

# ***Auckland City***

## ***Road Safety Report***

### ***2005 to 2009***



Performance Information  
NZ Transport Agency  
Private Bag 106602  
Level 11 HSBC House 1 Queen St  
AUCKLAND 1143

Ph. (09) 969 9800  
Fax. (09) 969 9813

Web: [www.nzta.govt.nz](http://www.nzta.govt.nz)

***June 2010***

## Contents

	Page
<b>Introduction and general information</b>	<b>1</b>
<b>Crash rates and costs</b> (Figures 1.1 to 1.11)	<b>5</b>
<b>Crash counts</b> (Figures 2.1 to 2.14)	<b>17</b>
<b>Road user statistics</b> (Figures 3.1 to 3.28)	<b>25</b>
<b>Crash type statistics</b> (Figures 4.1 to 4.6)	<b>41</b>
<b>Crash factor statistics</b> (Figures 5.1 to 5.14)	<b>47</b>
<b>Environmental statistics</b> (Figures 6.1 to 6.14)	<b>57</b>
<b>Date and time statistics</b> (Figures 7.1 to 7.3)	<b>67</b>
<b>Council road statistics</b> (Figures 8.1 to 8.26)	<b>71</b>
<b>Crash location statistics</b> (Figures 9.1 to 9.5)	<b>89</b>

## Appendices

**Grouping of crash types**

**Groupings of contributing factors**

## List of figures

### Crash rates and costs

page 5

Fig. 1.1	Reporting rate serious injuries to hospital admissions
Fig. 1.2	Crashes per 100 million vehicle kilometres travelled
Fig. 1.3	Casualties per 100 million vehicle kilometres travelled
Fig. 1.4	Peer group crash and casualty rates Group A
Fig. 1.5–1.8	Crashes per 100 million vehicle kilometres travelled on: Urban council roads Group A Rural council roads Group A Urban state highways Group A Rural state highways Group A
Fig. 1.9	Crashes per 10,000 people (2000 to 2009)
Fig. 1.10	Casualties per 10,000 people (2000 to 2009)
Fig. 1.11	Social cost of crashes in Auckland City in 2009

### Crash counts

page 17

Fig. 2.1	Crash numbers and severity (2005 to 2009) – whole city/district
Fig. 2.2, 2.3	Crash numbers and severity (2005 to 2009) – urban/rural
Fig. 2.4	Casualty numbers and severity (2005 to 2009) – whole city/district
Fig. 2.5, 2.6	Casualty numbers and severity (2005 to 2009) – urban/rural
Fig. 2.7	Number of injury crashes (2000 to 2009) – all roads
Fig. 2.8	Number of casualties (2000 to 2009) – all roads
Fig. 2.9	Number of injury crashes (2000 to 2009) – urban
Fig. 2.10	Number of casualties (2000 to 2009) – urban
Fig. 2.11	Number of injury crashes (2000 to 2009) – rural
Fig. 2.12	Number of casualties (2000 to 2009) – rural
Fig. 2.13, 2.14	Severity ratio (2000 to 2009) – urban/rural

### Road user statistics

page 25

Fig. 3.1, 3.2	Road user casualties (2005 to 2009) – urban/rural
Fig. 3.3, 3.4	Male/female casualties (2000 to 2009)
Fig. 3.5	Male casualties by age (2005 to 2009)
Fig. 3.6	Female casualties by age (2005 to 2009)
Fig. 3.7, 3.8	Car/van driver casualties (2000 to 2009)
Fig. 3.9, 3.10	Car/van passenger casualties (2000 to 2009)
Fig. 3.11, 3.12	Heavy vehicle casualties (2000 to 2009)
Fig. 3.13, 3.14	Motorcyclist casualties (2000 to 2009)
Fig. 3.15, 3.16	Pedestrian casualties (2000 to 2009)
Fig. 3.17, 3.18	Cyclist casualties (2000 to 2009)

## List of figures continued

### Road user statistics

page 25

Fig. 3.19	Car/van driver casualty age (2005 to 2009)
Fig. 3.20	Car/van passenger casualty age (2005 to 2009)
Fig. 3.21	Heavy vehicle casualty age (2005 to 2009)
Fig. 3.22	Motorcyclist casualty age (2005 to 2009)
Fig. 3.23	Pedestrian casualty age (2005 to 2009)
Fig. 3.24	Cyclist casualty age (2005 to 2009)
Fig. 3.25, 3.26	Casualty ethnicity (2005 to 2009)
Fig. 3.27, 3.28	Licence status (2000 to 2009)

### Crash type statistics

page 41

Fig. 4.1, 4.2	Crash movement type (2005 to 2009)
Fig. 4.3, 4.4	Crash movement type – trends (2000 to 2009)
Fig. 4.5	Failed to give way/stop – urban (2000 to 2009)
Fig. 4.6	Bend – lost control/head on – rural (2000 to 2009)

### Crash factor statistics

page 47

Fig. 5.1, 5.2	Contributing factors (2005 to 2009)
Fig. 5.3–5.6	Contributing factor trends – urban (2000 to 2009)
Fig. 5.7	Alcohol-involved trend – urban (2000 to 2009)
Fig. 5.8	Speed-involved trend – urban (2000 to 2009)
Fig. 5.9–5.12	Contributing factor trends – rural (2000 to 2009)
Fig. 5.13	Alcohol-involved trend – rural (2000 to 2009)
Fig. 5.14	Speed-involved trend – rural (2000 to 2009)

### Environmental statistics

page 57

Fig. 6.1, 6.2	Crashes not on state highways (2000 to 2009)
Fig. 6.3, 6.4	Intersection crashes (2000 to 2009)
Fig. 6.5, 6.6	Wet road crashes (2000 to 2009)
Fig. 6.7, 6.8	Crashes in darkness (2000 to 2009)
Fig. 6.9	Unsealed road crashes – rural (2000 to 2009)
Fig. 6.10	Icy road crashes – rural (2000 to 2009)
Fig. 6.11, 6.12	Collisions with objects (2000 to 2009)
Fig. 6.13, 6.14	Objects struck (2005 to 2009)

### Date and time statistics

page 67

Fig. 7.1	Time pattern over average week (2005 to 2009)
Fig. 7.2	Day of week (2005 to 2009)
Fig. 7.3	Month of year (2005 to 2009)

## List of figures continued

### Council road statistics

page 71

Fig. 8.1	Number of injury crashes (2000 to 2009) – all council roads
Fig. 8.2	Number of casualties (2000 to 2009) – all council roads
Fig. 8.3	Number of injury crashes (2000 to 2009) – urban council roads
Fig. 8.4	Number of casualties (2000 to 2009) – urban council roads
Fig. 8.5	Number of injury crashes (2000 to 2009) – rural council roads
Fig. 8.6	Number of casualties (2000 to 2009) – rural council roads
Fig. 8.7, 8.8	Crash movement type – council roads (2005 to 2009)
Fig. 8.9, 8.10	Crash movement type – trends – council roads (2000 to 2009)
Fig. 8.11	Failed to give way/stop – urban council roads (2000 to 2009)
Fig. 8.12	Bend – lost control/head on – rural council roads (2000 to 2009)
Fig. 8.13, 8.14	Contributing factors – council roads (2005 to 2009)
Fig. 8.15, 8.16	Intersection crashes – council roads (2000 to 2009)
Fig. 8.17, 8.18	Wet road crashes – council roads (2000 to 2009)
Fig. 8.19, 8.20	Crashes in darkness – council roads (2000 to 2009)
Fig. 8.21	Unsealed road crashes – rural council roads (2000 to 2009)
Fig. 8.22	Icy road crashes – rural council roads (2000 to 2009)
Fig. 8.23, 8.24	Collisions with objects – council roads (2000 to 2009)
Fig. 8.25, 8.26	Objects struck – council roads (2005 to 2009)

### Crash location statistics

page 89

Fig. 9.1	Urban crash blackspot list for the City (2005 to 2009)
Fig. 9.2	Rural crash blackspot list for the City (2005 to 2009)
Fig. 9.3	State Highway crash blackspot list for the City (2005 to 2009)
Fig. 9.4	Urban crash blackspots with a significant increase in crashes in 2009
Fig. 9.4a	Rural crash blackspots with a significant increase in crashes in 2009
Fig. 9.5	State highway crash blackspots with a significant increase in crashes in 2009

## Introduction and general information

The NZ Transport Agency provides information on road safety to its stakeholders and the public. It also has responsibility for promoting safety and sustainability in land transport, among a variety of other functions. This road safety report is an example of information supplied by the NZ Transport Agency.

This report helps identify road safety issues in Auckland City area ('the city') by presenting tables or graphs of:

- numbers and trends in reported crashes and casualties
- characteristics and types of crashes and casualties
- factors contributing to crashes
- locations with bad crash records
- characteristics of crashes on council authority roads

The information is intended to assist road controlling authorities, the New Zealand Police and others in evaluating the safety performance of the road network in Auckland City. Comparison with other cities, districts or regions elsewhere in the country is included.

Researchers, students, and organisations with an interest in road safety will also find the information useful.

### Source of crash information

This report uses data from the NZ Transport Agency's crash database. This database includes all crashes involving injury and non-injury for which Police reports have been completed and forwarded to the NZ Transport Agency. Mostly five-year data (2005 to 2009) has been used, but 10-year data (2000 to 2009) has been used to analyse trends.

### Council authority peer groups

Traffic crash patterns and features for an area can depend on the traffic and roading characteristics of that area. The most useful comparisons are made with other areas or authorities with similar characteristics, rather than with the whole country. The data for the city is compared with a peer group of similar council authorities (Group A) along with data for all New Zealand.

The peer group used for comparison with Auckland City is Group A which consists of major urban areas with some rural areas on the outskirts. (Population over 100000 and/or rural crashes less than 30 percent). Council authorities included in this group are listed in Figure 1.4.

## Definitions of urban and rural

Data has been separated for urban and rural (open) roads through this report because each has a distinctly different pattern of crashes. In this report urban roads are defined as all those with a speed limit of 70 km/h or less, however it should be noted that some locations which have been speed limit zoned might be more appropriately defined as rural but are included in urban zones.

## Definition of statistically significant

A number of graphs include a comparison between the road controlling authority, all New Zealand and a similar peer group. These graphs can include an indication as to whether the difference is statistically significant. For the purposes of this report statistically significant means that a difference of this size is unlikely to be due to chance. Significance is noted at the 5% level ( $P < 0.05$ ), this means that the observed result would occur by chance in only 1 in 20 similar situations.

## Road user compliance data

The Ministry of Transport collects information on road user compliance with traffic law. This information includes speed surveys, occupant restraint use surveys and cycle helmet use surveys. Information about these surveys is available on Ministry of Transport web site.

The appropriate web addresses are as follows:

Speed Surveys <http://www.transport.govt.nz/research/SpeedSurveys/>

Safety belts <http://www.transport.govt.nz/research/safetybeltstatistics/>

Cycle helmets <http://www.transport.govt.nz/research/cyclehelmets2009/>

The information is also distributed quarterly in the Ministry of Transport publication Road safety progress.

The Ministry of Transport also conducts public attitude surveys. These have been undertaken annually since 1994. They evaluate attitudes to road safety issues, primarily alcohol-impaired driving and speed. Surveys are carried out in May and June of each year by trained interviewers who conduct interviews with respondents in their homes. The sample is chosen to be representative of the New Zealand adult population, and includes men and women aged 15 and over from towns, cities and rural areas throughout New Zealand.

The results of these surveys are available from:

<http://www.transport.govt.nz/research/PublicAttitudestoRoadSafety-Survey/>

### **General explanatory notes**

1. Crash and casualty information in this report generally includes data for both council roads and state highways. Some tables and charts can separate this information, however figures 8.1–8.26 provide information for council roads only.
2. Crash and casualty rates are based on 2009 populations estimates updated from the 2006 census, traffic flows from the year 2009, and the average of five year crash data (2005–2009).
3. Traffic flows are based on Road Asset Maintenance and Management (RAMM) data from December 2009. As different road controlling authorities update flow data in RAMM at different times some data will be more up to date than other data, hence caution should be exercised when comparing traffic flow based crash rates in one authority with those of other authorities particularly as the traffic flow data (VKT) used in the calculations can not be considered definitive. Comparisons should be considered as indicative only.
4. With four to five categories of road for each council authority, some categories will only have short lengths of road. This may cause significant variation in the calculated crash and casualty rates.
5. The crash numbers include all those within the road controlling authority. The crash numbers used in the crash rate section can, however, vary slightly from the remainder of the document as only 'on road' crashes can be used. These are crashes on roads that have traffic volume information recorded. Crashes that occurred in car parks, reserves, beaches etc. are excluded.



6. The severity of a crash is determined as the most severely injured casualty in the crash. Injury severity is classified as fatal, serious, or minor as follows:
  - Fatal:** Injuries that result in death within 30 days of a crash.
  - Serious:** Fractures, concussion, internal injuries, crushing, severe cuts and lacerations, severe general shock necessitating medical treatment, and any injury involving removal to and detention in hospital.
  - Minor:** Injuries which are not serious but which require first aid, or cause discomfort or pain to the person injured, eg sprains and bruises.
  
7. Ethnicity of road users involved in crashes can now be recorded on traffic crash reports, although some reports may not include this data. Figures 3.25 and 3.26 shows the ethnicity of casualties, where known. Ethnicity is divided into five different groups. Only data for 2005 to 2009 is available. The graph includes all casualties irrespective of culpability.

NOTE: Ethnicity data should be treated with caution as the data can be considered subjective and incomplete.
  
8. For the licence status grouping in Figures 3.27 and 3.28 the 'no/wrong licence' group includes drivers who have never held a licence or have an expired or wrong class licence. This graph includes all drivers irrespective of injury or culpability.
  
9. See appendix for detailed descriptions of:
  - crash movement types and crash movement groupings (for Figures 4.1–4.4)
  - grouping of factors contributing to crashes (for Figures 5.1–5.14)
  
10. Blackspot sites listed in Figures 9.1 and 9.3 are listed by the total cost of crashes at the site and are listed regardless of any remedial treatments. Site were initially selected on the basis of 3 reported crashes and then the sites listed were limited to those with a higher number of injury crashes and over a defined social cost, which is indicated on each figure.
  
11. Alarm crash sites in section 9 as Figures 9.4 to 9.6 are crash sites that have shown a statistically significant increase (at the 95 percent level of confidence) in reported crashes in 2009 compared with the previous five years (2004 to 2008). The sites are initially selected on the basis of 3 or more reported crashes at the sites. Sites are listed regardless of any recent remedial treatments and they may already be under investigation for treatment.



# *Crash Rates and Costs*



## Crash reporting rates

The ratio of 'reported serious injuries' can be assessed by comparing seriously injured casualty numbers from Police crash reports to hospital admissions, given that a serious injury is generally one requiring hospital attention.

Figure 1.1 below indicates the serious injury reporting rate for each region.

**Figure 1.1 Reporting rate serious injuries to hospital admissions**

Region	2005	2006	2007	2008	2009
Northland	30%	28%	34%	38%	27%
Auckland	17%	20%	16%	18%	18%
Waikato	40%	38%	50%	47%	40%
Bay of Plenty	32%	37%	38%	29%	27%
Gisborne	32%	26%	31%	28%	27%
Hawkes Bay	80%	75%	59%	68%	42%
Taranaki	55%	65%	79%	41%	36%
Manawatu-Wanganui	38%	34%	35%	36%	31%
Wellington	68%	61%	74%	55%	48%
Nelson-Marlborough	44%	52%	54%	50%	39%
West Coast	53%	55%	59%	53%	54%
Canterbury	47%	42%	49%	45%	43%
Otago	99%	85%	77%	69%	39%
Southland	78%	103%	73%	53%	39%
<b>New Zealand</b>	<b>36%</b>	<b>35%</b>	<b>37%</b>	<b>35%</b>	<b>33%</b>

This is the ratio of the number of persons with serious injuries in reported crashes divided by the number of persons admitted to hospital with serious injuries.

These variations in reporting rates need to be considered when viewing the trends in crashes and casualties shown in this report.

**Note: These values should be considered indicative only.**

**Figure 1.2 Crashes per 100 million vehicle kilometres travelled**

	Council roads		State Highways	
	Urban	Rural	Urban	Rural
Auckland City	32	74	54	15
Group A	38	31	35	15
All NZ	37	29	27	18

**Figure 1.3 Casualties per 100 million vehicle kilometres travelled**

	Council roads		State Highways	
	Urban	Rural	Urban	Rural
Auckland City	40	111	71	19
Group A	48	42	46	21
All NZ	46	42	36	26

Figure 1.4 Peer group crash and casualty rates

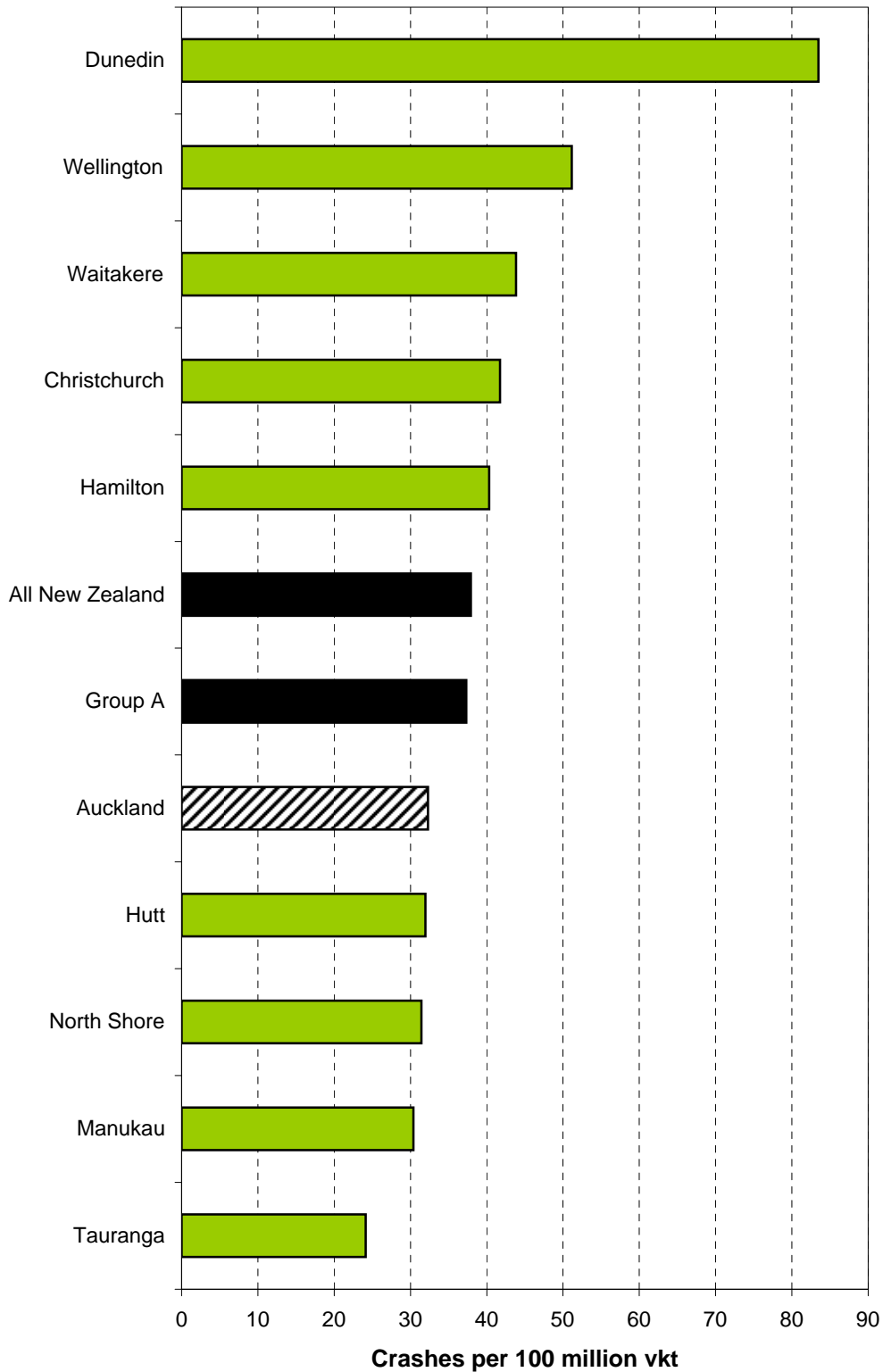
**Group A**

City or District	Crashes per					Casualties per					2009 Population	% of rural crashes
	10,000 Population (5 year average)	100 million vehicle kilometres travelled				10,000 Population (5 year average)	100 million vehicle kilometres travelled					
		Council roads		State Highways			Council roads		State Highways			
		Urban	Rural	Urban	Rural		Urban	Rural	Urban	Rural		
Auckland	26	32	74	54	15	33	40	111	71	19	444100	21
Christchurch	25	42	23	27	19	32	52	31	35	25	372600	9
Dunedin	40	83	67	63	19	57	118	95	91	32	123700	24
Hamilton	23	40	46	20	37	29	50	56	25	55	140700	10
Hutt	21	32	299	128	15	26	39	406	147	19	102100	23
Manukau	18	30	33	57	13	24	40	46	82	19	368600	22
North Shore	19	31	32	54	14	24	39	46	66	19	225800	20
Tauranga	15	24	*	11	15	19	29	*	14	24	112600	14
Waitakere	20	44	15	20	18	26	57	22	25	23	204500	16
Wellington	23	51	29	50	13	28	59	29	66	18	195500	15
<b>Group A</b>	<b>23</b>	<b>37</b>	<b>33</b>	<b>31</b>	<b>15</b>	<b>30</b>	<b>47</b>	<b>46</b>	<b>40</b>	<b>21</b>	<b>2290200</b>	<b>17</b>
<b>All New Zealand</b>	<b>131</b>	<b>38</b>	<b>29</b>	<b>28</b>	<b>18</b>	<b>36</b>	<b>48</b>	<b>42</b>	<b>38</b>	<b>26</b>	<b>4331000</b>	<b>41</b>

\* due to small numbers of rural crashes values are not considered meaningful

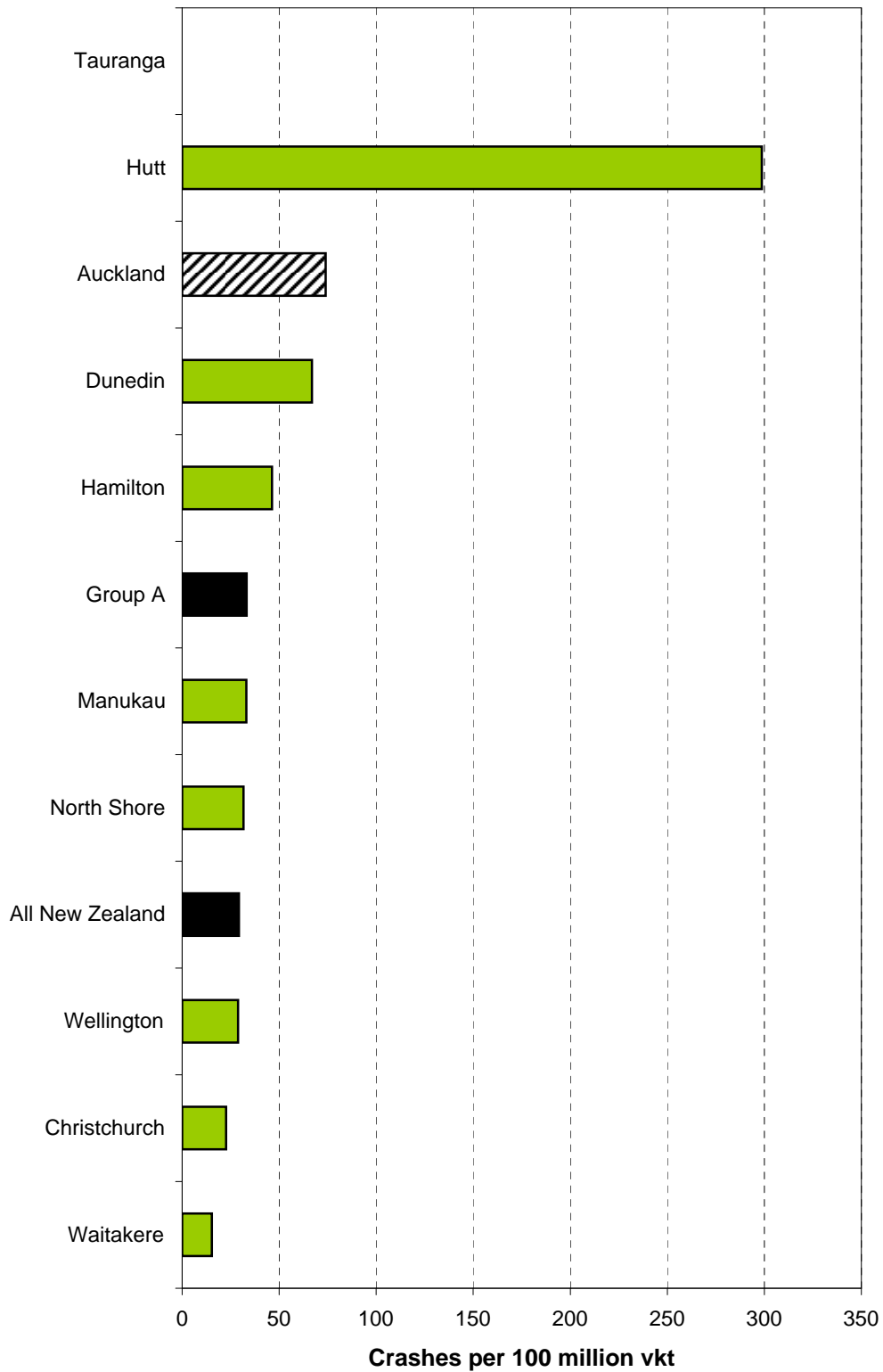
Group A : Major urban areas with some rural areas on the outskirts. (Population > 97500 and/or rural crashes less than 30 percent).  
 Crashes and casualties per 100 million VKT are based on five years of reported injury on-road crash data (2005-2009) and December 2009 VKT estimates.  
 Crashes and casualties per 10,000 population are based on five year average crash data (2005-2009) and Statistics NZ 2009 population estimates.

**Figure 1.5 Crashes per 100 million vehicle-kilometres travelled - urban council roads**

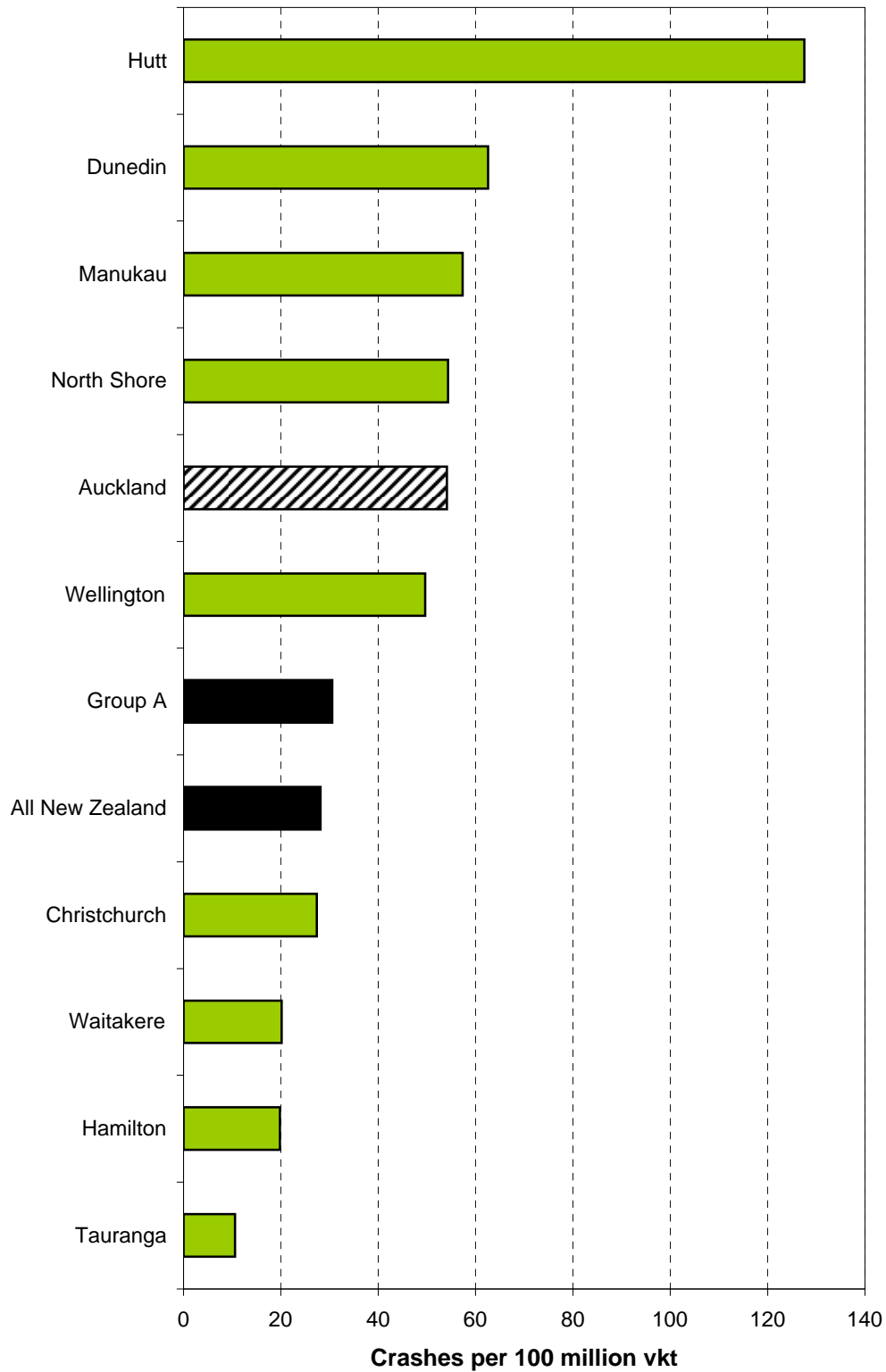




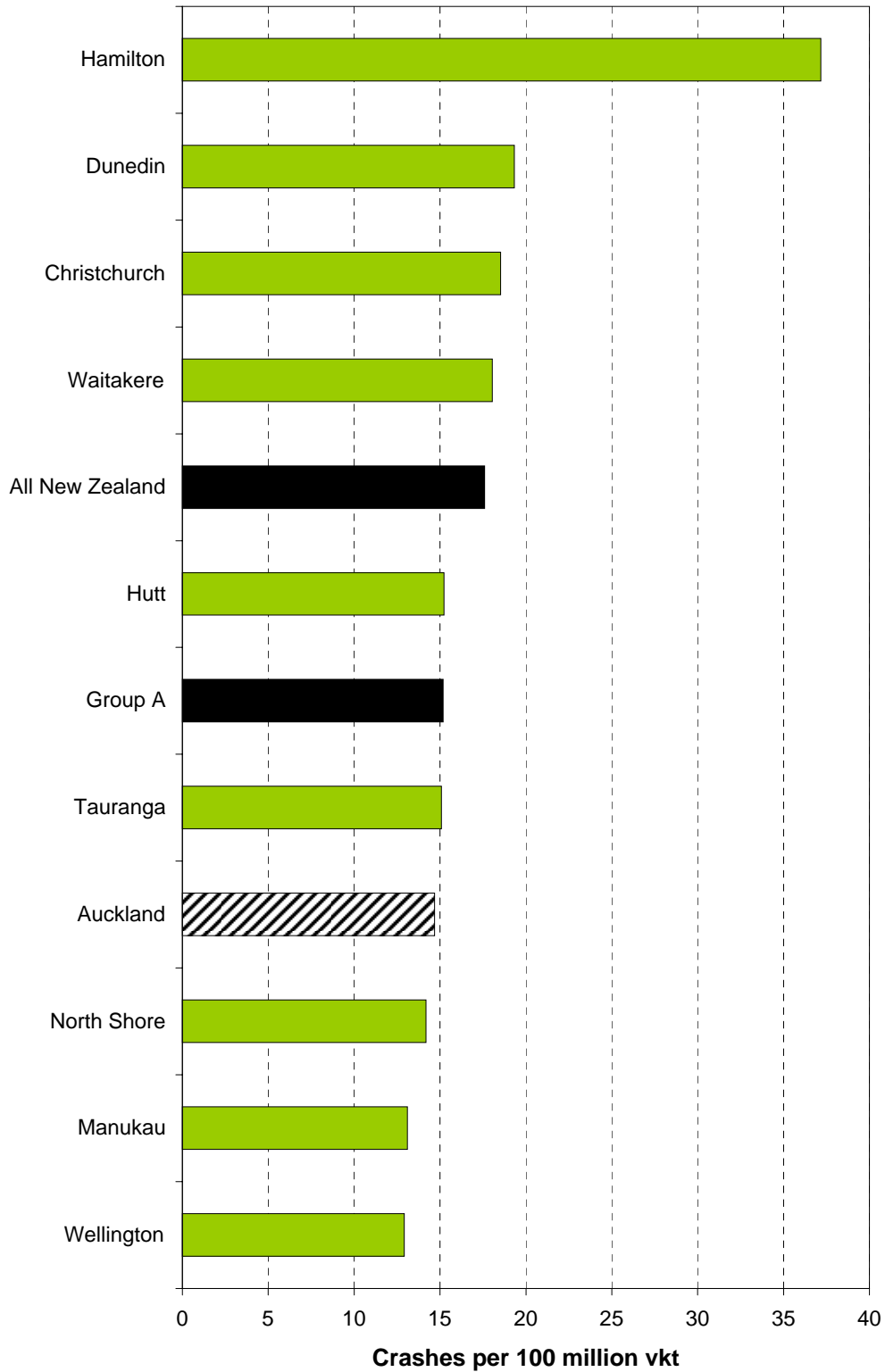
**Figure 1.6 Crashes per 100 million vehicle-kilometres travelled - rural council roads**



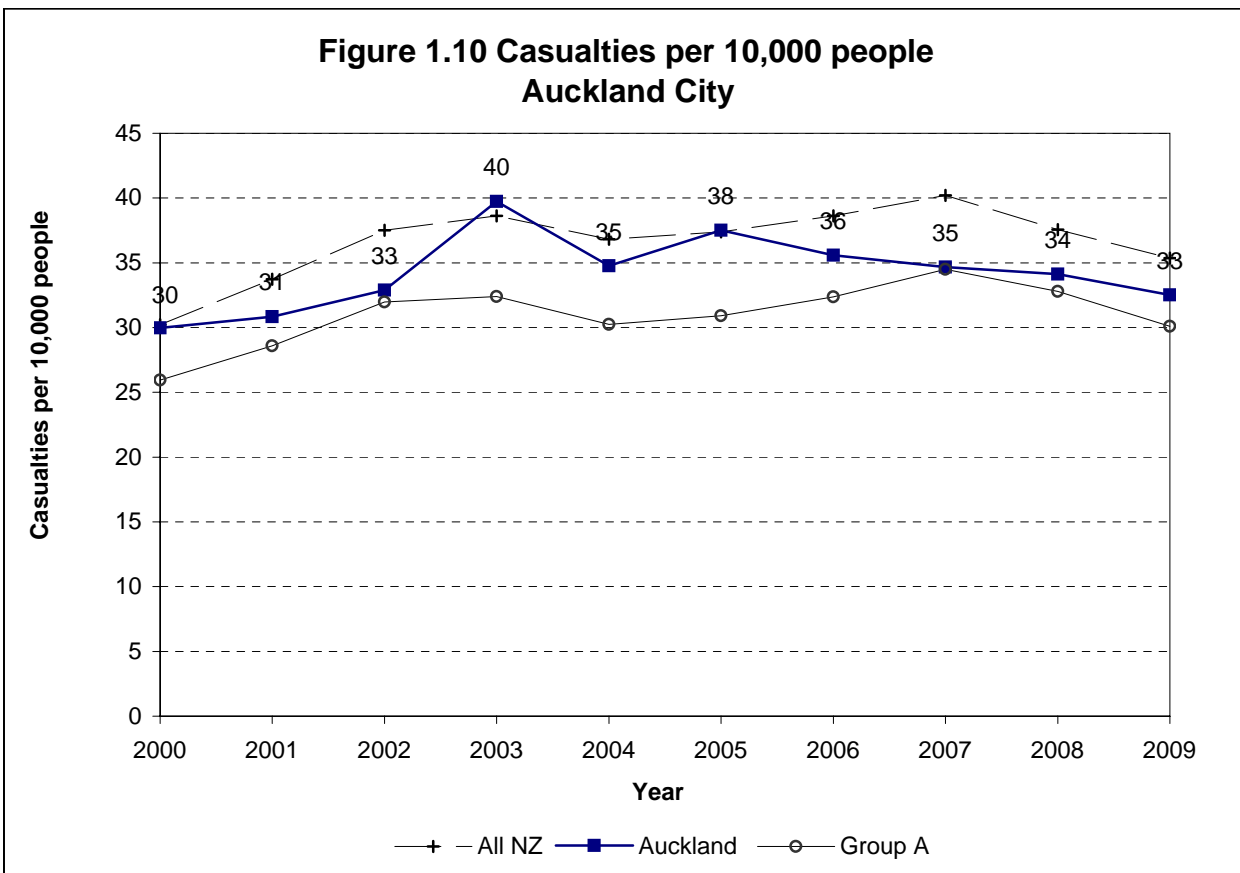
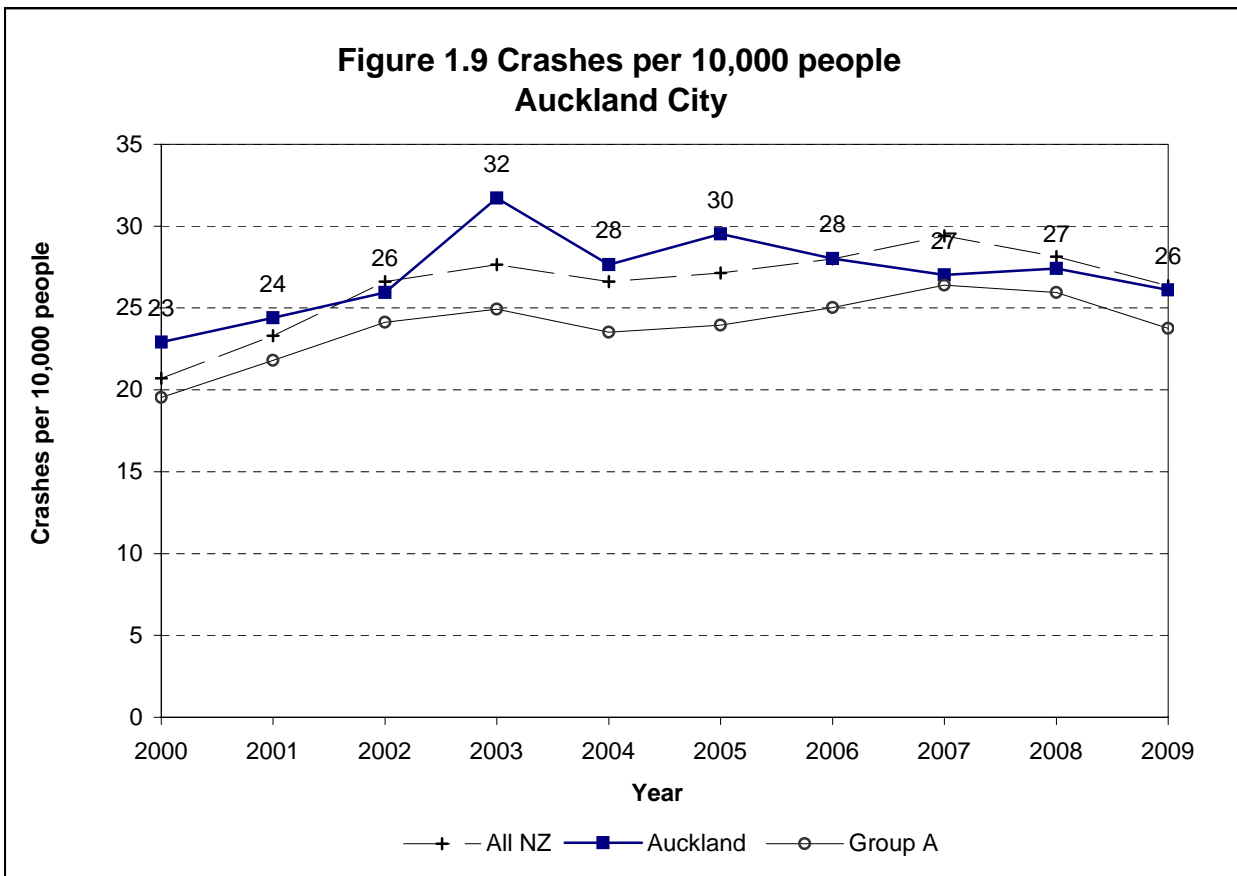
**Figure 1.7 Crashes per 100 million vehicle kilometres travelled  
- urban state highways**



**Figure 1.8 Crashes per 100 million vehicle-kilometres travelled - rural state highways**







**Figure 1.11 Social cost of crashes in Auckland City in 2009**

		Auckland City	New Zealand
Council roads	urban	\$217.20	\$1,607.40
	rural	\$2.87	\$909.43
State Highways	urban	\$6.27	\$299.76
	rural	\$62.45	\$1,487.35
<b>Total</b>		<b>\$288.79</b>	<b>\$4,303.94</b>

Note: Crash costs are in \$ millions

The social costs of a road crash and the associated injuries include a number of different elements:

- Loss of life and life quality
- Loss of output due to temporary incapacitation
- Medical costs
- Legal costs
- Property damage costs

The average value of a loss of life due to a road crash is estimated by the amount of money the New Zealand population would be willing to pay for a safety improvement that would result in the expected avoidance of one premature death. This is the willingness to pay based value of statistical life or VOSL. The VOSL was established at \$2 million in 1991. This has been indexed to the average hourly earnings (ordinary time) to express the value in current dollars. The updated VOSL is \$3.5 million (in June 2009 dollars). Based on several international and New Zealand studies on VOSL, the average loss of life quality for permanent impairments due to a serious and a minor injury were estimated to be 10% and 0.4% of the VOSL respectively.

Crash rates can vary due to reporting rates. These are adjusted on a regional basis in this report by comparing with hospitalisation rates.

The other social cost components are estimated based on a number of studies conducted during the early to mid-1990s and are updated for price changes by indexing to an appropriate price index.

For a detail discussion on this, please refer to 'The social cost of road crashes and injuries: June 2009 update', available at the Ministry of Transport's website:

<http://www.transport.govt.nz/assets/NewPDFs/NewFolder/Social-Cost-June-2009-update-final.pdf>

The average social cost per reported crash (in June 2009 dollars) are estimated at:

Rural fatal crash	\$4,260,000
Rural serious crash	\$820,000
Rural minor crash	\$91,000
Urban fatal crash	\$3,775,000
Urban serious crash	\$699,000
Urban minor crash	\$82,000

These values include an allowance for non-reported injury crashes, and the totals in Fig. 1.11 also include an allowance for non-injury crashes.



# *Crash Counts*





**Figure 2.1: Crash numbers and severity 2005 to 2009 - whole City**

	2005	2006	2007	2008	2009	Total	%	Group A
Fatal crashes	11	16	5	7	9	48	1%	1%
Serious crashes	148	138	125	141	137	689	12%	15%
Minor crashes	1064	1021	1015	1026	985	5111	87%	84%
<b>Total injury crashes</b>	<b>1223</b>	<b>1175</b>	<b>1145</b>	<b>1174</b>	<b>1131</b>	<b>5848</b>	<b>100%</b>	<b>100%</b>
Non-injury crashes	4643	4281	4115	3908	3733	20680		

**Figure 2.2: Crash numbers and severity 2005 to 2009 - urban roads**

	2005	2006	2007	2008	2009	Total	%	Group A
Fatal crashes	10	12	3	5	8	38	1%	1%
Serious crashes	125	121	112	126	117	601	13%	15%
Minor crashes	829	806	788	801	786	4010	86%	84%
<b>Total injury crashes</b>	<b>964</b>	<b>939</b>	<b>903</b>	<b>932</b>	<b>911</b>	<b>4649</b>	<b>100%</b>	<b>100%</b>
Non-injury crashes	3616	3285	3195	3056	2920	16072		

**Figure 2.3: Crash numbers and severity 2005 to 2009 - rural roads**

	2005	2006	2007	2008	2009	Total	%	Group A
Fatal crashes	1	4	2	2	1	10	1%	2%
Serious crashes	23	17	13	15	20	88	7%	14%
Minor crashes	235	215	227	225	199	1101	92%	84%
<b>Total injury crashes</b>	<b>259</b>	<b>236</b>	<b>242</b>	<b>242</b>	<b>220</b>	<b>1199</b>	<b>100%</b>	<b>100%</b>
Non-injury crashes	1027	996	920	852	813	4608		

**Figure 2.4: Casualty numbers and severity 2005 to 2009 - whole City**

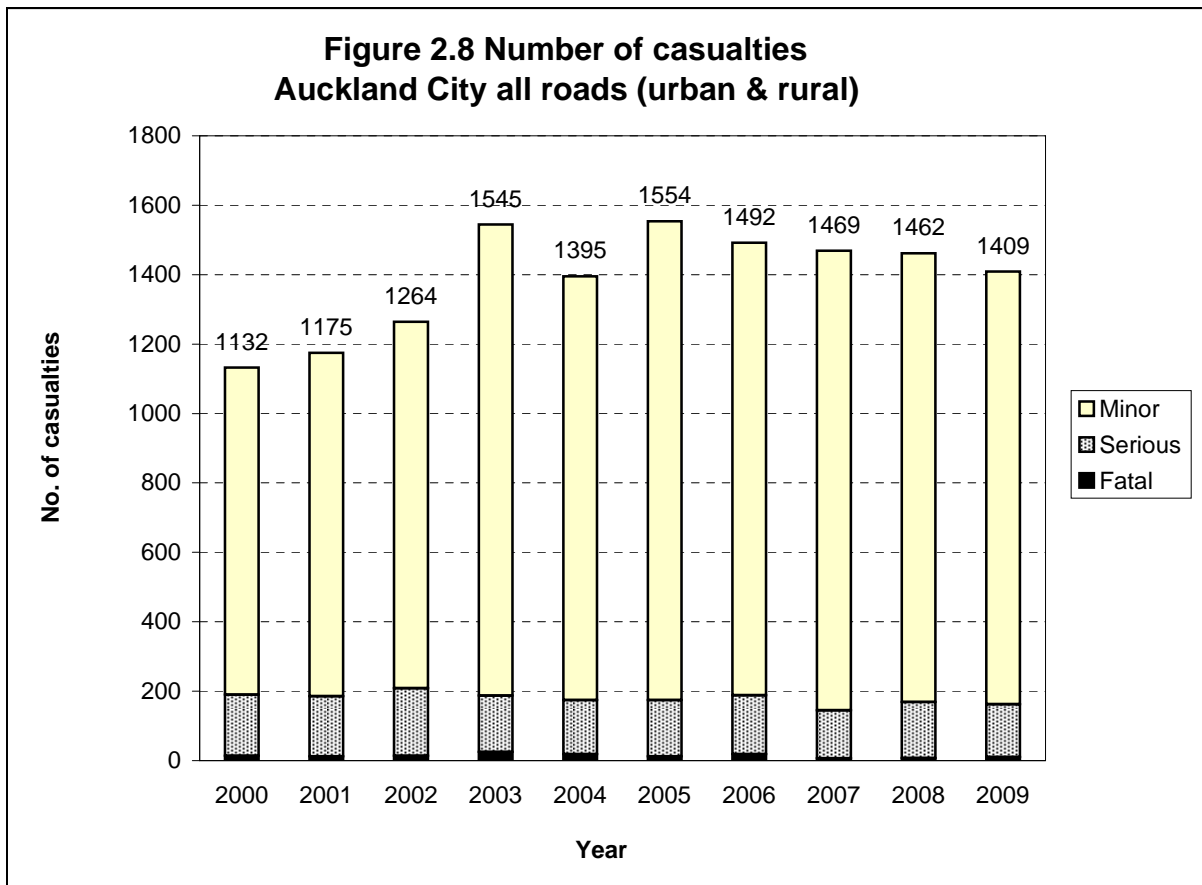
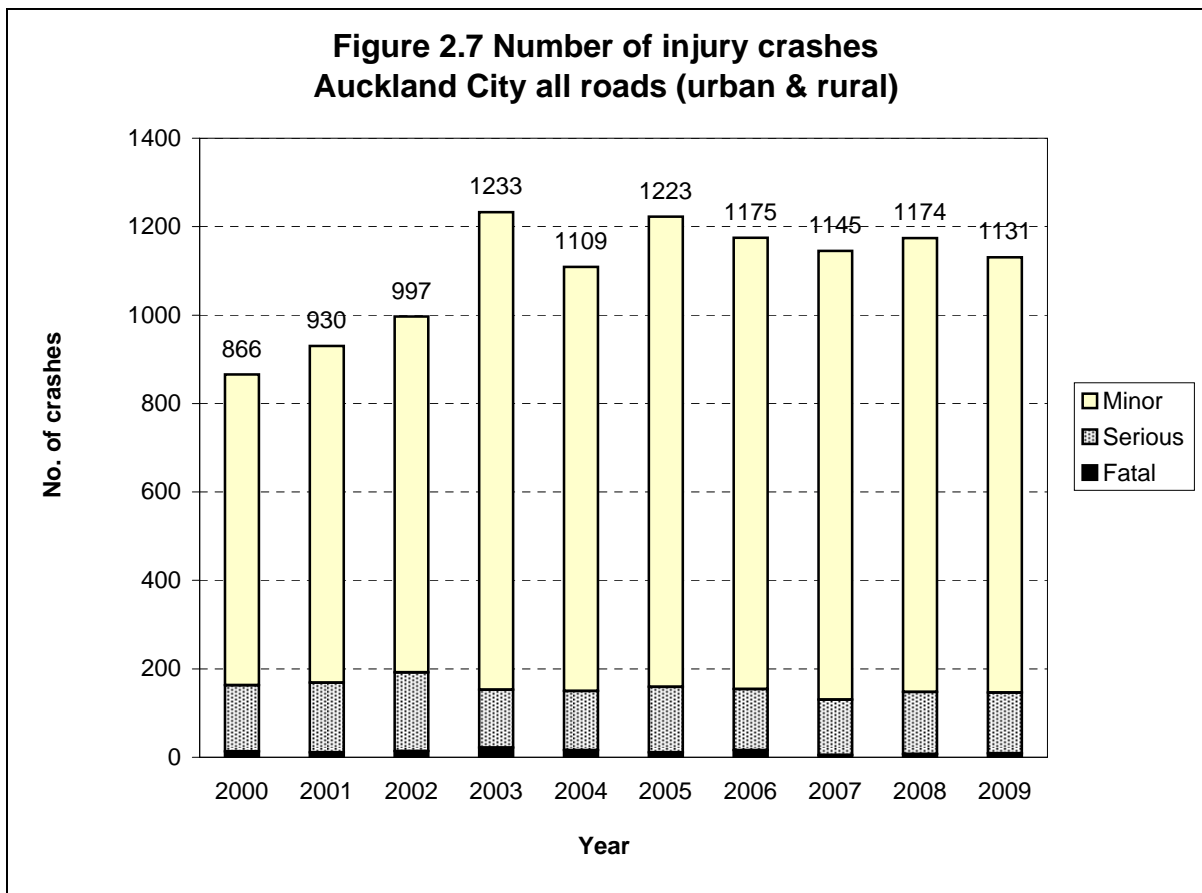
	2005	2006	2007	2008	2009	Total	%	Group A
Fatal casualties	12	18	6	7	10	53	1%	1%
Serious casualties	162	170	139	162	152	785	11%	13%
Minor casualties	1380	1304	1324	1293	1247	6548	89%	86%
<b>Total casualties</b>	<b>1554</b>	<b>1492</b>	<b>1469</b>	<b>1462</b>	<b>1409</b>	<b>7386</b>	<b>100%</b>	<b>100%</b>

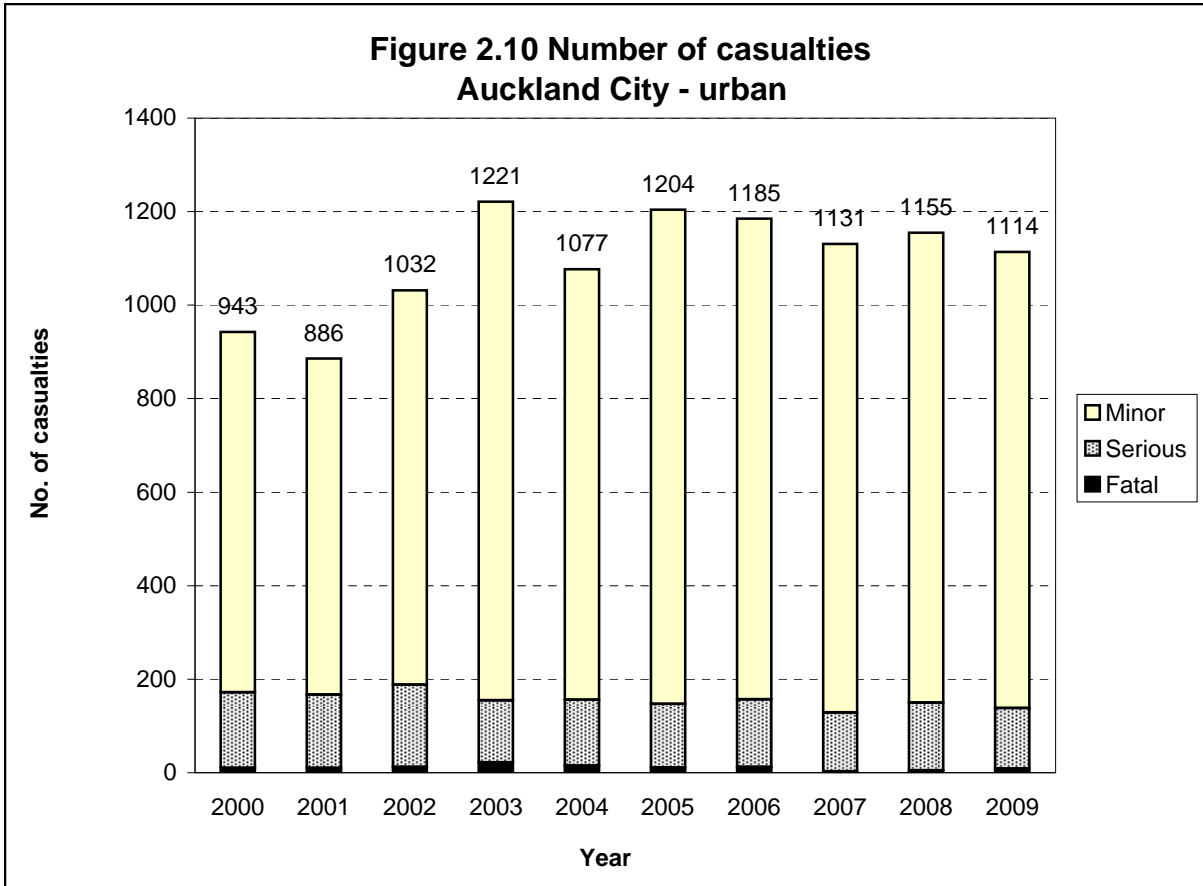
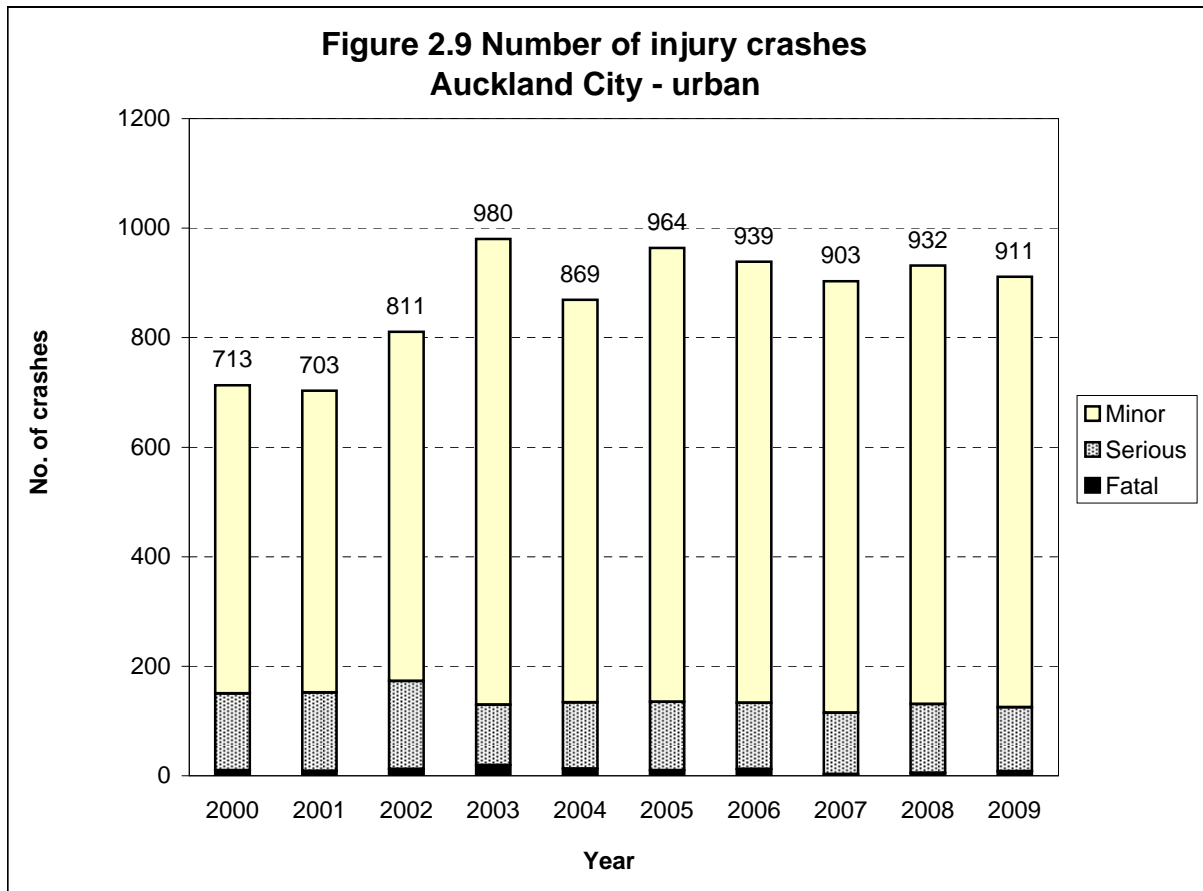
**Figure 2.5: Casualty numbers and severity 2005 to 2009 - urban roads**

	2005	2006	2007	2008	2009	Total	%	Group A
Fatal casualties	11	12	3	5	9	40	1%	1%
Serious casualties	136	145	126	145	129	681	12%	13%
Minor casualties	1057	1028	1002	1005	976	5068	88%	86%
<b>Total casualties</b>	<b>1204</b>	<b>1185</b>	<b>1131</b>	<b>1155</b>	<b>1114</b>	<b>5789</b>	<b>100%</b>	<b>100%</b>

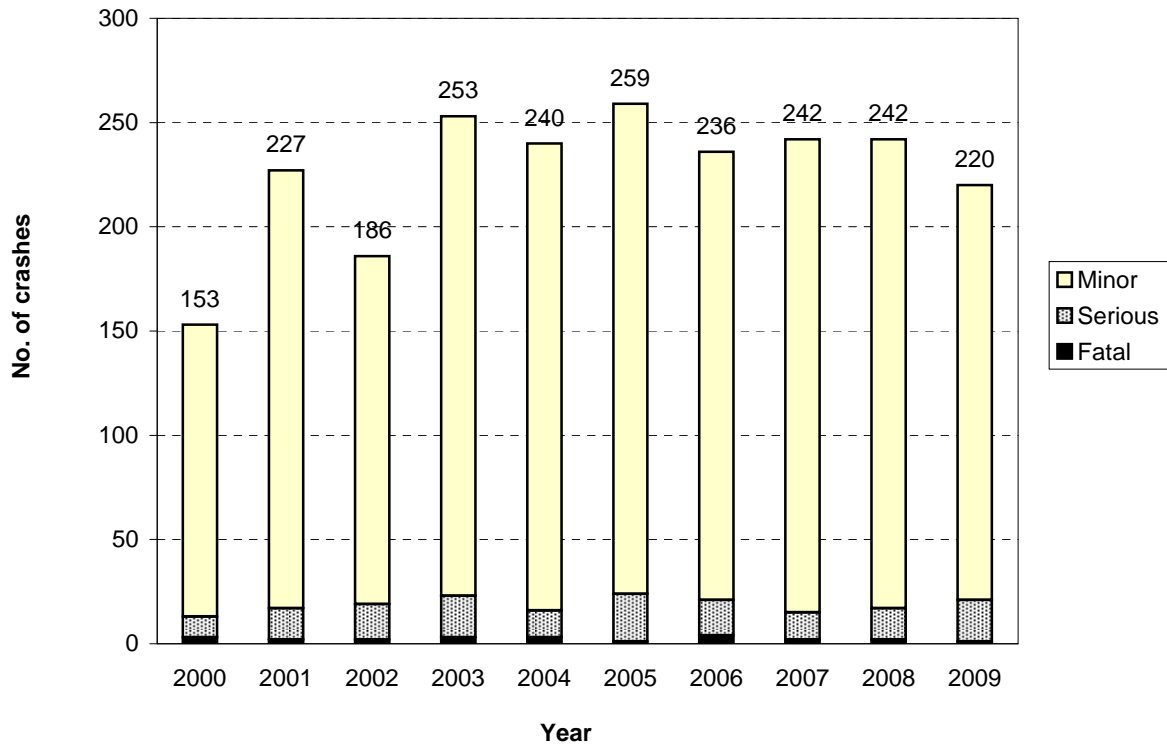
**Figure 2.6: Casualty numbers and severity 2005 to 2009 - rural roads**

	2005	2006	2007	2008	2009	Total	%	Group A
Fatal casualties	1	6	3	2	1	13	1%	2%
Serious casualties	26	25	13	17	23	104	7%	13%
Minor casualties	323	276	322	288	271	1480	93%	85%
<b>Total casualties</b>	<b>350</b>	<b>307</b>	<b>338</b>	<b>307</b>	<b>295</b>	<b>1597</b>	<b>100%</b>	<b>100%</b>

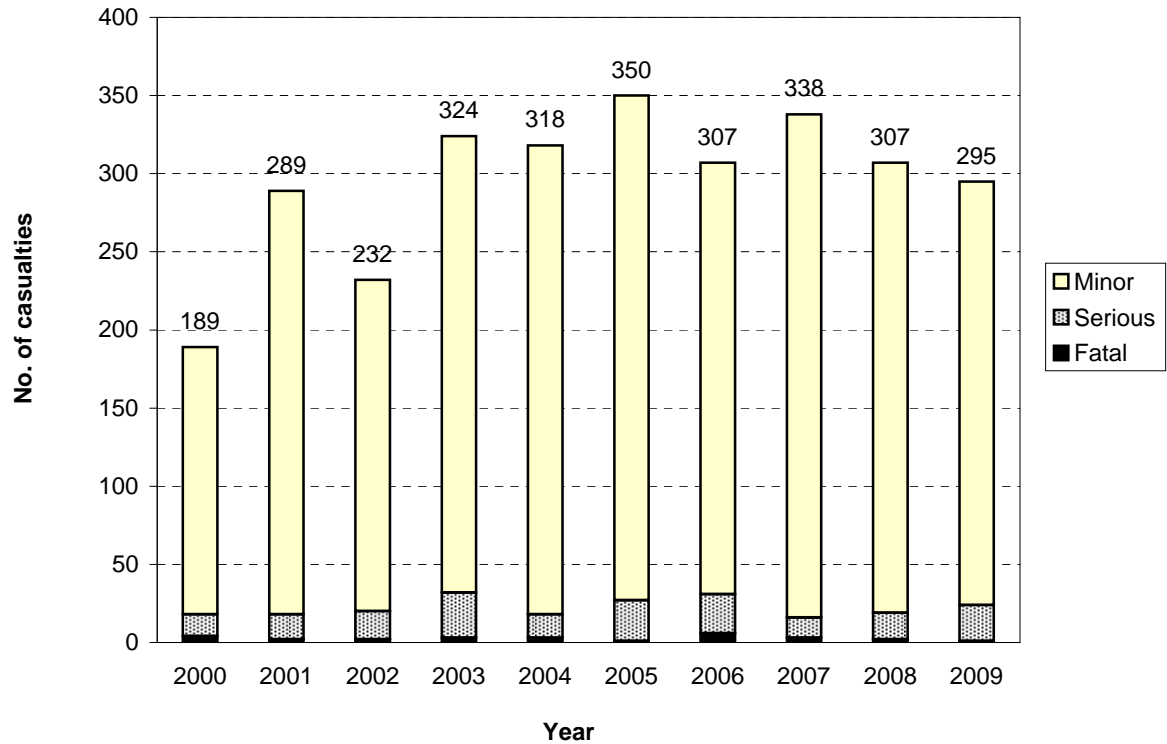


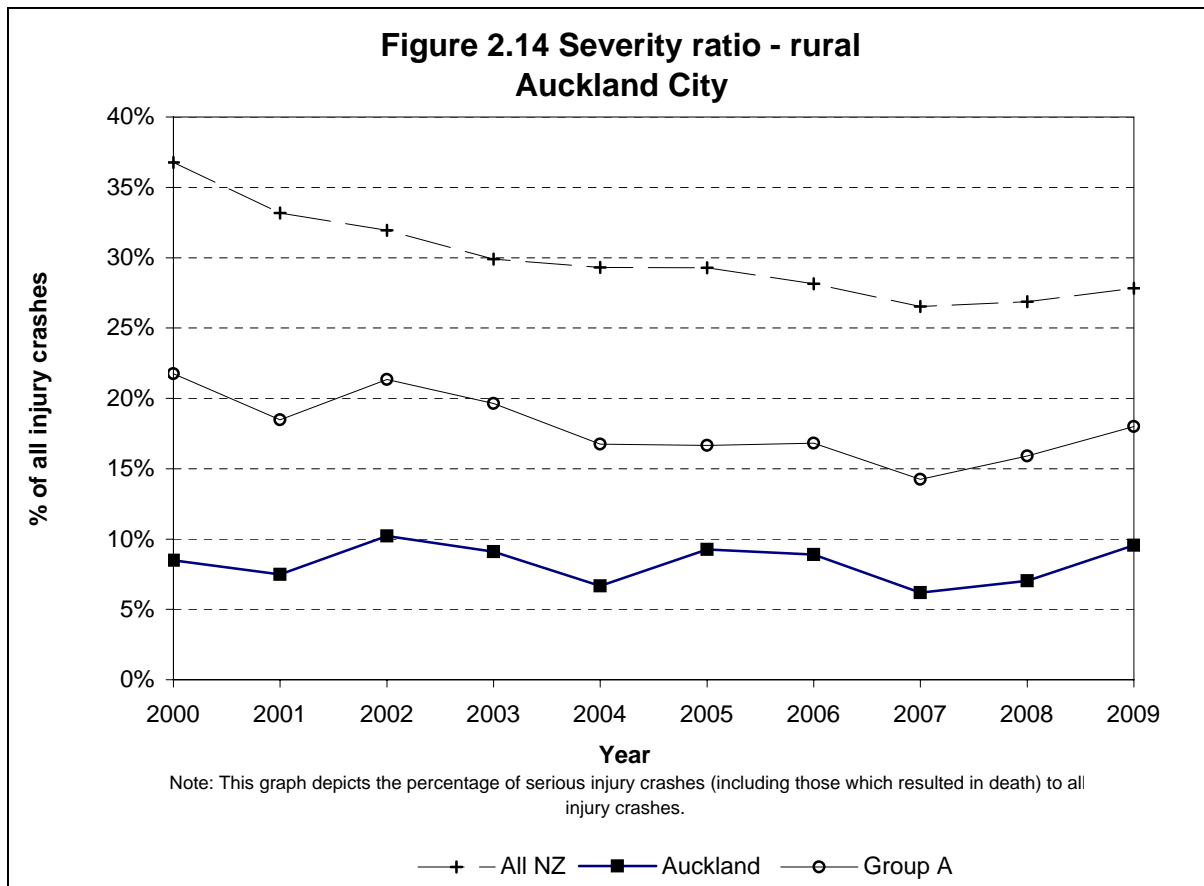
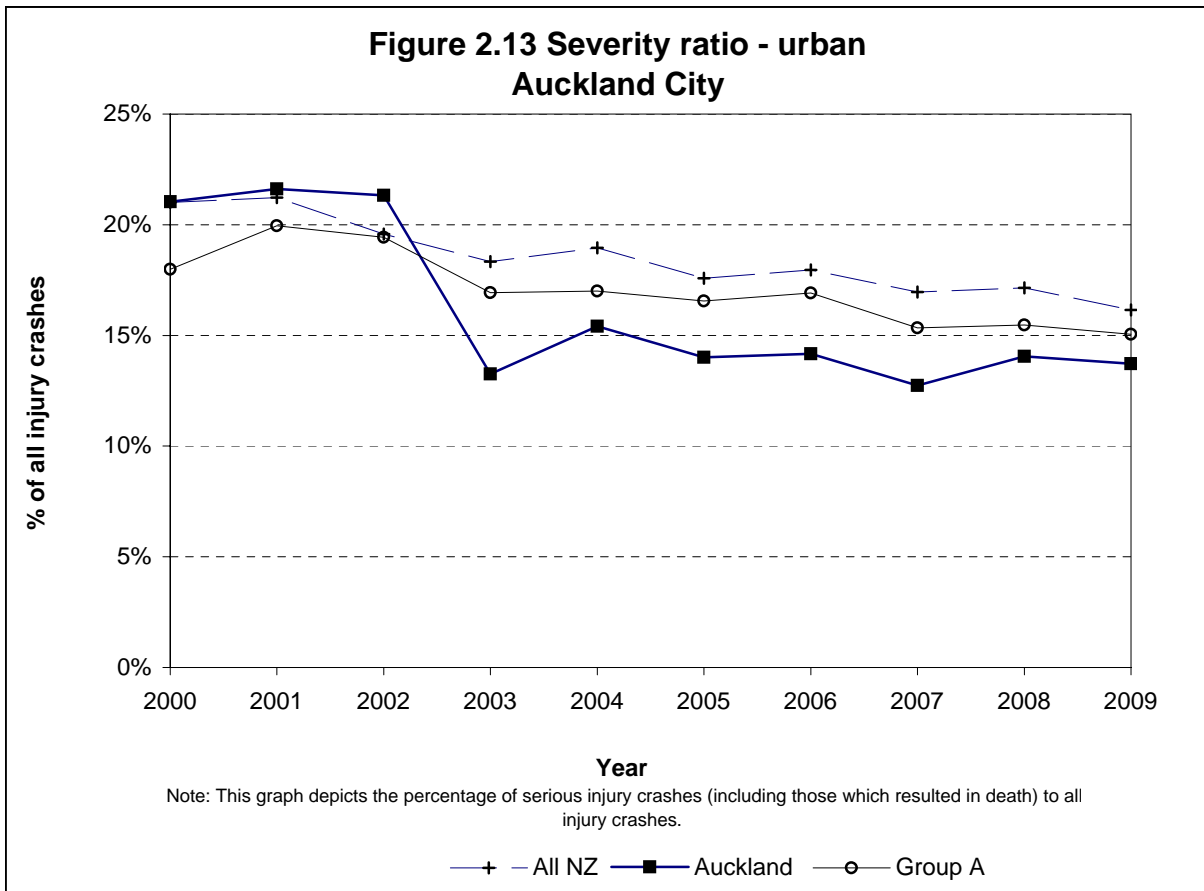


**Figure 2.11 Number of injury crashes  
Auckland City - rural**



**Figure 2.12 Number of casualties  
Auckland City - rural**





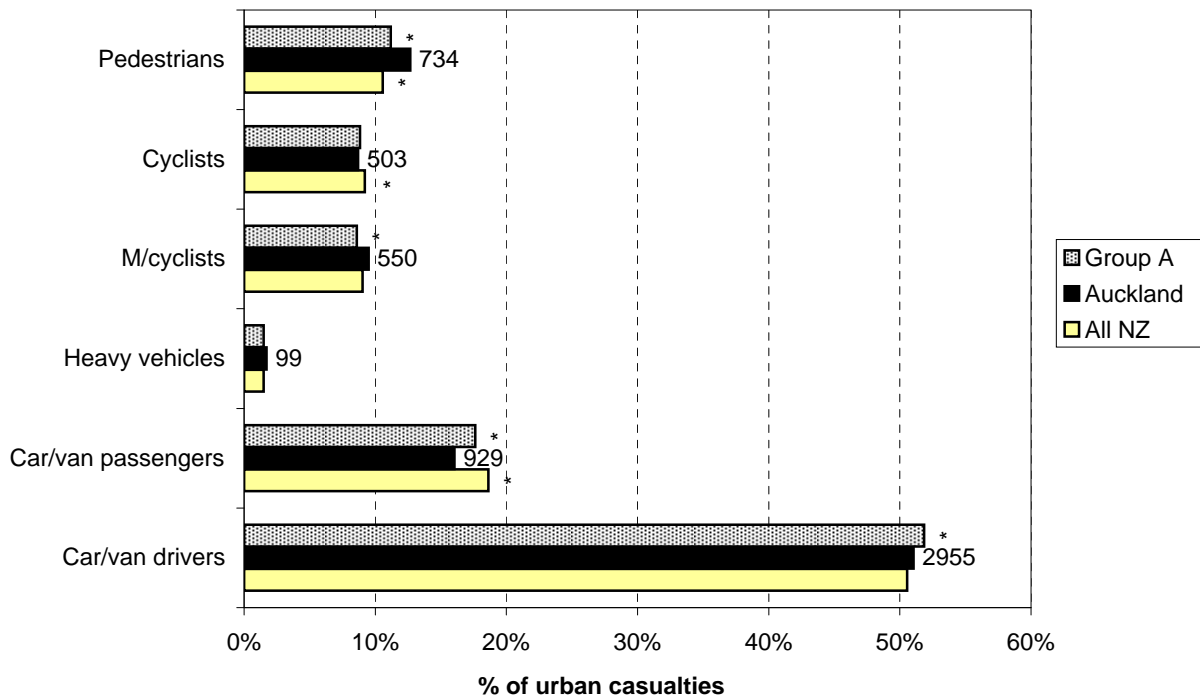


# *Road User Statistics*



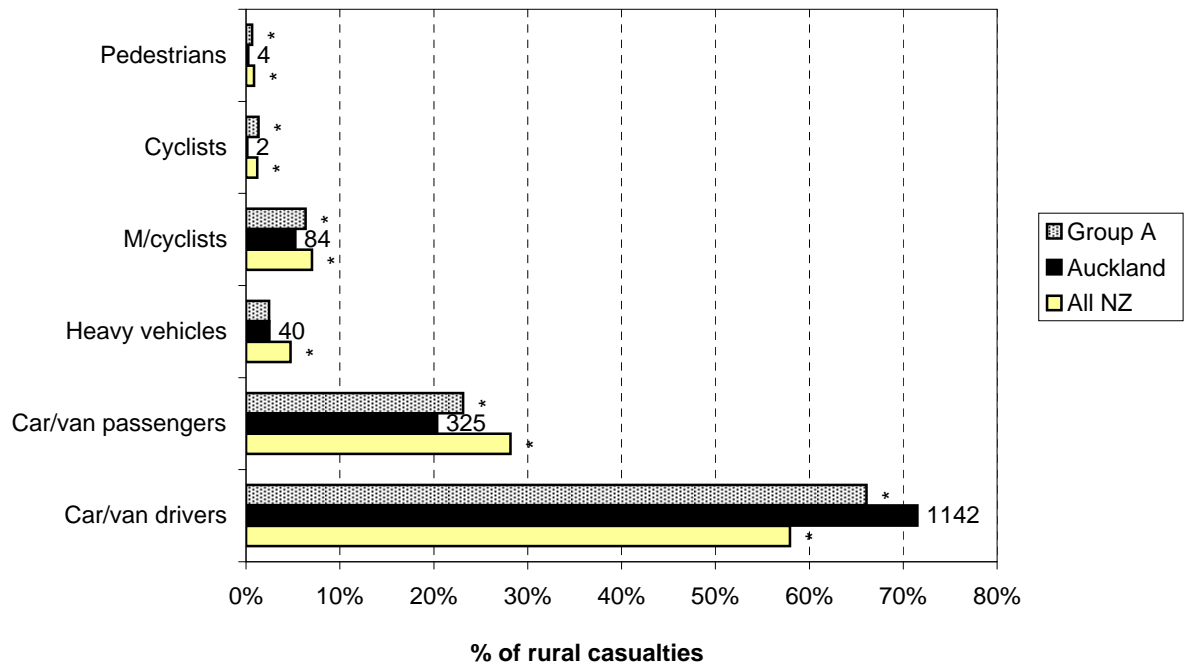


**Figure 3.1 Road user casualties - urban  
Auckland City (2005-2009)**



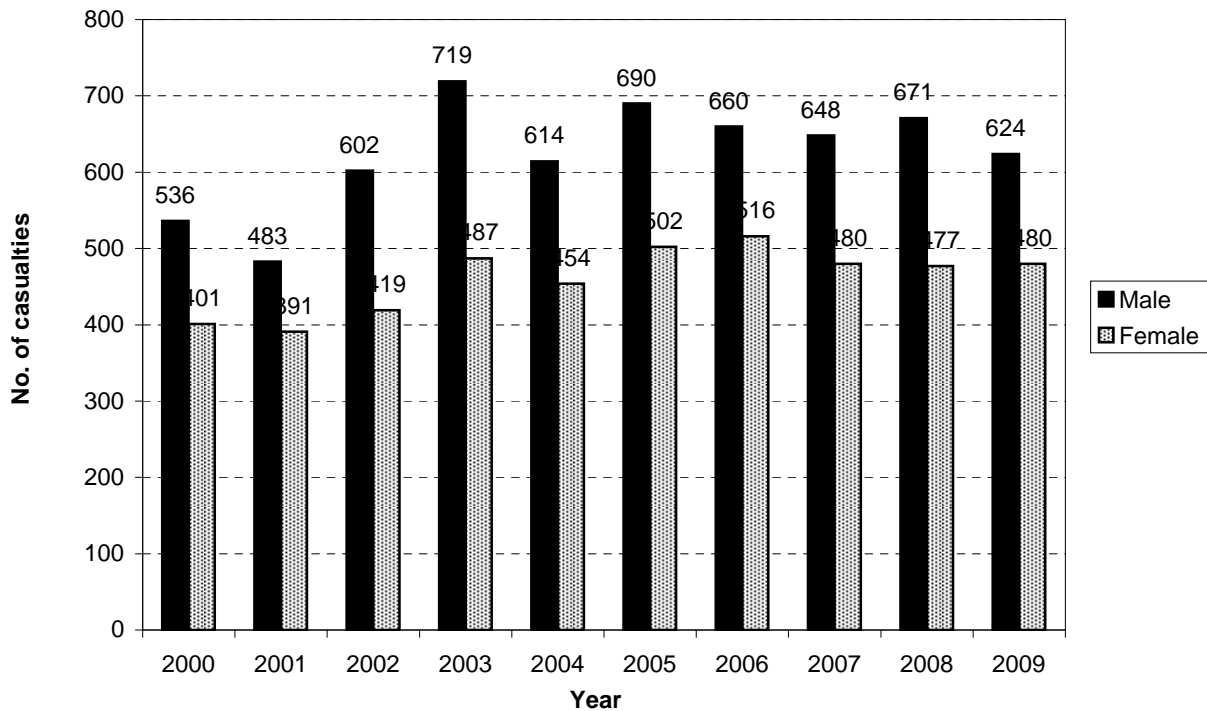
Note: While the graph plots percentages, the number of casualties is shown against the data points.  
\*Denotes statistically significant difference between Local Authority and National or Peer Group Proportions

**Figure 3.2 Road user casualties - rural  
Auckland City (2005-2009)**



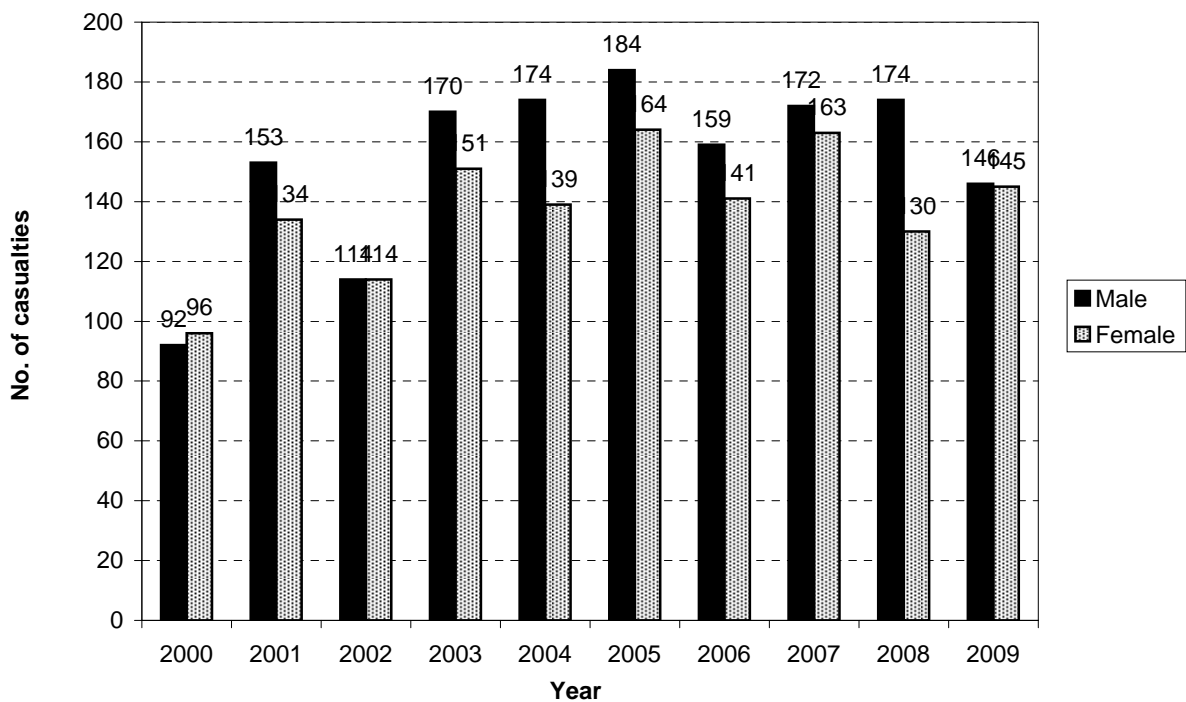
Note: While the graph plots percentages, the number of casualties is shown against the data points.  
\*Denotes statistically significant difference between Local Authority and National or Peer Group Proportions

**Figure 3.3 Male/female casualties - urban  
Auckland City**



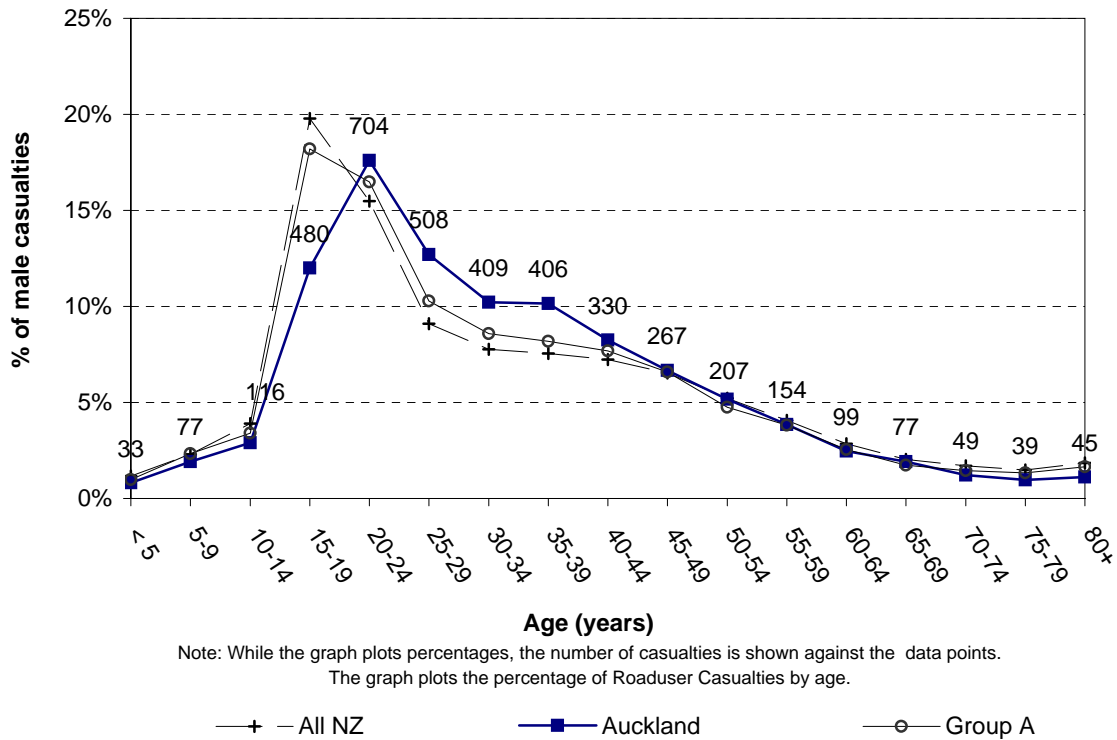
Note: This graph shows the number of male and female roadusers injured

**Figure 3.4 Male/female casualties - rural  
Auckland City**

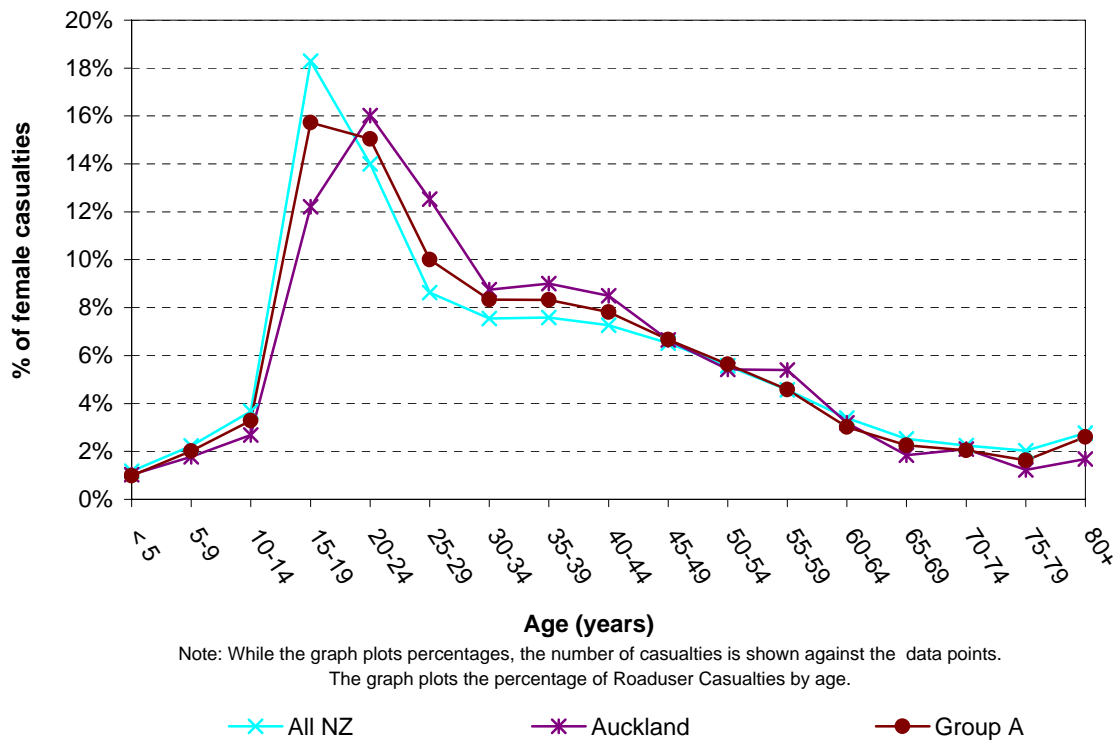


Note: This graph shows the number of male and female roadusers injured

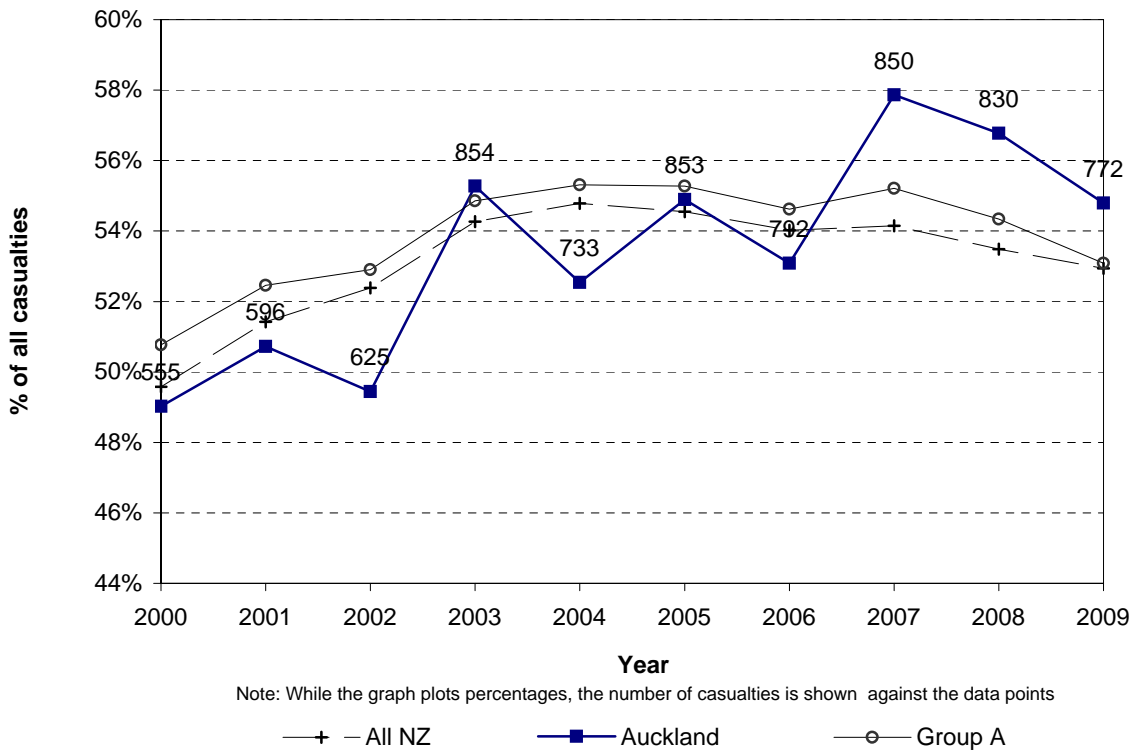
**Figure 3.5 Male casualties by age  
Auckland City (2005-2009)**



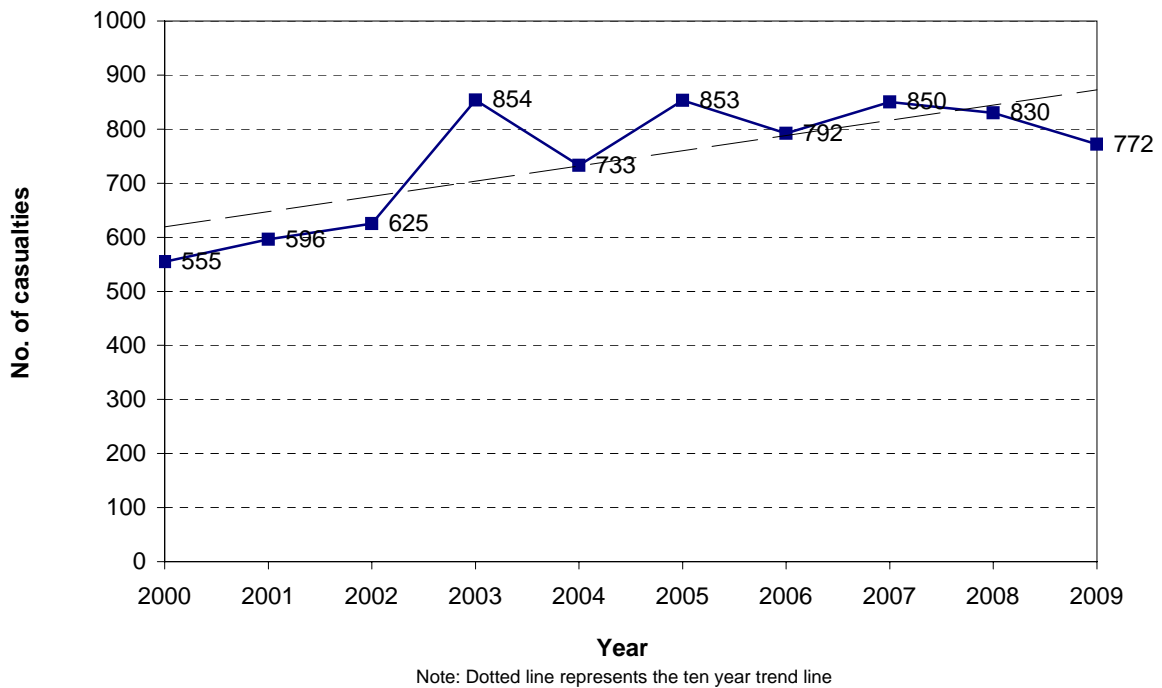
**Figure 3.6 Female casualties by age  
Auckland City (2005-2009)**



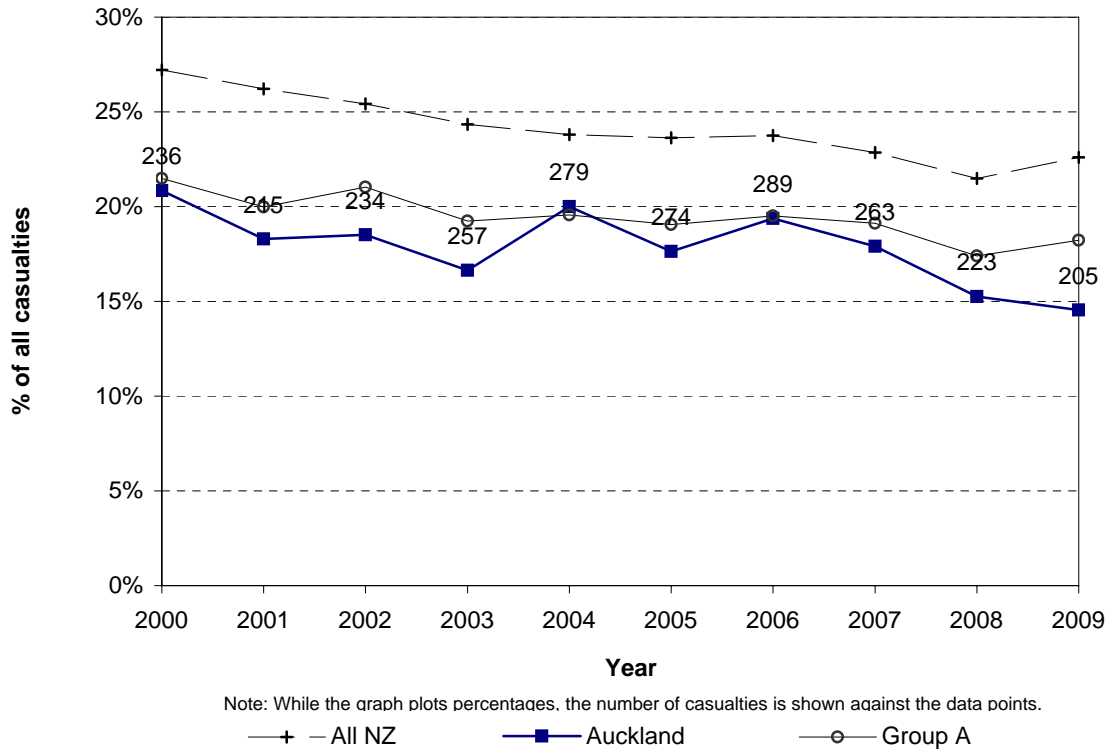
**Figure 3.7 Car/van driver casualties  
Auckland City**



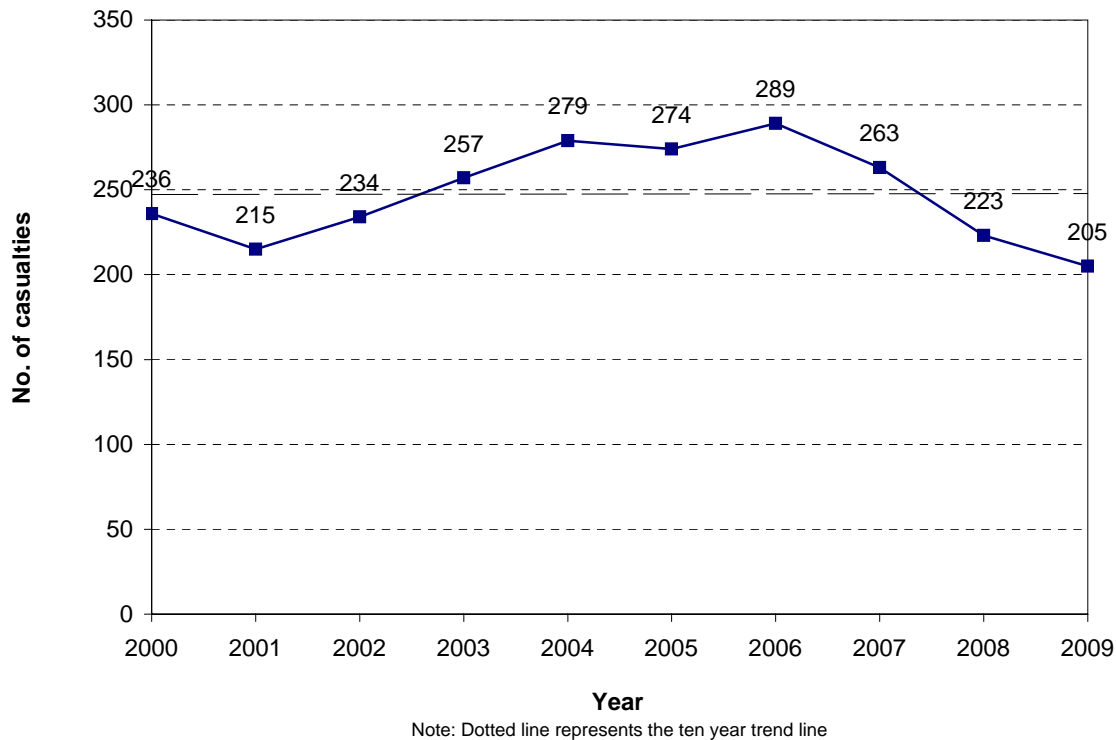
**Figure 3.8 Car/van driver casualties  
Auckland City**



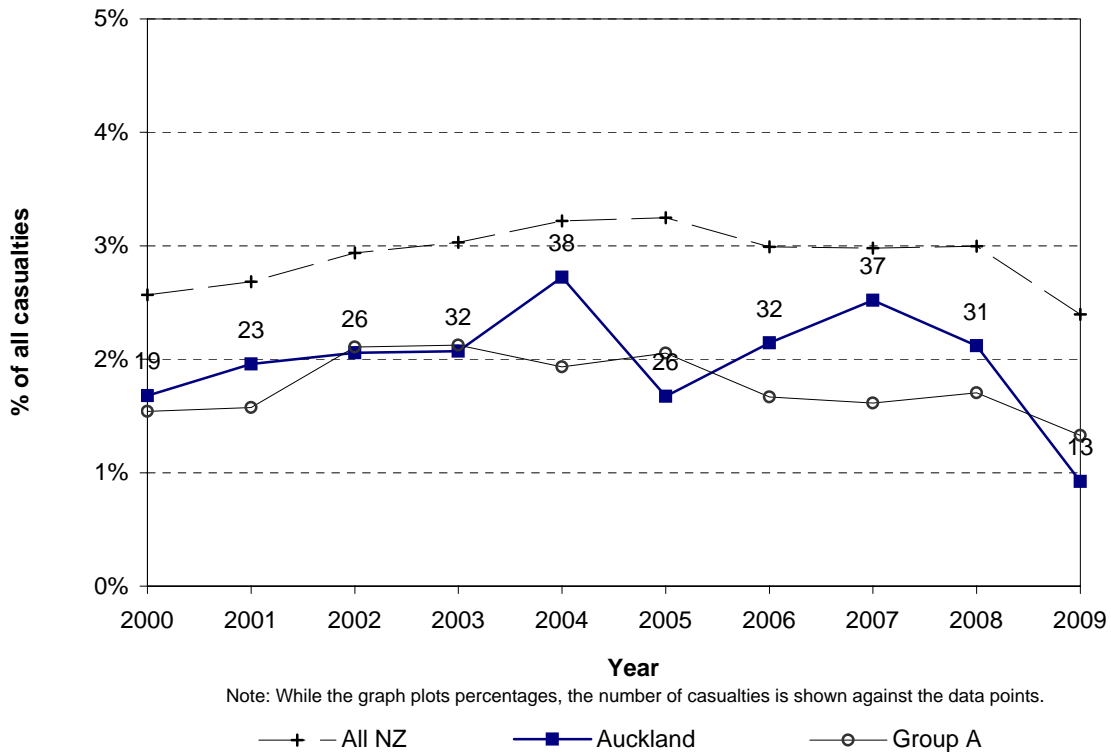
**Figure 3.9 Car/van passenger casualties  
Auckland City**



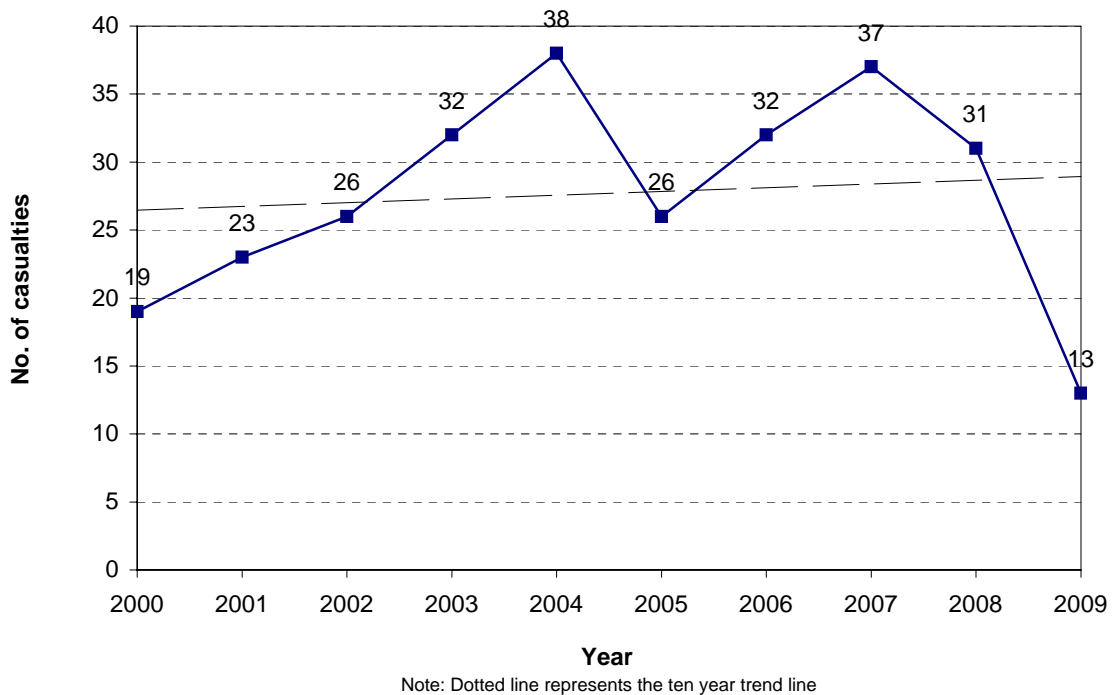
**Figure 3.10 Car/van passenger casualties  
Auckland City**



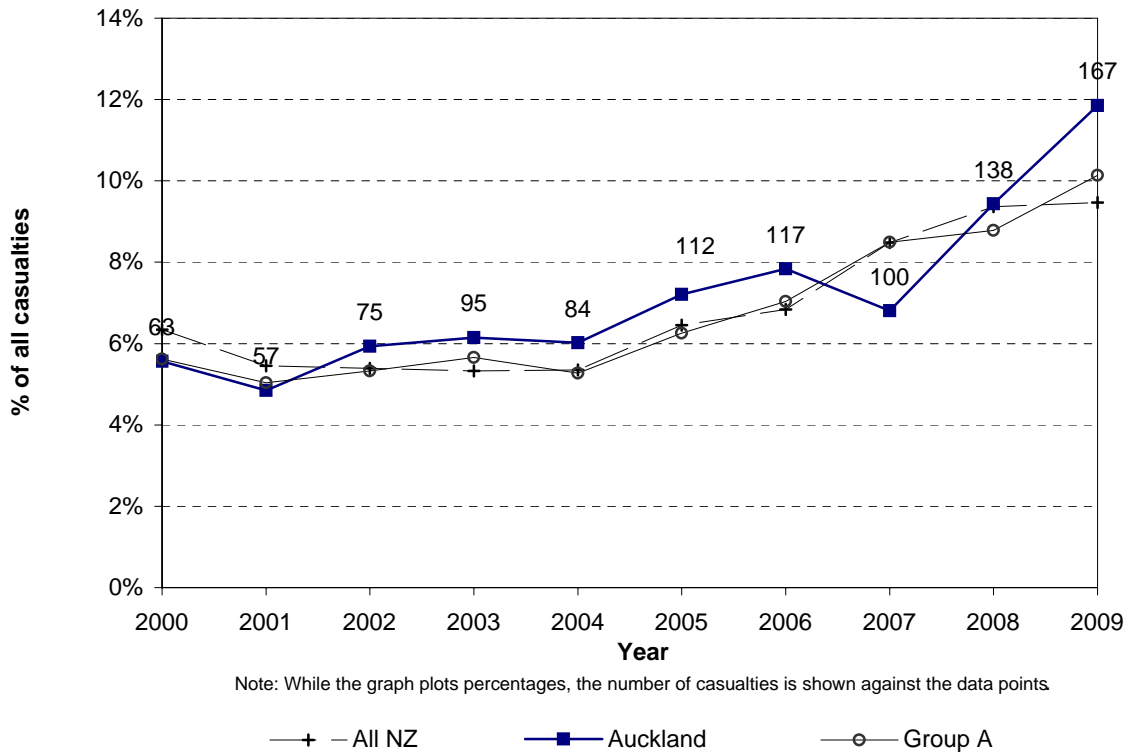
**Figure 3.11 Heavy vehicle casualties  
Auckland City**



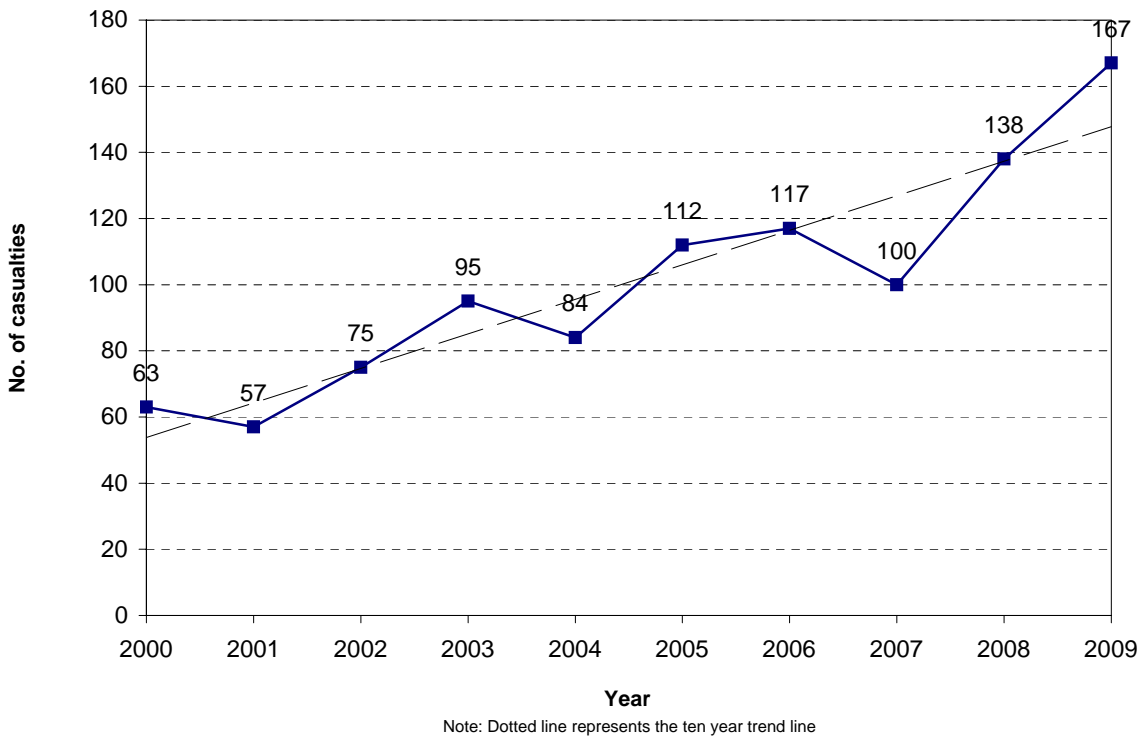
**Figure 3.12 Heavy vehicle casualties  
Auckland City**



**Figure 3.13 Motorcyclist casualties  
Auckland City**

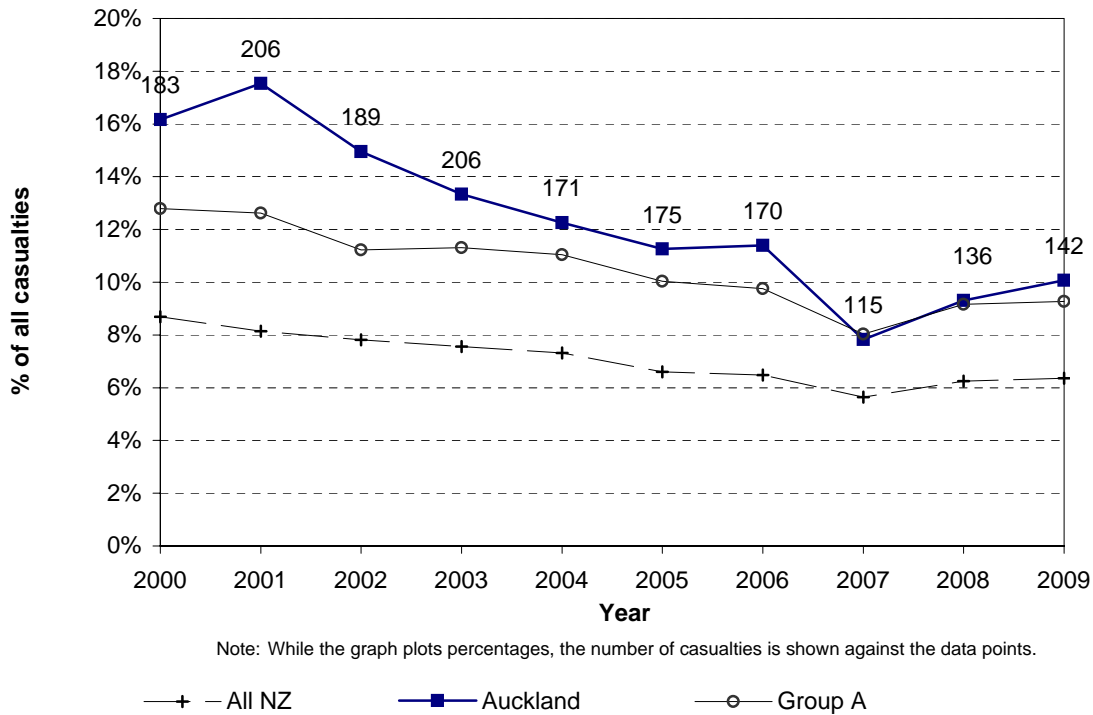


**Figure 3.14 Motorcyclist casualties  
Auckland City**

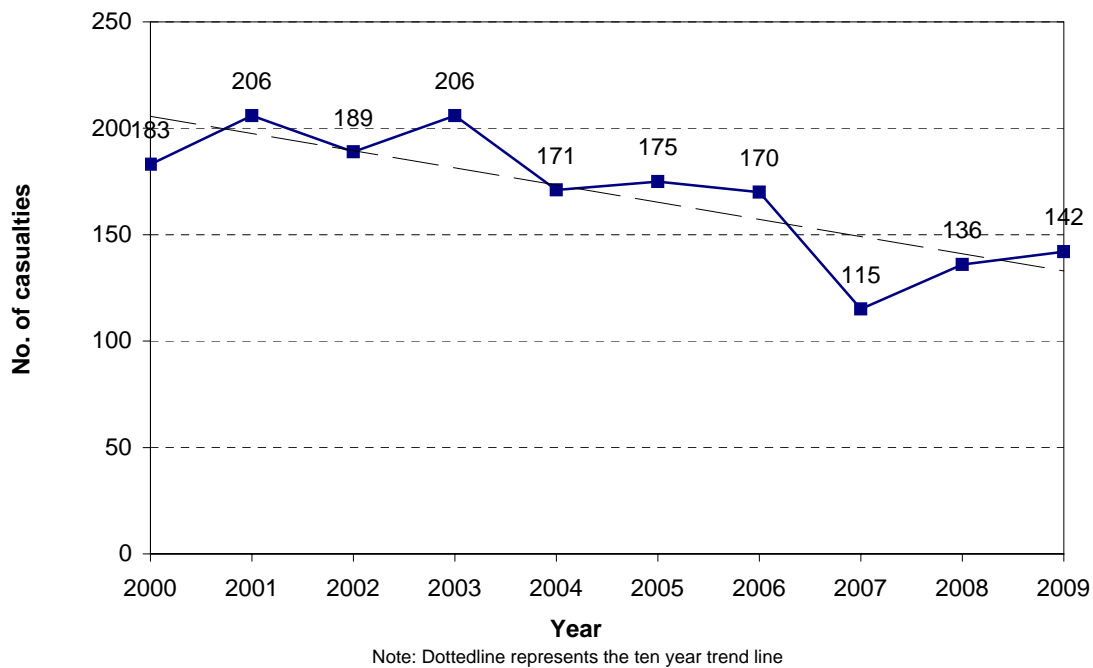




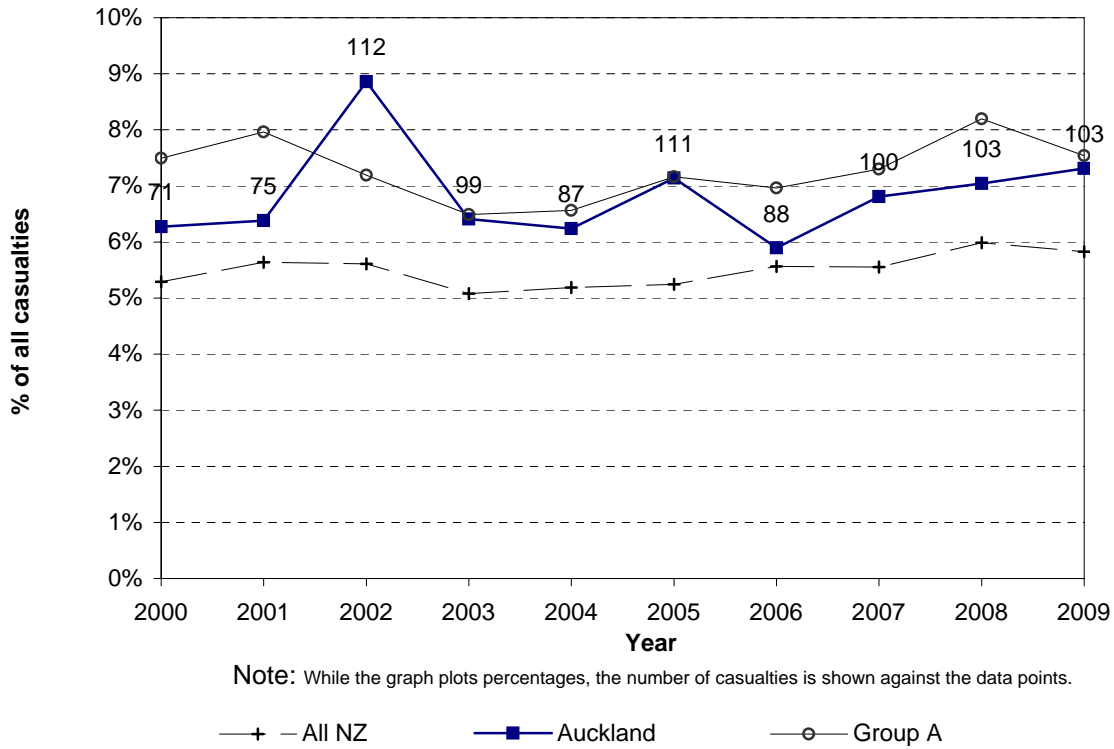
**Figure 3.15 Pedestrian casualties  
Auckland City**



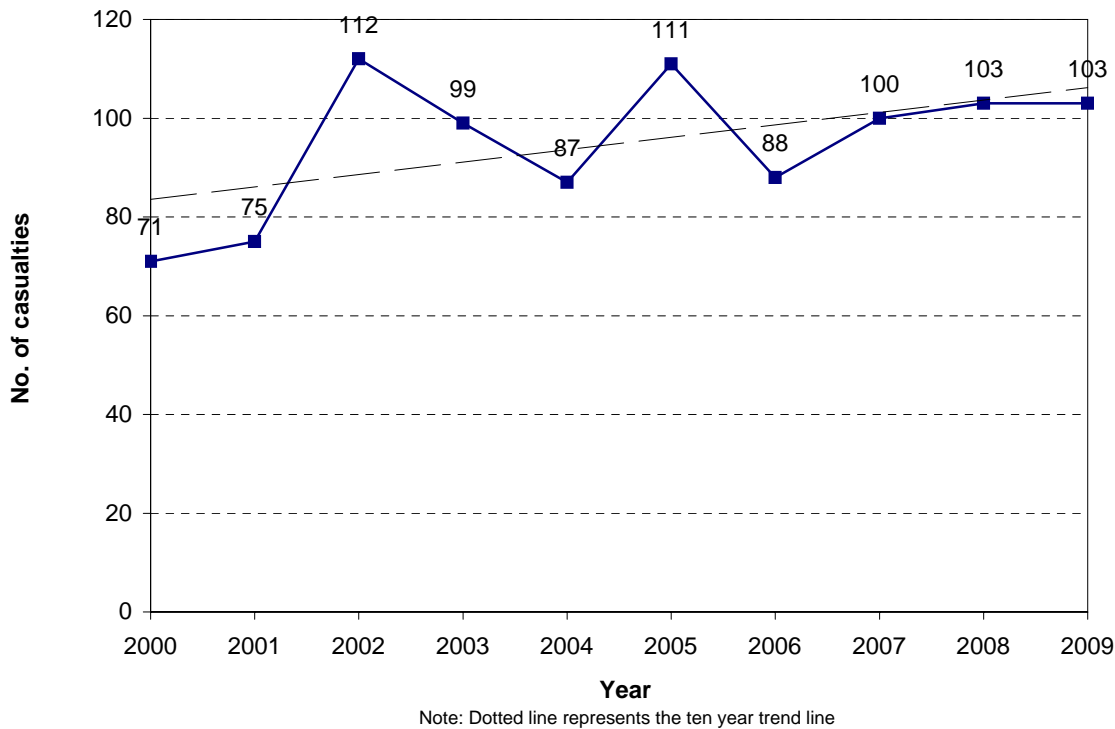
**Figure 3.16 Pedestrian casualties  
Auckland City**



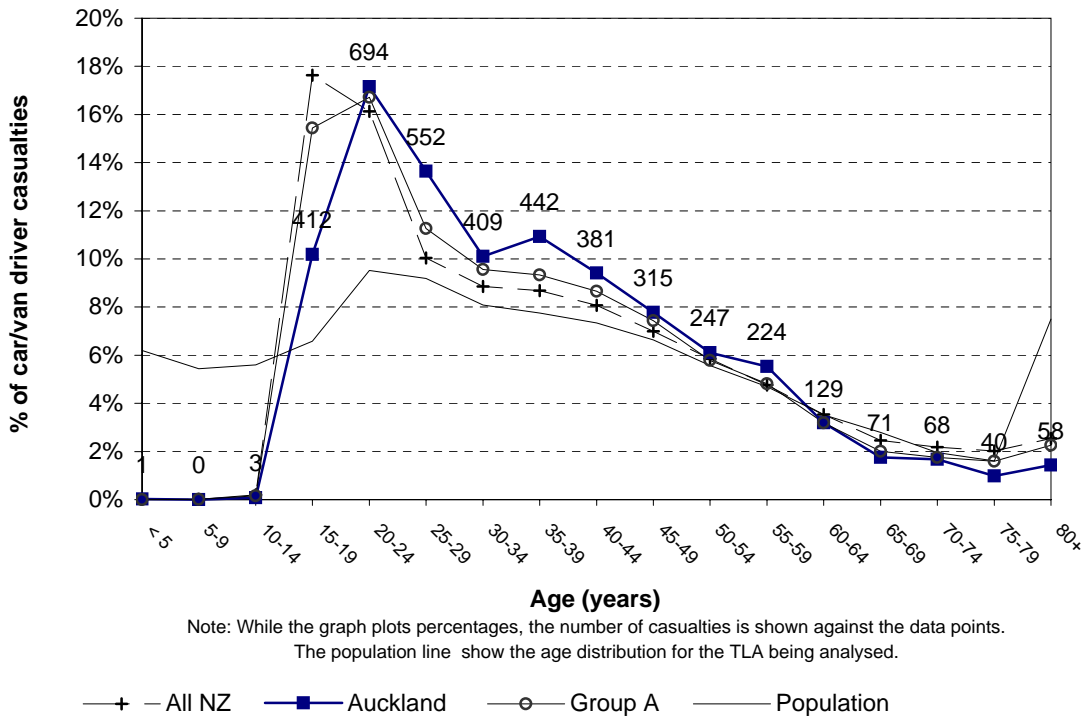
**Figure 3.17 Cyclist casualties  
Auckland City**



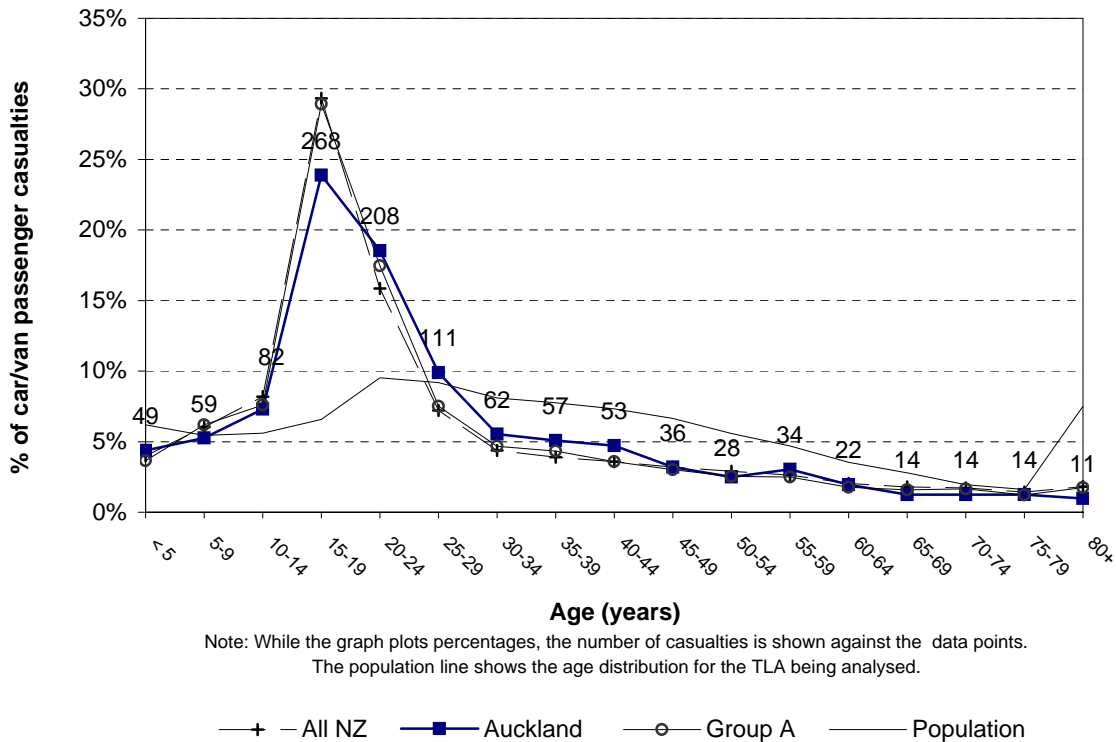
**Figure 3.18 Cyclist casualties  
Auckland City**



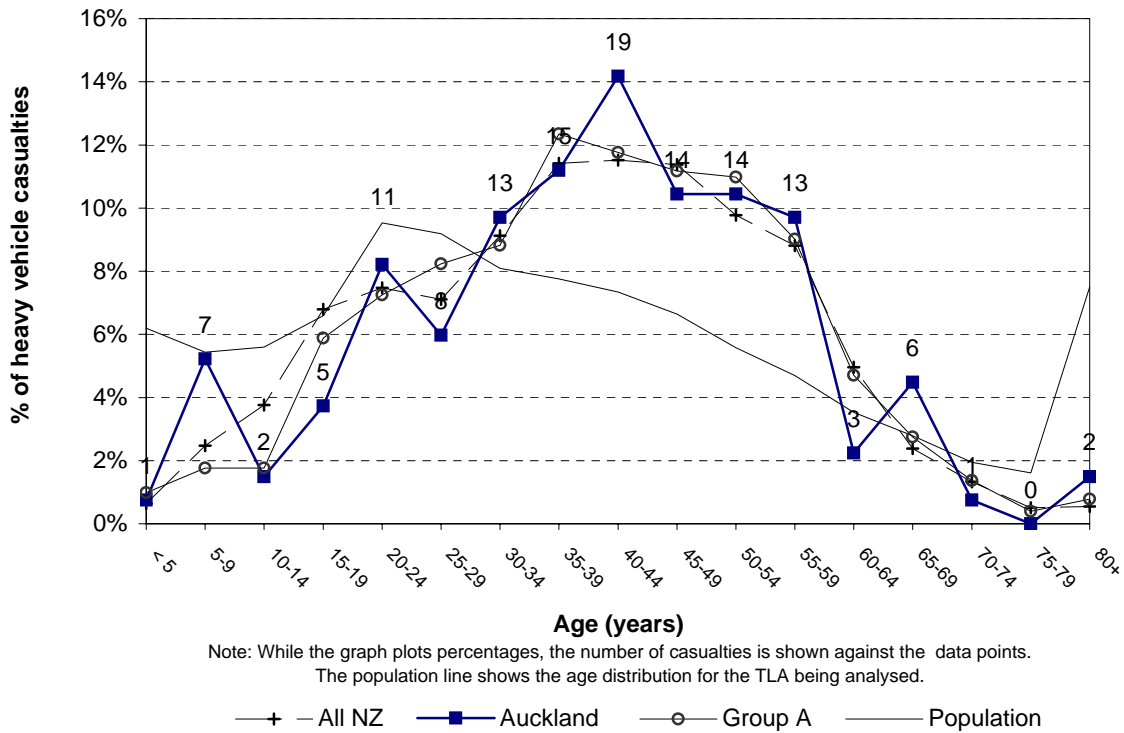
**Figure 3.19 Car/van driver casualty age  
Auckland City (2005-2009)**



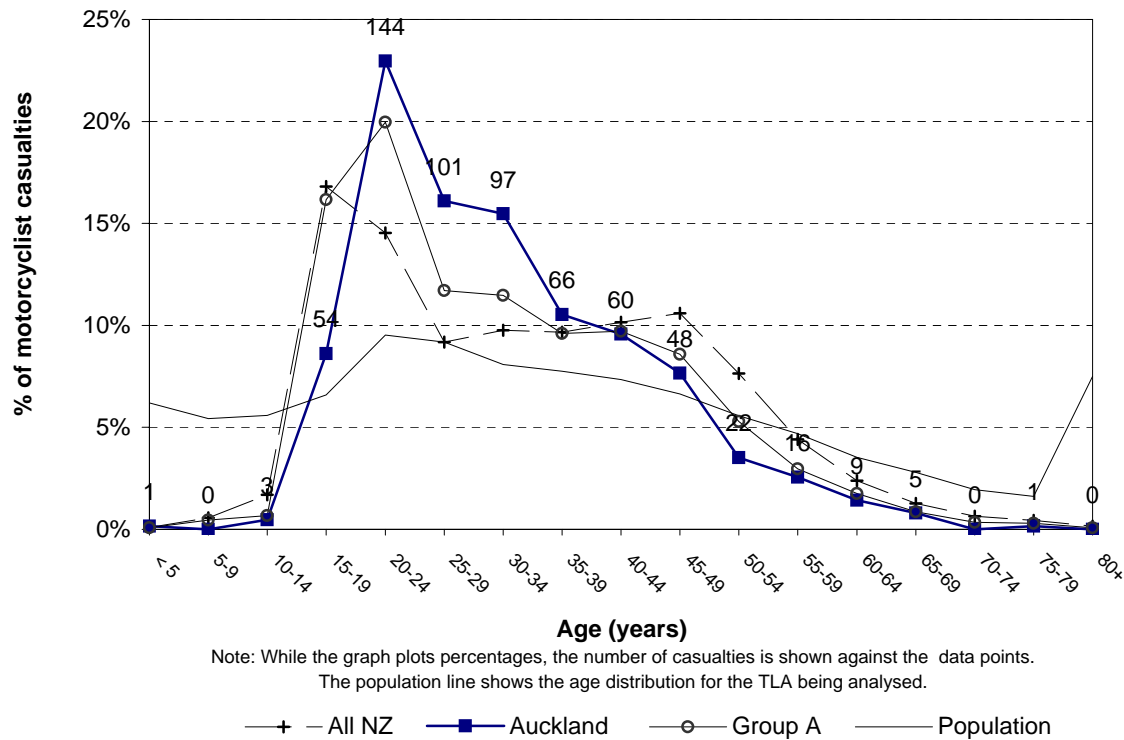
**Figure 3.20 Car/van passenger casualty age  
Auckland City (2005-2009)**



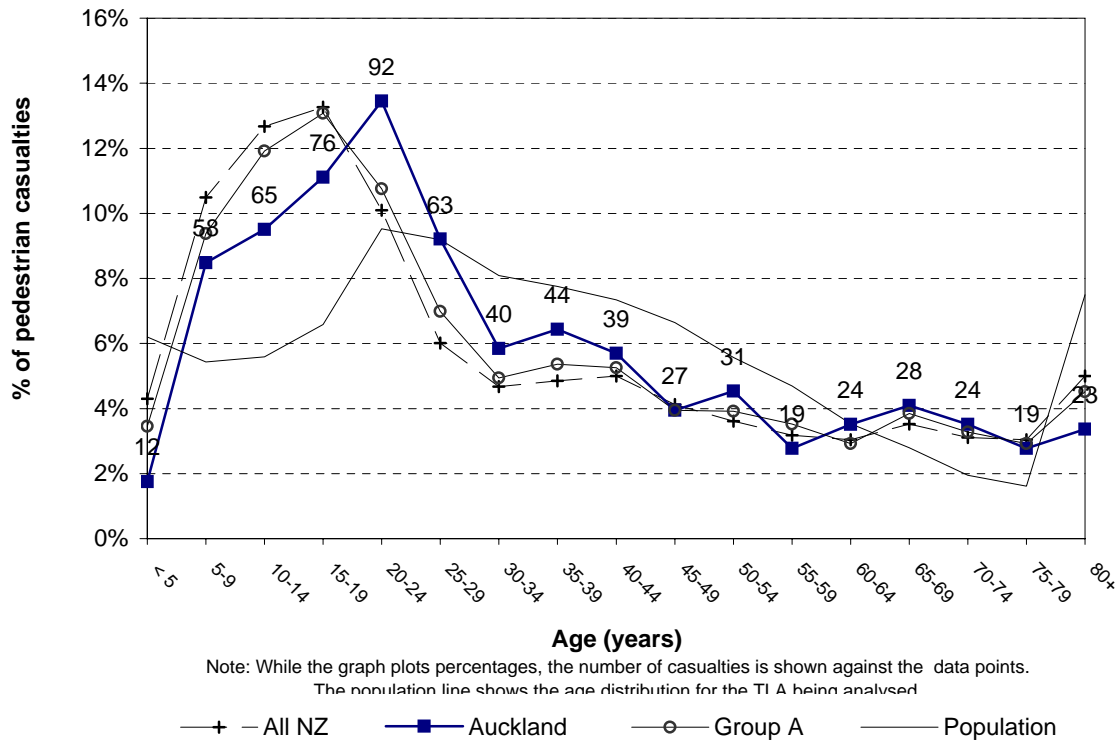
**Figure 3.21 Heavy vehicle casualty age  
Auckland City (2005-2009)**



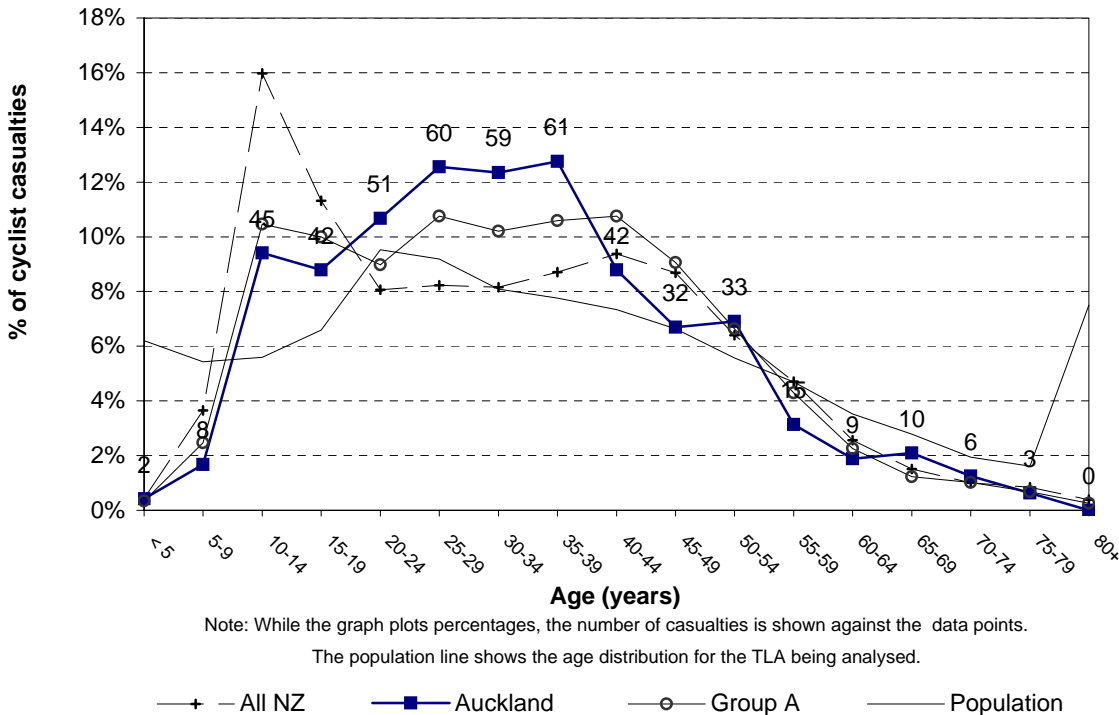
**Figure 3.22 Motorcyclist casualty age  
Auckland City (2005-2009)**



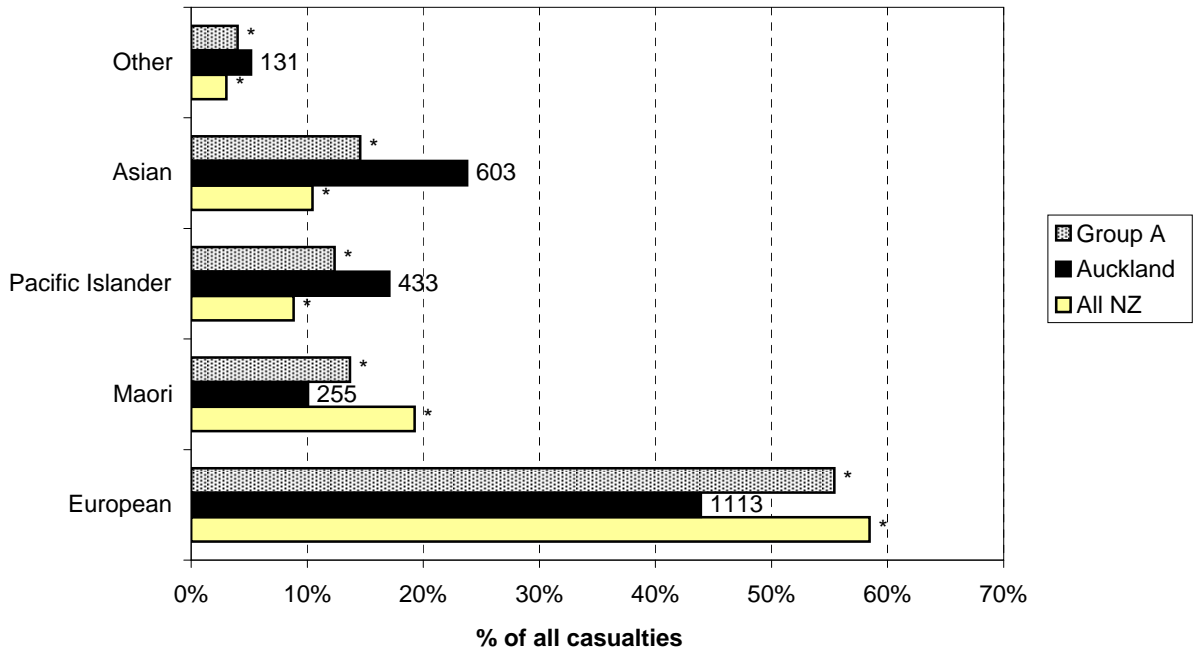
**Figure 3.23 Pedestrian casualty age  
Auckland City (2005-2009)**



**Figure 3.24 Cyclist casualty age  
Auckland City (2005-2009)**

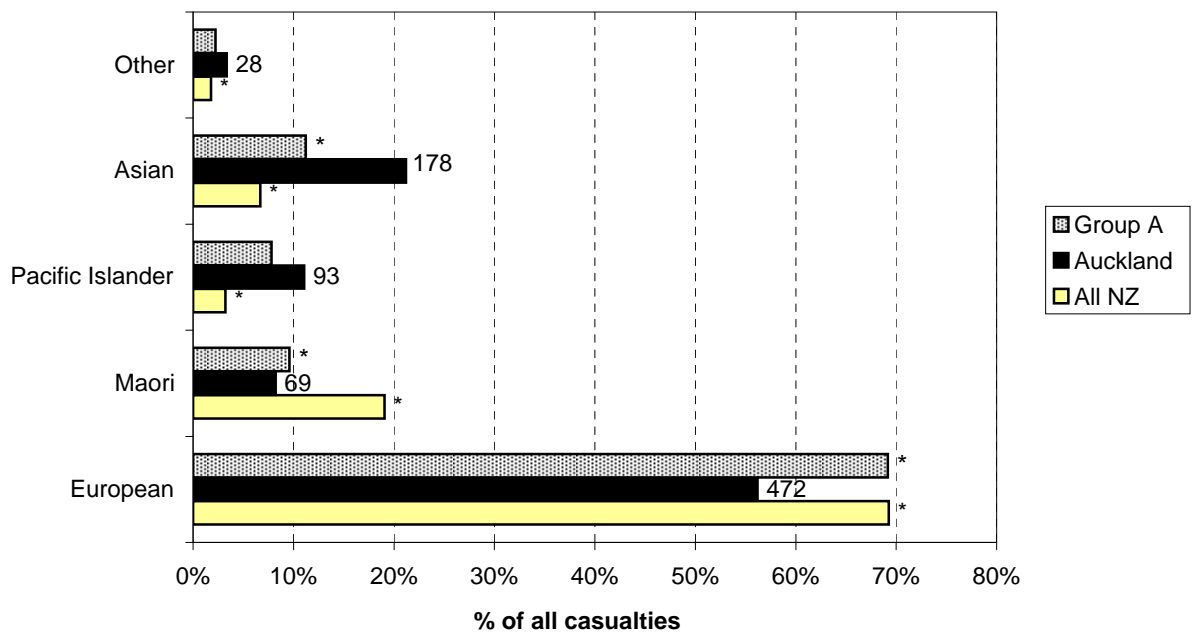


**Figure 3.25 Casualty ethnicity - urban  
Auckland City (2005-2009)**



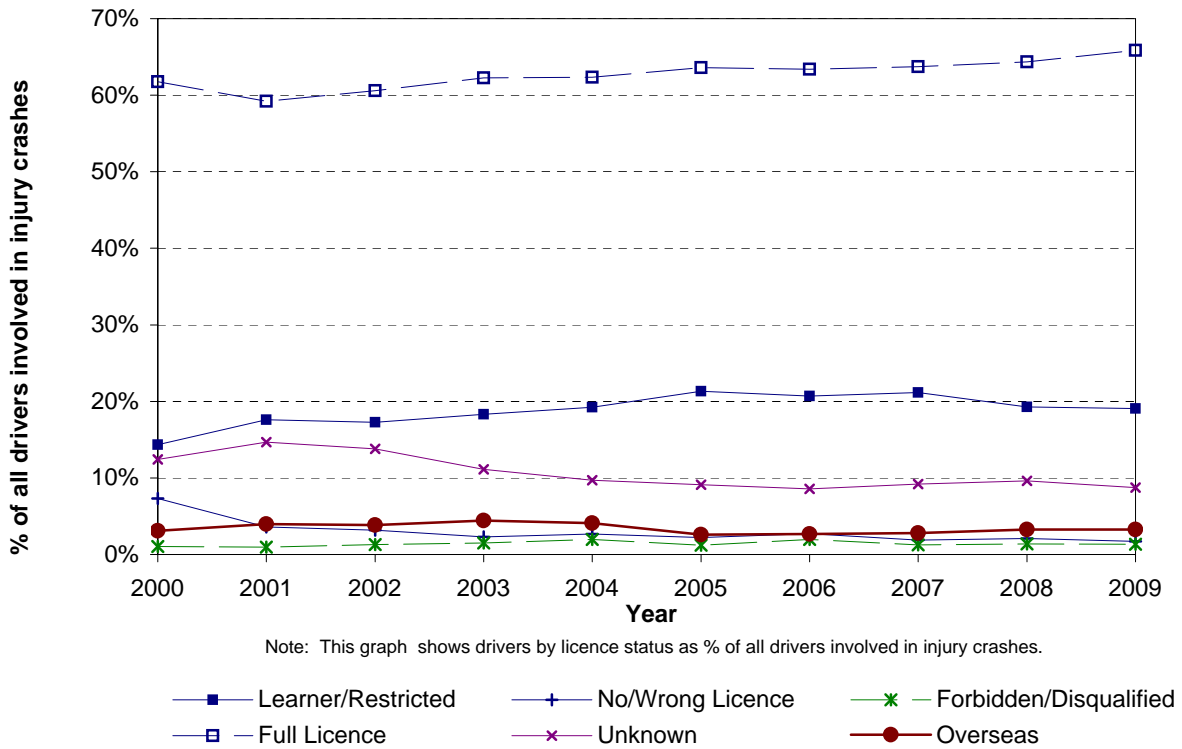
Note: While the graph plots percentages, the number of crashes is shown against the data points.  
\*Denotes statistically significant difference between Local Authority and National or Peer Group Proportions

**Figure 3.26 Casualty ethnicity - rural  
Auckland City (2005-2009)**

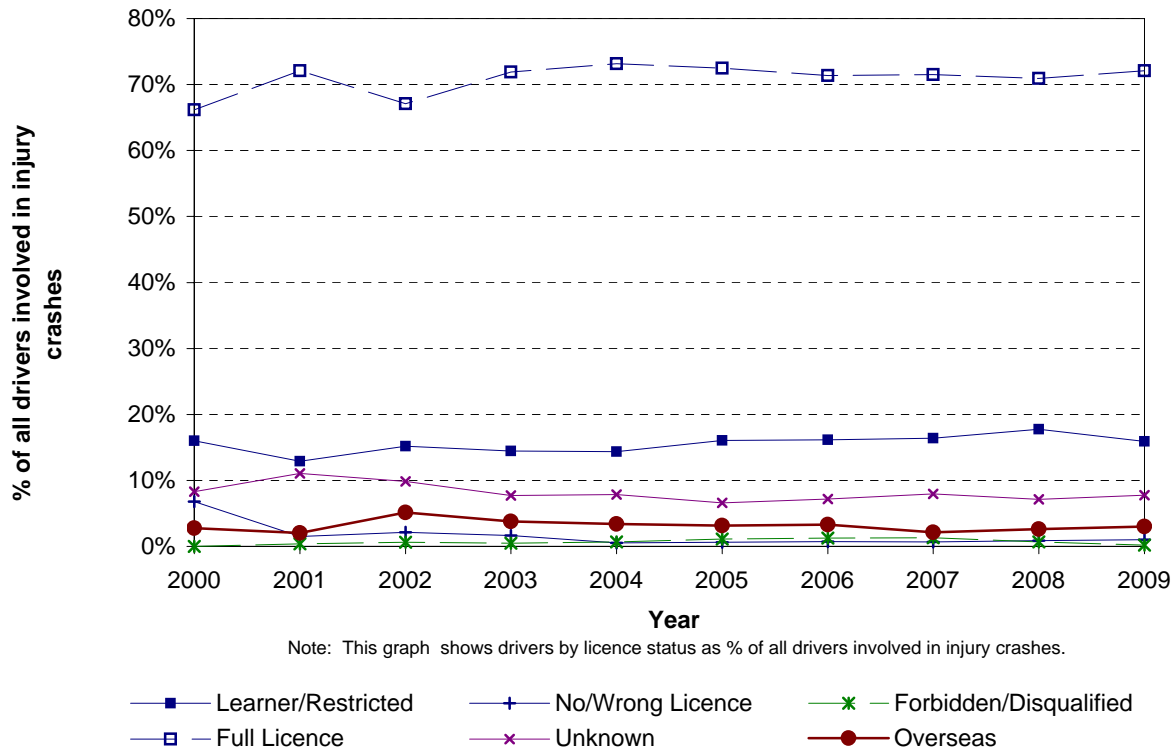


Note: While the graph plots percentages, the number of crashes is shown against the data points.  
\*Denotes statistically significant difference between Local Authority and National or Peer Group Proportions

**Figure 3.27 Licence status - urban  
Auckland City**



**Figure 3.28 Licence status - rural  
Auckland City**

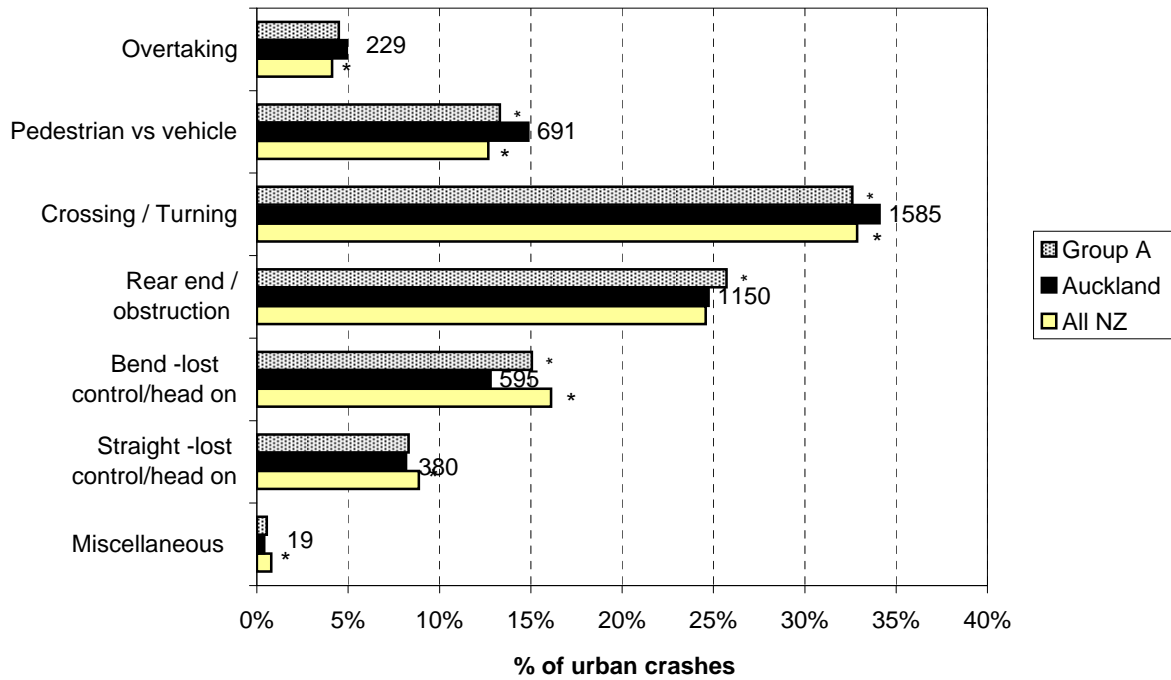


# *Crash Type Statistics*



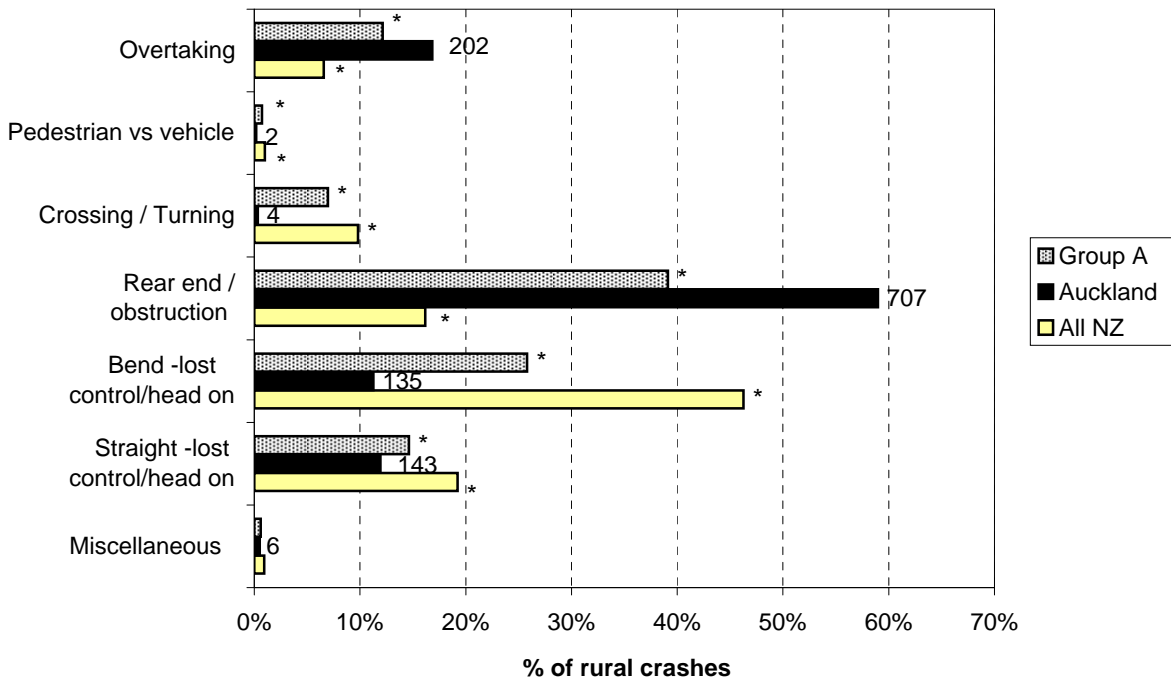


**Figure 4.1 Crash movement type - urban  
Auckland City (2005-2009)**



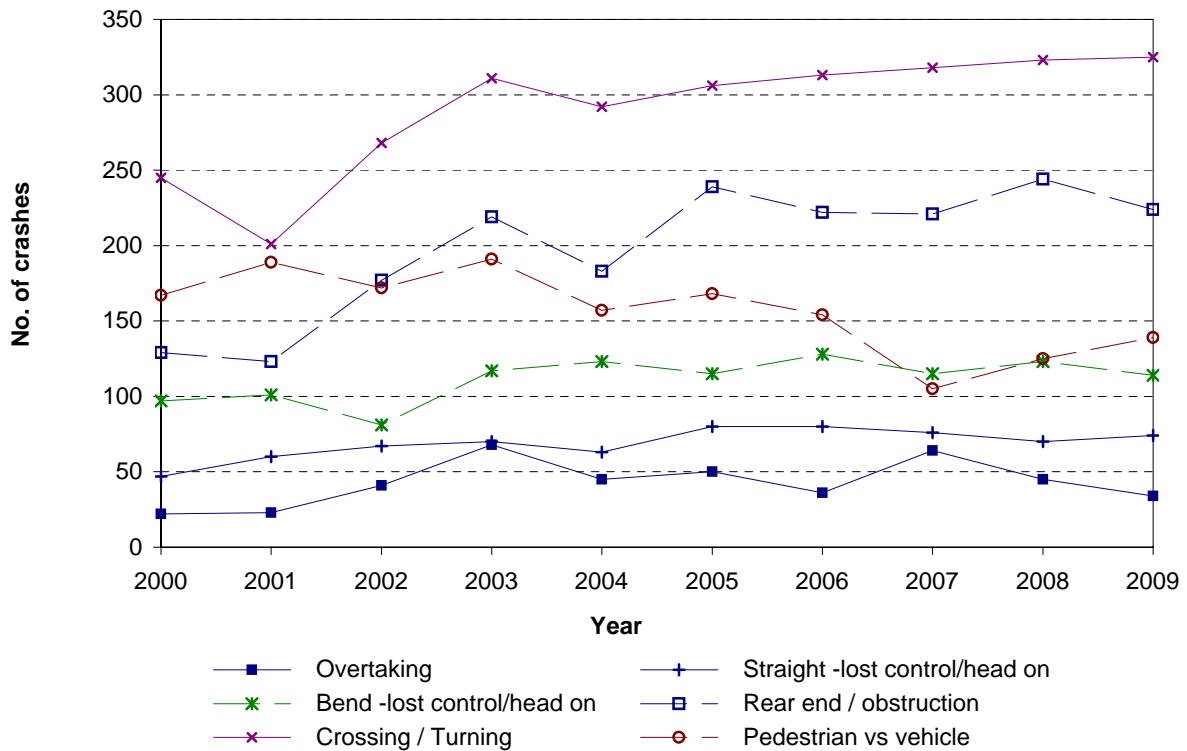
Note: While the graph plots percentages, the number of crashes is shown against the data points.  
\*Denotes statistically significant difference between Local Authority and National or Peer Group Proportions

**Figure 4.2 Crash movement type - rural  
Auckland City roads (2005-2009)**

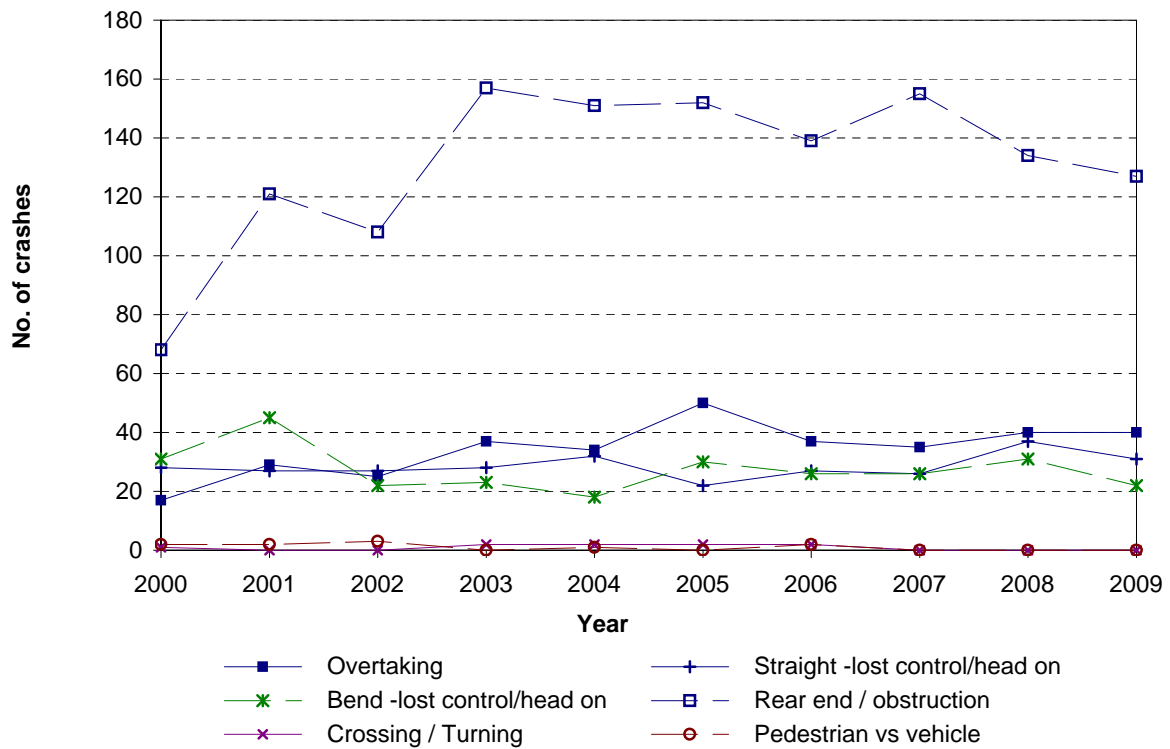


Note: While the graph plots percentages, the number of crashes is shown against the data points.  
\*Denotes statistically significant difference between Local Authority and National or Peer Group Proportions

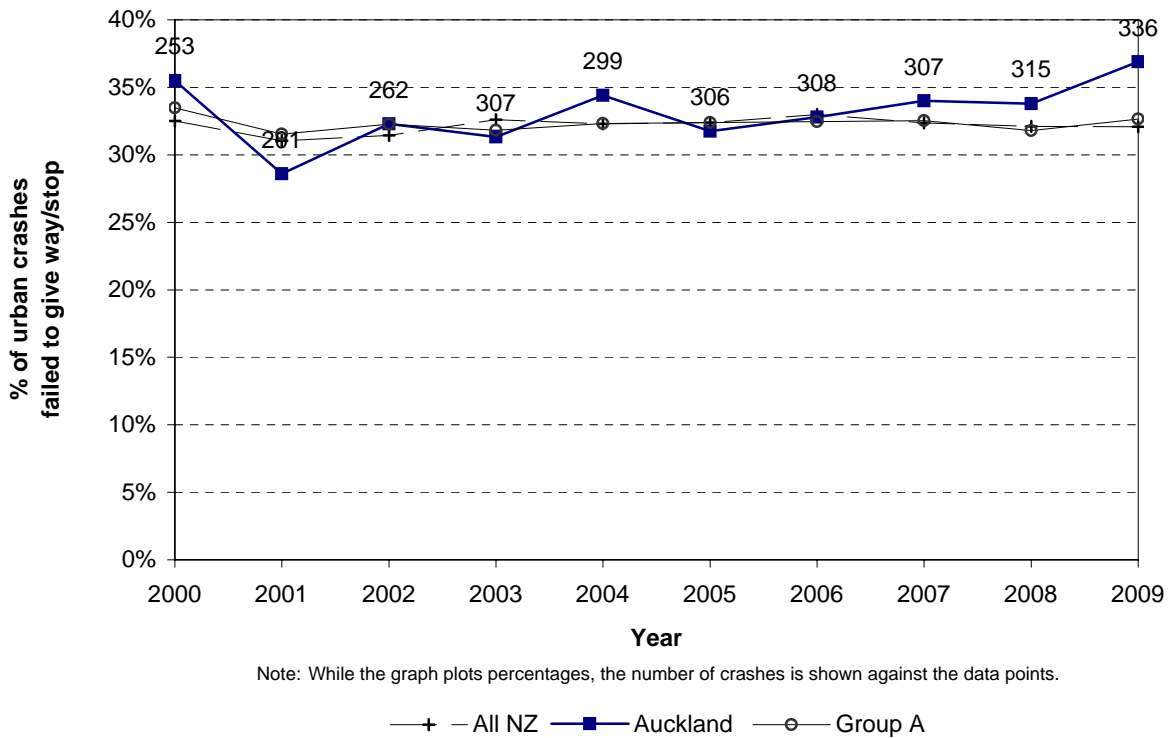
**Figure 4.3 Crash movement type - trends  
Auckland City - urban roads**



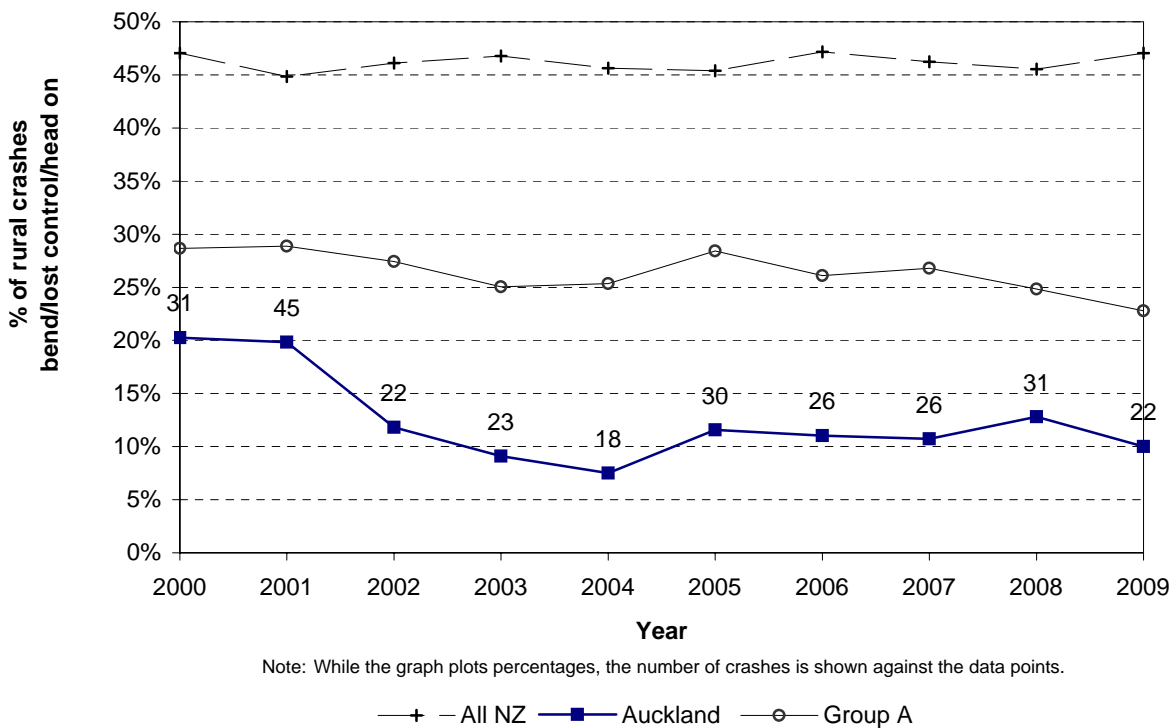
**Figure 4.4 Crash movement type - trends  
Auckland City - rural roads**



**Figure 4.5 Failed to give way / stop  
Auckland City - urban roads**



**Figure 4.6 Bend - lost control / head - on  
Auckland City - rural roads**

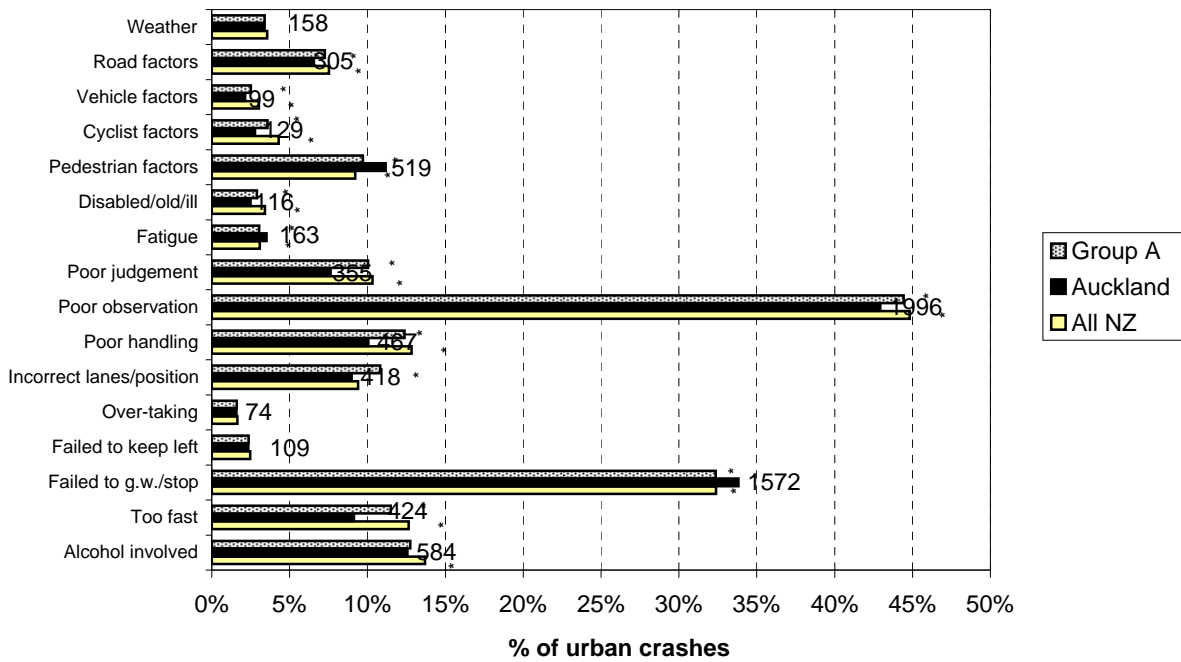




# *Crash Factor Statistics*

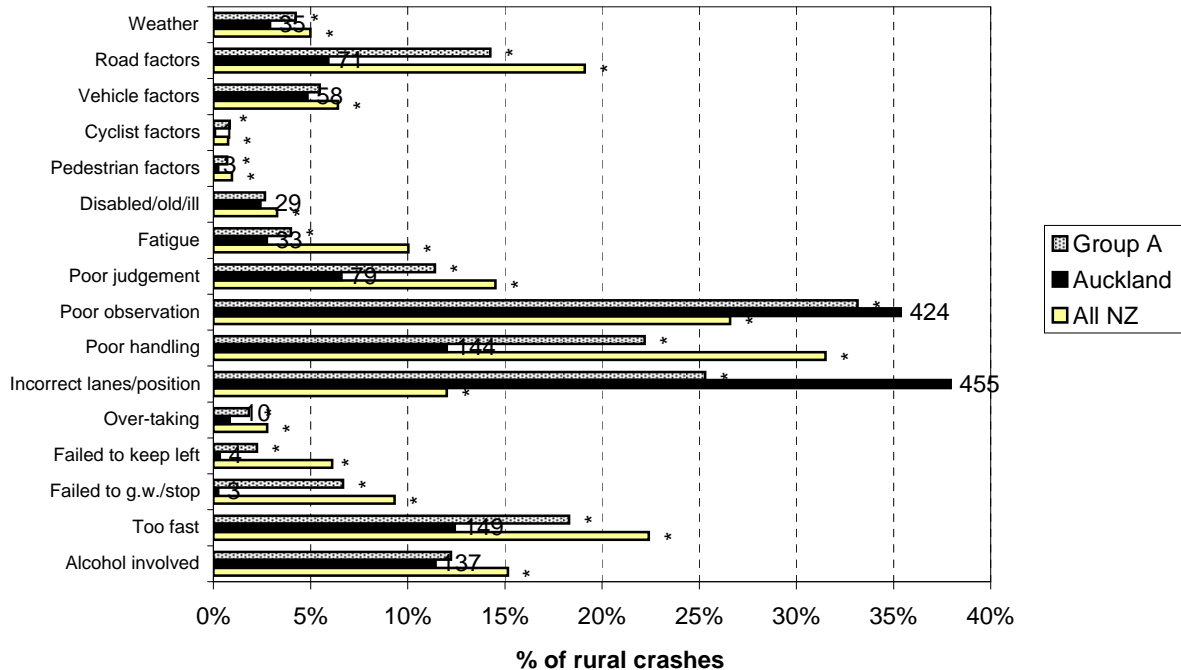


**Figure 5.1 Contributing factors - urban  
Auckland City (2005-2009)**



Note: While the graph plots percentages, the number of crashes is shown against the data points.  
\*Denotes statistically significant difference between Local Authority and National or Peer Group Proportions

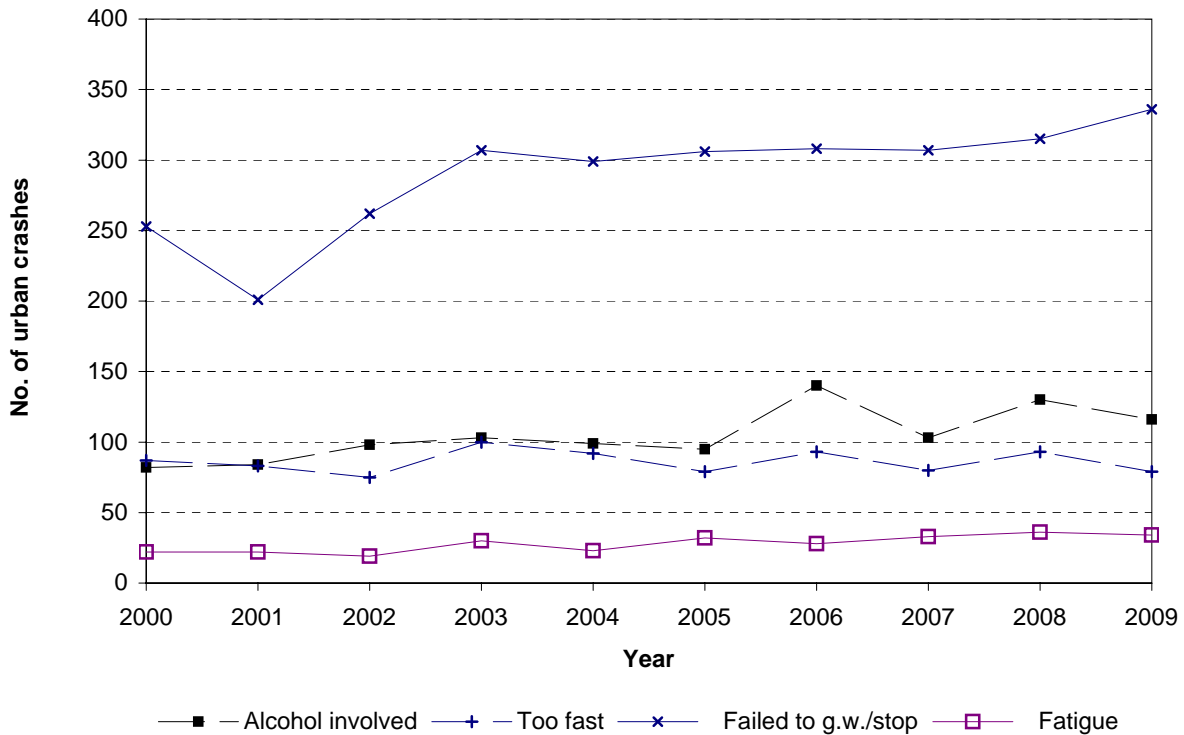
**Figure 5.2 Contributing factors - rural  
Auckland City (2005-2009)**



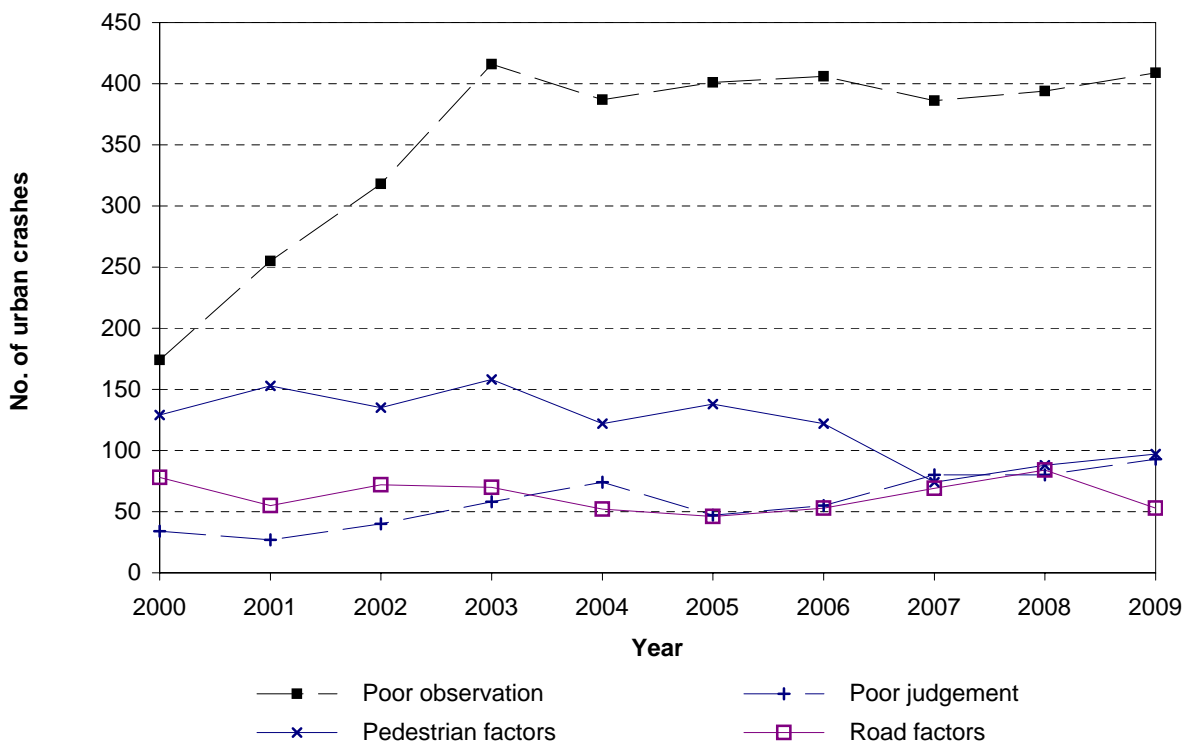
Note: While the graph plots percentages, the number of casualties is shown against the data points.  
\*Denotes statistically significant difference between Local Authority and National or Peer Group Proportions



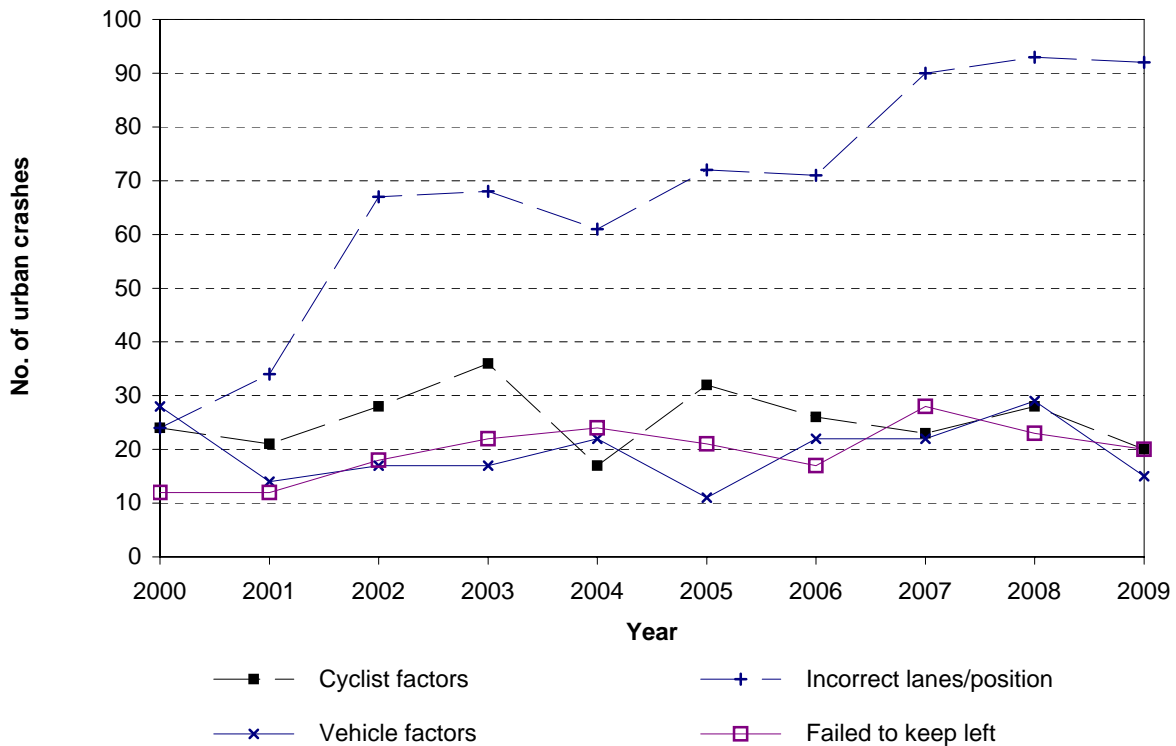
**Figure 5.3 Contributing factor trends  
Auckland City - urban roads**



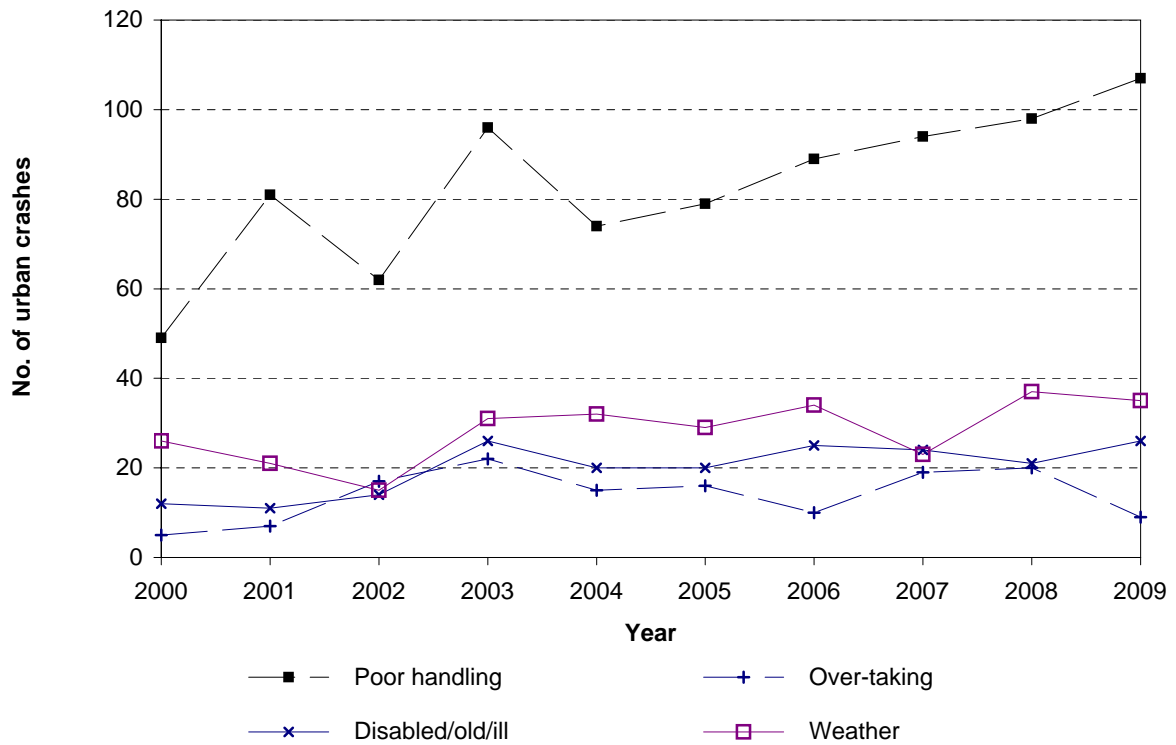
**Figure 5.4 Contributing factor trends  
Auckland City - urban roads**



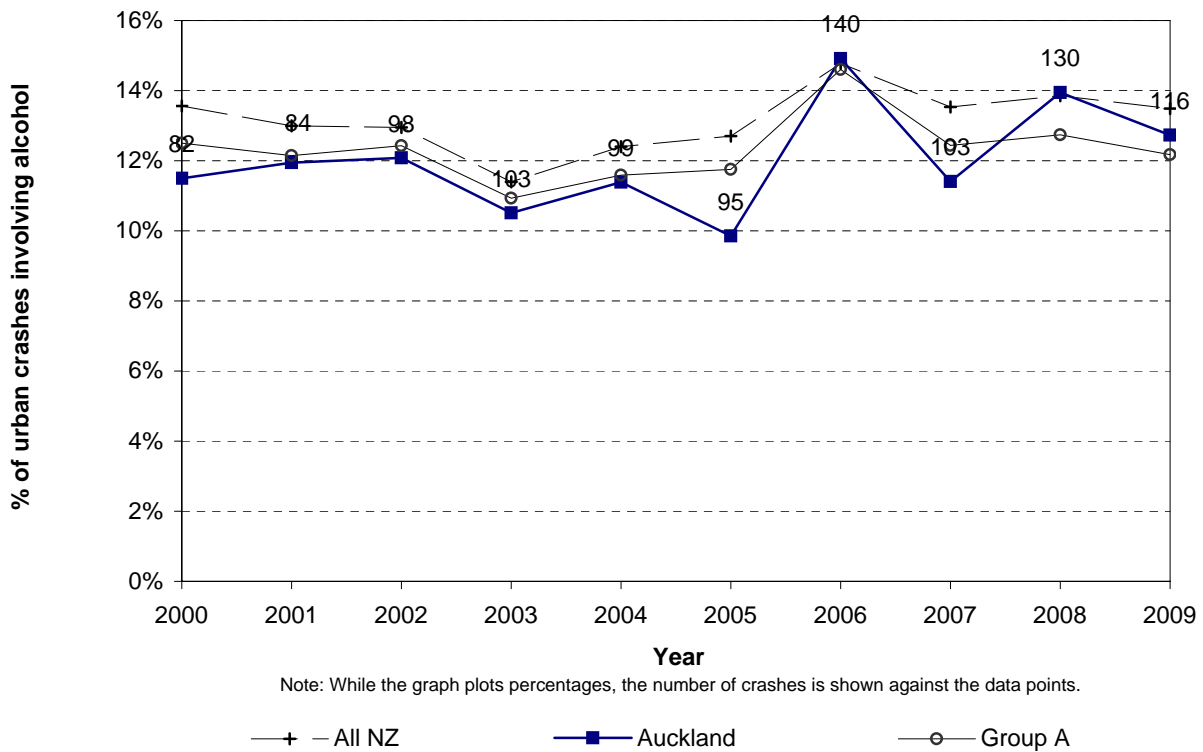
**Figure 5.5 Contributing factor trends  
Auckland City - urban roads**



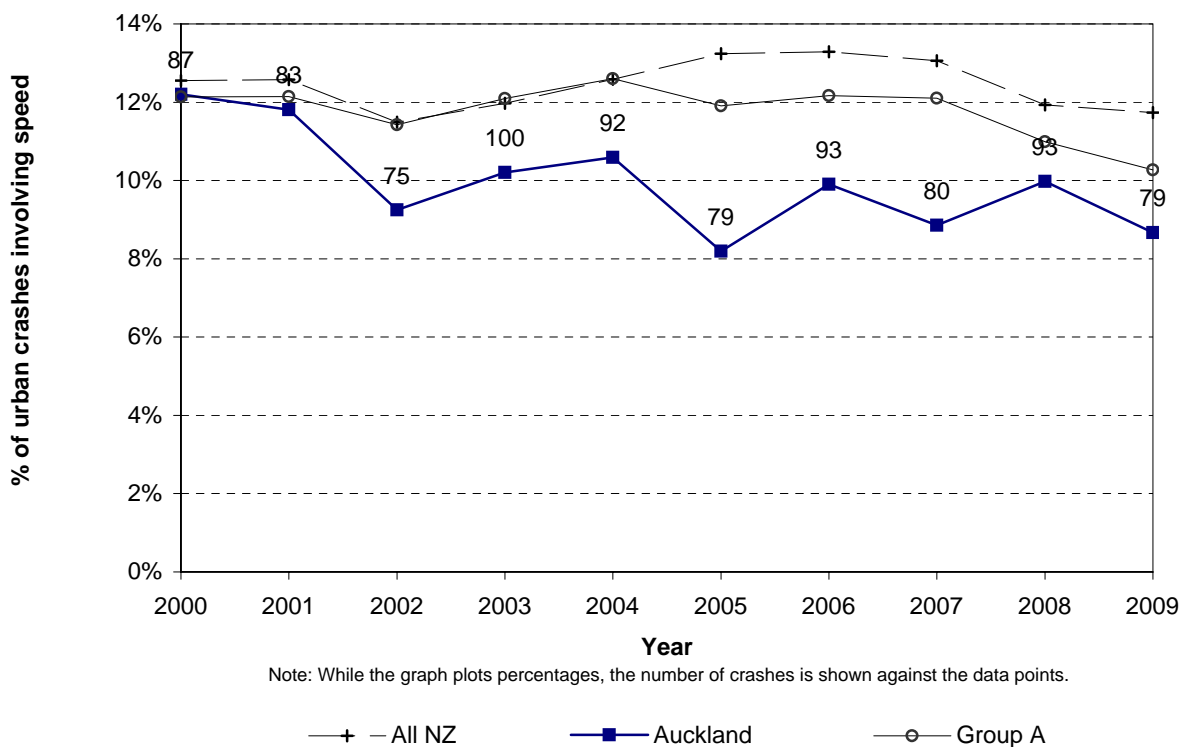
**Figure 5.6 Contributing factor trends  
Auckland City - urban roads**



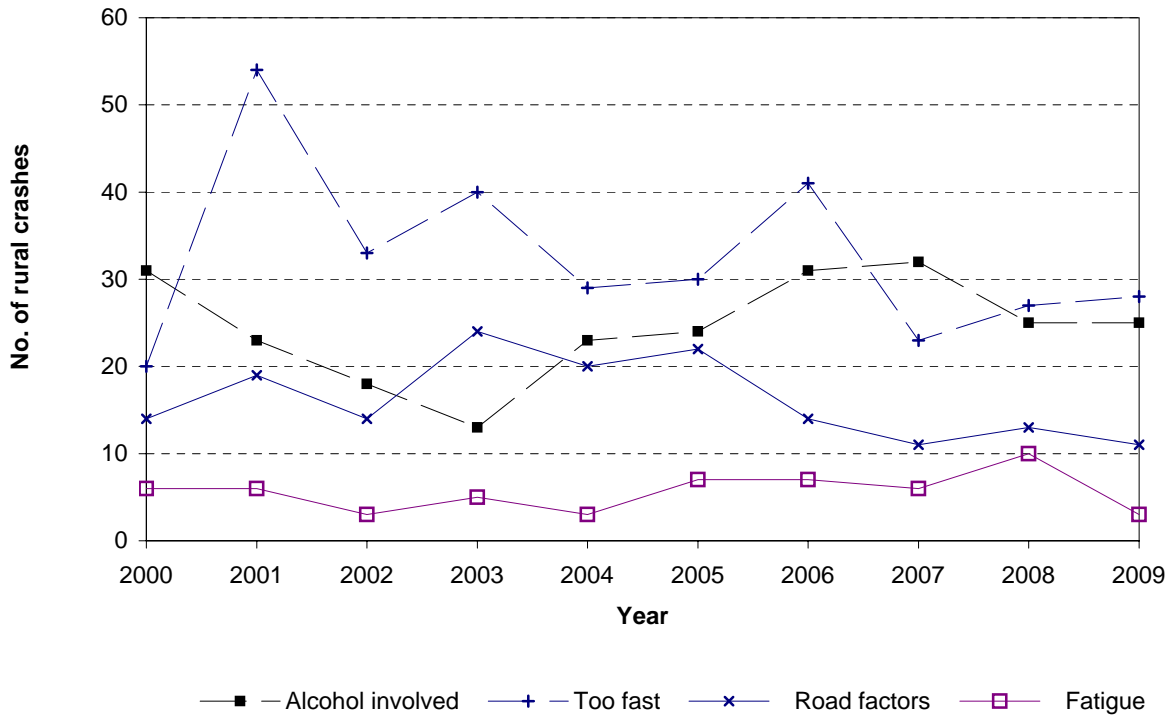
**Figure 5.7 Alcohol involved trend  
Auckland City - urban roads**



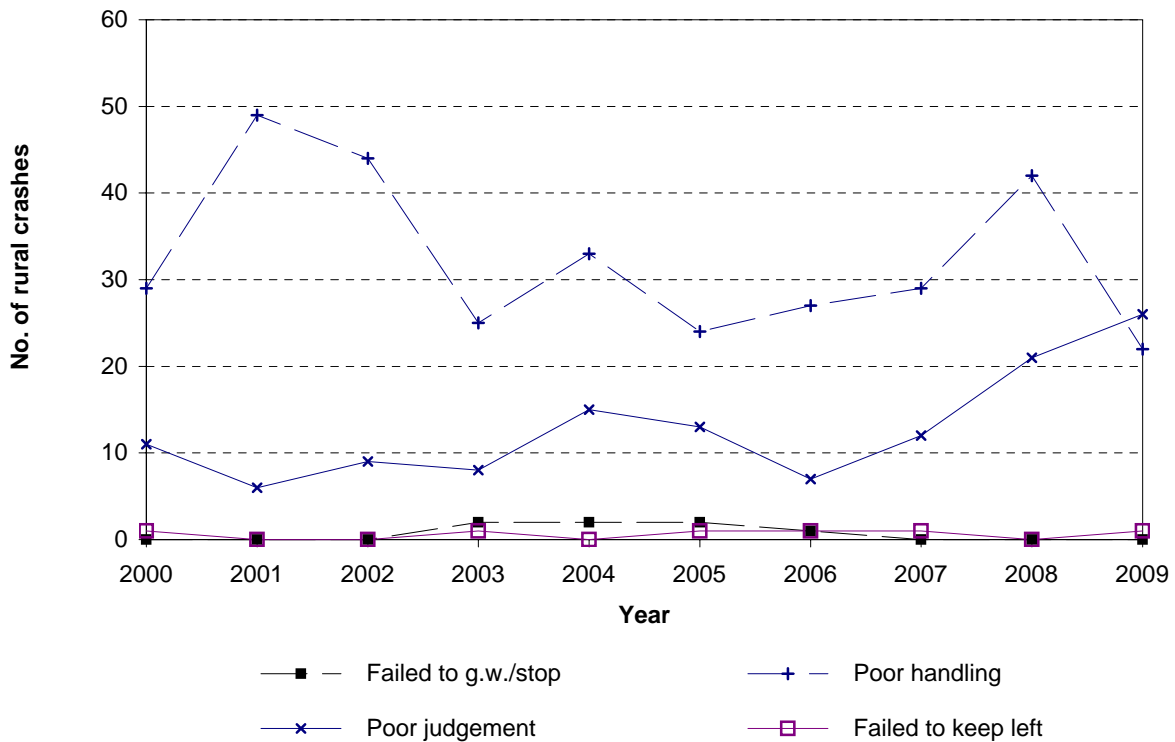
**Figure 5.8 Speed involved trend  
Auckland City - urban roads**



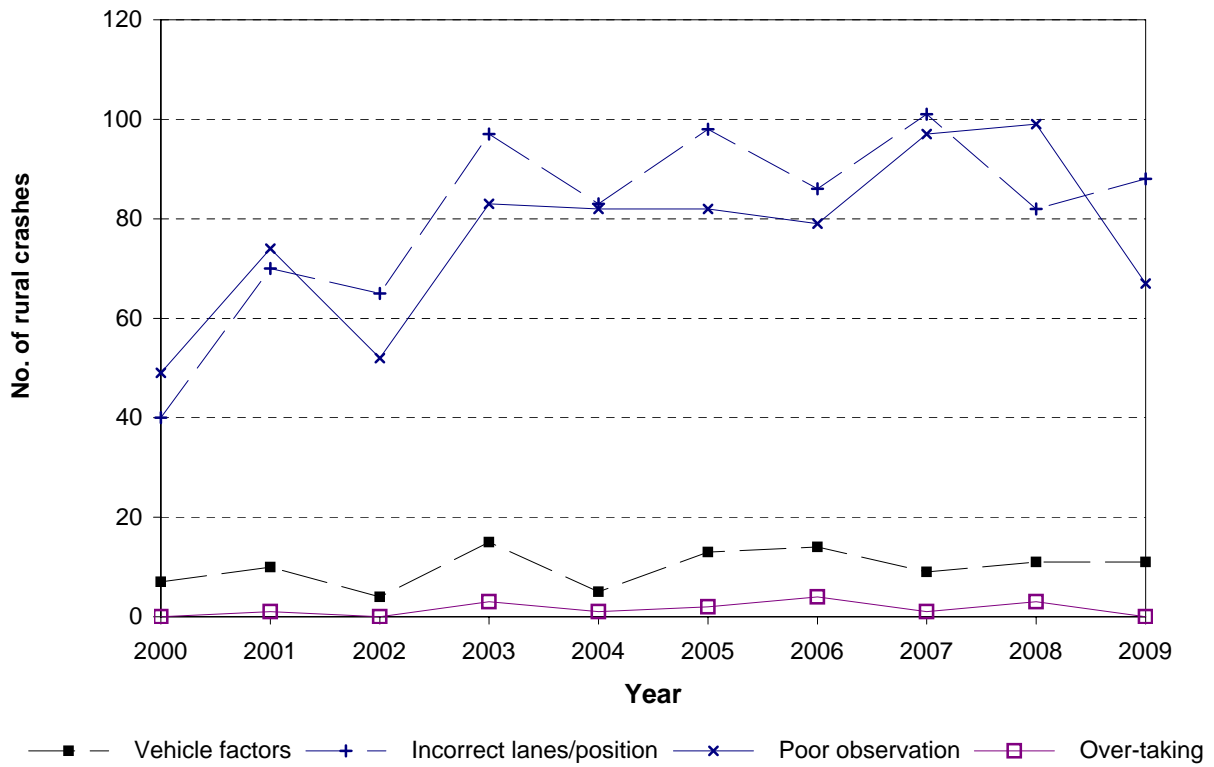
**Figure 5.9 Contributing factor trends  
Auckland City - rural roads**



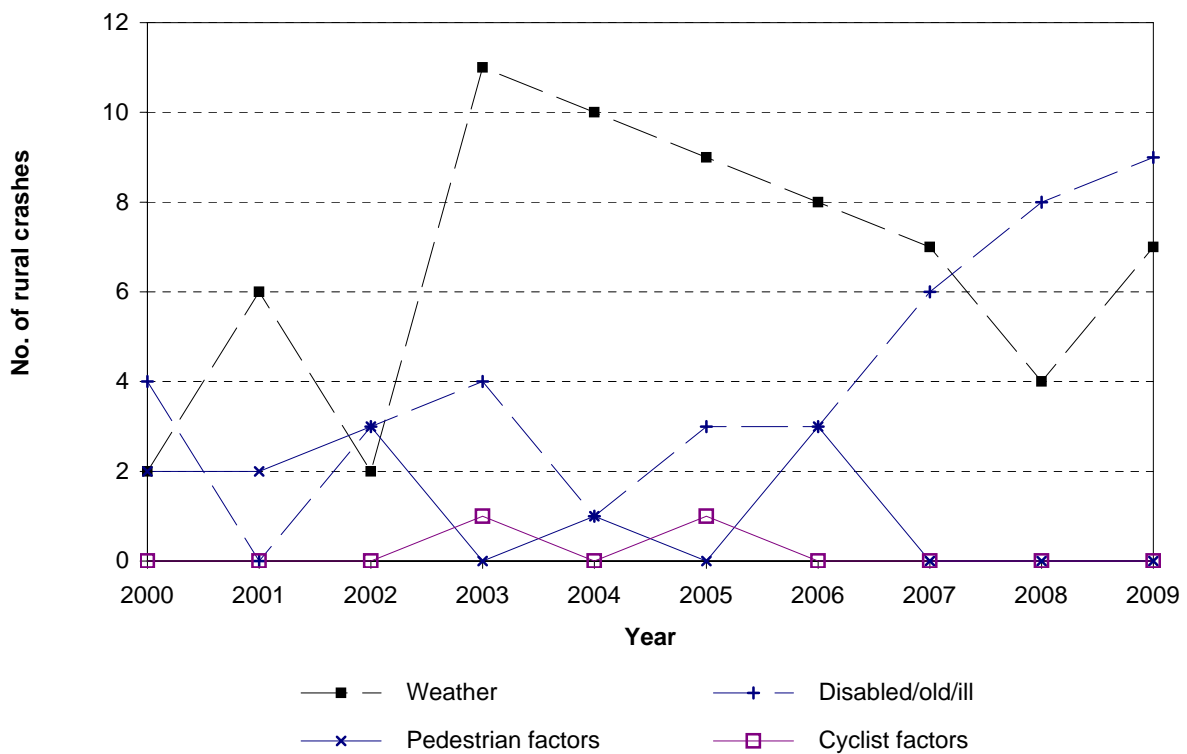
**Figure 5.10 Contributing factor trends  
Auckland City - rural roads**



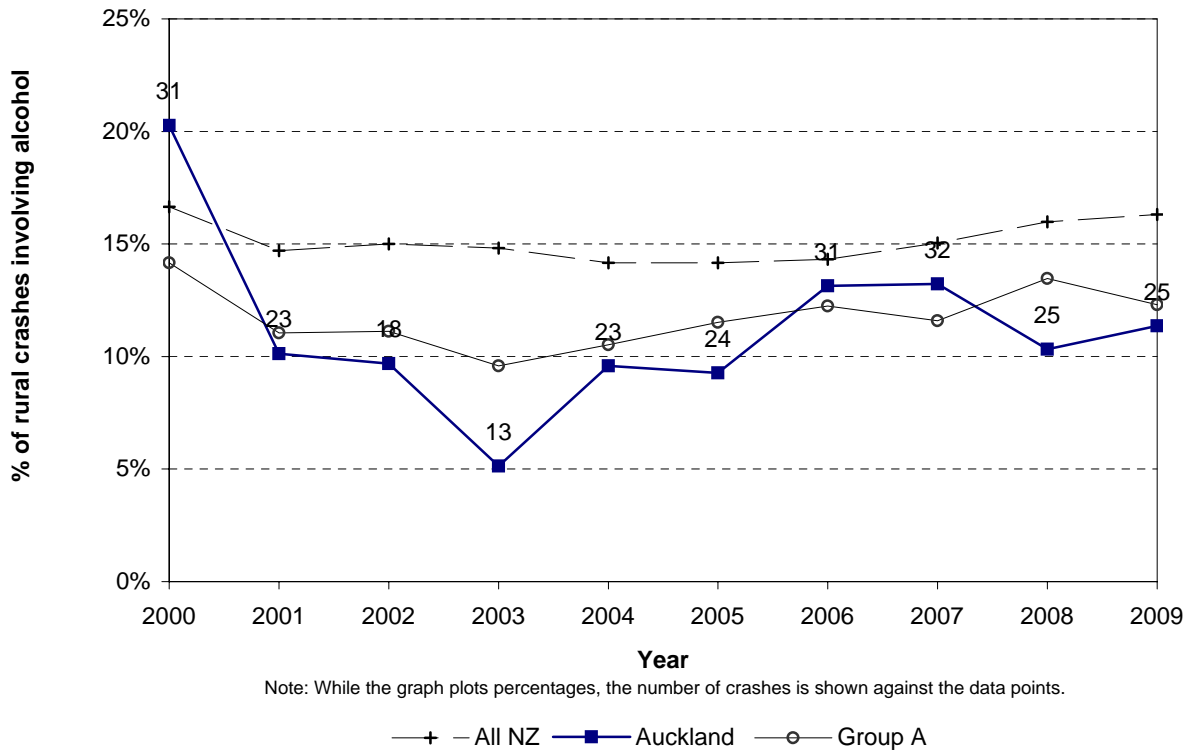
**Figure 5.11 Contributing factor trends  
Auckland City - rural roads**



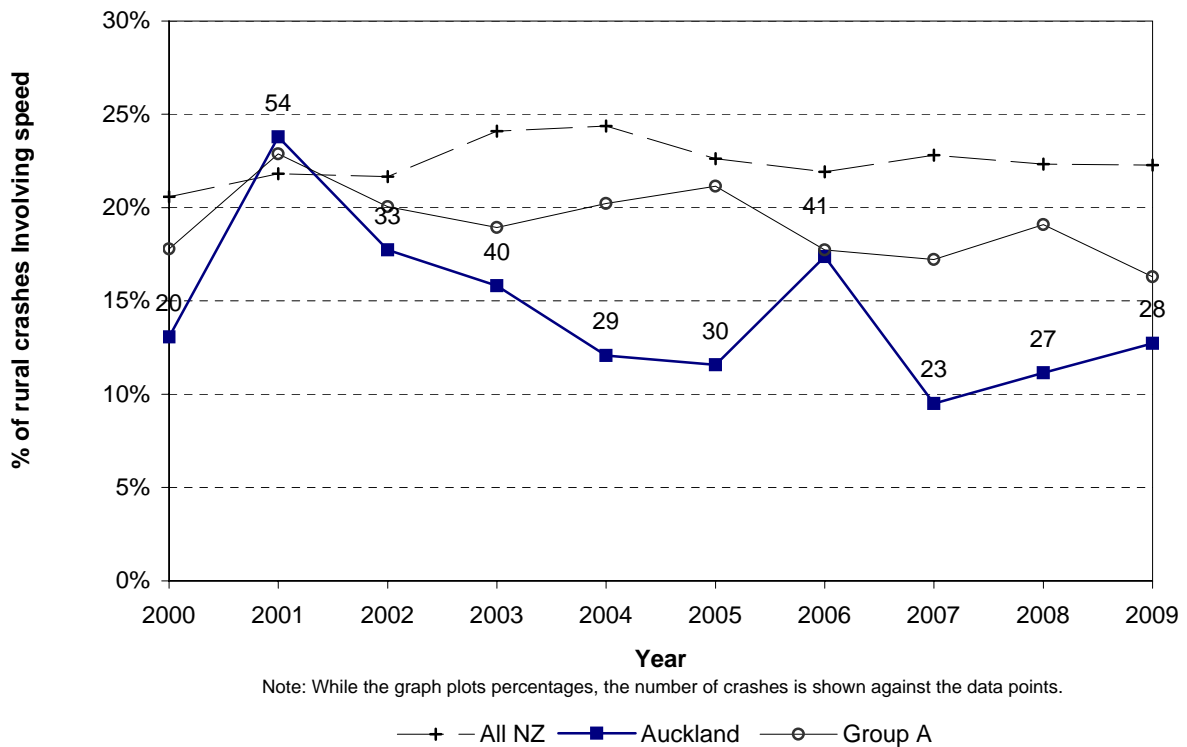
**Figure 5.12 Contributing factor trends  
Auckland City - rural roads**



**Figure 5.13 Alcohol involved trend  
Auckland City - rural roads**



**Figure 5.14 Speed involved trend  
Auckland City - rural roads**



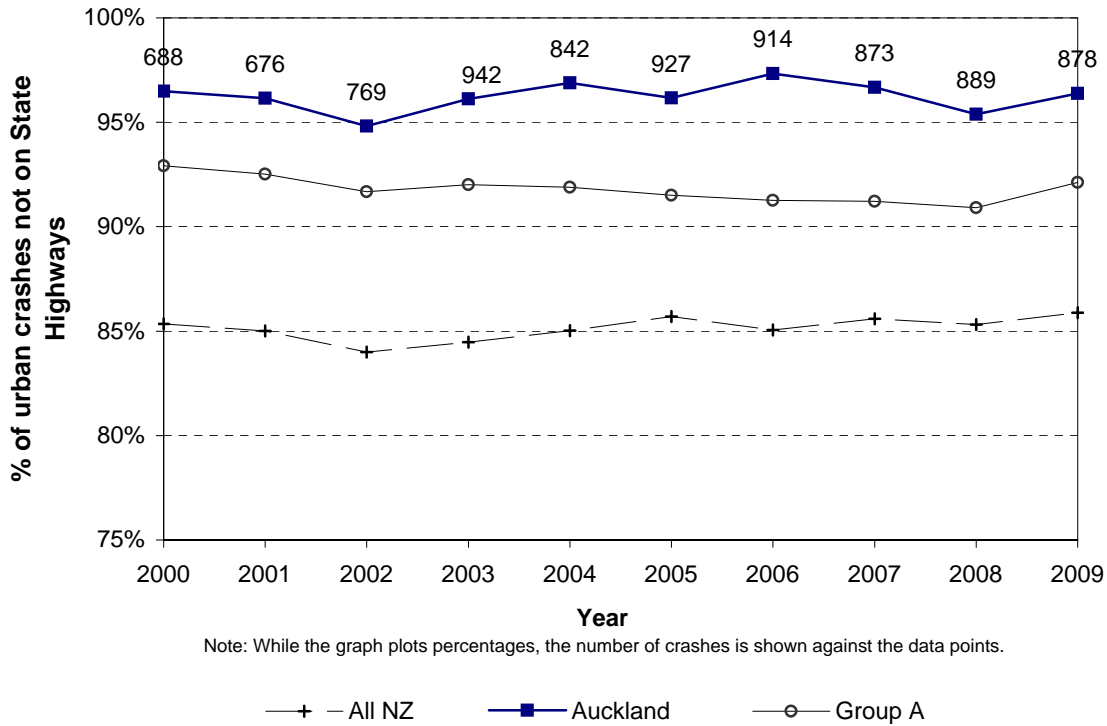


# *Environmental Statistics*

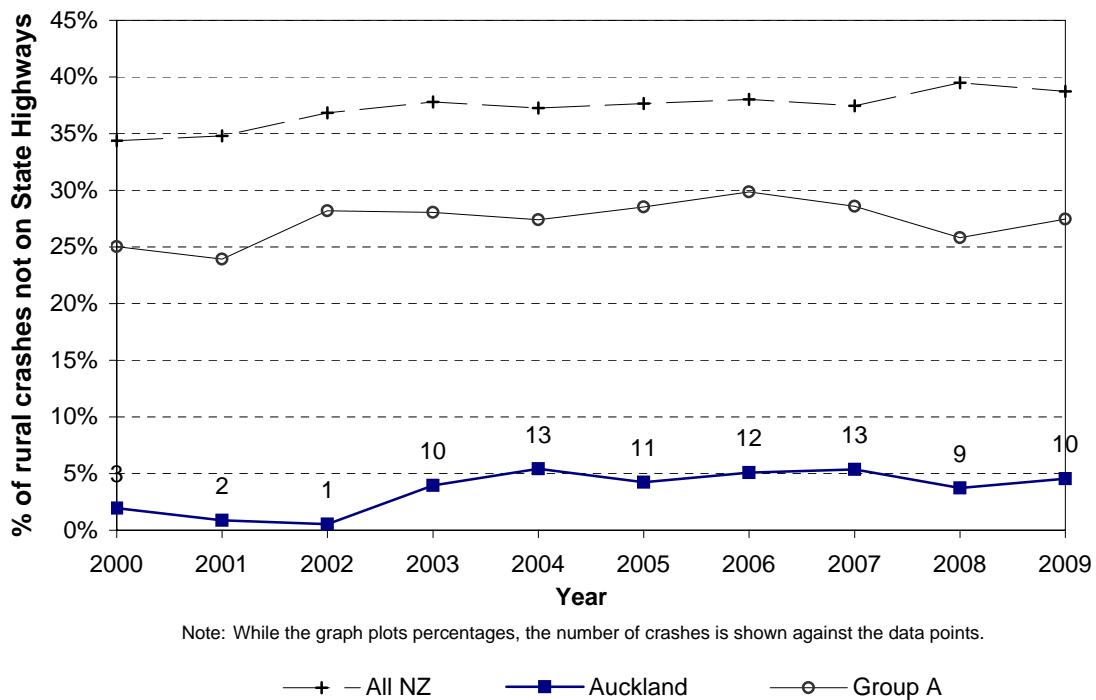




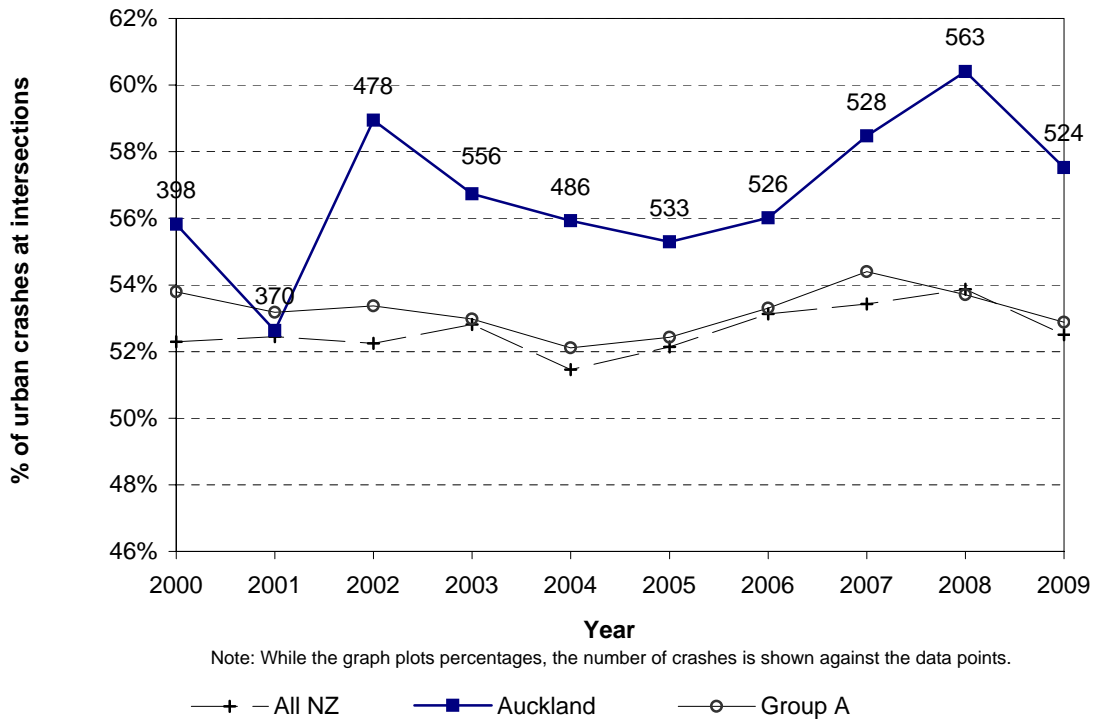
**Figure 6.1 Crashes not on state highways  
Auckland City - urban roads**



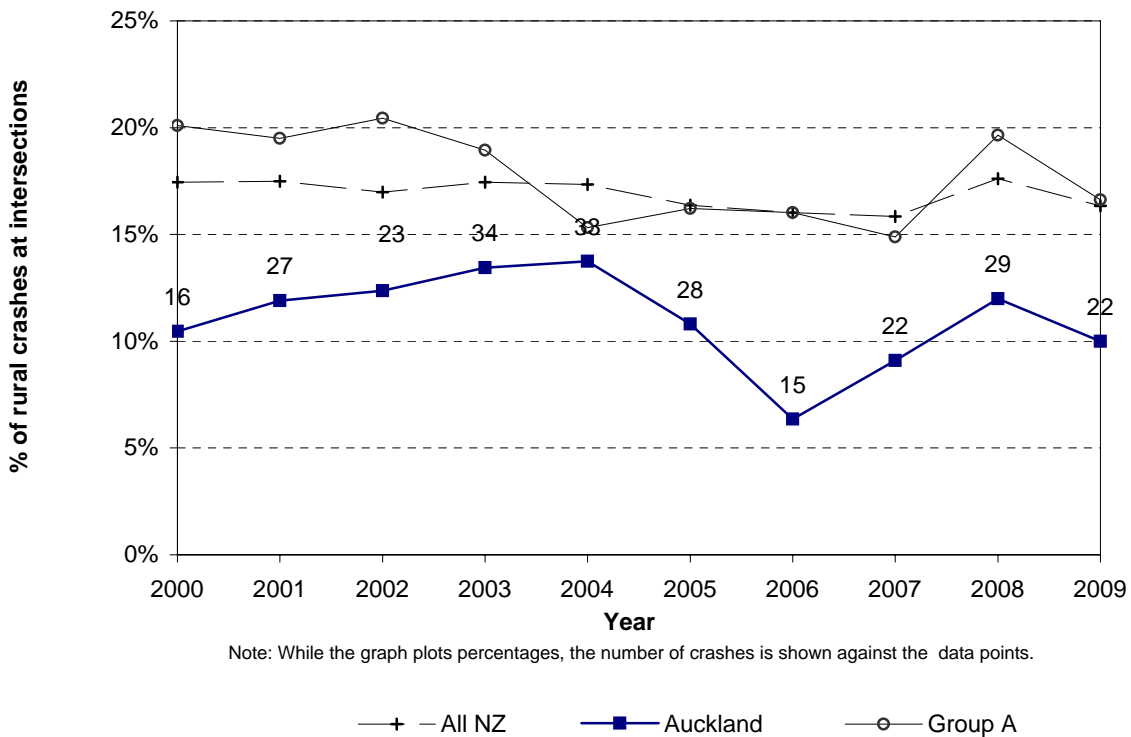
**Figure 6.2 Crashes not on state highways  
Auckland City - rural roads**



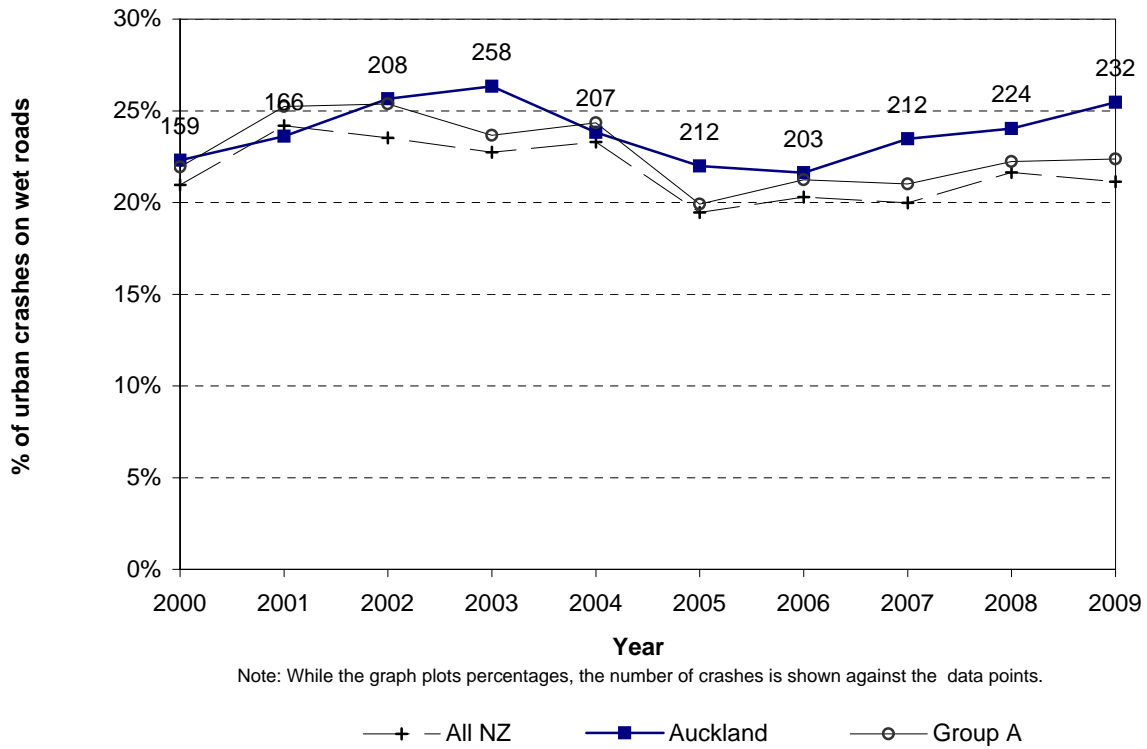
**Figure 6.3 Intersection crashes  
Auckland City - urban roads**



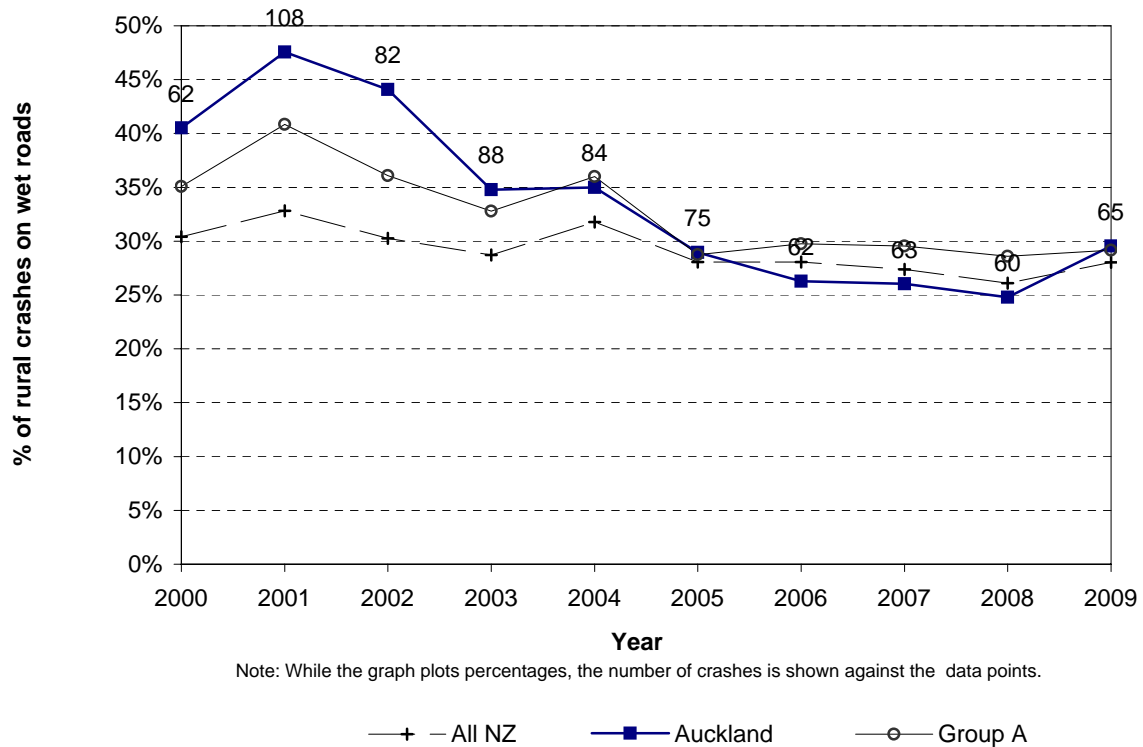
**Figure 6.4 Intersection crashes  
Auckland City - rural roads**



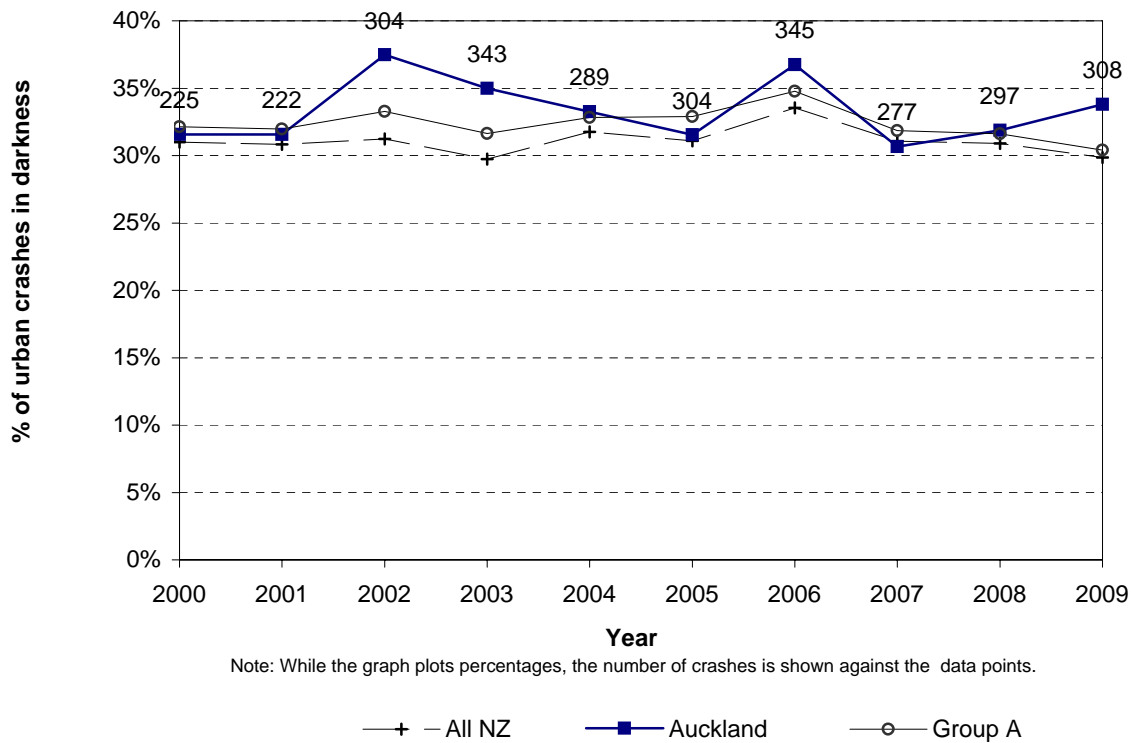
**Figure 6.5 Wet road crashes  
Auckland City - urban roads**



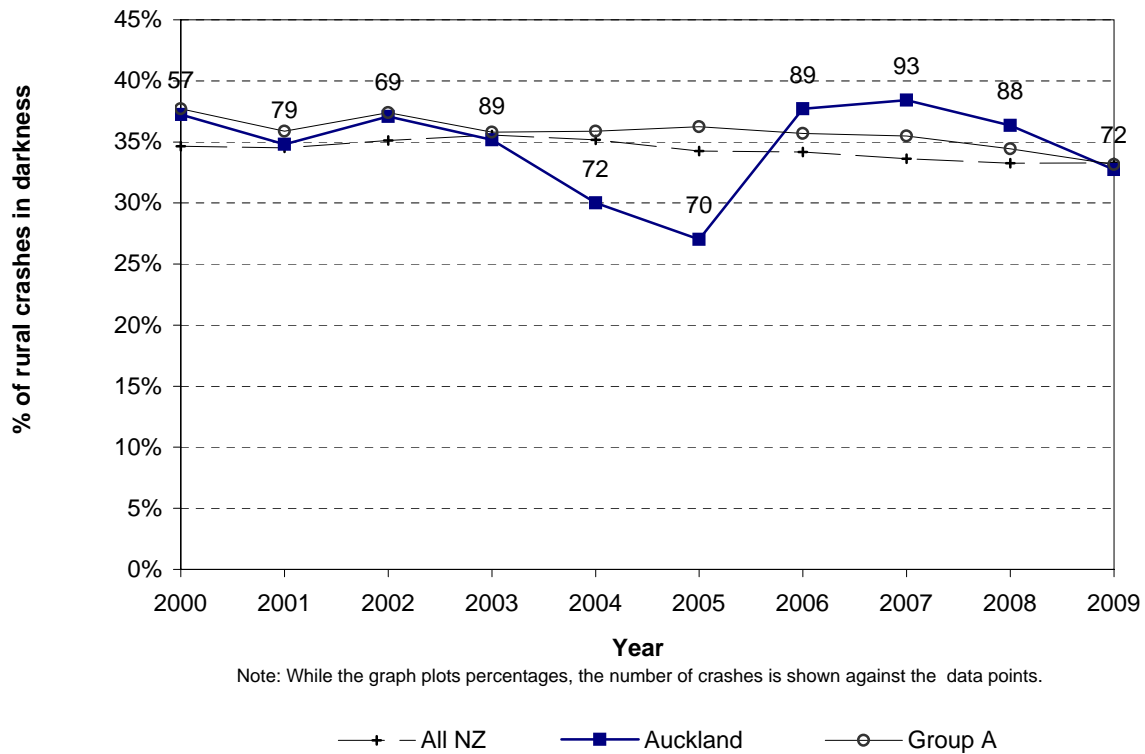
**Figure 6.6 Wet road crashes  
Auckland City - rural roads**



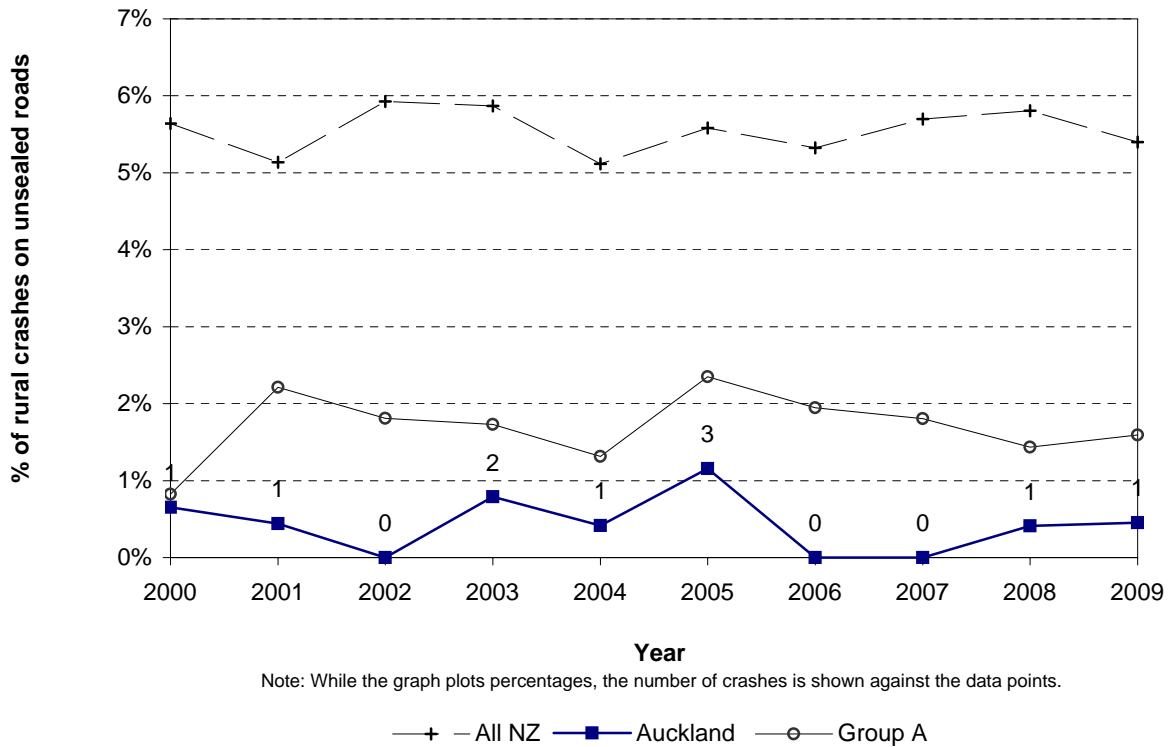
**Figure 6.7 Crashes in darkness  
Auckland City - urban roads**



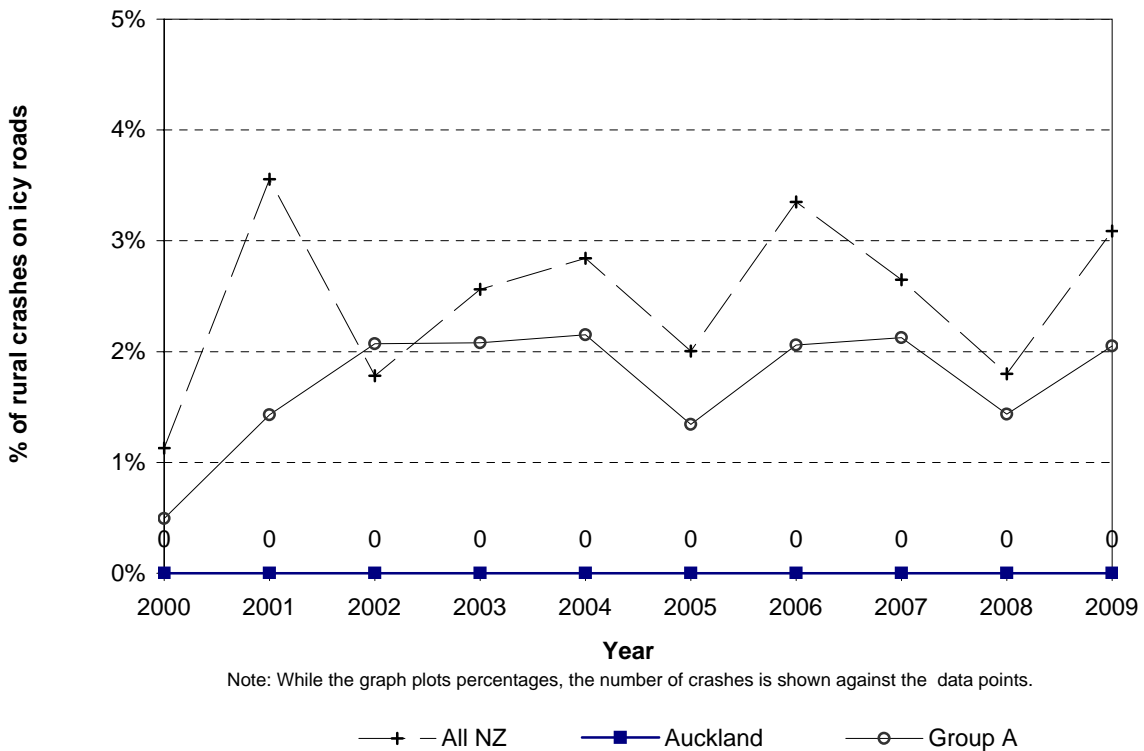
**Figure 6.8 Crashes in darkness  
Auckland City - rural roads**



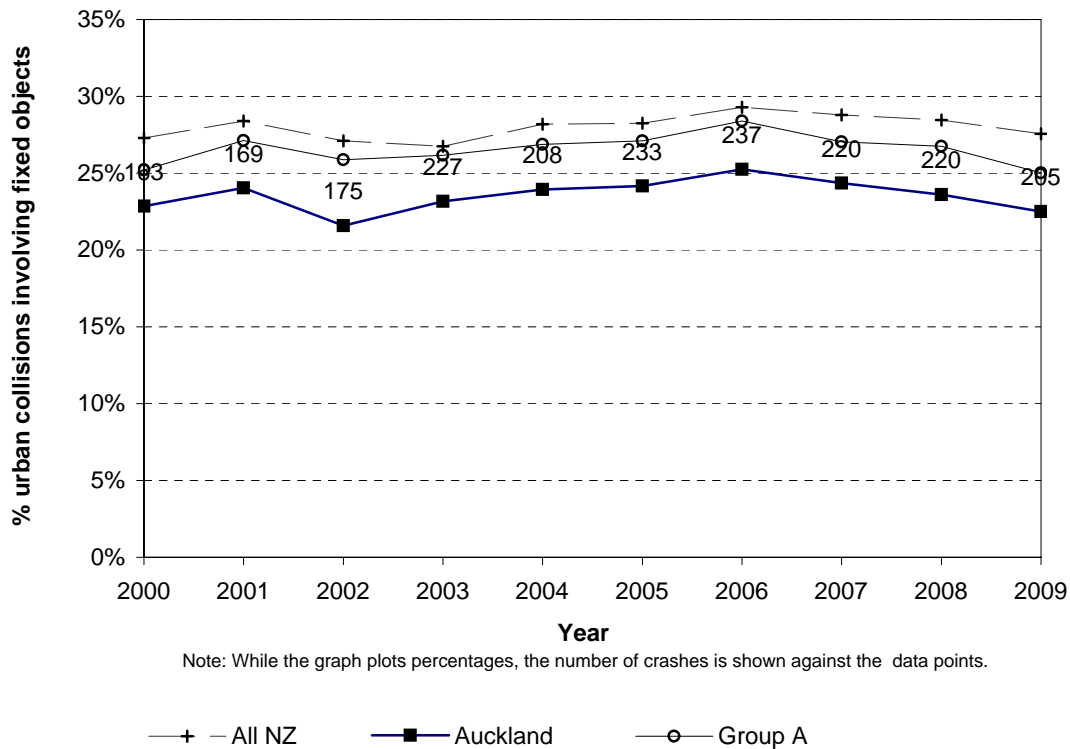
**Figure 6.9 Unsealed road crashes  
Auckland City - rural roads**



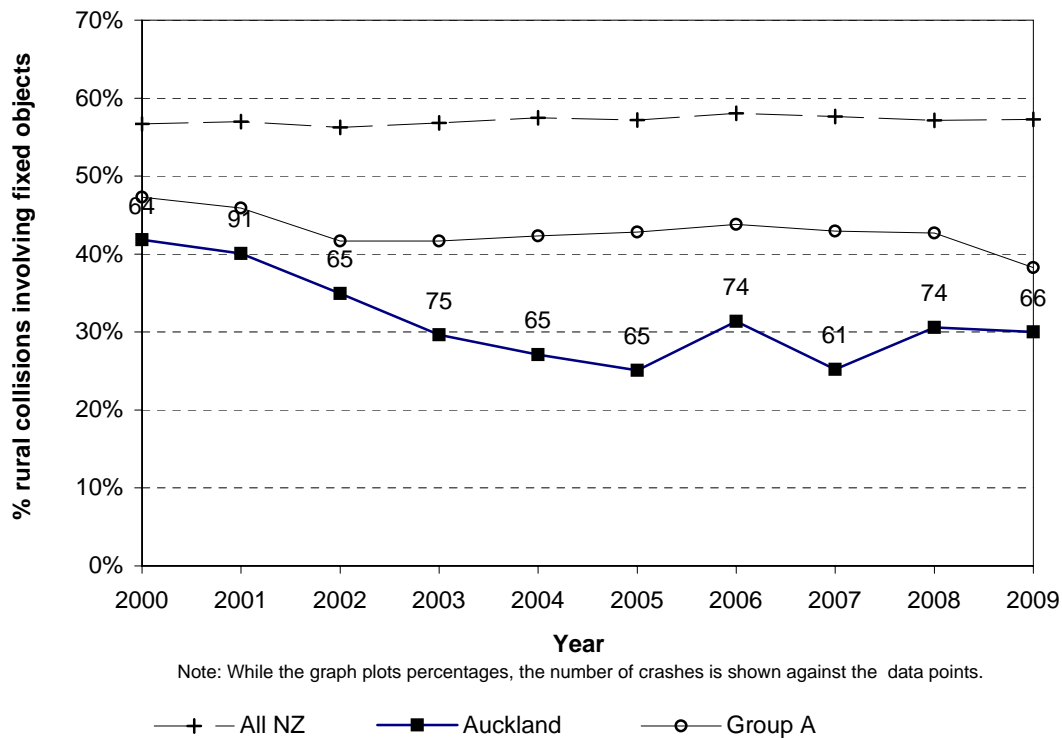
**Figure 6.10 Icy road crashes  
Auckland City - rural roads**



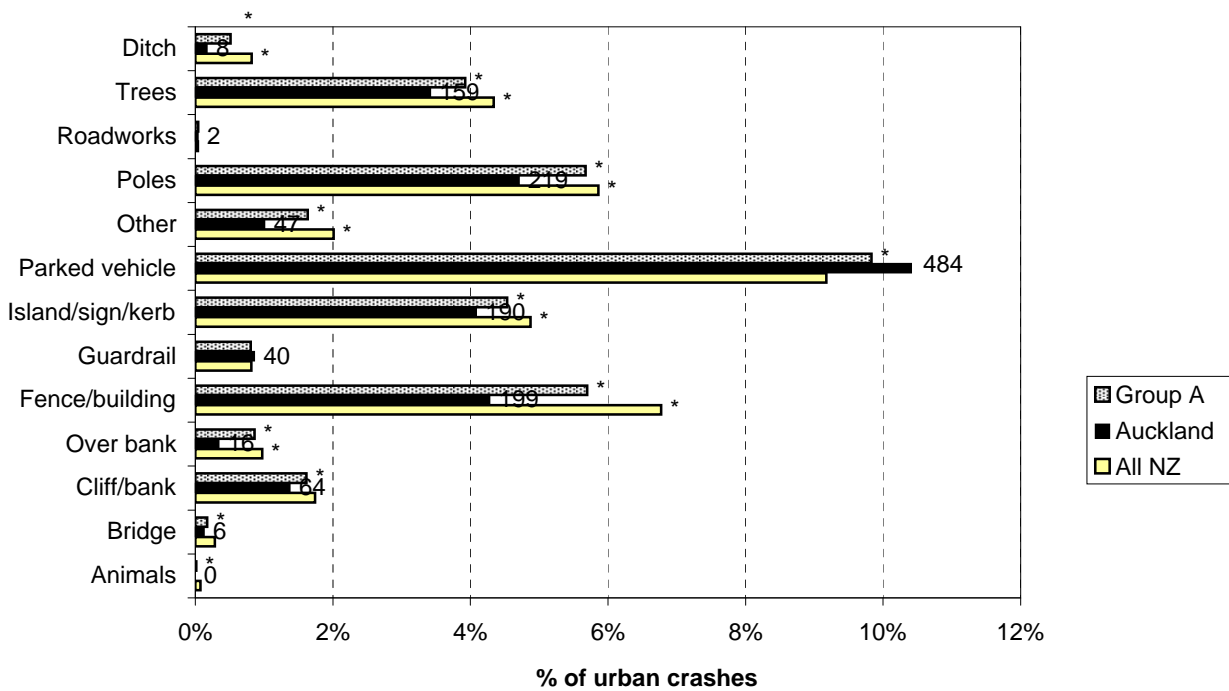
**Figure 6.11 Collisions with objects  
Auckland City - urban roads**



**Figure 6.12 Collisions with objects  
Auckland City - rural roads**

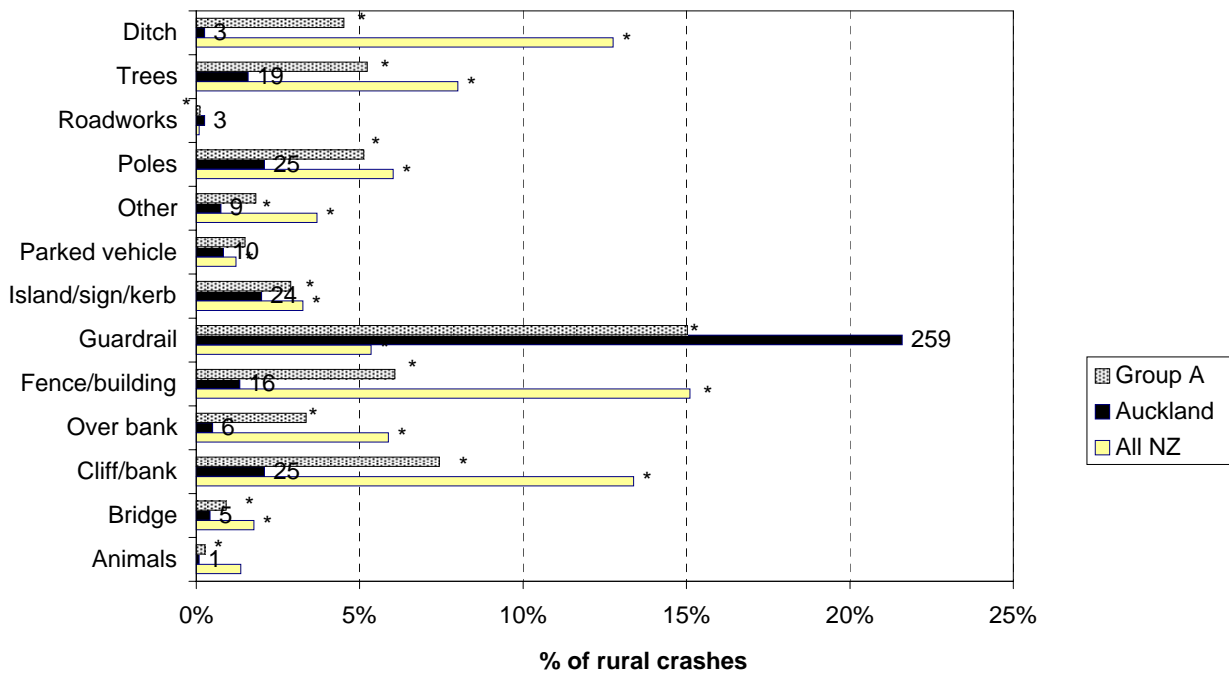


**Figure 6.13 Objects struck - urban  
Auckland City (2005-2009)**



Note: While the graph plots percentages, the number of crashes is shown against the data points.  
\*Denotes statistically significant difference between Local Authority and National or Peer Group Proportions

**Figure 6.14 Objects struck - rural  
Auckland City (2005-2009)**



Note: While the graph plots percentages, the number of crashes is shown against the data points.  
\*Denotes statistically significant difference between Local Authority and National or Peer Group Proportions

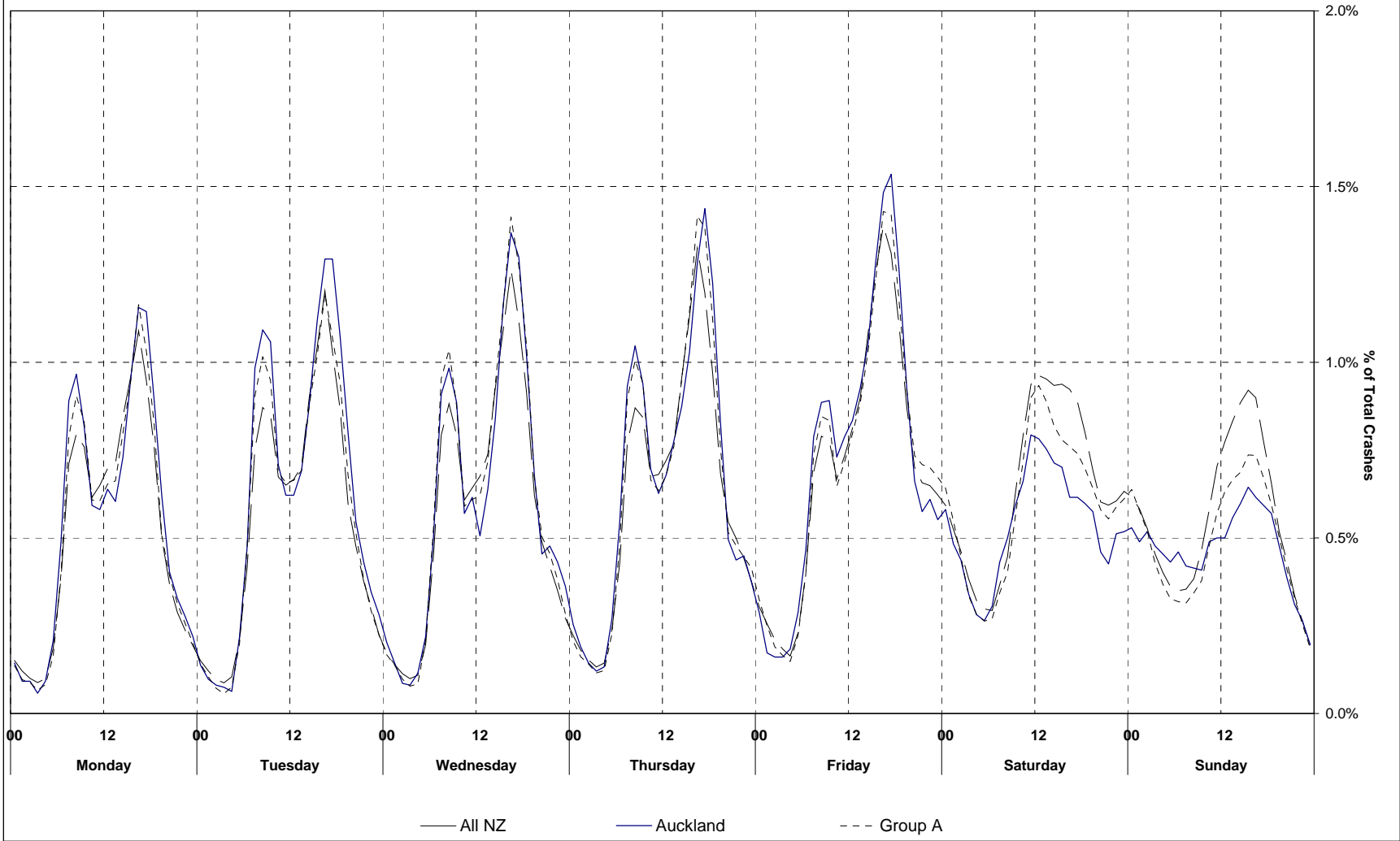




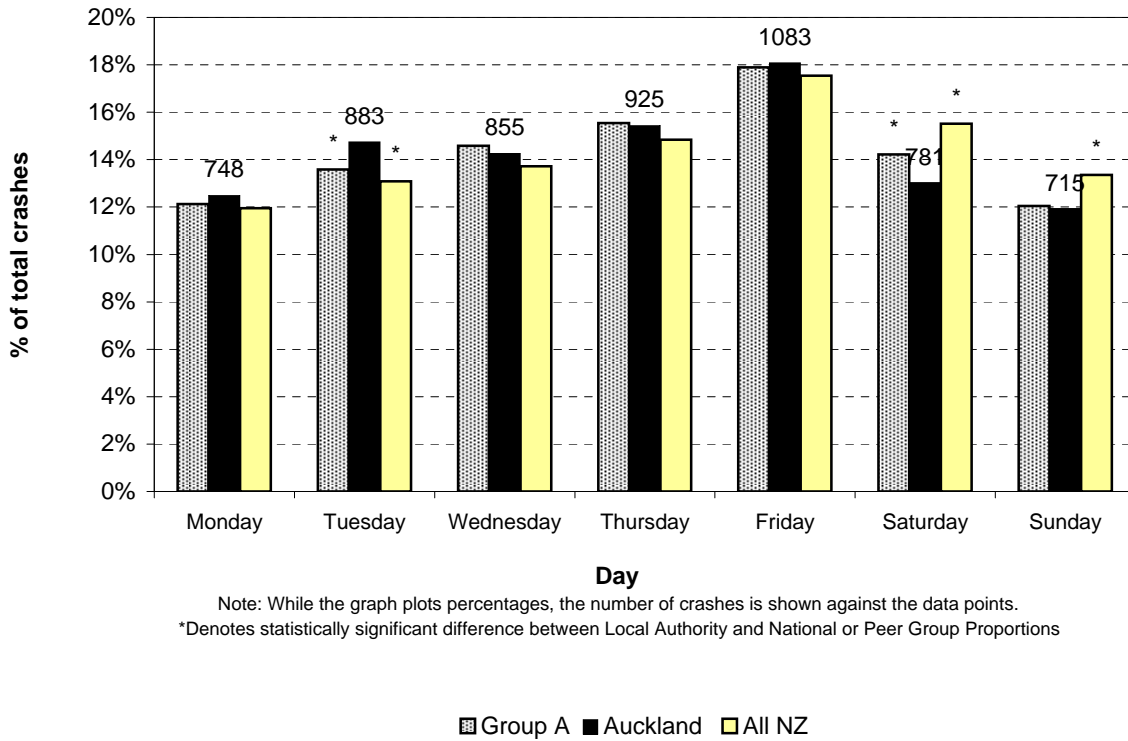
# *Date and Time Statistics*



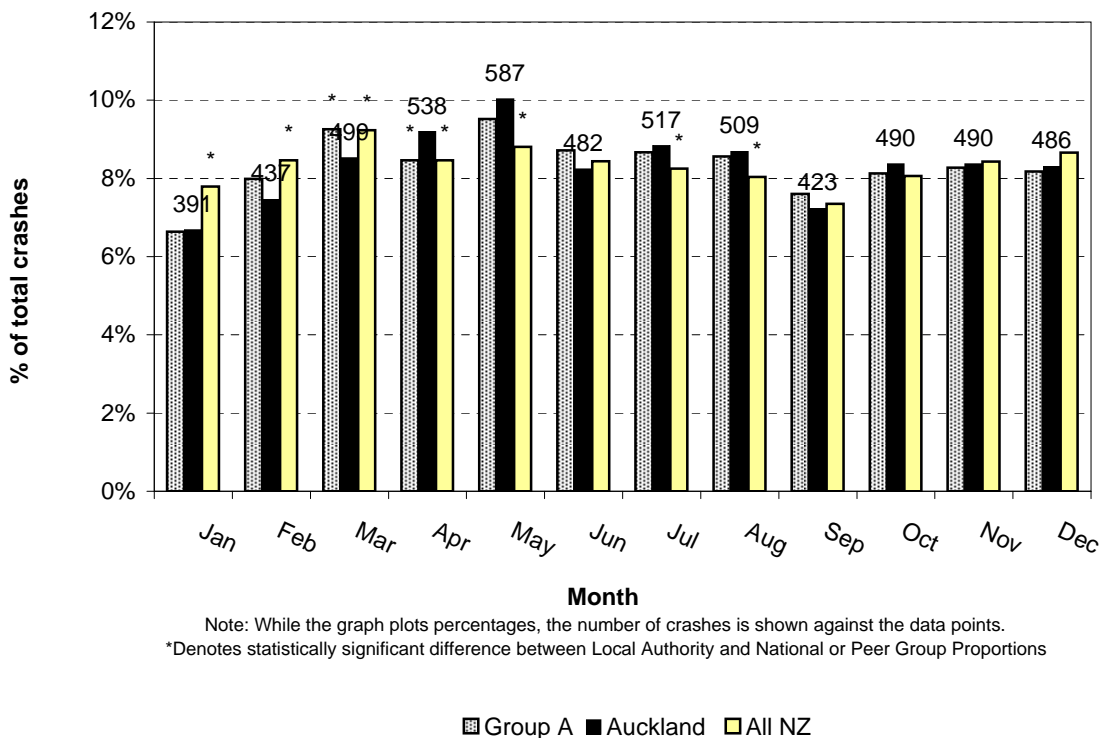
Figure 7.1 Time pattern over average week  
Auckland City (2005-2009)



**Figure 7.2 Day of week (6 a.m. to 6 a.m.)  
Auckland City (2005-2009)**



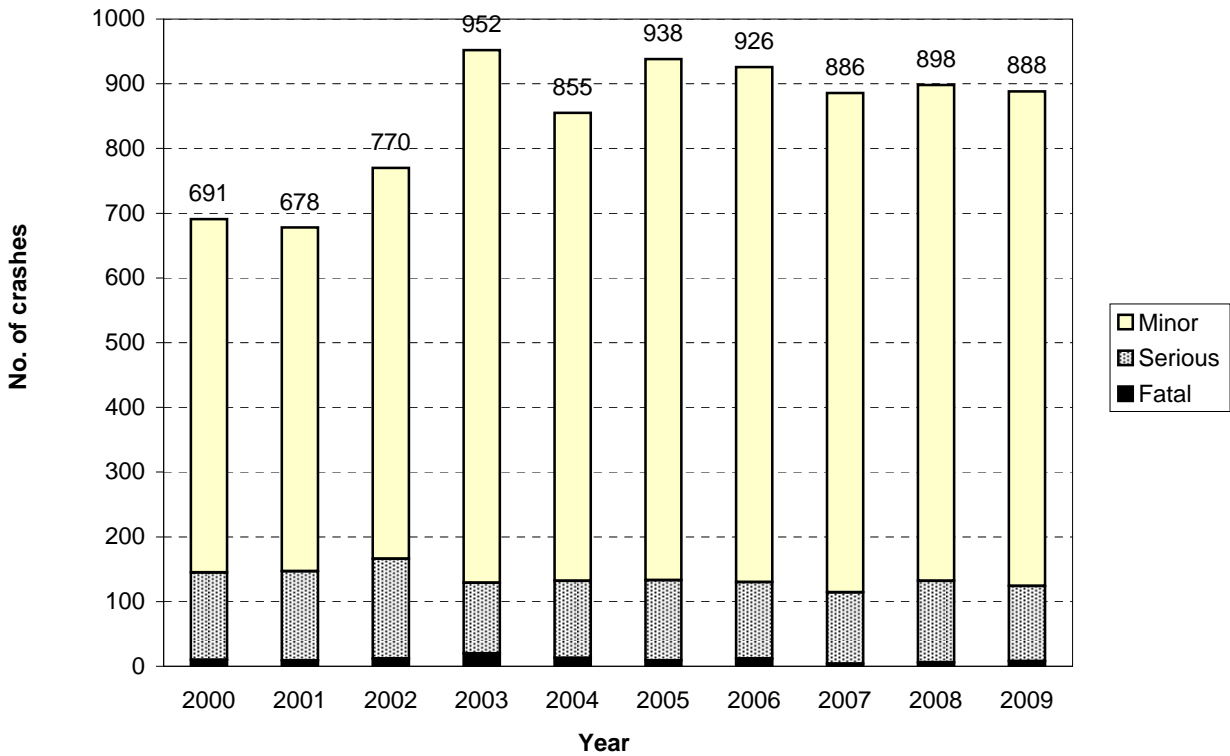
**Figure 7.3 Month of year  
Auckland City (2005-2009)**



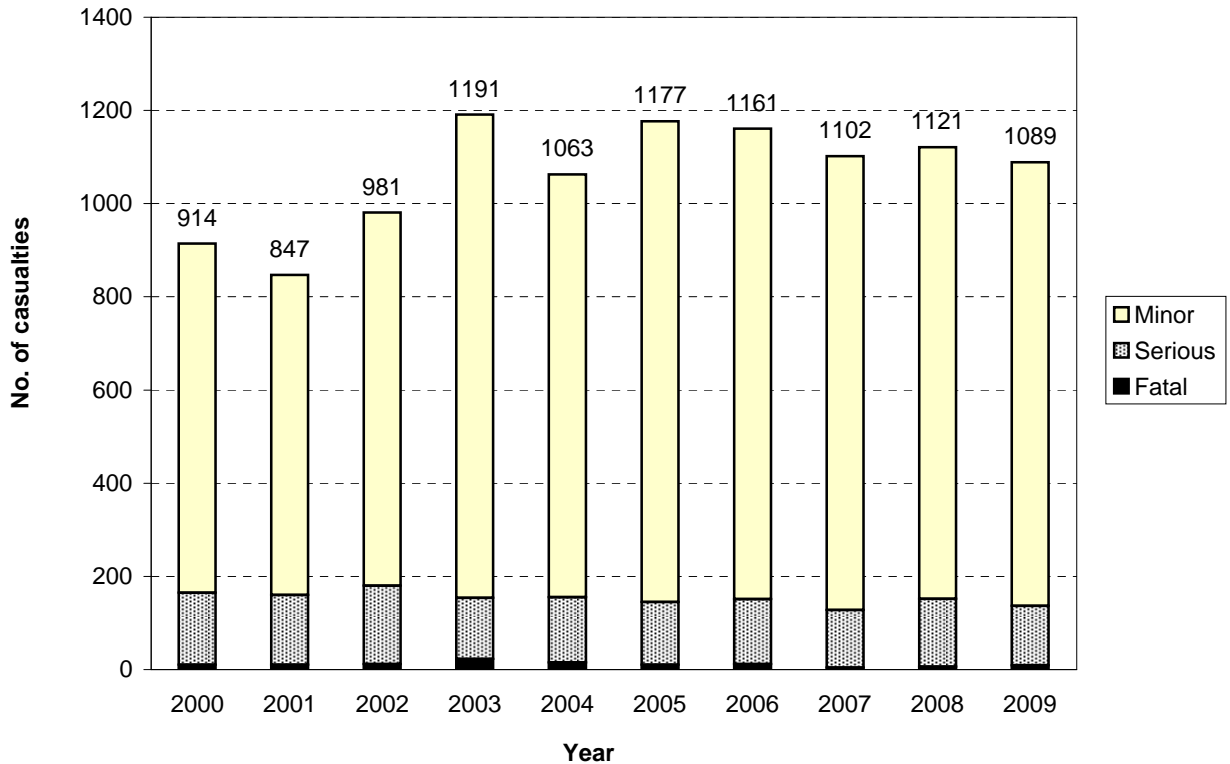
# *Local Road Statistics*



**Figure 8.1 Number of injury crashes**  
Auckland City - council roads (urban & rural)

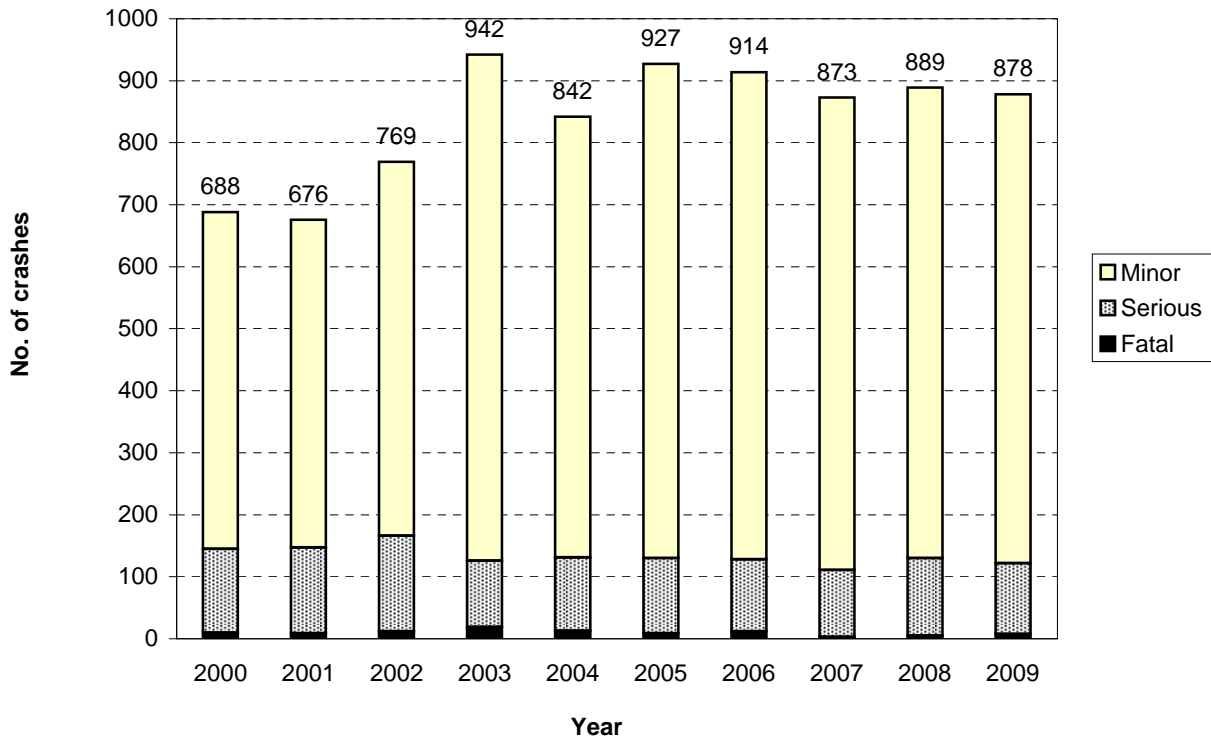


**Figure 8.2 Number of casualties**  
Auckland City - council roads (urban & rural)

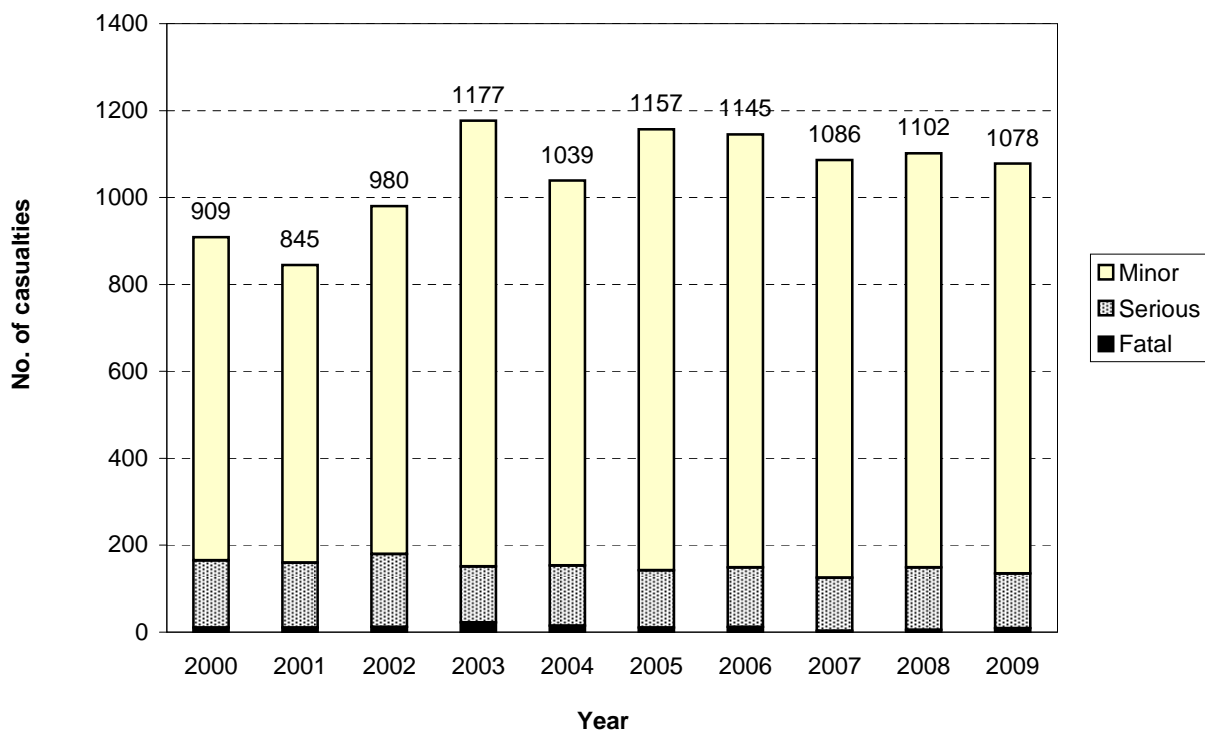




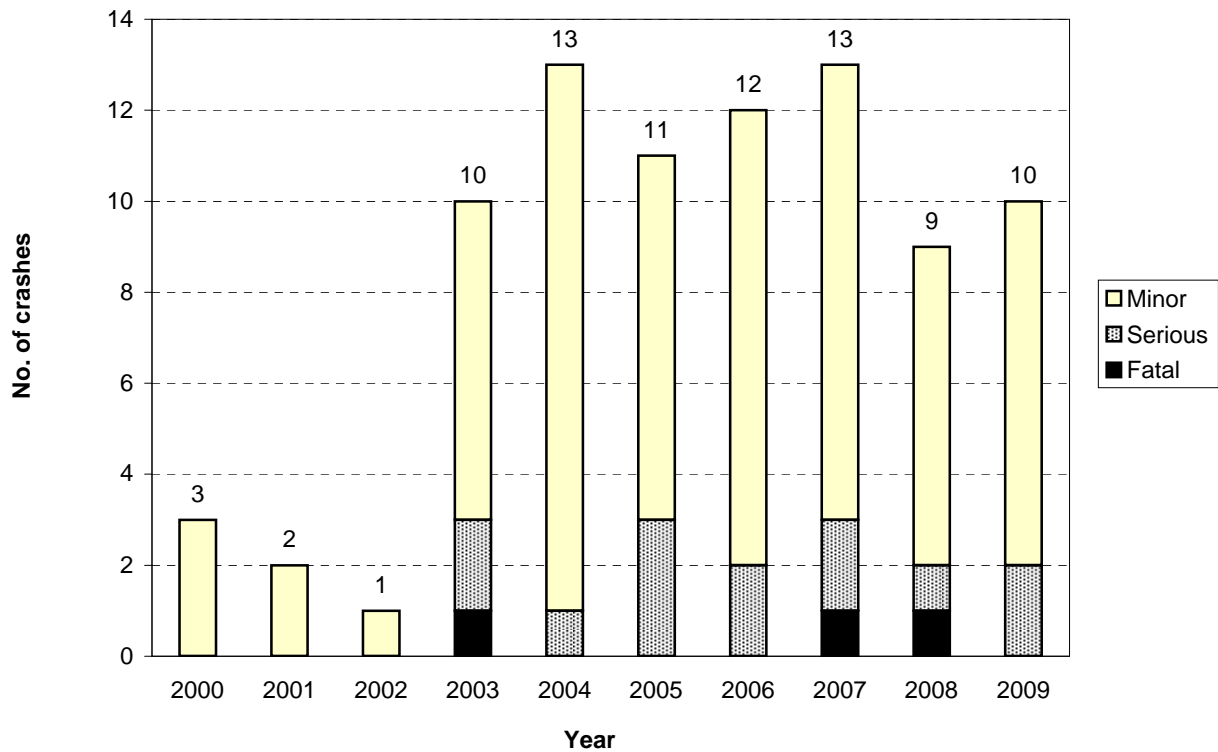
**Figure 8.3 Number of injury crashes  
Auckland City - urban council roads**



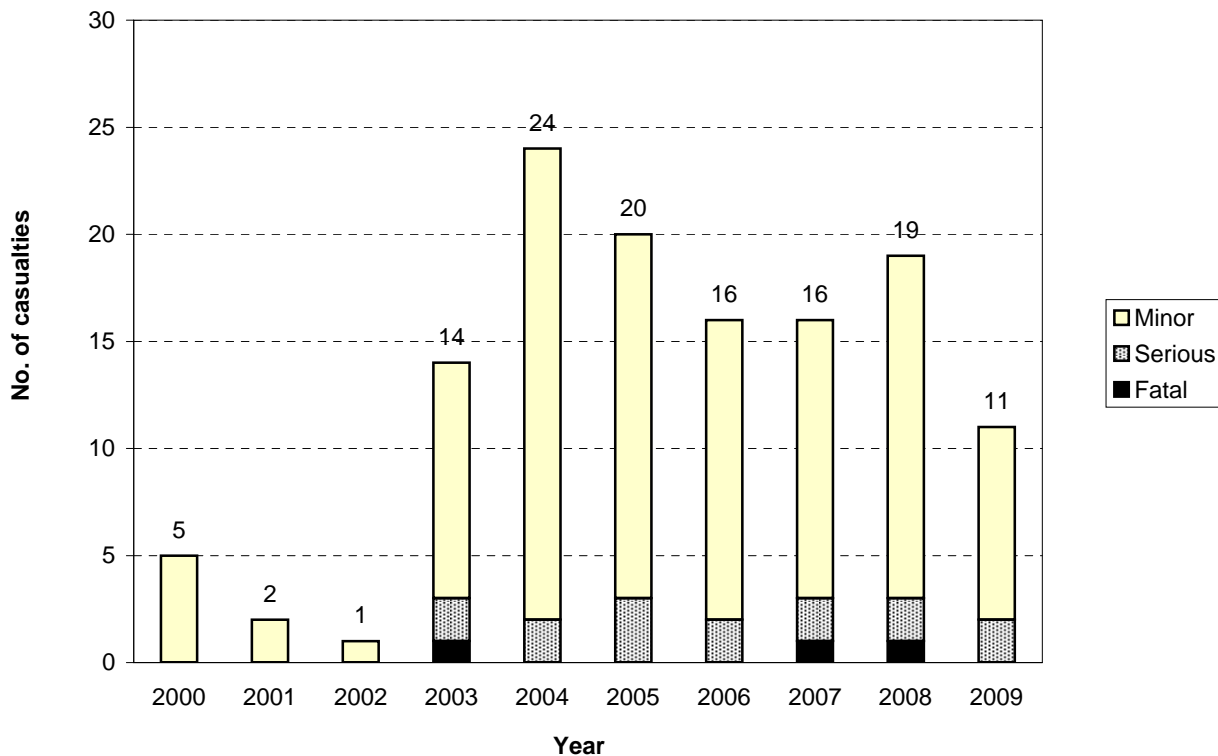
**Figure 8.4 Number of casualties  
Auckland City - urban council roads**



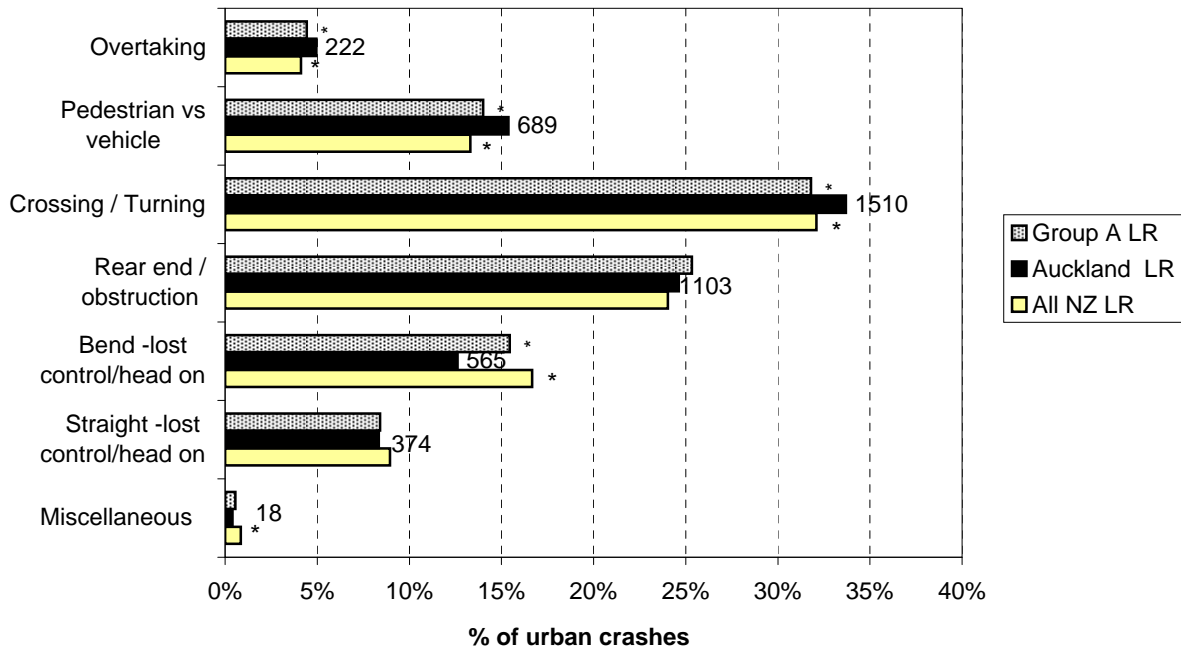
**Figure 8.5 Number of injury crashes  
Auckland City - rural council roads**



**Figure 8.6 Number of casualties  
Auckland City - rural council roads**

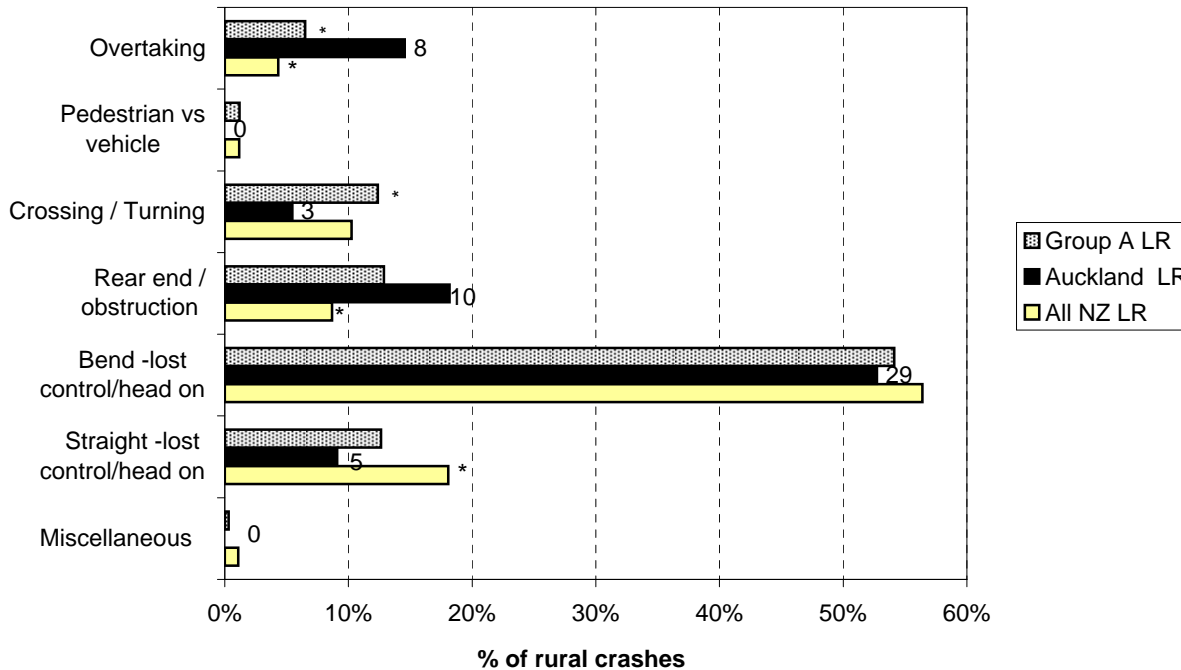


**Figure 8.7 Crash movement type - urban  
Auckland City council roads (2005-2009)**



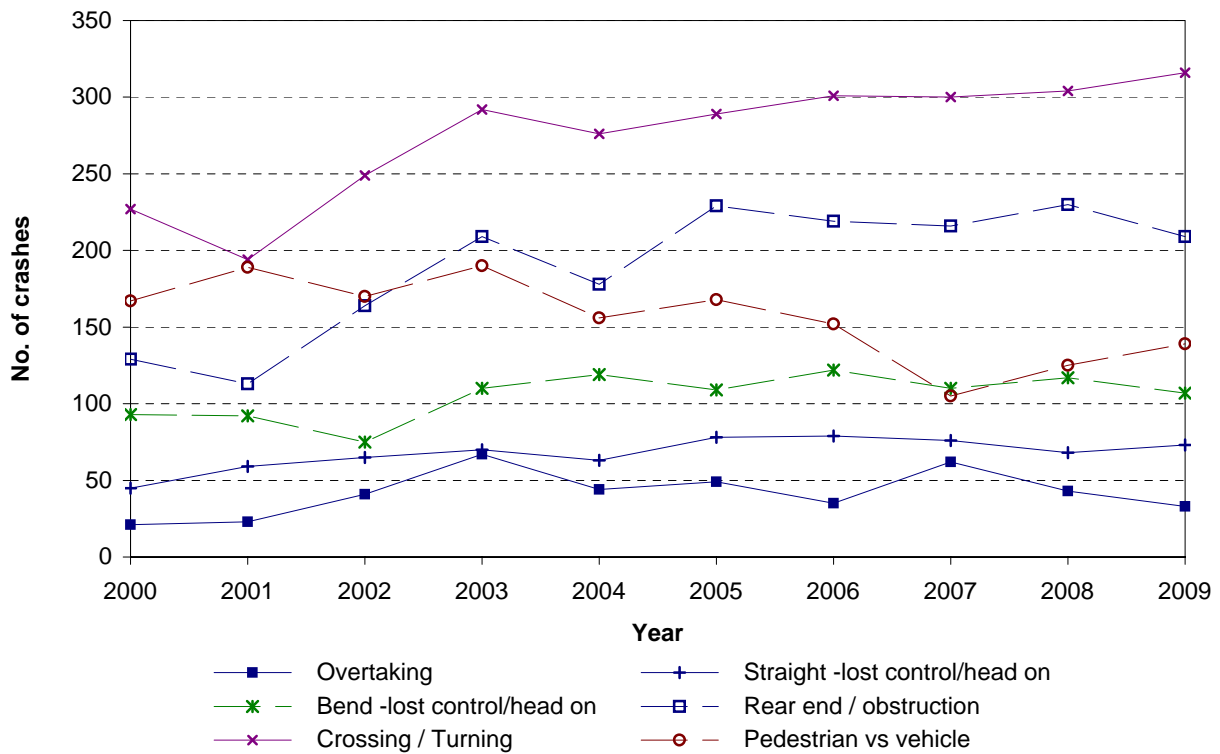
Note: While the graph plots percentages, the number of crashes is shown against the data points.  
\*Denotes statistically significant difference between Local Authority and National or Peer Group Proportions

**Figure 8.8 Crash movement type - rural  
Auckland City council roads (2005-2009)**

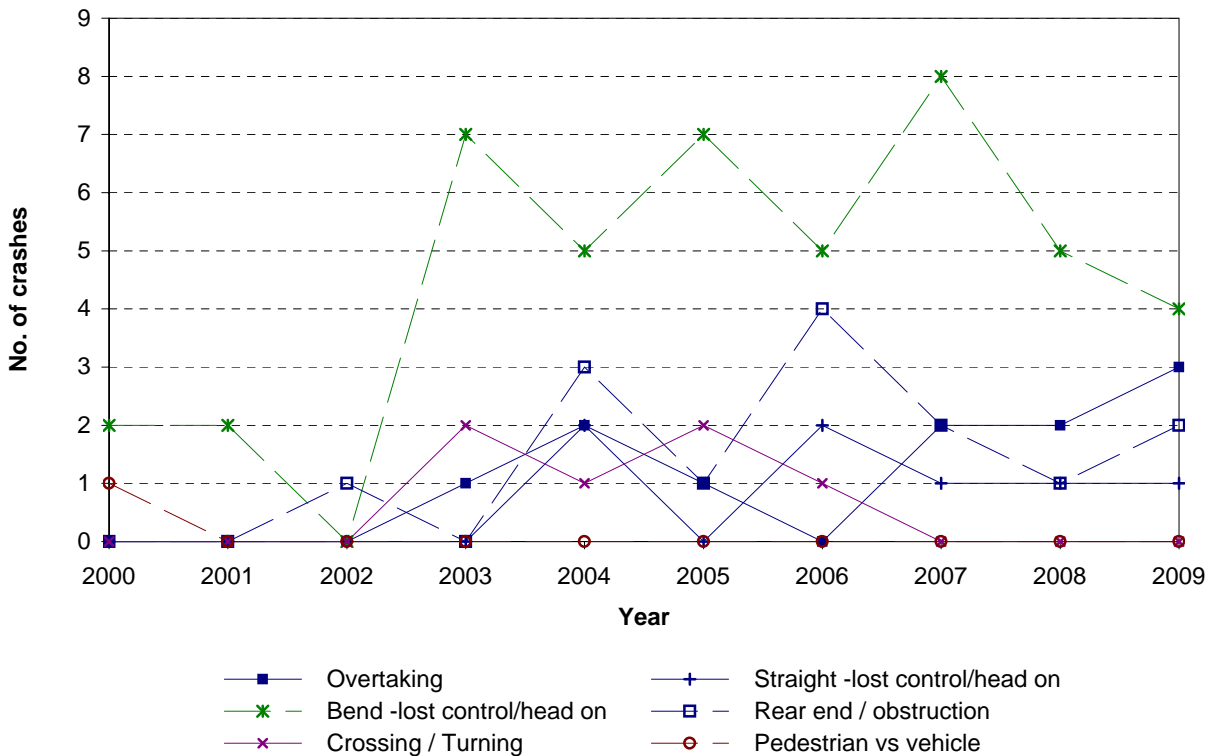


Note: While the graph plots percentages, the number of crashes is shown against the data points.  
\*Denotes statistically significant difference between Local Authority and National or Peer Group Proportions

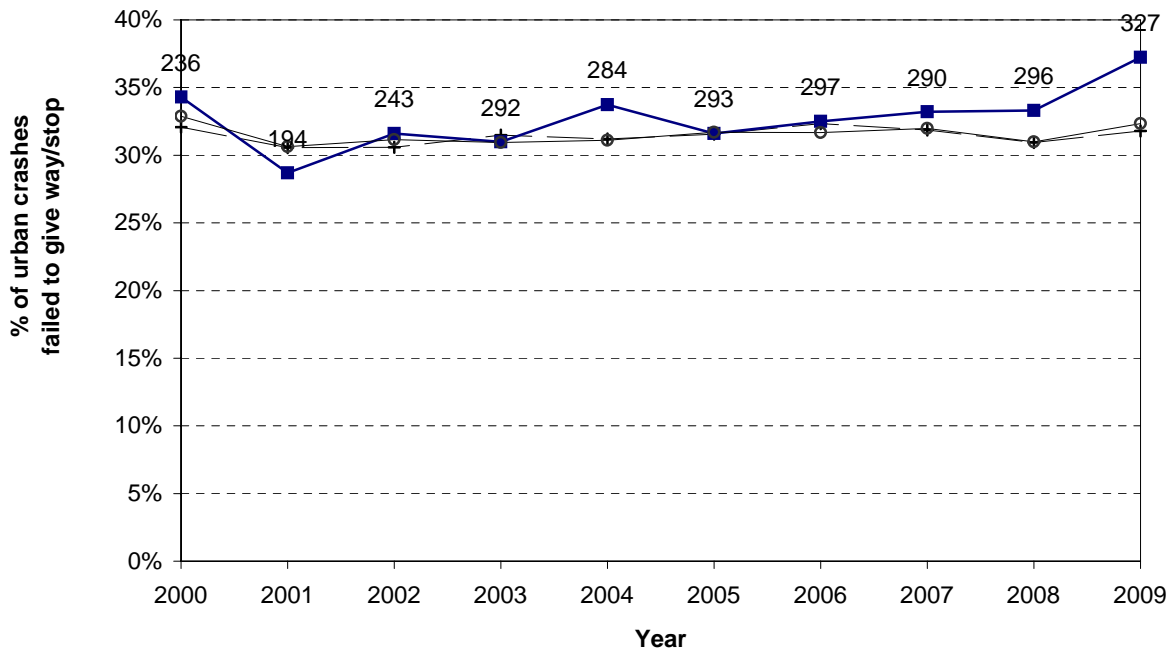
**Figure 8.9 Crash movement type - Trends  
Auckland City - urban council roads**



**Figure 8.10 Crash movement type - Trends  
Auckland City - rural council roads**



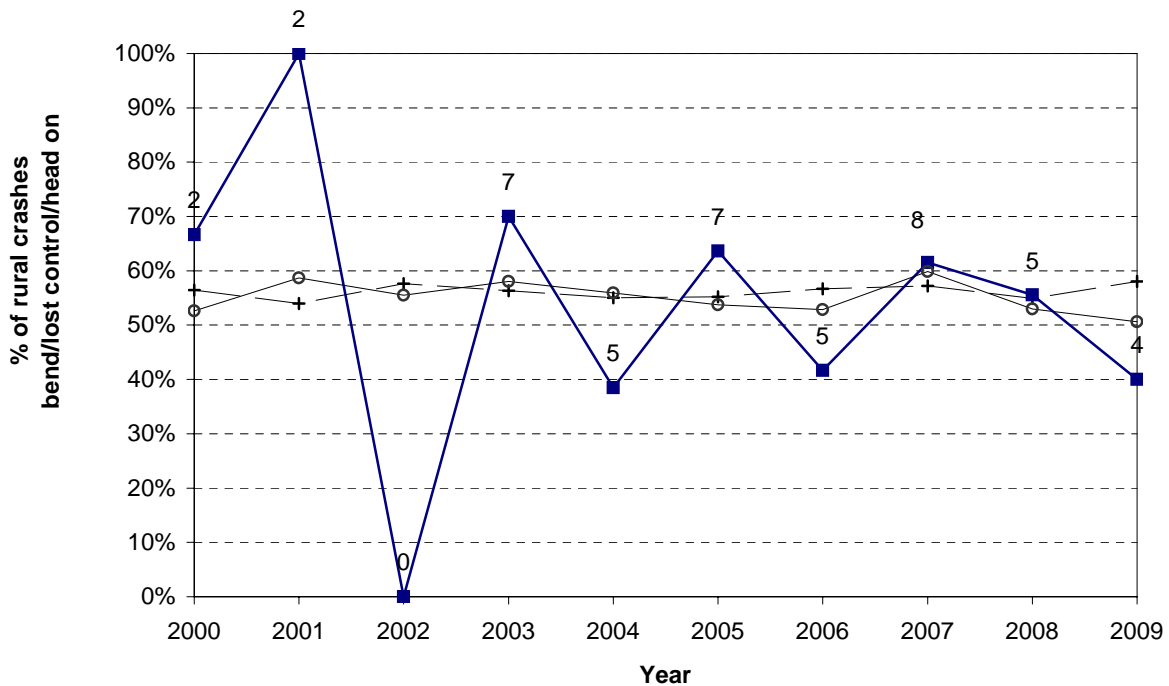
**Figure 8.11 Failed to give way/stop  
Auckland City - urban council roads**



Note: While the graph plots percentages, the number of crashes is shown against the data points.

—+— All NZ LR —■— Auckland LR —○— Group A LR

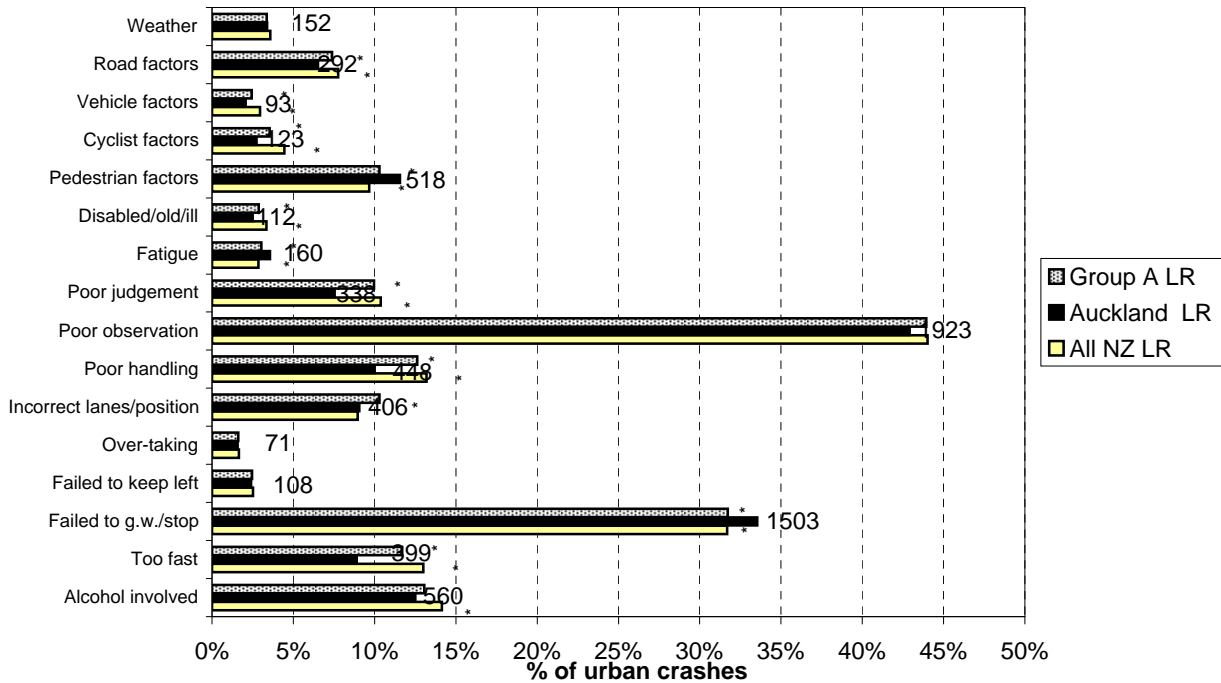
**Figure 8.12 Bend - lost control / head - on  
Auckland City - rural council roads**



Note: While the graph plots percentages, the number of crashes is shown against the data points.

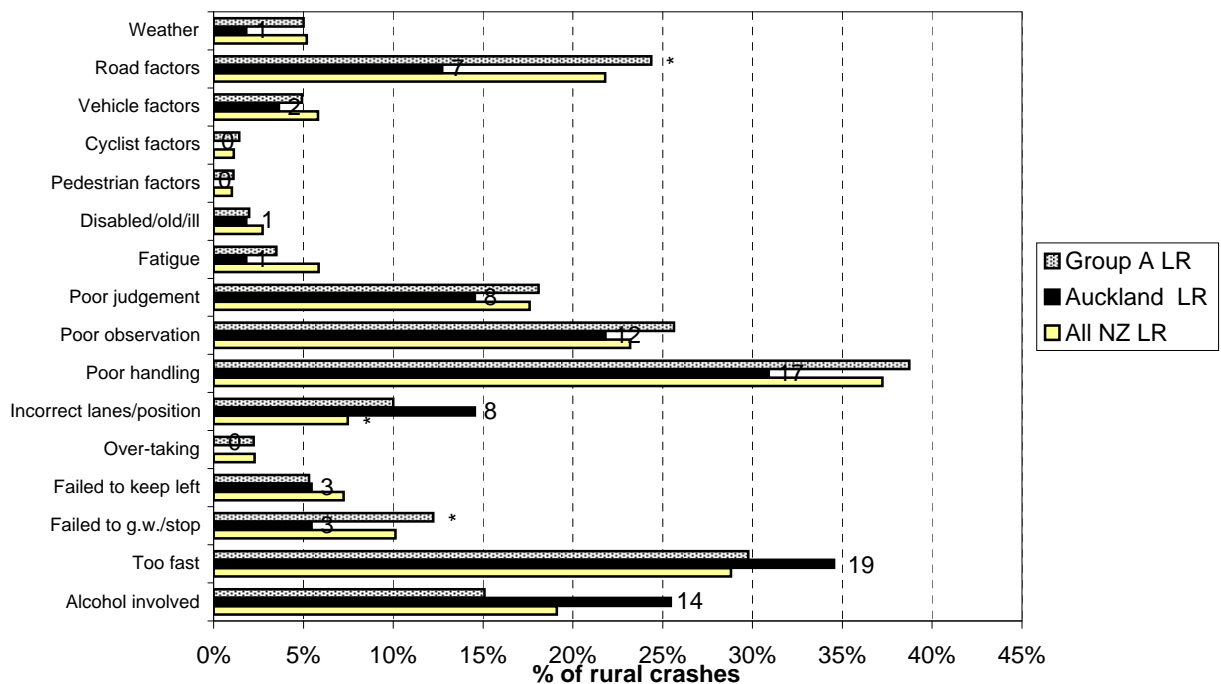
—+— All NZ LR —■— Auckland LR —○— Group A LR

**Figure 8.13 Contributing factors - urban  
Auckland City council roads (2005-2009)**



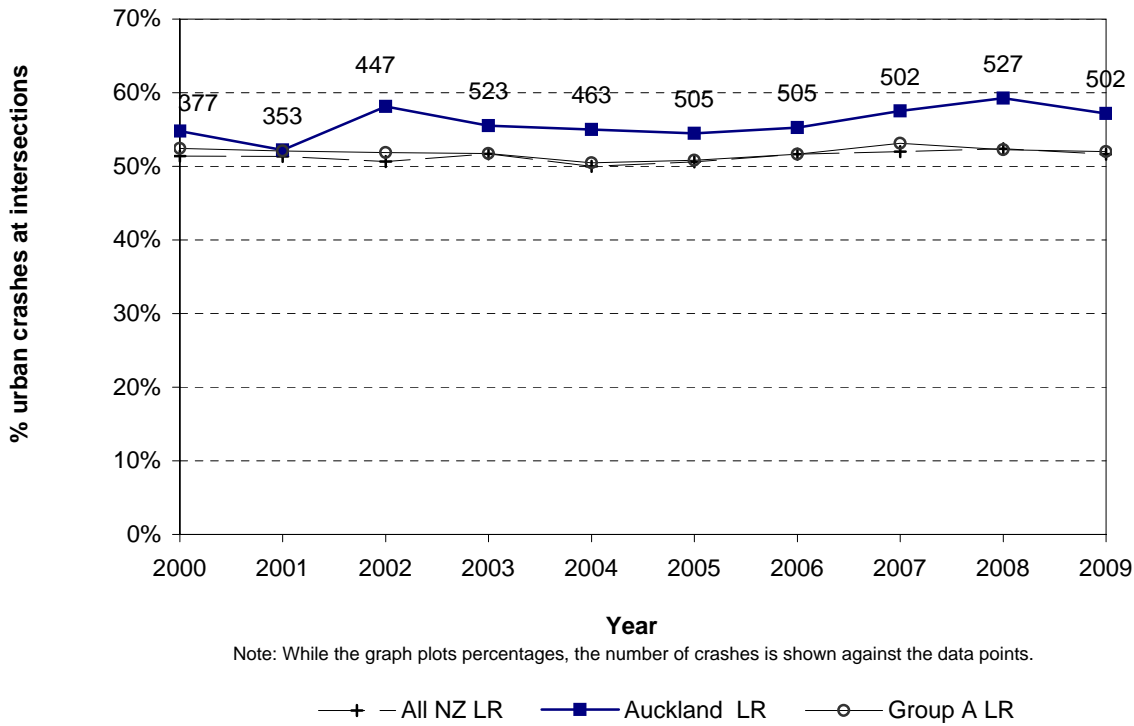
Note: While the graph plots percentages, the number of crashes is shown against the data points.  
\*Denotes statistically significant difference between Local Authority and National or Peer Group Proportions

**Figure 8.14 Contributing factors - rural  
Auckland City council roads (2005-2009)**

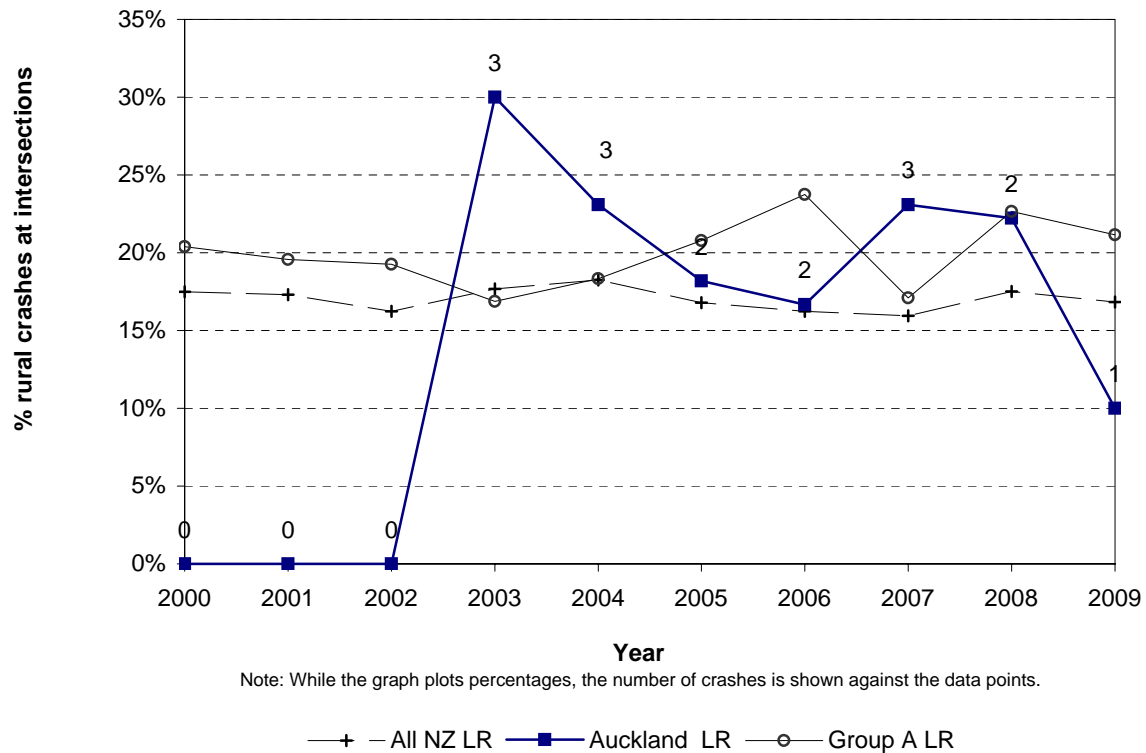


Note: While the graph plots percentages, the number of casualties is shown against the data points.  
\*Denotes statistically significant difference between Local Authority and National or Peer Group Proportions

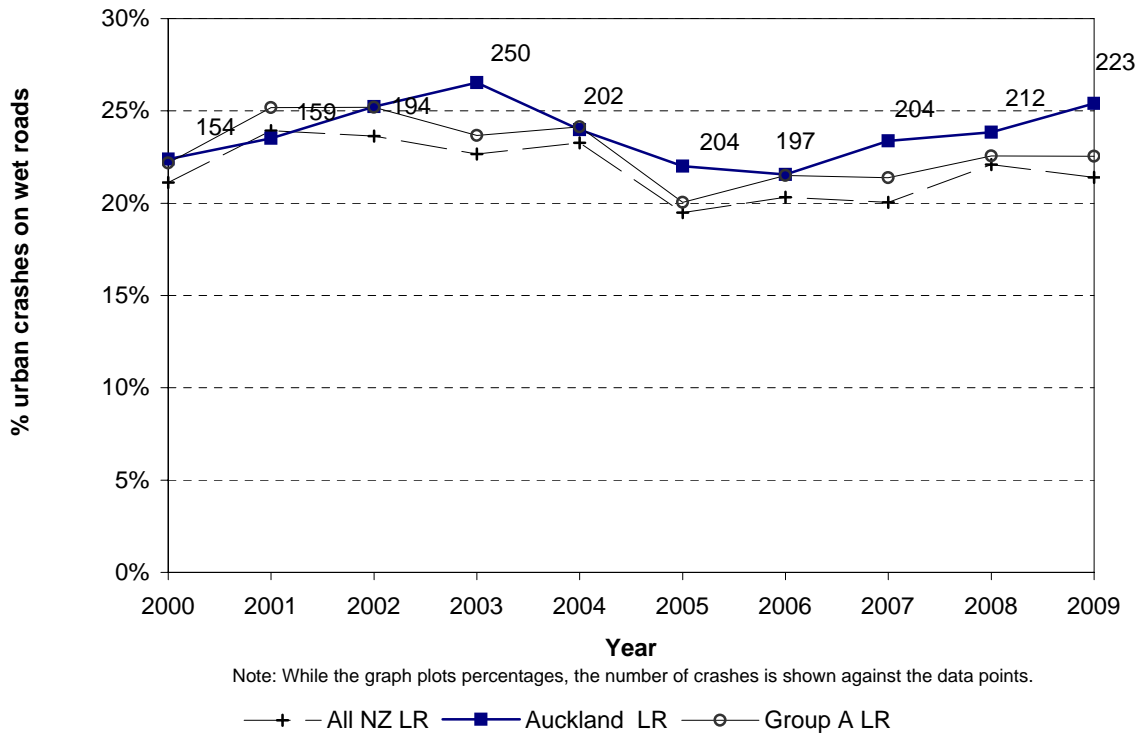
**Figure 8.15 Intersection crashes  
Auckland City - urban council roads**



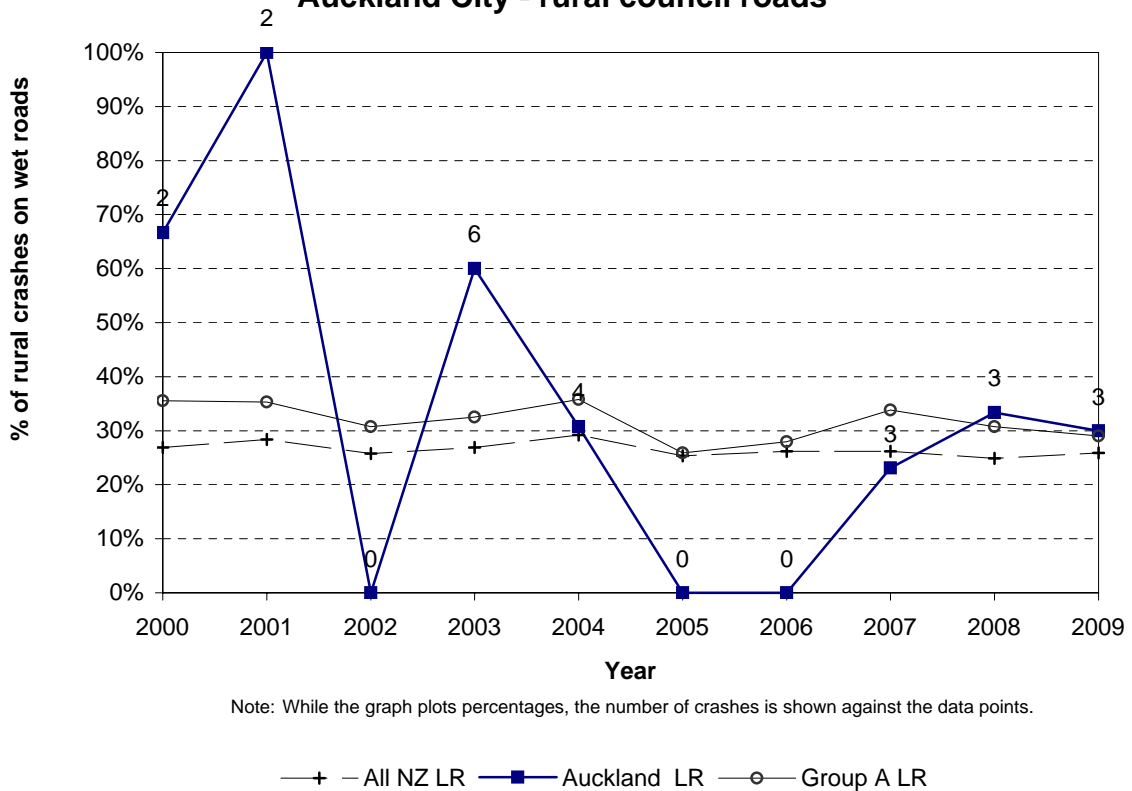
**Figure 8.16 Intersection crashes  
Auckland City - rural council roads**



**Figure 8.17 Wet road crashes  
Auckland City - urban council roads**

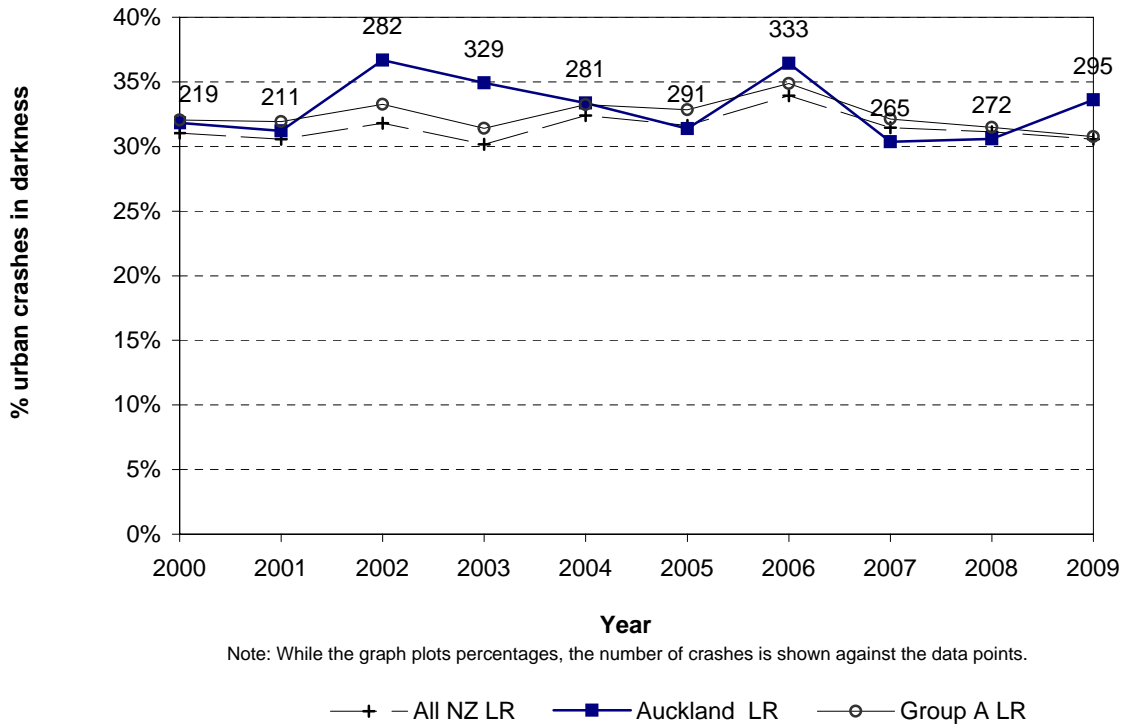


**Figure 8.18 Wet road crashes  
Auckland City - rural council roads**

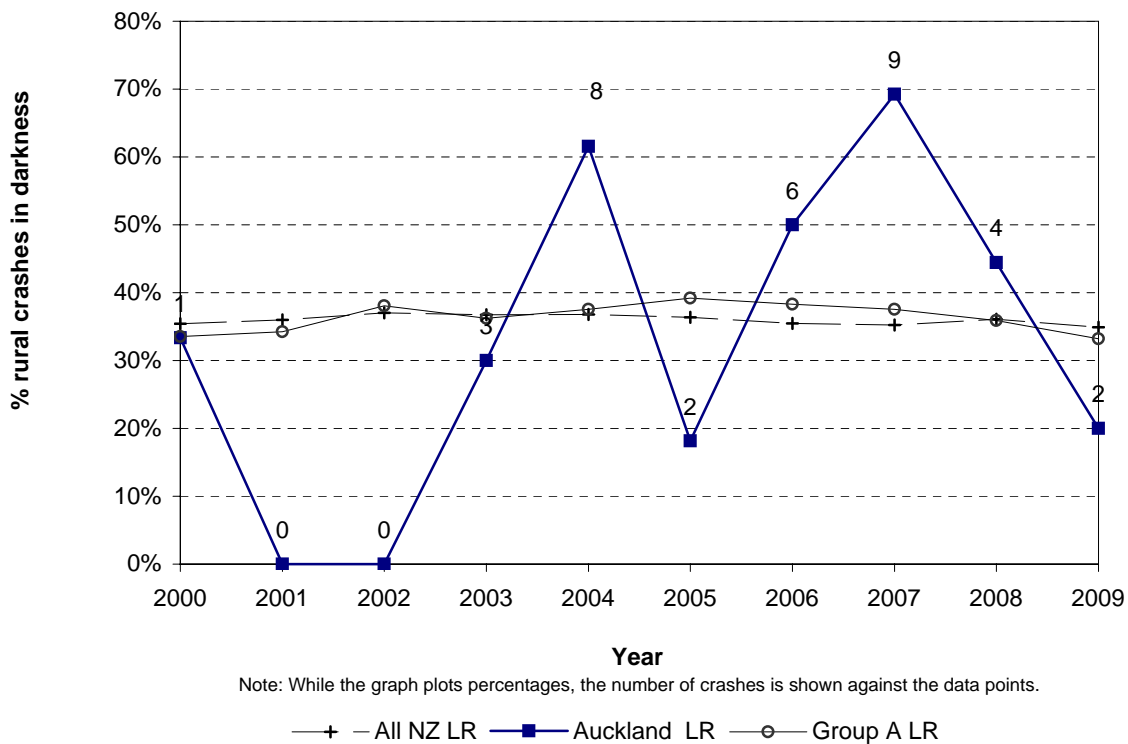




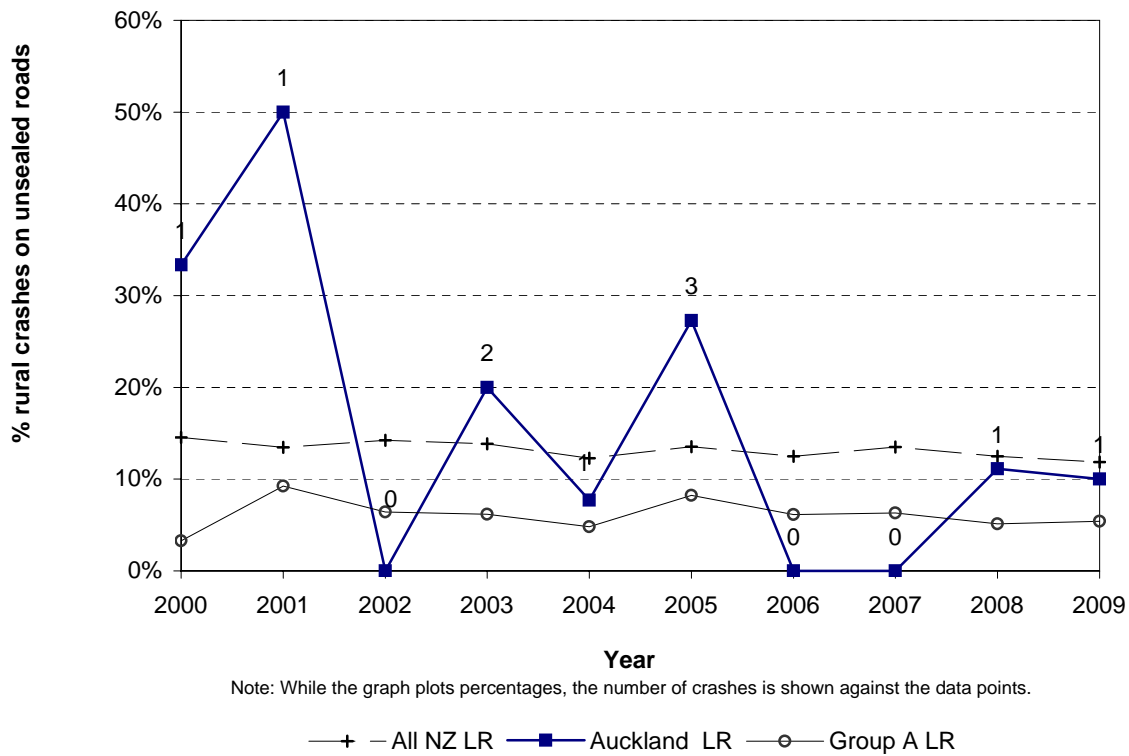
**Figure 8.19 Crashes in darkness  
Auckland City - urban council roads**



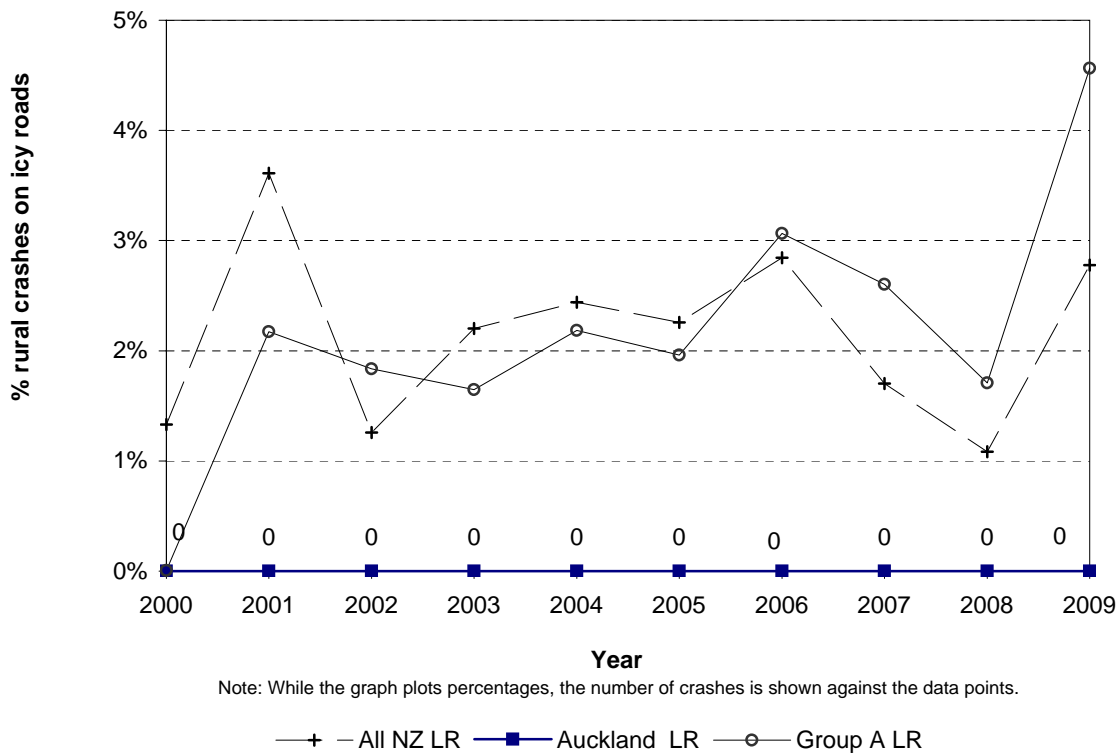
**Figure 8.20 Crashes in darkness  
Auckland City - rural council roads**



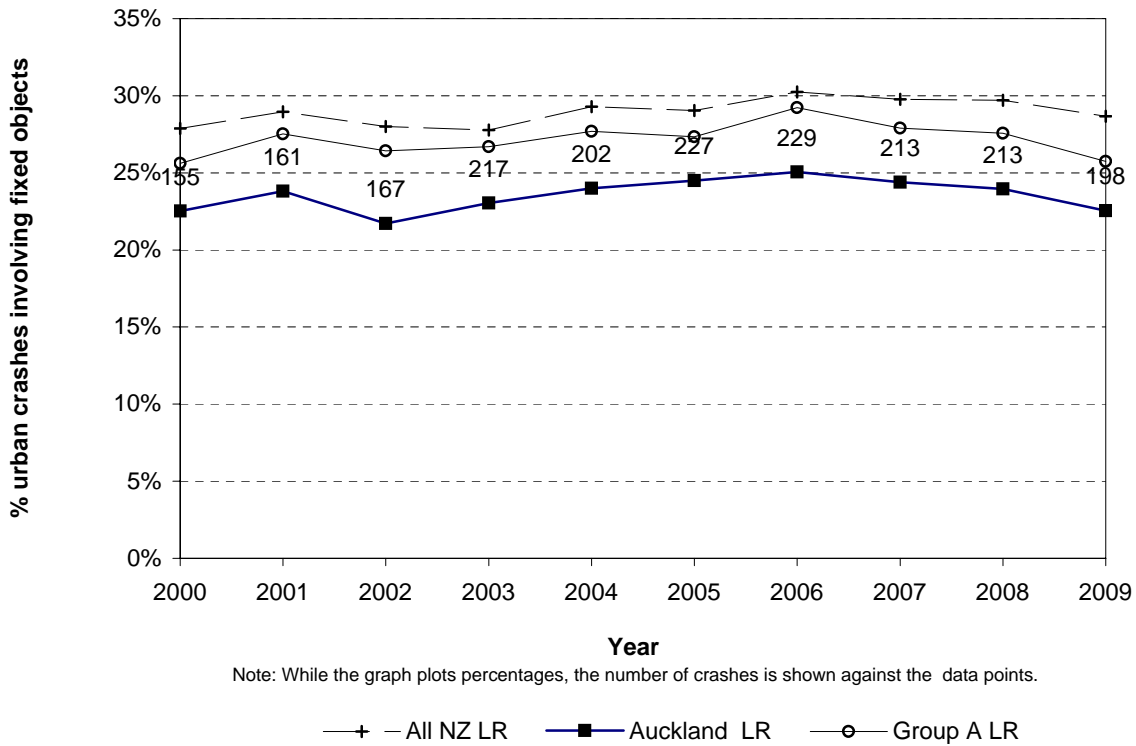
**Figure 8.21 Crashes on unsealed roads  
Auckland City - rural council roads**



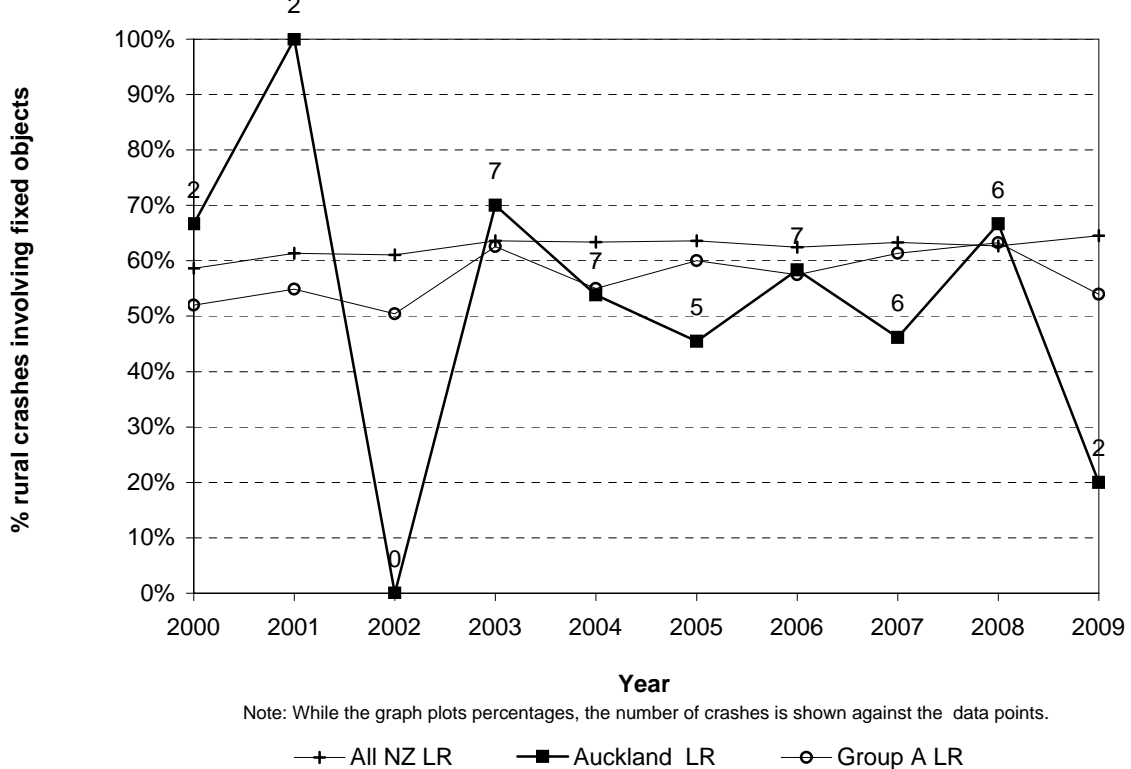
**Figure 8.22 Icy road crashes  
Auckland City - rural council roads**



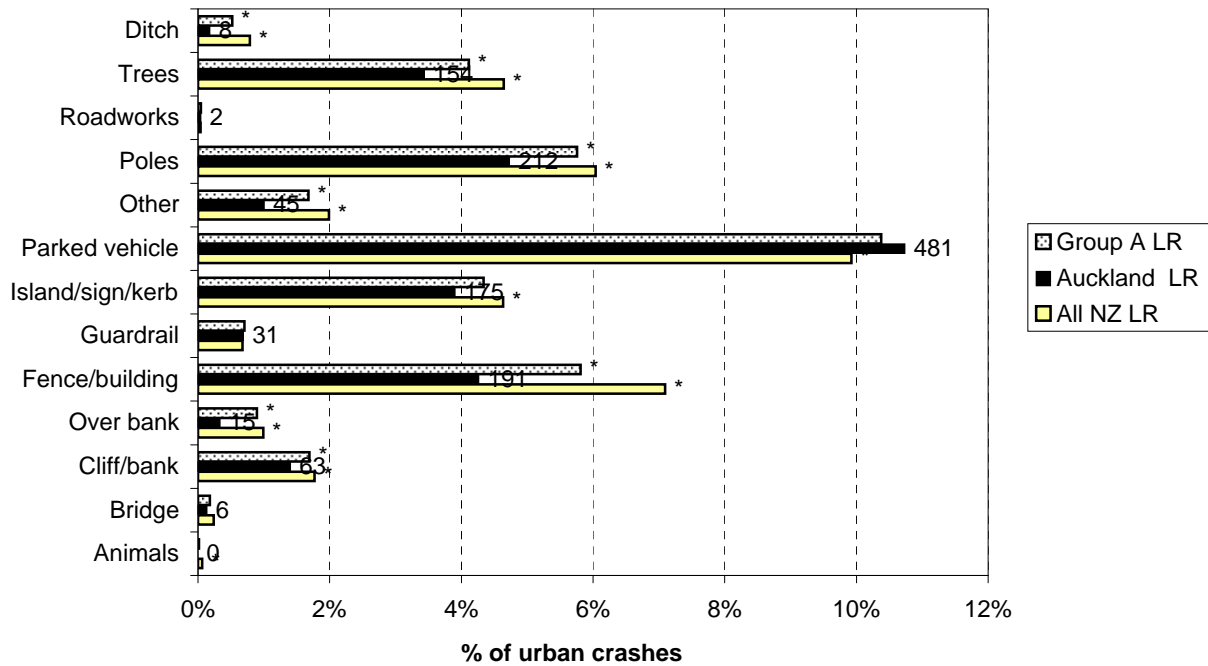
**Figure 8.23 Collisions with objects  
Auckland City - urban council roads**



**Figure 8.24 Collisions with objects  
Auckland City - rural council roads**

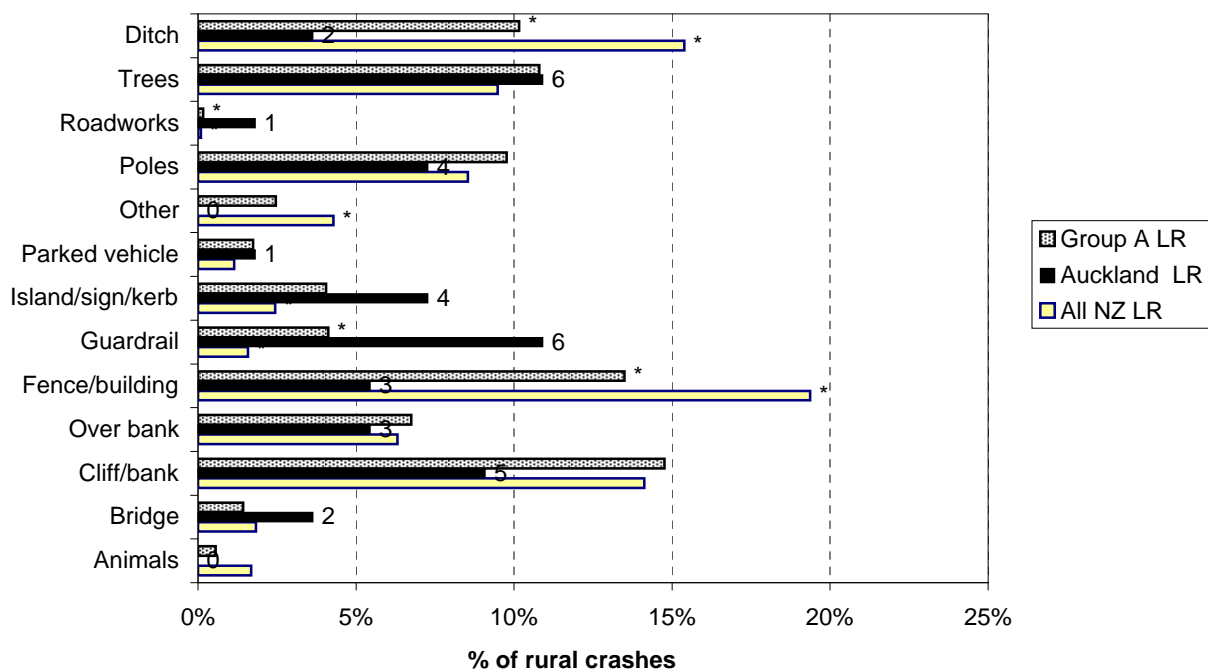


**Figure 8.25 Objects struck - urban  
Auckland City council roads (2005-2009)**



Note: While the graph plots percentages, the number of crashes is shown against the data points.  
\*Denotes statistically significant difference between Local Authority and National or Peer Group Proportions

**Figure 8.26 Objects struck - rural  
Auckland City council roads (2005-2009)**



Note: While the graph plots percentages, the number of crashes is shown against the data points.  
\*Denotes statistically significant difference between Local Authority and National or Peer Group Proportions



# *Crash Location Statistics*



**Table 9.1: Council Roads Black Spot List Urban  
(Injury and Non-Injury Crashes)**
**Site Radius = 30 metres**
**Sites with 5 or more injury crashes or more than \$1000000 in social costs**

CRASH ROAD	SIDE ROAD	2005	2006	2007	2008	2009	TOTAL	Non-Injury	Wet Crash %	Dark Crash %	Crash Costs
GREAT NORTH ROAD	I BULLOCK TRACK	10	12	12	8	15	57	34	21	25	\$6,427,743
NEILSON ST	I CAPTAIN SPRINGS ROAD	4	2	2	2	4	14	8	21	14	\$4,770,202
ALBERT ST	I WYNDHAM ST	5	7	5	2	6	25	18	20	24	\$4,437,811
PONSONBY ROAD	I COLLINGWOOD ST	3	3	4	1	6	17	13	18	47	\$4,266,463
GORDON ROAD	I ATKINSON AVENUE	5	6	4	4	2	21	16	14	24	\$4,249,146
GREAT SOUTH ROAD	I SOUTH-EASTERN HIGHWA	2	7	6	7	3	25	22	24	40	\$4,210,807
PENROSE ROAD	I BARRACK ROAD	4	3	3	2	8	20	16	35	50	\$4,204,241
TAMAKI DRIVE	I PATTESON AVENUE	2	8	8	3	4	25	16	8	32	\$4,120,097
WELLESLEY ST EAST	I MAYORAL DRIVE	4	6	1	3	3	17	14	6	65	\$4,100,914
MANUKAU ROAD	I PAH ROAD		4	2		4	10	7	20	40	\$3,984,974
NEILSON ST	I CHURCH ST	4	5	4	5	6	24	21	42	17	\$3,891,483
CRACROFT ST	I GREAT SOUTH ROAD	4	2	4		3	13	8	23	23	\$3,667,744
ROCKFIELD ROAD	I MOUNT SMART ROAD	1	3	5	3	1	13	9	46		\$3,642,276
GREAT NORTH ROAD	I KIWI ROAD	3	1	2		3	9	5	33	22	\$3,574,238
POINT ENGLAND ROAD	I LINE ROAD	4	1		1	2	8	7	50	63	\$3,506,734
HILLSBOROUGH ROAD	I KELSEY CRESCENT	2	3	1			6	5	33	17	\$3,472,090
DOMINION ROAD	I ST ALBANS AVENUE		3	3	1		7	5	29	29	\$3,428,236
MARUA ROAD	I MICHAELS AVENUE	1	1		3		5	4	40	40	\$3,340,196
GREAT NORTH ROAD	I CARRINGTON ROAD	14	10	11	11	13	59	42	27	27	\$3,277,210
TAMAKI DRIVE	I NGAPIPI ROAD	8	3	5	7	9	32	17	19	9	\$2,692,539
MOUNT WELLINGTON HIGH-I	I WAIPUNA ROAD	11	15	14	8	10	58	48	28	29	\$2,442,752
GREAT SOUTH ROAD	I MOUNT RICHMOND DRIVE	4	6	8	3	5	26	16	23	27	\$2,327,795
ASH ST	I ROSEBANK ROAD	8	11	10	14	8	51	33	12	24	\$2,297,709
DOMINION ROAD	I MOUNT ALBERT ROAD	13	12	15	14	13	67	55	21	22	\$2,264,224
PENROSE ROAD	I GREAT SOUTH ROAD	7	4	9	6	5	31	24	32	35	\$2,245,005
VICTORIA ST WEST	I HOBSON ST	9	5	16	13	10	53	45	25	47	\$2,234,432
KHYBER PASS ROAD	I MOUNTAIN ROAD	5	7	6	4	5	27	21	15	22	\$2,127,555
QUEEN ST	I MAYORAL DRIVE	16	11	12	10	12	61	50	28	46	\$2,105,604
KARANGAHAPE ROAD	I PITT ST	14	12	9	12	11	58	46	31	47	\$2,099,090
QUEEN ST	I CITY ROAD	8	4	9	2	2	25	11	16	44	\$2,089,416
HAYR ROAD	I CARR ROAD	19	14	9	6	1	49	43	22	20	\$2,066,063
QUEEN ST	I VICTORIA ST WEST	14	8	7	9	9	47	41	17	55	\$2,035,112
MANUKAU ROAD	I GREEN LANE WEST	8	9	11	8	11	47	41	21	21	\$2,022,428
GREAT NORTH ROAD	I HENRY ST	7	5	5	6	10	33	24	33	27	\$1,947,451
SALEYARDS ROAD	I STATION ROAD	3	5	6	1	3	18	13	33	28	\$1,931,563
BROADWAY	I MORROW ST	3	7	2	3	2	17	12	12	12	\$1,904,830
GREAT SOUTH ROAD	I MAIN HIGHWAY	3	4	5	6	3	21	10	29	43	\$1,844,077
GREAT SOUTH ROAD	I MANGERE ROAD	18	9	5	6	7	45	34	18	42	\$1,830,017
MOUNT WELLINGTON HIGH-I	I ARANUI ROAD	4	7	7	10	10	38	25	37	32	\$1,810,189
RICHARDSON ROAD	I ROGAN ST	3	2	6	1		12	7	25	25	\$1,805,728
DENBIGH AVENUE	I DOMINION ROAD	13	11	13	15	10	62	57	24	24	\$1,789,860
SYMONDS ST	I KHYBER PASS ROAD	10	13	17	11	10	61	48	13	46	\$1,765,752
BEACH ROAD	I ANZAC AVENUE	4	2	8	5	5	24	16	25	38	\$1,733,343
MOUNT ALBERT ROAD	I SANDRINGHAM ROAD	7	7	16	8	10	48	44	23	42	\$1,697,535
BROADWAY	I ALPERS AVENUE	10	7	10	11	6	44	35	18	20	\$1,689,062
QUEEN ST	I TURNER ST	8	8	3	3	5	27	21	26	33	\$1,687,347
MOUNT SMART ROAD	I ONEHUNGA MALL	4	7	2	7	10	30	25	30	30	\$1,687,197
SANDRINGHAM ROAD	I BALMORAL ROAD	4	6	10	10	10	40	30	33	23	\$1,672,735
WILLIAMSON AVENUE	I MACKELVIE ST			4	2	1	7	3	14	29	\$1,660,370
QUAY ST	400 W SH 16	1	1	1	1	2	6	2	17		\$1,643,036



**Table 9.1: Council Roads Black Spot List Urban  
(Injury and Non-Injury Crashes)**

Site Radius = 30 metres

**Sites with 5 or more injury crashes or more than \$1000000 in social costs**

CRASH ROAD		SIDE ROAD	2005	2006	2007	2008	2009	TOTAL	Non-Injury	Wet Crash %	Dark Crash %	Crash Costs
GREEN LANE EAST	I	GREAT SOUTH ROAD	9	10	8	7	15	49	43	12	18	\$1,616,814
UPPER QUEEN ST	I	KARANGAHAPE ROAD	16	15	11	16	7	65	56	14	52	\$1,614,460
GREAT SOUTH ROAD	I	PORTAGE ROAD	9	11	7	9	6	42	34	31	17	\$1,609,955
ST JUDE ST	I	BLOCKHOUSE BAY ROAD	6	10	9	8	9	42	34	14	33	\$1,603,149
SYMONDS ST	I	MOUNT ST	2	3	6	7	1	19	12	32	26	\$1,599,357
GREEN LANE WEST	I	WHETURANGI ROAD	1	4	6	4	3	18	11	33	44	\$1,582,035
CUSTOMS ST EAST	I	GORE ST	6	2	3	4	5	20	14	20	60	\$1,559,305
CARRINGTON ROAD	I	MOUNT ALBERT ROAD	10	8	10	10	7	45	39	27	29	\$1,548,980
SYMONDS ST	I	WAKEFIELD ST W	5	2	4	3	5	19	13	5	47	\$1,541,983
PRINCES ST	I	BOWEN AVENUE	3	3	1	3	5	15	8	33	53	\$1,522,112
GREAT NORTH ROAD	I	PONSONBY ROAD	6	10	5	9	13	43	37	16	56	\$1,514,279
DOMINION ROAD	I	DUKE ST	2	3	3	1	5	14	7	14	21	\$1,502,940
LOWER HOBSON ST	A	QUAY ST	7	1	5	3	3	19	14	5	47	\$1,491,285
WHITE SWAN ROAD	I	HILLSBOROUGH ROAD	5	5	8	4	6	28	18	14	50	\$1,469,091
PONSONBY ROAD	I	ANGLESEA ST	2	4	1	6	2	15	9	20	53	\$1,469,050
NELSON ST	I	COOK ST	9	10	6	7	5	37	30	24	43	\$1,465,625
MOUNT ALBERT ROAD		100 E HILLSBOROUGH ROAD	2	6	1	6	2	17	13	12	41	\$1,411,392
ST GEORGES ROAD	I	GREAT NORTH ROAD	13	9	14	14	12	62	56	21	21	\$1,399,100
STODDARD ROAD	I	SANDRINGHAM ROAD	4	5	1	1	2	13	8	15	15	\$1,398,204
ATKINSON AVENUE	I	AVENUE ROAD	9	5	1	2	3	20	17	25	30	\$1,394,911
GREAT NORTH ROAD	I	TUARANGI ROAD E	5	3	5	8	2	23	13	22	39	\$1,378,509
ST LUKES ROAD	I	ASQUITH AVENUE	1		2	6	7	16	12	44	25	\$1,374,835
WAIPUNA ROAD	I	IRELAND ROAD	2	4		2	3	11	6	36	18	\$1,352,250
ATKINSON AVENUE	I	PRINCES ST	8	7	8	8	6	37	32	30	32	\$1,351,507
WAKEFIELD ST	I	MAYORAL DRIVE	2	7	4	5	6	24	15	29	33	\$1,344,754
GREAT NORTH ROAD	I	BLOCKHOUSE BAY ROAD	4	3	5	8	9	29	22	45	41	\$1,320,081
QUEEN ST	I	CUSTOMS ST WEST	8	2	7	9	6	32	26	16	38	\$1,319,035
GREEN LANE EAST	I	ASCOT AVENUE	8	6	6	3	5	28	21	21	21	\$1,313,129
MOUNT EDEN ROAD	I	ESPLANADE ROAD	2	4			3	9	4		22	\$1,311,586
DOMINION ROAD	I	ONSLow ROAD	1	2	1	3	2	9	4	11	11	\$1,309,742
KARANGAHAPE ROAD	I	BOARDMAN LANE	2	3	3	1	2	11	7	18	27	\$1,289,722
ROSEBANK ROAD	I	CANAL ROAD	5	3	3		2	13	10	38	31	\$1,280,820
ALBERT ST	I	WELLESLEY ST WEST	10	4	7	6	5	32	27	34	44	\$1,277,141
CUSTOMS ST WEST	I	LOWER ALBERT ST	12	12	6	4	5	39	28	18	46	\$1,276,967
ROSEBANK ROAD	I	GREAT NORTH ROAD	10	7	8	13	13	51	44	14	27	\$1,265,938
BLOCKHOUSE BAY ROAD		5 S TIVERTON ROAD	10	5	10	11	18	54	48	19	19	\$1,263,196
SURREY CRESCENT	I	BULLOCK TRACK	1	3	2	1	2	9	5	22		\$1,262,626
PANMURE ROUNDABOUT	I	LAGOON DRIVE	10	15	8	8	10	51	44	10	10	\$1,259,671
DOMINION ROAD	I	RICHARDSON ROAD	5	6	7	6	4	28	22	18	32	\$1,256,633
DOMINION ROAD	I	VALLEY ROAD	5	7	4	5	4	25	18	12	36	\$1,255,867
QUEEN ST	I	SHORTLAND ST	3	5	6	3	5	22	14	23	64	\$1,253,336
BALMORAL ROAD	I	DOMINION ROAD	15	4	6	10	12	47	39	32	40	\$1,251,080
QUEEN ST	I	WELLESLEY ST WEST	13	10	8	13	12	56	51	14	52	\$1,245,138
SANDRINGHAM ROAD	I	WALTERS ROAD	1	3	1	4	2	11	8	18	27	\$1,242,618
ST LUKES ROAD	I	NEW NORTH ROAD	7	4	5	6	11	33	29	18	33	\$1,233,809
REMUERA ROAD	I	LADIES MILE	22	10	8	3	2	45	37	33	38	\$1,226,967
GREAT SOUTH ROAD	I	PARK AVENUE	8	9	5	5	5	32	28	19	31	\$1,214,867
MOUNT SMART ROAD	I	MANUKAU ROAD	13	16	9	11	8	57	53	11	11	\$1,211,558
VINCENT ST	I	PITT ST	3	9	7	3	6	28	23	21	50	\$1,198,597
CHURCH ST	I	HUGO JOHNSON DRIVE	1	5	5	7	7	25	19	20	20	\$1,197,533
MANGERE ROAD	I	WALMSLEY ROAD	6	9	8	4	4	31	27	32	42	\$1,195,831

**Table 9.1: Council Roads Black Spot List Urban  
(Injury and Non-Injury Crashes)**
**Site Radius = 30 metres**
**Sites with 5 or more injury crashes or more than \$1000000 in social costs**

CRASH ROAD	SIDE ROAD	2005	2006	2007	2008	2009	TOTAL	Non-Injury	Wet Crash %	Dark Crash %	Crash Costs	
DOMAIN DRIVE NORTH	I	LOVERS LANE	1	1	2		1	5	1	20		\$1,191,284
PITT ST	I	GREYS AVENUE	5	2	5	4	2	18	10	22	33	\$1,188,744
MOUNT EDEN ROAD	I	NGAURUHOE ST		1	1	3	2	7	4	43	57	\$1,165,262
NEW NORTH ROAD	I	BOLLARD AVENUE	6	5	11	9	5	36	26	31	36	\$1,160,931
QUAY ST	I	LOWER ALBERT ST	4	5	5	6	2	22	16	18	41	\$1,157,341
NGAPIPI ROAD	200 S	TAMAKI DRIVE	1	1		2	2	6	3	100	17	\$1,155,544
BLOCKHOUSE BAY ROAD	I	HOLBROOK ST	1			1	4	6	3		50	\$1,147,804
QUEEN ST	I	WAKEFIELD ST	9	4	1	9	2	25	20	8	56	\$1,147,739
CARRINGTON ROAD	I	CARRINGTON TECH GT4	2	3				5	2	20	40	\$1,147,608
GILLIES AVENUE	I	OWENS ROAD	3	3	6	4	6	22	16	23	32	\$1,147,015
KARANGAHAPE ROAD	I	EDINBURGH ST	7	9	5	4	9	34	32	32	50	\$1,141,803
PANMURE ROUNDABOUT	A	JELlicoe ROAD	14	17	11	8	3	53	49	13	23	\$1,136,819
PANAMA ROAD	I	CARBINE ROAD	4		1	2	1	8	6	25	13	\$1,132,888
GREAT NORTH ROAD	I	HERDMAN ST	4	6	5	5	4	24	19	33	46	\$1,130,441
LONG DRIVE	I	ST HELIERS BAY ROAD	4	4	2	4	3	17	10	12	53	\$1,122,586
DOMINION ROAD	I	GEORGE ST	1	1	3	6	8	19	13	11	47	\$1,098,965
GREAT SOUTH ROAD	100 N	GREEN LANE EAST	1	1	1	1	1	5	3		20	\$1,085,024
RICHARDSON ROAD	I	WHITE SWAN ROAD	5	5	4	6	3	23	19	17	48	\$1,061,511
ONEHUNGA MALL	I	GREY ST	2	6	2	8	2	20	15	40	20	\$1,059,167
FANSHAWE ST	I	HALSEY ST	4	6	7	9	4	30	20	33	50	\$1,058,323
MAIN HIGHWAY	I	LADIES MILE	6	5	2	3	3	19	14	21	16	\$1,050,309
NEW NORTH ROAD	I	MCLEAN ST	3	4	4	3	1	15	9	33	40	\$1,032,108
ELM ST	I	ROSEBANK ROAD	3	3	1	6	5	18	13	11	28	\$1,032,003
COOK ST	I	HOBSON ST	9	6	5	7	10	37	30	22	38	\$1,025,867
WELLESLEY ST WEST	I	NELSON ST	5	5	7	6	4	27	17	15	37	\$1,011,319
PARK ROAD	I	CARLTON GORE ROAD	3	3	6	7	1	20	16	20	10	\$1,002,529
ERIMA AVENUE	I	ANDERSON AVENUE	2	3	4	3	1	13	7	38	23	\$993,956
MAY ROAD	I	DENBIGH AVENUE	5	3	3	2	3	16	11	6	19	\$991,190
SYMONDS ST	I	CITY ROAD	1	3	3	4	5	16	11	19	25	\$991,153
NEW NORTH ROAD	I	PORTERS AVENUE	6	2	4	3	1	16	11	19	44	\$987,676
QUAY ST	I	TANGIHUA ST	10	3	7	2	6	28	19	7	43	\$977,213
VICTORIA ST WEST	I	ELLIOTT ST	4	5	2	2	2	15	10	7	27	\$975,588
MOUNT ALBERT ROAD	I	PAH ROAD	6	8	5	9	3	31	23	13	55	\$974,669
RICHARDSON ROAD	I	NEW NORTH ROAD	10	12	8	3	4	37	31	14	49	\$972,973
MAYORAL DRIVE	10 E	VINCENT ST	8	2	8	5	4	27	18	30	48	\$961,561
DOMINION ROAD	I	BURNLEY TERRACE	7	7	4	4	2	24	14	13	33	\$959,130
FORT RICHARD ROAD	I	GREAT SOUTH ROAD	3	4	3	2	2	14	9	14		\$956,484
DOMINION ROAD	I	EWINGTON AVENUE	3	1	5	2	3	14	9	36	50	\$951,194
TAMAKI DRIVE	300 E	HAPIMANA ST	2		3	3	2	10	4	50	50	\$938,154
FROST ROAD	I	MOUNT ALBERT ROAD	1	1	2	4	2	10	4	20	30	\$936,434
ALBERT ST	I	VICTORIA ST WEST	10	10	2	6	7	35	29	23	43	\$933,095
GREAT NORTH ROAD	I	KING ST	3	1	3	2	3	12	7	17	25	\$919,860
ONEHUNGA MALL	I	NEILSON ST	4	12	8	5	5	34	28	32	12	\$914,077
SELWYN ST	I	ARTHUR ST	9	6	3	4	2	24	15	21	8	\$909,502
NEW NORTH ROAD	I	LLOYD AVENUE	9	10	3	4	4	30	23	40	27	\$906,173
MOUNT ALBERT ROAD	I	WINSTONE ROAD	4		4	3		11	6	9	45	\$904,128
CURRAN ST	I	SARSFIELD ST	1	3	1	4	2	11	6		45	\$900,818
KOHIMARAMA ROAD	I	ST HELIERS BAY ROAD	1	1	1	4	4	11	6	9	18	\$899,036
ELLERSLIE-PANMURE HIGH	I	MOUNT WELLINGTON HIGH	6	8	5	8	9	36	31	19	50	\$897,125
WHARF ROAD	I	BELGIUM ST	3	5	1		1	10	5	20	60	\$896,322
KARANGAHAPE ROAD	I	WEST TERRACE	3		4	3		10	5	20	90	\$891,910

**Table 9.1: Council Roads Black Spot List Urban  
(Injury and Non-Injury Crashes)**

Site Radius = 30 metres

**Sites with 5 or more injury crashes or more than \$1000000 in social costs**

CRASH ROAD		SIDE ROAD	2005	2006	2007	2008	2009	TOTAL	Non-Injury	Wet Crash %	Dark Crash %	Crash Costs
ST LUKES ROAD	I	GREAT NORTH ROAD	7	5	5	4	8	29	22	21	21	\$888,355
TAMAKI DRIVE		100 E SELWYN AVENUE	3	2	1			6		50	33	\$877,200
CHURCH ST	I	GREAT SOUTH ROAD	9	10	7	6	2	34	29	15	26	\$860,793
BROADWAY	I	EDGERLEY AVENUE	3	2	1		2	8	3	38		\$853,746
TAMAKI DRIVE	I	WATENE CRESCENT		2	3	2	1	8	3	13	13	\$848,592
BLOCKHOUSE BAY ROAD	I	ROSEBANK ROAD	8	5	6	7	4	30	24	13	40	\$847,635
GREAT SOUTH ROAD	I	GT SOUTH LINK	6	7	6	8	5	32	27	28	9	\$824,187
QUEEN ST		50 N WAKEFIELD ST	2	1	1		2	6	1	17	33	\$820,630
MANUKAU ROAD	I	OWENS ROAD	3	5	4	7	3	22	14	41	27	\$818,121
QUAY ST	I	GORE ST	1	1	2		2	6	1	17	17	\$815,532
LAGOON DRIVE	I	CHURCH CRESCENT	9	5	4	3		21	13	24	29	\$809,374
HOBSON ST	I	WELLESLEY ST WEST	3	4	4	7	9	27	21	15	44	\$790,199
MOUNT EDEN ROAD	I	VALLEY ROAD	4	6	3	3	4	20	12	30	25	\$785,054
MOUNT EDEN ROAD	I	BALMORAL ROAD	7	10	6	4	2	29	24	24	34	\$772,197
PONSONBY ROAD	I	HOPETOUN ST	3	5	5	7	2	22	15	23	41	\$759,887
NEW NORTH ROAD	I	HENDON AVENUE	6	3	5	6	5	25	19	32	32	\$756,997
STODDARD ROAD	I	RICHARDSON ROAD	8	7	3	7	3	28	23	18	21	\$756,273
KARANGAHAPE ROAD	I	EAST ST	4	4	3	2	5	18	10	11	39	\$746,704
GREAT NORTH ROAD	I	MOTIONS ROAD	5	2	4	4	5	20	13	25	5	\$726,697
WOODWARD ROAD	I	CARRINGTON ROAD	9	3	3	1	2	18	11	28	17	\$700,504
SELWYN ST	I	CHURCH ST	5	3	3	3	4	18	11	22	6	\$691,849
HILLSBOROUGH ROAD	I	DOMINION ROAD	8	5	6	2	2	23	18	30	35	\$674,433
NEW NORTH ROAD	I	SANDRINGHAM ROAD	6	3	5	4	5	23	18	13	39	\$670,875
HILLSBOROUGH ROAD	I	CARLTON ST	3	5	4	4	4	20	14	10	30	\$670,189
UPPER QUEEN ST	I	CANADA ST	2	3	3	10	3	21	16	29	62	\$634,461
ST LUKES ROAD	I	MORNINGSIDE DRIVE	6	2	7	2	3	20	15	20	25	\$618,643
NGAPIPI ROAD		60 N PARITAI DRIVE	3	3	2	1	4	13	6	77	31	\$606,568
PAH ROAD	I	SELWYN ROAD	2	5	5	3	4	19	14	16	16	\$601,333
ASH ST	I	WAIRAU AVENUE	7	1	2	4	4	18	13	22	28	\$587,241
HILLSBOROUGH ROAD	I	GRIFFEN PARK ROAD	3	1	3	6	2	15	9	20	47	\$586,566
MOUNT SMART ROAD	I	MAYS ROAD	2	1	5	4	6	18	13	22	50	\$583,825
DOMINION ROAD	I	MEMORIAL AVENUE	3	3	2	2	5	15	9	13	27	\$583,244
NEW NORTH ROAD	I	ALBERTON AVENUE	1	7	4	2	4	18	13	17	6	\$582,414
SYMONDS ST	I	GRAFTON ROAD	3	4	4		6	17	12	29	59	\$575,165
MOUNT WELLINGTON HIGH I		ROSLYN ROAD	3	6	4	1	2	16	11	19	44	\$554,452
ATKINSON AVENUE	I	KING ST	4	2	5		5	16	11	19	13	\$547,436
PRINCES ST	I	CHURCH ST	1	5	5	2	3	16	11	6	19	\$545,852
TAMAKI DRIVE	I	SELWYN AVENUE	1	2	2	1	3	9	2	44	33	\$535,300
DOMINION ROAD	I	DEXTER AVENUE	4	1	2	3	5	15	10	20	47	\$529,984
SAM WRIGLEY ST	I	COOK ST	3	1	2	5	3	14	9	21	29	\$514,259
FAIRLANDS AVENUE	I	GREAT NORTH ROAD	1	2	4	2	2	11	5	18	27	\$511,846
RICHARDSON ROAD	I	PENNEY AVENUE	6	3	2	2		13	8	38	23	\$505,524
DOMINION ROAD	I	GRANGE ROAD	2	1	5	2	3	13	8	31	15	\$500,320
WELLESLEY ST EAST	I	PRINCES ST	3	3	4	1	2	13	8	15	8	\$496,992
TAMAKI DRIVE	I	ST HELIERS BAY ROAD	4	2	1	3	2	12	7	17	8	\$486,426
MEMORIAL AVENUE	I	MOUNT ROSKILL ROAD	2	2	5	1	1	11	6	18	45	\$463,944
DOMINION ROAD		5 N PAICE AVENUE	1	3		3	1	8	2	63	13	\$463,184
TANIWHA ST	I	ELSTREE AVENUE	2	2	1	2	4	11	6	27	27	\$460,498
ELLERSLIE-PANMURE HWY I		HARRISON ROAD	2	3	1	2	3	11	6	55	18	\$458,772
UPPER QUEEN ST	I	IAN MCKINNON DRIVE	3	2	3	1	1	10	5	30	50	\$451,652
ELLERSLIE-PANMURE HIGH I		STANHOPE ROAD	4	2	1	2	1	10	5	20	30	\$449,988

**Table 9.1: Council Roads Black Spot List Urban  
(Injury and Non-Injury Crashes)**

Site Radius = 30 metres

Sites with 5 or more injury crashes or more than \$1000000 in social costs

CRASH ROAD		SIDE ROAD	2005	2006	2007	2008	2009	TOTAL	Non-Injury	Wet Crash %	Dark Crash %	Crash Costs
RICHARDSON ROAD	I	OWAIRAKA AVENUE	3	2	1	3	1	10	5	10	10	\$448,206
AVERILL AVENUE	I	TAMAKI DRIVE	4	2		1	3	10	5		40	\$444,754
SANDRINGHAM ROAD	I	LANCING ROAD	1		2	2	2	7	1		57	\$443,950
MOUNTAIN ROAD	I	CLIVE ROAD	5		2		2	9	4	11		\$432,468
KHYBER PASS ROAD	I	MAUNGAWHAU ROAD	3	1	2	1	1	8	3	13	25	\$409,918
TAMAKI DRIVE		50 E SELWYN AVENUE	2		1	2	1	6	1	83	17	\$376,870

**Table 9.2: Council Roads Black Spot List Rural  
(Injury and Non-Injury Crashes)**

Site Radius = 250 metres

**Sites with 3 or more injury crashes or more than \$500000 in social costs**

CRASH ROAD	SIDE ROAD	2005	2006	2007	2008	2009	TOTAL	Non-Injury	Wet Crash %	Dark Crash %	Crash Costs
SOUTH-EASTERN HIGHWAY I	CARBINE ROAD	5	7	5	8	6	31	22	39	45	\$6,952,193
PAKURANGA HIGHWAY I	WAIPUNA ROAD	4		8	7	4	23	18	30	43	\$1,103,054
ONETANGI ROAD	770 W WAIATA ROAD	1	2	3			6	1	17	50	\$1,052,037
SOUTH-EASTERN HIGHWAY I	HUGO JOHNSTON DRIVE	2		1			3	1			\$795,277
MEDLAND ROAD	490 S WALTER BLACKWELL ROAD	1	1		1		3	1		67	\$774,616
SOUTH-EASTERN HIGHWAY I	SEMW ON WBD	4	5	1	2	3	15	11	40	27	\$771,930
FANSHAWE ST	15 W BEAUMONT ST		1		2		3	2		33	\$739,914
OBRIEN ROAD I	ONETANGI ROAD			2		1	3		33	33	\$255,780

**Table 9.3: State Highway  
Urban and Rural Black Spot List  
(Injury and Non-Injury Crashes)**

**Urban Site Radius = 30 metres  
Rural Site Radius = 250 metres**

**Sites with 3 or more injury crashes or more than \$500000 in social costs**

CRASH ROAD		SIDE ROAD	2005	2006	2007	2008	2009	TOTAL	Non-Injury	Wet Crash %	Dark Crash %	Crash Costs
SH 1N	I	GILLIES ON NBD	79	90	71	60	74	374	310	18	25	\$18,899,620
SH 1N	A	SHELLY BEACH OBR	43	27	36	28	49	183	145	24	34	\$11,038,947
SH 1N	I	FANSHAWE ON NBD	51	42	38	25	32	188	164	28	32	\$11,035,683
SH 1N	A	PENROSE OBR	54	49	48	42	30	223	172	21	17	\$10,991,259
SH 1N	I	SHELLY OFF SBD	40	34	28	34	49	185	141	25	18	\$10,308,431
SH 1N	I	WELLESLEY OFF NBD	38	36	42	43	36	195	162	26	33	\$9,525,272
SH 16	I	NEWTON ON WBD	40	34	44	21	22	161	125	25	21	\$8,995,043
SH 1N	I	SEART OFF SBD	18	23	9	12	8	70	52	20	29	\$8,875,213
SH 16		300 W BOND OBR	21	20	19	9	10	79	59	35	24	\$8,775,562
SH 1N	I	OTAHUHU ON SBD	21	27	17	21	27	113	89	25	40	\$8,299,939
SH 16	I	PT CHEV ON EBD	14	15	20	14	16	79	58	48	44	\$8,118,634
SH 1N	A	GREENLANE OFF NBD	24	23	18	28	25	118	91	25	24	\$8,017,043
SH 1N	I	MAIN OBR	15	13	10	14	10	62	52	21	24	\$7,586,279
SH 1N	I	TE COMA OFF SBD	9	16	18	10	17	70	56	17	37	\$7,419,605
SH 1N	I	PENROSE OFF NBD	31	28	24	41	26	150	129	25	27	\$7,260,829
SH 1N	I	SEART ON NBD	24	35	40	19	15	133	106	18	26	\$6,931,754
SH 1N	I	OTAHUHU OFF SBD	17	13	7	8	13	58	49	29	31	\$6,853,181
SH 1N	I	MARKET OFF NBD	19	25	23	16	21	104	82	25	43	\$6,708,430
SH 1N	I	MT WGTN OFF SBD	27	34	20	27	32	140	115	26	25	\$6,523,465
SH 1N	A	MT WGTN OBR	26	30	26	22	24	128	110	25	21	\$6,253,753
SH 1N	I	MARKET OFF SBD	34	24	22	21	26	127	100	20	35	\$6,142,595
SH 16	I	ST LUKES ON WBD	5	11	12	4	6	38	28	34	50	\$6,125,606
SH 16	I	1 LINK 16	22	19	14	19	11	85	64	33	40	\$5,916,535
SH 1N	I	KHYBER PASS OFF NBD	18	28	18	30	20	114	97	15	22	\$5,685,887
SH 1N		300 N FANSHAWE ON NBD	26	17	20	14	17	94	78	21	21	\$5,492,388
SH 16	A	ST LUKES ROAD	13	17	7	19	17	73	52	33	33	\$5,455,490
SH 16	I	WATERVIEW OFF WBD	13	13	21	20	26	93	66	37	42	\$5,365,246
SH 16	I	PATIKI ON WBD	17	20	18	19	16	90	75	20	30	\$5,270,273
SH 1N	I	PENROSE ON NBD	20	17	17	28	20	102	85	22	34	\$5,183,732
SH 1N	I	GREENLANE ON NBD	18	19	22	25	18	102	88	25	30	\$5,087,292
SH 16	I	UNION OFF EBD	18	15	27	16	13	89	71	26	25	\$4,802,271
SH 16	I	ST LUKES OFF WBD	2	3	3	3	3	14	13	29	50	\$4,709,789
SH 1N	I	SYMONDS ON SBD	20	14	26	16	14	90	78	24	33	\$4,542,580
SH 1N	A	PANAMA OBR	19	19	19	15	6	78	59	33	22	\$4,483,732
SH 20	I	ONEHUNGA OFF SBD	22	10	7	11	12	62	46	24	16	\$4,293,951
SH 20	I	ONEHUNGA OFF NBD	19	7	6	9	14	55	37	31	44	\$4,072,585
SYMONDS ST	I	GRAFTON BRIDGE	7	8	0	0	1	16	12	13	31	\$3,810,634
SH 16	I	ROSEBANK ON EBD	9	10	12	8	12	51	37	37	47	\$3,749,454
SH 20		100 E QUEENSTOWN OBR	15	14	6	12	1	48	38	29	25	\$3,486,069
SH 1N		300 N SHELLY OFF SBD	14	5	5	11	12	47	35	21	19	\$3,485,046
SH 1N	I	WELLINGTON ON NBD	14	7	17	18	15	71	55	21	35	\$3,420,431
SOUTH-EASTERN HIGHWAY	I	SEART ON NBD	18	9	4	9	8	48	39	23	17	\$3,373,018
SH 1N	I	MT WGTN ON SBD	16	15	17	13	8	69	54	33	33	\$3,319,889
SH 20	I	QUEENSTOWN OFF NBD	11	11	11	7	13	53	41	28	28	\$3,148,293
SH 16		700 E ST LUKES OFF WBD	14	13	7	9	10	53	42	34	25	\$3,130,071
SH 1N		300 S PANAMA OBR	20	14	11	13	6	64	51	30	25	\$3,095,159
SH 16		300 E ST LUKES OBR	9	15	14	11	7	56	47	30	30	\$3,084,896
SH 1N		300 N OTAHUHU OFF SBD	10	20	10	9	2	51	40	35	16	\$3,068,030
SH 1N		800 S PRINCES OBR	11	11	9	7	4	42	31	33	38	\$2,688,277
SH 1N	I	OTAHUHU ON NBD	15	13	15	11	4	58	49	31	26	\$2,612,629

**Table 9.3: State Highway  
 Urban and Rural Black Spot List  
 (Injury and Non-Injury Crashes)**
**Urban Site Radius = 30 metres  
 Rural Site Radius = 250 metres**
**Sites with 3 or more injury crashes or more than \$500000 in social costs**

CRASH ROAD	SIDE ROAD	2005	2006	2007	2008	2009	TOTAL	Non-Injury	Wet Crash %	Dark Crash %	Crash Costs
SH 16	300 E CARRINGTON OBR	4	7	11	12	5	39	27	26	28	\$2,608,560
SH 1N	500 S GILLIES OBR	10	17	2	7	3	39	31	18	31	\$2,474,619
SH 16	30 W BOND OBR	12	9	10	6	6	43	27	26	19	\$2,427,100
SH 1N	20 N ST MARKS ON SBD	19	5	10	11	7	52	44	15	23	\$2,375,504
SH 16	400 W PATIKI ON WBD	7	8	5	2	4	26	19	31	27	\$1,912,871
SH 1N	I HOBSON ON SBD	13	4	10	6	11	44	39	18	30	\$1,820,776
MOUNT WELLINGTON HIGH	I MT WGTN OFF SBD S	5	7	5	4	2	23	15	52	57	\$1,757,041
SH 16	I WATERVIEW ON WBD	5	10	10	4	6	35	27	37	37	\$1,721,416
SH 20	300 E HILLSBOROUGH ROAD	6	8	8	4	4	30	19	40	23	\$1,690,347
SH 1N	500 S PRINCES OBR	6	3	6	4	3	22	16	23	36	\$1,682,488
MARKET ROAD	I MARKET OFF NBD	3	9	6	5	9	32	25	34	28	\$1,674,712
GILLIES AVENUE	I GILLIES ON NBD N	8	7	4	6	3	28	20	21	46	\$1,643,889
SH 20	I HILLSBOROUGH ROAD	16	9	5	8	3	41	32	22	32	\$1,640,591
NEWTON ROAD	I NEWTON ON WBD	9	5	8	12	0	34	26	12	44	\$1,635,041
SH 16	100 E ROSEBANK OBR	9	4	6	5	4	28	17	25	14	\$1,609,403
SH 16	I ST GEORGES BAY ROAD	4	2	2	2	4	14	6	21	36	\$1,559,510
SH 16	700 E ROSEBANK OFF WBD	5	8	3	8	4	28	22	18	46	\$1,353,107
MT WGTN OFF NBD	I MOUNT WELLINGTON HIGH	5	6	2	4	6	23	17	26	30	\$1,349,682
UNION ST	I UNION ON WBD	6	8	13	0	4	31	28	13	48	\$1,319,891
SH 16	500 E TE ATATU OFF WBD	0	0	5	5	3	13	8	31	54	\$1,278,955
GILLIES AVENUE	I GILLIES OFF SBD	4	6	1	4	3	18	11	44	50	\$1,209,534
SH 20	200 N QUEENSTOWN OBR	7	6	2	6	3	24	19	54	17	\$1,163,435
SYMONDS ST	I SYMONDS OFF NBD	6	6	7	0	3	22	19	32	23	\$1,158,900
SH 16	700 E CARRINGTON OBR	5	3	3	5	7	23	17	39	57	\$1,155,846
SH 16	I GLADSTONE ROAD	1	4	4	3	5	17	10	29	35	\$1,119,158
GREENLANE OFF NBD	I GREENLANE INT	10	11	9	4	8	42	37	17	7	\$1,072,840
SH 1N	500 S GILLIES ON NBD	6	1	5	6	8	26	24	38	38	\$1,071,104
BEAUMONT ST	I FANSHAWE ST	9	7	3	0	2	21	17	19	38	\$1,055,457
KHYBER PASS OFF NBD	I KHYBER PASS ROAD	4	4	4	0	4	16	14	38	19	\$1,041,046
SH 1N	I MT WGTN OFF NBD	5	7	2	7	6	27	26	30	26	\$1,036,033
SH 16	400 E ROSEBANK OFF WBD	2	2	2	1	1	8	5	38	50	\$1,030,138
SH 16	600 E ST LUKES OBR	2	7	5	4	4	22	18	41	18	\$1,023,369
SH 1N	I PENROSE OFF SBD	4	6	2	4	4	20	15	10	5	\$989,389
SH 16	200 W ROSEBANK OBR	3	4	4	9	2	22	19	27	41	\$971,987
GREENLANE OFF SBD	I GREENLANE INT	8	8	5	4	7	32	25	16	13	\$956,487
SH 16	I WELLESLEY OFF EBD	5	2	3	8	3	21	18	24	29	\$939,048
PENROSE OFF SBD	I PENROSE INT	12	12	1	4	6	35	30	9	40	\$900,814
SH 20	100 W HILLSBOROUGH ROAD	1	2	3	0	1	7	5	43	14	\$876,147
UNION ST	I NELSON ST	13	5	4	4	4	30	24	20	37	\$867,408
SH 1N	100 N COOK OFF SBD	2	4	7	4	2	19	17	21	58	\$808,415
GREAT NORTH ROAD	I WATERVIEW ON WBD N	4	6	8	4	3	25	19	32	48	\$794,803
SH 16	I SLIP ROAD	1	2	3	6	7	19	11	42	53	\$773,880
ST LUKES OFF WBD	I ST LUKES ROAD N	4	1	6	7	1	19	12	37	42	\$772,726
SH 1N	200 N PENROSE OFF SBD	4	4	2	2	3	15	12	13	20	\$717,445
SH 1N	300 S PENROSE OFF NBD	1	3	2	3	3	12	7	25	17	\$702,218
ST MARKS ROAD	I ST MARKS ON SBD	7	4	4	5	1	21	17	10	43	\$682,028
SH 16	1500 E ROSEBANK OFF WBD	7	2	1	2	3	15	13	27	27	\$677,558
GREAT SOUTH ROAD	I GT SOUTH LINK	2	0	1	2	2	7	5	0	14	\$673,464
SH 16	100 E NGAOHO PLACE	2	1	0	0	1	4	3	50	75	\$652,336
PENROSE INT	I PENROSE INT S	6	5	9	5	1	26	24	8	19	\$565,567

**Table 9.3: State Highway  
Urban and Rural Black Spot List  
(Injury and Non-Injury Crashes)**

**Urban Site Radius = 30 metres  
Rural Site Radius = 250 metres**

**Sites with 3 or more injury crashes or more than \$500000 in social costs**

CRASH ROAD	SIDE ROAD	2005	2006	2007	2008	2009	TOTAL	Non-Injury	Wet Crash %	Dark Crash %	Crash Costs
SH 1N	15 N MARKET OBR	4	2	2	2	2	12	10	17	42	\$561,079
SH 16	I 16 LINK 1	4	1	4	1	0	10	6	30	30	\$558,886
SH 16	I PARNELL RISE	0	3	3	5	5	16	11	13	38	\$547,393
SH 16	1500 E ROSEBANK OBR	3	1	1	2	3	10	7	40	50	\$527,330
PRINCES ST	I OTAHUHU ON NBD	0	0	1	1	2	4	1	0	75	\$228,950



**Table 9.4 : Urban Council Road Crash Sites  
with a Significant Increase in Crashes in 2009  
(Injury and Non-Injury Crashes)**
**Site Radius =  
30 metres**

CRASH ROAD	SIDE ROAD	2004	2005	2006	2007	2008	2009	TOTAL	Non-Injury	Wet Crash %	Dark Crash %
BLOCKHOUSE BAY ROAD	5 S TIVERTON ROAD	9	10	5	10	11	18	63	56	21	19
GREEN LANE EAST	I GREAT SOUTH ROAD	6	9	10	8	7	15	55	49	15	24
NEWTON ROAD	I GREAT NORTH ROAD	9	6	10	5	9	13	52	45	15	52
ST LUKES ROAD	I NEW NORTH ROAD	3	7	4	5	6	11	36	30	17	33
SYMONDS ST	A GRAFTON BRIDGE	7	3	6	3	4	10	33	24	24	42
GREAT SOUTH ROAD	I CAMPBELL ROAD	7	3	1	0	9	9	29	25	14	31
SHORTLAND ST	I HIGH ST	1	6	2	3	5	9	26	26	12	42
ONEHUNGA MALL	5 S ARTHUR ST	3	2	2	4	5	8	24	21	42	33
HOBSON ST	I PITT ST	3	4	2	2	5	8	24	23	13	46
ORAKEI ROAD	I REMUERA ROAD	4	2	5	4	1	7	23	19	22	48
BARRACK ROAD	I PENROSE ROAD	2	4	3	3	2	8	22	18	36	50
DOMINION ROAD	I GEORGE ST	3	1	1	3	6	8	22	15	9	45
RANFURLY ROAD	I MANUKAU ROAD	1	1	5	3	3	7	20	18	35	25
BEACH ROAD	I CHURCHILL ST	3	0	4	1	2	9	19	18	16	21
GRAFTON ROAD	I SYMONDS ST	2	3	4	4	0	6	19	14	26	53
ST LUKES ROAD	I ASQUITH AVENUE	2	1	0	2	6	7	18	13	50	22
PONSONBY ROAD	I COLLINGWOOD ST	0	3	3	4	1	6	17	13	18	47
RICHARDSON ROAD	I MAIORO ST	1	4	1	0	3	7	16	13	25	25
JERVOIS ROAD	I REDMOND ST	4	1	0	2	3	6	16	14	13	13
CAPTAIN SPRINGS ROAD	I MAYS ROAD	3	1	1	2	2	7	16	14	19	31
DOMINION ROAD	I ROCKLANDS AVENUE	3	1	2	2	1	5	14	11	14	36
MOUNT ALBERT ROAD	I ERSON AVENUE	1	3	2	0	3	5	14	11	7	21
GREAT NORTH ROAD	I ASH ST	3	1	1	2	1	5	13	10	38	54
ST LUKES ROAD	I DUNCAN MACLEAN LINK	2	0	0	0	3	6	11	7	27	27
WOLVERTON ST	I MIRANDA ST	3	0	0	2	2	4	11	8	27	9
PARNELL ROAD	I AYR ST	0	0	3	2	1	4	10	10	30	30
MAIN HIGHWAY	I WALPOLE ST	1	0	0	1	2	5	9	9	22	11
ALFRED ST	I GREY ST	0	2	0	0	3	4	9	6	22	22
BOLLARD AVENUE	I METHUEN ROAD	3	0	0	1	1	4	9	6	22	33
MARKET PLACE	I PAKENHAM ST	2	0	0	2	1	4	9	8	11	67
GREAT NORTH ROAD	I ROBERTON ROAD	2	0	1	1	0	4	8	5	13	38
LADIES MILE	I MARUA ROAD	1	0	1	1	1	4	8	7	25	38
NEW NORTH ROAD	I CENTRAL ROAD	0	0	2	1	1	4	8	5	13	25
HIGH ST	50 S SHORTLAND ST	0	2	0	1	0	5	8	8	0	63
HOBSON ST	I WYNDHAM ST	1	0	1	0	1	5	8	8	0	13
MANUKAU ROAD	I QUEEN MARY AVENUE	0	1	0	2	1	4	8	8	25	25
HOWE ST	I HOPETOUN ST	1	1	1	1	0	4	8	8	50	88
PAH ROAD	I TRAFALGAR ST	1	0	1	0	1	4	7	6	14	29
GILLIES AVENUE	I GILLIES ON NBD N	0	1	1	1	1	3	7	4	0	43
MAIN HIGHWAY	I AMY ST	1	0	1	0	2	3	7	6	29	29
PAH ROAD	I AMBURY AVENUE	3	0	0	0	1	3	7	5	0	14
WAIPUNA ROAD	I MUSKET PLACE	1	0	2	0	1	3	7	6	29	71
TAMAKI DRIVE	I SAGE ROAD	0	2	0	1	1	3	7	5	0	0
WELLINGTON ST	I HEPBURN ST	1	1	1	1	0	3	7	7	29	29
SYMONDS ST	I ALEX EVANS ST	0	1	0	0	0	5	6	4	33	50
PARNELL RISE	I THE STRAND	1	1	1	0	0	3	6	3	17	50
MACKELVIE ST	I ROSE ROAD	0	1	0	0	1	4	6	4	0	33
PENROSE ROAD	50 W MOUNT WELLINGTON HIGHWAY	1	0	1	0	0	4	6	5	17	17
LOWER DOMAIN DRIVE	50 S LOVERS LANE	1	0	1	0	1	3	6	3	33	0
MEOLA ROAD	15 W WALFORD ROAD	1	1	0	0	1	3	6	5	0	50
BLOCKHOUSE BAY ROAD	I HOLBROOK ST	0	1	0	0	1	4	6	3	0	50
ASH ST	150 E WAIRAU AVENUE	0	1	0	1	1	3	6	3	17	50

**Table 9.4 : Urban Council Road Crash Sites  
with a Significant Increase in Crashes in 2009  
(Injury and Non-Injury Crashes)**

Site Radius =  
30 metres

CRASH ROAD	SIDE ROAD	2004	2005	2006	2007	2008	2009	TOTAL	Non-Injury	Wet Crash %	Dark Crash %
JERVOIS ROAD	I KELMARNIA AVENUE	0	0	2	1	0	3	6	6	0	17
MOUNT WELLINGTON HIGHWAY	I MT WGTN ON NBD N	2	0	0	0	0	3	5	5	0	40
TAMAKI DRIVE	500 N KITEMOANA ST	1	0	0	0	1	3	5	4	80	80
COLLEGE ROAD	I NGAHUE DRIVE	0	0	0	1	1	3	5	2	20	0
TAMAKI DRIVE	I HAPIMANA ST	0	1	0	0	1	3	5	5	40	20
KHYBER PASS ROAD	I KHYBER PASS OFF NBD	0	0	0	0	2	3	5	5	0	40
GREAT SOUTH ROAD	I GORDON ROAD	0	1	1	0	0	3	5	4	0	20
ASH ST	240 W ROSEBANK ROAD	0	0	0	0	1	4	5	4	0	20

**Table 9.4a : Rural Council Road Crash Sites  
with a Significant Increase in Crashes in 2009  
(Injury and Non-Injury Crashes)**

Site Radius =  
250 metres

CRASH ROAD	SIDE ROAD	2004	2005	2006	2007	2008	2009	TOTAL	Non-Injury	Wet Crash %	Dark Crash %
There are no rural alarm sites											

**Table 9.5 : State Highway Crash Sites  
with a Significant Increase in Crashes in 2009  
(Injury and Non-Injury Crashes)**

Urban Site Radius = 30 metres  
Rural Site Radius = 250 metres

CRASH ROAD		SIDE ROAD	2004	2005	2006	2007	2008	2009	TOTAL	Non-Injury	Wet Crash %	Dark Crash %
SH 1N	A	SHELLY BEACH OBR	44	43	27	36	28	49	227	177	27	35
SH 1N	I	SHELLY OFF SBD	42	40	34	28	34	49	227	170	25	19
SH 16	I	WATERVIEW OFF WBD	18	13	13	21	20	26	111	81	33	43
SH 16	I	SLIP ROAD	3	1	2	3	6	7	22	14	36	45
SH 16	I	COTESMORE WAY	0	0	0	1	0	2	3	1	0	67
SH 20	100 N	DOMINION ON WBD	0	0	0	0	0	3	3	1	33	67

# appendix

---



- Groupings of crash types
- Grouping of contributing factors
- General factor list
- General movement types



## Explanatory notes for the appendix

1. Each traffic crash report has a diagram and a description of what happened. These are used to classify the movements the vehicles were making when they crashed eg 'collided with parked vehicle', or 'lost control while overtaking'. In this report, crash types are grouped into seven categories. The following page shows the types of crashes which are included in each group.
2. Traffic crash reports also include information on why the crash occurred, or on factors contributing to the crash. In this report the hundreds of contributing factor codes used by New Zealand Transport Agency have been condensed into 16 groups for practical reasons. Lists of the factor groups used in this report, and of all the contributing factors used by New Zealand Transport Agency, are shown on the following pages.
3. Note that in the year 2000 there were some minor changes to the contributing factor groups. The most significant change was that 'inattention' was grouped with 'inadequate check' to form 'poor observation'. This allowed a more accurate assessment of 'fatigue' as a contributing factor, as it now has its own grouping.
4. The factor group 'poor handling' includes factor codes that were only introduced in 1998. This could explain why there may have been a sudden change at this time.
5. The coding of the factors contributing to a crash is subjective. Therefore analysis using contributing factor groups needs to be interpreted with caution. Also, to effectively target safety or enforcement campaigns more analysis of the specific contributing factors involved may be needed.
6. It should be noted that a traffic crash generally has more than one contributing factor. Therefore, adding the number of crashes on graphs showing the number of crashes with a given factor or factor group will be greater than the total number of crashes in the city or district.

# Groupings of crash types

Overtaking	AA	AB	AC	AD	AE	AF	AG						
	 PULLING OUT OR CHANGING LANE TO RIGHT	 HEAD ON	 CUTTING IN OR CHANGING LANE TO LEFT	 LOST CONTROL (OVERTAKING VEHICLE)	 SIDE ROAD	 LOST CONTROL (OVERTAKEN VEHICLE)	 WEAVING IN HEAVY TRAFFIC						
Straight - Lost control / Head on	GE	GB	BA	CA	CB	CC	BE						
	 OVERTAKING VEHICLE	 LEFT SIDE SIDE SWIPE	 ON STRAIGHT	 OUT OF CONTROL ON ROADWAY	 OFF ROADWAY TO LEFT	 OFF ROADWAY TO RIGHT	 LOST CONTROL ON STRAIGHT						
Bend - Lost control / Head on	DA	DB	DC	BB	BC	BD	BF						
	 LOST CONTROL TURNING RIGHT	 LOST CONTROL TURNING LEFT	 MISSED INTERSECTION OR END OF ROAD	 CUTTING CORNER	 SWINGING WIDE	 BOTH OR UNKNOWN	 LOST CONTROL ON CURVE						
Rear end / Obstruction	EA	EB	EC	ED	EE	FA	FB						
	 PARKED VEHICLE	 ACCIDENT OR BROKEN DOWN	 NON VEHICULAR OBSTRUCTIONS (INCLUDING ANIMALS)	 WORKMANS VEHICLE	 OPENING DOOR	 SLOWER VEHICLE	 CROSS TRAFFIC						
Crossing / Turning	FC	FD	FE	FF	GA	GD	GF						
	 PEDESTRIAN	 QUEUE	 SIGNALS	 OTHER	 REAR OF LEFT TURNING VEHICLE	 NEAR CENTRE LINE	 TWO TURNING						
Pedestrian vs Vehicle	MA	MB	MC	MD	ME	MF	MG						
	 PARKING OR LEAVING	 'U' TURN	 'U' TURN	 DRIVEWAY MANOEUVRE	 PARKING OPPOSITE	 ENTERING OR LEAVING	 REVERSING ALONG ROAD						
Miscellaneous	GC	HA	JA	JC	KA	KB	KC						
	 STOPPED OR TURNING FROM LEFT SIDE	 RIGHT ANGLE (70° TO 110°)	 RIGHT TURN RIGHT SIDE	 TWO TURNING	 LEFT TURN IN	 RIGHT TURN IN	 TWO TURNING						
Miscellaneous	LA	LB	NA	NB	NC	ND	NE	NF	NG				
	 STOPPED WAITING TO TURN	 MAKING TURN	 LEFT SIDE	 RIGHT SIDE	 LEFT TURN LEFT SIDE	 RIGHT TURN RIGHT SIDE	 LEFT TURN RIGHT SIDE	 RIGHT TURN LEFT SIDE	 MANOEUVRING VEHICLE				
Miscellaneous	PA	PB	PC	PD	PE	PF	QA	QB	QC	QD	QE	QF	QG
	 FELL WHILE BOARDING OR ALIGHTING	 FELL FROM MOVING VEHICLE	 TRAIN	 PARKED VEHICLE RAN AWAY	 EQUESTRIAN	 FELL INSIDE VEHICLE	 TRAILER OR LOAD						

## Groupings of contributing factors

Factor group	Factor codes included
<b>Alcohol involved</b>	100 – 101 103 – 109
<b>Too fast</b>	110 – 119 430 – 432
<b>Failed to give way or stop</b>	300 – 314 320 – 328
<b>Failed to keep left</b>	120 – 128 205
<b>Overtaking</b>	150 – 161
<b>Incorrect lanes or position</b>	129 170 – 183 200 – 204 206 – 209 440 – 448
<b>Poor handling</b>	130 – 134 137 – 149 420 – 429
<b>Poor observation</b>	330 – 360 370 – 379
<b>Poor judgement</b>	380 – 387 400 – 407
<b>Fatigue</b>	410 – 415
<b>Disabled, old age or illness</b>	500 – 507
<b>Pedestrian factors</b>	700 – 731
<b>Cyclist factors</b>	Any factor coded against a cyclist
<b>Vehicle factors</b>	136, 600 – 699
<b>Road factors</b>	135, 800 – 899
<b>Weather</b>	900 – 909








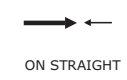
















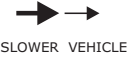











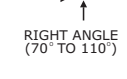









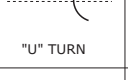
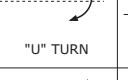

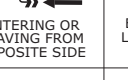
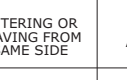






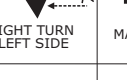





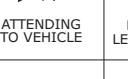
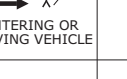
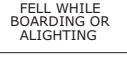


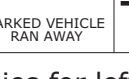

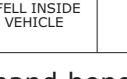
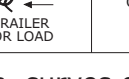
Note:

The following factor codes are not included as they do not fit adequately into any of the above groupings: 102, 106, 190–198, 433, 434, 510–534 and 910–999.



# VEHICLE MOVEMENT CODING SHEET

For use with crash data from CAS (Version 2.8 May 2010)

	TYPE	A	B	C	D	E	F	G	O
A	OVERTAKING AND LANE CHANGE	 PULLING OUT OR CHANGING LANE TO RIGHT	 HEAD ON	 CUTTING IN OR CHANGING LANE TO LEFT	 LOST CONTROL (OVERTAKING VEHICLE)	 SIDE ROAD	 LOST CONTROL (OVERTAKEN VEHICLE)	 WEAVING IN HEAVY TRAFFIC	OTHER
B	HEAD ON	 ON STRAIGHT	 CUTTING CORNER	 SWINGING WIDE	 BOTH OR UNKNOWN	 LOST CONTROL ON STRAIGHT	 LOST CONTROL ON CURVE		OTHER
C	LOST CONTROL OR OFF ROAD (STRAIGHT ROADS)	 OUT OF CONTROL ON ROADWAY	 OFF ROADWAY TO LEFT	 OFF ROADWAY TO RIGHT					OTHER
D	CORNERING	 LOST CONTROL TURNING RIGHT	 LOST CONTROL TURNING LEFT	 MISSED INTERSECTION OR END OF ROAD					OTHER
E	COLLISION WITH OBSTRUCTION	 PARKED VEHICLE	 CRASH OR BROKEN DOWN	 NON VEHICULAR OBSTRUCTIONS (INCLUDING ANIMALS)	 WORKMANS VEHICLE	 OPENING DOOR			OTHER
F	REAR END	 SLOWER VEHICLE	 CROSS TRAFFIC	 PEDESTRIAN	 QUEUE	 SIGNALS	 OTHER		OTHER
G	TURNING VERSUS SAME DIRECTION	 REAR OF LEFT TURNING VEHICLE	 LEFT TURN SIDE SIDE SWIPE	 STOPPED OR TURNING FROM LEFT SIDE	 NEAR CENTRE LINE	 OVERTAKING VEHICLE	 TWO TURNING		OTHER
H	CROSSING (NO TURNS)	 RIGHT ANGLE (70° TO 110°)							OTHER
J	CROSSING (VEHICLE TURNING)	 RIGHT TURN RIGHT SIDE	 OPPOSING RIGHT TURNS	 TWO TURNING					OTHER
K	MERGING	 LEFT TURN IN	 RIGHT TURN IN	 TWO TURNING					OTHER
L	RIGHT TURN AGAINST	 STOPPED WAITING TO TURN	 MAKING TURN						OTHER
M	MANOEUVRING	 PARKING OR LEAVING	 "U" TURN	 "U" TURN	 DRIVEWAY MANOEUVRE	 ENTERING OR LEAVING FROM OPPOSITE SIDE	 ENTERING OR LEAVING FROM SAME SIDE	 REVERSING ALONG ROAD	OTHER
N	PEDESTRIANS CROSSING ROAD	 LEFT SIDE	 RIGHT SIDE	 LEFT TURN LEFT SIDE	 RIGHT TURN RIGHT SIDE	 LEFT TURN RIGHT SIDE	 RIGHT TURN LEFT SIDE	 MANOEUVRING VEHICLE	OTHER
P	PEDESTRIANS OTHER	 WALKING WITH TRAFFIC	 WALKING FACING TRAFFIC	 WALKING ON FOOTPATH	 CHILD PLAYING (INCLUDING TRICYCLE)	 ATTENDING TO VEHICLE	 ENTERING OR LEAVING VEHICLE		OTHER
Q	MISCELLANEOUS	 FELL WHILE BOARDING OR ALIGHTING	 FELL FROM MOVING VEHICLE	 TRAIN	 PARKED VEHICLE RAN AWAY	 EQUESTRIAN	 FELL INSIDE VEHICLE	 TRAILER OR LOAD	OTHER

\* = Movement applies for left and right hand bends, curves or turns

## FACTORS PROBABLY CONTRIBUTING TO CRASHES (Version 1.8- 2 November 2009)

### DRIVER CONTROL

#### 100 Alcohol or drugs

- 101 Alcohol suspected
- 102 Alcohol test below limit
- 103 Alcohol test above limit or test refused
- 104 Alcohol test result unknown
- 105 Intoxicated non-driver (pedestrian / cyclist / passenger)
- 106 (MOT only) dead driver not suspect, tested neg
- 107
- 108 Drugs suspected
- 109 Drugs proven

#### 110 Too fast for conditions

- 111 Cornering
- 112 On straight
- 113 To give way at intersection
- 114 Approaching railway crossing
- 115 When passing stationary school bus
- 116 At temporary speed limit
- 117 At crash or emergency

#### 120 Failed to keep left

- 121 Swung wide on bend
- 122 Swung wide at intersection
- 123 Cutting corner on bend
- 124 Cutting corner at intersection
- 125 On straight section
- 126 Vehicle crossed raised median
- 127 Driving or riding abreast (cyclists more than 2 abreast)
- 128 Wandering or wobbling
- 129 Too far left / right

#### 130 Lost control

- 131 When turning
- 132 Under heavy braking
- 133 Under heavy acceleration
- 134 While returning to seal from unsealed shoulder
- 135 Due to road conditions (requires road series code)
- 136 Due to vehicle fault (requires vehicle series code)
- 137 Avoiding another vehicle, pedestrian, party or obstacle on roadway
- 138 On unsealed road
- 139 End of seal

#### 140 Failed to signal in time

- 141 When moving to left, pulling over to left
- 142 When turning left
- 143 When pulling out or moving to the right
- 144 When turning right
- 145 Incorrect Signal

#### 150 Overtaking

- 151 Overtaking line of traffic or queue
- 152 Deliberately in the face of oncoming traffic
- 153 Failed to notice oncoming traffic
- 154 Misjudged speed or distance of oncoming traffic
- 155 At no passing line
- 156 With insufficient visibility
- 157 At an intersection without due care
- 158 On left without due care
- 159 Cut in after overtaking
- 160 Vehicle signalling right turn
- 161 Without care at a pedestrian crossing

#### 170 Wrong lane or turned from wrong position

- 171 Turned right from incorrect lane
- 172 Turned left from incorrect lane
- 173 Travelled straight ahead from turning lane or flush median
- 174 Turned right from left side of road
- 175 Turned left from near centre line
- 176 Turned into incorrect lane
- 177 Weaving or cut in on multi-lane roads
- 178 Moved left to avoid slow vehicle
- 179 Long vehicle tracked outside lane

#### 180 In line of traffic

- 181 Following too closely
- 182 Travelling unreasonably slowly
- 183 Motorist crowded cyclist
- 184 Incorrect merging /diverging manoeuvre

#### 190 Sudden action

- 191 Braked
- 192 Turned left
- 193 Turned right
- 194 Swerved to avoid pedestrian
- 195 Swerved to avoid animal
- 196 Swerved to avoid crash or broken down vehicle
- 197 Swerved to avoid vehicle
- 198 Swerved to avoid object or for unknown reason
- 199 Avoiding approaching emergency vehicle

#### 200 Forbidden movements

- 201 Wrong way in one way street, motorway or roundabout
- 202 When turning or U turning contrary to a sign
- 203 Contrary to "in" or "out" only driveway sign
- 204 Driving or riding on footpath
- 205 On incorrect side of island or median
- 206 Contrary to "no entry" sign
- 207 In Car Park
- 208 Motor vehicle in cycle lane
- 209 Bus / Transit lane
- 210 Cyclist riding on ped-xing / ped signals

### VEHICLE CONFLICTS

#### 300 Failed to give way

- 301 At Stop sign
- 302 At Give Way sign
- 303 When turning to non-turning traffic
- 304 When deemed turning by markings, not geometry
- 305 When turning left, to opposing right turning traffic
- 306 To pedestrian on a crossing
- 307 When turning at signals to pedestrians
- 308 When entering roadway from driveway
- 309 To traffic approaching or crossing from the right
- 310 Failed to give way at one lane bridge / road
- 311 Failed to give way to pedestrian on footpath or verge
- 312 Entering roadway not from driveway or intersection
- 313 To emergency vehicle
- 314 Driver waved through

#### 320 Did not stop

- 321 At stop sign
- 322 At steady red light
- 323 At steady red arrow
- 324 At steady amber light
- 325 At steady amber arrow
- 326 At flashing red lights (Rail Xing, Fire Stn etc)
- 327 For police or flag-person
- 328 For school patrol / kea crossing

#### 330 Inattentive: failed to notice

- 331 Vehicle slowing, stopping or stationary in front
- 332 Bend in road
- 333 Indication of vehicle in front
- 334 Traffic lights
- 335 Intersection or its Stop / Give Way control
- 336 Other regulatory sign / markings
- 337 Warning sign
- 338 Direction, information signs / markings
- 339 Road-works signs
- 340 Lane use arrows / markings?
- 341 Obstructions on Roadway

#### 350 Attention diverted by:

- 351 Passengers
- 352 Scenery or persons outside vehicle
- 353 Other traffic
- 354 Animal or insect in vehicle
- 355 Trying to find intersection, house number, destination
- 356 Advertising or signs
- 357 Emotionally upset /road rage
- 358 Cigarette, radio, heater, AC, glove box, obj under drivers feet/pedals etc
- 359 Cell phone
- 360
- 361 Navigation device
- 362 CB radio/ non cell comms device
- 363 Driver dazzled

#### 370 Did not see or look for another party until too late

- 371 Behind when reversing / manoeuvring
- 372 Behind when changing lanes position or direction (includes U-turns)
- 373 Behind when pulling out from parked position
- 374 Behind when opening door or leaving vehicle
- 375 When required to give way to traffic from another direction
- 376 When required to give way to pedestrians.
- 377 When visibility obstructed by other vehicles
- 378 When visibility limited by roadside features
- 379 When first in queue on receiving green light

#### 380 Misjudged speed, distance, size or position of:

- 381 Other vehicle coming from behind or alongside
- 382 Other vehicle coming from another direction with right of way
- 383 Pedestrian movement or intention
- 384 Towed vehicle, or while towing a vehicle
- 385 Size or position of fixed object or obstacle
- 386 Of own vehicle
- 387 Misjudged intentions of another party

### GENERAL DRIVER

#### 400 Inexperience

- 401 In driving in fast, complex or heavy traffic
- 402 New driver showed inexperience
- 403 Driving unfamiliar vehicle
- 404 Overseas / migrant driver fails to adjust to NZ road rules and road conditions
- 405 Driver under instruction
- 406 At towing trailer / other vehicle
- 407 Driver over-reacted
- 408 Unsupervised cyclist

#### 410 Fatigue (drowsy, tired, fell asleep)

- 411 Long trip
- 412 Lack of sleep
- 413 Exhaust fumes
- 414 Worked long hours before driving
- 415 Exceeded driving hours

#### 420 Incorrect use of vehicle controls

- 421 Started in gear
- 422 Stalled engine
- 423 Wrong pedal
- 424 Footrest, stand
- 425 Ignition turned off (steering locked)
- 426 Lights not switched on
- 427 Foot slipped or caught under pedal
- 428 Parking brake not fully applied
- 429 Trailer coupling or safety chain not secured

#### 430 Showing off

- 431 Racing
- 432 Playing chicken
- 433 Wheel spins / wheelies / doughnuts / drifting
- 434 Intimidating driving

#### 440 Parked or stopped

- 441 Inadequately lit at night: (not lit by street lights or park lights off)
- 442 At point of limited visibility
- 443 Not as close as practicable to side of road
- 444 On incorrect side of road
- 445 Double parked
- 446 In 'No Stopping' area
- 447 Not clear of rail crossing
- 448 In cycle or Transit lane

### GENERAL PERSON

#### 500 Illness and disability

- 501 Illness with no warning e.g. heart attack, unexpected epilepsy)
- 502 Physically disabled
- 503 Defective vision
- 504 Medical illness (not sudden) flu, diabetes
- 505 Mental illness (depression, psychosis)
- 506 Suicidal (but not successful)
- 507 Impaired ability due to old age

#### 510 Intentional or criminal

- 511 Deliberate homicide (only if succeeded)
- 512 Intentional collision
- 513 Committed suicide (only if succeeded)
- 514 Evading enforcement
- 515 Object deliberately thrown at or dropped on vehicle / shot at
- 516 Object thrown from vehicle
- 517 Stolen vehicle

#### 520 Driver or passenger, boarding, leaving , in vehicle

- 521 Boarding moving vehicle
- 522 Intentionally leaving moving vehicle
- 523 Riding in insecure position
- 524 Interfered with driver
- 525 Opened door inadvertently
- 526 Overloaded vehicle (with passengers)
- 527 Child playing in parked vehicle

#### 530 Miscellaneous person

- 531 Casualty drowned
- 532 Casualty thrown from vehicle
- 533 Equestrian not keeping to verge
- 534 Cyclist or M/cyclist wearing dark clothing

## VEHICLES

### **600 Lights and reflectors at fault or dirty**

- 601 Dazzling headlights
- 602 Headlights inadequate or no headlights
- 603 Headlights failed suddenly
- 604 Brake-lights or indicators faulty or not fitted
- 605 Tail-lights inadequate or no tail-lights
- 606 Reflectors inadequate or no reflectors
- 607 Lights or reflectors obscured

### **610 Brakes**

- 611 Parking brake failed
- 612 Parking brake defective
- 613 Service brake failed
- 614 Service brake defective
- 615 Jack-knifed

### **620 Steering**

- 621 Defective
- 622 Failed suddenly

### **630 Tyres**

- 631 Puncture or blow-out
- 632 Worn tread on tyre
- 633 Incorrect tyre type
- 634 Mixed treads / space savers

### **640 Windscreen or mirror**

- 641 Shattered windscreen
- 642 Windscreen or rear window dirty
- 643 Rear vision mirror not adjusted correctly
- 644 No rear vision mirror
- 645 Windscreen or rear window misted/frosted
- 646 Inadequate or no sun-visors
- 647 Inadequate or no windscreen wipers
- 648 Cycle / Motorcycle visor, glasses, goggles or screen

### **650 Mechanical**

- 651 Engine failure
- 652 Transmission failure (including chains and gears)
- 653 Accelerator or throttle jammed

### **660 Body or chassis**

- 661 Body, chassis or frame (cycle, m/c) failure
- 662 Suspension failure
- 663 Failure of door catch or door not shut
- 664 Inadequate mudguards
- 665 Inadequate tow coupling
- 666 Inadequate or no safety chain
- 667 Bonnet catch failed
- 668 Wheel off
- 669 Broken axle
- 670 Inconspicuous colour
- 671 Blind spot
- 672 Seat belt / restraint failed
- 673 Air-bag failed to inflate (fully)

### **680 Load**

- 681 Load interferes with driver
- 682 Not well secured or load moved
- 683 Over-hanging
- 684 Load obscured vision
- 685 Excess dimensions not adequately indicated
- 686 Over dimension vehicle or load
- 687 Load too heavy
- 688 Towed vehicle or trailer too heavy or incompatible

### **690 Miscellaneous vehicle**

- 691 Emergency Vehicle attending emergency
- 692 Vehicle caught fire
- 693 Being towed
- 694 Air-bag contributed to crash or injury
- 695 Seatbelt / restraint absent or unusable
- 696 Dangerous goods

## PEDESTRIANS

### **700 Walking along road**

- 701 Not keeping to footpath
- 702 Not keeping to side of road
- 703 Not facing oncoming traffic
- 704 Not on outside of blind curve
- 705 Wheeled ped inconsiderate or dangerous on footpath

### **710 Crossing road**

- 711 Walking heedless of traffic
- 712 Stepping out from behind vehicles
- 713 Running heedless of traffic
- 714 Failed to use pedestrian crossing when one within 20 metres
- 715 Waiting on roadway for moving traffic
- 716 Confused by traffic or stepped back
- 717 Suddenly stepped onto pedestrian crossing
- 718 Not complying with traffic signals or school patrols
- 719 Misjudged speed and / or distance of vehicle

### **720 Miscellaneous**

- 721 Pushing, working on or unloading vehicle
- 722 Playing on road or unnecessarily on road
- 723 Working on road
- 724 Wearing dark clothing
- 725 Vision obscured by umbrella or clothing
- 726 Child escaped from supervision
- 727 Unsupervised child
- 728 Sitting / lying on road
- 729 Pedestrian to /from school bus
- 730 Pedestrian behind reversing / manoeuvring vehicle
- 731 Overseas pedestrian
- 732 Pedestrian attention diverted eg cigarette, cell phone, music player

## ROAD

### **800 Slippery**

- 801 Rain
- 802 Frost or ice
- 803 Snow or hail
- 804 Loose material on seal
- 805 Mud
- 806 Oil / Diesel / Fuel
- 807 Painted markings
- 808 Recently graded
- 809 Surface bleeding / defective

### **810 Surface**

- 811 Potholed
- 812 Uneven
- 813 Deep loose metal
- 814 High crown
- 815 Curve not well banked
- 816 Edge badly defined or gave way
- 817 Under construction or maintenance
- 818 Unusually narrow
- 819 Broken glass

### **820 Obstructed**

- 821 Fallen tree or branch
- 822 Slip or subsidence
- 823 Flood waters, large puddles, ford
- 824 Road works not adequately lighted
- 825 Road works not adequately signposted
- 826 Roadside object fell on vehicle
- 827 Object flicked up by vehicle

### **830 Visibility limited**

- 831 Curve
- 832 Crest
- 833 Building
- 834 Trees
- 835 Hedge or fence
- 836 Scrub or long grass
- 837 Bank
- 838 Temporary obstruction, dust or smoke
- 839 Parked vehicle

### **840 Signs and signals**

- 841 Damaged, removed or malfunction
- 842 Badly located
- 843 Ineffective or inadequate
- 844 Necessary
- 845 Signals turned off

### **850 Markings**

- 851 Faded
- 852 Difficult to see under weather conditions
- 853 Markings necessary
- 854 Not visible due to geometry or vehicles
- 855 Old markings not adequately removed

### **860 Street lighting**

- 861 Failed
- 862 Inadequate
- 863 Glare on wet road
- 864 Pedestrian crossing not adequately lighted

### **870 Raised islands and roundabouts**

- 871 Traffic island(s) difficult to see
- 872 Traffic island(s) ineffective, badly located or designed
- 873 Cyclist squeeze point

## MISCELLANEOUS

### **900 Weather**

- 901 Heavy rain
- 902 Dazzling sun
- 903 Strong wind
- 904 Fog or mist
- 905 Snow, sleet or hail

### **910 Animals**

- 911 Household pet rushed out or playing
- 912 Farm animal straying
- 913 Farm animal attended, but inadequate warning or unexpected
- 914 Farm animal attended, but out of control
- 915 Wild animal

### **920 Entering or leaving land use**

- 921 Roadside stall
- 922 Service station
- 923 Specialised liquor outlet
- 924 Take away foods
- 925 Shopping complex
- 926 Car parking building / area
- 927 Other commercial
- 928 Industrial site
- 929 Private house / farm
- 930 Other non-commercial
- 931 Mobile shop or vendor

### **999 Unknown**