

Auckland City
Road Safety Report
2004 to 2008



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June 2009

Contents

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

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 (1999 to 2008)
Fig. 1.10	Casualties per 10,000 people (1999 to 2008)
Fig. 1.11	Social cost of crashes in Auckland City in 2008

Crash counts

page 17

Fig. 2.1	Crash numbers and severity (2004 to 2008) – whole city
Fig. 2.2, 2.3	Crash numbers and severity (2004 to 2008) – urban/rural
Fig. 2.4	Casualty numbers and severity (2004 to 2008) – whole city
Fig. 2.5, 2.6	Casualty numbers and severity (2004 to 2008) – urban/rural
Fig. 2.7	Number of injury crashes (1999 to 2008) – all roads
Fig. 2.8	Number of casualties (1999 to 2008) – all roads
Fig. 2.9	Number of injury crashes (1999 to 2008) – urban
Fig. 2.10	Number of casualties (1999 to 2008) – urban
Fig. 2.11	Number of injury crashes (1999 to 2008) – rural
Fig. 2.12	Number of casualties (1999 to 2008) – rural
Fig. 2.13, 2.14	Severity ratio (1999 to 2008) – urban/rural

Road user statistics

page 25

Fig. 3.1, 3.2	Road user casualties (2004 to 2008) – urban/rural
Fig. 3.3, 3.4	Male/female casualties (1999 to 2008)
Fig. 3.5	Male casualties by age (2004 to 2008)
Fig. 3.6	Female casualties by age (2004 to 2008)
Fig. 3.7, 3.8	Car/van driver casualties (1999 to 2008)
Fig. 3.9, 3.10	Car/van passenger casualties (1999 to 2008)
Fig. 3.11, 3.12	Heavy vehicle casualties (1999 to 2008)
Fig. 3.13, 3.14	Motorcyclist casualties (1999 to 2008)
Fig. 3.15, 3.16	Pedestrian casualties (1999 to 2008)
Fig. 3.17, 3.18	Cyclist casualties (1999 to 2008)

List of figures continued

Road user statistics

page 25

Fig. 3.19	Car/van driver casualty age (2004 to 2008)
Fig. 3.20	Car/van passenger casualty age (2004 to 2008)
Fig. 3.21	Heavy vehicle casualty age (2004 to 2008)
Fig. 3.22	Motorcyclist casualty age (2004 to 2008)
Fig. 3.23	Pedestrian casualty age (2004 to 2008)
Fig. 3.24	Cyclist casualty age (2004 to 2008)
Fig. 3.25, 3.26	Casualty ethnicity (2004 to 2008)
Fig. 3.27, 3.28	Licence status (1999 to 2008)

Crash type statistics

page 41

Fig. 4.1, 4.2	Crash movement type (2004 to 2008)
Fig. 4.3, 4.4	Crash movement type – trends (1999 to 2008)
Fig. 4.5	Failed to give way/stop – urban (1999 to 2008)
Fig. 4.6	Bend – lost control/head on – rural (1999 to 2008)

Crash factor statistics

page 47

Fig. 5.1, 5.2	Contributing factors (2004 to 2008)
Fig. 5.3–5.6	Contributing factor trends – urban (1999 to 2008)
Fig. 5.7	Alcohol-involved trend – urban (1999 to 2008)
Fig. 5.8	Speed-involved trend – urban (1999 to 2008)
Fig. 5.9–5.12	Contributing factor trends – rural (1999 to 2008)
Fig. 5.13	Alcohol-involved trend – rural (1999 to 2008)
Fig. 5.14	Speed-involved trend – rural (1999 to 2008)

Environmental statistics

page 57

Fig. 6.1, 6.2	Crashes not on state highways (1999 to 2008)
Fig. 6.3, 6.4	Intersection crashes (1999 to 2008)
Fig. 6.5, 6.6	Wet road crashes (1999 to 2008)
Fig. 6.7, 6.8	Crashes in darkness (1999 to 2008)
Fig. 6.9	Unsealed road crashes – rural (1999 to 2008)
Fig. 6.10	Icy road crashes – rural (1999 to 2008)
Fig. 6.11, 6.12	Collisions with objects (1999 to 2008)
Fig. 6.13, 6.14	Objects struck (2004 to 2008)

Date and time statistics

page 67

Fig. 7.1	Time pattern over average week (2004 to 2008)
Fig. 7.2	Day of week (2004 to 2008)
Fig. 7.3	Month of year (2004 to 2008)

List of figures continued

Council road statistics

page 71

Fig. 8.1	Number of injury crashes (1999 to 2008) – all council roads
Fig. 8.2	Number of casualties (1999 to 2008) – all council roads
Fig. 8.3	Number of injury crashes (1999 to 2008) – urban council roads
Fig. 8.4	Number of casualties (1999 to 2008) – urban council roads
Fig. 8.5	Number of injury crashes (1999 to 2008) – rural council roads
Fig. 8.6	Number of casualties (1999 to 2008) – rural council roads
Fig. 8.7, 8.8	Crash movement type – council roads (2004 to 2008)
Fig. 8.9, 8.10	Crash movement type – trends – council roads (1999 to 2008)
Fig. 8.11	Failed to give way/stop – urban council roads (1999 to 2008)
Fig. 8.12	Bend – lost control/head on – rural council roads (1999 to 2008)
Fig. 8.13, 8.14	Contributing factors – council roads (2004 to 2008)
Fig. 8.15, 8.16	Intersection crashes – council roads (1999 to 2008)
Fig. 8.17, 8.18	Wet road crashes – council roads (1999 to 2008)
Fig. 8.19, 8.20	Crashes in darkness – council roads (1999 to 2008)
Fig. 8.21	Unsealed road crashes – rural council roads (1999 to 2008)
Fig. 8.22	Icy road crashes – rural council roads (1999 to 2008)
Fig. 8.23, 8.24	Collisions with objects – council roads (1999 to 2008)
Fig. 8.25, 8.26	Objects struck – council roads (2004 to 2008)

Crash location statistics

page 89

Fig. 9.1	Urban crash blackspot list for the City (2004 to 2008)
Fig. 9.2	Rural crash blackspot list for the City (2004 to 2008)
Fig. 9.3	State Highway crash blackspot list for the City (2004 to 2008)
Fig. 9.4	Urban crash blackspots with a significant increase in crashes in 2008
Fig. 9.4a	Rural crash blackspots with a significant increase in crashes in 2008
Fig. 9.5	State highway crash blackspots with a significant increase in crashes in 2008

Introduction and general information

The New Zealand 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 New Zealand 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 New Zealand 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 New Zealand Transport Agency. Mostly five-year data (2004 to 2008) has been used, but 10-year data (1999 to 2008) 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 2008 populations estimates updated from the 2006 census, traffic flows from the year 2008, and the average of five year crash data (2004–2008).
3. Traffic flows are based on Road Asset Maintenance and Management (RAMM) data from December 2008. 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 2004 to 2008 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 2008 compared with the previous five years (2003 to 2007). 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	2004	2005	2006	2007	2008
Northland	34%	30%	28%	34%	31%
Auckland	22%	17%	19%	16%	16%
Waikato	51%	40%	38%	49%	46%
Bay of Plenty	28%	32%	37%	38%	27%
Gisborne	28%	31%	26%	29%	26%
Hawkes Bay	73%	80%	75%	59%	60%
Taranaki	66%	55%	65%	77%	41%
Manawatu-Wanganui	50%	38%	34%	35%	34%
Wellington	61%	68%	61%	73%	64%
Nelson-Marlborough	63%	44%	52%	54%	49%
West Coast	43%	53%	55%	59%	53%
Canterbury	37%	47%	42%	50%	45%
Otago	107%	99%	85%	77%	53%
Southland	74%	78%	103%	73%	53%
New Zealand	39%	36%	35%	37%	34%

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	16	90	14
Group A	37	26	37	14
All NZ	35	27	30	16

Figure 1.3 Casualties per 100 million vehicle kilometres travelled

	Council roads		State Highways	
	Urban	Rural	Urban	Rural
Auckland City	39	26	123	19
Group A	46	37	50	19
All NZ	45	39	42	25

Figure 1.4 Peer group crash and casualty rates

Group A												
City or District	Crashes per					Casualties per					2008 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	16	90	14	33	39	26	123	19	438100	21
Christchurch	25	36	22	21	13	31	44	31	27	17	368900	10
Dunedin	40	84	67	60	20	58	119	96	87	32	122900	24
Hamilton	23	43	21	41	18	29	54	25	52	24	138500	10
Hutt	20	30	50	21	8	25	37	71	24	11	101600	23
Manukau	17	30	24	56	11	24	39	36	80	17	362000	22
North Shore	20	36	17	151	11	25	45	23	193	15	223000	19
Tauranga	15	21	17	19	8	20	26	27	27	13	110500	15
Waitakere	20	36	22	29	18	27	47	30	37	23	201400	14
Wellington	23	48	28	52	10	27	55	28	71	14	192800	15
Group A	23	36	27	35	13	29	45	38	47	18	2259700	17
All New Zealand	132	35	27	30	16	36	44	39	41	24	4267970	41

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 (2004-2008) and December (2005) VKT.

Crashes and casualties per 10,000 population are based on five year average crash data (2004-2008) and Statistics NZ 2008 population estimates.

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

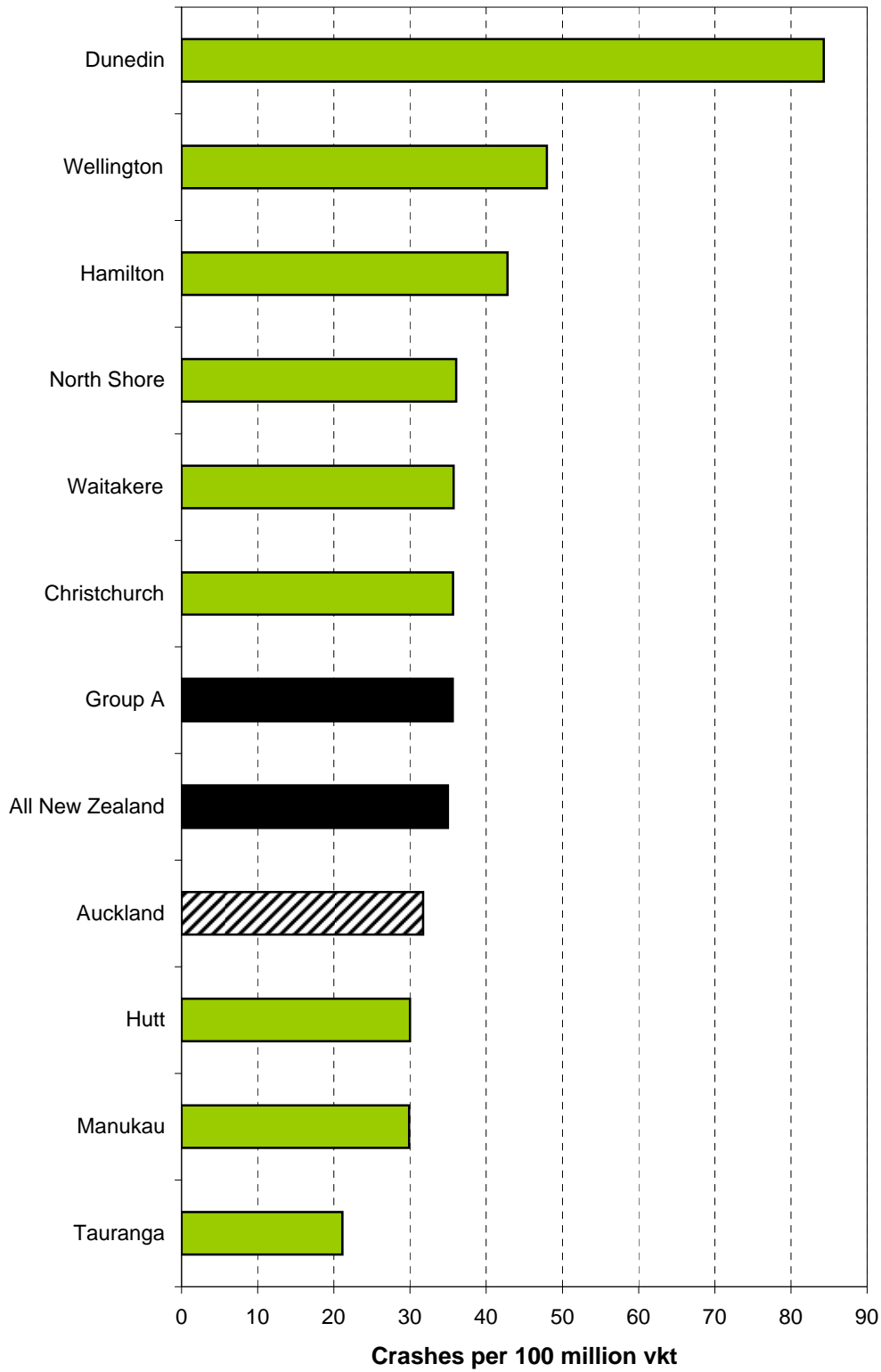
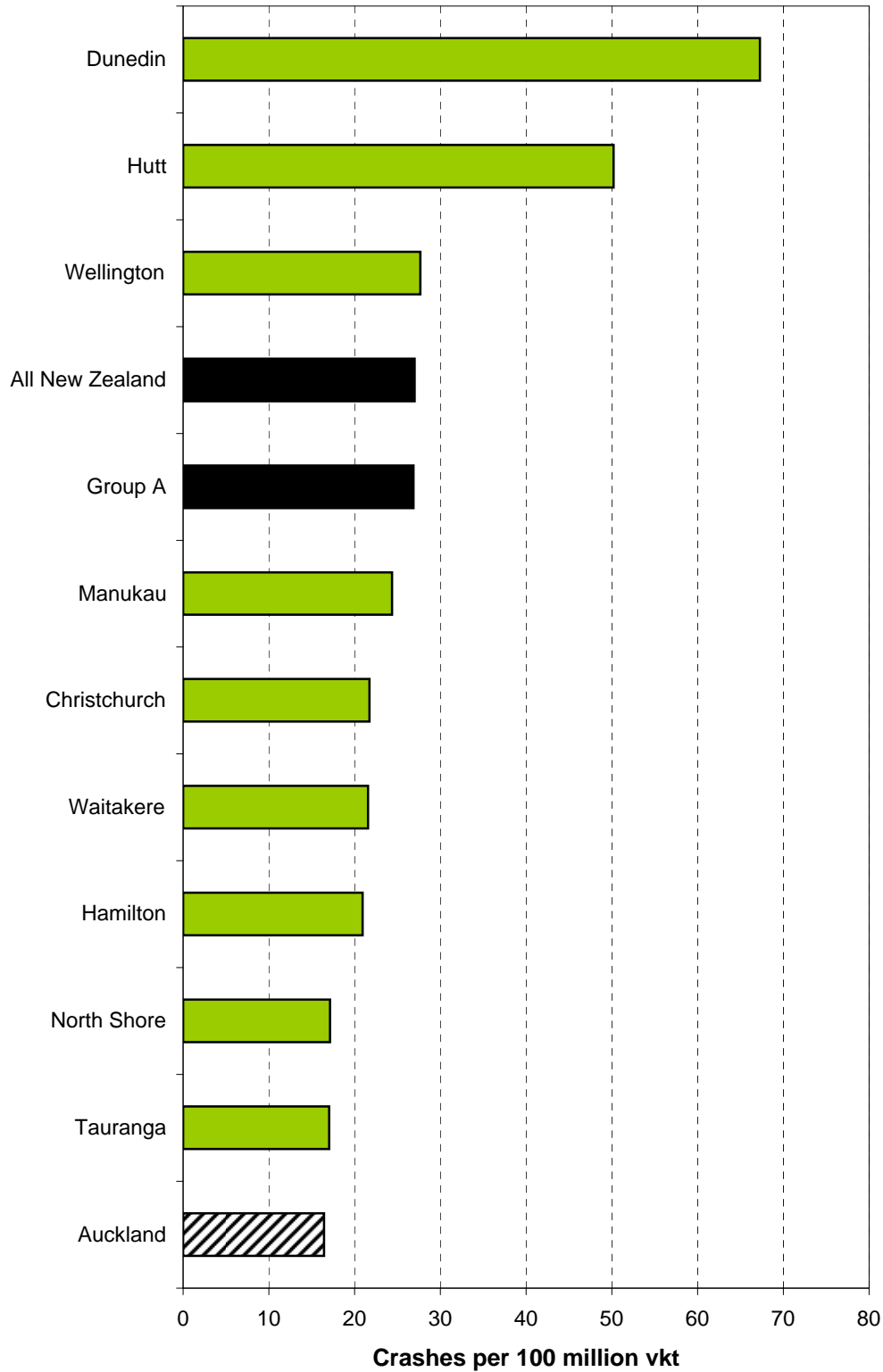


Figure 1.6 Crashes per 100 million vehicle-kilometres travelled - rural council roads



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

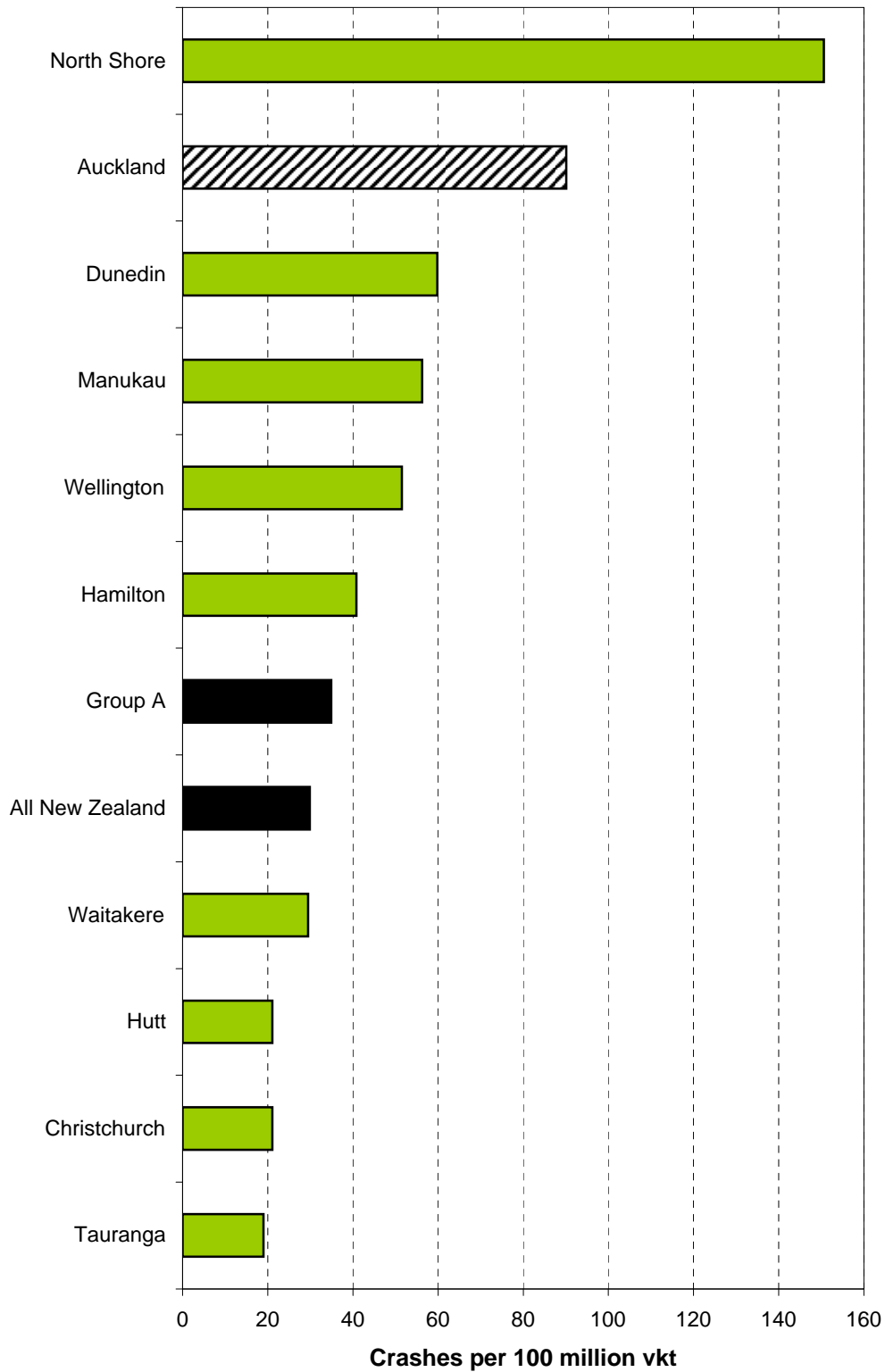
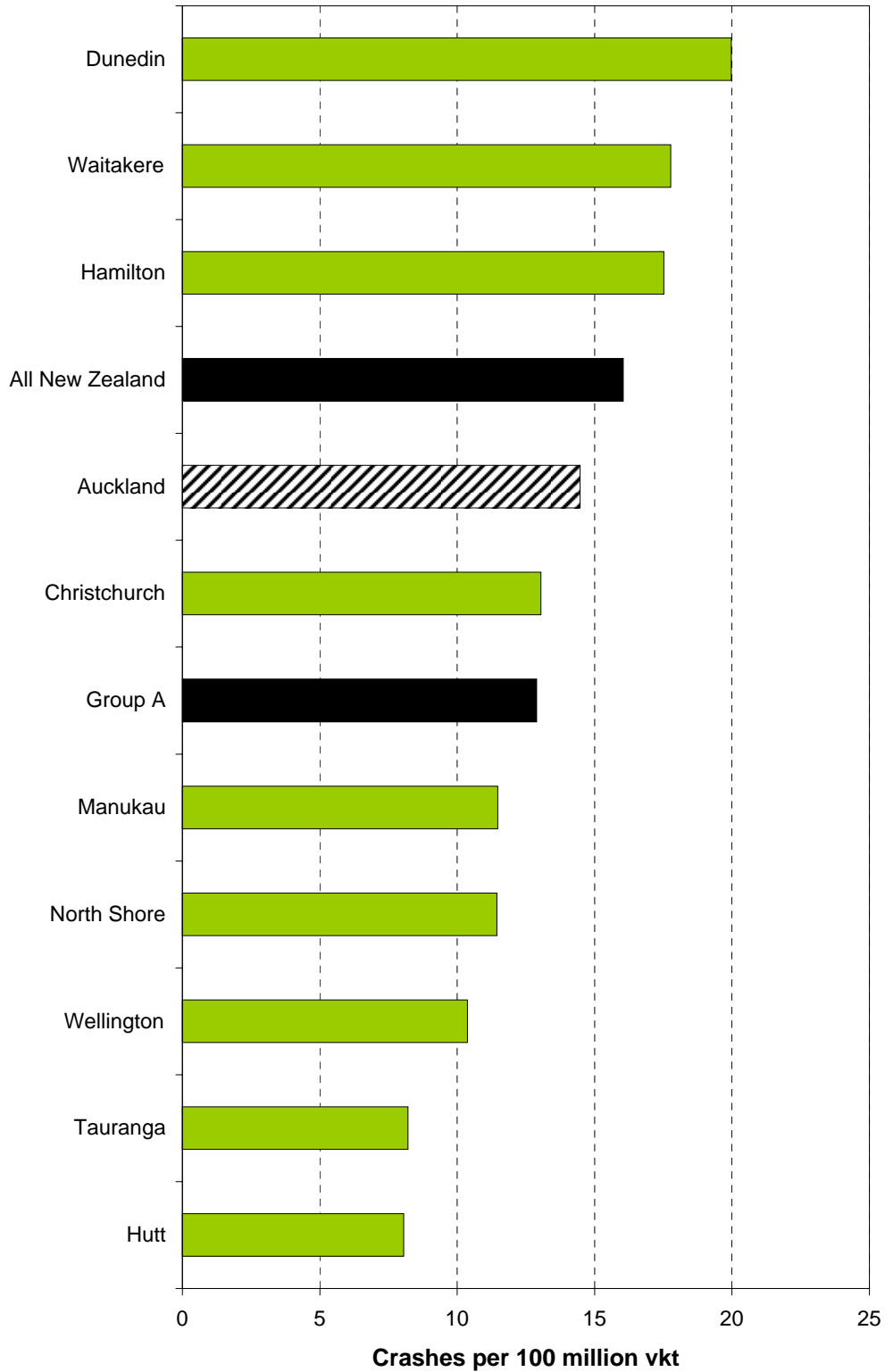


Figure 1.8 Crashes per 100 million vehicle-kilometres travelled - rural state highways



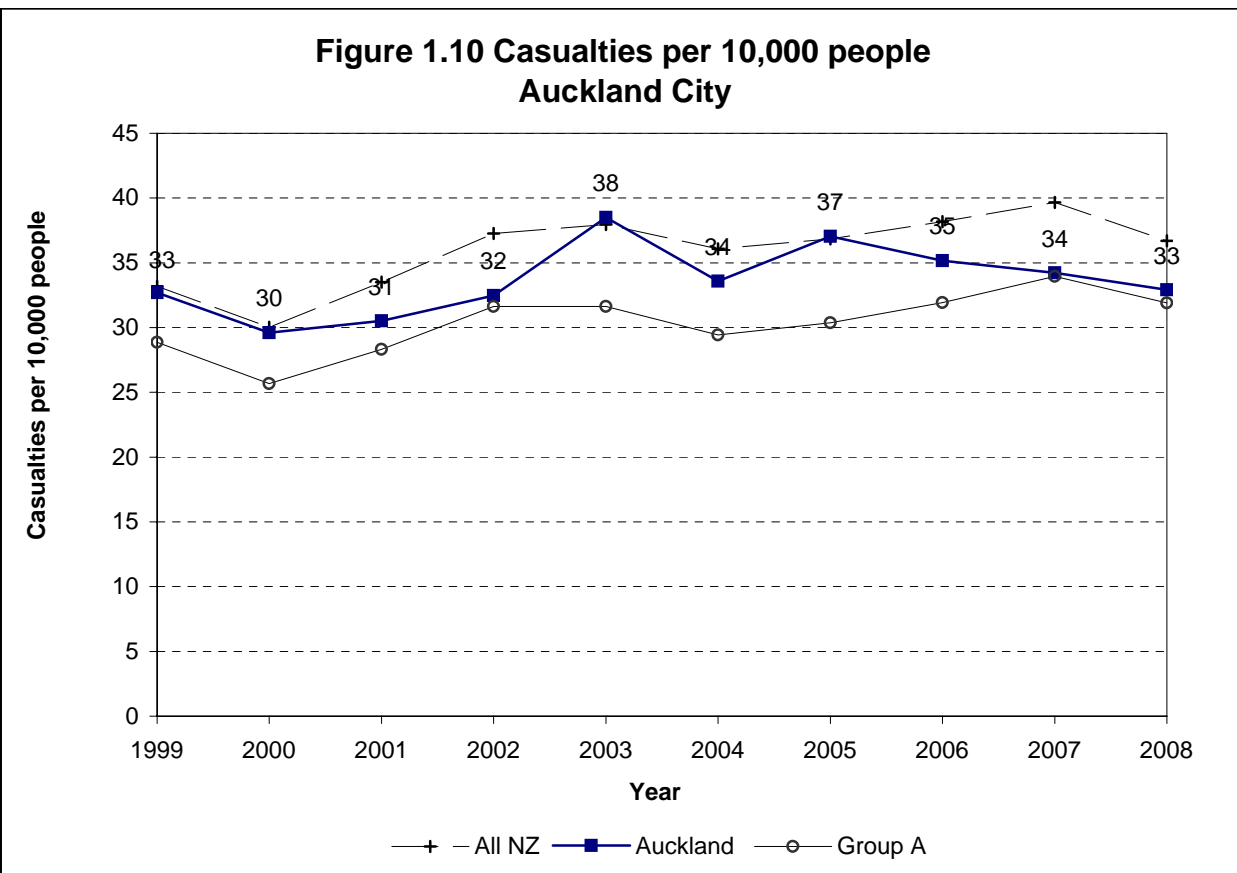
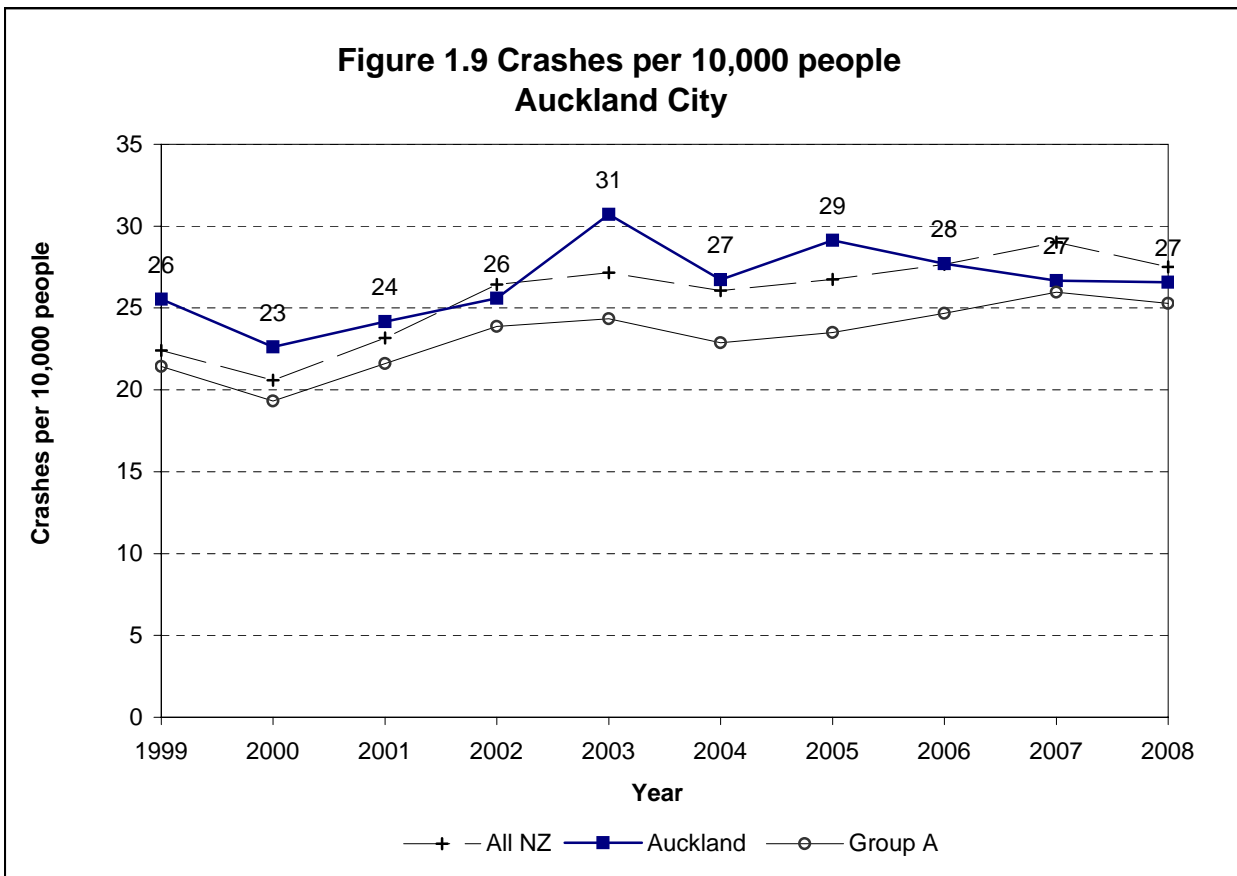


Figure 1.11 Social cost of crashes in Auckland City in 2008

		Auckland City	New Zealand
Council roads	urban	\$205.39	\$1,636.63
	rural	\$2.12	\$962.97
State Highways	urban	\$6.28	\$303.03
	rural	\$63.43	\$1,390.98
Total		\$277.22	\$4,293.62

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 \$3.35 million (in June 2008 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 2008 update', available at the Ministry of Transport's website:

<http://www.transport.govt.nz/assets/NewPDFs/NewFolder/Social-Cost-June-2008-update-final.pdf>

The average social cost per reported crash (in June 2008 dollars) are estimated at:

Rural fatal crash	\$4,199,000
Rural serious crash	\$776,000
Rural minor crash	\$90,000
Urban fatal crash	\$3,635,000
Urban serious crash	\$659,000
Urban minor crash	\$81,000

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 2004 to 2008 - whole City

	2004	2005	2006	2007	2008	Total	%	Group A
Fatal crashes	16	11	16	5	8	56	1%	1%
Serious crashes	134	147	137	123	131	672	12%	15%
Minor crashes	957	1064	1021	1014	1012	5068	87%	84%
Total injury crashes	1107	1222	1174	1142	1151	5796	100%	100%
Non-injury crashes	4490	4643	4281	4111	3809	21334		

Figure 2.2: Crash numbers and severity 2004 to 2008 - urban roads

	2004	2005	2006	2007	2008	Total	%	Group A
Fatal crashes	13	10	12	3	7	45	1%	1%
Serious crashes	121	125	121	110	116	593	13%	15%
Minor crashes	736	833	806	788	787	3950	86%	84%
Total injury crashes	870	968	939	901	910	4588	100%	100%
Non-injury crashes	3564	3631	3289	3195	2968	16647		

Figure 2.3: Crash numbers and severity 2004 to 2008 - rural roads

	2004	2005	2006	2007	2008	Total	%	Group A
Fatal crashes	3	1	4	2	1	11	1%	2%
Serious crashes	13	22	16	13	15	79	7%	14%
Minor crashes	221	231	215	226	225	1118	93%	84%
Total injury crashes	237	254	235	241	241	1208	100%	100%
Non-injury crashes	926	1012	992	916	841	4687		

Figure 2.4: Casualty numbers and severity 2004 to 2008 - whole City

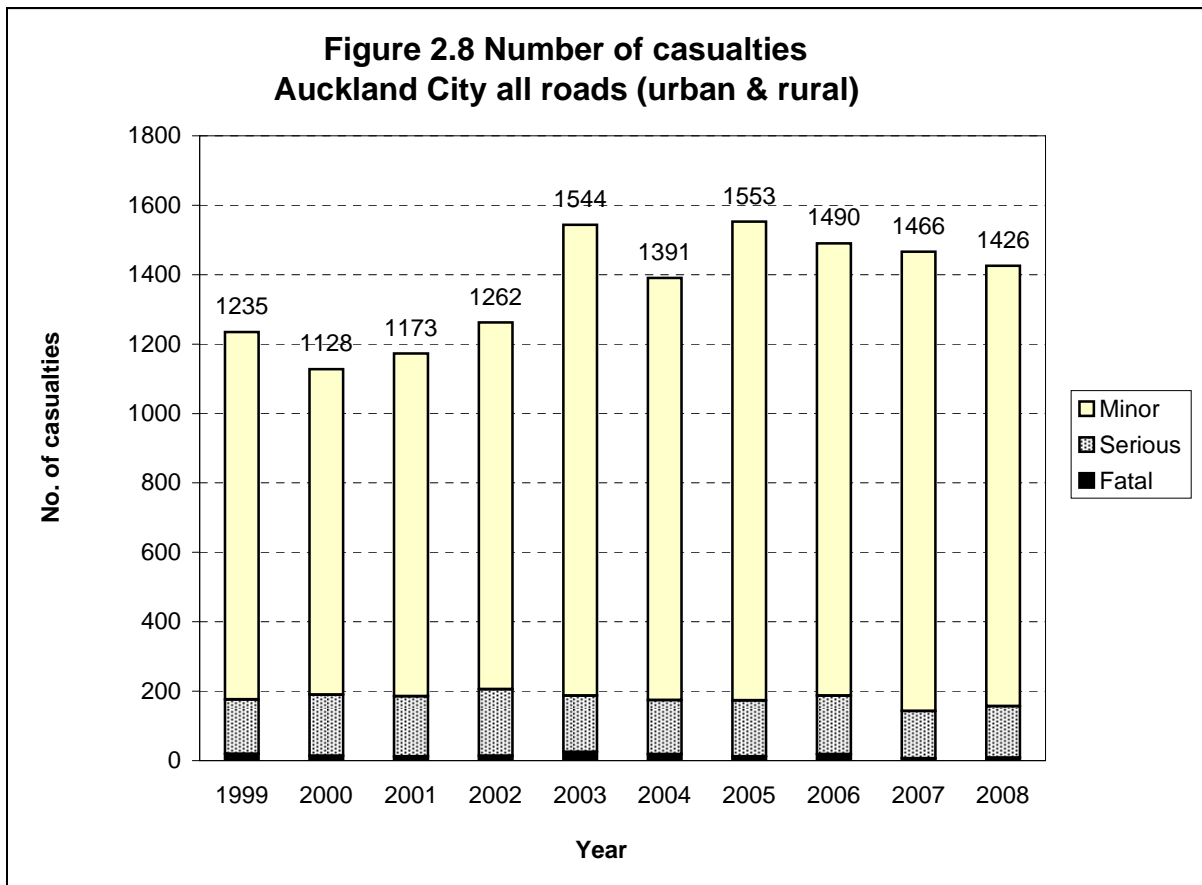
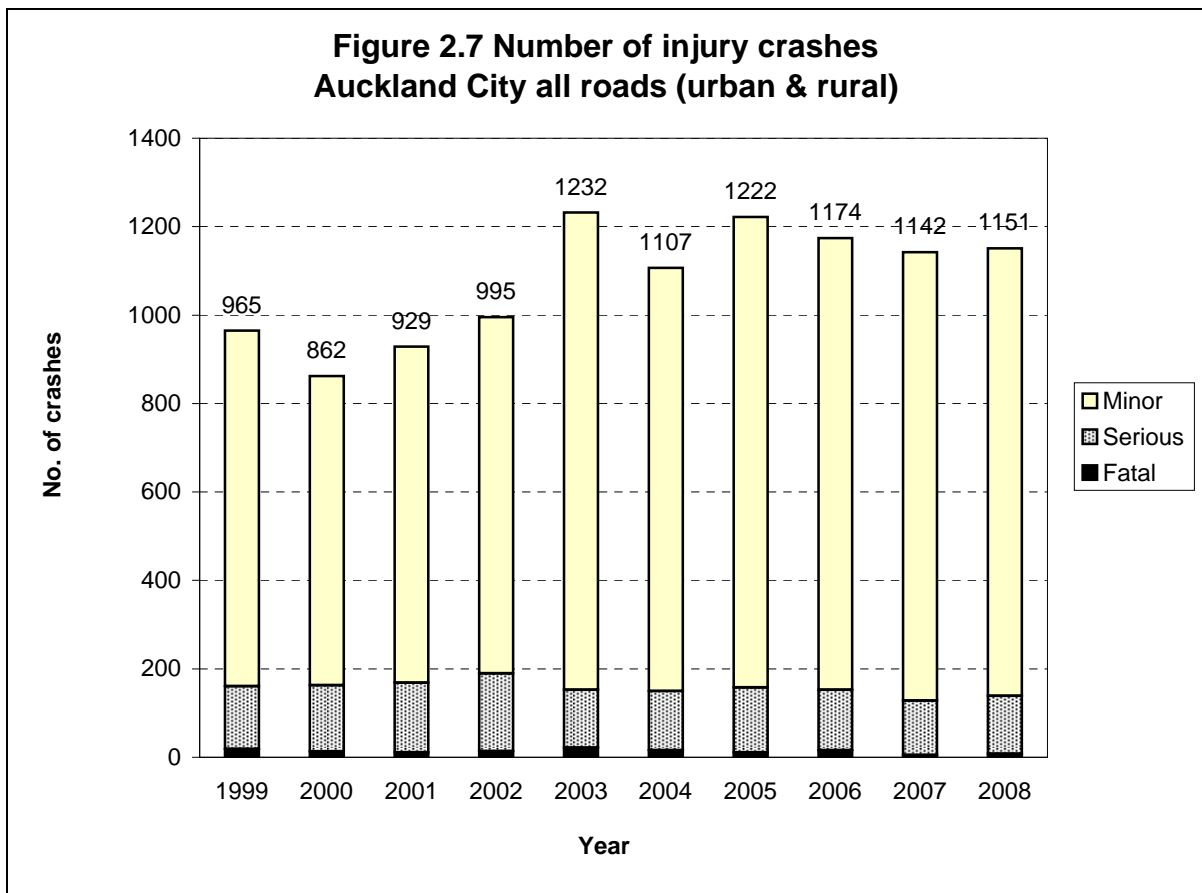
	2004	2005	2006	2007	2008	Total	%	Group A
Fatal casualties	18	12	18	6	8	62	1%	1%
Serious casualties	156	161	169	137	149	772	11%	13%
Minor casualties	1217	1380	1303	1323	1269	6492	89%	86%
Total casualties	1391	1553	1490	1466	1426	7326	100%	100%

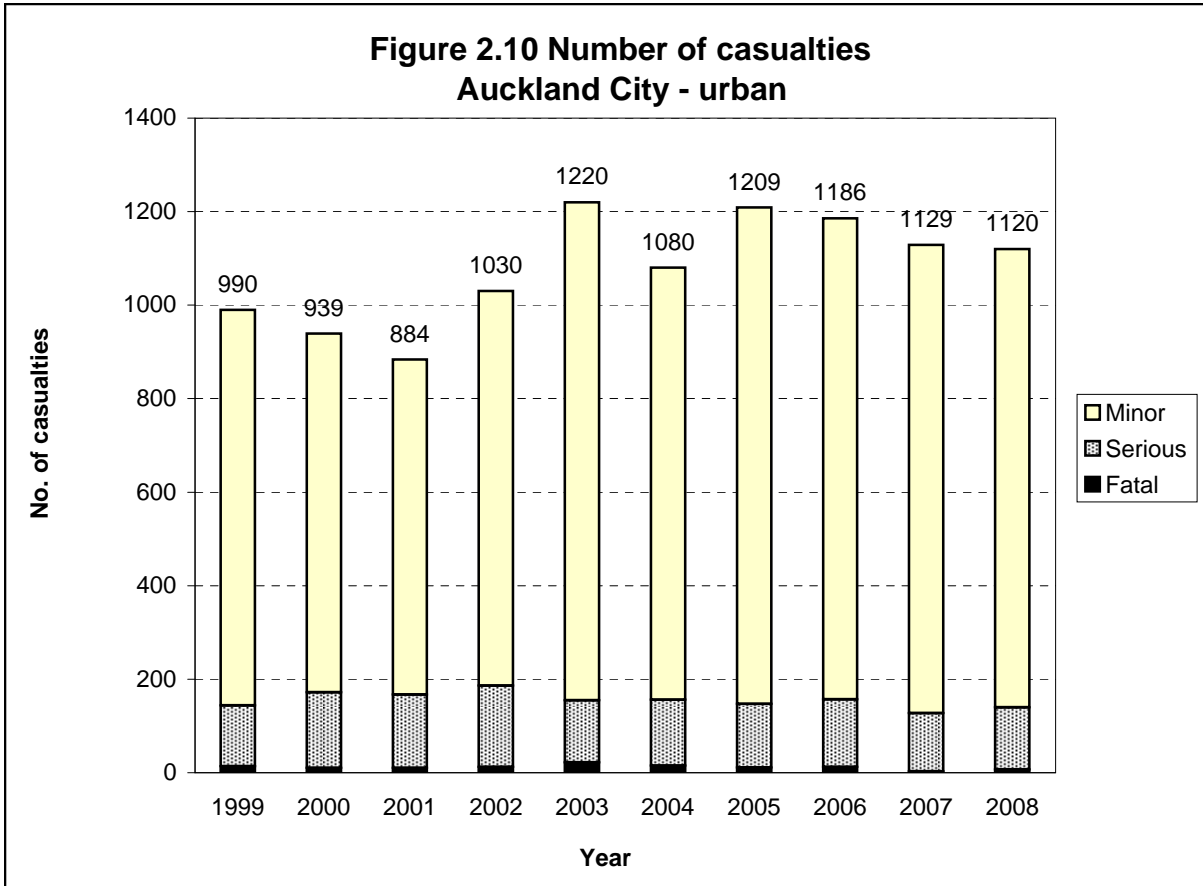
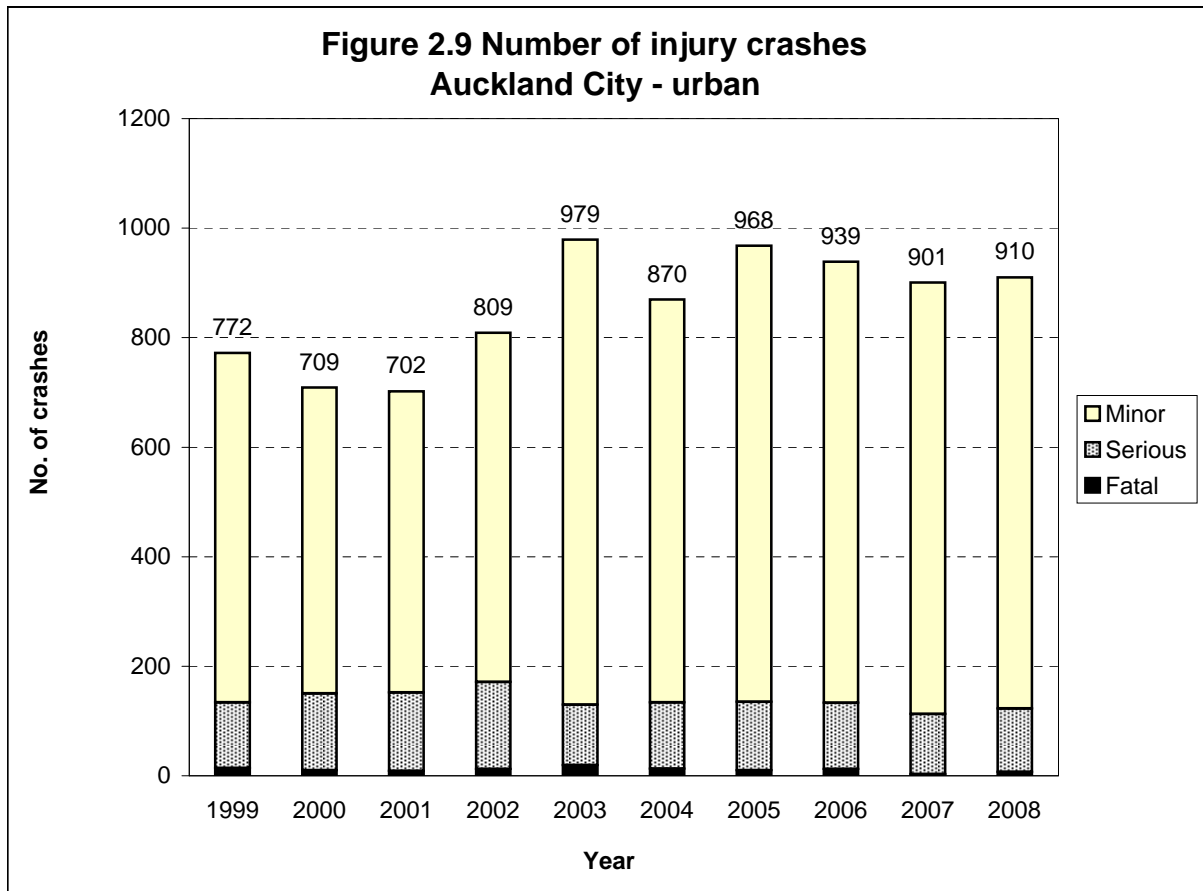
Figure 2.5: Casualty numbers and severity 2004 to 2008 - urban roads

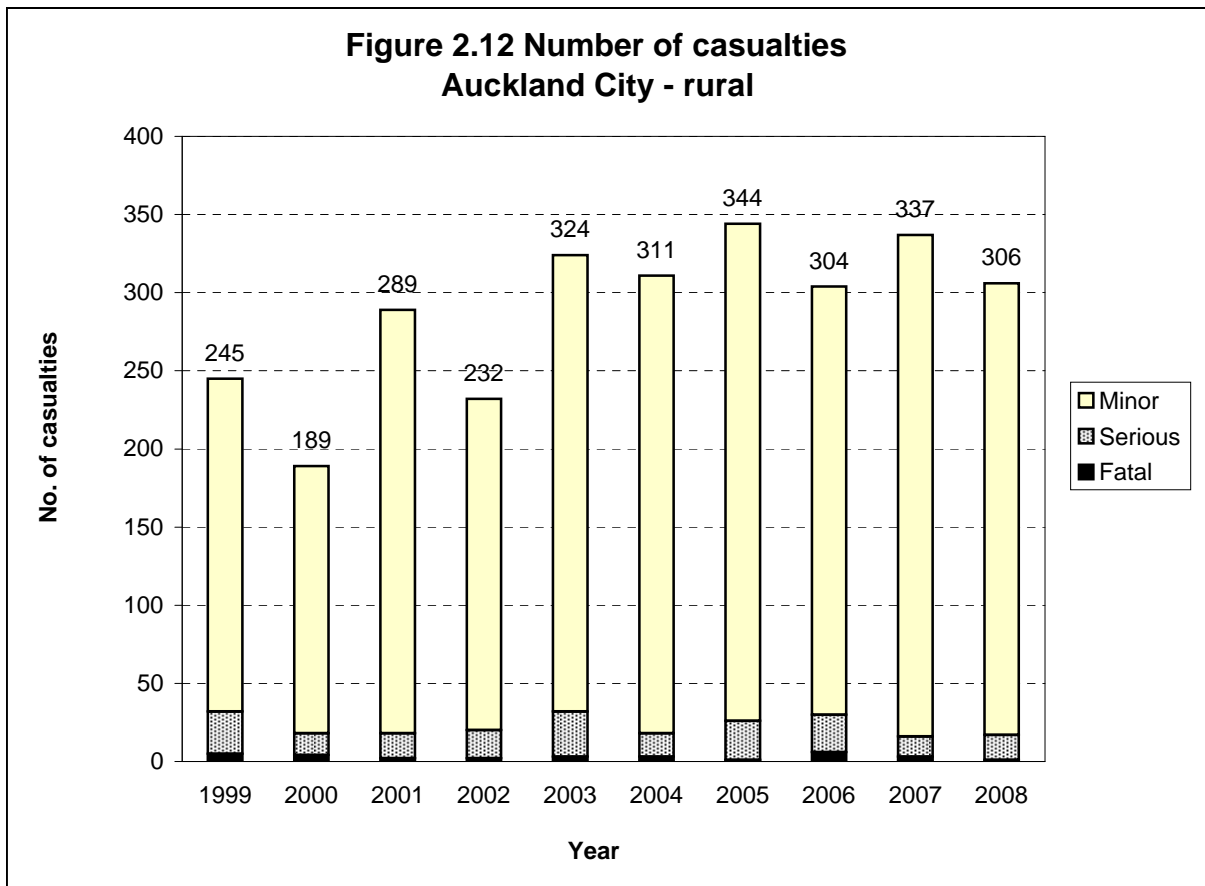
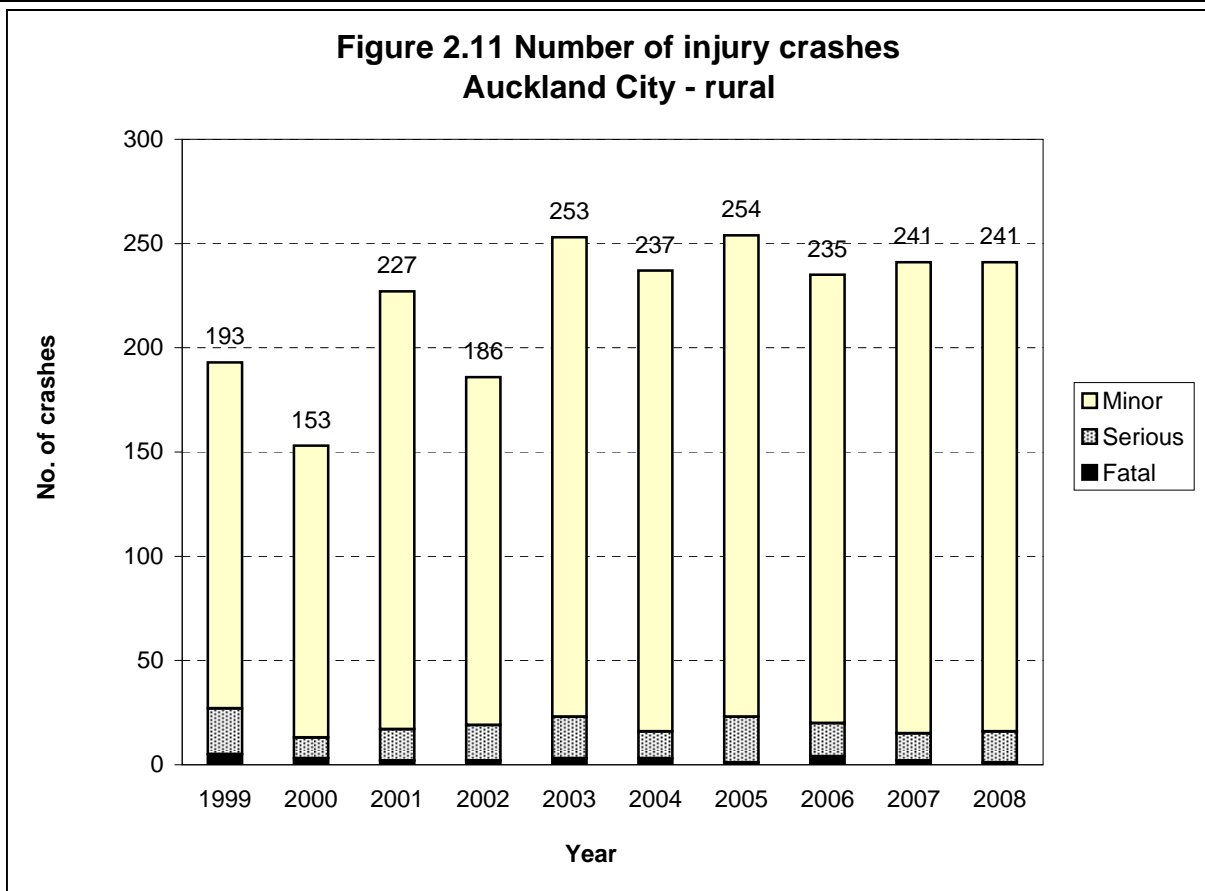
	2004	2005	2006	2007	2008	Total	%	Group A
Fatal casualties	15	11	12	3	7	48	1%	1%
Serious casualties	141	136	145	124	133	679	12%	13%
Minor casualties	924	1062	1029	1002	980	4997	87%	86%
Total casualties	1080	1209	1186	1129	1120	5724	100%	100%

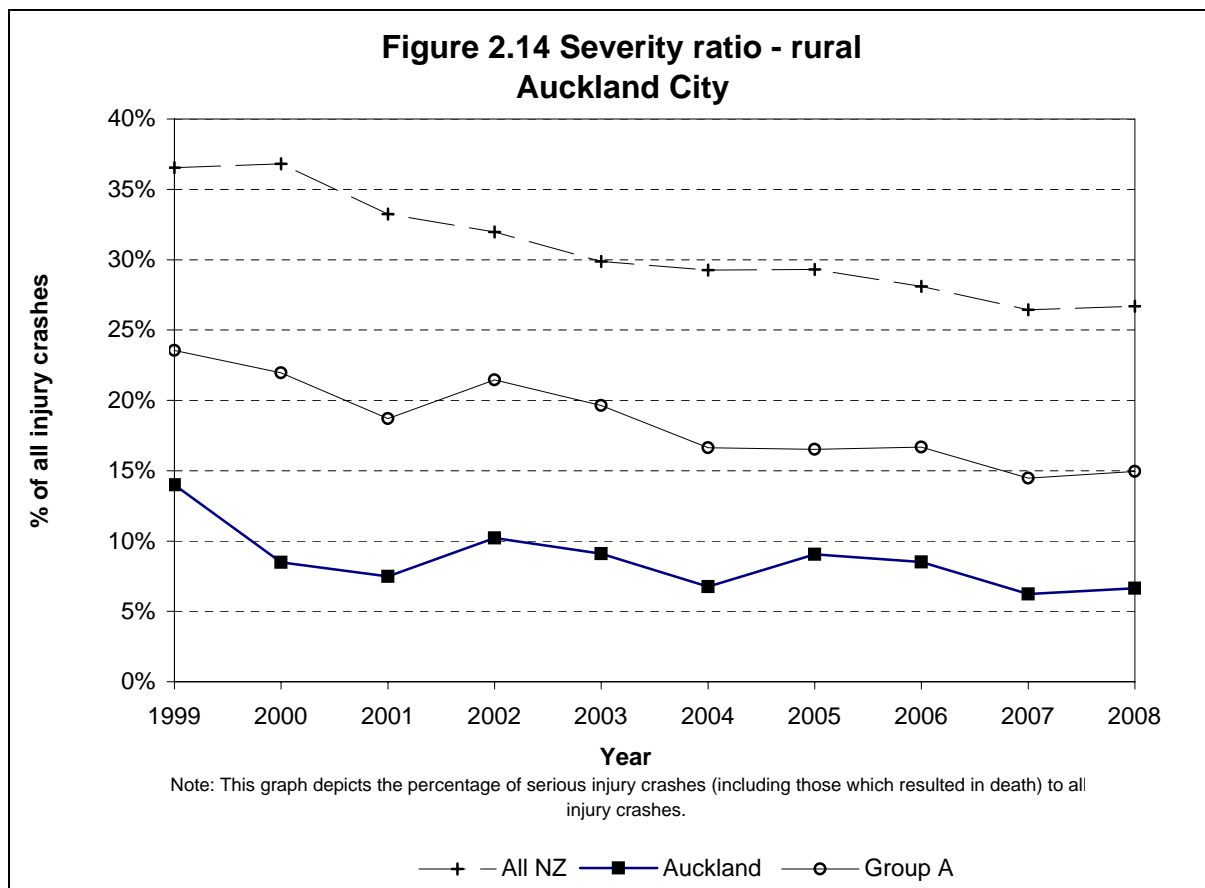
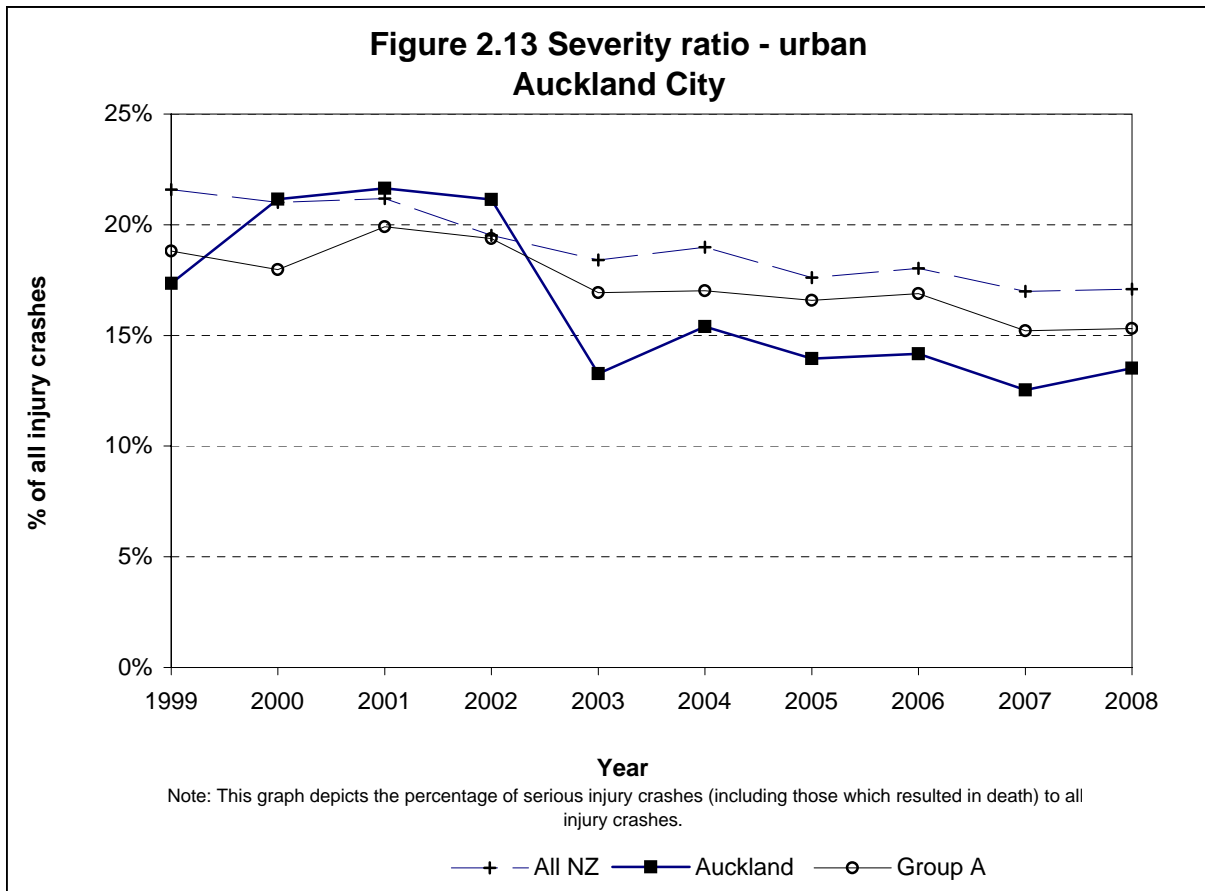
Figure 2.6: Casualty numbers and severity 2004 to 2008 - rural roads

	2004	2005	2006	2007	2008	Total	%	Group A
Fatal casualties	3	1	6	3	1	14	1%	2%
Serious casualties	15	25	24	13	16	93	6%	13%
Minor casualties	293	318	274	321	289	1495	93%	85%
Total casualties	311	344	304	337	306	1602	100%	100%



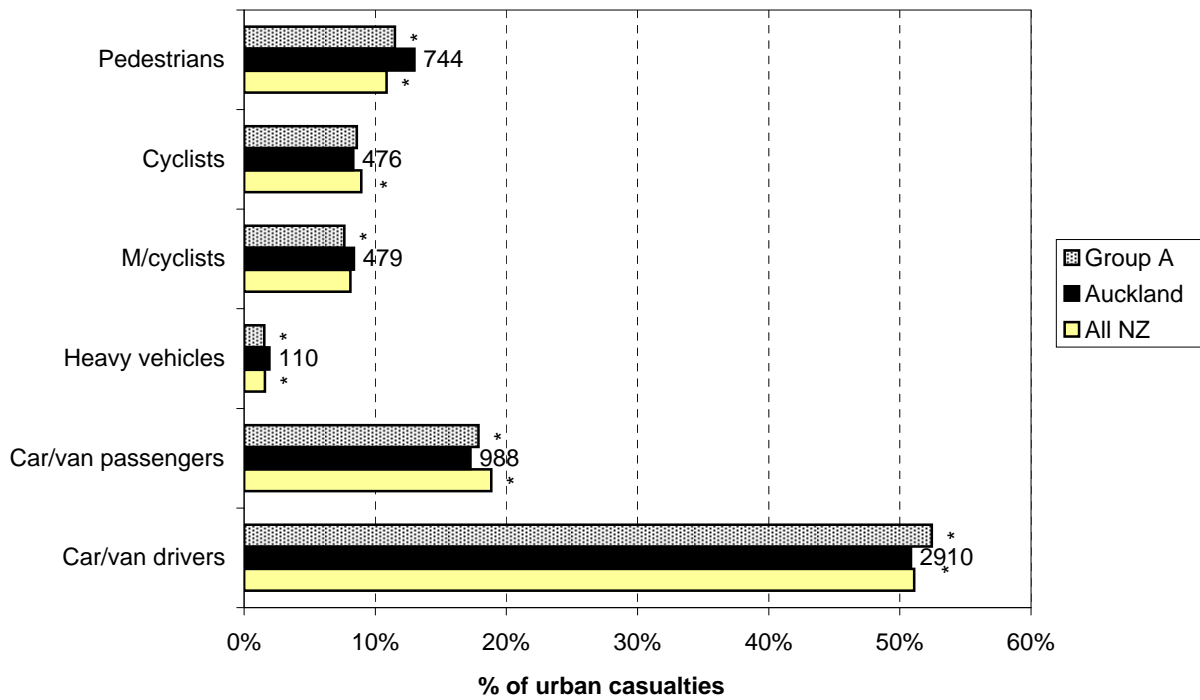






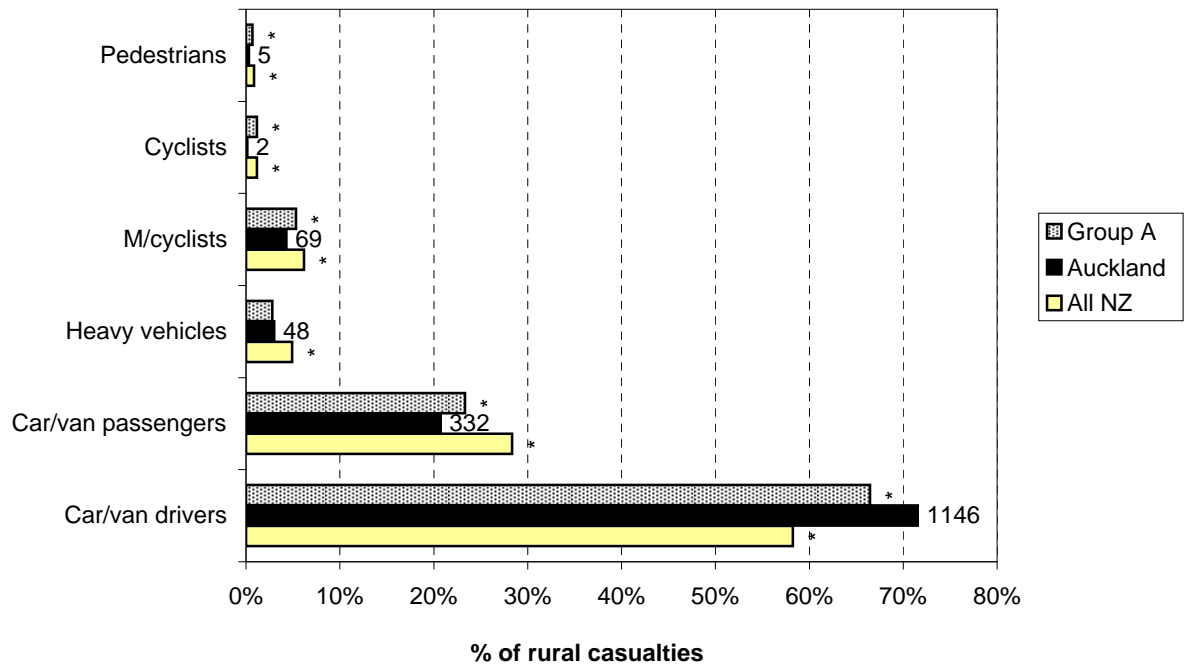
Road User Statistics

**Figure 3.1 Road user casualties - urban
Auckland City (2004-2008)**



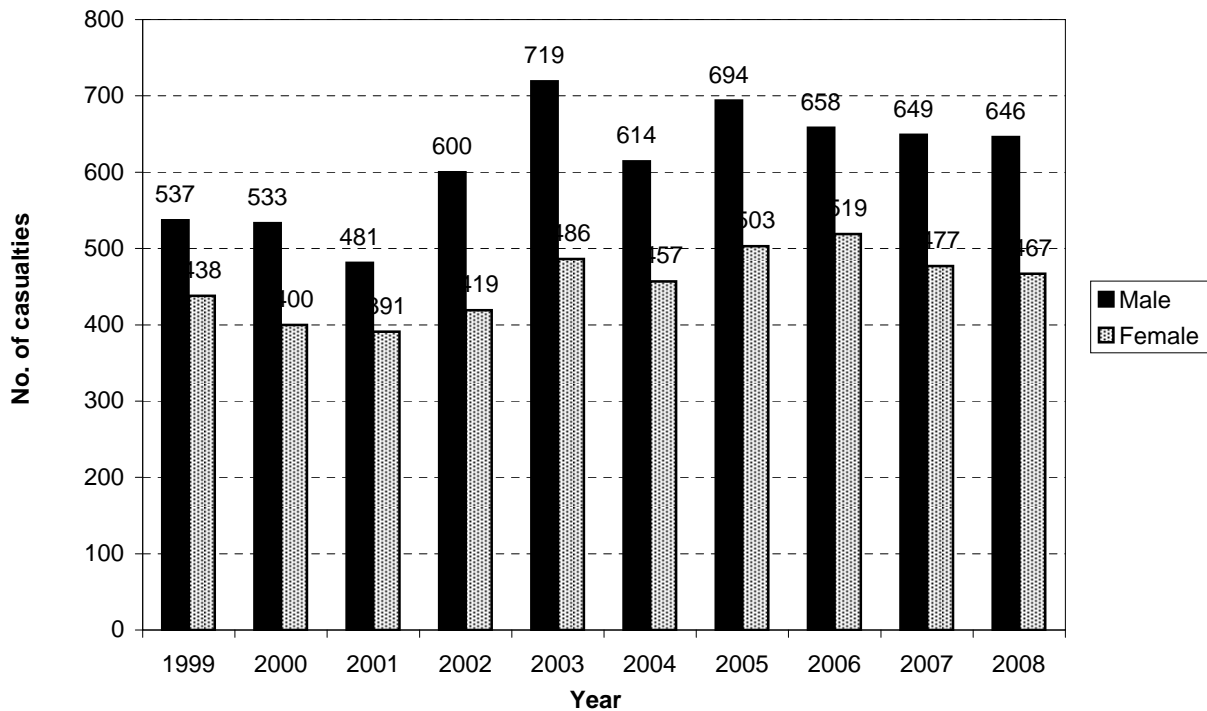
Note: While the graph plots percentages, the number of casualties is shown against the data points.
*Denotes statistically significant difference between Local Authority and National or Peer Group Proportions

**Figure 3.2 Road user casualties - rural
Auckland City (2004-2008)**



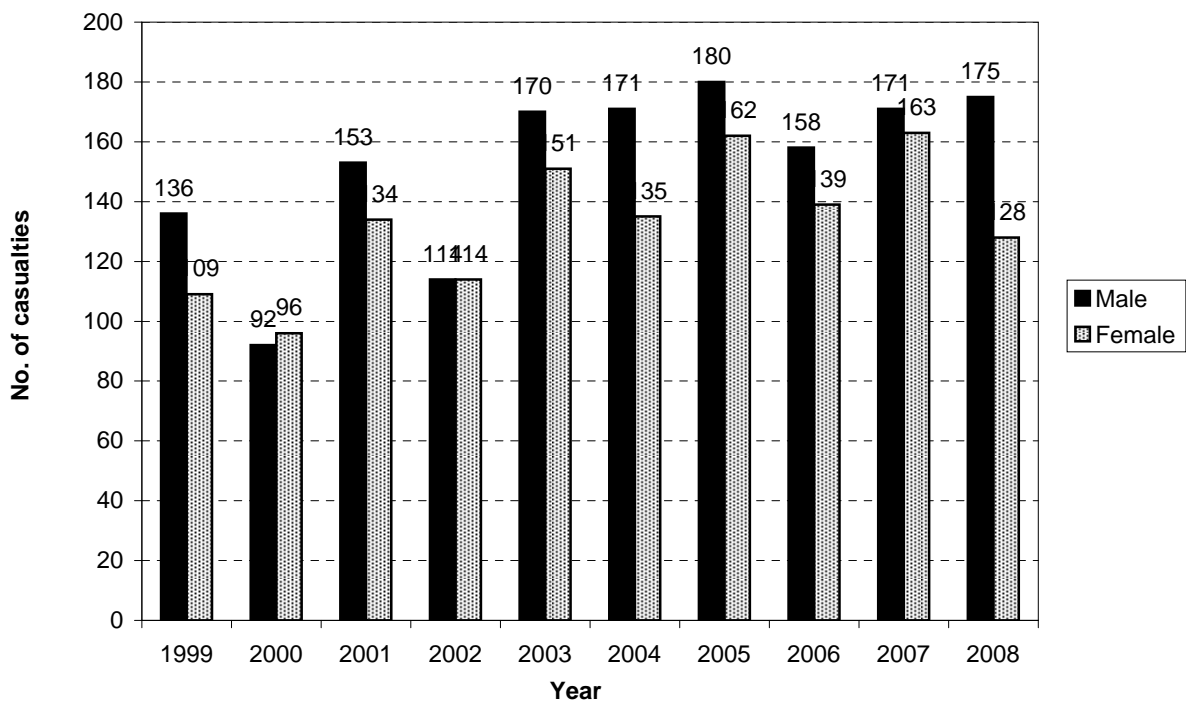
Note: While the graph plots percentages, the number of casualties is shown against the data points.
*Denotes statistically significant difference between Local Authority and National or Peer Group Proportions

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



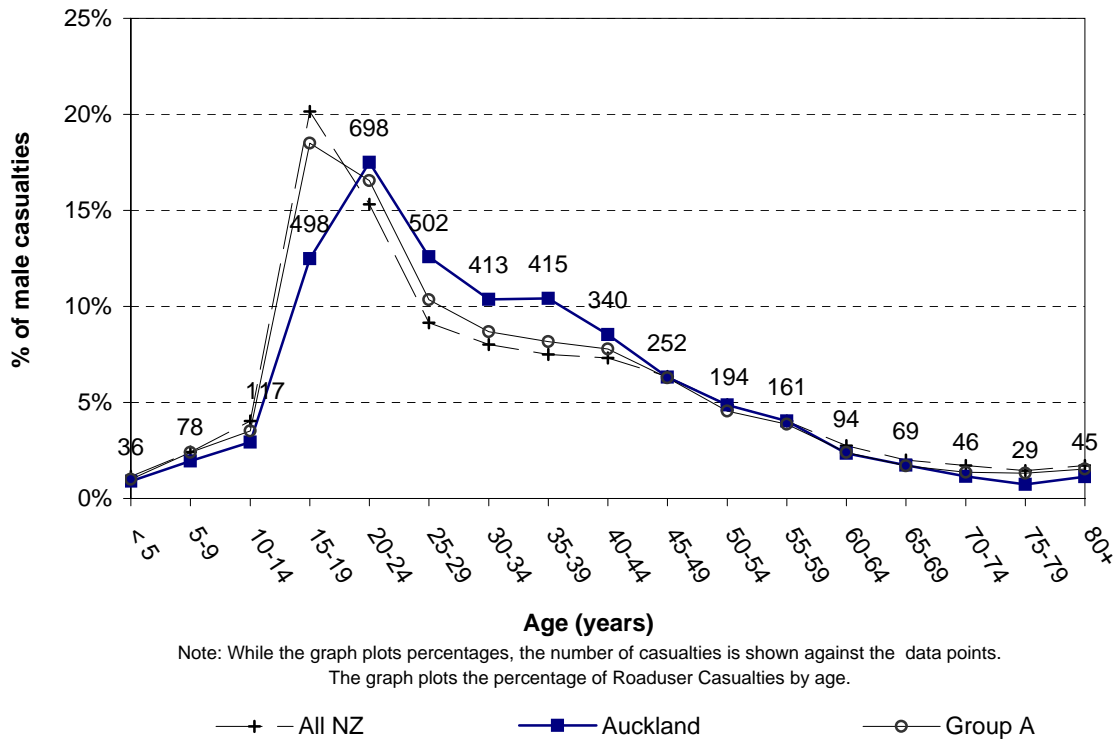
Note: This graph shows the number of male and female roadusers injured

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

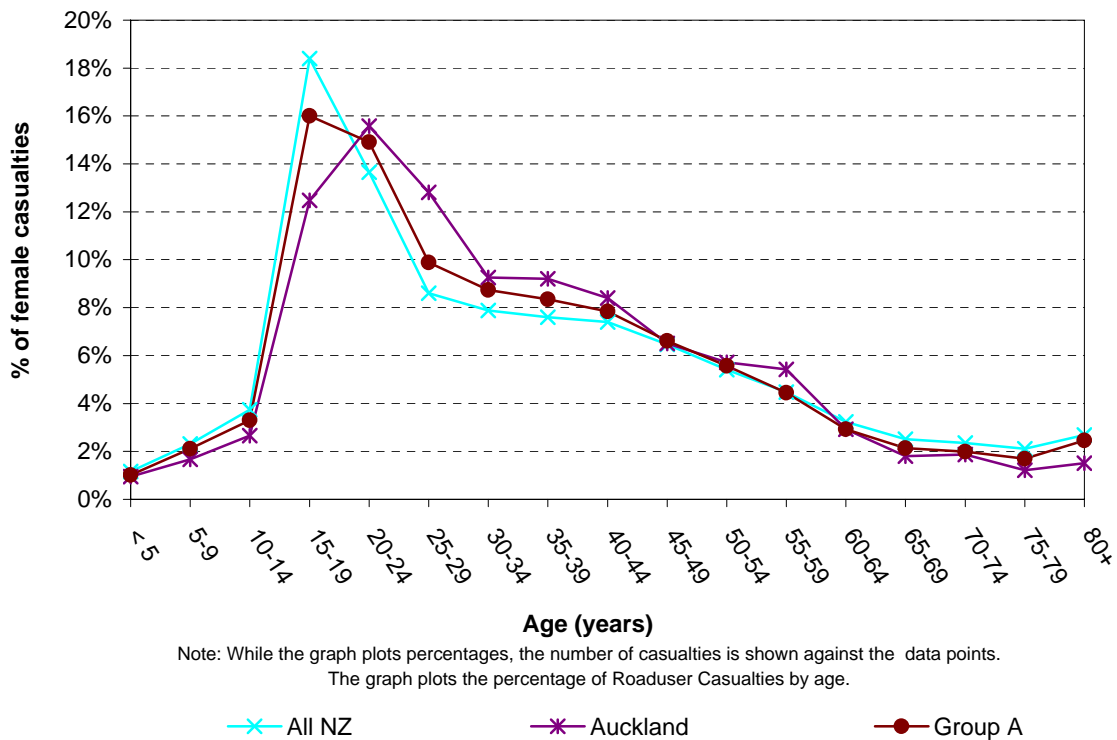


Note: This graph shows the number of male and female roadusers injured

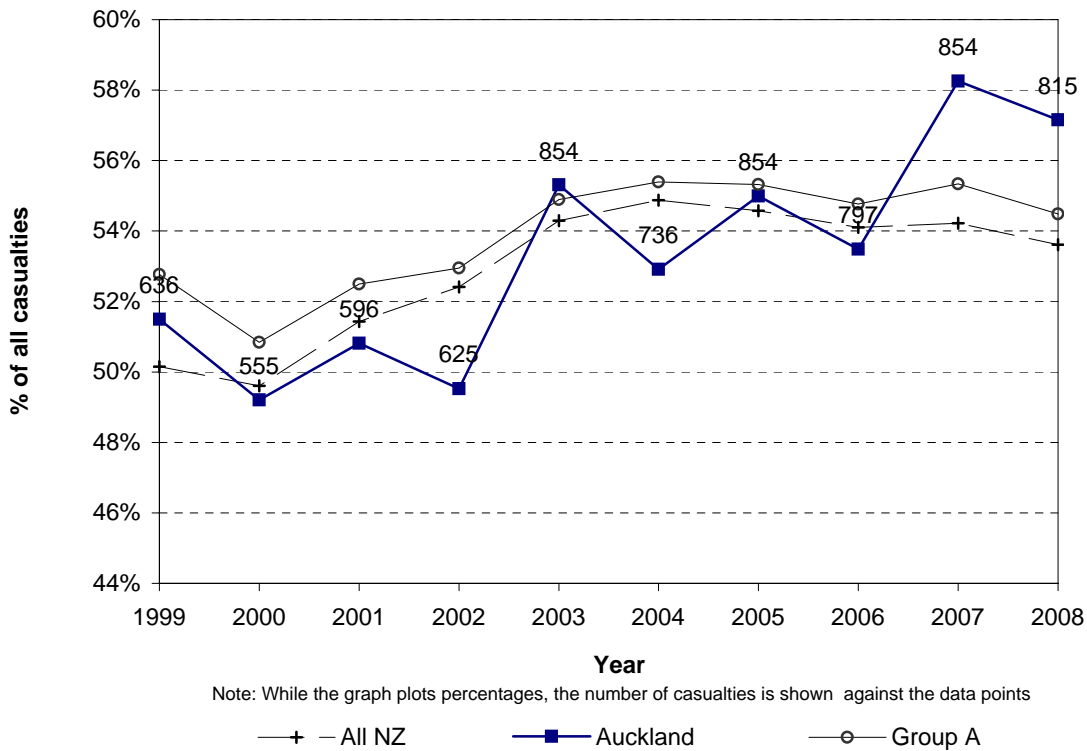
**Figure 3.5 Male casualties by age
Auckland City (2004-2008)**



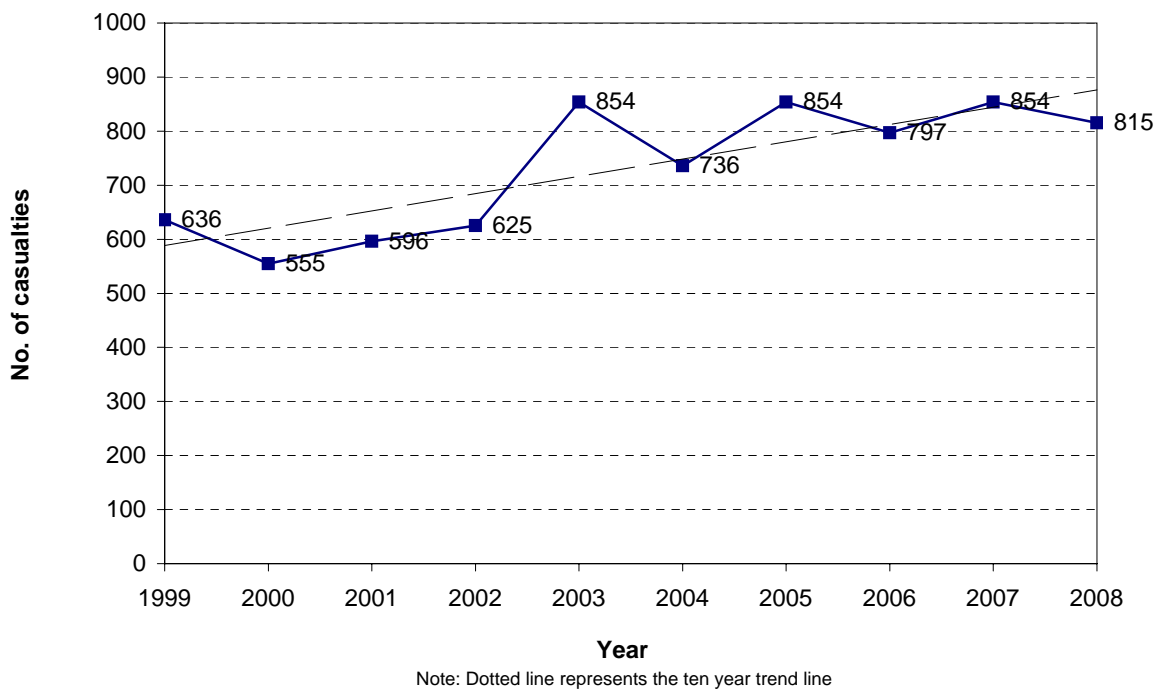
**Figure 3.6 Female casualties by age
Auckland City (2004-2008)**



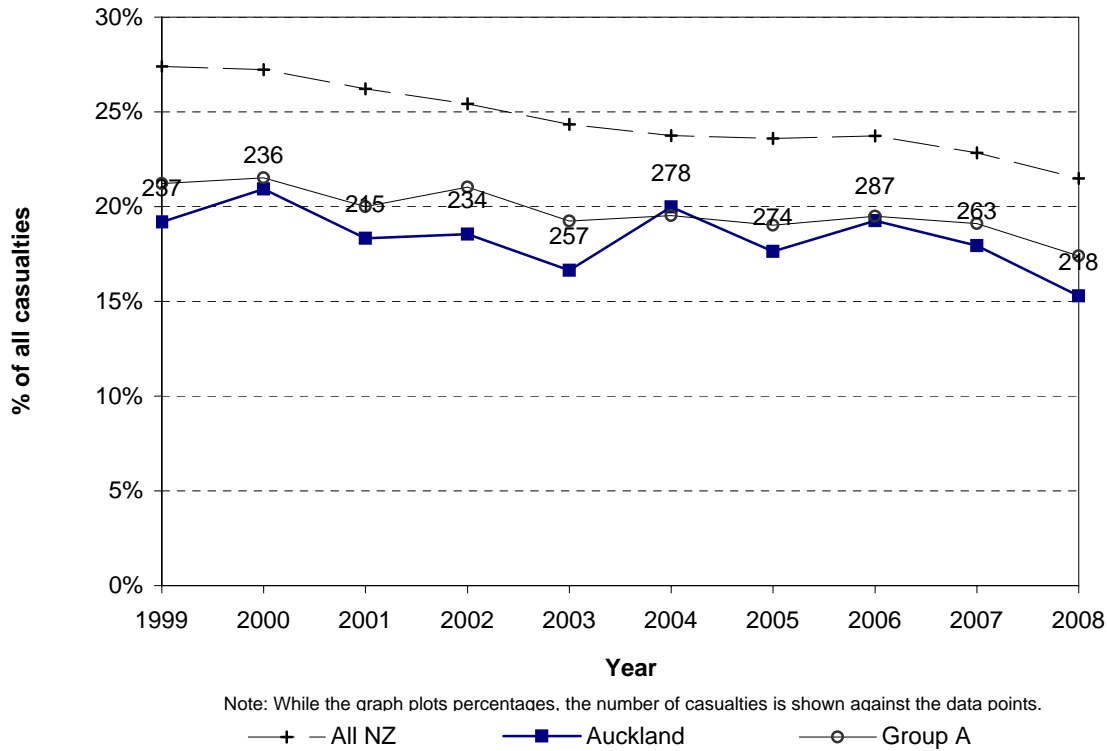
**Figure 3.7 Car/van driver casualties
Auckland City**



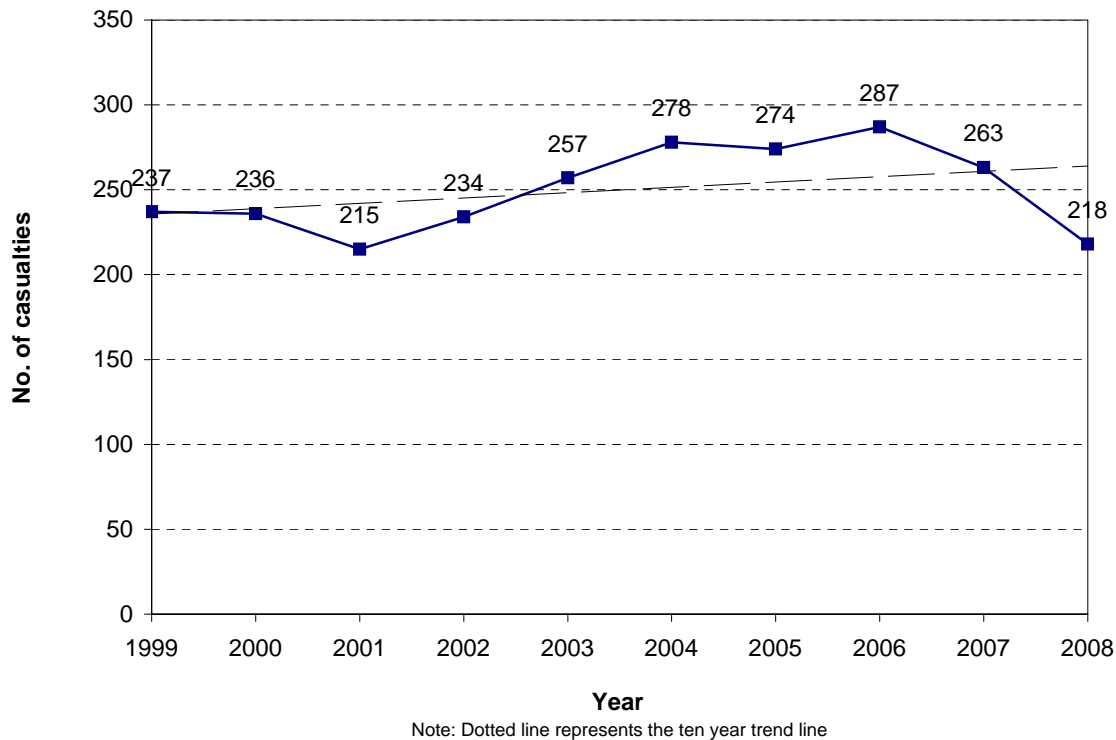
**Figure 3.8 Car/van driver casualties
Auckland City**



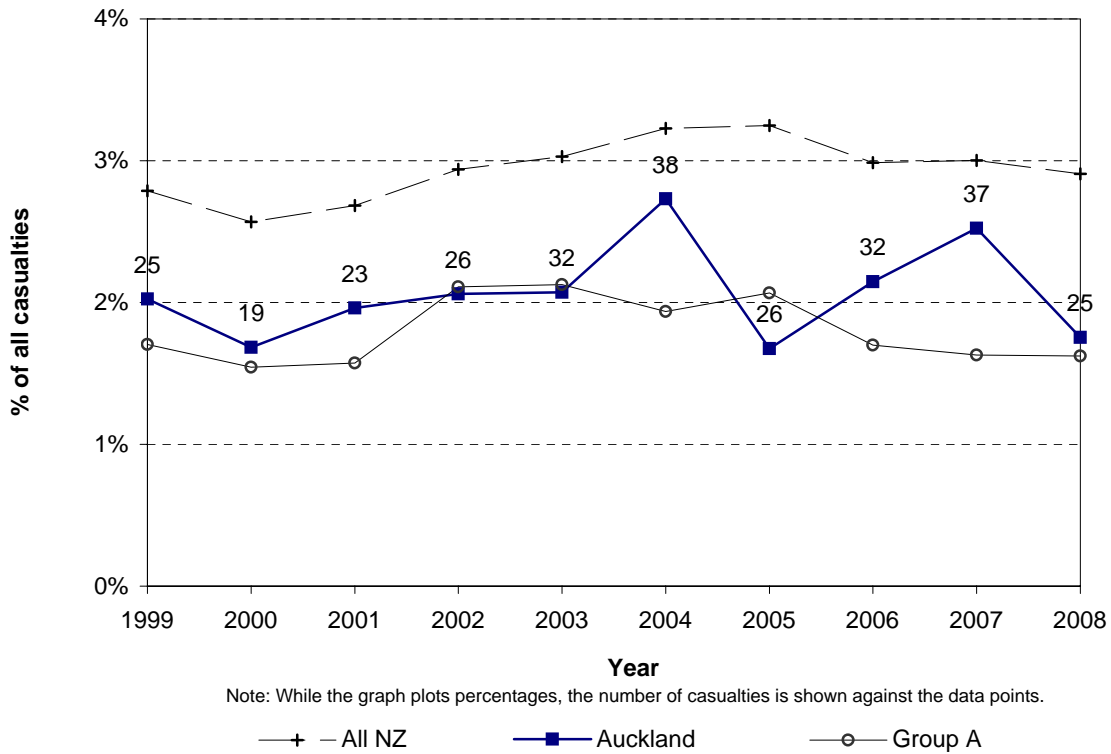
**Figure 3.9 Car/van passenger casualties
Auckland City**



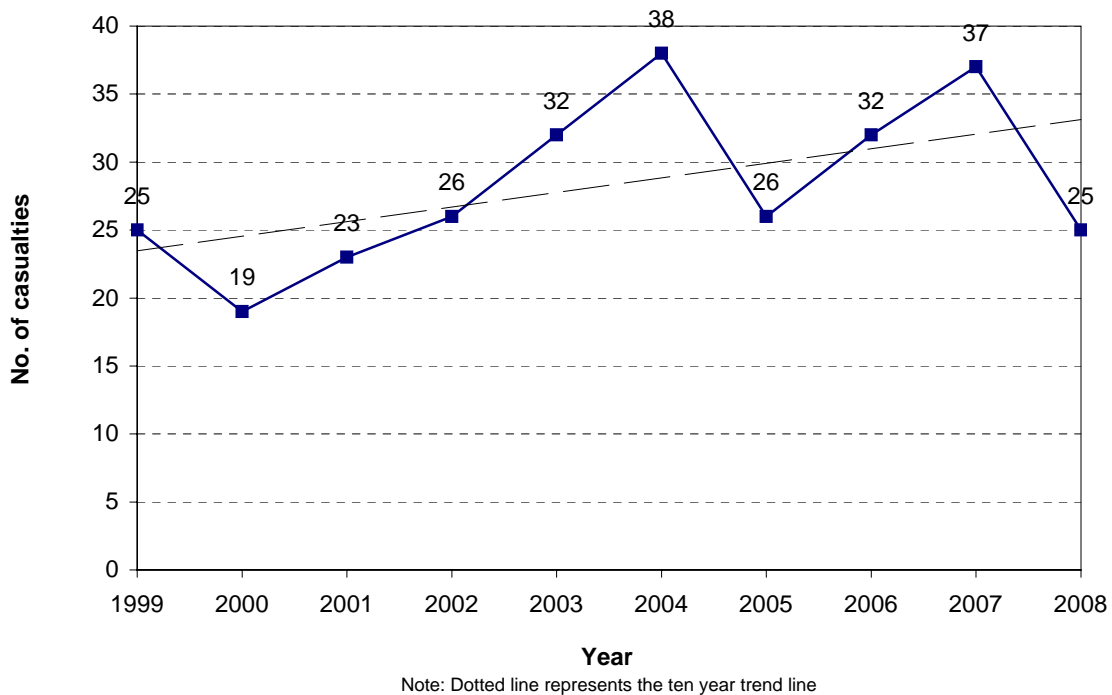
**Figure 3.10 Car/van passenger casualties
Auckland City**



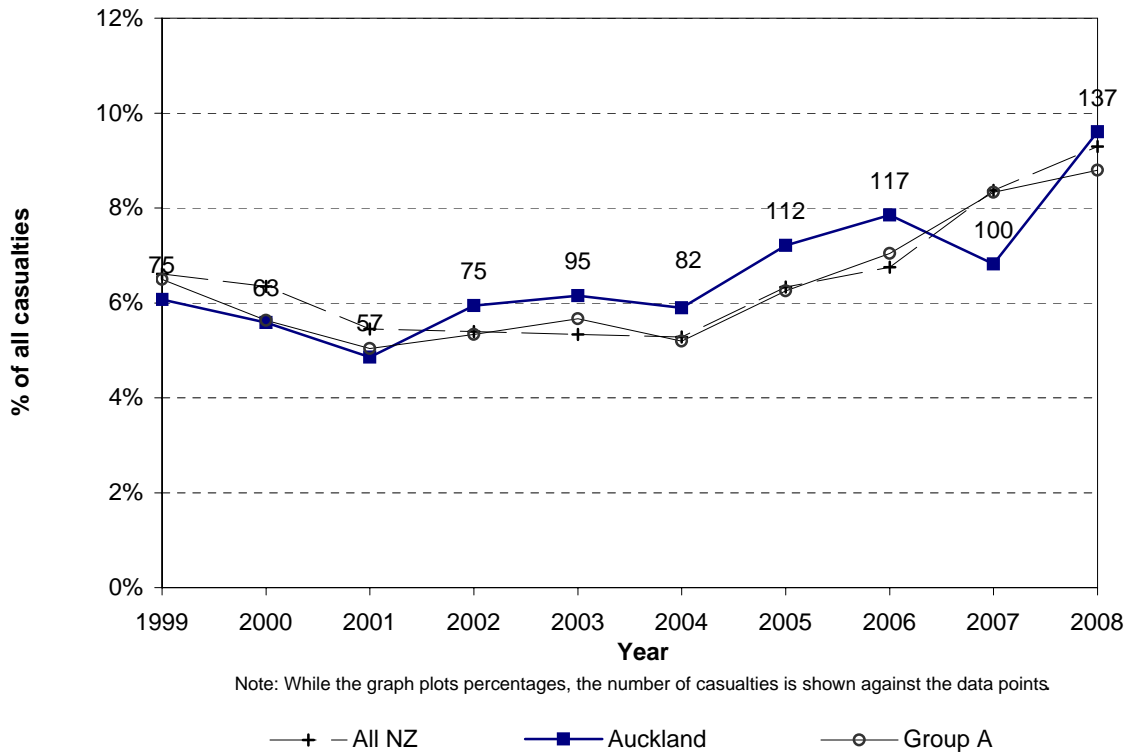
**Figure 3.11 Heavy vehicle casualties
Auckland City**



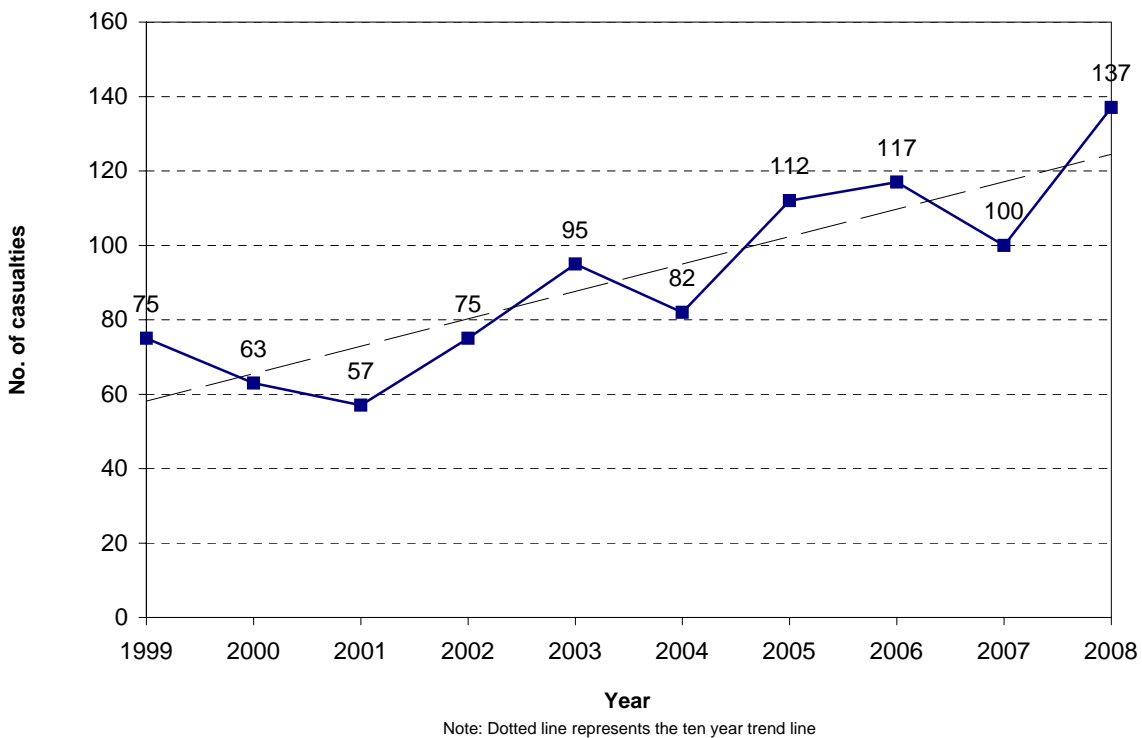
**Figure 3.12 Heavy vehicle casualties
Auckland City**



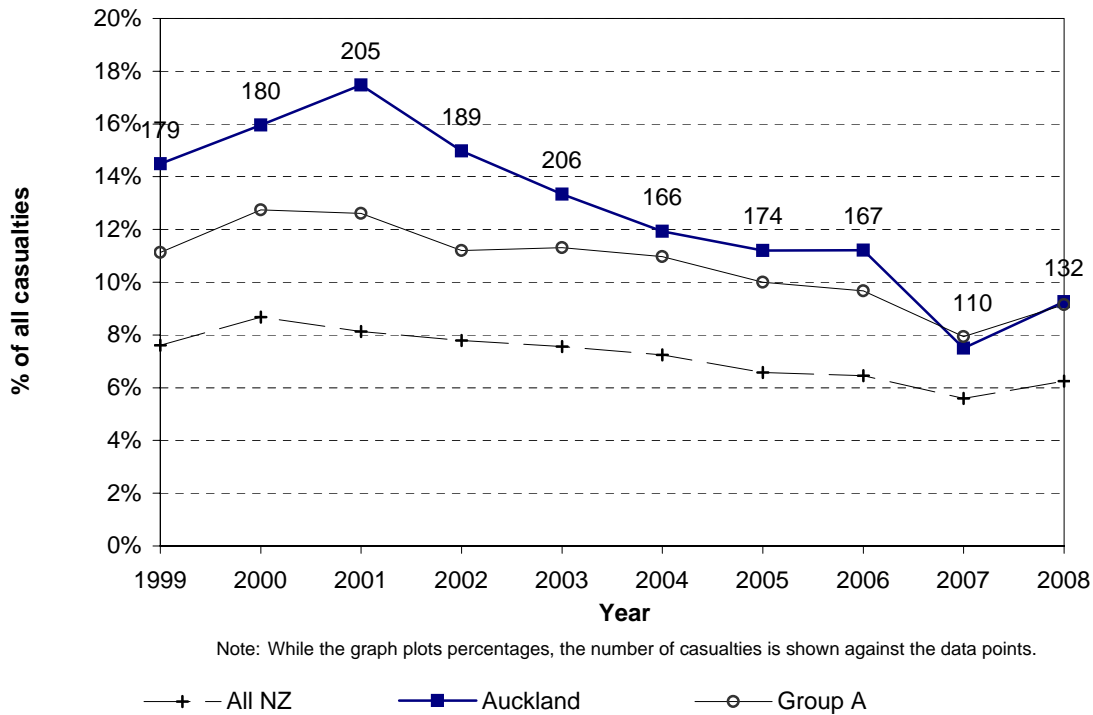
**Figure 3.13 Motorcyclist casualties
Auckland City**



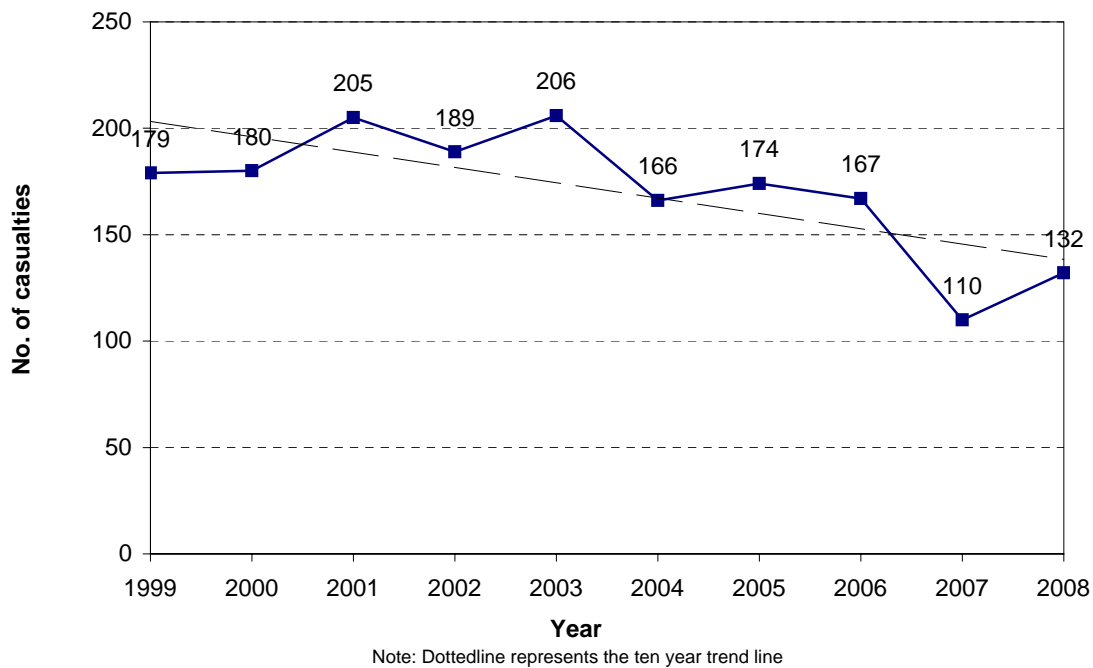
**Figure 3.14 Motorcyclist casualties
Auckland City**



**Figure 3.15 Pedestrian casualties
Auckland City**



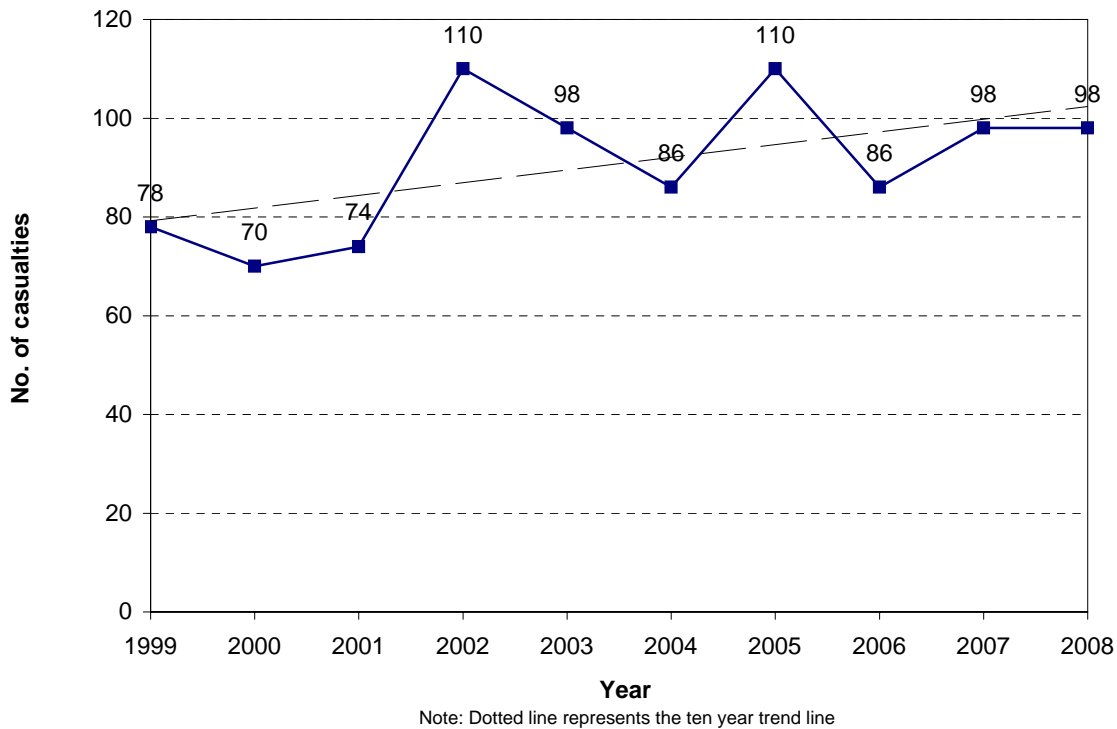
**Figure 3.16 Pedestrian casualties
Auckland City**



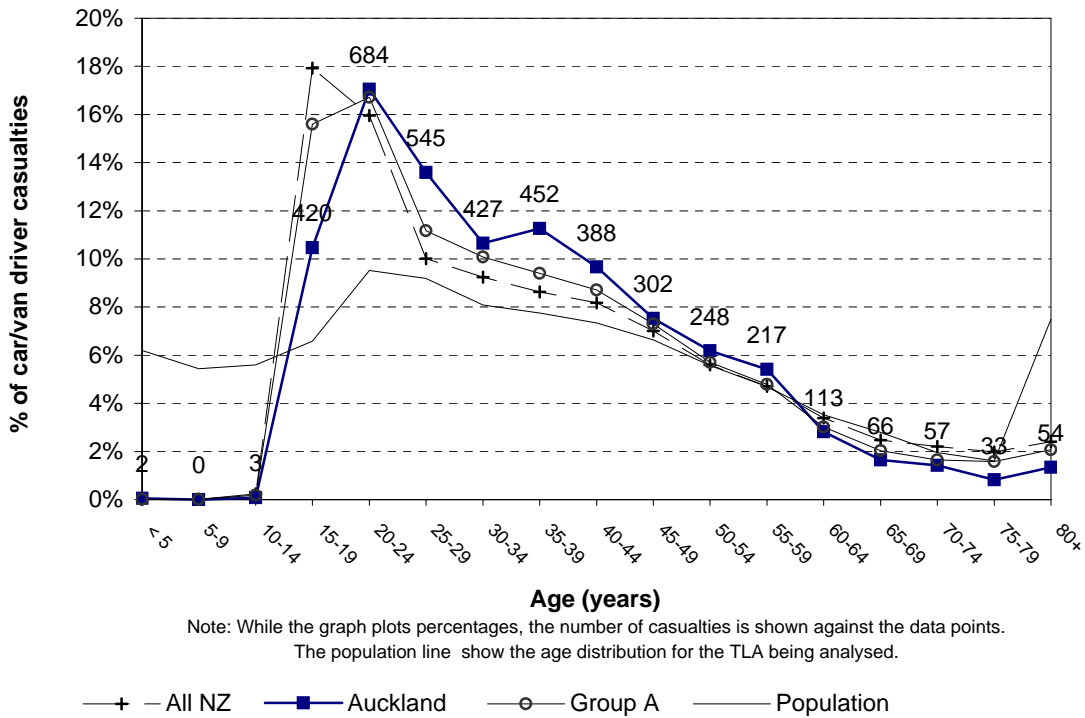
**Figure 3.17 Cyclist casualties
Auckland City**



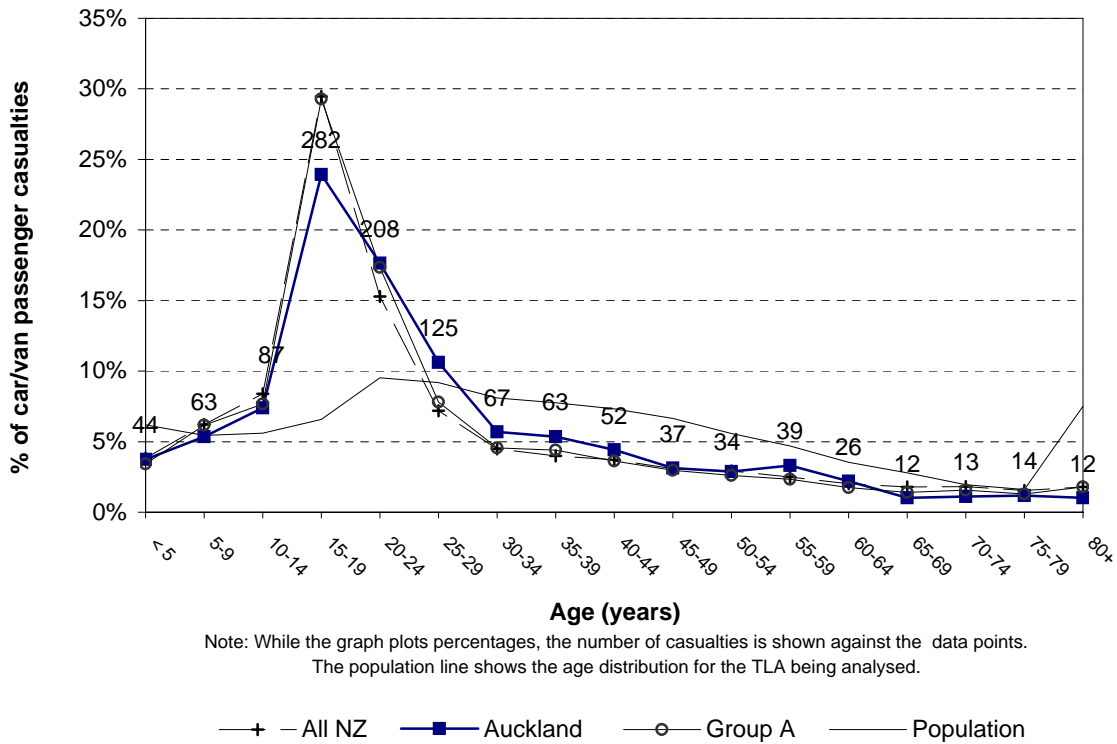
**Figure 3.18 Cyclist casualties
Auckland City**



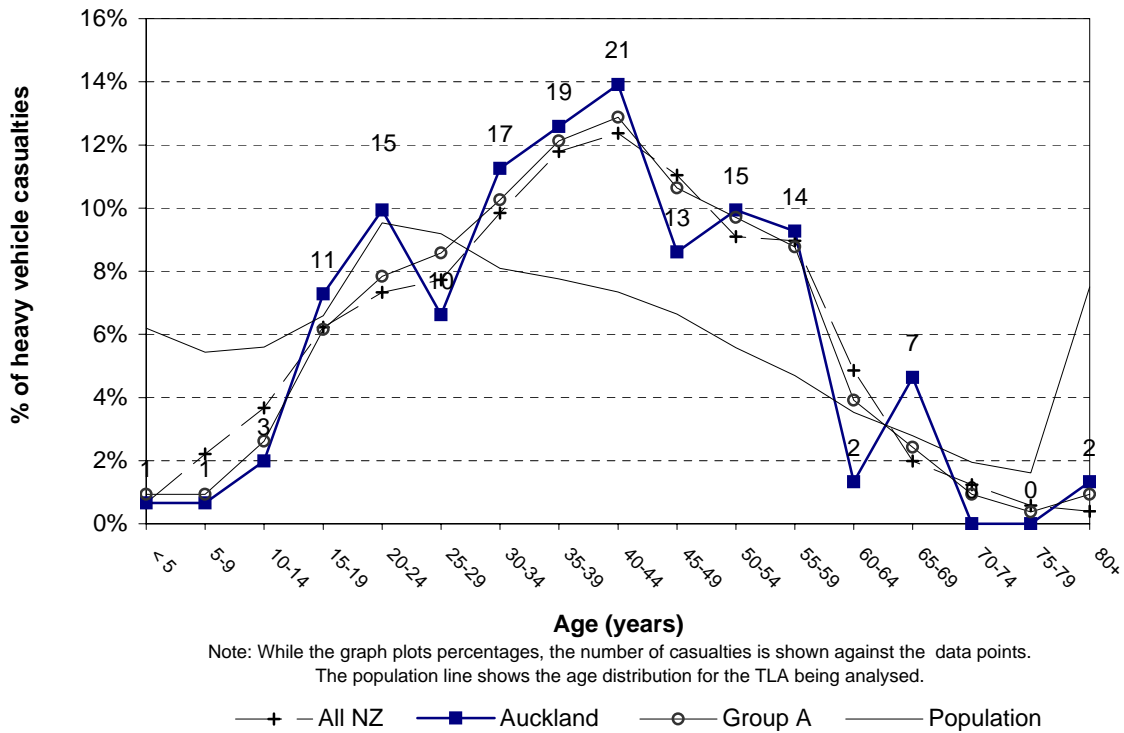
**Figure 3.19 Car/van driver casualty age
Auckland City (2004-2008)**



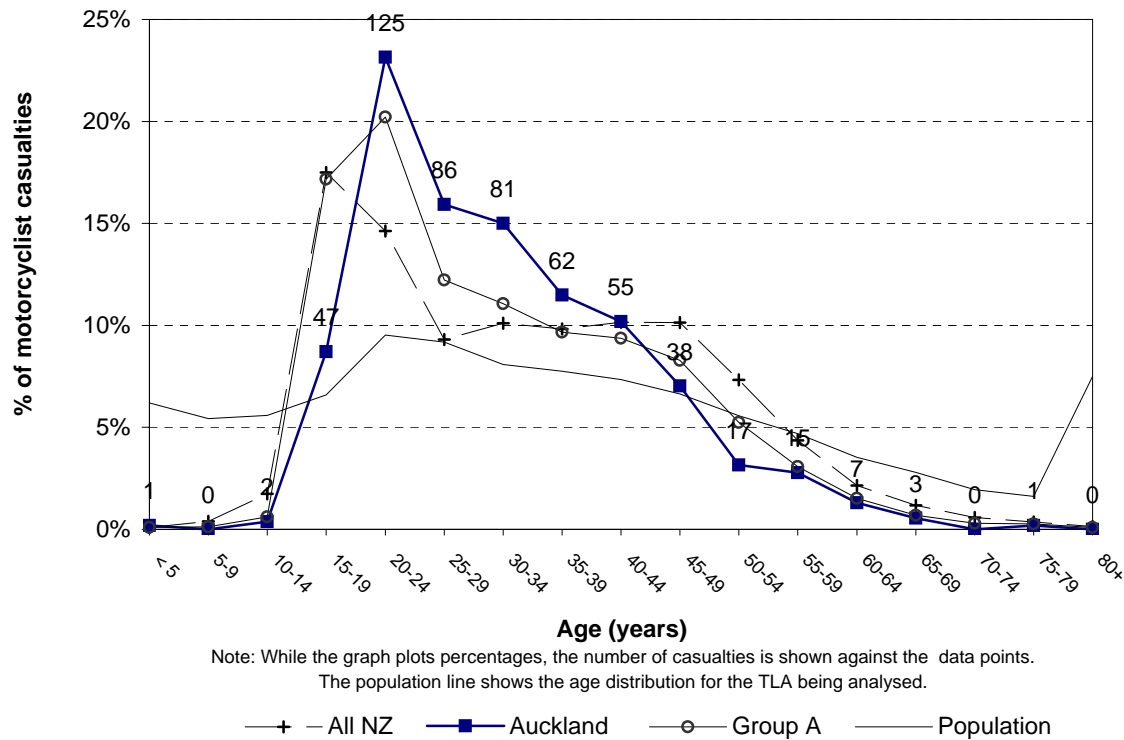
**Figure 3.20 Car/van passenger casualty age
Auckland City (2004-2008)**



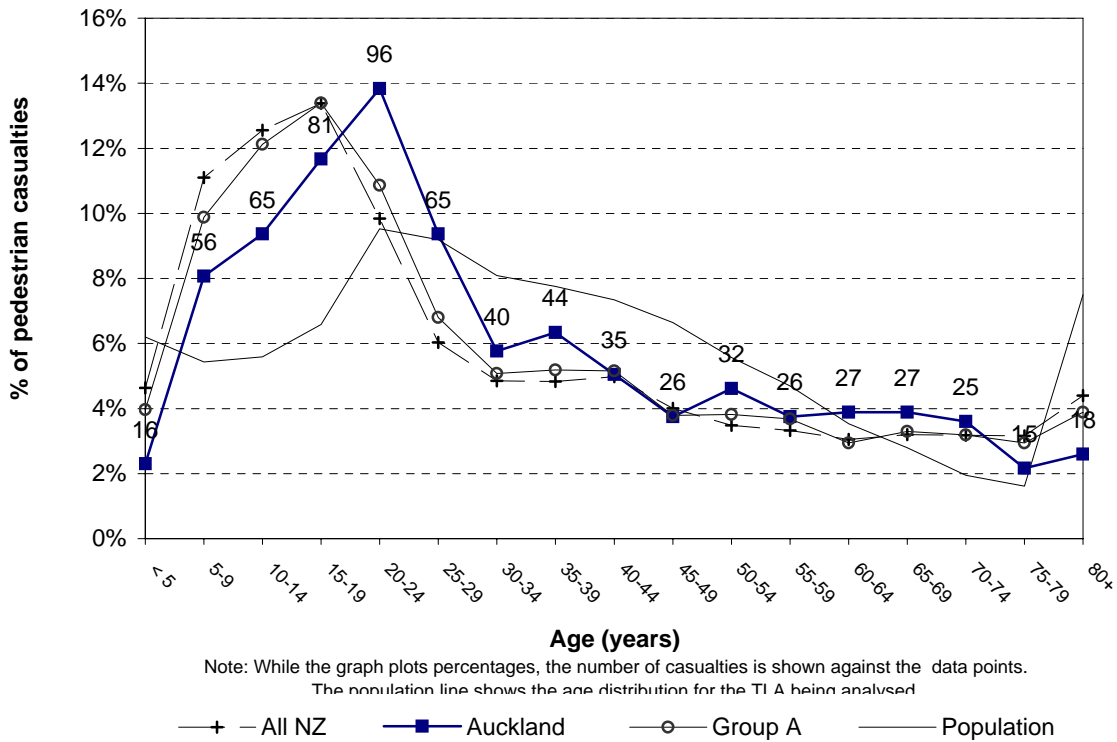
**Figure 3.21 Heavy vehicle casualty age
Auckland City (2004-2008)**



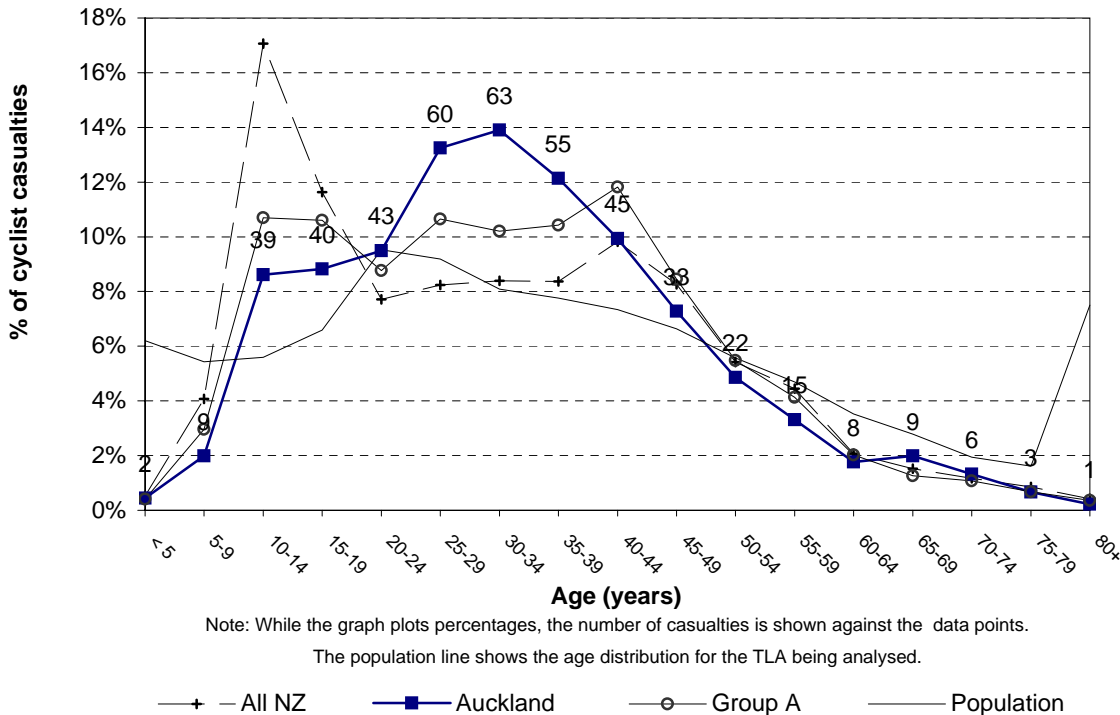
**Figure 3.22 Motorcyclist casualty age
Auckland City (2004-2008)**



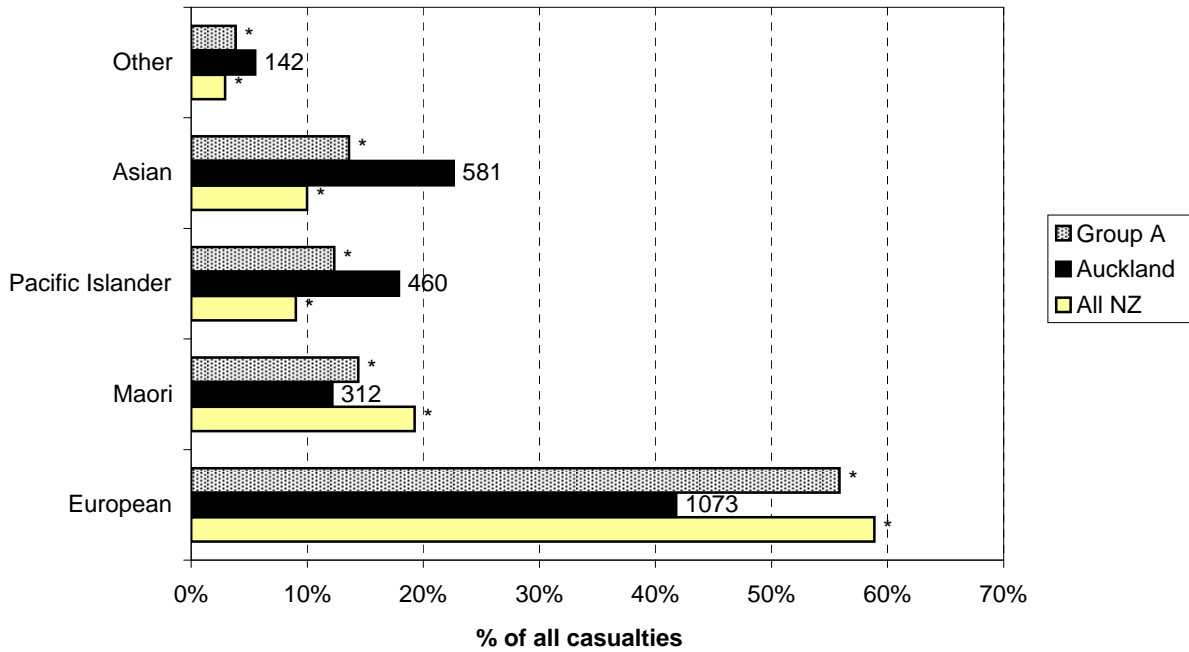
**Figure 3.23 Pedestrian casualty age
Auckland City (2004-2008)**



**Figure 3.24 Cyclist casualty age
Auckland City (2004-2008)**

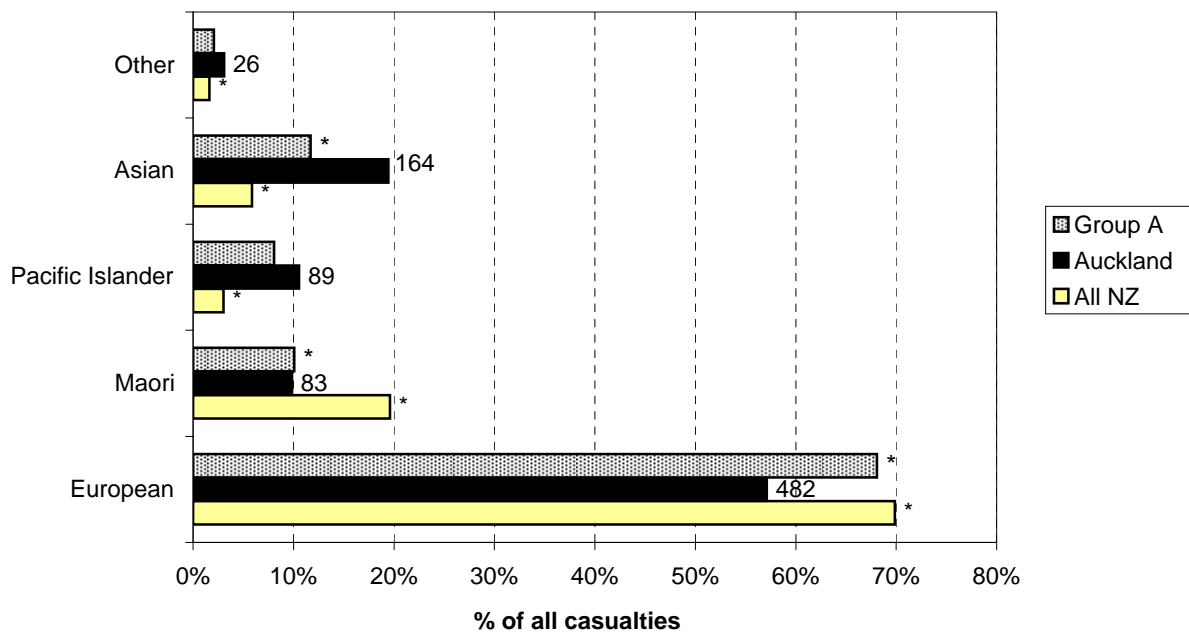


**Figure 3.25 Casualty ethnicity - urban
Auckland City (2004-2008)**



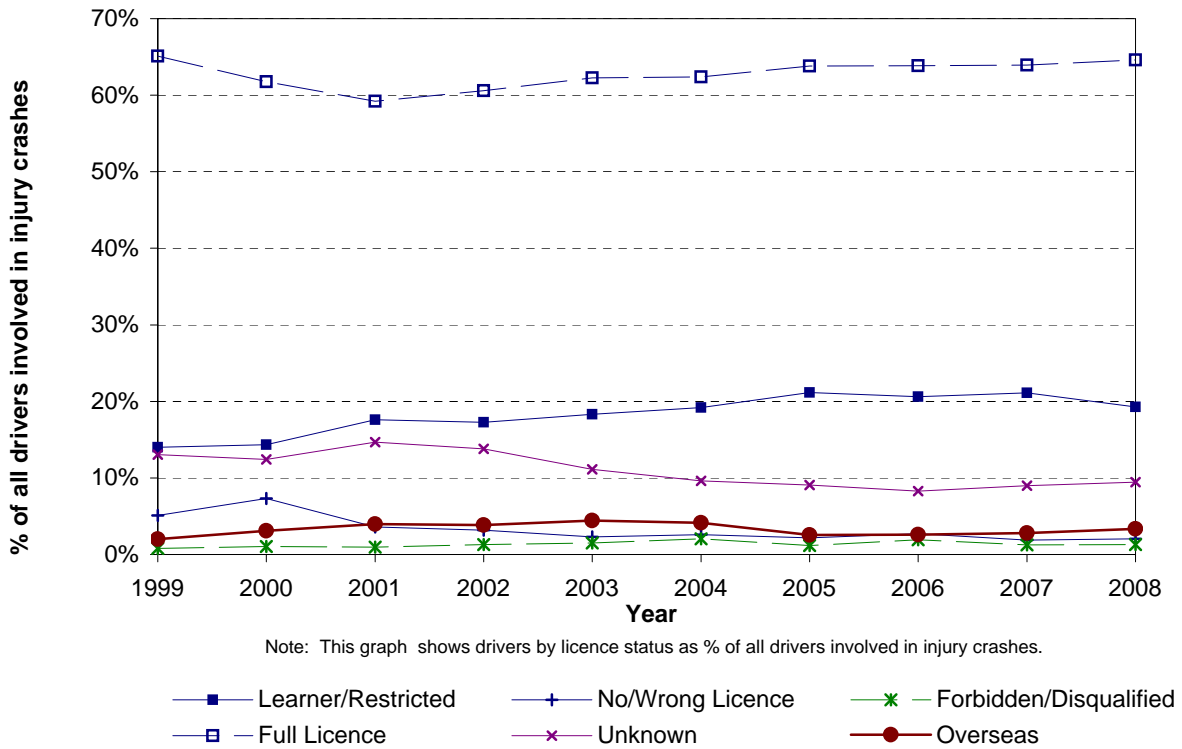
Note: While the graph plots percentages, the number of crashes is shown against the data points.
*Denotes statistically significant difference between Local Authority and National or Peer Group Proportions

**Figure 3.26 Casualty ethnicity - rural
Auckland City (2004-2008)**

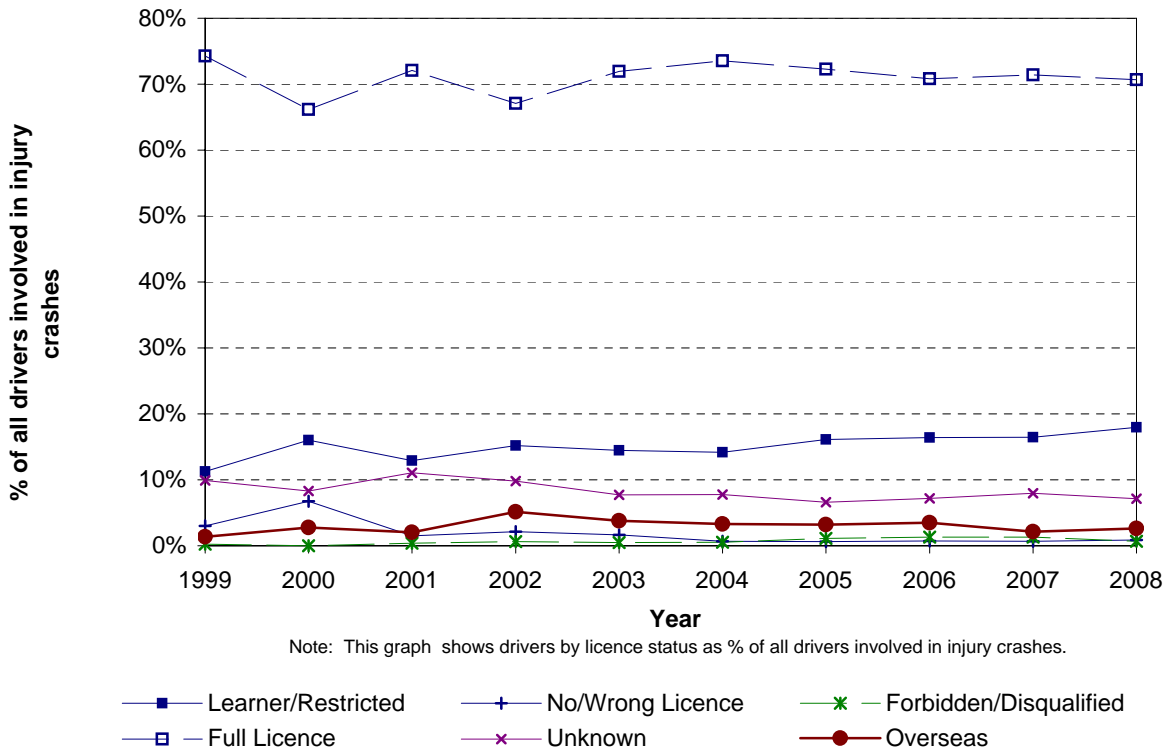


Note: While the graph plots percentages, the number of crashes is shown against the data points.
*Denotes statistically significant difference between Local Authority and National or Peer Group Proportions

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

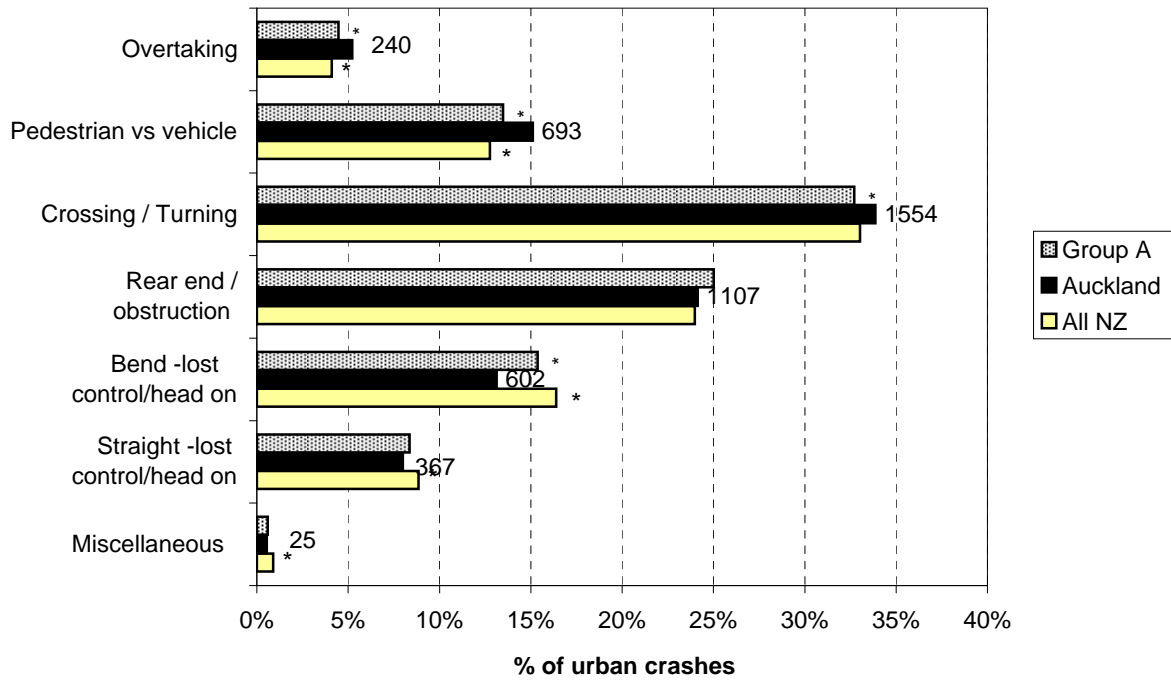


**Figure 3.28 Licence status - rural
Auckland City**



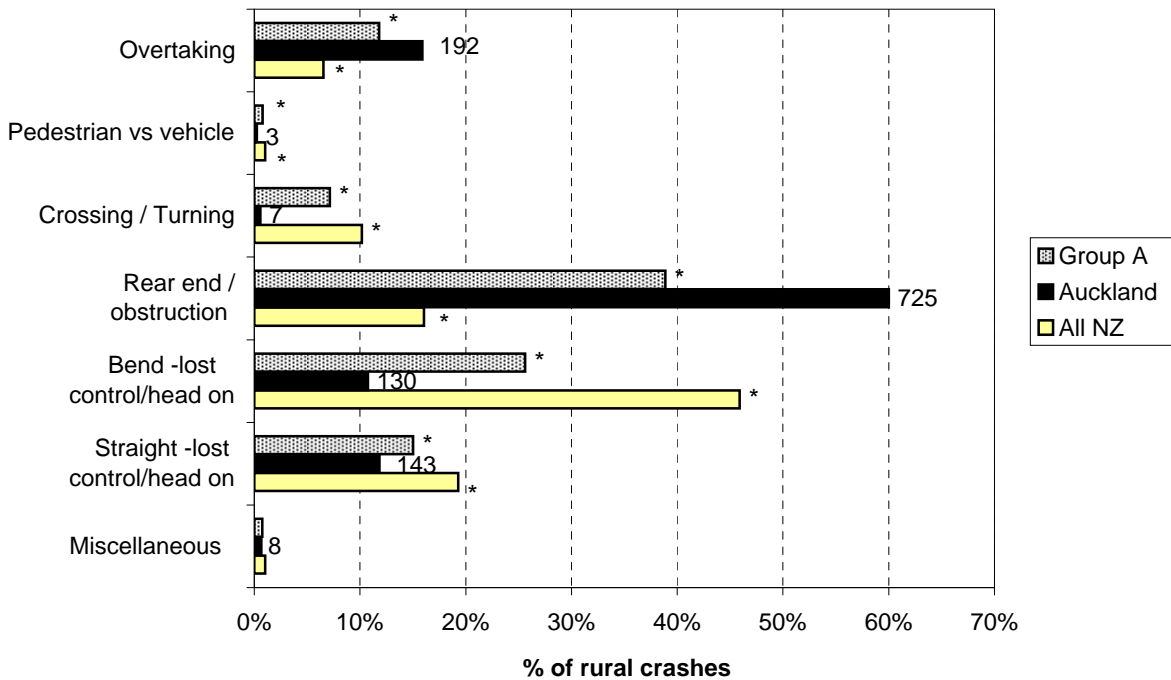
Crash Type Statistics

**Figure 4.1 Crash movement type - urban
Auckland City (2004-2008)**



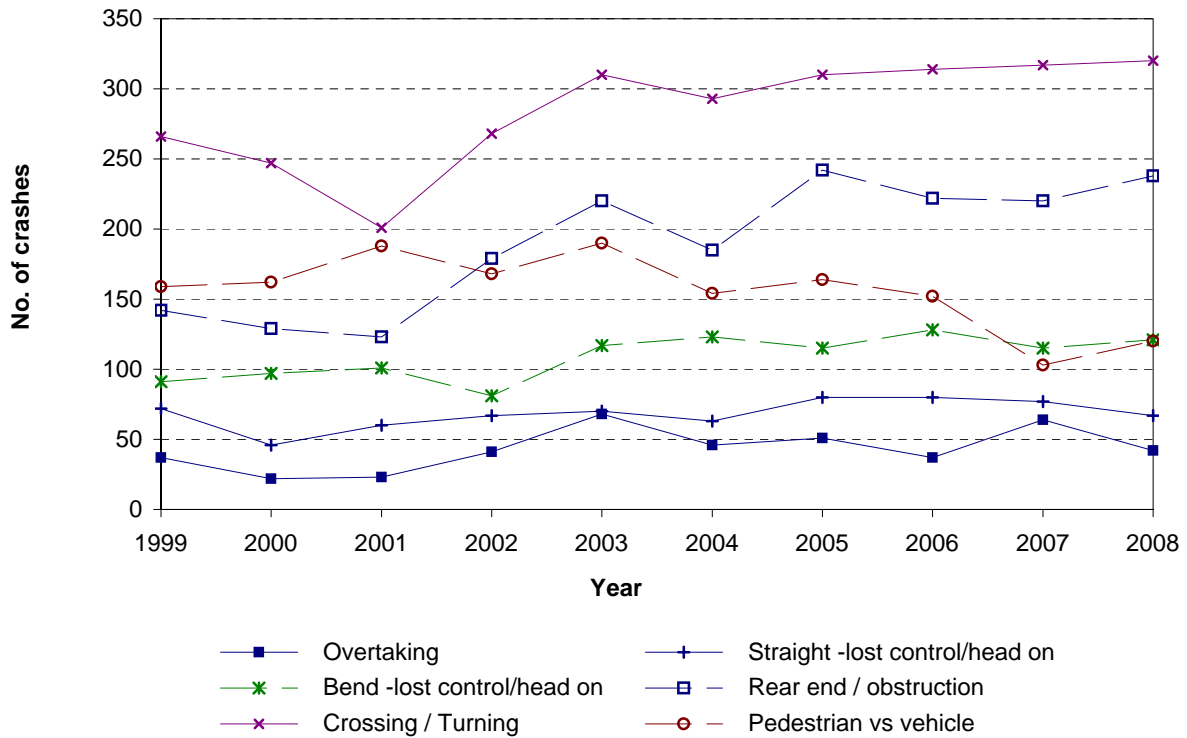
Note: While the graph plots percentages, the number of crashes is shown against the data points.
*Denotes statistically significant difference between Local Authority and National or Peer Group Proportions

**Figure 4.2 Crash movement type - rural
Auckland City roads (2004-2008)**

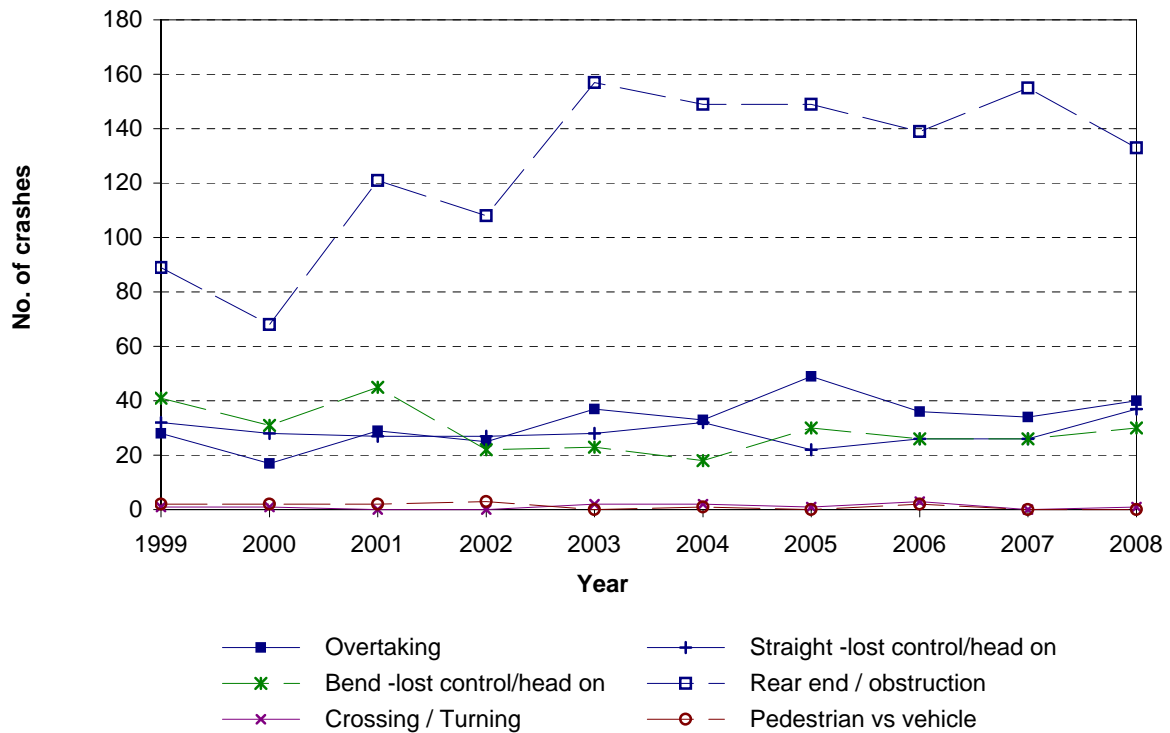


Note: While the graph plots percentages, the number of crashes is shown against the data points.
*Denotes statistically significant difference between Local Authority and National or Peer Group Proportions

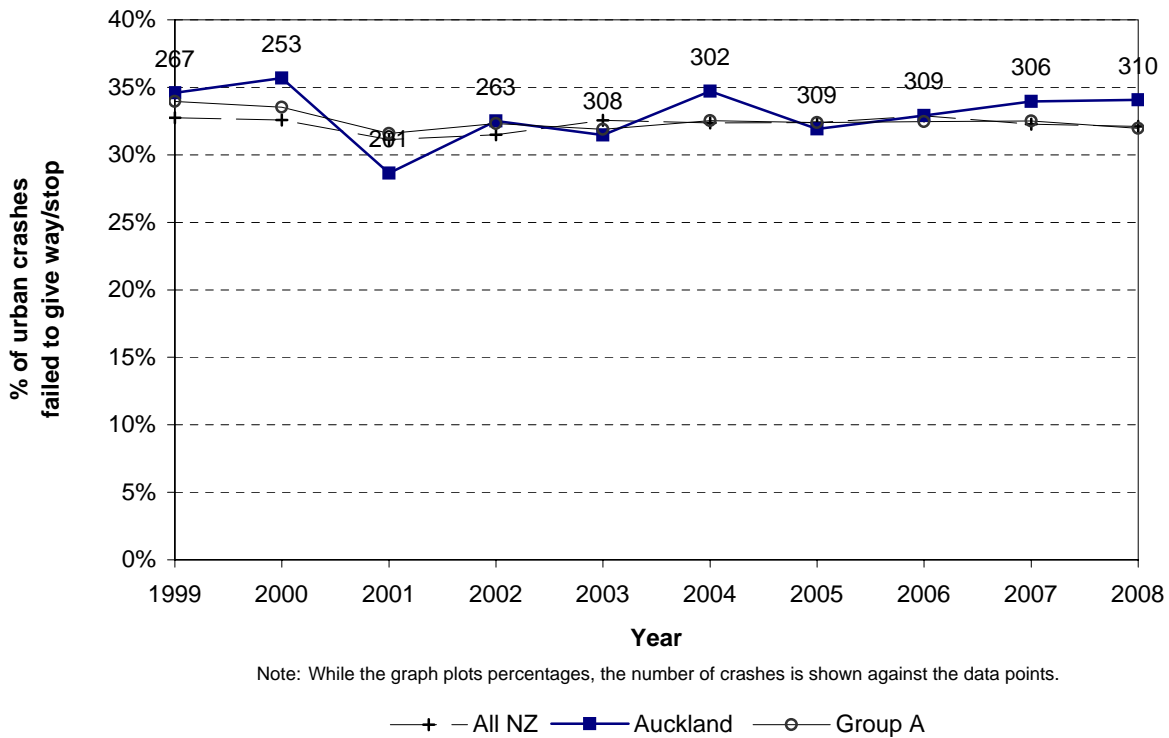
**Figure 4.3 Crash movement type - trends
Auckland City - urban roads**



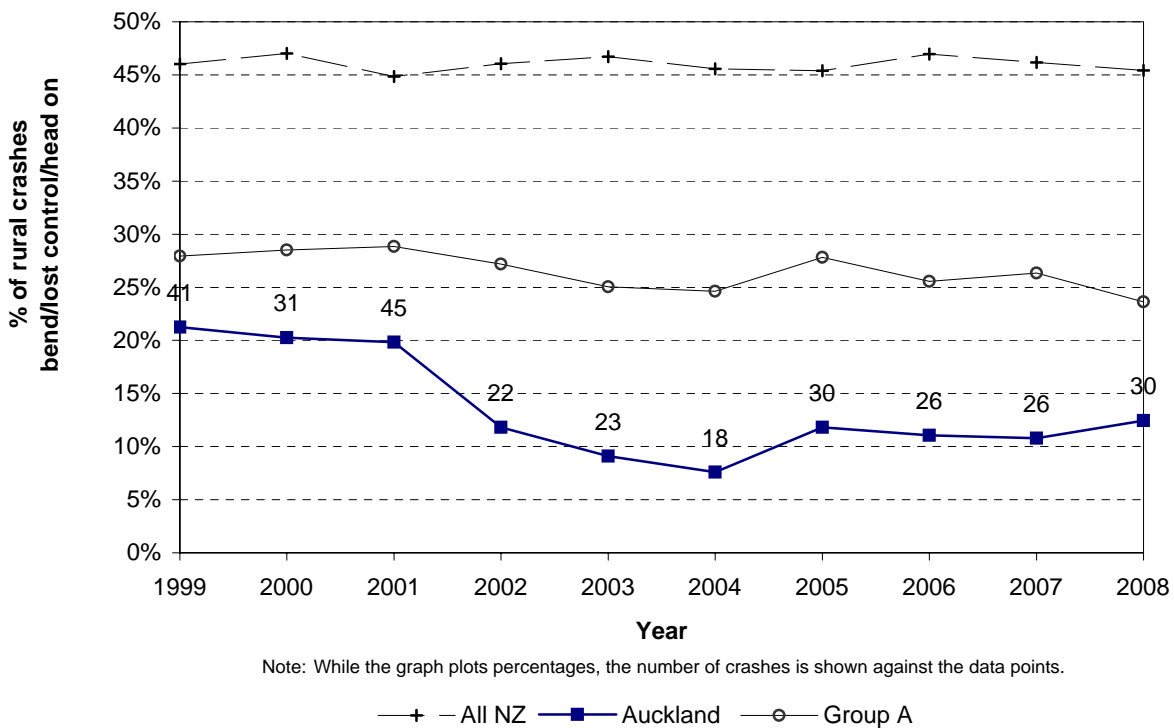
**Figure 4.4 Crash movement type - trends
Auckland City - rural roads**



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

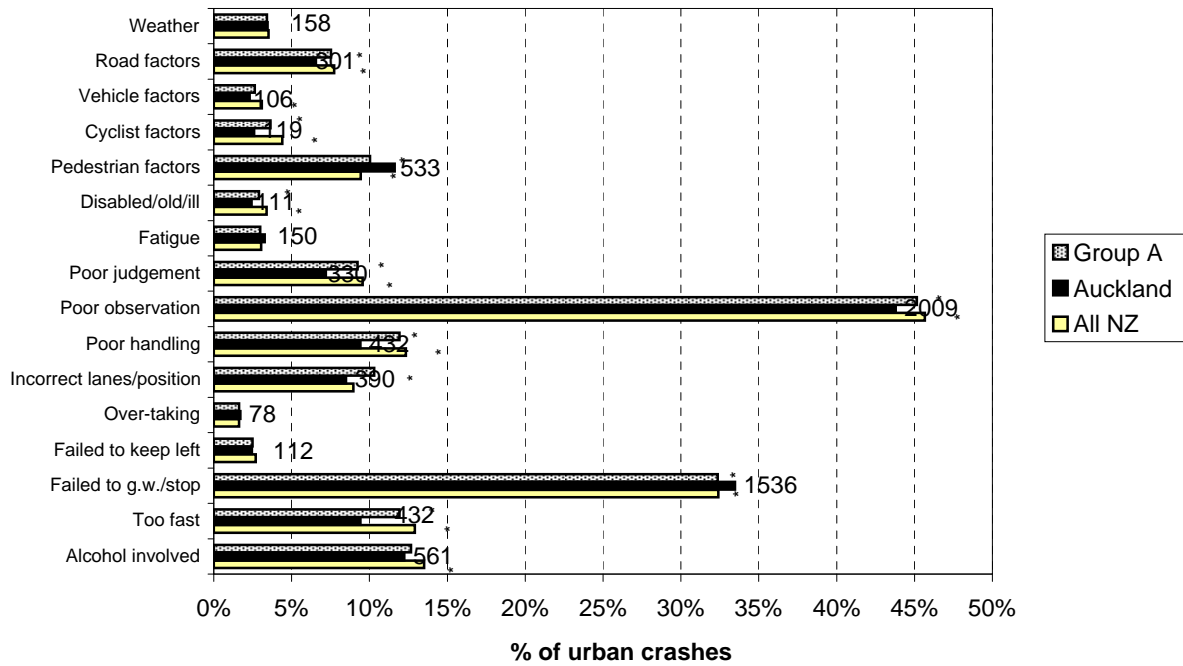


**Figure 4.6 Bend - lost control / head - on
Auckland City - rural roads**



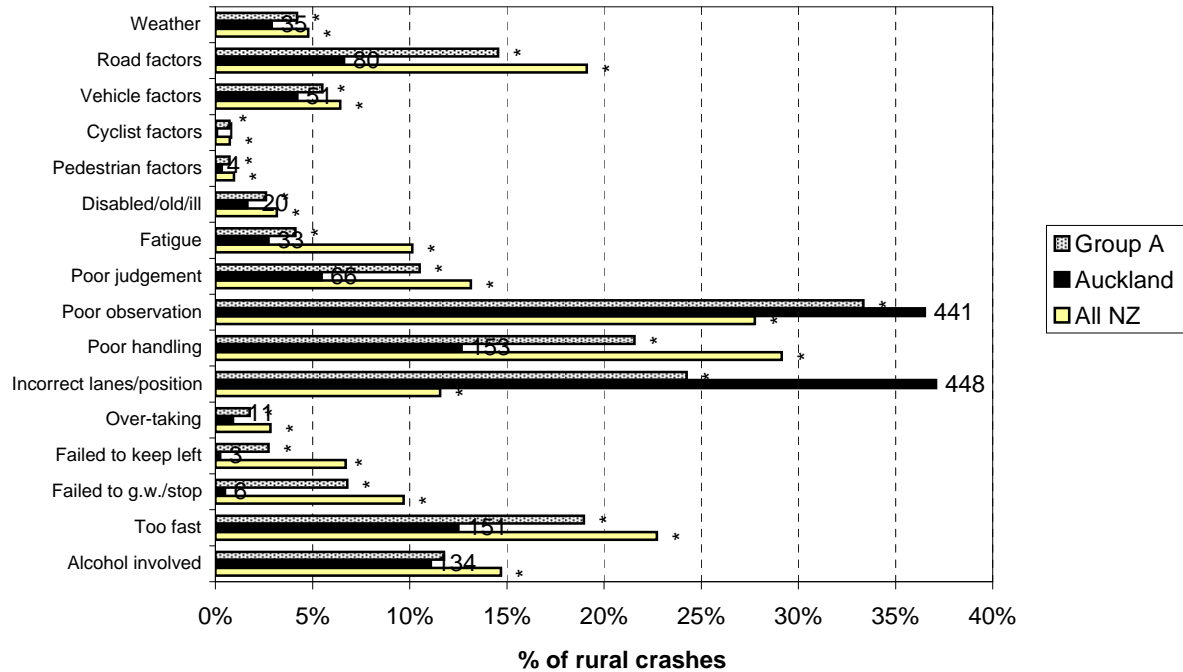
Crash Factor Statistics

**Figure 5.1 Contributing factors - urban
Auckland City (2004-2008)**



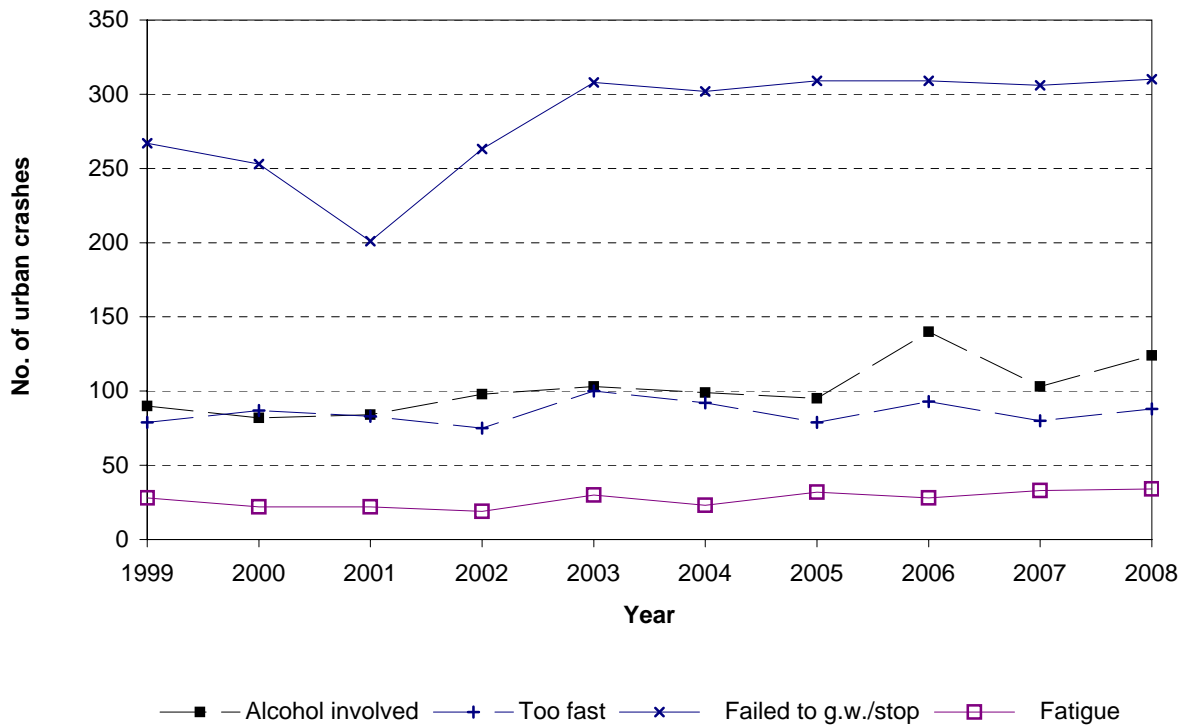
Note: While the graph plots percentages, the number of crashes is shown against the data points.
*Denotes statistically significant difference between Local Authority and National or Peer Group Proportions

**Figure 5.2 Contributing factors - rural
Auckland City (2004-2008)**

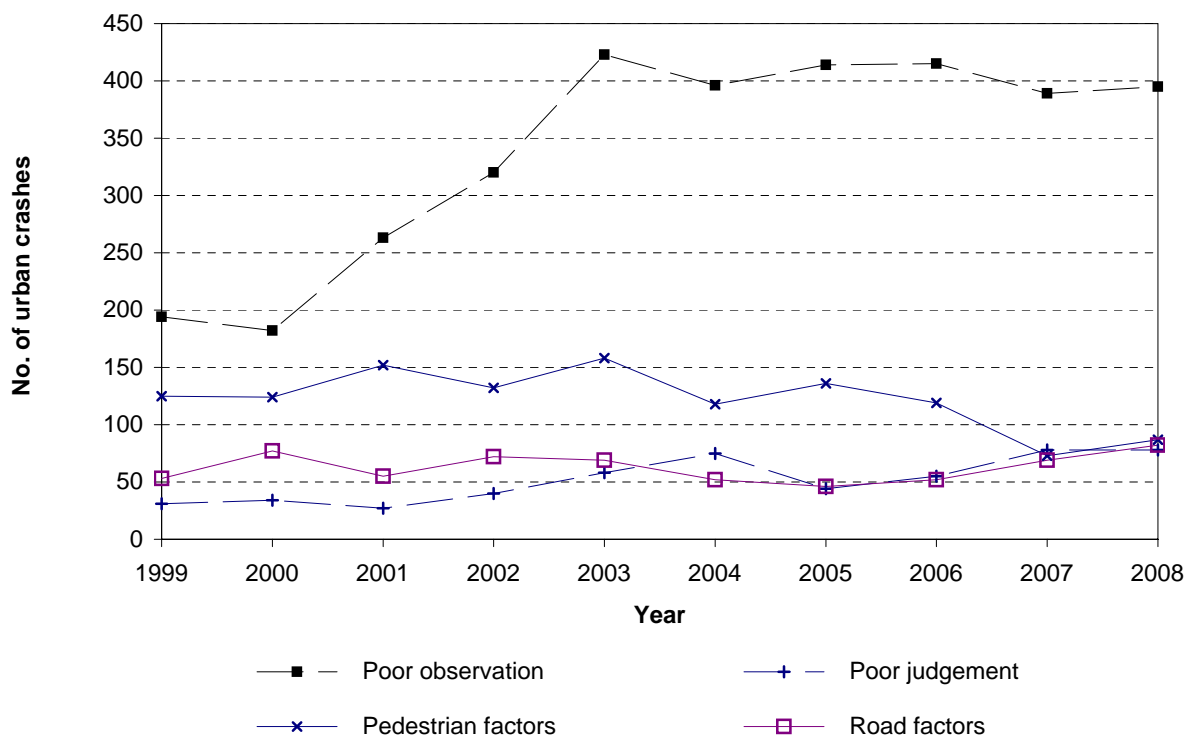


Note: While the graph plots percentages, the number of casualties is shown against the data points.
*Denotes statistically significant difference between Local Authority and National or Peer Group Proportions

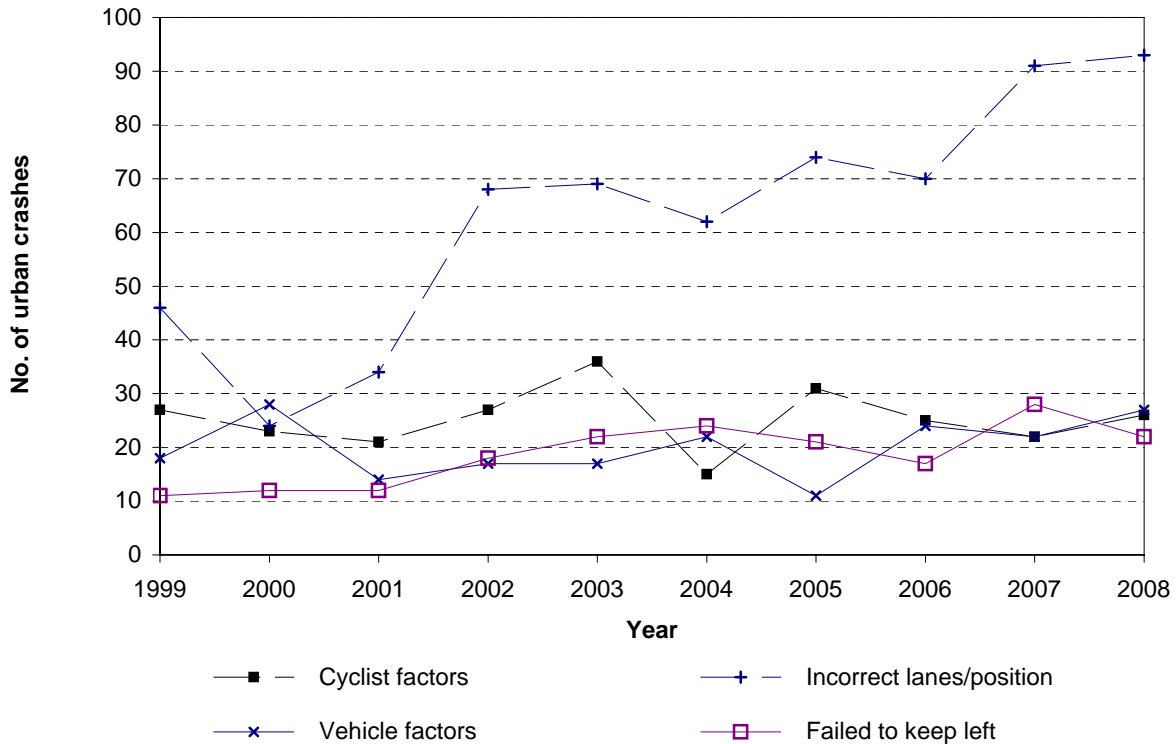
**Figure 5.3 Contributing factor trends
Auckland City - urban roads**



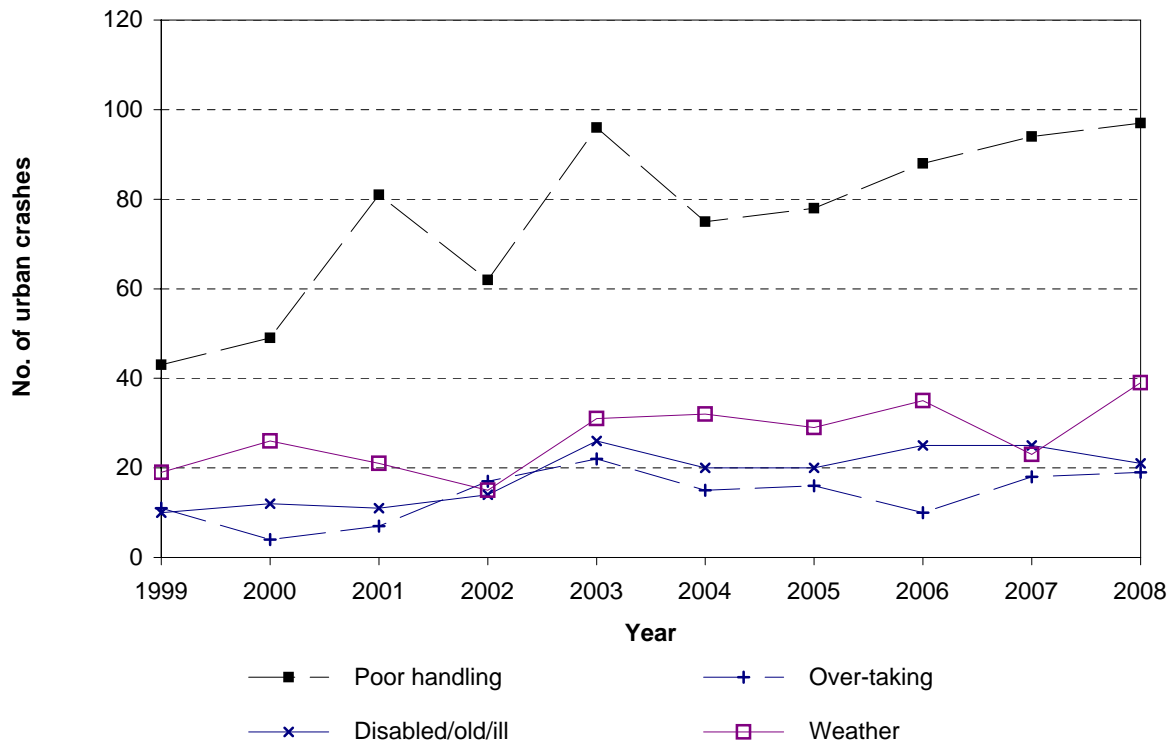
**Figure 5.4 Contributing factor trends
Auckland City - urban roads**



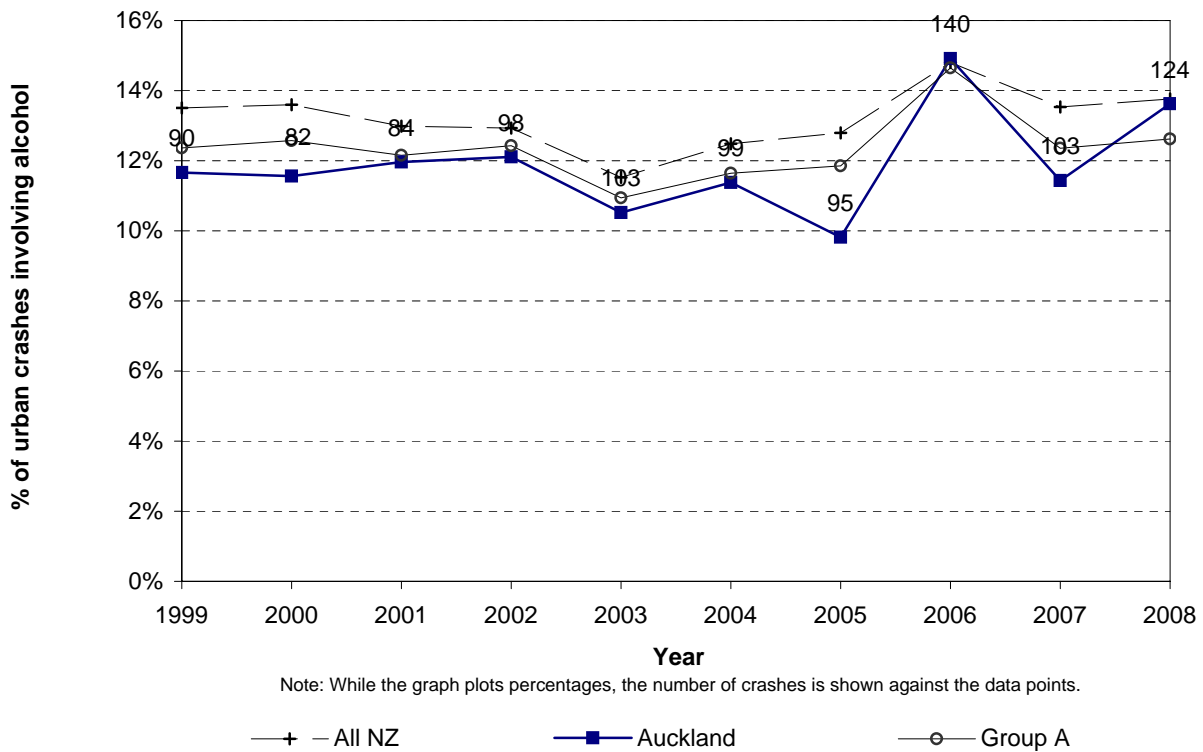
**Figure 5.5 Contributing factor trends
Auckland City - urban roads**



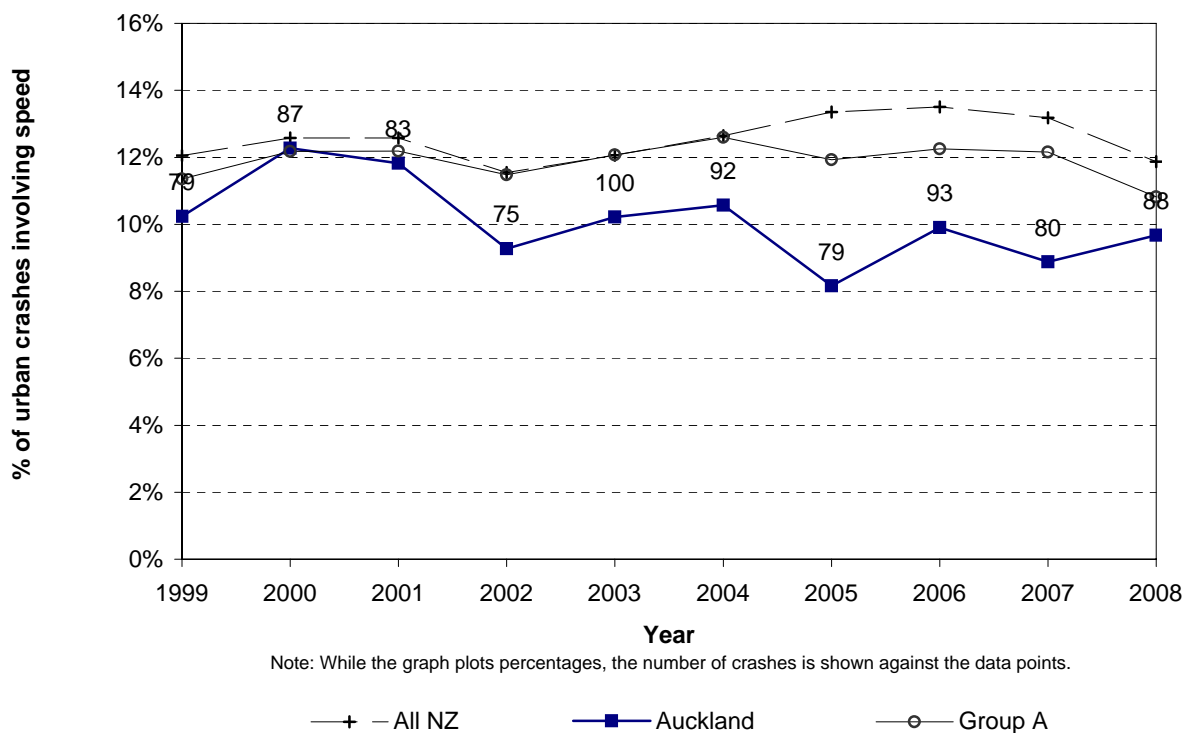
**Figure 5.6 Contributing factor trends
Auckland City - urban roads**



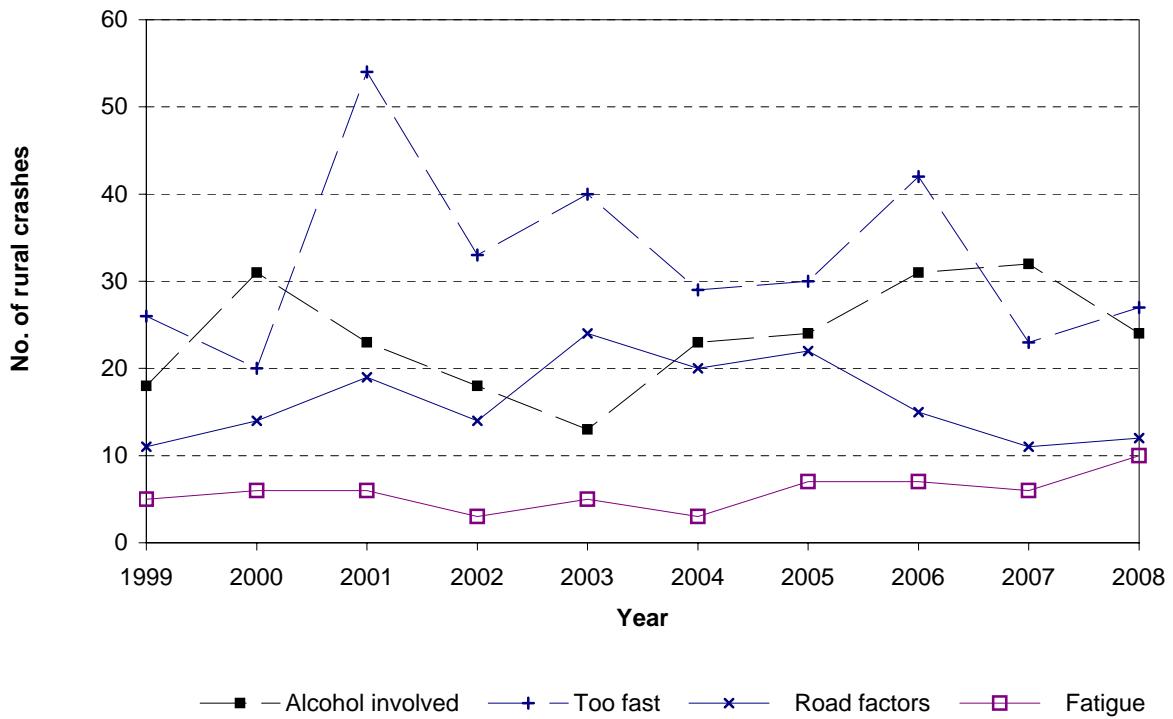
**Figure 5.7 Alcohol involved trend
Auckland City - urban roads**



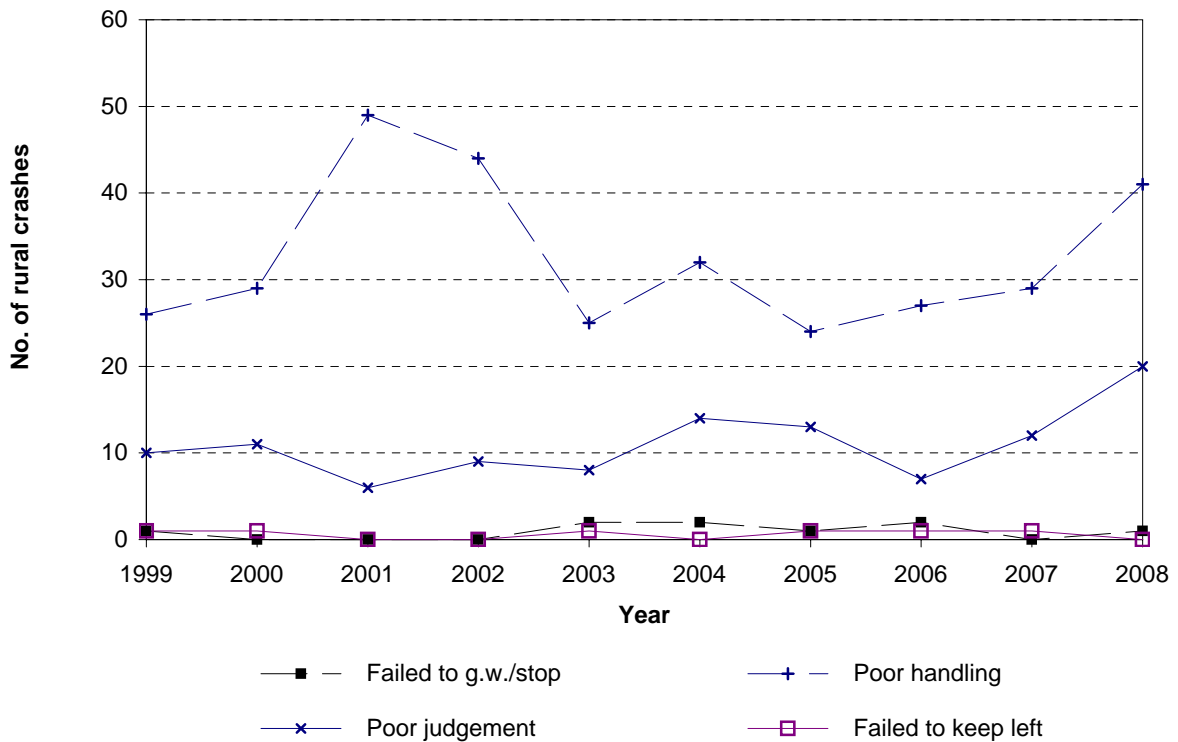
**Figure 5.8 Speed involved trend
Auckland City - urban roads**



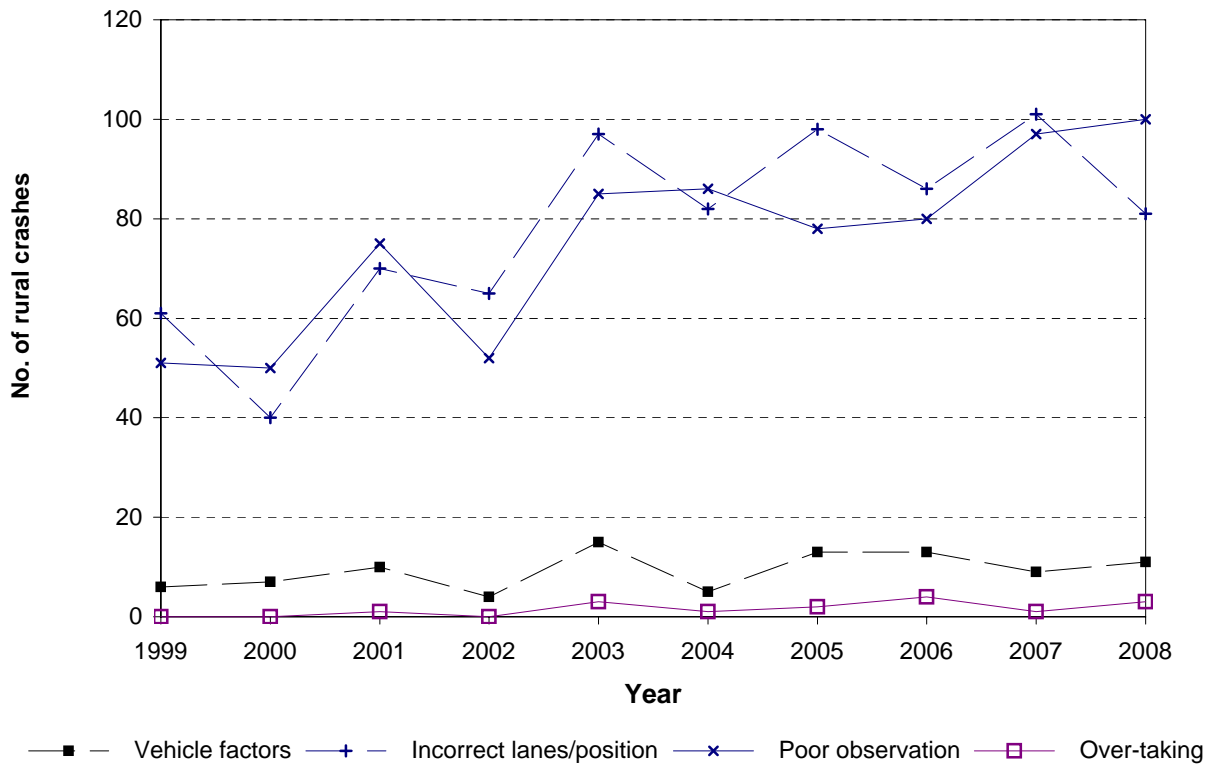
**Figure 5.9 Contributing factor trends
Auckland City - rural roads**



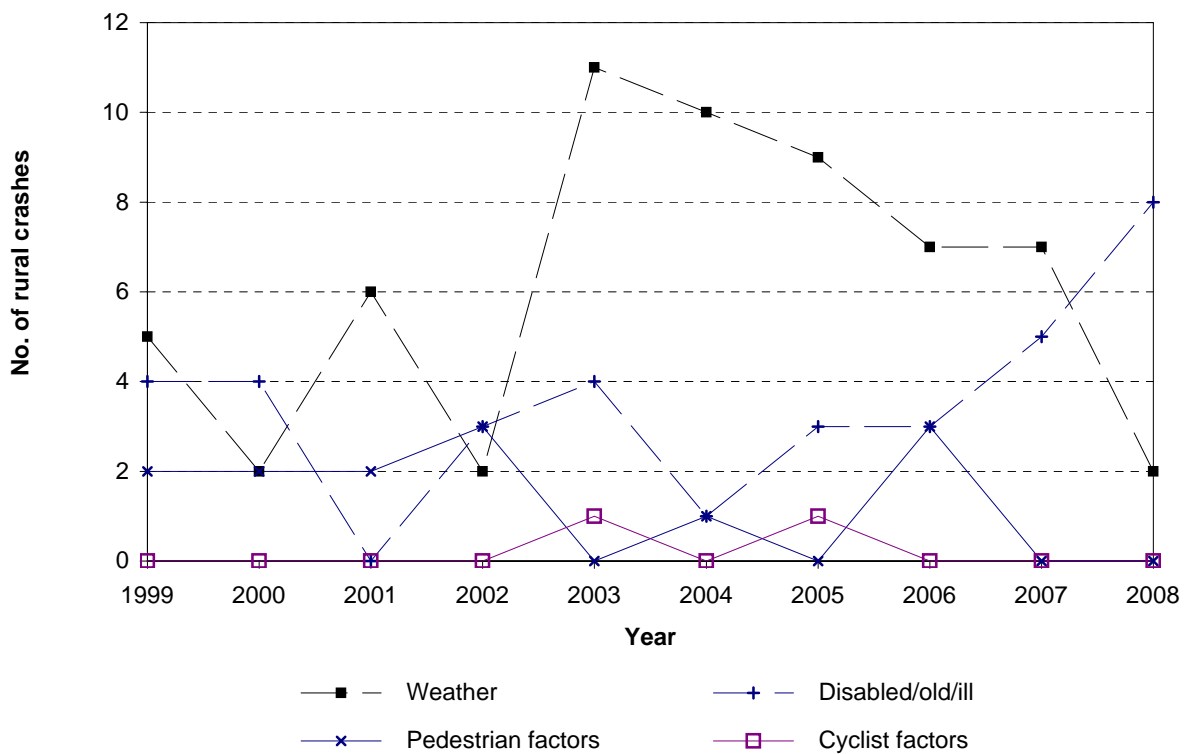
**Figure 5.10 Contributing factor trends
Auckland City - rural roads**



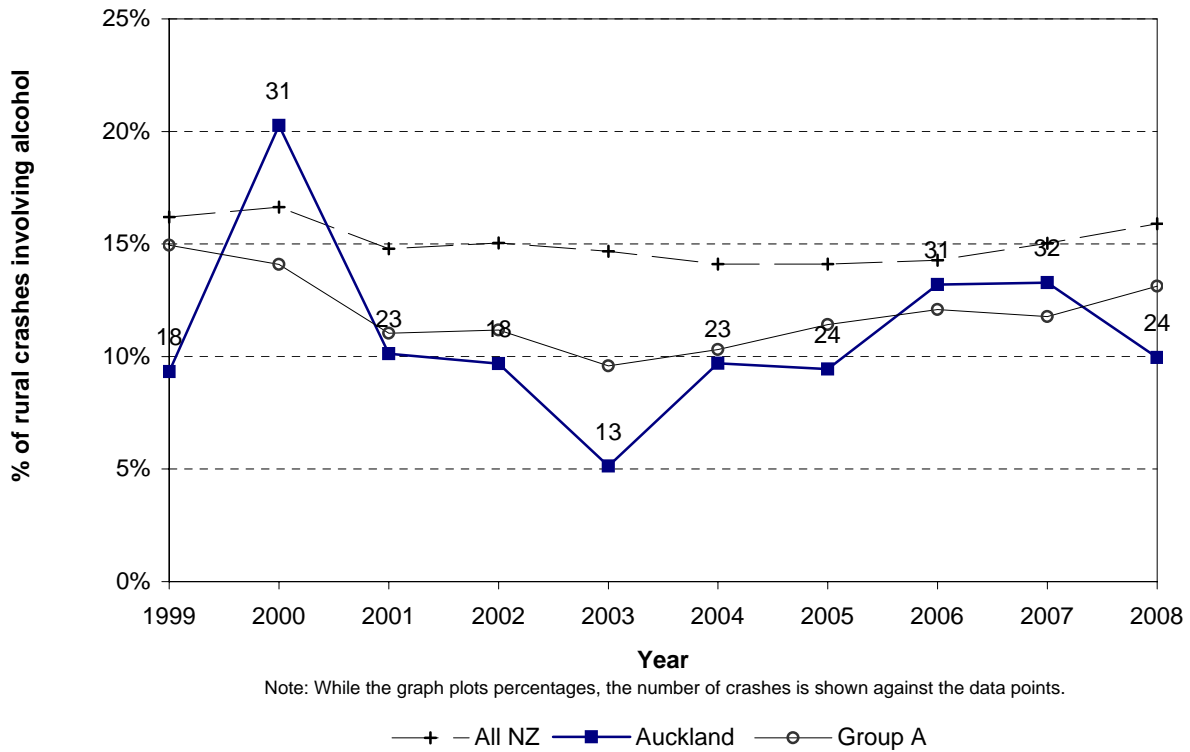
**Figure 5.11 Contributing factor trends
Auckland City - rural roads**



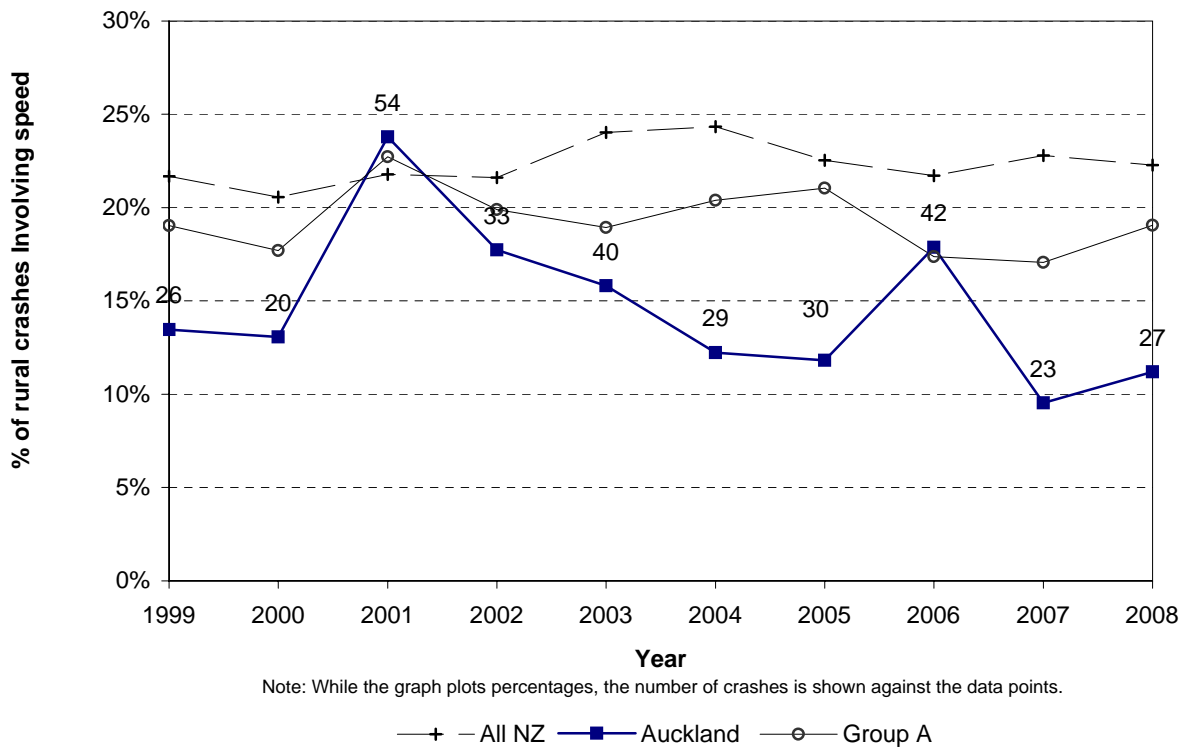
**Figure 5.12 Contributing factor trends
Auckland City - rural roads**



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

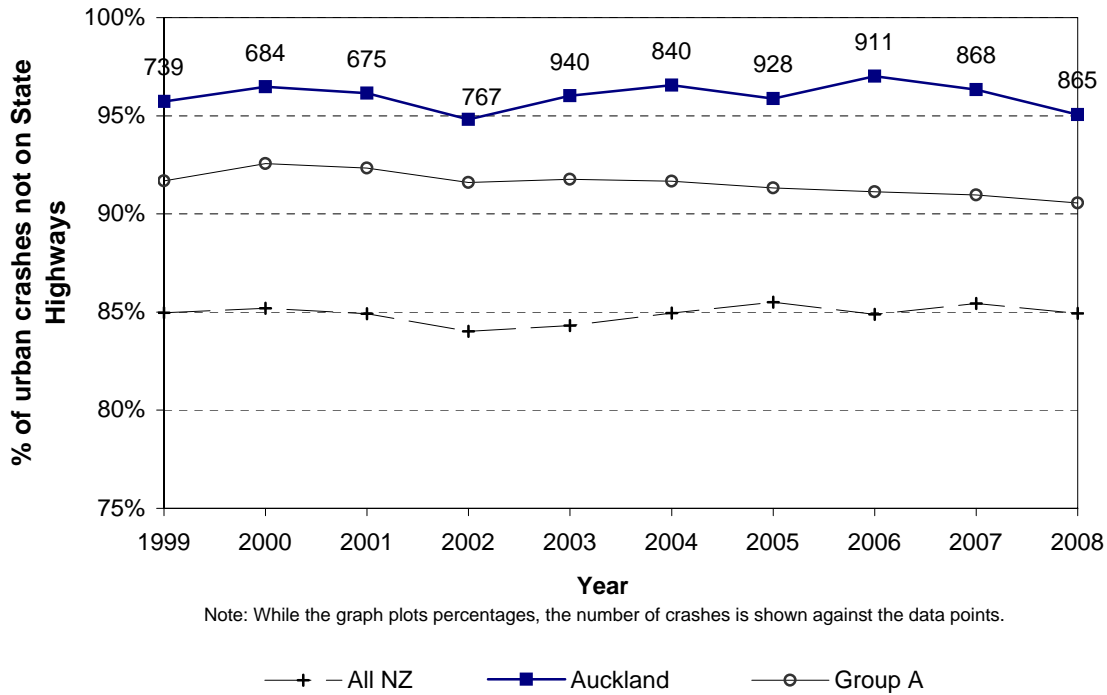


**Figure 5.14 Speed involved trend
Auckland City - rural roads**

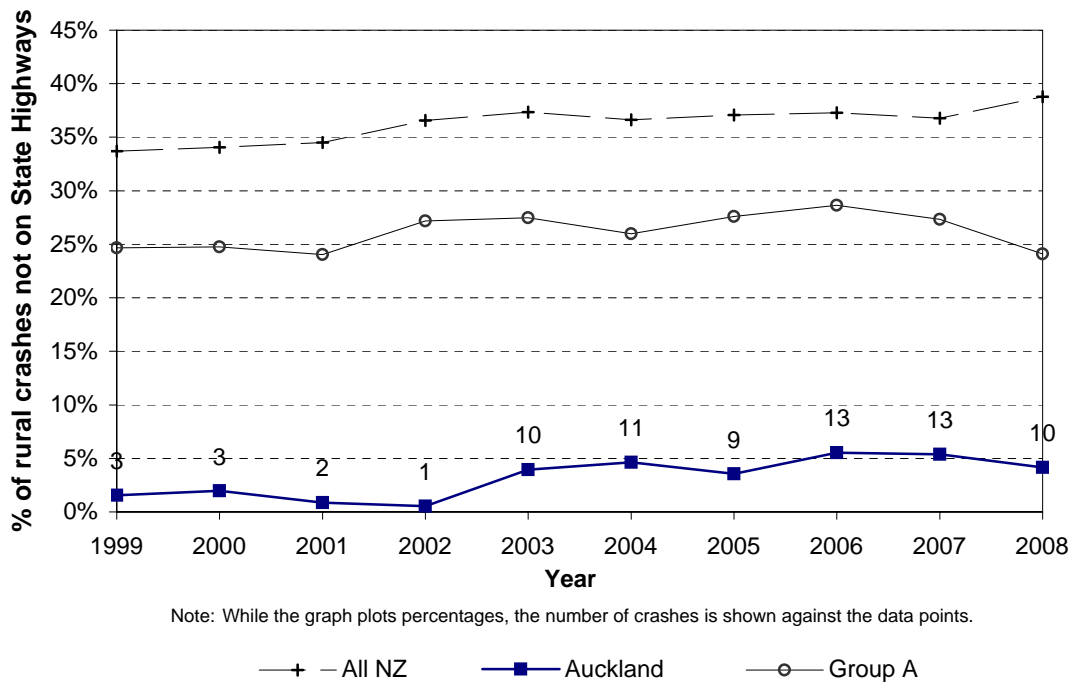


Environmental Statistics

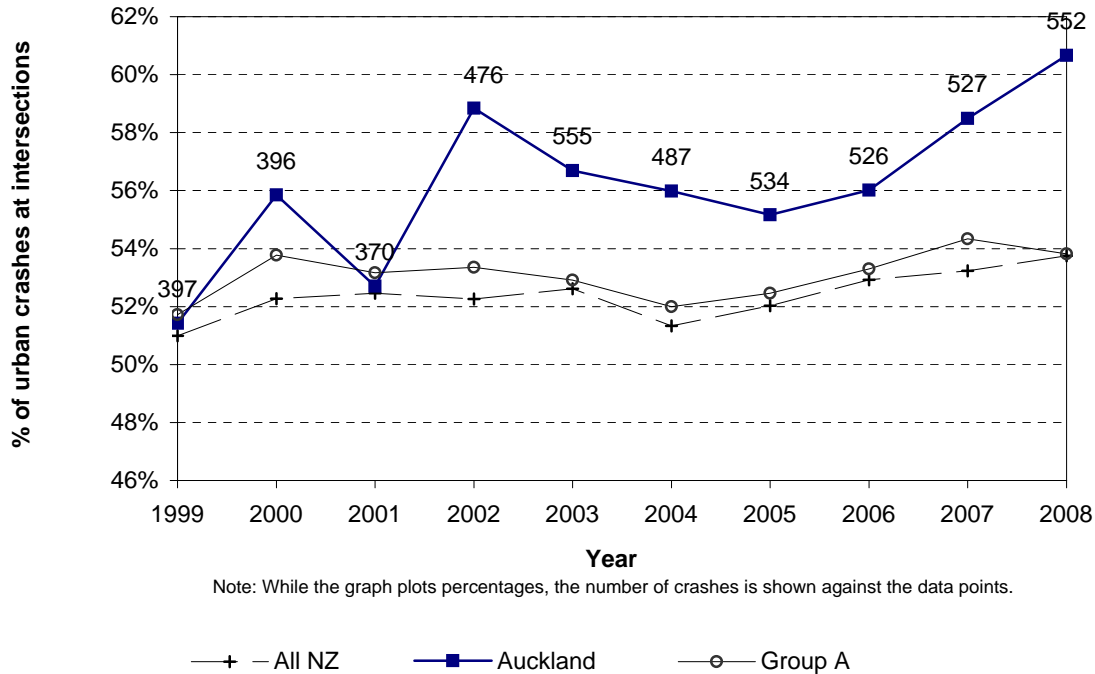
**Figure 6.1 Crashes not on state highways
Auckland City - urban roads**



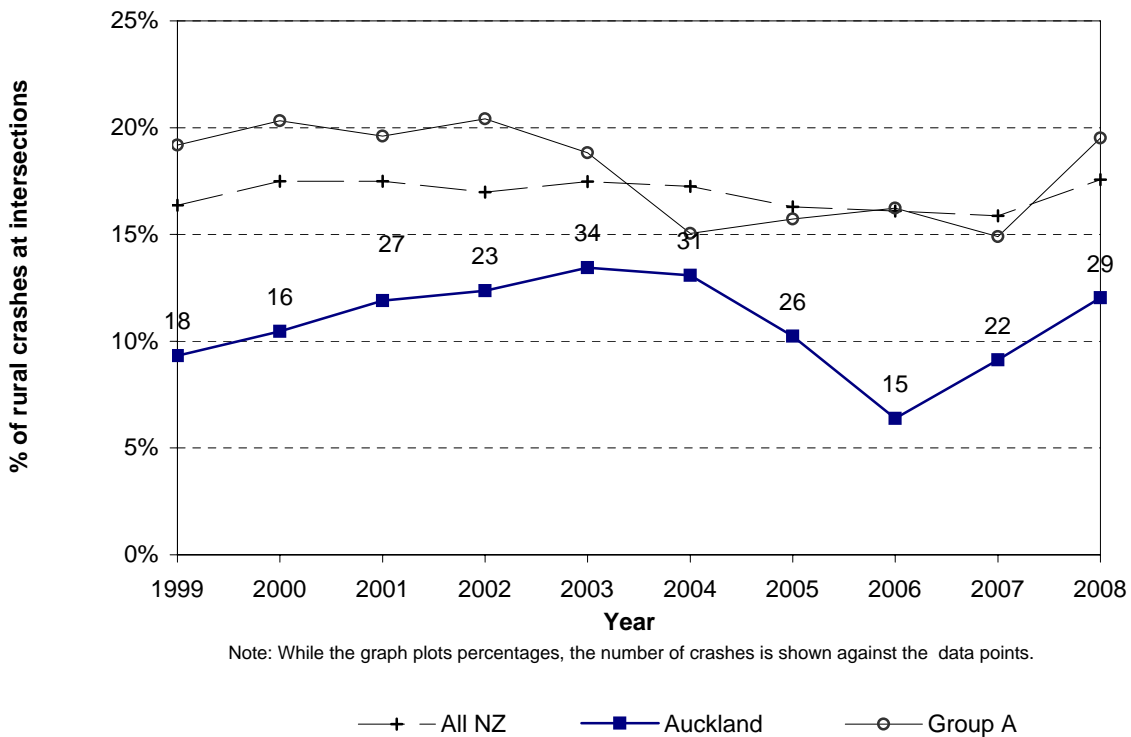
**Figure 6.2 Crashes not on state highways
Auckland City - rural roads**



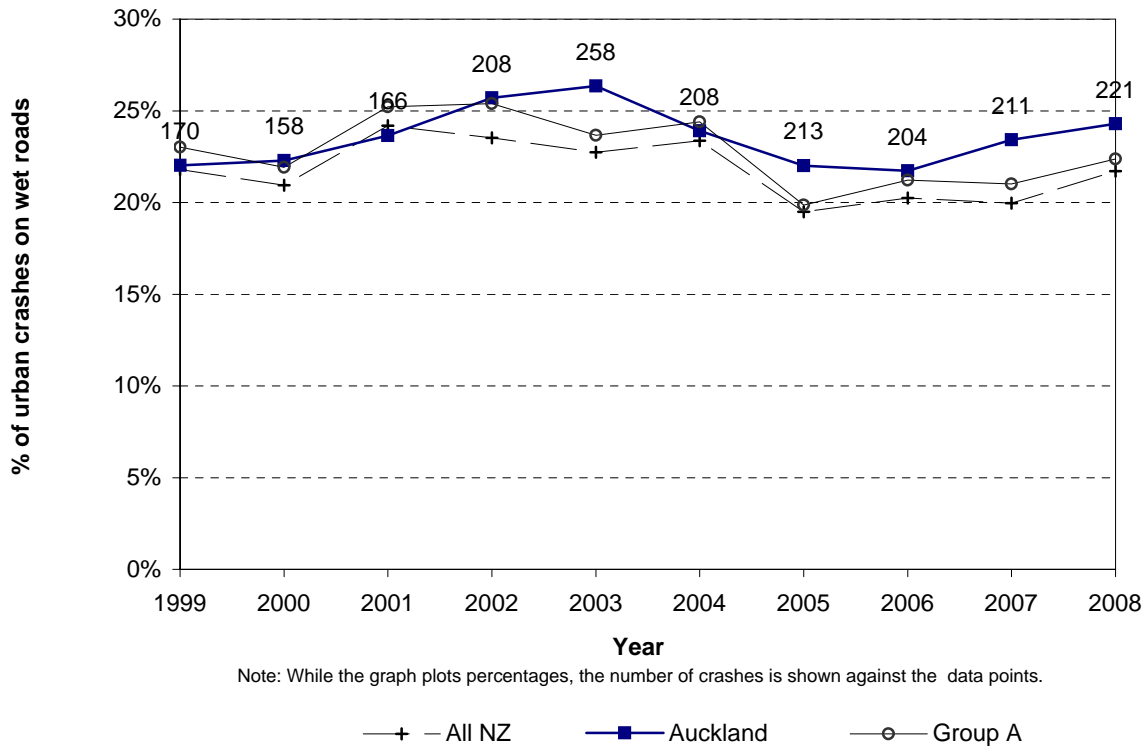
**Figure 6.3 Intersection crashes
Auckland City - urban roads**



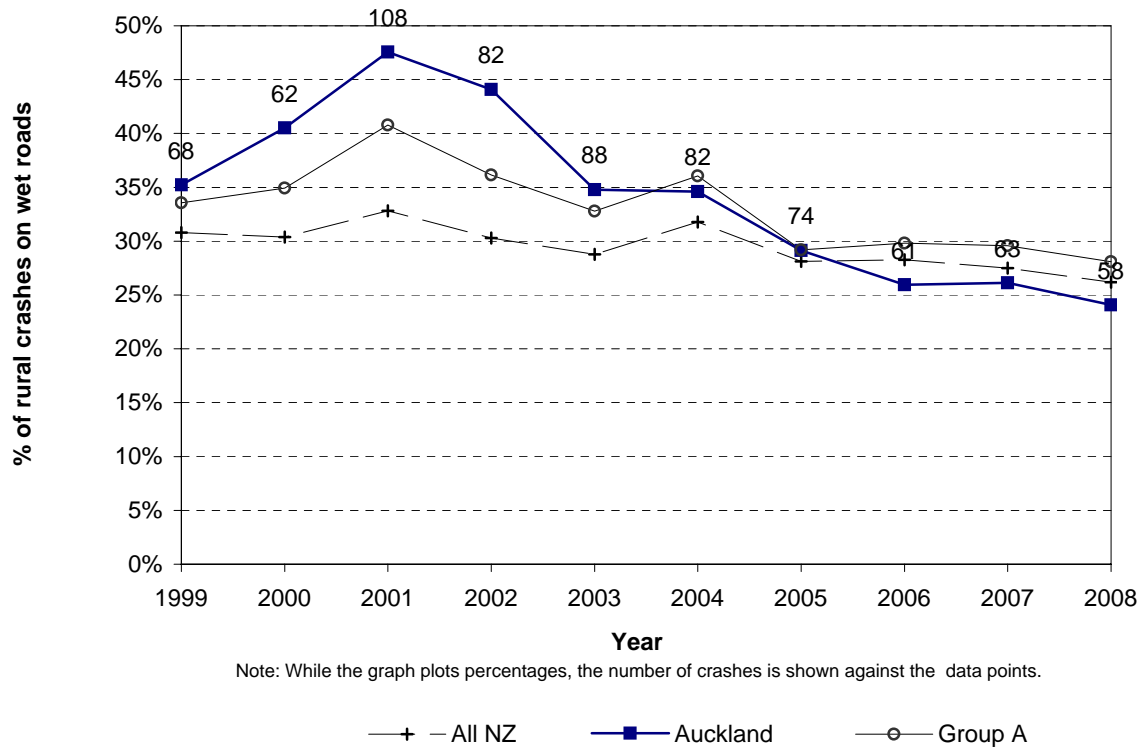
**Figure 6.4 Intersection crashes
Auckland City - rural roads**



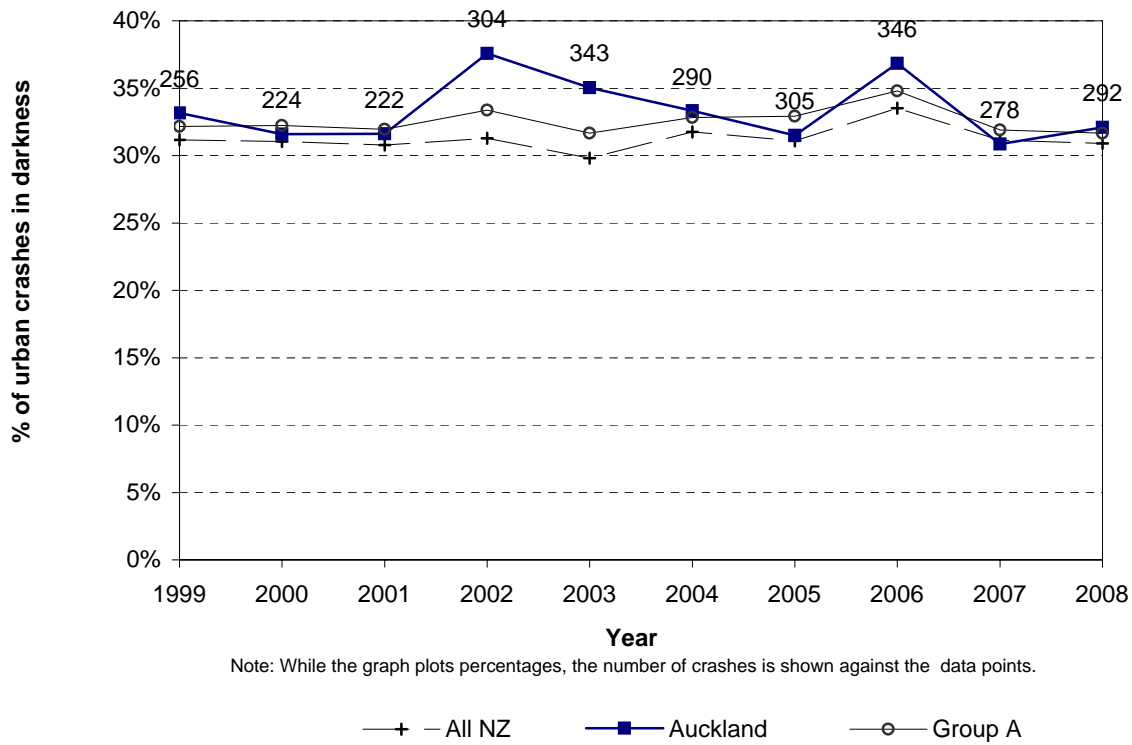
**Figure 6.5 Wet road crashes
Auckland City - urban roads**



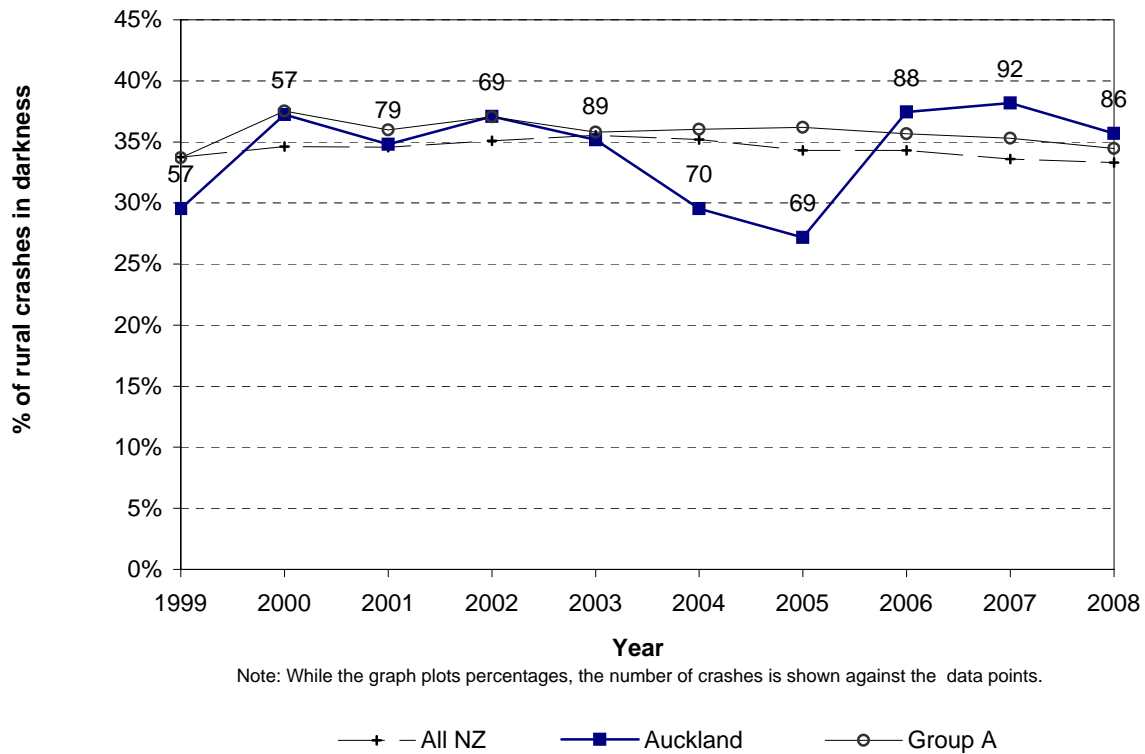
**Figure 6.6 Wet road crashes
Auckland City - rural roads**



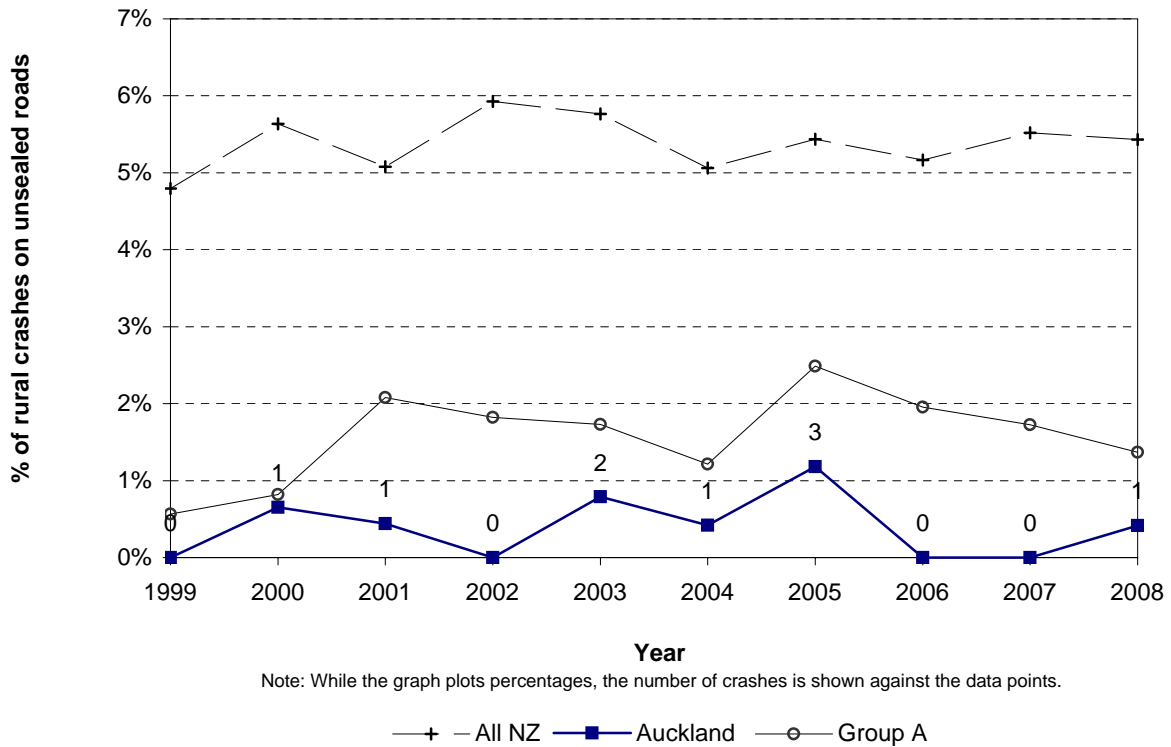
**Figure 6.7 Crashes in darkness
Auckland City - urban roads**



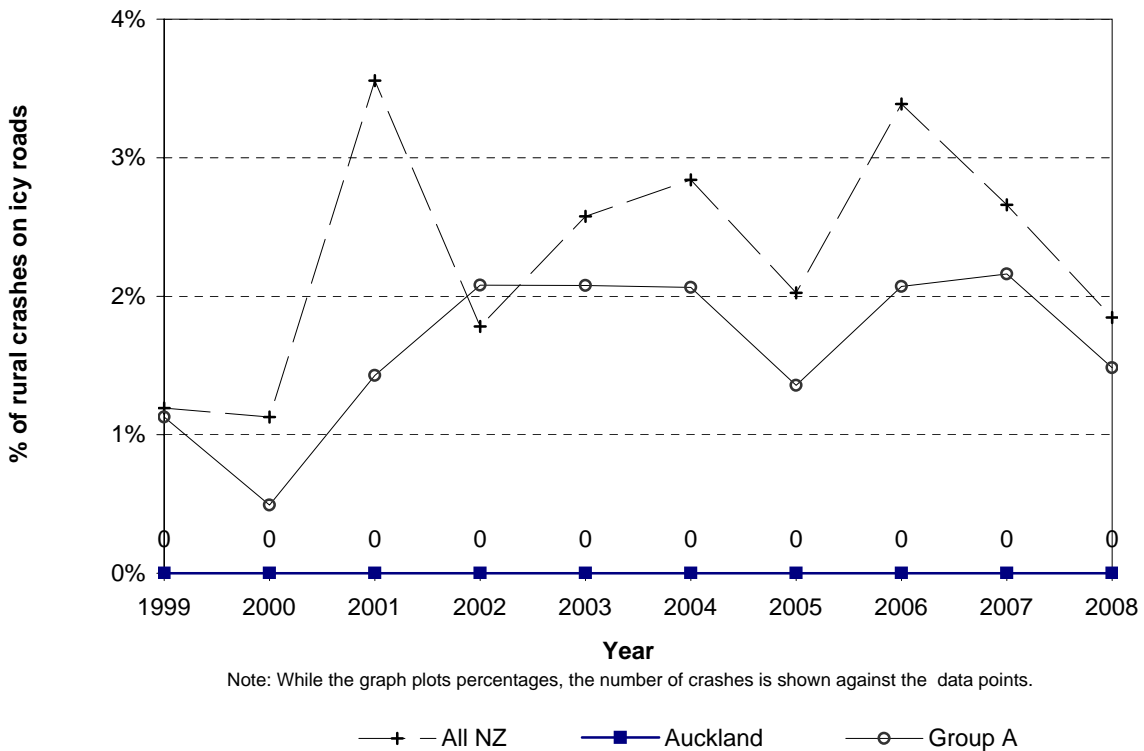
**Figure 6.8 Crashes in darkness
Auckland City - rural roads**



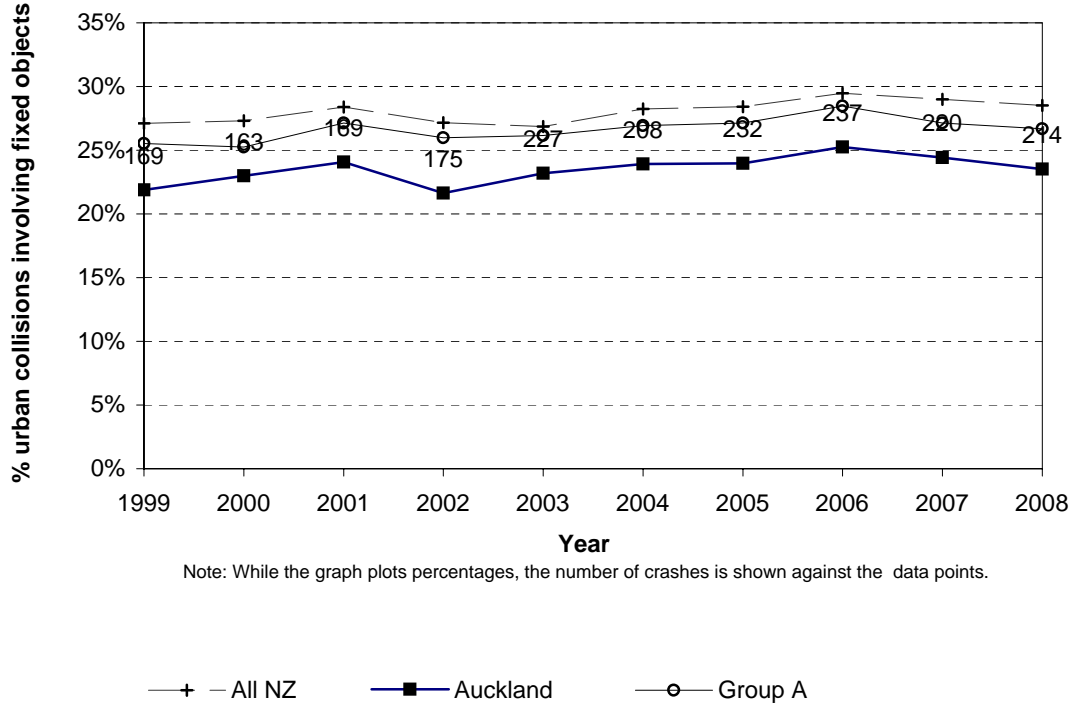
**Figure 6.9 Unsealed road crashes
Auckland City - rural roads**



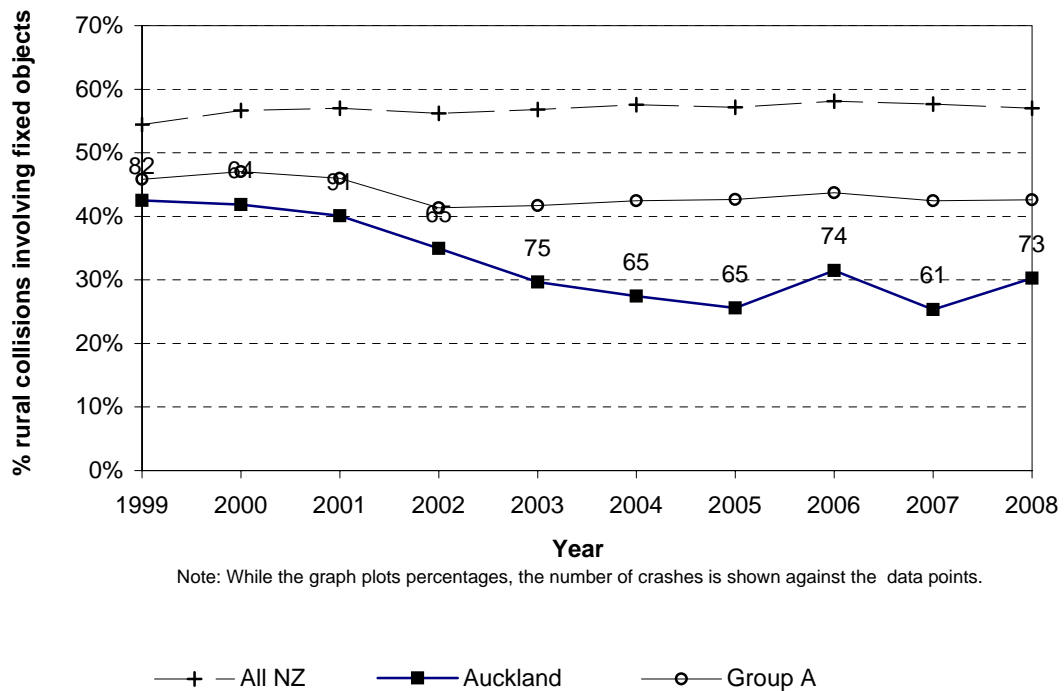
**Figure 6.10 Icy road crashes
Auckland City - rural roads**



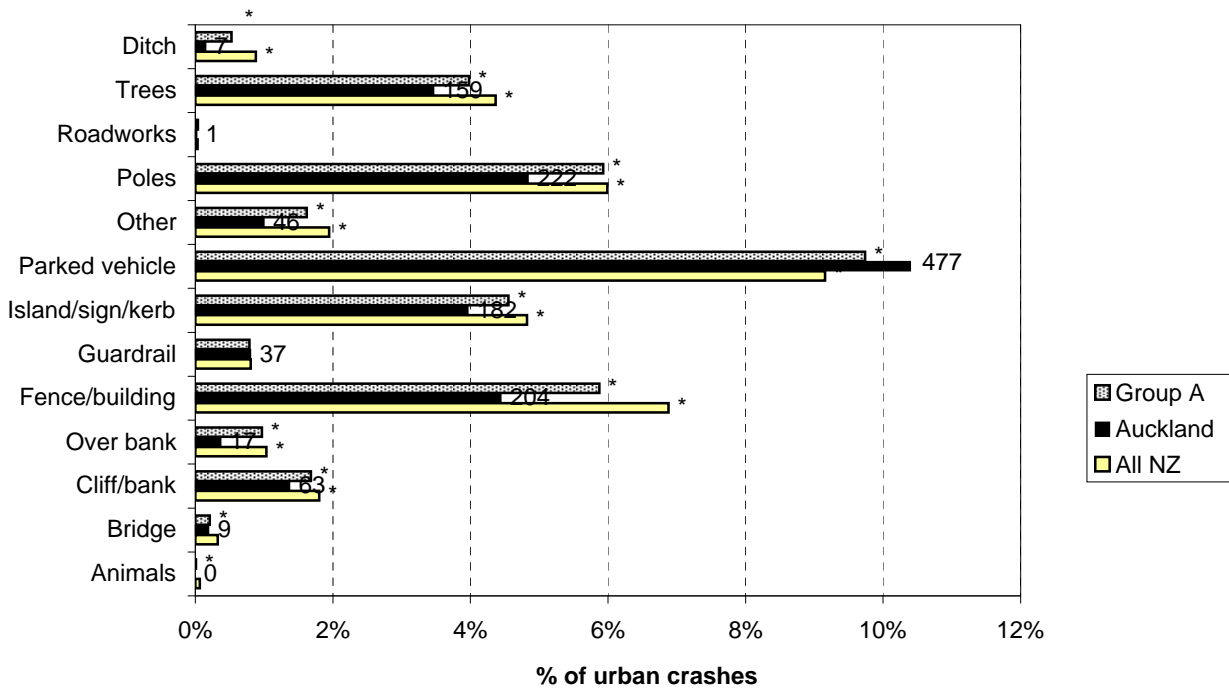
**Figure 6.11 Collisions with objects
Auckland City - urban roads**



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

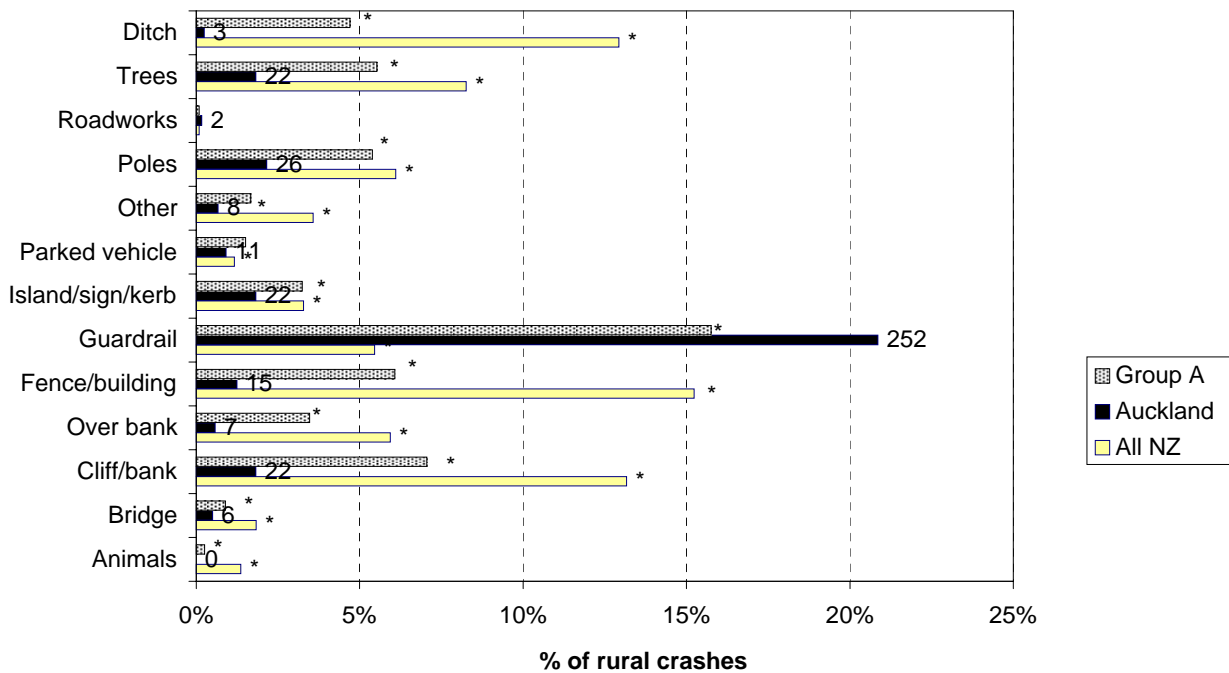


**Figure 6.13 Objects struck - urban
Auckland City (2004-2008)**



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

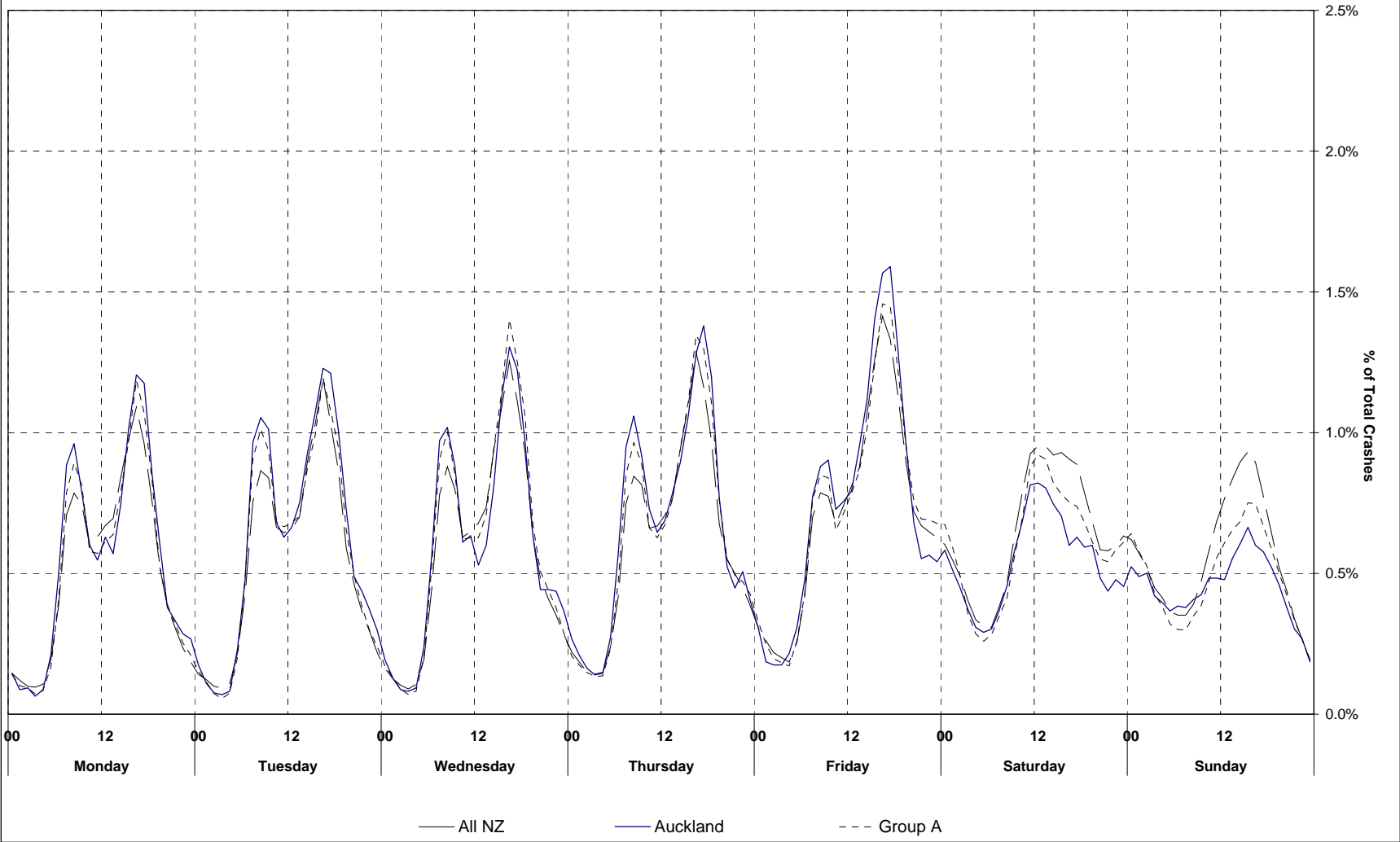
**Figure 6.14 Objects struck - rural
Auckland City (2004-2008)**



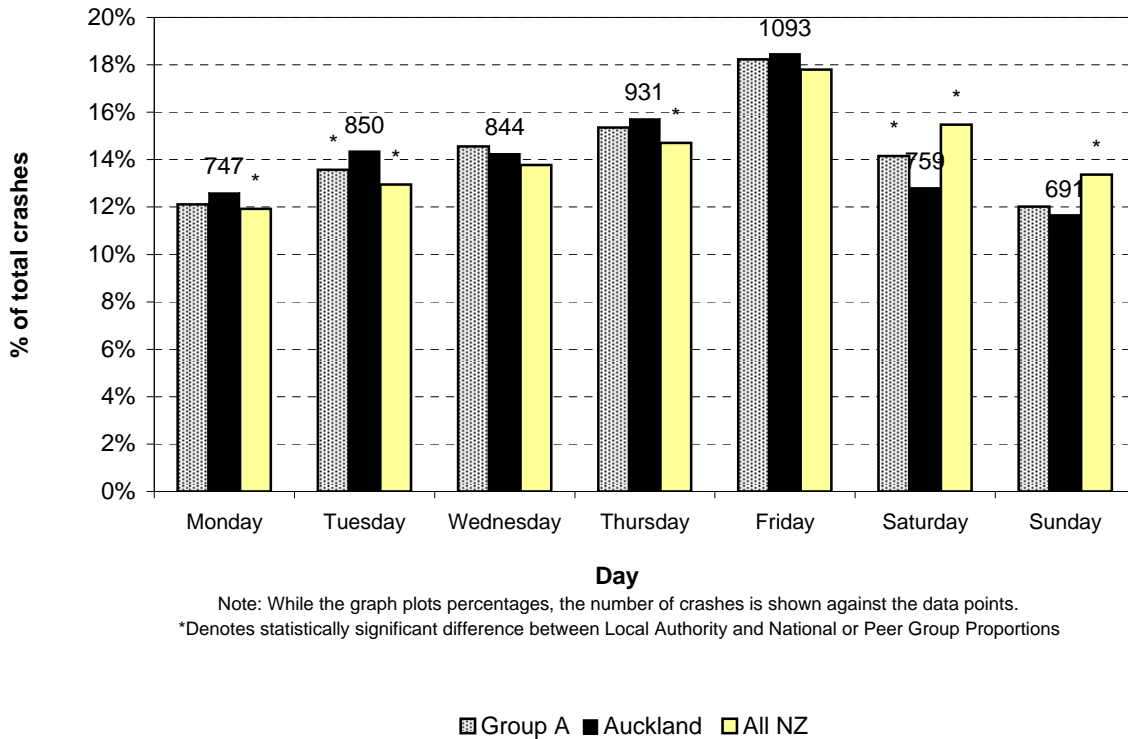
Note: While the graph plots percentages, the number of crashes is shown against the data points.
*Denotes statistically significant difference between Local Authority and National or Peer Group Proportions

Date and Time Statistics

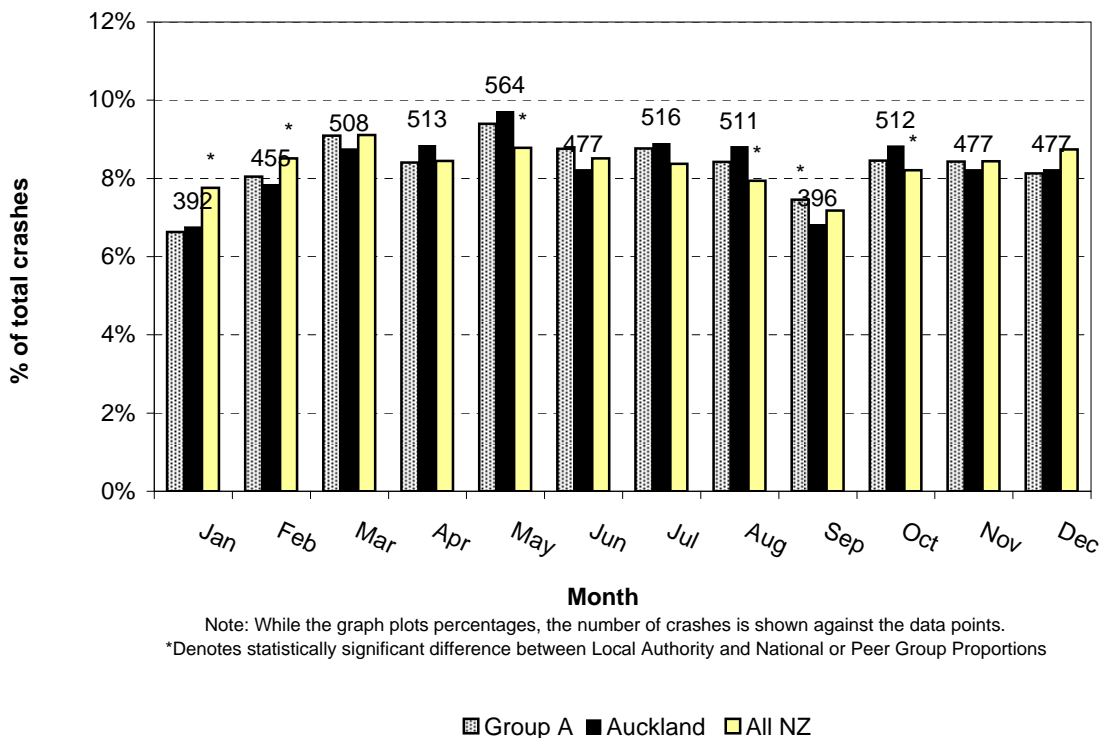
Figure 7.1 Time pattern over average week
Auckland City (2004-2008)



**Figure 7.2 Day of week (6 a.m. to 6 a.m.)
Auckland City (2004-2008)**

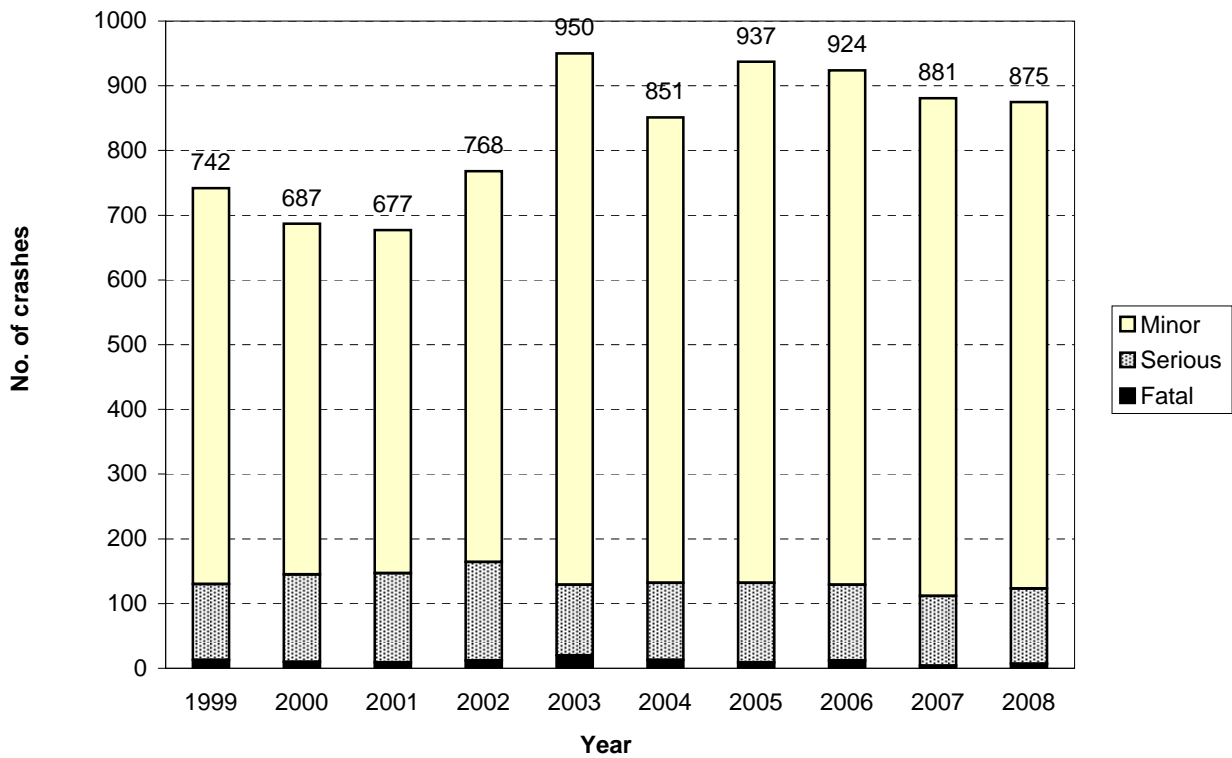


**Figure 7.3 Month of year
Auckland City (2004-2008)**

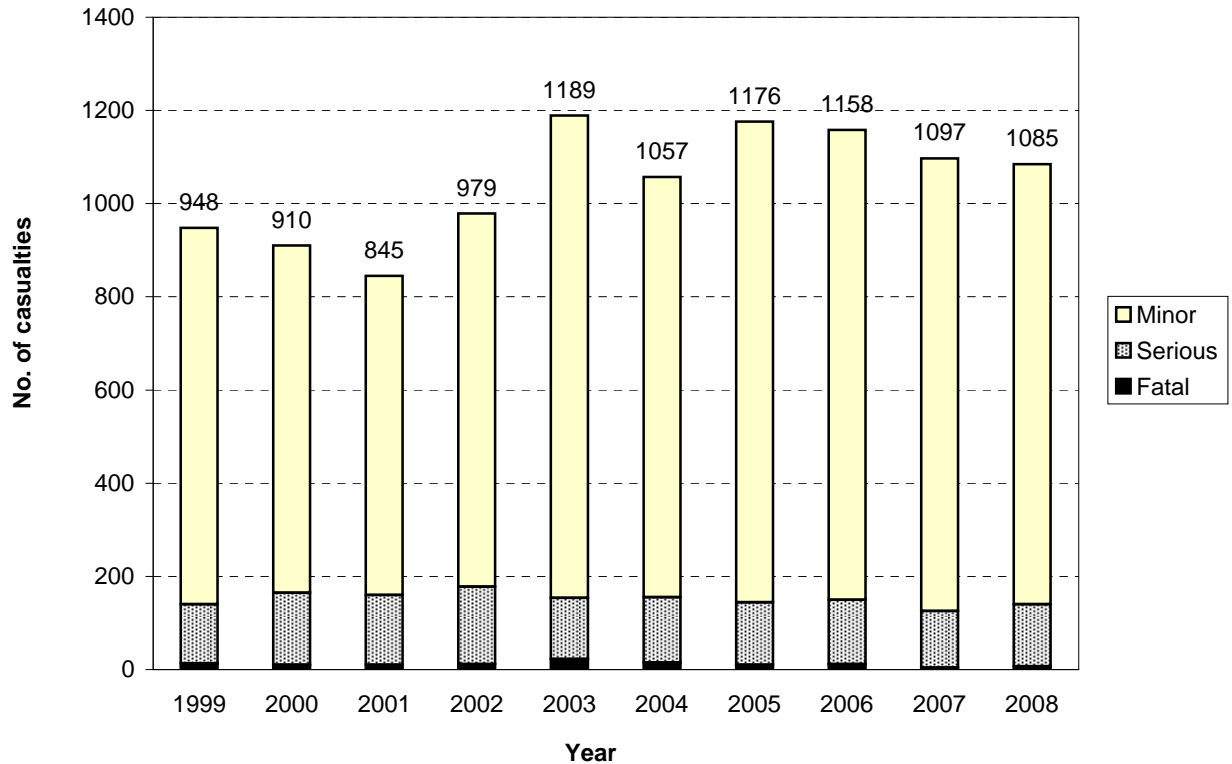


Local Road Statistics

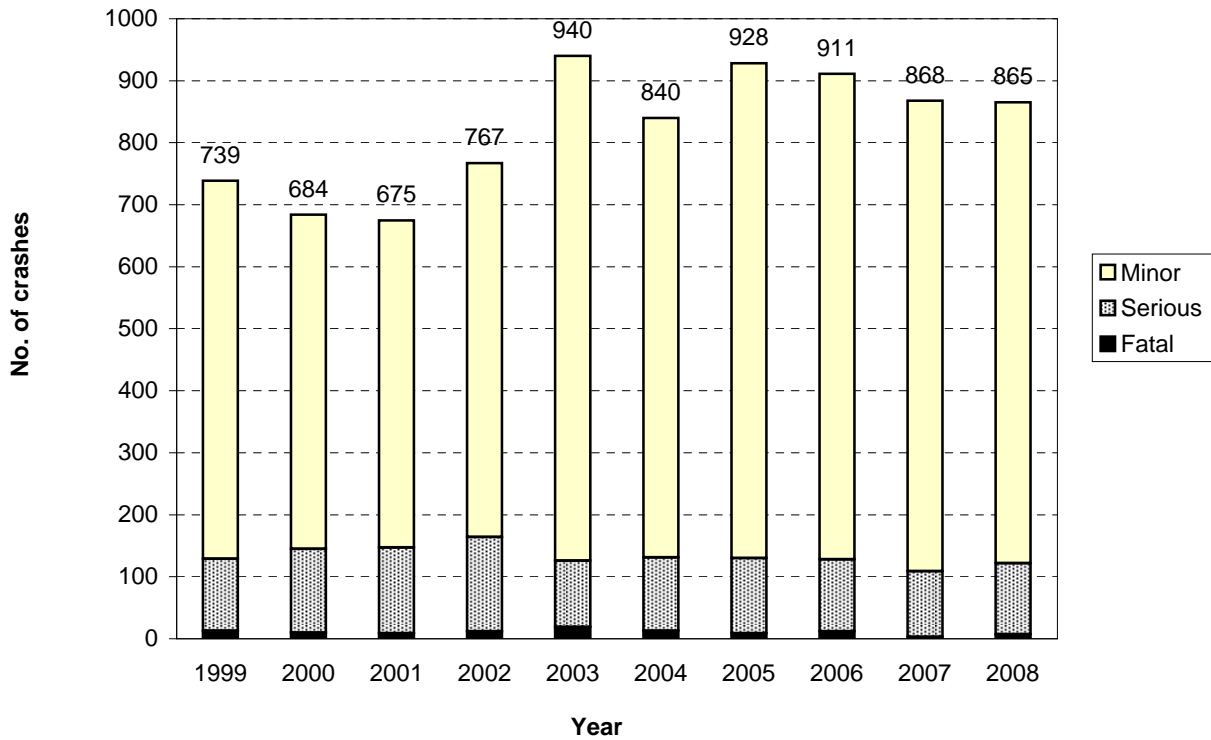
**Figure 8.1 Number of injury crashes
Auckland City - council roads (urban & rural)**



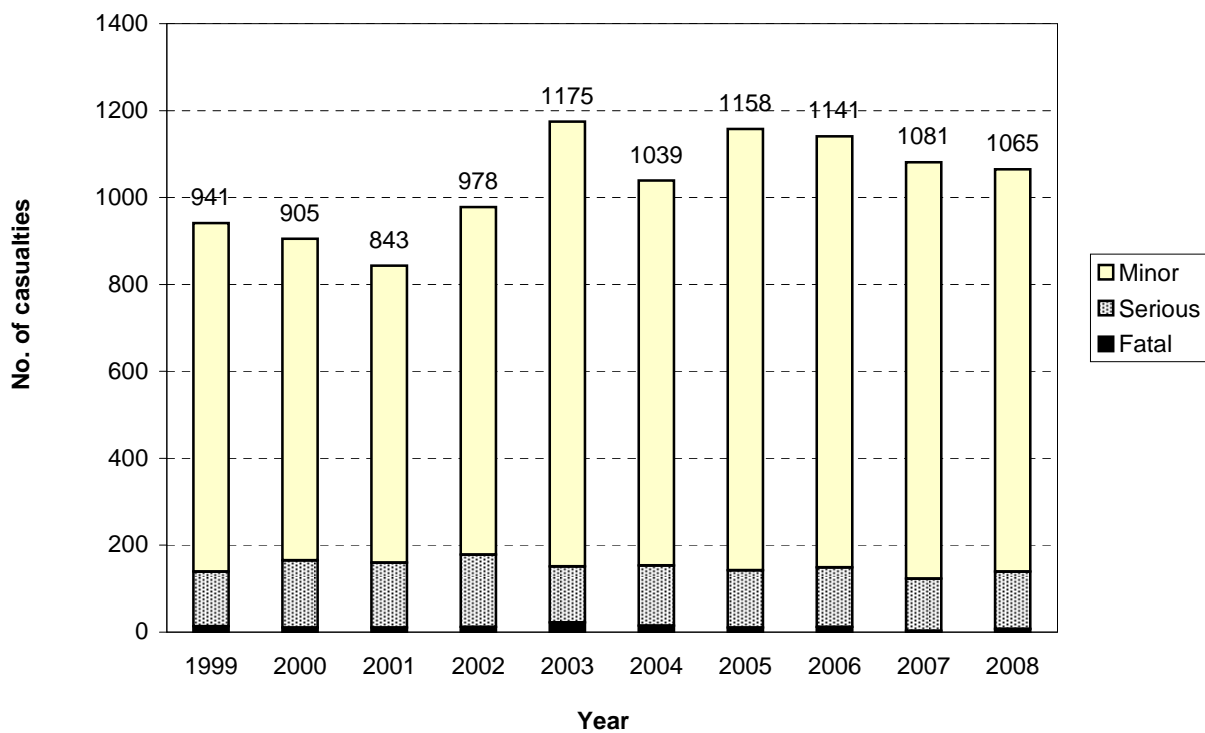
**Figure 8.2 Number of casualties
Auckland City - council roads (urban & rural)**



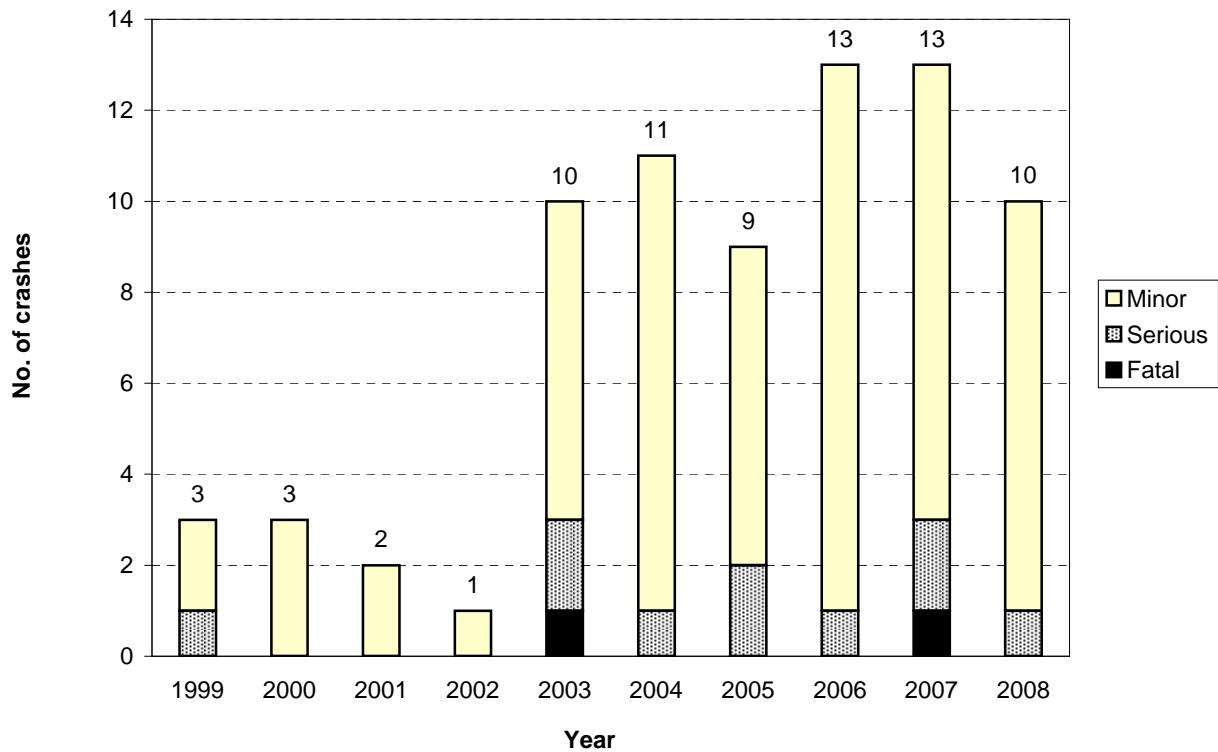
**Figure 8.3 Number of injury crashes
Auckland City - urban council roads**



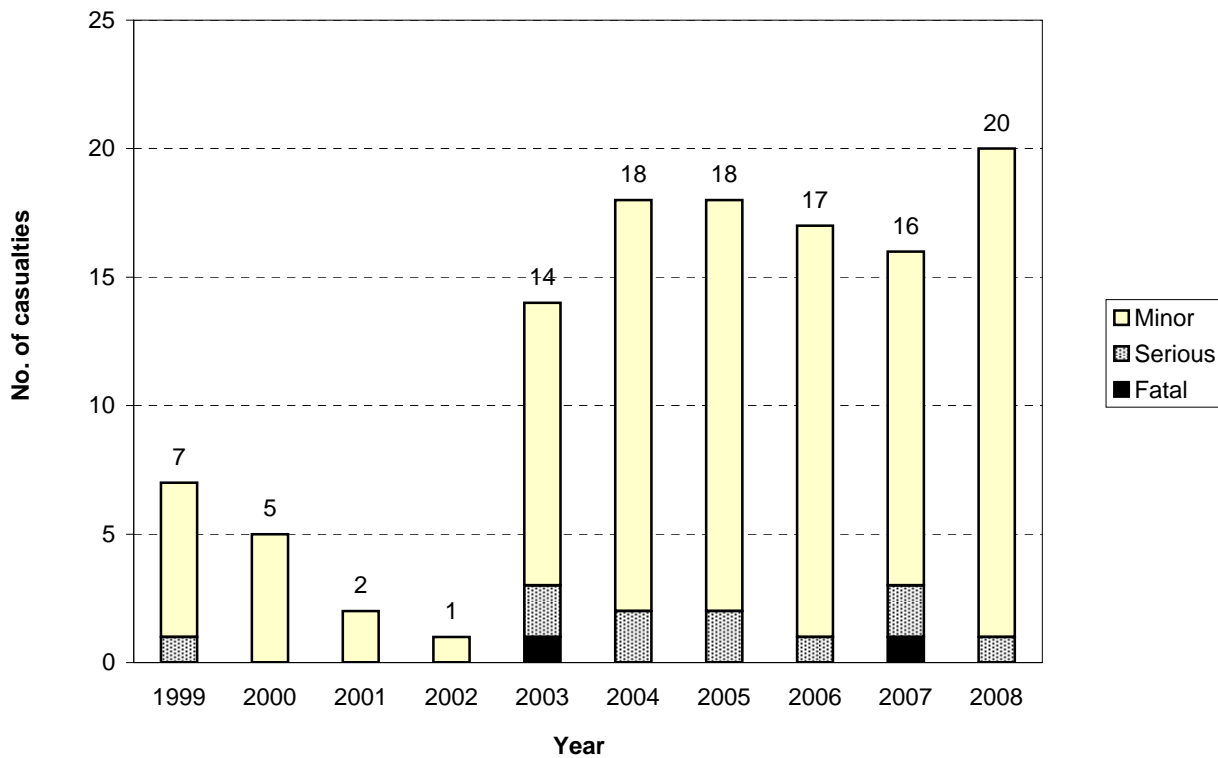
**Figure 8.4 Number of casualties
Auckland City - urban council roads**



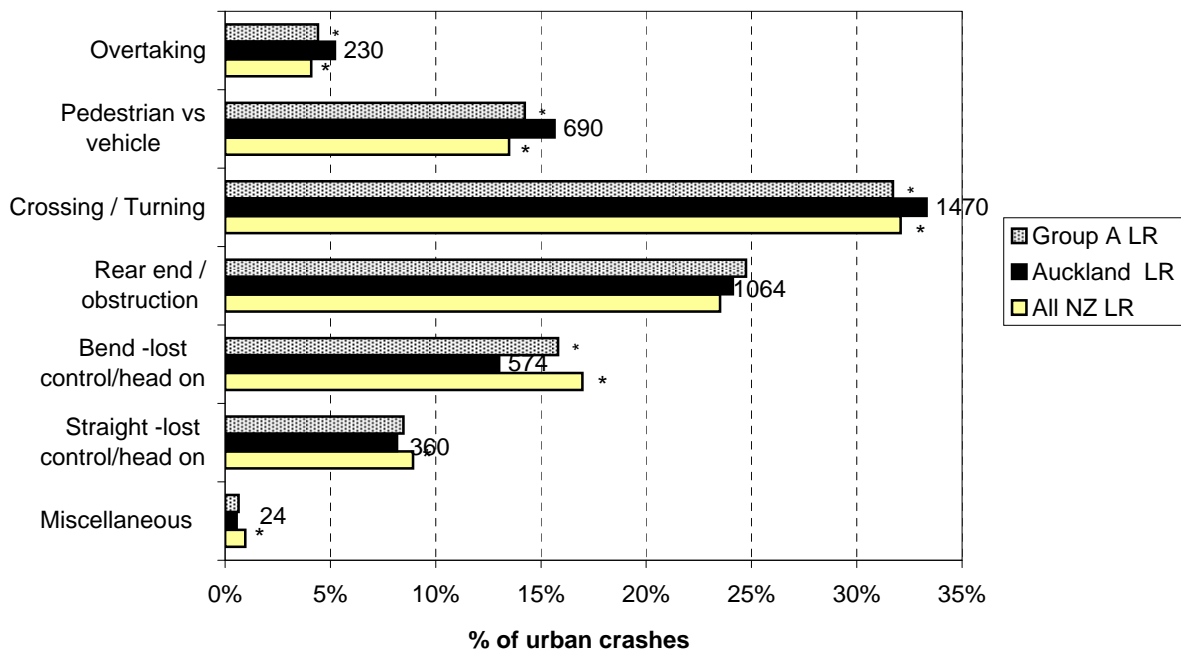
**Figure 8.5 Number of injury crashes
Auckland City - rural council roads**



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

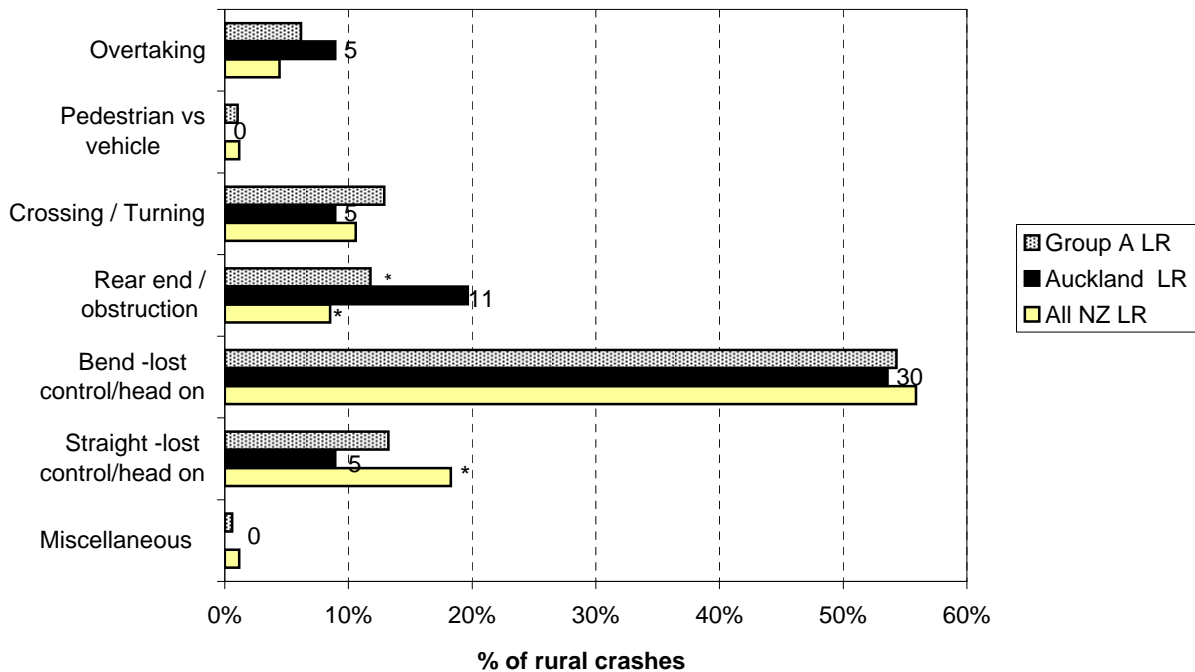


**Figure 8.7 Crash movement type - urban
Auckland City council roads (2004-2008)**



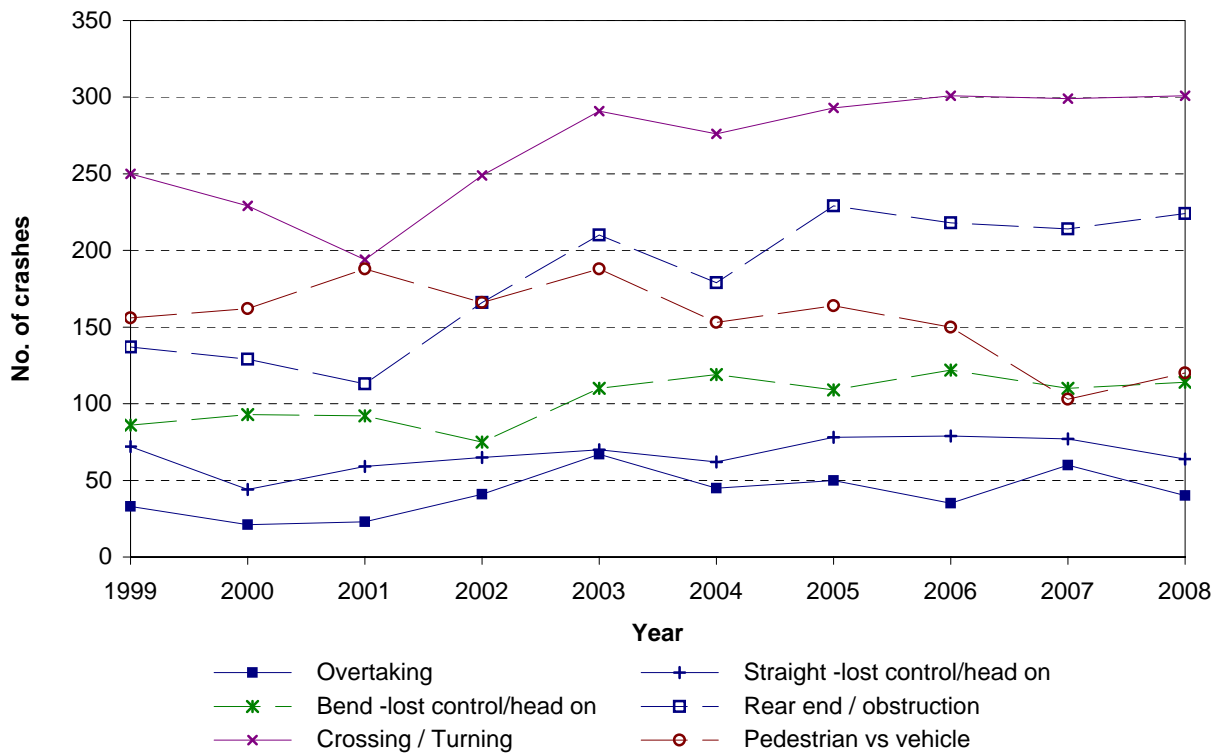
Note: While the graph plots percentages, the number of crashes is shown against the data points.
*Denotes statistically significant difference between Local Authority and National or Peer Group Proportions

**Figure 8.8 Crash movement type - rural
Auckland City council roads (2004-2008)**

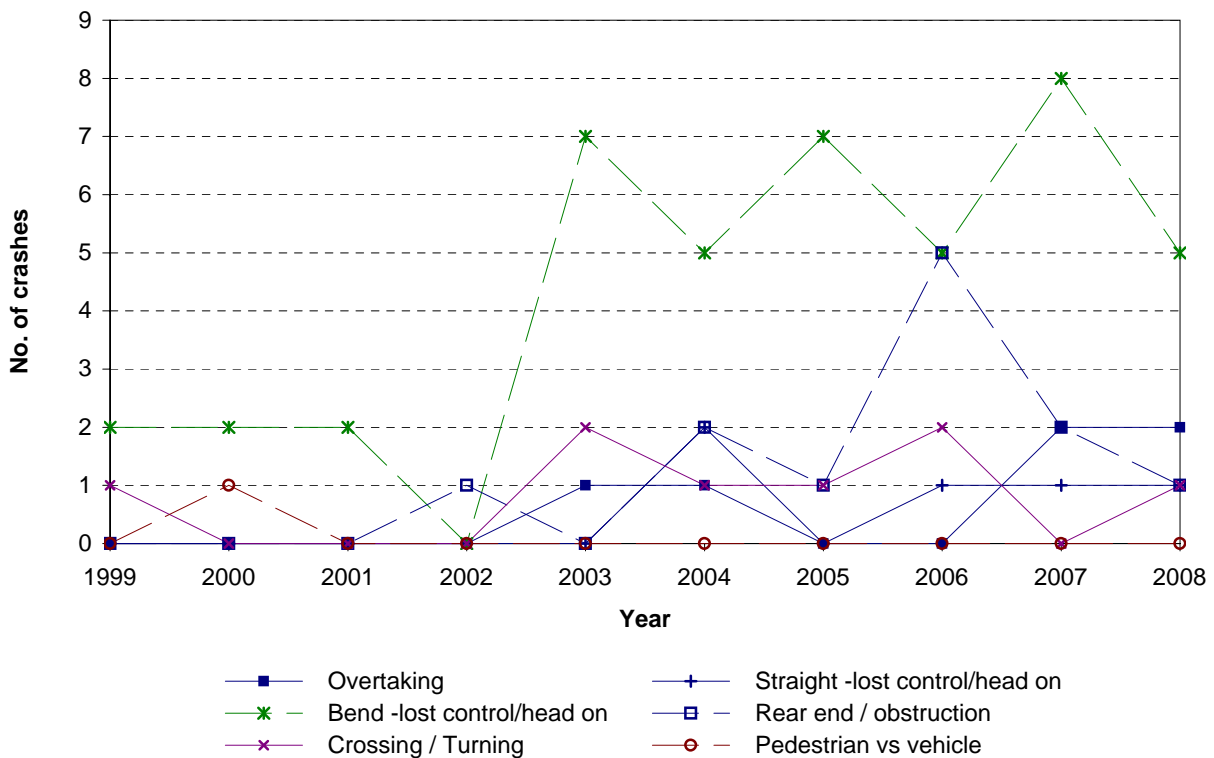


Note: While the graph plots percentages, the number of crashes is shown against the data points.
*Denotes statistically significant difference between Local Authority and National or Peer Group Proportions

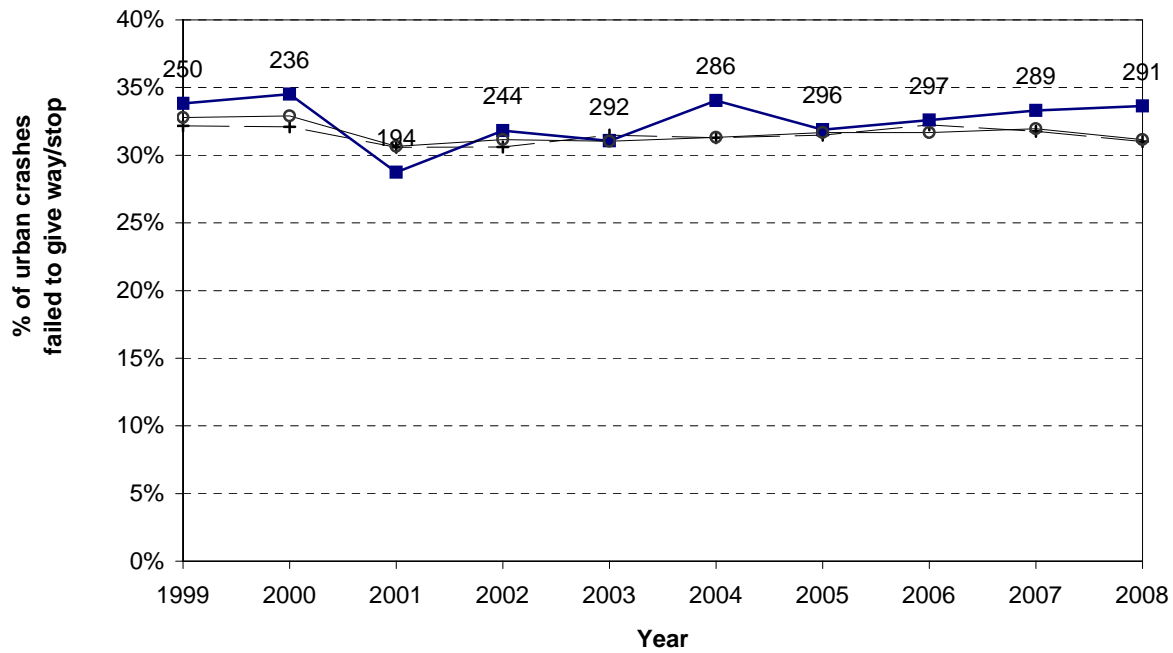
**Figure 8.9 Crash movement type - Trends
Auckland City - urban council roads**



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



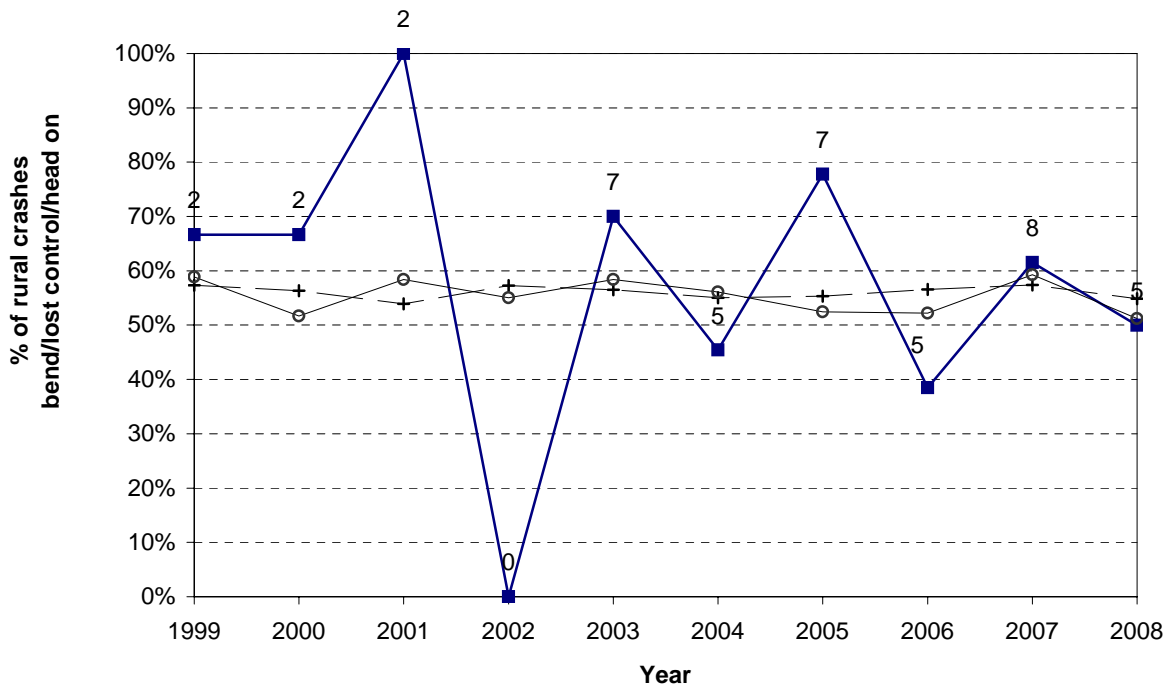
**Figure 8.11 Failed to give way/stop
Auckland City - urban council roads**



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

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

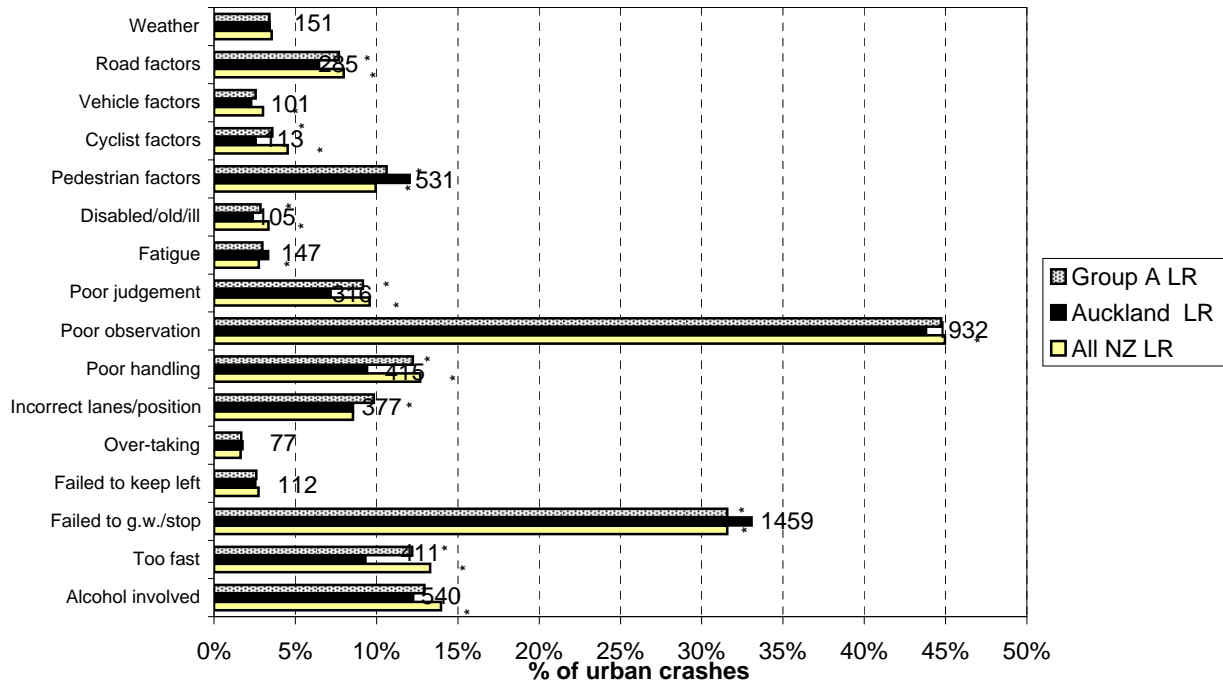
**Figure 8.12 Bend - lost control / head - on
Auckland City - rural council roads**



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

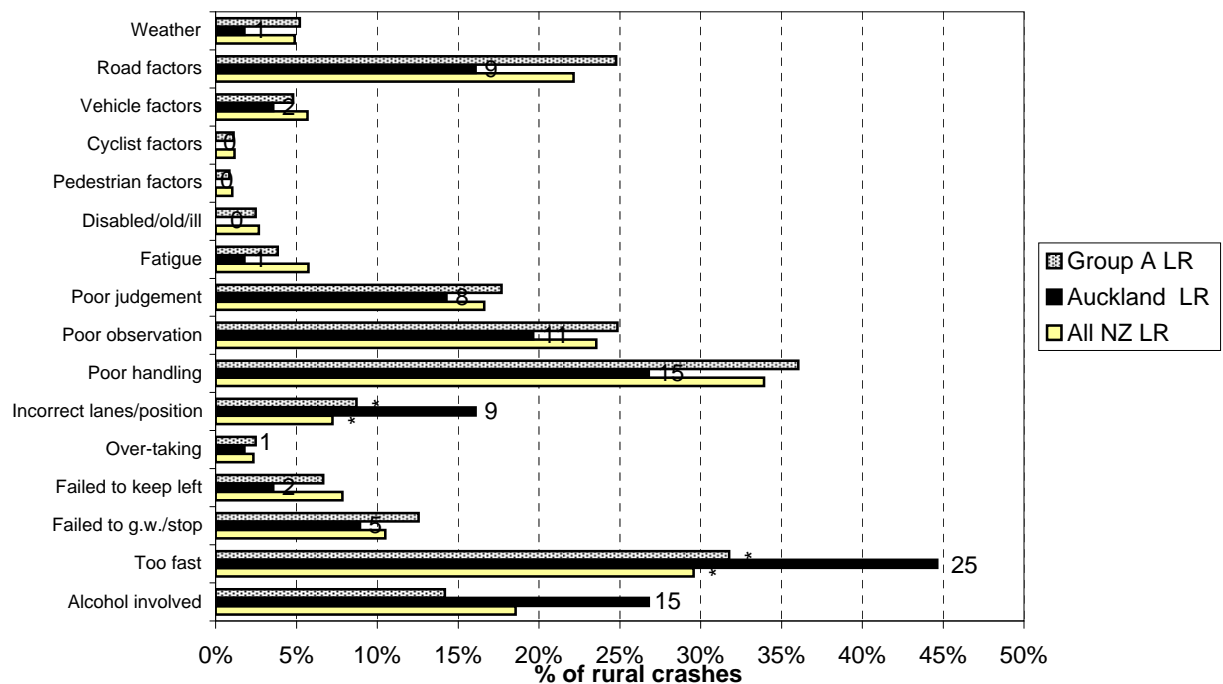
—+— All NZ LR —■— Auckland LR —○— Group A LR

**Figure 8.13 Contributing factors - urban
Auckland City council roads (2004-2008)**



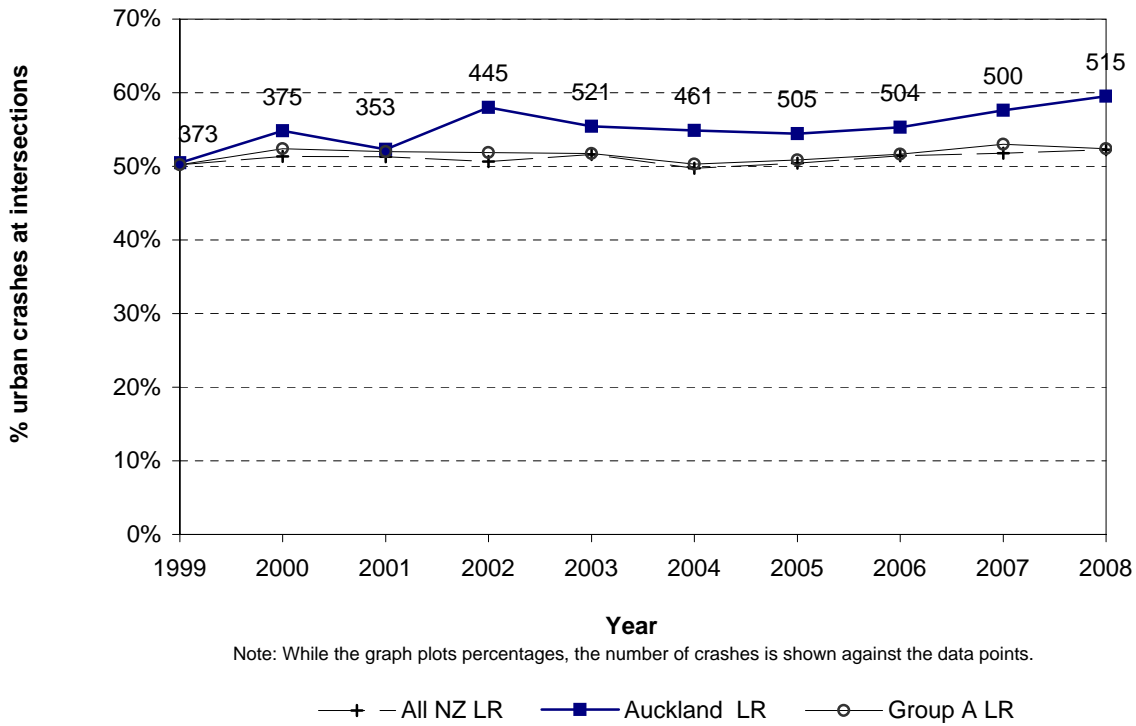
Note: While the graph plots percentages, the number of crashes is shown against the data points.
*Denotes statistically significant difference between Local Authority and National or Peer Group Proportions

**Figure 8.14 Contributing factors - rural
Auckland City council roads (2004-2008)**

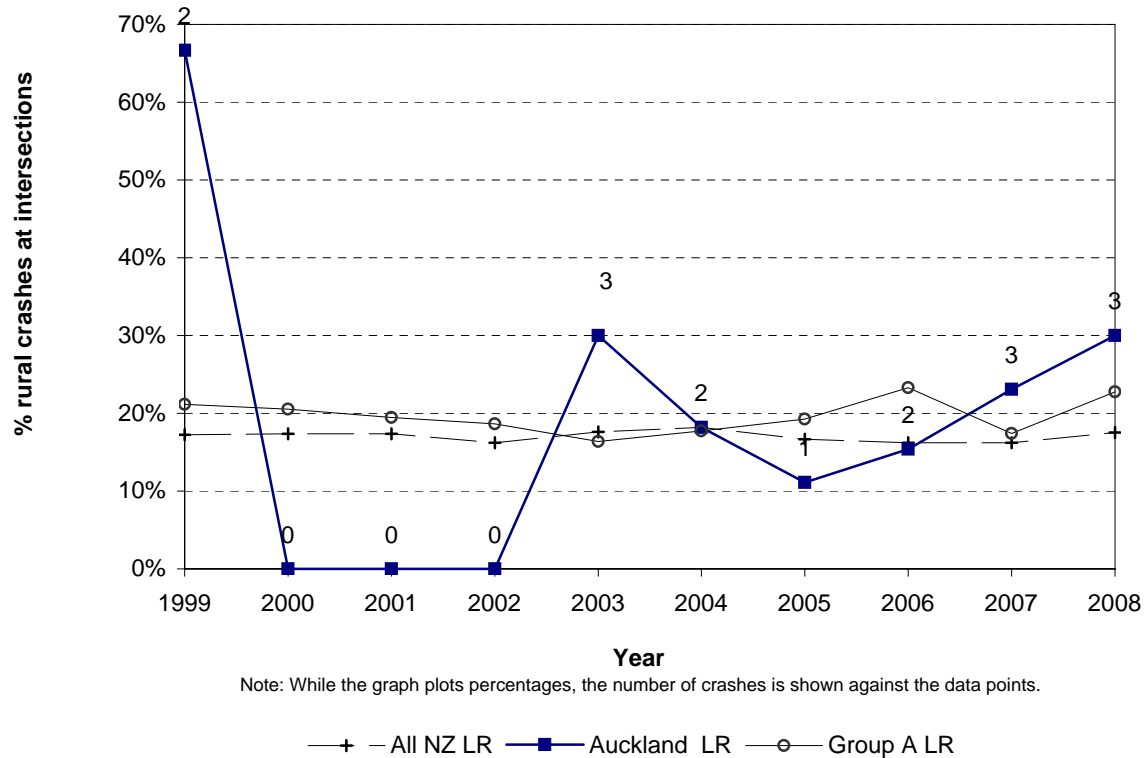


Note: While the graph plots percentages, the number of casualties is shown against the data points.
*Denotes statistically significant difference between Local Authority and National or Peer Group Proportions

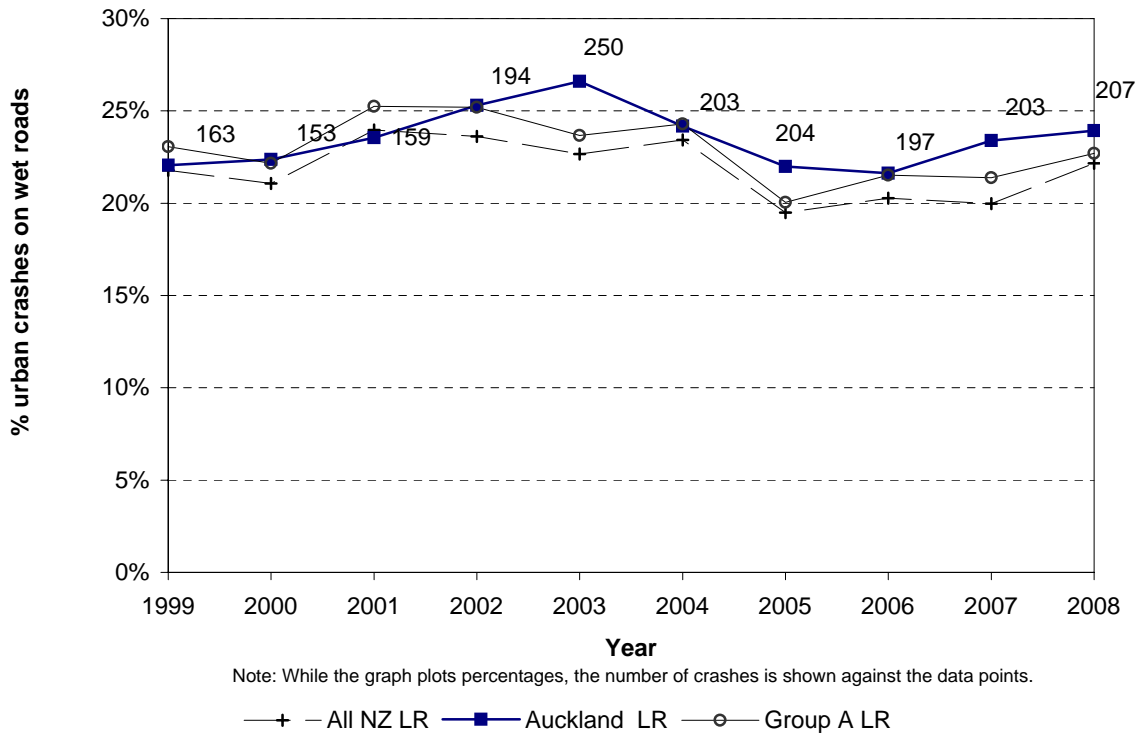
**Figure 8.15 Intersection crashes
Auckland City - urban council roads**



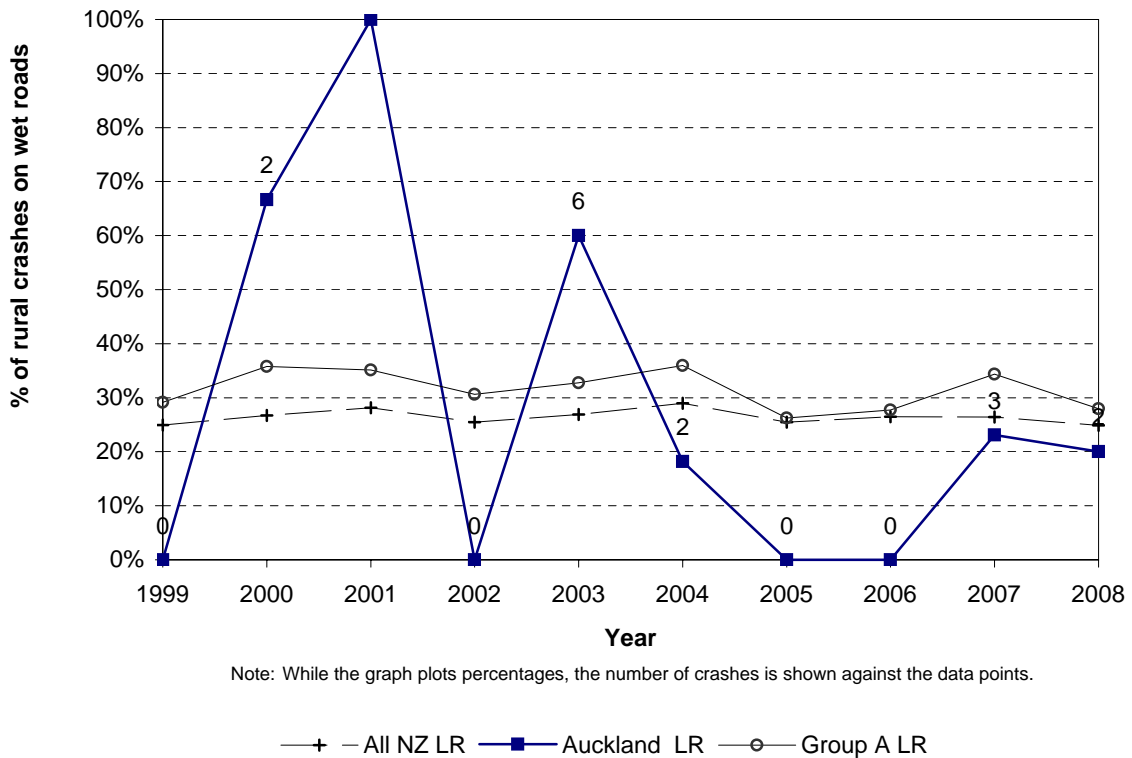
**Figure 8.16 Intersection crashes
Auckland City - rural council roads**



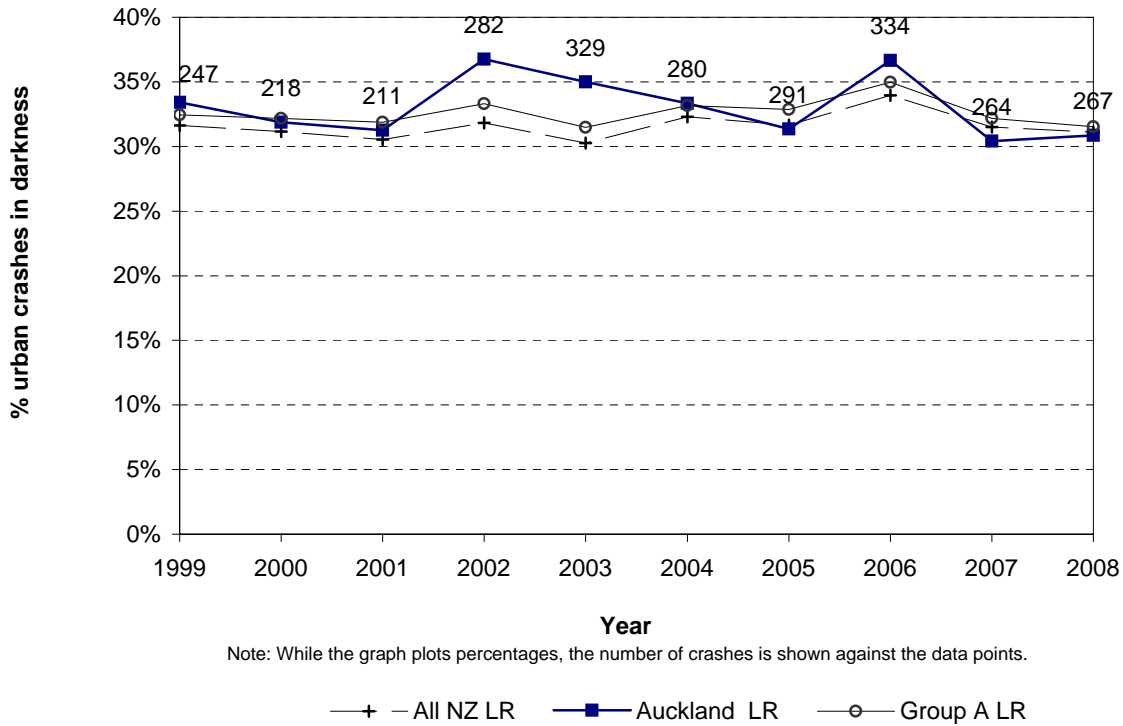
**Figure 8.17 Wet road crashes
Auckland City - urban council roads**



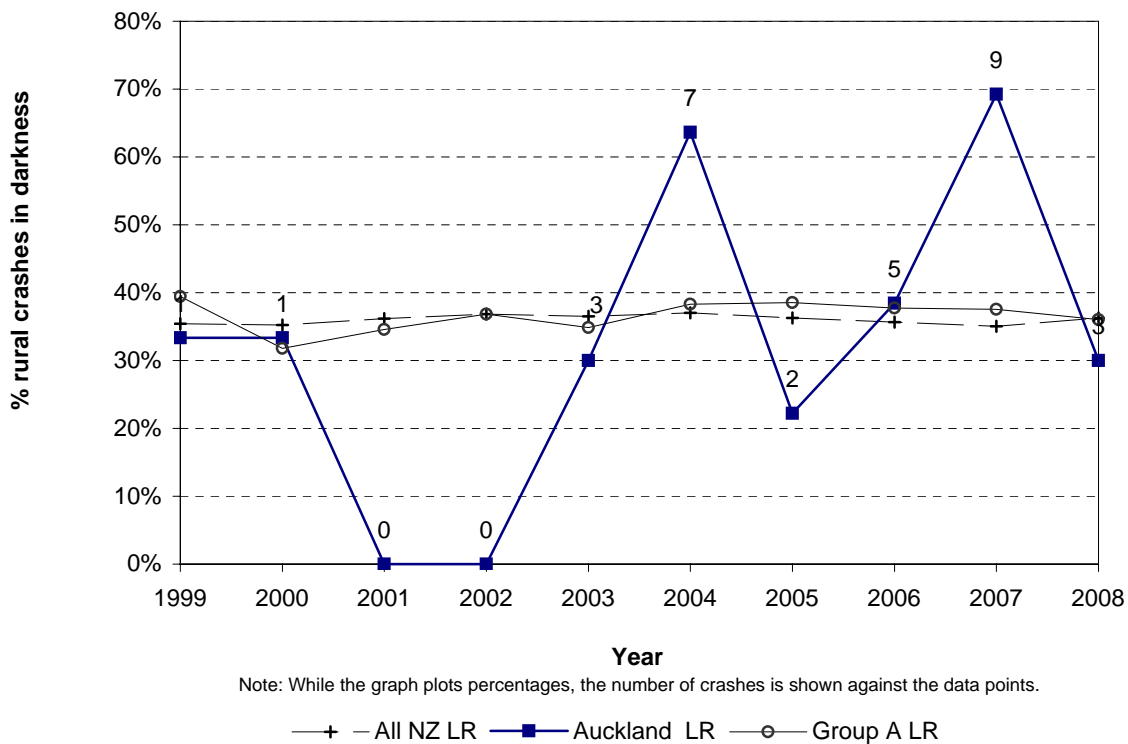
**Figure 8.18 Wet road crashes
Auckland City - rural council roads**



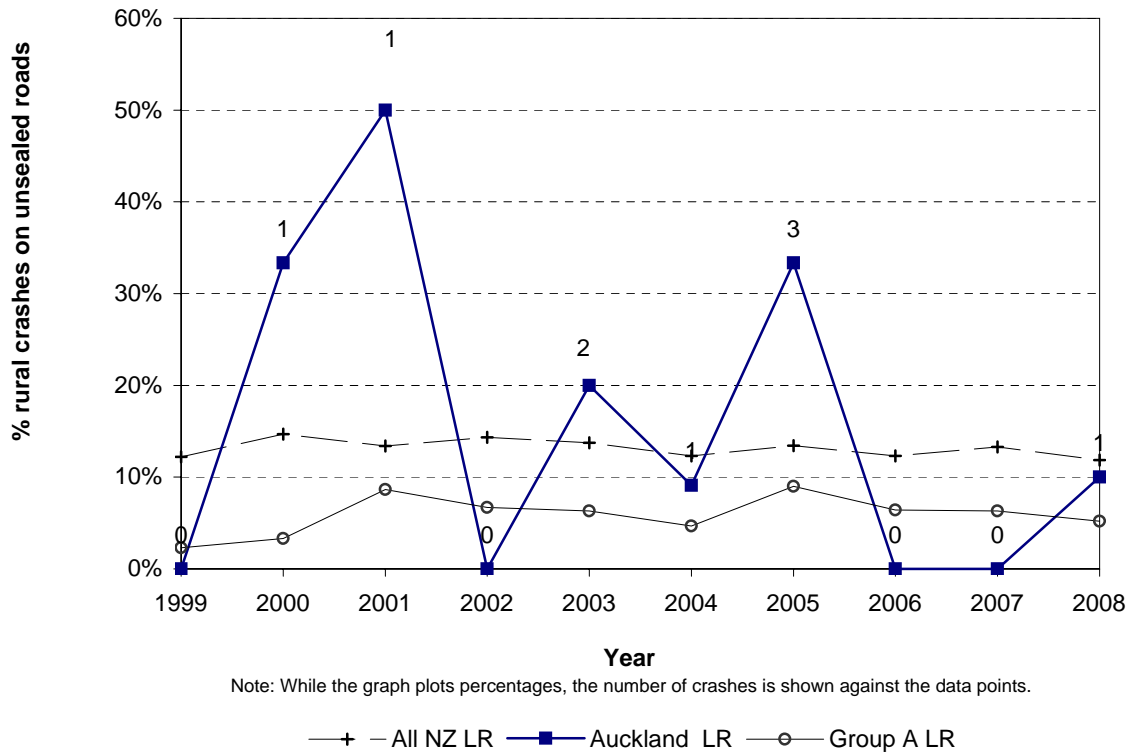
**Figure 8.19 Crashes in darkness
Auckland City - urban council roads**



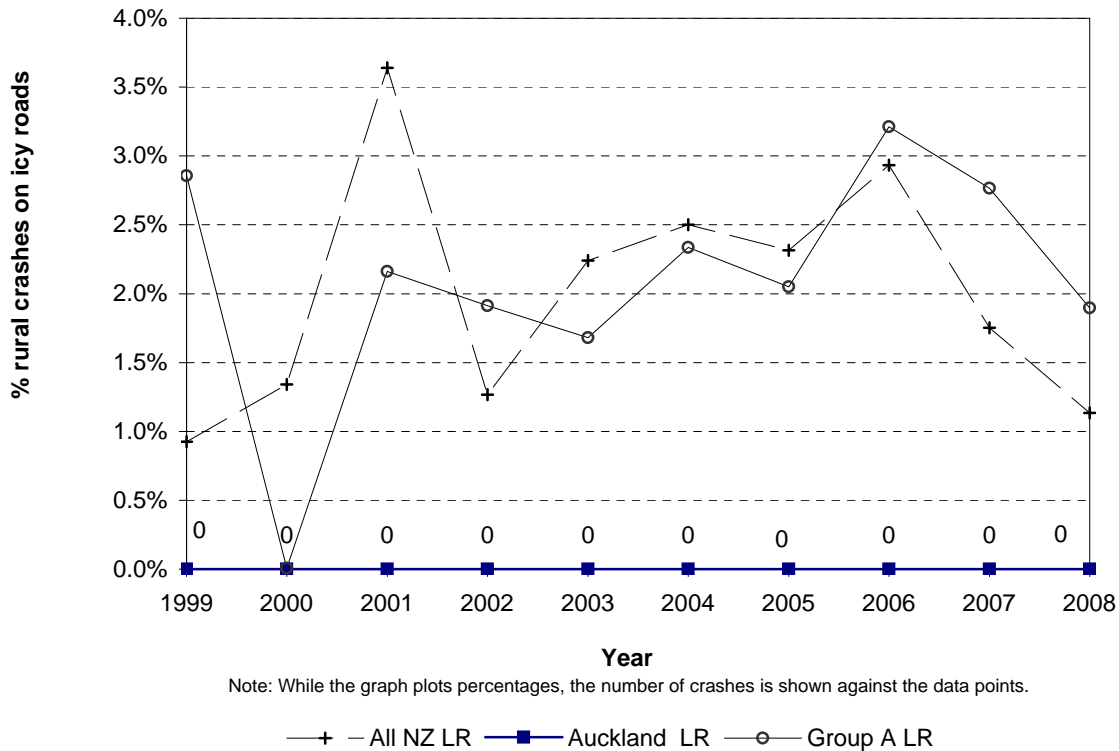
**Figure 8.20 Crashes in darkness
Auckland City - rural council roads**



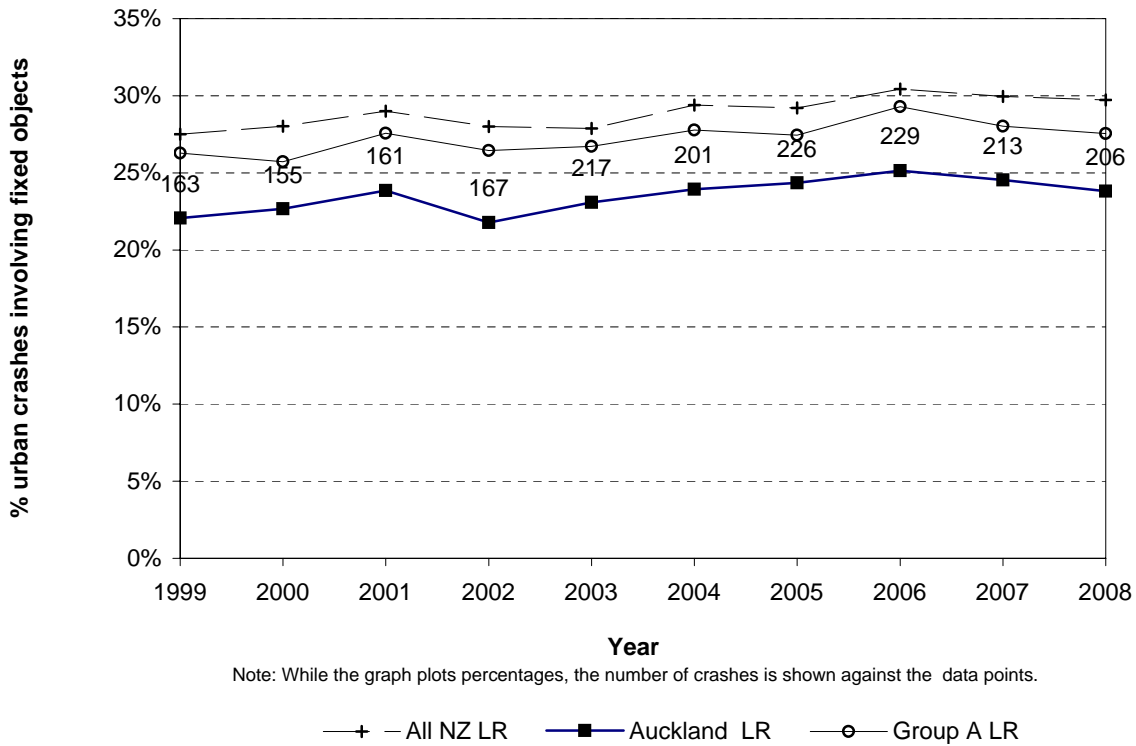
**Figure 8.21 Crashes on unsealed roads
Auckland City - rural council roads**



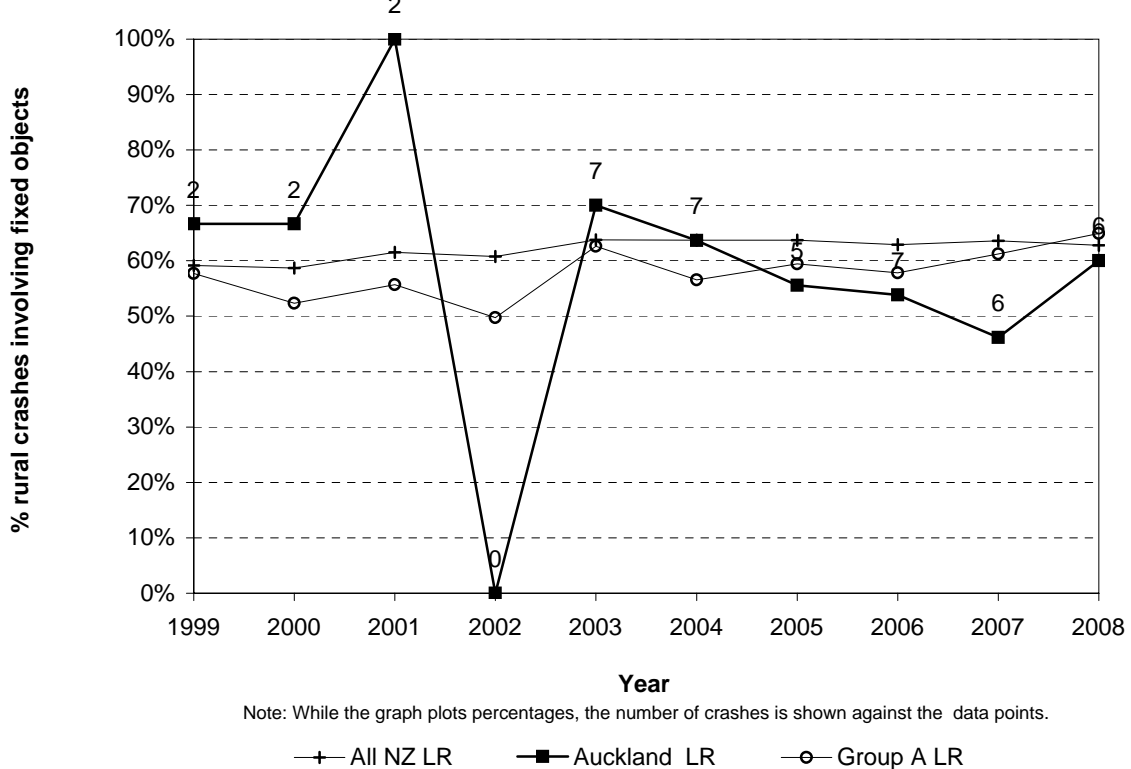
**Figure 8.22 Icy road crashes
Auckland City - rural council roads**



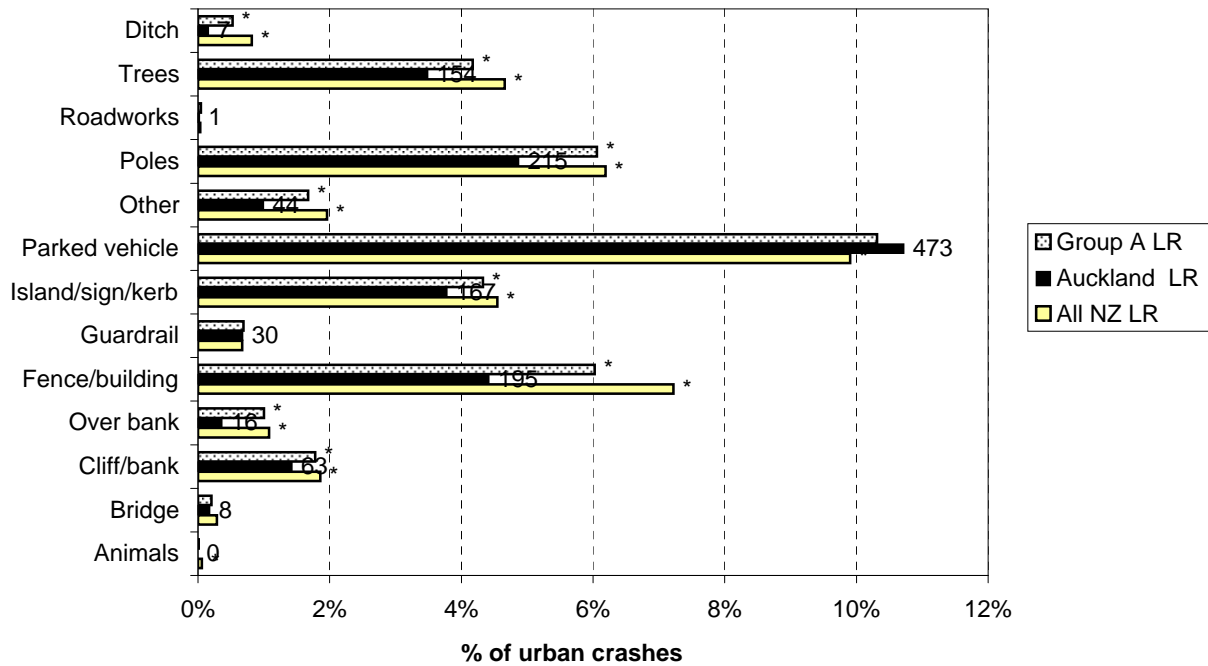
**Figure 8.23 Collisions with objects
Auckland City - urban council roads**



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

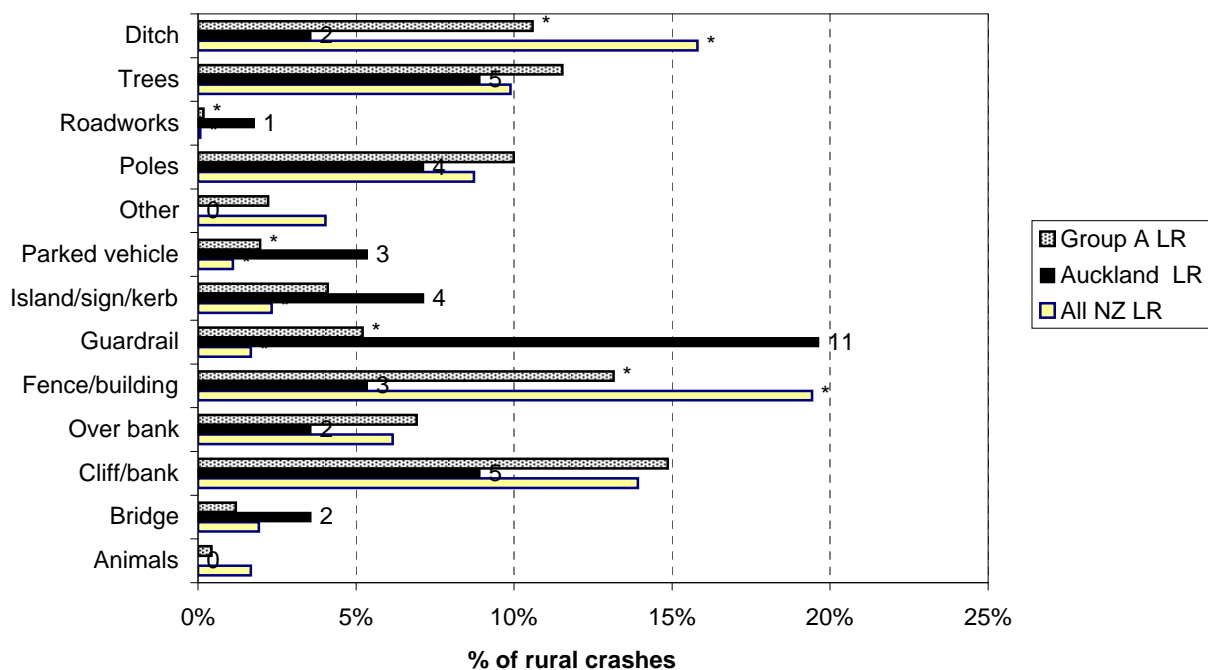


**Figure 8.25 Objects struck - urban
Auckland City council roads (2004-2008)**



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 (2004-2008)**



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 10 or more injury crashes or more than \$1500000 in social costs

CRASH ROAD		SIDE ROAD	2004	2005	2006	2007	2008	TOTAL	Non-Injury	Wet Crash %	Dark Crash %	Crash Costs
HILLSBOROUGH ROAD	I	KELSEY CRESCENT	2	2	3	1		8	5	38	25	\$6,649,917
GREAT NORTH ROAD	I	BULLOCK TRACK	10	10	12	12	8	52	31	19	29	\$6,398,967
MOUNT WELLINGTON HIGHWAY		50 N HAMLIN ROAD	1		3			4	2	50	50	\$6,235,551
DOMINION ROAD	I	MOUNT ALBERT ROAD	20	13	12	15	14	74	58	24	26	\$5,652,479
GREAT SOUTH ROAD	I	BELL AVENUE	6	4	6	8	3	27	15	33	19	\$5,542,825
SANDRINGHAM ROAD	I	MOUNT ALBERT ROAD	12	7	7	16	8	50	43	26	40	\$4,792,765
TAMAKI DRIVE	I	PATTESON AVENUE	3	2	8	8	3	24	14	8	29	\$4,369,633
NEW NORTH ROAD	I	BOLLARD AVENUE	8	6	5	11	8	38	28	29	32	\$4,335,079
ALBERT ST	I	WYNDHAM ST	4	5	7	5	2	23	16	22	26	\$4,204,367
ATKINSON AVENUE	I	GORDON ROAD	4	5	6	4	4	23	19	13	22	\$4,042,941
NEILSON ST	I	CAPTAIN SPRINGS ROAD		4	2	2	2	10	5	30	20	\$4,025,115
SOUTH-EASTERN HIGHWAY	I	GREAT SOUTH ROAD	4	2	7	6	7	26	24	27	38	\$3,977,283
NEW NORTH ROAD	I	WAIRERE AVENUE	3	4	3	3	3	16	12	38	31	\$3,664,248
IAN MCKINNON DRIVE		200 N UPPER QUEEN ST	1		1		1	3	1	33	100	\$3,631,820
NEILSON ST	I	CHURCH ST	2	4	5	4	5	20	18	45	20	\$3,595,631
LINCOLN ST	I	PONSONBY ROAD		3	3	4	1	11	8	9	45	\$3,505,807
GREAT NORTH ROAD	I	KIWI ROAD	3	3	1	2		9	6	33	22	\$3,498,127
MOUNT SMART ROAD	I	ROCKFIELD ROAD	3	1	3	5	3	15	12	47		\$3,433,236
BARRACK ROAD	I	PENROSE ROAD	2	4	3	3	2	14	11	36	57	\$3,416,783
CRACROFT ST	I	GREAT SOUTH ROAD		4	2	4		10	7	20	20	\$3,354,662
POINT ENGLAND ROAD	I	LINE ROAD	2	4	1		1	8	7	38	38	\$3,349,050
ATKINSON AVENUE		50 S PRINCES ST	2			1		3	2	33	33	\$3,294,351
DOMINION ROAD	I	ST ALBANS AVENUE	1		3	3	1	8	6	25	38	\$3,267,526
MARUA ROAD	I	MICHAELS AVENUE		1	1		3	5	4	40	40	\$3,166,314
JERVOIS ROAD	I	ALBANY ROAD	1		2	1	1	5	4	20	40	\$3,165,699
JELICOE ROAD		25 N DUNLOP LANE	1	1		1	2	5	4	20		\$3,165,657
MOUNT WELLINGTON HIGHWAY	I	NEW BRIGHTON ROAD			4			4	3	25	100	\$3,150,271
RICHARDSON ROAD	I	ALLENDALE ROAD			1	2		3	2		33	\$3,134,187
OCEAN VIEW ROAD		150 E GOODWIN AVENUE		1	1	1		3	2	33	100	\$3,134,146
MOUNT WELLINGTON HIGHWAY	I	PENROSE ROAD	19	13	15	14	8	69	60	25	25	\$2,854,874
MAYORAL DRIVE	I	QUEEN ST	12	16	11	12	9	60	49	25	47	\$2,392,561
GREAT NORTH ROAD	I	CARRINGTON ROAD	12	14	10	11	11	58	47	22	28	\$2,373,007
KARANGAHAPE ROAD	I	QUEEN ST	19	16	15	11	16	77	64	14	58	\$2,339,856
QUEEN ST	I	VICTORIA ST EAST	20	14	8	7	7	56	47	14	46	\$2,220,044
QUEEN ST	I	CITY ROAD	7	8	4	9	2	30	14	23	47	\$2,195,264
HAYR ROAD		5 S CARR ROAD	13	19	14	9	7	62	56	19	21	\$2,168,598
ASH ST	I	ROSEBANK ROAD	8	8	11	10	14	51	35	20	25	\$2,094,909
NEW NORTH ROAD	I	MOUNT ALBERT ROAD	18	10	8	10	10	56	50	25	27	\$2,050,677
TAMAKI DRIVE	I	NGAPIPI ROAD	5	8	3	5	7	28	14	18	14	\$2,047,672
GREAT NORTH ROAD	I	HENRY ST	8	7	5	5	6	31	26	32	26	\$2,029,276
REMUERA ROAD	I	LADIES MILE	21	22	10	8	3	64	53	30	42	\$2,025,864
CUSTOMS ST EAST	I	GORE ST	5	6	2	3	4	20	12	25	60	\$2,009,608
GREEN LANE WEST	I	MANUKAU ROAD	8	8	10	11	8	45	37	18	29	\$1,996,768
KHYBER PASS ROAD	I	PARK ROAD	3	5	7	5	4	24	18	17	25	\$1,983,949
SALEYARDS ROAD	I	STATION ROAD	1	3	5	6	1	16	10	31	31	\$1,863,555
DOMINION ROAD	I	VALLEY ROAD	10	5	7	4	5	31	22	10	35	\$1,820,747
KARANGAHAPE ROAD	I	PITT ST	10	14	12	9	12	57	48	30	46	\$1,811,174
MOUNT SMART ROAD	I	ONEHUNGA MALL	8	4	7	2	7	28	19	29	29	\$1,782,861
GREAT SOUTH ROAD	I	MANGERE ROAD	12	18	9	5	6	50	40	14	44	\$1,763,914
GREEN LANE EAST	I	ASCOT AVENUE	8	8	6	6	3	31	23	19	26	\$1,763,486

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

Site Radius = 30 metres

Sites with 10 or more injury crashes or more than \$1500000 in social costs

CRASH ROAD		SIDE ROAD	2004	2005	2006	2007	2008	TOTAL	Non-Injury	Wet Crash %	Dark Crash %	Crash Costs
WILLIAMSON AVENUE	I	GREAT NORTH ROAD	4	5	3	5	7	24	14	21	38	\$1,758,998
SYMONDS ST	I	KHYBER PASS ROAD	10	10	13	17	10	60	46	15	42	\$1,709,308
HOBSON ST	I	VICTORIA ST WEST	10	9	5	16	11	51	43	22	43	\$1,663,840
DOMINION ROAD	I	RICHARDSON ROAD	4	5	6	7	5	27	20	15	30	\$1,654,302
QUEEN ST	I	SHORTLAND ST	7	3	5	6	3	24	16	21	71	\$1,649,756
GREAT SOUTH ROAD	I	PENROSE ROAD	3	7	4	9	6	29	23	31	38	\$1,631,664
DOMINION ROAD	I	DENBIGH AVENUE	10	13	11	13	15	62	58	18	31	\$1,626,495
WILLIAMSON AVENUE	I	MACKELVIE ST	1			4	2	7	3	14	29	\$1,611,075
SYMONDS ST	I	MOUNT ST	1	2	3	6	7	19	11	32	21	\$1,590,720
BROADWAY	I	ST MARKS ROAD	7	10	7	10	11	45	37	18	18	\$1,575,652
BALMORAL ROAD	I	SANDRINGHAM ROAD	8	4	6	10	10	38	28	42	26	\$1,570,099
DENBIGH AVENUE	I	MAY ROAD	9	5	3	3	2	22	15	18	27	\$1,569,497
STODDARD ROAD	I	SANDRINGHAM ROAD	9	4	5	1	1	20	13	20	15	\$1,547,691
COOK ST	I	NELSON ST	8	9	10	6	7	40	31	18	40	\$1,547,583
QUEEN ST	I	TURNER ST	3	8	8	3	3	25	20	32	40	\$1,519,158
FANSHAWE ST	I	HALSEY ST	5	4	6	7	9	31	20	29	45	\$1,502,041
WHITE SWAN ROAD	I	HILLSBOROUGH ROAD	5	5	5	8	4	27	17	22	52	\$1,396,415
CUSTOMS ST WEST	I	LOWER ALBERT ST	16	12	12	6	4	50	39	24	50	\$1,385,031
GREAT SOUTH ROAD	I	MAIN HIGHWAY	6	3	4	5	6	24	14	17	29	\$1,340,914
NEW NORTH ROAD	I	LLOYD AVENUE	7	9	10	3	4	33	22	33	24	\$1,116,822
SELWYN ST	I	ARTHUR ST	4	9	6	3	4	26	15	23	8	\$1,006,816
NELSON ST	I	WELLESLEY ST WEST	6	5	5	7	6	29	19	10	38	\$999,442

**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 \$1500000 in social costs

CRASH ROAD	SIDE ROAD	2004	2005	2006	2007	2008	TOTAL	Non-Injury	Wet Crash %	Dark Crash %	Crash Costs
SOUTH-EASTERN HIGHWAY I	CARBINE ROAD	4	5	7	5	8	29	19	45	45	\$6,142,944
PAKURANGA HIGHWAY I	WAIPUNA ROAD	9	4		7	7	27	20	26	37	\$1,354,973
ONETANGI ROAD	800 E OBRIEN ROAD	1	1	2	3		7	1	29	57	\$1,102,580
SOUTH-EASTERN HIGHWAY I	20 W SEMW ON WBD	4	4	5	1	2	16	13	63	25	\$746,736

**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 \$1500000 in social costs

CRASH ROAD		SIDE ROAD	2004	2005	2006	2007	2008	TOTAL	Non-Injury	Wet Crash %	Dark Crash %	Crash Costs
SH 1N	I	GILLIES ON NBD	66	79	90	71	60	366	312	16	24	\$16,348,813
SH 1N	A	SHELLY BEACH OBR	44	43	27	36	28	178	139	26	39	\$14,561,585
SH 1N	A	PENROSE OBR	35	54	49	48	42	228	173	21	16	\$11,239,593
SH 1N	I	FANSHAWE ON NBD	37	50	42	36	25	190	164	28	34	\$10,500,917
SH 1N	I	SHELLY OFF SBD	42	40	34	28	34	178	130	24	21	\$10,132,704
SH 16	A	NEWTON OFF EBD	40	42	38	51	24	195	159	34	24	\$10,129,369
SH 1N	I	SEART ON NBD	32	32	39	44	25	172	132	20	23	\$10,048,637
SH 1N	I	SEART OFF SBD	19	23	27	12	18	99	75	23	31	\$9,993,103
SH 1N	I	WELLESLEY OFF NBD	32	38	36	42	43	191	158	21	29	\$9,322,338
SH 1N	I	MT WGTN ON NBD	34	35	46	36	32	183	152	34	24	\$8,893,028
SH 1N	I	PENROSE OFF NBD	32	31	28	24	41	156	131	28	27	\$8,713,558
SH 16		300 W BOND OBR	8	21	20	19	9	77	56	38	25	\$8,480,337
SH 1N	A	GREENLANE OFF NBD	23	24	23	18	28	116	89	25	22	\$8,401,438
SH 1N	I	TE COMA OFF SBD	25	9	16	18	10	78	66	19	35	\$7,975,950
SH 1N	I	OTAHUHU ON SBD	23	20	26	17	21	107	84	27	34	\$7,892,253
SH 16	I	PT CHEV ON EBD	11	14	15	20	14	74	54	53	46	\$7,657,652
SH 16	I	UNION OFF EBD	6	16	10	19	13	64	48	19	27	\$7,482,876
SH 1N	A	MAIN OBR	16	15	13	10	14	68	54	24	25	\$7,238,759
SH 16	I	ST LUKES ON WBD	7	7	16	15	13	58	43	38	53	\$6,914,125
SH 1N	I	MARKET OFF SBD	36	34	24	22	21	137	110	25	31	\$6,463,111
SH 1N	I	MARKET OFF NBD	27	19	25	23	16	110	85	27	38	\$6,439,100
SH 1N	I	KHYBER PASS OFF NBD	29	18	28	18	30	123	104	21	21	\$6,082,922
SH 16		800 E ST LUKES OFF WBD	10	11	6	7	8	42	34	29	21	\$5,754,836
SH 1N	I	GREENLANE ON NBD	17	18	19	22	25	101	83	26	32	\$5,741,494
SH 1N	I	PENROSE ON NBD	27	20	17	18	28	110	92	20	29	\$5,489,000
SH 16	I	1 LINK 16	14	22	19	14	19	88	70	33	39	\$5,244,074
SH 16	I	ST LUKES OFF WBD	4	2	3	3	3	15	12	47	60	\$5,217,283
SH 16	I	PATIKI ON WBD	24	17	20	18	19	98	79	26	33	\$5,154,827
SH 1N		300 N FANSHAWE ON NBD	10	26	17	20	14	87	72	17	23	\$5,109,242
SH 1N	A	PANAMA OBR	22	19	19	19	15	94	73	39	23	\$5,101,505
SH 1N	I	SYMONDS ON SBD	26	20	14	26	16	102	89	23	32	\$4,973,804
SH 1N	I	MT WGTN OFF NBD	22	24	23	18	20	107	89	36	29	\$4,834,511
SH 16	I	WATERVIEW OFF WBD	18	13	13	21	20	85	64	33	41	\$4,753,908
SH 20	I	ONEHUNGA OFF SBD	15	22	10	7	11	65	50	29	17	\$4,282,892
SH 1N	I	OTAHUHU ON NBD	11	26	25	13	12	87	73	31	23	\$3,955,894
WATER ST	I	OTAHUHU OFF NBD	12	17	14	15	11	69	52	29	33	\$3,930,535
KARANGAHAPE ROAD	I	SYMONDS ST	7	7	8	0	0	22	17	18	32	\$3,784,918
SH 1N		300 N OTAHUHU OFF SBD	10	11	20	10	10	61	48	39	16	\$3,468,800
SH 20		200 E QUEENSTOWN OBR	6	13	11	6	9	45	34	27	20	\$3,328,287
SH 16		300 E ST LUKES OBR	11	9	15	14	11	60	49	27	28	\$3,316,492
SH 1N		300 S PANAMA OBR	14	20	14	11	13	72	60	33	24	\$3,296,957
SH 16	I	ROSEBANK ON EBD	20	9	10	12	8	59	49	37	39	\$3,252,832
SH 16	I	MOTAT OFF EBD	6	11	12	4	9	42	30	29	29	\$3,245,469
SH 1N		20 N ST MARKS ON SBD	13	19	5	10	11	58	48	14	19	\$3,220,300
SH 20	I	ONEHUNGA OFF NBD	10	19	7	6	10	52	38	23	37	\$3,119,953
SH 1N	I	WELLINGTON ON NBD	6	14	7	17	17	61	45	20	34	\$3,062,727
SH 1N		300 N SHELLY OFF SBD	11	14	5	5	11	46	37	20	24	\$2,721,856
SH 1N		500 S GILLIES OBR	10	10	17	2	7	46	37	15	33	\$2,714,254
SH 16		300 E CARRINGTON OBR	2	4	7	11	12	36	24	25	31	\$2,477,245
SH 20	I	QUEENSTOWN OFF NBD	10	11	11	11	7	50	38	42	32	\$2,451,774

**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 \$1500000 in social costs

CRASH ROAD	SIDE ROAD	2004	2005	2006	2007	2008	TOTAL	Non-Injury	Wet Crash %	Dark Crash %	Crash Costs
SH 16	30 W BOND OBR	5	12	10	11	6	44	28	27	23	\$2,432,243
SH 1N	I HOBSON ON SBD	26	13	4	10	6	59	53	31	27	\$2,405,632
SH 16	500 E ST LUKES OFF WBD	12	5	13	5	5	40	33	33	18	\$2,389,907
SH 16	I WATERVIEW ON WBD	8	5	10	10	4	37	28	46	41	\$2,371,875
MT WGTN OFF NBD	I MOUNT WELLINGTON HIGH	2	5	6	2	4	19	12	21	37	\$2,227,207
SH 20	I HILLSBOROUGH ROAD	12	16	9	9	15	61	48	23	36	\$2,212,139
SH 16	800 E TE ATATU OFF WBD	8	7	8	5	2	30	20	27	23	\$2,166,021
NEWTON ROAD	I NEWTON ON WBD	7	9	5	8	12	41	30	12	39	\$1,891,537
SH 1N	200 S MT WGTN OBR	4	9	9	7	8	37	31	8	22	\$1,680,591
MOUNT WELLINGTON HIGH	I MT WGTN OFF SBD S	8	5	7	5	4	29	20	52	62	\$1,641,931
SH 16	I ST GEORGES BAY ROAD	4	4	2	2	2	14	7	21	36	\$1,448,695
SH 16	I GLADSTONE ROAD	2	1	4	4	3	14	7	36	29	\$1,444,889
SH 16	100 E ROSEBANK OBR	3	9	4	6	5	27	19	30	15	\$1,405,502
SH 20	100 E HILLSBOROUGH ROAD	2	4	3	5	3	17	13	47	35	\$1,346,963
UNION ST	I UNION ON WBD	5	6	8	13	0	32	28	16	53	\$1,334,430
SH 20	400 E HILLSBOROUGH ROAD	4	5	8	5	2	24	16	54	17	\$1,287,937
SH 1N	150 N PRINCES OBR	5	6	2	9	6	28	23	32	36	\$1,234,535
SH 20	800 E HILLSBOROUGH ROAD	4	7	6	2	8	27	23	48	30	\$1,209,824
GILLIES AVENUE	I GILLIES ON NBD N	4	8	7	4	6	29	21	17	45	\$1,209,115
SH 16	700 E ROSEBANK OFF WBD	0	5	8	3	8	24	18	21	42	\$1,187,830
GILLIES AVENUE	I GILLIES OFF SBD S	3	4	6	1	4	18	11	44	56	\$1,142,013
SH 1N	500 S GILLIES ON NBD	8	6	1	5	6	26	23	23	35	\$1,121,773
SYMONDS ST	I SYMONDS OFF NBD	2	6	6	7	0	21	18	38	29	\$1,086,006
FANSHAWE ST	I BEAUMONT ST	4	9	7	3	0	23	18	17	48	\$1,085,615
SH 16	200 W ROSEBANK OBR	3	3	4	4	9	23	19	35	43	\$1,054,863
KHYBER PASS OFF NBD	I KHYBER PASS ROAD	4	4	4	4	0	16	13	25	25	\$1,038,026
SH 16	400 E ROSEBANK OFF WBD	1	2	2	2	1	8	5	38	50	\$996,940
SH 16	700 E CARRINGTON OBR	4	5	3	3	5	20	15	45	55	\$996,526
MARKET ROAD	I MARKET OFF NBD	4	3	9	6	5	27	22	41	30	\$969,364
SH 1N	I PENROSE OFF SBD	5	4	6	2	4	21	17	10	10	\$964,245
PENROSE OFF SBD	I PENROSE INT	8	12	12	1	4	37	31	8	32	\$947,263
GREENLANE OFF NBD	I GREENLANE INT	8	10	11	9	4	42	38	24	5	\$941,052
UNION ST	I NELSON ST	10	13	5	4	4	36	31	14	33	\$917,800
SH 1N	300 N SEART OFF SBD	5	7	5	0	3	20	17	15	20	\$860,655
SH 16	I WELLESLEY OFF EBD	1	5	2	3	8	19	16	11	21	\$859,485
SH 16	500 E TE ATATU OFF WBD	5	0	0	5	5	15	9	33	40	\$851,475
ST LUKES ROAD	I ST LUKES OFF WBD N	4	4	1	6	7	22	15	41	41	\$812,743
GREAT NORTH ROAD	I WATERVIEW ON WBD N	6	4	6	8	3	27	21	30	44	\$803,904
GREENLANE OFF SBD	I GREENLANE INT	6	8	8	5	4	31	28	19	16	\$792,137
SH 16	1500 E ROSEBANK OFF WBD	3	7	3	1	3	17	14	24	24	\$786,720
SH 16	I 16 LINK 1	2	4	1	4	1	12	7	33	25	\$675,242
MAIN LINK	I PENROSE INT S	5	6	5	9	5	30	27	7	17	\$641,311
ST MARKS ROAD	I ST MARKS ON SBD	3	7	4	4	5	23	20	13	43	\$631,864
SH 1N	300 S PENROSE OFF NBD	0	1	3	2	3	9	4	22	22	\$578,521
SH 16	I SLIP ROAD	3	1	2	3	6	15	9	33	40	\$578,272
PARNELL RISE	I SH 16	4	0	3	3	5	15	10	13	40	\$506,309
SH 16	I NGAOHO PLACE	2	0	0	0	1	3	0	67	67	\$207,260

**Table 9.4 : Urban Council Road Crash Sites
with a Significant Increase in Crashes in 2008
(Injury and Non-Injury Crashes)**
**Site Radius =
30 metres**

CRASH ROAD		SIDE ROAD	2003	2004	2005	2006	2007	2008	TOTAL	Non-Injury	Wet Crash %	Dark Crash %
ASH ST	I	ROSEBANK ROAD	11	8	8	11	10	14	62	44	21	27
MOUNT WELLINGTON HIGHWAY	I	SYLVIA PARK ROAD	11	6	2	7	7	11	44	37	23	27
BALMORAL ROAD	I	SANDRINGHAM ROAD	2	8	4	6	10	10	40	29	40	28
MOUNT WELLINGTON HIGHWAY	I	ARANUI ROAD	4	6	4	7	7	10	38	29	34	37
FANSHAWE ST	I	HALSEY ST	5	5	4	6	7	9	36	23	25	47
UPPER QUEEN ST	I	CANADA ST	12	3	2	3	3	10	33	27	21	48
QUEEN ST	I	WAKEFIELD ST	2	5	9	4	1	8	29	23	14	59
GREAT SOUTH ROAD	I	GT SOUTH LINK		2	6	7	6	8	29	24	31	14
GREAT NORTH ROAD	I	BLOCKHOUSE BAY ROAD	3	5	4	3	5	8	28	21	32	36
PARK ROAD	I	GRAFTON ROAD	1	6	5	3	4	8	27	19	15	52
FORT ST	I	BEACH ROAD	3	3	4	4	4	8	26	23	31	31
GREY ST	I	ONEHUNGA MALL	4	3	2	6	2	8	25	20	28	20
GREENLANE ON SBD	I	GREENLANE INT	3	5	2	2	2	9	23	22	17	13
GREAT SOUTH ROAD	I	CAMPBELL ROAD	2	7	3	1		9	22	19	14	32
DOMINION ROAD	I	GEORGE ST	7	3	1	1	3	6	21	10	24	48
HOBSON ST	I	WOLFE ST	4	1	5	3		8	21	18	38	52
ROSEBANK ROAD	I	ELM ST	4	3	3	3	1	6	20	13	20	10
MOUNT ALBERT ROAD		100 E HILLSBOROUGH ROAD	3	2	2	6	1	6	20	14	5	40
SYMONDS ST	I	MOUNT ST		1	2	3	6	7	19	11	32	21
KARANGAHAPE ROAD	I	GUNDRY ST	1	1	6	2	2	7	19	17	26	21
CARRINGTON ROAD	I	SUTHERLAND ROAD	1	2	5	1	3	7	19	13		5
TAMAKI DRIVE	I	ATKIN AVENUE	3	3	1		6	6	19	14	16	42
ST HELIERS BAY ROAD	I	POLYGON ROAD	4	3	1	2	2	7	19	15	11	16
SYMONDS ST	I	WATERLOO QUADRANT	1	2	3	2	4	6	18	15	22	50
HILLSBOROUGH ROAD	I	COMMODORE DRIVE	3	2	3	1	3	6	18	11	17	28
GREEN LANE EAST	I	MAREWA ROAD	3	2	5	1		6	17	15	29	24
WELLESLEY ST WEST	I	ELLIOTT ST	5	1		3	2	5	16	14	13	44
WAITANGI ROAD	I	MOUNT SMART ROAD			3	4	3	6	16	14	38	6
HILLSBOROUGH ROAD	I	CARR ROAD	2		3	4	2	5	16	15	13	19
CROWHURST ST	I	KENT ST	5	2	1	1	1	5	15	14	13	20
PONSONBY ROAD		10 N ANGLESEA ST	1		2	4	1	6	14	11	21	50
RIVERSDALE ROAD	I	ROSEBANK ROAD	1	2	2	1	3	5	14	9	29	21
SANDRINGHAM ROAD	I	LAMBETH ROAD	3	1		2	2	6	14	12	43	36
MOUNT EDEN ROAD	I	GRANGE ROAD	1	1	1	2	4	5	14	10	43	7
COOK ST	I	SAM WRIGLEY ST E	3		3	1	2	5	14	11	29	29
DOMINION ROAD	I	CHARLES ST	1	2	1	1	4	5	14	13	36	7
GREAT SOUTH ROAD	I	OMAHU ROAD	2		2	2		6	12	9	17	17
ST LUKES ROAD	I	ASQUITH AVENUE		2	1		2	6	11	8	45	9
KINGS ROAD	I	DOMINION ROAD	2	2	1	2		4	11	8	27	27
STODDARD ROAD	I	DENIZE ROAD	3		1	1	1	5	11	9	27	18
SANDRINGHAM ROAD	I	GIFFORD AVENUE	1	3	2	1		4	11	9	18	18
SANDRINGHAM ROAD	I	BURNLEY TERRACE	1	2	1		3	4	11	10	36	27
TAWA ROAD	I	MOANA AVENUE	3		2	1		4	10	7	40	40
ROSEBANK ROAD	I	TIMOTHY PLACE	1	1	1	2	1	4	10	9		
GREENLANE INT	I	GREEN LANE EAST	1			4		4	9	9	11	11
DOMINION ROAD	I	DONALD CRESCENT N	1	1		1	1	4	8	7	38	50
SYMONDS ST	I	WAKEFIELD ST E	1	1			2	4	8	4	38	13
WILLIAMSON AVENUE	I	COLERIDGE ST	1	1	1	1		4	8	7	13	25
FORT ST	I	JEAN BATTEN PLACE	2			1	1	4	8	7	13	50
POINT CHEVALIER ROAD	I	WAKATIPU ST			1		2	4	7	3		29
MOUNT SMART ROAD	I	CAPTAIN SPRINGS ROAD			2		1	4	7	4		
DOMINION ROAD		5 N PAICE AVENUE			1	3		3	7	2	57	14

**Table 9.4 : Urban Council Road Crash Sites
with a Significant Increase in Crashes in 2008
(Injury and Non-Injury Crashes)**
**Site Radius =
30 metres**

CRASH ROAD	SIDE ROAD	2003	2004	2005	2006	2007	2008	TOTAL	Non-Injury	Wet Crash %	Dark Crash %
MOANA AVENUE	I AMARU ROAD		2		2		3	7	4	43	43
ST LUKES ROAD	I DUNCAN MACLEAN LINK	2	2				3	7	4	29	43
GREAT SOUTH ROAD	I ATARANGI ROAD		1	2			4	7	6	29	29
WAKEFIELD ST	I LYNDOCK ST		1		1	2	3	7	6	14	29
HILLSBOROUGH ROAD	I HIBISCUS PLACE		1		1	1	4	7	7	14	57
REMUERA ROAD	I HAAST ST	1	1	1		1	3	7	7	43	29
ONEHUNGA MALL	70 S NEILSON ST	1	2	1			3	7	7	29	14
KHYBER PASS ROAD	I AUBURN ST	2	1			1	3	7	7	29	14
MARUA ROAD	I MICHAELS AVENUE	1		1	1		3	6	4	33	33
GREAT NORTH ROAD	I SCANLAN ST		2	1			3	6	3	17	17
MOUNT EDEN ROAD	I NGAURUHOE ST		1		1	1	3	6	4	50	50
CARBINE ROAD	I FISHER CRESCENT		1	2			3	6	3	50	67
BEAUMONT ST	I BEAUMONT STREET				1	2	3	6	4		33
GREY ST	I ALFRED ST	1		2			3	6	4	33	17
KORMA ROAD	I PAH ROAD			1	1	1	3	6	5		
FOWLDS AVENUE	I HAVERSTOCK ROAD			2		1	3	6	5	50	33
MAY ROAD	I CHRISTIE ST	2	1				3	6	5	50	33
KINGSTON ST	I FEDERAL ST			2	1		3	6	6		50
MOUNTAIN ROAD	25 N JELICOE ROAD		1			1	3	5	4	20	
NGAPIPI ROAD	300 S TAMAKI DRIVE		2				3	5	2	100	40
TAMAKI DRIVE	100 E SOLENT ST	1	1				3	5	2	40	20
TRENWITH ST	I FRANK GREY PLACE					1	4	5	3	40	20
MOUNT ALBERT ROAD	I PEET AVENUE	2					3	5	3	20	20
SOMERSET ROAD	I DENBIGH AVENUE		1				4	5	5	60	60
ELLIOTT ST	I DARBY ST	1					4	5	5	20	60
CAUSEWAY ROAD	I WHARF ROAD			1			3	4	3	50	25
MAY ROAD	I DENNY AVENUE		1				3	4	3		25
CARR ROAD	80 E HAYR ROAD		1				3	4	4	25	
CHURCH ST	50 E GALWAY ST		1				2	3		67	33
GREAT NORTH ROAD	80 W COLERIDGE ST					1	2	3	1	33	
TUARANGI ROAD	I WEXFORD ROAD			1			2	3	2		33
BROADWAY	100 N KHYBER PASS ROAD	1					2	3	2		33
DOMINION ROAD	40 N NEW NORTH OBR			1			2	3	1	67	67
PITT ST	I BERESFORD ST						3	3	1	33	33
STATION ROAD	250 E ORORKE ROAD						3	3	1	33	
ST HELIERS BAY ROAD	I GRAMPIAN ROAD		1				2	3	1		
MOUNT ALBERT ROAD	100 W PAH ROAD	1					2	3	1	33	
GREAT SOUTH ROAD	400 S MAIN HIGHWAY			1			2	3	2		
BEACH ROAD	I BRITOMART PLACE					1	2	3	2	33	33
CLONBERN ROAD	100 S OHINERAU ST					1	2	3	2		67
DONOVAN ST	200 W RATHLIN ST				1		2	3	2		67
GREAT SOUTH ROAD	500 S ARATONGA AVENUE				1		2	3	2	33	33
MANUKAU ROAD	200 S OWENS ROAD				1		2	3	2		
GREY ST	5 E GALWAY ST			1			2	3	2	67	67
MARUA ROAD	400 W LUNN AVENUE			1			2	3	2	67	
OWAIRAKA AVENUE	150 W TYBURNIA AVENUE			1			2	3	2	67	
ST LUKES ROAD	200 S NEW NORTH ROAD			1			2	3	2	67	
ONEHUNGA MALL	100 N TRAFALGAR ST		1				2	3	2		33
ROSEBANK ROAD	200 N CHARANN PLACE	1					2	3	2		33
ST HELIERS BAY ROAD	200 E APIRANA AVENUE	1					2	3	2	33	
ALTEN ROAD	I CHURCHILL ST				1		2	3	3	33	33
CHURCH ST	I FAIRBURN ST				1		2	3	3	67	
GARNET ROAD	40 S CUMBERLAND AVENUE					1	2	3	3	33	67

**Table 9.4 : Urban Council Road Crash Sites
with a Significant Increase in Crashes in 2008
(Injury and Non-Injury Crashes)**

Site Radius =
30 metres

CRASH ROAD		SIDE ROAD	2003	2004	2005	2006	2007	2008	TOTAL	Non-Injury	Wet Crash %	Dark Crash %
HILLSBOROUGH ROAD	I	QUONA AVENUE			1			2	3	3	33	
PATTESON AVENUE		50 S TAMAKI DRIVE			1			2	3	3		67
STATION ROAD		50 W GREAT SOUTH ROAD			1			2	3	3	33	67
UNION ST	I	SAM WRIGLEY ST S			1			2	3	3	33	
WAKATIPU ST	I	KIWI ROAD			1			2	3	3		
ASQUITH AVENUE	I	ROSSGROVE TERRACE	1					2	3	3		
ROSEBANK ROAD		40 N GREAT NORTH ROAD	1					2	3	3	33	33

**Table 9.4a : Rural Council Road Crash Sites
with a Significant Increase in Crashes in 2008
(Injury and Non-Injury Crashes)**

**Site Radius =
250 metres**

CRASH ROAD	SIDE ROAD	2003	2004	2005	2006	2007	2008	TOTAL	Non-Injury	Wet Crash %	Dark Crash %
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There are no rural sites with a significant increase in crashes for 2008

**Table 9.5 : State Highway Crash Sites
with a Significant Increase in Crashes in 2008
(Injury and Non-Injury Crashes)**

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

CRASH ROAD		SIDE ROAD	2003	2004	2005	2006	2007	2008	TOTAL	Non-Injury	Wet Crash %	Dark Crash %
SH 1N	I	WELLESLEY OFF NBD	18	10	18	21	13	23	103	80	24	30
SH 1N	A	PRINCES OBR	5	10	13	10	13	15	66	51	35	33
SH 1N		200 N SHELLY OFF SBD	6	6	18	4	3	13	50	39	20	16
SH 16	I	ST LUKES ON WBD	5	5	6	9	9	11	45	35	36	47
SH 1N		100 N PENROSE INT N	5	7	6	8	4	11	41	37	27	34
SH 1N	I	COOK OFF SBD	7	3	4	3	7	11	35	27	20	17
SH 16		300 E CARRINGTON OBR	4	2	4	5	7	9	31	20	19	35
NEWTON ROAD	I	NEWTON ON WBD	6	2	5	2	3	7	25	17	16	40
SH 16		300 E PT CHEV ON EBD	5	2	0	3	5	6	21	20	33	33
SH 20		200 S QUEENSTOWN OBR	1	1	3	1	2	5	13	11	38	31
SH 20		200 N QUEENSTOWN OBR	1	1	0	2	0	6	10	7	70	60
SH 16		200 W ROSEBANK OBR	1	1	1	1	1	5	10	8	50	50
HILLSBOROUGH ROAD	I	SH 20	1	1	0	0	2	5	9	7	22	33
SH 16	I	WELLESLEY OFF EBD	2	0	1	0	1	4	8	7	38	0
SEART OFF SBD	I	SEMW ON WBD	0	1	0	2	1	3	7	4	43	71
SH 16		1000 W PT CHEV OFF EBD	1	0	0	2	1	3	7	4	14	43
PT CHEV OFF EBD	I	GREAT NORTH ROAD	0	1	2	1	0	3	7	6	0	0
SH 16		50 E GRAFTON OBR	0	0	0	1	0	2	3	2	0	33
SH 16	I	STANLEY ST	0	0	1	0	0	2	3	2	67	33
GT SOUTH LINK	I	PENROSE INT	0	0	0	1	0	2	3	3	0	33
GREENLANE OFF SBD	I	GREENLANE INT	0	1	0	0	0	2	3	3	33	67

appendix


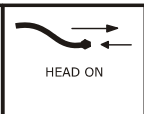


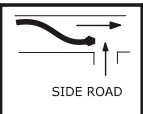


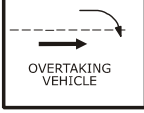
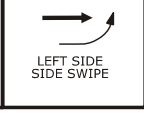







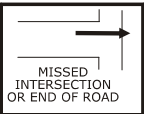
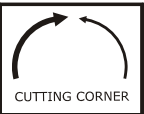
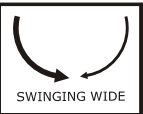
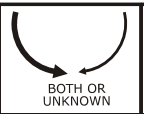
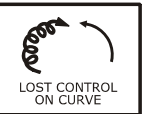
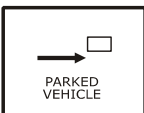


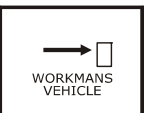

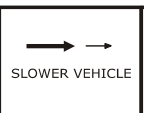

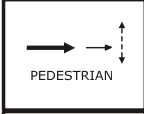
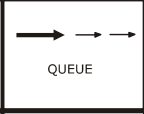
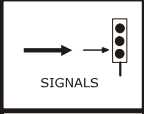
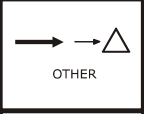

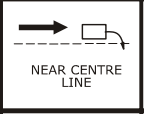

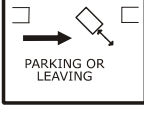
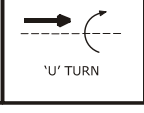
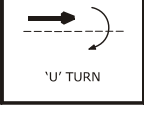

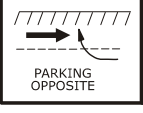


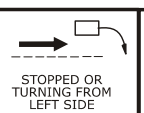
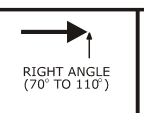
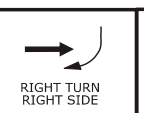
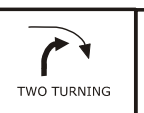
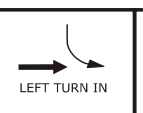
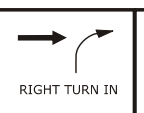
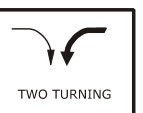

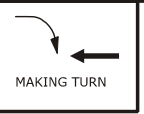
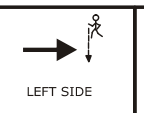
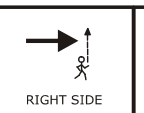
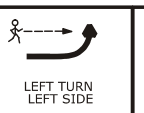
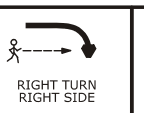
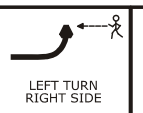
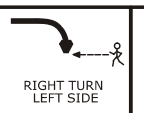



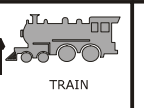
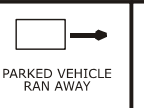

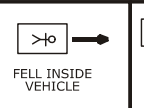
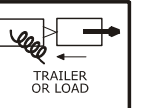


- Groupings of crash types
- Grouping of contributing factors

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

FACTORS PROBABLY CONTRIBUTING TO CRASHES

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 Visibly intoxicated non-driver (pedestrian / cyclist / passenger)
 - 106 Dead driver not suspected, tested negative (MOT only)
 - 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

- 180 **In line of traffic**
 - 181 Following too closely
 - 182 Travelling unreasonably slowly
 - 183 Motorist crowded cyclist

- 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
- 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

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 Car slowing, stopping or stopped 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
 - 358 Cigarette, radio, glove box etc, obj under drivers feet/pedals etc
 - 359 Cell phone / navigation device or any communications device
 - 360 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 strange vehicle
 - 404 Overseas driver fails to adjust to local 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
 - 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 etc
 - 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 blowout
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 from school bus
730 Pedestrian behind reversing / manoeuvring vehicle
731 Overseas pedestrian

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**