

Appendix 2.

ŌTAKI CUSTOMER SURVEY REPORT



Otaki Customer Survey:

*Draft Report of Pedestrian Intercept Surveys
conducted in March 2011*



Otaki Customer Survey: Draft Report of Pedestrian Intercept Surveys conducted in March 2011

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1 Executive summary

This report is a component of a broader study examining the business impacts of the proposed Peka Peka to Otaki Expressway (hereafter referred to as the Expressway). The information is also intended to inform social and transportation impact assessments of the Expressway. Using survey data collected from a sample of 500 pedestrians intercepted in the retail areas of Otaki by Opus Central Laboratories, this report:

- Reveals the characteristics of people who currently shop in Otaki, and details of their shopping and travel behaviour;
- Predicts the likelihood that people will deviate from the proposed Expressway so that they continue to come to Otaki;
- Estimates the impact on the number of shopping transactions and sales values based on a shift in traffic to the proposed Expressway;
- Evaluates the features of Otaki's retail areas that are particularly important to customers; and
- Describes the potential enhancements to Otaki that would make it more likely that people would return to shop.

A unique feature of this particular study is the inclusion of a Stated Preference Survey of shoppers' *Willingness to Detour* to Otaki, which is the first known use of this technique in New Zealand. The innovative approach follows *Willingness to Pay* methodology, making people trade the value of stopping in Otaki against the time they would be willing to accept to take the detour, or in other words, *Willingness to Detour*.

For those respondents that valued travel time as a critical factor in their decision to detour, about 60% reported that they would be willing to sacrifice the improved travel time savings offered by an Expressway and continue to stop and shop in Otaki. Overall, only 11% of those surveyed would no longer stop in Otaki after the Expressway is constructed, with the remainder continuing to use the shopping facilities either because they were residents (42%) or because they valued the stop in Otaki so much that they would continue to stop even with the Expressway (47%).

Those that would be willing to stop in Otaki are estimated to spend significantly more on average per person (\$70.57) than either Otaki Residents (\$56.66) or those who would choose to remain on the Expressway (\$53.02). So even though there may be an 11% reduction in foot traffic in the retail area, estimated spending suggests that only about 9% of overall sales would be lost by the introduction of the Expressway. When examined by the specific retail location, the State Highway 1 (Railway Precinct) was more heavily impacted, with an estimated 14% reduction in foot traffic and a 12% reduction in overall sales post-Expressway. However, the Main Street retail area was less heavily impacted after the proposed Expressway, with an estimated 5% reduction in foot traffic and a 3% reduction in overall sales.

The frequency of purchase types that are most likely to be affected by the loss of sales to the Expressway group are:

- Convenience foods: Results suggest that coffee, bakery and takeaway foods are the worst affected, with about 15% of sales transactions being made by future Expressway users.
- Petrol: The Expressway users are no more likely to purchase petrol than any other group, however we still estimate an 11% drop in the number of petrol transactions. This does not take into account any compounding impact from convenience food sales at the three petrol stations (that may also drop by 15%).
- Clothing: Expressway users are also no more likely to purchase clothes than other shoppers, but we still estimate that shops selling clothing, shoes and accessories will experience a decline in sales of about 12%.

The key characteristics that currently cause people to stop to shop in Otaki are accessibility, ease of parking, pedestrian safety, atmosphere and good facilities (such as toilets). Shopping characteristics, such as the variety and uniqueness of the shops available in Otaki, did not rank as highly as these features in the decision to stop. Respondents suggested that improving the perception of what Otaki retail stores offer would make it a more attractive destination for shoppers, particularly with regard to eating establishments and outlet shops.

The findings suggest that the completion of the Peka Peka to Otaki Expressway is likely to provide several of the key improvements desired that would make Otaki a more vibrant retail destination, such as reduced traffic congestion. Similarly, the characteristics that currently cause people to choose Otaki are likely to be reinforced by the Expressway, such as the safe, attractive pedestrian environment identified by shoppers.

2 Introduction

2.1 Background

The overall goal of the proposed Expressway is to alleviate transport issues in the Peka Peka to Otaki route, which has been identified as one of eight sections in the Wellington Northern Corridor (Wellington Airport to Levin) road of national significance requiring improvement to:

1. Ease congestion; and,
2. Improve travel time reliability (NZ Transport Agency, 2011).

2.2 Purpose

The purpose of this report is to assess current use and perceived continued use of facilities in Otaki, in particular businesses in Otaki. This information will form a key part of a business impact study being undertaken along with Market Economics that will predict the likely effects of the proposed Peka Peka to Otaki Expressway on businesses. It will also be used to inform social and transportation assessments.

In order to do this, people who were visiting key facilities (such as petrol stations and supermarkets) or walking within Otaki, were approached to engage in a short “intercept” survey that examined:

1. Baseline use of Otaki facilities: Including how frequently they passed through, and how much time and money they spent within Otaki;
2. Preference Indicators: Key characteristics of Otaki that encouraged shopping here, such as variety of shops, ease of parking, pedestrian safety, and atmosphere; and,
3. Perceived willingness to stop: Measured by willingness to continue to stop in Otaki in a post-Expressway scenario where the Expressway would likely offer travel time savings.

3 Method

3.1 Pedestrian Survey

Surveying was conducted on both a weekday (Wednesday the 9th of March) and a weekend day (Saturday the 12th of March) between 9am and 4.30pm. Eight trained surveyors and a senior staff member, working in a supervisory role, covered a variety of key Otaki retail sites including the supermarkets (New World and Countdown), petrol stations (BP and Mobil), and the retail stores located on State Highway 1 (Railway Precinct) and Main Street (see Figures 1 and 2). See Table 1 for a breakdown of businesses by survey location.

The supermarkets and petrol stations had surveyors on site for both full days and permission was sought from management at these sites prior to surveying for this purpose. Surveyors on the main shopping street moved more freely between retail locations to ensure the maximum number of participants were recruited.

Potential participants were approached by trained surveyors who explained the purpose of the survey and gave some background information, where appropriate, regarding the proposed Expressway. Clipboards were utilised by the surveyors for ease of writing and legibility. Surveyors encouraged participants to fill out the survey themselves; however surveys were filled out on the participants' behalf where appropriate. Potential participants who were too busy at the time of approach but indicated a desire to participate were given a copy of the survey with a freepost number and address to mail at a later date. All participants were given the opportunity to enter into a prize draw for a \$200 grocery voucher as an incentive. This method yielded a sample of 241 completed surveys on the Wednesday, 244 completed surveys on the Saturday and 15 completed mailed-in surveys (Total N=500).

Table 1. Frequency of business type by business location in Otaki.

Business type	Business location		Total
	Main Street	State Highway 1 (Railway Precinct)	
Retail			
Café, bakery and take-away	7	12	19
Clothing and shoes	2	37	39
Food, liquor or groceries	6	4	10
Petrol	0	3	3
Miscellaneous retail	12	14	26
Sub-total retail	27	70	97
Services			
Hotel, accommodation & bar	3	3	6
Auto repairs	1	4	5
Healthcare	3	3	6
Professional and business services	9	7	16
Other services	3	4	7
Sub-total services	19	21	40
Total	46	91	137

Figure 1. The surveyor locations on State Highway 1 (Railway Precinct).

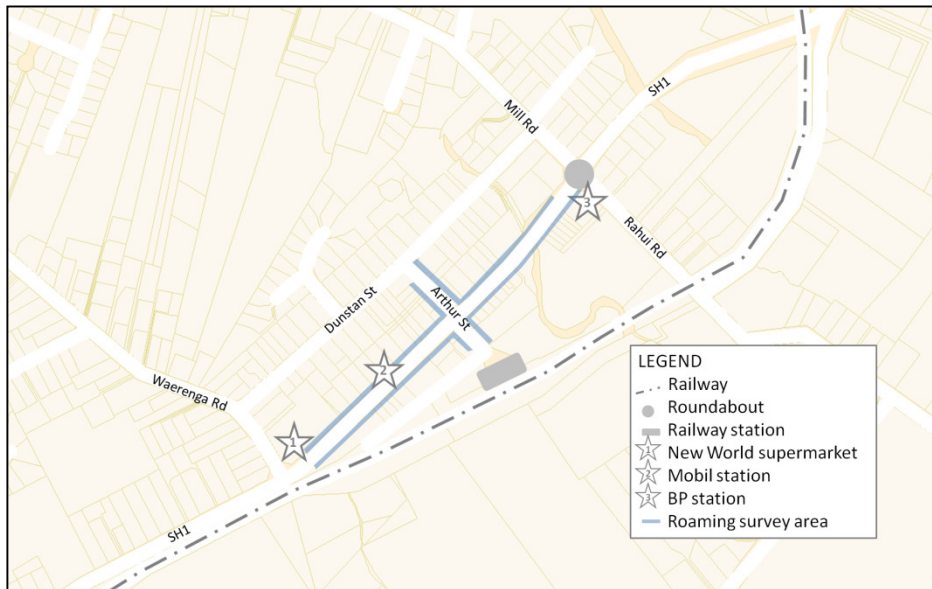
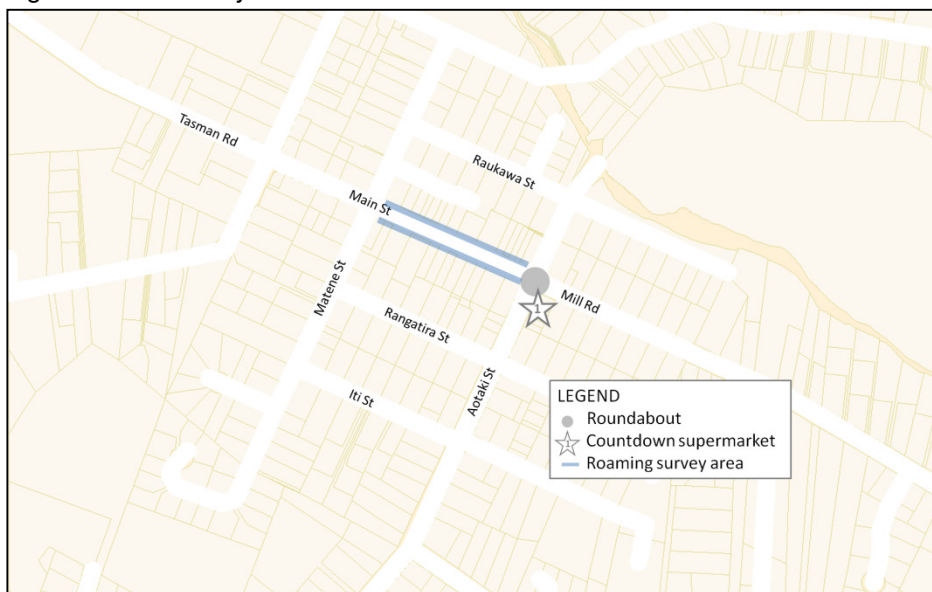


Figure 2. The surveyor locations on Main Street.



3.2 Retail store survey

A supplementary retail store survey was also undertaken, where store owners directed shoppers to participate in the survey. However, due to limitations in the methodology these results were not combined with the pedestrian surveys (see Section 4.9 for more information).

3.3 Data analysis

A number of re-coding decisions were made to simplify findings and remove bias in the data. In the survey, there were four options regarding behaviour following completion of the

Expressway, these were (1) no change due to residence in Otaki, (2) would continue to stop in Otaki regardless of time savings, (3) would stop in Otaki, but would only sacrifice a specified amount of time (ranging from 0.5 minutes to 5 minutes or more) and (4) would avoid Otaki and remain on the Expressway. This item was re-coded into three categories for ease of analysis; the third group was small in comparison to the others (N=32) and integration boosted other group sizes. The new Expressway is estimated to save 2.5 minutes on average, therefore, those who indicated they were willing to sacrifice 2.5 minutes or less were combined with those who originally stated they would avoid Otaki. Those who stated they were willing to sacrifice 3 minutes or more were combined with the group who stated they were willing to stop in Otaki regardless of time savings. This yielded three main groups: Otaki residents, 'willing to stop' and the 'Expressway' group (those who would continue on the Expressway and avoid Otaki).

An item relating to the main purpose of the trip on the day of surveying was also re-coded for the purposes of comparison with these groups. Chi-square goodness of fit (see below) was used to compare the original groups on the 'main purpose of the trip', however, when the original categories (shopping, toilet stop, coffee, business, visit friends/family, work here, petrol, eat a meal, tourism and other) were included in the analysis, large proportions of the cells had expected frequencies less than 5. The Chi-square goodness-of-fit test assumes that each cell in a cross-tabulation has an expected frequency of 5 or more (Field, 2009). When this assumption is violated the statistic is unreliable. Because of this Fisher's Exact Test is reported. This is the appropriate test to use in a situation where expected cell frequencies are below 5 as Fisher's test makes no assumption regarding expected cell values, but is instead based on observed cell values.

The Chi-square goodness of fit statistic was used to test for significant differences between groups on a number of categorical variables. The Chi-square goodness of fit statistic tests whether distributions of categorical variables differ from one another by examining whether the observed frequencies are the same as the expected or probable frequencies. A Chi-square test of independence is used when the data is nominal (i.e. there is no relationship between the categories, such that the order of the categories is arbitrary). For more information on Chi-square tests see Agresti (1996).

Analysis of Variance (ANOVA) was used to test for group differences on continuous variables (e.g., variables on a scale). ANOVA tests the null hypothesis that all group means are equal by analysing comparisons of variance estimates (see Field, 2009).

4 Findings

4.1 Sample

The characteristics of the total sample in relation to a number of key variables are displayed in Table 2. As can be seen, just over half of those surveyed were female, and those aged 45-54 and 55-64 years were surveyed at a higher rate than other age groups. Just over half the sample travelled from outside Otaki on the day of surveying, and the primary travel mode was car driver, followed by car passenger. Many of the trips were less than 30 minutes.

In regards to the origin of the trip on the day of surveying for those from outside the Otaki region, the Kapiti Coast was most common, followed by Wellington, Manawatu/Wanganui and the Horowhenua. Other origins included Hawkes Bay, Auckland, Bay of Plenty, Coromandel, Taranaki, Waikato and Wairarapa. Therefore, travellers from a large cross-section of New Zealand's regions were surveyed.

Table 2: Summary of key demographic and travel behaviour frequencies (N=500).

Key variable	Frequency
<i>Gender</i>	
Male	212 (42.7%)
Female	284 (57.3%)
<i>Age group</i>	
16-24	54 (10.9%)
24-34	51 (10.3%)
35-44	71 (14.3%)
45-54	118 (23.7%)
55-64	107 (21.5%)
65-74	64 (12.9%)
75+	32 (6.4%)
<i>Travel origin</i>	
Within Otaki	236 (47.2%)
Outside Otaki	264 (52.8%)
<i>Travel mode</i>	
Car driver	385 (77.8%)
Car passenger	54 (10.9%)
Bus	7 (1.4%)
Walking	34 (6.9%)
Cycling	9 (1.8%)
Other	6 (1.2%)
<i>Journey length</i>	
Less than 30 minutes	284 (57.4%)
30-60 minutes	65 (13.1%)
60-90 minutes	38 (7.7%)
90-120 minutes	27 (5.5%)
2-3 hours	34 (6.9%)
3-4 hours	16 (3.2%)
4 or more hours	31 (6.3%)

Shopping was the most commonly reported main purpose of the trip, followed by purchasing petrol and working in Otaki (see Table 3). Eating meals and drinking coffee were other common secondary purposes.

Table 3: Frequency count of trip by purpose (N=500).

Key variable	Frequency
<i>Purposeful versus passing through visitor</i>	
Purposeful – returning to original location following trip to Otaki retail centre	182 (61.7%)
Passing through – returning to a different location following trip to Otaki retail centre	113 (38.3%)
<i>Main purpose of trip</i>	
Shopping	219 (47.8%)
Toilet stop	7 (1.5%)
Coffee	22 (4.8%)
Business	32 (7.0%)
Visit friends/family	19 (4.1%)
Work here	55 (12.0%)
Petrol	55 (12.0%)
Eat a meal	7 (1.5%)
Tourism	3 (.7%)
Other ¹	39 (8.5%)
<i>Secondary purpose for trip²</i>	
Shopping	167 (33.4%)
Toilet stop	41 (8.2%)
Coffee	100 (20.0%)
Business	45 (9.0%)
Visit friends/family	74 (14.8%)
Work here	55 (11.0%)
Petrol	104 (20.8%)
Eat a meal	81 (16.2%)
Tourism	11 (2.2%)
Other	42 (8.4%)

The most common types of purchase were take away foods and drink, groceries, petrol and clothes (see Table 4). Almost all (97%) of the pedestrians surveyed had made or were planning to make some form of purchase. Just over half of the sample anticipated spending less than \$50 on these items on the day of surveying.

¹ Sport was often reported as the main reason for the trip for this group.

² These percentages do not add to 100 because respondents could endorse more than one option. Where other percentages also do not add to 100 similar question formats were utilised.

Table 4: Frequency count of purchase type and amount spent (N=500).

Key variable	Frequency
<i>Purchase type</i>	
Food or drink from cafe/bakery/take away	214 (42.8%)
Food, liquor or groceries	152 (30.4%)
Petrol	132 (26.4%)
Clothes, shoes or accessories	110 (22.0%)
Newspaper, hardware or pharmacy goods	44 (8.8%)
Household items, gifts, plants	31 (6.2%)
Other	38 (7.6%)
<i>Anticipated amount spent</i>	
Nothing	14 (2.9%)
Less than \$10	49 (10.0%)
\$10-\$25	100 (20.4%)
\$25-\$50	104 (21.3%)
\$50-\$75	69 (14.1%)
\$75-\$100	62 (12.7%)
\$100-\$200	68 (13.9%)
More than \$200	23 (4.7%)

4.2 Willingness to stop in Otaki

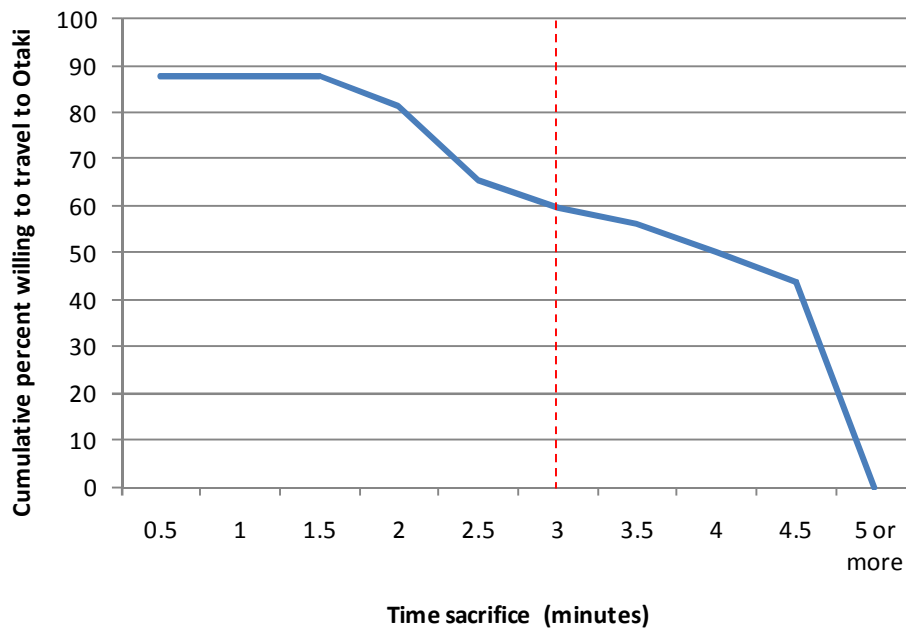
Table 5 displays the frequency of anticipated behaviour following the completion of the Expressway for the sample. About 9% of people indicated they would continue on the Expressway and therefore avoid Otaki, with approximately 7% of people indicated that their willingness to stop was time dependent.

Table 5: Anticipated behaviour following completion of the Expressway (N=486).

Anticipated behaviour	Frequency
1. Live in Otaki (so the Expressway would not affect behaviour)	205 (42.2%)
2. Would continue to stop in Otaki regardless of time savings	207 (42.6%)
3. Willing to stop in Otaki, but only if this resulted in a time savings sacrifice less than a specified number	32 (6.6%)
4. Would continue on the Expressway and therefore avoid Otaki	42 (8.6%)

The new Expressway is estimated to save approximately 2.5 minutes. Therefore, those who indicated they were willing to sacrifice 2.5 minutes or less were combined with those who originally stated they would avoid Otaki. Those who stated they were willing to sacrifice 3 minutes or more were combined with the group who stated they were willing to stop in Otaki regardless of time savings. Looking at Figure 3, about 60% of participants were willing to stop in Otaki, even with a time savings of 3 minutes or more.

Figure 3. The cumulative percent of people willing to travel to Otaki by overall Expressway trip time saved by taking the Expressway (N = 32).



The frequencies yielded by this new combination are provided in Table 6, and indicate that 11% of those surveyed would no longer stop in Otaki.

Table 6: Three combined groups representing anticipated behaviour following completion of the Expressway (N=486).

Anticipated behaviour	Frequency
1. Live in Otaki, so the Expressway would not affect behaviour ('Otaki residents')	205 (42.2%)
2. Would stop in Otaki regardless of time savings ('Willing to stop')	228 (46.9%)
3. Would continue on the Expressway and avoid Otaki ('Expressway' group)	53 (10.9%)

4.3 Comparison of Otaki residents, 'willing to stop' and 'Expressway' groups

Table 7 displays a comparison of the Otaki residents, 'willing to stop' and 'Expressway' groups on key demographic and travel characteristics, indicating that no significant differences were identified between these characteristics. As can be seen, each of the three groups fitted with the total sample with those aged 45-54 years and 55-64 years being sampled at a higher rate than other age groups. Travelling as a car driver was by far the most common transport mode for each of the three groups, with travelling as a car passenger being the second most common transport form for both the 'willing to stop' and 'Expressway' groups. Walking was by contrast the second most common transport mode for the Otaki residents.

Table 7: Demographic and travel characteristics by Otaki residents (N=205), 'willing to stop' (N=228) and 'Expressway' (N=53) groups.

Key Variable	Otaki residents	'Willing to stop'	'Expressway' group	Significant difference
<i>Gender</i>				
Male	75 (36.8%)	105 (46.3%)	27 (50.9%)	
Female	129 (63.2%)	122 (53.7%)	26 (49.1%)	
<i>Age</i>				
16-24	15 (7.4%)	29 (12.7%)	9 (17.0%)	
24-34	17 (8.3%)	27 (11.8%)	5 (9.4%)	
35-44	28 (13.7%)	34 (14.9%)	9 (17.0%)	
45-54	40 (19.6%)	60 (26.3%)	13 (24.5%)	
55-64	49 (24.0%)	46 (20.2%)	10 (18.9%)	
65-74	32 (15.7%)	25 (11.0%)	6 (11.3%)	
75+	23 (11.3%)	7 (3.1%)	1 (1.9%)	
<i>Travel mode</i>				
Car driver	147 (73.1%)	190 (83.3%)	39 (73.6%)	
Car passenger	14 (7.0%)	26 (11.4%)	11 (20.8%)	
Bus	2 (1.0%)	4 (1.8%)	1 (1.9%)	
Walking	28 (13.9%)	4 (1.8%)	1 (1.9%)	
Cycling	6 (3.0%)	3 (1.3%)	0 (0.0%)	
Other	4 (2.0%)	1 (0.4%)	1 (1.9%)	
<i>Journey length</i>				
Less than 30 minutes	174 (86.6%)	93 (41.0%)	10 (18.9%)	
30-60 minutes	15 (7.5%)	43 (18.9%)	3 (5.7%)	
60-90 minutes	7 (3.5%)	23 (10.1%)	7 (13.2%)	
90-120 minutes	1 (0.5%)	17 (7.5%)	9 (17.0%)	
2-3 hours	3 (1.5%)	20 (8.8%)	9 (17.0%)	
3-4 hours	0 (0.0%)	12 (5.3%)	4 (7.5%)	
4 or more hours	1 (0.5%)	19 (8.4%)	11 (20.8%)	

** p < .01, *** p < .001.

As Table 8 shows, statistical tests revealed a number of the differences between the three groups were statistically significant. The expected variation was also found in relation to both their frequency of visits to the Otaki shops, $\chi^2 (6, N = 486) = 189.14, p < .001$, and frequency of travelling through Otaki on SH1, $\chi^2 (6, N = 483) = 99.20, p < .001$. Otaki residents were significantly more likely to visit the shops on a daily or weekly basis compared to the other two groups. In contrast, those categorised as 'willing to stop' and the 'Expressway' group were significantly more likely to visit the shops on a monthly or 'other' basis not quantified in the previous categories than the Otaki residents. A similar trend was observed in relation to frequency of travelling through Otaki on SH1; with Otaki residents significantly more likely to do so on a daily or weekly basis, where as the 'willing to stop' and 'Expressway' groups were significantly more likely to travel through on a monthly or 'other' basis.

Anticipated time spent in Otaki on the day of surveying also differed significantly between the three groups, $\chi^2 (6, N = 480) = 41.02, p < .001$. The 'Expressway' group was

significantly more likely to anticipate their visit lasting '15 minutes or less' than either the Otaki residents or those 'willing to stop'. The 'Expressway' group was also significantly less likely to anticipate their visit lasting 'more than 60 minutes' than the other two groups.

Table 8. Exposure to Otaki by Otaki residents (N=205), 'willing to stop' (N=228) and 'Expressway' (N=53) groups.

Key Variable	Otaki residents	'Willing to stop'	'Expressway' group	Significant difference
<i>Anticipated time spent in Otaki</i>				
Under 15 minutes	34 (17.1%)	25 (11.0%)	23 (43.4%)	***
15-30 minutes	33 (16.6%)	45 (19.7%)	12 (22.6%)	***
30-60 minutes	26 (13.1%)	47 (20.6%)	7 (13.2%)	***
More than 60 minutes	106 (53.3%)	111 (48.7%)	11 (20.8%)	***
<i>Frequency visit Otaki shops</i>				
Daily	126 (61.5%)	32 (14.0%)	3 (5.7%)	***
Weekly	61 (29.8%)	52 (22.8%)	8 (15.1%)	***
Monthly	6 (2.9%)	47 (20.6%)	10 (18.9%)	***
Other ³	12 (5.9%)	97 (42.5%)	32 (60.4%)	***
<i>Frequency travel through Otaki on SH1</i>				
Daily	102 (50.2%)	37 (16.3%)	3 (5.7%)	***
Weekly	54 (26.6%)	47 (20.7%)	12 (22.6%)	***
Monthly	14 (6.9%)	53 (23.3%)	14 (26.4%)	***
Other	33 (16.3%)	90 (39.6%)	24 (45.3%)	***

** p < .01, *** p < .001.

4.3.1 Travel Behaviour and Expressway Use

The estimated percentage of shoppers that will no longer stop in Otaki after the introduction of the proposed Peka Peka to Otaki Expressway is outlined in the Table 9 by key travel behaviour. Otaki residents have not been included in these figures, as the focus here is on people currently travelling to Otaki that may utilise the proposed Expressway in the future.

People that were more likely to use the Expressway included those travelling 1) from the North, 2) on weekend days, and 3) to the Railway Precinct (SH1). The only significant difference is for the Railway Precinct, where businesses within this retail area are likely to be more greatly impacted than other businesses. These findings also have implications for transport demand and congestion modelling.

³ Respondents classed in the 'willing to stop' and 'Expressway' groups who gave an explanation for endorsing the 'Other' option for both frequency of visiting the Otaki shops and frequency of travelling through Otaki on SH1 commonly stated that trips were annual or bi annual, indicating that trips are likely generally on annual holidays, for example.

Table 9. Travel behaviours of the Willing to stop and Expressway groups.

Key measure	Willing to stop	Expressway group
<i>Travel origin</i>		
Other Kapiti	71 (92.2%)	6 (7.8%)
North of KCDC	58 (73.4%)	21 (24.7%)
South of KCDC	43 (70.5%)	16 (26.2%)
Other	18 (78.3%)	5 (21.7%)
<i>Travel direction (including Other Kapiti)</i>		
Travelling from North	76 (73.8%)	27 (26.2%)
Travelling from South	112 (83.6%)	22 (16.4%)
<i>Survey location</i>		
Railway Precinct	161 (78.5%)	44 (21.5%)
Main Street	58 (89.2%)	7 (10.8%)
<i>Survey day</i>		
Weekday	104 (83.2%)	21 (16.8%)
Weekend	117 (79.1%)	31 (20.9%)

4.3.2 Trip purpose

In relation to the proportions of purposeful visitors⁴ versus those passing through⁵ between the 'willing to stop' and 'Expressway' groups, a significant difference was found in that the 'willing to stop' sub-sample were significantly more likely to be 'purposeful' visitors whereas the 'Expressway' sub-sample were significantly more likely to be passing through, $\chi^2(1, N = 281) = 8.36, p < .01$ (see Table 10).

A significant trend was also found in relation to the main purposes reported for visits between the 'willing to stop' and 'Expressway' groups ($p < .001$)⁶. It was found that the 'Expressway' group were significantly more likely to stop for a coffee than those classed as 'willing to stop'. This may have implications for the food industry post completion of the Expressway, however conclusions regarding the accuracy of this finding in regards to the wider population should be made with care due to the relatively small sample size of the 'Expressway' group (N=53), as discussed below.

⁴ These visitors are defined as those who were returning to their original location following their visit to the Otaki retail centre.

⁵ These visitors are defined as those who were travelling to a different location than the origin of their journey following their visit to the Otaki retail centre.

⁶ Fisher's Exact Test is reported here because expected cell frequencies are less than 5. Otaki residents were also excluded from this analysis due to problems with low expected cell frequencies, as discussed above.

Table 10. Trip purpose by Otaki residents, 'willing to stop' and 'Expressway' groups.

Key Variable	Otaki residents	'Willing to stop'	'Expressway' group	Significant difference
<i>Purposeful versus passing through</i>				
Purposeful visitor	#	148 (64.9%)	23 (43.4%)	**
Passing through visitor	#	80 (35.1%)	30 (56.6%)	**
<i>Main purpose of trip</i>				
Shopping	92 (48.2%)	110 (52.9%)	12 (24.5%)	
Toilet stop	0 (0.0%)	1 (0.5%)	6 (12.2%)	
Coffee	# 3 (1.5%)	8 (3.8%)	11 (22.4%)	***
Business	18 (9.4%)	11 (5.3%)	3 (6.1%)	
Visit friends/family	7 (3.7%)	11 (5.3%)	0 (0.0%)	
Work here	26 (13.6%)	25 (12.0%)	1 (2.0%)	
Petrol	23 (12.0%)	22 (10.6%)	10 (20.4%)	
Eat a meal	3 (1.6%)	3 (1.4%)	1 (2.0%)	
Tourism	0 (0.0%)	2 (1.0%)	1 (2.0%)	
Other	19 (9.3%) ⁷	15 (7.2%)	4 (8.2%)	
<i>Secondary purpose for trip⁸</i>				
Shopping	58 (28.3%)	86 (37.7%)	18 (34.0%)	
Toilet stop	8 (3.9%)	21 (9.2%)	12 (22.6%)	
Coffee	27 (13.2%)	54 (23.7%)	15 (28.3%)	
Business	19 (9.3%)	22 (9.6%)	3 (5.7%)	
Visit friends/family	40 (19.5%)	29 (12.7%)	3 (5.7%)	
Work here	32 (15.6%)	21 (9.2%)	0 (0.0%)	
Petrol	44 (21.5%)	49 (21.5%)	9 (17.0%)	
Eat a meal	20 (9.8%)	56 (24.6%)	4 (7.5%)	
Tourism	1 (0.5%)	5 (2.2%)	4 (7.5%)	
Other	19 (9.3%)	16 (7.0%)	4 (7.5%)	

** p < .01, *** p < .001. # this group was omitted from the analysis.

4.3.3 Characteristics that encouraged shopping in Otaki

Twelve characteristics of the shopping environment in Otaki were rated for importance in the decision to stop and shop in Otaki. The ratings ranged from 1 = Very unimportant to 4 = Very important. The mean scores and significant differences between groups can be seen in Table 11.⁹

The Otaki residents were significantly more likely to rate each characteristic as more important than either the 'willing to stop' or 'Expressway' groups. The 'Expressway' group was significantly more likely to rate each item as less important in their decision to stop and shop than the 'willing to stop' group on all but two items: 'Otaki has nice places to eat/have

⁷ Common trip purposes for Otaki residents who endorsed the 'Other' category and gave an explanation for this were 'visiting the library' or a 'medical appointment'.

⁸ These percentages do not add to 100 because respondents could endorse more than one option. Where other percentages also do not add to 100 similar question formats were utilised.

⁹ One-way Analysis of Variance (ANOVA) was used to test for importance rating differences on key Otaki characteristics in the decision to stop and shop between the three groups.

a drink' and 'Otaki is easy to access from SH1'. These results indicate that easy access and nice eating establishments are equally important to both of these groups, suggesting it is the other characteristics that would encourage people to continue to stop at Otaki.

Table 11: Mean importance of characteristics important to shopping in Otaki by Otaki residents, 'willing to stop' and 'Expressway' groups, with significant differences highlighted (ordered by highest rated items to lowest for the 'willing to stop' group).

Otaki Characteristic	Otaki residents	Willing to stop group	Expressway group	Significant difference (between Willing to stop and Expressway groups)
It is easy to park	3.43	3.16	2.78	**
I feel safe walking around the shops	3.56	3.15	2.59	***
Easy to access from State Highway 1	3.41	3.11	2.88	
A good atmosphere	3.59	3.06	2.61	***
Good facilities (like toilets and tourist office)	3.40	3.02	2.71	*
Outlet/discount shops	3.02	2.96	2.55	**
Wide range of shops	3.21	2.92	2.31	***
Good choice of clothing shops	3.03	2.85	2.27	***
Nice places to eat/have a drink	3.28	2.77	2.60	
Shops that are unique	3.06	2.71	2.25	***
My favourite brand name of goods	2.63	2.54	2.09	**
My nearest shopping centre	3.69	2.38	1.94	**

Note: Otaki residents were significantly higher on all characteristic ratings when compared with either of the other groups (at the $p < .001$ level); * $p < .05$, ** $p < .01$, *** $p < .001$.

Figure 4 shows the ranked characteristics for each group. The key characteristics that currently cause people to stop and shop in Otaki are accessibility, ease of parking, pedestrian safety, atmosphere and good facilities (such as toilets). Shopping characteristics, such as the variety and uniqueness of the shops available in Otaki, did not rank as highly as these features in the decision to stop.

Figure 4.

The mean ranked importance of characteristics that cause people to shop in Otaki, for Otaki residents, those willing to stop, and those in the Expressway group. The four highest ranked characteristics are highlighted for each group.

Otaki residents	Willing to stop	Expressway group
Nearest shopping centre	Ease of parking	Access from SH1
Atmosphere	Pedestrian safety	Ease of parking
Pedestrian safety	Access from SH1	Good facilities (e.g.toilets)
Ease of parking	Atmosphere	Atmosphere
Access from SH1	Good facilities (e.g.toilets)	Nice places to eat/drink
Good facilities (e.g.toilets)	Outlet/discount shops	Pedestrian safety
Nice places to eat/drink	Variety of shops	Outlet/discount shops
Variety of shops	Choice of clothing shops	Variety of shops
Unique shops	Nice places to eat/drink	Choice of clothing shops
Choice of clothing shops	Unique shops	Unique shops
Outlet/discount shops	Brand name of goods	Brand name of goods
Brand name of goods	Nearest shopping centre	Nearest shopping centre

4.3.4 Economic impacts

An approximate total spend was calculated for each of the three groups based on the ‘anticipated amount spent’ (see Table 12). Overall, only 2.8% of those walking in the retail environment in Otaki did not intend to spend any money that day, indicating that almost all pedestrians were also shoppers (including those that were residents).

Estimated spending suggests that about 9% of overall sales would be lost by the introduction of the Expressway. Those that were Willing to Stop in Otaki spend significantly more (\$70.57) than either Otaki Residents (\$56.66) or those who choose the Expressway (\$53.02)¹⁰.

Table 12. Anticipated spending and estimated amount spent for Otaki residents, those willing to stop, and those in the Expressway group.

Spending behaviour	Otaki residents	‘Willing to stop’	‘Expressway’ group
<i>Anticipated amount spent</i>			
Nothing	7 (3.5%)	4 (1.8%)	3 (5.7%)
Less than \$10	19 (9.4%)	19 (8.5%)	9 (17.0%)
\$10-\$25	45 (22.3%)	40 (17.9%)	13 (24.5%)
\$25-\$50	50 (24.8%)	42 (18.8%)	9 (17.0%)
\$50-\$75	30 (14.9%)	35 (15.6%)	2 (3.8%)
\$75-\$100	19 (9.4%)	32 (14.3%)	10 (18.9%)
\$100-\$200	25 (12.4%)	39 (17.4%)	4 (7.5%)
More than \$200	7 (3.5%)	13 (5.8%)	3 (5.7%)

¹⁰ An ANOVA reveals significant differences in estimated spend between the groups ($F, (2, 476) = 4.34, p < .05$), further post-hoc tests reveal the Willing to Stop group has significantly higher spend than either Otaki residents ($t (424) = -2.61, p < .01$) or the Expressway group ($t (275) = 20.1, p < .05$). There was no difference between the Residents or Expressway groups in estimated spend ($t (253) = .45, p = .66$).

Spending behaviour	Otaki residents	'Willing to stop'	'Expressway' group
<i>Estimated spending</i> ¹¹			
Estimated mean spend (per person)	\$56.66	\$70.57	\$53.02
Estimated total spend	\$11,445.00	\$15,807.50	\$2,810.00
Percentage of total spend by group	38.1%	52.7%	9.2%

Examining current transactions by purchase type within the Expressway group identifies the industries that are likely to experience reductions in frequency of sales (see Table 13). The largest reductions in the number of transactions occur in food and drink sales from cafes, bakeries, and take away outlets (15%), followed by clothes (12%) and petrol (11%). Closer examination of these three purchase types reveals that those in the Expressway group were significantly more like to purchase food and drink from a cafe ($\chi^2(1, N = 486) = 5.66, p < .05$), but were not significantly more likely to purchase petrol or clothes than other shoppers.

Table 13. Frequency of purchase type for Otaki residents, those willing to stop, and those in the Expressway group.

Purchase type	Otaki residents	'Willing to stop'	'Expressway' group	% of sales in Expressway group ¹²
Food or drink from cafe/bakery/take away	75 (36.6%)	104 (45.6%)	31 (58.5%)	14.8%
Food, liquor or groceries	88 (42.9%)	54 (23.7%)	7 (13.2%)	4.7%
Petrol	58 (28.3%)	58 (25.4%)	14 (26.4%)	10.8%
Newspaper, hardware or pharmacy goods	27 (13.2%)	13 (5.7%)	2 (3.8%)	4.8%
Clothes, shoes or accessories	9 (4.4%)	84 (36.8%)	13 (24.5%)	12.3%
Household items, gifts, plants	15 (7.3%)	14 (6.1%)	2 (3.8%)	6.5%
Other	13 (6.3%)	18 (7.9%)	5 (9.4%)	13.9%

4.4 Comparison of 'purposeful', 'passing through' and Otaki residents groups

Of the total sample, around one fifth (22.6%, N=113) could be classified as 'passing through', with roughly equal proportions classified as either 'purposeful' visitors (36.4%, N=182) or Otaki residents (41.0%, N=205). Therefore, excluding the Otaki residents, 61.7% of the visitors to Otaki surveyed were 'purposeful' visitors.

Passing through visitors were found to be significantly more likely to spend shorter amounts of time (e.g., 15 minutes or less) at the Otaki retail centre than purposeful visitors, $\chi^2(6, N = 493) = 24.49, p < .001$. Those 'passing through' were significantly more likely to report

¹¹ An approximate average amount spent per head for each group was calculated by taking the midpoint of each 'anticipated amount spent' category. These figures are only approximate, based on anticipated spend for each group. Here a conservative range of \$0 to \$200 was used; however, respondents obviously may have spent more than \$200, potentially skewing the figures towards the lower end.

¹² Calculated by dividing the frequency of purchase type in the Expressway group by the overall frequency of people that made that purchase type.

purchasing coffee, petrol or a meal as the main purpose of the trip, when compared with purposeful visitors, $\chi^2(8, N = 458) = 40.22, p < .001$.

Differences were also found in relation to the spending patterns of these three groups. The most common purchases for the 'purposeful' visitors were food or drink at a cafe and clothes. Common purchases for the 'passing through' visitors also included food or drink at a cafe and clothes, however, petrol was also a relatively frequent purchase. As previously mentioned, common purchases for the Otaki residents included food, liquor or groceries, food or drink at a cafe and petrol.

4.5 Comparison of weekday versus weekend groups

Comparison of the weekday (N=241) versus weekend day (N=244) sub-samples reveals several trends. A summary of the differences found between the two groups are provided in Table 14, indicating the significant differences that were found. No significant difference was found between the two groups in terms of anticipated behaviour following completion of the Expressway, $\chi^2(2, N = 471) = 4.69, p = .09$, therefore no one group (Otaki residents, 'willing to stop' or 'Expressway') were more likely to be sampled on either day.

Spending patterns were found to differ significantly between the two groups, $\chi^2(7, N = 474) = 17.25, p < .05$. Those sampled on the weekday were significantly more likely to spend smaller amounts (e.g., nothing or \$25-\$50), where as those sampled on the weekend day were significantly more likely to spend larger amounts (e.g., \$100-\$200 or more than \$200).

In relation to the duration of the visit to the Otaki shops, a significant difference was found ($\chi^2(3, N = 478) = 12.05, p < .05$) in that those sampled on the weekday were significantly more likely to spend longer periods (e.g., '60 minutes or more') in the retail centre than those sampled on the weekend day. The opposite was found in terms of journey length between the two sampling days, with weekend day respondents being significantly more likely to have longer trip lengths (e.g., 90-120 minutes, 2-3 hours and 3-4 hours) than weekday respondents, $\chi^2(6, N = 480) = 13.66, p < .05$.

A significant difference was also found between the two groups in terms of the main purposes reported for their trips, $\chi^2(4, N = 444) = 35.30, p < .001$. Weekday respondents were significantly more likely to report business or work as the main purpose of their trip, where as weekend day respondents were significantly more likely to report shopping as the main purpose for their trip.

Finally, in terms of purchase types, the weekend sub-sample was more likely to report clothes as a purchase than the weekday sub-sample, whereas the weekday sub-sample was more likely to purchase food or drink at a cafe and petrol than the weekend sub-sample.

Table 14: Comparison of weekday and weekend day groups, highlighting significant differences.

Key Variable	Weekday group	Weekend group	Significant difference
<i>Anticipated behaviour following completion of the expressway</i>			
Otaki residents	109 (46.6%)	89 (37.6%)	
'Willing to stop'	104 (44.4%)	117 (49.4%)	
'Expressway' group	21 (9.0%)	31 (13.1%)	
<i>Anticipated amount spent</i>			
Nothing	11 (4.7%)	3 (1.3%)	*
Less than \$10	22 (9.4%)	25 (10.4%)	
\$10-\$25	49 (20.9%)	50 (20.8%)	
\$25-\$50	62 (26.5%)	39 (16.3%)	*
\$50-\$75	31 (13.2%)	34 (14.2%)	
\$75-\$100	27 (11.5%)	33 (13.8%)	
\$100-\$200	24 (10.3%)	41 (17.1%)	*
More than \$200	8 (3.4%)	15 (6.3%)	*
<i>Anticipated time spent in Otaki</i>			
Under 15 minutes	40 (17.0%)	41 (16.9%)	
15-30 minutes	30 (12.8%)	57 (23.5%)	**
30-60 minutes	37 (15.7%)	44 (18.1%)	
More than 60 minutes	128 (54.5%)	101 (41.6%)	**
<i>Journey length</i>			
Less than 30 minutes	145 (60.9%)	128 (52.9%)	*
30-60 minutes	36 (15.1%)	29 (12.0%)	*
60-90 minutes	19 (8.0%)	18 (7.4%)	
90-120 minutes	6 (2.5%)	20 (8.3%)	*
2-3 hours	14 (5.9%)	19 (7.9%)	*
3-4 hours	4 (1.7%)	11 (4.5%)	*
4 or more hours	14 (5.9%)	17 (7.0%)	
<i>Main purpose for trip</i>			
Shopping	81 (38.0%)	131 (56.7%)	***
Business/Work	63 (29.6%)	22 (9.5%)	***
Coffee/Eat a meal	11 (5.2%)	18 (7.8%)	
Petrol	25 (11.7%)	26 (11.3%)	
Other – toilet visit, tourism, visiting friends/family	33 (15.5%)	34 (14.7%)	
<i>Purchase type</i>			
Food or drink from cafe/bakery/take away	115 (47.7%)	94 (38.5%)	*
Food, liquor or groceries	74 (30.7%)	69 (28.3%)	
Petrol	78 (32.4%)	47 (19.3%)	*
Newspaper, hardware or pharmacy goods	18 (7.5%)	24 (9.8%)	
Clothes, shoes or accessories	43 (17.8%)	66 (27.0%)	*
Household items, gifts, plants	16 (6.6%)	15 (6.1%)	
Other	22 (9.1%)	16 (6.6%)	

* p < .05, ** p < .01, *** p < .001.

4.6 Comparison of Railway Precinct versus Main Street groups

Most pedestrians were surveyed in the State Highway 1 Railway Precinct (67.4%, N = 326), with the remaining being surveyed on Main Street (32.6%, N = 158). Those surveyed in Main Street were significantly more likely to be Otaki residents, whereas those surveyed in the Railway Precinct were significantly more likely to be classified in either the 'willing to stop' or 'Expressway' groups, $\chi^2(2, N = 470) = 21.96, p < .001$. Those classed as 'willing to stop' or 'Expressway' were not significantly more likely to be surveyed in either location, however, $\chi^2(1, N = 270) = 3.68, p = .055$. This same pattern held true in terms of the sampling of Otaki residents, purposeful and passing through visitors in the two locations, $\chi^2(2, N = 484) = 16.93, p < .001$. Therefore, visitors to either location were no more or less likely to be either a 'purposeful' visitor or 'passing through' or belong to the 'willing to stop' or 'Expressway' groups.

In terms of journey length, those surveyed in Main Street were significantly more likely to have shorter expected journey lengths (e.g. 60 minutes or less), whereas those surveyed in the Railway Precinct were more likely to have longer journey lengths (e.g. more than an hour and up to four hours or more), $\chi^2(6, N = 479) = 22.22, p = .001$. This finding is likely due to the oversampling of Otaki residents in the Main Street area. In contrast, there were no significant differences between the two locations in terms of anticipated time spent in Otaki for those sampled, $\chi^2(3, N = 477) = 7.52, p = .057$.

Those surveyed in the Railway Precinct were significantly more likely to have stopped with the main purpose of purchasing petrol compared to those surveyed in Main Street, who were significantly more likely to report a main purpose of either shopping or business/work, $\chi^2(4, N = 443) = 24.04, p < .001$. Reported purchase types for the surveyed groups from these two locations are reported in Table 15, with significant differences highlighted. This data shows that, as expected, those surveyed in the Railway Precinct were significantly more likely purchase petrol compared to those in Main Street, who were significantly more likely to purchase food, liquor and groceries and 'other' items.

No significant differences were found between the Railway Precinct and Main Street groups on anticipated amount spent, $\chi^2(7, N = 473) = 2.57, p = .92$. Those surveyed in the Railway Precinct are estimated to spend an average of \$60.99, whereas those surveyed in Main Street are estimated to spend an average of \$61.17.

Table 15: Purchase types for Railway Precinct and Main Street groups, highlighting significant differences.

Purchase type	Railway Precinct	Main Street	Significant difference
Food or drink from cafe	145 (44.5%)	64 (40.5%)	
Food, liquor, groceries	88 (27.0%)	58 (36.7%)	**
Petrol	103 (31.6%)	24 (15.2%)	***
Newspaper, pharmacy	24 (7.4%)	19 (12.0%)	
Clothes	72 (22.1%)	30 (19.0%)	
Household items	18 (5.5%)	11 (7.0%)	
Other	18 (5.5%)	19 (12.0%)	**

* $p < .05$, ** $p < .01$, *** $p < .001$.

To further understand the potential economic impacts on the Railway Precinct and Main Street retail centres, these sub-samples were explored in terms of anticipated behaviour following completion of the expressway (see Table 16). As can be seen, a higher proportion of those surveyed in the Railway Precinct anticipated remaining on the Expressway and therefore not visiting Otaki than those surveyed in the Main Street. This finding is intuitive given the higher proportion of Otaki residents in Main Street.

Table 16. Anticipated behaviour following completion of the Expressway for those surveyed in the Railway Precinct versus those surveyed in Main Street.

Anticipated behaviour	Railway Precinct	Main Street
Otaki resident	114 (35.7%)	86 (57.0%)
'Willing to stop'	161 (50.5%)	58 (38.4%)
'Expressway' group	44 (13.8%)	7 (4.6%)

Anticipated economic impacts for the Railway Precinct retail centre are detailed in Table 17, with Table 18 providing the same data for Main Street. As can be seen, in line with the lower proportion of 'Expressway' users sampled in the Main Street area, this group is responsible for a generally lower proportion of sales in each industry than in the Railway Precinct retail area (with the exception of 'household items'). The expressway users sampled in Main Street were correspondingly responsible for a lower overall proportion of total estimated spend (2.9%) compared to those sampled in the Railway Precinct (12.3%). In line with previous findings, those in the 'Expressway' group were lower overall anticipated spenders than both Otaki residents and those 'willing to stop' groups in both locations.

Table 17. Economic data for the Railway Precinct sub-sample.

Purchase type	Otaki residents	Willing to stop	Expressway Group	% of sales in Expressway group ¹³
Food or drink from a cafe	40 (35.1%)	76 (47.2%)	26 (59.1%)	18.3%
Food, liquor, groceries	43 (37.7%)	37 (23.0%)	6 (13.6%)	7.0%
Petrol	41 (36.0%)	48 (29.8%)	13 (29.5%)	12.7%
Newspaper, pharmacy	12 (10.5%)	9 (5.6%)	2 (4.5%)	8.7%
Clothes	5 (4.4%)	56 (34.8%)	10 (22.7%)	14.1%
Household items	7 (6.1%)	10 (6.2%)	1 (2.3%)	5.6%
Other	3 (2.6%)	10 (6.2%)	4 (9.1%)	23.5%
<i>Estimated spending</i>				
Estimated mean spend (per person)	\$58.04	\$65.90	\$54.20	—
Estimated total spend	\$6,500.48	\$10,412.20	\$2,384.80	—
Percentage of total spend by group	33.7%	54.0%	12.3%	—

¹³ Calculated by dividing the frequency of purchase type in the Expressway group by the overall frequency of people that made that purchase type.

Table 18. Economic data for the Main Street sub-sample.

Purchase type	Otaki residents	Willing to stop	Expressway Group	% of sales in Expressway group ¹⁴
Food or drink from a cafe	35 (40.7%)	24 (41.4%)	4 (57.1%)	6.3%
Food, liquor, groceries	42 (48.8%)	15 (25.9%)	0 (0.0%)	0.0%
Petrol	15 (17.4%)	8 (13.8%)	0 (0.0%)	0.0%
Newspaper, pharmacy	14 (16.3%)	4 (6.9%)	0 (0.0%)	0.0%
Clothes	4 (4.7%)	21 (36.2%)	2 (28.6%)	7.4%
Household items	8 (9.3%)	2 (3.4%)	1 (14.3%)	9.1%
Other	9 (10.5%)	8 (13.8%)	1 (14.3%)	5.6%
<i>Estimated spending</i>				
Estimated mean spend (per person)	\$54.94	\$74.91	\$38.57	—
Estimated total spend	\$4,669.90	\$4,269.87	\$269.99	—
Percentage of total spend by group	50.7%	46.4%	2.9%	—

4.7 Travel origin characteristics

Variation as a function of travel origin characteristics was also explored. For this purpose, the sample was divided into five new groupings: Otaki (including all those who identified themselves as residents of Otaki), other Kapiti (including those travelling from within the Kapiti Coast on the day of surveying), north of Kapiti Coast District Council (KCDC) (including those travelling from Horowhenua District, Tararua District, Palmerston North City or Manawatu District on the day of surveying), South of KCDC (including those travelling from Wellington City, Lower Hutt City, Upper Hutt City or Porirua City on the day of surveying) and 'other' (including travellers from any other region on New Zealand on the day of surveying). The group sizes yielded from this division are displayed in Table 19.

Table 19. Travel origin grouping frequencies.

Location	Frequency
Otaki	205 (45.4%)
Other Kapiti	78 (17.3%)
North of KCDC	85 (18.8%)
South of KCDC	61 (13.5%)
Other	23 (5.1%)
Total	452 (100.0%)

¹⁴ Calculated by dividing the frequency of purchase type in the Expressway group by the overall frequency of people that made that purchase type.

Table 20 shows that, as expected, those travelling from closer proximities to Otaki on the day were more likely to visit Otaki or travel through Otaki on a frequent basis than those travelling from greater distances. The use of the Main Street retail location reduced as travel origin increased in proximity from Otaki, $\chi^2(4, N = 438) = 19.75, p < .01$ (see Table 21).

Table 20. Frequency of visits to Otaki by travel origin group.

	Otaki	Other Kapiti	North of KCDC	South of KCDC	Other
<i>Frequency visits Otaki</i>					
Daily	126 (61.5%)	9 (11.5%)	11 (12.9%)	0 (0.0%)	1 (4.3%)
Weekly	61 (29.8%)	29 (37.2%)	11 (12.9%)	6 (9.8%)	1 (4.3%)
Monthly	6 (2.9%)	13 (16.7%)	20 (23.5%)	13 (21.3%)	3 (13.0%)
Other	12 (5.9%)	27 (34.6%)	43 (50.6%)	42 (68.9%)	18 (78.3%)
<i>Frequency travel through on SH1</i>					
Daily	102 (50.2%)	15 (19.2%)	12 (14.3%)	0 (0.0%)	1 (4.3%)
Weekly	54 (26.3%)	23 (29.5%)	14 (16.7%)	5 (8.2%)	0 (0.0%)
Monthly	14 (6.8%)	15 (19.2%)	23 (27.4%)	19 (31.1%)	4 (17.4%)
Other	33 (16.3%)	25 (32.1%)	35 (41.7%)	37 (60.7%)	18 (78.3%)

Table 21. Frequency of surveying at Railway Precinct versus Main Street by travel origin group.

Location	Railway Precinct	Main Street
Otaki	114 (57.0%)	86 (43.0%)
Other Kapiti	54 (72.0%)	21 (28.0%)
North of KCDC	62 (76.5%)	19 (23.5%)
South of KCDC	45 (76.3%)	14 (23.7%)
Other	20 (87.0%)	3 (13.0%)

A comparison of the stated main purposes of trips on the day of surveying between these groups is provided in Table 22. As can be seen, those travelling from south of KCDC were the highest shoppers of the five groups, with those travelling from the north of KCDC being the lowest. Those travelling from south of KCDC were also the most likely to stop for a coffee, with those from Otaki being the least likely. Those travelling from 'other' locations were the most likely to stop in Otaki with the main purpose of purchasing petrol on the day of surveying, with those travelling from within the Kapiti Coast (excluding Otaki) being the least likely.

Table 22. Main purposes reported by trips by travel origin group.

Main purpose	Otaki	Other Kapiti	North of KCDC	South of KCDC	Other
Shopping	92 (48.2%)	35 (48.6%)	32 (41.6%)	31 (55.4%)	9 (47.4%)
Toilet stop	0 (0.0%)	0 (0.0%)	6 (7.8%)	0 (0.0%)	1 (5.3%)
Coffee	3 (1.6%)	4 (5.6%)	7 (9.1%)	7 (12.5%)	1 (5.3%)
Business	18 (9.4%)	6 (8.3%)	3 (3.9%)	2 (3.6%)	1 (5.3%)
Visit friends or family	7 (3.7%)	2 (2.8%)	2 (2.6%)	5 (8.9%)	1 (5.3%)
Work here	26 (13.6%)	12 (16.7%)	11 (14.3%)	0 (0.0%)	1 (5.3%)
Petrol	23 (12.0%)	5 (6.9%)	9 (11.7%)	7 (12.5%)	4 (21.1%)
Eat a meal	3 (1.6%)	1 (1.4%)	1 (1.3%)	0 (0.0%)	1 (5.3%)
Tourism	0 (0.0%)	0 (0.0%)	1 (1.3%)	1 (1.8%)	0 (0.0%)
Other	19 (9.9%)	7 (9.7%)	5 (6.5%)	3 (5.4%)	0 (0.0%)

Table 23 displays purchase types and average spends by travel origin group. Several trends were found with regard to purchasing patterns between these groups. Otaki residents were significantly more likely to purchase food, liquor or groceries ($\chi^2(4, N = 452) = 31.46, p < .001$) and newspaper and pharmacy goods ($\chi^2(4, N = 452) = 12.84, p < .05$) compared to all other groups. Otaki residents were significantly less likely to purchase clothes compared to the Other Kapiti, North of Kapiti and South of Kapiti groups ($\chi^2(4, N = 452) = 79.39, p < .001$), and significantly less likely to purchase food or drink at a cafe ($\chi^2(4, N = 452) = 9.81, p < .05$) compared to the North of Kapiti and South of Kapiti groups. A t test also revealed that Otaki residents spent significantly less on average compared with those travelling from South of Kapiti, $t(259) = 7.07, p < .05$. There were no other significant differences in spend between the five groups.

Table 23. Purchase types and average spend by travel origin group.

Purchase type	Otaki	Other Kapiti	North of KCDC	South of KCDC	Other
Food or drink at a cafe	75 (36.6%)	30 (38.5%)	44 (51.8%)	33 (54.1%)	10 (43.5%)
Food, liquor or groceries	88 (42.9%)	17 (21.8%)	17 (20.0%)	10 (16.4%)	3 (13.0%)
Petrol	58 (28.3%)	22 (28.2%)	18 (21.2%)	13 (21.3%)	6 (26.1%)
Newspaper or pharmacy goods	27 (13.2%)	6 (7.7%)	3 (3.5%)	1 (1.6%)	1 (4.3%)
Clothes	9 (4.4%)	27 (34.6%)	34 (40.0%)	28 (45.9%)	4 (17.4%)
Household items	15 (7.3%)	4 (5.1%)	5 (5.9%)	3 (4.9%)	0 (0.0%)
Other	13 (6.3%)	7 (9.0%)	6 (7.1%)	2 (3.3%)	3 (13.0%)
<i>Estimated spending</i>					
Estimated mean spend (per person)	\$56.66	\$65.71	\$61.11	\$77.25	\$70.45
Estimated total spend	\$11,445	\$5,125	\$4,950	\$4558	\$1550
Percentage of total	41.4%	18.6%	17.9%	16.5%	5.6%

spend by group					
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Average spend for Otaki residents versus all others was also explored in relation to those ‘purposeful’ visitors and those ‘passing through’. As can be seen in Table 24, travellers from outside the Otaki region who were purposeful visitors had the highest average anticipated spend, with Otaki residents who were passing through having the lowest. Otaki residents visited Otaki purposefully at a higher rate than those from outside the Otaki region.

Table 24. Purposeful visitors and passers through frequencies and average spends for Otaki residents and all others.

Location	Purposeful visitor		Passing through visitor	
	Frequency	Average spend	Frequency	Average spend
Otaki	182 (88.8%)	\$56.90	23 (11.2%)	\$54.66
All others	149 (60.3%)	\$71.30	98 (39.7%)	\$61.41

4.8 What is the one thing you would change about Otaki?

In an open response question, respondents were asked what one thing could be changed about Otaki that would increase their desire to return to Otaki for shopping purposes. As shown in Table 25, the responses to this question can be grouped into seven broad categories and indicates the proportions of respondents who made comments relating to these main themes. Table 26 gives some further explanation regarding the content of comments grouped into each theme.

Table 25: Frequency of the one thing people would change about Otaki by comment theme and Resident, Willing to stop and Expressway groups.

Key change theme	Otaki Residents	‘Willing to stop’	‘Expressway’ group	Overall
Reduce traffic flow problems	35 (28.5%)	38 (24.1%)	8 (36.4%)	81 (26.7%)
Increase shopping/retail variety	31 (25.2%)	32 (20.3%)	5 (22.7%)	69 (22.8%)
Would change nothing	24 (19.5%)	24 (15.2%)	1 (4.5%)	49 (16.2%)
Increase/improve parking	13 (10.6%)	28 (17.7%)	4 (18.2%)	45 (14.9%)
Improve the look and facilities of the town	16 (13.0%)	13 (8.2%)	2 (9.1%)	32 (10.6%)
Alleviate roading issues	4 (3.3%)	20 (12.7%)	2 (9.1%)	26 (8.6%)
Increase advertising	0 (0.0%)	3 (1.9%)	0 (0.0%)	3 (0.9%)
Total	123 (100.0%)	158 (100.0%)	22 (100.0%)	303 (100.0%)

Table 26: A detailed description of the types of things people would choose to change by comment theme with example comments.

Key theme	Further explanation
Reduce traffic flow problems	<p>Various traffic problems were mentioned in these comments, most commonly these related to congestion, removing the roundabout and reducing pedestrian crossings on the main shopping road, e.g.</p> <p><i>"[I would like it if] traffic congestion was reduced"</i></p> <p><i>"[I would like] less traffic – that would make it easier to get away from home"</i></p> <p><i>"[I would like to remove] the roundabout"</i></p> <p><i>"Get rid of the pedestrian crossing by Subway so traffic flows better"</i></p>
Increase shopping/retail variety	<p>A number of respondents stated they would like the variety and number of retail locations and stores to be increased. Increasing the variety and quality of food outlets was a strong theme within this. Others specifically mentioned an increase in outlet and budget stores was important to their shopping decisions, e.g.</p> <p><i>"[I would like a] good quality eating place"</i></p> <p><i>"[I would like] new fast food shops like KFC and McDonalds"</i></p> <p><i>"[I would like] more shops and more food options"</i></p>
Would change nothing	<p>Generally this comment was followed by some indication that Otaki is great or loved by the respondent as is, e.g.</p> <p><i>"[I would change] nothing – Otaki is a great place to shop and live"</i></p>
Increase/improve parking	<p>Parking accessibility and availability was mentioned specifically by a number of respondents. Building a parking structure was suggested by some as a potential fix to the issues experienced, e.g.</p> <p><i>"[I would like] more parking"</i></p> <p><i>"[I would like] better signage and access to car parking"</i></p> <p><i>"[I would like] more parking, maybe a parking structure could be built?"</i></p>
Alleviate other roading issues	<p>Various roading issues were identified by the respondents, including the number and duration of road works, pedestrian safety, accessibility to key Otaki amenities, and a desire for vehicle access to be removed from the main shopping road. A number of respondents also identified the SH1 pedestrian crossings as problematic, however, suggested remedies to this problem varied from respondents wanting to change the location of the crossings to wanting the number of pedestrian crossings to be increased, e.g.</p> <p><i>"I'd somehow make the footpaths safer, maybe some sort of barriers. I see too many kids trying to run on the highway"</i></p> <p><i>"[I would like a] more friendly main road for shoppers – no trucks and through traffic"</i></p> <p><i>"[I would like] more pedestrian crossings or an over bridge"</i></p>
Improve the look and facilities of the town	<p>The look of both the town itself and the beach were mentioned as requiring updating. Facilities such as foot paths, parks/play areas and public toilets were specifically identified as needing attention. Others commented that the number of money machines should be increased. A number of respondents also commented that public transport in Otaki and the surrounding areas (e.g., from Wellington for weekend shopping trips) should be improved, as well as active transport facilities in the area. Other comment groups related to this category include reducing crime and gang behaviour and a want for further economic development in the town, e.g.</p>

Key theme	Further explanation
	<p><i>“Do the beach front up and install a coffee shop”</i></p> <p><i>“[I would like] better toilet facilities”</i></p> <p><i>“[I would like an] Otaki to Paraparaumu bus service or train upgrade”</i></p>
Increase advertising	<p>The respondents who made comments regarding advertising indicated that out-of-towners generally lack knowledge of the variety of outlet and other stores located in Otaki. Indicating that advertising will be of increased importance after the Expressway has been built, e.g.</p> <p><i>“[I would like] more advertising of the outlet stores, people from outside the region don’t know what’s here”</i></p>

4.8.1 General comments

In addition to comments regarding desired changes to the Otaki township, respondents were also encouraged to make any other comments they felt relevant to the survey. Only 17.8% (N=88) of respondents choose to make such a comment. Of these, 52 respondents made comments specifically related to the Expressway. The main themes of the Expressway related comments were: pro Expressway (n=31, 59.7% of Expressway related comments), against Expressway (n=14, 26.9%), more information needs to be provided regarding the Expressway (n=2, 3.8%) and identifying detriments to the Otaki community from the Expressway (n=5, 9.6%). Therefore, of those who specifically showed a preference regarding the Expressway (N=50), 62% were in support and 38% were in opposition.

Other comments made in this section tied in with the themes identified in the desired changes to Otaki comments. For example, a number of participants noted they disliked the traffic in Otaki (9.1% of those who made a final comment), others commented the public transport in the Otaki region (6.8%) or the town (2.3%) were requiring improvements and others suggested vehicles should be removed from the main shopping road (1.1%). On a positive note, 12.5% of those who made a final comment made positive statements about the Otaki community, mainly stating that it is a friendly place. The new car park at the Railway (1.1%) and the absence of parking meters (2.3%) were also identified as positives in the township.

4.9 Retail store survey

A second survey was conducted in March 2011 within the retail sectors of both the Otaki and Te Horo townships to gain a deeper understanding of shopper’s behaviour and therefore the potential economic impacts of the proposed Expressway. This survey had a similar layout and question format to the pedestrian intercept survey (see Appendix A and B for the final versions of both), however, there were several key differences between the two, particularly in terms of methodology.

In the retail store survey, questionnaires were placed in key retail stores in both Otaki and Te Horo. Retailers were asked to direct customers to fill these out. Completed surveys were collected from retailers. In contrast, as discussed above, participants in the pedestrian survey were intercepted while walking in the retail area of Otaki by trained interviewers.

4.9.1 Limitations

There are three potential limitations to the validity of the retail store survey data when compared with the pedestrian survey data. Therefore, the retail store survey results should be treated with caution.

- 1) Sample selection bias: Owners may have influenced who completed the retail store surveys, therefore causing a sample selection bias, where certain customers were oversampled or under-sampled. The pedestrian survey utilised surveyors trained in approach techniques and used a prize draw incentive to maximise the response rate (and therefore the representative nature of the sample). Store owners were not trained, and were not focused solely on the survey. Also, due to confidentiality issues surrounding the collection of personal details, the prize draw incentive was not part of the retail store survey. Perhaps the best evidence of a sample selection bias is the apparent oversampling of females (see Table 27), and the lower response (indicating a lower response rate).
- 2) Participant response bias: There is the possibility of 'owner influence' in the retail store survey, where owners may have inadvertently caused a participant response bias based on their expectations, how they explained the research, or merely being present. Official trained surveyors were more objective, as they were not influenced by the outcome of the research, and therefore less likely to influence participant responses in this way.
- 3) Sample size: Third, the retail store survey method yielded a smaller number of participants (N = 150, with only 5 of these from Te Horo), meaning it is more difficult to detect differences or trends in the data (due to lower statistical power) and there are greater limitations on the depth of analysis possible.

Because of these key differences between the two surveys these two samples were deemed inappropriate for combining. A short analysis of the retail store survey was undertaken, excluding the five surveys from Te Horo due to the extremely small sample size and the increased complication in reporting the results. The findings of this analysis are provided in the sections below, and due to the limitations outlined previously, should be interpreted with caution.

Table 27: Comparison of retail store and pedestrian survey samples on key characteristics.

Key variable	Customer survey	Pedestrian intercept survey
<i>Gender</i>		
Male	37 (27.6%)	212 (42.7%)
Female	97 (72.4%)	284 (57.3%)
Total	134 (100.0%)	496 (100.0%)
<i>Age group</i>		
16-24	21 (15.4%)	54 (10.9%)
25-34	12 (8.8%)	51 (10.3%)
35-44	27 (19.9%)	71 (14.3%)
45-54	22 (16.2%)	118 (23.7%)
55-64	38 (27.9%)	107 (21.5%)
65-74	15 (11.0%)	64 (12.9%)
75+	1 (0.7%)	32 (6.4%)
Total	136 (100.0%)	497 (100.0%)
<i>Anticipated behaviour group</i>		
Otaki Residents	23 (17.2%)	205 (42.2%)
Willing to stop	88 (65.7%)	228 (46.9%)
Expressway group	23 (17.2%)	53 (10.9%)
Total	145 (100.0%)	486 (100.0%)

4.9.2 Retail store survey sample characteristics

The characteristics of the retail store survey sample in relation to key travel factors are displayed in Table 28. As can be seen, the majority of the sample (80.3%) was travelling from a location outside of Otaki on the day of surveying. Driving a private motor vehicle was by far the most common transport choice (71.3%), with trip lengths less than 30 minutes being the most common (39.9%). In contrast to the short trip length, the majority of the sample planned to spend relatively long periods of time (more than 60 minutes, 63.6%) in the Otaki township on the day of surveying. Finally, a good spread of participants were surveyed in terms of frequency of visiting the Otaki township.

Table 28: Retail store survey sample characteristics on key travel variables.

Key variable	Frequency
<i>Travel origin</i>	
Inside Otaki	28 (19.7%)
Outside Otaki	114 (80.3%)
<i>Travel mode</i>	
Car driver	102 (71.3%)
Car passenger	30 (21.0%)
Bus	0 (0.0%)
Walking	8 (5.6%)
Cycling	2 (1.4%)
Other	1 (.7%)

Key variable	Frequency
<i>Journey length</i>	
Less than 30 minutes	57 (39.9%)
30-60 minutes	30 (21.0%)
60-90 minutes	12 (8.4%)
90-120 minutes	15 (10.5%)
2-3 hours	9 (6.3%)
3-4 hours	6 (4.2%)
4 or more hours	14 (9.8%)
<i>Time in Otaki</i>	
Under 15 minutes	3 (2.1%)
15-30 minutes	16 (11.2%)
30-60 minutes	33 (23.1%)
More than 60 minutes	91 (63.6%)
<i>Frequency visit Otaki</i>	
Daily	32 (22.1%)
Weekly	31 (21.4%)
Monthly	32 (22.1%)
Other	50 (34.5%)

Main purposes for, and purchase types during, these trips are displayed in Table 29. Shopping was the most common main purpose for this sample (53.8%), followed by work (20.8%), with business (6.2%) and 'other' purposes (6.2%) being third equal. The most common purchase type during these trips was clothes, shoes or accessories (57.9%), although food or drink from a cafe or bakery (53.8%) were also common purchases. Petrol (20.7%) and food, liquor or groceries (19.3%) were the next most frequent purchases.

Table 29: Main trip purpose and purchase types for the retail store survey sample.

Key variable	Frequency
<i>Main purpose trip</i>	
Shopping	70 (53.8%)
Coffee	2 (1.5%)
Business	8 (6.2%)
Visit friends/family	6 (4.6%)
Work	27 (20.8%)
Petrol	3 (2.3%)
Eat a meal	4 (3.1%)
Tourism	2 (1.5%)
Other	8 (6.2%)
<i>Purchase type</i>	
Food or drink from cafe/bakery/take away	77 (53.1%)
Food, liquor or groceries	28 (19.3%)
Petrol	30 (20.7%)
Clothes, shoes or accessories	84 (57.9%)
Newspaper, hardware or pharmacy goods	13 (9.0%)
Household items, gifts, plants	14 (9.7%)
Other	7 (4.8%)

4.9.3 Retail Store Survey Comparison of Otaki residents, 'Willing to stop' and 'Expressway' groups

Table 30 displays a comparison of the Otaki residents, 'willing to stop' and 'Expressway' groups on key factors. Statistical tests excluded the Otaki residents group due to problems with low expected cell frequencies. There were no significant differences found between the two remaining groups in terms of time spent in Otaki on the day of surveying or frequency of visiting Otaki. Therefore, those in the 'Expressway' group were equally frequent visitors to Otaki as the 'willing to stop' group, and in addition, anticipated spending around the same amount of time in Otaki as the 'willing to stop' group.

In relation to differences in main purposes for trips between these two groups, only the frequency of shopping was found to have a significant difference, in that those in the 'willing to stop' group were significantly more likely to shop compared to the 'Expressway' group, $\chi^2(1, N = 106) = 4.63, p < .05$. Therefore, those in the 'Expressway' group were no more likely to report any purpose (e.g. petrol) for trips compared to the 'willing to stop' group. However, in relation to purchase type, those from the 'Expressway' group were found to purchase petrol at a significantly higher rate than the 'willing to stop' group, $\chi^2(1, N = 111) = 11.41, p = .001$. No other significant differences were found between the two groups in terms of purchase types.

Table 30: Comparison of Otaki residents, 'willing to stop' and 'Expressway' groups on key variables, indicating significant differences.

Key Variable	Otaki residents	'Willing to stop'	'Expressway' group	Significant difference
<i>Time spent in Otaki</i>				
Under 15 minutes	0 (0.0%)	1 (1.1%)	1 (4.3%)	
15-30 minutes	5 (22.7%)	10 (11.4%)	1 (4.3%)	
30-60 minutes	3 (13.6%)	20 (22.7%)	7 (30.4%)	
More than 60 minutes	14 (63.6%)	57 (64.8%)	14 (60.9%)	
<i>Frequency visit Otaki</i>				
Daily	17 (73.9%)	6 (6.8%)	4 (17.4%)	
Weekly	6 (26.1%)	17 (19.3%)	7 (30.4%)	
Monthly	0 (0.0%)	24 (27.3%)	7 (30.4%)	
Other	0 (0.0%)	41 (46.6%)	5 (21.7%)	
<i>Main purpose of trip</i>				
Shopping	10 (45.5%)	52 (61.9%)	8 (36.4%)	*
Toilet stop	0 (0.0%)	0 (0.0%)	0 (0.0%)	
Coffee	0 (0.0%)	1 (1.2%)	1 (4.5%)	
Business	2 (9.1%)	4 (4.8%)	2 (9.1%)	
Visit friends/family	0 (0.0%)	4 (4.8%)	2 (9.1%)	
Work here	9 (40.9%)	12 (14.3%)	5 (22.7%)	
Petrol	1 (4.5%)	1 (1.2%)	1 (4.5%)	
Eat a meal	0 (0.0%)	3 (3.6%)	0 (0.0%)	
Tourism	0 (0.0%)	1 (1.2%)	1 (4.5%)	
Other	0 (0.0%)	6 (7.1%)	2 (8.7%)	

Key Variable	Otaki residents	'Willing to stop'	'Expressway' group	Significant difference
<i>Purchase type</i>				
Food or drink from cafe/bakery/take away	13 (56.5%)	46 (52.3%)	16 (69.6%)	
Food, liquor or groceries	9 (39.1%)	12 (13.6%)	6 (26.1%)	
Petrol	8 (34.8%)	11 (12.5%)	10 (43.5%)	***
Clothes, shoes or accessories	7 (30.4%)	63 (71.6%)	13 (56.5%)	
Newspaper, hardware or pharmacy goods	6 (26.1%)	3 (3.4%)	2 (8.7%)	
Household items, gifts, plants	2 (8.7%)	7 (8.0%)	3 (13.0%)	
Other	2 (8.7%)	3 (3.4%)	1 (4.3%)	

* p < .05, ** p < .01, *** p < .001.

4.9.4 Retail Store Survey Economic Impacts

No spend data was collected in the retail store survey so analysis of the potential economic impacts of the proposed Expressway for this sample cannot be as detailed. However, the frequency of purchase types between the three groups does provide another indication of this potential impact (see Table 31). These findings should be interpreted with care due to the small sample size, meaning these findings are less robust than those already reported. In addition, both the 'Expressway' and 'willing to stop' groups were sampled at a higher rate in the retail store survey (about 18% of the sample) than in the pedestrian intercept survey (about 11% of the sample), potentially unreliably boosting these proportions.

As previously mentioned, those in the 'Expressway' group were significantly more likely to purchase petrol compared to those 'willing to stop'. Table 28 shows that 34.5% of petrol purchases for the sample were made by the 'Expressway' group, which is more than three times the proportion found in the pedestrian intercept sample (11%). This indicates that petrol sales could drop at a higher rate than predicted by the intercept survey, however, as mentioned this should be interpreted with care due to the robustness of the data. The 'Expressway' group was also responsible for over 20% of sales in food and drink from cafes, bakery and take away stores, household items and liquor/groceries. Again, these proportions are higher than those found in the intercept survey.

Table 31: Percentage of sales in various industries attributed to the 'Expressway' group.

Purchase type	Percent of sales from 'Expressway' group ¹⁵
Food or drink from cafe/bakery/take away	21.3%
Food, liquor or groceries	22.2%
Petrol	34.5%
Clothes, shoes or accessories	15.7%
Newspaper, hardware or pharmacy goods	18.2%
Household items, gifts, plants	25.0%
Other	16.7%

¹⁵ Calculated by dividing the frequency of purchase type in the Expressway group by the overall frequency of people that made that purchase type.

5 Discussion

The introduction of an Expressway that bypasses Otaki is likely to reduce pedestrian foot traffic in the retail areas by up to 11%, with 53 of the 500 pedestrians interviewed in Otaki indicating that they would typically remain on the Expressway. Further examination of the characteristics of these Expressway users indicates that they presently visit the Otaki shops on an infrequent basis, and are more likely to spend short amounts of time (e.g., less than 15 minutes) in the Otaki retail area.

Future Expressway users spend about \$18 less per person than those that would still choose to stop in Otaki regardless of the time savings of the Expressway, and make up about 9% of the value of current sales. The most common purchases for the Expressway group are food or drink at a cafe, petrol and clothes.

5.1 Purchase types most affected

The Expressway users are no more likely to purchase petrol than any other group, but this still indicates about an 11% drop in sales transactions. Clothing sales for Expressway users are also similar to other groups, but this accounts for a 12% reduction in sales transactions. Food and drink sales in cafes, bakeries and take away outlets are significantly higher for the Expressway group, with about 15% of sales transactions coming from the Expressway users. These three industries account for about 45% of the businesses in Otaki (Clothing stores = 28%; Café, bakery and take-away = 14%; Petrol stations = 2%).

The findings related to increased food, coffee or petrol purchases for likely 'Expressway' groups fits with previous findings (e.g., Srinivasan & Kockelman, 2002; Anderson, Harrison, Euritt, Mahmassani, Walton & Helaakoski, 1992; Binney, 2010). Srinivasan and Kockelman (2002) found petrol stations were most vulnerable to negative effects following the completion of an Expressway. Anderson et al. (1992) found that both petrol station sales and sales for eating and drinking establishments dropped at a higher rate than other industries in small Texan towns following completion of an Expressway. Sales dropped for both industries at a rate of between 10%-15% (Anderson et al., 1992).

5.2 Learning from international solutions

Parolin and Garner (1996) found that the greatest loss was experienced in service stations and takeaway food outlets, with food stores such as supermarkets being less affected. Opening 'service centres' outside of the town centre mitigated job loss in the town centre.

Binney (2010) emphasised incorporating strategies to mitigate these effects following the introduction of an Expressway. For example, emphasising the improved safety and attractiveness of the retail area, increasing signage and advertising of retail opportunities, and applying business restructure or refocus.

Reviews of the overseas literature reveal these economic effects are generally short term, with the long term benefits outweighing any detriments (Binney, 2010; Leong & Weisbrod, 2000). Economic impacts of an Expressway are typically higher in small communities (e.g., less than 2,500 people; Binney, 2010; Srinivasan & Kockelman, 2002). The Otaki

community has a population of more than twice this at around 5,643 (Statistics New Zealand, 2010), so this community is perhaps more robust than some small communities.

5.3 Key characteristics for improvement

When asked about the one thing that could be improved to make it more likely that respondents would return to shop in Otaki, traffic congestion is the primary issue that people commented on, followed by improving the number and variety of shopping facilities.

- **Congestion:** Easing traffic congestion (including around the roundabout) is a key issue for 26% of respondents. The proposed Expressway is likely to alleviate this issue, including easing congestion and removing trucks from the main shopping road. The consequent reduction in traffic is likely to make it a safer, user friendly environment for pedestrians in the CBD.
- **Shopping variety:** Increasing the variety and number of retail opportunities is suggested as a key area of improvement. Currently shopping characteristics are not rated highly as the primary reason for stopping in Otaki. There is a particular desire for an increase in the variety and number of eating establishments and outlet stores.
- **Parking accessibility:** Is currently rated among the most important factors in people's current decisions to stop in Otaki, indicating that parking is already perceived to be highly accessible in Otaki. The new car park at the railway and the lack of parking meters are specifically mentioned as positive features. Even taking into account the perceived ease of parking in Otaki, about 15% of respondents want further improvement in parking accessibility.

Other issues identified by the respondents that are not directly addressed by the proposed Expressway include improving key amenities (e.g., public toilets and play/park areas), the look of the town and beach, public transport, and active transport facilities (e.g., walking and cycling facilities)¹⁶. Strategies aimed at improving these factors could therefore increase the attractiveness of the town to both locals and out-of-towners and consequently provide a boost to the retail sector.

5.4 Location-based findings

The proposed Expressway has heavier impacts in the Railway Precinct (State Highway 1) retail area, where there is an estimated 13.8% reduction in overall foot traffic and an estimated 12.3% reduction in overall sales due to Expressway use. The impact on the Main Street retail area is less, with an estimated 4.6% reduction in foot traffic and an estimated 2.9% reduction in overall sales due to Expressway use. The 'Expressway' group was also responsible for a higher proportion of sales in each industry in the Railway Precinct compared to the Main Street retail area, with the exception of household items and gifts (where those sampled in Main Street were responsible for a higher proportion).

¹⁶ The proposed Peka Peka to Otaki Expressway does provide improved active transport amenity, with both a walking and cycling track.

5.5 Travel behaviour and travel origin

Over a third (37.4%) of those using the Otaki retail areas are from outside of the Kapiti region, and these travellers accounted for an estimated 40.0% of the total spend on the days surveyed. People who were purposefully travelling to Otaki as a destination shopping location were spending higher on average than those passing through or locals to Otaki. Those travelling from a more distant origin were less likely to use the Main Street retail area, most likely indicating either the relative convenience of the Railway Precinct or a lower level of knowledge regarding the Main Street retail area.

5.6 Acceptable time sacrifices and Willingness to Detour

This study is the first known to gather data related to acceptable time sacrifices in relation to continued stopping at a town following the introduction of an Expressway in New Zealand. While the figures are only indicative due to the small sample size, the findings do provide insights into both intentions and behaviour post completion of Expressways and can potentially assist in future planning.

Of the travellers that indicated that time savings are a critical factor in their decision to stop, about 60% are still willing to sacrifice 3 minutes or more in time savings to stop in towns like Otaki. If the overall time savings of the Expressway are only up to 1.5 minutes, the proportion of people willing to stop increases to 88%. This provides indicative thresholds of through traffic loss for similar towns in New Zealand.

Drivers should be educated to the likely time savings of any Expressway to ensure they are well-informed when making their decision to detour. This finding also has implications for other Expressway options, and further work into acceptable thresholds where people are still willing to stop would be useful to inform Expressway locations.

5.7 Conclusion

There is likely to be some decline in retail sales following the completion of the proposed Peka Peka to Otaki Expressway, particularly in the food, coffee, clothing and petrol sectors. However, these findings suggest that several of the key changes required to make Otaki a more vibrant retail destination, such as reduced traffic congestion, are likely to be provided by the construction of the Expressway. Similarly, the characteristics that currently cause people to choose Otaki are likely to be reinforced and enhanced by the Expressway, such as its perception as a safe, attractive pedestrian environment.

6 References

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7 Appendices

Appendix A: Otaki pedestrian questionnaire

TELL US ABOUT SHOPPING IN OTAKI: PEDESTRIAN INTERCEPT SURVEY

Your contribution to this survey is valued. As a sign of our appreciation, completed forms will be entered into a prize draw to win \$200 in New World vouchers. If you would like to enter the draw, please provide a contact name and some way of contacting you at the end of this form, and return to us by 19th March 2011. Post it to:

**FREEPOST 225938,
PEKA PEKA TO OTAKI EXPRESSWAY CONSULTATION,
PO BOX 12003,
THORNDON,
WELLINGTON 6144.**

This survey is part of a number of investigations being carried out by the NZ Transport Agency for the proposed Peka Peka to Otaki Expressway. We are aiming to identify key factors that attract people to the Otaki retail area, and how SH1 influences this. Your answers will be used to inform the design team and help to identify future impacts that need to be considered. Your answers to the survey questions are confidential and will be used for the purposes of this project only. The New Zealand Privacy Act 1993 applies to this survey.

Location of surveyor: _____ Date: _____ Time: _____
(outside which store)

1. How did you travel to Otaki today?

Walk Cycle Bus Car driver Car Passenger Other _____

2. Where did you travel from today?

Within Otaki & Otaki Beach **OR** Outside Otaki & Otaki Beach.
If so, please state the nearest intersection to where you live e.g. Smith St/Jones Rd
_____/_____
If so, please name which Suburb /Town _____
City/Region _____

3. Where are you heading once you leave Otaki shops?

Back to where I started my journey **OR** Somewhere else. If so, say where
Suburb /Town _____
City/Region _____

4. How long do you think your overall journey will take, from where you originally travelled from to your final destination? (This should be your travelling time so don't include time stopped).

Less than 30 mins 30-60 mins 60-90 mins 90-120 mins 2-3 hours 3-4 hours 4 or more hours

5. How long do you plan on spending in Otaki today?

Under 15 minutes 15-30 minutes 30 – 60 minutes More than 60 minutes

6. How often do you visit the Otaki shops?

Daily Weekly Monthly Other _____

7. How often do you travel through Otaki on State Highway 1?

Daily Weekly Monthly Other _____

8. How important were each of the following in your decision to SHOP in Otaki today?

	Very important	Important	Unimportant	Very unimportant
Otaki is the nearest shopping centre for me	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Otaki has outlet/discount shops	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Otaki has a wide range of all types of shops	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Otaki has a good choice of clothing shops	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Otaki has my favourite brand name of goods	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Otaki has nice places to eat/have a drink	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Otaki is easy to access from State Highway 1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
It is easy to park in Otaki	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I feel safe walking around the Otaki shops	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Otaki has shops that are unique	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Otaki has a good atmosphere	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Otaki has good facilities, like toilets & tourist office	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

9. What is the MAIN purpose of your trip to Otaki today? (please tick ONE answer only)

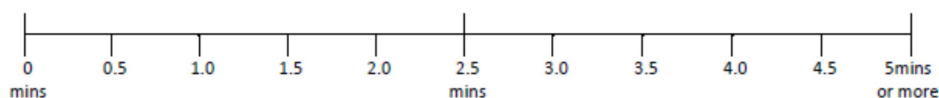
Shopping Toilet stop Coffee Business Visit friends/family Work here
 Petrol Eat a meal Tourism Other (please specify) _____

10. What else will you do while you are in Otaki today? (please tick ALL applicable)

Shopping Toilet stop Coffee Business Visit friends/family Work here
 Petrol Eat a meal Tourism Other (please specify) _____

11. When the Expressway is completed, the new State Highway 1 will avoid Otaki, making it slightly faster to avoid Otaki. Thinking about the MAIN reason you are in Otaki today, do you think you would continue to come to Otaki for THIS main reason after the Expressway is completed? (please tick ONE answer only)

- Yes, I live in Otaki, so don't use SH1 to get here
- Yes, I would continue to come to Otaki regardless of the time savings of the Expressway
- Yes, I would continue to come to Otaki, but I would only be willing to add the following amount to my overall driving time **[Please place a mark on the line below to indicate how much extra time]**



- No, I would stay on the new State Highway 1 and avoid Otaki

12. What have you bought in Otaki today? (please tick ALL applicable)

Food or drink from café/bakery/take away Food, liquor or groceries Petrol
 Newspaper, hardware or pharmacy goods Clothes, shoes or accessories Household items, gifts, plants
 Other (please specify) _____

13. How much do you think you will spend in Otaki today? (please tick ONE answer only)

Less than \$10 \$10-\$25 \$25-\$50 \$50-\$75 \$75-\$100 \$100-\$200
 More than \$200 Nothing

14. Please indicate your age group

16-24 25-34 35-44 45-54 55-64 65-74 75+

15. Please indicate your gender

Male Female

16. What is the ONE thing you would change about Otaki that would make you more likely to return to shop in Otaki?

17. Any further comments

If you have any further questions you can contact us on 0800 PP2O INFO (0800 7726 4636) or email info@pp2o.co.nz
Thank you for your contribution. Please supply the details below if you would like to enter our prize draw.

Contact name	Contact details (eg cell phone, email address)
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Appendix B: Otaki/Te Horo retail store questionnaire¹⁷

TELL US ABOUT SHOPPING IN OTAKI: CUSTOMER SURVEY

This survey is part of a number of investigations being carried out by the NZ Transport Agency for the proposed Peka Peka to Otaki Expressway. We are aiming to identify key factors that attract people to the Otaki retail area, and how SH1 influences this. Your answers will be used to inform the design team and help to identify future impacts that need to be considered. Your answers to the survey questions are confidential and will be used for the purposes of this project only. The New Zealand Privacy Act 1993 applies to this survey.

Store Name (if sent in): _____ Date: _____ Time: _____

1. How did you travel to Otaki today?
 Walk Cycle Bus Car driver Car Passenger Other _____

2. Where did you travel from today?
 Within Otaki & Otaki Beach **OR** Outside Otaki & Otaki Beach.
 If so, please state the nearest intersection to where you live e.g. Smith St/Jones Rd _____
 _____/_____
 If so, please name which Suburb/Town _____
 City/Region _____

3. Where are you heading once you leave Otaki shops?
 Back to where I started my journey **OR** Somewhere else. If so, say where
 Suburb/Town _____
 City/Region _____

4. How long do you think your overall journey will take, from where you originally travelled from to your final destination? (This should be your travelling time so don't include time stopped).
 Less than 30 mins 30-60 mins 60-90 mins 90-120 mins 2-3 hours 3-4 hours 4 or more hours

5. How long do you plan on spending in Otaki today?
 Under 15 minutes 15-30 minutes 30-60 minutes More than 60 minutes

6. How often do you visit the Otaki shops?
 Daily Weekly Monthly Other _____

7. How often do you travel through Otaki on State Highway 1?
 Daily Weekly Monthly Other _____

8. How important were each of the following in your decision to SHOP in Otaki today?

	Very important	Important	Unimportant	Very unimportant
Otaki is the nearest shopping centre for me	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Otaki has outlet/discount shops	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Otaki has a wide range of all types of shops	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Otaki has a good choice of clothing shops	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Otaki has my favourite brand name of goods	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Otaki has nice places to eat/have a drink	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Otaki is easy to access from State Highway 1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
It is easy to park in Otaki	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I feel safe walking around the Otaki shops	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Otaki has shops that are unique	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Otaki has a good atmosphere	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Otaki has good facilities, like toilets & tourist office	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

¹⁷ Note: in the Te Horo questionnaire the word 'Otaki' was replaced with 'Te Horo' and a few items not relevant to the Te Horo township (e.g. relating to outlet stores and petrol stations) were removed.

9. What is the MAIN purpose of your trip to Otaki today? (please tick ONE answer only)

Shopping Toilet stop Coffee Business Visit friends/family Work here
 Petrol Eat a meal Tourism Other (please specify) _____

10. What else will you do while you are in Otaki today? (please tick ALL applicable)

Shopping Toilet stop Coffee Business Visit friends/family Work here
 Petrol Eat a meal Tourism Other (please specify) _____

11. If the Expressway is completed, the new State Highway 1 will avoid Otaki, making State Highway 1 travel slightly faster. Thinking about the MAIN reason you are in Otaki today, do you think you would continue to come to Otaki for THIS main reason after the Expressway was completed? (please tick ONE answer only)

- Yes, I live in Otaki, so don't use SH1 to get here
- Yes, I would continue to come to Otaki regardless of the time savings of the Expressway
- Yes, I would continue to come to Otaki, but I would only be willing to add the following amount to my overall driving time *[Please place a mark on the line below to indicate how much extra time]*



- No, I would stay on the new State Highway 1 and avoid Otaki

12. What have you bought in Otaki today? (please tick ALL applicable)

Food or drink from café/bakery/take away Food, liquor or groceries Petrol
 Newspaper, hardware or pharmacy goods Clothes, shoes or accessories Household items, gifts, plants
 Other (please specify) _____

13. Please indicate your age group

16-24 25-34 35-44 45-54 55-64 65-74 75+

14. Please indicate your gender

Male Female

15. What is the ONE thing you would change about Otaki that would make you more likely to return to shop in Otaki?

16. Any further comments

If you have any further questions you can contact us on 0800 PP2O INFO (0800 7726 4636) or email info@pp2o.co.nz. Thank you for your contribution. If you have taken this survey home to complete please send it to the following freepost address:

FREEPOST 225938,
 PEKA PEKA TO OTAKI EXPRESSWAY CONSULTATION,
 PO BOX 12003,
 THORNDON,
 WELLINGTON 6144.

