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Research Report Prepared for
Auckland Transport

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2015 Auckland Region Manual Cycle Monitor

- Franklin Ward -

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1.1 Introduction

The Need For Reliable Cycle Trip Data

Monitoring cycle movements and cycle traffic is important to Auckland Transport, to identify where investment may be needed to improve infrastructure for cycling. Cycle traffic data will also help Auckland Transport prioritise future funding through the Auckland Land Transport Programme[1].

This cycle monitoring gives precise cycle traffic information for a number of locations across the region, which can guide investment in infrastructure and other programmes. It also allows Auckland Transport to track progress against a quality baseline over the coming decade.

Manual Cycle Monitoring

Historically, manual cycle monitoring had been carried out in four of the seven Auckland region Territorial Authorities (TAs). However, each monitor had been undertaken using a different methodology[2]. This variability prevented the possibility of comparing the relative popularity of different sites across TA boundaries. In addition, each monitor programme took place at different times of the year, preventing comparability from location to location since factors such as weather, school/tertiary education holidays, seasonal variations and daylight savings each have an impact on the numbers of cyclists. Even within TAs, inconsistencies as to when counts took place from year to year prevented robust comparability over time.

Through the Regional Cycle Monitoring Plan, it was proposed that these manual counts be regionally aligned to ensure better regional consistency. Ideally, cycle count monitoring would be carried out at the same time each year across the region, applying a standard methodology.

[1] Auckland Regional Transport Authority (2006) *Regional Cycle Monitoring Plan (Provisional Guidelines)*

[2] For example, Manukau and North Shore cities' monitors took place at the same morning and evening peak times, while Auckland city's differs by one hour for the evening peak, and Waitakere's differs for both peaks.

As outlined in the Regional Cycle Monitoring Plan, a consistent methodology would ensure that:

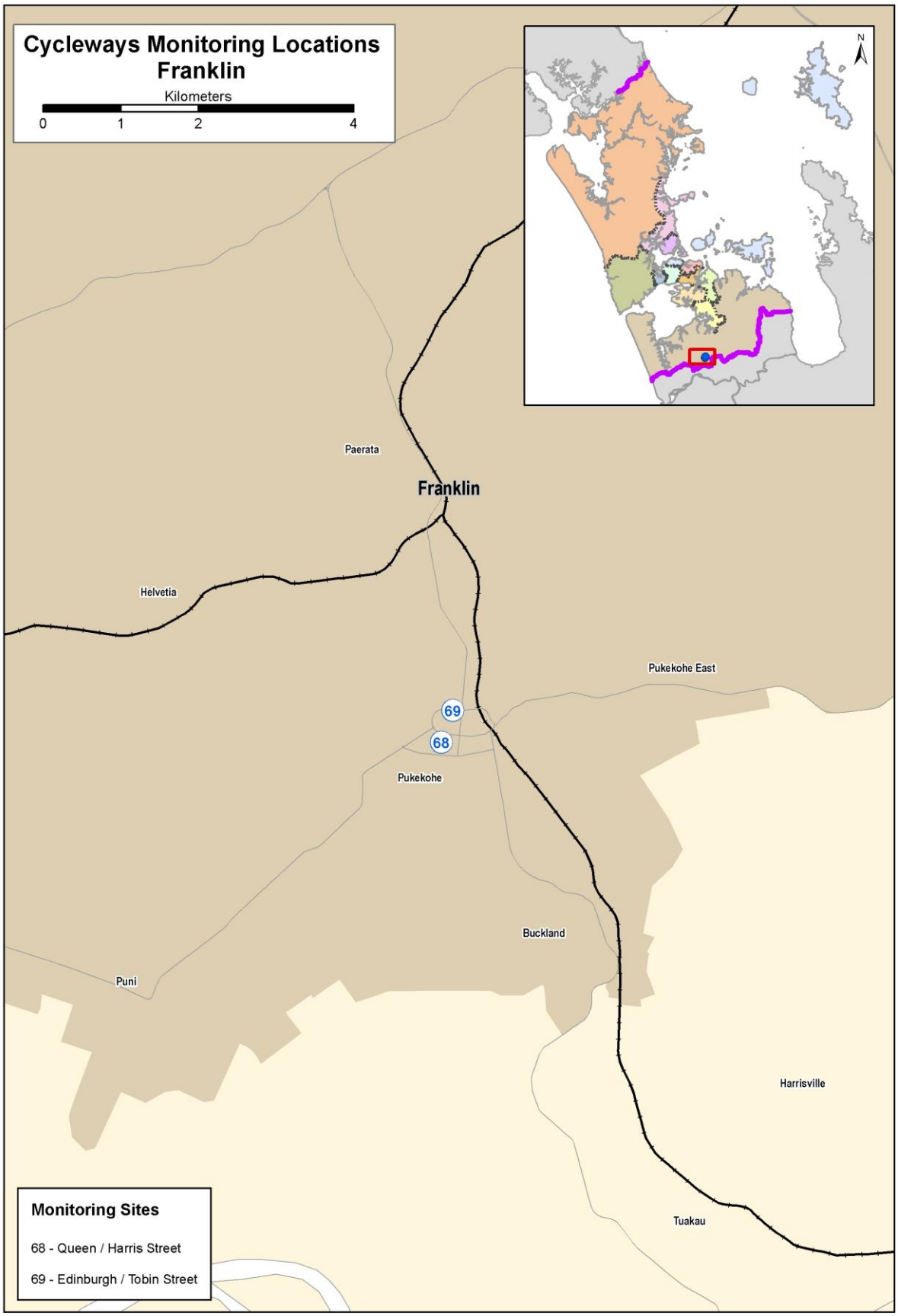
- standard monitoring days are used – that is, school and tertiary holidays, and statutory holidays are excluded and that monitoring preferably takes place at the same time each year to enable reliable year-on-year comparisons to be made. Decisions about whether cycle counts take place on weekdays and weekends would be made at the outset;
- a consistent set of times are used for monitoring, for the morning, evening and inter-peak periods; and
- a consistent method is used for monitoring direction and location of cyclists, including monitoring how many are on the footpath.

This report presents results from manual cycle counts conducted at two sites in the Franklin ward following a standardised methodology. Results are presented site-by-site, as well as being aggregated to a ward and region level. For sites also monitored in previous years, comparative results are provided.

Important Note: This report provides the results of manual cycle monitoring conducted at two pre-determined sites in the Franklin ward only. Site-by-site results and ward summaries for all other Auckland region wards have been provided in separate documents. It is strongly recommended that this report be read in conjunction with the Regional Summary document, which provides aggregated data for the region, as well as a regional comparison of results.

Figure 1.1 shows the locations of the monitoring sites in the Franklin ward.

Figure 1.1: 2015 Cycle Monitoring Locations in Franklin Ward



1.2 Methodology

Manual cycle counts have been conducted using a standardised methodology across all sites. This methodology is outlined below.

Choice of Sites

Decisions as to which sites were chosen for cycle counts were guided by the planned developments for the Regional Cycle Network.

Manual counts were undertaken at 85 different sites throughout the region. Sites were distributed by ward as follows:

- Albany 15 sites
- Albert-Eden–Roskill 11 sites
- Franklin 2 sites
- Howick 5 sites
- Manukau 10 sites
- Manurewa-Papakura 4 sites
- Maungakiekie-Tamaki 7 sites
- North Shore 8 sites
- Orakei 3 sites
- Waitakere 13 sites
- Waitemata and Gulf 10 sites
- Whau 4 sites

(Note: Seven sites lie on the border of two wards. These sites have been included in both ward reports).

Monitoring Times

Time Of Day

Manual counts in the morning peak were conducted between 6:30 and 9:00 am, with manual counts in the evening peak conducted between 4:00pm and 7:00pm.

Day Of Week

Previous experience conducting cycle and other traffic manual counts has found that these counts are best undertaken on either a Tuesday, Wednesday or Thursday as travel patterns on Mondays and Fridays tend to be more variable.

Time Of Year

To ensure consistency throughout the region, standard monitoring days were selected and agreed upon by Auckland Transport. In selecting the days, consideration was given to:

- the timing of school and tertiary holidays/the commencement of term time for tertiary institutions;
- the timing of statutory holidays (particularly Easter);
- the timing of Bikewise Month; and
- daylight saving times.

It was agreed that manual counts would commence on Tuesday the 3rd of March and be conducted on the first three fine days of the 3rd, 4th, 5th, 10th, 11thor 12thof March.

Counts were conducted on the following days:

- Tuesday 3rd March — Albert-Eden-Roskill, Orakei, Manurewa-Papakura, Maungakiekie-Tamaki, Whau
- Wednesday 4th March — Howick, Franklin, Manukau, Waitemata & Gulf
- Thursday 5th March — Albany, North Shore, Waitakere

Note: Counts in the morning and evening peaks took place on the same day for each site.

Weather and Daylight Conditions

To reduce the impact of weather conditions on cycle numbers, manual counts were conducted on predominantly fine days. In addition, if it rained during the morning peak, monitoring in the evening peak on that same day was also postponed, irrespective of the weather (as it can be assumed that cyclists' travel behaviour in the evening peak will have been influenced by decisions they made earlier in the day – for example, the decision to leave their bike at home and use public transport instead). Care was taken to ensure that all manual counts were conducted prior to the conclusion of daylight saving.

The weather on the three count days in 2015 was as follows:

Tuesday 3rd March

- Sunrise: 7:08am; Sunset: 7:58pm.
- Highest temperature: 25 degrees Celsius. Lowest temperature: 17 degree Celsius.
- Mostly fine weather with scattered cloud throughout the day.

Wednesday 4th March

- Sunrise: 7:09am; Sunset: 7:57pm.
- Highest temperature: 26 degrees Celsius. Lowest temperature: 19 degree Celsius.
- Fine with cloud throughout the morning shift. Cloudy in the evening with light rain recorded at some sites from 6:00pm.

Thursday 5th March

- Sunrise: 7:09am; Sunset: 7:55pm.
- Highest temperature: 27 degrees Celsius. Lowest temperature: 17 degree Celsius.
- Fine weather in the morning and evening shifts.

Conducting The Manual Counts

Scoping Visit

Gravitas visited each of the sites prior to the first monitoring shift. This scoping visit was used to map the roading network and to identify and map the range of directions that cyclists could travel through the site. This visit was also used to identify any particular features (such as designated cycle ways) or potential hazards that surveyors needed to be aware of when monitoring at the site. As part of the scoping visit, a recommended observation point was identified and mapped (this point chosen on the basis of offering the best trade-off between visibility and safety). The maps prepared for each site have been included in this report – just prior to the count results for each site.

As part of the scoping visit, a small number of sites were identified as requiring two or more surveyors to accurately capture all cycle movements (due predominantly to the complexity of the roading/cycleway network at the site or poor visibility at the intersection). Two surveyors were used at:

- Great South Road/Campbell Road/Main Highway, Greenlane (Site 21; Maungakiekie-Tamaki/Albert-Eden-Roskill wards).
- Beach Road/Browns Bay Road, Mairangi Bay (Site 45; Albany ward).
- Onehunga Harbour Road (Site 17, Maungakiekie-Tamaki ward).

Three surveyors were used at the ferry terminal site (Site 22; Waitemata and Gulf ward).

Briefing Session

Prior to their monitoring shift, all surveyors participated in a briefing session. The session covered:

- the overall aims of the Regional Cycle Monitoring Plan and how the manual monitoring fits with this Plan;
- the aims and purpose of the cycle monitoring and the process to be used;
- review of all materials supplied – how to interpret and use the maps, how to accurately record data on count sheets etc;
- health and safety issues; and
- general administration – shift times, collection and return of materials etc.

This session was interactive, with surveyors being encouraged to ask questions and seek further explanation on issues they were unsure about. Surveyors were also provided with a copy of the briefing notes for reference during their shifts. During the briefing session, all surveyors were also required to conduct a "practice count" for 20 minutes at the Ponsonby Road/Karangahape Road site.

Conducting The Manual Counts

Each site was assigned to a surveyor, who was issued with a map that showed the range of movements a cyclist could make through that site. In addition to the map, surveyors were issued with a clipboard, a safety vest and a letter identifying them as a member of a Gravitas research team[3].

During their shift the surveyor collected data on:

- The total number of cyclists[4] passing through the intersection;
- The direction in which cyclists are travelling (using the numbers on the map provided);
- The time at which cyclists pass through the intersection (to the nearest minute);
- Whether cyclists are school children or adults (determined by whether they are wearing a school uniform or clearly of school age);
- Whether cyclists are wearing a helmet;
- Gender of the cyclist *(collected for the first time in 2011)*; and
- Whether cyclists are riding on the road, footpath or designated off- road cycleway[5].

[3] This letter also contained contact details for Auckland Transport and Gravitas Research and Strategy for any member of the public or local business owners who had queries about the work being undertaken.

[4] To ensure consistency across all surveyors, a "cycle" was defined as being non-motorised, with one or two wheels and requiring pedalling to make it move. Note that this definition did not include scooters.

[5] Note: For the purpose of this project, an off-road cycleway is defined as designated off-road path for cycles. This includes exclusive cycle paths, separated paths (such as the footpath on Tamaki Drive) and shared-use paths (available to cyclists and pedestrians). It excludes on-road cycle lanes (that is, designated lanes marked on the road).

Since 2009, surveyors have been required to indicate those cyclists riding together in groups of three or more. To be consistent with previous years, each member of these 'pelotons' has been included in the site-level analysis as a separate cyclist movement. However, where pelotons were observed, the number of cyclists and the time they passed through the site has been given in the report, along with a percentage figure indicating what share of all cyclists at the site were riding as groups.

In addition, where cyclists were recognisable, surveyors were instructed to record each cyclist no more than three times during a single shift, irrespective of how many movements they actually made through the site. Surveyors noted where and when this occurred.

Data was collected on the weather and daylight conditions at the site. Surveyors were also encouraged to record any information that may have affected cycle numbers or cycle movements at the site – for example, construction or maintenance works being conducted on the cycle way or road works at the intersection.

A team of supervisors checked that surveyors were in the correct position and recording data accurately.

Data Analysis

Upon their return to Gravitas, all count sheets were checked for completeness. The raw data was then entered into Excel for logic checking, analysis and graphing.

Annual Average Daily Traffic (AADT) Analysis

It is acknowledged that the number of cyclists using a site varies by time of day, day of the week and week of the year, and therefore it is not valid to simply multiply manual count data collected over a certain (relatively brief) period out to represent a full day, week or year. However, according to Land Transport New Zealand[6], Annual Average Daily Traffic (AADT) analysis can be used to estimate the average annual daily flow of cyclists from manual and automated cycle counts conducted at one point in time. The procedure involves deriving scale factors, which account for the time of day, day of the week, and week of the year (which varies with school holidays and season) as well as weather conditions on the count day. These scale factors are then applied to the count data collected to give an AADT estimate.

Using the manual count figures for each site, it has been possible to provide the average annual daily traffic flow of cyclists (cycling AADT) estimate for each site. AADT scale factors (morning and afternoon) were provided by ViaStrada[7].

[6] http://www.ltsa.govt.nz/road-user-safety/walking-and-cycling/cycle-network/appendix2.html
[7] ViaStrada is a traffic engineering and transport planning consultancy based in Christchurch, New Zealand.

By applying the scale factor to the manual count data for each morning and afternoon peak, and averaging the two figures, an average annual daily cyclist flow figure has been obtained for each site. *A more comprehensive overview of the methodology used for this analysis is provided in Appendix One.*

Note: ViaStrada acknowledge that, as cycling volumes fluctuate from day to day depending on the weather, this method should be used with caution. They note that ideally an estimate should be achieved based on the average of the results of several counts, rather than counts from a single day, as in this study[8]*.*

School Bike Shed Counts

As stated above, manual cycle counts were undertaken during the morning (6:30am to 9:00am) and evening (4:00pm to 7:00pm) peaks. However, it was noted in the design phase of the project that the timing of the evening peak monitoring would mean that the greatest share of students cycling home from school will be excluded from the counts. This was identified as a potential weakness of the monitoring proposed.

Therefore, it was suggested that information on numbers of students cycling to and from intermediate and secondary schools across the region could be collected by counting the number of bikes in school bike sheds on a pre-determined day. Rates of cycling among students could also be assessed by calculating the number of bikes counted as a share of the school's total roll (or share of the school's roll eligible to cycle).

Initially it was decided that school bike shed monitoring would focus only on intermediate and secondary schools (and composite schools which included children of intermediate and secondary school age), since children travelling to primary schools are considered by many parents (and schools) as too young to cycle to school. Note however that, to ensure all children of intermediate school age cycling to school were captured, full primary schools (those catering for Years 1 to 8) were included in the school bike shed count from 2011.

Based on feedback from some schools in 2013, from 2014 a count of the number of students who use (non-motorised) scooters to get to and from school was also included in the school bike shed count.

[8] Appendix 2 of the Cycle Network and Route Planning Guide (CNRPG) (Land Transport New Zealand, 2004)

Methodology

The following process was used to collect the school bike shed count data.

1. Gravitas designed an information sheet that was distributed to most full primary, intermediate, secondary and composite (Years 1 to 13) schools in the Auckland region via email (note a small number of schools were omitted due to the special nature of the students e.g. boarding schools, special needs schools). This sheet was designed in consultation with Auckland Transport to ensure all necessary information was collected.

2. This email was then sent to all eligible schools in Auckland region (n=300) to notify them of the bike shed count and to let them know what they would be required to do. Included in this email was a link to an online count form.

3. To enhance the comparability of the school bike shed data with that of the regional cycle monitor, Tuesday 3rd March was designated as the bike shed count day. (Most schools reported that they undertook the count on this day).

4. Once the school bike shed count had been completed, schools completed the online count form and submitted it electronically to Gravitas. Gravitas contacted all participating schools who had not returned their sheets after five working days, first by email (two rounds) and then by telephone. All count forms were checked for completeness before being data-entered into Excel. In 2015, 201 responses were received, a response rate of 64 per cent. (This compares with 88 per cent in 2014).

Reporting

The data from the manual counts has been presented at a site-by-site, TA and regional level.

Manual Counts - Site Level Reporting

The following results have been reported for each site:

- Total number of movements through the intersection during each peak;
- Total number of movements through the intersection during each ten-minute interval during each peak;
- Number of cyclists making each directional movement through the intersection during each peak; and
- Share of cyclists through the intersection during each peak who are:
  - adults/school children
  - wearing a helmet/not wearing a helmet
  - male/female
  - riding on the road/riding on the footpath/riding on an off-road path

Manual Counts - Aggregated Reporting

Results have also been reported at an aggregate level (that is, summing up all sites) – by ward and across the region – to show the total number of cycle movements recorded (both overall and by ten-minute intervals) and the characteristics of the cyclists.

Bike Shed Counts

Results have been provided by school (along with notes explaining why counts for some schools may not be representative), as well as at a ward and regional level. Raw cycle numbers and a "cyclists as a share of total school roll" figure have both been provided. Separate scooter counts have also been provided.

1.3 Summary of Results

This summary contains the aggregated results of the two sites surveyed in the Franklin ward. It is split into four sections – a summary of results for the morning peak period (6:30am to 9:00am), a summary for the evening peak period (4:00pm to 7:00pm), a summary of aggregated results (morning and evening combined) and a summary of the results from the school bike shed counts.

While the summaries in this section are useful in giving an overall picture of cycling behaviour in the Franklin ward, they hide much of the specific details of cycling behaviour at individual sites. The site-specific data varies significantly from site to site, and can be found in Sections Two and Three of this report.

Note: Surveying in the Franklin ward was undertaken on Wednesday 4th of March, 2015. Sunrise was at 7:09am and sunset was at 7:57pm. The highest temperature was 26 degrees Celsius.

1.4 Morning Peak

Environmental Conditions

- The weather was fine but cloudy throughout the morning shift.
- There were no road works or accidents that may affect cycle counts.

Key Points

- A total of 25 cyclist movements were recorded across the two sites in the morning peak period (between 6:30am and 9:00am) in 2015. This represents a 25 per cent increase on the result for 2014 (20 movements).
- However, the share of cycle movements recorded at the two sites has decreased by 59 per cent since monitoring began seven years ago (61 movements recorded in 2007).
- The average volume of morning cyclist movements per site in the Franklin ward was 13 across the two sites monitored this year. This compares with an average of 10 movements in 2014.
- As in previous years, the busiest site in the morning peak is the intersection of Queen Street and Harris Street (18 cycle movements, up from 15 last year).

Table 1.1: Summary Of Morning Cyclist Movements

2007 – 2015 (n)

Site No.	*Locations*	*2007*	*2008*	*2009*	*2010*	*2011*	*2012*	*2013*	*2014*	*2015*	Change 14-15	Change 07-15
68	Queen/Harris Street	44	31	27	18	14	11	20	15	**18**	**20%**	**-59%**
69	Edinburgh/Tobin Street	17	16	15	17	11	7	9	5	**7**	**40%**	**-59%**
	Average per site	***31***	***24***	***21***	***18***	***13***	***9***	***15***	***10***	***13***	**30%**	**-58%**
	Total	**61**	**47**	**42**	**35**	**25**	**18**	**29**	**20**	**25**	**25%**	**-59%**

- Morning cyclist characteristics are shown in Table 1.2 below. Overall, 64 per cent of the cyclists were adults and the remaining 36 per cent were school-age children.
- Eighty-four per cent of all the cyclists across the Franklin ward sites were wearing a helmet, down from 95 per cent last year).
- Four in five of morning cyclists were males.
- This year, 68 per cent of the cyclists were riding on the footpath, up from 40 per cent in 2014.

Table 1.2: Summary of Morning Cyclist Characteristics

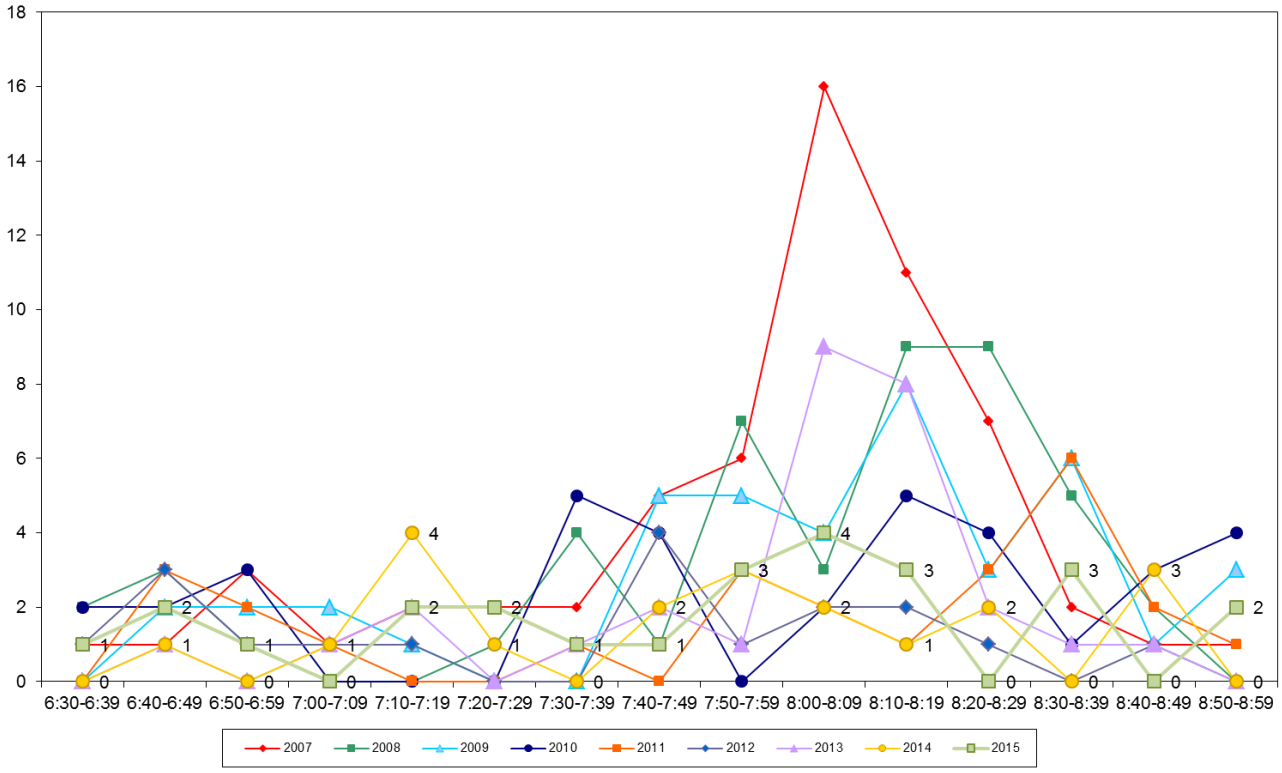
2007 – 2015 (%)

	2007	*2008*	*2009*	*2010*	*2011*	*2012*	*2013*	*2014*	*2015*	Change 14-15
Cyclist Type										
Adult	33	57	40	69	60	83	31	60	**64**	**4%**
School child	67	43	60	31	40	17	69	40	**36**	**-4%**
Helmet Wearing										
Helmet on head	93	91	79	80	92	50	90	95	**84**	**-11%**
No helmet	7	9	21	20	8	50	10	5	**16**	**11%**
Gender										
Male	-	-	-	-	80	89	83	90	**80**	**-10%**
Female	-	-	-	-	20	6	17	10	**16**	**6%**
Can't tell	-	-	-	-	0	5	0	0	**4**	**4%**
Where Riding										
Road	31	64	45	63	40	47	21	60	**32**	**-28%**
Footpath	69	36	55	37	60	53	79	40	**68**	**28%**
Base:	***61***	***47***	***42***	***35***	***25***	***18***	***29***	***20***	***25***	

- Figure 1.2 illustrates the total number of cyclists in the morning peak by time of movement. The volume of morning cycle movements remained low throughout the morning period, peaking slightly between 8:00am and 8:09am (a total of 4 movements across the 10-minute interval), after which the number of movements remains at three or lower over the rest of the monitoring period. Last year, the peak occurred almost one hour earlier, between 7:10am and 7:19am (4 movements over the 10-minute period).

Figure 1.2: Total Cyclist Frequency

Morning Peak 2007 – 2015 (n)



1.5 Evening Peak

Environmental Conditions

- The weather was fine at the start of the shift but cloudy by the end of the evening shift.
- There were no road works or accidents that may affect cycle counts.

Key Points

- A total of 27 cyclist movements were recorded across the two sites monitored in the evening peak period (between 4:00pm and 7:00pm) in 2015. This represents an 16 per cent decrease on last year's result.
- The number of cycle movements recorded was also down 64 per cent from seven years ago (75 movements recorded in 2007).
- The average volume of evening cyclist movements per site in the Franklin ward was 14 movements, compared with 16 movements in 2014.
- Consistent with the previous year, the intersection of Queen Street and Harris Street continued to be the busiest in terms of the evening cyclists' activity, with 17 cycle movements recorded (down from 20 movements in 2014).

Table 1.3: Summary Of Evening Cyclist Movements

2007 – 2015 (n)

Site No.	*Locations*	*2007*	*2008*	*2009*	*2010*	*2011*	*2012*	*2013*	*2014*	*2015*	Change 14-15	Change 07-15
68	Queen/Harris Street	57	52	68	39	53	33	27	20	**17**	**-15%**	**-70%**
69	Edinburgh/Tobin Street	18	24	19	11	17	21	12	12	**10**	**-17%**	**-44%**
	Average per site	**38**	**38**	**44**	**25**	**35**	**27**	**20**	**16**	**14**	**-13%**	**-63%**
	Total	**75**	**76**	**87**	**50**	**70**	**54**	**39**	**32**	**27**	**-16%**	**-64%**

- Approximately two-thirds of the evening cyclists were school-age children (63 per cent, up significantly from 27 per cent in 2014).
- Eighty-five per cent of cyclists were wearing a helmet (up 4 percentage points from last year).
- The majority of evening cyclists (93 per cent) were male.
- The share of cyclists riding on the footpath was 74 per cent, up from 54 per cent in the previous year.

Table 1.4: Summary of Evening Cyclist Characteristics

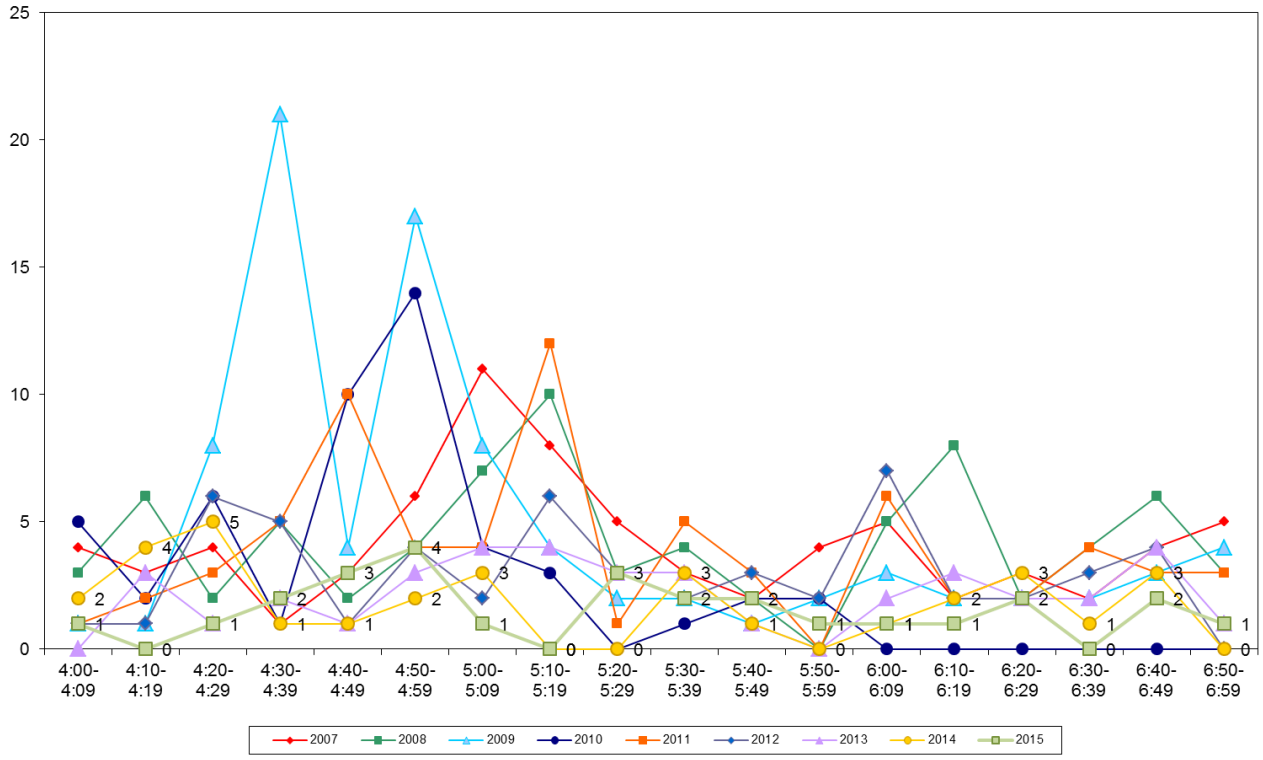
2007 – 2015 (%)

	2007	*2008*	*2009*	*2010*	*2011*	*2012*	*2013*	*2014*	*2015*	Change 14-15
Cyclist Type										
Adult	55	51	33	50	48	80	62	73	**37**	**-36%**
School child	45	49	67	50	52	20	38	27	**63**	**36%**
Helmet Wearing										
Helmet on head	64	63	85	78	77	67	74	81	**85**	**4%**
No helmet	36	37	15	22	23	33	26	19	**15**	**-4%**
Gender										
Male	-	-	-	-	90	81	97	85	**93**	**8%**
Female	-	-	-	-	10	15	3	10	**7**	**-3%**
Can't tell	-	-	-	-	0	4	0	5	**0**	**-5%**
Where Riding										
Road	40	43	24	38	31	50	54	44	**26**	**-18%**
Footpath	60	57	76	62	69	50	46	54	**74**	**20%**
Don't know	0	0	0	0	0	0	0	2	**0**	**-2%**
Base:	***75***	***76***	***87***	***50***	***70***	***54***	***39***	***32***	***27***	

- The overall pattern of cyclist volumes by time of movement in the evening has been illustrated in Figure 1.3. Similar to last year, evening cyclist volume was quite low, with a small peak of four movements between 4:50pm and 4:59pm.

Figure 1.3: Total Cyclist Frequency

Evening Peak 2007 – 2015 (n)



1.6 Aggregated Total

- A total of 52 cyclist movements were recorded across the two monitored sites in 2015, the same as last year's monitor result. However, the volume has decreased by nearly two-thirds (62 per cent) when compared with 2007.
- Consistent with historical data, the busiest site was the intersection of Queen Street and Harris Street with a total of 35 movements recorded.

Table 1.5: Summary Of Total Cyclist Movements

2007 – 2015 (n)

Site No.	*Locations*	*2007*	*2008*	*2009*	*2010*	*2011*	*2012*	*2013*	*2014*	*2015*	Change 14-15	Change 07-15
68	Queen/Harris Street	101	83	95	57	67	44	47	35	**35**	**0%**	**-65%**
69	Edinburgh/Tobin Street	35	40	34	28	28	28	21	17	**17**	**0%**	**-51%**
	Average per site	***68***	***62***	***65***	***43***	***48***	***36***	***34***	***26***	***26***	**0%**	**-62%**
	Total	**136**	**123**	**129**	**85**	**95**	**72**	**68**	**52**	**52**	**0%**	**-62%**

- Overall cyclist characteristics have been illustrated in Table 1.6. In total, half of the cyclists were adults (a noticeable 21 percentage point decrease from 2014).
- Eighty-five per cent of cyclists were wearing a helmet (stable from 84 per cent last year).
- Eighty-seven per cent of cyclists observed in the Franklin ward were male (stable from 86 per cent last year).
- About three-quarter of the cyclists were riding on the footpath (a 19 percentage point increase from last year).

Table 1.6: Summary of Total Cyclist Characteristics

2007 – 2015 (%)

	2007	*2008*	*2009*	*2010*	*2011*	*2012*	*2013*	*2014*	*2015*	Change 14-15
Cyclist Type										
Adult	45	54	36	58	51	81	49	71	**50**	**-21%**
School child	55	46	64	42	49	19	51	29	**50**	**21%**
Helmet Wearing										
Helmet on head	77	74	83	79	81	62	81	84	**85**	**1%**
No helmet	23	26	17	21	19	38	19	16	**15**	**-1%**
Gender										
Male	-	-	-	-	87	83	91	86	**87**	**1%**
Female	-	-	-	-	13	13	9	10	**11**	**1%**
Can't tell	-	-	-	-	0	4	0	4	**2**	**-2%**
Where Riding										
Road	36	51	31	48	33	49	40	47	**29**	**-18%**
Footpath	64	49	69	52	67	51	60	52	**71**	**19%**
Don't know	0	0	0	0	0	0	0	1	**0**	**-1%**
Base:	***136***	***123***	***129***	***85***	***95***	***72***	***68***	***52***	***52***	

1.7 Average Annual Daily Traffic (AADT) Estimate

Note: A discussion of Average Annual Daily Traffic Estimates is provided in Section 1.2. A full description of the tool, the calculation used, and the limitations of the estimates are provided in Appendix One. Readers are encouraged to review these sections in conjunction with the data presented here.

- Table 1.7 provides the comparative AADT estimates for each site, based on the average of morning and evening peak AADT calculations.
- The highest AADT is at Queen/Harris/Wesley Street (51 daily movements, stable from 50 movements in 2014, but down significantly - by 65 per cent - since monitoring began in 2007).

Table 1.7: Dry Weather AADT Estimates Based on Morning and Evening Cyclist Movements 2007 – 2015 (n)

Site No.	*Locations*	*2007 AADT*	*2008 AADT*	*2009 AADT*	*2010 AADT*	*2011 AADT*	*2012 AADT*	*2013 AADT*	*2014 AADT*	*2015 AADT*	Change 14-15	Change 07-15
68	Queen/Harris Street	146	119	135	81	94	62	68	50	**51**	**2%**	**-65%**
69	Edinburgh/Tobin Street	51	58	49	41	40	40	30	24	**24**	**0%**	**-53%**

1.8 Ferry Wharf Bike Count Summary

Key Points

- Two cycles were observed at the Pine Harbour Ferry Wharf in the morning. This compares with 7 in 2014.

1.9 School Bike Shed Count Summary

Cycle Counts

- Among the surveyed schools, of those eligible to cycle to school, on average, three per cent of students are cycling to their schools, up from 2 per cent in 2014.
- Beachlands School reported the highest share of cyclists – 35 per cent of all eligible students currently cycling to school, up from 17 per cent last year.
- In total, n=113 students from the responding schools were reported to be cycling to school.
- Of the 21 schools that responded, 11 (52 per cent) had no students cycling to school.
- Of the 21 schools that participated in the count in both 2014 and 2015, 7 (33 per cent) reported an increase in the share of students cycling, the most notable increase being Beachlands School (35 per cent, up from 17 per cent)
- Of the 21 schools that participated in the count in both 2014 and 2015, one school (5 per cent) reported a decrease in the share of students cycling.

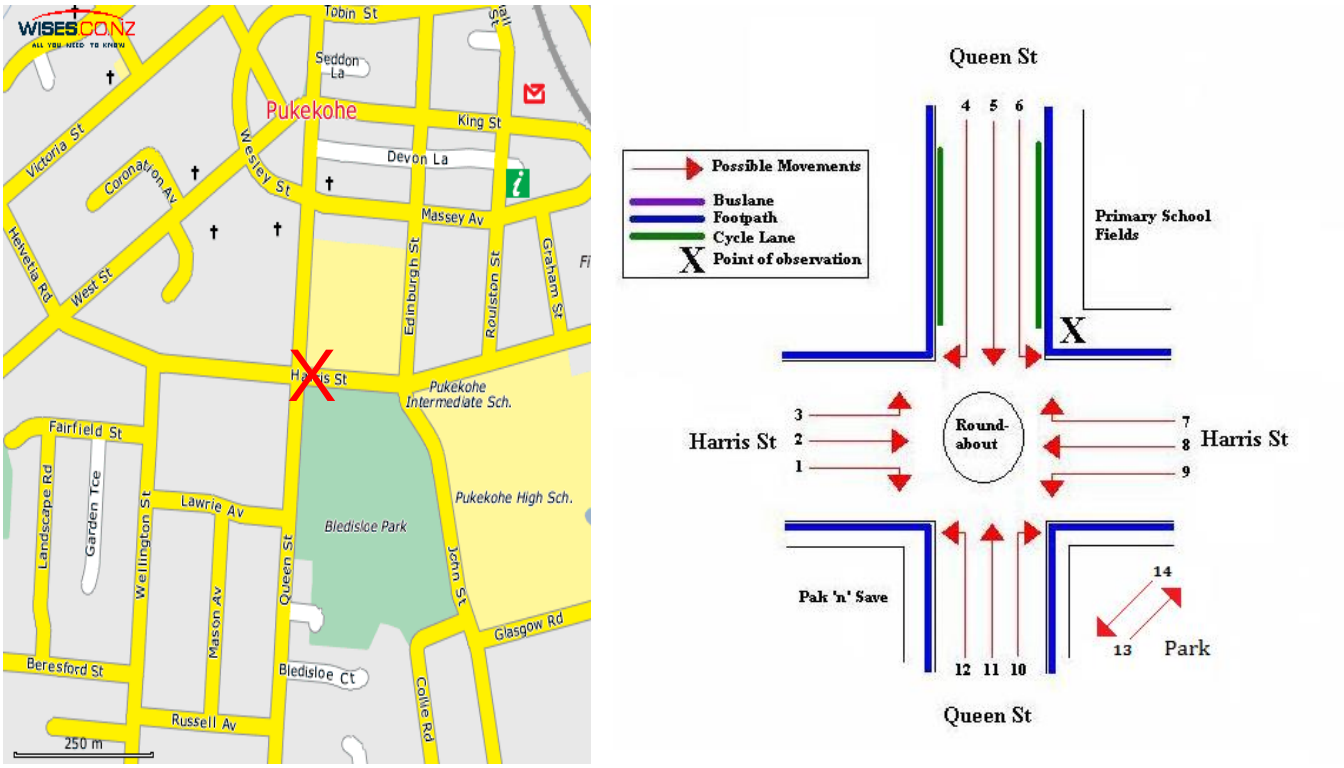
Scooter Counts

- Among the surveyed schools, of those eligible to scooter, on average, four per cent of students are scooting to their schools, unchanged from 2014.
- Beachlands School reported the highest share of scooters – 20 per cent of all eligible students currently scooting to school. However, this share is down from 40 per cent last year.
- In total, n=145 students from the responding schools were reported to be scooting to school.

2. QUEEN STREET/HARRIS STREET, PUKEKOHE (SITE 68)

Figure 2.1 shows the possible cyclist movements at this intersection.

Figure 2.1: Cycle Movements: Queen/Harris Street



Note: Movements 13 and 14 were added in 2014 to take account of cyclists riding through Bledisloe Park.

2.1 Site Summary

	Raw Counts			AADT
	Morning Peak	Evening Peak	Total	Total
2007	44	57	101	146
2008	31	52	83	119
2009	27	68	95	135
2010	18	39	57	81
2011	14	53	67	94
2012	11	33	44	62
2013	20	27	47	68
2014	15	20	35	50
2015	**18**	**17**	**35**	**51**

2.2 Morning Peak

Environmental Conditions

- The weather was fine but cloudy throughout the morning shift.
- There were no road works or accidents that may affect cycle counts.

Key Points

- Eighteen cycle movements were recorded in the morning peak, up from 15 movements last year.
- The most common movement in the morning was turning left from Harris Street into Queen Street and heading north (Movement 3 = 6 cyclists).

Table 2.1: Morning Cyclist Movements

Queen/Harris Street 2007 – 2015 (n)

Movement	*2007*	*2008*	*2009*	*2010*	*2011*	*2012*	*2013*	*2014*	*2015*	Change 14-15
1	0	0	0	0	1	1	0	0	**0**	**0**
2	16	7	13	7	2	2	2	2	**5**	**3**
3	12	7	2	2	3	2	3	4	**6**	**2**
4	2	0	0	0	0	0	3	0	**3**	**3**
5	1	0	1	1	1	3	3	0	**2**	**2**
6	1	1	1	0	0	1	1	3	**0**	**-3**
7	0	1	0	0	1	1	0	1	**1**	**0**
8	3	2	0	1	0	0	0	1	**0**	**-1**
9	0	1	0	0	0	0	0	0	**0**	**0**
10	3	5	5	6	3	1	5	0	**0**	**0**
11	4	7	5	1	3	0	3	3	**0**	**-3**
12	2	0	0	0	0	0	0	0	**0**	**0**
13	-	-	-	-	-	-	-	1	**1**	**0**
14	-	-	-	-	-	-	-	0	**0**	**0**
Total	**44**	**31**	**27**	**18**	**14**	**11**	**20**	**15**	**18**	**3**

- Over the morning peak, half of the cyclists passing by this site were adults, this share similar to 2014 (53 per cent).
- Eighty-three per cent of the cyclists were wearing a helmet (a decrease from 93 per cent in 2014).
- Eighty-three percent of the cyclists at this site were male (down slightly from 87 per cent last year).
- In contrast to last year, the share of cyclists riding on the footpath has increased notably (72 per cent, up 25 percentage points from last year).

Table 2.2: Morning Cyclist Characteristics

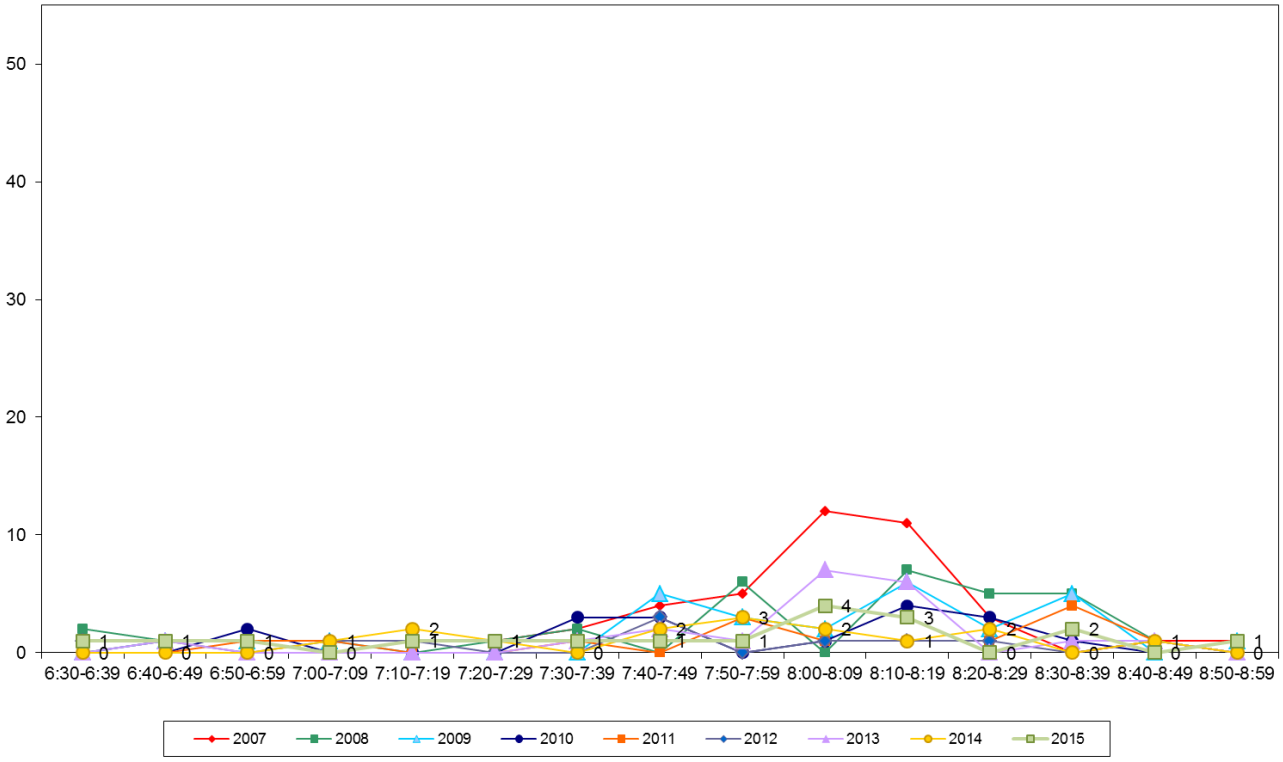
Queen/Harris Street 2007 – 2015 (%)

	2007	*2008*	*2009*	*2010*	*2011*	*2012*	*2013*	*2014*	*2014*	Change 14-15
Cyclist Type										
Adult	27	58	37	61	43	82	20	53	**50**	**-3**
School child	73	42	63	39	57	18	80	47	**50**	**3**
Helmet Wearing										
Helmet on head	93	94	74	72	100	36	90	93	**83**	**-10**
No helmet	7	6	26	28	0	64	10	7	**17**	**10**
Gender										
Male	-	-	-	-	86	91	90	87	**83**	**-4**
Female	-	-	-	-	14	9	10	13	**11**	**-2**
Can't tell	-	-	-	-	0	0	0	0	**6**	**6**
Where Riding										
Road	25	58	48	61	36	50	15	53	**28**	**-25**
Footpath	75	42	52	39	64	50	85	47	**72**	**25**
Base:	***44***	***31***	***27***	***18***	***14***	***11***	***20***	***15***	***18***	

- The volume of morning cycle movements was low throughout the shift, with a small peak between 8:00am and 8:09am (4 cycle counts).

Figure 2.2: Morning Peak Cyclist Frequency

Queen/Harris Street 2007 – 2015 (n)



2.3 Evening Peak

Environmental Conditions

- The weather was fine at the start but turned cloudy by the end of the shift.
- There were no road works or accidents that may affect cycle counts.

Key Points

- The total number of cycle movements recorded at the Queen/Harris Street intersection in the evening has decreased from 20 movements in 2014 to 17 movements this year.
- The most common movement in the evening was travelling west along Harris Street (Movement 8 = 5 cyclists).
- The most noticeable change in terms of evening cyclist movements was reported for Movement 9 – turning left from Harris Street into Queen Street heading southwards (down 4 cyclists).

Table 2.3: Evening Cyclist Movements

Queen/Harris Street 2007 – 2015 (n)

Movement	*2007*	*2008*	*2009*	*2010*	*2011*	*2012*	*2013*	*2014*	*2015*	Change 14-15
1	0	2	0	0	7	0	4	0	**0**	**0**
2	1	3	1	0	4	7	4	1	**3**	**2**
3	6	4	3	0	0	3	1	0	**0**	**0**
4	6	4	2	0	3	3	0	0	**0**	**0**
5	17	8	4	6	8	4	1	4	**1**	**-3**
6	0	2	0	1	0	1	2	0	**2**	**2**
7	0	2	0	4	0	0	0	1	**0**	**-1**
8	16	8	6	7	3	3	6	3	**5**	**2**
9	0	5	50	13	5	5	3	4	**0**	**-4**
10	2	1	0	3	0	1	2	1	**0**	**-1**
11	8	8	2	5	11	6	1	2	**1**	**-1**
12	1	5	0	0	12	0	3	0	**2**	**2**
13	-	-	-	-	-	-	-	0	**2**	**2**
14	-	-	-	-	-	-	-	3	**1**	**-2**
Don't know	0	0	0	0	0	0	0	1	**0**	**-1**
Total	**57**	**52**	**68**	**39**	**53**	**33**	**27**	**20**	**17**	**-3**

- The majority of cyclists using the Queen/Harris Street intersection were school-age children (76 per cent, a notable 61 percentage point increase from last year).
- Eighty-eight per cent of cyclists at this site were wearing a helmet (up from 70 per cent in 2014).
- Nearly all cyclists were male (94 per cent, compared with 85 per cent last year).
- Footpath riding continued to be more common than riding on the road (71 per cent, stable from 70 per cent last year).

Table 2.4: Evening Cyclist Characteristics

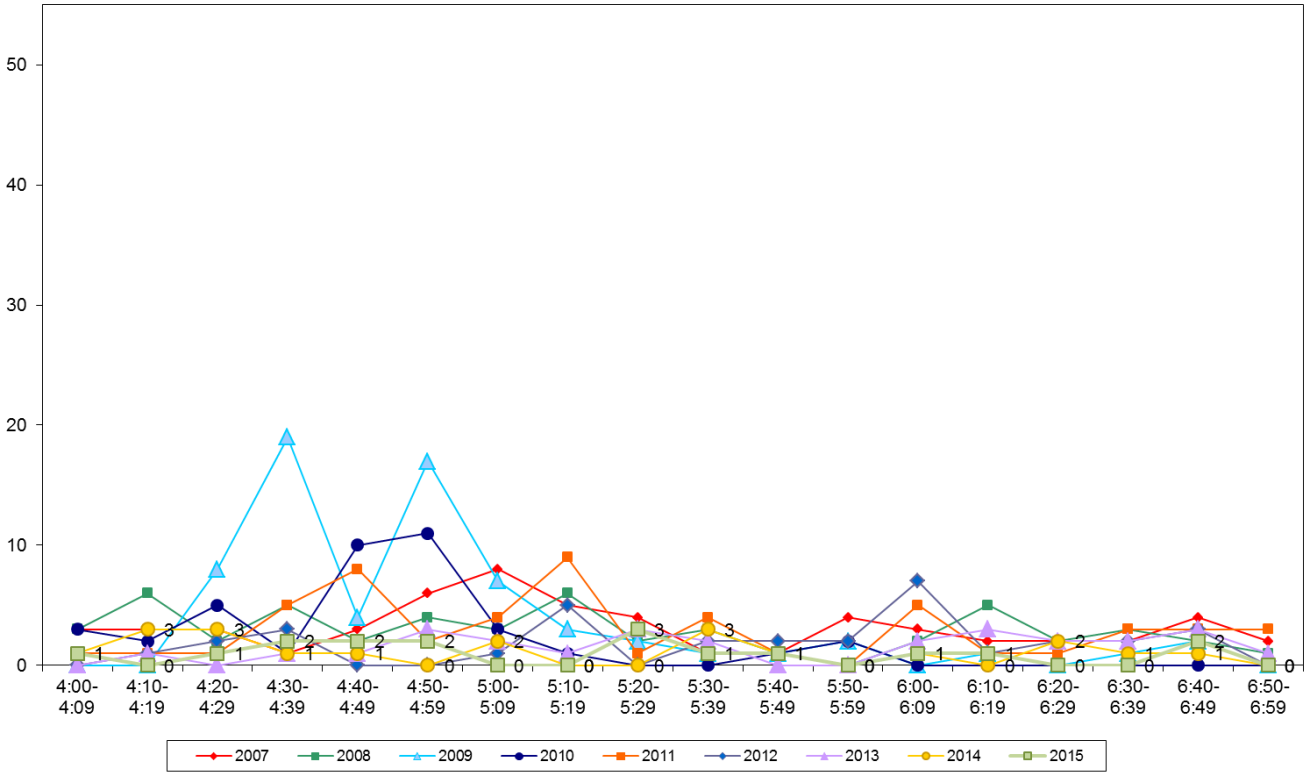
Queen/Harris Street 2007 – 2015 (%)

	2007	*2008*	*2009*	*2010*	*2011*	*2012*	*2013*	*2014*	*2014*	Change 14-15
Cyclist Type										
Adult	47	50	26	38	45	73	56	85	**24**	**-61**
School child	53	50	74	62	55	27	44	15	**76**	**61**
Helmet Wearing										
Helmet on head	60	67	93	77	72	67	63	70	**88**	**18**
No helmet	40	33	7	23	28	33	37	30	**12**	**-18**
Gender										
Male	-	-	-	-	94	79	96	85	**94**	**9**
Female	-	-	-	-	6	21	4	0	**6**	**6**
Can't tell	-	-	-	-	0	0	0	15	**0**	**-15**
Where Riding										
Road	35	42	15	26	26	39	41	25	**29**	**4**
Footpath	65	58	85	74	74	61	59	70	**71**	**1**
Don't know	0	0	0	0	0	0	0	5	**0**	**-5**
Base:	***57***	***52***	***68***	***39***	***53***	***33***	***27***	***20***	***17***	

- The volume of cycle movements in the evening remained low and stable throughout the shift.

Figure 2.3: Evening Peak Cyclist Frequency

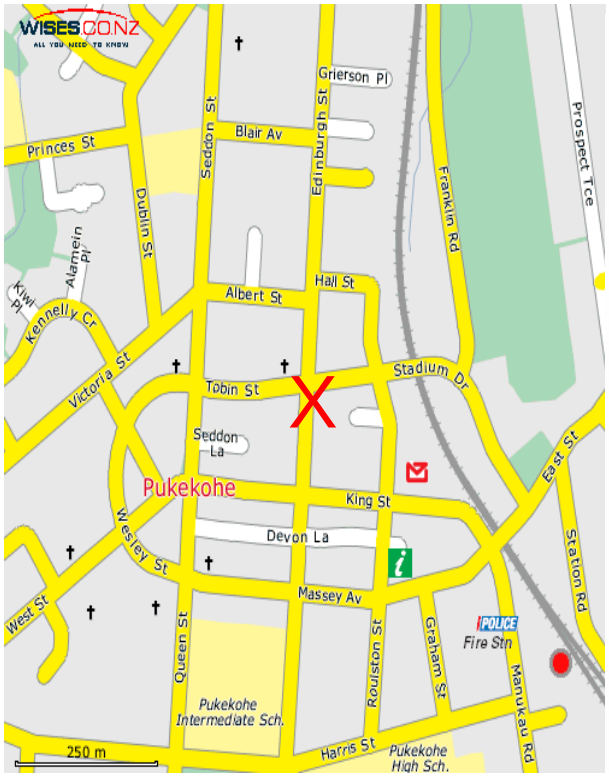
Queen/Harris Street 2007 – 2015 (n)

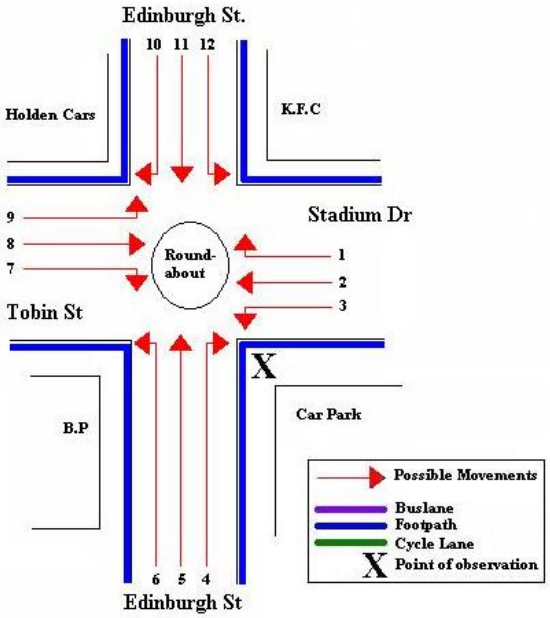


3. EDINBURGH STREET/TOBIN STREET, PUKEKOHE (SITE 69)

Figure 3.1 shows the possible cyclist movements at this intersection.

Figure 3.1: Cycle Movements: Edinburgh/Tobin Street





3.1 Site Summary

	Raw Counts			AADT
	Morning Peak	*Evening Peak*	*Total*	*Total*
2007	17	18	35	51
2008	16	24	40	58
2009	15	19	34	49
2010	17	11	28	41
2011	11	17	28	40
2012	7	21	28	40
2013	9	12	21	30
2014	5	12	17	24
2015	**7**	**10**	**17**	**24**

3.2 Morning Peak

Environmental Conditions

- The weather was fine but cloudy throughout the morning shift.
- There were no road works or accidents that may affect cycle counts.

Key Points

- The volume of morning cyclists at the Edinburgh/Tobin Street intersection has gone from 5 movements recorded in 2014 to 7 movements this year.
- The most common movement was travelling north along Edinburgh Street (Movement 5 = 2 cyclists).

Table 3.1: Morning Cyclist Movements

Edinburgh/Tobin Street 2007 – 2015 (n)

Movement	*2007*	*2008*	*2009*	*2010*	*2011*	*2012*	*2013*	*2014*	*2015*	Change 14-15
1	0	1	0	0	1	0	0	0	**1**	**1**
2	1	2	2	2	0	1	0	0	**0**	**0**
3	1	1	0	0	0	0	2	1	**0**	**-1**
4	0	0	1	1	0	0	0	0	**1**	**1**
5	3	1	2	2	2	1	1	1	**2**	**1**
6	0	0	0	0	0	0	1	0	**0**	**0**
7	0	1	1	0	1	0	0	0	**1**	**1**
8	0	4	1	2	0	1	2	0	**1**	**1**
9	0	0	0	1	2	1	0	1	**0**	**-1**
10	0	1	2	0	0	1	0	0	**0**	**0**
11	10	3	6	6	3	0	0	1	**1**	**0**
12	2	2	0	3	2	2	3	1	**0**	**-1**
Total	**17**	**16**	**15**	**17**	**11**	**7**	**9**	**5**	**7**	**2**

- All cyclists travelling past this site in the morning were adults (100 per cent, up from 80 per cent last year).
- Eighty-six per cent of the cyclists were wearing a helmet (down from 100 per cent in 2014).
- The share of female cyclists has increased from 0 per cent to 29 per cent this year.
- Notable changes to the riding location of cyclists occurred this year, with more than half now riding on the footpath (57 per cent, compared with 20 per cent last year).

Table 3.2: Morning Cyclist Characteristics

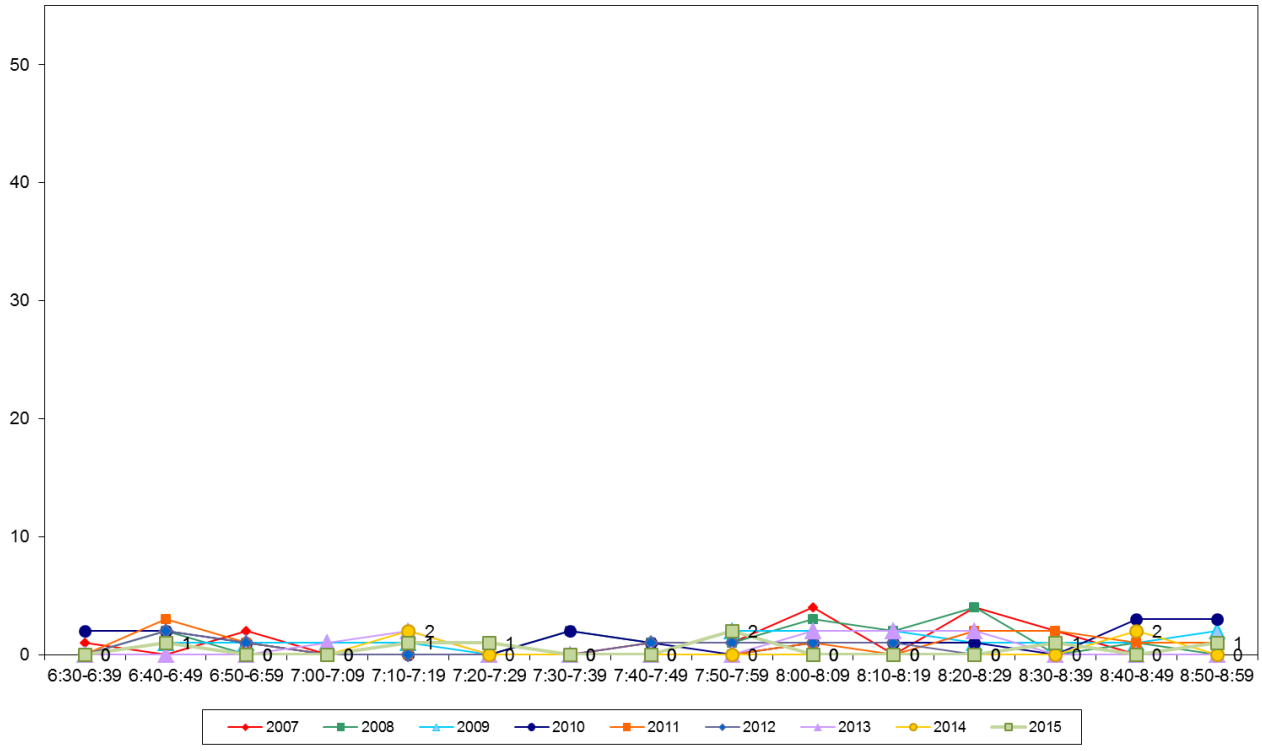
Edinburgh/Tobin Street 2007 – 2015 (%)

	2007	*2008*	*2009*	*2010*	*2011*	*2012*	*2013*	*2014*	*2015*	Change 14-15
Cyclist Type										
Adult	47	56	47	76	82	86	56	80	**100**	**20**
School child	53	44	53	24	18	14	44	20	**0**	**-20**
Helmet Wearing										
Helmet on head	94	88	87	88	82	71	89	100	**86**	**-14**
No helmet	6	12	13	12	18	29	11	0	**14**	**14**
Gender										
Male	-	-	-	-	73	86	67	100	**71**	**-29**
Female	-	-	-	-	27	0	33	0	**29**	**29**
Can't tell	-	-	-	-	0	14	0	0	**0**	**0**
Where Riding										
Road	47	75	40	65	45	43	33	80	**43**	**-37**
Footpath	53	25	60	35	55	57	67	20	**57**	**37**
Base:	***17***	***16***	***15***	***17***	***11***	***7***	***9***	***5***	***7***	

- Morning cycle volume was low throughout the monitoring period, with no more than two cyclists recorded during any ten minute interval. This pattern is consistent with that observed in previous years.

Figure 3.2: Morning Peak Cyclist Frequency

Edinburgh/Tobin Street 2007 – 2015 (n)



3.3 Evening Peak

Environmental Conditions

- The weather was fine at the start but turned cloudy by the end of the shift.
- There were no road works or accidents that may affect cycle counts.

Key Points

- The total number of cycle movements recorded in the evening at the Edinburgh/Tobin Street intersection has decreased from 12 to 10 movements over the last 12 months.
- The key movements in the evening were going straight from Tobin Street into Stadium Drive (Movement 8 = 2 cyclists), right turn from Tobin Street to Edinburgh Street travelling southwards (Movement 7 = 2 cyclists) and straight along Edinburgh Street heading north (Movement 5 = 2 cyclists).

Table 3.3: Evening Cyclist Movements

Edinburgh/Tobin Street 2007 – 2015 (n)

Movement	*2007*	*2008*	*2009*	*2010*	*2011*	*2012*	*2013*	*2014*	*2015*	Change 14-15
1	0	2	0	0	2	1	3	0	**1**	**1**
2	0	4	4	1	0	4	1	0	**1**	**1**
3	4	0	3	0	0	1	0	0	**0**	**0**
4	0	0	1	0	0	1	0	0	**0**	**0**
5	2	2	1	2	5	4	1	4	**2**	**-2**
6	1	4	0	2	0	3	0	0	**0**	**0**
7	1	0	1	1	1	1	0	0	**2**	**2**
8	1	5	0	0	3	0	0	1	**2**	**1**
9	2	1	2	2	2	2	2	1	**0**	**-1**
10	1	1	2	0	1	1	0	1	**0**	**-1**
11	3	3	5	3	1	2	3	3	**1**	**-2**
12	3	2	0	0	2	1	2	1	**1**	**0**
Don't know	0	0	0	0	0	0	0	1	**0**	**-1**
Total	**18**	**24**	**19**	**11**	**17**	**21**	**12**	**12**	**10**	**-2**

- The share of cyclists using this intersection in the evening who are children has increased from 25 per cent to 40 percent this year.
- Four in five cyclists at this site were wearing a helmet (up 5 percentage points from last year).
- The majority of cyclists at this site were male (90 per cent, up 15 percentage points from last year).
- Four in five cyclists were riding on the footpath (an increase of 30 percentage points on last year).

Table 3.4: Evening Cyclist Characteristics

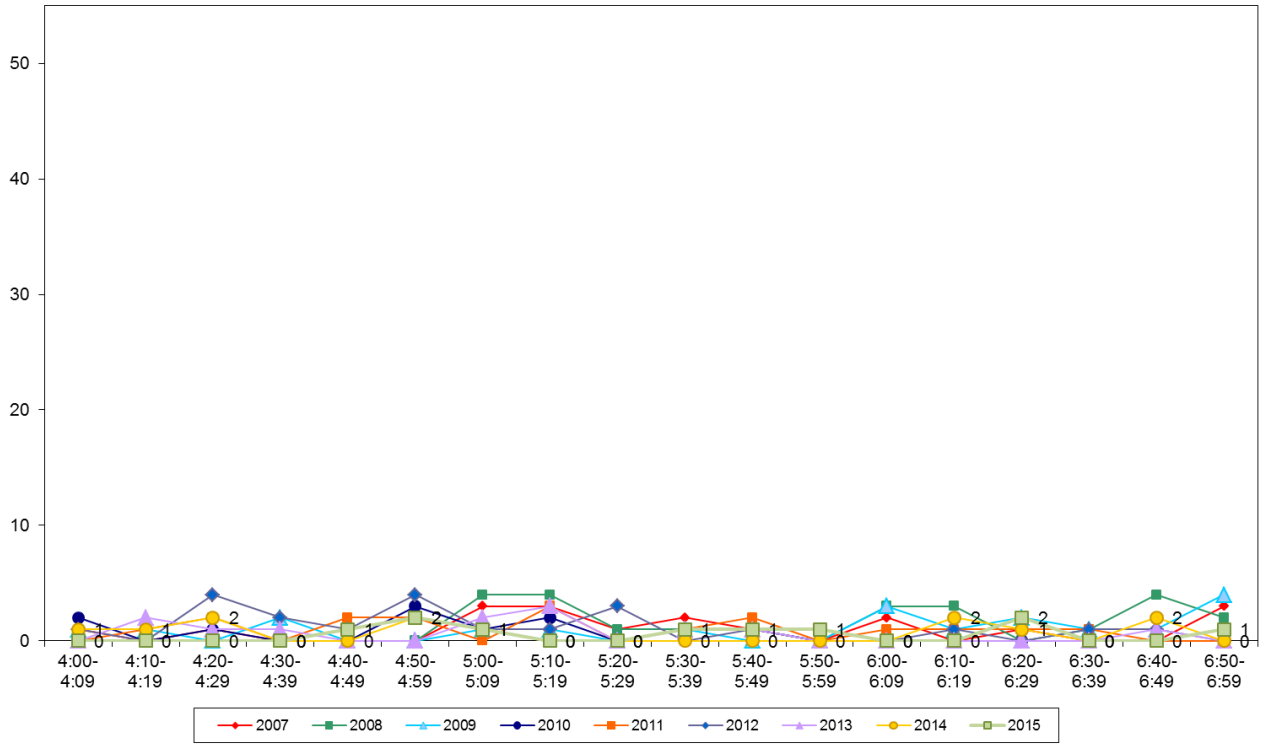
Edinburgh/Tobin Street 2007 – 2015 (%)

	2007	*2008*	*2009*	*2010*	*2011*	*2012*	*2013*	*2014*	*2015*	Change 14-15
Cyclist Type										
Adult	78	54	58	91	59	90	75	75	**60**	**-15**
School child	22	46	42	9	41	10	25	25	**40**	**15**
Helmet Wearing										
Helmet on head	78	54	58	82	94	67	100	75	**80**	**5**
No helmet	22	46	42	18	6	33	0	25	**20**	**-5**
Gender										
Male	-	-	-	-	76	86	100	75	**90**	**15**
Female	-	-	-	-	24	5	0	25	**10**	**-15**
Can't tell	-	-	-	-	0	9	0	0	**0**	**0**
Where Riding										
Road	56	46	58	82	47	67	83	50	**20**	**-30**
Footpath	44	54	42	18	53	33	17	50	**80**	**30**
Base:	***18***	***24***	***19***	***11***	***17***	***21***	***12***	***12***	***10***	

- Evening cycle volume was low throughout the monitoring period, with no more than two cyclists recorded during any ten minute interval. This pattern is consistent with that observed in previous years.

Figure 3.3: Evening Peak Cyclist Frequency

Edinburgh/Tobin Street 2007 – 2015 (n)



4. PINE HARBOUR FERRY WHARF

Key Points

- Two cycles were observed parked at the Pine Harbour ferry wharf at Beachlands at the end of the morning peak in 2014[9]. This is a decrease in cycle numbers from 7 in 2014.

Table 4.1: Cycles Observed At Pine Harbour Ferry Wharf

2010 – 2012, 2014 – 2015 (n)

	Number of Cycles Observed
2010	4
2011	12
2012	7
2014	7
2015	**2**

[9] Count undertaken on Thursday 6th March.

5. SCHOOL BIKE SHED COUNT

5.1 Cycle Count Background Information

- A total of 21 schools in the Franklin ward participated in the school bike shed count. Of the schools that responded to the survey, most had no policies that restrict students cycling to school[10].
- Two schools surveyed reported an event or issue that may affect the cycle counts[11].
- The designated count day was Tuesday 3rd of March 2015[12].

Note: Full primary schools (those taking children through to Year 8) were included in the count for the first time in 2011.

5.2 Cycle Count Key Points

- Among the surveyed schools, of those eligible to cycle to school, on average, three per cent of students are cycling to their schools. This share is up from 2 per cent in 2014.
- Beachlands School reported the highest share of cyclists – 35 per cent of all eligible students currently cycling to school, up from 17 per cent last year.
- In total, n=113 students from the responding schools were reported to be cycling to school.
- Of the 21 schools that responded, 11 (52 per cent) had no students cycling to school.
- Of the 21 schools that participated in the count in both 2014 and 2015, 7 (33 per cent) reported an increase in the share of students cycling, the most notable increases being:
  - Beachlands School (35 per cent, up from 17 per cent)
  - View Road School (7 per cent, up from 2 per cent).
  - Paparimu School (5 per cent, up from 0 per cent).

[10] The following schools have policies surrounding cycling to school:
- Beachlands School *"Students must be 10 years or older to cycle to school"*
- Hunua School *"Children cycling to school must be 9 years of age or older, must observe the road rules and wear a helmet"*
- Orere School *"Only students older than 10 may ride to school without adult supervision"*
- Te Hihi School *"Students require approval of the principal to ride to school. No year/age limit"*
- Waiau Pa School *"Years 4 – 8 only"*

[11] The following schools reported events or issues that may affect cycle counts:
- Clevedon School *"Some students away at school camp"*
- Pukekohe Christian School *"Usually have three cyclists – one did not ride today"*

[12] The following schools conducted their counts on alternative days:
- Ararimu School – 17th March 2015
- Ardmore School – 4th March 2015
- Awhitu District School – 4th March 2015
- Bombay School – 5th March 2015
- Glenbrook School – 6th March 2015
- Hunua School – 9th March 2015
- Karaka School – 6th March 2015
- KingsGate School – 9th March 2015
- Orere School – 5th March 2015
- View Road School – 21st February 2015

- Of the 21 schools that participated in the count in both 2014 and 2015, only one school (5 per cent) reported a decrease in the share of students cycling.

Table 5.1 shows the results of the 21 schools surveyed in the Franklin ward.

Table 5.1: Summary Table of School Bike Count 2007 – 2015 (n)

School Name	*School Type*	*School Roll Eligible To Cycle*	*No. of Cycles Counted*	*Cyclists as share of those eligible*[13]								
				2015	*2014*	*2013*	*2012*	*2011*	*2010*	*2009*	*2008*	*2007*
Beachlands School	Full Primary	187	65	**35%**	17%	24%	6%	7%	-	-	-	-
View Road School	Full Primary	138	9	**7%**	2%	5%	5%	3%	-	-	-	-
Paparimu School	Full Primary	19	1	**5%**	0%	5%	-	8%	-	-	-	-
Waiau Pa School	Full Primary	175	7	**4%**	3%	0%	2%	-	-	-	-	-
KingsGate School	Full Primary	67	2	**3%**	0%	0%	0%	0%	-	-	-	-
Waiuku College	Secondary	885	18	**2%**	2%	1%	<1%	-	-	-	-	-
Awhitu District School	Full Primary	122	2	**2%**	0%	5%	0%	2%	-	-	-	-
Clevedon School	Full Primary	367	5	**1%**	2%	0%	1%	-	-	-	-	-
Pukekohe Christian Shool	Composite	192	2	**1%**	0%	1%	<1%	-	-	-	-	-
St Joseph's School (Pukekohe)	Full Primary	400	2	**1%**	1%	1%	0%	2%	-	-	-	-
Ararimu School	Full Primary	148	0	**0%**	0%	0%	0%	0%	-	-	-	-
Ardmore School	Full Primary	338	0	**0%**	0%	0%	0%	0%	-	-	-	-
Bombay School	Full Primary	345	0	**0%**	0%	0%	0%	0%	-	-	-	-
Brookby School	Full Primary	123	0	**0%**	0%	0%	0%	-	-	-	-	-
Glenbrook School	Full Primary	230	0	**0%**	0%	0%	0%	0%	-	-	-	-
Hunua School	Full Primary	55	0	**0%**	0%	0%	0%	-	-	-	-	-
Karaka School	Full Primary	235	0	**0%**	0%	0%	0%	-	-	-	-	-
Orere School	Full Primary	11	0	**0%**	0%	0%	-	-	-	-	-	-

[13] This share is calculated by averaging the number of cycles counted over the total number of students eligible to cycle. The figure obtained is rounded to zero decimal places.

School Name	School Type	School Roll Eligible To Cycle	No. of Cycles Counted	Cyclists as share of those eligible[13]								
				2015	2014	2013	2012	2011	2010	2009	2008	2007
Paerata School	Full Primary	87	0	**0%**	0%	0%	-	-	-	-	-	-
Te Hihi School	Full Primary	178	0	**0%**	0%	0%	-	0%	-	-	-	-
Waipipi School	Full Primary	134	0	**0%**	0%	0%	0%	-	-	-	-	-
Total		**4436**	**113**	**3%**	**2%**	3%	2%	3%	-	-	-	-

Table 5.2 illustrates the rates of cycling to school at different school levels. Rates of cycling to school are highest for the full primary schools (3 per cent, unchanged since 2012).

Table 5.2: Summary Table of School Bike Count by School Type

2007 – 2015 (%)

School Type	*Number of Schools Responded in 2015 (n)*	*Cyclists as share of those eligible*								Change
		2007	*2008*	*2009*	*2010*	*2011*	*2012*	*2013*	*2014*	*2015*	14-15
Full Primary	19	-	-	-	-	4%	3%	3%	3%	**3%**	**0%**
Secondary	1	-	-	-	-	-	<1%	1%	1%	**2%**	**1%**
Composite	1	1%	1%	1%	2%	1%	<1%	1%	0%	**1%**	**1%**
Intermediate/Secondary	-	-	2%	1%	1%	1%	-	-	0%	**-**	**-**
Intermediate	-	5%	7%	3%	-	2%	1%	-	3%	**-**	**-**

5.3 Scooter Count Background Information

- A total of 21 schools in the Franklin ward participated in the school bike shed scooter count. Of the schools that responded to the survey, most had no policies that restrict students scooting to school[14].
- One school reported an event or issue that may affect the scooter counts[15].
- The designated count day was Tuesday 3rd of March 2015[16].

Note: Non-motorised scooters were counted for the first time in 2014.

5.4 Scooter Count Key Points

- Among the surveyed schools, of those eligible to scooter, on average, four per cent of students are scooting to their schools, unchanged from 2014.
- Beachlands School reported the highest share of scooters – 20 per cent of all eligible students currently scooting to school.
- In total, n=145 students from the responding schools were reported to be scooting to school.
- Of the 21 schools that responded, 14 (67 per cent) had no students scooting to school.
- Of the 15 schools that participated in the count in both 2014 and 2015, 3 (20 per cent) reported an increase in the share of students scooting to school. The most notable increase was Paerata School (11 per cent, up from 2 per cent last year).
- Of the 15 schools that participated in the count in both 2014 and 2015, 2 (13 per cent) reported a decline in the share of students scooting.

[14] The following school have policies surrounding scooting to school:
- Waiuku College *"Scooters are banned from school"*

[15] The following school reported events or issues that may affect scooter counts:
- Clevedon School *"Some students away at school camp"*

[16] The following schools conducted their counts on alternative days:
- Ararimu School – 17th March 2015
- Ardmore School – 4th March 2015
- Awhitu District School – 4th March 2015
- Bombay School – 5th March 2015
- Glenbrook School – 6th March 2015
- Hunua School – 9th March 2015
- Karaka School – 6th March 2015
- KingsGate School – 9th March 2015
- Orere School – 5th March 2015
- View Road School – 21st February 2015

Table 5.3 shows the results of the 21 schools surveyed in the Franklin ward.

Table 5.3: Summary Table of School Scooter Count

2014 – 2015 (n)

School Name	*School Type*	*School Roll Eligible To Scooter*	*No. of Scooters Counted*	*Scooters as share of those eligible*[17]	
				2015	*2014*
Beachlands School	Full Primary	542	110	**20%**	40%
Paerata School	Full Primary	87	10	**11%**	2%
Orere School	Full Primary	42	3	**7%**	-
View Road School	Full Primary	138	10	**7%**	4%
KingsGate School	Full Primary	67	2	**3%**	0%
St Joseph's School (Pukekohe)	Full Primary	400	6	**2%**	7%
Clevedon School	Full Primary	367	4	**1%**	1%
Ararimu School	Full Primary	148	0	**0%**	0%
Ardmore School	Full Primary	338	0	**0%**	0%
Awhitu District School	Full Primary	122	0	**0%**	0%
Bombay School	Full Primary	345	0	**0%**	0%
Brookby School	Full Primary	123	0	**0%**	-
Glenbrook School	Full Primary	230	0	**0%**	0%
Hunua School	Full Primary	111	0	**0%**	0%
Karaka School	Full Primary	235	0	**0%**	-
Paparimu School	Full Primary	19	0	**0%**	-
Pukekohe Christian School	Composite	192	0	**0%**	0%
Te Hihi School	Full Primary	178	0	**0%**	-
Waiau Pa School	Full Primary	320	0	**0%**	0%
Waipipi School	Full Primary	134	0	**0%**	0%
Waiuku College	Secondary	0	0	**0%**	-
Total		**4135**	**145**	**4%**	**4%**

[17] This share is calculated by averaging the number of scooters counted over the total number of students eligible to scooter. The figure obtained is rounded to zero decimal places.

Table 5.4 illustrates the rates of scooting to school at different school levels. Rates of scooting to school continue to be highest for the full primary schools (5 per cent).

Table 5.4: Summary Table of School Scooter Count by School Type

2014 – 2015 (%)

School Type	*Number of Schools Responded in 2015 (n)*	*Scooter riders as share of those eligible*		Change
		2014	*2015*	14-15
Full Primary	19	4%	**5%**	**1%**
Composite	1	0%	**0%**	**0%**
Secondary	1	0%	**0%**	**0%**
Intermediate	-	-	**-**	**-**
Intermediate/Secondary	-	0%	**-**	**-**

APPENDIX

Appendix One: Annual Average Daily Traffic (AADT) Calculation

APPENDIX ONE: ANNUAL AVERAGE DAILY TRAFFIC (AADT) CALCULATION

Note: This description of the calculation of the Annual Average Daily Traffic Flow of Cyclists has been provided by ViaStrada based on their May 2007 report for ARTA entitled "Development of a Cycle Traffic AADT Tool".

Purpose

The purpose of this appendix is to document the recommended procedure for estimating a cycling AADT[18] in the Auckland region from any Gravitas manual count.

Method for Estimating AADT

The methodology is based on that published in Appendix 2 of the Cycle Network and Route Planning Guide (CNRPG)[19], adjusted for Auckland conditions based on data collected during March 2007. The aim was to use the published methodology as much as possible, with any necessary departure from it documented below. The following equation yields the best estimate of a cycling AADT:

$$AADT_{Cyc} = Count \times \frac{1}{\sum H} \times \frac{1}{D} \times \frac{W}{7} \times \frac{1}{R}$$

where *Count = result of count period*

H = scale factor for time of day

D = scale factor for day of week

W = scale factor for week of year

R = scale factor for weather conditions on the count day

If more than one set of count data is available (for example, both a morning count and afternoon count), then **the calculation should be carried out for each set of data, and the estimates derived from each averaged**.

The values for the scale factors (*H, D, W* and *R*) have been deduced in the ViaStrada report and are included in this report in Figure 1.

[18] Annual average daily traffic

[19] LTSA, 2004

For the Gravitas counts, the following factors apply:

$\sum H_{AM} = 30$; $\sum H_{PM} = 33.3$; (AM and PM refer to morning and afternoon respectively)

D = 14

W = 0.9

$R_{DRY} = 100$; $R_{WET} = 64$ (DRY and WET refer to fine and rainy conditions respectively)

These can be combined as a single multiplier to convert the manual count to an AADT estimate as follows:

	Morning	Afternoon
Dry weather	**3.06**	**2.78**
Wet weather	**4.78**	**4.35**

Worked Example

If morning and afternoon manual traffic counts are available at a site, the AADT can be calculated using the count summaries for each period. For example, a morning survey of 102 and an afternoon survey of 130 are suggested. It is assumed for this example that the weather was fine in both surveys.

- Thus the AADT from the morning survey is estimated as 3.06 x 102 = 312.
- The AADT from the afternoon survey is estimated as 2.78 x 130 = 359.
- The average of these two estimates is 335; this is the estimate of AADT for this site, based on the two surveys.

Appendix Figure 1: Scale Factors for Auckland Region

Period Starting	Period Ending	Interval (hours)	$H_{Weekday}$ Mon to Fri	$H_{Weekend}$ Sat & Sun
0:00	6:30	6.50	5.5%	1.8%
6:30	6:45	0.25	2.3%	0.8%
6:45	7:00	0.25	2.6%	1.5%
7:00	7:15	0.25	3.2%	1.4%
7:15	7:30	0.25	3.7%	2.1%
7:30	7:45	0.25	3.8%	2.8%
7:45	8:00	0.25	4.0%	3.3%
8:00	8:15	0.25	3.9%	3.2%
8:15	8:30	0.25	3.1%	3.8%
8:30	8:45	0.25	2.3%	3.5%
8:45	9:00	0.25	1.3%	3.5%
9:00	10:00	1.00	4.2%	13.6%
10:00	11:00	1.00	3.4%	11.6%
11:00	12:00	1.00	2.6%	9.1%
12:00	13:00	1.00	2.7%	6.6%
13:00	14:00	1.00	2.7%	5.0%
14:00	14:15	0.25	0.7%	1.9%
14:15	14:30	0.25	0.7%	1.3%
14:30	14:45	0.25	0.6%	1.3%
14:45	15:00	0.25	0.6%	1.2%
15:00	15:15	0.25	0.8%	1.1%
15:15	15:30	0.25	1.0%	0.9%
15:30	15:45	0.25	1.3%	1.4%
15:45	16:00	0.25	1.2%	1.3%
16:00	16:15	0.25	2.1%	1.0%
16:15	16:30	0.25	2.3%	1.7%
16:30	16:45	0.25	2.1%	1.0%
16:45	17:00	0.25	2.5%	1.2%
17:00	17:15	0.25	3.3%	1.2%
17:15	17:30	0.25	3.7%	1.2%
17:30	17:45	0.25	4.0%	1.1%
17:45	18:00	0.25	3.2%	1.1%
18:00	18:15	0.25	3.0%	0.9%
18:15	18:30	0.25	2.7%	0.7%
18:30	18:45	0.25	2.4%	0.8%
18:45	19:00	0.25	2.1%	0.6%
19:00	20:00	1.00	5.6%	2.0%
20:00	0:00	4.00	3.0%	1.5%
		24.00	100.0%	100.0%

Day	D
Monday	14%
Tuesday	14%
Wednesday	14%
Thursday	14%
Friday	14%
Saturday	14%
Sunday	16%

Period	W
Summer holidays	1.0
Term 1	0.9
April holidays	1.0
Term 2	1.0
July holidays	1.2
Term 3	1.1
Sep/Oct holidays	1.2
Term 4	1.0

Weather	R
Fine	100%
Rain	64%