	51.98%
Grand Total	**100.00%**	**100.00%**	**100.00%**

Table 8: Staff and student response to removing parking permits, on mode of travel

If one dollar per day parking at University was introduced, would this affect how you travel?	Staff	Student	Grand Total
I would travel by car/van more often	11.62%	26.07%	20.77%
I would travel by car/van less often	2.61%	2.64%	2.63%

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[9] There is a discrepancy here with data compiled in 2016 for the Transport and Parking Strategy, which estimated that 34% of students and 68% of staff had a parking permit. Source: University of Canterbury Integrated Transport and Parking Strategy 2016, p.31

I would no longer drive a car/van	0.33%	1.51%	1.08%
It wouldn't	85.45%	69.77%	75.53%
Grand Total	**100.00%**	**100.00%**	**100.00%**

Breaking this down, we can understand staff and student opinions on the addition of a one dollar per day parking fee, in relation to their usual mode of transport (Tables 13-16), and whether they currently possess a parking permit (Tables 9-12).

Table 9 shows that 85% of respondents who currently have a parking permit would not change where they park, if one dollar per day fees were introduced (93% of staff, and 77% of students). However, Table 10 shows that of respondents that do not currently hold a parking permit, 54% indicated they would park on campus more often if this fee were introduced (60% of staff, and 52% of students). This could suggest that introducing this fee would increase on-campus parking demand.

Table 9: Staff and students with parking permits, and the effect of one dollar per day parking fees, on parking

How would $1 fee effect parking for those with permits?			
	Staff	**Student**	**Grand Total**
I would park in University more often	3.30%	11.79%	7.44%
I would park outside University	3.74%	11.54%	7.78%
It wouldn't	92.95%	76.67%	84.78%
Grand Total	**100.00%**	**100.00%**	**100.00%**

Table 10: Staff and students without parking permits, and the effect of one dollar per day parking fees, on parking

How would $1 fee effect parking for those without permits?			
	Staff	**Student**	**Grand Total**
I would park in University more often	59.87%	52.35%	54.49%
I would park outside University	12.72%	10.35%	11.12%
It wouldn't	27.41%	37.30%	34.39%
Grand Total	**100.00%**	**100.00%**	**100.00%**

Table 11 and 12 look at this same effect on usual travel patterns of staff and students. Of those with current parking permits, 85% would not change their mode of travel to University with the introduction of a one dollar per day parking fee (92% of staff, and 79% of students). Of those without permits, 70% would not change their mode of travel with the introduction of the fee (76% of staff and 68% of students). However, 20% of students who currently have permits, and 30% of those that currently do not have suggested they would consider changing their mode of transport. Along with 14% of staff that do not have a permit, this number is still fairly large, suggesting the number of students particularly driving to University could increase dramatically.

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Table 11: Staff and students with parking permits, and the effect of one dollar per day parking fees, on travel mode

How would $1 fee effect travel mode for those with permits?			
	Staff	**Student**	**Grand Total**
I would travel by car/van more often	3.30%	19.78%	8.13%
I would travel by car/van less often	4.41%	0.86%	5.73%
I would no longer drive a car/van	0.22%	0.43%	1.49%
It wouldn't	92.07%	78.92%	84.65%
Grand Total	**100.00%**	**100.00%**	**100.00%**

Table 12: Staff and students without parking permits, and the effect of one dollar per day parking fees, on travel mode

How would $1 fee effect travel mode for those without permits?			
	Staff	**Student**	**Grand Total**
I would travel by car/van more often	13.62%	30.13%	27.48%
I would travel by car/van less often	7.20%	1.17%	1.23%
I would no longer drive a car/van	2.83%	1.09%	0.88%
It wouldn't	76.35%	67.61%	70.42%
Grand Total	**100.00%**	**100.00%**	**100.00%**

The effect of a one dollar per day parking fee, in relation to respondents' usual mode of travel was then assessed. Table 13 shows the effect on parking for individuals who usually drive a car/van to University, and Table 14 shows the effect on individuals who take any means other than those who usually drive a car/van. Of those that usually drive, 53% would not be affected by the introduction of a one dollar fee (62% of staff and 47% of students). 38% indicated they would park in the University more often, 31% of staff and 43% of students (Table 13). 51% of those who do not drive indicated they would not change their parking if the one dollar fee was introduced (58% of staff and 47% of students). 38% did say they would park on campus more often, 32% of staff and 42% of students (Table 14).

Table 13: Staff and students who usually drive a car/van to University, and the effect of one dollar per day parking fees, on parking

How would $1 fee effect parking for those who usually drive?			
	Staff	**Student**	**Grand Total**
I would park in University more often	30.77%	42.56%	38.24%
I would park outside University	7.25%	10.05%	9.18%
It wouldn't	61.98%	47.39%	52.57%
Grand Total	**100.00%**	**100.00%**	**100.00%**

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Table 14: Staff and students who usually take a means other than drive a car/van to University, and the effect of one dollar per day parking fees, on parking

How would $1 fee effect parking for those who usually take transport other than driving?	Staff	Student	Grand Total
I would park in University more often	32.39%	41.81%	38.37%
I would park outside University	9.19%	11.21%	10.74%
It wouldn't	58.42%	46.98%	50.89%
Grand Total	**100.00%**	**100.00%**	**100.00%**

Finally, respondents who drove a car/van, or took any other form of transport were asked if the introduction of a one dollar fee would influence them to change their mode of transport. Of those that usually drive, 75% would not change their mode (86% of staff and 69% of students). 21% did indicate they would travel by car or van more often, 12% of staff and 27% of students (Table 15). 75% of those that do not currently drive indicated they would not change their mode of transport (85% of staff and 71% of students). 21% again indicated they would travel by car/van more often (11% of staff and 25% of students) (Table 16). This, similarly to the above result in Table 12, suggests a sizeable increase in students and staff driving to University if a one dollar per day fee were introduced.

Table 15: Staff and students who usually drive a car/van to University, and the effect of one dollar per day parking fees, on transport mode

How would $1 fee effect travel for those who usually drive?	Staff	Student	Grand Total
I would travel by car/van more often	11.96%	26.76%	21.26%
I would travel by car/van less often	1.96%	2.94%	2.65%
I would no longer drive a car/van	0.22%	1.41%	1.01%
It wouldn't	85.87%	68.89%	75.08%
Grand Total	**100.00%**	**100.00%**	**100.00%**

Table 16: Staff and students who usually take a means other than drive a car/van to University, and the effect of one dollar per day parking fees, on transport mode

How would $1 fee effect travel for those who usually take transport other than driving?	Staff	Student	Grand Total
I would travel by car/van more often	11.28%	25.40%	20.61%
I would travel by car/van less often	3.25%	2.35%	2.84%
I would no longer drive a car/van	0.43%	1.61%	1.15%
It wouldn't	85.03%	70.63%	75.40%
Grand Total	**100.00%**	**100.00%**	**100.00%**

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Carpooling

Respondents were asked about factors that would influence them to carpool more often, and were able to select more than one option. Of the 40% of respondents which answered this question: 43% indicated nothing would, 41% responded with help finding partners, and 32% indicated cheaper parking for carpoolers would influence them to carpool more often (Figure 11).
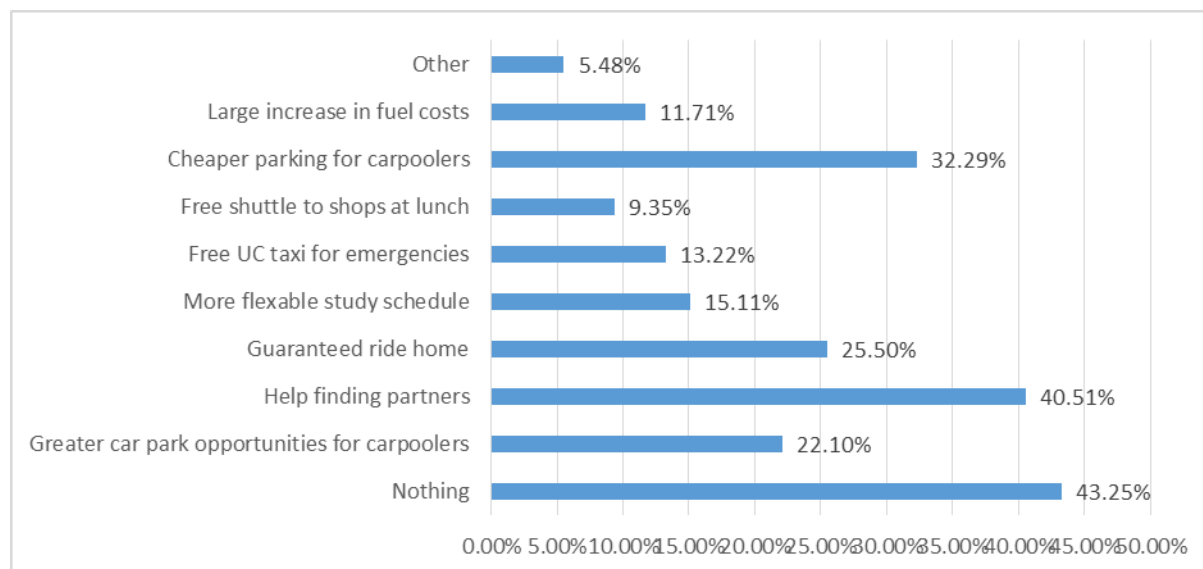

Figure 11: Reasons for respondents to consider carpooling

When asked for their primary reason, respondents indicated they were help finding partners (23%), and cheaper parking for carpoolers (10%). 41% of respondents indicated nothing would influence them to travel by carpooling (Figure 12). Those who answered 'other' had varied reasons, including the want for free car parking for carpoolers, and that they either live too far from campus to be able to find partners, or take other passengers and have no space.
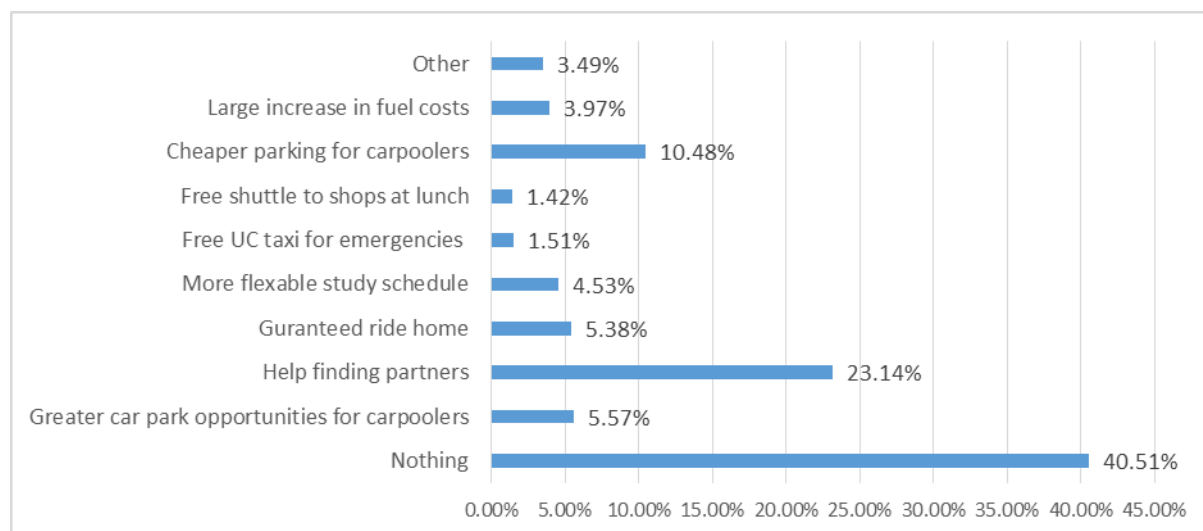

Figure 12: Most important incentive for respondents to consider carpooling more often.

Public Transport

58% of respondents indicated they own a metro card, and 80% said there was a bus stop within 10 minutes' walk from their home, 16% indicated there was not, and 4% did not know. Of those that currently bus to University, 68% of respondents indicated they would support an on-campus bus exchange, while 5% said they would not. 27% answered with maybe.

Respondents who do not usually bus were then asked to give all reasons they would consider bussing to University more often. Of the 88% of respondents who answered this question, 39% indicated discount tickets would influence them, and 37% indicated either nothing would, or more direct routes to campus would (Figure 13).
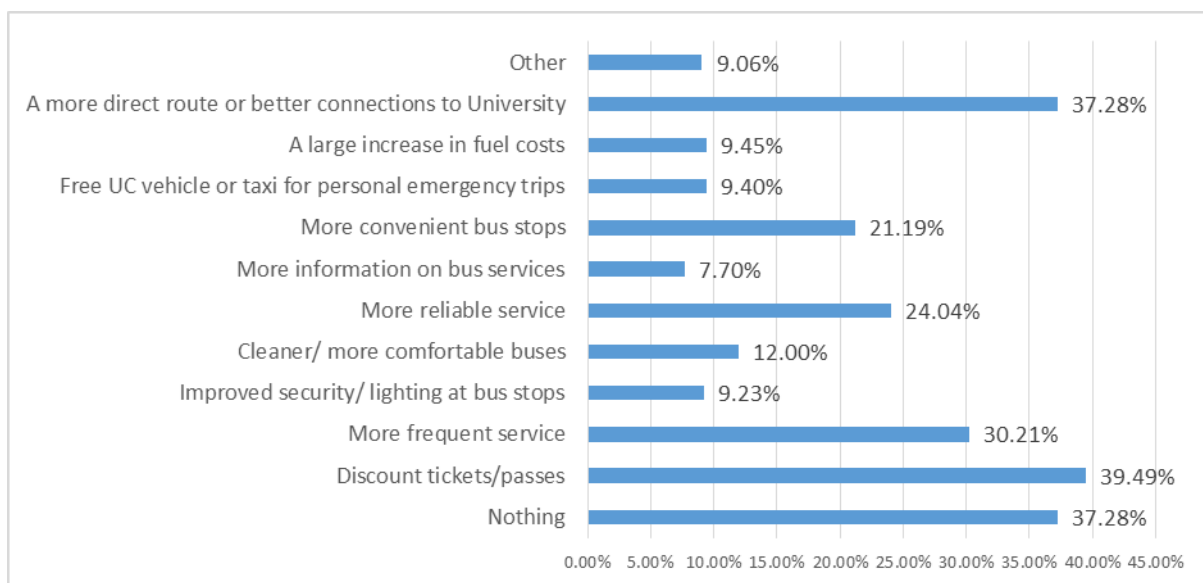

Figure 13: Reasons for respondents to consider bussing more often

Of these reasons, respondents indicated that discount tickets (21%), and better routes and connections to University (21%) are the main factors that would promote them using public transport more often. 34% indicated that nothing would influence them to use public transport more often (Figure 14). Those who answered 'other' mentioned the price of bussing being too expensive, the lack of bus stops near their home, and more direct and reliable services to university.

Breaking this into staff and student patterns, around a third of staff indicated nothing would influence them to bus more often, while 31% indicated better routes or connections would influence them. 7% want more frequent services, and 8% answered other for similar reasons to above (Figure 15).
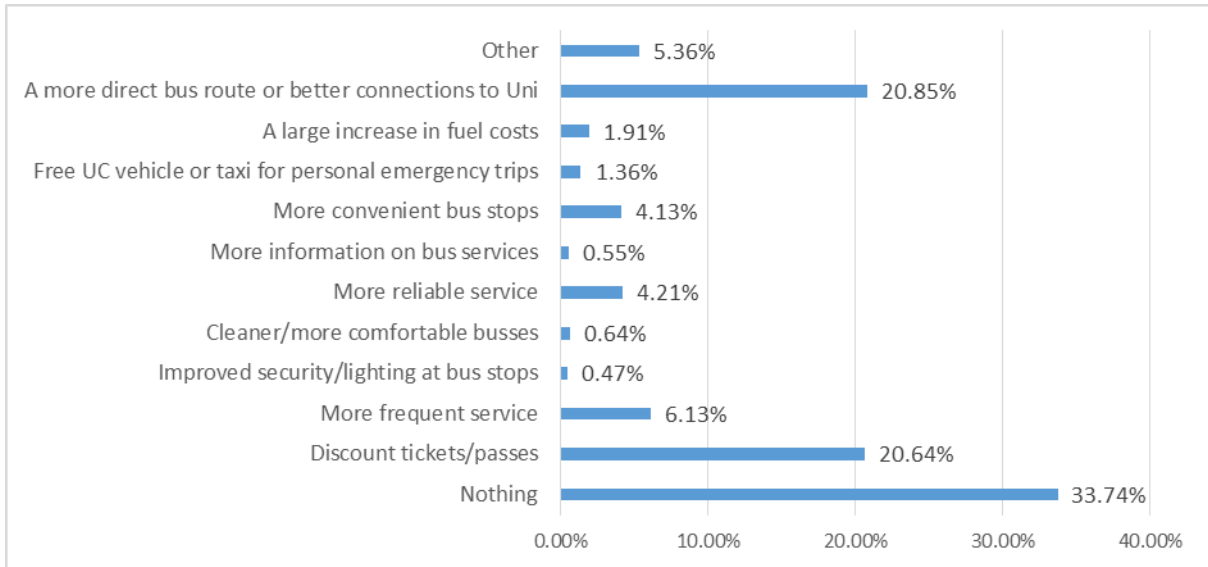
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Figure 14: Most important incentive for respondents to consider bussing more often
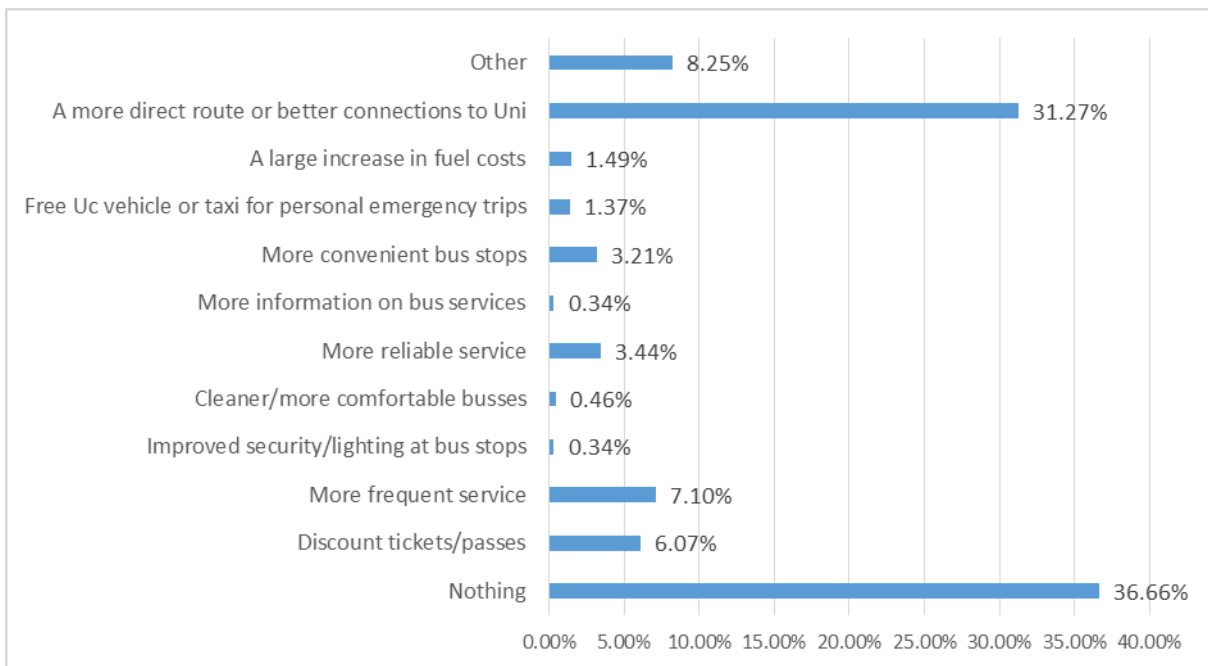
Figure 15: Most important reason for staff to consider bussing more often

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Students, however, offered slightly different opinions. Again, the highest number, around 32% said nothing would influence them to take the bus, while 30% said discounted tickets would, 15% wanted more direct routes, and less at 4% responded with other (Figure 16).

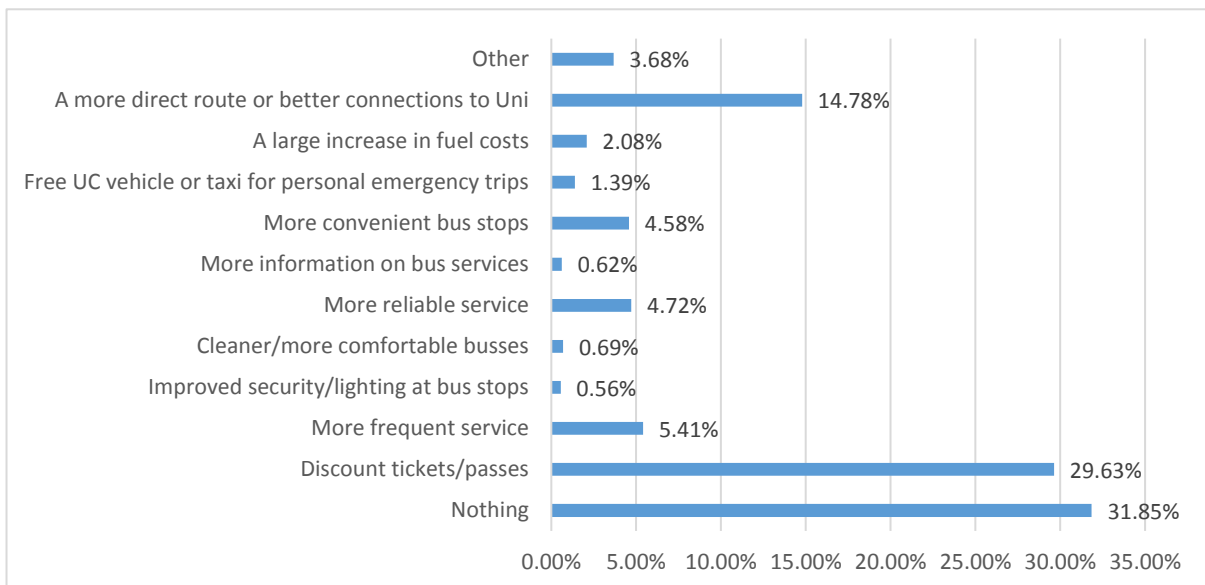*Figure 16: Most important reason for students to consider bussing more often*

Of those that indicated they usually bus to University, 71% of respondents find the current bus stops around campus convenient or very convenient. 14% find them inconvenient or very inconvenient (Figure 17).
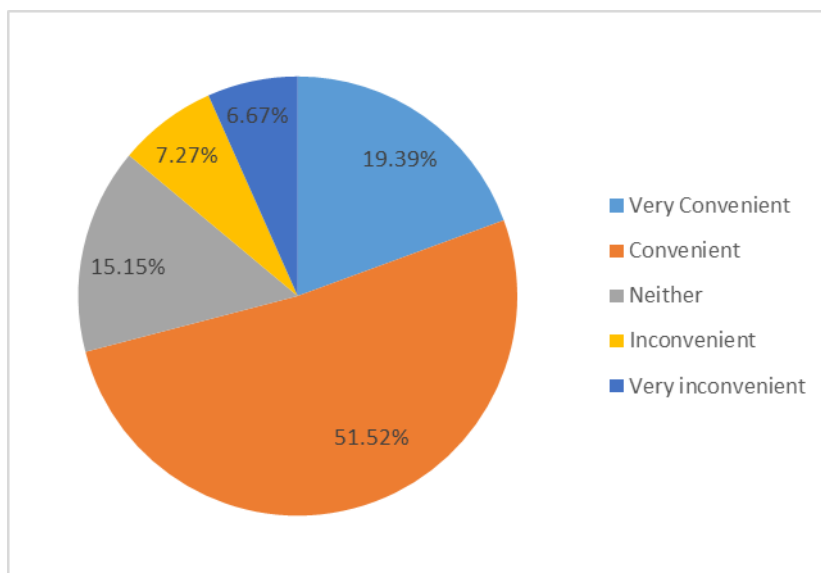

Figure 17: Convenience of bus stops around campus for respondents that currently bus

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Cycling

58% of respondents who indicated they do not currently cycle to university said they live within a reasonable distance to cycle, of these, 55% own or have access to a bike. 13% of respondents cycle for recreation regularly, 42% do occasionally, and 45% rarely or never cycle for recreation. 69% of respondents who usually cycle feel there are adequate cycle parking facilities. 7% answered other to this question, indicating that currently there are enough cycle parks in most locations but if more start cycling there will need to be an increased number, and more covered and locked stands would be beneficial.

When asked about the convenience of current cycle parking infrastructure for those that currently cycle, 74% believed these to be convenient or very convenient. 15% said they find cycle parking either inconvenient or very inconvenient (Figure 18).

Of these parking facilities, 42% of usual cyclists indicated that enclosed secure stands are their preference for cycle parking. An even amount indicated that covered non-locked stands (30%) and open air stands close to buildings are their preference (28%) (Figure 19).
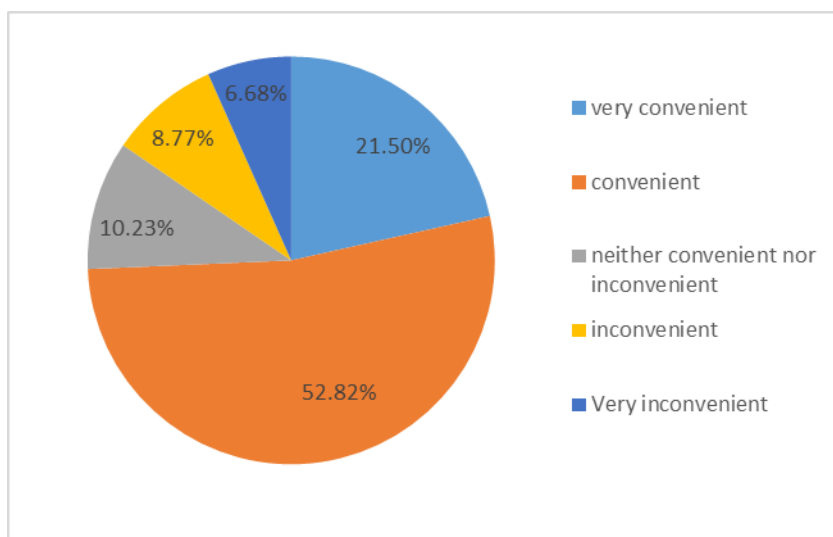

Figure 18: Convenience of current cycle parking respondents who usually cycle

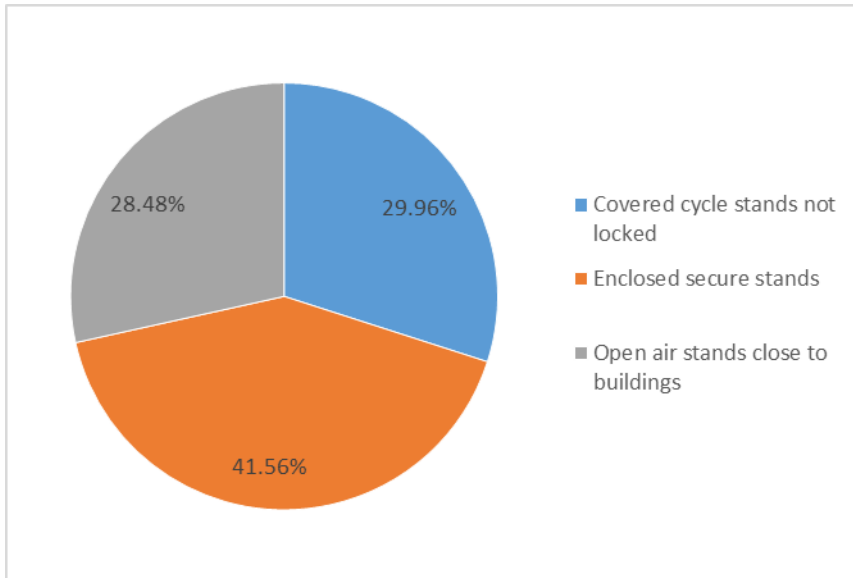University of Canterbury 2016 Travel Survey Results

Figure 19: Cyclists preferred cycle parking facilities

Respondents who do not usually cycle to University were asked what reasons would influence them to travel to University by cycle more often. Of the 76% of respondents who answered this question, 45% indicated nothing would, 31% said that improved cycle routes would influence them, and 28% indicated less traffic congestion (Figure 20). 13% answered other, with reasons including living closer, increased safety, the removal of helmet laws, the weather, and not needing to drop off children or partners. Since this survey was undertaken, the new City to University cycle route (UniCycle) has been implemented, which may improve the result regarding improved cycle routes in the future.

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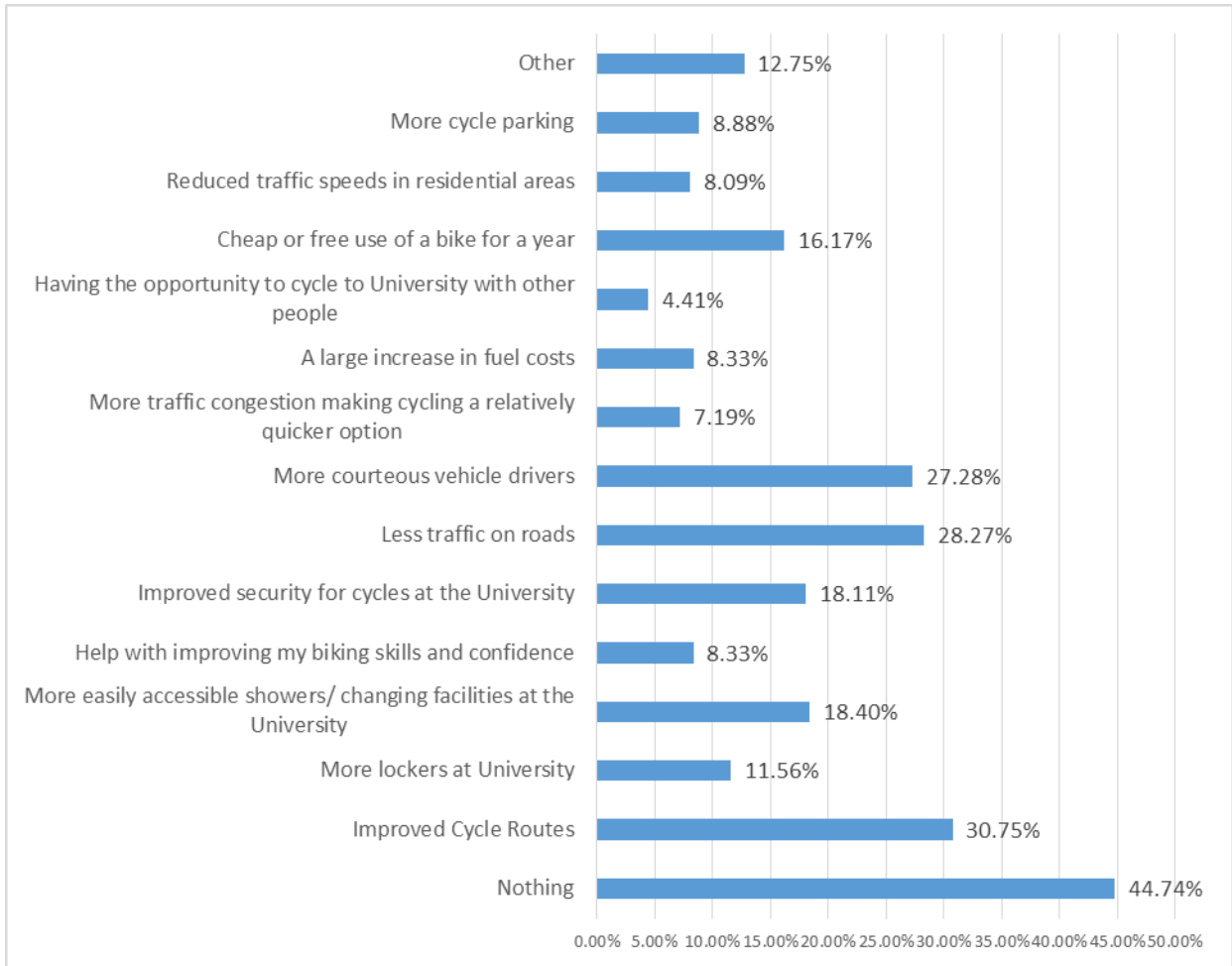
Figure 20: Reasons for respondents to consider cycling more often

Of these reasons, respondents indicated that improved cycle routes are the most important incentive to cycle more often (13%), and 42% indicated nothing would influence them to consider cycling. (Figure 21). Similar reasons to above were listed for those that checked other (9%). Again, it is hoped that the UniCycle route, which has been installed since the survey was undertaken, will meet the need shown in this result.

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Figure 21: Most important incentive for respondents to consider cycling more often

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Walking

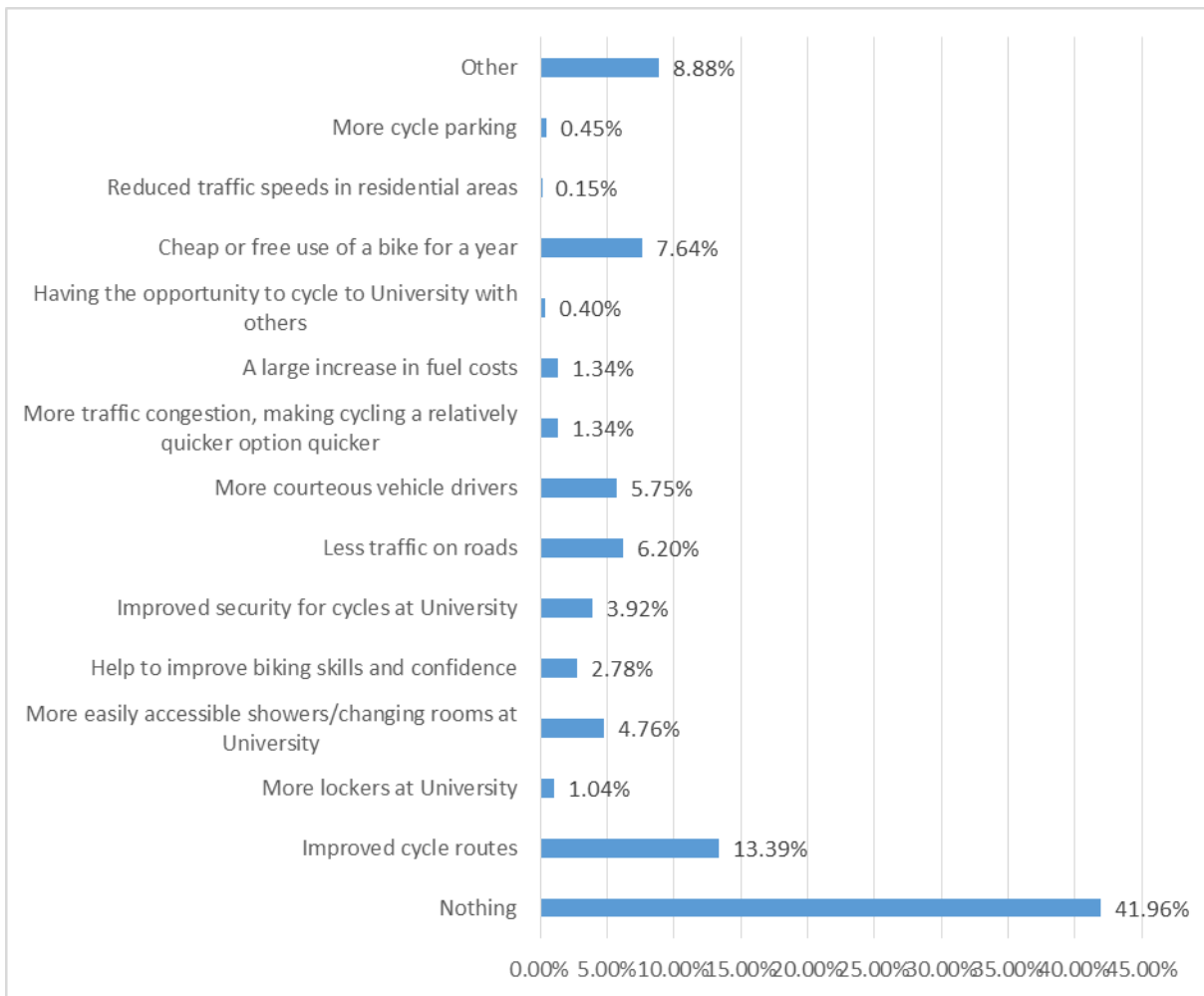Respondents who do not usually walk to University, but consider themselves to live within walking distance were asked for reasons that would influence them to walk to University more often. Of the 17% of respondents who answered this question, 43% indicated nothing would influence them to walk to University more often; 21% said a shuttle bus home at the end of the day would offer an incentive to walk to University, and 20% indicated better security, including lighting and visibility (Figure 22).[10] A large portion also answered other (18%), with reasons including guaranteed good weather, their current location being too far away, and complications regarding their children and family.
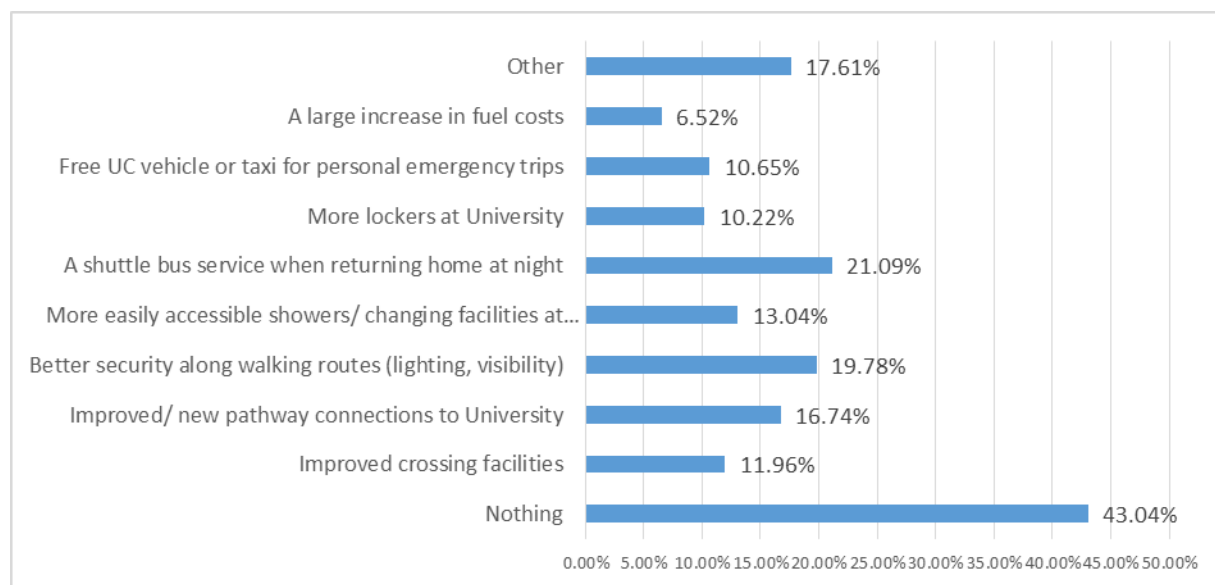
Figure 22: Reasons respondents would consider walking more often

Respondents were then asked the main factors that would influence them to walk to University more often. Again, a large majority of those who replied indicated nothing would (40%). Following this, 15% ticked 'other', 11% indicated a shuttle bus, and 9% indicated better security along walking routes. Those that ticked 'other' were for similar reasons to above, as well as some indicating that if they did not have to travel between campuses they would consider walking more often (Figure 23).

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[10] Note that respondents could provide multiple answers to this question.

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Figure 23: Most important incentive for respondents to consider walking more often

The most commonly selected change that would encourage respondents to walk to the university more often was the provision of a night shuttle service.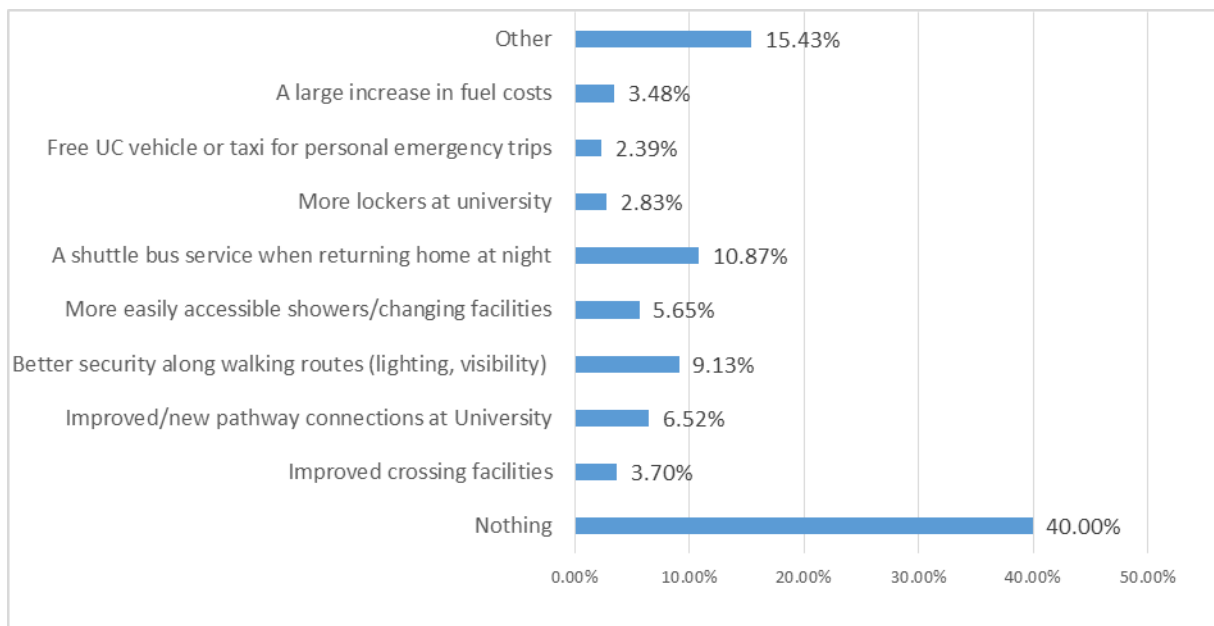 The following analysis compares the home addresses of survey respondents to existing bus service provision. This analysis can help us to identify areas where existing provision might be effectively supplemented by the provision of a shuttle bus.

- All of the bus stops on bus services that pass the University of Canterbury have been mapped. Respondents' home addresses have also been mapped. Analysis can then determine the proximity of each residents' home address to a bus stop on a bus route that passes the University of Canterbury.
- This analysis uses data for bus routes that stop on Ilam, Creyke, or Clyde Roads in the vicinity of the University.
- The analysis includes the 2,286 survey respondents who provided a mappable address in Canterbury, details of their usual travel mode, and details of their staff or student status.
- Due to the complexity of this analysis, distances used in this section (unless otherwise specified) are straight line (or as the crow flies) distances rather than network distances.

Overall, 69% of respondents live within 800m (about 10 minutes' walk) of a bus stop on a direct bus route to the University. Table 17 shows the percentage of staff and students, who usually travel by each different mode, who live within 800m of a bus stop on a direct bus route to the University. Those who usually drive to University are least likely to live near a bus stop, and those who walk are most likely to do so. (Arguably, sustainability initiatives would need to focus most on increasing bus access for those who normally drive to University, however, these respondents are the most widely dispersed from campus).

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Table 17: Bus stop access for staff and students usually travelling by different modes

Mode		Respondents living within 800m of a bus stop (%)
Driver or passenger (car or van)	Staff	50
	Students	54
Cyclist	Staff	77
	Students	95
Walker, skateboarder, blader, or scooterer	Staff	100
	Students	99
Bus passenger	Staff	63
	Students	60
Motorcyclist or moped rider	Staff	63
	Students	75

Of the 97 survey respondents who indicated a desire for a shuttle bus, 81 provided mappable addresses.

Map 10 shows that all of these respondents live within 6km network travel distance of the University (the lines on the map show networked travel distances from the University). The map also shows that more of these respondents live to the south or west of the University than to the north or east (this is probably more a reflection of a generally greater density of respondents living to the south and west of the University than of a difference in perspective between respondents in different directions from the University).
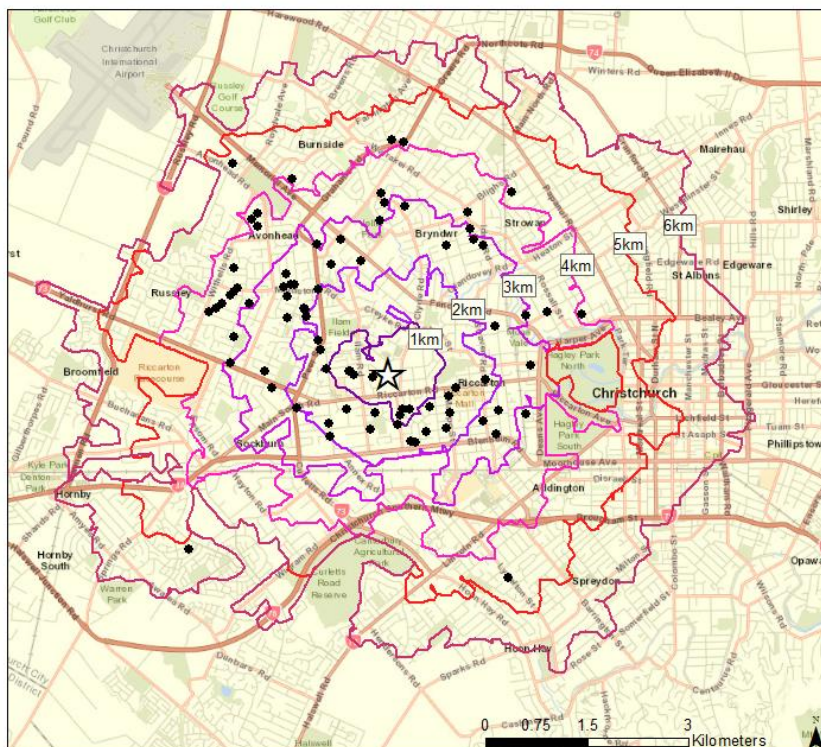
Map 10: Travel distance from University of respondents indicating a desire for a shuttle bus

Table 18 shows the travel distance from the University of respondents indicating a desire for a shuttle bus. The table shows that 66 of the 81 respondents (over 80%) live between 1 and 4 km from the university.

Table 18: Travel distance from the University of respondents indicating a desire for a shuttle bus

Distance from the University	Respondents in this area
Less then 1km	7
1-2kms	21
2-3kms	23
3-4kms	22
4-5kms	7
5-6kms	1
Total	**81**

Comparing the residential addresses of those individuals who indicated a desire for a shuttle bus to existing bus routes may provide insights into areas where existing bus routes do not meet night-time travel needs of University staff and students.

The green shaded areas in map 11 indicate areas that are 800m or less from a bus stop on a direct bus route to the University. It also shows the residential locations of people who indicated a desire for a shuttle bus. 78 of the 81 mappable respondents indicating a desire for a shuttle bus live within 800m of a bus stop on a direct bus route to the University.

Map 11: Proximity of potential shuttle bus users to city bus routes (800m)

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Although 800m (or approximately 10 minutes walk) is often considered a reasonable distance to expect people to walk to access public transport provision, people indicating a desire for a shuttle bus at night may be reluctant to walk 800m after dark on their own. If we reduce the distance to a bus stop to 400 (Map 12), we see a reduction in the number of people living in shaded areas. 60 of the 81 respondents in this analysis live within 400m of a bus stop.
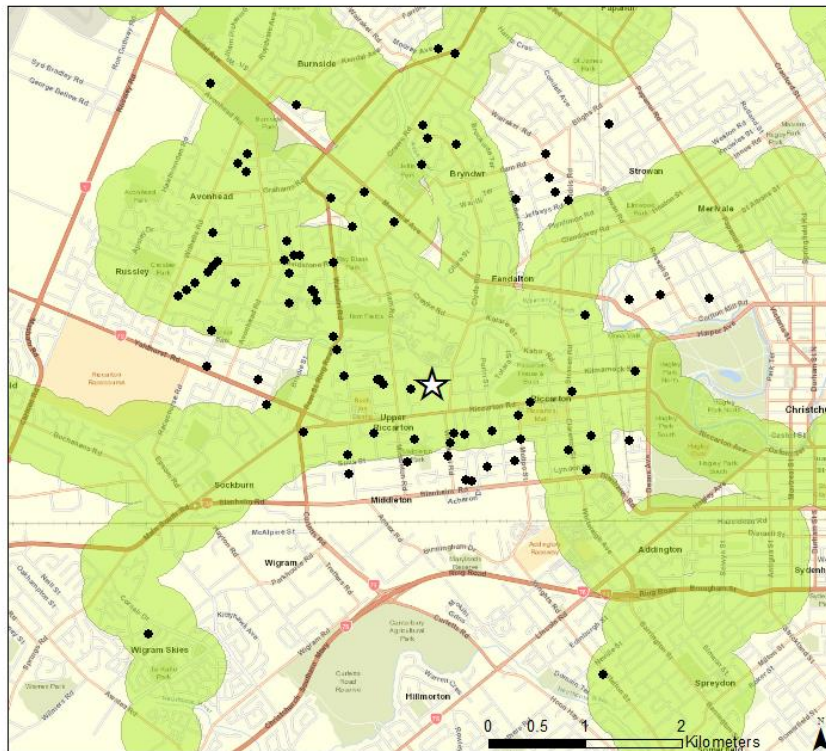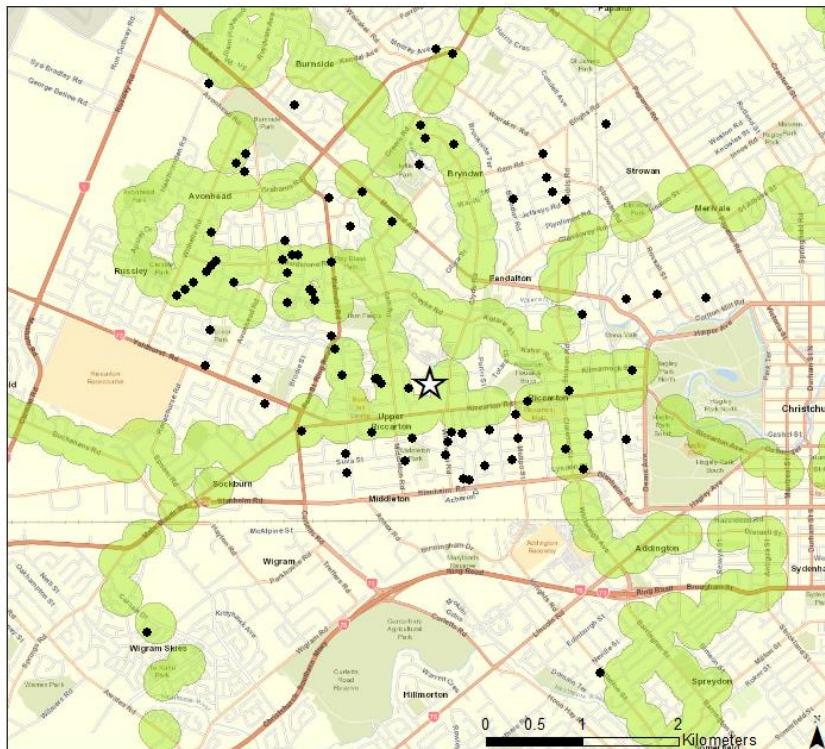

Map 12: Proximity of potential shuttle bus users to city bus routes (400m)

Map 12 does show some small clusters of people who live more than 400m from a bus stop on a direct bus route to the University. Notably, there are clusters of respondents, outside the green shading, between Riccarton and Blenheim Roads and North of Hagley Park along the rail corridor through Merivale.

If we reduce the acceptable travel distance to bus stops to 200m (Map 13), only 40 of the 81 respondents live within an acceptable walking distance from a bus stop. At this resolution, we see the cluster of respondents between Riccarton and Blenheim Roads more clearly. It is perhaps worth noting that while this cluster of people do live fairly close to bus stops on Riccarton Road, many might be reluctant to pay a bus fare for the short distance from the University to Riccarton Road and may be more likely to walk (or not walk) the entire distance.

Whether this cluster of respondents is large enough to warrant the provision of a shuttle bus will be a matter for policy discussions. Twenty-one percent of those who responded to a question about what would encourage them to walk more selected a shuttle bus. However, it is worth noting that this question was answered by less than 20% of survey respondents. That means that only 4% of the total respondent cohort indicated a desire for a shuttle bus. However, the shuttle bus was the most widely supported initiative suggested for encouraging walking and this mapping exercise may provide a first clue to wider demand.

Map 13: Proximity of potential shuttle bus users to city bus routes (200m)

Finally, when considering the provision of alternative transport modes, it is worth considering the modes currently being used by target respondents. Map 14 shows respondents who indicated a desire for a shuttle bus coloured according to the mode of transport they usually use to travel to the University. Red is used for car drivers, orange for car passengers, yellow for bus passengers, and green for cyclists. The cluster of respondents between Riccarton and Blenheim Roads and living more than 200m from a bus stop on a direct bus route to the University is composed mostly of car drivers and cyclists. It is perhaps more of a priority to provide alternative transport modes for drivers than for cyclists, however, without further analysis it is unclear how often these respondents travel by their 'usual' mode and how often they substitute other modes. For example, some respondents who usually cycle may drive if they know they will be travelling home late on a particular day. The survey did ask about alternative modes used when not using the 'usual' mode but did not query the frequency of use of these modes. This means that further data collection would be needed to explore this issue in more detail.

It is perhaps worth noting that 18 of the survey respondents who indicated a desire for a shuttle bus also indicated a willingness to be involved in transport related focus groups and provided an e-mail address at the end of the survey.

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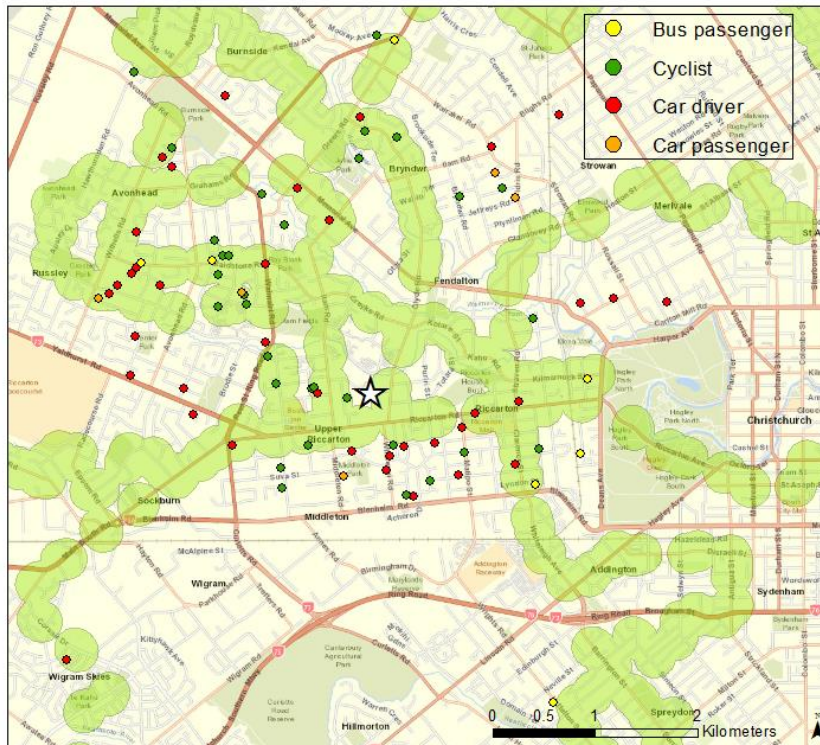
Map 14: Proximity of potential shuttle bus users (by mode) to city bus routes (200m)

Arrival and departure time on Tuesday the 12th of July 2016

Respondents were asked questions about travel on the day of the survey. 78% said that congestion did not affect their travel on this day, 15% said it did and 7% were unsure. Some noted elsewhere that there was much less congestion that normal as the survey was taken during the school holidays.

43% of respondents on 12 July travelled as the driver of a car/van, 18% walked and 14% cycled (Figure 24). The proportion of walkers was similar to that of general travel modes (around 19%); however, a lower proportion usually drive (49%) and cycle (18%) (Figure 3). This could be because 11% of respondents indicated that they did not travel to university on this day (Figure 24).

An even number of staff (10%) and students (11%) did not travel to University on this day, and around 44% of students and 40% of staff drove to University. Again relatively evenly, 18% of students and 20% of staff walked to University, and 14% of students and 16% of staff cycled (Figure 25 and 26).

There was very little difference reported between normal mode of travel and travel mode on the day of the survey.

University of Canterbury 2016 Travel Survey Results
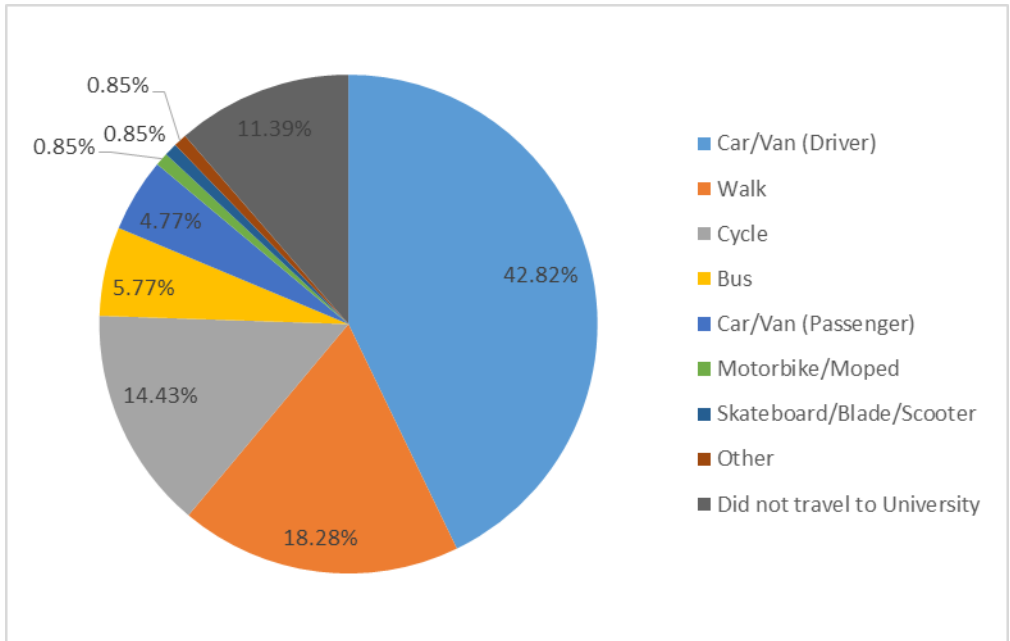
Figure 24: Mode of travel on Tuesday 12 July
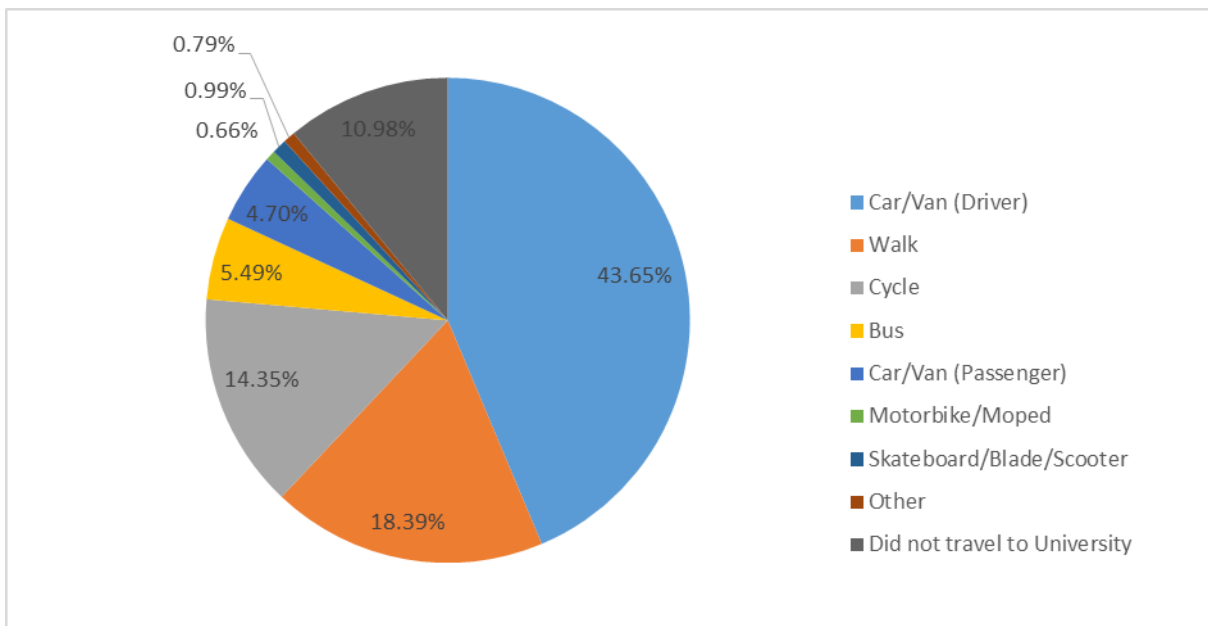
Figure 25: Mode of Travel of Students on Tuesday 12 July

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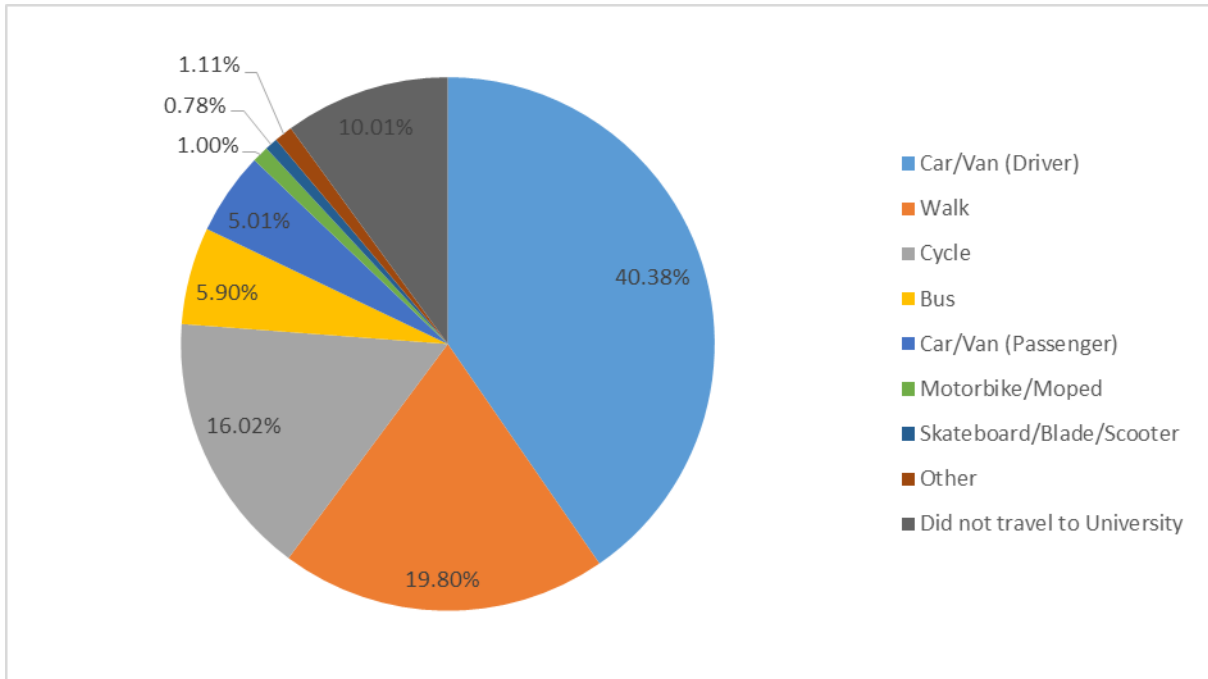
Figure 26: Mode of Travel of Staff on Tuesday 12 July

Arrival and departure time of respondents was also assessed. The majority of respondents (around 79%) arrived at University between 7am and 10:59am. 35% of respondents were within the 8:00am to 8:59am hour block (Figure 27). Departure times were more spread across the day, with around 60% or respondents leaving between 3:00pm and 6:59pm. 22% indicated they left in the hour bracket from 5:00pm to 5:59pm (Figure 28).
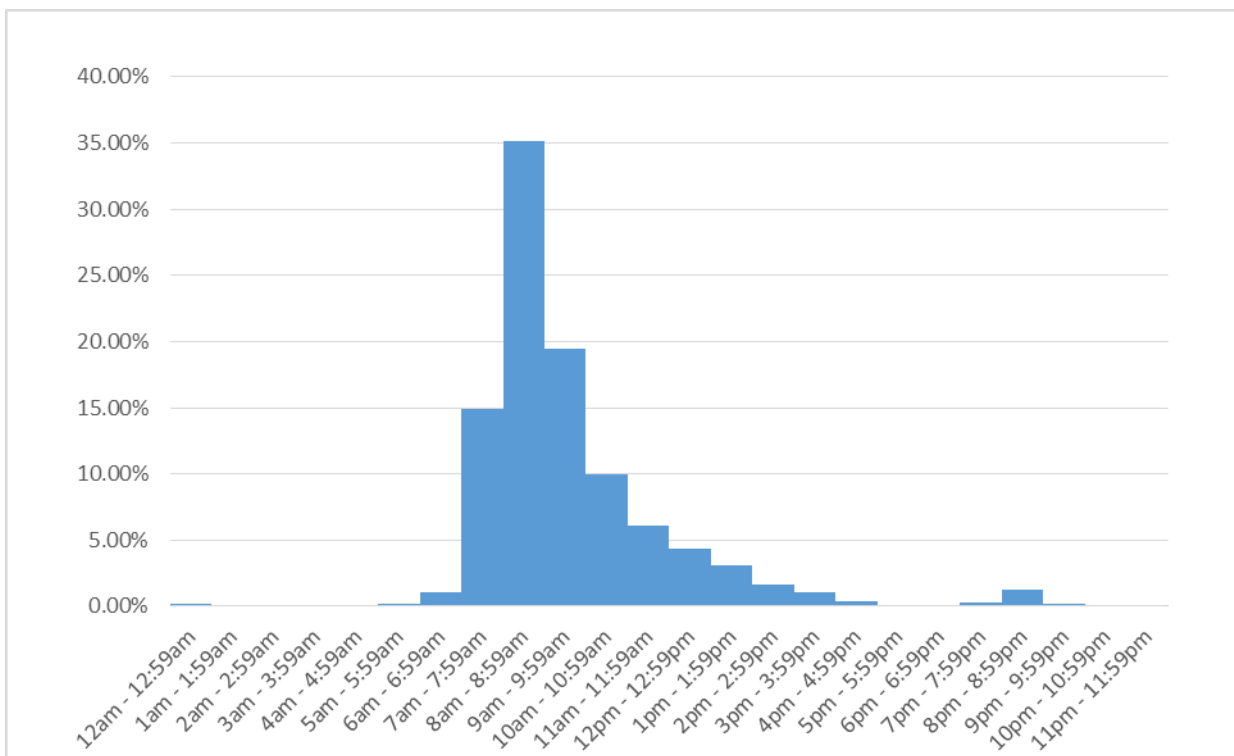
Figure 27: Arrival time at University on the 12th of July

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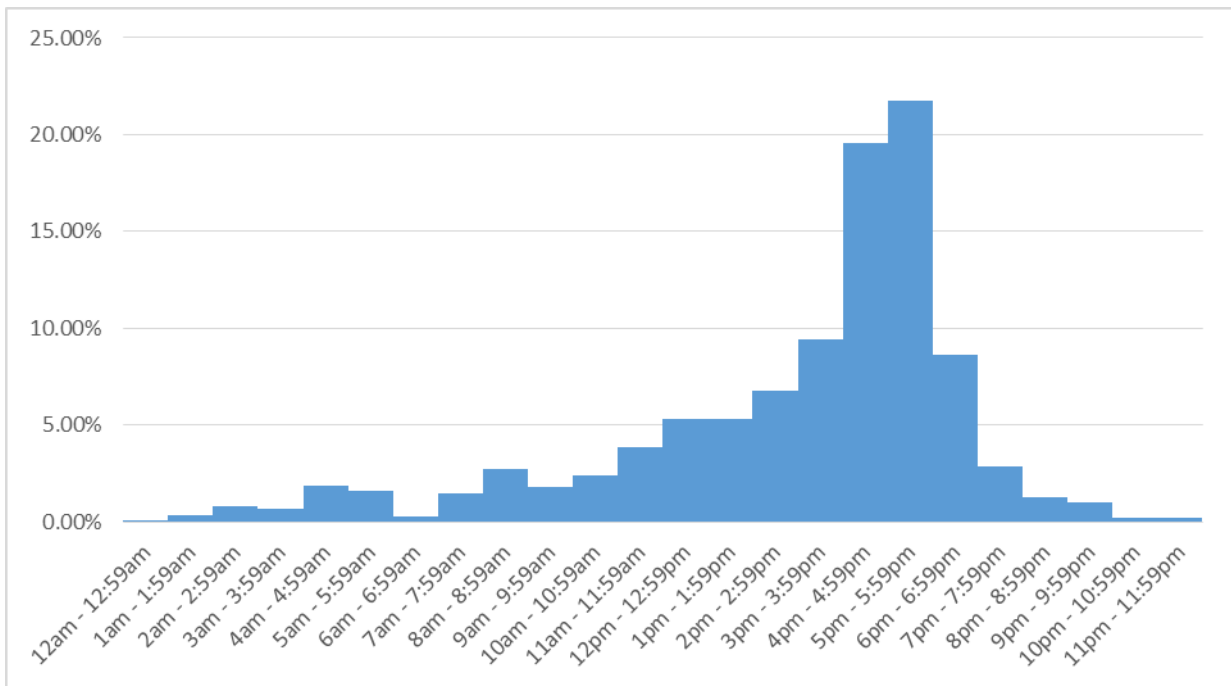
Figure 28: Departure time from University on the 12th of July

Arrival and departure times between students and staff are fairly similar. More than two thirds of both staff and students arrived at University between 7:00am and 9:59am, with the largest majority between 8:00am and 8:59am (35% of students (Figure 29) and 33% of staff (Figure 30)). Again similarly, around 40% of students (Figure 30) and 41% staff (Figure 31) departed University between 4:00pm and 5:59pm. A slightly larger number of staff and students departed between 5:00pm and 5:59pm, around 21% of students and 22% of staff.

There was very little difference between arrival and departure times of staff and students on 12 July, indicating staff and student working behaviour at University is similar, and no clear conclusions relating to differences between staff and student patterns can be drawn.

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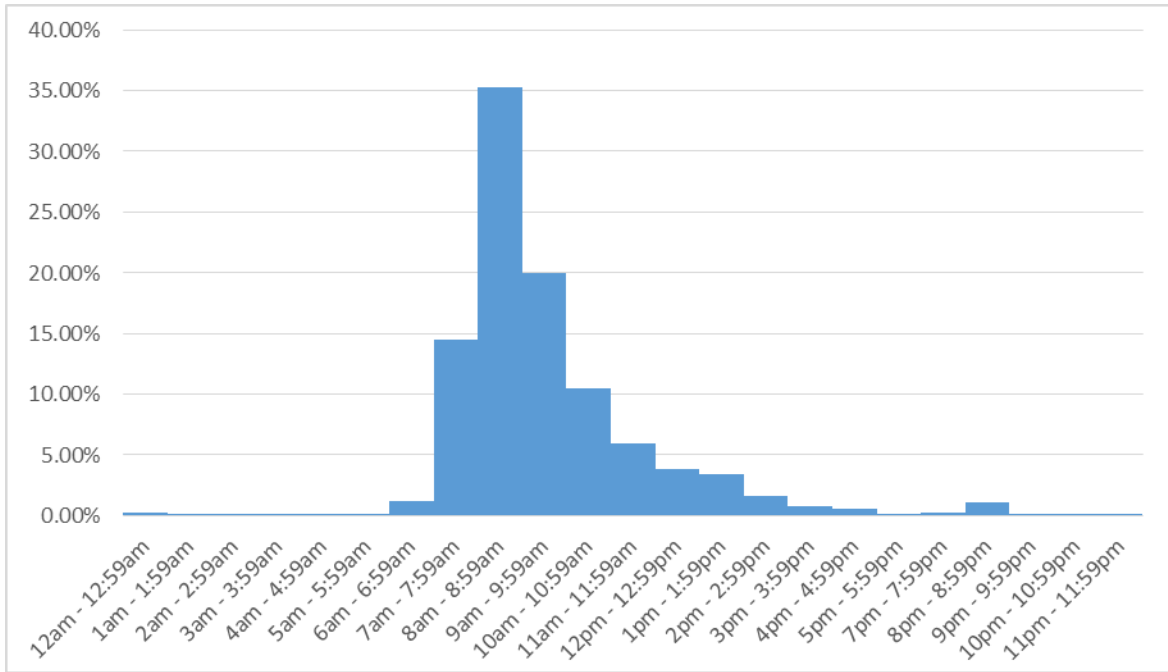
Figure 29: Arrival time at University of students on the 12th of July
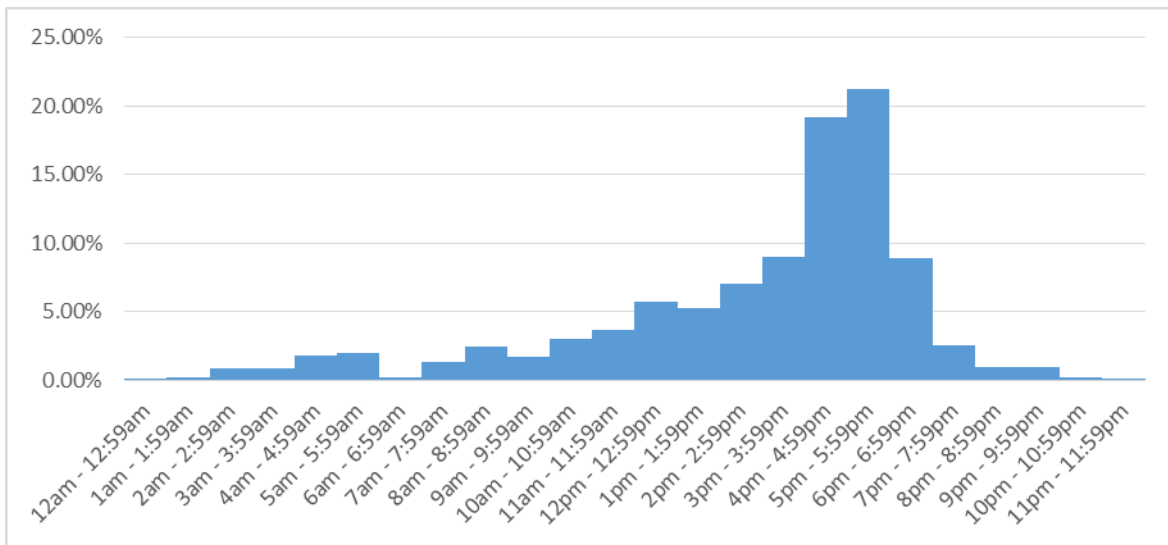
Figure 30: Departure time from University of students on the 12th of July

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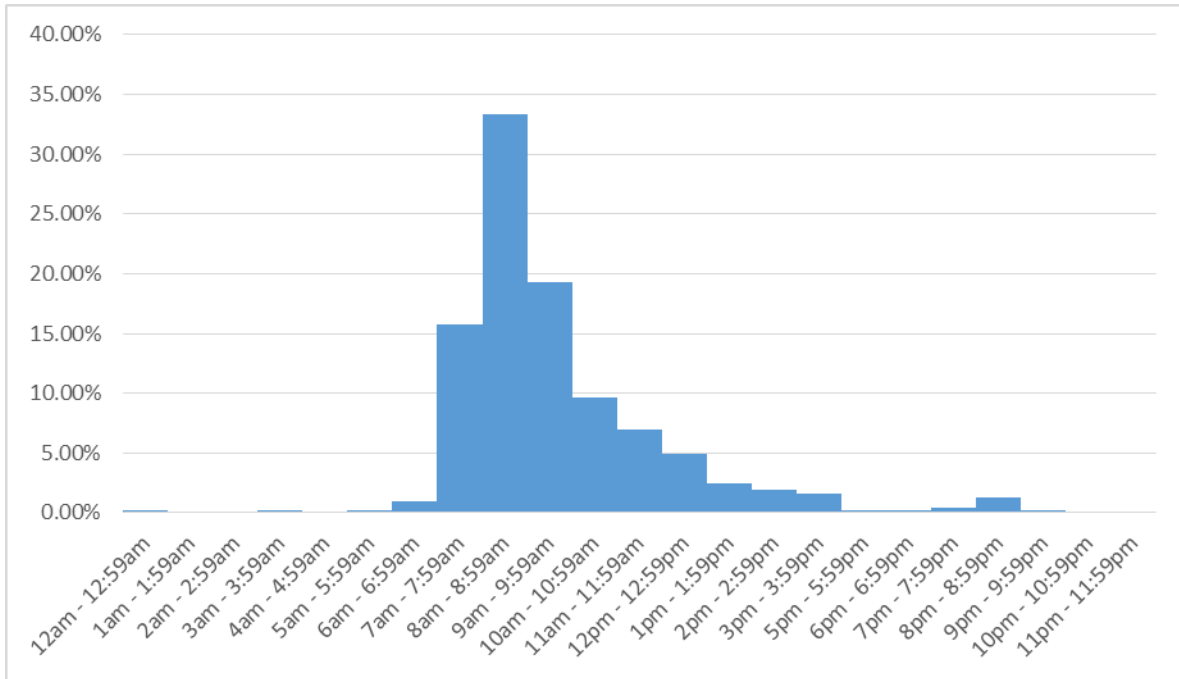
Figure 31: Arrival time at University of staff on the 12th of July
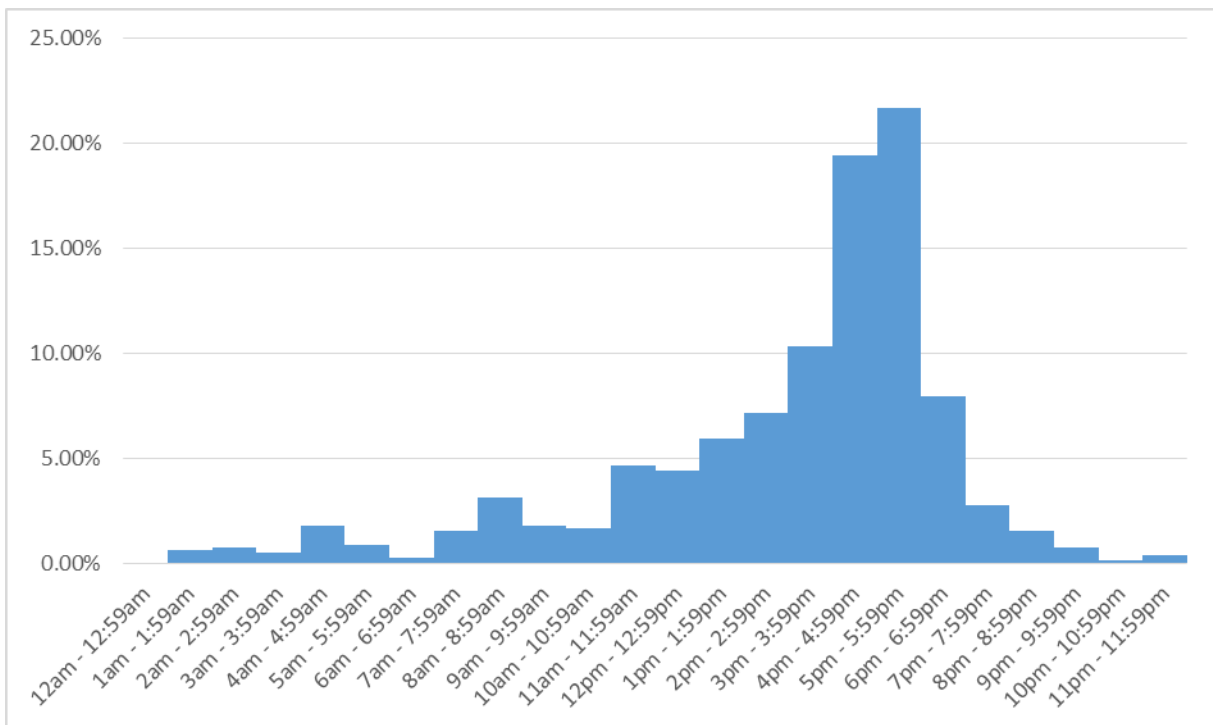
Figure 32: Departure time from University of staff on the 12th of July

Finally, travel time was assessed (Figure 33). 33% of respondents indicated it took them between 0 and 10 minutes to travel to University. 33% also indicated it took between 11 and 20 minutes.

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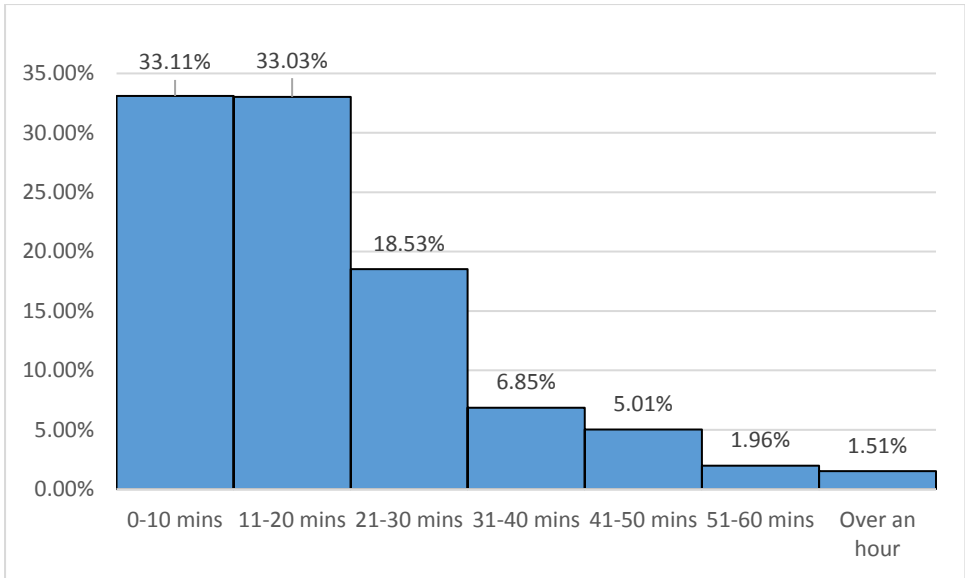
Figure 33: Travel time to University on the 12th of July

Between campus travel

Respondents were asked how often they travel between the main Ilam campus and Dovedale campus. 72% make the trip less than once a month, and 10% make the trip most days (Figure 34). Respondents were then asked about the mode of transport they take between campuses. 45% responded that they cycle, 26% drove a car/van, and 24% took a bus. Only 0.4% of respondents walked between campus, reflecting the distance and time taken for those with only 10 minutes between lectures (Figure 35).
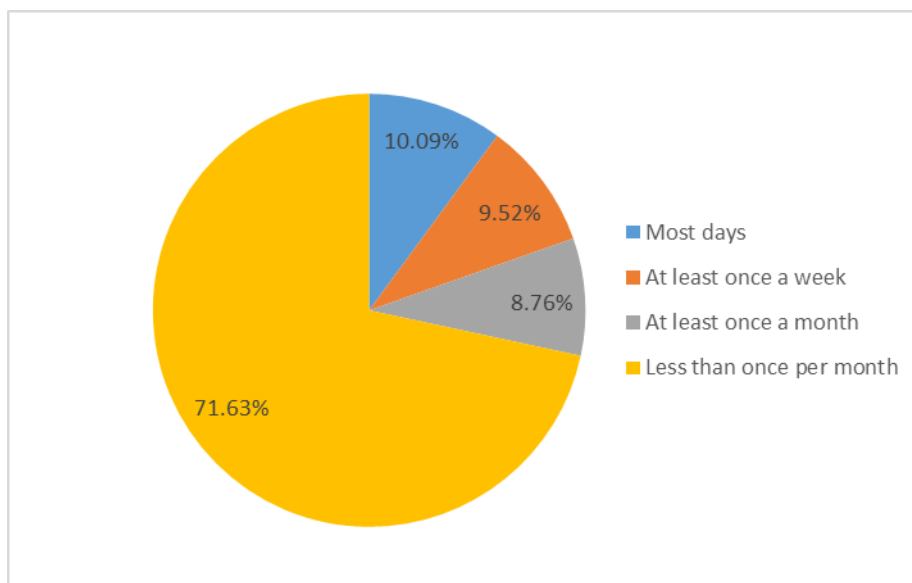
Figure 34: How often respondents travel between Ilam and Dovedale campuses
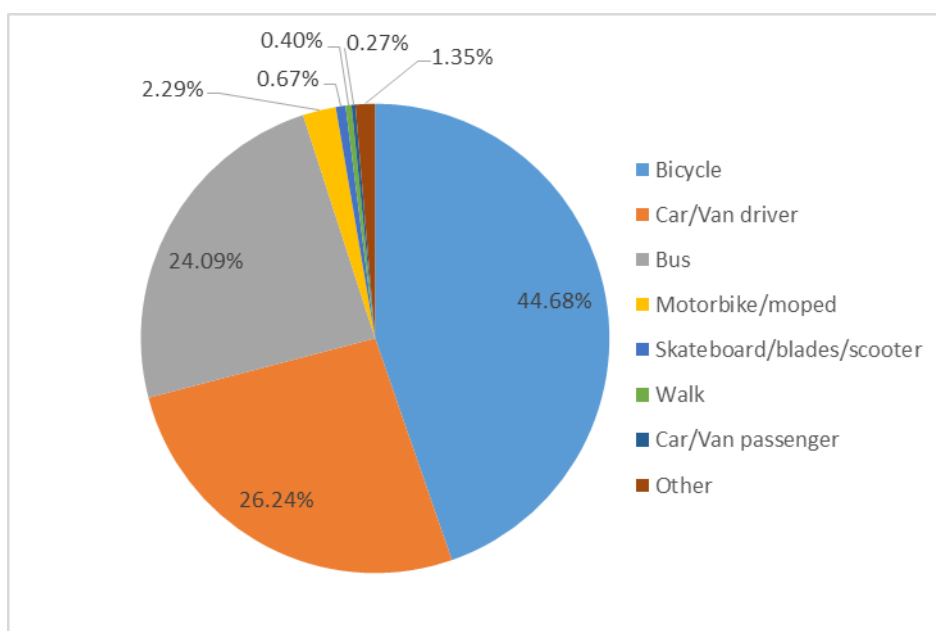
Figure 35: Main form of transport between campuses of respondents

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Earthquake effect on travel

Respondents were asked questions about how their travel patterns differed from prior to the Christchurch Earthquake sequence in 2011. 27% said they still use the same mode of travel as prior, 7% said they do not, and 66% were not yet studying at the University prior to the earthquakes.

Figure 36 shows changes in travel mode for the 7% who reported that they had changed their mode of travel since the earthquakes. Of these, 28% drove to university prior to the earthquakes but no longer do. Conversely 49% of those who changed mode shifted to driving. We can also see that more people shifted from walking (25%) than to walking (13%). Noticeably 21% shifted from bus, and only 7% to bus. Similar numbers of people shifted from and to cycling.
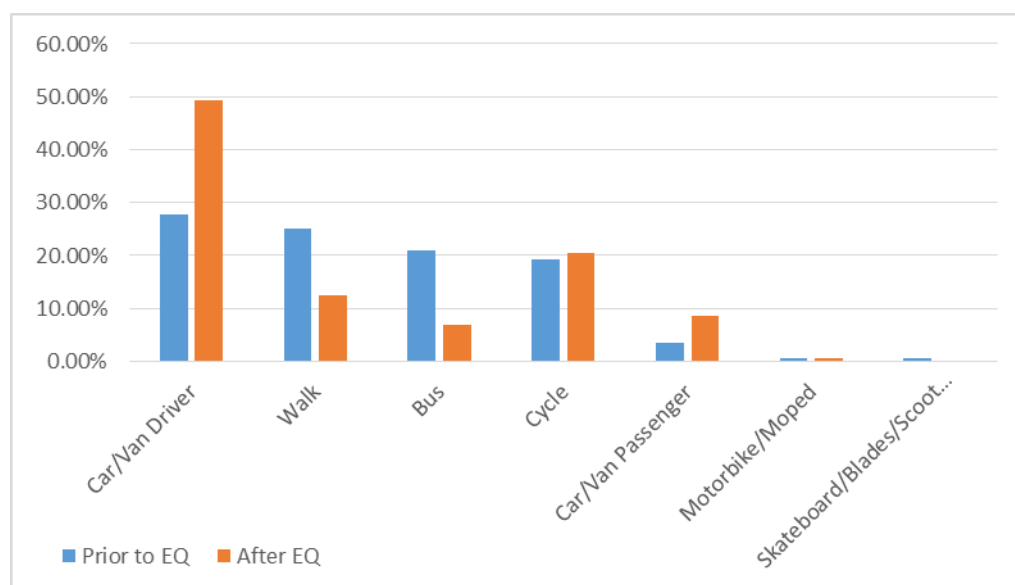
Figure 36: Change of travel mode after Christchurch earthquake sequence in 2011

When questioned about reasons for transport mode change, respondents for the majority responded with 'other' (45%). Within this category, many answered indicating family reasons have caused their change, including partners traveling different directions or working different hours and dropping kids or partners off in other areas. Other reasons did include the earthquake sequence, including the relocation of work, and the cancelation of bus routes; however, the majority of respondents' answers suggest the earthquake sequence was not the main catalyst for their change in transport mode. The number of respondents selecting other, with reasons not relating to the earthquake sequence suggests that this change in transport mode may be attributed less to the sequence itself, and more so to general lifestyle changes of people, five years on from the event (Figure 37).

It would be suggested this question be discontinued in the 2020 survey, as by this time, the earthquake sequence will be nine years past, and those still at university are unlikely to attribute this to their transport behaviours.
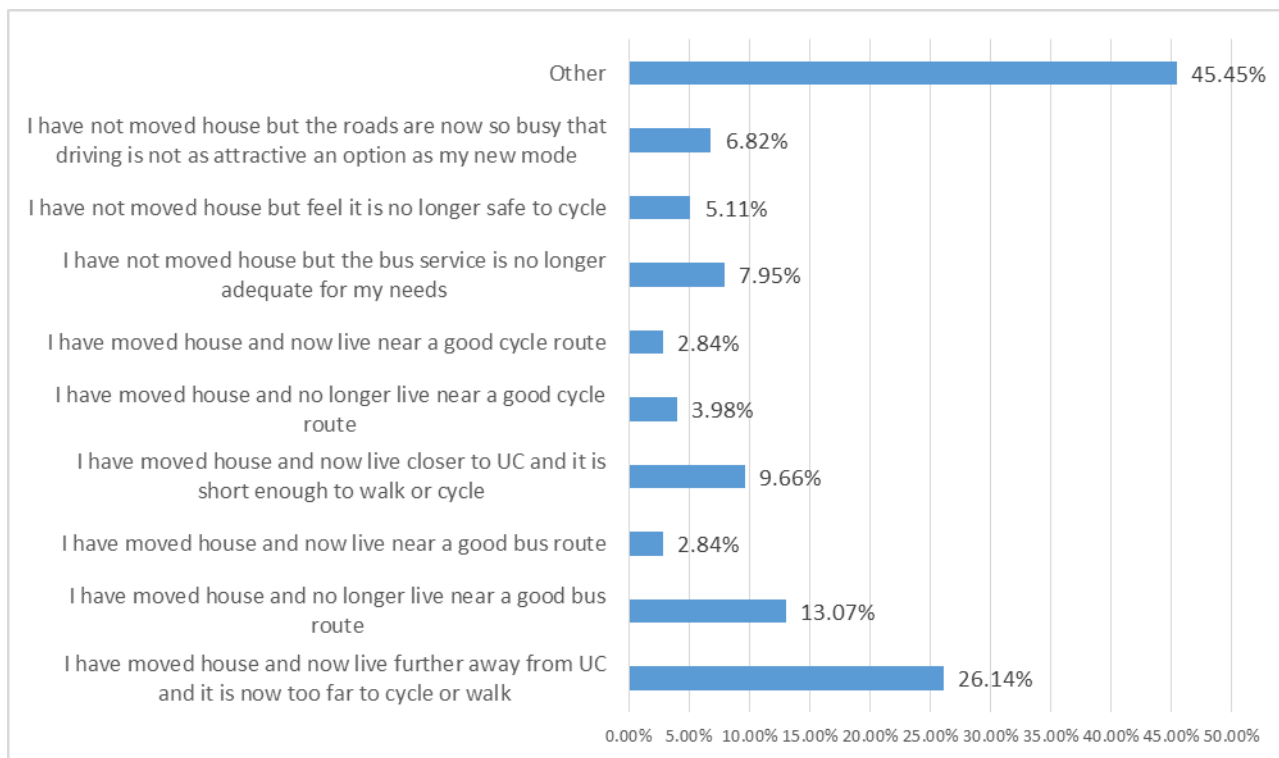
Figure 37: Reason for change of transport mode after Christchurch Earthquake sequence in 2011

Analysis of open-ended survey question

The final question asked in the 2016 survey, as in 2012, asked respondents to write "any other comments about your travel to University or about desirable transport features of the University of Canterbury in the future."

As in 2012, this question solicited a wide range of comments, although only 697 (26%) of all respondents chose to answer this question.

The overall response to this question was vastly different to 2012, with 183 people (26% of respondents to this question) making a direct comment about the perceived high cost of car parking on campus. This was a fairly minor area of concern in 2012, but is vastly over-represented in the 2016 response. To put this in perspective, the next most commonly made comment was about the need for improved bus routes, but even this was only commented on by 5% of respondents.

The most common comments in 2012 related to a desire for more car parking, and more bike stands. More car parking was the third most common response in 2016, although only by 4.3%. More bike stands was an insignificant response, likely reflecting the increase in bike stands on campus since the last survey.

The responses are presented below as a word cloud. Because so many people commented on the price of car parking, the other comments are difficult to read in the weighted word cloud format. For this reason, the comments about the perceived expensiveness of car parking have been removed to make it possible to read the other responses.

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One noteworthy area of concern, which had not been as prominent in 2012, was a call for separated bike and pedestrian paths on campus, or just wider paths. Sometimes the same idea was presented as a call for bike lanes on campus. This reflects a view that there is a significant clash occurring between pedestrians, cyclists and skateboarders.

Figure 38: Word cloud of responses to final question (with parking permit costliness removed)

Conclusions

Parking

Parking fees remain a concern for many staff and students. Queries about differentiated pricing structures for students and staff, and full and part time staff, and people who live closer or further away, were suggested. A desire for more flexible parking charges was also expressed; this may have been addressed with the new fee structure in 2017. The issues associated with this are complex and this report is not able to cover them all. The University continues to disincentivise driving to campus for a variety of reasons, not least of which is the cost of maintaining parking facilities. As the car-parking environment continues to become more constrained, the University is exploring ways in which it can support staff and students to find alternative means to transportation to and from campus.

Cycling

Cycling around campus since 2012 has changed significantly, with the introduction of the Uni-Cycle way leading through University and into the city centre. The infrastructure in the Ilam Rd area has been developed immensely also, with the addition of traffic crossing for cyclists, separated cycle ways, and more cycle parking around the University.

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Currently, around three-quarters of respondents indicate they find cycle parking infrastructure around campus convenient. This question is important, as in 2012 there was an overwhelming call for more cycle stands, specifically covered, non-secure cycle stands. In 2016, the proportion of individuals finding cycle stands convenient suggests that issue has been mitigated to an extent. However, there is still a sizeable portion calling for more cycle infrastructure, and this needs to be considered with the redevelopment of the University.

Also, the 2016 survey suggests that a larger proportion of staff and students would prefer enclosed, secured cycle stands around campus (42%). This could be in relation to the recent bike thefts around campus. However, similar to the 2012 survey there are concerns around the security of these cycle stands, as all University of Canterbury students can still access these.

Although there has been work to improve cycle infrastructure around campus, many respondents still indicated that they want this to be further improved, especially for many who may consider cycling to University in the future more often. Safety and security were key for many who currently cycle, or are considering it.

Public Transport

Students and staff indicated two key priorities in relation to public transport, the want for more direct services and better connections to University, and discounted tickets for students. These aligned with 2012's highlighted key priorities, suggesting little has changed between surveys. There was also a call for more frequent services, which could be supported by the sporadic timetable of students travelling to the University.

A large portion of respondents highlighted their support for an on campus bus depot. Only a few stated directly they would not. The potential for this should be assessed, and further consideration is recommended to assess ideal locations for this service.

There was also a call for more convenient bus services to rural areas of Christchurch, including Rolleston. The following response is indicative of a wider problem: "Bus to Rolleston costs more than trips around town, and is a MAJOR reason I don't take it. It costs less in car fuel than it does bus rides". Map 1 shows areas outside of the city where there are a concentration of staff and students such as Rolleston, which may provide support for bus services.

Again, the idea of a UC shuttle bus for those returning home at night was proposed within the walking section of the survey. This idea was generally supported, similar to the results in 2012. The mapping exercise undertaken suggests that indeed there are some student-based flatting areas that are not within an easy walk to a direct route to University, and this could be considered in future discussions with Environment Canterbury.

Many people mentioned the price of bussing as a key factor influencing their travel choice, indicating it is too expensive each week to bus to University. It can be cheaper to drive each week than bus if one is paying full price for a ride two times a day, five days a week. Many people called for a student bus fare to be introduced.

Walking

Pedestrians travelling to University mentioned a variety of factors that need to be considered for improving this mode of transport. For some, the key factors are outside of anyone's control. Many mentioned the weather being a key reason to avoid walking to University. Also, distance is key, as those who consider themselves too far away to walk would be unlikely to alter their mode of transport.

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Safety is a factor that needs to be considered further to improve pedestrian transport around campus. Similar to 2012, there is a call for better crossing and footpath networks around the Ilam area, although, since 2012, the addition of three new crossings on Ilam Road and one set of traffic lights on Clyde Road has seen a sizeable drop in respondents requesting this be implemented.

Other safety points were raised, specifically around lighting and visibility on campus. This issue needs to be considered in the landscape plan of the University, as many are apprehensive to walk to University as they need to leave late and would prefer not walking, as it is considered dangerous. The option of a UC bus or shuttle service was fairly popular and would support the safety, as the option of a shuttle on late nights would be offered.

Between campus, travel was raised as an issue for many, as 10-minute gaps between lectures are not enough time to walk between campuses and a reason for many to drive to university rather than walking.

In particular, many people (far more than in 2012) raised concerns about footpaths on campus being too narrow, and asking for separated pedestrian and cycle routes through campus.

Other data

Disabilities

3% of respondents indicated they have a disability or long term medical condition. The effect this has on travel mode should be considered, and the University must make sure to include provisions for the travel of those with disabilities in its masterplan. This is suggested for further research.

Carpooling

There was a call for support for carpooling to and from University. Many respondents indicated they would support a system to help finding carpool partners, as well as cheaper parking for those who can prove they are carpooling.

The call for cheaper parking aligns with the previous comments discussed. Exploring the idea of cheaper carpool parking, or generally cheaper shared parking permits could help to bring down the perceived cost of parking, and increase the likelihood of individuals utilising this mode of transport. "a carpool ticketing system (like Otago University/DCC operates for premium parking spots) incentivised by cheaper parking e.g. 50% off cost of parking fee, you get issued a different colour permit, which must display 2 of those tickets on dash for park (so security still get their money, but people can save money and the environment".

More sought after was a system for help finding carpool partners. "I would not mind carpooling but the problem is being able to find others to carpool with and negotiating times to suit". An attempt to facilitate this would be beneficial in helping to promote carpooling as an alternative to individuals driving themselves, and help to reduce the stress on the current parking situation at the university.

Children/family

Similar to the 2012 survey, many respondents, especially staff, indicated that family commitments were a key reason for their mode of transport. Dropping off children or partners was a common reason for many to drive to University, as opposed to any other form of transport. This was seen to limit their options, with few alternative transport mode options.

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Appendix: Draft Recommendations for the 2016 UC Travel Survey

Recommendations from the 2016 UC Travel Survey
From the Transport Advisory Panel, June 2017

Issue	Recommendation	Who	Status (at 11/07/2017)
Cycling			
High bike theft.	UCSA trialled cheap D Locks last year and are planning to re-run this in 2017. UCSA to explore whether this could be made available for staff	UCSA reps	In progress
Bike parking area styles	A mixture of secure, covered and open-air bike parking areas is required on campus (reflected in the Landscaping Master Plan). Identify covered stand solution and early opportunities.	Capital Programme/ Engineering Services	In progress – a cycle parking strategy is being developed
Bike stand designs	Different spaces may require different stand designs, which need to be explored on a case by case basis	Capital Programme/Engineering Services	In progress
Cheap or free use of a bike	UCSA is offering a service, which is also available for staff. Promotion of this service is required.	UCSA reps/ Sustainability Office	Service still being offered to students, but a service for staff may require more investment
On-campus routes	The Boulevard is a priority. On campus routes need to be sign-posted better	Minor Capital Works Programme	In progress
Off-campus routes	Research how far out the arterials go from campus. There are NO EXIT signs where there is pedestrian/cycle access – engage with CCC to see if this can be altered. Quiet routes could be marked on wayfinding information.	- Sustainability Office (to be approved as a project by ENGS)	
Cycle safety off campus	Investigate a Bike Buddy or bike awareness event (eg Commuter Challenge) concept to increase cycling confidence. Work with H&S re cycle Think First campaign. Incorporate new Smart Travel site into comms – good way to find bike buddies.	- Sustainability Office (to be approved as a project by ENGS)	Travel planning opportunity created as part of Sustainapalooza '17. Smart Travel to be incorporated

			when new engagement coordinator on board.
Showers and lockers	This still needs to be addressed. There are plenty of showers across campus – the issue is student access. This will be achieved through opportunities created in major refurbishment or other future campus projects.	Capital Programme/ Engineering Services	In progress
Bussing			
Bus routes are inadequate	Work with Ecan on this	Director, Learning Resources	
Student discounts	Work with Ecan on this	Director, Learning Resources	
Bus stops near campus	Most people are happy with this. Would be useful to ask more detailed questions about the concept of an 'on campus' hub through a focus group.	Capital Works & Sustainability Office	
Improved bus stops	There was a call for more covered stops on or near campus. This should be investigated further.	Capital Works & Sustainability Office	
Walking			
Lighting and safety on nearby streets	Ask CCC if they are planning to make any improvements on key cycle and pedestrian routes linked to campus	Director, Learning Resources	
Wider paths and/or separated pedestrian/cycle ways	Implementation of wider paths as detailed in Design Guidelines and Landscape Master Plan.	Capital Works	In progress
Safety	There is safety in numbers, which may be a rationale for combining pedestrian and cycle routes	Landscape/Transport Master Plans	
Night bus	There do not seem to be any simple ways of taking this idea forward as it could be prohibitively expensive. Consider whether to ask this question again, and/or seek advice as to how a project might be developed and implemented.		Awaiting direction.
Carpooling			
Finding carpool partners	Live feed apps appear to be the most promising avenue. Technology is lagging it seems. Recommend raising profile of existing apps. Explore possibility of adding this to the Wayfinding app. Uber pool to be explored further	- Sustainability Office (to be approved as a project by ENGS)	

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Skateboards			
Safety	Continue UCSA initiatives to teach skateboarding safety as appropriate.	UCSA reps	Completed
Other			
Survey question on parking permits	Explain why this question is asked when we have good data from Security. We ask this question to test validity of the sample.	Sustainability Office	Completed
Earthquake questions	Recommend that we do not ask these questions in future surveys.	Sustainability Office	To be incorporated into next survey
Part time students	Survey should be updated for 2020 to ensure that the part-time/full-time split between students is comparable to wider university data. Determine whether further investigation is needed here.	Sustainability Office	To be incorporated into next survey
College of Education, Health and Human Development	Determine whether further investigation is required to rectify the under-representation of this College in the data	Transport Advisory Panel	To be incorporated into next survey
Other for next survey	Ask people whether they have changed mode since last survey. Ask for IDs?		
E-Vehicle	This barely came up in the survey but it is noted by the panel that a new trend is emerging.	Campus Services/Engineering Services	Trial e-vehicle charging station being installed
Motorcycles	This did not feature prominently in the survey, but we are noticing more pressure on motorcycle parks. Important to ask a question about this in the next survey, and to evaluate the situation thoroughly in the meantime	Campus Services	
Parking permits	It was noted by the Panel that the parking permit system is completely different now to when the survey ran. Many people wanted more flexibility in how permits were charged, and this has now been delivered	Campus Services	
Contractor parking	This has put huge pressure on campus parking, and this pressure will be relieved eventually	Campus Services	

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