

# 2013 Auckland Region Manual Cycle Monitor

## - Regional Summary -





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# 1. INTRODUCTION

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## 1.1 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<sup>1</sup>.

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<sup>2</sup> and conducted at different times of the year. This variability prevented the possibility of comparing the relative popularity of different sites across TA boundaries.

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.

This report provides a regional summary of the results of manual cycle monitoring conducted at 85 pre-determined sites throughout the Auckland region. Site-by-site results and ward summaries for each of the twelve<sup>3</sup> wards in the Auckland region have been provided in separate documents. Readers should refer to these documents for ward and site-level detail.

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<sup>1</sup> Auckland Regional Transport Authority (2006) *Regional Cycle Monitoring Plan (Provisional Guidelines)*

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

<sup>3</sup> Note that there were no monitoring sites in the Rodney ward.



## 1.2 Cycle Monitoring Locations

Eighty-five sites were monitored across the Auckland region in 2013. Note that where sites lie on the border between two wards, they have been included in the reports for both wards. Site numbers (which correspond to the numbering in Figure 1.1) appear in brackets after the site name.

### *Albany*

- Whangaparaoa Road (near Red Beach intersection), Red Beach (59)
- Whangaparaoa Road (near Hibiscus Coast Highway intersection), Silverdale (60)
- D'Oyly Reserve cycleway, Stanmore Bay (61)
- Gulf Harbour Drive/Laurie Southwick Parade, Gulf Harbour (63)
- Hibiscus Coast Highway/Jelas Road (82)
- Behind Auckland Council Building, Centreway Road, Orewa (84)
- Beach/Browns Bay Road, Browns Bay (45)
- Rosedale/East Coast Road, Rosedale (38)
- Upper Harbour/Albany Highway, Greenhithe (39)
- Oteha Valley Road/SH17/Albany Highway, Oteha (40)
- Rosedale/Bush Road, Albany (46)
- Oteha Valley/East Coast Road, Northcross (47)
- Squadron Drive/Buckley Avenue, Greenhithe (70)
- Luckens/Hobsonville Road, West Harbour (51)
- Sunnynook Road/East Coast Road, Sunnynook (89)

### *North Shore*

- Lake Road by Takapuna Grammar, Takapuna (35)
- Hurstmere Road/Killarney Street, Takapuna (36)
- Taharoto/Northcote Road, Northcote (37)
- Wairau/Glenfield Road, Glenfield (41)
- Shakespeare/East Coast Road, Milford (42)
- Glenfield/Coronation Road, Hillcrest (43)
- Birkenhead Ave/Mokoia Road, Birkenhead (44)
- Sunnynook Road/East Coast Road, Sunnynook (89)



### *Waitakere*

- Henderson Creek, Henderson (48)
- Triangle Road/Don Buck Road, Massey (49)
- Lincoln Road/Fairdene Ave, Henderson (50)
- Luckens/Hobsonville Road, West Harbour (51)
- Central Park Drive, Henderson (52)
- 326 Te Atatu Road, Te Atatu (53)
- Te Atatu Road/Elcoat Eve, Te Atatu (54)
- Swanson Road/Ranui Station Road/Armada Drive, Ranui (55)
- West Coast/Rosier Road, Glen Eden (57)
- North Western Cycleway (near Te Atatu off-ramp), Te Atatu (58)
- Te Atatu Road/Old Te Atatu Road, Te Atatu (72)
- Rathgar/Pomaria Road, Henderson (85)
- Triangle Road/Huruhuru Road, Henderson (87)

### *Waitemata and Gulf*

- Victoria Street/Wellesley Street, CBD (1)
- Ponsonby/Karangahape/Newton/Great North Road, Newton (2)
- Symonds/Karangahape/Grafton Road, Grafton (8)
- Karangahape Road/Queen Street, CBD (9)
- Tamaki Drive/The Strand, Mechanics Bay (10)
- Auckland Ferry Terminal, CBD (22)
- Stanley Street/Grafton Road/Wellesley Street East, CBD (75)
- Ian McKinnon Drive/Newton Road, Eden Terrace (13)
- Jervis Road/Wallace Street/Kelmarna Ave, Herne Bay (16)
- Broadway/Khyber Pass, Newmarket (90)

### *Albert-Eden-Roskill*

- Great North/Carrington/Point Chevalier Road, Point Chevalier (3)
- Dominion/Balmoral Road, Balmoral (5)
- North Western Cycleway/Great North Road, Waterview (6)
- North Western Cycleway/St Lukes Road, St Lukes (7)
- Manukau Road/Greenlane West, Epsom (12)
- Mount Albert/New North Road, Mt Albert (14)
- Keith Hay Park, Sandringham (88)
- Great South Road/Campbell Road/Main Highway, Ellerslie (21)
- Blockhouse Bay Road/Great North Road, Avondale (73)



- Richardson Road/Maioro Street, New Windsor (15)
- Broadway/Khyber Pass Road, Newmarket (90)
- Upper Dominion Road, Eden Terrace<sup>4</sup> (92)

#### *Whau*

- 3 Rankin Ave, New Lynn (56)
- Blockhouse Bay Road/Great North Road, Avondale (73)
- Patiki/Rosebank Road, Avondale (4)
- Richardson Road/Maioro Street, New Windsor (15)

#### *Orakei*

- St Heliers Bay/West Tamaki Road, Glendowie (20)
- Remuera/Orakei Road, Remuera (11)
- Orakei Basin Boardwalk, Orakei<sup>4</sup> (91)

#### *Maungakiekie-Tamaki*

- Ellerslie Panmure Highway/Lunn Ave, Panmure (19)
- Great South Road/Campbell Road/Main Highway, Ellerslie (21)
- Apirana Avenue/Pilkington Road/Tripoli Road, Glen Innes (74)
- Waikaraka Cycleway, Onehunga (76)
- Onehunga Harbour Road, Onehunga (17)
- Lagoon Drive/Church Crescent, Panmure (78)
- St Heliers Bay/West Tamaki Road, Glendowie (20)

#### *Howick*

- Bucklands Beach/Pakuranga Road, Howick (33)
- Te Irirangi/Ti Rakau Drive, Botany (34)
- Pakuranga Road/Ti Rakau Drive, Pakuranga (80)
- Harris/Smales Road, East Tamaki (79)
- Te Irirangi Drive/Ormiston Road, Flat Bush (81)

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<sup>4</sup> Upper Dominion Road, Eden Terrace and Orakei Basin Boardwalk, Orakei are new sites in 2013.



### **Manukau**

- Great South/Bairds Road, Papatoetoe (23)
- Great South Road/Te Irirangi Drive/Cavendish Drive, Manukau (24)
- Massey/Buckland Road, Mangere (28)
- Te Irirangi Drive/Ormiston Road, Flat Bush (81)
- Tom Pearce/George Bolt Memorial Drive, Mangere (25)
- Great South/East Tamaki Road, Papatoetoe (30)
- Wyllie Avenue/Puhinui Road, Papatoetoe (31)
- McKenzie/Coronation/Walmsley Road, Mangere (32)
- Highbrook Drive, Highbrook (71)
- Great South Road/High Street/Atkinson Avenue, Otahuhu (18)

### **Manurewa-Papakura**

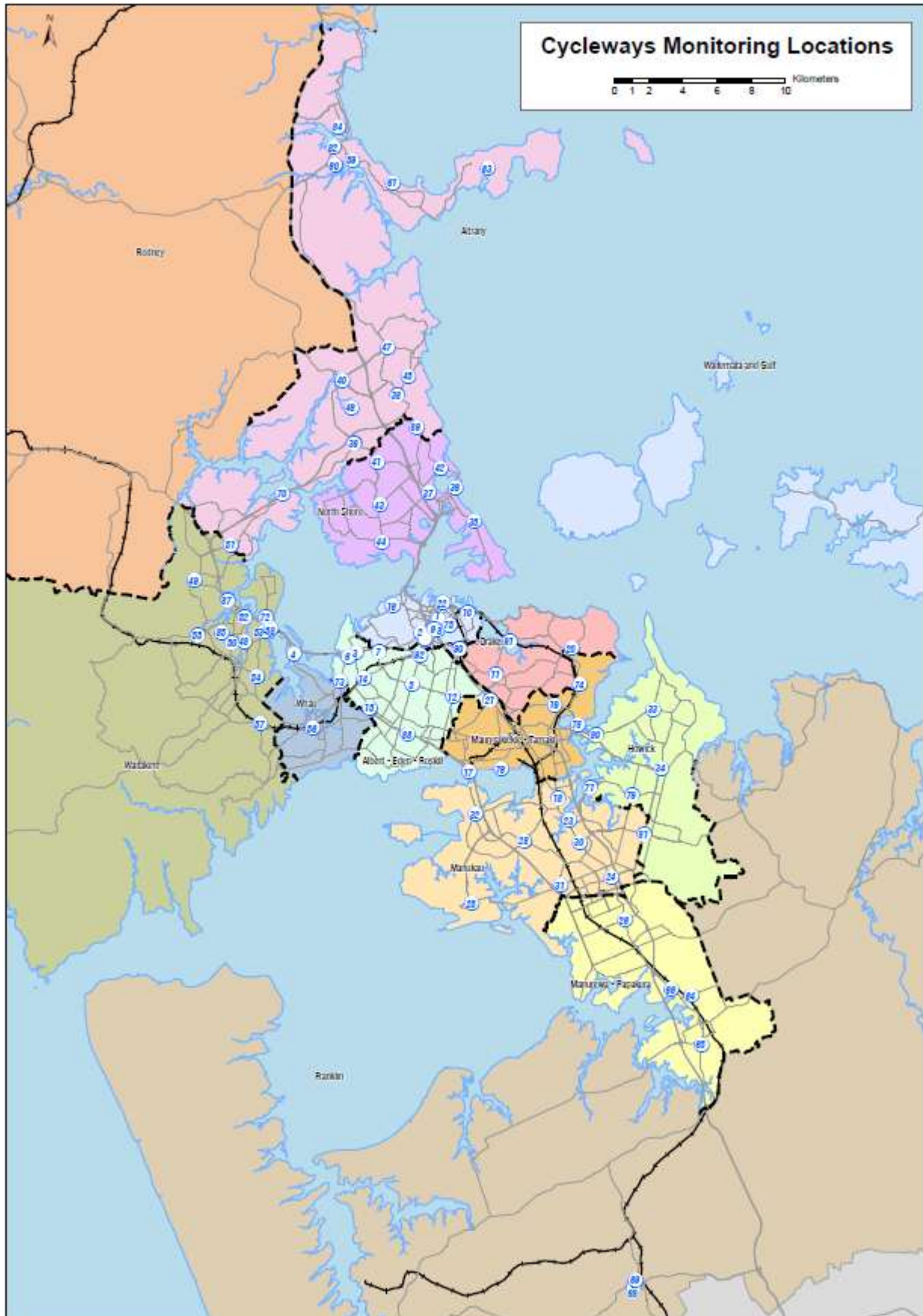
- Great South Road/Taka Street, Takanini (66)
- Porchester Road/Walters Road, Takanini (64)
- Great South Road/Rosehill Drive, Papakura (65)
- Great South/Browns/Orams Road, Manurewa (26)

### **Franklin**

- Queen/Harris Street, Pukekohe (68)
- Edinburgh/Tobin Street, Pukekohe (69)

Note that there are no cycle monitoring sites in the Rodney ward.

Figure 1.1: 2013 Cycle Monitoring Locations in the Auckland Region







## 2. REGIONAL SUMMARY OF RESULTS

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### 2.1 Aggregated Total

#### *Total Movements*

- Overall, a total of 14,864 cyclist movements<sup>5</sup> were recorded across the 85 sites monitored in 2013. Of the 83 sites monitored in both 2012 and 2013, a total of 14,628 movements were recorded. This figure represents an **11 per cent increase** when compared with 2012 (13,215 movements).
- Across the 60 sites monitored since the manual cycle monitor began in 2007, cyclist movements have **increased by 36 per cent**.
- The average number of cycle movements per site across the Auckland region this year is 175 (Figure 2.1).
- Of the sites monitored in both 2012 and 2013, the average number of cycle movements in the region across the morning and evening periods has increased (176 per site in 2013, compared with 159 per site in 2012 - an increase of 11 per cent). However, these figures mask considerable variation between wards. For example, Orakei has experienced a noticeable increase in average total cycle movements (up 71 per cent), while Franklin has experienced a decline in average total cycle movements by six per cent since 2012 (Figures 2.2).

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<sup>5</sup> It is important to note that this figure represents individual cyclist movements rather than total cyclist numbers. The limitations of the methodology used mean that, due to the close proximity of sites to one another (particularly in the Auckland CBD), it is possible for the same cyclist to be counted at more than one site. It is also possible to 'double count' cyclists if they use the same intersection more than once during a shift. At the same time, there will be many cycle trips that will not be counted at all by this methodology, if a cyclist's route does not pass through a monitoring location. Because of these limitations, it cannot be said that 14864 different cyclists were counted on the Auckland region's roads using these sites; the actual number of cyclists, and the number of cycle trips they take, may be higher or lower than the number of cycle movements counted through this methodology.



**Table 2.1: Total Cyclist Movements in the Auckland Region  
2007-2013**

<i>Locations</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>	<i>2011</i>	<i>2012</i>	<i>2013</i>	<b>Change 12-13</b>	<b>Change 07-11</b>
<b>Total (60 sites since 2007)</b>	<b>8417</b>	<b>8783</b>	<b>8427</b>	<b>10659</b>	<b>10917</b>	<b>10275</b>	<b>11405</b>	<b>11%</b>	<b>36%</b>
<i>Annual change</i>	<i>4%</i>	<i>-4%</i>	<i>26%</i>	<i>2%</i>	<i>-6%</i>	<i>11%</i>			
<b>Total (67 sites since 2008)</b>	-	<b>9255</b>	<b>8965</b>	<b>11336</b>	<b>11517</b>	<b>10949</b>	<b>12130</b>	<b>11%</b>	-
<i>Annual change</i>		<i>-3%</i>	<i>26%</i>	<i>2%</i>	<i>-5%</i>	<i>11%</i>			
<b>Total (78 sites in 2009)</b>	-	-	<b>9969</b>	<b>12646</b>	<b>12970</b>	<b>12215</b>	<b>13587</b>	<b>11%</b>	-
<i>Annual change</i>			<i>27%</i>	<i>3%</i>	<i>-6%</i>	<i>11%</i>			
<b>Total (80 sites in 2010)</b>	-	-	-	<b>12836</b>	<b>13160</b>	<b>12439</b>	<b>13799</b>	<b>11%</b>	-
<i>Annual change</i>				<i>3%</i>	<i>-5%</i>	<i>11%</i>			
<b>Total (82 sites in 2011)</b>	-	-	-	-	<b>13406</b>	<b>12638</b>	<b>13991</b>	<b>11%</b>	-
<i>Annual change</i>					<i>-6%</i>	<i>11%</i>			
<b>Total (83 sites in 2012)</b>	-	-	-	-	-	<b>13215</b>	<b>14628</b>	<b>11%</b>	-
<i>Annual change</i>						<i>11%</i>			
<b>Total (85 sites in 2013)</b>	-	-	-	-	-		<b>14864</b>	-	



Figure 2.1: Average and Range of Total Cyclist Movements by Ward in 2013 (All 85 Sites)

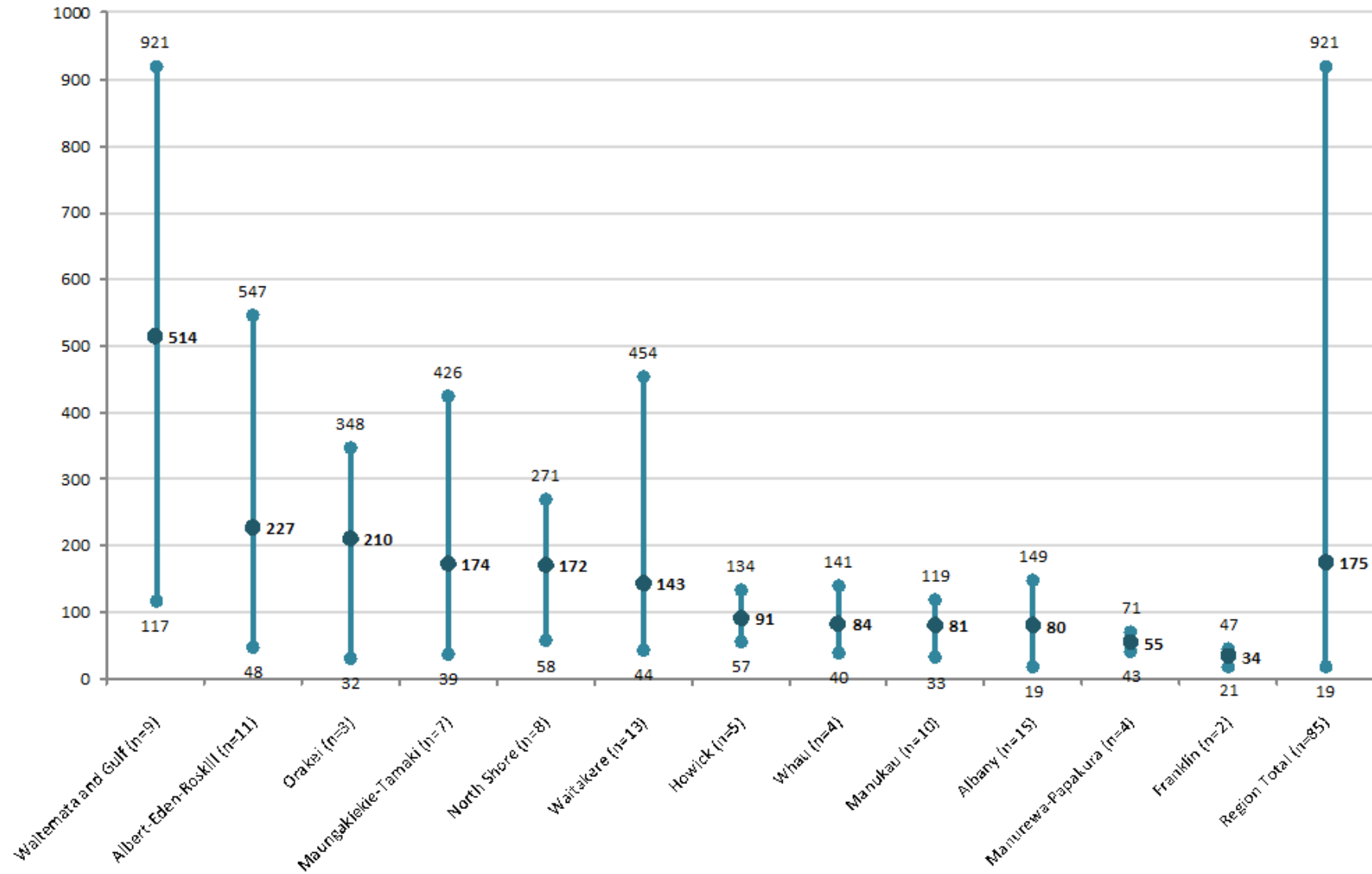
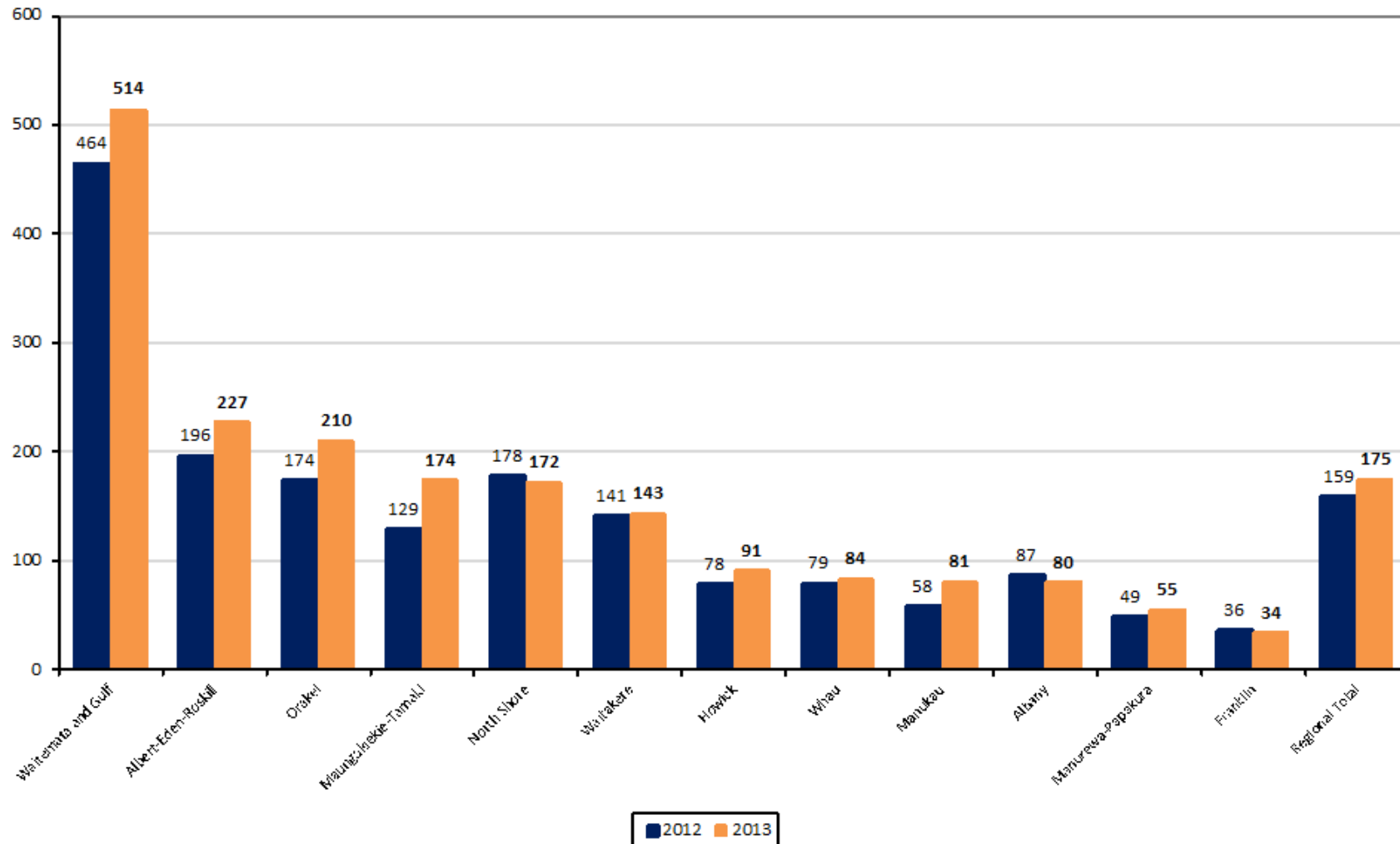


Figure 2.2: Average Cyclist Movements by Ward - 2012-2013 (n)



Note: To allow for accurate time series comparisons, average site calculation for 2013 for Albert-Eden-Roskill and Orakei wards exclude Upper Dominion Road and Orakei Basin Boardwalk, sites monitored for the first time in 2013.



- Of the 85 sites monitored in Auckland this year, the busiest was the Tamaki Drive/The Strand intersection, Waitemata and Gulf with a total of 921 movements (down from 944 movements last year).
- In contrast, Whangaparaoa Road, near Hibiscus Coast Highway intersection, Albany ward had the lightest cyclist traffic (19 movements, down from 20 movements last year).
- The majority of the sites (52 of the 83 sites monitored in 2012 and 2013; 63 per cent) have recorded increases in total cyclist numbers over the last 12 months. The most noticeable increases occurred at:
  - Tom Pearce/George Bolt Memorial Drive (Manukau ward) – up from 15 to 33 movements (120 per cent);
  - Wyllie Avenue/Puhinui Road (Manukau ward) – up from 47 to 95 movements (102 per cent);
  - McKenzie/Coronation/Walmsley Road (Manukau ward) – up from 48 to 90 movements (88 per cent); and
  - St Heliers Bay/West Tamaki Road (Maungakiekie-Tamaki/Orakei ward) – up from 135 to 248 movements (84 per cent).
- In contrast, 35 per cent of the sites (29 of the 83 sites monitored in 2012 and 2013) have recorded smaller cycle volumes than last year. The most noticeable decreases were at:
  - Wairau/Glenfield Road (North Shore ward) – down from 105 to 69 movements (34 per cent); and
  - Oteha Valley Road/SH17/Albany Highway (Albany ward) – down from 128 to 85 movements (34 per cent).
- Two sites experienced no change in cycle volume over the last 12 months. They were the Mt Albert/New North Road intersection in Albert-Eden-Roskill ward and behind Auckland Council Building, Orewa in the Albany ward.



**Table 2.2: Summary Of Total Cyclist Movements  
2007-2013 (n) – 6:30am to 9:00am and 4:00pm to 7:00pm**

Site Number	Location	Area	2007	2008	2009	2010	2011	2012	2013	Change 12-13	Change 07-13
10	Tamaki Drive/The Strand	Waitemata and Gulf	900	786	603	936	1059	944	<b>921</b>	<b>-2%</b>	<b>2%</b>
8	Symonds Street/Karangahape Road	Waitemata and Gulf	639	621	528	597	690	732	<b>902</b>	<b>23%</b>	<b>41%</b>
9	Karangahape Road/Queen Street	Waitemata and Gulf	507	424	459	582	554	573	<b>654</b>	<b>14%</b>	<b>29%</b>
90	Broadway/Khyber Pass	Waitemata and Gulf	-	-	-	-	-	577	<b>637</b>	<b>10%</b>	-
2	Ponsonby/Karangahape Road	Waitemata and Gulf	487	415	370	559	511	498	<b>595</b>	<b>19%</b>	<b>22%</b>
13	Ian McKinnon/Newton Road	Waitemata and Gulf	-	-	291	374	560	503	<b>582</b>	<b>16%</b>	-
7	North Western Cycleway/St Lukes	Albert-Eden-Roskill	324	331	310	432	513	429	<b>547</b>	<b>28%</b>	<b>69%</b>
6	North Western Cycleway/Great North Road	Albert-Eden-Roskill	232	369	286	485	486	405	<b>519</b>	<b>28%</b>	<b>124%</b>
58	North Western Cycleway/near Te Atatu Road off-ramp	Waitakere	232	272	355	388	345	425	<b>454</b>	<b>7%</b>	<b>96%</b>
17	Onehunga Harbour Road	Maungakiekie-Tamaki	249	220	180	257	310	323	<b>426</b>	<b>32%</b>	<b>71%</b>
22	Ferry Terminal	Waitemata and Gulf	380	316	248	395	391	389	<b>417</b>	<b>7%</b>	<b>10%</b>
11	Remuera/Orakei Road	Orakei	195	189	187	244	280	213	<b>348</b>	<b>63%</b>	<b>78%</b>
52	Central Park Drive	Waitakere	127	157	212	200	212	246	<b>273</b>	<b>11%</b>	<b>115%</b>
36	Hurstmere Road/Killarney Street	North Shore	121	252	318	302	304	262	<b>271</b>	<b>3%</b>	<b>124%</b>
35	Lake Road, by Takapuna Grammar	North Shore	192	297	295	327	316	321	<b>266</b>	<b>-17%</b>	<b>39%</b>
42	Shakespeare/East Coast Road	North Shore	137	250	310	305	286	238	<b>266</b>	<b>12%</b>	<b>94%</b>
20	St Heliers Bay/West Tamaki Road	Maungakiekie-Tamaki/Orakei	208	167	108	170	224	135	<b>248</b>	<b>84%</b>	<b>19%</b>
5	Dominion/Balmoral Road	Albert-Eden-Roskill	237	201	183	205	197	188	<b>235</b>	<b>25%</b>	<b>-1%</b>
37	Taharoto/Northcote Road	North Shore	162	270	202	229	307	218	<b>234</b>	<b>7%</b>	<b>44%</b>
3	Great North/Carrington Road	Albert-Eden-Roskill	235	231	193	314	232	206	<b>228</b>	<b>11%</b>	<b>-3%</b>
92	Upper Dominion Road	Albert-Eden-Roskill	-	-	-	-	-	-	<b>204</b>	-	-



Site Number	Location	Area	2007	2008	2009	2010	2011	2012	2013	Change 12-13	Change 07-13
12	Manukau Road/Greenlane West	Albert-Eden-Roskill	225	205	176	257	227	205	199	-3%	-12%
72	Te Atatu/Old Te Atatu Road/Tatau Way	Waitakere	-	111	134	207	141	193	192	-1%	-
78	Lagoon Drive/Church Crescent	Maungakiekie-Tamaki	-	-	129	195	163	137	182	33%	-
1	Victoria/Wellesley/Halsey Street	Waitemata and Gulf	160	136	124	162	225	192	176	-8%	10%
14	Mount Albert/New North Road	Albert-Eden-Roskill	156	164	142	209	201	170	170	0%	9%
53	326 Te Atatu Road, near Covil Avenue	Waitakere	87	107	138	127	127	135	153	13%	76%
87	Triangle/Huruhuru Road	Waitakere	-	-	-	137	121	177	153	-14%	-
89	Sunnynook/East Coast Road	Albany/North Shore	-	-	-	-	174	155	149	-4%	-
21	Great South Road/Campbell Road/Main Highway	Albert-Eden-Roskill/Maungakiekie-Tamaki	174	114	151	171	138	132	146	11%	-16%
73	Blockhouse Bay/Great North Road	Albert-Eden-Roskill/Whau	-	117	119	141	129	129	141	9%	-
16	Jervois Road/Wallace Street	Waitemata and Gulf	-	-	111	167	148	141	136	-4%	-
80	Pakuranga Road/Ti Rakau Drive	Howick	-	-	123	162	124	127	134	6%	-
39	Upper Harbour/Albany Highway	Albany	25	98	138	158	148	187	134	-28%	436%
24	Great South Road/Te Irirangi Drive/Cavendish Drive	Manukau	73	51	41	72	94	78	119	53%	63%
75	Stanley Street/Grafton Road	Waitemata and Gulf	-	65	96	93	74	94	117	24%	-
55	Swanson/Ranui Station Road/Armada Drive	Waitakere	62	86	103	102	132	115	116	1%	87%
38	Rosedale/East Coast Road	Albany	76	98	159	152	143	118	112	-5%	47%
34	Te Irirangi Drive/Ti Rakau Drive	Howick	81	75	59	78	76	86	107	24%	32%
70	Squadron Drive/Buckley Avenue*	Albany	-	35	68	94	83	110	106	-4%	-
47	Oteha Valley/East Coast Road	Albany	59	114	138	168	129	137	106	-23%	80%
4	Patiki/Rosebank Road	Whau	82	79	72	90	121	95	105	11%	28%
51	Luckens/Hobsonville Road	Albany/Waitakere	32	41	77	95	52	112	104	-7%	225%



Site Number	Location	Area	2007	2008	2009	2010	2011	2012	2013	Change 12-13	Change 07-13
23	Great South/Bairds Road	Manukau	68	56	57	71	89	81	103	27%	51%
46	Rosedale/Bush Road	Albany	31	73	72	109	85	63	100	59%	223%
30	Great South/East Tamaki Road	Manukau	73	51	63	65	89	86	96	13%	33%
31	Wyllie Avenue/Puhinui Road	Manukau	38	33	35	57	75	47	95	102%	150%
19	Ellerslie Panmure Highway/Lunn Ave	Maungakiekie-Tamaki	118	94	82	100	77	79	94	19%	-20%
32	McKenzie/Coronation/Walmsley Road	Manukau	70	57	52	87	93	48	90	88%	29%
84	Behind Auckland Council Building, Orewa	Albany	-	-	86	95	138	89	89	0%	-
49	Triangle Road/Don Buck Road	Waitakere	67	61	56	90	88	83	87	5%	30%
48	Henderson Creek	Waitakere	46	30	73	84	66	116	86	-26%	87%
81	Te Irirangi Drive/Ormiston Road	Howick/Manukau	-	-	33	66	56	50	85	70%	-
40	Oteha Valley Road/SH17/Albany Highway	Albany	19	48	72	91	82	128	85	-34%	347%
76	Waikaraka Cycle Way	Maungakiekie-Tamaki	-	54	51	42	65	52	83	60%	-
18	Great South Road/High Street/Atkinson/Park Avenue	Manukau	84	60	49	61	71	75	79	5%	-6%
33	Bucklands Beach/Pakuranga Road	Howick	140	130	94	114	107	85	71	-16%	-49%
65	Great South Road/Rosehill Drive	Manurewa-Papakura	53	72	59	62	73	57	71	25%	34%
41	Wairau/Glenfield Road	North Shore	64	73	80	91	93	105	69	-34%	8%
50	Lincoln Road/Fairdene Avenue	Waitakere	40	55	43	56	54	67	68	1%	70%
85	Rathgar/Pomaria Road	Waitakere	-	-	85	99	68	73	68	-7%	-
44	Birkenhead Ave/Mokoia Road	North Shore	40	49	57	75	45	52	61	17%	53%
45	Beach/Browns Bay Road	Albany	19	45	59	77	75	61	60	-2%	216%
88	Keith Hay Park	Albert-Eden-Roskill	-	-	-	53	69	47	59	26%	-
43	Glenfield/Coronation Road	North Shore	28	75	78	93	52	73	58	-21%	107%
28	Massey/Buckland Road	Manukau	43	31	39	45	53	48	58	21%	35%





Site Number	Location	Area	2007	2008	2009	2010	2011	2012	2013	Change 12-13	Change 07-13
79	Harris/Smales Road	Howick	-	-	60	62	75	44	57	30%	-
57	West Coast/Rosier Road	Waitakere	48	37	62	60	60	38	56	47%	17%
66	Great South Road/Taka Street	Manurewa-Papakura	58	58	36	43	60	49	55	12%	-5%
26	Great South/Browns/Orams Road	Manurewa-Papakura	60	55	39	58	70	44	49	11%	-18%
15	Richardson Road/Maioro Street	Albert-Eden-Roskill/Whau	-	-	21	39	37	53	48	-9%	-
68	Queen/Harris Street	Franklin	101	83	95	57	67	44	47	7%	-53%
71	Highbrook Drive	Manukau	-	29	38	40	53	50	47	-6%	-
54	Te Atatu Road/Elcoat Avenue	Waitakere	50	45	69	52	48	57	44	-23%	-12%
82	Hibiscus Coast Highway/Jelas Road	Albany	-	-	38	39	30	34	43	26%	-
64	Porchester Road/Walters Road	Manurewa-Papakura	50	46	49	-	72	44	43	-2%	-14%
63	Gulf Harbour Drive/Laurie Southwick Parade	Albany	56	44	22	37	39	33	40	21%	-29%
56	3 Rankin Avenue	Whau	31	38	38	32	42	38	40	5%	29%
74	Apirana Avenue/Pilkington/Tripoli Road	Maungakiekie-Tamaki	-	61	32	60	55	46	39	-15%	-
25	Tom Pearce/George Bolt Memorial Drive	Manukau	-	-	27	12	54	15	33	120%	-
91	Orakei Basin Boardwalk	Orakei	-	-	-	-	-	-	32	-	-
61	D'Oyly Reserve cycleway	Albany	24	103	9	44	58	35	27	-23%	13%
59	Whangaparaoa Road, near Red Beach Intersection	Albany	29	31	26	29	26	28	25	-11%	-14%
69	Edinburgh/Tobin Street	Franklin	35	40	34	28	28	28	21	-25%	-40%
60	Whangaparaoa Road, near Hibiscus Coast Highway intersection	Albany	28	20	12	23	22	20	19	-5%	-32%
	<b>Total (60 sites since 2007)^</b>		<b>8417</b>	<b>8783</b>	<b>8427</b>	<b>10659</b>	<b>10917</b>	<b>10275</b>	<b>11405</b>	<b>11%</b>	<b>36%</b>
	<b>Total (67 sites since 2008)^</b>		<b>-</b>	<b>9255</b>	<b>8965</b>	<b>11336</b>	<b>11517</b>	<b>10949</b>	<b>12130</b>	<b>11%</b>	<b>-</b>
	<b>Total (78 sites in 2009)</b>		<b>-</b>	<b>-</b>	<b>9969</b>	<b>12646</b>	<b>12970</b>	<b>12215</b>	<b>13587</b>	<b>11%</b>	<b>-</b>



Site Number	Location	Area	2007	2008	2009	2010	2011	2012	2013	Change 12-13	Change 07-13
	<b>Total (80 sites in 2010)</b>		-	-	-	12836	13160	12439	13799	11%	-
	<b>Total (82 sites in 2011)</b>		-	-	-	-	13406	12638	13991	11%	-
	<b>Total (83 sites in 2012)</b>		-	-	-	-	-	13215	14628	11%	-
	<b>Total (85 sites in 2013)</b>		-	-	-	-	-	-	14864	-	-

^Note that the evening count for D'Oyly Reserve cycleway (site 61) in 2008 is considered as an outlier, so the total figures exclude this outlier for more accurate comparison.

\*Note that the Squadron Drive/Buckley Avenue (site 70) is the relocated site from previous Upper Harbour Drive/Buckley Avenue, so previous results are not directly comparable.



- Overall, 92 per cent of cyclists in the Auckland region were adults in 2013 (stable from 2012). Of the 12 wards monitored, the Waitemata and Gulf ward had the highest proportion of adult cyclists (99 per cent) whilst the Franklin ward had the greatest share of cyclists identified as school children (51 per cent).
- Almost all cyclists were wearing a helmet (92 per cent, stable from previous years). The North Shore ward had the highest proportion of cyclists who are wearing a helmet (96 per cent) whilst the Manukau ward had the greatest share of cyclists who did not wearing helmets (21 per cent).
- Eighty-three per cent of all cyclists observed in the Auckland region throughout the monitoring period were male and 15 per cent were female (both shares stable from last year). Franklin ward had the highest proportion of male cyclists (91 per cent), while Orakei and Manurewa-Papakura wards had the greatest share of female cyclists (18 per cent each).
- Three-fifths of the cyclists were riding on the road (60 per cent, stable from last year). The other cyclists either rode on an off-road cycleway or on the footpath (20 per cent each, stable from last year). Orakei ward continued to have the highest share of cyclists riding on the road (87 per cent, down slightly from 91 per cent last year), while Waitakere ward had the greatest share of cyclists using an off-road cycleway (43 per cent, unchanged from 2012). Franklin ward had the highest proportion of footpath riders (60 per cent, up from 51 per cent 12 months ago).

**Table 2.3: Aggregate Totals of Cyclist Characteristics 2007-2013 (%)**

	<i>Aggregate Total (2007)</i>	<i>Aggregate Total (2008)</i>	<i>Aggregate Total (2009)</i>	<i>Aggregate Total (2010)</i>	<i>Aggregate Total (2011)</i>	<i>Aggregate Total (2012)</i>	<i>Aggregate Total (2013)</i>
<b>Cyclist Type</b>							
Adult	89	87	88	89	90	90	<b>92</b>
School child	11	13	12	11	10	10	<b>8</b>
<b>Helmet Wearing</b>							
Helmet on head	90	90	91	91	91	91	<b>92</b>
No helmet	10	10	9	9	9	9	<b>8</b>
<b>Gender</b>							
Male	-	-	-	-	79	82	<b>83</b>
Female	-	-	-	-	16	15	<b>15</b>
Can't tell	-	-	-	-	5	3	<b>2</b>
<b>Where Riding</b>							
Road	68	72	61	62	61	61	<b>60</b>
Footpath	21	21	25	25	21	18	<b>20</b>
Off-road cycleway	10	7	14	13	18	21	<b>20</b>
<b>Base:</b>	<b>8417</b>	<b>9255</b>	<b>9969</b>	<b>12836</b>	<b>13406</b>	<b>13215</b>	<b>14864</b>



**Table 2.4: Summary of Cyclist Characteristics by Ward in 2013**

	<i>Albany</i>	<i>North Shore</i>	<i>Wai-takere</i>	<i>Waite-mata and Gulf</i>	<i>Albert/Eden/Roskill</i>	<i>Whau</i>	<i>Orakei</i>	<i>Maungakiekie-Tamaki</i>	<i>Howick</i>	<i>Manukau</i>	<i>Manurewa-Papakura</i>	<i>Franklin</i>
<b>Cyclist Type</b>												
Adult	82	85	85	99	94	94	91	92	92	90	79	49
School child	18	15	15	1	6	6	9	8	8	10	21	51
<b>Helmet Wearing</b>												
Helmet on head	95	96	89	93	95	90	94	92	92	79	81	81
No helmet	5	4	11	7	5	10	2	7	8	21	19	19
Can't tell	0	0	0	0	0	0	4	1	0	0	0	0
<b>Gender</b>												
Male	86	83	86	80	84	86	82	84	83	88	82	91
Female	13	16	13	17	15	14	18	14	9	10	18	9
Can't tell	1	1	1	3	1	0	0	2	8	2	0	0
<b>Where Riding</b>												
Road	73	75	34	73	46	55	87	70	70	60	54	40
Footpath	14	20	23	14	17	35	7	20	30	34	45	60
Off-road cycleway	13	5	43	13	37	10	5	10	0	6	1	0
Can't tell	0	0	0	0	0	0	1	0	0	0	0	0
<b>Base:</b>	<b>1199</b>	<b>1374</b>	<b>1854</b>	<b>5137</b>	<b>2496</b>	<b>334</b>	<b>628</b>	<b>1218</b>	<b>454</b>	<b>806</b>	<b>218</b>	<b>68</b>

Note: Orange highlighting denotes the ward with the highest proportion of a particular characteristic when compared to the other wards. Also, base sizes add to more than total number of cycle movements as sites on ward boundaries have been included in both wards.



## 2.2 Morning Peak

### Key Points

- A total of 7452<sup>6</sup> morning cyclist movements were recorded across the 85 sites monitored in 2013.
- Across the the 83 sites monitored in 2012 and 2013 in the morning peak period (between 6:30am and 9:00am), 7341 cyclist movements were recorded in 2013. This represents a **15 per cent increase** from 2012 (6357 movements).
- As shown in Figure 2.3, the average volume of morning cyclists across all 85 sites in the Auckland region is 88 cycle movements. Of the 12 wards, the average number of morning cyclists is highest in the Waitemata and Gulf ward (254 movements) and lowest in Franklin ward (15 movements).
- Of the 83 sites monitored in 2012 and 2013, Figure 2.4 compares the average morning cycle volume of each ward over the last 12 months. All but one ward recorded higher averages, most noticeable at Orakei. Whau had no change in the average morning cycle volume.

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<sup>6</sup> It is important to note that this figure represents individual cyclist movements rather than total cyclist numbers. The limitations of the methodology used mean that, due to the close proximity of sites to one another (particularly in Auckland City's CBD), it is possible for the same cyclist to be counted at more than one site. It is also possible to 'double count' cyclists if they use the same intersection more than once during a shift. At the same time, there will be many cycle trips that were not counted at all by this methodology, if a cyclist's route does not pass through a monitoring location. Because of these limitations, it cannot be said that 7452 different cyclists were counted on the Auckland region's roads using these sites; the actual number of cyclists, and the number of cycle trips they take, may be higher or lower than the number of cycle movements counted through this methodology.



Figure 2.3: Average and Range of Morning Cyclist Movements by Ward in 2013 (All 85 Sites)

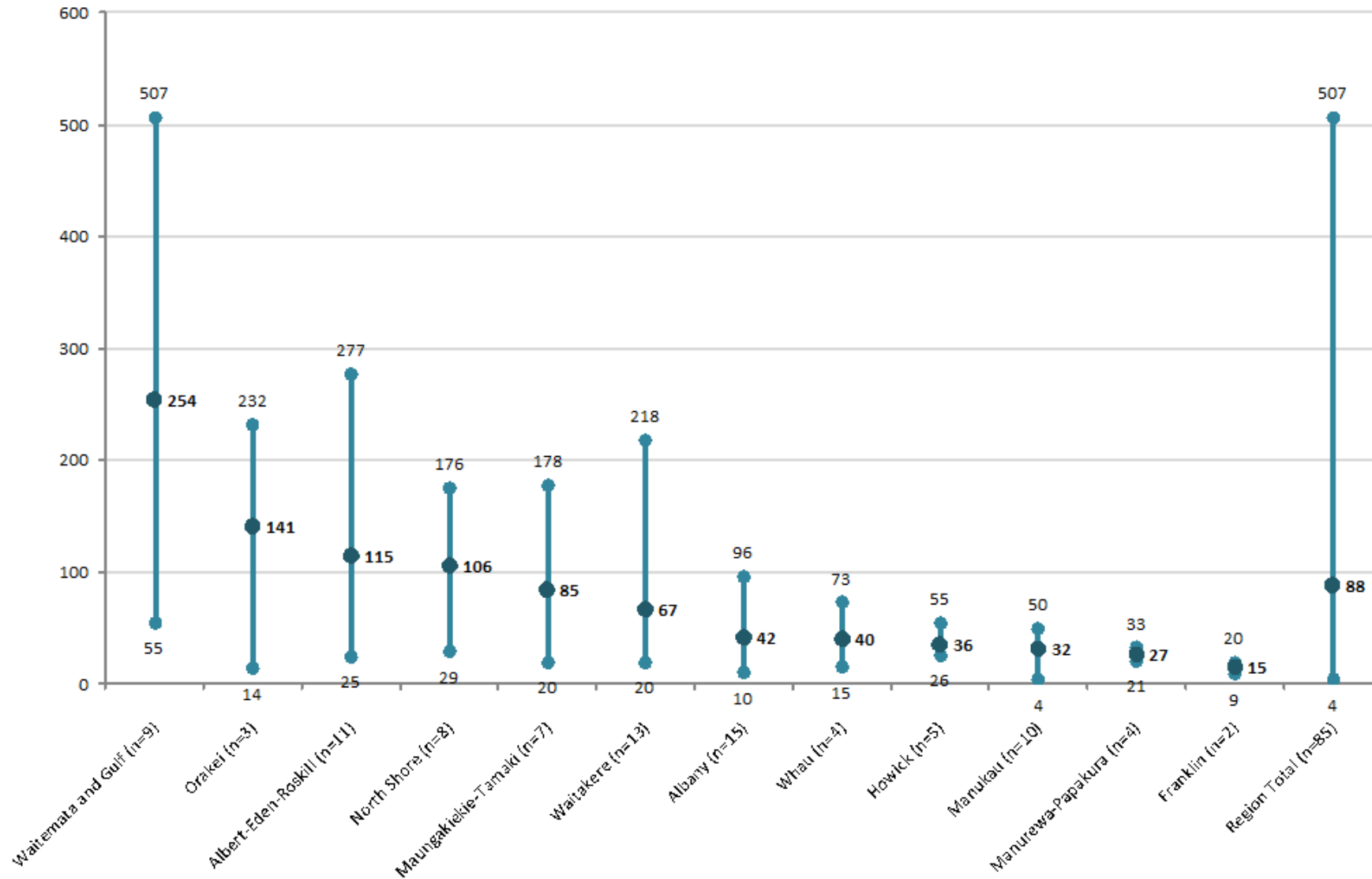
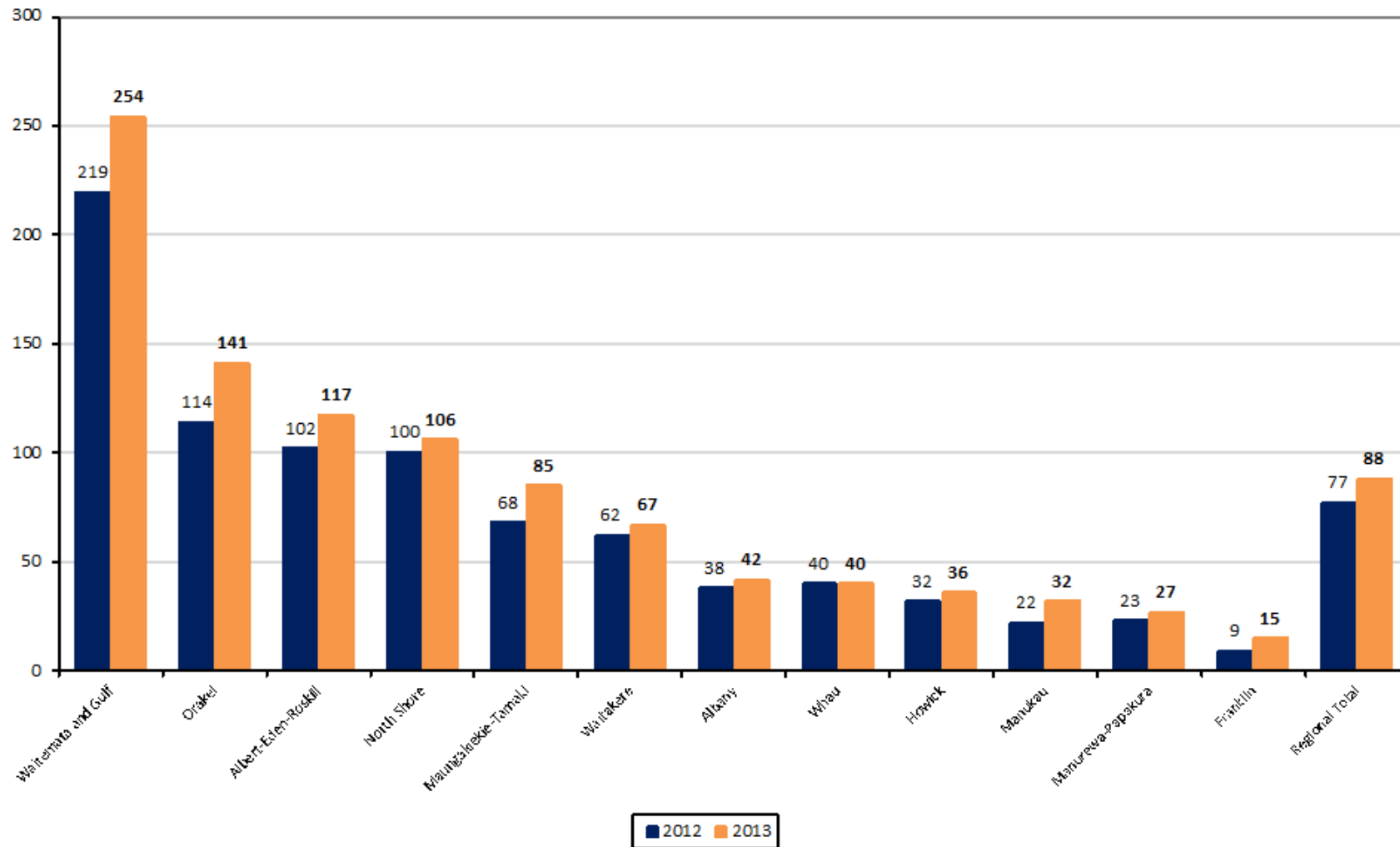




Figure 2.4: Average Morning Cyclist Movements by Ward - 2012-2013 (n)



Note: To allow for accurate time series comparisons, average site calculation for 2013 for Albert-Eden-Roskill and Orakei wards exclude Upper Dominion Road and Orakei Basin Boardwalk, sites monitored for the first time in 2013.



- As in previous years, the busiest site out of the 85 sites in the morning peak was the intersection of Tamaki Drive and The Strand (507 movements, up from 503 movements in 2012), while the lowest level of morning cyclist traffic was observed at the Tom Pearce/George Bolt Memorial Drive intersection (4 movements, up from 3 movements last year).
- Sixty-one sites (73 per cent of the 83 sites monitored in 2012 and 2013) have experienced higher morning peak cycle volumes than last year. The most noticeable increases occurred at:
  - McKenzie/Coronation/Walmsley Road (Manukau ward) – up from 19 to 48 movements (153 per cent);
  - Wyllie Avenue/Puhinui Road (Manukau ward) – up from 8 to 17 movements (113 per cent); and
  - St Heliers Bay/West Tamaki Road (Maungakiekie-Tamaki/Orakei wards) – up from 86 to 177 movements (106 per cent).
- In contrast, 22 per cent of the sites (18 of the 83 sites monitored in 2012 and 2013) have recorded decreases in total morning cyclist numbers this year compared with 2012. The most noticeable decreases occurred at:
  - Te Atatu Road/Elcoat Avenue (Waitakere ward) – down from 34 to 20 movements (41 per cent); and
  - Bucklands Beach/Pakuranga Road (Howick ward) – down from 40 to 26 movements (35 per cent).
- Four sites registered no change in morning cycle volumes over the last 12 months.





**Table 2.5: Summary Of Morning Cyclist Movements  
2007-2013 (n) – 6:30am to 9:00am**

<b>Site Number</b>	<b>Location</b>	<b>Area</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>	<b>Change 12-13</b>	<b>Change 07-13</b>
10	Tamaki Drive/The Strand	Waitemata and Gulf	480	416	321	498	630	503	<b>507</b>	<b>1%</b>	<b>6%</b>
8	Symonds Street/Karangahape Road	Waitemata and Gulf	290	285	246	283	317	338	<b>410</b>	<b>21%</b>	<b>41%</b>
9	Karangahape Road/Queen Street	Waitemata and Gulf	246	212	238	272	256	266	<b>315</b>	<b>18%</b>	<b>28%</b>
90	Broadway/Khyber Pass	Waitemata and Gulf	-	-	-	-	-	292	<b>322</b>	<b>10%</b>	-
13	Ian McKinnon/Newton Road	Waitemata and Gulf	-	-	139	190	236	219	<b>303</b>	<b>38%</b>	-
7	North Western Cycleway/St Lukes	Albert-Eden-Roskill	152	156	155	222	240	222	<b>277</b>	<b>25%</b>	<b>82%</b>
6	North Western Cycleway/ Great North Road	Albert-Eden-Roskill	98	156	145	244	204	201	<b>258</b>	<b>28%</b>	<b>163%</b>
2	Ponsonby/Karangahape Road	Waitemata and Gulf	226	199	176	242	222	204	<b>253</b>	<b>24%</b>	<b>12%</b>
11	Remuera/Orakei Road	Orakei	86	100	107	149	173	142	<b>232</b>	<b>63%</b>	<b>170%</b>
58	North Western Cycleway/near Te Atatu Road off-ramp	Waitakere	102	121	157	179	155	187	<b>218</b>	<b>17%</b>	<b>114%</b>
22	Ferry Terminal	Waitemata and Gulf	195	158	137	198	205	189	<b>205</b>	<b>8%</b>	<b>5%</b>
17	Onehunga Harbour Road	Maungakiekie-Tamaki	93	88	74	98	139	171	<b>178</b>	<b>4%</b>	<b>91%</b>
20	St Heliers Bay/West Tamaki Road	Maungakiekie-Tamaki/Orakei	139	107	61	98	150	86	<b>177</b>	<b>106%</b>	<b>27%</b>
36	Hurstmere Road/Killarney Street	North Shore	76	134	186	180	191	154	<b>176</b>	<b>14%</b>	<b>132%</b>
42	Shakespeare/East Coast Road	North Shore	82	127	177	146	181	145	<b>172</b>	<b>19%</b>	<b>110%</b>
35	Lake Road, by Takapuna Grammar	North Shore	127	200	166	186	220	175	<b>159</b>	<b>-9%</b>	<b>25%</b>
37	Taharoto/Northcote Road	North Shore	111	160	98	117	202	141	<b>152</b>	<b>8%</b>	<b>37%</b>
52	Central Park Drive	Waitakere	61	68	91	94	100	112	<b>135</b>	<b>21%</b>	<b>121%</b>
5	Dominion/Balmoral Road	Albert-Eden-Roskill	114	90	85	91	99	97	<b>128</b>	<b>32%</b>	<b>12%</b>
3	Great North/Carrington Road	Albert-Eden-Roskill	114	95	97	150	103	112	<b>112</b>	<b>0%</b>	<b>-2%</b>



Site Number	Location	Area	2007	2008	2009	2010	2011	2012	2013	Change 12-13	Change 07-13
1	Victoria/Wellesley/Halsey Street	Waitemata and Gulf	70	57	59	82	116	82	103	26%	47%
12	Manukau Road/Greenlane West	Albert-Eden-Roskill	103	92	84	130	120	110	99	-10%	-4%
92	Upper Dominion Road	Albert-Eden-Roskill	-	-	-	-	-	-	97		-
89	Sunnynook/East Coast Road	Albany/North Shore	-	-	-	-	81	95	96	1%	-
72	Te Atatu/Old Te Atatu Road/Tatau Way	Waitakere	-	56	66	105	63	103	88	-15%	-
21	Great South Road/Campbell Road/Main Highway	Albert-Eden-Roskill/ Maungakiekie-Tamaki	89	53	64	69	60	68	77	13%	-13%
53	326 Te Atatu Road, near Covil Avenue	Waitakere	44	52	79	65	73	75	76	1%	73%
73	Blockhouse Bay/Great North Road	Albert-Eden-Roskill/ Whau	-	57	57	66	56	60	73	22%	-
87	Triangle/Huruhuru Road	Waitakere	-	-	-	59	52	71	73	3%	-
78	Lagoon Drive/Church Crescent	Maungakiekie-Tamaki	-	-	57	100	65	66	72	16%	-
16	Jervois Road/Wallace Street	Waitemata and Gulf	-	-	60	88	73	62	70	6%	-
14	Mount Albert/New North Road	Albert-Eden-Roskill	75	68	59	91	97	94	70	-26%	-7%
84	Behind Auckland Council Building, Orewa	Albany	-	-	75	73	72	61	66	8%	-
38	Rosedale/East Coast Road	Albany	54	52	105	93	73	67	65	-3%	20%
47	Oteha Valley/East Coast Road	Albany	42	40	69	87	53	68	60	-12%	43%
75	Stanley Street/Grafton Road	Waitemata and Gulf	-	36	49	47	27	38	55	45%	-
80	Pakuranga Road/Ti Rakau Drive	Howick	-	-	46	70	59	51	55	8%	-
39	Upper Harbour/Albany Highway	Albany	14	54	63	65	57	51	55	8%	293%
23	Great South/Bairds Road	Manukau	32	27	29	34	40	39	50	28%	56%
30	Great South/East Tamaki Road	Manukau	36	24	33	25	44	40	49	23%	36%
55	Swanson/Ranui Station Road/Armada Drive	Waitakere	15	21	37	34	47	27	49	81%	227%



Site Number	Location	Area	2007	2008	2009	2010	2011	2012	2013	Change 12-13	Change 07-13
32	McKenzie/Coronation/Walmsley Road	Manukau	28	21	22	38	32	19	48	153%	71%
70	Squadron Drive/Buckley Avenue*	Albany	-	17	23	37	34	28	46	64%	-
49	Triangle Road/Don Buck Road	Waitakere	24	29	21	27	35	30	46	53%	92%
4	Patiki/Rosebank Road	Whau	37	34	38	38	56	52	46	-12%	24%
88	Keith Hay Park	Albert-Eden-Roskill	-	-	-	28	29	28	45	61%	-
51	Luckens/Hobsonville Road	Albany/Waitakere	20	25	26	41	14	42	44	5%	120%
46	Rosedale/Bush Road	Albany	15	36	26	48	29	22	43	95%	187%
45	Beach/Browns Bay Road	Albany	11	26	29	50	47	28	43	54%	291%
24	Great South Road/Te Irirangi Drive/Cavendish Drive	Manukau	34	25	19	28	41	28	42	50%	24%
19	Ellerslie Panmure Highway/Lunn Ave	Maungakiekie-Tamaki	52	42	31	44	31	40	41	3%	-21%
34	Te Irirangi Drive/Ti Rakau Drive	Howick	36	36	30	30	37	30	41	37%	14%
85	Rathgar/Pomaria Road	Waitakere	-	-	32	53	33	38	36	-5%	-
18	Great South Road/High Street/Atkinson/Park Avenue	Manukau	38	30	21	25	20	34	34	0%	-11%
65	Great South Road/Rosehill Drive	Manurewa-Papakura	29	42	22	29	30	30	33	10%	14%
43	Glenfield/Coronation Road	North Shore	16	36	36	37	27	35	33	-6%	106%
41	Wairau/Glenfield Road	North Shore	34	39	42	38	41	36	32	-11%	-6%
81	Te Irirangi Drive/Ormiston Road	Howick/Manukau	-	-	13	25	24	18	31	72%	-
50	Lincoln Road/Fairdene Avenue	Waitakere	13	19	21	21	26	34	31	-9%	138%
48	Henderson Creek	Waitakere	14	11	27	38	24	39	30	-23%	114%
44	Birkenhead Ave/Mokoia Road	North Shore	20	20	27	29	22	17	29	71%	45%
76	Waikaraka Cycle Way	Maungakiekie-Tamaki	-	13	18	7	29	28	29	4%	-
40	Oteha Valley Road/SH17/Albany Highway	Albany	4	20	25	29	26	40	29	-28%	625%
82	Hibiscus Coast Highway/Jelas Road	Albany	-	-	15	24	19	20	28	40%	-



Site Number	Location	Area	2007	2008	2009	2010	2011	2012	2013	Change 12-13	Change 07-13
64	Porchester Road/Walters Road	Manurewa-Papakura	22	19	19	-	33	18	27	50%	23%
79	Harris/Smales Road	Howick	-	-	35	25	35	20	27	35%	-
33	Bucklands Beach/Pakuranga Road	Howick	68	53	51	45	43	40	26	-35%	-62%
26	Great South/Browns/Orams Road	Manurewa-Papakura	25	32	21	21	29	24	26	8%	4%
15	Richardson Road/Maioro Street	Albert-Eden-Roskill/Whau	-	-	8	14	15	29	25	-14%	-
63	Gulf Harbour Drive/Laurie Southwick Parade	Albany	17	14	5	14	12	13	24	85%	41%
28	Massey/Buckland Road	Manukau	12	11	19	16	18	14	24	71%	100%
57	West Coast/Rosier Road	Waitakere	19	18	28	31	25	19	24	26%	26%
71	Highbrook Drive	Manukau	-	13	20	27	23	21	24	14%	-
66	Great South Road/Taka Street	Manurewa-Papakura	18	19	12	15	23	18	21	17%	17%
68	Queen/Harris Street	Franklin	44	31	27	18	14	11	20	82%	-55%
74	Apirana Avenue/Pilkington/Tripoli Road	Maungakiekie-Tamaki	-	22	12	30	14	19	20	5%	-
54	Te Atatu Road/Elcoat Avenue	Waitakere	26	27	37	30	30	34	20	-41%	-23%
31	Wyllie Avenue/Puhinui Road	Manukau	18	8	12	23	13	8	17	113%	-6%
56	3 Rankin Avenue	Whau	16	17	21	12	16	20	15	-25%	-6%
59	Whangaparaoa Road, near Red Beach Intersection	Albany	13	15	15	21	11	15	15	0%	15%
91	Orakei Basin Boardwalk	Orakei	-	-	-	-	-	-	14		-
61	D'Oyly Reserve cycleway	Albany	14	19	5	31	13	14	13	-7%	-7%
60	Whangaparaoa Road, near Hibiscus Coast Highway intersection	Albany	11	9	6	13	7	10	10	0%	-9%
69	Edinburgh/Tobin Street	Franklin	17	16	15	17	11	7	9	29%	-47%
25	Tom Pearce/George Bolt Memorial Drive	Manukau	-	-	6	5	15	3	4	33%	-



Site Number	Location	Area	2007	2008	2009	2010	2011	2012	2013	Change 12-13	Change 07-13
	<b>Total (60 sites since 2007)^</b>		<b>4109</b>	<b>4192</b>	<b>4135</b>	<b>5119</b>	<b>5370</b>	<b>4969</b>	<b>5726</b>	<b>15%</b>	<b>39%</b>
	<b>Total (67 sites since 2008)^</b>		-	<b>4406</b>	<b>4380</b>	<b>5438</b>	<b>5616</b>	<b>5266</b>	<b>6061</b>	<b>15%</b>	-
	<b>Total (78 sites in 2009)</b>		-	-	<b>4866</b>	<b>6105</b>	<b>6262</b>	<b>5853</b>	<b>6778</b>	<b>16%</b>	-
	<b>Total (80 sites in 2010)</b>		-	-	-	<b>6192</b>	<b>6343</b>	<b>5952</b>	<b>6896</b>	<b>16%</b>	-
	<b>Total (82 sites in 2011)</b>		-	-	-	-	<b>6457</b>	<b>6065</b>	<b>7019</b>	<b>16%</b>	-
	<b>Total (83 sites in 2012)</b>		-	-	-	-	-	<b>6357</b>	<b>7341</b>	<b>15%</b>	-
	<b>Total (85 sites in 2013)</b>		-	-	-	-	-	-	<b>7452</b>	-	-

^Note that the evening count for D'Oyly Reserve cycleway (site 61) in 2008 is considered as an outlier, so the total figures exclude this outlier for more accurate comparison.

\*Note that the Squadron Drive/Buckley Avenue (site 70) is the new relocated site from previous Upper Harbour Drive/Buckley Avenue, so previous results are not directly comparable.



Total morning cyclist characteristics are shown in Table 2.6 below.

- Overall, 90 per cent of morning cyclists in the Auckland region were adults in 2012 (stable from 88 per cent last year). Of the 12 wards monitored, the Waitemata and Gulf ward again had the highest proportion of adults cyclists (99 per cent, unchanged from last year) whilst the Franklin ward had the greatest share of cyclists identified as school children (69 per cent).
- The majority of cyclists were wearing a helmet (95 per cent, up slightly from 92 per cent in 2012). North Shore ward had the highest proportion of cyclists who are wearing a helmet (98 per cent) whilst the Manukau ward had the greatest share of cyclists not wearing helmets (22 per cent).
- Eighty-two percent of all morning cyclists were identified as male (stable from 80 per cent 12 months ago). Albany, Waitakere, Whau and Manukau wards had the highest proportion of male cyclists (86 per cent each), while Orakei and Manurewa-Papakura ward had the highest share of female cyclists (19 per cent each).
- In the morning, 61 per cent of all cyclists were riding on the road (stable from 62 per cent last year). Twenty per cent of cyclists were riding on the footpath and the remaining 19 per cent rode on an off-road cycleway. Orakei ward had the highest share of cyclists riding on the road (91 per cent), while Waitakere ward (44 per cent) had the greatest share of cyclists using an off-road cycleway. Franklin ward had the highest proportion of footpath riders (79 per cent).

**Table 2.6: Aggregate Totals of Morning Cyclist Characteristics - 2007-2013 (%)**

	<i>Aggregate Total (2007)</i>	<i>Aggregate Total (2008)</i>	<i>Aggregate Total (2009)</i>	<i>Aggregate Total (2010)</i>	<i>Aggregate Total (2011)</i>	<i>Aggregate Total (2012)</i>	<i>Aggregate Total (2013)</i>
<b>Cyclist Type</b>							
Adult	86	86	85	87	88	88	<b>90</b>
School child	14	14	15	13	12	12	<b>10</b>
<b>Helmet Wearing</b>							
Helmet on head	93	93	93	93	93	92	<b>95</b>
No helmet	7	7	7	7	7	8	<b>5</b>
<b>Gender</b>							
Male	-	-	-	-	77	80	<b>82</b>
Female	-	-	-	-	16	15	<b>16</b>
Can't tell	-	-	-	-	7	5	<b>2</b>
<b>Where Riding</b>							
Road	69	73	63	63	65	62	<b>61</b>
Footpath	21	20	23	23	19	17	<b>20</b>
Off-road cycleway	9	7	14	14	16	21	<b>19</b>
<b>Base:</b>	<b>4109</b>	<b>4406</b>	<b>4866</b>	<b>6192</b>	<b>6457</b>	<b>6357</b>	<b>7452</b>



**Table 2.7: Summary of Morning Cyclist Characteristics by Ward in 2013**

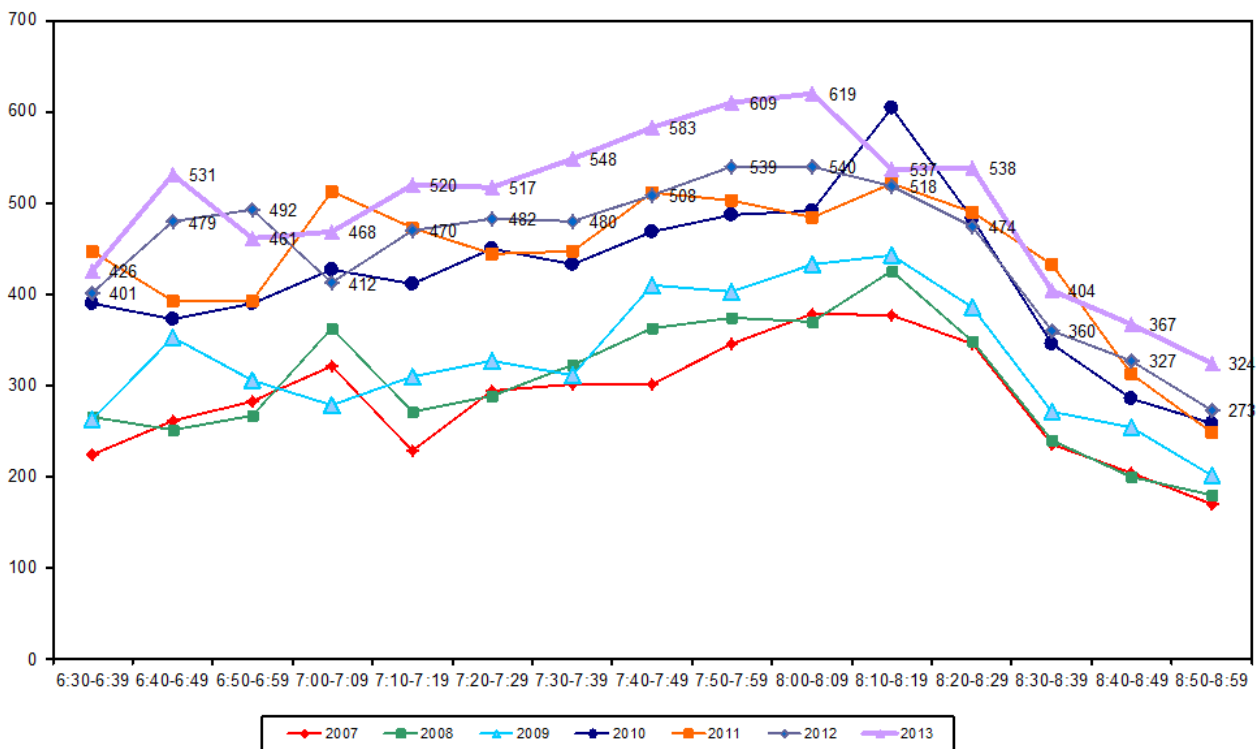
	<i>Albany</i>	<i>North Shore</i>	<i>Wai-takere</i>	<i>Waite-mata and Gulf</i>	<i>Albert/Eden/Roskill</i>	<i>Whau</i>	<i>Orakei</i>	<i>Maungakiekie-Tamaki</i>	<i>Howick</i>	<i>Manukau</i>	<i>Manurewa-Papakura</i>	<i>Franklin</i>
<b>Cyclist Type</b>												
Adult	78	82	84	99	92	91	91	91	92	89	77	31
School child	22	18	16	1	8	9	9	9	8	11	23	69
<b>Helmet Wearing</b>												
Helmet on head	97	98	91	95	97	92	92	93	91	78	84	90
No helmet	3	2	9	5	3	8	1	4	9	22	16	10
Can't tell	0	0	0	0	0	0	7	3	0	0	0	0
<b>Gender</b>												
Male	86	81	86	79	84	86	81	85	81	86	81	83
Female	13	18	12	17	15	13	19	13	11	11	19	17
Can't tell	1	1	1	4	1	1	0	2	8	3	0	0
<b>Where Riding</b>												
Road	71	74	33	74	46	51	91	76	69	52	55	21
Footpath	13	20	22	13	16	38	5	17	31	40	44	79
Off-road cycleway	16	6	45	12	38	11	3	7	0	8	1	0
Can't tell	0	0	0	1	0	0	1	0	0	0	0	0
<b>Base:</b>	<b>637</b>	<b>849</b>	<b>870</b>	<b>2543</b>	<b>1261</b>	<b>159</b>	<b>423</b>	<b>594</b>	<b>180</b>	<b>323</b>	<b>107</b>	<b>29</b>

Note: Orange highlighting denotes the ward with the highest proportion of a particular characteristic when compared to the other wards. Also, base sizes add to more than total number of cycle movements as sites on ward boundaries have been included in both wards.



- Figure 2.5 shows the overall pattern of total morning cyclist volumes recorded at the 85 sites monitored in the Auckland region. Morning cyclist numbers remained steady over the monitoring period, increasing to a peak of 619 movements between 8:00am and 8:09am. From there, cycle volumes declined until the end of the morning peak period. The trend was consistent with previous years.

**Figure 2.5: Total Cyclist Frequency – Morning Peak  
2007-2013 (n)**







## 2.3 Evening Peak

### Key Points

- A total of 7412<sup>7</sup> cyclist movements were recorded in the evening peak period across the 85 sites monitored in 2013.
- Across the the 83 sites monitored in 2012 and 2013 in the evening peak period (between 4:00pm and 7:00pm), 7287 cyclist movements were recorded in 2013. This represents a **6 per cent increase** from 2012 (6858 movements).
- As shown in Figures 2.6, the average volume of evening cyclists across all 85 sites in the Auckland region is 88 cycle movements in 2013. Of the 12 wards, the average number of evening cyclists is highest in the Waitemata and Gulf ward (259 movements) and lowest in Franklin (20 movements).
- Of the 83 sites monitored in 2012 and 2013, Figure 2.7 compares the average evening cycle volume of each ward over the last twelve months. Eight wards have recorded higher averages, most noticeable at Orakei. The remaining four wards had lower averages this year, most noticeable at North Shore and Albany.

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<sup>7</sup> It is important to note that this figure represents individual cyclist movements rather than total cyclist numbers. The limitations of the methodology used mean that, due to the close proximity of sites to one another (particularly in Auckland City's CBD), it is possible for the same cyclist to be counted at more than one site. It is also possible to 'double count' cyclists if they use the same intersection more than once during a shift. At the same time, there will be many cycle trips that were not counted at all by this methodology, if a cyclist's route does not pass through a monitoring location. Because of these limitations, it cannot be said that 7412 different cyclists were counted on the Auckland region's roads using these sites; the actual number of cyclists, and the number of cycle trips they take, may be higher or lower than the number of cycle movements counted through this methodology.



Figure 2.6: Average and Range of Evening Cyclist Movements by Ward in 2013 (All 85 Sites)

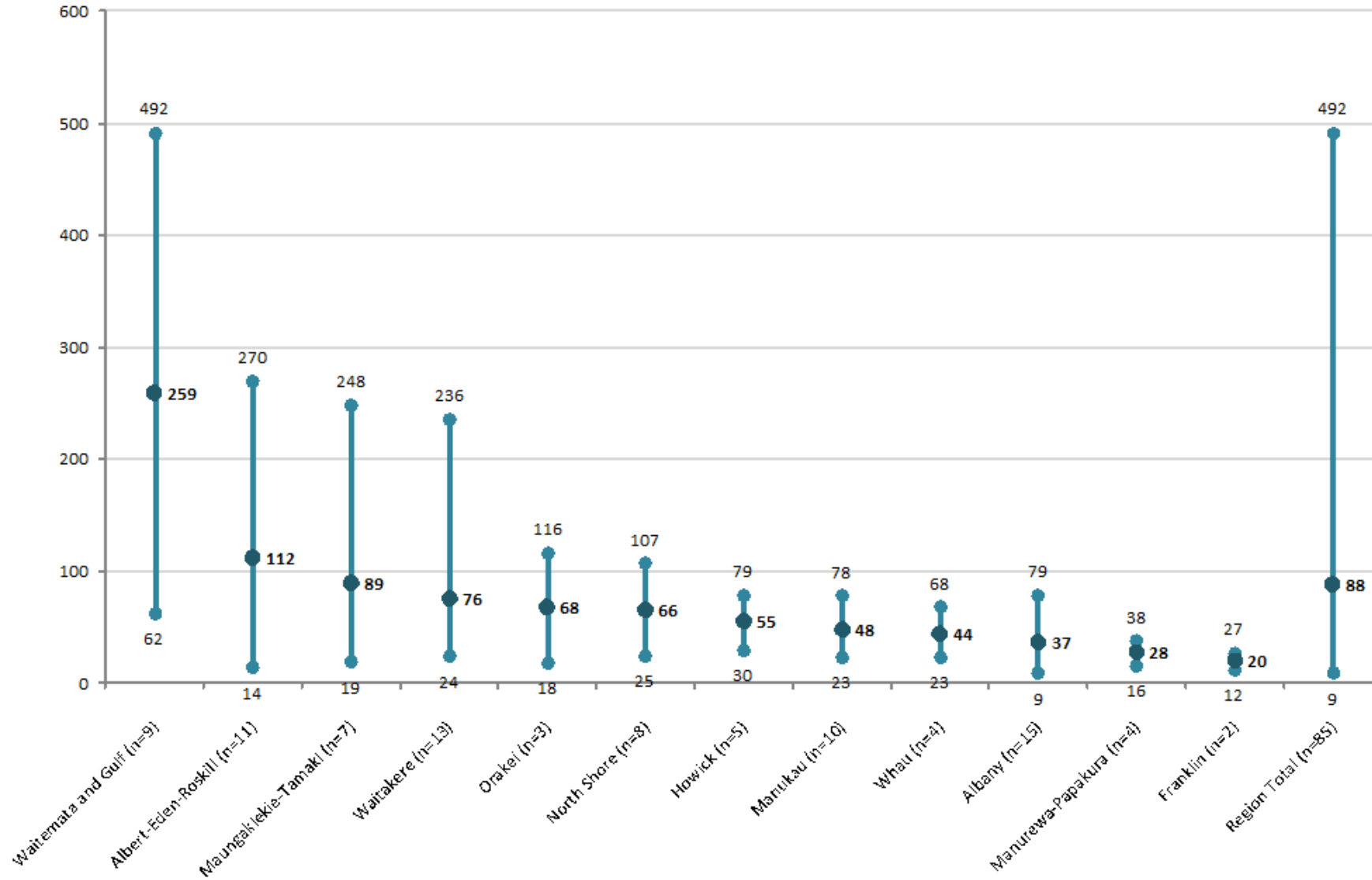
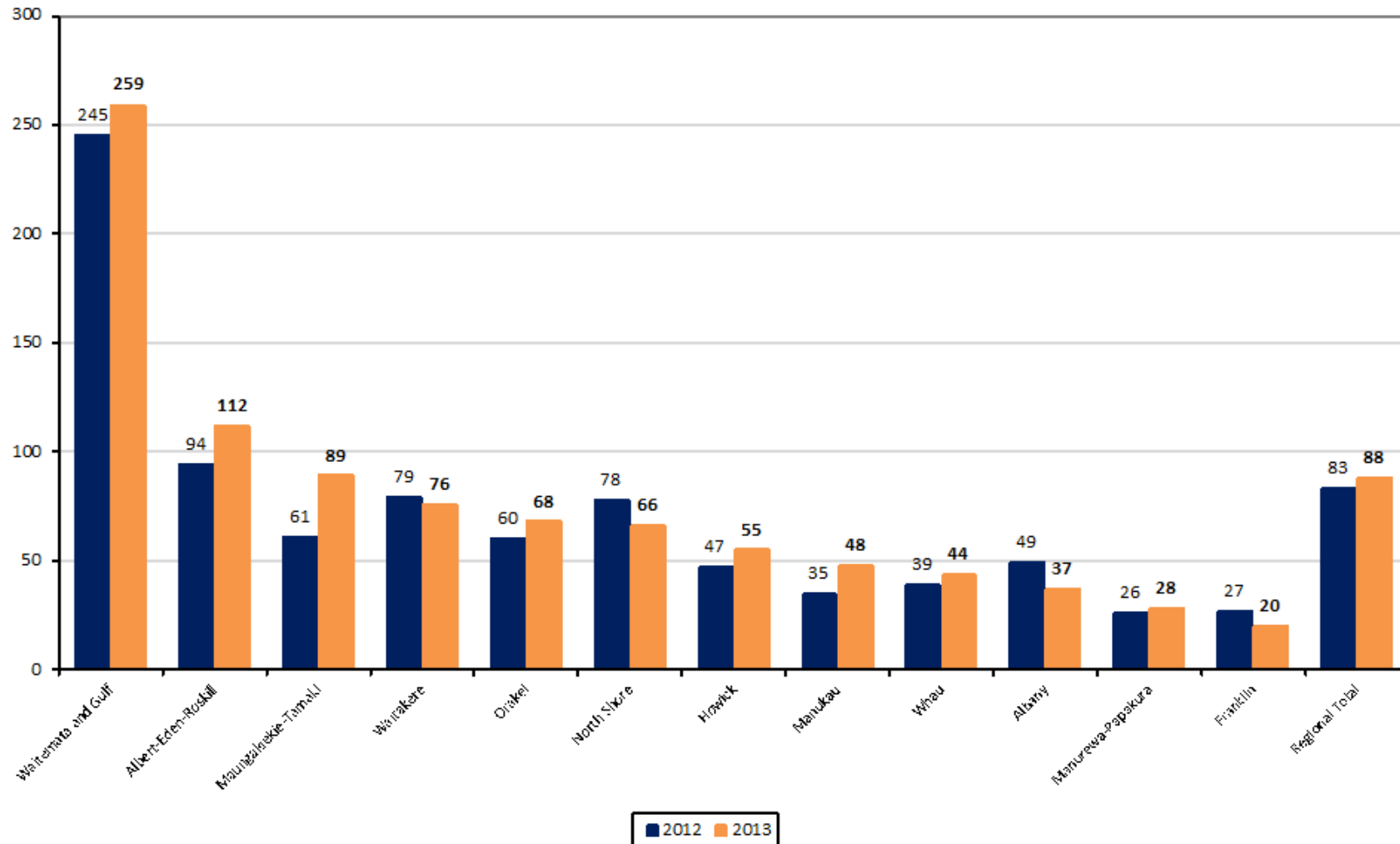


Figure 2.7: Average Evening Cyclist Movements by Ward 2012-2013 (n)



Note: To allow for accurate time series comparisons, average site calculation for 2013 for Albert-Eden-Roskill and Orakei wards exclude Upper Dominion Road and Orakei Basin Boardwalk, sites monitored for the first time in 2013.



- In contrast to previous years, the busiest site of the 85 monitored in the evening period this year was the intersection of Symonds Street and Karangahape Road in Waitemata and Gulf ward (492 movements, up from 394 movements in 2012). The lowest level of evening cyclist traffic was observed at Whangaparaoa Road, near Hibiscus Coast Highway intersection in Albany ward (9 movements, down from 10 movements last year).
- Fifty-four per cent (45 of the 83 sites monitored in 2012 and 2013) have experienced higher cycle volumes in the evening than last year. The most noticeable increases occurred at:
  - Tom Pearce/George Bolt Memorial Drive (Manukau ward) – up from 12 to 29 movements (142 per cent);
  - Waikaraka Cycle Way (Maungakiekie-Tamaki ward) - up from 24 to 54 movements (125 per cent); and
  - Wyllie Avenue/Puhinui Road (Manukau ward) – up from 39 to 78 movements (100 per cent).
- In contrast, 43 per cent of the sites (36 of the 83 sites monitored in 2012 and 2013) have recorded decreases in total evening cyclist numbers this year compared with 2012. The most noticeable decreases occurred at:
  - Beach/Browns Bay Road (Albany ward) - down from 33 to 17 movements (48 per cent)
  - Wairau/Glenfield Road (North Shore ward) – down from 69 to 37 movements (46 per cent)
  - Edinburgh/Tobin Street (Franklin ward) – down from 21 to 12 movements (43 per cent); and
  - Upper Harbour/Albany Highway (Albany ward) – down from 136 to 79 movements (42 per cent).
- Two sites registered no change in evening cycle volumes over the last 12 months.



**Table 2.8: Summary of Evening Cyclist Movements  
2007-2013 (n) – 4:00pm to 7:00pm**

<b>Site Number</b>	<b>Location</b>	<b>Area</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>	<b>Change 12-13</b>	<b>Change 07-13</b>
8	Symonds Street/Karangahape Road	Waitemata and Gulf	349	336	282	314	373	394	<b>492</b>	<b>25%</b>	<b>41%</b>
10	Tamaki Drive/The Strand	Waitemata and Gulf	420	370	282	438	429	441	<b>414</b>	<b>-6%</b>	<b>-1%</b>
2	Ponsonby/Karangahape Road	Waitemata and Gulf	261	216	194	317	289	294	<b>342</b>	<b>16%</b>	<b>31%</b>
9	Karangahape Road/Queen Street	Waitemata and Gulf	261	212	221	310	298	307	<b>339</b>	<b>10%</b>	<b>30%</b>
90	Broadway/Khyber Pass	Waitemata and Gulf	-	-	-	-	-	285	<b>315</b>	<b>11%</b>	-
13	Ian McKinnon/Newton Road	Waitemata and Gulf	-	-	152	184	324	284	<b>279</b>	<b>-2%</b>	-
7	North Western Cycleway/St Lukes	Albert-Eden-Roskill	172	175	155	210	273	207	<b>270</b>	<b>30%</b>	<b>57%</b>
6	North Western Cycleway/Great North Road	Albert-Eden-Roskill	134	213	141	241	282	204	<b>261</b>	<b>28%</b>	<b>95%</b>
17	Onehunga Harbour Road	Maungakiekie-Tamaki	156	132	106	159	171	152	<b>248</b>	<b>63%</b>	<b>59%</b>
58	North Western Cycleway/near Te Atatu Road off-ramp	Waitakere	130	151	198	209	190	238	<b>236</b>	<b>-1%</b>	<b>82%</b>
22	Ferry Terminal	Waitemata and Gulf	185	158	111	197	186	200	<b>212</b>	<b>6%</b>	<b>15%</b>
52	Central Park Drive	Waitakere	66	89	121	106	112	134	<b>138</b>	<b>3%</b>	<b>109%</b>
3	Great North/Carrington Road	Albert-Eden-Roskill	121	136	96	164	129	94	<b>116</b>	<b>23%</b>	<b>-4%</b>
11	Remuera/Orakei Road	Orakei	109	89	80	95	107	71	<b>116</b>	<b>63%</b>	<b>6%</b>
78	Lagoon Drive/Church Crescent	Maungakiekie-Tamaki	-	-	72	95	98	71	<b>110</b>	<b>55%</b>	-
35	Lake Road, by Takapuna Grammar	North Shore	65	97	129	141	96	146	<b>107</b>	<b>-27%</b>	<b>65%</b>
5	Dominion/Balmoral Road	Albert-Eden-Roskill	123	111	98	114	98	91	<b>107</b>	<b>18%</b>	<b>-13%</b>
92	Upper Dominion Road	Albert-Eden-Roskill	-	-	-	-	-	-	<b>107</b>	-	-
72	Te Atatu/Old Te Atatu Road/Tatau Way	Waitakere	-	55	68	102	78	90	<b>104</b>	<b>16%</b>	-
12	Manukau Road/Greenlane West	Albert-Eden-Roskill	122	113	92	127	107	95	<b>100</b>	<b>5%</b>	<b>-18%</b>
14	Mount Albert/New North Road	Albert-Eden-Roskill	81	96	83	118	104	76	<b>100</b>	<b>32%</b>	<b>23%</b>



Site Number	Location	Area	2007	2008	2009	2010	2011	2012	2013	Change 12-13	Change 07-13
36	Hurstmere Road/Killarney Street	North Shore	45	118	132	122	113	108	95	-12%	111%
42	Shakespeare/East Coast Road	North Shore	55	123	133	159	105	93	94	1%	71%
37	Taharoto/Northcote Road	North Shore	51	110	104	112	105	77	82	6%	61%
87	Triangle/Huruhuru Road	Waitakere	-	-	-	78	69	106	80	-25%	-
80	Pakuranga Road/Ti Rakau Drive	Howick	-	-	77	92	65	76	79	4%	-
39	Upper Harbour/Albany Highway	Albany	11	44	75	93	91	136	79	-42%	618%
31	Wyllie Avenue/Puhinui Road	Manukau	20	25	23	34	62	39	78	100%	290%
53	326 Te Atatu Road, near Covil Avenue	Waitakere	43	55	59	62	54	60	77	28%	79%
24	Great South Road/Te Irirangi Drive/Cavendish Drive	Manukau	39	26	22	44	53	50	77	54%	97%
1	Victoria/Wellesley/Halsey Street	Waitemata and Gulf	90	79	65	80	109	110	73	-34%	-19%
20	St Heliers Bay/West Tamaki Road	Maungakiekie-Tamaki/Orakei	69	60	47	72	74	49	71	45%	3%
21	Great South Road/Campbell Road/Main Highway	Albert-Eden-Roskill/ Maungakiekie-Tamaki	85	61	87	102	78	64	69	8%	-19%
73	Blockhouse Bay/Great North Road	Albert-Eden-Roskill/Whau	-	60	62	75	73	69	68	-1%	-
55	Swanson/Ranui Station Road/Armada Drive	Waitakere	47	65	66	68	85	88	67	-24%	43%
34	Te Irirangi Drive/Ti Rakau Drive	Howick	45	39	29	48	39	56	66	18%	47%
16	Jervois Road/Wallace Street	Waitemata and Gulf	-	-	51	79	75	79	66	-16%	-
75	Stanley Street/Grafton Road	Waitemata and Gulf	-	29	47	46	47	56	62	11%	-
51	Luckens/Hobsonville Road	Albany/Waitakere	12	16	51	54	38	70	60	-14%	400%
70	Squadron Drive/Buckley Avenue*	Albany	-	18	45	57	49	82	60	-27%	-
4	Patiki/Rosebank Road	Whau	45	45	34	52	65	43	59	37%	31%
46	Rosedale/Bush Road	Albany	16	37	46	61	56	41	57	39%	256%
40	Oteha Valley Road/SH17/Albany Highway	Albany	15	28	47	62	56	88	56	-36%	273%



Site Number	Location	Area	2007	2008	2009	2010	2011	2012	2013	Change 12-13	Change 07-13
48	Henderson Creek	Waitakere	32	19	46	46	42	77	56	-27%	75%
76	Waikaraka Cycle Way	Maungakiekie-Tamaki	-	41	33	35	36	24	54	125%	-
81	Te Irirangi Drive/Ormiston Road	Howick/Manukau	-	-	20	41	32	32	54	69%	-
19	Ellerslie Panmure Highway/Lunn Ave	Maungakiekie-Tamaki	66	52	51	56	46	39	53	36%	-20%
23	Great South/Bairds Road	Manukau	36	29	28	37	49	42	53	26%	47%
89	Sunnynook/East Coast Road	Albany/North Shore	-	-	-	-	93	60	53	-12%	-
30	Great South/East Tamaki Road	Manukau	37	27	30	40	45	46	47	2%	27%
38	Rosedale/East Coast Road	Albany	22	46	54	59	70	51	47	-8%	114%
47	Oteha Valley/East Coast Road	Albany	17	74	69	81	76	69	46	-33%	171%
33	Bucklands Beach/Pakuranga Road	Howick	72	77	43	69	64	45	45	0%	-38%
18	Great South Road/High Street/Atkinson/Park Avenue	Manukau	46	30	28	36	51	41	45	10%	-2%
32	McKenzie/Coronation/Walmsley Road	Manukau	42	36	30	49	61	29	42	45%	0%
49	Triangle Road/Don Buck Road	Waitakere	43	32	35	63	53	53	41	-23%	-5%
65	Great South Road/Rosehill Drive	Manurewa-Papakura	24	30	37	33	43	27	38	41%	58%
50	Lincoln Road/Fairdene Avenue	Waitakere	27	36	22	35	28	33	37	12%	37%
41	Wairau/Glenfield Road	North Shore	30	34	38	53	52	69	37	-46%	23%
66	Great South Road/Taka Street	Manurewa-Papakura	40	39	24	28	37	31	34	10%	-15%
28	Massey/Buckland Road	Manukau	31	20	20	29	35	34	34	0%	10%
57	West Coast/Rosier Road	Waitakere	29	19	34	29	35	19	32	68%	10%
44	Birkenhead Ave/Mokoia Road	North Shore	20	29	30	46	23	35	32	-9%	60%
85	Rathgar/Pomaria Road	Waitakere	-	-	53	46	35	35	32	-9%	-
79	Harris/Smales Road	Howick	-	-	25	37	40	24	30	25%	-
25	Tom Pearce/George Bolt Memorial Drive	Manukau	-	-	21	7	39	12	29	142%	-



Site Number	Location	Area	2007	2008	2009	2010	2011	2012	2013	Change 12-13	Change 07-13
68	Queen/Harris Street	Franklin	57	52	68	39	53	33	27	-18%	-53%
43	Glenfield/Coronation Road	North Shore	12	39	42	56	25	38	25	-34%	108%
56	3 Rankin Avenue	Whau	15	21	17	20	26	18	25	39%	67%
54	Te Atatu Road/Elcoat Avenue	Waitakere	24	18	32	22	18	23	24	4%	0%
26	Great South/Browns/Orams Road	Manurewa-Papakura	35	23	18	37	41	20	23	15%	-34%
15	Richardson Road/Maioro Street	Albert-Eden-Roskill/Whau	-	-	13	25	22	24	23	-4%	-
84	Behind Auckland Council Building, Orewa	Albany	-	-	11	22	66	28	23	-18%	-
71	Highbrook Drive	Manukau	-	16	18	13	30	29	23	-21%	-
74	Apirana Avenue/Pilkington/Tripoli Road	Maungakiekie-Tamaki	-	39	20	30	41	27	19	-30%	-
91	Orakei Basin Boardwalk	Orakei	-	-	-	-	-	-	18	-	-
45	Beach/Browns Bay Road	Albany	8	19	30	27	28	33	17	-48%	113%
63	Gulf Harbour Drive/Laurie Southwick Parade	Albany	39	30	17	23	27	20	16	-20%	-59%
64	Porchester Road/Walters Road	Manurewa-Papakura	28	27	30	-	39	26	16	-38%	-43%
82	Hibiscus Coast Highway/Jelas Road	Albany	-	-	23	15	11	14	15	7%	-
88	Keith Hay Park	Albert-Eden-Roskill	-	-	-	25	40	19	14	-26%	-
61	D'Oyly Reserve cycleway	Albany	10	84	4	13	45	21	14	-33%	40%
69	Edinburgh/Tobin Street	Franklin	18	24	19	11	17	21	12	-43%	-33%
59	Whangaparaoa Road, near Red Beach Intersection	Albany	16	16	11	8	15	13	10	-23%	-38%
60	Whangaparaoa Road, near Hibiscus Coast Highway intersection	Albany	17	11	6	10	15	10	9	-10%	-47%
<b>Total (60 sites since 2007)^</b>			<b>4308</b>	<b>4591</b>	<b>4292</b>	<b>5540</b>	<b>5547</b>	<b>5306</b>	<b>5679</b>	<b>7%</b>	<b>32%</b>
<b>Total (67 sites since 2008)^</b>			<b>-</b>	<b>4849</b>	<b>4585</b>	<b>5898</b>	<b>5901</b>	<b>5683</b>	<b>6069</b>	<b>7%</b>	<b>-</b>
<b>Total (78 sites in 2009)</b>			<b>-</b>	<b>-</b>	<b>5103</b>	<b>6541</b>	<b>6708</b>	<b>6362</b>	<b>6809</b>	<b>7%</b>	<b>-</b>





Site Number	Location	Area	2007	2008	2009	2010	2011	2012	2013	Change 12-13	Change 07-13
	<b>Total (80 sites in 2010)</b>		-	-	-	6644	6817	6487	6903	6%	-
	<b>Total (82 sites in 2011)</b>		-	-	-	-	6949	6573	6972	6%	-
	<b>Total (83 sites in 2012)</b>		-	-	-	-	-	6858	7287	6%	-
	<b>Total (85 sites in 2013)</b>		-	-	-	-	-	-	7412	-	-

^Note that the evening count for D'Oyly Reserve cycleway (site 61) in 2008 is considered as an outlier, so the total figures exclude this outlier for more accurate comparison.

\*Note that the Squadron Drive/Buckley Avenue (site 70) is the new relocated site from previous Upper Harbour Drive/Buckley Avenue, so previous results are not directly comparable.



Evening cyclist characteristics are shown in Table 2.9 below.

- Overall, 93 per cent of evening cyclists in the Auckland region were adults in 2013 (stable from 92 per cent in 2012). Of the 12 wards monitored, the Waitemata and Gulf ward had the highest proportion of adult cyclists (98 per cent) whilst Franklin ward had the greatest share of cyclists identified as school children (38 per cent).
- Almost all cyclists were wearing a helmet (90 per cent, stable from 89 per cent last year). Orakei ward had the highest proportion of cyclists who were wearing a helmet (96 per cent) whilst the Franklin ward had the greatest share of cyclists who were not wearing helmets (26 per cent).
- Eighty-four per cent of evening cyclists were male (stable from 83 per cent last year). Franklin ward has the highest share of male cyclists (97 per cent), while Waitemata and Gulf ward had the highest proportion of female cyclists (18 per cent).
- In the evening, 59 per cent of all cyclists were riding on the road (stable from 60 per cent last year). Twenty-one per cent of cyclists were riding on the footpath (stable from 19 per cent in 2012). Orakei ward had the highest share of cyclists riding on the road (81 per cent), while Waitakere ward had the greatest share of cyclists using an off-road cycleway (43 per cent). Manurewa-Papakura ward had the highest proportion of footpath riders (47 per cent).

**Table 2.9: Aggregate Totals of Evening Cyclist Characteristics  
2007-2013 (%)**

	<i>Aggregate Total (2007)</i>	<i>Aggregate Total (2008)</i>	<i>Aggregate Total (2009)</i>	<i>Aggregate Total (2010)</i>	<i>Aggregate Total (2011)</i>	<i>Aggregate Total (2012)</i>	<i>Aggregate Total (2013)</i>
<b>Cyclist Type</b>							
Adult	92	88	90	91	91	92	<b>93</b>
School child	8	12	10	9	9	8	<b>7</b>
<b>Helmet Wearing</b>							
Helmet on head	87	87	89	88	88	89	<b>90</b>
No helmet	13	13	11	12	12	11	<b>10</b>
<b>Gender</b>							
Male	-	-	-	-	82	83	<b>84</b>
Female	-	-	-	-	15	14	<b>15</b>
Can't tell	-	-	-	-	3	3	<b>1</b>
<b>Where Riding</b>							
Road	67	71	60	60	58	60	<b>59</b>
Footpath	22	21	26	27	22	19	<b>21</b>
Off-road cycleway	11	8	14	13	20	21	<b>20</b>
<b>Base:</b>	<b>4308</b>	<b>4849</b>	<b>5103</b>	<b>6644</b>	<b>6949</b>	<b>6858</b>	<b>7412</b>



**Table 2.10: Summary of Evening Cyclist Characteristics by Ward in 2013**

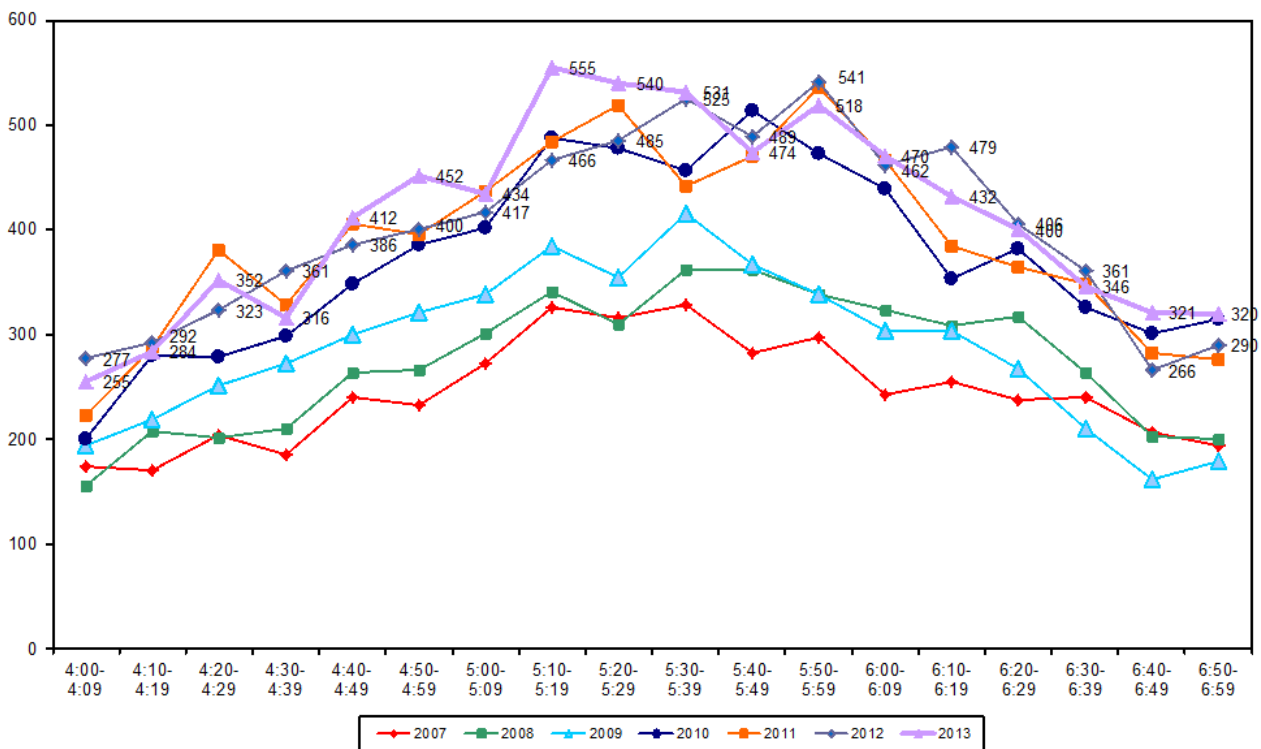
	<i>Albany</i>	<i>North Shore</i>	<i>Wai-takere</i>	<i>Waite-mata and Gulf</i>	<i>Albert/Eden/Roskill</i>	<i>Whau</i>	<i>Orakei</i>	<i>Maungakiekie-Tamaki</i>	<i>Howick</i>	<i>Manukau</i>	<i>Manurewa-Papakura</i>	<i>Franklin</i>
<b>Cyclist Type</b>												
Adult	87	90	86	98	96	96	89	92	92	90	81	62
School child	13	10	14	2	4	4	11	7	8	10	19	38
Can't tell	0	0	0	0	0	0	0	1	0	0	0	0
<b>Helmet Wearing</b>												
Helmet on head	93	94	88	91	93	88	96	91	93	80	77	74
No helmet	6	6	12	9	7	12	4	9	7	20	23	26
Can't tell	1	0	0	0	0	0	0	0	0	0	0	0
<b>Gender</b>												
Male	86	85	85	80	84	85	84	83	85	90	83	97
Female	14	14	13	18	16	15	16	15	8	9	16	3
Can't tell	0	1	2	2	0	0	0	2	7	1	1	0
<b>Where Riding</b>												
Road	74	77	34	72	46	59	81	63	71	65	52	54
Footpath	15	20	23	14	17	32	10	23	29	30	47	46
Off-road cycleway	11	3	43	13	37	9	9	14	0	5	1	0
Can't tell	0	0	0	1	0	0	0	0	0	0	0	0
<b>Base:</b>	<b>562</b>	<b>525</b>	<b>984</b>	<b>2594</b>	<b>1235</b>	<b>175</b>	<b>205</b>	<b>624</b>	<b>274</b>	<b>482</b>	<b>111</b>	<b>39</b>

Note: Orange highlighting denotes the ward with the highest proportion of a particular characteristic when compared to the other wards. Also, base sizes add to more than total number of cycle movements as sites on ward boundaries have been included in both wards.



- Figure 2.8 shows the overall pattern of total evening cyclist volumes recorded at the 85 sites monitored in the Auckland region. Evening cyclist numbers increased over the monitoring period to a peak of 555 cyclist movements between 5:10pm and 5:19pm, then declined until the end of the shift. This compared with the peak of 541 movements between 5:50pm and 5:59pm last year. The overall trend was consistent with previous years.

**Figure 2.8: Total Cyclist Frequency – Evening Peak  
2007-2013 (n)**





## 2.4 Annual Average Daily Traffic (AADT) Estimates

*Note: A full description of the Annual Daily Traffic tool, the calculation used, and the limitations of the estimates, are provided in Appendix Two. Readers are encouraged to review this section in conjunction with the data presented here.*

- Table 2.11 provides the comparative AADT estimates for each site, based on the average of morning and evening peak AADT calculations.
- The highest AADT is at Tamaki Drive/The Strand (1346 daily trips, down from 1377 daily trips last year) and the lowest is at Whangaparaoa Road, near Hibiscus Coast Highway intersection (28 daily trips).
- Sixty-five per cent of the sites monitored in 2012 and 2013 (54 out of 83) have recorded increases in total AADT estimates this year compared with last year. The most noticeable increases are at:
  - Tom Pearce/George Bolt Memorial Drive (Manukau ward) – up from 21 to 46 movements (119 per cent);
  - Wyllie Avenue/Puhinui Road (Manukau ward) – up from 66 to 133 movements (102 per cent);
  - McKenzie/Coronation/Walmsley Road (Manukau ward) – up from 69 to 131 movements (90 per cent); and
  - St Heliers Bay/West Tamaki Road (Maungakiekie-Tamaki/Orakei wards) – up from 199 to 369 movements (85 per cent).
- In contrast, AADT estimates at 28 sites are lower than last year. The most noticeable declines are at:
  - Oteha Valley Road/SH17/Albany Highway (Albany ward) – down from 182 to 121 movements (34 per cent); and
  - Wairau/Glenfield Road (North Shore ward) – down from 150 to 100 movements (33 per cent).



**Table 2.11: AADT Estimates Based on Morning and Evening Cyclist Movements 2007-2013 (n)**

Site Number	Locations	Area	AADT 2007	AADT 2008	AADT 2009	AADT 2010	AADT 2011	AADT 2012	AADT 2013	Change 12-13	Change 07-13
10	Tamaki Drive/The Strand	Waitemata and Gulf	1313	1146	880	1365	1555	1377	<b>1346</b>	-2%	3%
8	Symonds Street/Karangahape Road	Waitemata and Gulf	924	899	765	865	999	1060	<b>1305</b>	23%	41%
9	Karangahape Road/Queen Street	Waitemata and Gulf	736	616	669	843	802	830	<b>949</b>	14%	29%
90	Broadway/Khyber Pass	Waitemata and Gulf	-	-	-	-	-	839	<b>927</b>	10%	-
2	Ponsonby/Karangahape Road	Waitemata and Gulf	705	602	536	807	738	717	<b>858</b>	20%	22%
13	Ian McKinnon/Newton Road	Waitemata and Gulf	-	-	422	544	807	726	<b>848</b>	17%	-
7	North Western Cycleway/St Lukes	Albert-Eden-Roskill	469	480	451	629	743	625	<b>796</b>	27%	70%
6	North Western Cycleway/Great North Road	Albert-Eden-Roskill	335	532	416	705	701	589	<b>754</b>	28%	125%
58	North Western Cycleway/near Te Atatu Road off-ramp	Waitakere	335	393	513	562	499	614	<b>659</b>	7%	97%
17	Onehunga Harbour Road	Maungakiekie-Tamaki	357	316	259	369	448	471	<b>614</b>	30%	72%
22	Ferry Terminal	Waitemata and Gulf	553	459	363	574	570	565	<b>606</b>	7%	10%
11	Remuera/Orakei Road	Orakei	282	276	274	359	412	315	<b>515</b>	63%	83%
36	Hurstmere Road/Killarney Street	North Shore	279	368	466	443	448	384	<b>400</b>	4%	43%
35	Lake Road, by Takapuna Grammar	North Shore	444	440	432	479	469	469	<b>391</b>	-17%	-12%
52	Central Park Drive	Waitakere	184	227	306	290	307	356	<b>397</b>	12%	116%
42	Shakespeare/East Coast Road	North Shore	314	364	454	442	422	350	<b>393</b>	12%	25%
20	St Heliers Bay/West Tamaki Road	Maungakiekie-Tamaki/Orakei	308	246	158	249	331	199	<b>369</b>	85%	20%
37	Taharoto/Northcote Road	North Shore	375	396	293	333	454	322	<b>346</b>	7%	-8%
5	Dominion/Balmoral Road	Albert-Eden-Roskill	344	291	265	296	286	274	<b>343</b>	25%	0%
3	Great North/Carrington Road	Albert-Eden-Roskill	341	333	281	455	335	301	<b>331</b>	10%	-3%
92	Upper Dominion Road	Albert-Eden-Roskill	-	-	-	-	-	-	<b>296</b>	-	-



Site Number	Locations	Area	AADT 2007	AADT 2008	AADT 2009	AADT 2010	AADT 2011	AADT 2012	AADT 2013	Change 12-13	Change 07-13
12	Manukau Road/Greenlane West	Albert-Eden-Roskill	326	296	255	374	331	299	<b>289</b>	<b>-3%</b>	<b>-11%</b>
72	Te Atatu/Old Te Atatu Road/Tatau Way	Waitakere	-	161	195	301	204	282	<b>278</b>	<b>-1%</b>	-
78	Lagoon Drive/Church Crescent	Maungakiekie-Tamaki	-	-	186	284	234	199	<b>262</b>	<b>32%</b>	-
1	Victoria/Wellesley/Halsey Street	Waitemata and Gulf	231	196	180	236	328	277	<b>258</b>	<b>-7%</b>	<b>12%</b>
14	Mount Albert/New North Road	Albert-Eden-Roskill	226	236	205	302	292	249	<b>245</b>	<b>-2%</b>	<b>8%</b>
53	326 Te Atatu Road, near Covil Avenue	Waitakere	127	155	202	185	186	197	<b>222</b>	<b>13%</b>	<b>75%</b>
87	Triangle/Huruhuru Road	Waitakere	-	-	-	198	175	255	<b>222</b>	<b>-13%</b>	-
89	Sunnynook/East Coast Road	Albany/North Shore	-	-	-	-	252	228	<b>220</b>	<b>-4%</b>	-
21	Great South Road/Campbell Road/Main Highway	Albert-Eden-Roskill/ Maungakiekie-Tamaki	253	165	218	246	199	192	<b>213</b>	<b>11%</b>	<b>-16%</b>
73	Blockhouse Bay/Great North Road	Albert-Eden-Roskill/Whau	-	170	173	204	186	187	<b>205</b>	<b>10%</b>	-
16	Jervois Road/Wallace Street	Waitemata and Gulf	-	-	162	243	215	204	<b>198</b>	<b>-3%</b>	-
80	Pakuranga Road/Ti Rakau Drive	Howick	-	-	176	234	180	183	<b>193</b>	<b>5%</b>	-
39	Upper Harbour/Albany Highway	Albany	57	143	200	228	213	265	<b>193</b>	<b>-27%</b>	<b>239%</b>
24	Great South Road/Te Irirangi Drive/Cavendish Drive	Manukau	106	74	59	103	136	112	<b>170</b>	<b>52%</b>	<b>60%</b>
75	Stanley Street/Grafton Road	Waitemata and Gulf	-	95	140	135	106	135	<b>170</b>	<b>26%</b>	-
55	Swanson/Ranui Station Road/Armada Drive	Waitakere	88	122	148	146	189	162	<b>167</b>	<b>3%</b>	<b>90%</b>
38	Rosedale/East Coast Road	Albany	176	143	235	224	208	173	<b>164</b>	<b>-5%</b>	<b>-7%</b>
47	Oteha Valley/East Coast Road	Albany	137	163	201	245	186	199	<b>155</b>	<b>-22%</b>	<b>13%</b>
34	Te Irirangi Drive/Ti Rakau Drive	Howick	117	109	86	112	110	123	<b>154</b>	<b>25%</b>	<b>32%</b>
70	Squadron Drive/Buckley Avenue*	Albany	-	51	97	135	120	156	<b>153</b>	<b>-2%</b>	-
4	Patiki/Rosebank Road	Whau	119	114	105	130	175	139	<b>152</b>	<b>9%</b>	<b>28%</b>
51	Luckens/Hobsonville Road	Albany/Waitakere	47	60	110	137	74	161	<b>150</b>	<b>-7%</b>	<b>219%</b>



Site Number	Locations	Area	AADT 2007	AADT 2008	AADT 2009	AADT 2010	AADT 2011	AADT 2012	AADT 2013	Change 12-13	Change 07-13
23	Great South/Bairds Road	Manukau	99	81	83	103	129	118	150	27%	52%
46	Rosedale/Bush Road	Albany	70	106	103	157	121	90	144	60%	106%
30	Great South/East Tamaki Road	Manukau	106	74	92	93	129	125	140	12%	32%
19	Ellerslie Panmure Highway/Lunn Ave	Maungakiekie-Tamaki	170	136	118	144	111	115	136	18%	-20%
31	Wyllie Avenue/Puhinui Road	Manukau	55	47	50	82	105	66	133	102%	142%
84	Behind Auckland Council Building, Orewa	Albany	-	-	130	142	201	132	133	1%	-
32	McKenzie/Coronation/Walmsley Road	Manukau	101	82	75	126	133	69	131	90%	30%
49	Triangle Road/Don Buck Road	Waitakere	96	88	80	128	127	119	127	7%	32%
48	Henderson Creek	Waitakere	65	43	105	121	95	166	123	-26%	89%
81	Te Irirangi Drive/Ormiston Road	Howick/Manukau	-	-	47	95	81	72	122	69%	-
40	Oteha Valley Road/SH17/Albany Highway	Albany	42	69	103	130	117	182	121	-34%	188%
76	Waikaraka Cycle Way	Maungakiekie-Tamaki	-	76	73	59	94	76	119	57%	-
18	Great South Road/High Street/Atkinson/Park Avenue	Manukau	121	87	71	88	101	108	114	6%	-6%
65	Great South Road/Rosehill Drive	Manurewa-Papakura	77	106	85	90	105	83	103	24%	34%
33	Bucklands Beach/Pakuranga Road	Howick	203	187	137	164	154	123	102	-17%	-50%
41	Wairau/Glenfield Road	North Shore	93	107	117	131	134	150	100	-33%	8%
85	Rathgar/Pomaria Road	Waitakere	-	-	122	144	99	106	99	-7%	-
50	Lincoln Road/Fairdene Avenue	Waitakere	57	79	62	80	78	97	98	1%	72%
45	Beach/Browns Bay Road	Albany	44	66	86	114	110	88	89	1%	102%
88	Keith Hay Park	Albert-Eden-Roskill	-	-	-	77	99	69	88	28%	-
44	Birkenhead Ave/Mokoia Road	North Shore	58	71	83	108	65	74	88	19%	52%
43	Glenfield/Coronation Road	North Shore	64	109	113	134	76	106	85	-20%	33%





Site Number	Locations	Area	AADT 2007	AADT 2008	AADT 2009	AADT 2010	AADT 2011	AADT 2012	AADT 2013	Change 12-13	Change 07-13
28	Massey/Buckland Road	Manukau	61	44	57	64	76	68	84	24%	38%
79	Harris/Smales Road	Howick	-	-	88	89	109	64	83	30%	-
57	West Coast/Rosier Road	Waitakere	69	54	90	87	86	55	81	47%	17%
66	Great South Road/Taka Street	Manurewa-Papakura	83	83	51	62	86	70	79	13%	-5%
26	Great South/Browns/Orams Road	Manurewa-Papakura	86	81	57	83	101	64	71	11%	-17%
15	Richardson Road/Maioro Street	Albert-Eden-Roskill/Whau	-	-	30	56	53	77	70	-9%	-
68	Queen/Harris Street	Franklin	146	119	135	81	94	62	68	10%	-53%
71	Highbrook Drive	Manukau	-	42	55	59	77	72	68	-6%	-
82	Hibiscus Coast Highway/Jelas Road	Albany	-	-	55	57	44	50	64	28%	-
54	Te Atatu Road/Elcoat Avenue	Waitakere	73	66	101	76	71	84	64	-24%	-12%
64	Porchester Road/Walters Road	Manurewa-Papakura	72	66	70	-	104	63	63	0%	-13%
63	Gulf Harbour Drive/Laurie Southwick Parade	Albany	80	63	31	53	56	47	59	26%	-26%
56	3 Rankin Avenue	Whau	45	55	56	46	60	55	57	4%	27%
74	Apirana Avenue/Pilkington/Tripoli Road	Maungakiekie-Tamaki	-	87	46	87	78	66	57	-14%	-
25	Tom Pearce/George Bolt Memorial Drive	Manukau	-	-	38	17	77	21	46	119%	-
91	Orakei Basin Boardwalk	Orakei	-	-	-	-	-	-	46	-	-
61	D'Oyly Reserve cycleway	Albany	35	145	13	65	82	50	39	-22%	11%
59	Whangaparaoa Road, near Red Beach Intersection	Albany	42	45	38	43	37	41	37	-10%	-12%
69	Edinburgh/Tobin Street	Franklin	51	58	49	41	40	40	30	-25%	-41%
60	Whangaparaoa Road, near Hibiscus Coast Highway intersection	Albany	40	29	17	34	31	29	28	-3%	-30%
	<b>Total (60 sites since 2007)^</b>		<b>12940</b>	<b>12740</b>	<b>12243</b>	<b>15461</b>	<b>15856</b>	<b>14910</b>	<b>16585</b>	<b>11%</b>	<b>28%</b>
	<b>Total (67 sites since 2008)^</b>		<b>-</b>	<b>13422</b>	<b>13022</b>	<b>16441</b>	<b>16721</b>	<b>15884</b>	<b>17635</b>	<b>11%</b>	<b>-</b>

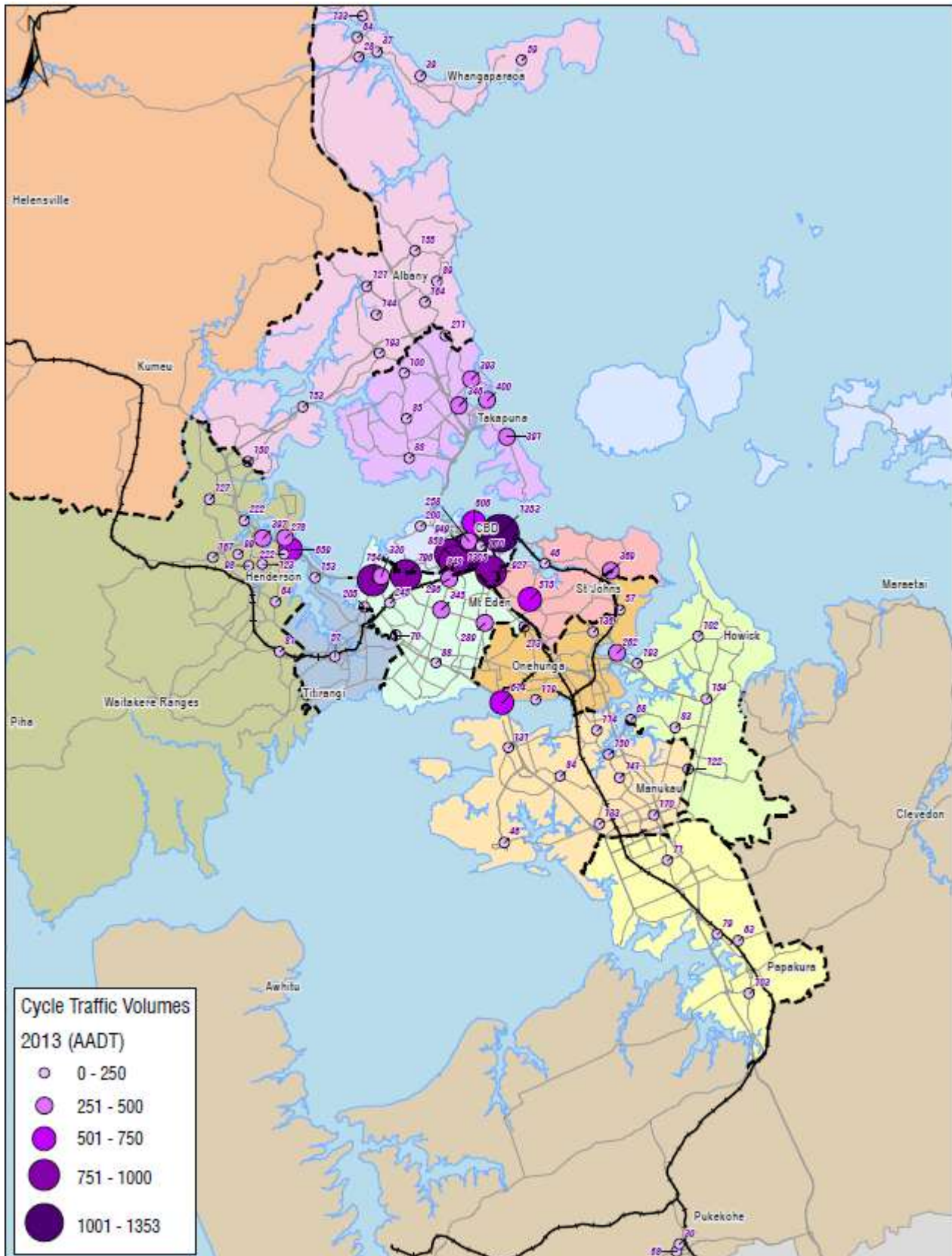


Site Number	Locations	Area	AADT 2007	AADT 2008	AADT 2009	AADT 2010	AADT 2011	AADT 2012	AADT 2013	Change 12-13	Change 07-13
	Total (78 sites in 2009)		-	-	14478	18346	18821	17718	19753	11%	-
	Total (80 sites in 2010)		-	-	-	18621	19095	18042	20063	11%	-
	Total (82 sites in 2011)		-	-	-	-	19199	18333	20346	11%	-
	Total (83 sites in 2012)		-	-	-	-	-	19172	21273	11%	-
	Total (85 sites in 2013)		-	-	-	-	-	-	21615	-	-

^Note that the evening count for D'Oyly Reserve cycleway (site 61) in 2008 is considered as an outlier, so the total figures exclude this outlier for more accurate comparison.

\*Note that the Squadron Drive/Buckley Avenue (site 70) is the new relocated site from previous Upper Harbour Drive/Buckley Avenue, so previous results are not directly comparable.

Figure 2.9: AADT Cycle Volumes in the Auckland Region – 2013





## 2.5 Ferry Wharf Count Summary

- Devonport, Half Moon Bay, Hobsonville Point and Beachhaven ferry wharf counts of stationary cycles were conducted prior to, and at the conclusion of, the morning and evening monitoring periods (on the same day as other sites in the ward).
- Bayswater ferry wharf counts of stationary cycles were conducted after the morning peak period.
- The Hobsonville ferry wharf and the Beachhaven ferry wharf were monitored for the first time in 2013.

### *Key Points*

- In the morning, four cycles were observed at the Devonport Ferry Terminal at 6.10am and 61 were observed at 9.10am. This suggests approximately 57 passengers cycled to the ferry and parked their cycles in the morning peak. This is up from 40 in 2012. (However, seasonal variations should be noted as the 2012 counts were conducted in early June.)
- In the afternoon, 57 cycles were recorded at the Devonport Ferry Terminal at 3.30pm and 12 were observed at 7.10pm. This suggests around 45 ferry passengers collected their bikes after disembarking and cycled home in the evening peak. This is up from 22 last year. (However, seasonal variations should be noted as the 2012 counts were conducted in early June.)
- At the Half Moon Bay Terminal, no cycles were observed at 6.10am and two cycles were observed at 9.10am. This suggests two passengers might have cycled to the ferry in the morning peak. This is up from no cycles in 2012.
- At the Hobsonville Terminal, no cycles were observed at 6.10am and one cycle was observed at 9.10am. This suggests one passenger might have cycled to the ferry in the morning peak. In the evening, one cycle was observed at 3:30pm and at 7:30pm.
- At the Beachhaven Terminal, no cycles were observed either prior to, or after the morning shift. In the evening, two cycles were observed at 3:30pm and no cycles at 7:10pm. This suggests two passengers collected their bikes after disembarking from the ferry and cycled home in the evening peak.
- Twenty-two cycles were counted at the Bayswater ferry wharf after the morning peak.



**Table 2.12: Stationery Cycle Counts at Ferry Wharves (n)**

	<i>Devonport</i>			<i>Half Moon Bay</i>			<i>Hobsonville</i>	<i>Beachhaven</i>
	<i>2011</i>	<i>2012</i>	<i>2013</i>	<i>2011</i>	<i>2012</i>	<i>2013</i>	<i>2013</i>	<i>2013</i>
<b>Morning Peak</b>								
6:10am	5	3	4	2	0	0	0	0
9:10am	47	43	61	0	0	2	1	0
<b>Evening Peak</b>								
3:30pm	79	26	57	1	0	0	1	2
7:10pm	11	4	12	0	0	0	1	0



## 2.6 School Bike Shed Count Summary

### *Background Information*

- A total of 304 full primary, intermediate, secondary and composite schools throughout the Auckland region were contacted by Gravitas. Of the 275<sup>8</sup> schools that responded to the survey (90 per cent<sup>9</sup>), most have no policies that restrict students cycling to school.<sup>10</sup>
- Most schools conducted their count on Tuesday the 5<sup>th</sup> of March, 2013.

### *Key Points*

- Of those students from the surveyed schools eligible to cycle to school, on average two per cent are cycling to their schools. This result is unchanged since 2007.
- This year, 14 schools (5 per cent) reported at least 10 per cent of students cycling to school. This compares with 2 per cent in 2012. The following schools reported more than 20 per cent of students cycling to school:
  - Hingaia Peninsula School (Manurewa-Papakura ward) (81 per cent)
  - Tomarata School (Rodney ward) (45 per cent)
  - Hobsonville Point School (Albany ward) (31 per cent)
  - Okiwi School (Waitemata and Gulf ward) (26 per cent)
  - Belmont Intermediate (North Shore ward) (25 per cent)
  - Beachlands School (Franklin ward) (24 per cent).
- Among secondary schools, Takapuna Grammar (North Shore ward) has the highest rate of students cycling to school (10 per cent).
- Of the 214 schools that participated in the count in both 2012 and 2013:
  - Fifty-eight schools (27 per cent) had increased their share of students cycling
  - Forty-seven schools (22 per cent) had decreased their share of students cycling
  - 109 schools (51 per cent) remain unchanged.
- The most notable increase is at Hingaia Peninsula School – up from 29 per cent in 2012 to 81 per cent in 2013.
- Of the 214 schools that participated in the count in both 2012 and 2013, 81 (38 per cent) had no students cycling to school. This compares with 40 per cent of these schools in 2012.

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<sup>8</sup> Note that Dilworth School responded to the survey. However, their results have been excluded from the analysis as all students are boarders.

<sup>9</sup> Compared with 74 per cent in 2012.

<sup>10</sup> These exceptions are detailed in the ward level reports. Most relate to full primary schools restricting younger students from cycling.



- Tables 2.14 and 2.15 illustrate the rates of cycling to school at different school levels in 2013 and in previous years. Rates of cycling to school continue to be highest among intermediate schools surveyed (4 per cent).

**Table 2.14: Average Cycling Rates by School Level  
2013 (n)**

<i>Year Levels</i>	<i>Number of Schools Responding (n)</i>	<i>Average School Roll Eligible To Cycle</i>	<i>Average Number of Cycles Counted</i>	<i>Average Cycling Rate per School</i>
Intermediate	37	522	20	<b>4%</b>
Full Primary	134	231	4	<b>2%</b>
Composite	32	425	4	<b>1%</b>
Intermediate/Secondary	24	919	10	<b>1%</b>
Secondary	48	1341	15	<b>1%</b>
<b>Regional Total</b>	<b>275</b>	<b>547</b>	<b>9</b>	<b>2%</b>

**Table 2.15: Summary Table of Average Cycling Rates by School Level  
2007-2013**

<i>Year Levels</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>	<i>2011</i>	<i>2012</i>	<i>2013</i>
Intermediate	5%	4%	4%	5%	4%	4%	<b>4%</b>
Full Primary	-	-	-	-	2%	1%	<b>2%</b>
Intermediate/Secondary	2%	2%	1%	2%	1%	1%	<b>1%</b>
Composite	1%	1%	<1%	1%	1%	1%	<b>1%</b>
Secondary	1%	1%	1%	1%	1%	1%	<b>1%</b>
<b>Regional Total</b>	<b>2%</b>	<b>2%</b>	<b>2%</b>	<b>2%</b>	<b>2%</b>	<b>2%</b>	<b>2%</b>



- Table 2.16 illustrates the rates of cycling to school within each of the Auckland wards. Rates of cycling to school are highest among schools in North Shore ward (4 per cent, unchanged from 4 per cent last year). Rates of cycling among North Shore Ward intermediate schools are particularly high (11 per cent of students cycling). By comparison, Manukau ward (less than 1 per cent) has the lowest rate of cycling – unchanged from 2012.

**Table 2.16: Summary Table of School Bike Count by Ward  
2007-2013 (n)**

Ward	2013			Average Cycle Rate Per Ward						
	Number of Schools Responding (n)	Average School Roll Eligible To Cycle	Average Number of Cycles Counted	2007	2008	2009	2010	2011	2012	2013
North Shore	15	909	36	3%	3%	3%	4%	4%	4%	<b>4%</b>
Franklin	23	215	6	1%	1%	1%	<1%	3%	2%	<b>3%</b>
Albert-Eden-Roskill	19	739	11	2%	1%	1%	21%	2%	2%	<b>2%</b>
Orakei	18	528	10	1%	1%	2%	1%	2%	2%	<b>2%</b>
Waitakere	25	531	9	1%	1%	1%	1%	1%	2%	<b>2%</b>
Waitemata & Gulf	18	589	12	1%	1%	2%	2%	2%	2%	<b>2%</b>
Albany	19	787	13	2%	1%	1%	1%	1%	1%	<b>2%</b>
Manurewa-Papakura	36	438	7	<1%	1%	<1%	1%	1%	1%	<b>2%</b>
Whau	10	744	8	1%	1%	1%	<1%	1%	2%	<b>1%</b>
Howick	13	1040	12	1%	2%	3%	2%	1%	1%	<b>1%</b>
Rodney	21	292	4	2%	1%	<1%	0%	1%	1%	<b>1%</b>
Maungakiekie-Tamaki	22	318	2	<1%	0%	<1%	0%	<1%	0%	<b>1%</b>
Manukau	36	543	1	0%	0%	<1%	<1%	<1%	<1%	<b>&lt;1%</b>
<b>Regional Total</b>	<b>275</b>	<b>547</b>	<b>9</b>	<b>2%</b>	<b>2%</b>	<b>2%</b>	<b>2%</b>	<b>2%</b>	<b>2%</b>	<b>2%</b>





**Table 2.17: Summary Table of Average Cycling Rates by School Level and Ward  
2013**

<i>Ward</i>	<i>School Type</i>					<i>All School Levels</i>
	<i>Composite</i>	<i>Full Primary</i>	<i>Intermediate</i>	<i>Intermediate/Secondary</i>	<i>Secondary</i>	
North Shore	-	0%	11%	2%	3%	<b>4%</b>
Franklin	1%	3%	-	-	1%	<b>3%</b>
Albert-Eden-Roskill	2%	3%	4%	0%	1%	<b>2%</b>
Orakei	0%	2%	3%	1%	2%	<b>2%</b>
Waitakere	1%	1%	4%	1%	2%	<b>2%</b>
Waitemata & Gulf	<1%	3%	5%	1%	2%	<b>2%</b>
Albany	1%	4%	2%	4%	<1%	<b>2%</b>
Manurewa-Papakura	2%	3%	3%	<1%	1%	<b>2%</b>
Whau	0%	2%	4%	-	1%	<b>1%</b>
Howick	2%	-	2%	<1%	1%	<b>1%</b>
Rodney	0%	3%	-	1%	0%	<b>1%</b>
Maungakiekie-Tamaki	0%	<1%	1%	-	1%	<b>1%</b>
Manukau	<1%	<1%	1%	<1%	<1%	<b>&lt;1%</b>
<b>Regional Total</b>	<b>1%</b>	<b>2%</b>	<b>4%</b>	<b>1%</b>	<b>1%</b>	<b>2%</b>

**Note:** A dash indicates no schools of this type responded to the survey for a Ward.



The following table ranks the 275 schools from the highest share of cyclists to the lowest.

**Table 2.18: School Bike Count by School**

School Name	Ward	School Type	School Roll Eligible To Cycle	No. of Cycles Counted	Cyclists as share of those eligible <sup>11</sup>							
					2013	2012	2011	2010	2009	2008	2007	
Hingaia Peninsula School	Manurewa-Papakura	Full Primary	37	30	81%	29%	-	-	-	-	-	-
Tomarata School	Rodney	Full Primary	20	9	45%	0%	0%	-	-	-	-	-
Hobsonville Point School	Albany	Full Primary	29	9	31%	-	-	-	-	-	-	-
Okiwi School	Waitemata & Gulf	Full Primary	35	9	26%	-	-	-	-	-	-	-
Belmont Intermediate	North Shore	Intermediate	530	132	25%	31%	30%	33%	22%	26%	34%	
Beachlands School	Franklin	Full Primary	167	40	24%	6%	7%	-	-	-	-	-
Takapuna Normal Intermediate School	North Shore	Intermediate	600	100	17%	8%	-	-	-	-	-	-
Sandspit Road School	Franklin	Full Primary	239	30	13%	5%	10%	-	-	-	-	-
Pasadena Intermediate School	Albert-Eden-Roskill	Intermediate	302	32	11%	12%	22%	26%	17%	12%	18%	
Churchill Park School	Orakei	Full Primary	146	14	10%	6%	2%	-	-	-	-	-
Huapai District School	Rodney	Full Primary	442	43	10%	3%	5%	-	-	-	-	-
Reremoana School	Manurewa-Papakura	Full Primary	342	33	10%	5%	9%	-	-	-	-	-
Stonefields School	Orakei	Full Primary	250	25	10%	5%	-	-	-	-	-	-
Takapuna Grammar School	North Shore	Secondary	1650	157	10%	9%	9%	8%	9%	6%	8%	
Wellsford School	Rodney	Full Primary	100	9	9%	-	-	-	-	-	-	-
Kaitoke School (Claris)	Waitemata & Gulf	Full Primary	25	2	8%	-	-	-	-	-	-	-

<sup>11</sup> 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	Ward	School Type	School Roll Eligible To Cycle	No. of Cycles Counted	Cyclists as share of those eligible <sup>11</sup>							
					2013	2012	2011	2010	2009	2008	2007	
Mulberry Grove School	Waitemata & Gulf	Full Primary	39	3	8%	0%	-	-	-	-	-	-
Tapora School	Rodney	Full Primary	26	2	8%	0%	0%	-	-	-	-	-
Te Atatu Intermediate	Waitakere	Intermediate	320	26	8%	9%	8%	8%	9%	7%	10%	
Kohia Terrace School	Albert-Eden-Roskill	Full Primary	170	12	7%	2%	-	-	-	-	-	-
Mt Hobson Middle School	Orakei	Intermediate/Secondary	55	4	7%	6%	-	-	-	-	-	-
Rosehill Intermediate School	Manurewa-Papakura	Intermediate	370	26	7%	6%	6%	6%	6%	-	-	
Buckland School	Franklin	Full Primary	323	20	6%	2%	6%	-	-	-	-	-
Conifer Grove School	Manurewa-Papakura	Full Primary	500	30	6%	3%	4%	-	-	-	-	-
Remuera Intermediate	Orakei	Intermediate	952	54	6%	6%	6%	5%	7%	5%	9%	
Silverdale Primary School	Albany	Full Primary	175	10	6%	2%	8%	-	-	-	-	-
Awhitu District School	Franklin	Full Primary	110	6	5%	0%	2%	-	-	-	-	-
Birkdale Intermediate	North Shore	Intermediate	461	21	5%	2%	2%	2%	1%	<1%	-	-
Farm Cove Intermediate	Howick	Intermediate	589	29	5%	5%	7%	7%	9%	6%	4%	
Green Bay Primary & Intermediate School	Whau	Full Primary	215	10	5%	2%	3%	-	-	-	-	-
Hebron Christian College	Albert-Eden-Roskill	Composite	135	7	5%	1%	-	-	-	-	-	-
Orewa College	Albany	Intermediate/Secondary	2068	105	5%	2%	4%	7%	5%	5%	6%	
Paparimu School	Manurewa-Papakura	Full Primary	19	1	5%	-	8%	-	-	-	-	-
Ponsonby Intermediate	Waitemata & Gulf	Intermediate	544	27	5%	4%	5%	6%	5%	4%	6%	
Red Hill Primary School	Manurewa-Papakura	Full Primary	178	9	5%	<1%	<1%	-	-	-	-	-
View Road School	Franklin	Full Primary	150	8	5%	5%	3%	-	-	-	-	-
Waitoki School	Rodney	Full Primary	79	4	5%	-	-	-	-	-	-	-
Gulf Harbour Primary	Albany	Full Primary	400	17	4%	5%	6%	-	-	-	-	-



School Name	Ward	School Type	School Roll Eligible To Cycle	No. of Cycles Counted	Cyclists as share of those eligible <sup>11</sup>						
					2013	2012	2011	2010	2009	2008	2007
Rangeview Intermediate School	Waitakere	Intermediate	785	29	4%	3%	-	-	-	-	-
St Cuthbert's College	Albert-Eden-Roskill	Composite	1400	50	4%	<1%	-	-	-	-	-
Taupaki School	Rodney	Full Primary	100	4	4%	-	<1%	-	-	-	-
Waiheke High School	Waitemata & Gulf	Intermediate/Secondary	496	19	4%	6%	4%	4%	3%	2%	3%
Waikowhai Intermediate School	Albert-Eden-Roskill	Intermediate	390	17	4%	6%	5%	3%	4%	3%	3%
Wairau Intermediate School	North Shore	Intermediate	278	12	4%	3%	4%	6%	5%	7%	4%
Wesley Intermediate School	Whau	Intermediate	126	5	4%	1%	-	-	-	-	-
Western Springs College	Waitemata & Gulf	Secondary	1350	50	4%	-	-	3%	6%	7%	-
ACG Sunderland	Waitakere	Composite	200	5	3%	2%	<1%	4%	2%	1%	-
Auckland Grammar School	Waitemata & Gulf	Secondary	2550	82	3%	3%	4%	4%	4%	3%	2%
Auckland Normal Intermediate	Albert-Eden-Roskill	Intermediate	726	25	3%	4%	7%	7%	6%	5%	7%
Balmoral School	Albert-Eden-Roskill	Full Primary	456	13	3%	4%	4%	0%	-	-	-
Blockhouse Bay Intermediate	Whau	Intermediate	820	28	3%	5%	3%	-	3%	4%	4%
Bucklands Beach Intermediate	Howick	Intermediate	782	24	3%	3%	-	-	-	-	-
Glen Eden Intermediate School	Waitakere	Intermediate	969	26	3%	1%	1%	1%	3%	-	-
Henderson Intermediate	Waitakere	Intermediate	525	14	3%	4%	-	-	-	-	-
Kereru Park Campus	Manurewa-Papakura	Full Primary	70	2	3%	0%	0%	-	-	-	-
Maraetai Beach School	Franklin	Full Primary	90	3	3%	1%	3%	-	-	-	-
Our Lady Sacred Heart School (Epsom)	Albert-Eden-Roskill	Full Primary	232	6	3%	-	-	-	-	-	-
Papakura Normal Primary School	Manurewa-Papakura	Full Primary	389	10	3%	3%	2%	-	-	-	-
Papatoetoe Intermediate School	Manukau	Intermediate	803	23	3%	2%	2%	2%	1%	-	-
Pukekohe North School	Franklin	Full Primary	220	7	3%	-	-	-	-	-	-



School Name	Ward	School Type	School Roll Eligible To Cycle	No. of Cycles Counted	Cyclists as share of those eligible <sup>11</sup>						
					2013	2012	2011	2010	2009	2008	2007
Rosmini College	North Shore	Intermediate/Secondary	1041	33	3%	3%	5%	3%	3%	4%	3%
Rutherford College	Waitakere	Secondary	1400	46	3%	4%	-	-	-	-	-
Selwyn College	Orakei	Secondary	887	29	3%	2%	2%	2%	2%	1%	-
Waiheke Primary School	Waitemata & Gulf	Full Primary	205	7	3%	-	-	-	-	-	-
Waitakere College	Waitakere	Secondary	1400	37	3%	2%	-	-	-	-	-
Waiuku Primary School	Franklin	Full Primary	325	11	3%	12%	5%	-	-	-	-
Westlake Boys' High School	North Shore	Secondary	2230	61	3%	2%	4%	3%	2%	<1%	2%
ACG Strathallan	Manurewa-Papakura	Composite	869	19	2%	1%	-	-	-	-	-
Albany Junior High School	Albany	Intermediate/Secondary	1200	20	2%	5%	-	-	-	-	-
Birdwood School	Waitakere	Full Primary	214	5	2%	0%	0%	-	-	-	-
Botany Downs Secondary College	Howick	Secondary	1840	34	2%	2%	-	-	-	-	-
Bruce McLaren Intermediate	Waitakere	Intermediate	249	4	2%	1%	<1%	3%	4%	2%	2%
Elim Christian College (Junior & Senior Campuses)	Howick	Composite	604	14	2%	2%	-	-	-	-	-
Glendowie Primary	Orakei	Full Primary	630	10	2%	2%	4%	-	-	-	-
Greemeadows Intermediate School	Manurewa-Papakura	Intermediate	406	7	2%	3%	4%	2%	0%	5%	3%
KingsWay School	Albany	Composite	896	22	2%	2%	2%	1%	1%	1%	<1%
Kowhai Intermediate School	Albert-Eden-Roskill	Intermediate	385	7	2%	3%	5%	5%	6%	6%	6%
Lincoln Heights School	Waitakere	Full Primary	232	4	2%	0%	0%	-	-	-	-
Marina View School	Albany	Full Primary	660	15	2%	-	-	-	-	-	-
Mt Roskill Intermediate School	Albert-Eden-Roskill	Intermediate	650	15	2%	3%	2%	4%	-	2%	2%
Northcross Intermediate	Albany	Intermediate	1013	20	2%	2%	2%	-	4%	0%	5%



School Name	Ward	School Type	School Roll Eligible To Cycle	No. of Cycles Counted	Cyclists as share of those eligible <sup>11</sup>						
					2013	2012	2011	2010	2009	2008	2007
Parnell District School	Waitemata & Gulf	Full Primary	450	9	2%	3%	1%	-	-	-	-
Stella Maris Primary School	Albany	Full Primary	320	6	2%	0%	1%	-	-	-	-
The Gardens School	Manurewa-Papakura	Full Primary	274	6	2%	3%	-	-	-	-	-
Weymouth Intermediate School	Manurewa-Papakura	Intermediate	285	6	2%	1%	-	-	-	-	-
Alfriston College	Manurewa-Papakura	Secondary	1426	10	1%	1%	1%	1%	1%	2%	-
Auckland International College	Waitemata & Gulf	Secondary	385	2	1%	0%	0%	0%	0%	0%	-
Avondale College	Whau	Secondary	2800	20	1%	-	-	-	1%	1%	-
Colwill School	Waitakere	Full Primary	200	1	1%	0%	<1%	-	-	-	-
Drury School	Manurewa-Papakura	Full Primary	174	1	1%	2%	4%	-	-	-	-
Edgewater College	Howick	Secondary	815	9	1%	1%	2%	2%	2%	2%	-
Ellerslie School	Maungakiekie-Tamaki	Full Primary	230	2	1%	0%	1%	-	-	-	-
Glen Innes School	Maungakiekie-Tamaki	Full Primary	180	1	1%	0%	-	-	-	-	-
Glen Taylor School	Orakei	Full Primary	234	2	1%	0%	-	-	-	-	-
Glendowie College	Orakei	Secondary	1020	8	1%	1%	1%	1%	1%	-	-
Glenfield College	North Shore	Secondary	850	10	1%	-	-	1%	1%	-	-
Glenfield Intermediate School	North Shore	Intermediate	324	2	1%	0%	1%	1%	3%	2%	4%
Green Bay High School	Whau	Secondary	1344	9	1%	1%	1%	1%	1%	1%	1%
Henderson High School	Waitakere	Secondary	700	5	1%	1%	-	-	-	-	-
Holy Cross School (Papatoetoe)	Manukau	Full Primary	200	2	1%	0%	-	-	-	-	-
Kadimah College	Waitemata & Gulf	Full Primary	157	1	1%	2%	8%	-	-	-	-



School Name	Ward	School Type	School Roll Eligible To Cycle	No. of Cycles Counted	Cyclists as share of those eligible <sup>11</sup>						
					2013	2012	2011	2010	2009	2008	2007
Kedgley Intermediate	Manukau	Intermediate	779	6	1%	1%	1%	2%	2%	-	-
Kohimarama School	Orakei	Full Primary	500	5	1%	1%	-	-	-	-	-
Liston College	Waitakere	Intermediate/Secondary	787	10	1%	3%	-	-	-	-	-
Macleans College	Howick	Secondary	2553	15	1%	1%	<1%	-	2%	1%	-
Manurewa Intermediate	Manurewa-Papakura	Intermediate	700	8	1%	-	-	-	-	-	-
Massey High School	Waitakere	Secondary	2199	19	1%	-	-	<1%	1%	1%	1%
Mount Albert Grammar School	Albert-Eden-Roskill	Secondary	2650	25	1%	2%	-	-	-	-	-
Northcote College	North Shore	Secondary	1209	9	1%	1%	<1%	<1%	0%	-	-
One Tree Hill College	Maungakiekie-Tamaki	Secondary	920	8	1%	-	-	<1%	0%	-	-
Onehunga High School	Maungakiekie-Tamaki	Secondary	1300	18	1%	-	-	1%	1%	-	-
Orakei School	Orakei	Full Primary	142	1	1%	-	-	-	-	-	-
Pakuranga Intermediate School	Howick	Intermediate	287	4	1%	3%	-	-	-	-	-
Pinehurst School	Albany	Composite	720	6	1%	1%	<1%	1%	0%	1%	1%
Pukekohe Christian School	Franklin	Composite	167	1	1%	<1%	-	-	-	-	-
Rosehill College	Manurewa-Papakura	Secondary	1779	18	1%	2%	1%	1%	1%	1%	<1%
Royal Oak Intermediate	Maungakiekie-Tamaki	Intermediate	500	6	1%	-	-	-	3%	2%	2%
Sacred Heart College	Orakei	Intermediate/Secondary	1200	7	1%	-	1%	-	1%	1%	-
Saint Kentigern Primary School (Remuera)	Orakei	Full Primary	500	3	1%	-	-	-	-	-	-
Sir Douglas Bader Intermediate School	Manukau	Intermediate	200	2	1%	-	<1%	<1%	0%	<1%	0%



School Name	Ward	School Type	School Roll Eligible To Cycle	No. of Cycles Counted	Cyclists as share of those eligible <sup>11</sup>						
					2013	2012	2011	2010	2009	2008	2007
Somerville Intermediate	Howick	Intermediate	939	14	1%	2%	2%	3%	3%	4%	4%
St Heliers School	Orakei	Full Primary	711	10	1%	2%	-	-	-	-	-
St Mary's Catholic School (Papakura)	Manurewa-Papakura	Full Primary	273	2	1%	1%	2%	-	-	-	-
Swanson School	Waitakere	Full Primary	458	4	1%	2%	7%	-	-	-	-
Takanini School	Manurewa-Papakura	Full Primary	430	6	1%	-	-	-	-	-	-
Tamaki Primary School	Maungakiekie-Tamaki	Full Primary	248	2	1%	-	-	-	-	-	-
Te Kura Kaupapa Māori a Rohe o Mangere	Manukau	Composite	187	1	1%	0%	1%	-	-	-	-
Te Kura Māori o Nga Tapuwae	Manukau	Composite	277	4	1%	2%	-	-	-	-	-
Waiuku College	Franklin	Secondary	925	9	1%	<1%	-	-	-	-	-
Wentworth College	Albany	Intermediate/Secondary	220	2	1%	1%	2%	3%	4%	<1%	3%
Whangaparaoa College	Rodney	Intermediate/Secondary	1450	14	1%	1%	1%	-	1%	2%	4%
ACG Parnell College	Waitemata & Gulf	Composite	680	3	<1%	-	1%	1%	-	0%	-
Albany Senior High School	Albany	Secondary	760	2	<1%	1%	1%	2%	-	-	-
Birkenhead College	North Shore	Secondary	775	1	<1%	<1%	<1%	1%	-	-	-
Carmel College	North Shore	Intermediate/Secondary	1067	3	<1%	<1%	<1%	0%	0%	<1%	0%
Clayton Park School	Manurewa-Papakura	Full Primary	240	1	<1%	<1%	<1%	-	-	-	-
De La Salle College	Manukau	Intermediate/Secondary	987	1	<1%	-	-	-	<1%	<1%	0%
Diocesan School for Girls	Albert-Eden-Roskill	Composite	1395	2	<1%	<1%	<1%	<1%	0%	<1%	0%
Epsom Girls' Grammar School	Albert-Eden-Roskill	Secondary	2200	1	<1%	<1%	0%	<1%	0%	<1%	-
Holy Cross Henderson	Waitakere	Full Primary	390	1	<1%	0%	0%	-	-	-	-
Howick College	Howick	Secondary	1800	2	<1%	0%	-	-	-	-	-





School Name	Ward	School Type	School Roll Eligible To Cycle	No. of Cycles Counted	Cyclists as share of those eligible <sup>11</sup>						
					2013	2012	2011	2010	2009	2008	2007
Howick Intermediate	Howick	Intermediate	490	1	<1%	<1%	-	-	-	-	-
James Cook High school	Manurewa-Papakura	Secondary	1470	2	<1%	<1%	-	-	-	-	-
Kelston Boys' High School	Whau	Secondary	930	4	<1%	<1%	<1%	<1%	0%	1%	1%
Kia Aroha College	Manukau	Intermediate/Secondary	285	1	<1%	1%	0%	-	-	0%	-
Kristin School	Albany	Composite	1520	5	<1%	<1%	<1%	<1%	1%	-	-
Long Bay College	Albany	Secondary	1650	5	<1%	<1%	<1%	<1%	0%	1%	-
Lynfield College	Albert-Eden-Roskill	Secondary	1892	5	<1%	<1%	<1%	<1%	1%	<1%	1%
Mangere College	Manukau	Secondary	830	3	<1%	<1%	1%	1%	1%	-	-
Manurewa High School	Manurewa-Papakura	Secondary	1906	5	<1%	0%	<1%	1%	0%	1%	2%
Massey Primary School	Waitakere	Full Primary	420	1	<1%	-	-	-	-	-	-
Northcote Intermediate School	North Shore	Intermediate	237	1	<1%	2%	3%	5%	2%	3%	2%
Papakura High School	Manurewa-Papakura	Secondary	884	4	<1%	1%	<1%	1%	0%	<1%	<1%
Rangitoto College	Albany	Secondary	3046	7	<1%	<1%	1%	1%	1%	<1%	1%
Saint Kentigern College	Howick	Intermediate/Secondary	1702	6	<1%	-	<1%	<1%	1%	-	-
Sancta Maria College	Howick	Intermediate/Secondary	993	3	<1%	1%	1%	1%	1%	1%	2%
Southern Cross Campus	Manukau	Composite	1047	2	<1%	-	-	0%	0%	0%	-
St Anne's Catholic School	Manurewa-Papakura	Full Primary	215	1	<1%	0%	0%	-	-	-	-
St Joseph's School (Pukekohe)	Franklin	Full Primary	189	1	<1%	0%	2%	-	-	-	-
St Mary's College (Ponsonby)	Waitemata & Gulf	Intermediate/Secondary	898	1	<1%	<1%	0%	0%	0%	-	-
St Thomas School (Auckland)	Orakei	Full Primary	670	3	<1%	-	<1%	-	-	-	-
Stanhope Road School	Maungakiekie-Tamaki	Full Primary	466	1	<1%	0%	<1%	-	-	-	-



School Name	Ward	School Type	School Roll Eligible To Cycle	No. of Cycles Counted	Cyclists as share of those eligible <sup>11</sup>						
					2013	2012	2011	2010	2009	2008	2007
Sutton Park School	Manukau	Full Primary	496	2	<1%	0%	0%	-	-	-	-
Tangaroa College	Manukau	Secondary	1000	1	<1%	-	0%	0%	-	0%	-
Westlake Girls' High School	North Shore	Secondary	2180	3	<1%	<1%	<1%	<1%	0%	<1%	<1%
ACG Senior College	Waitemata & Gulf	Secondary	280	0	0%	4%	0%	1%	-	0%	-
Ahuroa School	Rodney	Full Primary	80	0	0%	0%	0%	-	-	-	-
Alfriston School	Manurewa-Papakura	Full Primary	318	0	0%	0%	-	-	-	-	-
Al-Madinah School	Manukau	Composite	505	0	0%	0%	0%	0%	0%	0%	-
Aorere College	Manukau	Secondary	1600	0	0%	0%	0%	0%	0%	-	-
Ararimu School	Franklin	Full Primary	116	0	0%	0%	0%	-	-	-	-
Ardmore School	Franklin	Full Primary	334	0	0%	0%	0%	-	-	-	-
Auckland Girls' Grammar School	Waitemata & Gulf	Secondary	1420	0	0%	<1%	<1%	0%	0%	0%	<1%
Auckland Seventh Day Adventist High School	Manukau	Secondary	192	0	0%	1%	<1%	-	-	-	-
Bailey Road School	Maungakiekie-Tamaki	Full Primary	440	0	0%	0%	0%	-	-	-	-
Balmoral SDA School	Albert-Eden-Roskill	Full Primary	85	0	0%	2%	2%	-	-	-	-
Baradene College of the Sacred Heart	Orakei	Intermediate/Secondary	1057	0	0%	0%	0%	0%	0%	<1%	0%
Bombay School	Franklin	Full Primary	332	0	0%	0%	0%	-	-	-	-
Brookby School	Manurewa-Papakura	Full Primary	109	0	0%	0%	-	-	-	-	-
Carey College	Maungakiekie-Tamaki	Composite	33	0	0%	-	-	0%	0%	-	-
Christ the King Catholic School	Albert-Eden-Roskill	Full Primary	149	0	0%	0%	0%	-	-	-	-
City Impact Church School	Albany	Composite	150	0	0%	0%	-	-	-	-	-



School Name	Ward	School Type	School Roll Eligible To Cycle	No. of Cycles Counted	Cyclists as share of those eligible <sup>11</sup>						
					2013	2012	2011	2010	2009	2008	2007
Clevedon School	Franklin	Full Primary	345	0	0%	1%	-	-	-	-	-
Dairy Flat School	Albany	Full Primary	0	0	0%	0%	0%	-	-	-	-
Destiny School	Maungakiekie-Tamaki	Full Primary	160	0	0%	0%	0%	-	-	-	-
Don Buck Primary School	Waitakere	Full Primary	67	0	0%	0%	0%	-	-	-	-
Drury Christian School	Manurewa-Papakura	Composite	33	0	0%	0%	-	-	-	-	-
Edmund Hillary School	Manurewa-Papakura	Full Primary	130	0	0%	0%	0%	-	-	-	-
Ferguson Intermediate School	Manukau	Intermediate	480	0	0%	0%	0%	-	-	0%	-
Ficino School	Albert-Eden-Roskill	Full Primary	45	0	0%	0%	0%	-	-	-	-
Glenavon School	Whau	Full Primary	225	0	0%	0%	0%	-	-	-	-
Glenbrae Primary School	Maungakiekie-Tamaki	Full Primary	184	0	0%	0%	-	-	-	-	-
Glenbrook School	Franklin	Full Primary	243	0	0%	0%	0%	-	-	-	-
Golden Grove School	Maungakiekie-Tamaki	Full Primary	30	0	0%	0%	0%	-	-	-	-
Hare Krishna School	Rodney	Full Primary	9	0	0%	0%	0%	-	-	-	-
Helensville School	Rodney	Full Primary	240	0	0%	<1%	-	-	-	-	-
Hunua School	Franklin	Full Primary	97	0	0%	0%	-	-	-	-	-
Immanuel Christian School	Whau	Composite	129	0	0%	2%	0%	-	2%	1%	1%
Kaipara College	Rodney	Secondary	568	0	0%	-	0%	0%	-	0%	<1%
Karaka School	Manurewa-Papakura	Full Primary	227	0	0%	0%	-	-	-	-	-
Kaukapakapa School	Rodney	Full Primary	250	0	0%	0%	0%	-	-	-	-



School Name	Ward	School Type	School Roll Eligible To Cycle	No. of Cycles Counted	Cyclists as share of those eligible <sup>11</sup>						
					2013	2012	2011	2010	2009	2008	2007
Kelston Girls' High School	Whau	Secondary	640	0	0%	0%	0%	0%	0%	0%	0%
King's College	Manukau	Secondary	913	0	0%	0%	-	-	-	-	-
King's School	Orakei	Full Primary	400	0	0%	<1%	-	-	-	-	-
KingsGate School	Franklin	Full Primary	51	0	0%	0%	0%	-	-	-	-
Koru School	Manukau	Full Primary	550	0	0%	0%	-	-	-	-	-
Living Way Learning Centre	Rodney	Composite	29	0	0%	0%	5%	3%	9%	3%	24%
Mahurangi Christian School	Rodney	Full Primary	36	0	0%	-	-	-	-	-	-
Mahurangi College	Rodney	Intermediate/Secondary	1300	0	0%	<1%	-	-	-	-	-
Mangere Central School	Manukau	Full Primary	0	0	0%	0%	-	-	-	-	-
Mansell Senior School	Manurewa-Papakura	Intermediate	157	0	0%	1%	0%	0%	-	-	-
Manukau Christian School	Manurewa-Papakura	Full Primary	106	0	0%	0%	0%	0%	2%	0%	4%
Marcellin College	Albert-Eden-Roskill	Intermediate/Secondary	670	0	0%	0%	<1%	0%	0%	1%	-
Marist College	Waitemata & Gulf	Intermediate/Secondary	750	0	0%	<1%	0%	<1%	0%	-	-
McAuley High School	Manukau	Secondary	710	0	0%	0%	0%	0%	0%	0%	0%
Mission Heights Junior College	Manukau	Composite	668	0	0%	2%	1%	5%	3%	-	-
Nga Kakano Christian Reo Rua Kura	Waitakere	Composite	73	0	0%	6%	2%	-	6%	7%	7%
Opapeke Primary School	Manurewa-Papakura	Full Primary	590	0	0%	0%	0%	-	-	-	-
Orere School	Manurewa-Papakura	Full Primary	49	0	0%	-	-	-	-	-	-
Otahuhu College	Manukau	Secondary	1500	0	0%	0%	0%	-	0%	0%	0%
Otahuhu Intermediate School	Manukau	Intermediate	347	0	0%	2%	0%	0%	-	1%	1%
Pacific Christian School	Manukau	Full Primary	85	0	0%	-	0%	-	-	-	-
Paerata School	Franklin	Full Primary	115	0	0%	-	-	-	-	-	-



School Name	Ward	School Type	School Roll Eligible To Cycle	No. of Cycles Counted	Cyclists as share of those eligible <sup>11</sup>						
					2013	2012	2011	2010	2009	2008	2007
Panmure Bridge School	Maungakiekie-Tamaki	Full Primary	0	0	0%	-	-	-	-	-	-
Panmure District School	Maungakiekie-Tamaki	Full Primary	0	0	0%	0%	1%	-	-	-	-
Pt England School	Maungakiekie-Tamaki	Full Primary	590	0	0%	0%	0%	-	-	-	-
Ramarama School	Franklin	Full Primary	197	0	0%	1%	2%	-	-	-	-
Randwick Park School	Manurewa-Papakura	Full Primary	409	0	0%	-	0%	-	-	-	-
Redoubt North School	Manukau	Full Primary	642	0	0%	-	0%	-	-	-	-
Robertson Road School	Manukau	Full Primary	475	0	0%	-	-	-	-	-	-
Rodney College	Rodney	Secondary	360	0	0%	0%	0%	0%	0%	0%	2%
Rosehill School	Manurewa-Papakura	Composite	163	0	0%	0%	-	-	-	-	-
Royal Road School	Waitakere	Full Primary	67	0	0%	0%	0%	-	-	-	-
Ruapotaka School	Maungakiekie-Tamaki	Full Primary	186	0	0%	0%	-	-	-	-	-
Saint Kentigern School for Girls – Corran	Orakei	Full Primary	157	0	0%	0%	0%	0%	-	-	-
Sir Edmund Hillary Collegiate	Manukau	Composite	1200	0	0%	-	-	-	-	-	-
Sir Keith Park School	Manukau	Composite	138	0	0%	0%	-	-	-	-	-
Sommerville Special School	Maungakiekie-Tamaki	Composite	203	0	0%	0%	-	-	-	-	-
South Auckland SDA School	Manukau	Full Primary	297	0	0%	0%	-	-	-	-	-
St Dominic’s College	Waitakere	Intermediate/Secondary	910	0	0%	0%	0%	-	<1%	<1%	<1%



School Name	Ward	School Type	School Roll Eligible To Cycle	No. of Cycles Counted	Cyclists as share of those eligible <sup>11</sup>						
					2013	2012	2011	2010	2009	2008	2007
St Joseph's School (Grey Lynn)	Waitemata & Gulf	Full Primary	90	0	0%	-	0%	-	-	-	-
St Joseph's School (Onehunga)	Manukau	Full Primary	274	0	0%	-	0%	-	-	-	-
St Joseph's School (Otahuhu)	Manukau	Full Primary	297	0	0%	-	0%	-	-	-	-
St Mary MacKillop School	Manukau	Full Primary	327	0	0%	0%	0%	-	-	-	-
St Mary's School Avondale	Whau	Full Primary	210	0	0%	-	0%	-	-	-	-
St Patrick's School (Panmure)	Maungakiekie-Tamaki	Full Primary	99	0	0%	0%	-	-	-	-	-
St Paul's College	Waitemata & Gulf	Intermediate/Secondary	252	0	0%	-	0%	-	0%	-	-
St Pius X School (Glen Innes)	Maungakiekie-Tamaki	Full Primary	153	0	0%	0%	1%	-	-	-	-
St Therese School (Three Kings)	Albert-Eden-Roskill	Full Primary	117	0	0%	-	0%	-	-	-	-
Sylvia Park School	Maungakiekie-Tamaki	Full Primary	370	0	0%	-	0%	-	-	-	-
Tamaki College	Maungakiekie-Tamaki	Secondary	600	0	0%	-	-	0%	0%	<1%	<1%
Tauhoa School	Rodney	Full Primary	47	0	0%	0%	0%	-	-	-	-
Te Hihi School	Manurewa-Papakura	Full Primary	198	0	0%	-	0%	-	-	-	-
Te Kura Kaupapa Māori o Hoani Waititi Marae	Waitakere	Composite	168	0	0%	0%	2%	2%	0%	0%	-
Te Kura Kaupapa Māori o Manurewa	Manurewa-Papakura	Full Primary	45	0	0%	0%	-	-	-	-	-
Te Kura Kaupapa Māori o Otara/o Piripono	Manukau	Full Primary	45	0	0%	-	4%	-	-	-	-
Te Kura Kaupapa Māori o Puau Te	Maungakiekie-	Composite	138	0	0%	-	0%	-	-	-	-



School Name	Ward	School Type	School Roll Eligible To Cycle	No. of Cycles Counted	Cyclists as share of those eligible <sup>11</sup>							
					2013	2012	2011	2010	2009	2008	2007	
Moananui-a-Kiwa	Tamaki											
Te Kura Kaupapa Māori o Te Kotuku	Waitakere	Full Primary	59	0	0%	-	-	-	-	-	-	-
Te Kura Kaupapa Māori o Waiuku	Franklin	Full Primary	13	0	0%	-	-	-	-	-	-	-
The Bridge Academy	Orakei	Composite	0	0	0%	100%	0%	0%	-	-	-	-
The Corelli School	Albany	Composite	100	0	0%	0%	-	-	-	-	-	-
Timatanga Community School	Albany	Full Primary	17	0	0%	-	-	-	-	-	-	-
Titirangi Rudolf Steiner School	Waitakere	Full Primary	150	0	0%	0%	0%	0%	0%	0%	0%	0%
Tyndale Park Christian School	Howick	Composite	121	0	0%	0%	0%	0%	0%	0%	0%	0%
Viscount School	Manukau	Full Primary	690	0	0%	-	-	-	-	-	-	-
Waiau Pa School	Franklin	Full Primary	72	0	0%	2%	-	-	-	-	-	-
Waimauku School	Rodney	Full Primary	601	0	0%	0%	0%	-	-	-	-	-
Wainui School	Rodney	Full Primary	185	0	0%	1%	0%	-	-	-	-	-
Waioneke School	Rodney	Full Primary	88	0	0%	0%	0%	-	-	-	-	-
Waipipi School	Franklin	Full Primary	115	0	0%	0%	-	-	-	-	-	-
West Harbour School	Waitakere	Full Primary	330	0	0%	-	-	-	-	-	-	-
Westminster Christian School	North Shore	Full Primary	206	0	0%	0%	0%	-	-	-	-	-
Wiri Central School	Manukau	Full Primary	426	0	0%	-	0%	-	-	-	-	-
Woodhill School	Rodney	Full Primary	115	0	0%	-	-	-	-	-	-	-
Zayed College for Girls	Manukau	Intermediate/Secondary	93	0	0%	0%	0%	-	-	-	-	-



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## **APPENDICES**

Appendix One: Methodology

Appendix Two: Annual Average Daily Traffic (AADT) Calculation





# APPENDIX ONE: METHODOLOGY

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

## 1. 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: Eight sites lie on the border of two wards. These sites have been included in both ward reports).*

## 2. Monitoring Times

### *Time Of Day*

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

### *Day Of Week*

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



### *Time Of Year*

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

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

It was agreed that manual counts would commence on Tuesday the 5<sup>th</sup> of March and be conducted on the first three fine days of the 5<sup>th</sup>, 6<sup>th</sup>, 7<sup>th</sup>, 12<sup>th</sup>, 13<sup>th</sup>, or 14<sup>th</sup> of March.

Counts were conducted on the following days:

- Tuesday 5<sup>th</sup> March                      Albany, North Shore, Waitakere
- Wednesday 6<sup>th</sup> March                Howick, Franklin, Manukau, Waitemata & Gulf
- Thursday 7<sup>th</sup> 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 four count days in 2013 was as follows:

#### **Tuesday 5<sup>th</sup> March**

- Sunrise: 7:10am; Sunset: 7:55pm.
- Highest temperature: 24.0 degrees Celsius.
- Mostly fine weather with a few sites experiencing light drizzle in the morning and cloud in the evening.



### Wednesday 6<sup>th</sup> March

- Sunrise: 7:11am; Sunset: 7:53pm.
- Highest temperature: 24.0 degrees Celsius.
- Mostly fine weather with clear sky in the morning and evening shifts.

### Thursday 7<sup>th</sup> March

- Sunrise: 7:12am; Sunset: 7:52pm.
- Highest temperature: 26.0 degrees Celsius.
- Mostly fine weather with some clouds for some sites in the morning and evening shifts.

## 3. 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<sup>12</sup>.

During their shift the surveyor collected data on:

- The total number of cyclists<sup>13</sup> 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<sup>14</sup>.

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<sup>12</sup> 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.

<sup>13</sup> 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.

<sup>14</sup> Note: For the purpose of this project, an off-road cycleway is defined as designated off-road path for cycles. This includes exclusive cycle paths, separated paths (such as the footpath on Tamaki Drive) and shared-use paths (available to cyclists and pedestrians). It excludes on-road cycle lanes (that is, designated lanes marked on the road).



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

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

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

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

#### **4. 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.

#### **5. 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<sup>15</sup>, 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.

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<sup>15</sup> <http://www.ltsa.govt.nz/road-user-safety/walking-and-cycling/cycle-network/appendix2.html>



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<sup>16</sup>. 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<sup>17</sup>.*

## 6. 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.

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<sup>16</sup> ViaStrada is a traffic engineering and transport planning consultancy based in Christchurch, New Zealand.

<sup>17</sup> 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 5<sup>th</sup> March was designated as the bike shed count day. (Most schools reported that they undertook the count on this day.)
4. Once the school bike shed count had been completed, schools completed the online count form and submitted it electronically to Gravitas. Gravitas contacted all participating schools who had not returned their sheets after five working days, first by email (two rounds) and then by telephone. All count forms were checked for completeness before being data-entered into Excel. In 2013, 275 responses were received, a response rate of 90 per cent. (This compares with 74 per cent in 2012.)

## 7. 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.





## APPENDIX TWO: ANNUAL AVERAGE DAILY TRAFFIC (AADT) CALCULATION

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**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<sup>18</sup> 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)<sup>19</sup>, 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. 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)

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<sup>18</sup> Annual average daily traffic

<sup>19</sup> LTSA, 2004



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  $3.06 \times 102 = 312$ .
- The AADT from the afternoon survey is estimated as  $2.78 \times 130 = 359$ .
- 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 <sub>Weekday</sub>		H <sub>Weekend</sub>	
			Mon to Fri	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%