



**MT EDEN TOWN CENTRE
BUS OBSERVATIONAL AND
INTERCEPT SURVEY
REPORT DRAFT V0.2
AUGUST 2017**

Prepared for: BECA	Prepared by: Aleph Limited
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1.0 Introduction

BECA requested Aleph Limited to undertake a bus observational and intercept survey intercept survey in the Mt Eden Town Centre.

The objectives of this survey is to gain an understanding of bus behaviour at the intersection of Mt Eden Road and Stokes Road, the origin of commuters waiting at the northbound and southbound bus stops in the town centre and the commuters main mode of transport taken to arrive at the bus stop

2.0 Methodology

Bus behaviour:

A camera was installed at the intersection of Mt Eden Road and Stokes Road to record bus behaviour. The camera filmed on Tuesday the 08th of August between 7.30am and 7.30pm and Saturday the 26th August between 10am and 3pm.

The footage was watched by an analyst and points of interest were recorded and a small video was produced, displaying the activity.

Commuter intercept survey:

Two surveyors were stationed at the bus stops in the town centre and completed the following;

AM Peak (7.00am to 10:00am)

Both surveyors were stationed at the bus stop outside 415 Mt Eden Road on the western kerb (commuters heading into the city) and surveyed as many commuters as possible waiting to catch the bus travelling northbound.

Inter Peak (11.00am to 1:00pm)

One surveyor was stationed at the bus stop outside 415 Mt Eden Road on the western kerb and the other surveyor outside 448-450 Mt Eden Road on the eastern kerb. They surveyed as many commuters as possible waiting to catch the bus and also observed commuters alighting the bus to see whether they went into a shop or walked directly outside of sight.

PM Peak (3.00pm to 7:00pm)

Both surveyors were stationed at the bus stop outside 448-450 Mt Eden Road on the eastern kerb (commuters heading away from the city) and observed commuters alighting the bus to see whether they went into a shop or walked directly outside of sight.

Surveyors wore hi-viz vests and approached members of the public politely. Surveyors read each question and/or showed them the question on an electronic tablet. Any people who refused to participate in the survey were recorded.

Before undertaking any work, surveyors were supplied with a written health and safety briefing which outlines how to undertake the survey safely and responsibly (see Appendix B).



3.0 Results

Summary

Bus behaviour survey

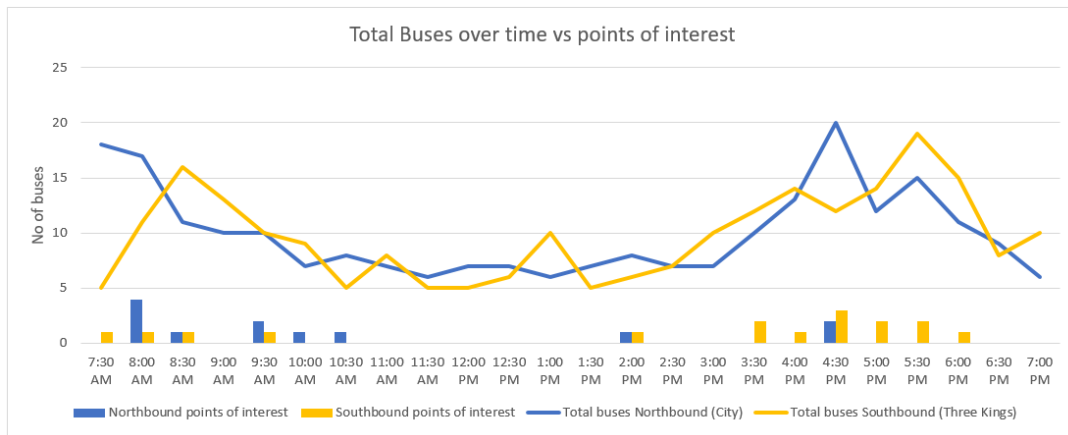
Between 7.30am and 7.30pm, 239 buses were counted travelling northbound and 235 were counted travelling southbound along Mt Eden Road, a total of 474 buses.

Of the buses travelling northbound, 12 buses (5%) were observed either blocking the pedestrian crossing, blocking the intersection or travelling through a late yellow light. Of the buses travelling southbound, 16 buses (7%) were observed either blocking the pedestrian crossing, blocking the intersection or travelling through a late yellow light.

Weekday

Total Buses every 30 minutes vs points of interest

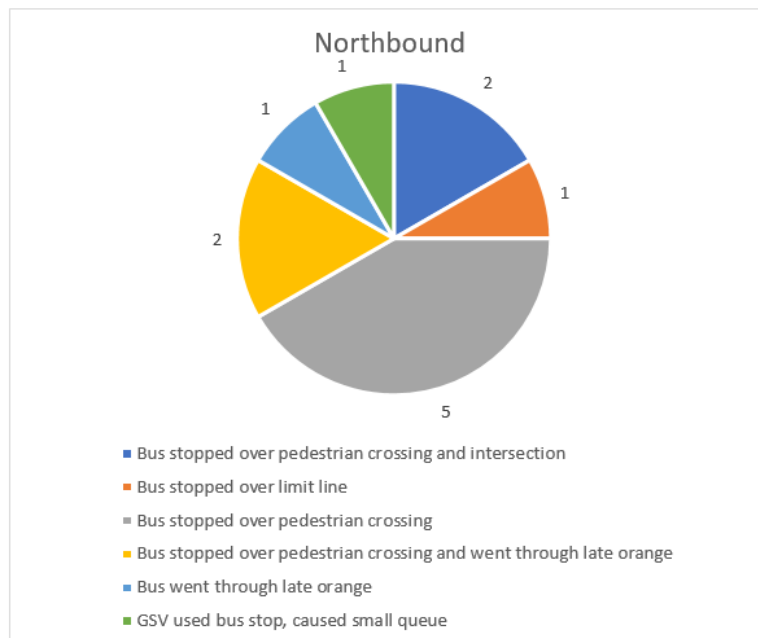
Hours	Total buses Northbound (City)	Northbound points of interest	Total buses Southbound (Three Kings)	Southbound points of interest
7:30 AM	18		5	1
8:00 AM	17	4	11	1
8:30 AM	11	1	16	1
9:00 AM	10		13	
9:30 AM	10	2	10	1
10:00 AM	7	1	9	
10:30 AM	8	1	5	
11:00 AM	7		8	
11:30 AM	6		5	
12:00 PM	7		5	
12:30 PM	7		6	
1:00 PM	6		10	
1:30 PM	7		5	
2:00 PM	8	1	6	1
2:30 PM	7		7	
3:00 PM	7		10	
3:30 PM	10		12	2
4:00 PM	13		14	1
4:30 PM	20	2	12	3
5:00 PM	12		14	2
5:30 PM	15		19	2
6:00 PM	11		15	1
6:30 PM	9		8	
7:00 PM	6		10	
	239	12	235	16



Of the buses recorded travelling northbound, 9 (75%) were observed blocking or partially blocking the pedestrian crossing and 3 (25%) were observed travelling through a late orange light.

Points of interest by type - Northbound

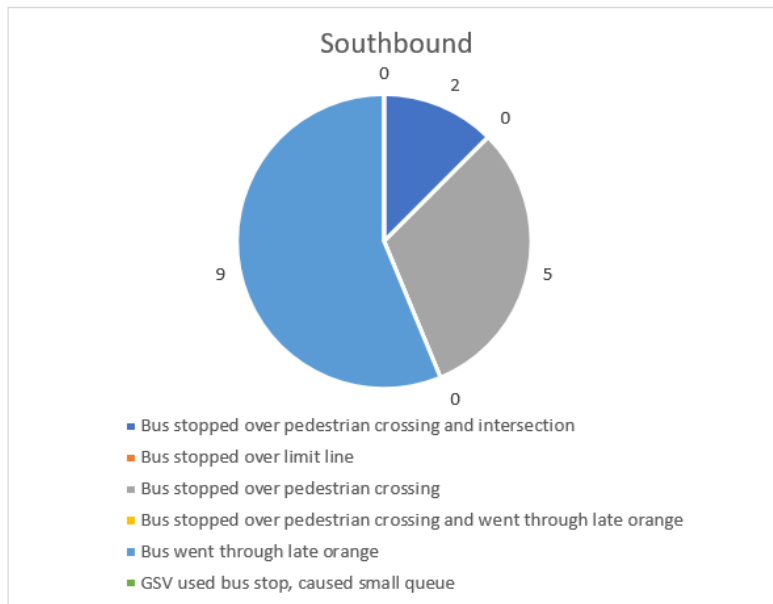
Northbound	Total
Bus stopped over pedestrian crossing and intersection	2
Bus stopped over limit line	1
Bus stopped over pedestrian crossing	5
Bus stopped over pedestrian crossing and went through late orange	2
Bus went through late orange	1
GSV used bus stop, caused small queue	1
Total	12



Of the buses recorded southbound, 7 (44%) were observed blocking or partially blocking the pedestrian crossing and 9 (56%) were observed travelling through a late orange light.

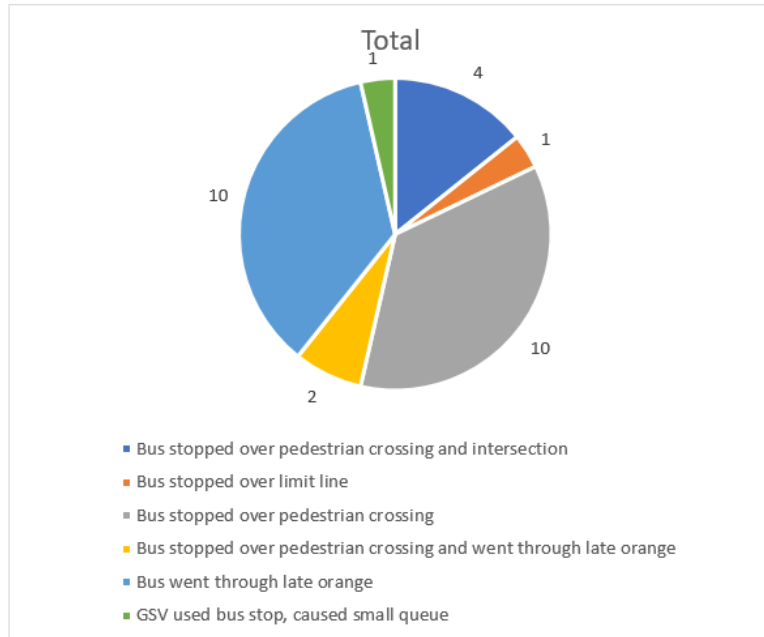
Points of interest by type - Southbound

Southbound	Total
Bus stopped over pedestrian crossing and intersection	2
Bus stopped over limit line	0
Bus stopped over pedestrian crossing	5
Bus stopped over pedestrian crossing and went through late orange	0
Bus went through late orange	9
GSV used bus stop, caused small queue	0
Total	16



Points of interest by type - Total

Total	Total
Bus stopped over pedestrian crossing and intersection	4
Bus stopped over limit line	1
Bus stopped over pedestrian crossing	10
Bus stopped over pedestrian crossing and went through late orange	2
Bus went through late orange	10
GSV used bus stop, caused small queue	1
Total	28



In total, 16 (57%) were observed blocking or partially blocking the pedestrian crossing and 12 (43%) were observed travelling through a late orange light.

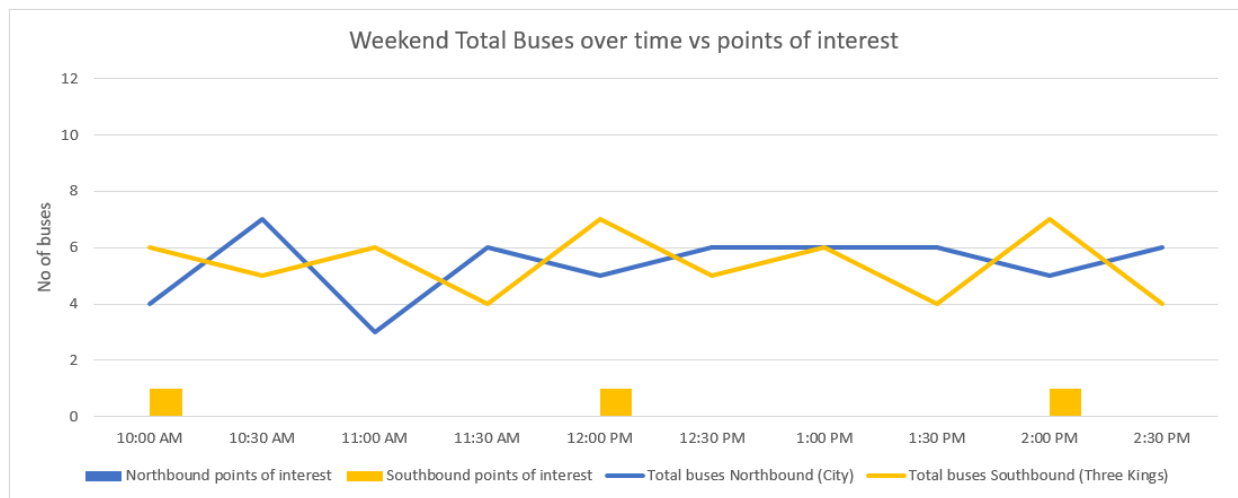
A memory stick has been supplied with the full days footage (7.30am to 7.30pm) and 28 individual clips showing the bus behaviour.

The appendix includes a log of each video clip, along with a time stamp of the recording

Weekend

Weekend Total Buses every 30 minutes vs points of interest

Hours	Total buses Northbound (City)	Northbound points of interest	Total buses Southbound (Three Kings)	Southbound points of interest
10:00 AM	4		6	1
10:30 AM	7		5	
11:00 AM	3		6	
11:30 AM	6		4	
12:00 PM	5		7	1
12:30 PM	6		5	
1:00 PM	6		6	
1:30 PM	6		4	
2:00 PM	5		7	1
2:30 PM	6		4	
	54	0	54	3



Of the buses recorded travelling northbound, no buses were observed blocking or partially blocking the pedestrian or travelling through an orange light.

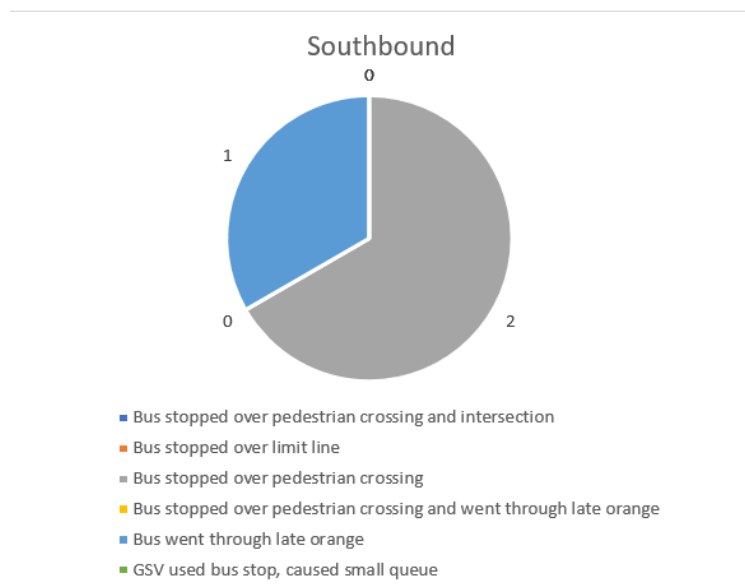
Weekend Points of interest by type - Northbound

Northbound	Total
Bus stopped over pedestrian crossing and intersection	0
Bus stopped over limit line	0
Bus stopped over pedestrian crossing	0
Bus stopped over pedestrian crossing and went through late orange	0
Bus went through late orange	0
GSV used bus stop, caused small queue	0
Total	0

Of the buses recorded southbound, 3 (6%) were observed blocking or partially blocking the pedestrian crossing and 9 (56%) were observed travelling through a late orange light.

Points of interest by type - Southbound

Southbound	Total
Bus stopped over pedestrian crossing and intersection	0
Bus stopped over limit line	0
Bus stopped over pedestrian crossing	2
Bus stopped over pedestrian crossing and went through late orange	0
Bus went through late orange	1
GSV used bus stop, caused small queue	0
Total	3



Commuter Intercept survey

The following four questions were asked to commuters waiting at the bus stop outside 415 Mt Eden Road, in the AM and inter peak and outside 448-450 Mt Eden Road in the interpeak and PM peak.

1. How often do you use this bus stop?
2. What suburb did your journey begin from?
3. What was your main mode of transport to get to this bus stop?
4. When you do use this bus stop, how often would you make use of one of the shops in the town centre?

In total 203 commuters were interviewed during the weekday and 56 during the weekend. 25 commuters declined to take part in the survey which equals an 89% success rate.

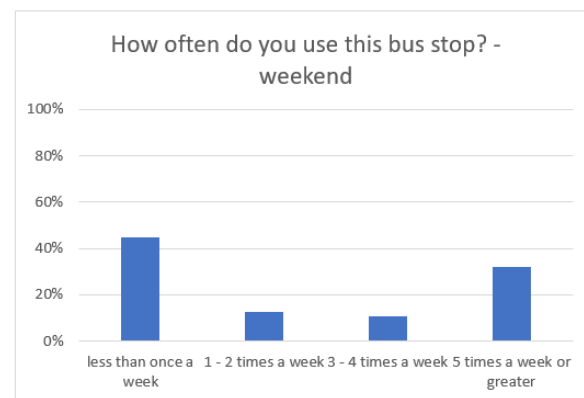
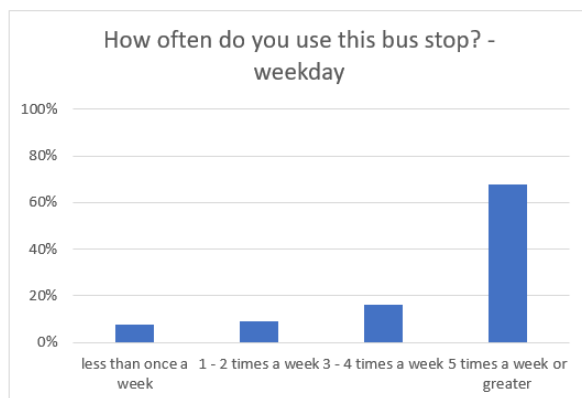
During the interpeak, only three commuters were observed boarding the bus to travel southbound and therefore excluded from the results.

How often do you use this bus stop? - weekday

	AM Peak (7am to 10am)	%age	Inter Peak (11am to 1pm)	%age	Total	%age
less than once a week	11	7%	4	9%	15	7%
1 - 2 times a week	11	7%	7	16%	18	9%
3 - 4 times a week	25	16%	8	18%	33	16%
5 times a week or greater	111	70%	26	58%	137	67%
Total	158	100%	45	100%	203	100%

How often do you use this bus stop? - weekend

	10am to 3pm	%age
less than once a week	25	45%
1 - 2 times a week	7	13%
3 - 4 times a week	6	11%
5 times a week or greater	18	32%
Total	56	100%



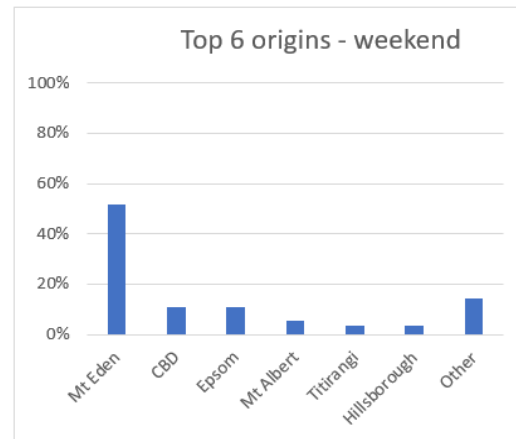
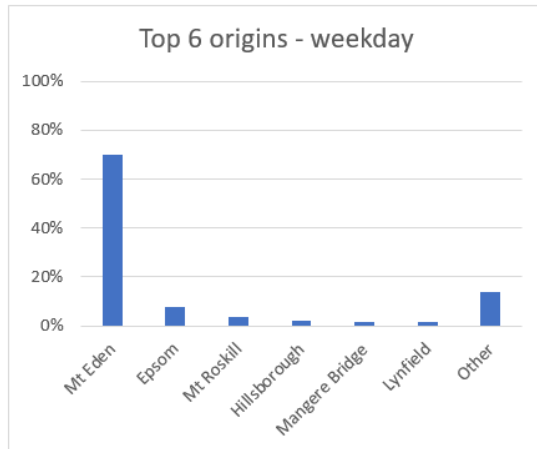
During the weekday 67% of commuters said they use the northbound bus stop 5 times a week or greater. During the weekend this number dropped to 32%. The most common answer during the weekend was less than once per week, 42%

Top 6 origins - weekday

	AM and Inter Peak	%age
Mt Eden	142	70%
Epsom	16	8%
Mt Roskill	7	3%
Hillsborough	4	2%
Mangere Bridge	3	1%
Lynfield	3	1%
Other	28	14%
Total	203	

Top 6 origins - weekend

	AM and Inter Peak	%age
Mt Eden	29	52%
CBD	6	11%
Epsom	6	11%
Mt Albert	3	5%
Titirangi	2	4%
Hillsborough	2	4%
Other	8	14%
Total	56	



During the weekday 78% of commuters indicated they started their journey from Mt Eden or Epsom compared to 63% of commuters on the weekend.

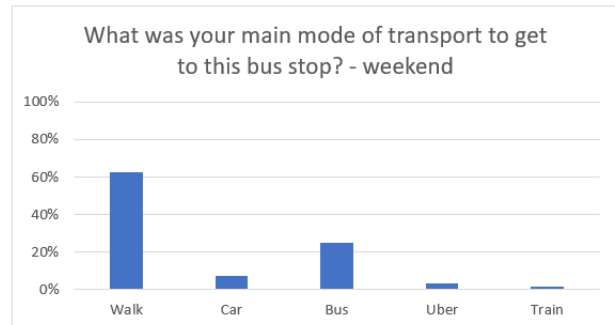
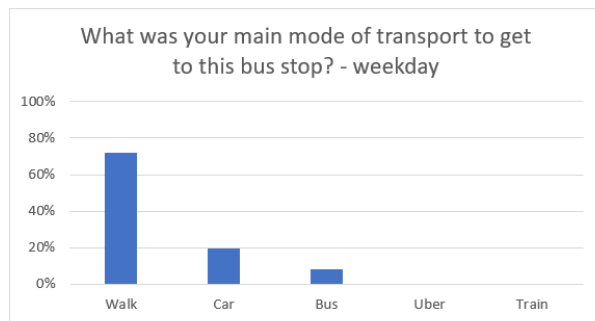
A full breakdown by suburb is in the appendix below.

What was your main mode of transport to get to this bus stop? - weekday

	AM Peak (7am to 10am)	%age	Inter Peak (11am to 1pm)	%age	Total	%age
Walk	112	71%	34	76%	146	72%
Car	37	23%	3	7%	40	20%
Bus	9	6%	8	18%	17	8%
Uber	0	0%	0	0%	0	0%
Train	0	0%	0	0%	0	0%
Total	158		45		203	

What was your main mode of transport to get to this bus stop? - weekend

	10am to 3pm	%age
Walk	35	63%
Car	4	7%
Bus	14	25%
Uber	2	4%
Train	1	2%
Total	56	



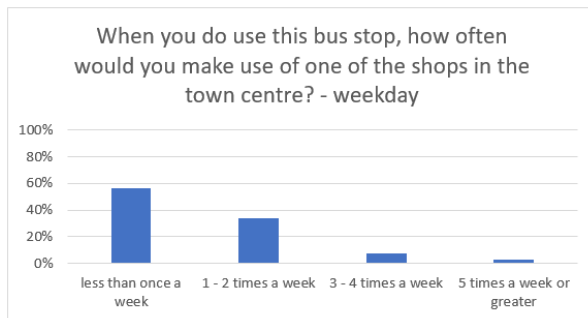
During the weekday and weekend, the main mode of transport to arrive at the bus stop was walking, 72% and 63% respectively. Transport by car during the weekday was the second most popular – 20%, compared to during the weekend where bus was the second most popular – 25%.

When you do use this bus stop, how often would you make use of one of the shops in the town centre? - weekday

	AM Peak (7am to 10am)	%age	Inter Peak (11am to 1pm)	%age	Total	%age
less than once a week	87	55%	27	60%	114	56%
1 - 2 times a week	53	34%	16	36%	69	34%
3 - 4 times a week	14	9%	1	2%	15	7%
5 times a week or greater	4	3%	1	2%	5	2%
Total	158		45		203	

When you do use this bus stop, how often would you make use of one of the shops in the town centre? - weekend

Row Labels	10am to 3pm	%age
less than once a week	41	73%
1 - 2 times a week	13	23%
3 - 4 times a week	2	4%
5 times a week or greater	0	0%
Total	56	



The majority of commuters stated they make use of one of the shops at least once a week, 56% during the weekday and 73% during the weekend.

Anecdotal, approximately 50% indicated this included a visit to the dairy to top up their AT Hop card.

4.0 Appendices

Appendix A – Video Clip log

Video Clip log

Clip	Description	Start	End	Duration
1	Bus went through late orange	07:58:04	07:58:20	00:00:15
2	Bus went through late orange	08:02:16	08:02:26	00:00:10
3	Bus stopped over pedestrian crossing and intersection	08:08:04	08:08:59	00:00:54
4	Bus stopped over pedestrian crossing and intersection	08:10:13	08:10:45	00:00:31
5	Bus went through late orange	08:14:44	08:14:55	00:00:11
6	Bus stopped over pedestrian crossing	08:20:54	08:21:19	00:00:25
7	Bus stopped over limit line	08:39:50	08:41:02	00:01:11
8	Bus stopped over pedestrian crossing and intersection	08:50:16	08:50:35	00:00:18
9	Bus stopped over pedestrian crossing	09:37:36	09:38:34	00:00:58
10	Bus stopped over pedestrian crossing	09:43:14	09:43:37	00:00:22
11	Bus stopped over pedestrian crossing	09:44:56	09:45:36	00:00:40
12	Bus stopped over pedestrian crossing	10:04:13	10:04:32	00:00:18
13	GSV used bus stop, caused small queue	10:35:57	10:37:15	00:01:18
14	Bus stopped over pedestrian crossing	14:03:30	14:04:15	00:00:44
15	Bus stopped over pedestrian crossing	14:07:47	14:08:23	00:00:36
16	Bus stopped over pedestrian crossing	15:35:07	15:35:43	00:00:35
17	Bus went through late orange	15:59:39	15:59:46	00:00:07
18	Bus went through late orange	16:01:27	16:01:44	00:00:17
19	Bus went through late orange	16:38:29	16:38:45	00:00:15
20	Bus went through late orange	16:42:41	16:42:51	00:00:09
21	Bus stopped over pedestrian crossing and went through late orange	16:46:36	16:46:59	00:00:22
22	Bus went through late orange	16:54:48	16:55:01	00:00:13
23	Bus went through late orange	16:56:54	16:57:06	00:00:12
24	Bus went through late orange	17:03:10	17:03:18	00:00:07
25	Bus went through late orange	17:28:01	17:28:19	00:00:18
26	Bus stopped over pedestrian crossing and intersection	17:38:27	17:39:10	00:00:42
27	Bus stopped over pedestrian crossing	17:48:37	17:49:17	00:00:40
28	Bus stopped over pedestrian crossing	18:11:30	18:12:07	00:00:36

Appendix B – Detailed origin results

What suburb did your journey begin from? - weekday

	AM Peak (7am to 10am)	%age	Inter Peak (11am to 1pm)	%age	Total	%age
Mt Eden	108	68%	34	76%	142	70%
Epsom	15	9%	1	2%	16	8%
Mt Roskill	6	4%	1	2%	7	3%
Hillsborough	3	2%	1	2%	4	2%
Mangere Bridge	3	2%	0	0%	3	1%
Lynfield	3	2%	0	0%	3	1%
Three Kings	2	1%	0	0%	2	1%
Royal Oak	1	1%	1	2%	2	1%
Pakuranga	2	1%	0	0%	2	1%
Balmoral	2	1%	0	0%	2	1%
Sandringham	1	1%	1	2%	2	1%
Flatbush	2	1%	0	0%	2	1%
CBD	0	0%	2	4%	2	1%
Mangere	1	1%	1	2%	2	1%
Blockhouse Bay	1	1%	0	0%	1	0%
Waiheke Island	1	1%	0	0%	1	0%
Taupaki	1	1%	0	0%	1	0%
did not answer	1	1%	0	0%	1	0%
Papatoetoe	1	1%	0	0%	1	0%
Murrays Bay	0	0%	1	2%	1	0%
Avondale	1	1%	0	0%	1	0%
Newmarket	0	0%	1	2%	1	0%
Clendon	1	1%	0	0%	1	0%
Otara	1	1%	0	0%	1	0%
Grey Lynn	0	0%	1	2%	1	0%
Howick	1	1%	0	0%	1	0%
Total	158		45		203	

What suburb did your journey begin from? - weekend

	10am to 3pm	%age
Mt Eden	29	52%
CBD	6	11%
Epsom	6	11%
Mt Albert	3	5%
Titirangi	2	4%
Hillsborough	2	4%
Grey Lynn	2	4%
Newmarket	1	2%
Birkenhead	1	2%
Swanson	1	2%
Grafton	1	2%
Eden Terrace	1	2%
Greenlane	1	2%
Total	56	56

During any survey, the safety of the surveyor and members of the public comes first. Each survey has therefore been prepared to ensure safety and comfort. Please take time to read this briefing, which takes into account various hazards, and to ask any questions if you are unsure of any aspects.

Your responsibility as an employee is to do the following:

- Take no action that may harm you or others in the workplace
- Co-operate with all health and safety provisions agreed by management and employees
- Seek assistance or advice where the safe method of completing a job is not understood
- Correct or report any unsafe conditions or accidents which come to your attention

Before any survey:

- Read your briefings thoroughly and follow all instructions given to you for each survey. If you are in doubt about anything please ask your supervisor.
- Bring a fully charged cell phone and conserve your battery for communication purposes.
- Dress in appropriate clothing and bring sunhat/sunscreen/sunglasses/raincoat/umbrella to protect yourself from the weather.
- Bring adequate food and water (or money to buy this during breaks) to stay alert and hydrated.
- Arrive early to your survey site to give you enough time to get ready.

During any survey:

- You must wear your hi-viz vest and have it zipped up at all times. If name tags are provided for any survey, you must wear them in a visible location at all times.
- Stand or sit in a location that allows you to clearly see all traffic movements that you are to record. Do not sit too close to the curb (to reduce any roadside hazards involving oncoming traffic).
 - Whenever possible, stand under shelter, sit on a bench or bring a folding stool with you.
 - If you are sitting in your car, it is important that you park legally and in a place that does not interfere with the normal flow of traffic, and where you can see clearly in all directions.
- You must not stand on the road or within a vehicle's path under any circumstances unless directly instructed to do so by an Aleph supervisor.
- Should you need to cross the road or car park, you should use a pedestrian crossing, or any other pedestrian facility if one is available. You must never cross a motorway.
- Be attentive to oncoming foot traffic, particularly children and elderly people, and be ready to move out of the way if necessary.
- If you are walking around a parking area, stay on footpaths where possible and ensure that you cross maneuvering areas as if they were active carriageways, i.e. concentrate on crossing the road rather than continuing to count parked vehicles.
- You should not distract drivers, pedestrians or cyclists in any way – this includes jumping out in front of them, sounding your horn, driving carelessly or recklessly.
- Please be courteous with anyone who approaches you. However do not stop surveying - simply say that you are undertaking a traffic survey. If the person continues to talk to you or question

you please give them a copy of the notification letter provided and/or ask them to call the Aleph supervisor.

- You must always do as instructed by a supervisor. However if you feel your personal safety is at risk at any time, for any reason, or as any consequence of your supervisor's instructions, you must bring it to management's attention so that remedial action may be taken.
- You may be subject to a random site check to ensure that all safety requirements are being met.

In case of an emergency:

- Should an accident or sudden illness occur involving you or any other Aleph surveyor, stop surveying immediately. If you are not personally affected provide assistance to those who need help as best you can. The following list provides some basic steps to follow when confronting an emergency situation:
 - Ensure that no further hazards exist and that you don't put yourself or others at risk
 - Obtain assistance from emergency services on 111
 - Identify the injuries or illness, if possible
 - Notify the Aleph supervisor as soon as possible.

After any survey:

- Record any hazards that you observed during the day, so that safety processes can be strengthened.
- Ensure that you do not leave any belongings or litter at your survey site.
- Delivery your survey results to your supervisor or the Aleph office. If this cannot be done immediately, contact your supervisor to arrange a time for this to be done.

Survey Manager to complete:

Name, address and phone number of nearest medical facility to site:	Grey Lynn Family Medical Centre 543 Great North Road, Grey Lynn 1021 09-378 6827
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*Survey Manager, Project Manager or **Surveyor** to complete post-survey to inform future surveys:*

Identified Hazard	Required Action

I _____, acknowledge that I have read and understood these safety instructions.

Signed: _____ Date: _____