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Research Report Prepared for
Auckland Transport

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2014 Auckland Region Manual Cycle Monitor

- Waitemata and Gulf 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:

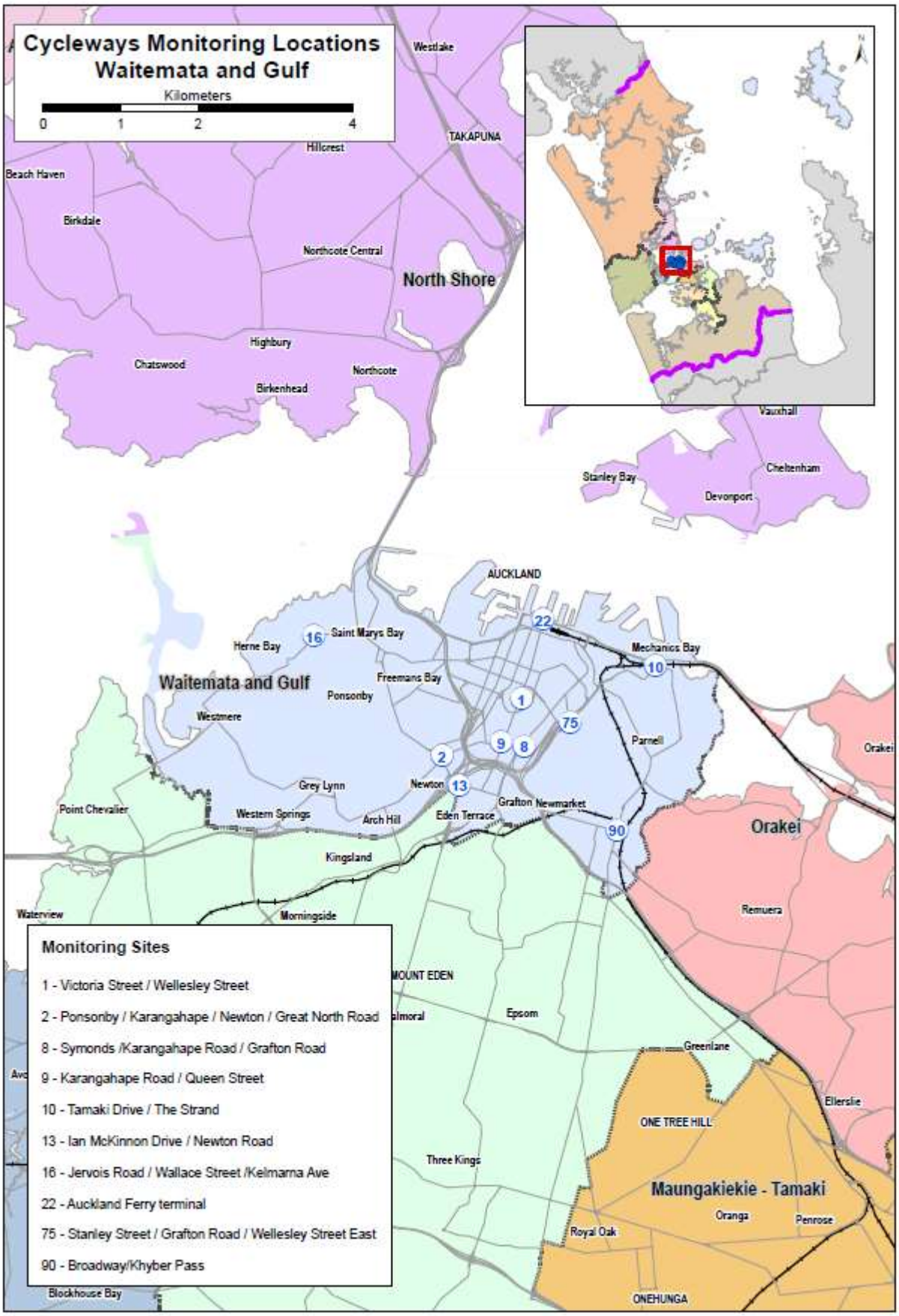
- standard monitoring days are used – that is, school and tertiary holidays, and statutory holidays are excluded and that monitoring preferably takes place at the same time each year to enable reliable year-on-year comparisons to be made. Decisions about whether cycle counts take place on weekdays and 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 10 sites in the Waitemata and Gulf 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 ten pre-determined sites in the Waitemata and Gulf 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 Waitemata and Gulf ward.

Figure 1.1: 2014 Cycle Monitoring Locations in Waitemata and Gulf 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 6:30am and 9:00am, 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 4th of March and be conducted on the first three fine days of the 4th, 5th, 6th, 11th, 12th, or 13th of March.

Counts were conducted on the following days:

• Tuesday 4th March	Albany, North Shore, Waitakere
• Wednesday 5th March	Howick, Franklin, Manukau, Waitemata & Gulf
• Thursday 6th March	Whau, Albert-Eden-Roskill, Orakei, Manurewa-Papakura, Maungakiekie-Tamaki

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 2014 was as follows:

Tuesday 4th March

- Sunrise: 7:09am; Sunset: 7:56pm.
- Highest temperature: 20 degrees Celsius.
- Mostly fine weather with the majority of sites experiencing drizzle in the morning and cloud in the evening.

Wednesday 5th March

- Sunrise: 7:10am; Sunset: 7:55pm.
- Highest temperature: 20 degrees Celsius.
- Cloudy and windy with occasional light drizzle for some sites during the morning shift. Mostly fine weather with clear sky in the evening with light winds for some sites.

Thursday 6th March

- Sunrise: 7:11am; Sunset: 7:54pm.
- Highest temperature: 22.0 degrees Celsius.
- Mostly 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 have 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, in 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=306) 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 5th 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 filled out 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 2014, 264 responses were received, a response rate of 88 per cent. (This compares with 92 per cent in 2013).

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.

1.3 Summary of Results

This summary contains the aggregated results of the ten sites surveyed in the Waitemata and Gulf 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 Waitemata and Gulf 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 to Eleven of this report.

Note: Surveying in the Waitemata and Gulf ward was undertaken on Wednesday 5th of March, 2014. Sunrise was at 7:10am and sunset was at 7:55pm. The highest temperature was 20 degrees Celsius.

1.4 Morning Peak Summary Results

Environmental Conditions

- All sites in the Waitemata and Gulf ward had either fine or overcast weather in the morning monitoring period. Many sites recorded a light shower approximately ten minutes prior to the end of the monitoring period.
- No sites reported road works or accidents that may have affected cycle counts.

Key Points

- A total of 2,271 cyclist movements were recorded across the ten sites in the morning peak period in 2014. There has been a decrease in morning cycle movements (down 11 per cent) between 2013 (2,543 movements) and 2014 (2,271 movements).
- Three per cent (n=62) of the total cycle movements in the morning peak were made by those cycling in groups. This compares with three per cent (n=71) last year.
- The average volume of morning cyclists across the all ten sites monitored in the Waitemata and Gulf ward was 227. This compares with 254 movements last year.
- Of the ten sites monitored, the busiest site in the morning peak continued to be the intersection of Tamaki Drive and The Strand (411 cycle movements), whereas the Stanley Street/Grafton Road site was still the quietest site in the morning (39 cycle movements).
- Three of the ten sites have recorded increases over the last twelve months, the most noticeable being Karangahape Road/Queen Street (up 9 per cent).
- The remaining seven sites have recorded decreases over the last twelve months, the most noticeable being at:
  - Stanley Street/Grafton Road – down 29 per cent; and
  - Ian McKinnon/Newton Road – down 24 per cent.

Table 1.1: Summary of Morning Cyclist Movements

2007 – 2014 (n)

Site No.	*Locations*	*2007*	*2008*	*2009*	*2010*	*2011*	*2012*	*2013*	*2014*	Change 13-14	Change 07-14
10	Tamaki Drive/The Strand	480	416	321	498	630	503	507	**411**	**-19%**	**-14%**
8	Symonds Street/Karangahape Road	290	285	246	283	317	338	410	**385**	**-6%**	**33%**
9	Karangahape Road/Queen Street	246	212	238	272	256	266	315	**343**	**9%**	**39%**
2	Ponsonby/Karangahape Road	226	199	176	242	222	204	253	**257**	**2%**	**14%**
22	Ferry Terminal	195	158	137	198	205	189	205	**177**	**-14%**	**-9%**
1	Victoria/Wellesley Street	70	57	59	82	116	82	103	**107**	**4%**	**53%**
	Average per site (6 sites since 2007)	**251**	**221**	**196**	**263**	**291**	**264**	**299**	**280**	**-6%**	**12%**
	Total (6 sites since 2007)	**1507**	**1327**	**1177**	**1575**	**1746**	**1582**	**1793**	**1680**	**-6%**	**11%**
13	Ian McKinnon/Newton Road	-	-	139	190	236	219	303	**230**	**-24%**	**-**
16	Jervois Road/Wallace Street	-	-	60	88	73	62	70	**67**	**-4%**	**-**
75	Stanley Street/Grafton Road	-	36	49	47	27	38	55	**39**	**-29%**	**-**
	Average per site (7 sites since 2008, 9 sites since in 2009)	**-**	**195**	**158**	**211**	**231**	**211**	**247**	**224**	**-9%**	**-**
	Total (7 sites since 2008, 9 sites since 2009)	**-**	**1363**	**1425**	**1900**	**2082**	**1901**	**2221**	**2016**	**-9%**	**-**
90	Broadway/Khyber Pass Road	-	-	-	-	-	292	322	**255**	**-21%**	**-**
	Average per site (10 sites since 2012)	**-**	-	-	-	-	**219**	**254**	**227**	**-11%**	**-**
	Total (10 sites since 2012)	**-**	-	-	-	-	**2193**	**2543**	**2271**	**-11%**	**-**

- Morning cyclist characteristics this year are similar to those reported in 2013. Ninety-nine per cent of cyclists were adults (unchanged since 2010).
- Almost all cyclists were wearing a helmet (95 per cent, unchanged from 2013).
- Over three-quarters of morning cyclists were male (79 per cent, unchanged from last year).
- Riding on the road remained common (74 per cent, unchanged from last year).

Table 1.2: Summary of Morning Cyclist Characteristics

2007 – 2014 (%)

	2007	*2008*	*2009*	*2010*	*2011*	*2012*	*2013*	*2014*	Change 13-14
Cyclist Type									
Adult	99	96	98	99	99	99	99	**99**	**0**
School child	1	4	2	1	1	1	1	**1**	**0**
Helmet Wearing									
Helmet on head	95	93	93	92	92	93	95	**95**	**0**
No helmet	5	7	7	8	8	7	5	**5**	**0**
Gender									
Male	-	-	-	-	74	76	79	**79**	**0**
Female	-	-	-	-	19	16	17	**19**	**2**
Can't tell	-	-	-	-	7	8	4	**2**	**-2**
Where Riding*									
Road	89	94	78	75	74	78	74	**74**	**0**
Footpath	11	6	11	16	15	13	13	**13**	**0**
Off-road cycleway	0	0	11	9	11	9	12	**12**	**0**
Can't tell	-	-	-	-	-	-	1	**1**	**0**
Base:	***1507***	***1363***	***1425***	***1900***	***2082***	***2193***	***2543***	***2271***	

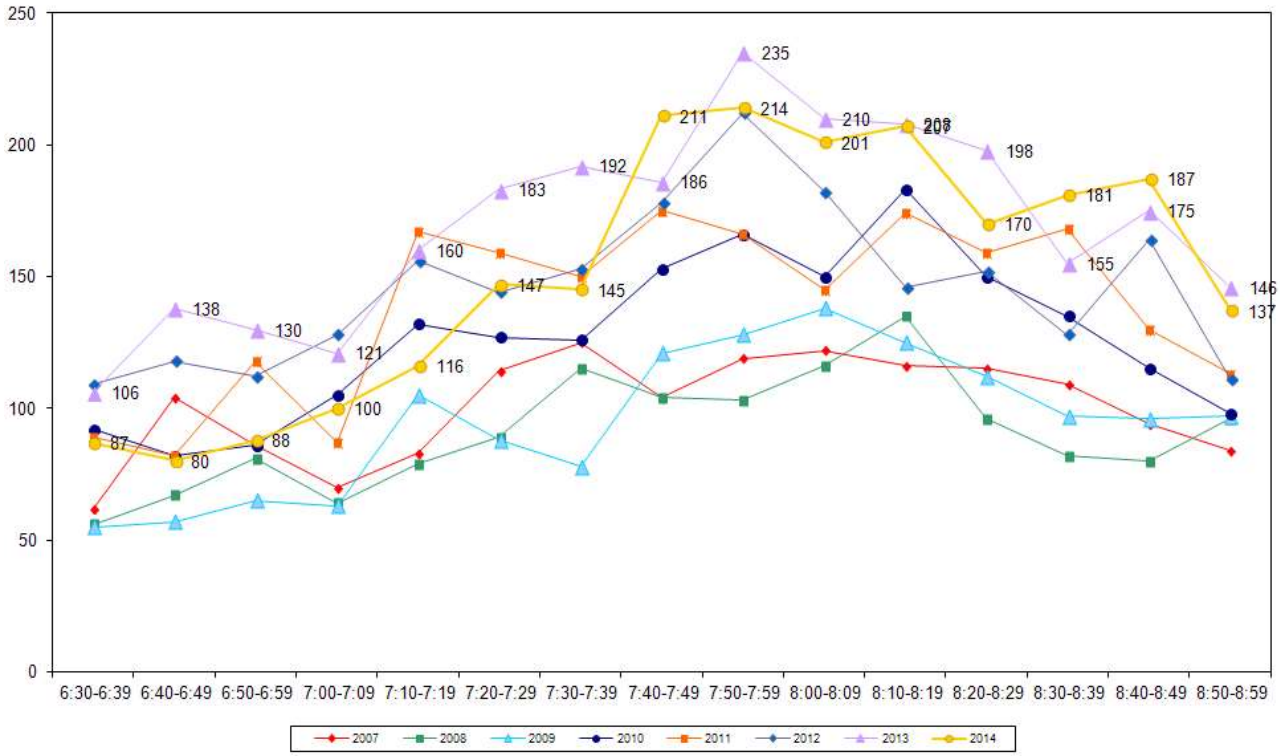
** Note: Prior to 2009, cyclists riding on the North-Western, Waikaraka, Onehunga Harbour Road cycleways, and the designated side of the footpath on Tamaki Drive are categorised as road riders.*

The Ferry Terminal, Auckland Central site has not been included for figures regarding where cyclists were riding.

- Figure 1.2 shows the overall pattern of morning cyclist volumes recorded at the ten sites monitored in 2014. Morning cyclist numbers followed an increasing trend to peak between 7:50am and 7:59am (214 cyclists), after which the numbers of movements declined until the end of the monitoring period.

Figure 1.2: Total Cyclist Frequency – Morning Peak

2007 – 2014 (n)



1.5 Evening Peak Summary Results

Environmental Conditions

- All sites had sunny weather, with some sites indicating light winds during the evening monitoring period.
- There were no road works or accidents that may affect cycle counts.

Key Points

- A total of 2,353 cyclist movements were recorded across the ten sites in the evening peak period in 2014, an overall decrease of nine per cent between 2013 (2,594 movements) and 2014 (2,353 movements).
- One per cent (n=21) of cyclists were observed as riding in groups this year, compared with none of the total cycle movements in the evening peak made by pelotons last year.
- The average volume of morning cyclists across all ten sites monitored in the Waitemata and Gulf ward was 235 cycle movements. This compares with 259 movements in 2013.
- Of the ten sites monitored, the busiest site in the evening peak was the intersection of Symonds Street/Karangahape Road (447 cycle movements), whereas the Stanley Street/Grafton Road site has the lowest volume of evening cyclists (53 movements, the highest count at this site since it was first monitored in 2008).
- Only one of the ten sites has recorded increases this year. This increase occurred at Victoria/Wellesley Street, up 60 per cent to 117 cycle movements from 2013.
- The remaining sites have recorded decreases in evening cycle volumes this year. The most notable of these decreases occurred at:
  - Karangahape Road/Queen Street – down 20 per cent; and
  - Ferry Terminal – down 16 per cent.

Table 1.3: Summary of Evening Cyclist Movements

2007 – 2014 (n)

Site No.	*Locations*	*2007*	*2008*	*2009*	*2010*	*2011*	*2012*	*2013*	*2014*	Change 13-14	Change 07-14
8	Symonds Street/Karangahape Road	349	336	282	314	373	394	492	**447**	**-9%**	**28%**
10	Tamaki Drive/The Strand	420	370	282	438	429	441	414	**388**	**-6%**	**-8%**
9	Karangahape Road/Queen Street	261	212	221	310	298	307	339	**270**	**-20%**	**3%**
2	Ponsonby/Karangahape Road	261	216	194	317	289	294	342	**301**	**-12%**	**15%**
22	Ferry Terminal	185	158	111	197	186	200	212	**178**	**-16%**	**4%**
1	Victoria/Wellesley Street	90	79	65	80	109	110	73	**117**	**60%**	**30%**
	Average per site (6 sites since 2007)	**261**	**229**	**193**	**276**	**281**	**291**	**312**	**284**	**-9%**	**9%**
	Total (6 sites since 2007)	**1566**	**1371**	**1155**	**1656**	**1684**	**1746**	**1872**	**1701**	**-9%**	**9%**
13	Ian McKinnon/Newton Road	-	-	152	184	324	284	279	**266**	**-5%**	**-**
16	Jervois Road/Wallace Street	-	-	51	79	75	79	66	**65**	**-2%**	**-**
75	Stanley Street/Grafton Road	-	29	47	46	47	56	62	**53**	**-15%**	**-**
	Average per site (7 sites since 2008, 9 sites since 2009)	**-**	**189**	**156**	**218**	**237**	**241**	**253**	**232**	**-8%**	**-**
	Total (7 sites since 2008, 9 sites since 2009)	**-**	**1321**	**1405**	**1965**	**2130**	**2165**	**2279**	**2085**	**-9%**	**-**
90	Broadway/Khyber Pass Road	**-**	-	-	-	-	285	315	**268**	**-15%**	**-**
	Average per site (10 sites since 2012)	**-**	-	-	-	-	**245**	**259**	**235**	**-9%**	**-**
	Total (10 sites since 2012)	**-**	-	-	-	-	**2450**	**2594**	**2353**	**-9%**	**-**

- Ninety-nine per cent of evening cyclists this year were adults (stable from 2007).
- Most cyclists were wearing a helmet in the evening (93 per cent, stable from 91 per cent in 2013).
- Most cyclists were male (77 per cent, down slightly from 80 per cent last year).
- The majority of evening cyclists were riding on the road (71 per cent, stable from 72 per cent in 2013). The use of the cycleway has been on a decline in this ward since 2009.

Table 1.4: Summary of Evening Cyclist Characteristics

2007 – 2014 (%)

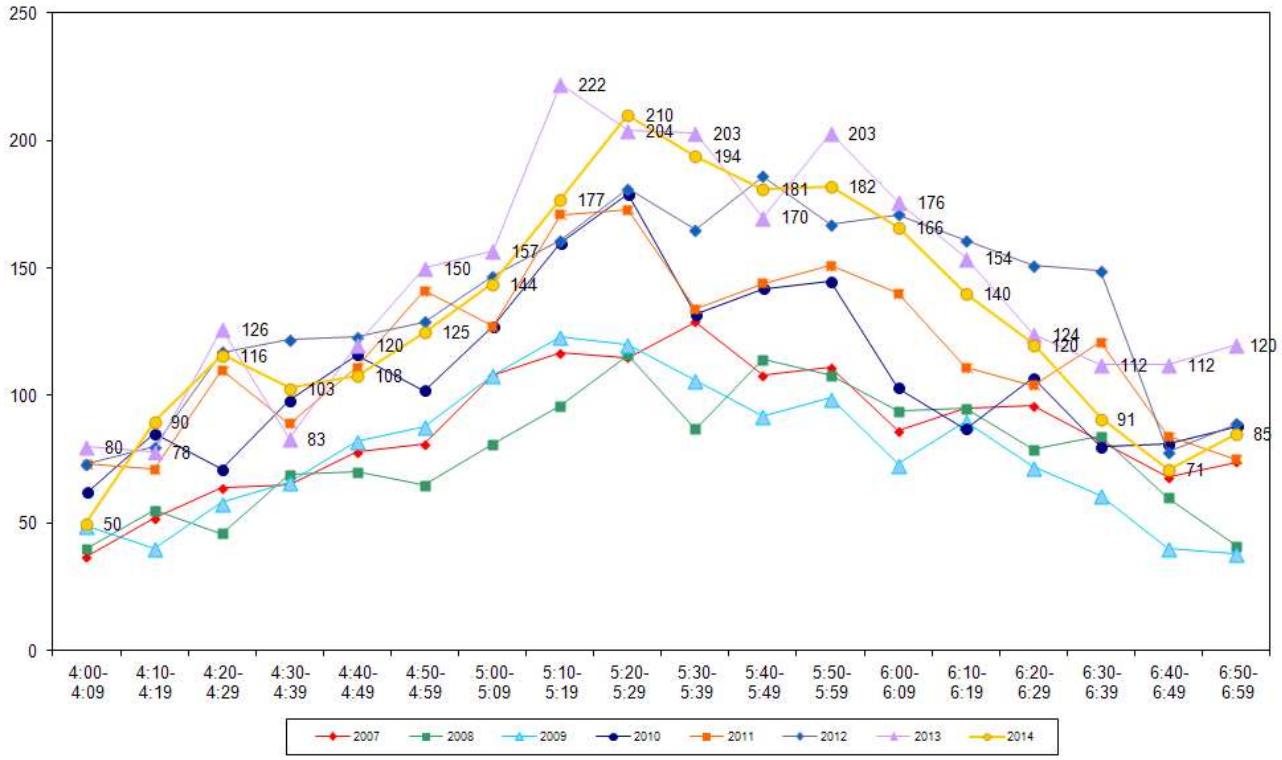
	2007	*2008*	*2009*	*2010*	*2011*	*2012*	*2013*	*2014*	Change 13-14
Cyclist Type									
Adult	99	99	98	99	99	99	98	**99**	**1**
School child	1	1	2	1	1	1	2	**1**	**-1**
Helmet Wearing									
Helmet on head	89	91	91	89	88	90	91	**93**	**2**
No helmet	11	9	9	11	12	10	9	**7**	**-2**
Gender									
Male	-	-	-	-	74	80	80	**77**	**-3**
Female	-	-	-	-	19	16	18	**20**	**2**
Can't tell	-	-	-	-	7	4	2	**3**	**1**
Where Riding*									
Road	86	93	61	62	64	69	72	**71**	**-1**
Footpath	14	7	18	20	21	18	14	**16**	**2**
Off-road cycleway	0	0	21	18	15	13	13	**12**	**-1**
Can't tell	-	-	-	-	-	-	1	**1**	**0**
Base:	***1566***	***1321***	***1405***	***1965***	***2130***	***2450***	***2594***	***2353***	

** Note: Prior to 2009, cyclists riding on the North-Western, Waikaraka, Onehunga Harbour Road cycleways, and the designated side of the footpath on Tamaki Drive were categorised as road riders.*
The Ferry Terminal, Auckland Central site has not been included for figures regarding where cyclists were riding.

- The overall pattern of evening cyclist volumes derived from the 10 Waitemata and Gulf sites is illustrated in Figure 1.3. Evening cycle volumes increased to a peak between 5:20pm to 5:29pm (210 cycle movements), after which the cycle volumes followed a decreasing trend until the end of the shift. The overall trend was consistent with previous years.

Figure 1.3: Total Cyclist Frequency – Evening Peak

2007 – 2014 (n)



1.6 Aggregated Total Summary Results

- Overall, a total of 4,624 cyclist movements were recorded across the ten sites monitored in 2014. Cycle volumes in this ward have decreased 10 per cent over the last 12 months (down from 5,137 movements to 4,624).
- Two per cent (n=83) were observed as cycling in groups, compared to one per cent (n=71) in 2013.
- The average volume of morning cyclists across all ten sites monitored in the Waitemata and Gulf ward this year was 462, down from 514 cycle movements last year.
- Of the ten sites monitored, the busiest site was the intersection of Symonds Street and Karangahape Road (832 cycle movements, down from 902 movements last year), whereas the Stanley Street/Grafton Road site has the lowest volume of cyclists (92 movements, down from 117 movements in 2013).
- Only one of the ten sites has recorded an increase this year. Victoria/Wellesley Street has increased from 176 cycle movements in 2013, to 224 cycle movements this year (an increase of 27 per cent).
- The remaining 9 sites have all recorded decreases in cycle volumes this year, the most notable being:
  - Stanley Street/Grafton Road - down 21 per cent
  - Ian McKinnon/Newton Road – down 15 per cent; and
  - The Ferry Terminal – down 15 per cent.

Table 1.5: Summary of Total Cyclist Movements

2007 – 2014 (n)

Site No.	*Locations*	*2007*	*2008*	*2009*	*2010*	*2011*	*2012*	*2013*	*2014*	Change 13-14	Change 07-14
8	Symonds Street/Karangahape Road	639	621	528	597	690	732	902	**832**	**-8%**	**30%**
10	Tamaki Drive/The Strand	900	786	603	936	1059	944	921	**799**	**-13%**	**-11%**
9	Karangahape Road/Queen Street	507	424	459	582	554	573	654	**613**	**-6%**	**21%**
2	Ponsonby/Karangahape Road	487	415	370	559	511	498	595	**558**	**-6%**	**15%**
22	Ferry Terminal	380	316	248	395	391	389	417	**355**	**-15%**	**-7%**
1	Victoria/Wellesley Street	160	136	124	162	225	192	176	**224**	**27%**	**40%**
	Average per site (6 sites since 2007)	**512**	**450**	**389**	**539**	**572**	**555**	**611**	**564**	**-8%**	**10%**
	Total (6 sites since 2007)	**3073**	**2698**	**2332**	**3231**	**3430**	**3328**	**3665**	**3381**	**-8%**	**10%**
13	Ian McKinnon/Newton Road	-	-	291	374	560	503	582	**496**	**-15%**	**-**
16	Jervois Road/Wallace Street	-	-	111	167	148	141	136	**132**	**-3%**	**-**
75	Stanley Street/Grafton Road	-	65	96	93	74	94	117	**92**	**-21%**	**-**
	Average per site (7 sites since 2008, 9 sites since 2099)	**-**	**375**	**314**	**429**	**468**	**452**	**500**	**456**	**-9%**	**-**
	Total (7 sites since 2008, 9 sites since 2009)	**-**	**2627**	**2830**	**3865**	**4212**	**4066**	**4500**	**4101**	**-9%**	**-**
90	Broadway/Khyber Pass Road						577	637	**523**	**-18%**	**-**
	Average per site (10 sites since 2012)	**-**	-	-	-	-	**464**	**514**	**462**	**-10%**	**-**
	Total (10 sites since 2012)	**-**	-	-	-	-	**4643**	**5137**	**4624**	**-10%**	**-**

- Overall, cyclist characteristics this year are similar to those reported in 2013. In particular, 99 per cent of evening cyclists this year are adults (stable since 2007).
- Most cyclists were wearing a helmet (94 per cent, stable from 93 per cent in 2013).
- Seventy-nine per cent of the cyclists were male.
- The majority of cyclists were riding on the road (73 per cent). Fourteen per cent were riding on the footpath, with the remaining 12 per cent riding on the off-road cycleway (all percentages stable from last year).

Table 1.6: Summary of Total Cyclist Characteristics

2007 – 2014 (%)

	2007	***2008***	***2009***	***2010***	***2011***	***2012***	***2013***	***2014***	**Change 13-14**
Cyclist Type									
Adult	99	98	98	99	99	99	99	**99**	**0**
School child	1	2	2	1	1	1	1	**1**	**0**
Helmet Wearing									
Helmet on head	92	92	92	90	90	91	93	**94**	**1**
No helmet	8	8	8	10	10	9	7	**6**	**-1**
Gender									
Male	-	-	-	-	74	78	80	**79**	**-1**
Female	-	-	-	-	19	16	17	**19**	**2**
Can't tell	-	-	-	-	7	6	3	**2**	**-1**
Where Riding*									
Road	87	93	66	65	69	74	73	**73**	**0**
Footpath	13	7	14	17	18	15	14	**14**	**0**
Off-road cycleway	0	0	20	18	13	11	13	**12**	**-1**
Don't know	0	0	0	0	0	0	0	**1**	**1**
Base:	***3073***	***2627***	***2830***	***3865***	***4212***	***4643***	***5137***	***4624***	

** Note: Prior to 2009 cyclists riding on the North-Western, Waikaraka, Onehunga Harbour Road cycleways, and the designated side of the footpath on Tamaki Drive were categorised as road riders.*

The Ferry Terminal, Auckland Central site has not been included for figures regarding where cyclists were riding.

1.7 Average Annual Daily Traffic (AADT) Estimate

Note: A discussion of Average Annual Daily Traffic Estimates is provided in Section 1.1. 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 Symonds Street/Karangahape Road (1,205 daily movements, down from 1,305 movements in 2013) and the lowest is at Stanley Street/Grafton Road (133 daily movements).
- Nine of the ten sites have recorded decreases in total AADT estimates this year compared to 2013. The most noticeable decreases were at:
  - Stanley Street/Grafton Road – down 22 per cent; and
  - Broadway/Khyber Pass Road – down 18 per cent.
- Only one site has recorded an increase in total AADT estimates this year compared to 2013. Victoria/Wellesley Street recorded an increase of 26 percentage points to an ADDT value of 325 this year.

Table 1.7: AADT Estimates Based on Morning and Evening Cyclist Movements 2007 – 2014 (n)

Site No.	*Locations*	*2007 AADT*	*2008 AADT*	*2009 AADT*	*2010 AADT*	*2011 AADT*	*2012 AADT*	*2013 AADT*	*2014 AADT*	13-14 Change	07-14 Change
8	Symonds Street/Karangahape Road	924	899	765	865	999	1060	1305	**1205**	**-8%**	**30%**
10	Tamaki Drive/The Strand	1313	1146	880	1365	1555	1377	1346	**1163**	**-14%**	**-11%**
9	Karangahape Road/Queen Street	736	616	669	843	802	830	949	**897**	**-5%**	**22%**
2	Ponsonby/Karangahape Road	705	602	536	807	738	717	858	**808**	**-6%**	**15%**
90	Broadway/Khyber Pass Road	-	-	-	-	-	839	927	**759**	**-18%**	-
13	Ian McKinnon/Newton Road	-	-	422	544	807	726	848	**718**	**-15%**	-
22	Ferry Terminal	553	459	363	574	570	565	606	**516**	**-15%**	**-7%**
1	Victoria/Wellesley Street	231	201	180	236	328	277	258	**325**	**26%**	**41%**
16	Jervois Road/Wallace Street	-	-	162	243	215	204	200	**192**	**-4%**	-
75	Stanley Street/Grafton Road	-	95	140	135	106	135	170	**133**	**-22%**	-

1.8 School Bike Shed Count Summary

Cycle Counts

- Among the surveyed schools, of those eligible to cycle, on average two per cent of students are cycling to their schools. This compares with 2 per cent in 2014.
- Okiwi School reported the highest share of cyclists – 29 per cent of all eligible students currently cycling to school, up from 26 per cent last year.
- In total, n=215 students from the responding schools were reported to be cycling to school.
- Of the 17 schools that responded, 6 (35 per cent) had no students cycling to school.
- Rates of cycling to school are highest among intermediate schools (5 per cent), unchanged from 2013.

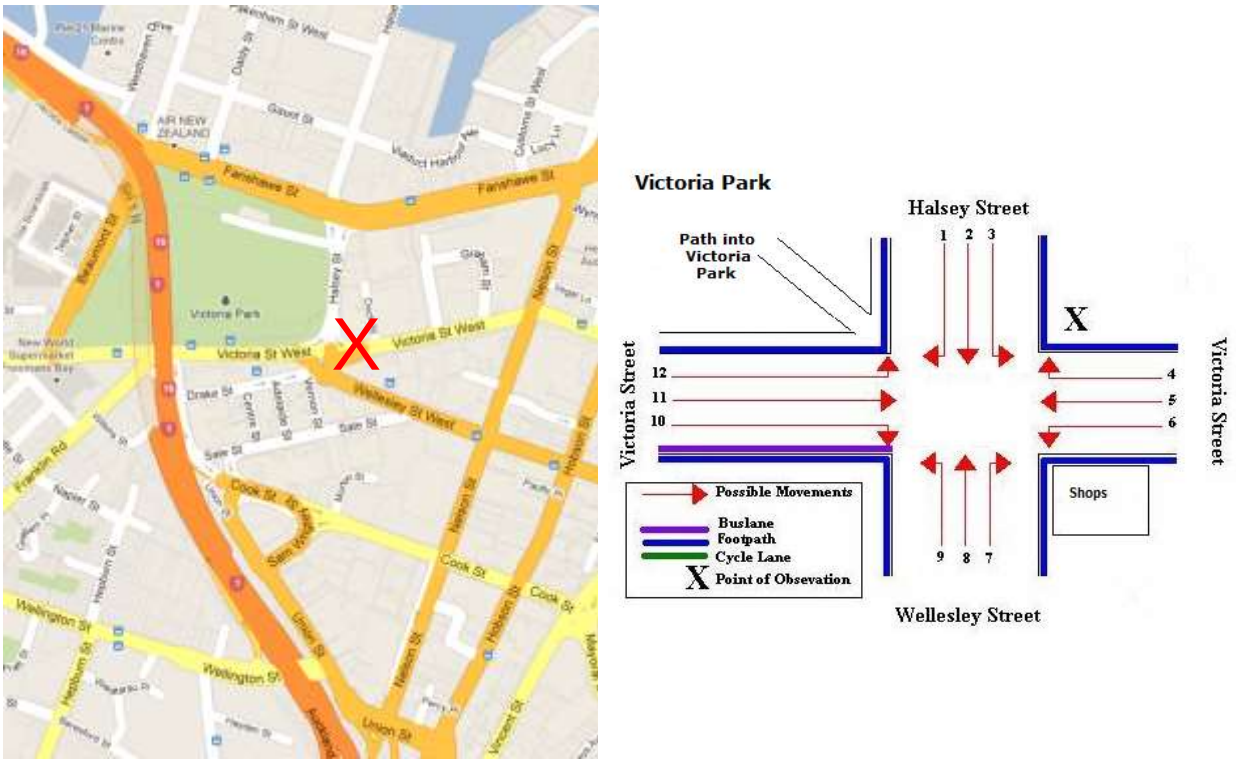
Scooter Counts

- Among the surveyed schools, of those eligible to scooter, on average, less than one per cent of students are scootering to their schools.
- Waiheke Primary School reported the highest share of scooters – 4 per cent of all eligible students currently scootering to school.
- In total, n=27 students from the responding schools were reported to be scootering to school.
- Of the 15 schools that responded, 10 (67 per cent) had no students scootering to school.

2. VICTORIA STREET/WELLESLEY STREET/HALSEY STREET (SITE 1)

Figure 2.1 shows the possible cyclist movements at this intersection.

Figure 2.1: Cycle Movements: Victoria/Wellesley/Halsey Street



2.1 Site Summary

	Raw Counts			*AADT*
	Morning Peak	***Evening Peak***	***Total***	***Total***
2007	70	90	160	231
2008	57	79	136	201
2009	59	65	124	180
2010	82	80	162	236
2011	116	109	225	328
2012	82	110	192	277
2013	103	73	176	258
2014	**107**	**117**	**224**	**325**

2.2 Morning Peak

Environmental Conditions

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

Key Points

- The volume of morning peak cyclist movements recorded at the Victoria/Wellesley/Halsey intersection has increased (107 movements, up from 103 in 2013).
- The key routes in the morning were turning left from Victoria Street West onto Halsey Street travelling south (Movement 12 = 23 movements) and travelling straight on Victoria Street West heading east (Movement 11 = 32 movements).
- Of the 16 movements possible at this intersection, the most noticeable change since last year was at Movement 8 (up 8 movements).

Table 2.1: Morning Cyclist Movements

Victoria/Wellesley/Halsey 2007 – 2014 (n)

Movement	*2007*	*2008*	*2009*	*2010*	*2011*	*2012*	*2013*	*2014*	Change 13-14
1	16	10	6	11	18	12	15	**13**	**-2**
2	0	4	2	10	6	9	9	**2**	**-7**
3	2	5	2	5	23	18	17	**15**	**-2**
4	1	0	3	3	0	1	1	**2**	**1**
5	3	5	1	5	4	3	2	**2**	**0**
6	0	0	1	1	3	0	1	**1**	**0**
7	0	0	0	0	2	0	0	**1**	**1**
8	1	4	1	4	9	2	2	**10**	**8**
9	0	1	1	0	5	0	0	**2**	**2**
10	2	2	1	3	1	2	1 (1V)	**4**	**3**
11	22	13	11	15	16	18 (1V)	25 (2V)	**32 (2V)**	**7**
12	23	13	30	25	29	17	30	**23 (1V)**	**-7**
Total	**70**	**57**	**59**	**82**	**116**	**82**	**103**	**107**	**4**

Note: Cyclists entering/exiting Victoria Park are denoted by a V in brackets. These cyclists are included in the preceding total movement counts. The text below describes the movements of cyclists entering/exiting Victoria Park.

Victoria Street (west) → Victoria Park = Movement 12 V
Victoria Street (east) → Victoria Park = Movement 4 V
Halsey Street → Victoria Park = Movement 1 V
Wellesley Street → Victoria Park = Movement 9 V

Victoria Park → Halsey Street = Movement 12 V
Victoria Park → Victoria Street (east) = Movement 11 V
Victoria Park → Wellesley Street = Movement 10 V
Victoria Park → Victoria Street (west) = Movement 5 V

- All cyclists at this site were adults (unchanged from the previous measure).
- Almost all cyclists were wearing a helmet (93 per cent, down from 99 per cent last year).
- The majority of cyclists were male (87 per cent, up slightly from 84 per cent in 2013).
- The majority of cyclists were riding on the road (86 per cent, a 9 percentage point decrease from 2013).

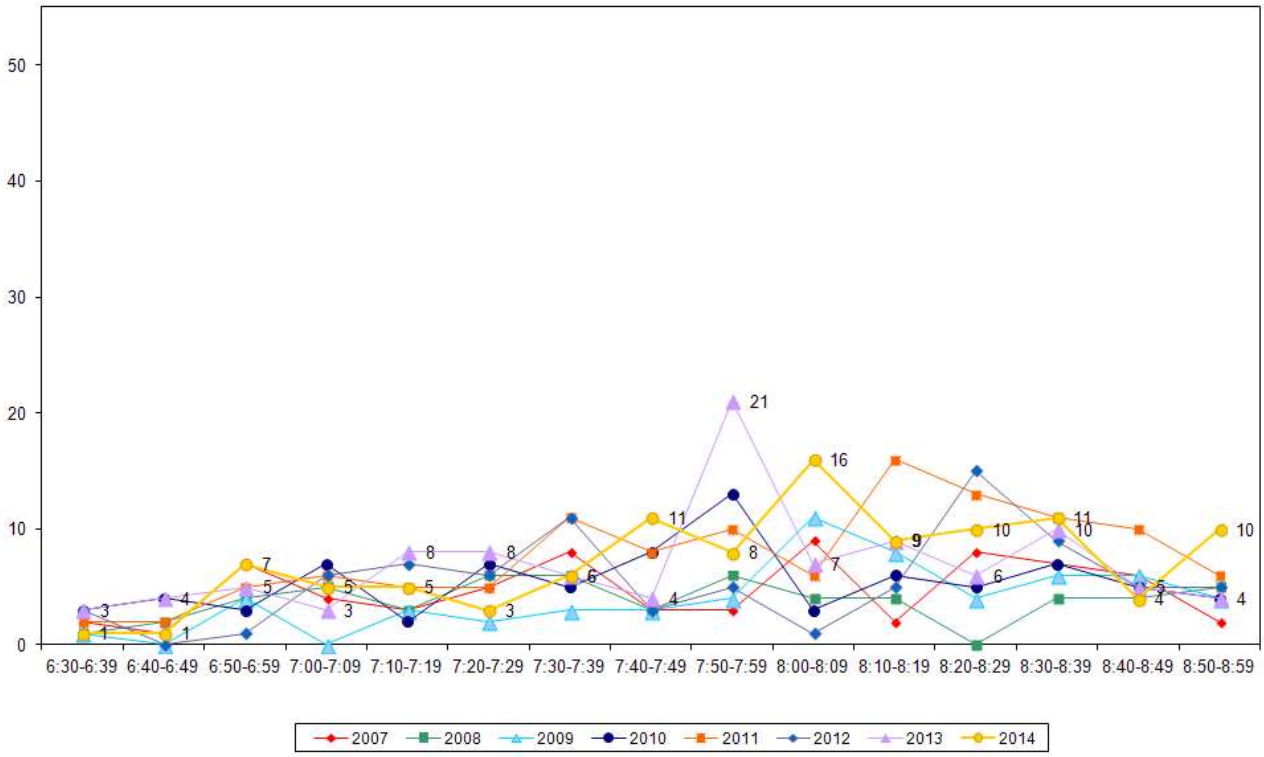
Table 2.2: Morning Cyclist Characteristics

Victoria/Wellesley/Halsey 2004 – 2014 (%)

	2007	***2008***	***2009***	***2010***	***2011***	***2012***	***2013***	***2014***	**Change 13-14**
Cyclist Type									
Adult	100	100	92	99	99	99	100	**100**	**0**
School child	0	0	8	1	1	1	0	**0**	**0**
Helmet Wearing									
Helmet on head	91	98	93	90	90	93	99	**93**	**-6**
No helmet	9	2	7	10	10	7	1	**7**	**6**
Gender									
Male	-	-	-	-	85	81	84	**87**	**3**
Female	-	-	-	-	15	19	16	**11**	**-5**
Can't tell	-	-	-	-	0	0	0	**2**	**2**
Where Riding									
Road	91	86	83	84	81	84	95	**86**	**-9**
Footpath	9	14	17	16	19	16	5	**14**	**9**
Base:	***70***	***57***	***59***	***82***	***116***	***82***	***103***	***107***	

- The volume of morning cycle movements in 2014 remained low (less than 11 movements in a ten-minute interval) for most of the monitoring period, with exception of a peak from 8:00am to 8:09am (16 movements).

Figure 2.2: Morning Peak Cyclist Frequency
Victoria/Wellesley/Halsey 2007 – 2014 (n)



Note: No cyclists were observed riding together at this site in the morning peak in 2014. This compares with 3 per cent (n=3) in 2013.

2.3 Evening Peak

Environmental Conditions

- The weather was fine throughout the evening monitoring period.
- There were no road works or accidents that may affect cycle counts.

Key Points

- The volume of evening peak cyclist movements recorded at the Victoria/Wellesley/Halsey intersection was up from 73 movements last year to 117 this year.
- The key movements in the evening were turning right from Halsey Street onto Victoria Street travelling west (Movement 1 = 27 cyclists), and heading straight on Victoria Street West travelling west (Movement 5 = 23).
- Evening cyclist volumes have most noticeably increased at Movement 4 (up 7 movements) and at Movement 9 (up 9 movements).

Table 2.3: Evening Cyclist Movements

Victoria/Wellesley/Halsey 2007 – 2014 (n)

Movement	*2007*	*2008*	*2009*	*2010*	*2011*	*2012*	*2013*	*2014*	Change 13-14
1	25	23	15	26	28	21	28	**27**	**-1**
2	3	6	5	2	12	3	1	**6**	**5**
3	0	1	7	1	1	3	3	**6**	**3**
4	5	3	3	3	8	9 (2V)	1 (1V)	**8 (2V)**	**7**
5	23	8	11	12	21	28	20	**23**	**3**
6	1	0	0	0	0	0	1	**1**	**0**
7	0	2	0	0	1	0	0	**2**	**2**
8	2	10	6	11	6	6	4	**6**	**2**
9	3	2	4	3	5	10 (2V)	0	**9 (1V)**	**9**
10	4	0	0	0	0	3 (2V)	0	**6 (1V)**	**6**
11	5	7	5	9	1	11 (1V)	4 (1V)	**6 (2V)**	**2**
12	19	17	9	13	26	16	11	**17 (4V)**	**6**
Total	**90**	**79**	**65**	**80**	**109**	**110**	**73**	**117**	**44**

Note: Cyclists entering/exiting Victoria Park are denoted by a V in brackets. These cyclists are included in the preceding total movement counts. The text below describes the movements of cyclists entering/exiting Victoria Park.

Victoria Street (west) → Victoria Park = Movement 12V
Victoria Street (east) → Victoria Park = Movement 4V
Halsey Street → Victoria Park = Movement 1V
Wellesley Street → Victoria Park = Movement 9V

Victoria Park → Halsey Street = Movement 12V
Victoria Park → Victoria Street (east) = Movement 11V
Victoria Park → Wellesley Street = Movement 10V
Victoria Park → Victoria Street (west) = Movement 5V

- Almost all cyclists using the Victoria/Wellesley/Halsey intersection were adults (96 per cent, down slightly from 99 per cent in 2013).
- Most evening cyclists at this site were wearing a helmet (85 per cent, down from 95 per cent in 2013).
- The majority of cyclists were male (84 per cent, stable from 82 per cent last year).
- Seventy per cent of cyclists were riding on the road (down from 79 per cent in 2013).

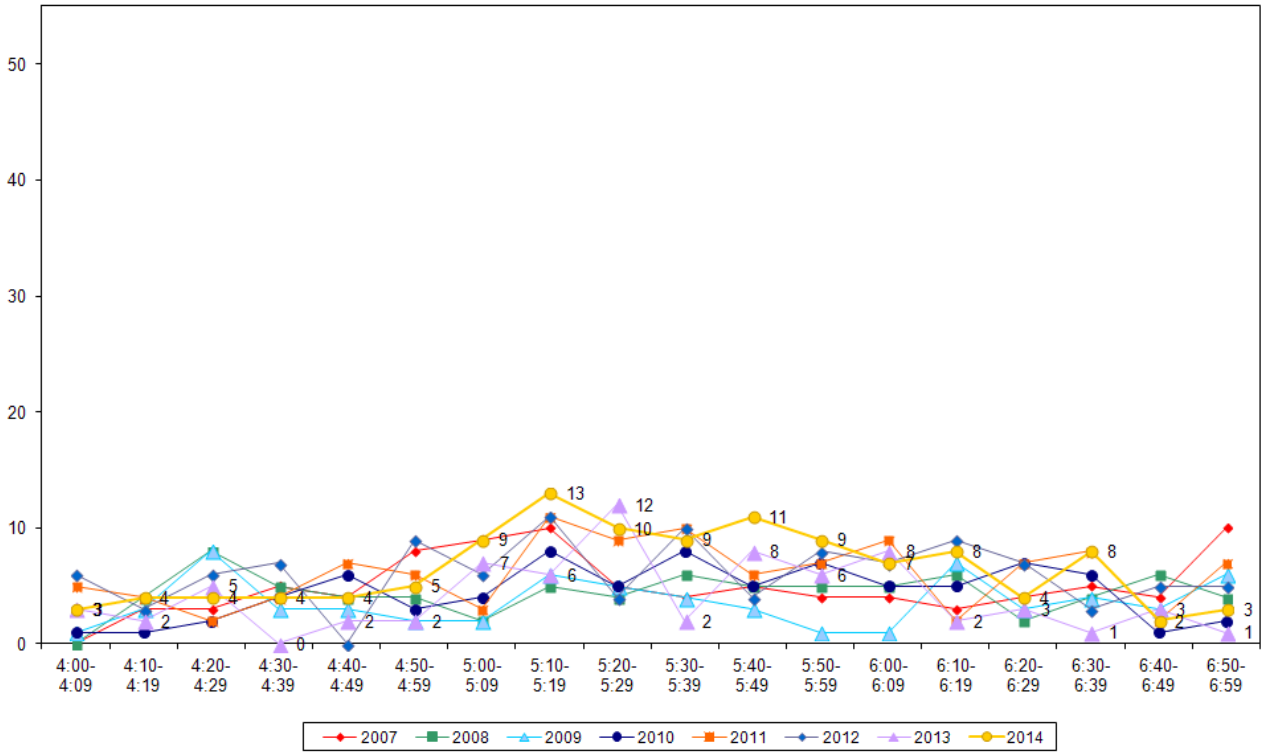
Table 2.4: Evening Cyclist Characteristics

Victoria/Wellesley/Halsey 2004 – 2014 (%)

	2007	***2008***	***2009***	***2010***	***2011***	***2012***	***2013***	***2014***	**Change 13-14**
Cyclist Type									
Adult	100	99	100	100	98	98	99	**96**	**-3**
School child	0	1	0	0	2	2	1	**4**	**3**
Helmet Wearing									
Helmet on head	91	96	83	81	86	87	95	**85**	**-10**
No helmet	9	4	17	19	14	13	5	**15**	**10**
Gender									
Male	-	-	-	-	80	84	82	**84**	**2**
Female	-	-	-	-	17	15	18	**12**	**-6**
Can't tell	-	-	-	-	3	1	0	**4**	**4**
Where Riding									
Road	87	87	71	76	73	76	79	**70**	**-9**
Footpath	13	13	29	24	27	24	21	**30**	**9**
Base:	***90***	***79***	***65***	***80***	***109***	***110***	***73***	***117***	

- Evening cycle movement volume by time of trip has been low this year. Traffic was heavier in the middle part of the monitoring period, with a slight peak of 13 movements between 5:10pm and 5:19pm.

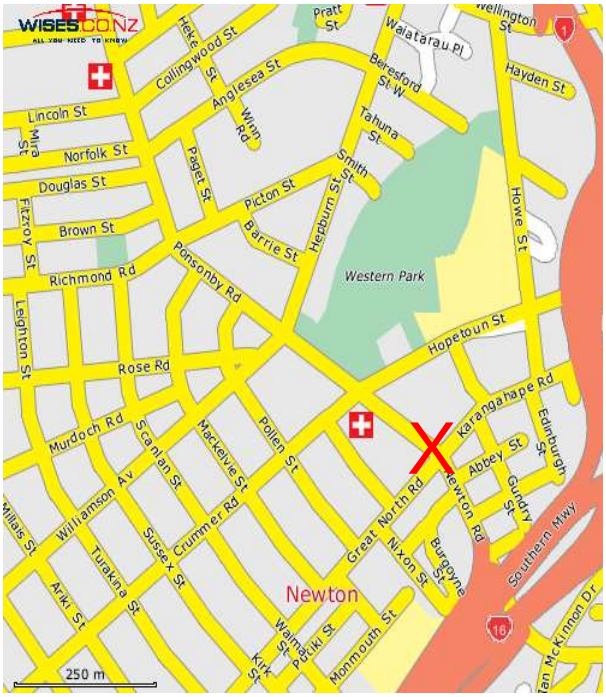
Figure 2.3: Evening Peak Cyclist Frequency
Victoria/Wellesley/Halsey 2007 – 2014 (n)

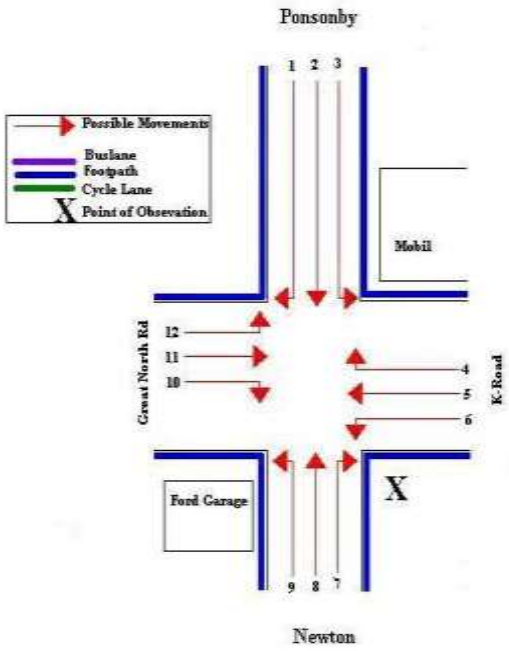


3. PONSONBY/KARANGAHAPE/ NEWTON/GREAT NORTH ROAD, NEWTON (SITE 2)

Figure 3.1 shows the possible cyclist movements at this intersection.

Figure 3.1: Cycle Movements: Ponsonby/Karangahape/Newton/Great North Roads





3.1 Site Summary

	Raw Counts			AADT
	Morning Peak	*Evening Peak*	*Total*	*Total*
2007	226	261	487	705
2008	199	216	415	602
2009	176	194	370	536
2010	242	317	559	807
2011	222	289	511	738
2012	204	294	498	717
2013	253	342	595	858
2014	**257**	**301**	**558**	**808**

3.2 Morning Peak

Environmental Conditions

- The weather was fine but cloudy at the start of the shift. It became sunny over the course of the morning monitoring period, but it began to rain at 8:50am.
- There were no road works or accidents that may affect cycle counts.

Key Points

- The volume of morning peak cyclists recorded at the Ponsonby/Karangahape/Newton/Great North Road intersection in 2014 has increased (257 movements, up from 253 movements in 2013).
- The most common movement at this intersection continued to be straight through from Great North Road into Karangahape Road travelling in a north-easterly direction (Movement 11 = 95 cyclists).
- Morning cyclist volumes decreased most noticeably at Movement 11 (down 15 movements) while the most noticeable increase occurred at Movement 3 (up 23 movements).

Table 3.1: Morning Cyclist Movements

Ponsonby/Karangahape/Newton/Great North 2007 – 2014 (n)

Movement	*2007*	*2008*	*2009*	*2010*	*2011*	*2012*	*2013*	*2014*	Change 13-14
1	7	6	8	10	5	8	12	**7**	**-5**
2	7	6	7	12	6	8	6	**8**	**2**
3	24	22	28	36	43	21	30	**53**	**23**
4	15	15	9	14	18	10	17	**16**	**-1**
5	16	9	7	10	9	14	9	**13**	**-4**
6	2	1	1	2	1	1	3	**2**	**-1**
7	11	5	5	4	8	7	11	**13**	**2**
8	11	15	7	19	15	21	29	**20**	**-9**
9	0	2	1	2	1	2	1	**2**	**1**
10	5	0	0	1	4	1	2	**3**	**1**
11	105	97	84	97	79	84	110	**95**	**-15**
12	23	21	19	35	33	27	23	**25**	**2**
Total	**226**	**199**	**176**	**242**	**222**	**204**	**253**	**257**	**-4**

- Almost all cyclists using the Ponsonby/Karangahape/Newton/Great North Road intersection were adults (99 per cent, stable from 2013).
- Most cyclists were wearing a helmet (91 per cent, stable from 89 per cent 12 months ago).
- Three-quarters of cyclists were male (76 per cent, unchanged from 2013).
- Two-thirds of the cyclists at this site were riding on the road (65 per cent, down from 75 per cent in 2013).

Table 3.2: Morning Cyclist Characteristics

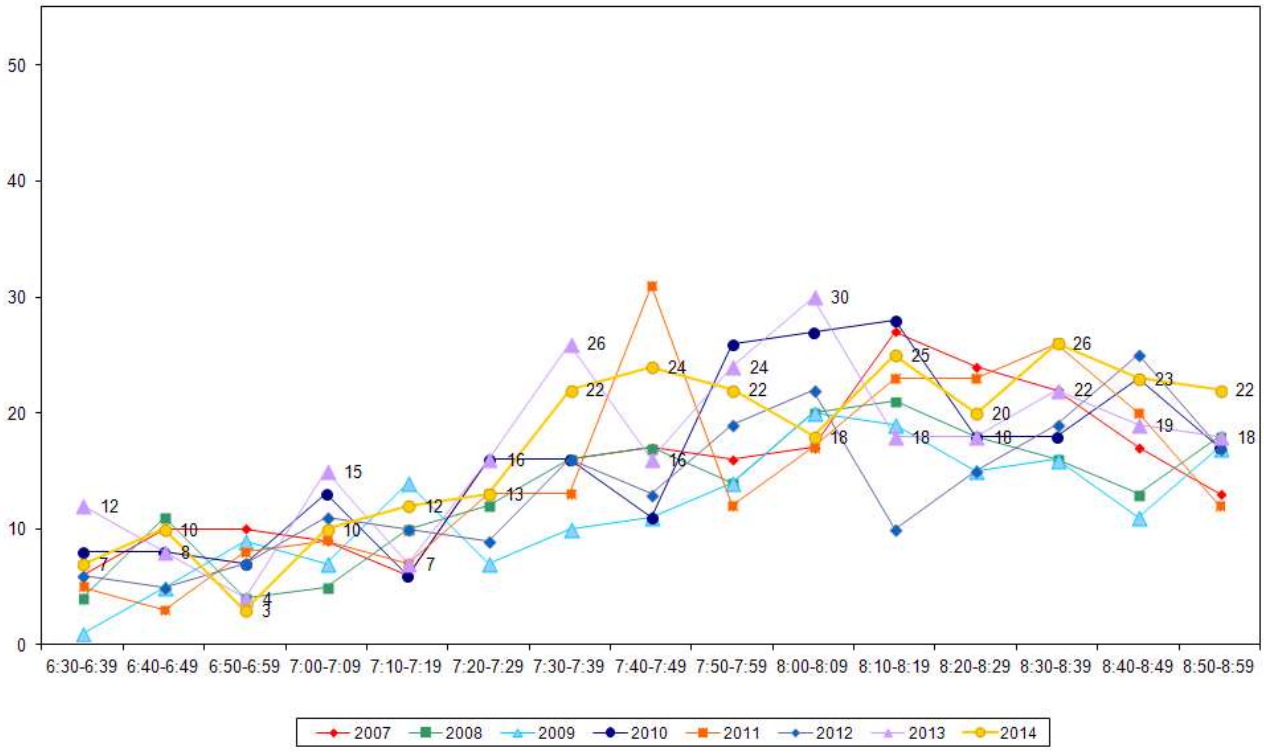
Ponsonby/Karangahape/Newton/Great North 2004 – 2014 (%)

	2007	***2008***	***2009***	***2010***	***2011***	***2012***	***2013***	***2014***	**Change 13-14**
Cyclist Type									
Adult	98	97	95	99	100	96	100	**99**	**-1**
School child	2	3	5	1	0	4	0	**1**	**1**
Helmet Wearing									
Helmet on head	93	92	91	89	89	87	89	**91**	**2**
No helmet	7	8	9	11	11	13	10	**9**	**-1**
Can't tell	-	-	-	-	-	-	1	**0**	**-1**
Gender									
Male	-	-	-	-	75	73	76	**76**	**0**
Female	-	-	-	-	18	24	21	**24**	**3**
Can't tell	-	-	-	-	6	3	3	**0**	**-3**
Where Riding									
Road	68	91	79	64	66	70	75	**65**	**-10**
Footpath	32	9	21	36	34	30	25	**35**	**10**
Base:	***226***	***199***	***176***	***242***	***222***	***204***	***253***	***257***	

- Morning cyclist movements rose throughout the morning shift. While there are no evident peaks, cycle volumes continued to rise until the end of the monitoring period.

Figure 3.2: Morning Peak Cyclist Frequency

Ponsonby/Karangahape/Newton/Great North 2007 – 2014 (n)



No cyclists were observed riding together at this site in the morning peak in 2014. This compares with one per cent (n=3) riding together in 2013.

3.3 Evening Peak

Environmental Conditions

- The weather was sunny throughout the evening shift.
- There were no road works or accidents that may affect cycle counts.

Key Points

- Total cyclist volume at the Ponsonby/Karangahape/Newton/Great North Road intersection has decreased by 41 movements over the last 12 months, to 301 movements.
- As in earlier years, the most common movement at this intersection was straight through from Karangahape Road into Great North Road travelling in a south-westerly direction (Movement 5 = 126 movements).
- The most noticeable decrease in evening cyclist volume was at Movement 5 (down 20 movements from 2013). The most noticeable increase was at Movement 4 (up 8 movements from 12 months ago).

Table 3.3: Evening Cyclist Movements

Ponsonby/Karangahape/Newton/Great North 2007 – 2014 (n)

Movement	*2007*	*2008*	*2009*	*2010*	*2011*	*2012*	*2013*	2014	Change 13-14
1	38	18	23	19	27	26	30	**20**	**-10**
2	14	20	7	21	18	23	31	**27**	**-4**
3	20	12	15	19	24	14	22	**13**	**-9**
4	32	25	31	45	40	40	41	**49**	**8**
5	106	97	85	139	110	119	146	**126**	**-20**
6	8	1	9	15	15	8	18	**11**	**-7**
7	1	1	1	2	2	1	9	**4**	**-5**
8	10	6	6	16	11	15	9	**15**	**6**
9	1	1	3	0	2	2	4	**0**	**-4**
10	0	1	1	0	1	0	1	**1**	**0**
11	22	22	8	31	30	34	21	**24**	**3**
12	9	12	5	10	9	12	10	**11**	**1**
Total	**261**	**216**	**194**	**317**	**289**	**294**	**342**	**301**	**-41**

- Over the evening peak, almost all riders at this intersection were adults (97 per cent, down slightly from 100 per cent in 2013).
- The majority of cyclists were wearing a helmet (89 per cent, stable from 88 per cent 2013).
- The majority of cyclists were male (72 per cent, down from 80 per cent 12 months ago).
- Three quarters of cyclists were riding on the road (75 per cent, down from 81 per cent in 2013).

Table 3.4: Evening Cyclist Characteristics

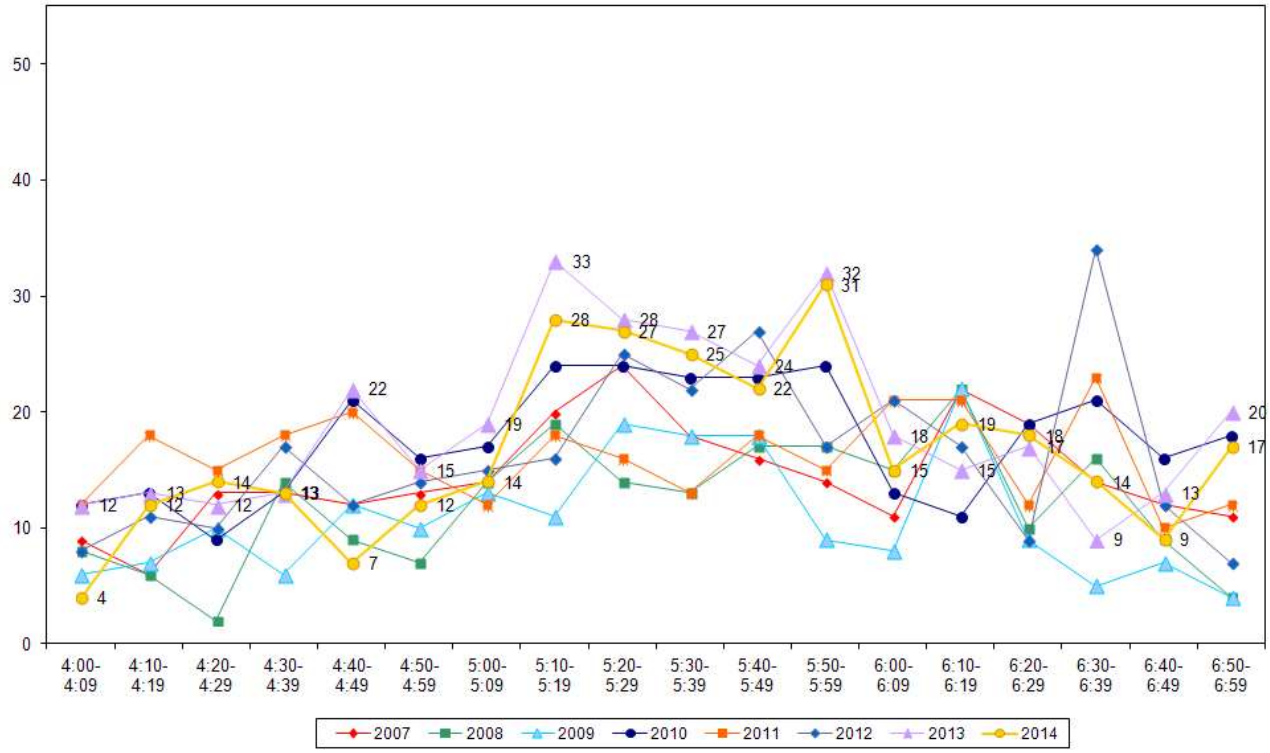
Ponsonby/Karangahape/Newton/Great North 2004 – 2013 (%)

	2007	*2008*	*2009*	*2010*	*2011*	*2012*	*2013*	*2014*	Change 13-14
Cyclist Type									
Adult	99	98	97	99	100	99	100	**97**	**-3**
School child	1	2	3	1	0	1	0	**2**	**2**
Don't know	0	0	0	0	0	0	0	**1**	**1**
Helmet Wearing									
Helmet on head	87	89	88	85	85	86	88	**89**	**1**
No helmet	13	11	12	15	15	14	12	**8**	**-4**
Don't know	0	0	0	0	0	0	0	**3**	**3**
Gender									
Male	-	-	-	-	78	81	80	**72**	**-8**
Female	-	-	-	-	20	18	20	**21**	**1**
Can't tell	-	-	-	-	2	1	0	**7**	**7**
Where Riding									
Road	74	90	75	68	72	78	81	**75**	**-6**
Footpath	26	10	25	32	28	22	19	**18**	**-1**
Don't know	0	0	0	0	0	0	0	**7**	**7**
Base:	***261***	***216***	***194***	***317***	***289***	***294***	***342***	***301***	

- The volume of cyclist movements was heaviest in the hour from 5:00pm to 6:00pm. One notable peak occurred during this time, between 5:50pm to 5:59pm with 31 movements. At the start and at the end of the monitoring period, cycle volumes were relatively low.

Figure 3.3: Evening Peak Cyclist Frequency

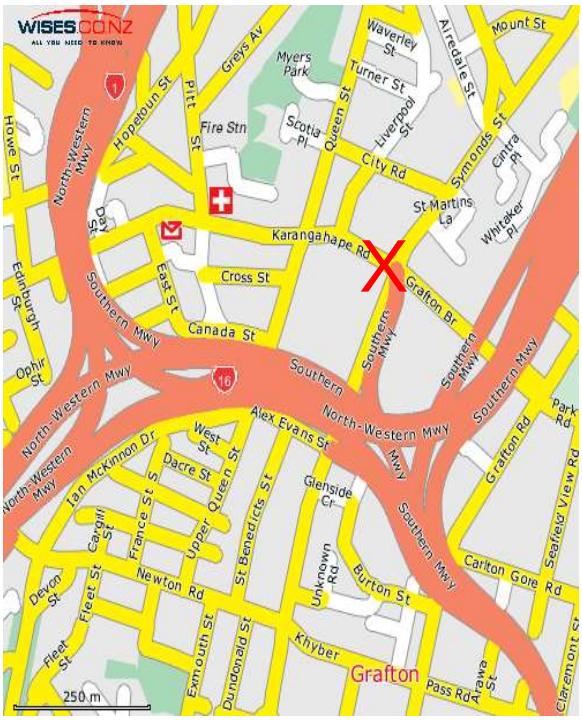
Ponsonby/Karangahape/Newton/Great North 2007 – 2014 (n)

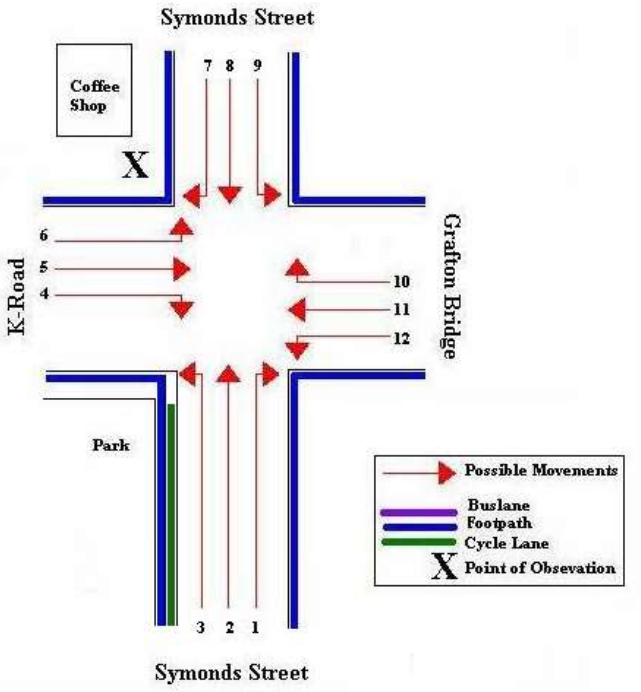


4. SYMONDS/KARANGAHAPE/ GRAFTON ROAD, GRAFTON (SITE 8)

Figure 4.1 shows the possible cyclist movements at this intersection.

Figure 4.1: Cycle Movements: Symonds/Karangahape/Grafton





When recording where cyclists are riding, surveyors can only select one option from road, footpath or cycleway. Where cyclists ride in multiple places, e.g footpath and cycleway, surveyors are instructed to record where cyclists are riding when they exited the site. As no cyclists exited this site on the cycleway in the morning peak, no cycleway riders have been recorded.

4.1 Site Summary

	Raw Counts			*AADT*
	Morning Peak	***Evening Peak***	***Total***	***Total***
2007	290	349	639	924
2008	285	336	621	899
2009	246	282	528	735
2010	283	314	597	865
2011	317	373	690	999
2012	338	394	732	1060
2013	410	492	902	1305
2014	**385**	**447**	**832**	**1205**

4.2 Morning Peak

Environmental Conditions

- The weather was overcast with light drizzle at the start of the shift, but gradually improved towards the end of the monitoring period.
- There were no road works or accidents that may affect cycle counts.

Key Points

- The volume of morning peak cyclists recorded at the Symonds/Karangahape/Grafton intersection in 2014 (385 movements) has decreased since last year (410 movements).
- This year, key movements in the morning were northbound along Symonds Street (Movement 2 = 126 cyclists), from Karangahape Road onto Grafton Bridge (Movement 5 = 86 cyclists), and straight through from Grafton Bridge into Karangahape Road (Movement 11 = 51 cyclists).
- The most noticeable changes since last year occurred at Movement 5 (up 17 movements) and at Movements 3 and 8 (each down 12 movements).

Table 4.1: Morning Cyclist Movements

Symonds/Karangahape/Grafton 2007 – 2014 (n)

Movement	*2007*	*2008*	*2009*	*2010*	*2011*	*2012*	*2013*	*2014*	Change 13-14
1	3	10	6	4	17	19	14	**21**	**7**
2	92	81	77	87	75	107	118	**126**	**8**
3	9	18	18	22	9	11	26	**14**	**-12**
4	2	6	1	1	6	2	4	**3**	**-1**
5	55	54	51	51	57	54	69	**86**	**17**
6	12	11	12	7	26	21	30	**21**	**-9**
7	3	3	0	1	6	0	2	**2**	**0**
8	11	8	2	19	17	19	18	**6**	**-12**
9	8	5	9	7	8	13	16	**9**	**-7**
10	41	33	21	31	38	35	48	**44**	**-4**
11	51	53	48	48	55	55	61	**51**	**-10**
12	3	3	1	5	3	2	4	**2**	**-2**
Total	***290***	***285***	***246***	***283***	***317***	***338***	***410***	***385***	**-25**

- Similar to previous years, all morning cyclists at this site were adults.
- Ninety-seven per cent of cyclists at this site were wearing a helmet (unchanged from the previous measure).
- The greatest share of cyclists continued to be males (74 per cent).
- The share of cyclists riding on the road has remained stable at 96 per cent this year (stable at 94 per cent from 2013).

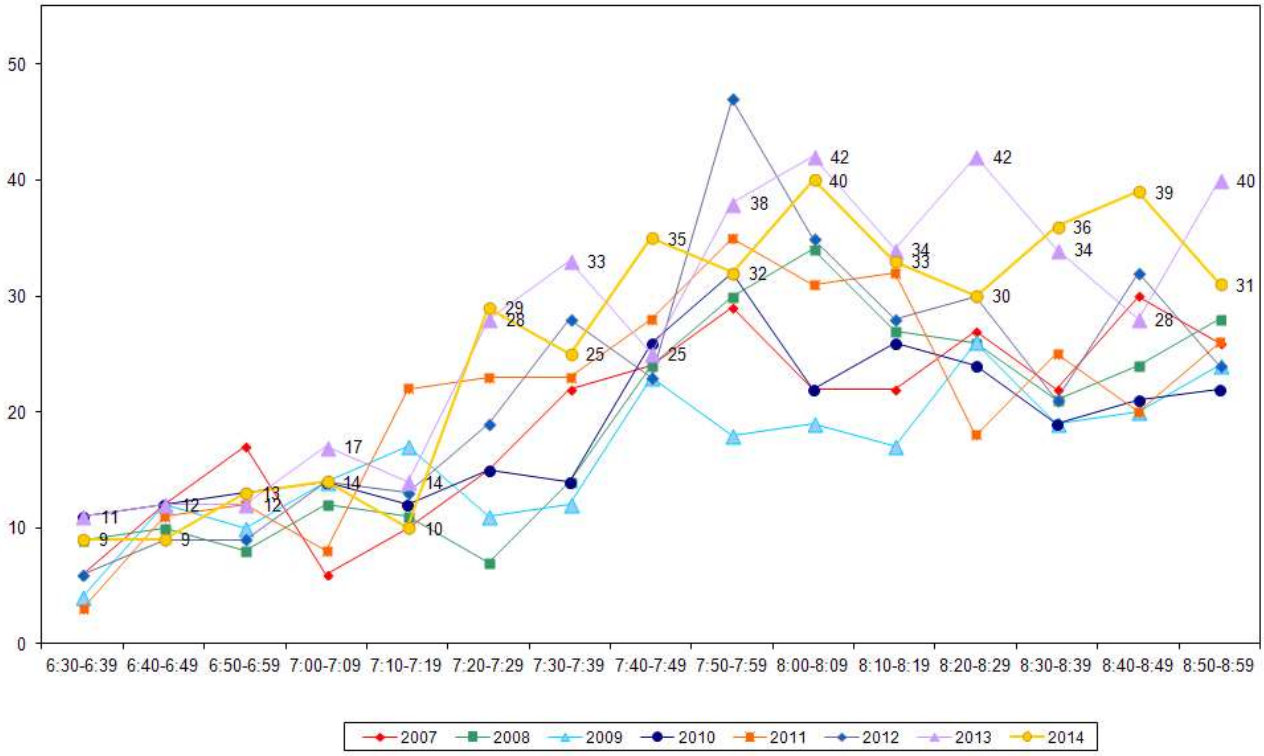
Table 4.2: Morning Cyclist Characteristics

Symonds/Karangahape/Grafton 2004 – 2014 (%)

	2007	*2008*	*2009*	*2010*	*2011*	*2012*	*2013*	*2014*	Change 13-14
Cyclist Type									
Adult	99	100	100	99	99	99	100	**100**	**0**
School child	1	0	0	1	1	1	0	**0**	**0**
Helmet Wearing									
Helmet on head	98	95	94	94	95	96	97	**97**	**0**
No helmet	2	5	6	6	5	4	3	**3**	**0**
Gender									
Male	-	-	-	-	68	75	79	**74**	**-5**
Female	-	-	-	-	18	18	20	**25**	**5**
Can't tell	-	-	-	-	14	7	1	**1**	**0**
Where Riding									
Road	91	92	91	87	93	91	94	**96**	**2**
Footpath	9	8	9	13	7	9	6	**3**	**-3**
Don't know	0	0	0	0	0	0	0	**1**	**1**
Base:	***290***	***285***	***246***	***283***	***317***	***338***	***410***	***385***	

- Morning cyclist movement volumes increased over the monitoring period, rising sharply at approximately 7:20am. Two peaks were evident in the second half of the monitoring period – between 8:00am to 8:09am (40 movements) and between 8:40am and 8:49am (39 movements). The overall pattern is similar to previous years.

Figure 4.2: Morning Peak Cyclist Frequency
Symonds/Karangahape/Grafton 2007 – 2014 (n)



Note: In 2014, three cyclists (1 per cent of all morning peak cycle movements at this site) were observed riding together at 8:42am. This compares with one per cent (n=3 cyclists) riding in groups in 2013.

4.3 Evening Peak

Environmental Conditions

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

Key Points

- The number of cyclists at this site has decreased this year (447 movements, down from 492 in 2013).
- The key evening movements at this site were straight along Symonds Street travelling south (Movement 8 = 128 movements), straight from Grafton Bridge into Karangahape Road (Movement 11 = 71 movements) and the opposite route (Movement 5 = 61 movements).
- The most noticeable increase this year was at Movement 7 (up 18 cyclists), whereas the most noticeable decrease was at Movement 5 (down 27 movements).

Table 4.3: Evening Cyclist Movements

Symonds/Karangahape/Grafton 2007 – 2014 (n)

Movement	*2007*	*2008*	*2009*	*2010*	*2011*	*2012*	*2013*	*2014*	Change 13-14
1	2	1	0	2	2	1	1	**0**	**-1**
2	20	17	11	24	15	22	38	**20**	**-18**
3	4	4	6	3	3	4	8	**8**	**0**
4	17	24	23	20	21	24	25	**29**	**4**
5	56	49	40	41	58	62	88	**61**	**-27**
6	4	5	3	8	10	10	9	**10**	**1**
7	16	16	12	7	29	12	23	**41**	**18**
8	117	103	74	85	89	121	129	**128**	**-1**
9	38	55	33	27	30	51	37	**41**	**4**
10	20	11	16	15	9	16	17	**17**	**0**
11	42	42	60	74	89	54	94	**71**	**-23**
12	13	9	4	8	18	17	23	**21**	**-2**
Total	**349**	**336**	**282**	**314**	**373**	**394**	**492**	**447**	**-45**

- Almost all evening cyclists at the Symonds/Karangahape/Grafton intersection were adults (99 per cent, stable since monitoring began).
- The majority of cyclists at this site were wearing a helmet (95 per cent; up 3 percentage points from last year and relatively stable since the monitor began).
- The majority of cyclists continue to be male (78 per cent, stable from 80 per cent last year).
- Most cyclists were riding on the road (82 per cent, a slight decrease from 86 per cent in 2013).
- Thirteen per cent of evening cyclists made use of the cycleway this year.

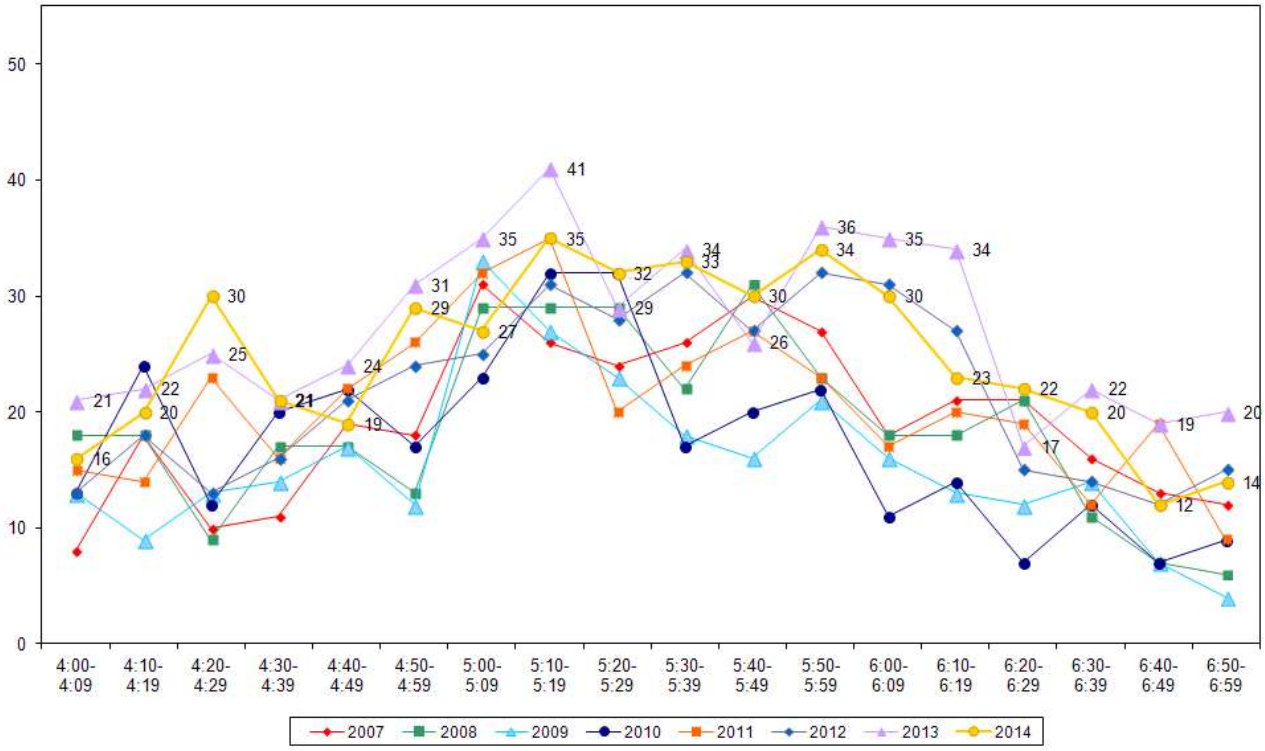
Table 4.4: Evening Cyclist Characteristics

Symonds/Karangahape/Grafton 2004 – 2014 (%)

	2007	*2008*	*2009*	*2010*	*2011*	*2012*	*2013*	*2014*	Change 13-14
Cyclist Type									
Adult	99	100	100	99	99	100	100	**99**	**-1**
School child	1	0	0	1	1	0	0	**1**	**1**
Helmet Wearing									
Helmet on head	90	92	90	92	90	93	92	**95**	**3**
No helmet	10	8	10	8	10	7	8	**5**	**-3**
Gender									
Male	-	-	-	-	69	80	80	**78**	**-2**
Female	-	-	-	-	22	16	20	**21**	**1**
Can't tell	-	-	-	-	9	4	0	**1**	**1**
Where Riding									
Road	84	97	88	79	82	80	86	**82**	**-4**
Footpath	16	3	12	21	18	20	13	**5**	**-8**
Cycleway	-	-	-	-	-	-	-	**13**	**13**
Can't tell	-	-	-	-	-	-	1	**0**	**-1**
Base:	***349***	***336***	***282***	***314***	***373***	***394***	***492***	***447***	

- Evening cycle volumes in 2014 increased over the monitoring period to a peak between 4:20pm to 4:29pm (30 movements). Cycle volumes remained high over the middle of the evening monitoring period, primarily between 5:00pm and 6:00pm. These trends are similar to those of previous years.

Figure 4.3: Evening Peak Cyclist Frequency
Symonds/Karangahape/Grafton 2007 – 2014 (n)



Note: In 2014, 3 per cent of the total cycle movements (n=12) in the evening peak were identified as cycling in groups. Three or more cyclists were observed travelling in groups at this site at the following times:

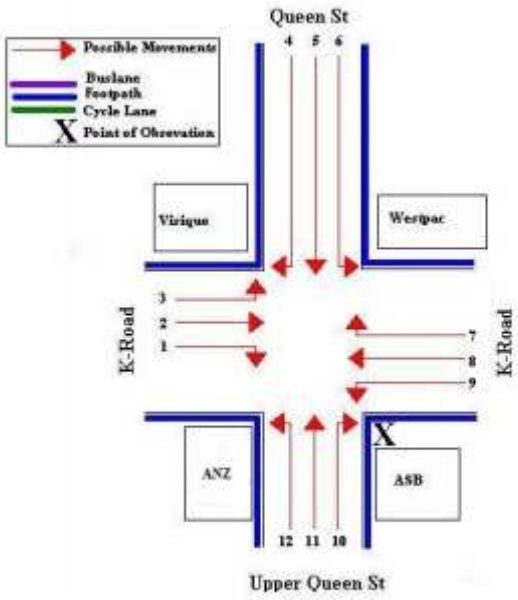
- *4 cyclists at 4:53pm*
- *3 cyclists at 5:42pm*
- *5 cyclists at 6:56pm.*

This compares with no cyclists observed riding through this site in groups in 2013.

5. KARANGAHAPE ROAD/QUEEN STREET, AUCKLAND CENTRAL (SITE 9)

Figure 5.1 shows the possible cyclist movements at this intersection.

Figure 5.1: Cycle Movements: Karangahape/Queen



5.1 Site Summary

	Raw Counts			AADT
	Morning Peak	*Evening Peak*	*Total*	*Total*
2007	246	261	507	736
2008	212	212	424	616
2009	238	221	459	669
2010	272	310	582	843
2011	256	298	554	802
2012	266	307	573	830
2013	315	339	654	949
2014	**343**	**270**	**613**	**897**

5.2 Morning Peak

Environmental Conditions

- The weather was overcast but gradually became sunny over the morning shift. A short light shower was recorded at 8:58am.
- There were no road works or accidents that may affect cycle counts.

Key Points

- Total morning cyclist volumes recorded at the Karangahape/Queen Street intersection in 2014 have increased from last year (343 movements, up from 315 in 2013).
- Key morning movements were straight along Karangahape Road in both directions (Movement 2 = 126 movements travelling east; Movement 8 = 59 movements travelling west).
- Of the twelve movements possible at this intersection, the most noticeable changes occurred at Movement 8 (down 39 movements) and Movement 2 (up 33 movements).

Table 5.1: Morning Cyclist Movements

Karangahape/Queen 2007 – 2014 (n)

Movement	*2007*	*2008*	*2009*	*2010*	*2011*	*2012*	*2013*	*2014*	Change 13-14
1	0	0	1	0	0	1	4	**2**	**-2**
2	85	77	96	99	93	95	93	**126**	**33**
3	10	6	13	8	6	11	9	**7**	**-2**
4	8	2	2	2	2	2	1	**0**	**-1**
5	2	4	2	3	4	2	0	**4**	**4**
6	9	0	3	2	6	0	2	**2**	**0**
7	9	11	10	15	12	13	11	**12**	**1**
8	60	67	69	74	69	66	98	**59**	**-39**
9	0	1	0	0	4	1	4	**5**	**1**
10	12	16	8	13	13	14	29	**38**	**9**
11	38	20	28	46	30	48	55	**55**	**0**
12	13	8	6	10	17	13	9	**32**	**23**
Don't know	0	0	0	0	0	0	0	**1**	**1**
Total	**246**	**212**	**238**	**272**	**256**	**266**	**315**	**343**	**28**

- Almost all cyclists were adults (99 per cent, consistent with results recorded in previous years with the exception of 2008 – 83 per cent).
- Most of the cyclists were wearing a helmet (93 per cent, stable from 95 per cent in 2013).
- The majority of cyclists continued to be male (79 per cent).
- The percentage of cyclists riding on the road continued to be high (95 per cent, up slightly from 91 per cent in 2013).

Table 5.2: Morning Cyclist Characteristics

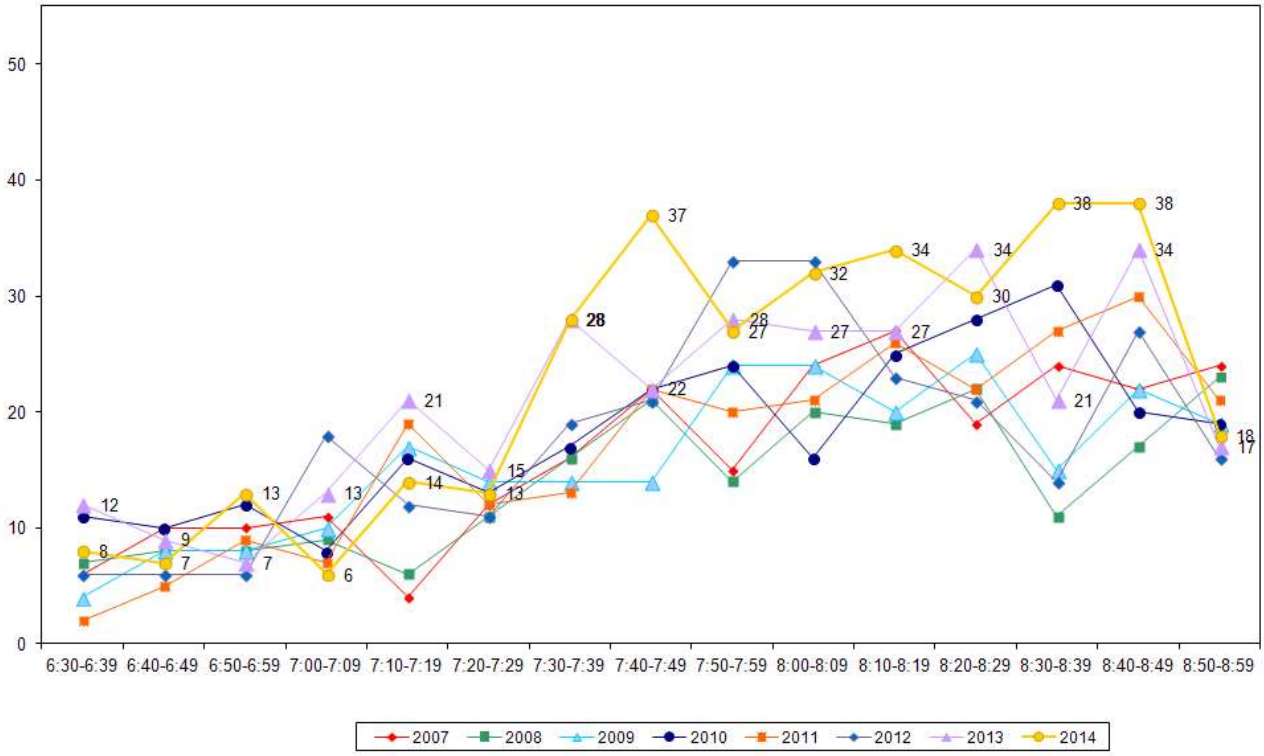
Karangahape/Queen 2004 – 2014 (%)

	2007	*2008*	*2009*	*2010*	*2011*	*2012*	*2013*	*2014*	Change 13-14
Cyclist Type									
Adult	99	83	99	100	99	100	100	**99**	**-1**
School child	1	17	1	0	1	0	0	**0**	**0**
Don't know	0	0	0	0	0	0	0	**1**	**1**
Helmet Wearing									
Helmet on head	95	92	93	97	92	91	95	**93**	**-2**
No helmet	5	8	7	3	8	9	5	**6**	**1**
Don't know	0	0	0	0	0	0	0	**1**	**1**
Gender									
Male	-	-	-	-	78	79	78	**79**	**1**
Female	-	-	-	-	18	21	15	**20**	**5**
Can't tell	-	-	-	-	4	0	7	**1**	**-6**
Where Riding									
Road	92	92	92	94	86	88	91	**95**	**4**
Footpath	8	8	8	6	14	12	9	**4**	**-5**
Don't know	0	0	0	0	0	0	0	**1**	**1**
Base:	***246***	***212***	***238***	***272***	***256***	***266***	***315***	***343***	

- Morning cyclist volumes increased throughout the entire monitoring period. In contrast to previous years, a peak is evident near the middle of the monitoring period between 7:40am and 7:50am (37 cycle movements). Cycle volumes reached similar numbers towards the end of the shift between 8:30am to 8:39 and 8:40 to 8:49am with 38 cycle movements recorded at each ten minute interval during this period.

Figure 10.2: Morning Peak Cyclist Frequency

Karangahape/Queen 2007 – 2014 (n)



5.3 Evening Peak

Environmental Conditions

- The weather was sunny throughout the evening shift.
- There were no road works or accidents that may affect cycle counts.

Key Points

- The number of evening cyclist movements recorded at the Karangahape Road/Queen Street intersection has decreased (270 movements, down from 339 in 2013).
- Key evening movements were straight along Karangahape Road in both directions (Movement 8 = 109 movements travelling east; Movement 2 = 84 movements travelling west).
- A noticeable increase in cycle movement volumes was seen at Movement 6 (up 5 movements) and the largest decrease was at Movement 2 (down 31 movements).

Table 5.3: Evening Cyclist Movements

Karangahape/Queen 2007 – 2014 (n)

Movement	*2007*	*2008*	*2009*	*2010*	*2011*	*2012*	*2013*	*2014*	Change 13-14
1	4	3	3	6	6	1	7	**5**	**-2**
2	85	63	70	104	83	112	115	**84**	**-31**
3	2	8	5	4	3	8	5	**4**	**-1**
4	6	4	14	15	10	9	9	**12**	**3**
5	24	17	10	15	21	39	35	**13**	**-22**
6	16	4	5	4	5	4	1	**6**	**5**
7	6	5	5	10	9	3	13	**11**	**-2**
8	94	84	101	137	140	109	132	**109**	**-23**
9	5	11	4	8	9	5	12	**8**	**-4**
10	2	3	0	1	3	3	1	**5**	**4**
11	11	9	3	4	7	11	9	**9**	**0**
12	6	1	1	2	2	3	0	**4**	**4**
Total	**261**	**212**	**221**	**310**	**298**	**307**	**339**	**270**	**-69**

- All riders at this intersection were adults (consistent with previous years).
- Most cyclists were wearing a helmet (90 per cent, up from 86 per cent in 2013).
- The majority of cyclists were male (80 per cent, stable from 79 per cent last year).
- Riding on the road continued to be most common in the evening (99 per cent, a 16 percentage point increase from last year).

Table 4.4: Evening Cyclist Characteristics

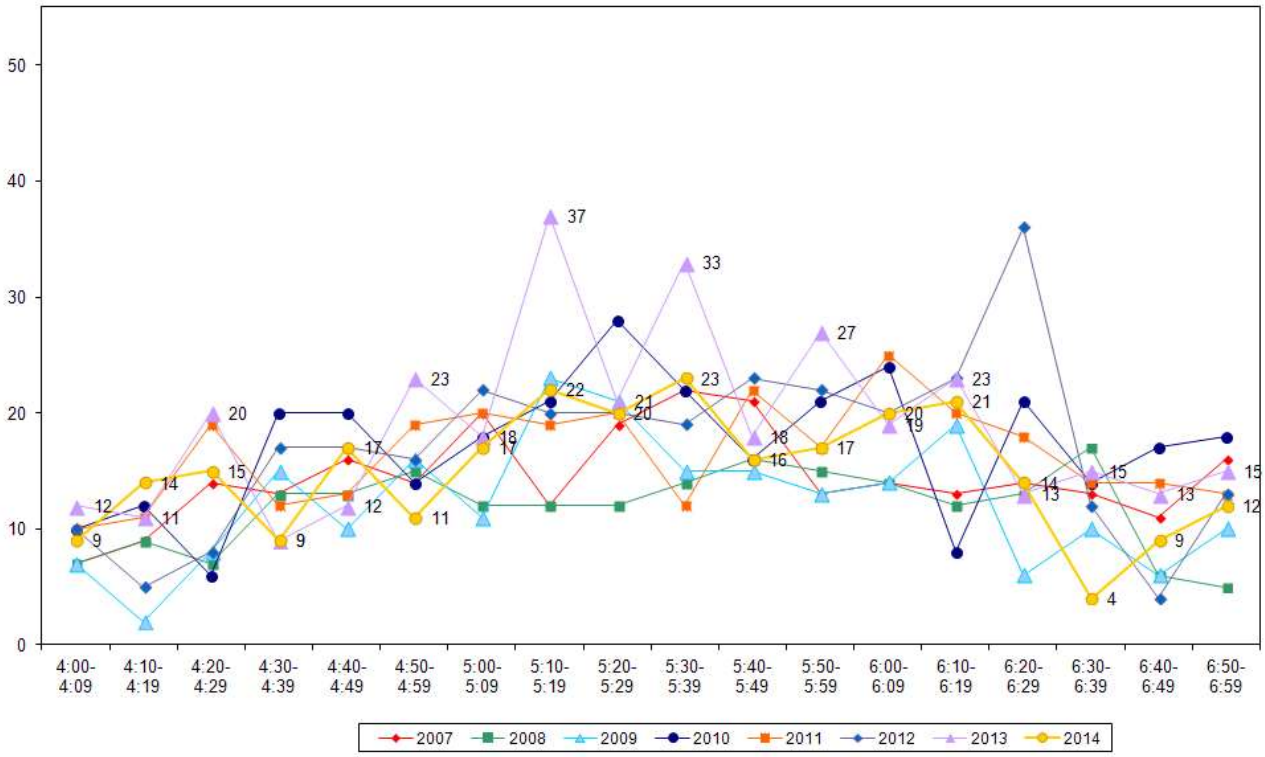
Karangahape/Queen 2004 – 2014 (%)

	2007	***2008***	***2009***	***2010***	***2011***	***2012***	***2013***	***2014***	**Change 13-14**
Cyclist Type									
Adult	99	94	100	100	99	99	100	**100**	**0**
School child	1	6	0	0	1	1	0	**0**	**0**
Helmet Wearing									
Helmet on head	78	88	86	91	82	87	86	**90**	**4**
No helmet	22	12	14	9	18	13	14	**10**	**-4**
Gender									
Male	-	-	-	-	76	80	79	**80**	**1**
Female	-	-	-	-	23	20	18	**20**	**2**
Can't tell	-	-	-	-	1	0	3	**0**	**-3**
Where Riding									
Road	80	86	77	86	74	81	83	**99**	**16**
Footpath	20	14	23	14	26	19	17	**1**	**-16**
Base:	***261***	***212***	***221***	***310***	***298***	***307***	***339***	***270***	

- Cyclist movement volumes fluctuated throughout the monitoring period. The highest volume of cyclists recorded was between 5:30pm and 5:39pm with 23 cycle movements. Cycle volumes declined steadily after the 6:10pm to 6:19pm interval.

Figure 5.3: Evening Peak Cyclist Frequency

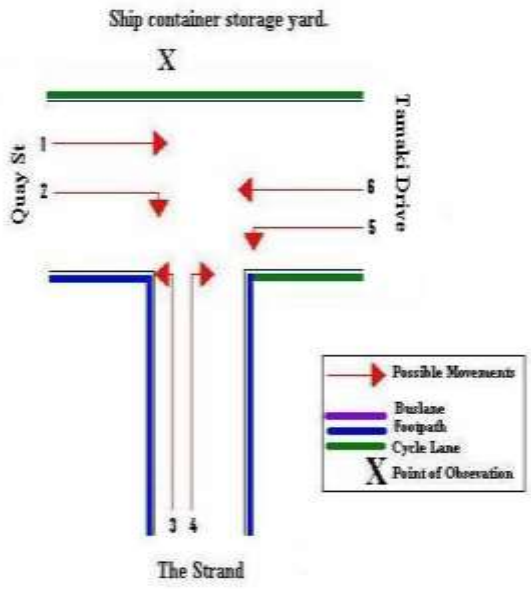
Karangahape/Queen 2007 – 2014 (n)



6. TAMAKI DRIVE/THE STRAND, PARNELL (SITE 10)

Figure 6.1 shows the possible cyclist movements at this intersection.

Figure 6.1: Cycle Movements: Tamaki/The Strand



6.1 Site Summary

	Raw Counts			AADT
	Morning Peak	*Evening Peak*	*Total*	*Total*
2007	480	420	900	1313
2008	416	370	786	1146
2009	321	282	603	880
2010	498	438	936	1365
2011	630	429	1059	1555
2012	503	441	944	1377
2013	507	414	921	1346
2014	**411**	**388**	**799**	**1163**

6.2 Morning Peak

Environmental Conditions

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

Key Points

- Morning cyclist numbers at the Tamaki Drive/The Strand/Quay Street intersection in 2014 have decreased from the previous year (411 movements, compared with 507 in 2013).
- The most common movements were heading straight along Tamaki Drive onto Quay Street (Movement 6 = 199 movements) and turning left from Tamaki Drive onto The Strand (Movement 5 = 103).
- Of the six movements possible at this site, the most noticeable change occurred at Movement 6 (down 52 movements).

Table 6.1: Morning Cyclist Movements

Tamaki/The Strand 2007 – 2014 (n)

Movement	*2007*	*2008*	*2009*	*2010*	*2011*	*2012*	*2013*	*2014*	Change 13-14
1	55	58	47	92	57	44	49	**43**	**-6**
2	31	36	29	37	43	38	37	**28**	**-9**
3	14	9	14	29	19	22	34	**25**	**-9**
4	26	25	8	17	37	18	22	**13**	**-9**
5	147	112	50	106	221	170	114	**103**	**-11**
6	207	176	173	217	253	211	251	**199**	**-52**
Total	**480**	**416**	**321**	**498**	**630**	**503**	**507**	**411**	**-96**

- All cyclists at this intersection were adults (stable since 2007).
- Nearly all riders were wearing a helmet (99 per cent, stable from previous years).
- The majority of riders were male (88 per cent, up from 83 per cent in 2013).
- The greatest share of cyclists were riding on the road (65 per cent), while 25 per cent rode on the off-road cycleway, and 10 per cent rode on the footpath.

Table 6.2: Morning Cyclist Characteristics

Tamaki/The Strand 2004 – 2014 (%)

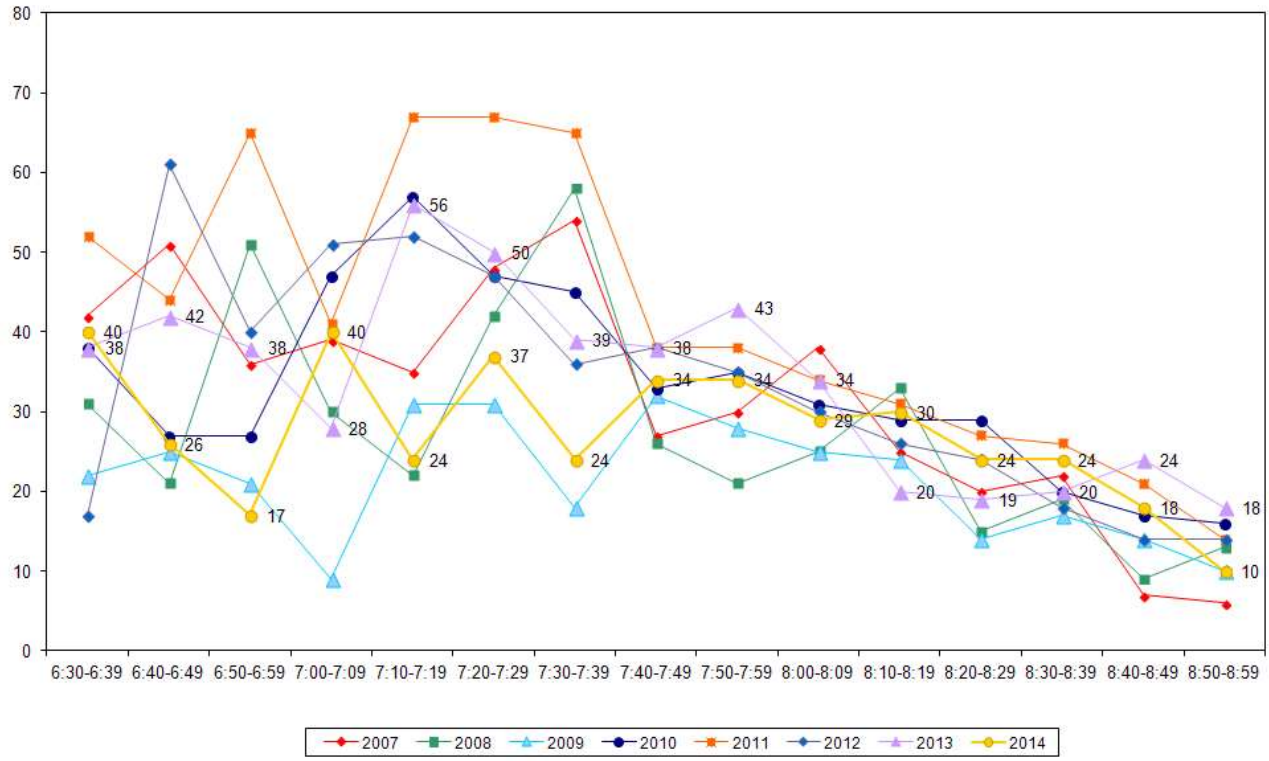
	2007	***2008***	***2009***	***2010***	***2011***	***2012***	***2013***	***2014***	**Change 13-14**
Cyclist Type									
Adult	100	100	100	100	99	99	99	**100**	**1**
School child	0	0	0	0	1	1	1	**0**	**-1**
Helmet Wearing									
Helmet on head	99	100	99	97	97	99	98	**99**	**1**
No helmet	1	0	1	3	3	1	2	**1**	**-1**
Gender									
Male	-	-	-	-	77	87	83	**88**	**5**
Female	-	-	-	-	23	13	17	**12**	**-5**
Can't tell	-	-	-	-	0	0	0	**0**	**0**
Where Riding*									
Road	95	99	74	78	77	79	70	**65**	**-5**
Footpath	5	1	2	7	9	6	8	**10**	**2**
Off-road cycleway	-	-	24	15	14	15	22	**25**	**3**
Base:	***480***	***416***	***321***	***498***	***630***	***503***	***507***	***411***	

** Prior to 2009, cyclists riding on the cycle-designated side of the footpath on Tamaki Drive were classified as road riders. In 2009, a separate classification of 'off-road cycleway' was introduced, which incorporates separated cycleways such as Tamaki Drive. From 2009, 'road riders' were defined as those cycling on the cycle designated side of the footpath, and 'footpath' riders as those cycling on the pedestrian-designated side of the footpath.*

- Morning cyclist volumes experienced a high level of variation in the first hour of the monitoring period, with 40 cyclists at each interval: 6:30am to 6:39am and 7:00am to 7:09am. Cycle volumes stabilized between 7:40am to 7:49am and followed a decreasing trend for the remainder of the monitoring period, similar to that of previous years.

Figure 6.2: Morning Peak Cyclist Frequency

Tamaki/The Strand 2007 – 2014 (n)



Note: In 2014, 11 per cent of the morning peak cycle movements (n=44) at this site were identified as cycling in groups. Three or more cyclists were observed travelling in groups at this site at the following times:

- *5 cyclists at 6:36am*
- *11 cyclists at 6:37am*
- *3 cyclists at 6:37am*
- *3 cyclists at 6:40am*
- *6 cyclists at 7:05am*
- *3 cyclists at 7:08am*
- *8 cyclists at 7:09am*
- *5 cyclists at 7:29am.*

This compares with nine per cent of cyclists (n=44) riding as groups in 2013 (and 13 per cent; n=67 in 2012)

6.3 Evening Peak

Environmental Conditions

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

Key Points

- Evening cycle movement volumes have decreased from last year by 26 movements, to a total of 388 this year.
- Movements made in the evening were dominated by those travelling east along Tamaki Drive away from the city (Movement 1 = 193 cyclists), and also to a lesser extent, by those travelling right onto Tamaki Drive from The Strand (Movement 4 = 68 cyclists).
- Cyclist volumes have changed most noticeably at Movement 5 (down 10 cyclists) and at Movement 4 (down 7 cyclists).

Table 6.3: Evening Cyclist Movements

Tamaki/The Strand 2007 – 2014 (n)

Movement	*2007*	*2008*	*2009*	*2010*	*2011*	*2012*	*2013*	*2014*	Change 13-14
1	182	150	152	170	200	198	196	**193**	**-3**
2	24	12	15	29	28	31	40	**37**	**-3**
3	21	25	24	28	38	32	28	**24**	**-4**
4	98	78	51	102	73	77	75	**68**	**-7**
5	38	30	13	36	49	44	29	**19**	**-10**
6	57	75	27	73	41	59	46	**47**	**1**
Total	**420**	**370**	**282**	**438**	**429**	**441**	**414**	**388**	**-26**

- All cyclists using this intersection were adults (stable from previous years).
- Almost all cyclists were wearing a helmet (96 per cent, unchanged from last year).
- The greatest share of evening cyclists was male (83 per cent, unchanged from 2013).
- Riding on the road continued to be the most popular (53 per cent) while 34 per cent of cyclists made use of the off-road cycleway.

Table 6.4: Evening Cyclist Characteristics

Tamaki/The Strand 2004 – 2013 (%)

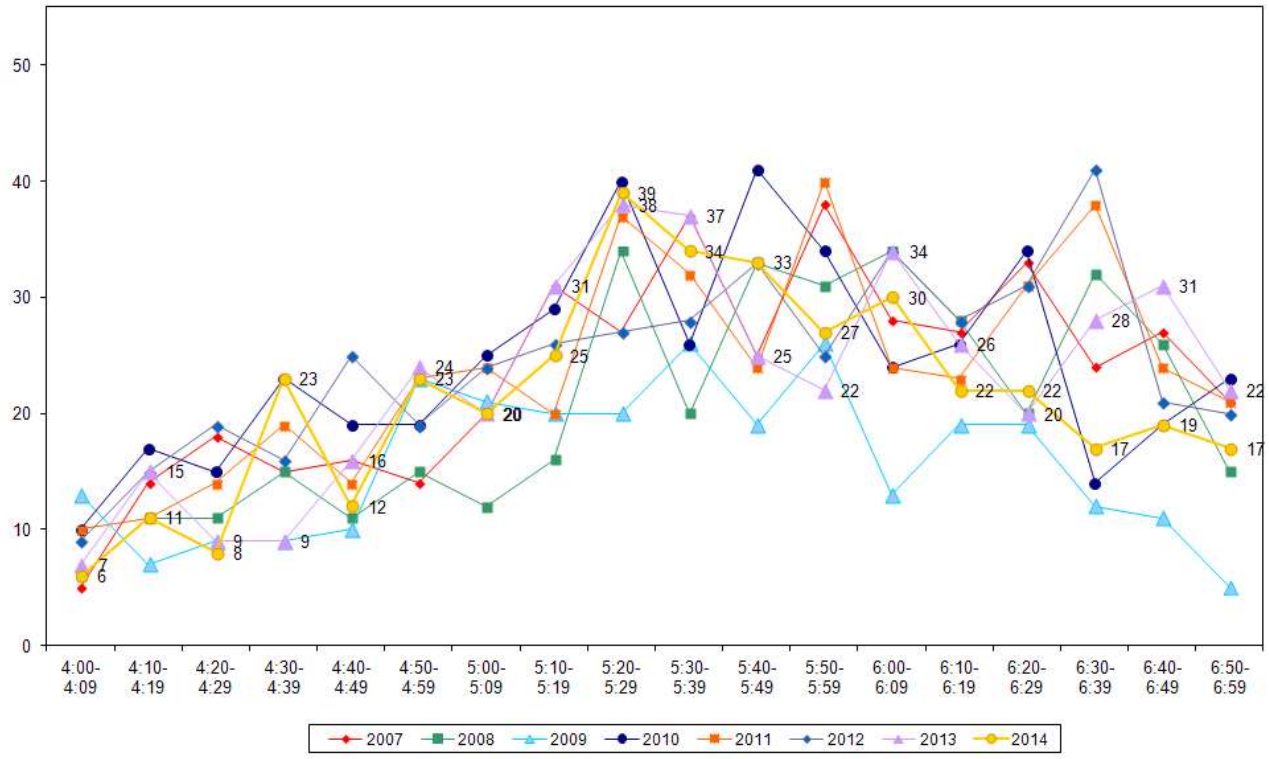
	2007	***2008***	***2009***	***2010***	***2011***	***2012***	***2013***	***2014***	**Change 13-14**
Cyclist Type									
Adult	100	100	100	99	100	100	99	**100**	**1**
School child	0	0	0	1	0	0	1	**0**	**-1**
Helmet Wearing									
Helmet on head	96	100	99	96	93	94	96	**96**	**0**
No helmet	4	0	1	4	7	6	4	**4**	**0**
Gender									
Male	-	-	-	-	82	84	83	**83**	**0**
Female	-	-	-	-	18	16	17	**17**	**0**
Can't tell	-	-	-	-	0	0	0	**0**	**0**
Where Riding*									
Road	97	99	57	63	61	58	56	**53**	**-3**
Footpath	3	1	4	12	16	14	7	**13**	**6**
Off-road cycleway	-	-	39	25	23	28	37	**34**	**-3**
Base:	***420***	***370***	***282***	***438***	***429***	***441***	***414***	***388***	

** Prior to 2009, cyclists riding on the cycle-designated side of the footpath on Tamaki Drive were classified as road riders. In 2009, a separate classification of 'off-road cycleway' was introduced, which incorporates separated cycleways such as Tamaki Drive. From 2009, 'road riders' were defined as those cycling on the cycle designated side of the footpath, and 'footpath' riders as those cycling on the pedestrian-designated side of the footpath.*

- In the evening, cyclist movement volumes increased over the observation period to peak between 5:20pm and 5:29pm (39 movements). Cycle volumes steadily declined for the remainder of the monitoring period. The 2014 trends are similar to those of previous years.

Figure 6.3: Evening Peak Cyclist Frequency

Tamaki/The Strand 2007 – 2014 (n)



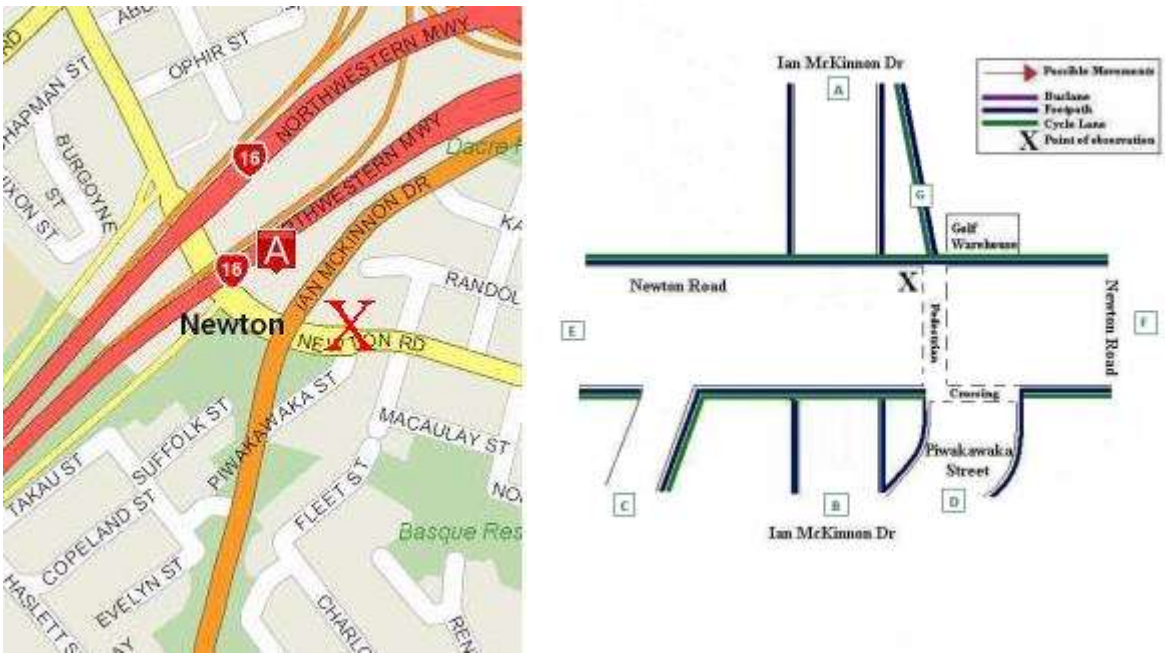
Note: No cyclists were observed riding in groups in 2014. This compares with three per cent (n=11) riding as pelotons in 2013.

7. IAN MCKINNON DRIVE/NEWTON ROAD, NEWTON (SITE 13)

Figure 7.1 shows the possible cyclist movements at this intersection.

Note: Due to the complexity of this site, the map and movement directions were re-designed in 2013 to more accurately capture how this site is used by cyclists. Rather than trying to keep track of cyclists as they move around the site, surveyors were instead required to record the zone at which each cyclist entered the site (represented by letters on the map), and the zone from which they exited. As a result, movement numbers in 2013 and 2014 are not directly comparable with previous years.

Figure 7.1: Cycle Movements: Ian McKinnon Drive/Newton Road



7.1 Site Summary

	Raw Counts			AADT
	Morning Peak	*Evening Peak*	*Total*	*Total*
2009	139	152	291	422
2010	190	184	374	544
2011	236	324	560	807
2012	219	284	503	726
2013	303	279	582	848
2014	**230**	**266**	**496**	**718**

7.2 Morning Peak

Environmental Conditions

- The weather was cloudy, with light drizzle towards the end of the morning shift.
- There were no road works or accidents that may affect cycle counts.

Key Points

- The volume of morning cyclists at the Ian McKinnon Drive/Newton Road site has decreased, from 303 movements in 2013 to 230 this year.
- Cyclists were most likely to enter the site at C (off the North-Western Cycleway, 165 cycle movements), and were most likely to exit at G (north along Ian McKinnon Drive on the cycleway by the Golf Warehouse, 69 cycle movements).
- The key morning movement at this intersection was getting off the North-Western Cycleway and travelling north along Ian McKinnon Drive on the cycleway (Entry C, Exit G = 55 cyclists, down from 70 cyclists last year).

Table 7.1A: Morning Cyclist Movements

Ian McKinnon Drive/Newton Road 2014 (n)

Entry	*Exit*								*Total*
	A	**B**	**C**	**D**	**E**	**F**	**G**	**DK**	
A	0	1	0	0	0	0	0	0	**1**
B	14	0	0	0	0	0	0	0	**14**
C	0	0	1	44	33	32	55	0	**165**
D	0	0	2	1	5	0	3	0	**11**
E	0	0	4	5	0	6	7	0	**22**
F	0	0	2	1	5	0	4	0	**12**
G	0	0	1	1	3	0	0	0	**5**
DK	0	0	0	0	0	0	0	0	**0**
Total	**14**	**1**	**10**	**52**	**46**	**38**	**69**	**0**	***230***

Table 7.1B: Morning Cyclist Movements

Ian McKinnon Drive/Newton Road 2009 – 2014 (n)

	2009	*2010*	*2011*	*2012*	*2013*	*2014*	Change 13-14
Total Movements	139	190	236	219	303	**230**	**-73**

- All cyclists at this site were adults, unchanged from last year.
- Ninety-nine per cent of the cyclists were wearing a helmet (stable from last year).
- Two-thirds of the cyclists were identified as male (65 per cent, down slightly from 69 per cent in 2013).
- Seventy-three percent of the cyclists were riding on the off-road cycleway (a 17 percentage point increase since 12 months ago, and the highest proportion recorded since 2009). In contrast, 6 per cent were riding on the road (a decrease of 12 percentage points from last year, also the lowest proportion recorded since 2009).

Table 7.2: Morning Cyclist Characteristics

Ian McKinnon Drive/Newton Road 2009 – 2014 (%)

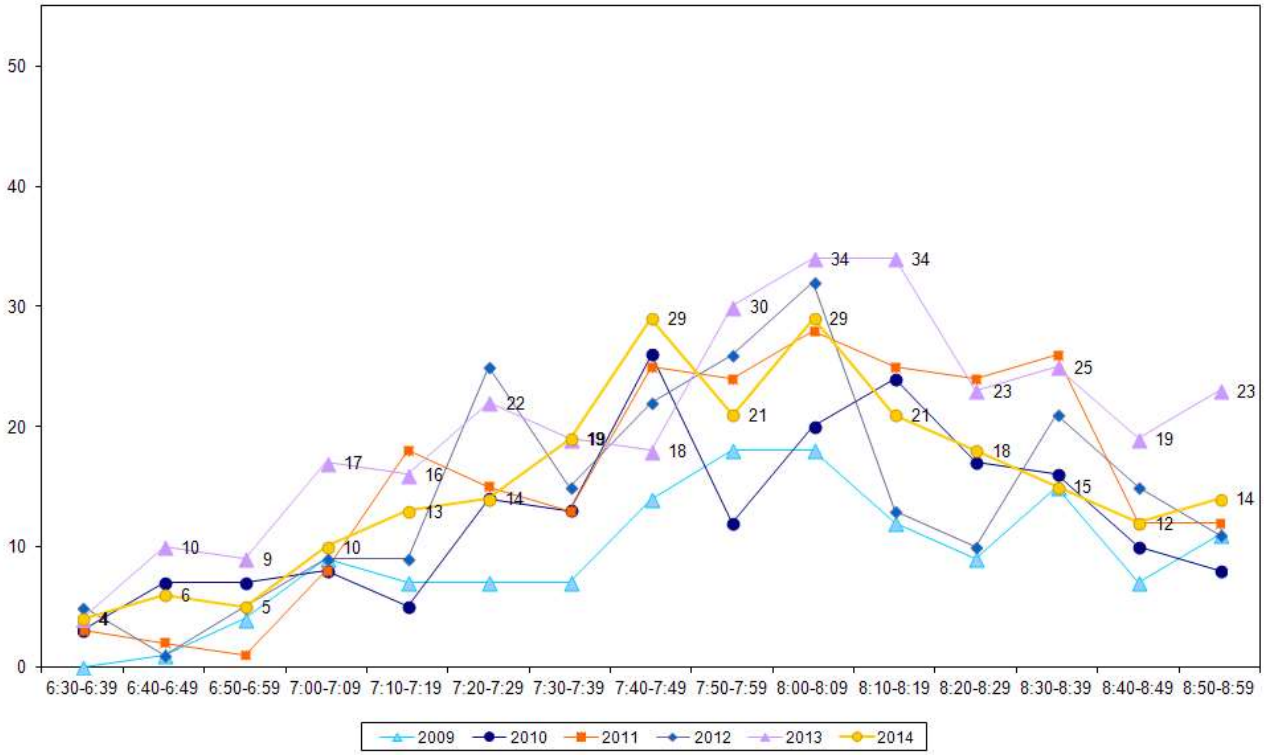
	2009	*2010*	*2011*	*2012*	*2013*	*2014*	Change 13-14
Cyclist Type							
Adult	99	99	100	99	100	**100**	**0**
School child	1	1	0	1	0	**0**	**0**
Helmet Wearing							
Helmet on head	90	93	98	95	100	**99**	**-1**
No helmet	10	7	2	5	0	**1**	**1**
Gender							
Male	-	-	53	57	69	**65**	**-4**
Female	-	-	15	14	11	**27**	**16**
Can't tell	-	-	32	29	20	**8**	**-12**
Where Riding							
Road	40	43	25	18	18	**6**	**-12**
Footpath	15	19	22	24	25	**20**	**-5**
Off-road cycleway	45	38	53	58	56	**73**	**17**
Unsure	-	-	-	-	1	**1**	**0**
Base:	***139***	***190***	***236***	***219***	***303***	***230***	

Note: Any cyclists that have been observed riding on the off-road cycleway at all (so they may not be on the cycleway all the time eg. when they cross the traffic lights) is recorded as "Off-road cycleway" under Where Riding.

- As in previous years, morning cyclist movement volumes started off low, but followed a generally increasing trend to reach maximum traffic flow around 8:00am, with 29 cyclists recorded at each interval between 7:40am to 7:49am and 8:00am to 8:09am. Following the peak cyclist intervals, cycle volumes steadily declined for the remainder of the monitoring period.

Figure 7.2: Morning Peak Cyclist Frequency

Ian McKinnon Drive/Newton Road 2009 – 2014 (n)



7.3 Evening Peak

Environmental Conditions

- The weather was fine throughout the evening monitoring period.
- There were no road works or accidents that may affect cycle counts.

Key Points

- The number of evening cyclists recorded at the Ian McKinnon Drive/Newton Road intersection was 266, slightly down from 279 movements in 2013.
- Looking at entries only, Entry A (northern end of Ian McKinnon Drive) and E (western end of Newton Road) experienced the most cycle traffic in the evening (70 and 64 cycle movements respectively).
- In regards to exits, Exit C (North-Western Cycleway) and B (southern end of Ian McKinnon Drive) had the most evening cycle traffic (125 and 70 movements respectively).
- The key evening movement at this intersection was straight along Ian McKinnon Drive heading south (Entry A, Exit B = 70 cyclist movements).

Table 7.3A: Evening Cyclist Movements

Ian McKinnon Drive/Newton Road 2014 (n)

Entry	*Exit*								*Total*
	A	**B**	**C**	**D**	**E**	**F**	**G**	**DK**	
A	0	70	0	0	0	0	0	0	**70**
B	10	0	0	0	0	0	0	0	**10**
C	0	0	0	2	4	3	4	0	**13**
D	0	0	29	0	2	2	2	0	**35**
E	0	0	43	10	0	6	5	0	**64**
F	0	0	16	0	2	0	1	1	**20**
G	0	0	37	5	3	5	4	0	**54**
DK	0	0	0	0	0	0	0	0	**0**
Total	**10**	**70**	**125**	**17**	**11**	**16**	**16**	**1**	***266***

Table 7.3B: Evening Cyclist Movements

Ian McKinnon Drive/Newton Road 2009 – 2014 (n)

	2009	*2010*	*2011*	*2012*	*2013*	*2014*	Change 13-14
Total Movements	152	184	324	284	279	**266**	**-13**

- Over the evening peak, all cyclists using this site were adults (stable since the first monitor in 2009).
- The greatest share of cyclists at this site was wearing a helmet (97 per cent, stable from 99 per cent last year).
- Thirty-one per cent of the cyclists were female (a 16 percentage point increase over the last 12 months).
- The share of off-road cycleway cyclists continued to decrease this year (30 per cent, down from 45 per cent last year). Contrarily, 39 per cent of the cyclists were riding on the road (up from 29 per cent last year), while 30 per cent were cycling on the footpath (up from 25 per cent last year).

Table 7.4: Evening Cyclist Characteristics

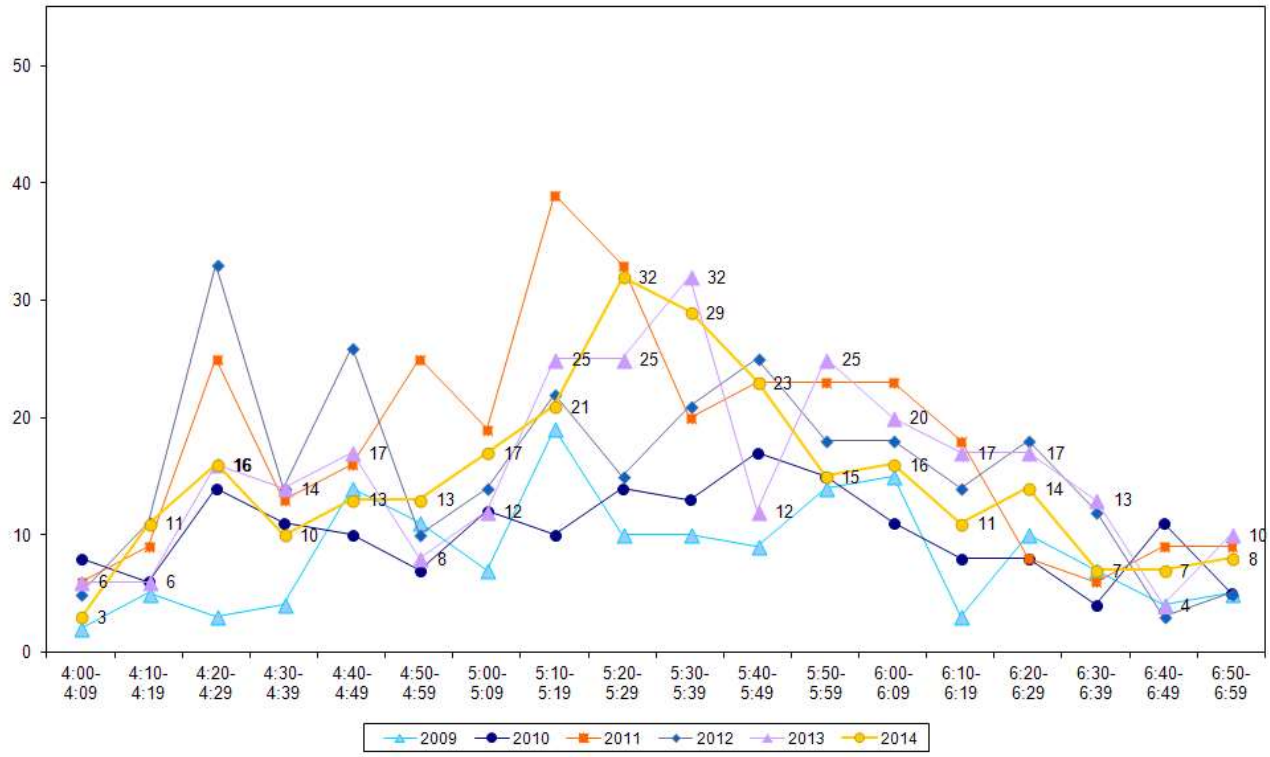
Ian McKinnon Drive/Newton Road 2009 – 2014 (%)

	2009	*2010*	*2011*	*2012*	*2013*	*2014*	Change 13-14
Cyclist Type							
Adult	98	99	100	99	100	**100**	**0**
School child	2	1	0	1	0	**0**	**0**
Helmet Wearing							
Helmet on head	95	96	97	96	99	**97**	**-2**
No helmet	5	4	3	4	1	**3**	**2**
Gender							
Male	-	-	56	60	75	**55**	**-20**
Female	-	-	17	11	15	**31**	**16**
Can't tell	-	-	27	29	10	**14**	**4**
Where Riding							
Road	31	39	24	18	29	**39**	**10**
Footpath	25	29	16	19	25	**30**	**5**
Off-road cycleway	44	32	60	63	45	**30**	**-15**
Unsure	-	-	-	-	1	**1**	**0**
Base:	***152***	***184***	***324***	***284***	***279***	***266***	

- This year, cycle volumes were variable throughout the evening. Cycle traffic was heavier during the middle portion of the monitoring period and peaked between 5:20pm to 5:29 pm (32 movements).

Figure 7.3: Evening Peak Cyclist Frequency

Ian McKinnon Drive/Newton Road 2009 – 2014 (n)

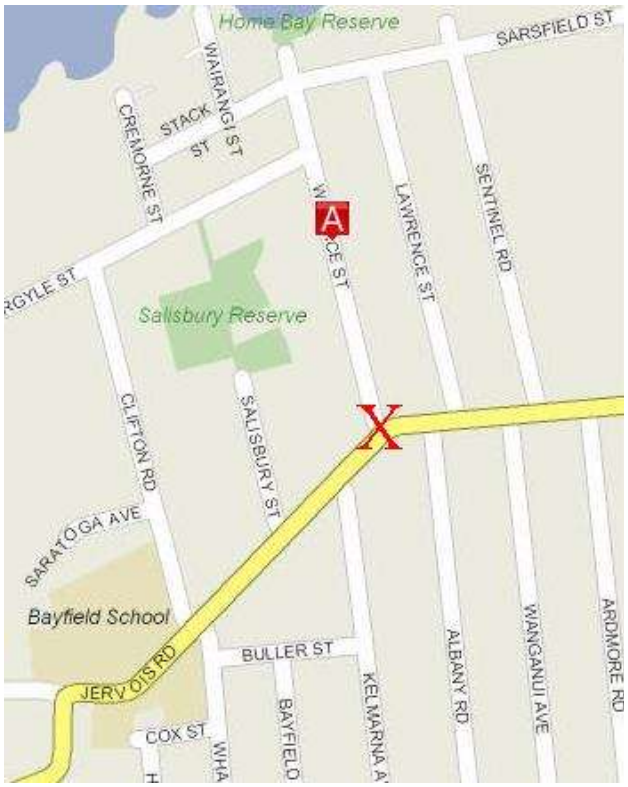


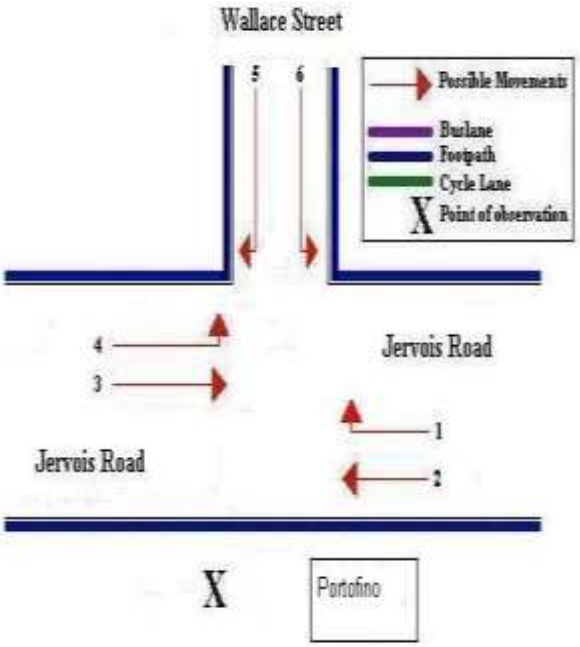
Note: In 2014, three cyclists (1 per cent of the evening peak cycle movements at this site) were observed riding together at 5:37pm.

8. JERVOIS ROAD/WALLACE STREET, HERNE BAY (SITE 16)

Figure 8.1 shows the possible cyclist movements at this intersection.

Figure 8.1: Cycle Movements: Jervois Road/Wallace Street





8.1 Site Summary

	Raw Counts			AADT
	Morning Peak	*Evening Peak*	*Total*	*Total*
2009	60	51	111	162
2010	88	79	167	243
2011	73	79	152	215
2012	62	79	141	204
2013	70	66	136	200
2014	**67**	**65**	**132**	**192**

8.2 Morning Peak

Environmental Conditions

- The weather was fine with some wind present over the morning shift.
- There were no road works or accidents that may affect cycle counts.

Key Points

- The total number of cyclists recorded at this site in the morning has remained stable this year (67 movements, down slightly from 70 in 2013).
- The key movements were straight along Jervois Road in both directions (Movement 2 heading southwest = 18 movements; Movement 3 heading northeast = 38 movements).
- The most noticeable change was a decrease at Movement 2 (down 3 movements).

Table 8.1: Morning Cyclist Movements

Jervois Road/Wallace Street 2009 – 2014 (n)

Movement	*2009*	*2010*	*2011*	*2012*	*2013*	*2014*	Change 13-14
1	0	1	1	0	1	**0**	**-1**
2	30	36	37	17	21	**18**	**-3**
3	24	37	25	29	37	**38**	**1**
4	2	12	8	12	8	**6**	**-2**
5	1	1	0	2	1	**1**	**0**
6	3	1	2	2	2	**4**	**2**
Total	**60**	**88**	**73**	**62**	**70**	**67**	**-3**

- There was a three percentage point increase in the share of school children cycling at this site this year (up from 10 per cent in 2013 to 13 per cent in 2014).
- Helmet wearing continued to be widespread (100 per cent, up from 97 per cent last year).
- The proportion of male cyclists continued to increase – up from 83 per cent in 2013 to 88 per cent this year.
- The number of cyclists riding on the road has remained the same this year, at 73 per cent. The remaining 27 per cent were riding on the footpath.

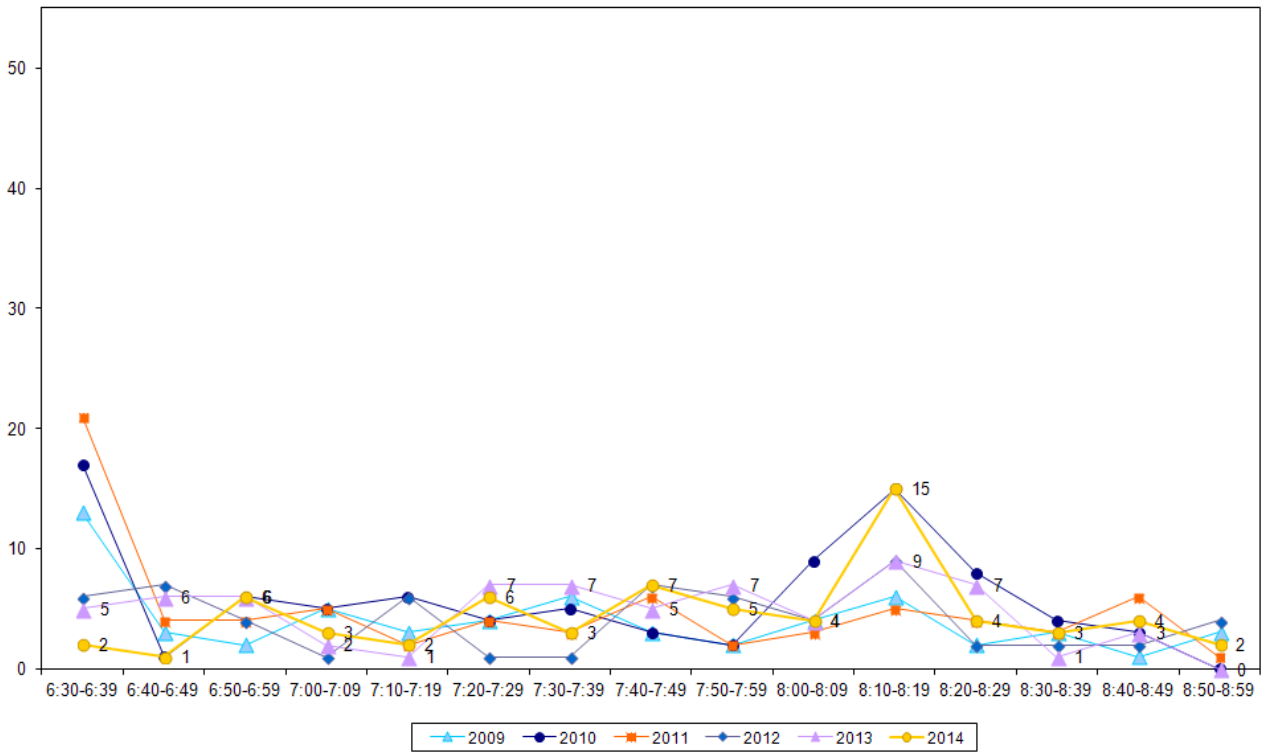
Table 8.2: Morning Cyclist Characteristics

Jervois Road/Wallace Street 2009 – 2014 (%)

	2009	*2010*	*2011*	*2012*	*2013*	*2014*	Change 13-14
Cyclist Type							
Adult	90	80	97	100	90	**87**	**-3**
School child	10	20	3	0	10	**13**	**3**
Helmet Wearing							
Helmet on head	98	97	93	94	97	**100**	**3**
No helmet	2	3	7	6	3	**0**	**-3**
Gender							
Male	-	-	71	79	83	**88**	**5**
Female	-	-	29	21	17	**9**	**-8**
Can't tell	-	-	0	0	0	**3**	**3**
Where Riding							
Road	85	73	85	93	73	**73**	**0**
Footpath	15	27	15	7	27	**27**	**0**
Base:	***60***	***88***	***73***	***62***	***70***	***67***	

- Morning cycle volumes were relatively low over most of the monitoring period. A peak occurred between 8:10am and 8:19am (15 movements), the same time as previous years, although with greater intensity than last year. Other ten minute intervals did not exceed 7 cycle movements throughout the morning period.

Figure 8.2: Morning Peak Cyclist Frequency
Jervois Road/Wallace Street 2009 – 2014 (n)



Note: No cyclists were observed riding in groups in the morning peak in 2014. This compares with four per cent (n=3) in 2013 and 15 per cent (n=12) in 2012.

8.3 Evening Peak

Environmental Conditions

- The weather was sunny and windy throughout the evening shift.
- There were no road works or accidents that may affect cycle counts.

Key Points

- Evening cyclist numbers have remained stable from last year (65 movements, compared to 66 movements recorded in 2013).
- Consistent with the morning peak, the key movement in the evening was straight along Jervois Road travelling in a southwest direction (Movement 2 = 32 movements).
- The most noticeable changes occurred at Movement 2 (down 6 movements), Movement 6 (down 5 movements) and at Movement 5 (up 5 movements).

Table 8.3: Evening Cyclist Movements

Jervois Road/Wallace Street 2009 – 2014 (n)

Movement	*2009*	*2010*	*2011*	*2012*	*2013*	*2014*	Change 13-14
1	1	4	1	3	1	**3**	**2**
2	22	50	41	35	38	**32**	**-6**
3	17	21	19	22	14	**15**	**1**
4	3	0	1	3	1	**2**	**1**
5	3	4	10	13	7	**12**	**5**
6	5	0	3	3	5	**0**	**-5**
Don't know	0	0	0	0	0	**1**	**1**
Total	**51**	**79**	**75**	**79**	**66**	**65**	**-1**

- Most cyclists at this site in 2014 were adults (97 per cent, the highest count recorded since monitoring began in 2009).
- Most cyclists were wearing a helmet (98 per cent, up from 88 per cent last year).
- The majority of cyclists were male (82 per cent, stable from 83 per cent in 2013).
- There has been an increase in the number of cyclists riding on the road this year, with the share of road riders up from 62 per cent in 2013 to 82 per cent this year.

Table 8.4: Evening Cyclist Characteristics

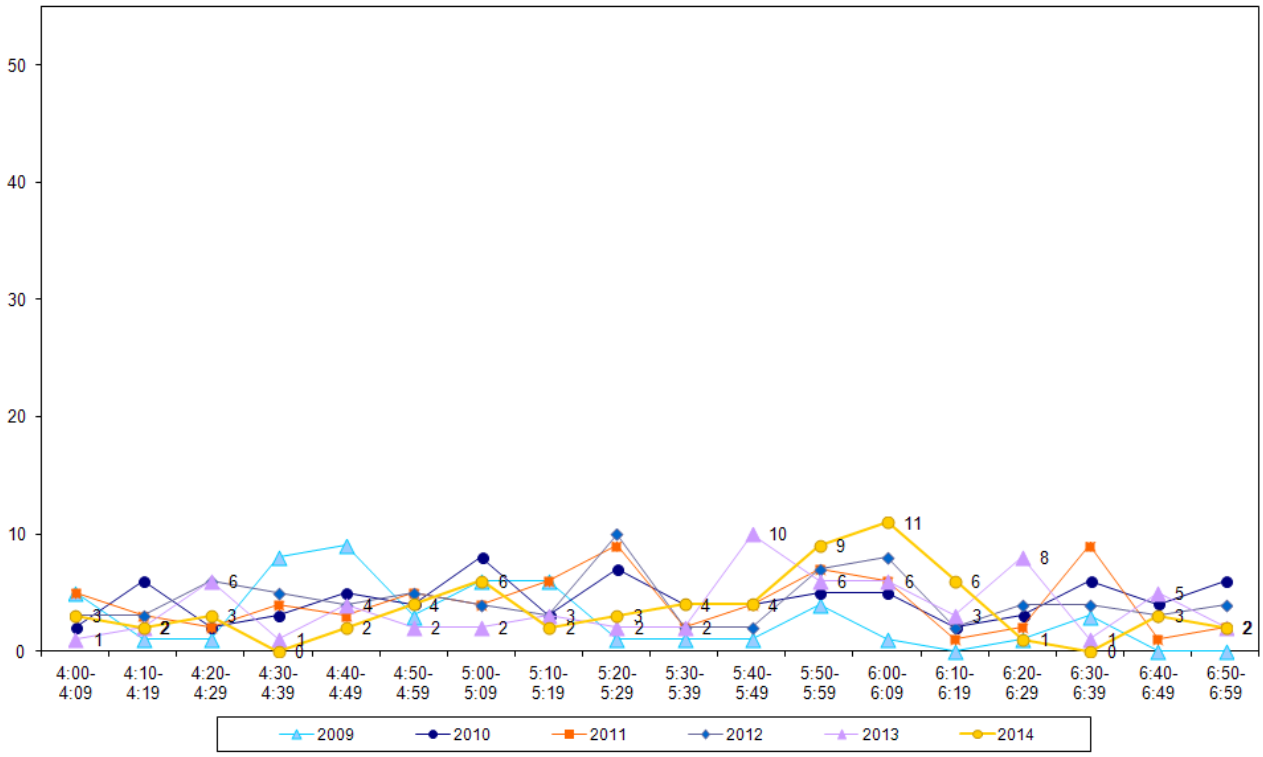
Jervois Road/Wallace Street 2009 – 2014 (%)

	2009	*2010*	*2011*	*2012*	*2013*	*2014*	Change 13-14
Cyclist Type							
Adult	55	78	92	91	96	**97**	**1**
School child	45	22	8	9	4	**3**	**-1**
Helmet Wearing							
Helmet on head	98	85	92	89	88	**98**	**10**
No helmet	2	15	8	11	12	**2**	**-10**
Gender							
Male	-	-	76	89	83	**82**	**-1**
Female	-	-	24	11	17	**18**	**1**
Can't tell	-	-	0	0	0	**0**	**0**
Where Riding							
Road	55	62	76	74	62	**82**	**20**
Footpath	45	38	24	26	38	**18**	**-20**
Base:	***51***	***79***	***75***	***79***	***66***	***65***	

- Evening cycle movement volumes were low across the entire monitoring period, with no more than 9 cyclists recorded during most ten minute intervals. The exception to this occurred between 6:00pm and 6:09pm where 11 cyclists were recorded.

Figure 8.3: Evening Peak Cyclist Frequency

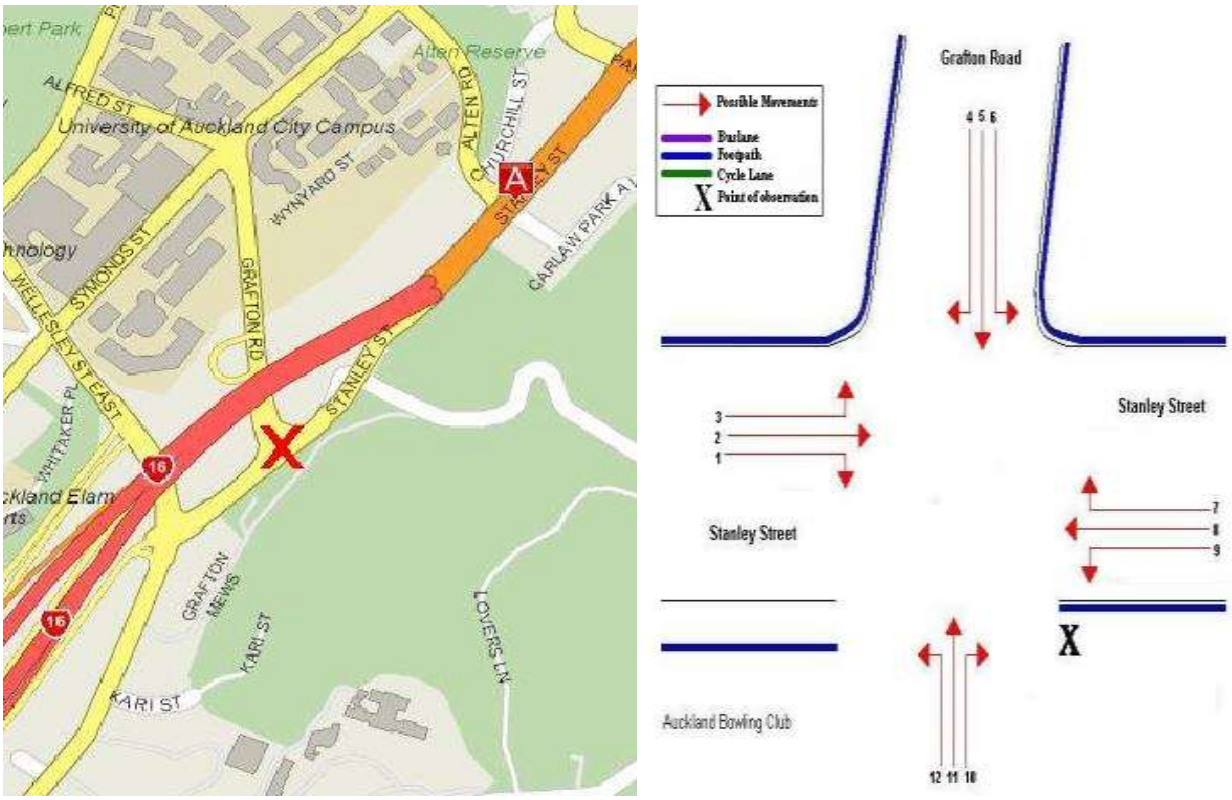
Jervois Road/Wallace Street 2009 – 2014 (n)



9. STANLEY STREET/GRAFTON ROAD, GRAFTON (SITE 75)

Figure 9.1 shows the possible cyclist movements at this intersection.

Figure 9.1: Cycle Movements: Stanley Street/Grafton Road



9.1 Site Summary

	Raw Counts			AADT
	Morning Peak	*Evening Peak*	*Total*	*Total*
2008	36	29	65	95
2009	49	47	96	140
2010	47	46	93	135
2011	27	47	74	106
2012	38	56	94	135
2013	55	62	117	170
2014	**39**	**53**	**92**	**133**

9.2 Morning Peak

Environmental Conditions

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

Key Points

- The cycle volumes at the Stanley Street/Grafton Road site have decreased this year (39 movements, down from 55 movements 12 months ago).
- The most common morning movements were travelling along Stanley Street in both directions (Movement 2 to head north = 10 movements; Movement 8 to head south = 11 movements).
- The most noticeable decrease in cyclist volumes from 2013 was at Movement 7 (down 8 movements) and Movement 2 (down 7 cyclists).

Table 9.1: Morning Cyclist Movements

Stanley Street/Grafton Road 2008 – 2014 (n)

Movement	*2008*	*2009*	*2010*	*2011*	*2012*	*2013*	*2014*	Change 13-14
1	0	0	0	0	0	1	**0**	**-1**
2	3	10	9	6	2	17	**10**	**-7**
3	1	1	1	1	1	3	**0**	**-3**
4	0	0	0	0	0	2	**2**	**0**
5	0	0	1	0	0	0	**0**	**0**
6	1	1	0	1	1	1	**2**	**-1**
7	8	11	9	8	20	11	**3**	**-8**
8	9	13	16	5	10	14	**11**	**-3**
9	2	3	0	4	1	0	**2**	**2**
10	0	0	0	0	0	0	**0**	**0**
11	12	9	11	2	3	6	**7**	**1**
12	0	1	0	0	0	0	**2**	**2**
Total	**36**	**49**	**47**	**27**	**38**	**55**	**39**	**-16**

- Over the morning peak, all cyclists were adults (100 per cent, unchanged from last year).
- Almost all cyclists were wearing a helmet (97 per cent, stable from 95 per cent last year).
- Three-quarters of cyclists were male (72 per cent, down slightly from 76 per cent last year).
- The greatest share of cyclists were riding on the footpath (54 per cent, stable from 53 per cent last year).

Table 9.2: Morning Cyclist Characteristics

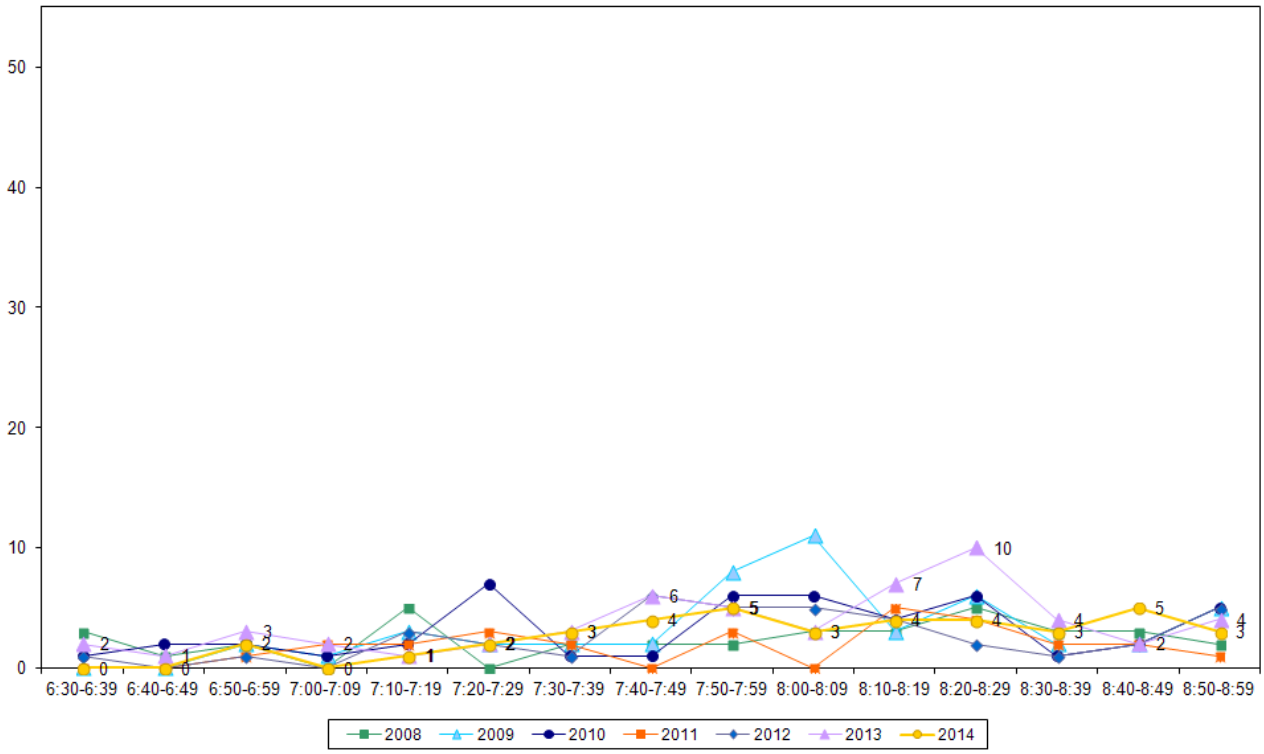
Stanley Street/Grafton Road 2008 – 2014 (%)

	2008	***2009***	***2010***	***2011***	***2012***	***2013***	***2014***	**Change 13-14**
Cyclist Type								
Adult	100	100	100	100	100	100	**100**	**0**
School child	0	0	0	0	0	0	**0**	**0**
Helmet Wearing								
Helmet on head	92	94	94	100	95	95	**97**	**2**
No helmet	8	6	6	0	5	5	**3**	**-2**
Gender								
Male	-	-	-	85	74	76	**72**	**-4**
Female	-	-	-	15	24	22	**28**	**6**
Can't tell	-	-	-	0	2	2	**0**	**-2**
Where Riding								
Road	78	61	49	81	42	47	**46**	**-1**
Footpath	22	39	51	19	58	53	**54**	**1**
Base:	***36***	***49***	***47***	***27***	***38***	***55***	***39***	

- Morning cyclist movement volumes remained low throughout the morning period. No more than five cyclists were recorded travelling through the site at any ten minute interval. Five cyclists were recorded at each interval between 7:50am to 7:59am and at 8:40am to 8:49am.

Figure 26.2: Morning Peak Cyclist Frequency

Stanley Street/Grafton Road 2008 – 2014 (n)



9.3 Evening Peak

Environmental Conditions

- The weather was sunny with some wind throughout the evening shift.
- There were no road works or accidents that may affect cycle counts.

Key Points

- The total number of cycle movements recorded at the Stanley Street/Grafton Road site has decreased from last year (53 movements, down from 62 movements in 2013).
- The key movements in the evening were straight along Stanley Street in both directions (Movement 2 heading northwest = 12 movements, Movement 8 heading southeast = 12 movements) and turning left from Grafton Road onto Stanley Street heading southeast (Movement 6 = 12 movements).
- The most noticeable change since 2013 was at Movement 4 (down 6 movements).

Table 9.3: Evening Cyclist Movements

Stanley Street/Grafton Road 2008 – 2014 (n)

Movement	*2008*	*2009*	*2010*	*2011*	*2012*	*2013*	*2014*	Change 13-14
1	0	0	0	0	1	0	**1**	**1**
2	8	13	11	2	14	10	**12**	**2**
3	3	0	1	2	0	1	**0**	**-1**
4	1	1	1	2	3	6	**0**	**-6**
5	3	8	7	2	4	9	**6**	**-3**
6	4	5	8	10	10	9	**12**	**3**
7	2	1	1	3	4	4	**3**	**-1**
8	2	12	15	11	11	14	**12**	**-2**
9	1	2	1	8	7	5	**2**	**-3**
10	4	2	0	4	2	1	**3**	**2**
11	1	3	1	3	0	3	**2**	**-1**
12	0	0	0	0	0	0	**0**	**0**
Total	**29**	**47**	**46**	**47**	**56**	**62**	**53**	**-9**

- Over the evening peak, all cyclists using this site were adults (up slightly from 97 per cent in 2013).
- Most cyclists at this site were wearing a helmet (91 per cent, down from 95 per cent 12 months ago).
- The majority of cyclists were male (79 per cent, down slightly from 82 per cent last year).
- Cyclists shared the road and footpath evenly this year with approximately 50 per cent of cyclists riding in both locations (road = 51 per cent, footpath = 49 per cent). Footpath riding increased by 7 per cent from 2013.

Table 9.4: Evening Cyclist Characteristics

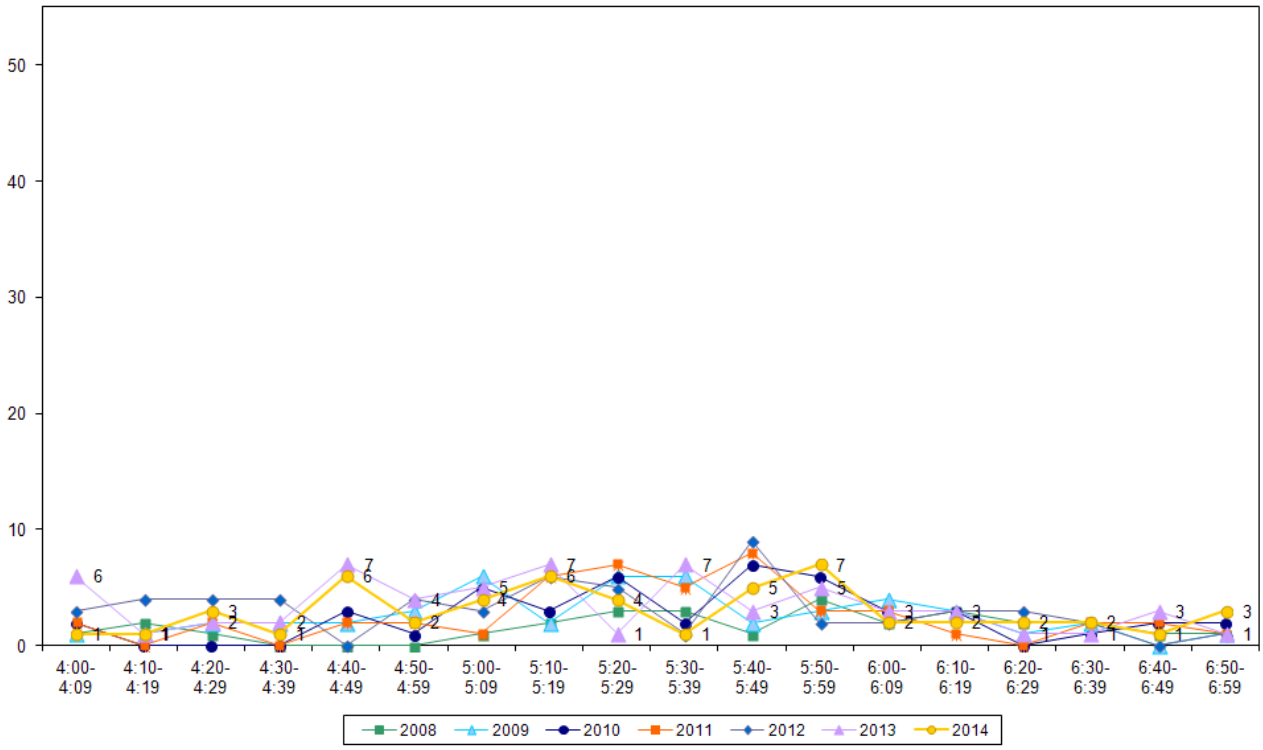
Stanley Street/Grafton Road 2008 – 2014 (%)

	2008	*2009*	*2010*	*2011*	*2012*	*2013*	*2014*	Change 13-14
Cyclist Type								
Adult	100	100	100	100	100	97	**100**	**3**
School child	0	0	0	0	0	0	**0**	**0**
Can't tell	-	-	-	-	-	3	**0**	**-3**
Helmet Wearing								
Helmet on head	93	96	89	91	91	95	**91**	**-4**
No helmet	7	4	11	9	9	5	**9**	**4**
Gender								
Male	-	-	-	85	77	82	**79**	**-3**
Female	-	-	-	15	23	16	**21**	**5**
Can't tell	-	-	-	0	0	2	**0**	**-2**
Where Riding								
Road	66	36	57	64	56	58	**51**	**-7**
Footpath	34	64	43	36	44	42	**49**	**7**
Base:	***29***	***47***	***46***	***47***	***56***	***62***	***53***	

- Consistent with previous years, evening cyclist volumes were low throughout the evening shift. No more than six cyclists were recorded at most ten minute intervals during the shift. The exception to this occurred between 5:50pm to 5:59pm where seven cyclists were recorded.

Figure 9.3: Evening Peak Cyclist Frequency

Stanley Street/Grafton Road 2008 – 2014 (n)



10. FERRY TERMINAL, AUCKLAND CENTRAL (SITE 22)

Figure 10.1 shows the possible cyclist movements at this site. *Note: Due to the size of this site, three surveyors were used to conduct the cycle counts. One surveyor counted cycle traffic entering and leaving via the actual ferry terminal (Pier 1). The second surveyor counted cycle traffic using the ferries at Pier 2. The third surveyor counted cycle traffic using ferries at Piers 3 and 4.*

Figure 10.1: Cycle Movements: Ferry Terminal

10.1 Site Summary

	Raw Counts			AADT
	Morning Peak	*Evening Peak*	*Total*	*Total*
2007	195	185	380	553
2008	158	158	316	459
2009	137	111	248	363
2010	198	197	395	574
2011	205	186	391	570
2012	189	200	389	565
2013	205	212	417	606
2014	**177**	**178**	**355**	**516**

10.2 Morning Peak

Environmental Conditions

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

Key Points

- The volume of cyclist movements at the Ferry Terminal site has decreased from last year (177 movements, down from 205 movements in 2013).
- Like last year, the key movement in the morning was disembarking the terminal at Pier One, which provides access to ferry services to and from Birkenhead, Northcote Point, Bayswater, Devonport and Half Moon Bay (119 movements, down from 146 in 2013).
- The most noticeable change occurred in cyclist movements at Pier One; disembarking has decreased by 27 movements and boarding has increased by 6 movements compared to last year.

Table 10.1: Morning Cyclist Movements

Ferry Terminal 2007 – 2014 (n)

Movement	*2007*	*2008*	*2009*	*2010*	*2011*	*2012*	*2013*	*2014*	Change 13-14
Pier One									
Boarding	18	11	10	24	14	15	14	**20**	**6**
Disembarking	136	127	100	134	141	128	146	**119**	**-27**
Pier Two									
Boarding	8	5	1	0	4	2	0	**1**	**1**
Disembarking	18	10	16	28	32	31	23	**19**	**-4**
Pier Three									
Boarding	0	0	1	0	0	3	0	**0**	**0**
Disembarking	4	3	3	8	8	5	7	**7**	**0**
Pier Four									
Boarding	0	0	4	0	1	1	2	**2**	**0**
Disembarking	11	2	2	4	5	4	13	**9**	**-4**
Total	**195**	**158**	**137**	**198**	**205**	**189**	**205**	**177**	**-28**

Pier 1 – departs for Birkenhead, Northcote Point, Bayswater, Devonport and Half Moon Bay

Pier 2 – departs for Waiheke Island

Pier 3 – departs for West Harbour, Pine Harbour and Coromandel

Pier 4 – departs for Gulf Harbour, Stanley Bay, Tiritiri Matangi Island and Hobsonville/Beachhaven

Note: Prior to 2013, Half Moon Bay ferry services departed from Pier 2. Since 2013, these services have departed from Pier 1. Also, the Hobsonville/Beachhaven service was first introduced in 2013.

Table 10.2A: Morning Cyclist Movements – Which Ferry Boarded (n)

Ferry	*2009*	*2010*	*2011*	*2012*	*2013*	*2014*	Change 13-14
Pier One							
Bayswater	-	-	-	-	7	**4**	**-3**
Birkenhead	-	-	-	-	0	**1**	**1**
Devonport	-	-	-	-	5	**15**	**10**
Half Moon Bay	0	0	0	0	0	**0**	**0**
Don't know	-	-	-	-	2	**0**	**-2**
Pier Two							
Waiheke	1	0	4	2	0	**1**	**1**
Pier Three							
Pine Harbour	0	0	0	0	0	**0**	**0**
West Harbour	1	0	0	0	0	**0**	**0**
Coromandel	-	-	-	3	0	**0**	**0**
Pier Four							
Gulf Harbour	0	0	0	0	0	**0**	**0**
Stanley Bay	4	0	1	1	1	**1**	**0**
Tiritiri Matangi Island	-	-	-	-	1	**0**	**-1**
Hobsonville/Beachhaven	-	-	-	-	0	**1**	**1**
Total	**6**	**0**	**5**	**6**	**16**	**23**	**7**

Note: Prior to 2013, it is not possible to identify which ferry cyclists are boarding at Pier 1.

Table 10.2B: Morning Cyclist Movements – Which Ferry Disembarked (n)

Ferry	*2009*	*2010*	*2011*	*2012*	*2013*	*2014*	Change 13-14
Pier One							
Bayswater	22	-	35	12	30	**22**	**-8**
Birkenhead	34	-	28	14	27	**20**	**-7**
Devonport	44	-	78	40	79	**67**	**-12**
Half Moon Bay	4	10	7	-	10	**10**	**0**
Don't know	-	-	-	62	0	**0**	**0**
Pier Two							
Waiheke	12	18	25	-	23	**19**	**-4**
Pier Three							
Pine Harbour	2	8	8	5	7	**5**	**-2**
West Harbour	1	0	0	0	0	**2**	**2**
Pier Four							
Gulf Harbour	1	1	1	3	6	**3**	**-3**
Stanley Bay	1	3	4	1	6	**5**	**-1**
Hobsonville/Beachhaven	-	-	-	-	1	**1**	**0**
Total	**121**	**40**	**186**	**137**	**189**	**154**	**-35**

- All cyclists using this site in the morning were adults, unchanged from last year.
- Seventy-six per cent of cyclists were wearing a helmet (stable from 75 per cent last year).
- The majority of cyclists were male (87 per cent, the highest proportion recorded since 2011).

Table 10.3: Morning Cyclist Characteristics

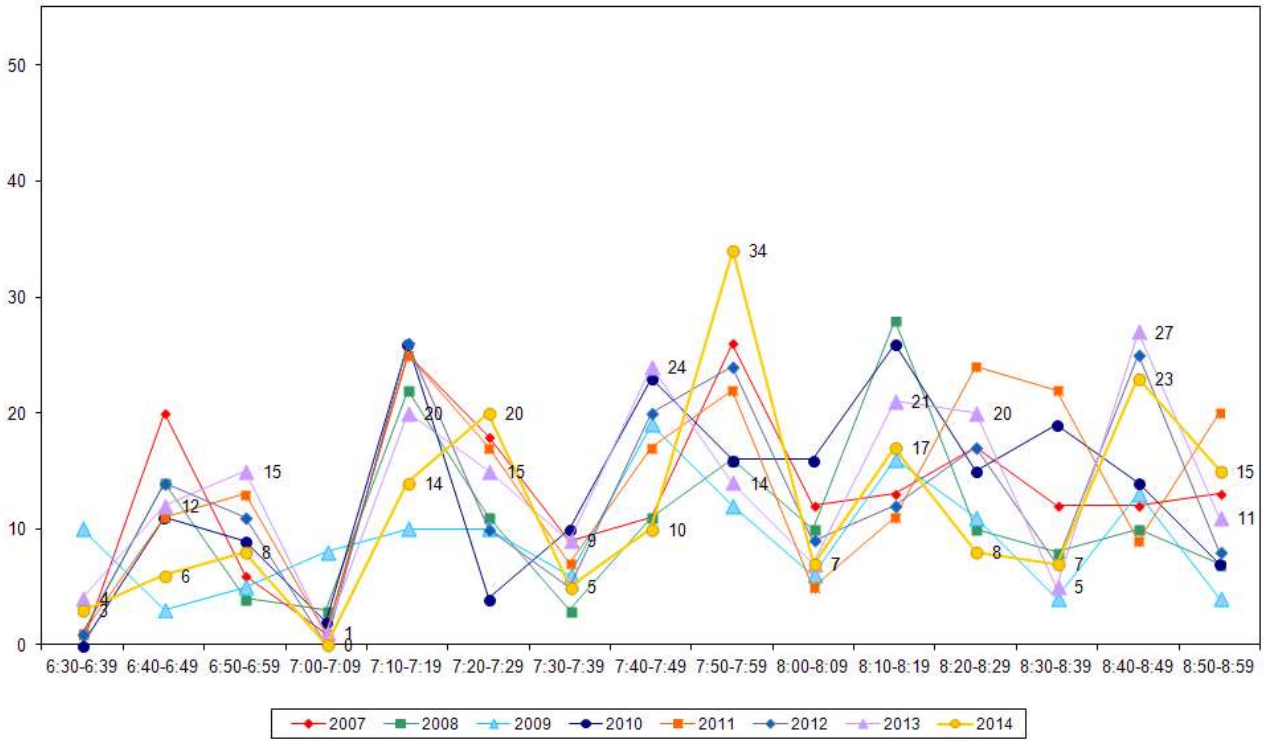
Ferry Terminal 2007 – 2014 (%)

	2007	*2008*	*2009*	*2010*	*2011*	*2012*	*2013*	*2014*	Change 13-14
Cyclist Type									
Adult	98	96	100	99	98	99	100	**100**	**0**
School child	2	4	0	1	2	1	0	**0**	**0**
Helmet Wearing									
Helmet on head	87	70	80	69	68	70	75	**76**	**1**
No helmet	13	30	20	31	32	30	22	**22**	**0**
Unsure	-	-	-	-	-	-	3	**2**	**-1**
Gender									
Male	-	-	-	-	83	83	83	**87**	**4**
Female	-	-	-	-	17	13	15	**13**	**-2**
Can't tell	-	-	-	-	0	4	2	**0**	**-2**
Base:	***195***	***158***	***137***	***198***	***205***	***189***	***205***	***177***	

- Morning cyclist volumes vary throughout the shift, with peaks at ten past and twenty to the hour across the morning peak. The general trend was consistent with previous years. The most notable peak of cycle volume occurred between 7:50am and 7:59am with 34 cyclists recorded.

Figure 23.2: Morning Peak Cyclist Frequency

Ferry Terminal 2007 – 2014 (n)



10.3 Evening Peak

Environmental Conditions

- The weather was fine throughout the evening monitoring period.
- There were no road works or accidents that may affect cycle counts.

Key Points

- The volume of evening cycle movements at the Ferry Terminal site has decreased from last year (188 movements, down from 212 in 2013).
- In contrast to the morning shift, the key movement in the evening was boarding the ferries at Pier One (130 movements, down from 141 in 2013).
- Compared with last year, the most noticeable changes were for boarding the ferry at Pier One (down 11 movements) and boarding at Pier Four (down 9 movements).

Table 10.4: Evening Cyclist Movements

Ferry Terminal 2007 – 2014 (n)

Movement	*2007*	*2008*	*2009*	*2010*	*2011*	*2012*	*2013*	*2014*	Change 13-14
Pier One									
Boarding	131	122	88	137	135	128	141	**120**	**-21**
Disembarking	15	13	5	25	15	22	20	**19**	**-1**
Pier Two									
Boarding	7	15	10	21	19	32	27	**21**	**-6**
Disembarking	16	6	0	3	5	4	2	**4**	**2**
Pier Three									
Boarding	0	2	5	6	6	4	6	**8**	**2**
Disembarking	0	0	0	0	0	1	0	**0**	**0**
Pier Four									
Boarding	0	0	3	3	5	7	15	**6**	**-9**
Disembarking	16	0	0	2	1	2	1	**0**	**-1**
Total	**185**	**158**	**111**	**197**	**186**	**200**	**212**	**178**	**-34**

Pier 1 – departs for Birkenhead, Northcote Point, Bayswater, Devonport and Half Moon Bay

Pier 2 – departs for Waiheke Island

Pier 3 – departs for West Harbour, Pine Harbour and Coromandel

Pier 4 – departs for Gulf Harbour, Stanley Bay, Tiritiri Matangi Island and Hobsonville/Beachhaven

Note: Prior to 2013, Half Moon Bay ferry services departed from Pier 2. Since 2013, these services have departed from Pier 1. Also, the Hobsonville/Beachhaven service was first introduced in 2013.

Table 10.5A: Evening Cyclist Movements – Which Ferry to Board (n)

Ferry	*2009*	*2010*	*2011*	*2012*	*2013*	*2014*	Change 13-14
Pier One							
Bayswater	-	-	-	-	26	**27**	**1**
Birkenhead	-	-	-	-	29	**21**	**-8**
Devonport	-	-	-	-	76	**64**	**-12**
Half Moon Bay	3	4	6	7	8	**4**	**-4**
Don't know	-	-	-	-	2	**4**	**2**
Pier Two							
Waiheke	7	17	13	25	27	**21**	**-6**
Pier Three							
Pine Harbour	4	6	6	4	6	**7**	**1**
West Harbour	1	0	0	0	0	**1**	**1**
Pier Four							
Gulf Harbour	0	0	0	5	4	**0**	**-4**
Stanley Bay	3	3	5	2	7	**5**	**-2**
Hobsonville/Beachhaven	-	-	-	-	4	**0**	**-4**
Don't know	-	-	-	-	-	**1**	**1**
Total	**18**	**30**	**30**	**43**	**189**	**155**	**-34**

Note: Prior to 2013, it is not possible to identify which ferry cyclists are boarding on Pier 1.

Table 10.5B: Evening Cyclist Movements – Which Ferry to Disembark (n)

Ferry	*2009*	*2010*	*2011*	*2012*	*2013*	*2014*	Change 13-14
Pier One							
Bayswater	0	-	0	0	3	**4**	**1**
Birkenhead	0	-	2	0	1	**2**	**1**
Devonport	5	-	13	2	16	**12**	**-4**
Half Moon Bay	0	0	0	-	0	**0**	**0**
Don't know	-	-	-	20	0	**1**	**1**
Pier Two							
Waiheke	0	3	5	-	2	**4**	**2**
Pier Three							
Pine Harbour	0	0	0	1	0	**0**	**0**
West Harbour	0	0	0	0	0	**0**	**0**
Pier Four							
Gulf Harbour	0	1	0	0	0	**0**	**0**
Stanley Bay	0	1	1	2	1	**0**	**-1**
Hobsonville/Beachhaven	-	-	-	-	0	**0**	**0**
Total	**5**	**5**	**21**	**25**	**23**	**23**	**0**

- Over the evening peak, almost all cyclists using this site were adults (99 per cent, stable from previous years).
- Eighty-eight per cent of cyclists were wearing a helmet (a 14 percentage point increase from 2013 and the highest proportion recorded since the first monitor in 2007).
- The majority of cyclists were male (87 per cent, stable from previous years).

Table 10.6: Evening Cyclist Characteristics

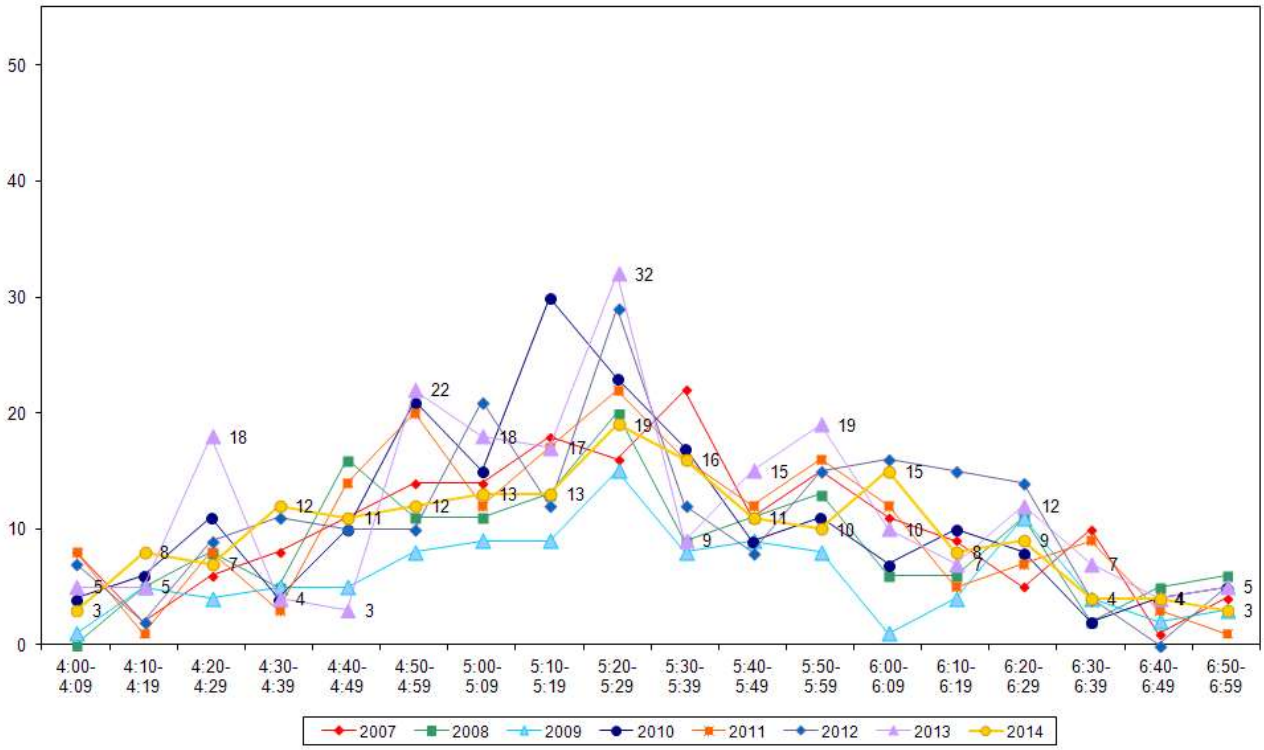
Ferry Terminal 2007 – 2014 (%)

	2007	*2008*	*2009*	*2010*	*2011*	*2012*	*2013*	*2014*	Change 13-14
Cyclist Type									
Adult	99	98	100	100	98	99	100	**99**	**-1**
School child	1	2	0	0	2	1	0	**1**	**1**
Helmet Wearing									
Helmet on head	85	69	80	71	68	72	74	**88**	**14**
No helmet	15	31	20	29	32	28	26	**12**	**-14**
Gender									
Male	-	-	-	-	83	87	85	**87**	**2**
Female	-	-	-	-	17	13	15	**13**	**-2**
Can't tell	-	-	-	-	0	0	0	**0**	**0**
Base:	***185***	***158***	***111***	***198***	***186***	***200***	***212***	***178***	

- Evening cyclist movement volumes vary throughout the shift, increasing from the beginning of the shift and peaking between 5:20 and 5:29 (19 movements). This pattern was consistent with previous years.

Figure 10.6: Evening Peak Cyclist Frequency

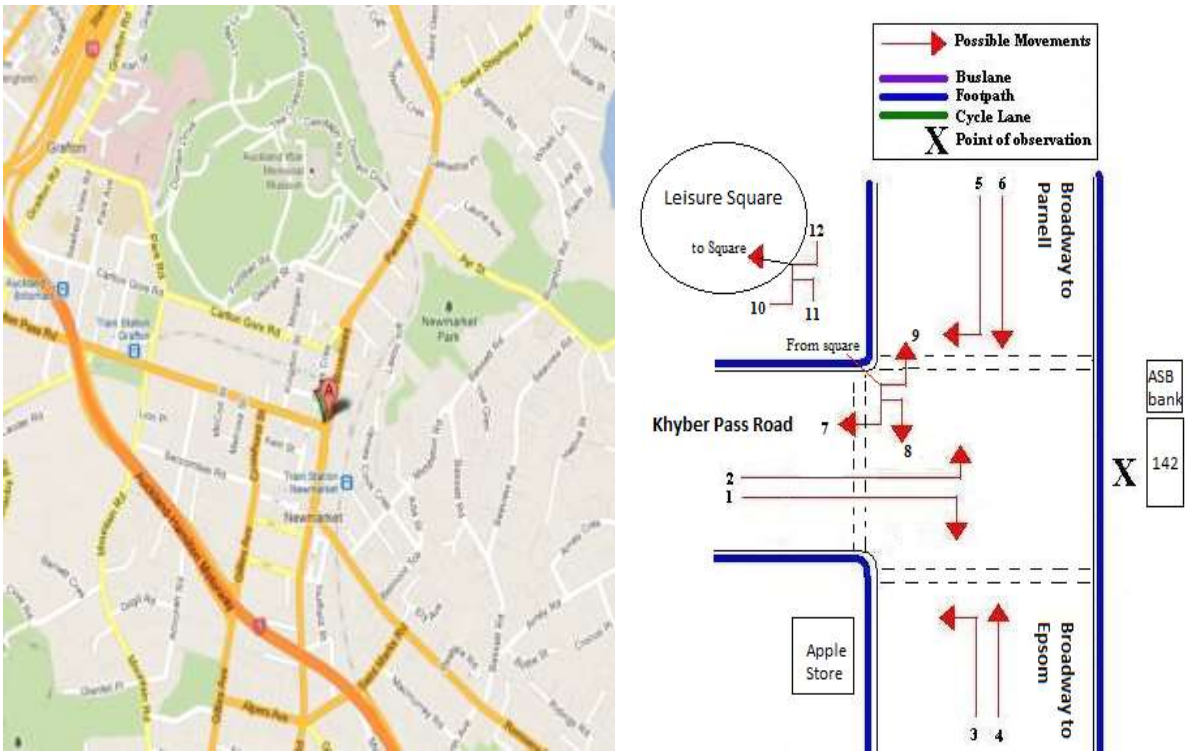
Ferry Terminal 2007 – 2014 (n)



11. BROADWAY/KHYBER PASS ROAD, NEWMARKET (SITE 90)

Figure 11.1 shows the possible cyclist movements at this intersection.

Figure 11.1: Cycle Movements: Broadway/Khyber Pass Road



Note: This site was monitored for the first time in 2012.

11.1 Site Summary

	Raw Counts			*AADT*
	Morning Peak	*Evening Peak*	*Total*	*Total*
2012	292	285	577	839
2013	322	315	637	927
2014	**255**	**265**	**523**	**759**

11.2 Morning Peak

Environmental Conditions

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

Key Points

- There has been a decrease in cyclist movements at the Broadway/Khyber Pass Road site (322 movements in 2013 to 255 this year).
- The key morning movements were heading north on Broadway (Movement 4 = 78 movements) and going in the opposite direction (Movement 6 = 63 movements).
- Cyclist traffic has decreased most notably travelling straight along Broadway in both directions (towards Parnell: Movement 4 = 78 movements, down from 105; and towards Epsom: Movement 6 = 63 movements, down from 91), while the most notable increase was observed at Movement 11 (cyclists exiting Leisure Square and heading towards Epsom; 50 movements, up 8 cyclists from last year).

Table 11.1: Morning Cyclist Movements

Broadway/Khyber Pass Road 2012 – 2014 (n)

Movement	*2012*	*2013*	*2014*	Change 13-14
1	64	33	**14**	**-19**
2	2	6	**6**	**0**
3	23	32	**35**	**3**
4	81	105	**78**	**-27**
5	4	3	**1**	**-2**
6	76	91	**63**	**-28**
7	0	0	**0**	**0**
8	1	8	**4**	**-4**
9	1	1	**1**	**0**
10	1	1	**1**	**0**
11	36	42	**50**	**8**
12	3	0	**2**	**2**
Total	**292**	**322**	**255**	**-67**

- Over the morning peak, the majority of cyclists were adults (99 per cent, up from 95 per cent in 2013).
- Almost all cyclists were wearing a helmet (96 per cent, stable from 98 per cent in 2013).
- Approximately four out of five cyclists were male (83 per cent, up slightly from 80 per cent in 2013).
- Almost all cyclists were riding on the road (97 per cent, up from 93 per cent from 2013).

Table 11.2: Morning Cyclist Characteristics

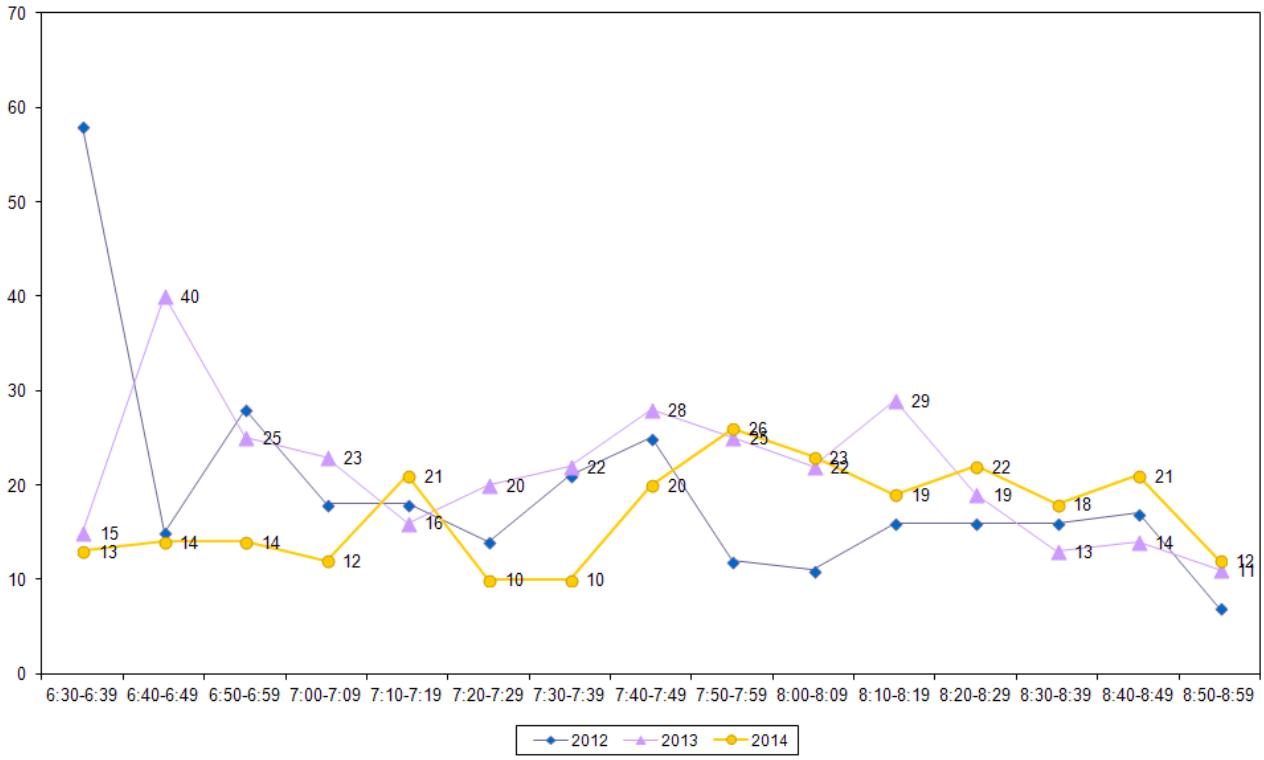
Broadway/Khyber Pass Road 2012 – 2014 (%)

	2012	*2013*	*2014*	Change 13-14
Cyclist Type				
Adult	98	95	**99**	**4**
School child	2	5	**1**	**-4**
Helmet Wearing				
Helmet on head	98	98	**96**	**-2**
No helmet	2	2	**4**	**2**
Gender				
Male	67	80	**83**	**3**
Female	11	19	**15**	**-4**
Can't tell	22	1	**2**	**1**
Where Riding				
Road	95	93	**97**	**4**
Footpath	5	7	**3**	**-4**
Base:	***292***	***322***	***255***	

- Morning cyclist volumes increased gradually to a peak between 7:10am and 7:19am with 21 recorded cycle movements. A second peak is evident between 7:50am and 7:59am and consisted of 26 cycle movements. Cycle numbers steadily declined for the remainder of the monitoring period.

Figure 11.2: Morning Peak Cyclist Frequency

Broadway/Khyber Pass Road 2012 – 2014 (n)



Note: In 2014, 6 per cent of the total cycle movements (n=15) in the morning peak were identified as cycling in groups. Three or more cyclists were observed travelling in groups at this site at the following times:

- *3 cyclists at 6:40am*
- *9 cyclists at 7:12am-7:13am*
- *3 cyclists at 7:58am.*

This compares with 5 per cent of cyclists (n=15) riding as groups in 2013.

11.3 Evening Peak

Environmental Conditions

- The weather was sunny but windy throughout the evening monitoring period.
- There were no road works or accidents that may affect cycle counts.

Key Points

- There has been a decrease in cyclist movements from 2013 (268 movements this year compared with 315 last year).
- The key morning movements were heading south on Broadway (Movement 6 = 94 movements), turning right from Khyber Pass onto Broadway (Movement 1 = 62 movements) and north along Broadway (Movement 4 = 50 movements).
- Movement 6 and Movement 1 also recorded the biggest decreases over the last twelve months (down 29 and 13 movements respectively).
- The most noticeable increase occurred at Movement 11 (up by 5 movements).

Table 11.3: Evening Cyclist Movements

Broadway/Khyber Pass Road 2012 – 2014 (n)

Movement	*2012*	*2013*	*2014*	Change 13-14
1	55	75	**62**	**-13**
2	12	11	**4**	**-7**
3	11	12	**9**	**-3**
4	53	52	**50**	**-2**
5	8	3	**7**	**4**
6	100	123	**94**	**-29**
7	1	0	**2**	**2**
8	36	26	**20**	**-6**
9	0	0	**0**	**0**
10	2	1	**4**	**3**
11	7	10	**15**	**5**
12	0	0	**1**	**1**
Don't know	0	2	**0**	**-2**
Total	**285**	**315**	**268**	**-47**

- Over the evening peak, the majority of cyclists were adults (96 per cent, up from 93 per cent last year).
- Almost all cyclists were wearing a helmet (95 per cent, unchanged from last year).
- Eighty-two per cent of the cyclists were male.
- While the majority of cyclists were riding on the road (80 per cent), the share of footpath cyclists increased by 11 percentage points compared to last year (19 per cent this year).

Table 11.4: Evening Cyclist Characteristics

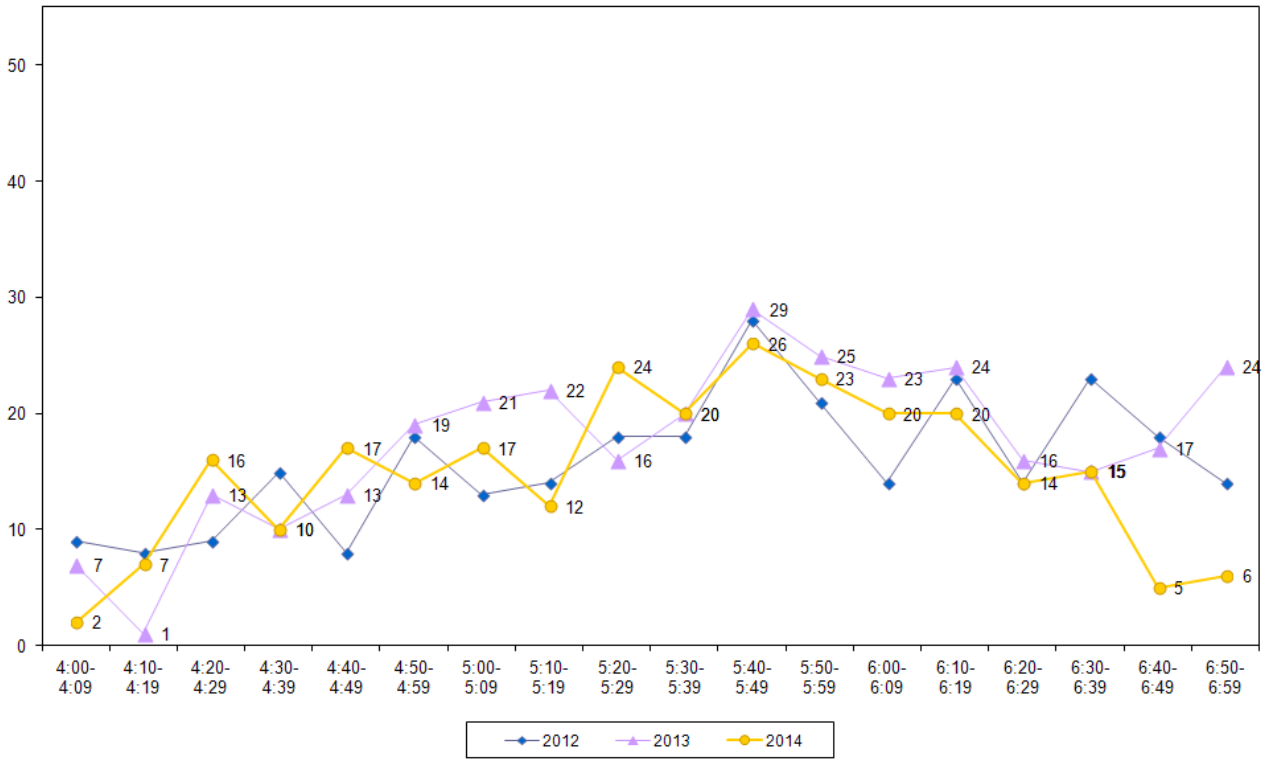
Broadway/Khyber Pass Road 2012 – 2014 (%)

	2012	*2013*	*2014*	Change 13-14
Cyclist Type				
Adult	95	93	**96**	**3**
School child	5	7	**4**	**-3**
Helmet Wearing				
Helmet on head	95	95	**95**	**0**
No helmet	5	5	**4**	**1**
Don't know	0	0	**1**	**-1**
Gender				
Male	81	80	**82**	**2**
Female	14	19	**17**	**-2**
Can't tell	5	1	**1**	**0**
Where Riding				
Road	93	91	**80**	**-11**
Footpath	7	8	**19**	**11**
Can't tell	-	1	**1**	**0**
Base:	***285***	***315***	***268***	

- Evening cyclist volumes increased inconsistently throughout the shift before peaking between 5:40pm and 5:49pm (26 movements). Cycle volumes steadily declined for the remainder of the monitoring period. The present trends have been similar to that of the past two years.

Figure 11.3: Evening Peak Cyclist Frequency

Broadway/Khyber Pass Road 2012 – 2014 (n)



Note: In 2014, 6 cyclists (2 per cent of all evening peak cycle movements at this site) were observed riding together at 5:50pm.

12. Waitemata and Gulf Ferry Wharves

Environmental Conditions

- Stationary cycle counts at various ferry wharves were conducted on Wednesday 5th March 2014 (the same day as the cycle counts in the Waitemata and Gulf ward).
- There were no road works or incidents that may affect cycle counts.

Downtown Ferry Terminal - Key Points

- In the morning, 18 cycles were observed at the Downtown Ferry Terminal at 6:10am and 17 were observed at 9:10am.
- In the afternoon, 19 cycles were recorded at the Downtown Ferry Terminal at 3:30pm and 23 were observed at 7:10pm.

Note: Observation of stationary cycles at the Downtown Ferry Terminal was conducted for the first time in 2014.

Table 10.1: Downtown Ferry Terminal Cycle Counts (n)

	2014
Morning Peak	
6:10am	**18**
9:10am	**17**
Evening Peak	
3:30pm	**19**
7:10pm	**23**

Matiatia Ferry Terminal - Key Points

- After the morning peak, 6 cycles were observed parked at the Matiatia ferry wharf this year.

Note: Observation of stationary cycles at Matiatia Ferry Wharf was conducted for the first time in 2014.

Table 10.3: Matiatia Ferry Wharf Cycle Counts 2014 (n)

	2014
Matiatia	**6**

13. SCHOOL BIKE SHED COUNT

13.1 Cycle Count Background Information

- A total of 17 schools in the Waitemata and Gulf ward took part in the school bike shed count.
- No schools reported policies that restrict students cycling to school.
- Most schools did not report any events or issues that may affect cycle counts[9].
- Although the designated count day was Tuesday 4th of March 2014, most schools in the Waitemata and Gulf ward completed their count on an alternative day[10].

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

13.2 Cycle Count Key Points

- Of those eligible to cycle, on average two per cent of students are cycling to their schools (unchanged from last year).
- Across the 17 eligible schools that responded, n=147 students were reported to cycle to school.
- Okiwi School reported the highest share of cyclists – 29 per cent of all eligible students currently cycling.
- Of the 16 schools that participated in the count in both 2013 and 2014, seven schools (44 per cent) reported an increase in the share of students cycling to school.
- Of the 16 schools that participated in the count in both 2013 and 2014, 4 (25 per cent) reported a decrease in the share of students cycling.
- Six schools (38 per cent) had no students cycling to school.

Table 13.1 shows the results of the 17 schools surveyed in the Waitemata and Gulf ward.

[9] The following schools reported events or issues that had an effect on the cycle count:
- ACG Parnell College *"Bike club this morning"*
- Auckland Grammar School *"A number of 6th formers on camp. Possibly 5-6 of these would ride a bike to school"*
- Parnell District School *"Our Year 7 & 8 students are away on camp"*

[10] The following schools undertook counts on alternative days:
- ACG Senior College – 12th March 2014
- Auckland Girls' Grammar School – 17th March 2014
- Kadimah College – 13th March 2014
- Kaitoke School (Claris) – 27th March 2014
- Okiwi School – 27th March 2014
- Ponsonby Intermediate – 17th March 2014
- St Joseph's School (Grey Lynn) – 17th March 2014
- St Paul's College – 17th March 2014
- St Peter's College – 17th March 2014
- Waiheke Primary School – 27th March 2014

Table 13.1 shows the results of the 17 schools surveyed in the Waitemata and Gulf ward.

Table 13.1: Summary Table of School Bike Count

2007 – 2014 (n)

School Name	*School Type*	*School Roll Eligible To Cycle*	*No. of Cycles Counted*	*Cyclists as share of those eligible*[11]							
				2014	*2013*	*2012*	*2011*	*2010*	*2009*	*2008*	*2007*
Okiwi School	Full Primary	35	10	**29%**	26%	-	-	-	-	-	-
Waiheke Primary School	Full Primary	206	12	**6%**	3%	-	-	-	-	-	-
Ponsonby Intermediate	Intermediate	550	25	**5%**	5%	4%	5%	6%	5%	4%	6%
Waiheke High School	Intermediate/Secondary	546	25	**5%**	4%	6%	4%	4%	3%	2%	3%
Auckland Grammar School	Secondary	1600	62	**4%**	3%	3%	4%	4%	4%	3%	2%
Kadimah College	Full Primary	170	4	**2%**	1%	2%	8%	-	-	-	-
St Joseph's School (Grey Lynn)	Full Primary	90	2	**2%**	0%	-	0%	-	-	-	-
ACG Parnell College	Composite	830	3	**<1%**	<1%	-	1%	1%	-	0%	-
Auckland International College	Secondary	299	1	**<1%**	1%	0%	0%	0%	0%	0%	-
Marist College	Intermediate/Secondary	760	1	**<1%**	0%	<1%	0%	<1%	0%	-	-
Parnell District School	Full Primary	485	2	**<1%**	2%	3%	1%	-	-	-	-
ACG Senior College	Intermediate/Secondary	302	0	**0%**	0%	4%	0%	1%	-	0%	-
Auckland Girls' Grammar School	Secondary	1400	0	**0%**	0%	<1%	<1%	0%	0%	0%	<1%
Kaitoke School (Claris)	Full Primary	29	0	**0%**	8%	-	-	-	-	-	-
St Mary's College	Intermediate/Secondary	944	0	**0%**	<1%	<1%	0%	0%	0%	-	-
St Paul's College	Intermediate/Secondary	268	0	**0%**	0%	-	0%	-	0%	-	-

[11] 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*[11]							
				2014	*2013*	*2012*	*2011*	*2010*	*2009*	*2008*	*2007*
St Peter's College	Intermediate/Secondary	1200	0	**0%**	-	-	-	-	-	-	-
Total		**10606**	**215**	**2%**	2%	2%	2%	**-**	**-**	**-**	**-**

Table 13.2 illustrates the rates of cycling to school at different school levels. Rates of cycling to school are highest among intermediate schools (5 per cent, unchanged from 2013), while composite schools have the lowest rates in this ward (less than 1 per cent).

Table 13.2: Summary Table of School Bike Count by School Type

2007 – 2014 (%)

Year Levels	***Number of Schools Responded in 2014***	***Cyclists as share of those eligible***								
		2007	***2008***	***2009***	***2010***	***2011***	***2012***	***2013***	***2014***	**Change 13-14**
Intermediate	1	6%	4%	5%	6%	5%	4%	5%	**5%**	**0%**
Full Primary	6	-	-	-	-	2%	3%	3%	**3%**	**0%**
Secondary	3	2%	1%	2%	2%	2%	2%	2%	**2%**	**0%**
Intermediate/Secondary	6	-	-	0%	0%	0%	2%	1%	**1%**	**0%**
Composite	1	-	0%	-	1%	1%	3%	<1%	**<1%**	**0%**

13.3 Scooter Count Background Information

- A total of 15 schools in the Waitemata and Gulf ward participated in the school bike shed scooter count. Of the schools that responded to the survey, no school had any policies that restrict students scootering to school.
- Most schools surveyed reported no events or issues that may affect the scooter counts[12].
- The designated count day was Tuesday 4th of March 2014[13].

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

13.4 Scooter Count Key Points

- Among the surveyed schools, of those eligible to scooter, on average, less than one per cent of students are scootering to their schools.
- Waiheke Primary School reported the highest share of scooters – 4 per cent of all eligible students currently scootering to school.
- In total, n=27 students from the responding schools were reported to be scootering to school.
- Of the 15 schools that responded, 10 (67 per cent) had no students scootering to school.

[12] The following schools reported events or issues that had an effect on the scooter count:
- Auckland Grammar School *"A number of 6th formers on camp."*
- Parnell District School *"Our Year 7 & 8 students are away on camp."*

[13] The following schools conducted their counts on alternative days:
- ACG Senior College – 12th March 2014
- Auckland Girls' Grammar School – 17th March 2014
- Kidmah College – 13th March 2014
- Kaitoke School (Claris) – 27th March 2014
- Okiwi School – 27th March 2014
- St Joseph's School (Grey Lynn) – 17th March 2014
- St Paul's College – 17th March 2014
- St Peter's College – 17th March 2014
- Waiheke Primary School – 27th March 2014

Table 13.3 shows the results of the 15 schools surveyed in the Waitemata and Gulf ward.

Table 13.3: Summary Table Of School Scooter Count

2007 – 2014 (n)

School Name	*School Type*	*School Roll Eligible To Scooter*	*No. of Scooters Counted*	*Scooters as share of those eligible*[14]
				2014
Waiheke Primary School	Full Primary	206	8	**4%**
Parnell District School	Full Primary	485	12	**2%**
ACG Parnell College	Composite	830	4	**<1%**
St Mary's College	Intermediate/Secondary	944	2	**<1%**
Marist College	Intermediate/Secondary	760	1	**<1%**
ACG Senior College	Intermediate/Secondary	302	0	**0%**
Auckland Girls' Grammer School	Secondary	1400	0	**0%**
Auckland Grammar School	Secondary	1600	0	**0%**
Auckland International College	Secondary	299	0	**0%**
Kadimah College	Full Primary	170	0	**0%**
Kaitoke School (Claris)	Full Primary	29	0	**0%**
Okiwi School	Full Primary	35	0	**0%**
St Joseph's School (Grey Lynn)	Full Primary	90	0	**0%**
St Paul's College	Intermediate/Secondary	268	0	**0%**
St Peter's College	Intermediate/Secondary	1200	0	**0%**
Total		**8618**	**27**	**<1%**

[14] 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 13.4 illustrates the rates of scootering to school at different school levels. Rates of scootering to school are highest for the full primary schools (2 per cent).

Table 13.4: Summary Table Of School Scooter Count by School Type

2007 – 2014 (%)

School Type	*Number of Schools Responded in 2014 (n)*	*Scooter riders as share of those eligible*
		2014
Full Primary	6	2%
Composite	1	<1%
Intermediate/Secondary	6	<1%
Intermediate	1	0%
Secondary	3	0%

APPENDICES

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[15] 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)[16], 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.

[15] Annual average daily traffic

[16] 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.

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%