

Auckland Region

Road Safety Report

2005 to 2009



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



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

Web: www.nzta.govt.nz

June 2010

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 X
Fig. 1.5–1.8	Crashes per 100 million vehicle kilometres travelled on: Urban council roads Group X Rural council roads Group X Urban state highways Group X Rural state highways Group X
Fig. 1.9	Crashes per 10,000 people (2000 to 2009)
Fig. 1.10	Casualties per 10,000 people (2000 to 2009)
Fig. 1.11	Social cost of crashes in Auckland Region in 2009

Crash counts

page 17

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

Road user statistics

page 25

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

List of figures continued

Road user statistics

page 25

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

Crash type statistics

page 41

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

Crash factor statistics

page 47

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

Environmental statistics

page 57

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

Date and time statistics

page 67

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

List of figures continued

Council road statistics

page 71

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

Crash location statistics

page 89

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

Introduction and general information

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

This report helps identify road safety issues in Auckland Region area ('the region') 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 Region. Comparison with other cities, districts or regions elsewhere in the country is included.

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

Source of crash information

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

Council authority peer groups

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

The peer group used for comparison with Auckland Region is Group X which consists of major urban area with associated provincial towns and hinterland. (Population over 1250000 and/or rural crashes less than 30 percent). Council authorities included in this group are listed in Figure 1.4.

Definitions of urban and rural

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

Definition of statistically significant

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

Road user compliance data

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

The appropriate web addresses are as follows:

Speed Surveys	http://www.transport.govt.nz/research/SpeedSurveys/
Safety belts	http://www.transport.govt.nz/research/safetybeltstatistics/
Cycle helmets	http://www.transport.govt.nz/research/cyclehelmets2009/

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

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

The results of these surveys are available from:

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

General explanatory notes

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

6. The severity of a crash is determined as the most severely injured casualty in the crash. Injury severity is classified as fatal, serious, or minor as follows:
 - Fatal:** Injuries that result in death within 30 days of a crash.
 - Serious:** Fractures, concussion, internal injuries, crushing, severe cuts and lacerations, severe general shock necessitating medical treatment, and any injury involving removal to and detention in hospital.
 - Minor:** Injuries which are not serious but which require first aid, or cause discomfort or pain to the person injured, eg sprains and bruises.

7. Ethnicity of road users involved in crashes can now be recorded on traffic crash reports, although some reports may not include this data. Figures 3.25 and 3.26 shows the ethnicity of casualties, where known. Ethnicity is divided into five different groups. Only data for 2005 to 2009 is available. The graph includes all casualties irrespective of culpability.

NOTE: Ethnicity data should be treated with caution as the data can be considered subjective and incomplete.

8. For the licence status grouping in Figures 3.27 and 3.28 the 'no/wrong licence' group includes drivers who have never held a licence or have an expired or wrong class licence. This graph includes all drivers irrespective of injury or culpability.

9. See appendix for detailed descriptions of:
 - crash movement types and crash movement groupings (for Figures 4.1–4.4)
 - grouping of factors contributing to crashes (for Figures 5.1–5.14)

10. Blackspot sites listed in Figures 9.1 and 9.3 are listed by the total cost of crashes at the site and are listed regardless of any remedial treatments. Site were initially selected on the basis of 3 reported crashes and then the sites listed were limited to those with a higher number of injury crashes and over a defined social cost, which is indicated on each figure.

11. Alarm crash sites in section 9 as Figures 9.4 to 9.6 are crash sites that have shown a statistically significant increase (at the 95 percent level of confidence) in reported crashes in 2009 compared with the previous five years (2004 to 2008). The sites are initially selected on the basis of 3 or more reported crashes at the sites. Sites are listed regardless of any recent remedial treatments and they may already be under investigation for treatment.

Crash Rates and Costs

Crash reporting rates

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

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

Figure 1.1 Reporting rate serious injuries to hospital admissions

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

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 Region	33	29	40	14
Group X	36	29	36	13
All NZ	37	29	27	18

Figure 1.3 Casualties per 100 million vehicle kilometres travelled

	Council roads		State Highways	
	Urban	Rural	Urban	Rural
Auckland Region	42	41	53	19
Group X	46	41	48	19
All NZ	46	42	36	26

Figure 1.4 Peer group crash and casualty rates

Regions

Region name	Crashes per					Casualties per					2009 Population	% of rural crashes
	10,000 Population (5 year average)	100 million vehicle kilometres travelled				10,000 Population (5 year average)	100 million vehicle kilometres travelled					
		Council roads		State Highways			Council roads		State Highways			
		Urban	Rural	Urban	Rural		Urban	Rural	Urban	Rural		
Auckland	23	33	29	40	14	29	42	41	53	19	1454200	28
Bay of Plenty	16	28	29	17	17	22	35	43	24	27	371020	48
Gisborne	27	31	21	28	28	38	41	31	38	44	46200	47
Hawkes Bay	32	46	30	37	24	44	57	45	48	38	153270	47
Manawatu Wanganui	27	39	25	31	18	38	47	37	42	28	230000	54
Nelson Marlborough	25	39	23	22	20	33	47	35	27	29	136800	52
Southland	91	71	32	57	24	138	102	50	77	39	45330	50
Greater Wellington	27	41	37	32	14	34	49	50	43	20	386480	27
Canterbury	51	41	22	24	14	67	51	31	31	21	278450	30
Chathams	1109	n/a	n/a	n/a	n/a	91	n/a	n/a	n/a	n/a	640	n/a
Northland	26	34	34	20	22	39	43	49	32	39	185900	71
Otago	47	73	43	47	21	69	103	65	65	33	186150	45
Taranaki	28	45	31	30	22	39	58	45	38	33	108240	53
Waikato	32	40	29	22	19	45	50	39	31	30	384870	58
West Coast	38	35	24	20	22	55	48	34	30	33	32590	77
All New Zealand	26	38	29	28	18	36	48	42	38	26	4331000	41

N/A : Denotes that data for vehicle kilometres travelled (VKT) is not available or inappropriate for some categories.

Crashes and casualties per 100 million VKT are based on five years of reported injury on-road crash data (2005-2009) and December 2009 VKT estimates.

Crashes and casualties per 10,000 population are based on five year average crash data (2005-2009) and Statistics NZ 2009 population estimates.

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

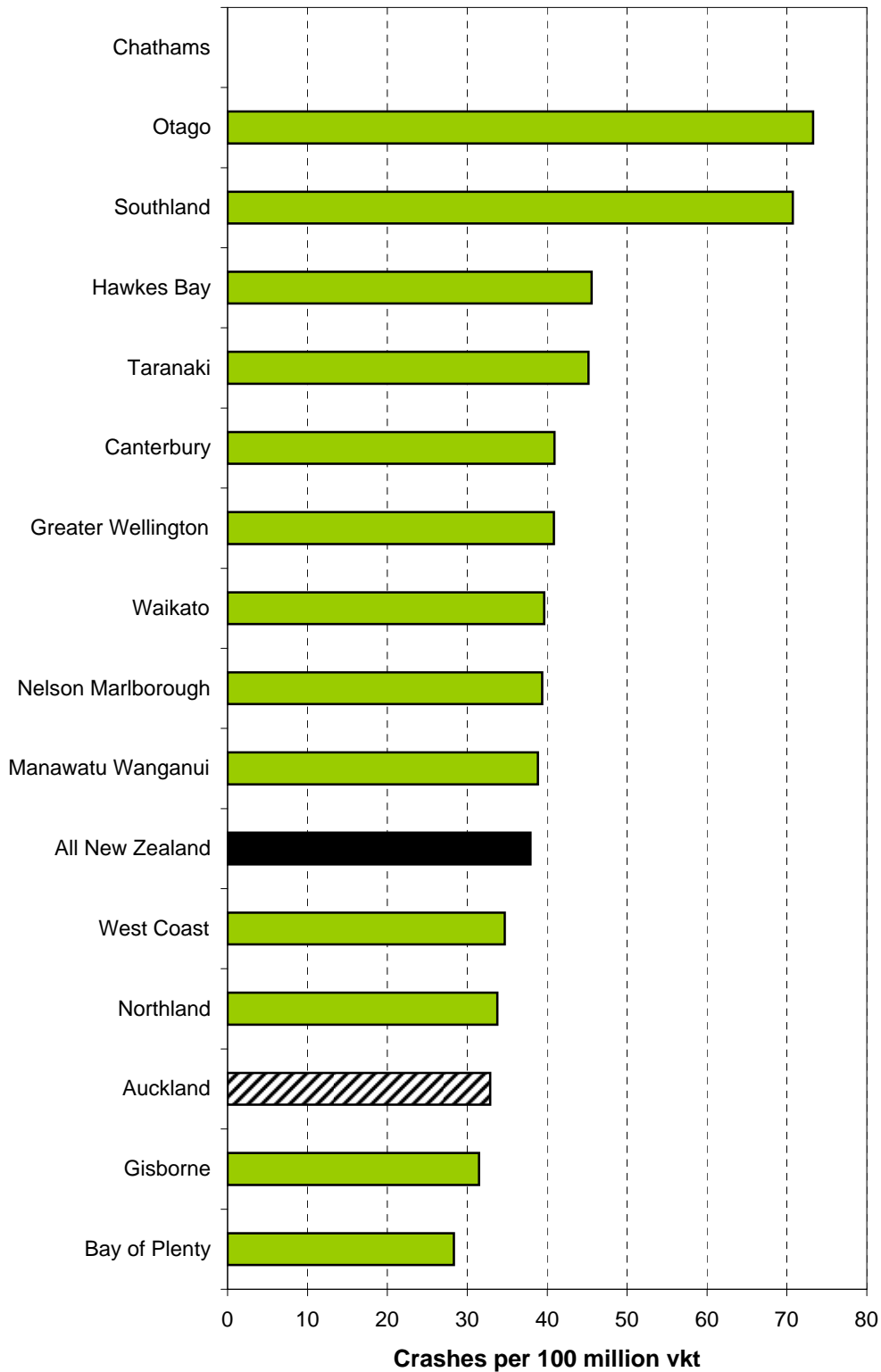


Figure 1.6 Crashes per 100 million vehicle-kilometres travelled - rural council roads

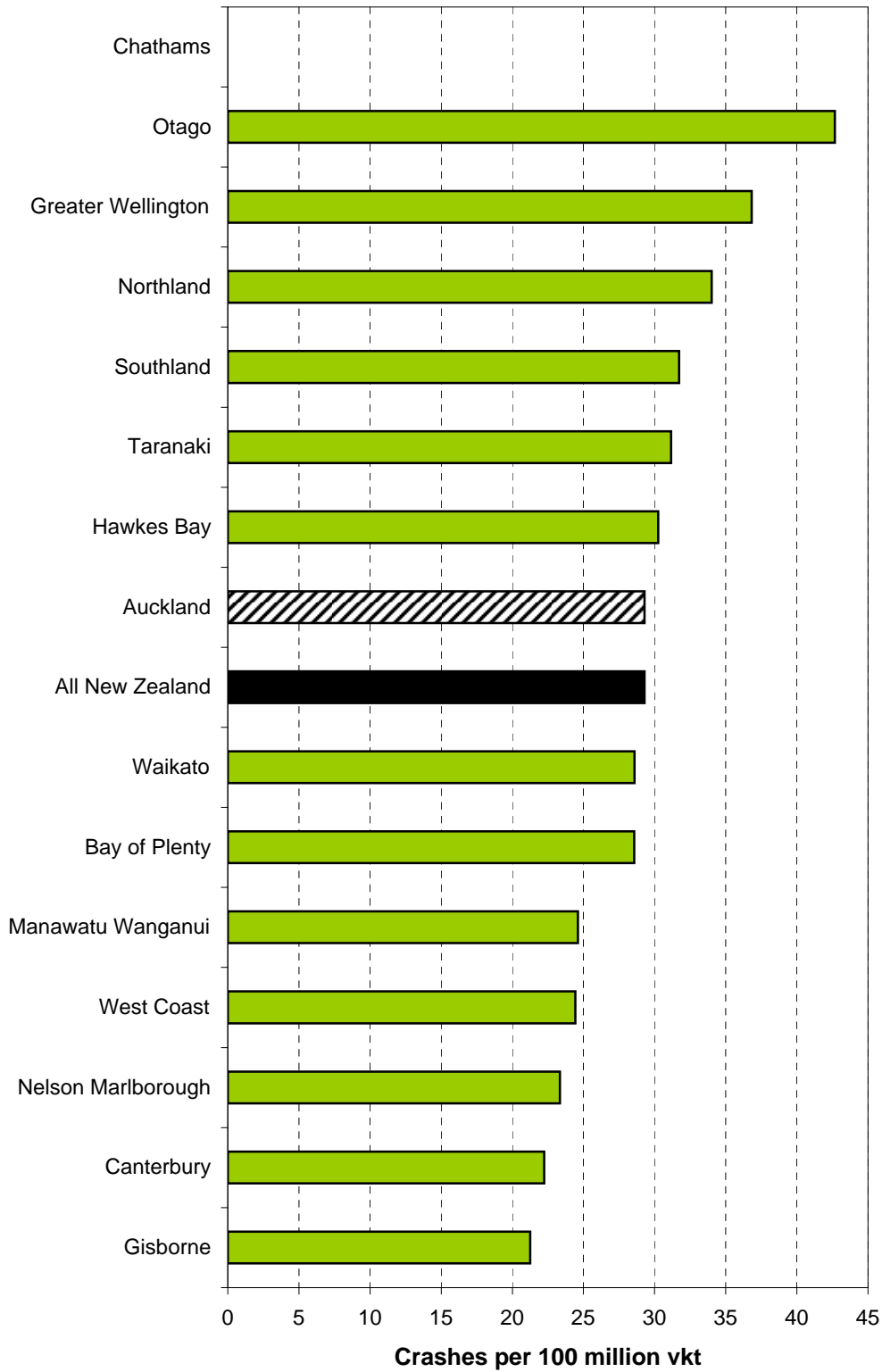
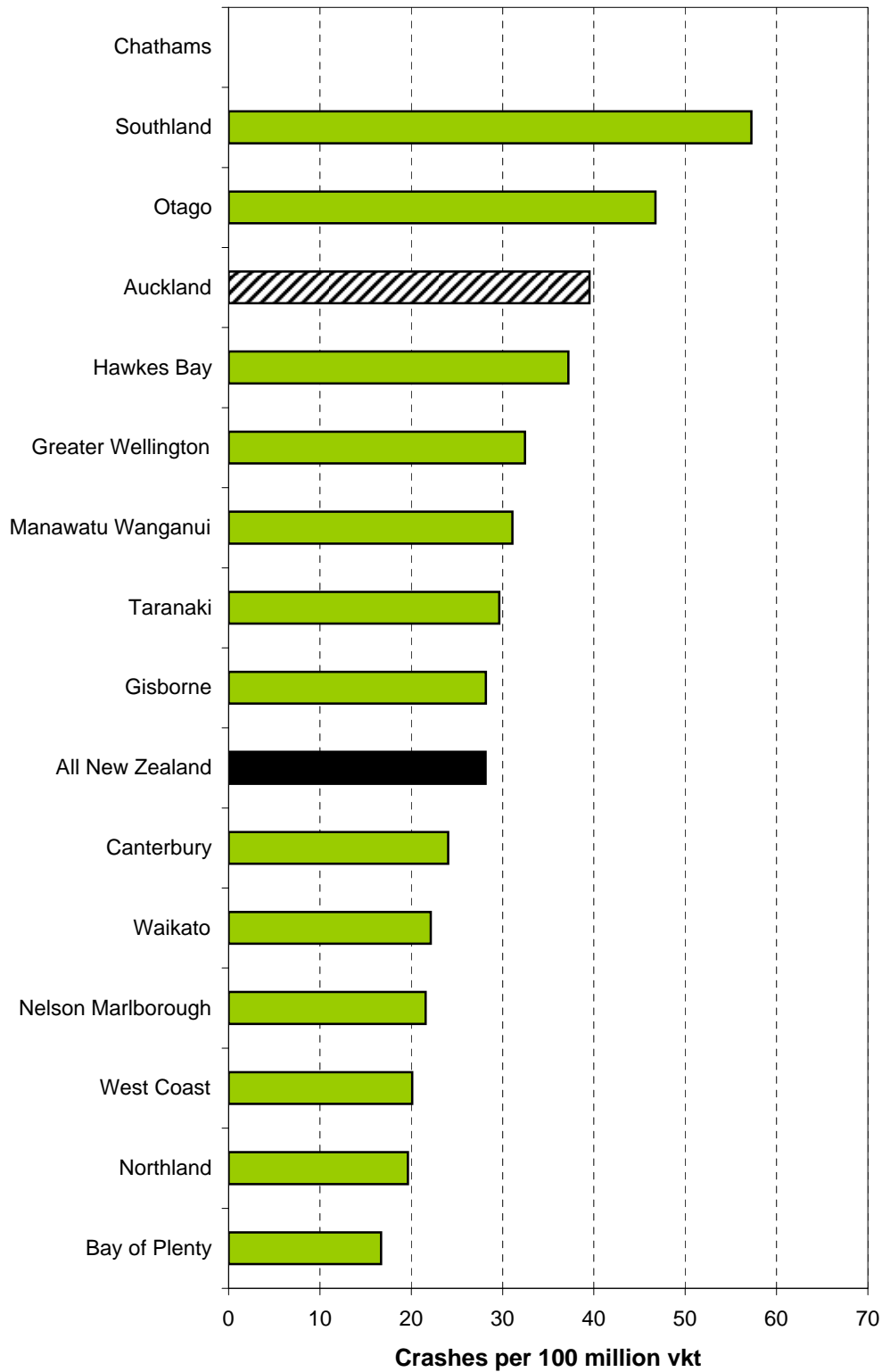
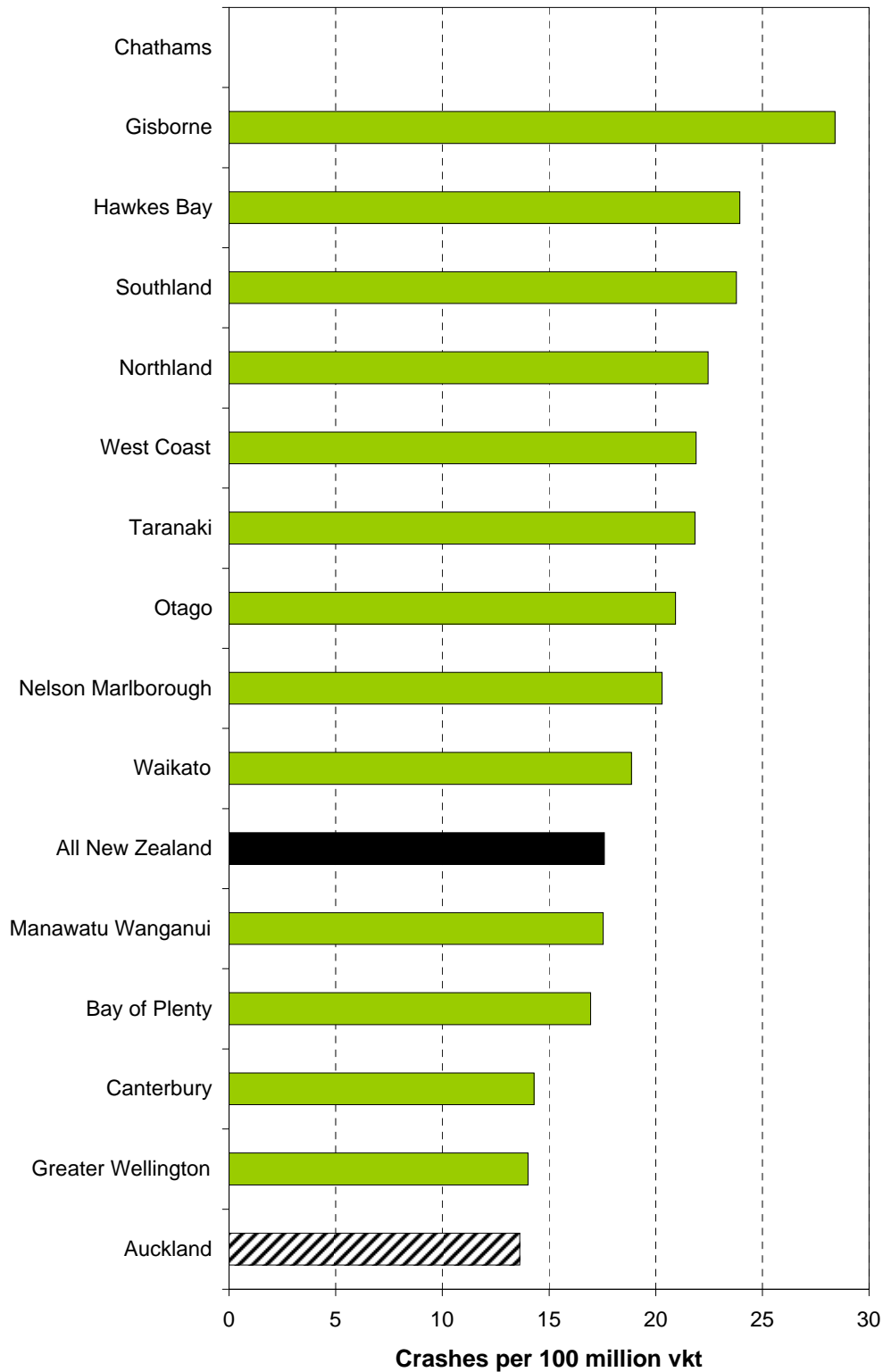


Figure 1.7 Crashes per 100 million vehicle kilometres travelled - urban state highways



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



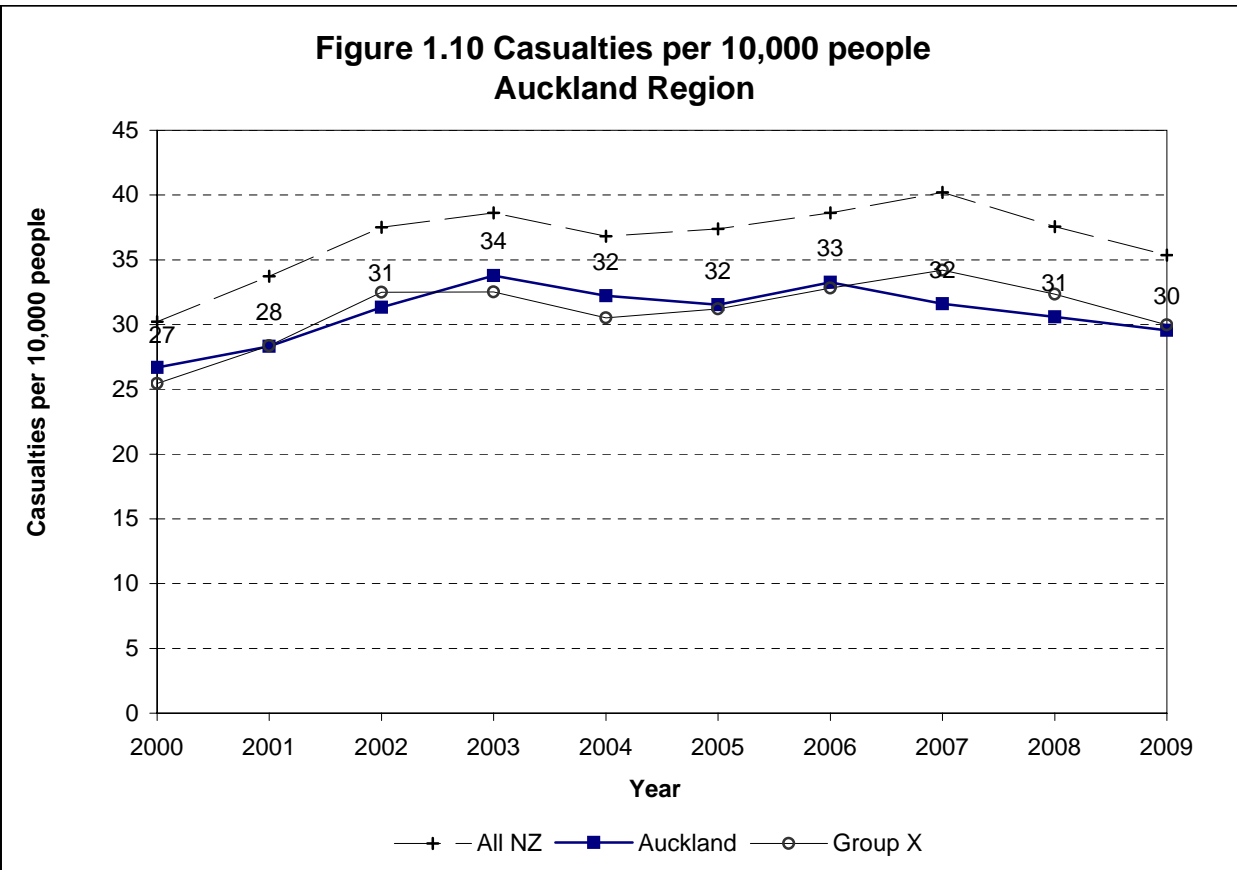
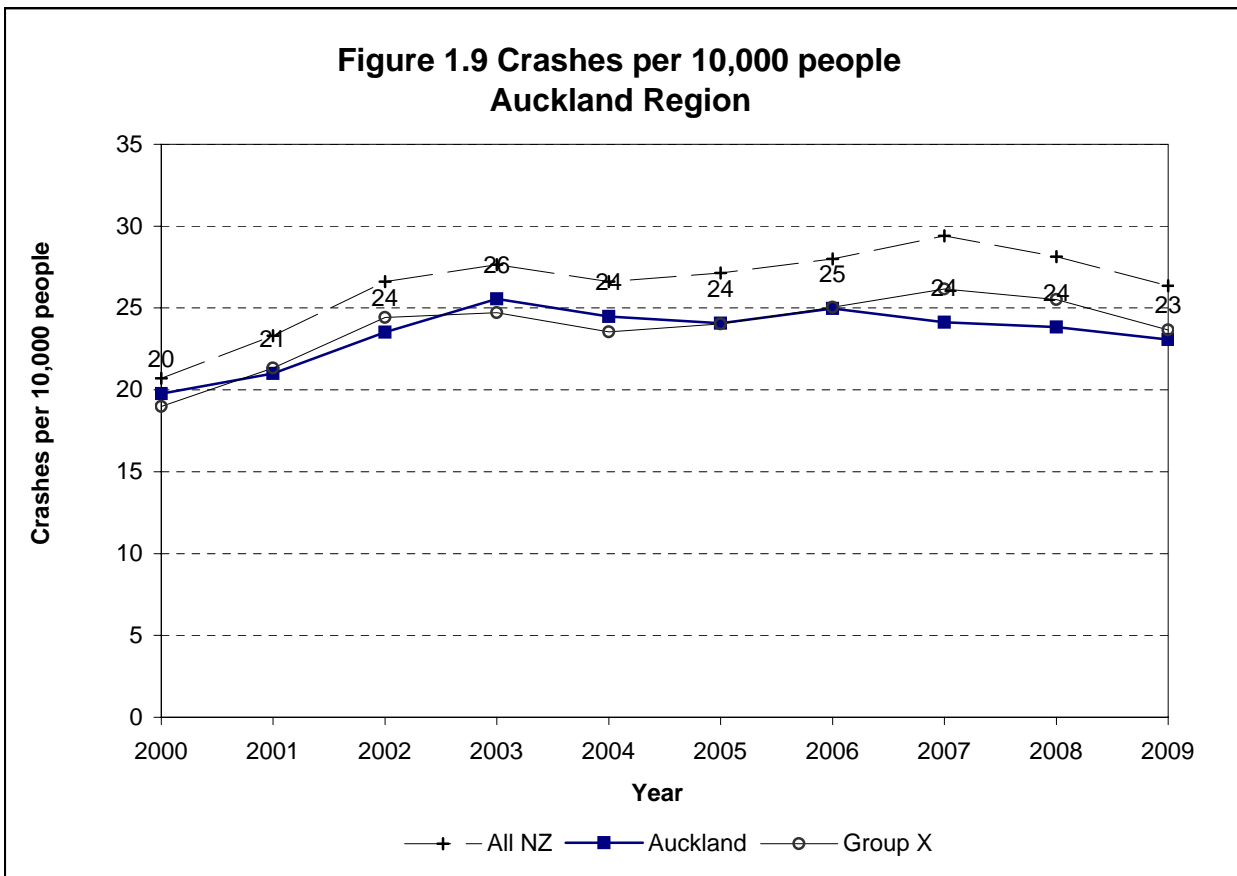


Figure 1.11 Social cost of crashes in Auckland Region in 2009

		Auckland Region	New Zealand
Council roads	urban	\$598.10	\$1,607.40
	rural	\$125.87	\$909.43
State Highways	urban	\$30.83	\$299.76
	rural	\$208.70	\$1,487.35
Total		\$963.50	\$4,303.94

Note: Crash costs are in \$ millions

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

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

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

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

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

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

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

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

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

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

Crash Counts

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

	2005	2006	2007	2008	2009	Total	%	Group X
Fatal crashes	66	74	49	45	63	297	2%	1%
Serious crashes	414	492	387	415	405	2113	13%	15%
Minor crashes	2640	2740	2815	2809	2748	13752	85%	83%
Total injury crashes	3120	3306	3251	3269	3216	16162	100%	100%
Non-injury crashes	10582	10531	10709	10356	9667	51845		

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

	2005	2006	2007	2008	2009	Total	%	Group X
Fatal crashes	31	42	24	19	35	151	1%	1%
Serious crashes	306	366	284	310	296	1562	13%	15%
Minor crashes	1933	2045	2055	2064	2031	10128	86%	84%
Total injury crashes	2270	2453	2363	2393	2362	11841	100%	100%
Non-injury crashes	8256	8215	8377	8192	7582	40622		

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

	2005	2006	2007	2008	2009	Total	%	Group X
Fatal crashes	35	32	25	26	28	146	3%	3%
Serious crashes	108	126	103	105	109	551	13%	16%
Minor crashes	707	695	760	745	717	3624	84%	81%
Total injury crashes	850	853	888	876	854	4321	100%	100%
Non-injury crashes	2326	2316	2332	2164	2085	11223		

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

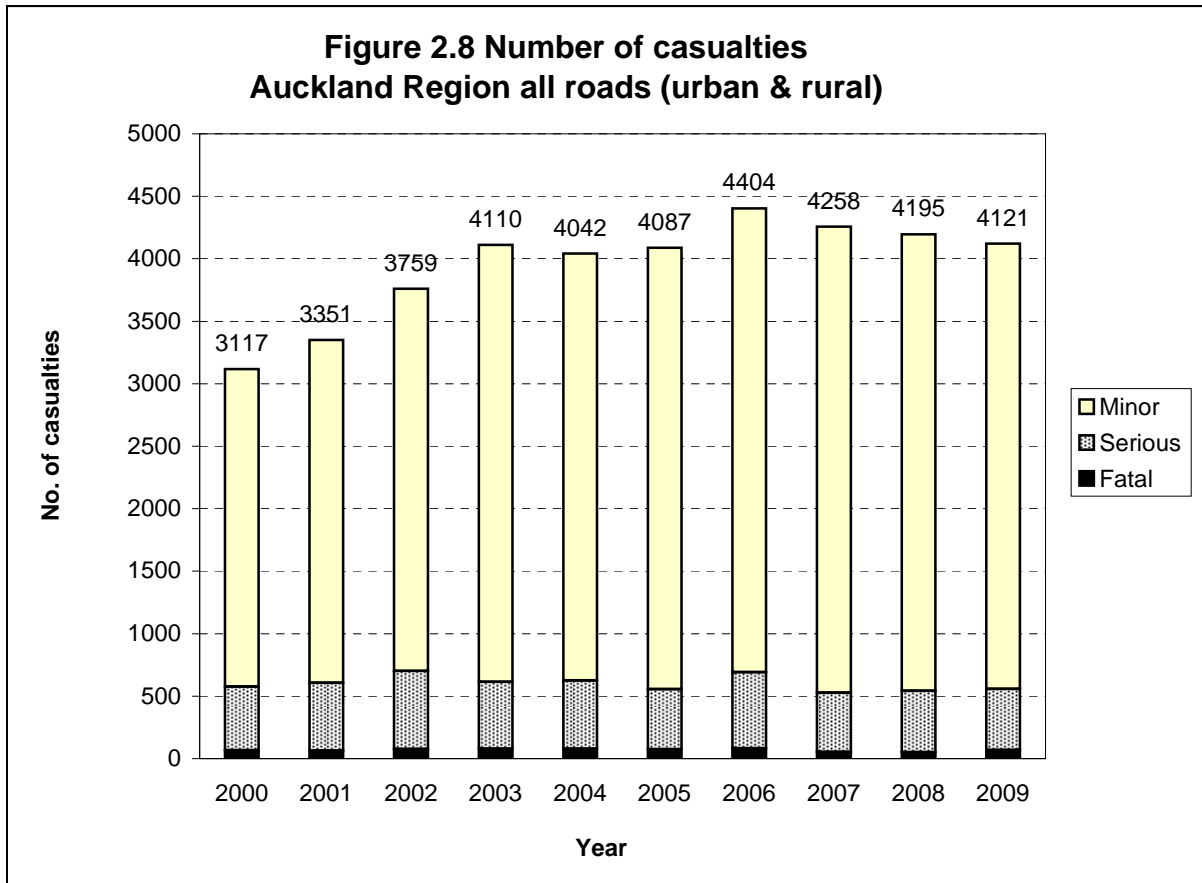
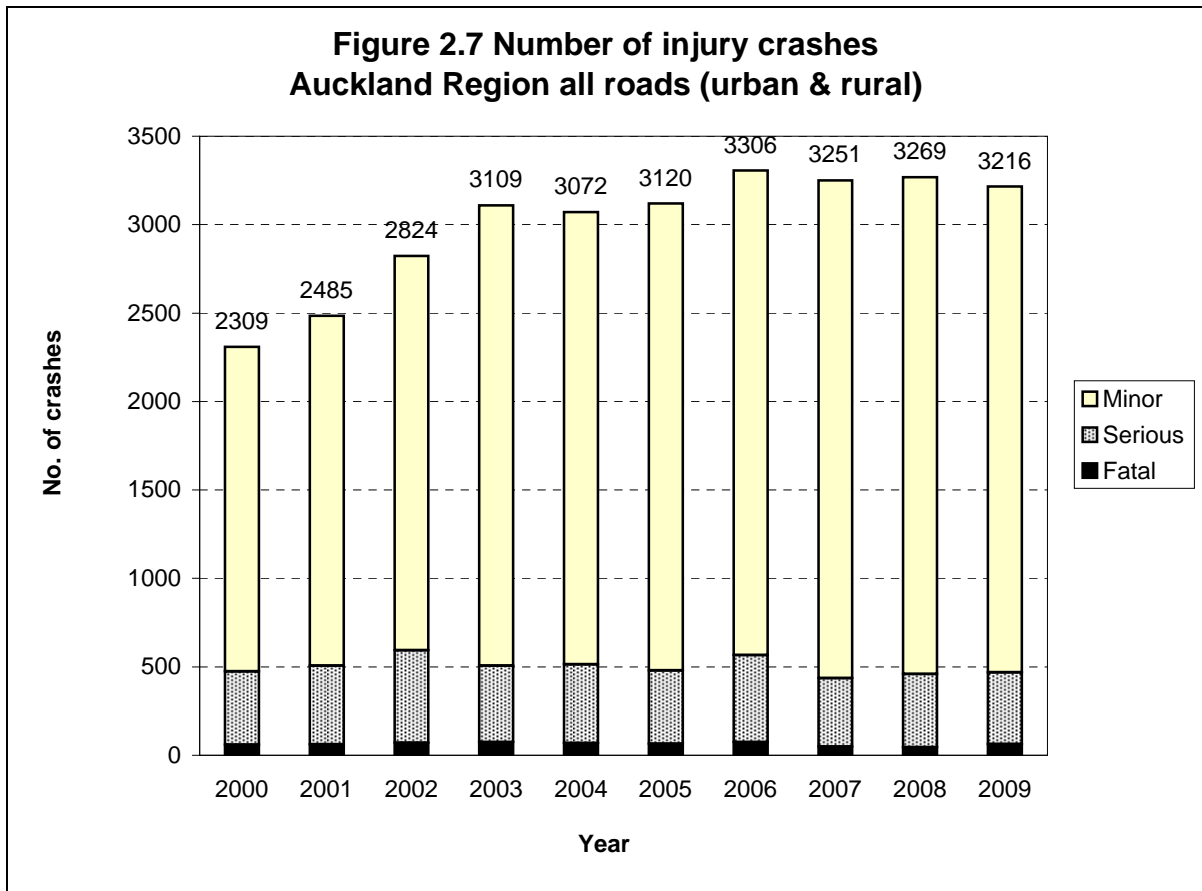
	2005	2006	2007	2008	2009	Total	%	Group X
Fatal casualties	74	81	54	51	68	328	2%	1%
Serious casualties	482	611	474	492	490	2549	12%	14%
Minor casualties	3531	3712	3730	3652	3563	18188	86%	85%
Total casualties	4087	4404	4258	4195	4121	21065	100%	100%

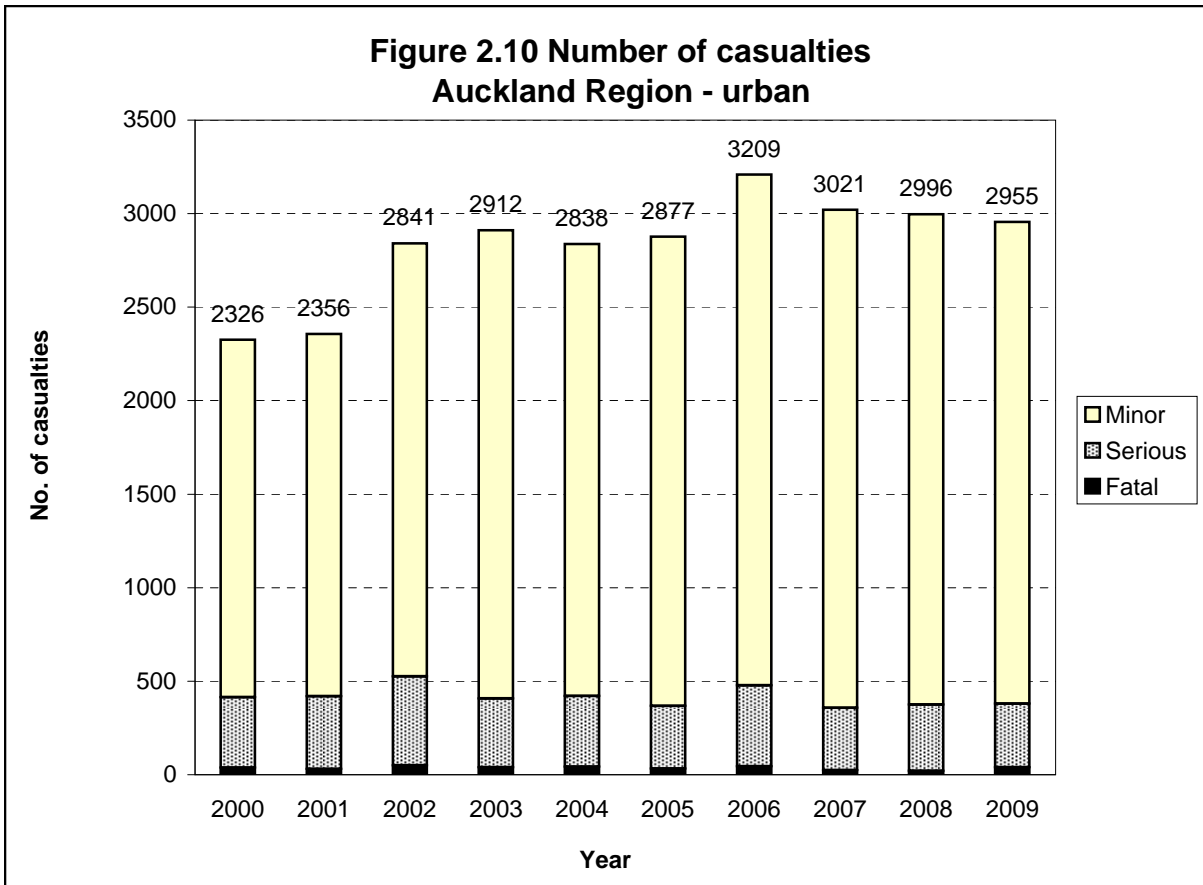
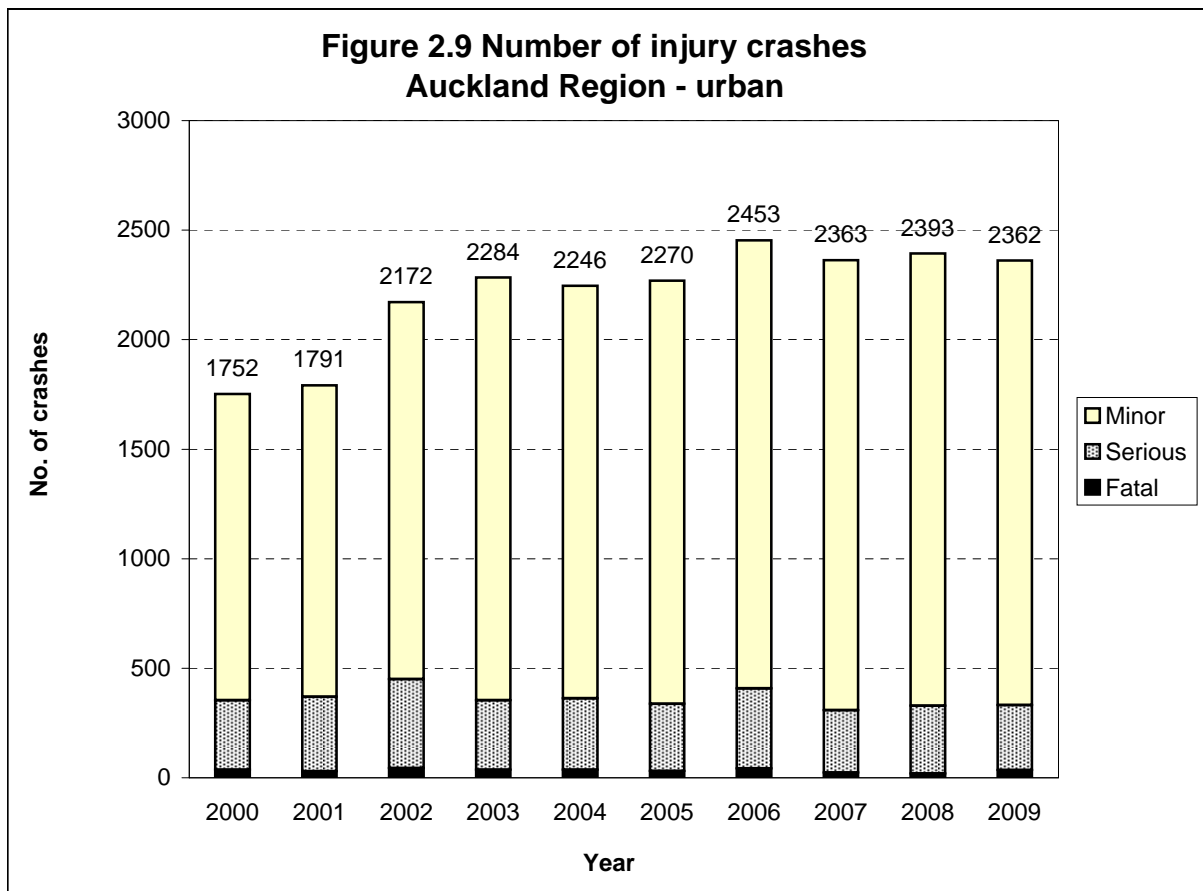
Figure 2.5: Casualty numbers and severity 2005 to 2009 - urban roads

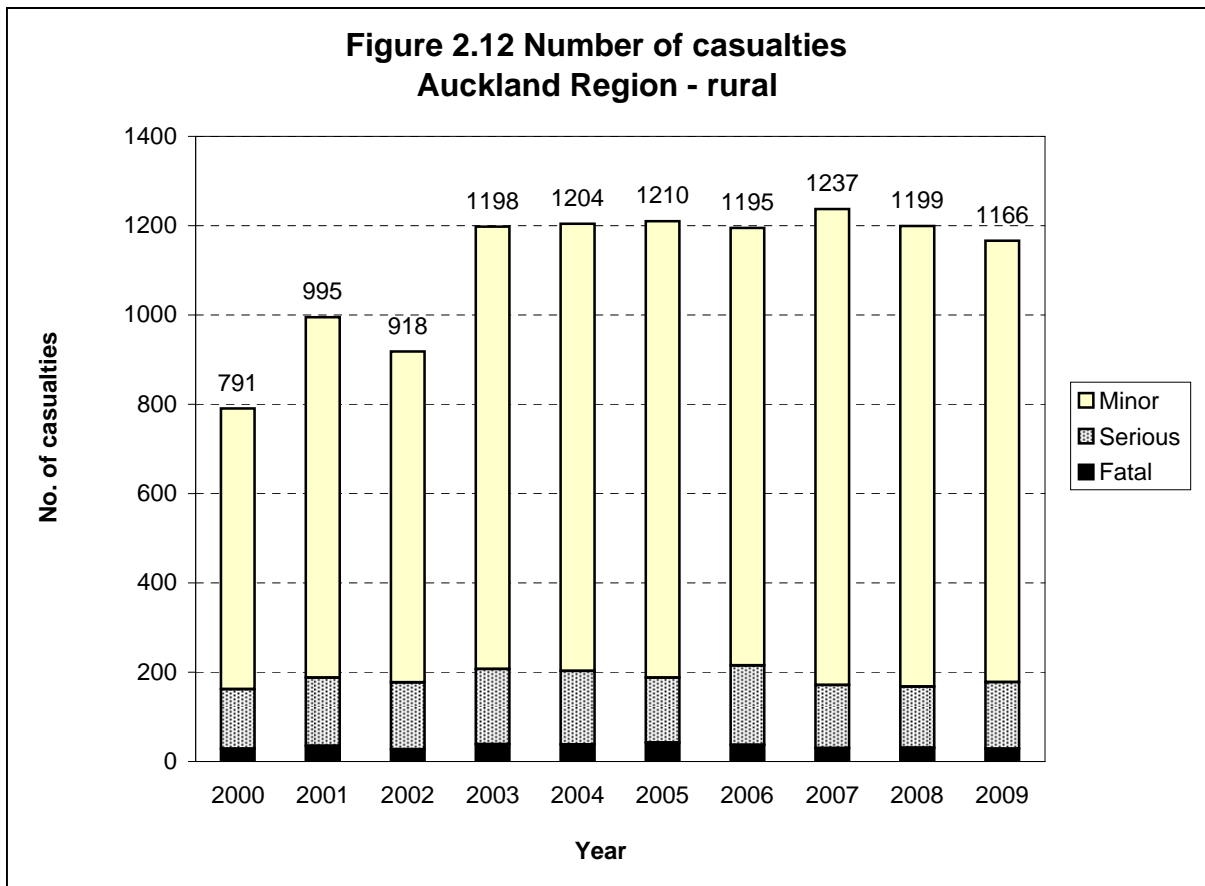
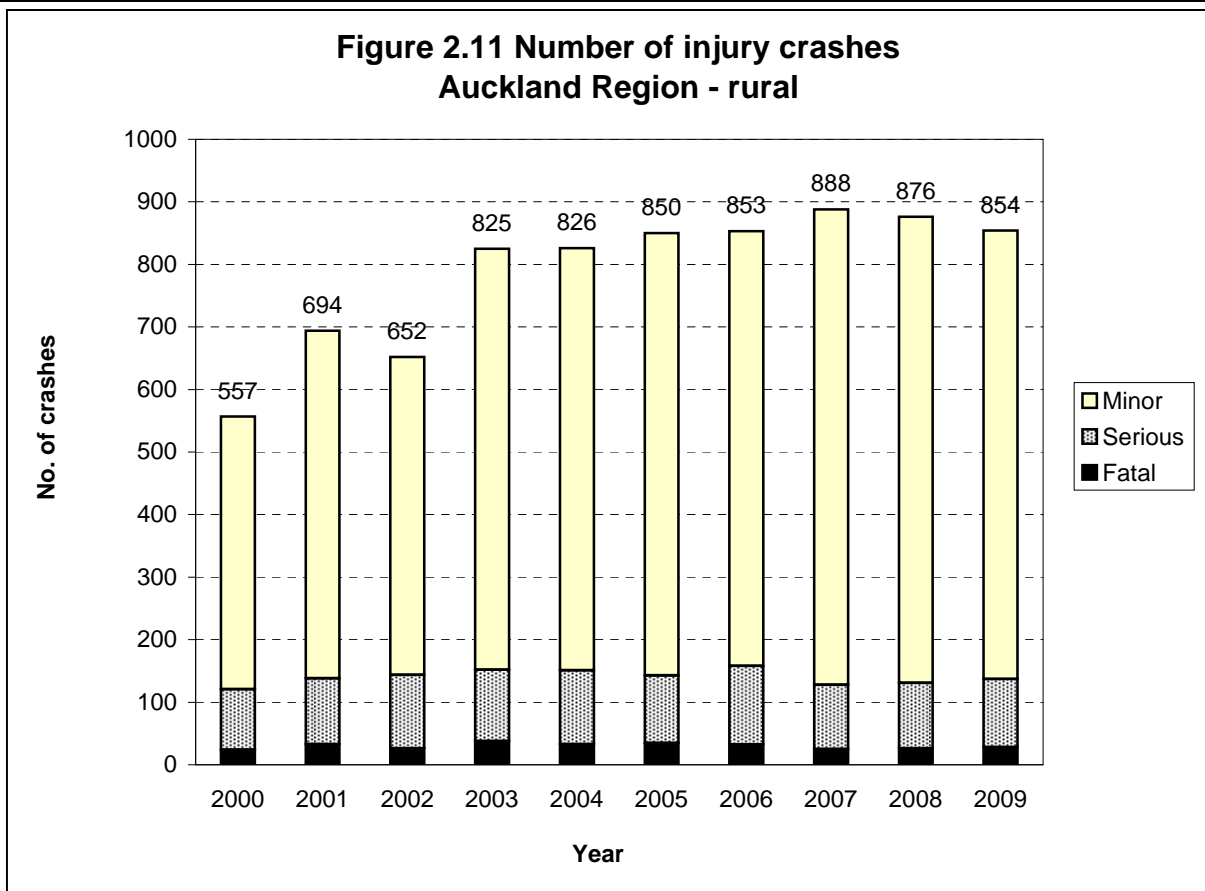
	2005	2006	2007	2008	2009	Total	%	Group X
Fatal casualties	32	44	24	20	39	159	1%	1%
Serious casualties	336	433	333	355	341	1798	12%	13%
Minor casualties	2509	2732	2664	2621	2575	13101	87%	86%
Total casualties	2877	3209	3021	2996	2955	15058	100%	100%

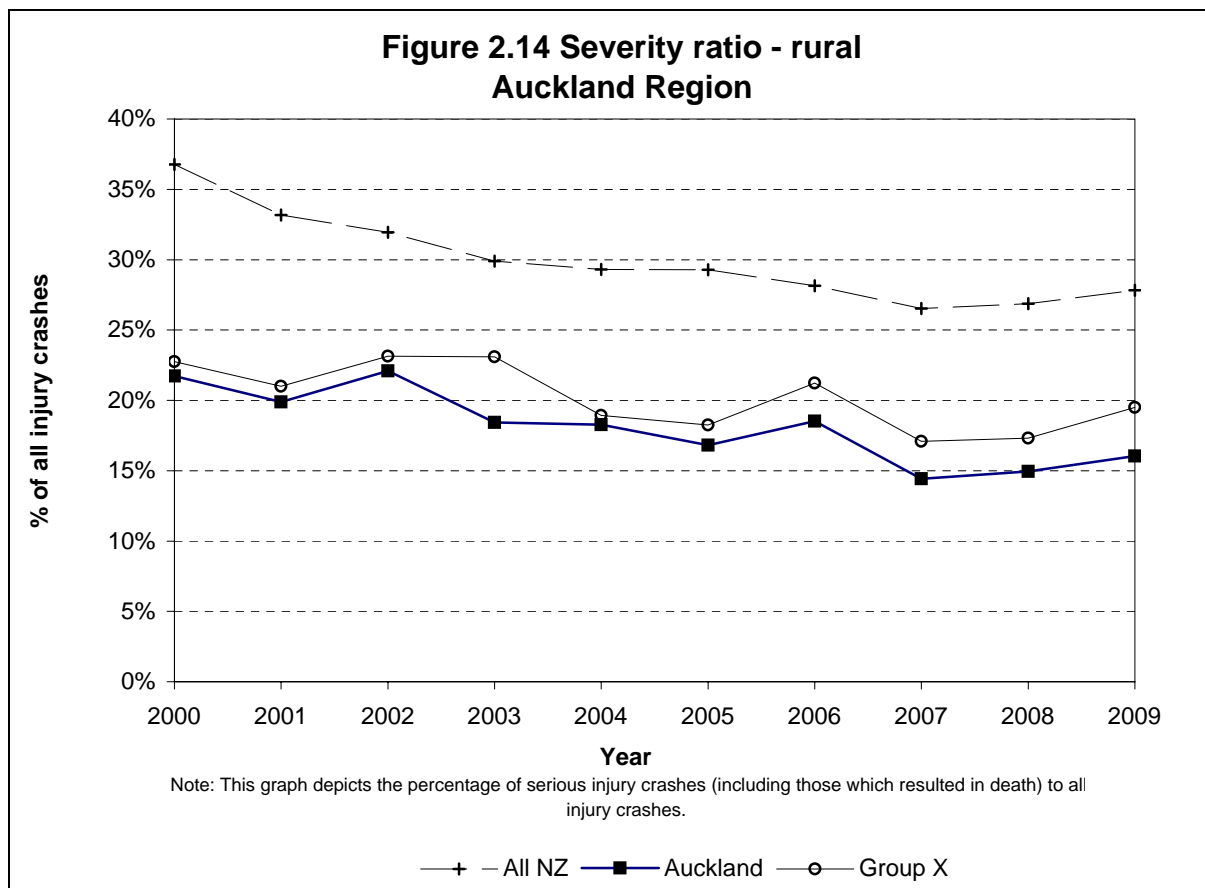
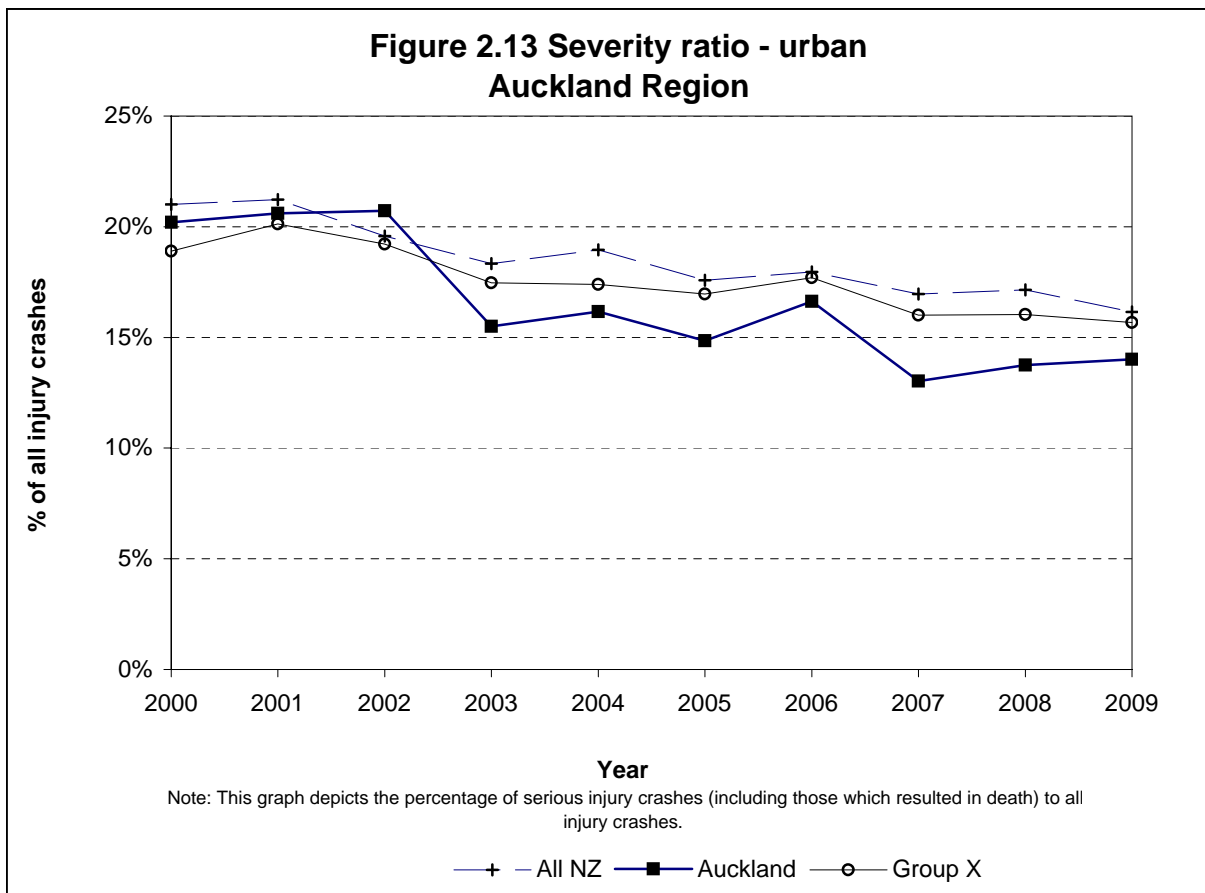
Figure 2.6: Casualty numbers and severity 2005 to 2009 - rural roads

	2005	2006	2007	2008	2009	Total	%	Group X
Fatal casualties	42	37	30	31	29	169	3%	2%
Serious casualties	146	178	141	137	149	751	13%	15%
Minor casualties	1022	980	1066	1031	988	5087	85%	83%
Total casualties	1210	1195	1237	1199	1166	6007	100%	100%



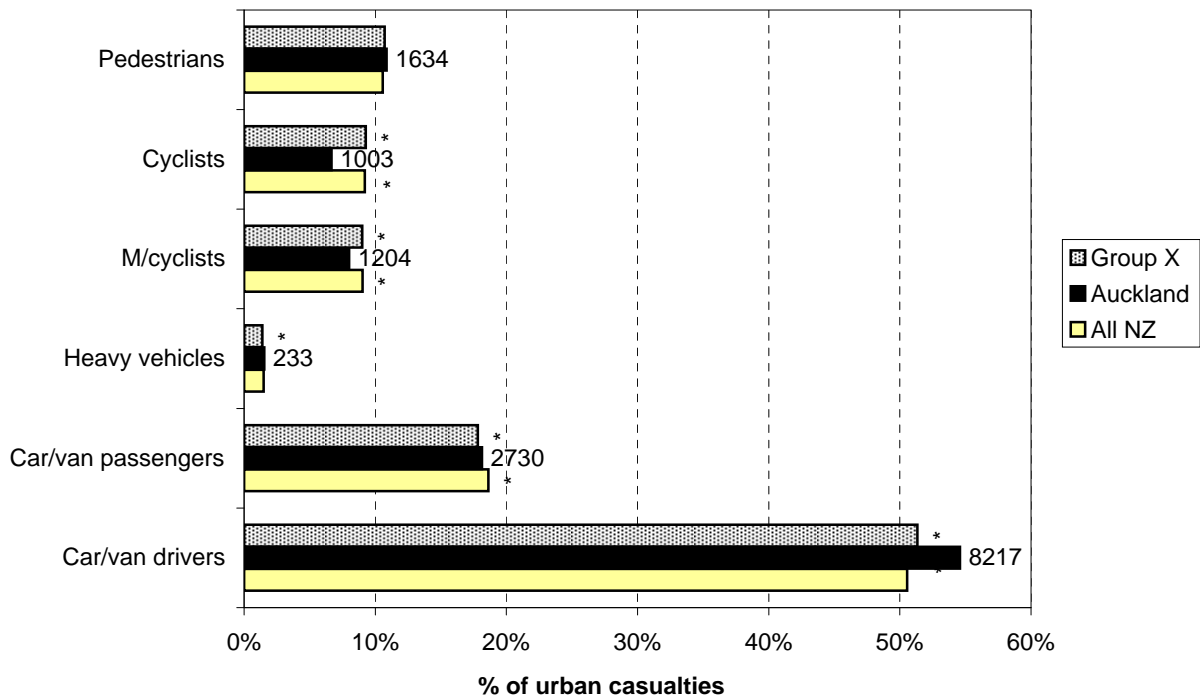






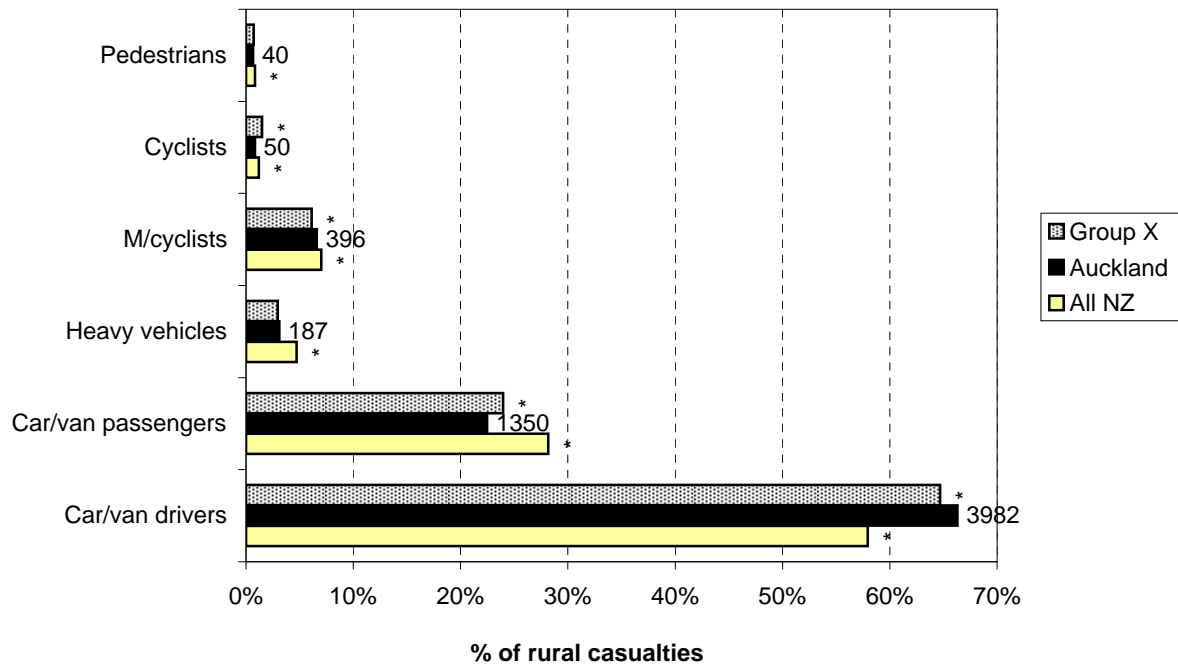
Road User Statistics

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



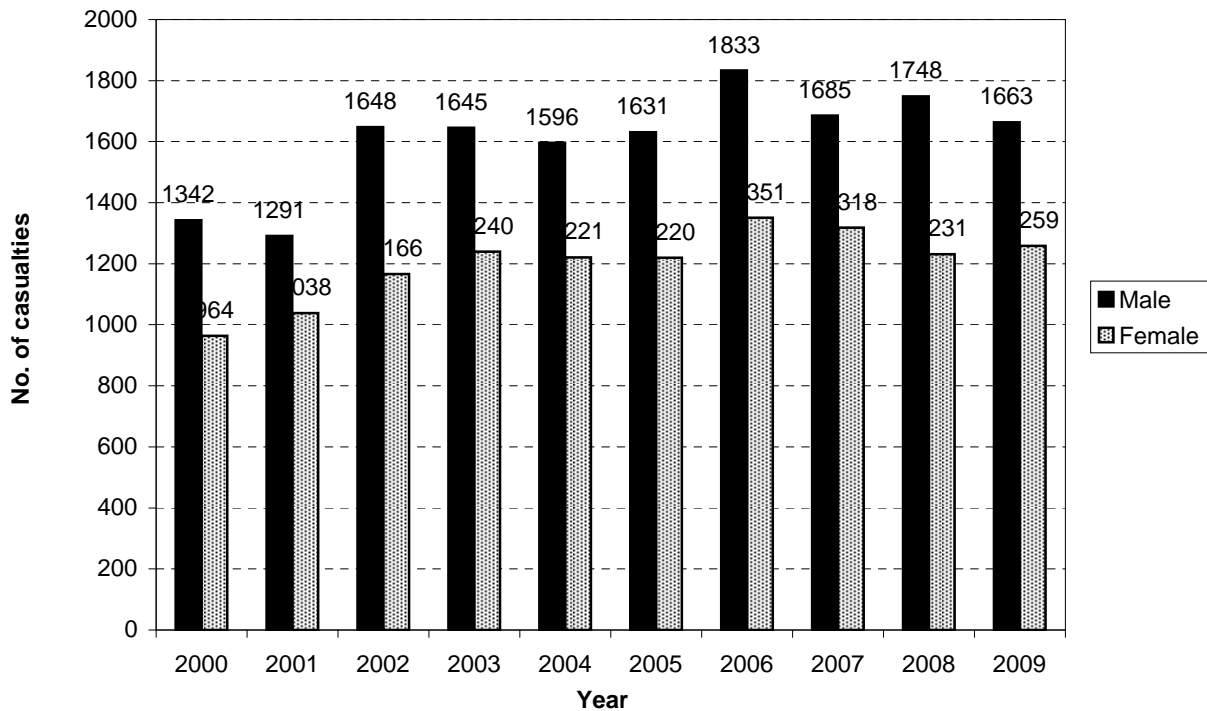
Note: While the graph plots percentages, the number of casualties is shown against the data points.
*Denotes statistically significant difference between Local Authority and National or Peer Group Proportions

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



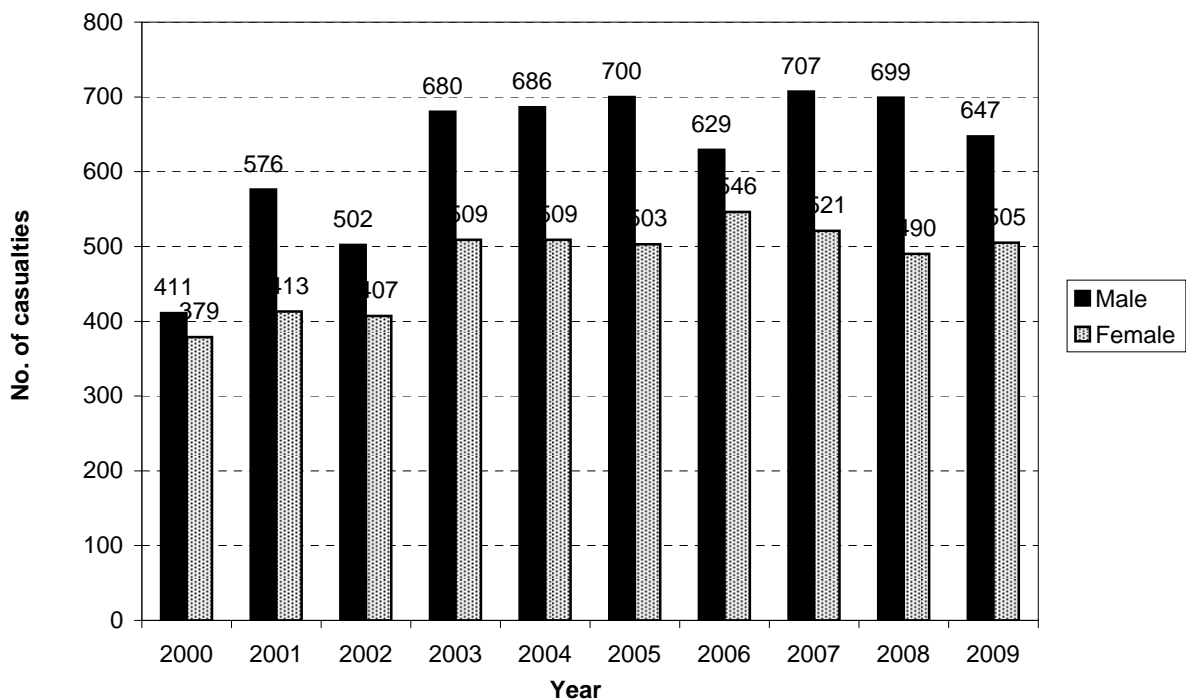
Note: While the graph plots percentages, the number of casualties is shown against the data points.
*Denotes statistically significant difference between Local Authority and National or Peer Group Proportions

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



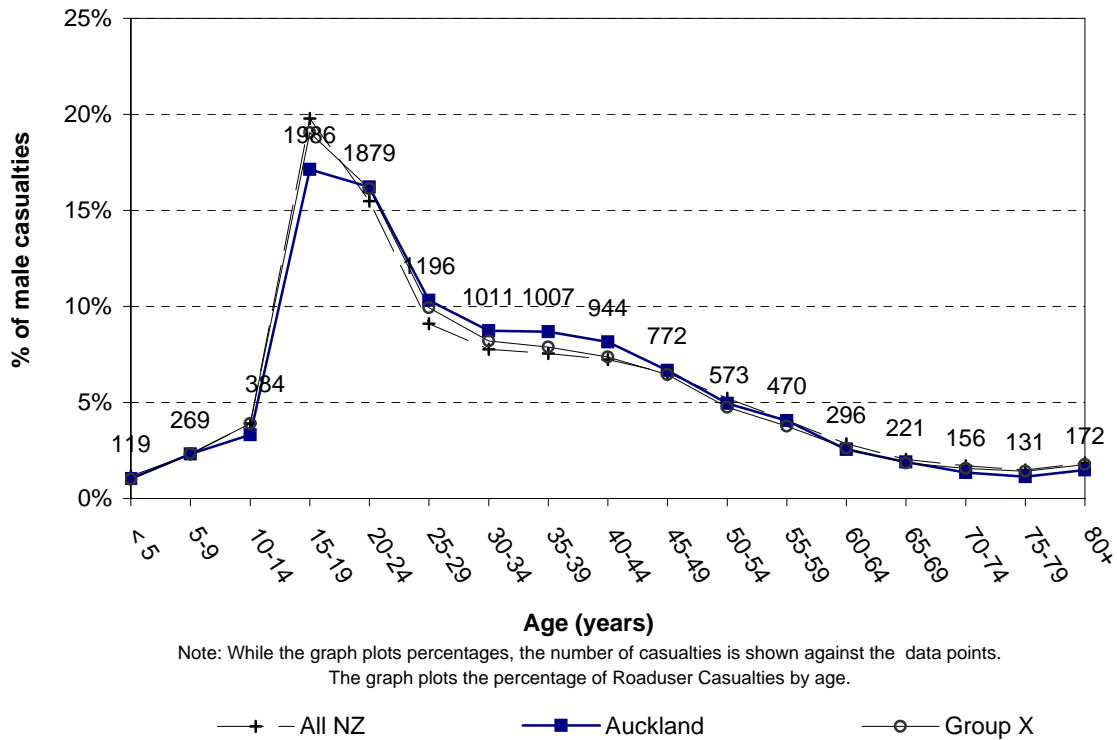
Note: This graph shows the number of male and female roadusers injured

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

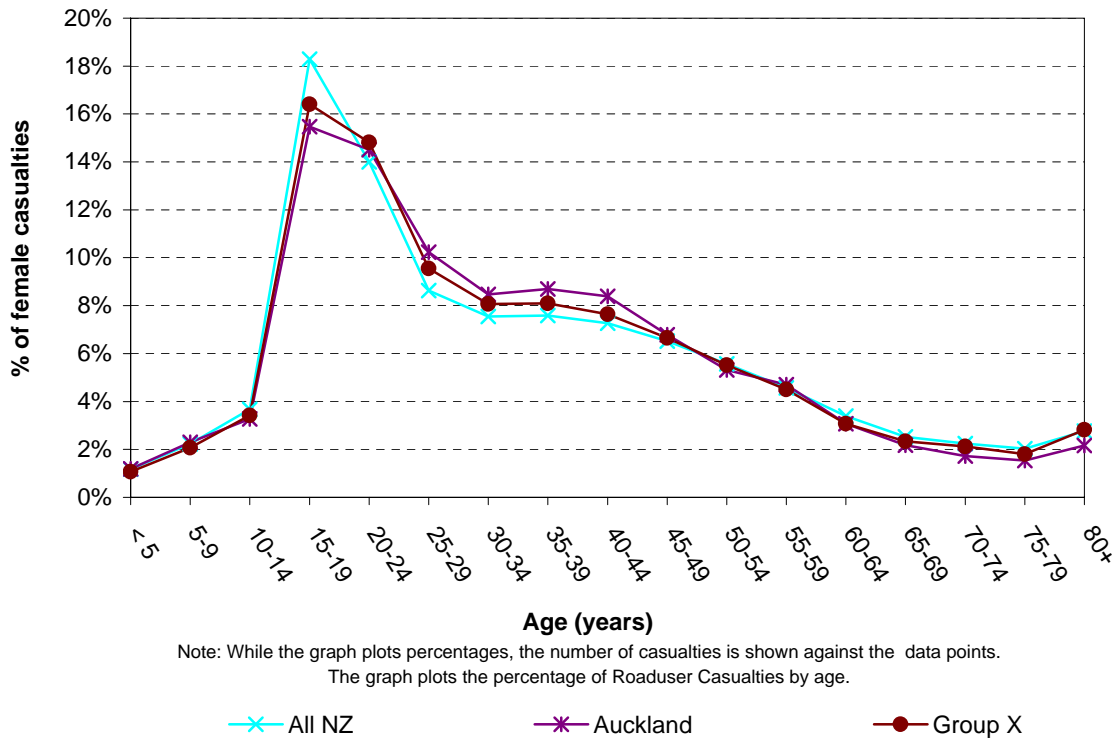


Note: This graph shows the number of male and female roadusers injured

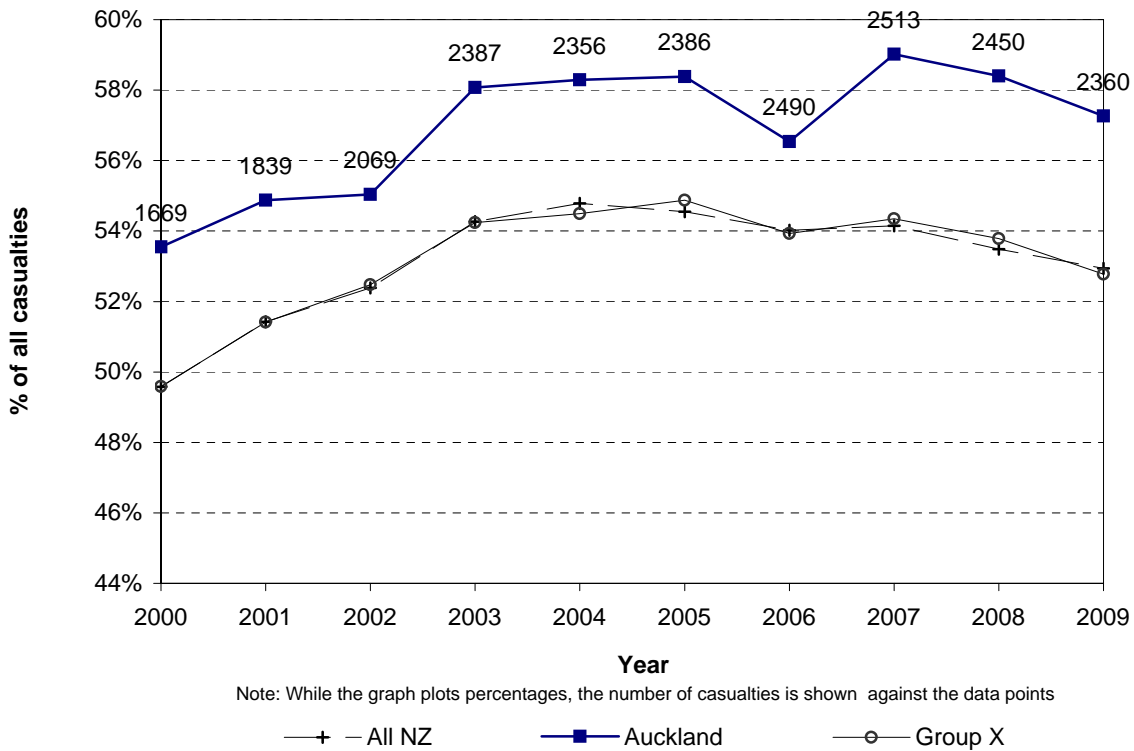
**Figure 3.5 Male casualties by age
Auckland Region (2005-2009)**



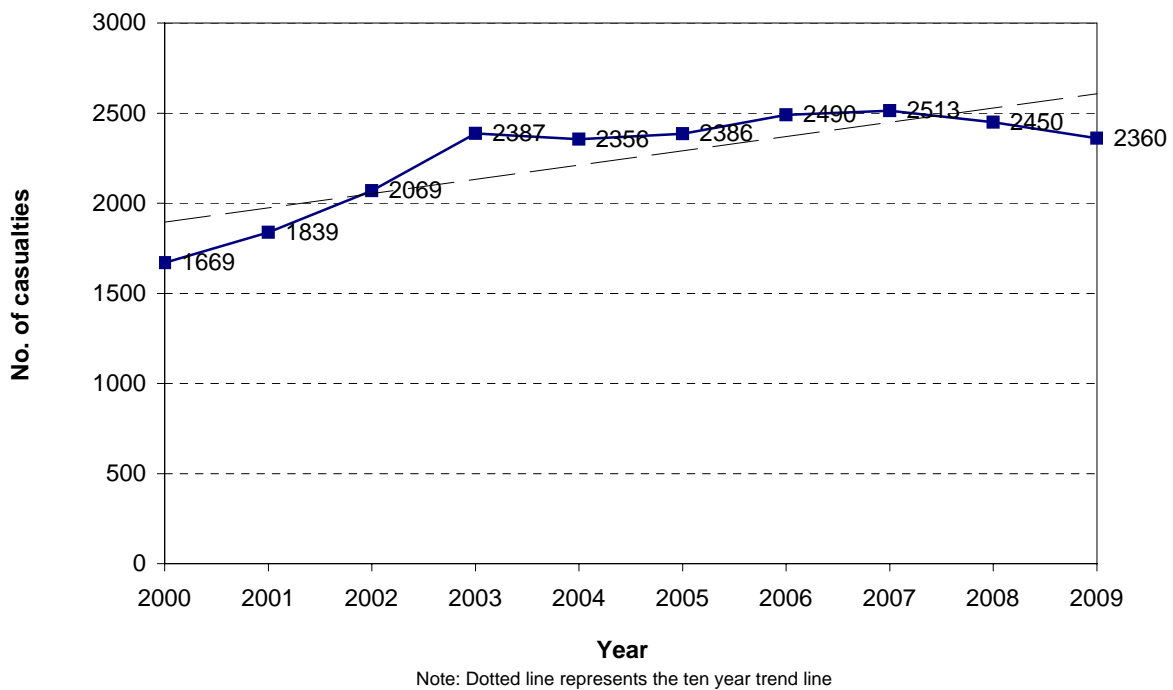
**Figure 3.6 Female casualties by age
Auckland Region (2005-2009)**



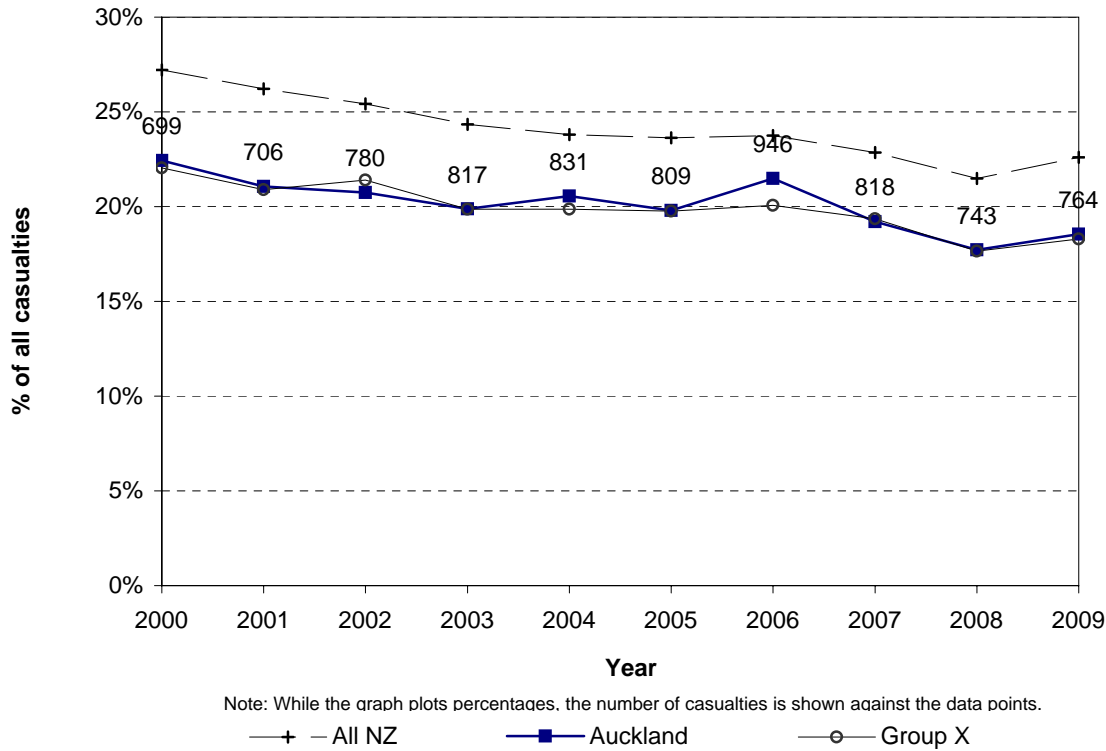
**Figure 3.7 Car/van driver casualties
Auckland Region**



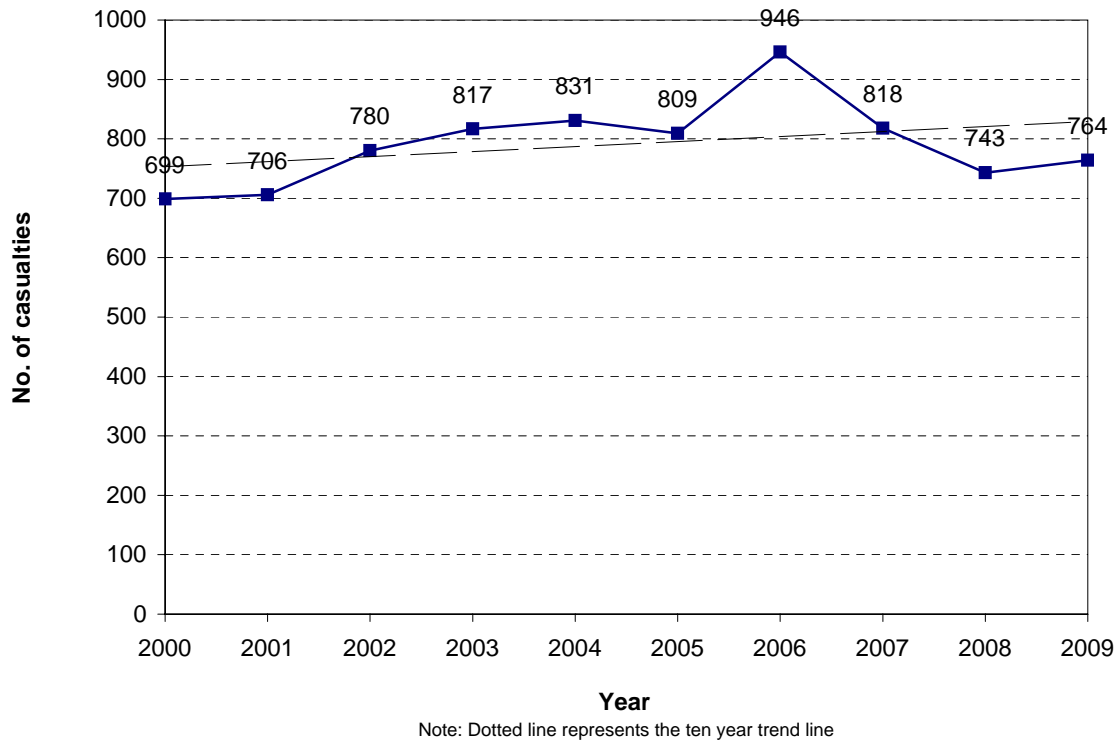
**Figure 3.8 Car/van driver casualties
Auckland Region**



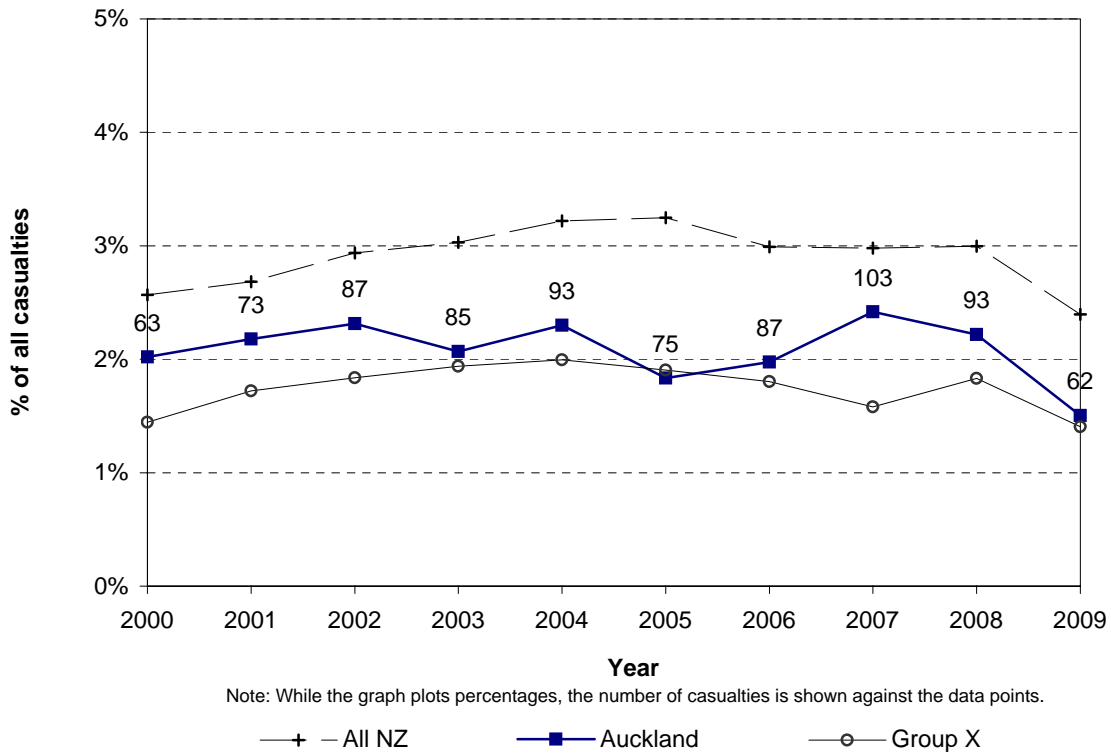
**Figure 3.9 Car/van passenger casualties
Auckland Region**



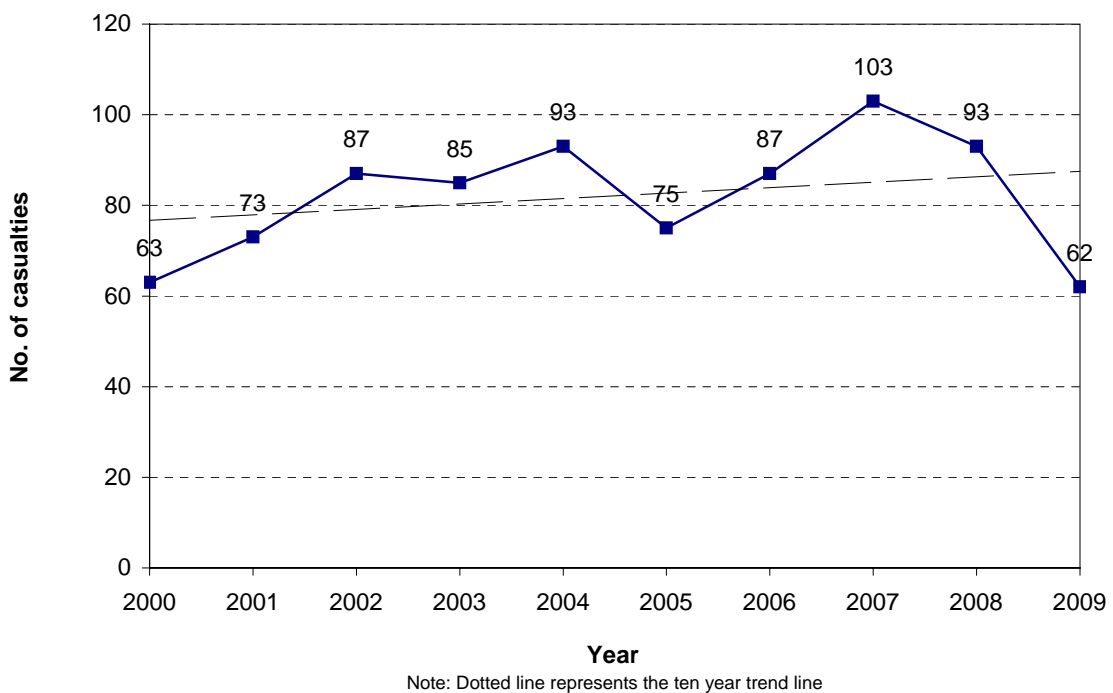
**Figure 3.10 Car/van passenger casualties
Auckland Region**



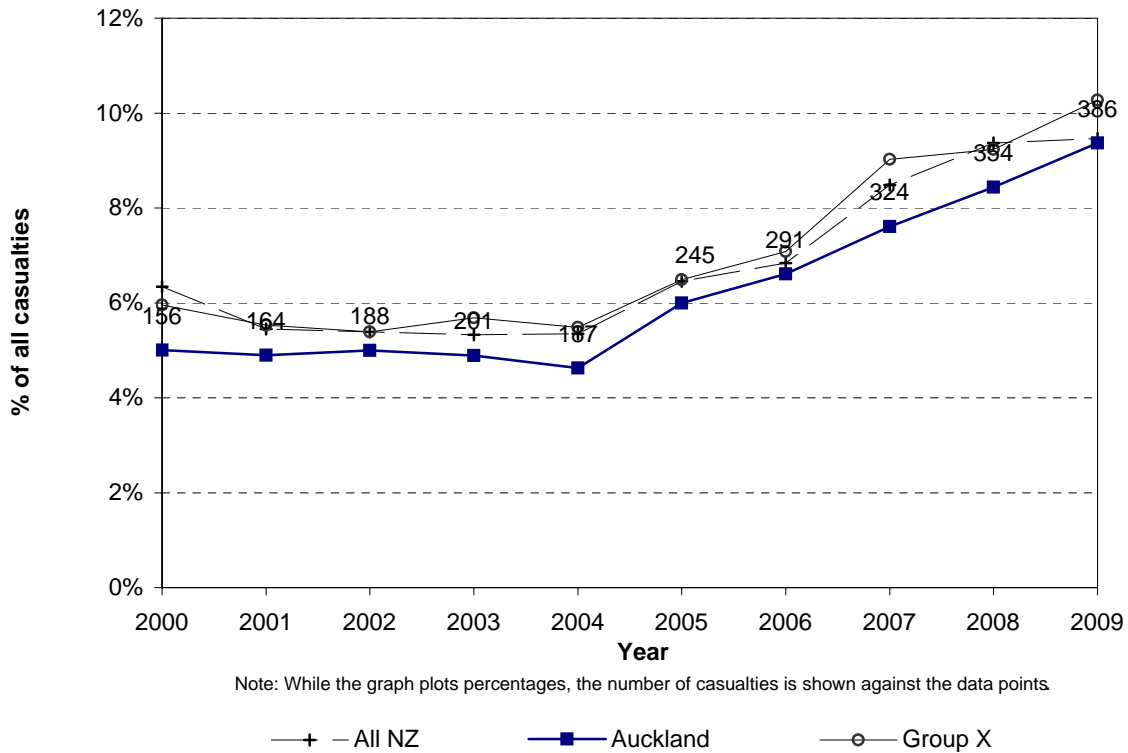
**Figure 3.11 Heavy vehicle casualties
Auckland Region**



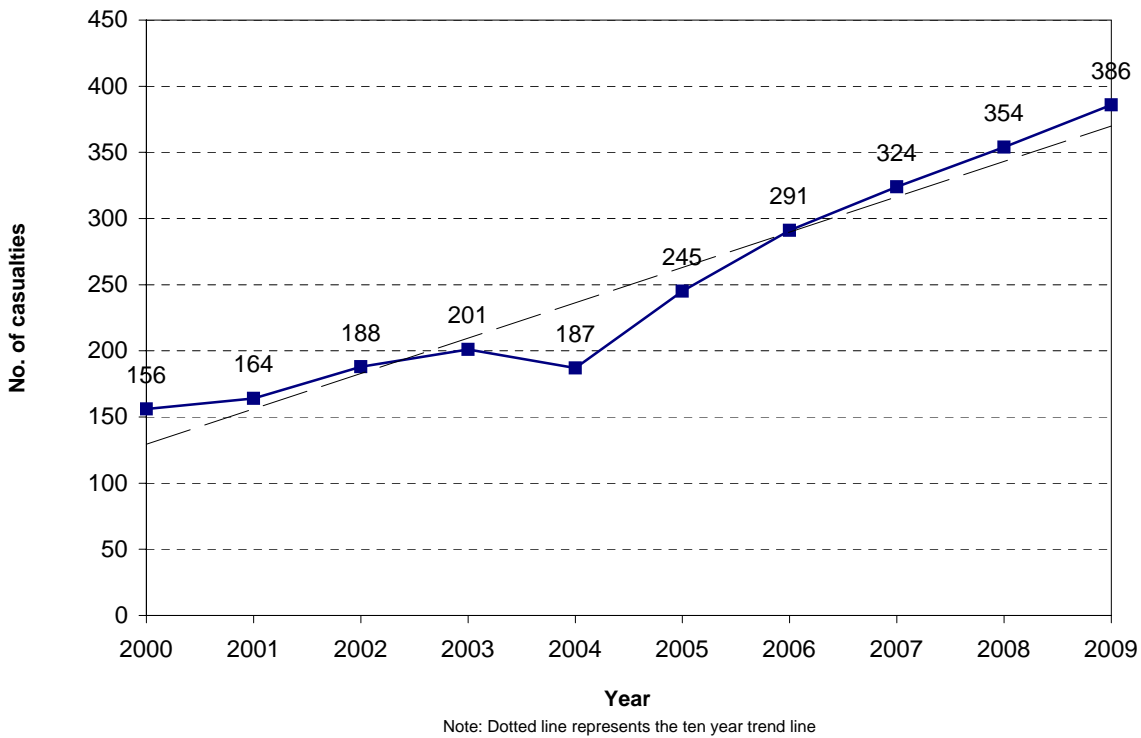
**Figure 3.12 Heavy vehicle casualties
Auckland Region**



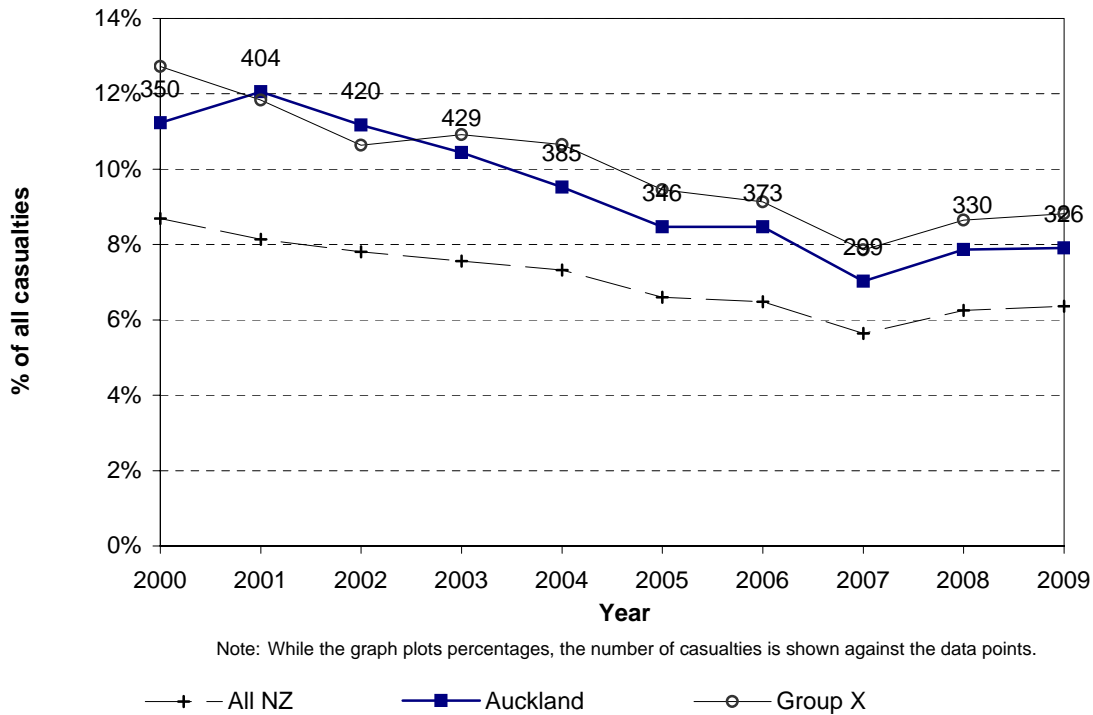
**Figure 3.13 Motorcyclist casualties
Auckland Region**



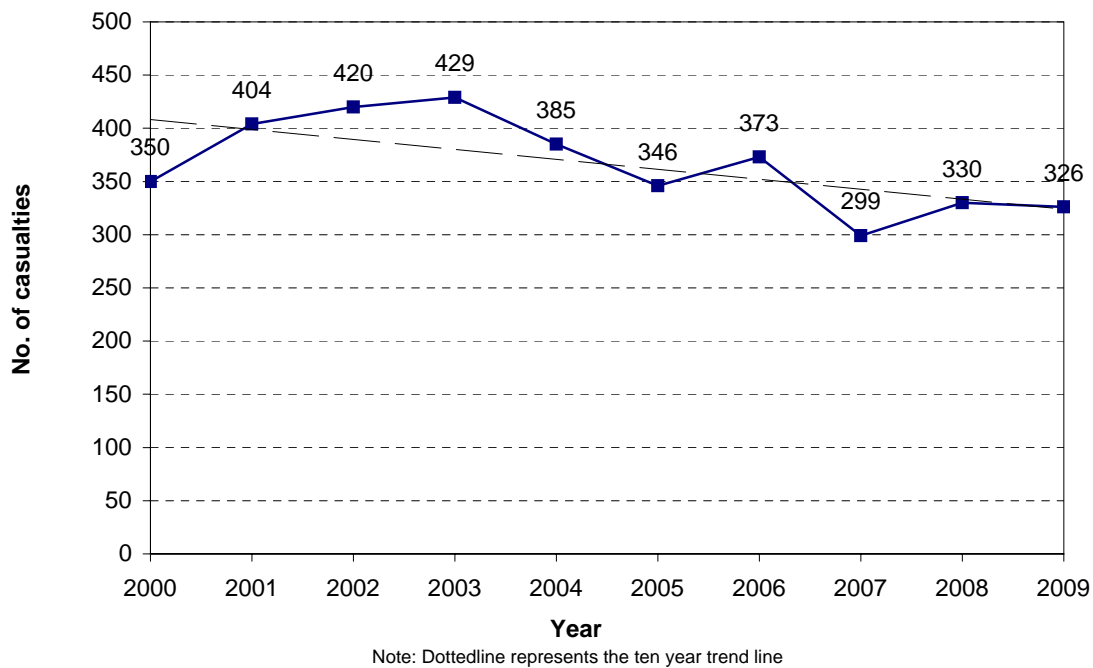
**Figure 3.14 Motorcyclist casualties
Auckland Region**



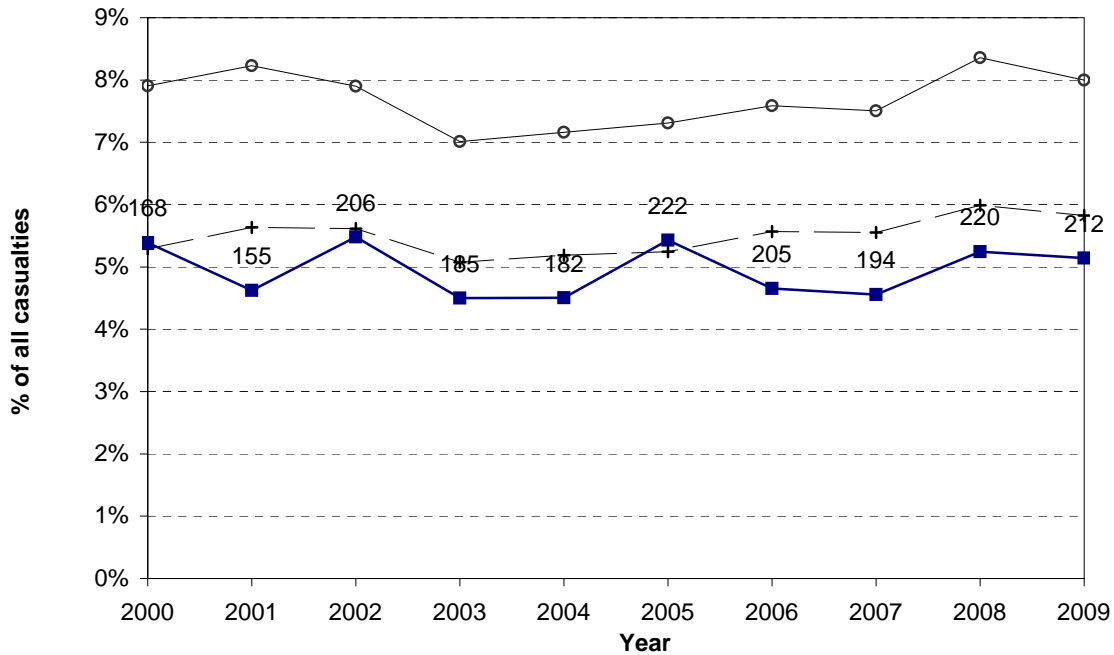
**Figure 3.15 Pedestrian casualties
Auckland Region**



**Figure 3.16 Pedestrian casualties
Auckland Region**



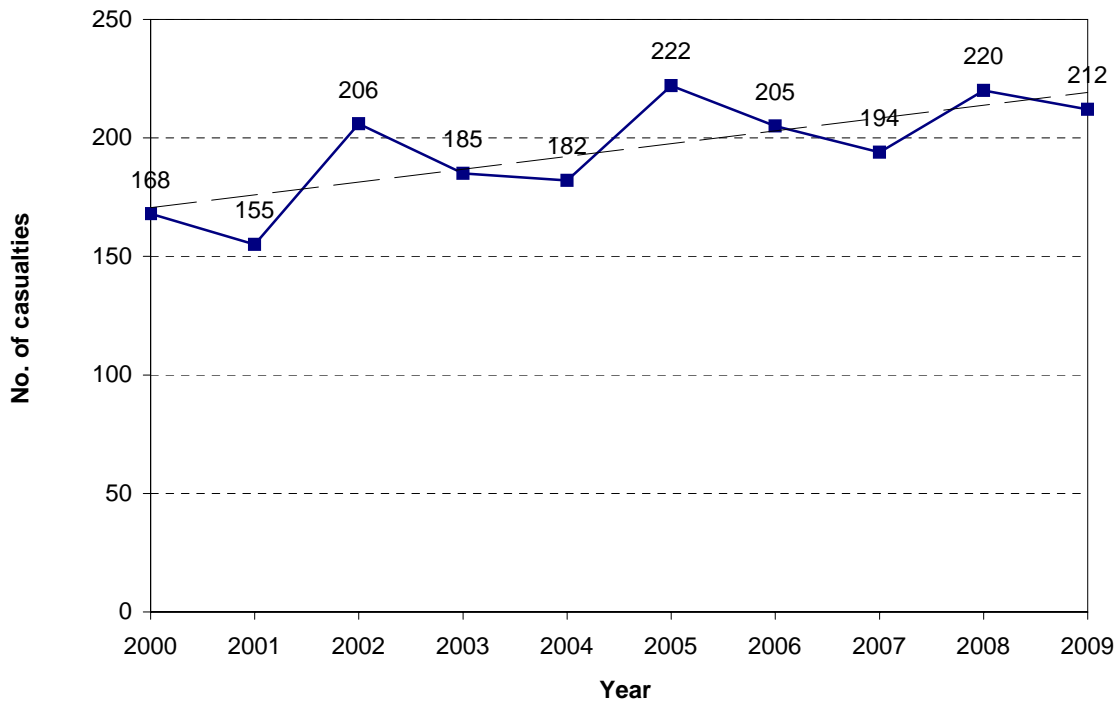
**Figure 3.17 Cyclist casualties
Auckland Region**



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

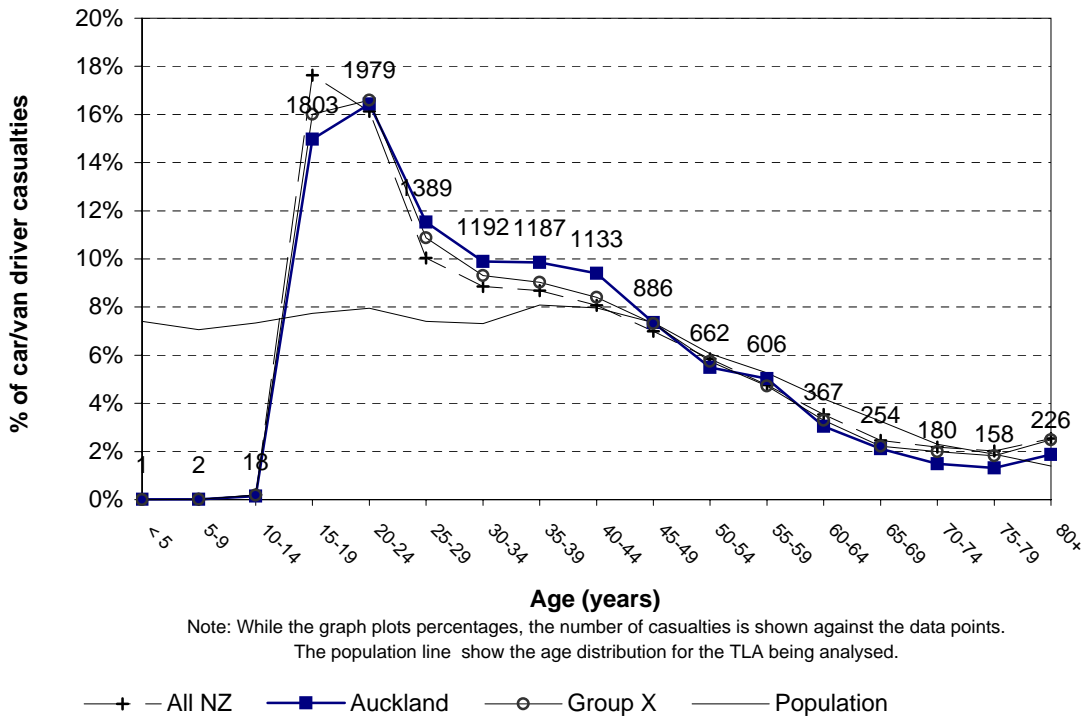
—+— All NZ —■— Auckland —○— Group X

**Figure 3.18 Cyclist casualties
Auckland Region**

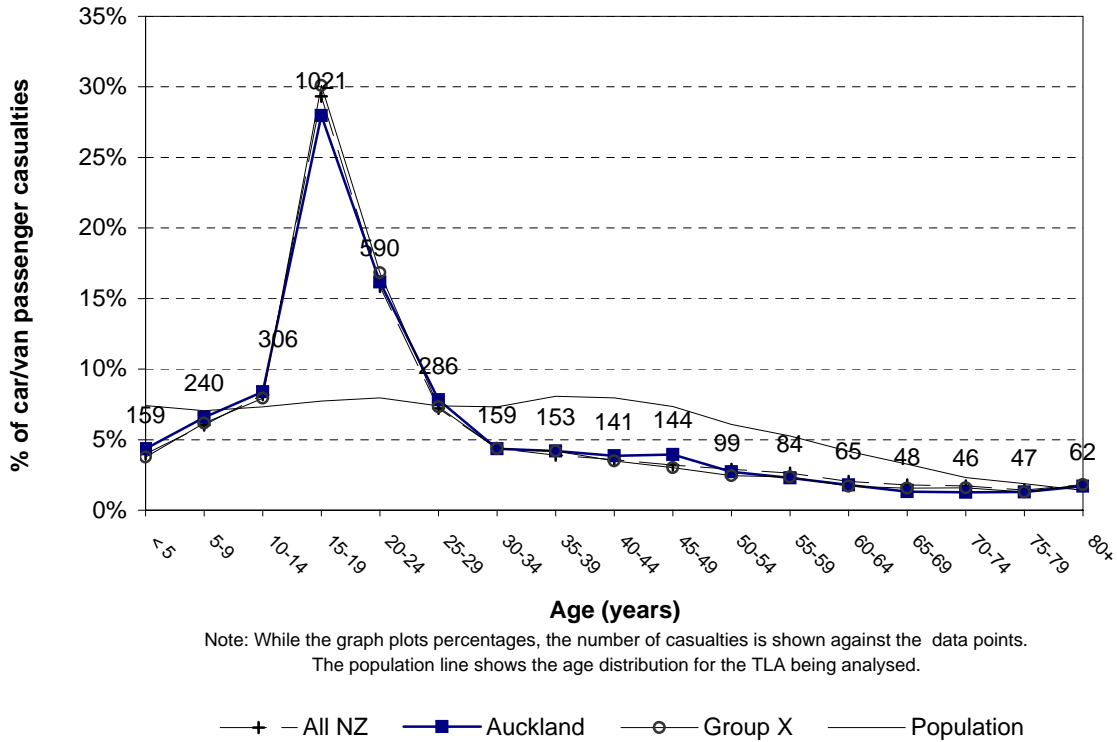


Note: Dotted line represents the ten year trend line

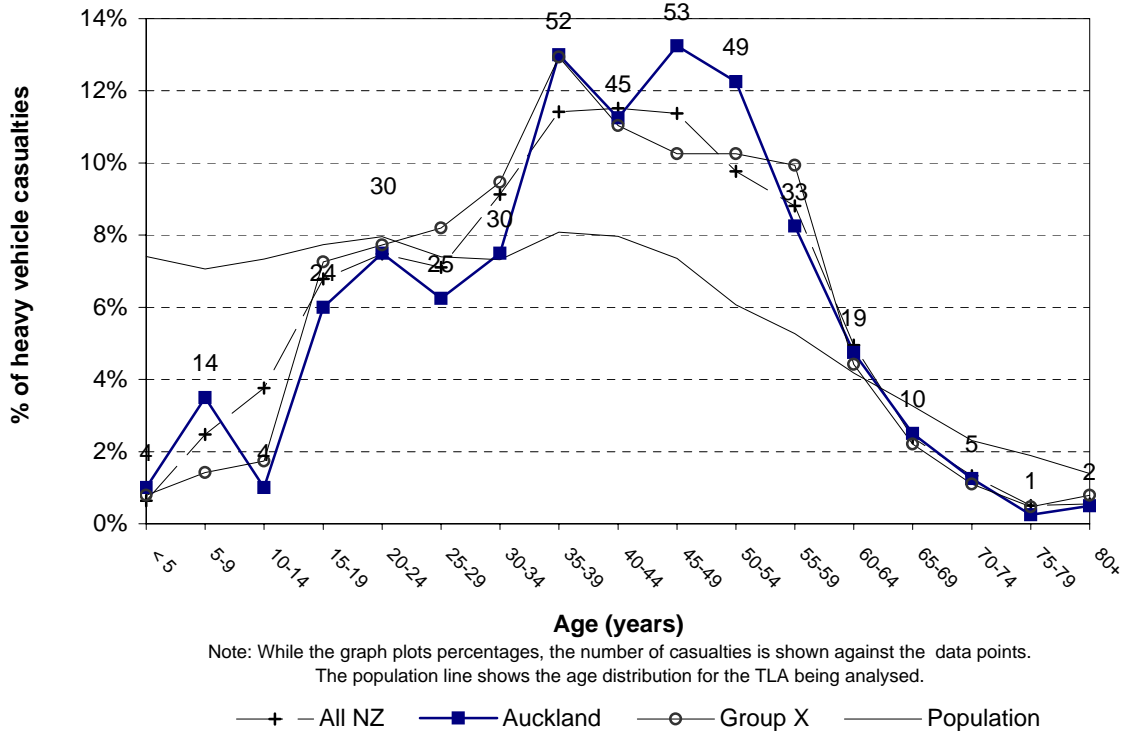
**Figure 3.19 Car/van driver casualty age
Auckland Region (2005-2009)**



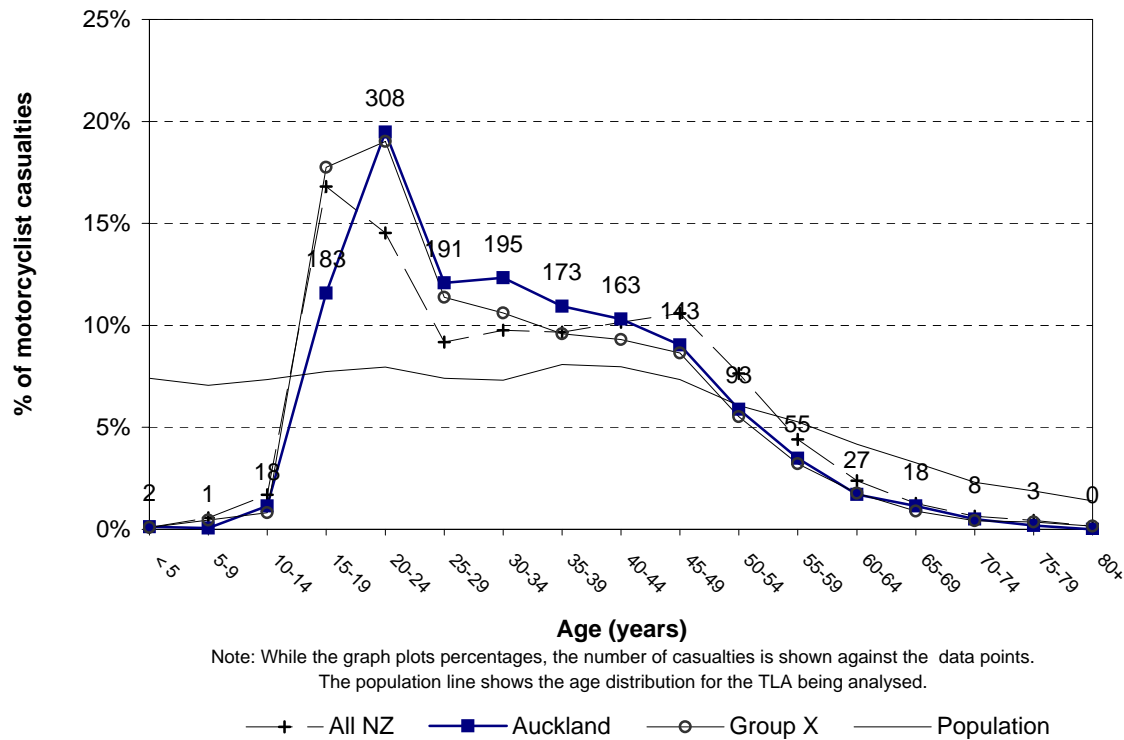
**Figure 3.20 Car/van passenger casualty age
Auckland Region (2005-2009)**



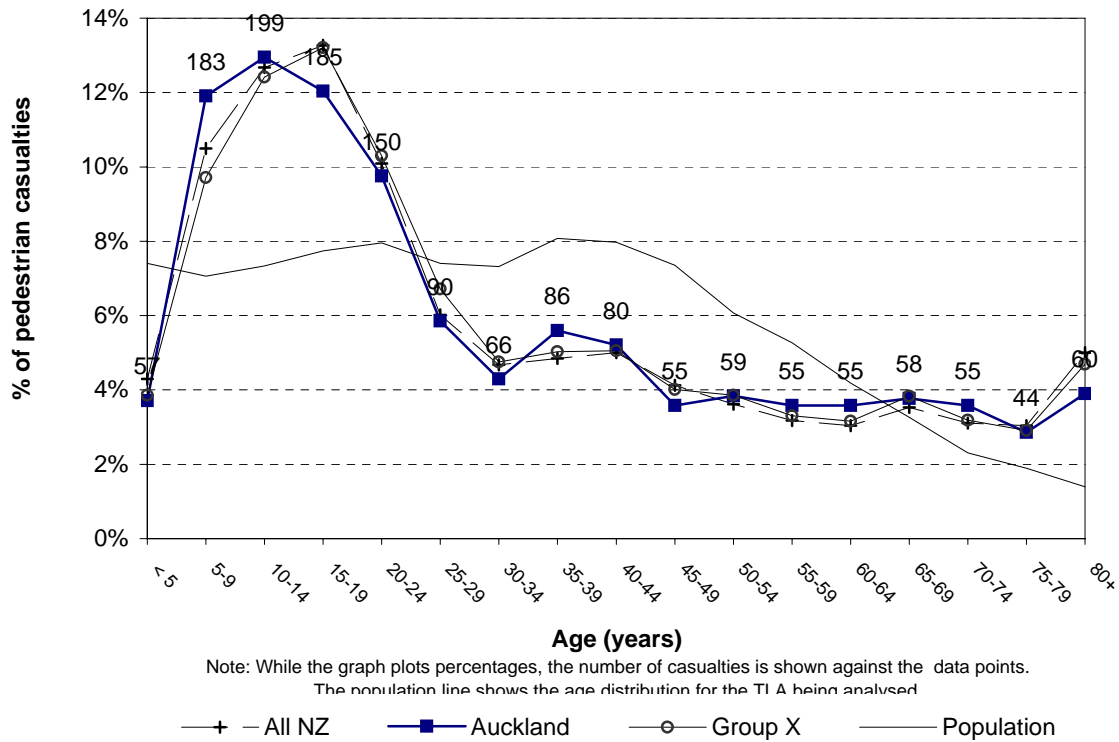
**Figure 3.21 Heavy vehicle casualty age
Auckland Region (2005-2009)**



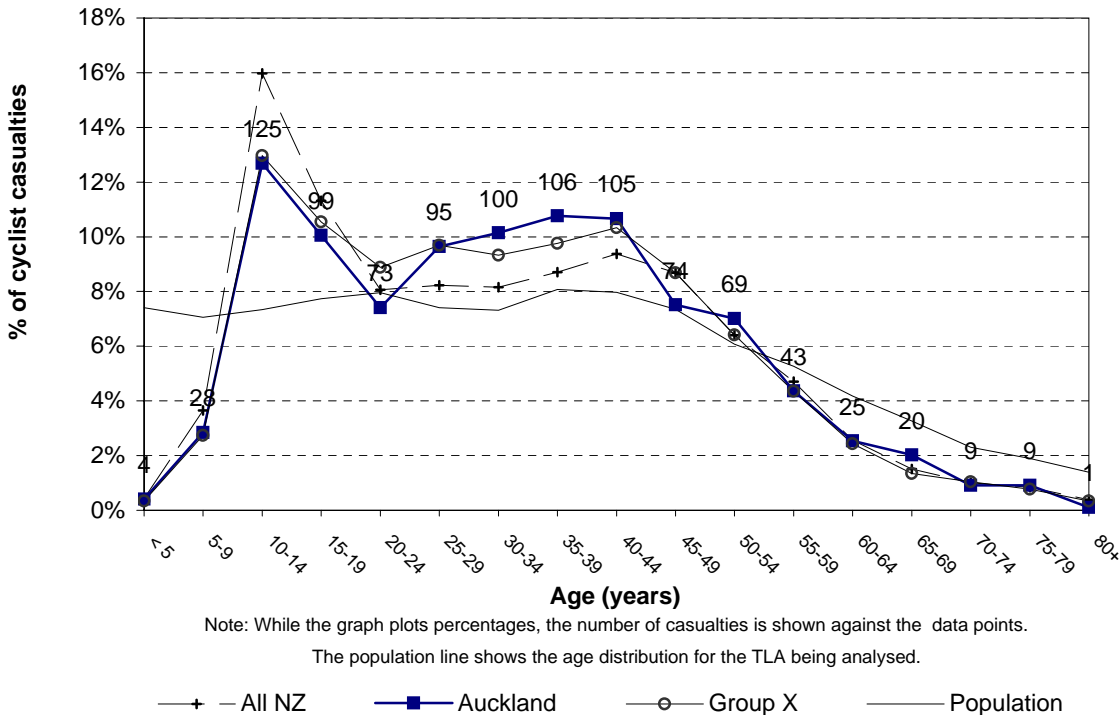
**Figure 3.22 Motorcyclist casualty age
Auckland Region (2005-2009)**



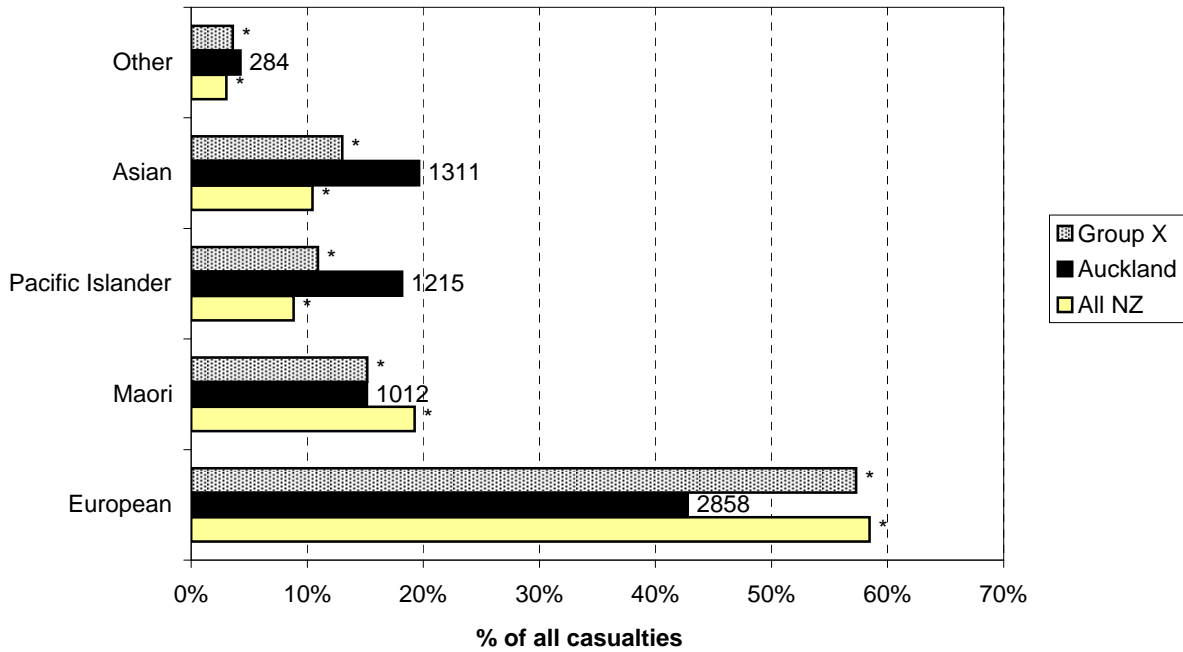
**Figure 3.23 Pedestrian casualty age
Auckland Region (2005-2009)**



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

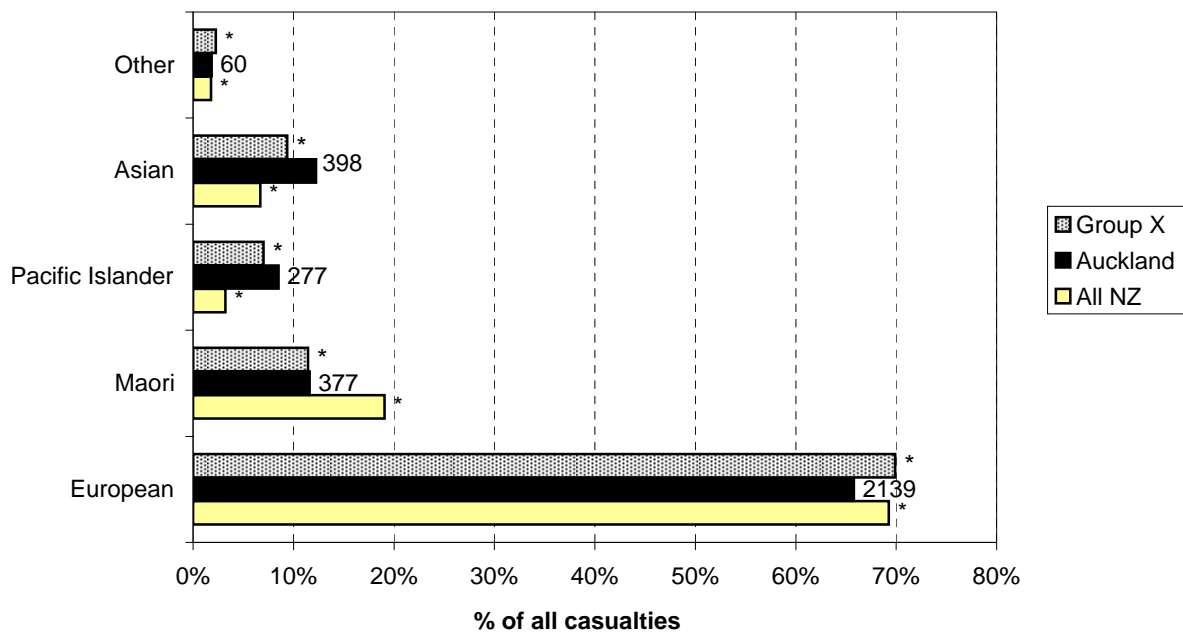


**Figure 3.25 Casualty ethnicity - urban
Auckland Region (2005-2009)**



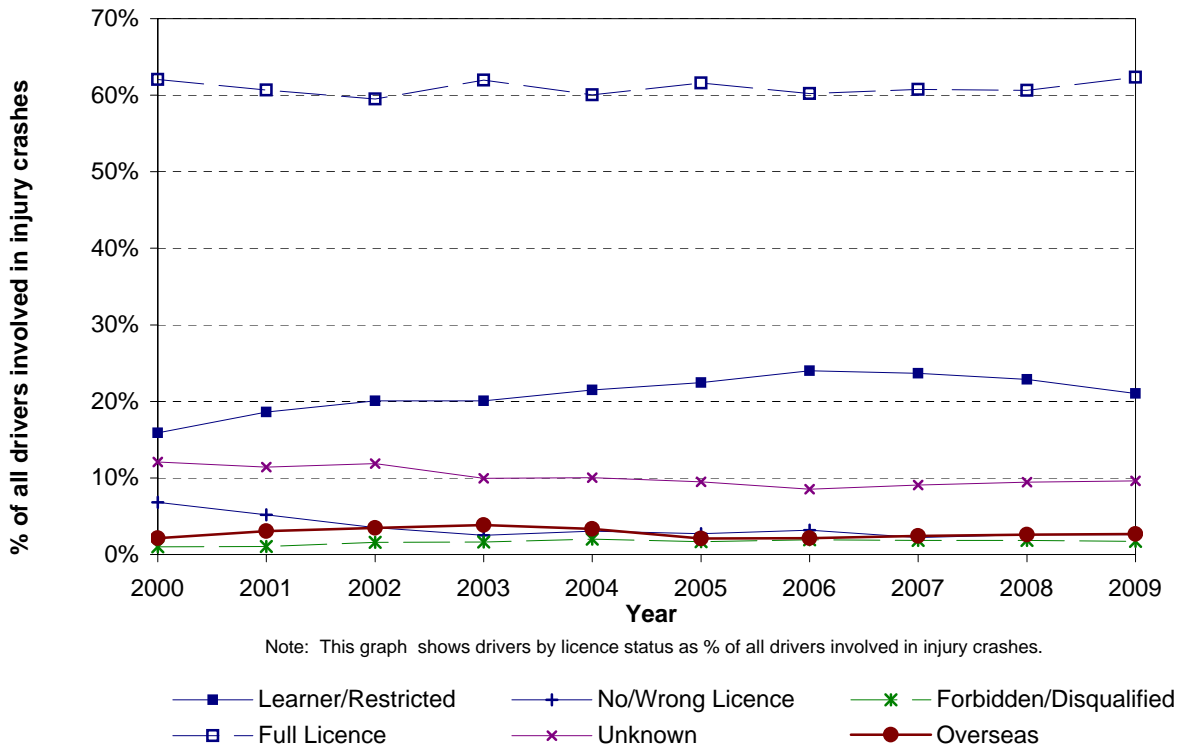
Note: While the graph plots percentages, the number of crashes is shown against the data points.
*Denotes statistically significant difference between Local Authority and National or Peer Group Proportions

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

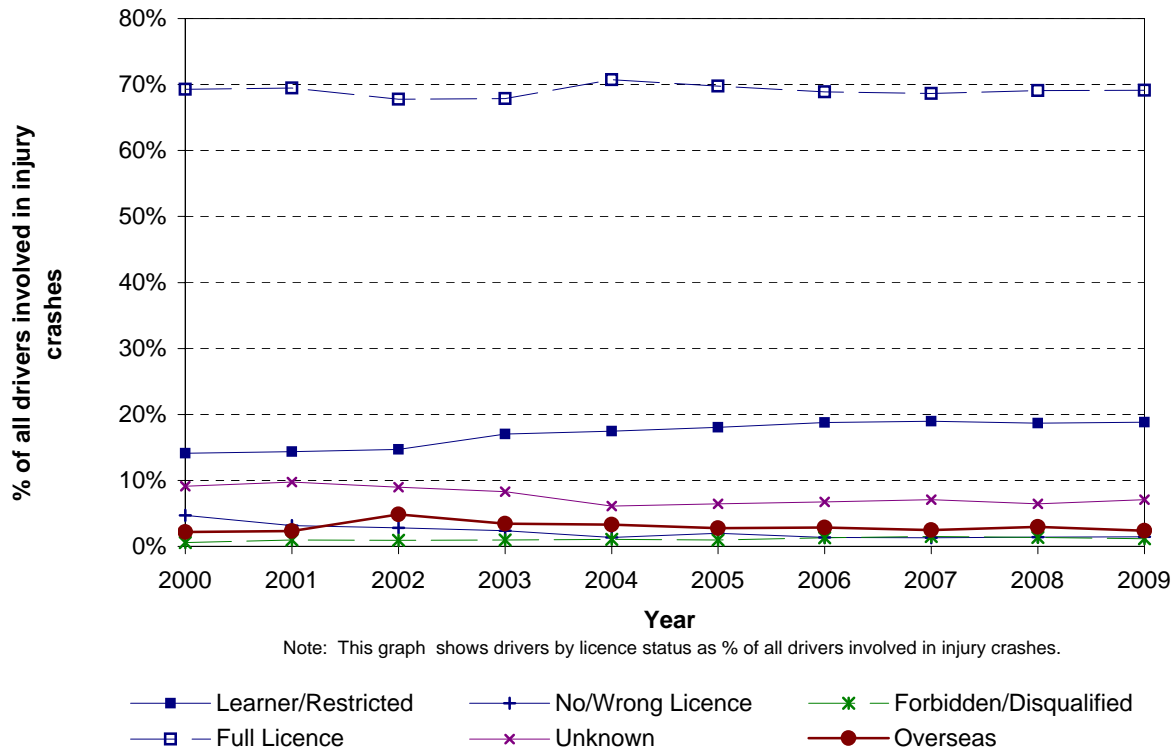


Note: While the graph plots percentages, the number of crashes is shown against the data points.
*Denotes statistically significant difference between Local Authority and National or Peer Group Proportions

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

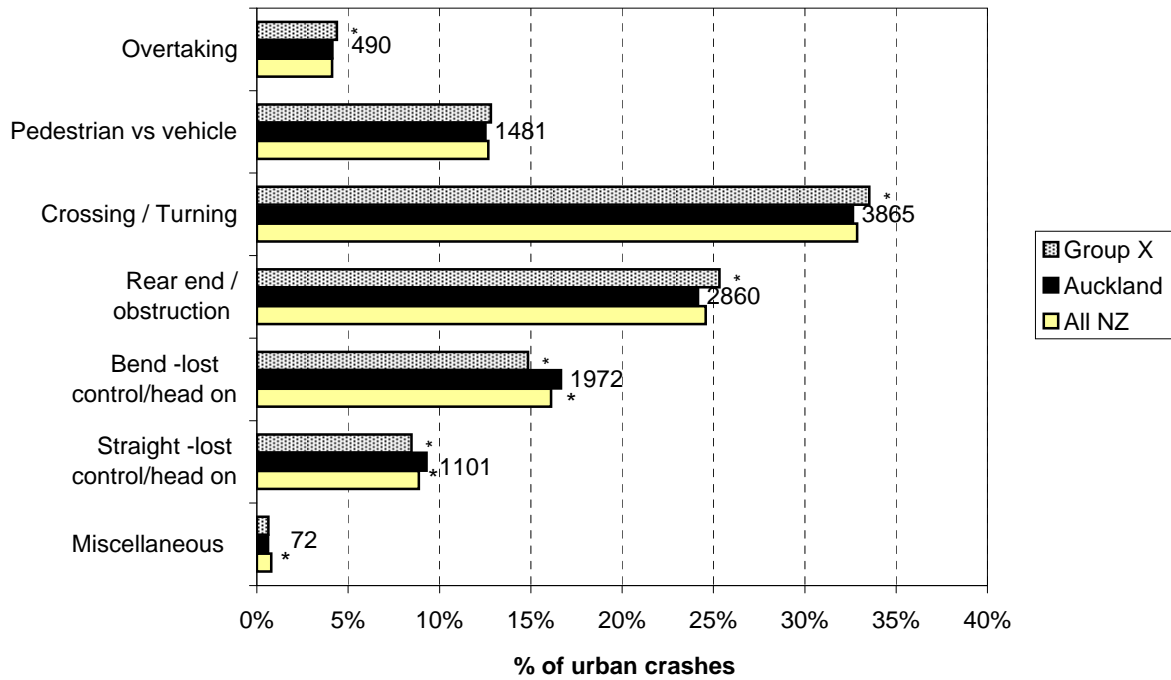


**Figure 3.28 Licence status - rural
Auckland Region**



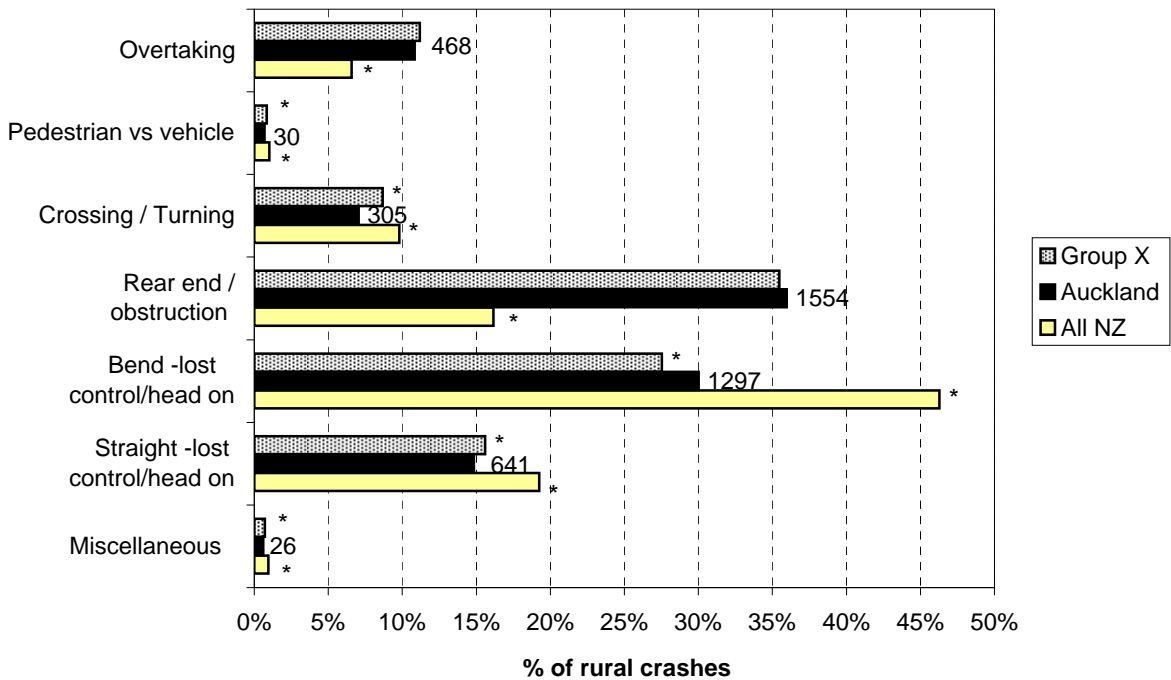
Crash Type Statistics

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



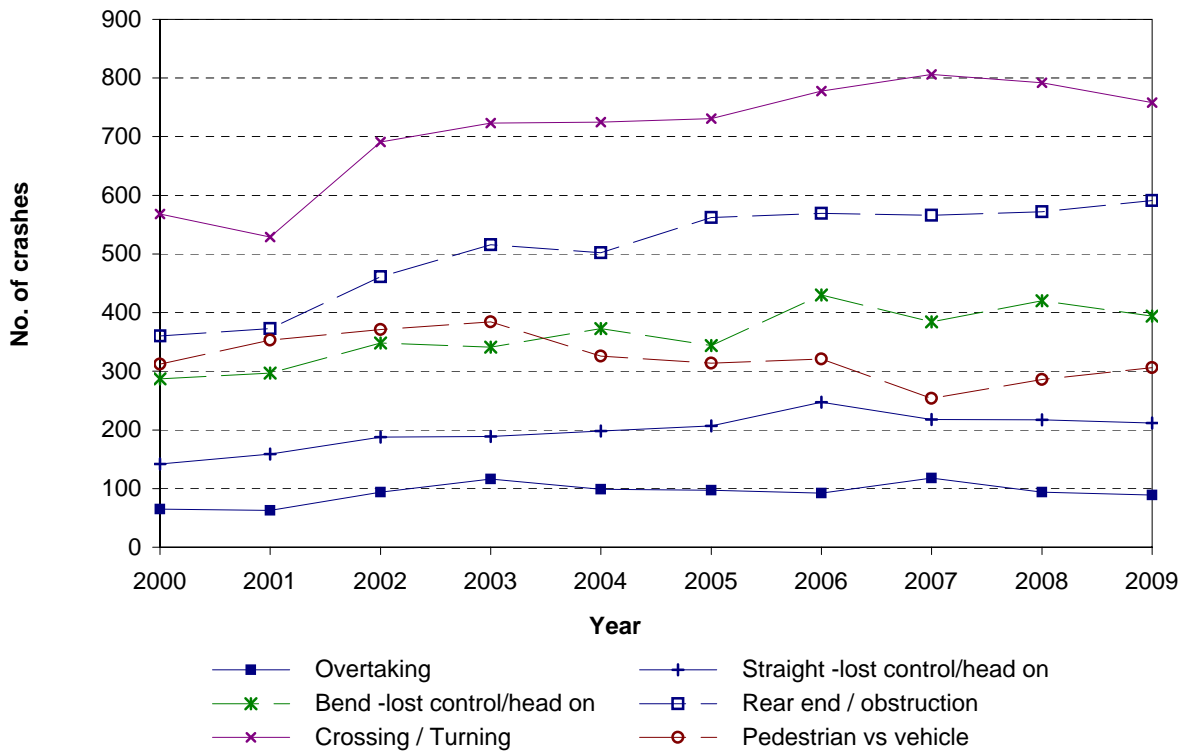
Note: While the graph plots percentages, the number of crashes is shown against the data points.
*Denotes statistically significant difference between Local Authority and National or Peer Group Proportions

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

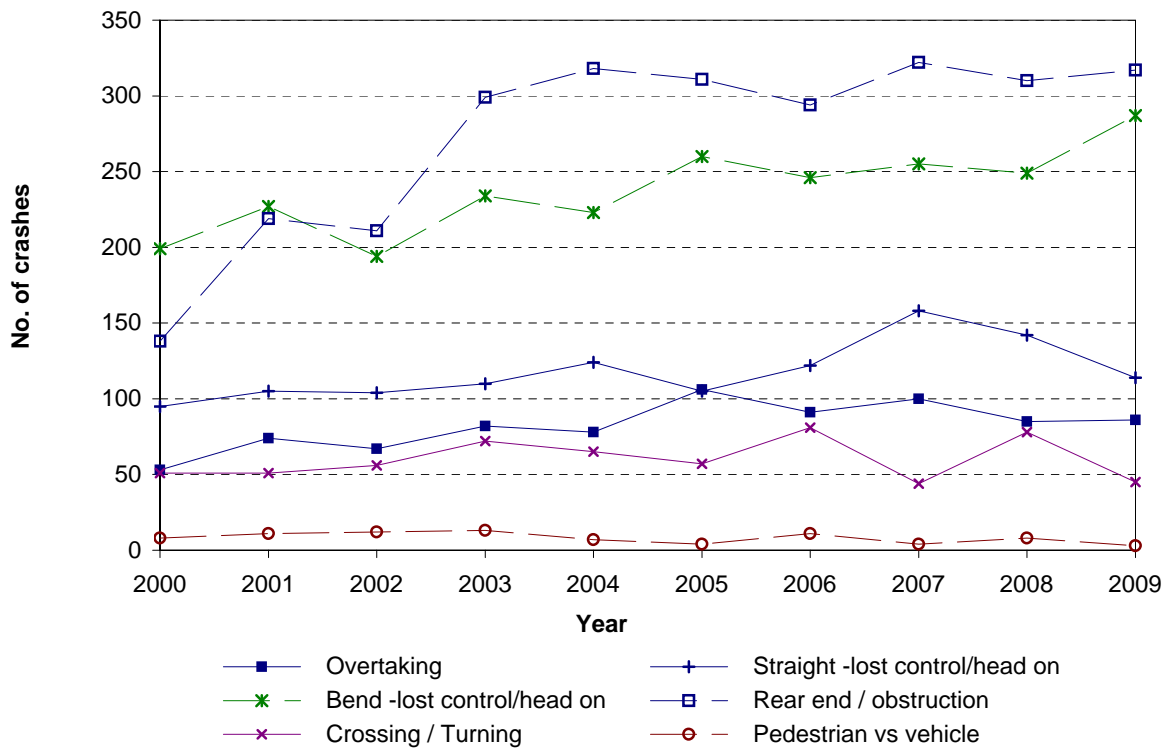


Note: While the graph plots percentages, the number of crashes is shown against the data points.
*Denotes statistically significant difference between Local Authority and National or Peer Group Proportions

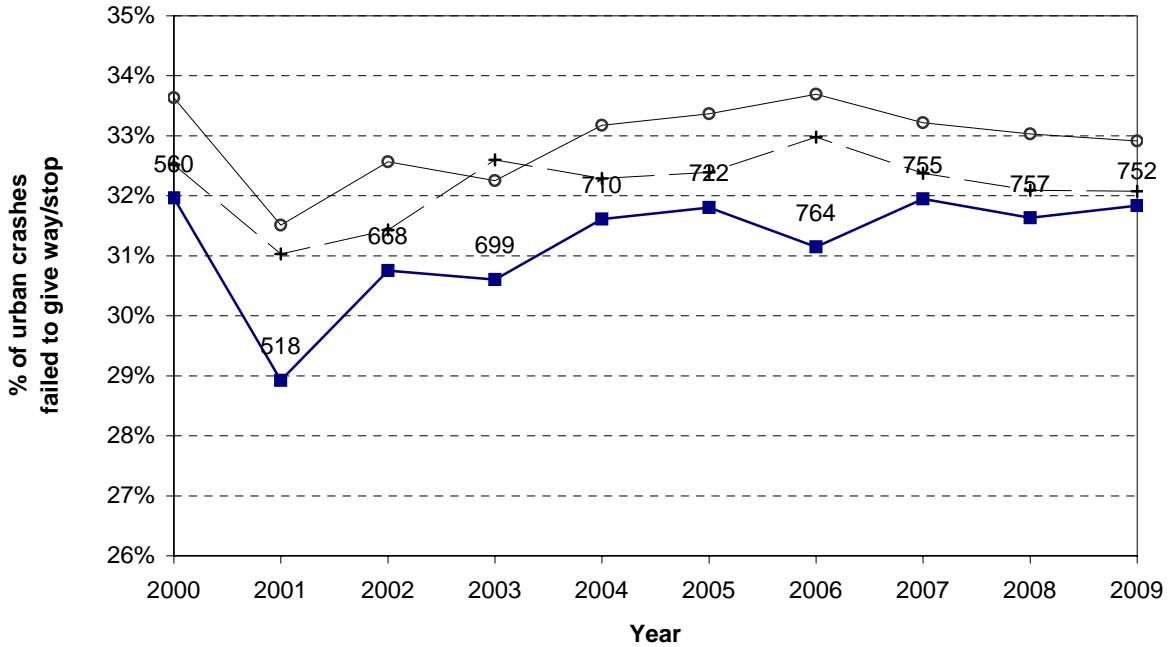
**Figure 4.3 Crash movement type - trends
Auckland Region - urban roads**



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



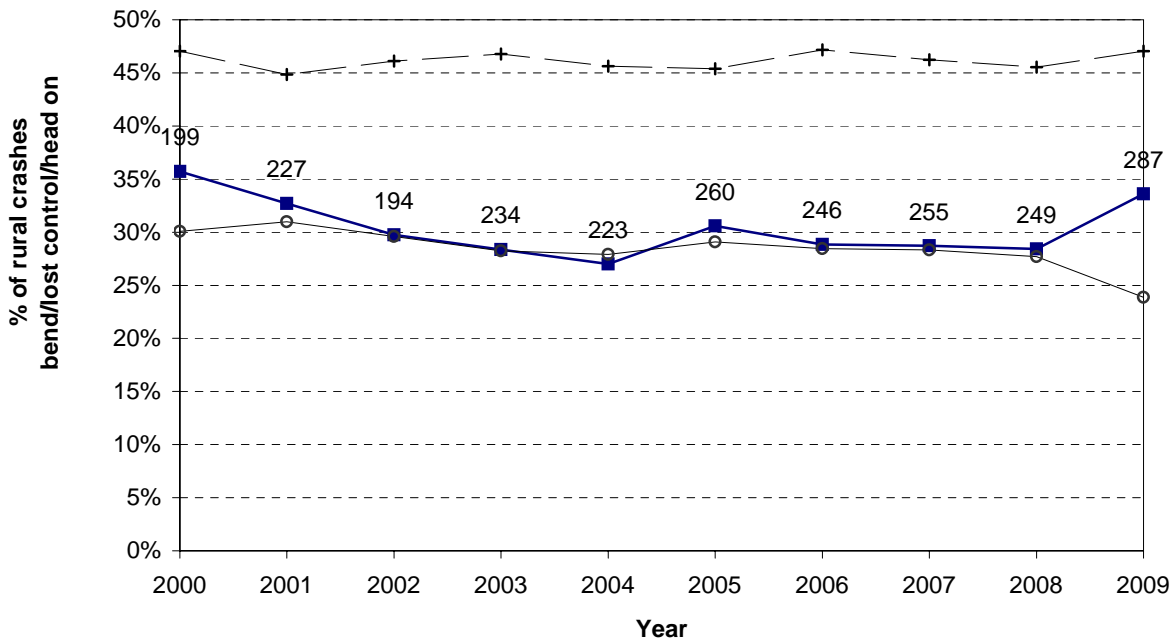
**Figure 4.5 Failed to give way / stop
Auckland Region - urban roads**



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

+ All NZ ■ Auckland ○ Group X

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

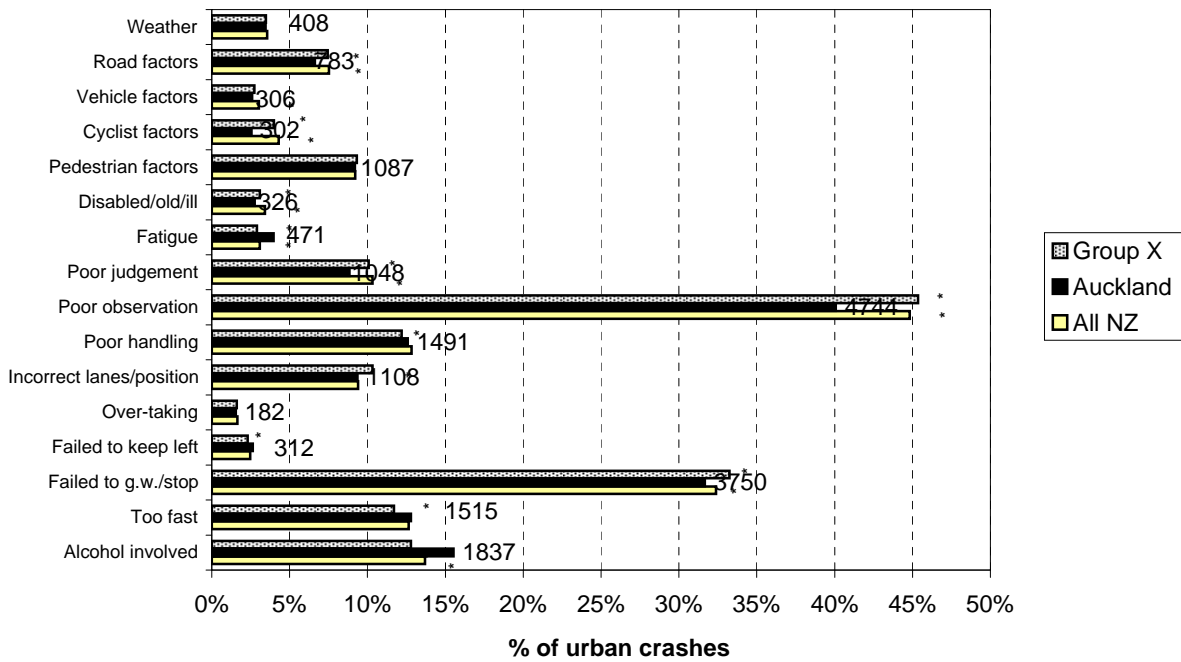


Note: While the graph plots percentages, the number of crashes is shown against the data points.

+ All NZ ■ Auckland ○ Group X

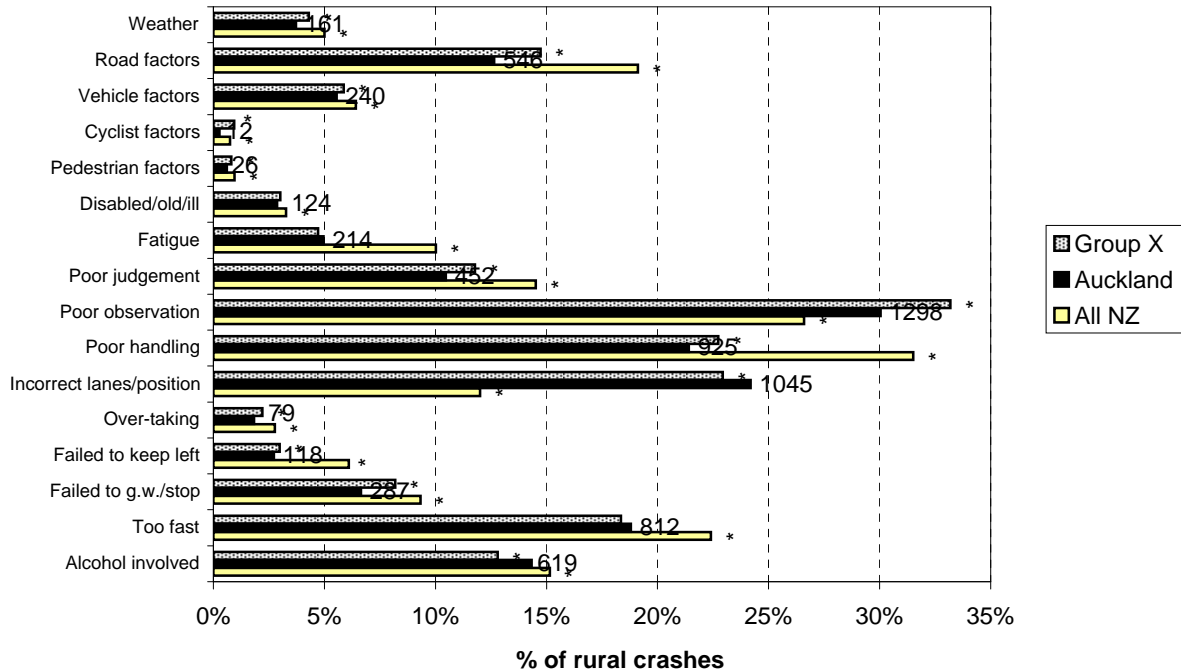
Crash Factor Statistics

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



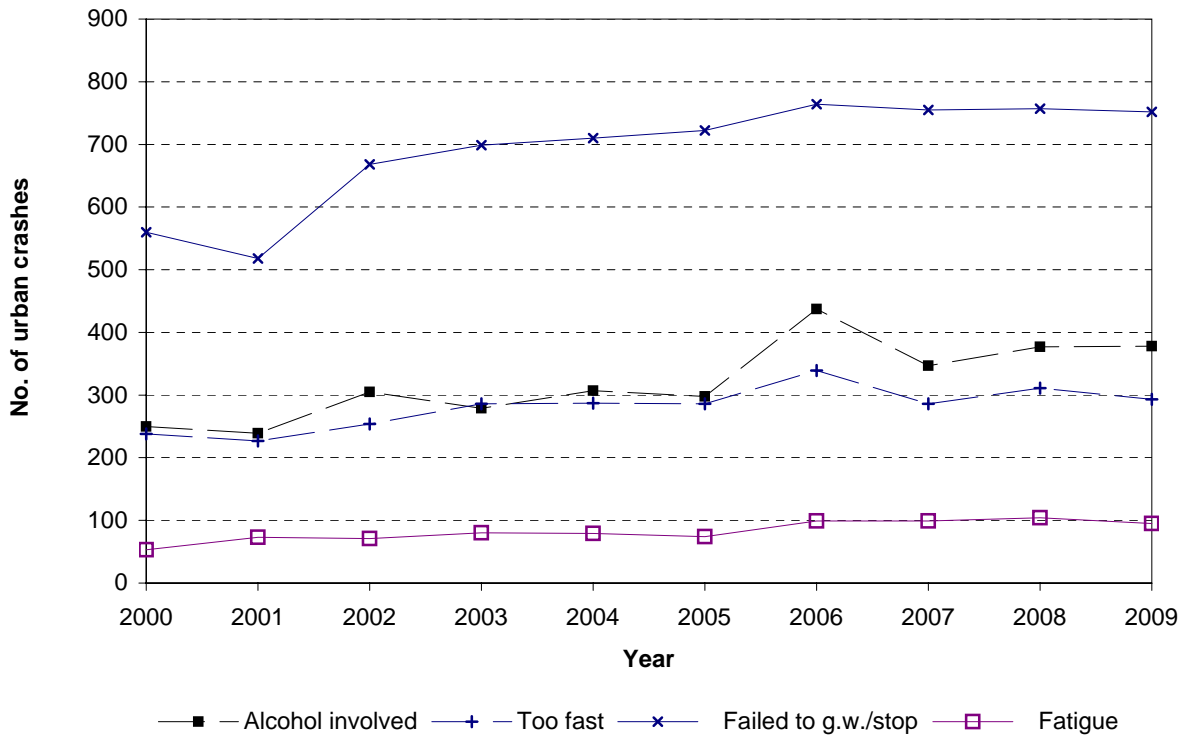
Note: While the graph plots percentages, the number of crashes is shown against the data points.
*Denotes statistically significant difference between Local Authority and National or Peer Group Proportions

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

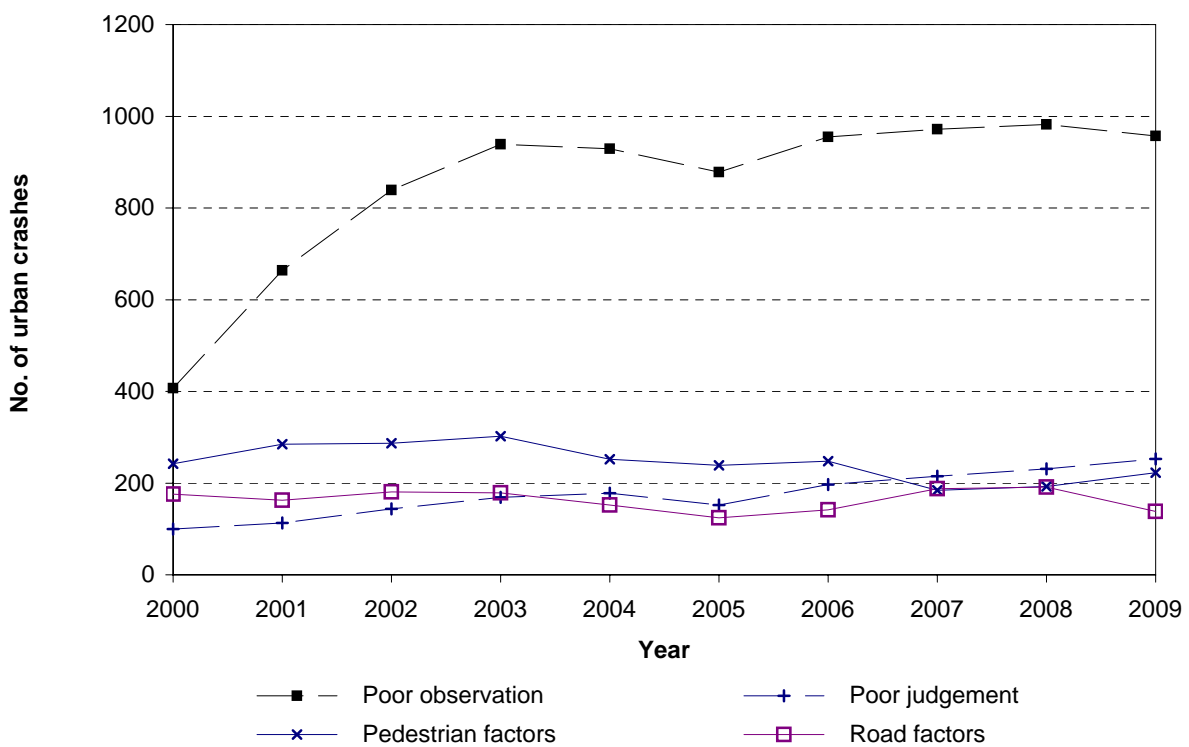


Note: While the graph plots percentages, the number of casualties is shown against the data points.
*Denotes statistically significant difference between Local Authority and National or Peer Group Proportions

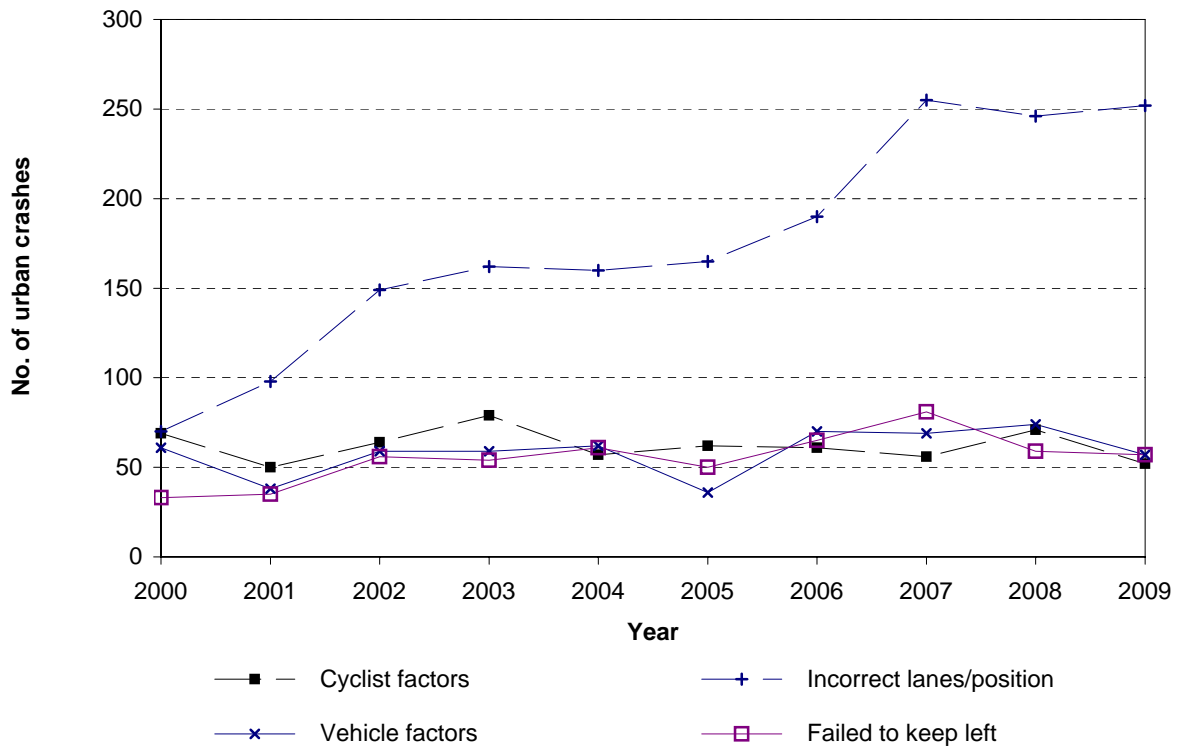
**Figure 5.3 Contributing factor trends
Auckland Region - urban roads**



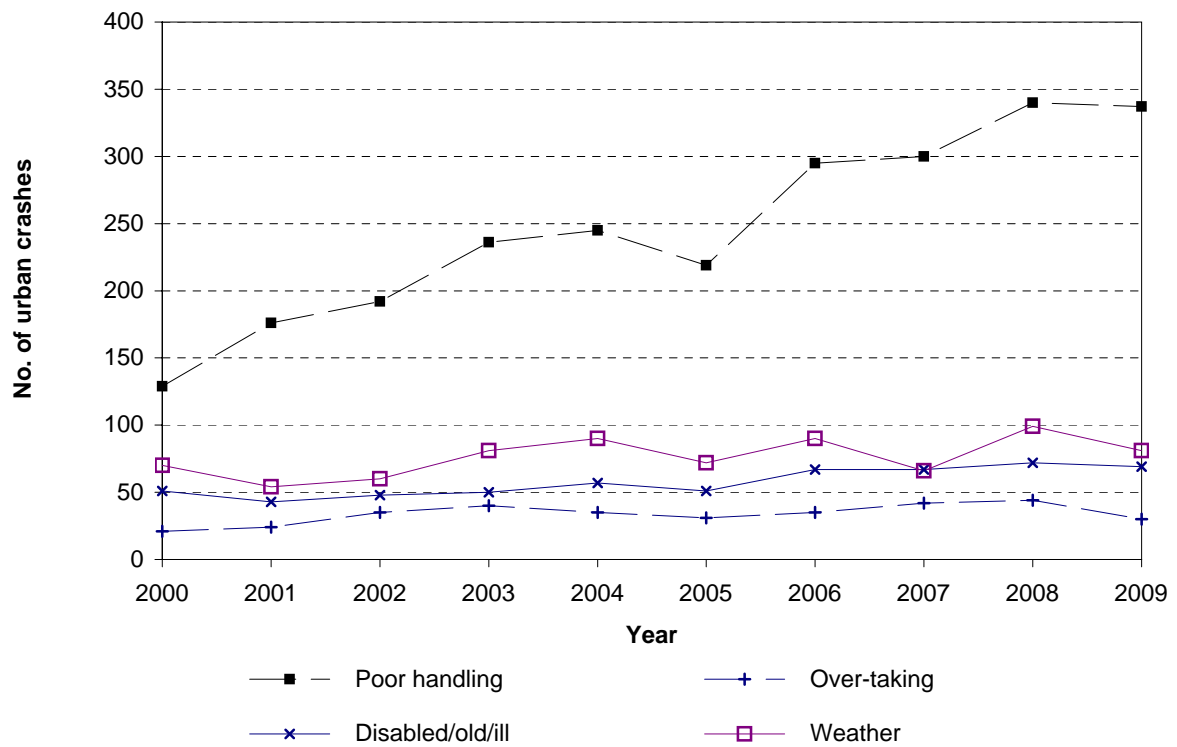
**Figure 5.4 Contributing factor trends
Auckland Region - urban roads**



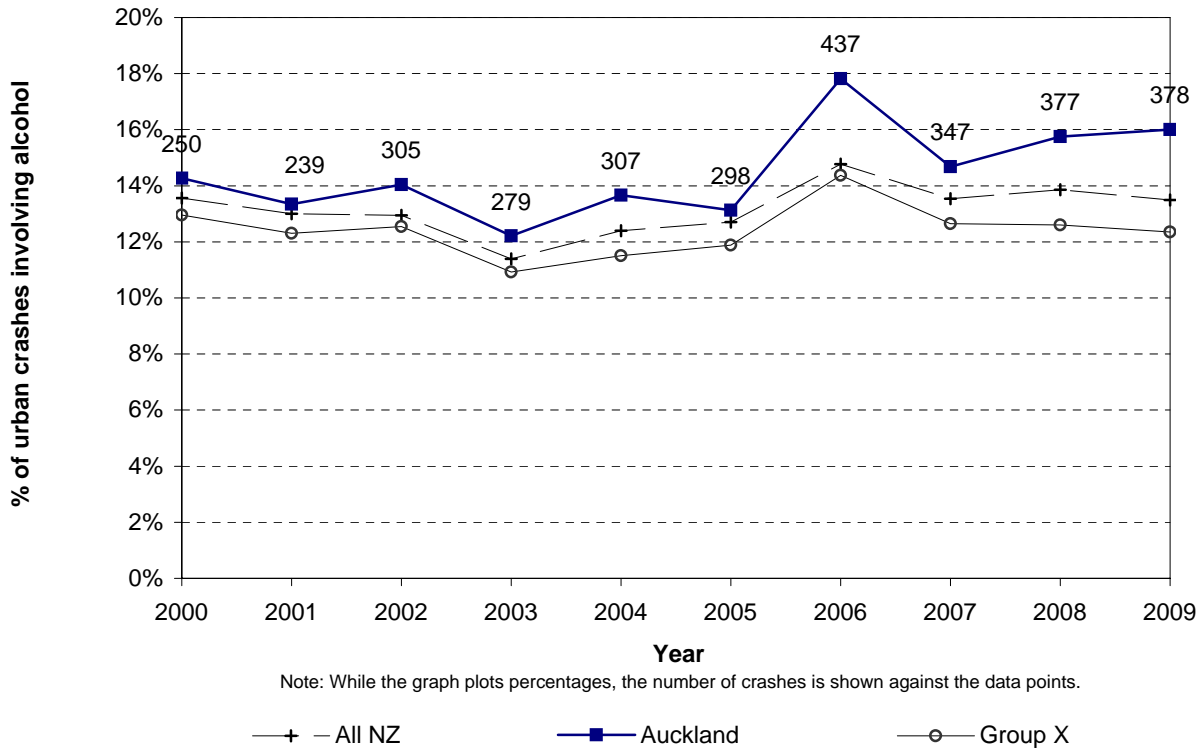
**Figure 5.5 Contributing factor trends
Auckland Region - urban roads**



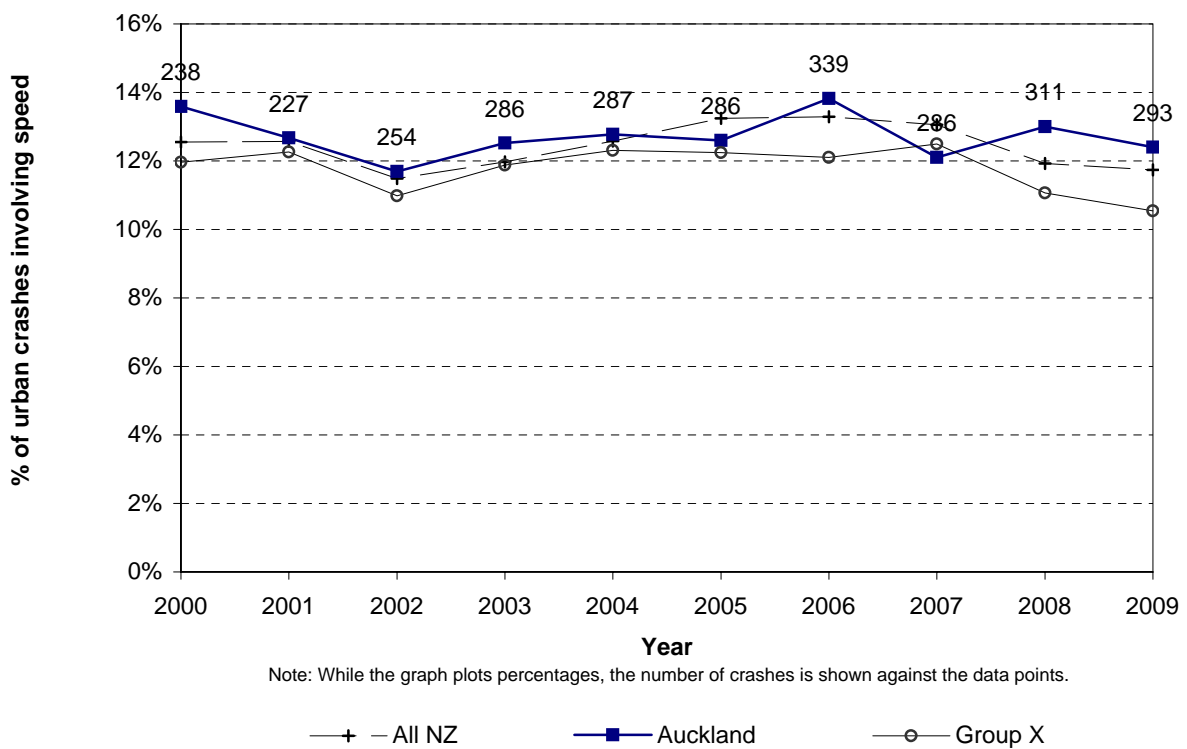
**Figure 5.6 Contributing factor trends
Auckland Region - urban roads**



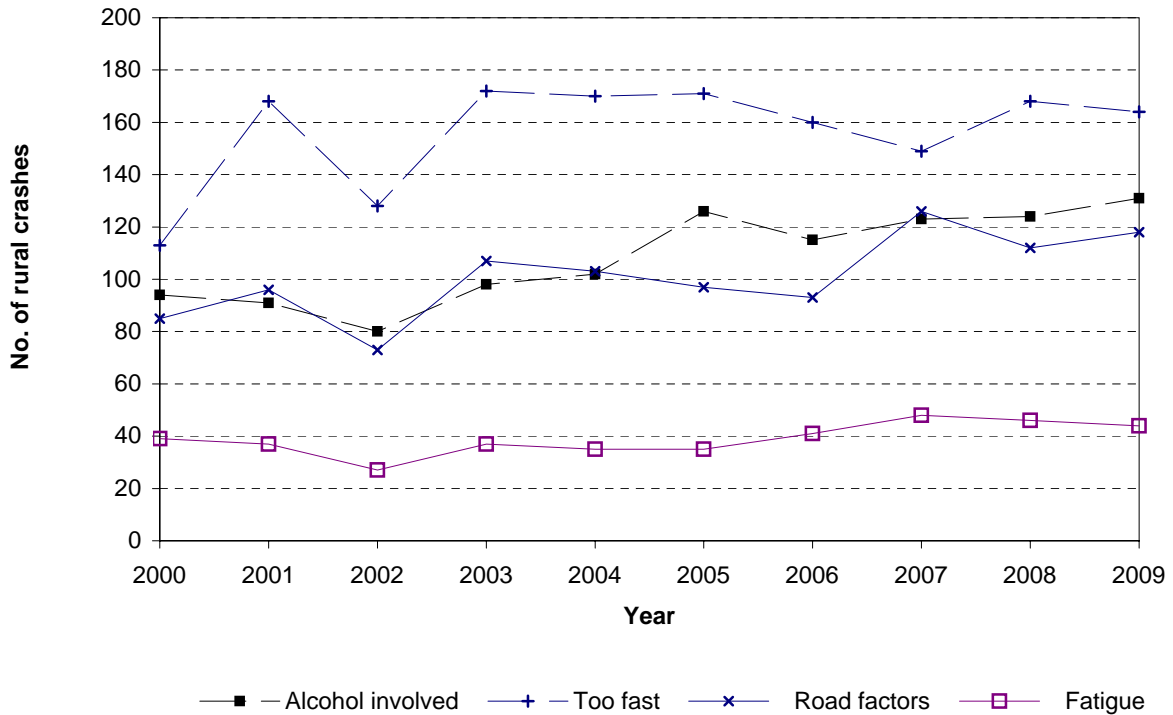
**Figure 5.7 Alcohol involved trend
Auckland Region - urban roads**



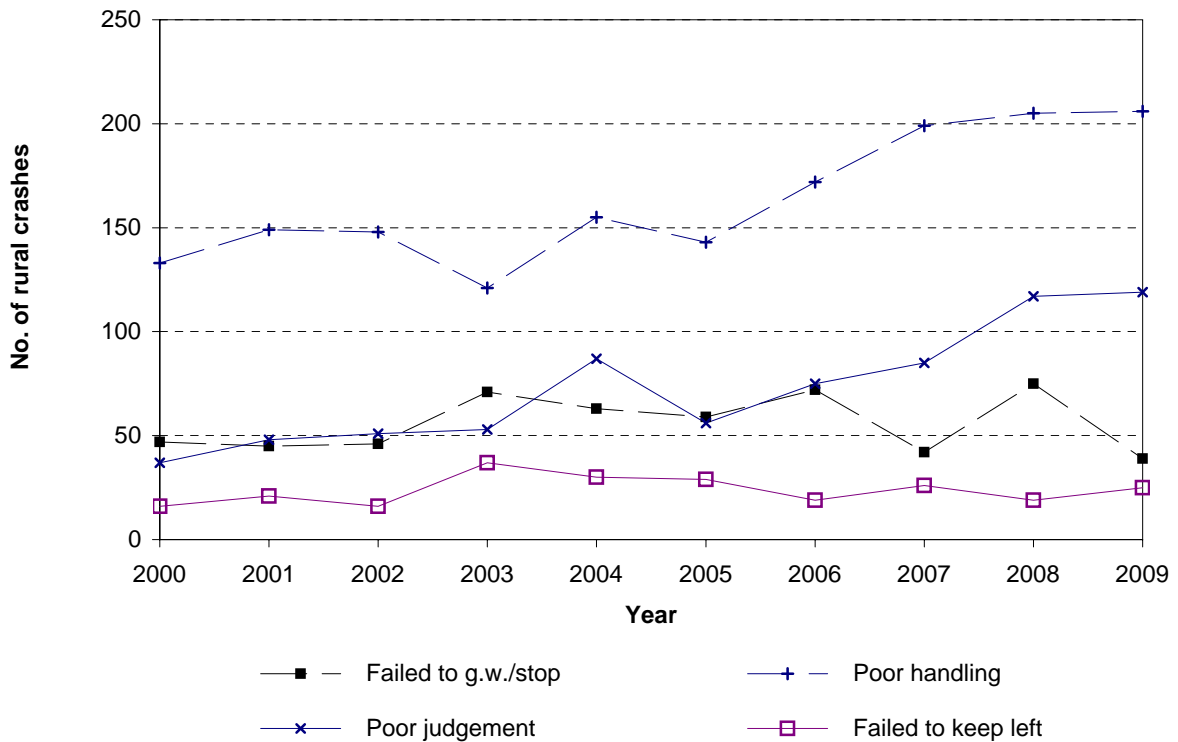
**Figure 5.8 Speed involved trend
Auckland Region - urban roads**



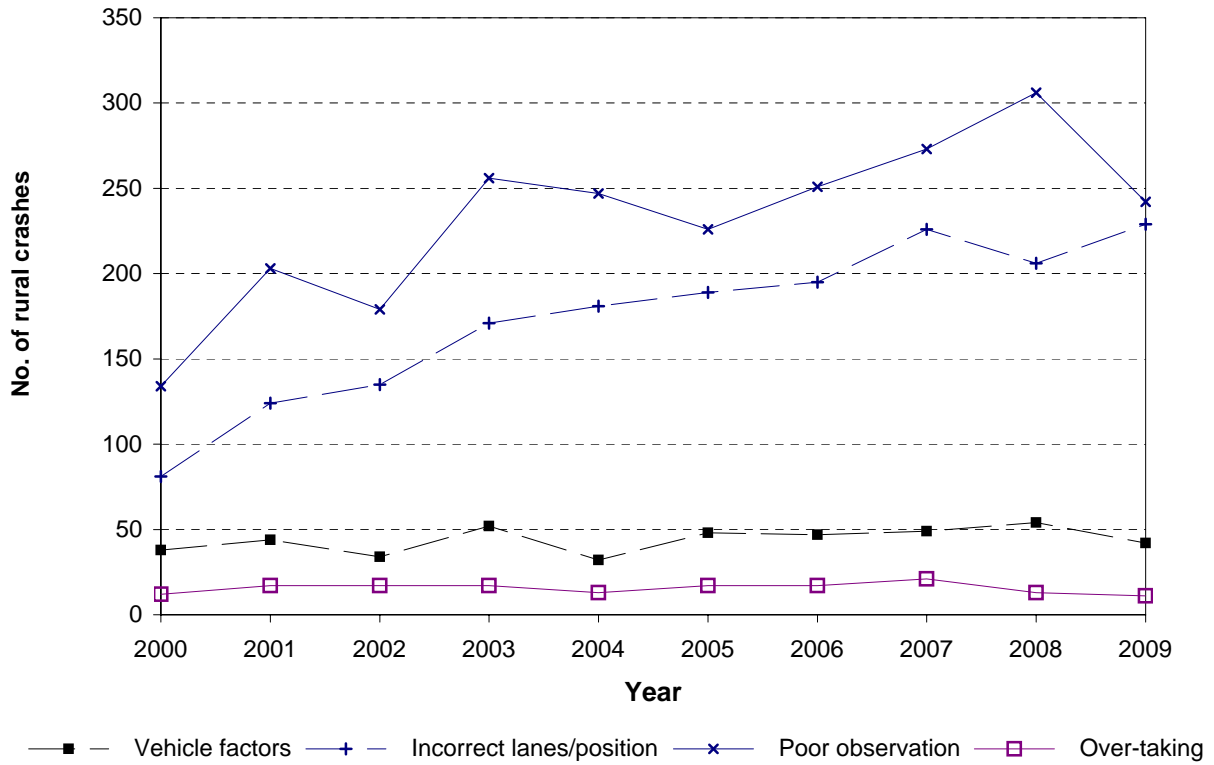
**Figure 5.9 Contributing factor trends
Auckland Region - rural roads**



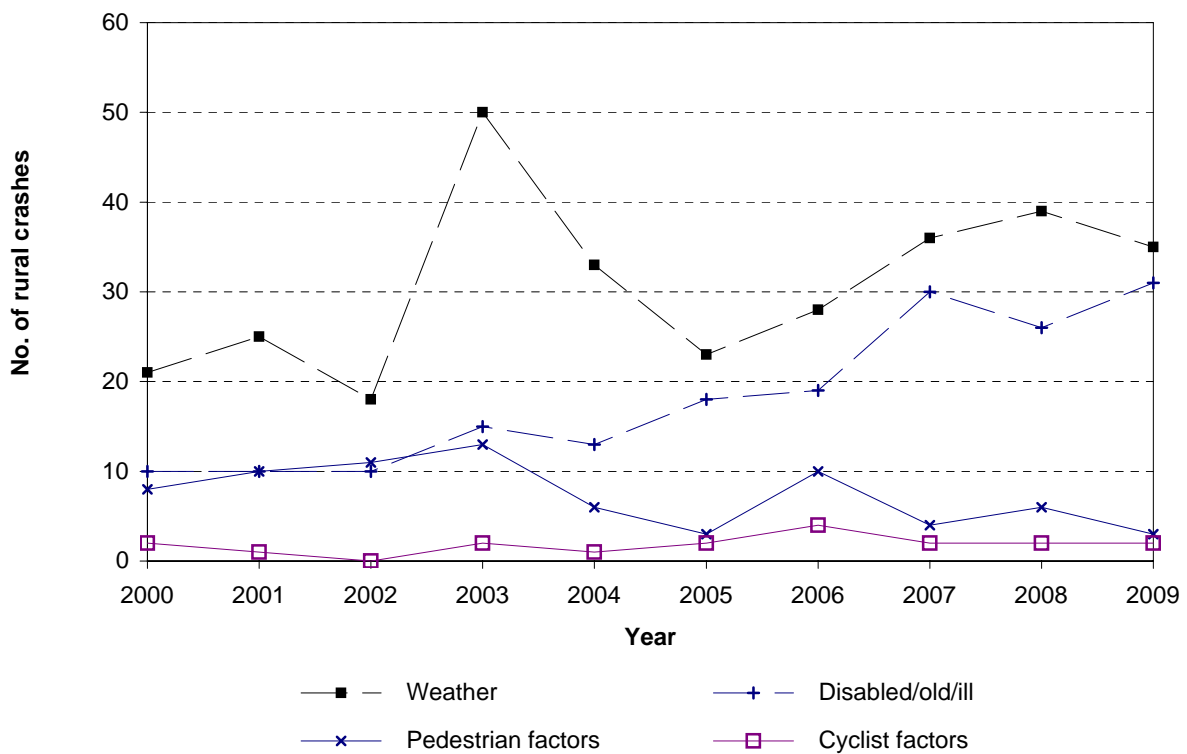
**Figure 5.10 Contributing factor trends
Auckland Region - rural roads**



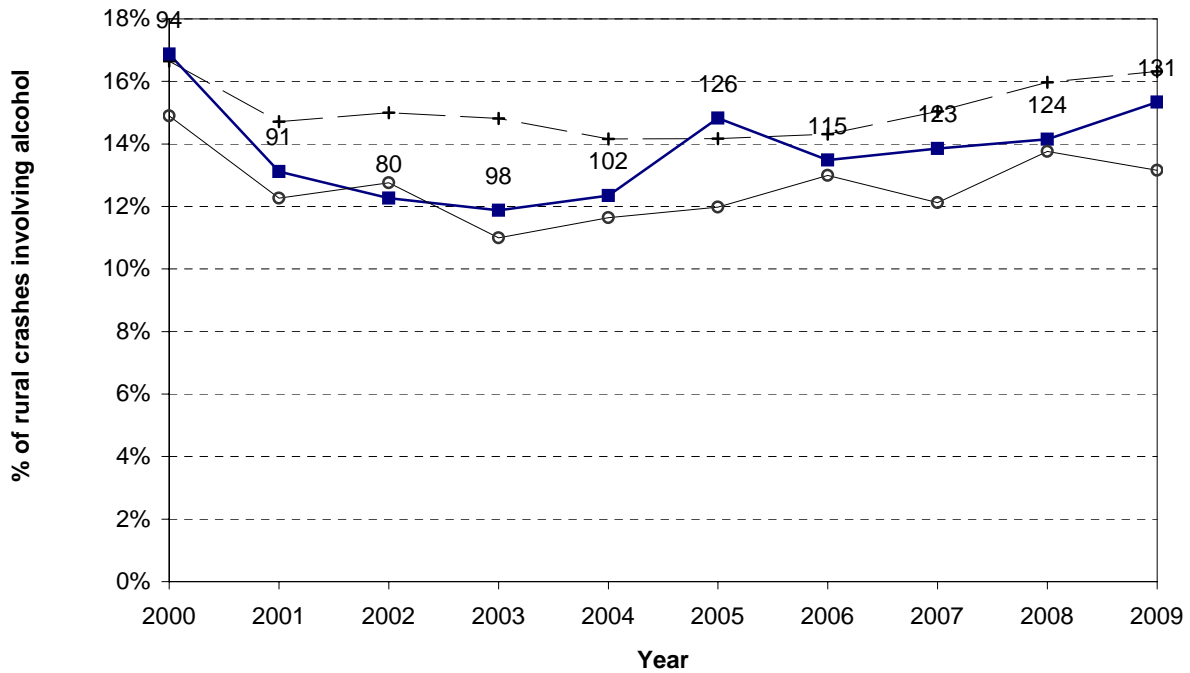
**Figure 5.11 Contributing factor trends
Auckland Region - rural roads**



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



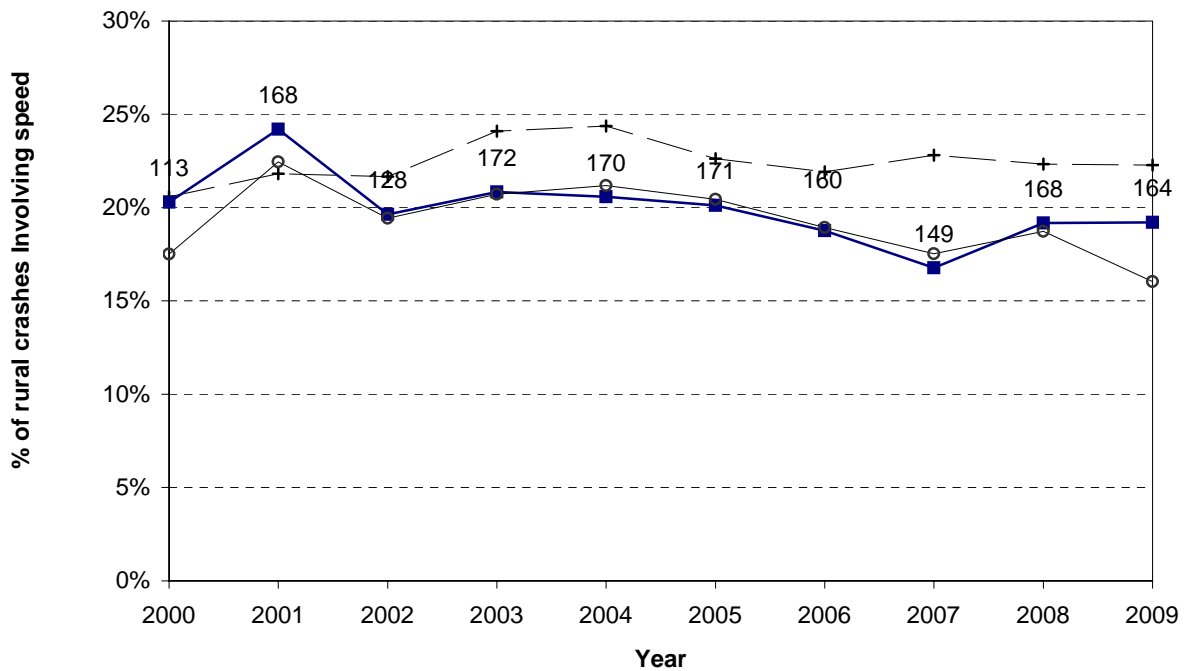
**Figure 5.13 Alcohol involved trend
Auckland Region - rural roads**



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

+ All NZ ■ Auckland ○ Group X

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

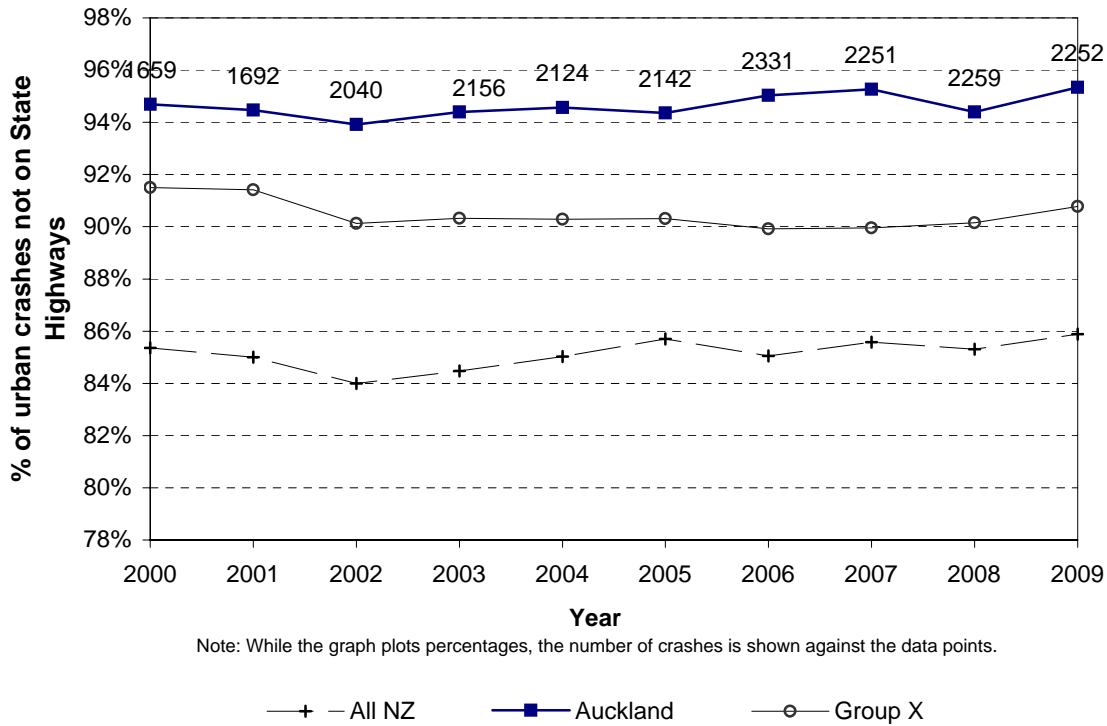


Note: While the graph plots percentages, the number of crashes is shown against the data points.

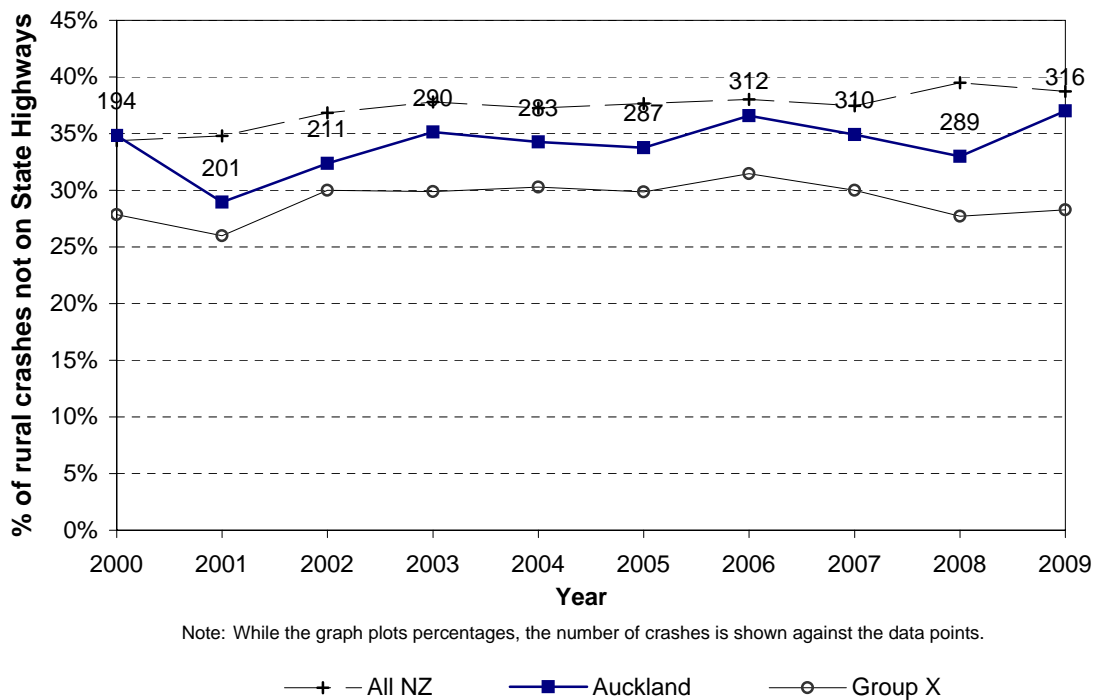
+ All NZ ■ Auckland ○ Group X

Environmental Statistics

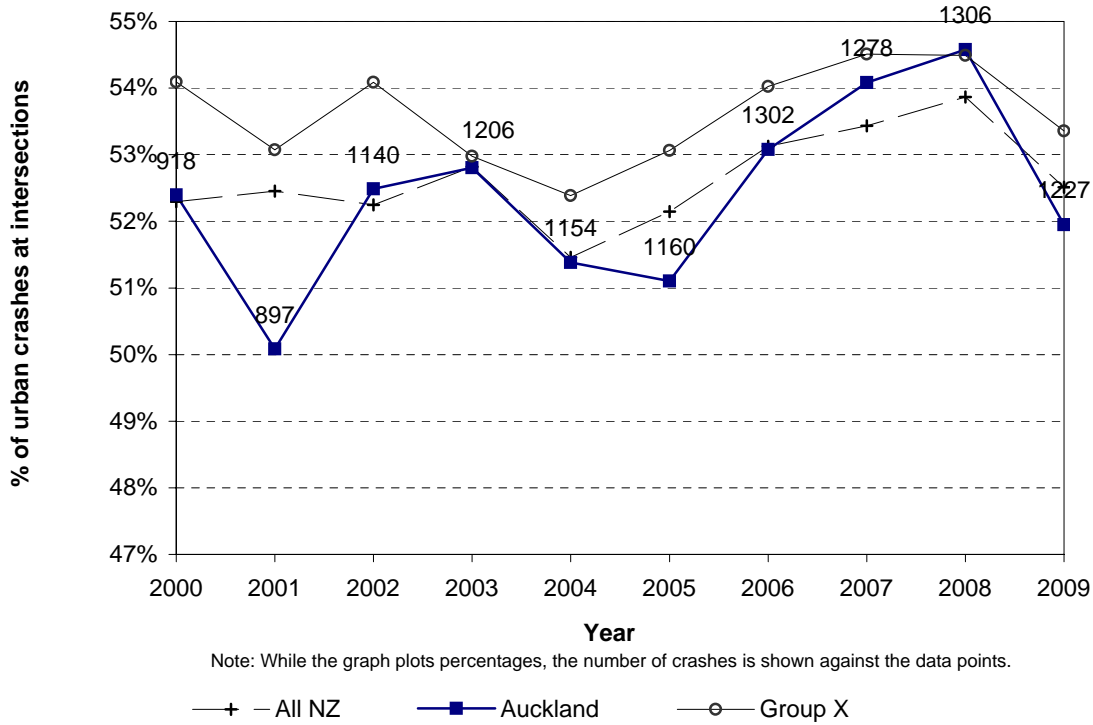
**Figure 6.1 Crashes not on state highways
Auckland Region - urban roads**



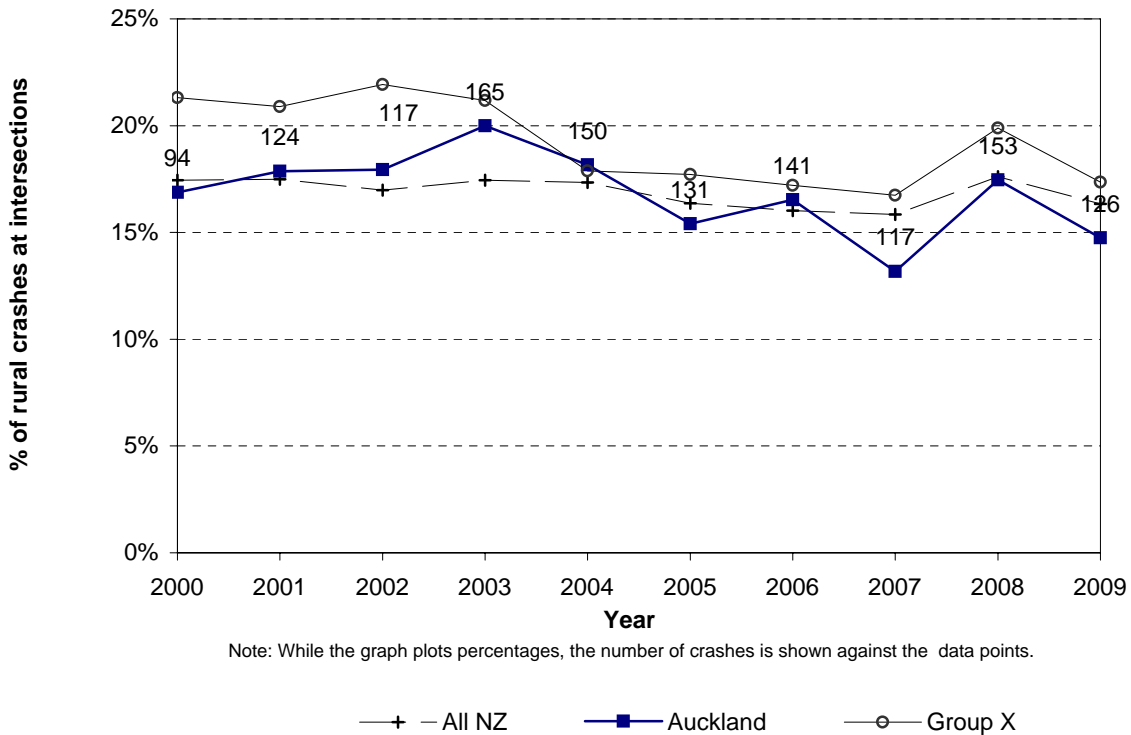
**Figure 6.2 Crashes not on state highways
Auckland Region - rural roads**



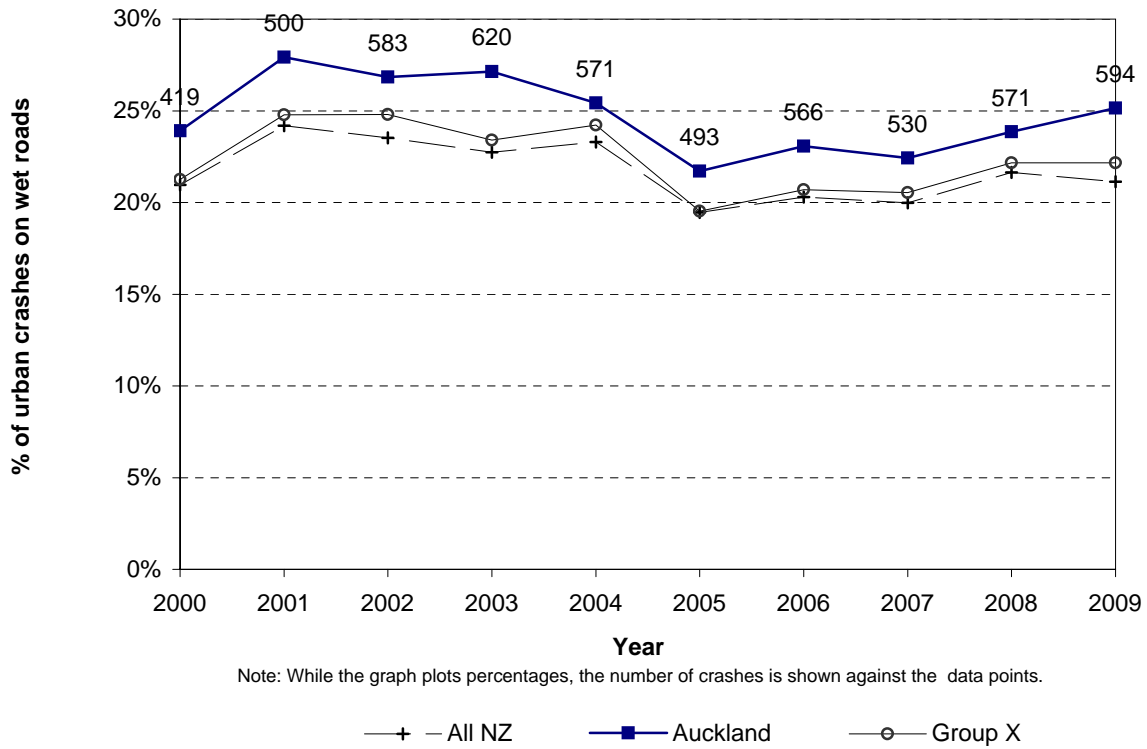
**Figure 6.3 Intersection crashes
Auckland Region - urban roads**



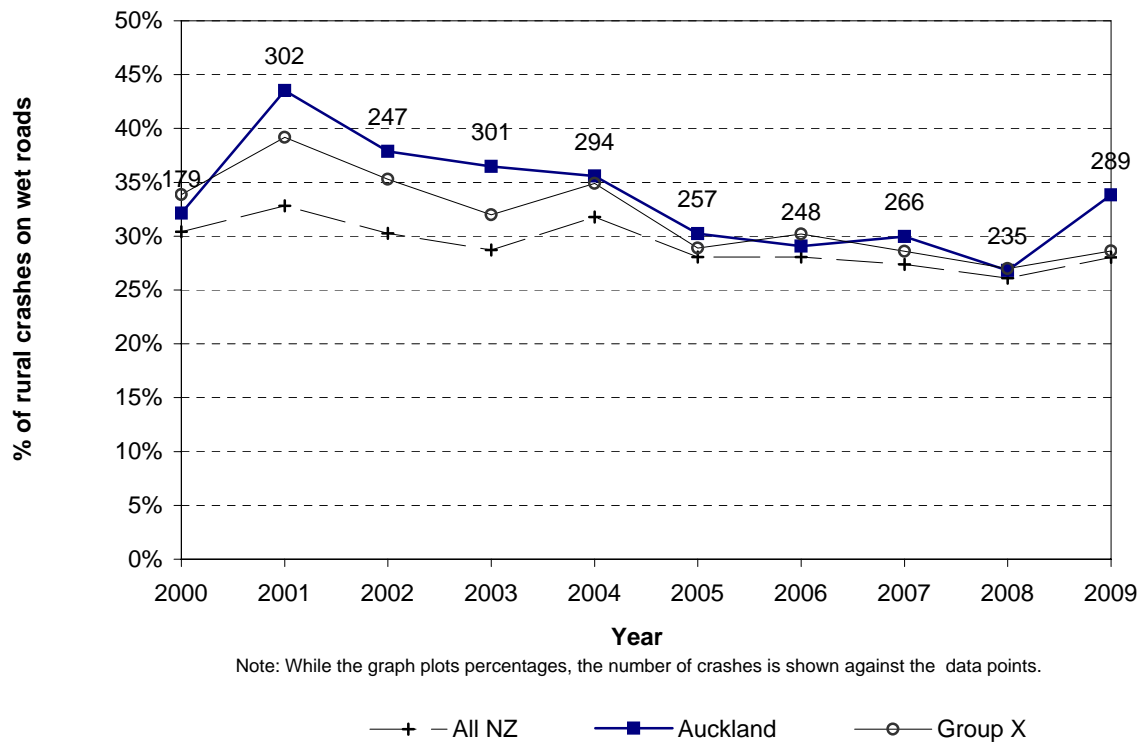
**Figure 6.4 Intersection crashes
Auckland Region - rural roads**



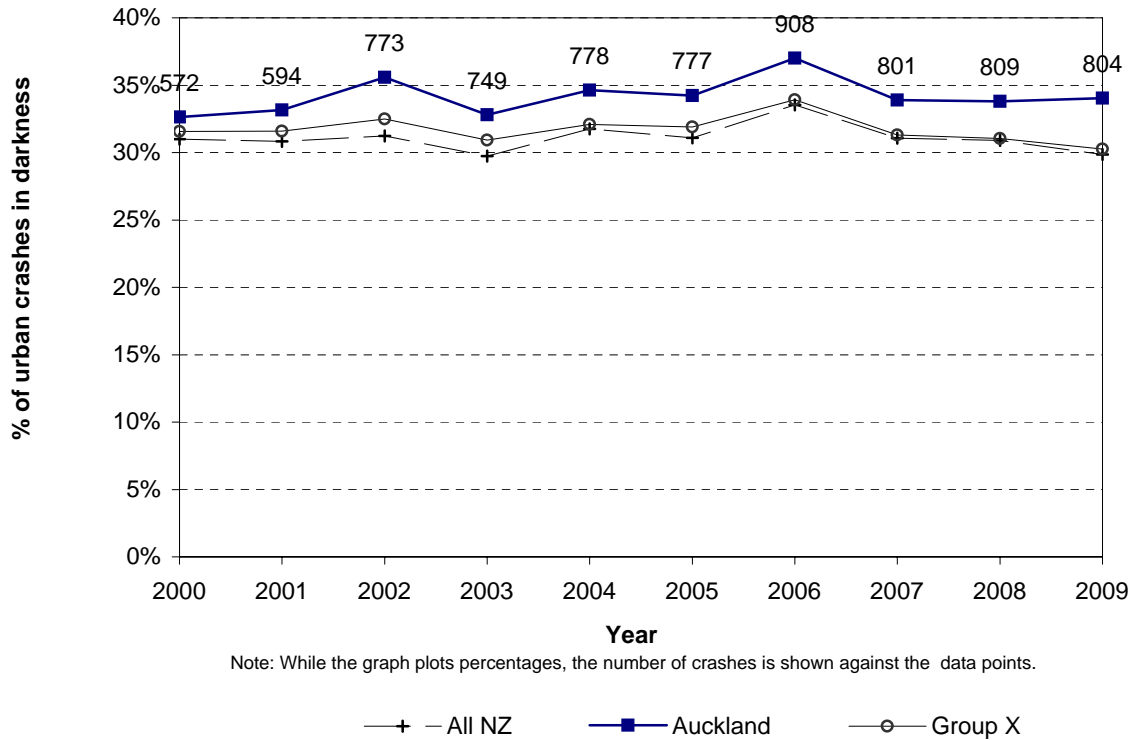
**Figure 6.5 Wet road crashes
Auckland Region - urban roads**



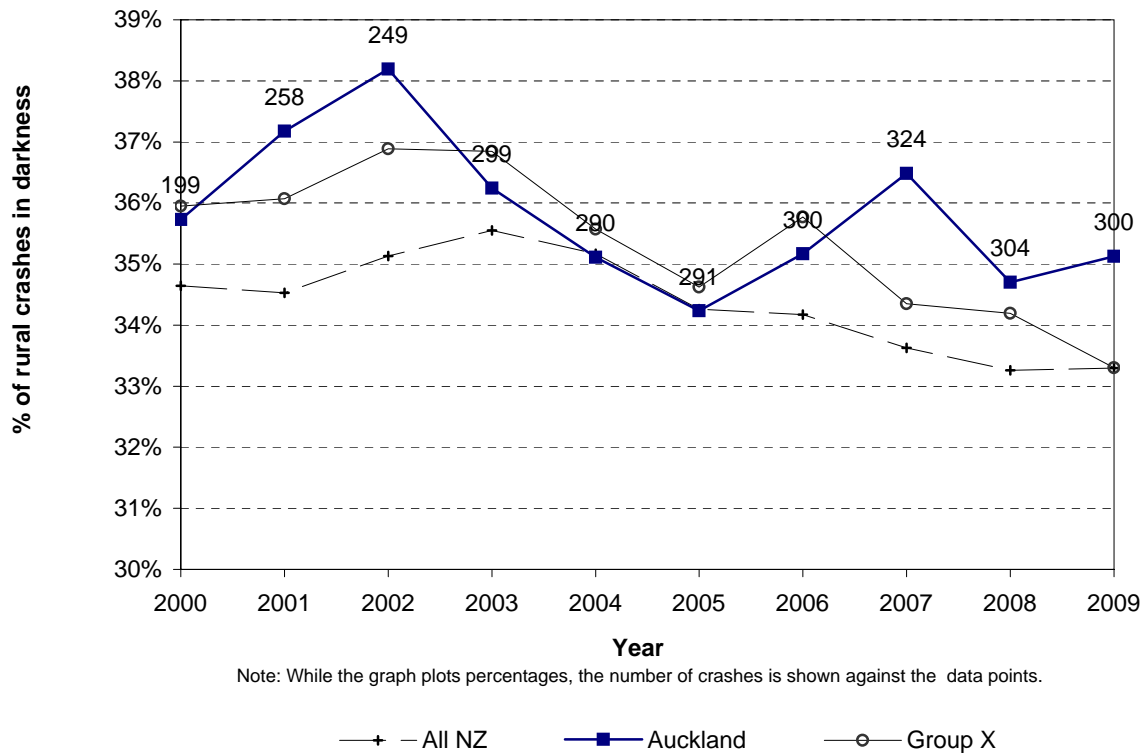
**Figure 6.6 Wet road crashes
Auckland Region - rural roads**



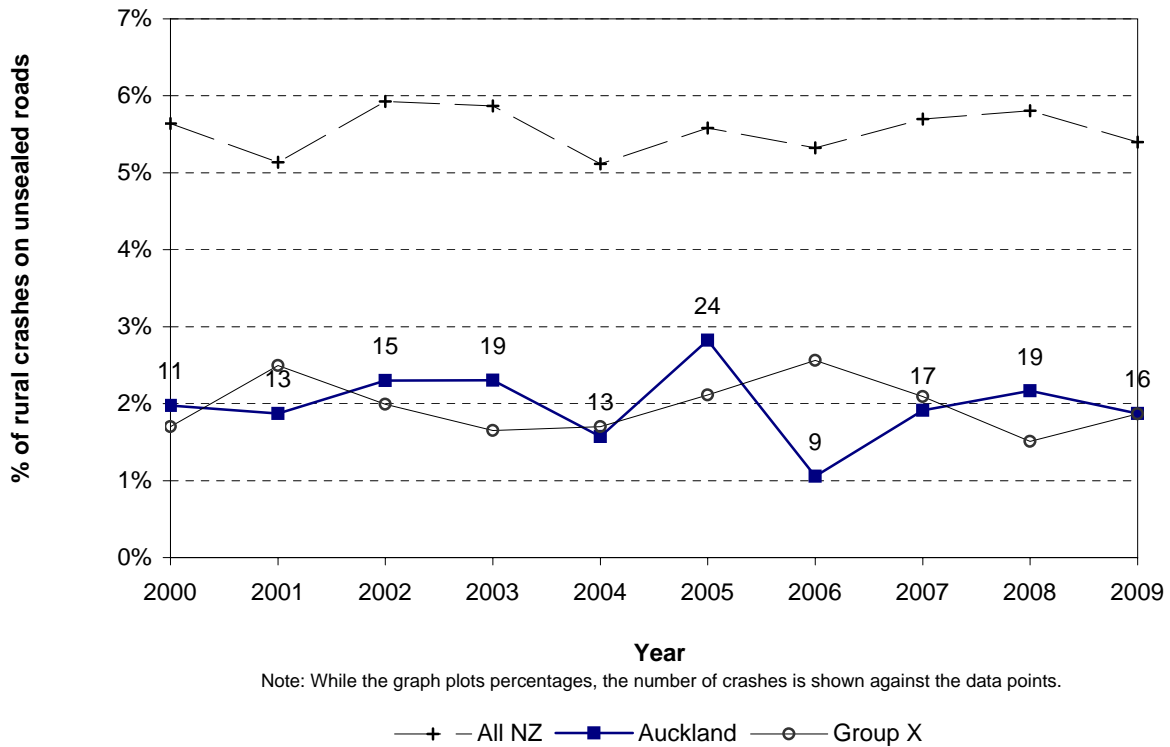
**Figure 6.7 Crashes in darkness
Auckland Region - urban roads**



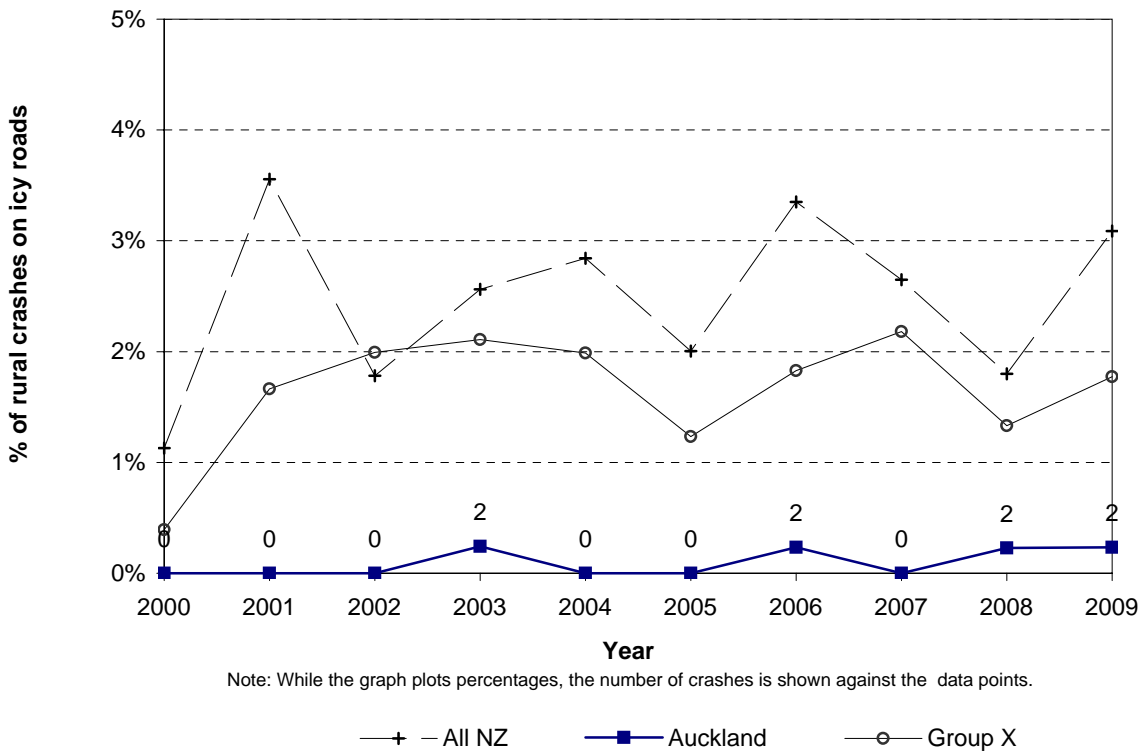
**Figure 6.8 Crashes in darkness
Auckland Region - rural roads**



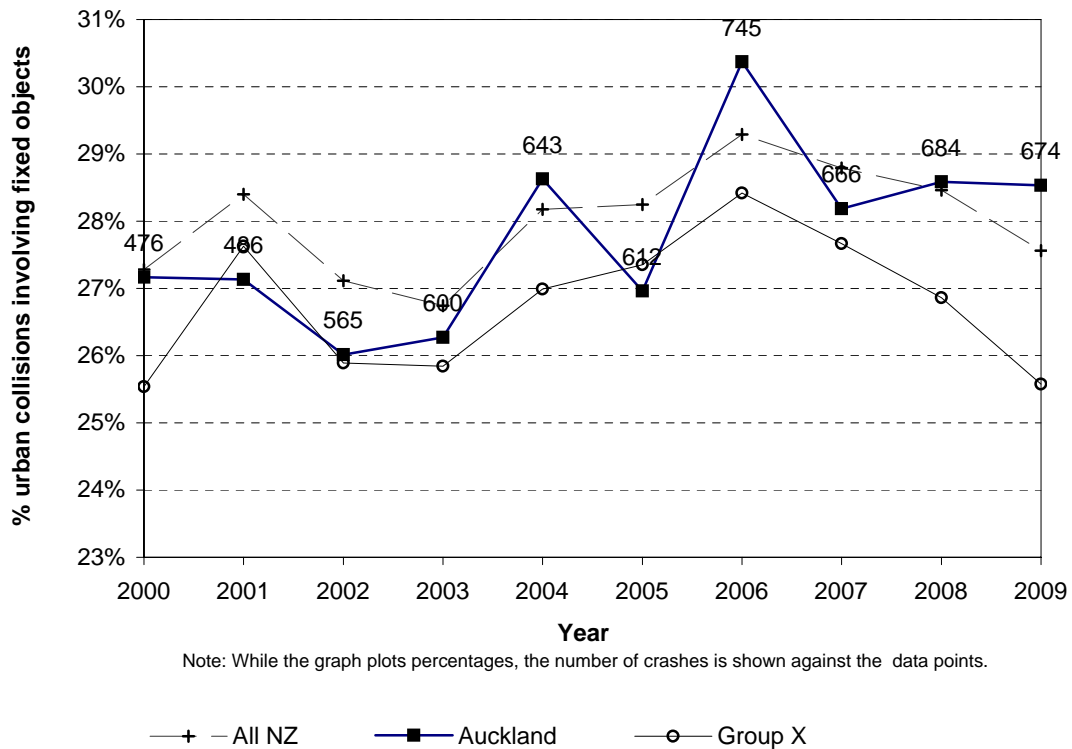
**Figure 6.9 Unsealed road crashes
Auckland Region - rural roads**



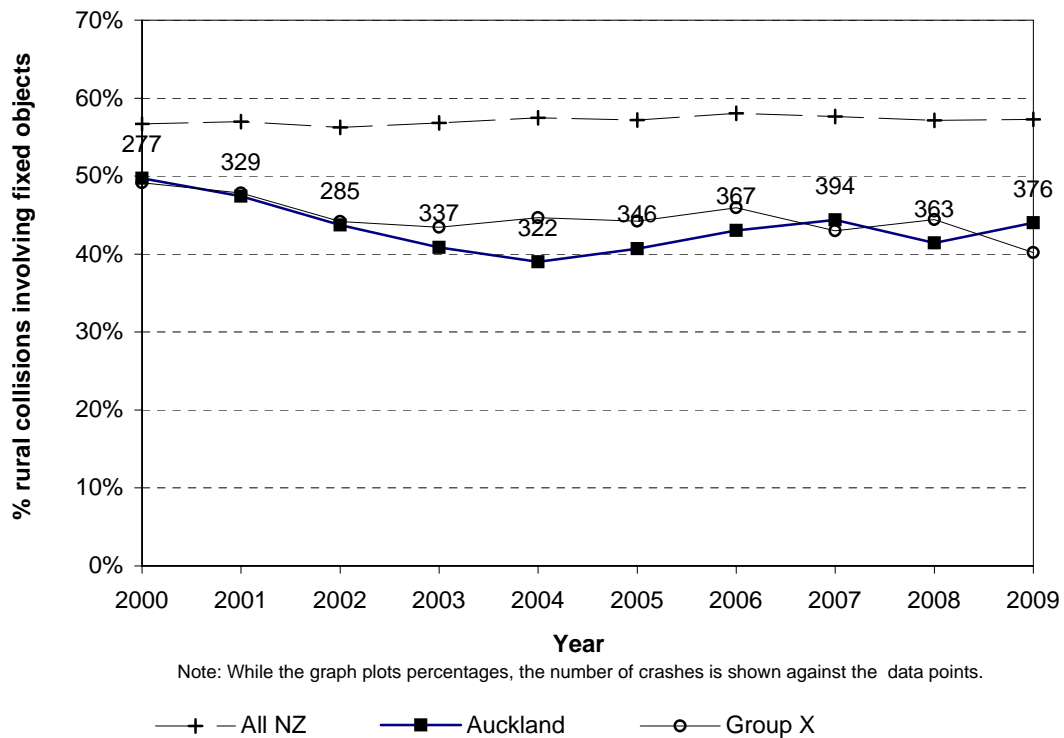
**Figure 6.10 Icy road crashes
Auckland Region - rural roads**



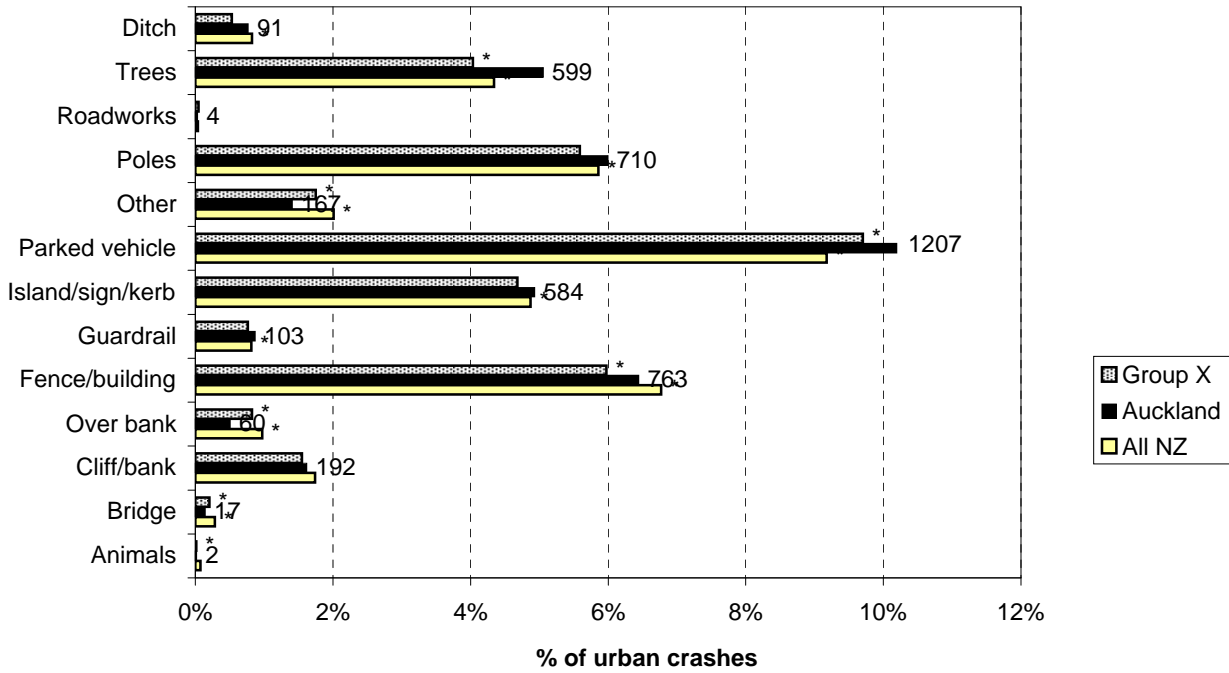
**Figure 6.11 Collisions with objects
Auckland Region - urban roads**



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

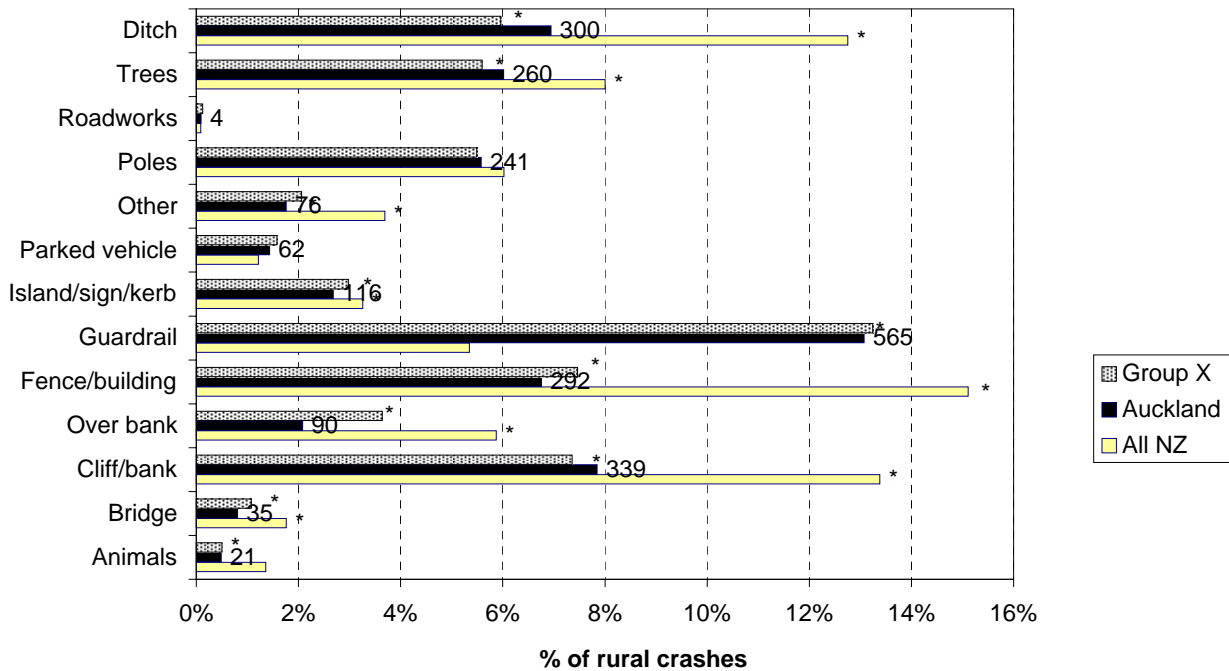


**Figure 6.13 Objects struck - urban
Auckland Region (2005-2009)**



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

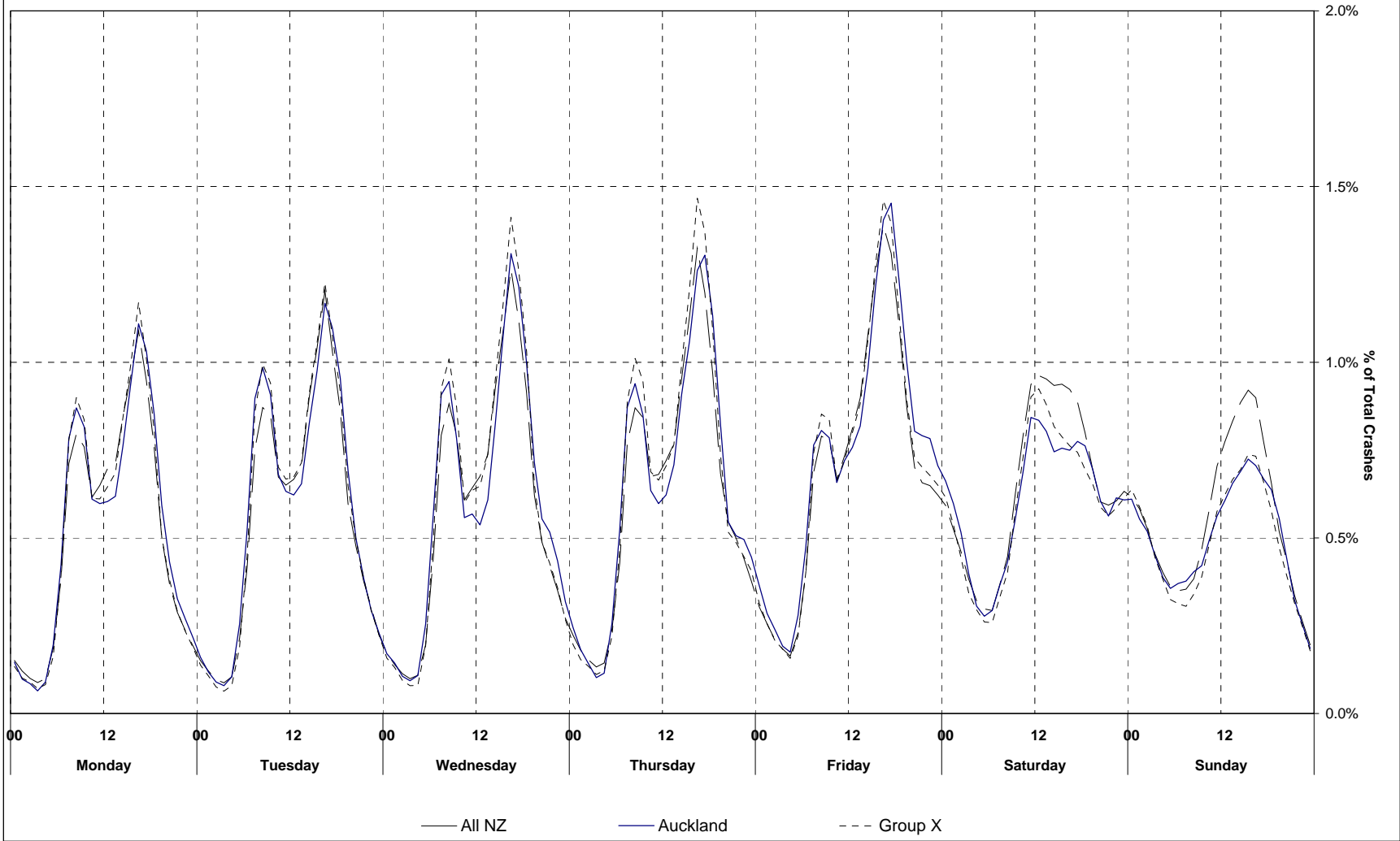
**Figure 6.14 Objects struck - rural
Auckland Region (2005-2009)**



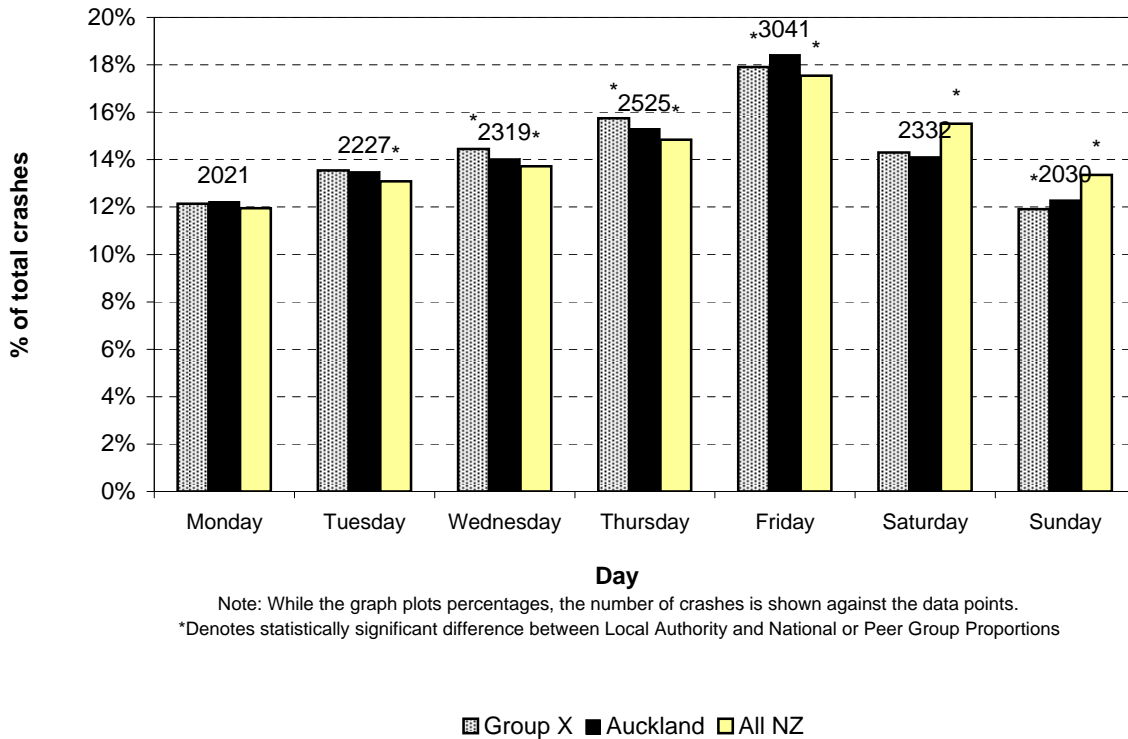
Note: While the graph plots percentages, the number of crashes is shown against the data points.
*Denotes statistically significant difference between Local Authority and National or Peer Group Proportions

Date and Time Statistics

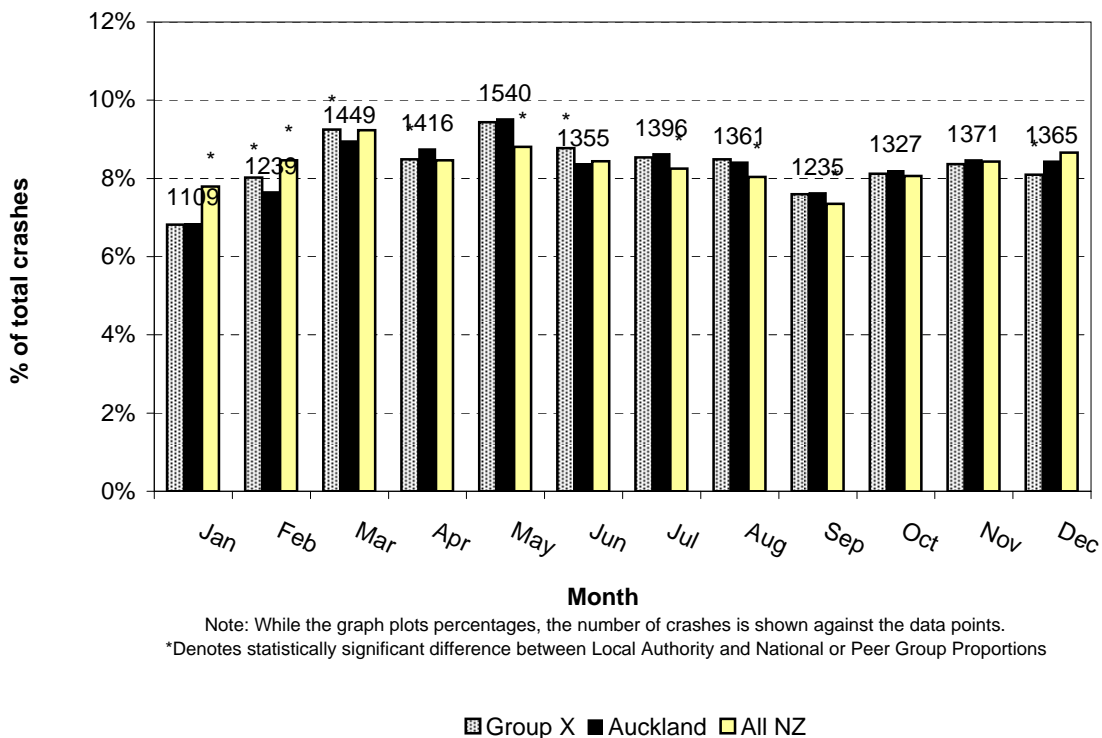
Figure 7.1 Time pattern over average week
Auckland Region (2005-2009)



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



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



Local Road Statistics

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

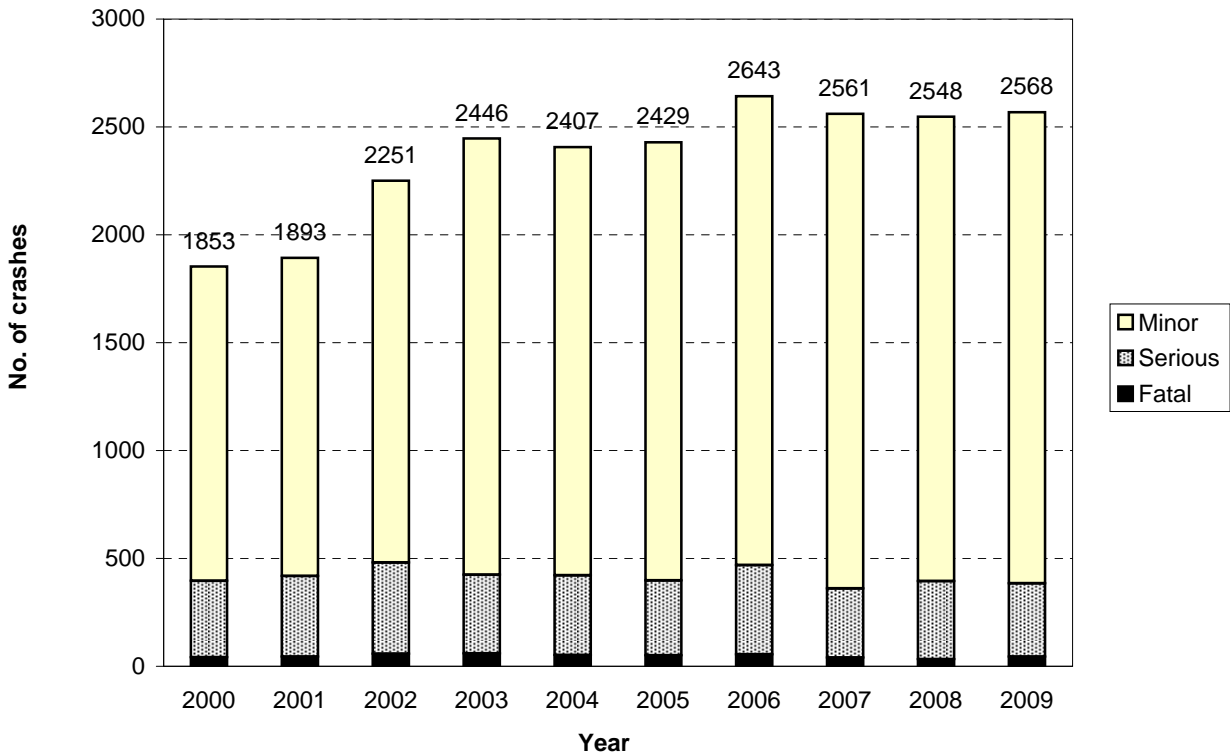
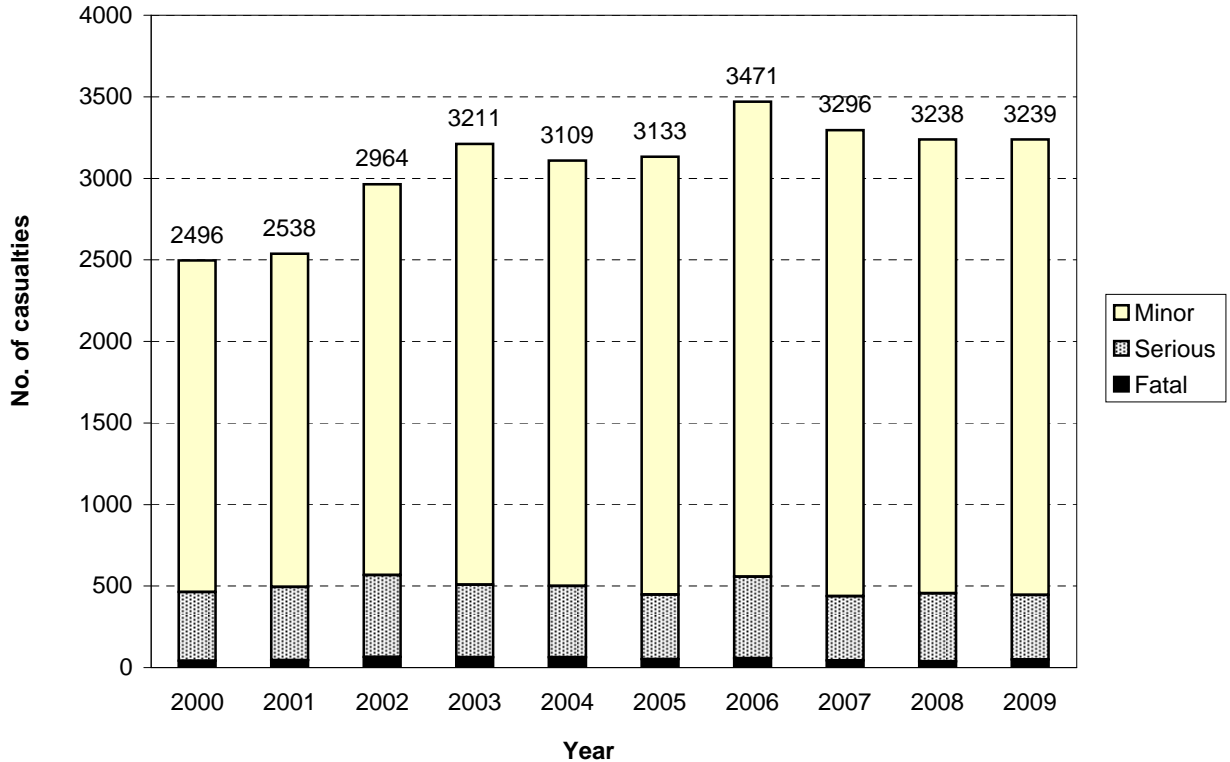
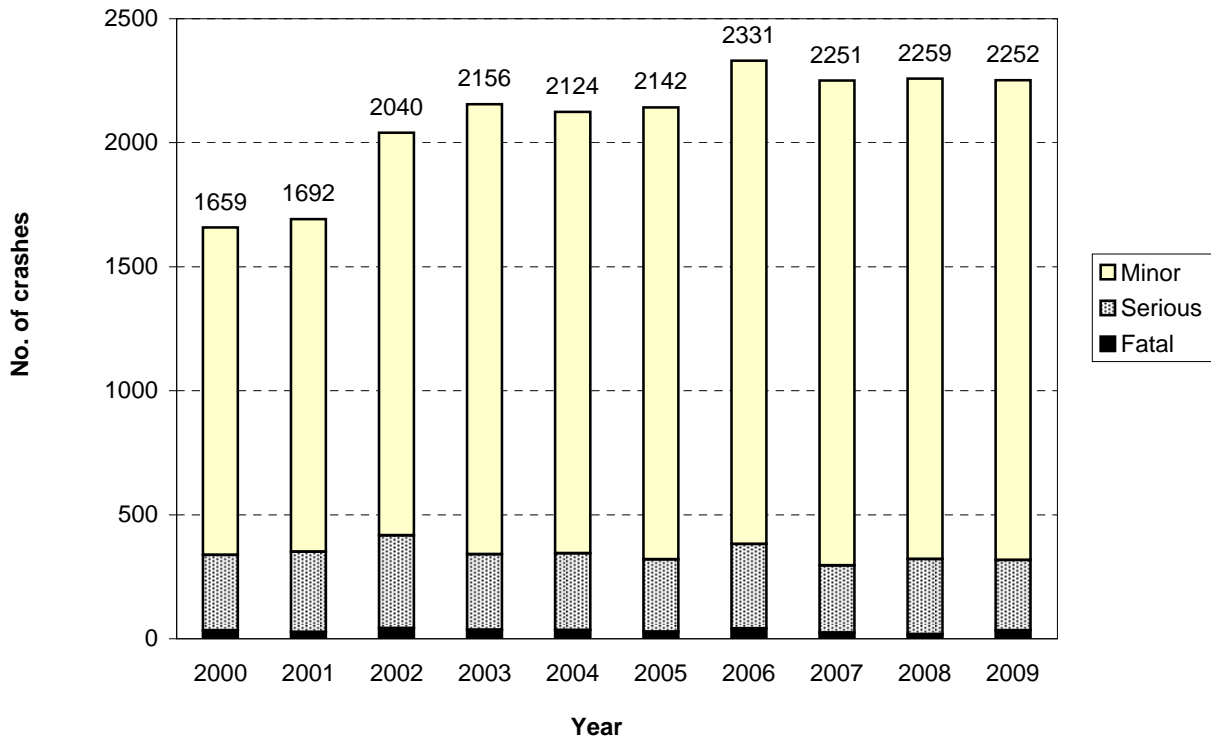


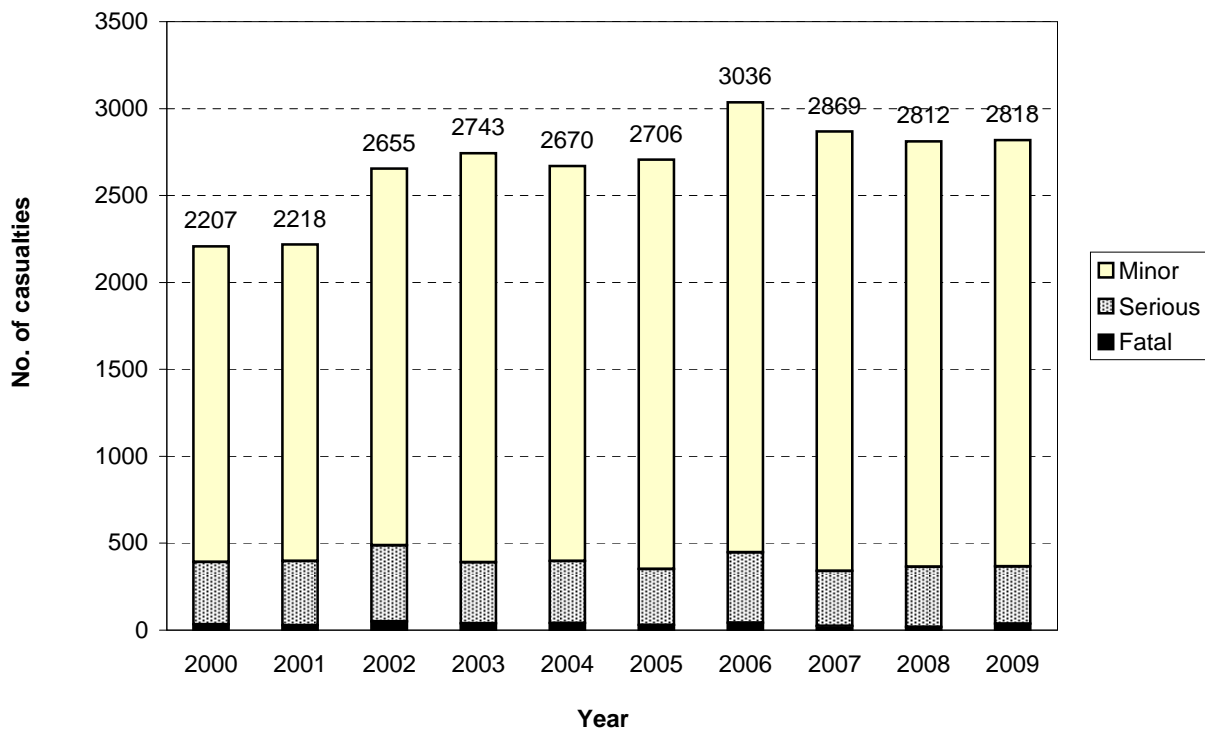
Figure 8.2 Number of casualties
Auckland Region - council roads (urban & rural)



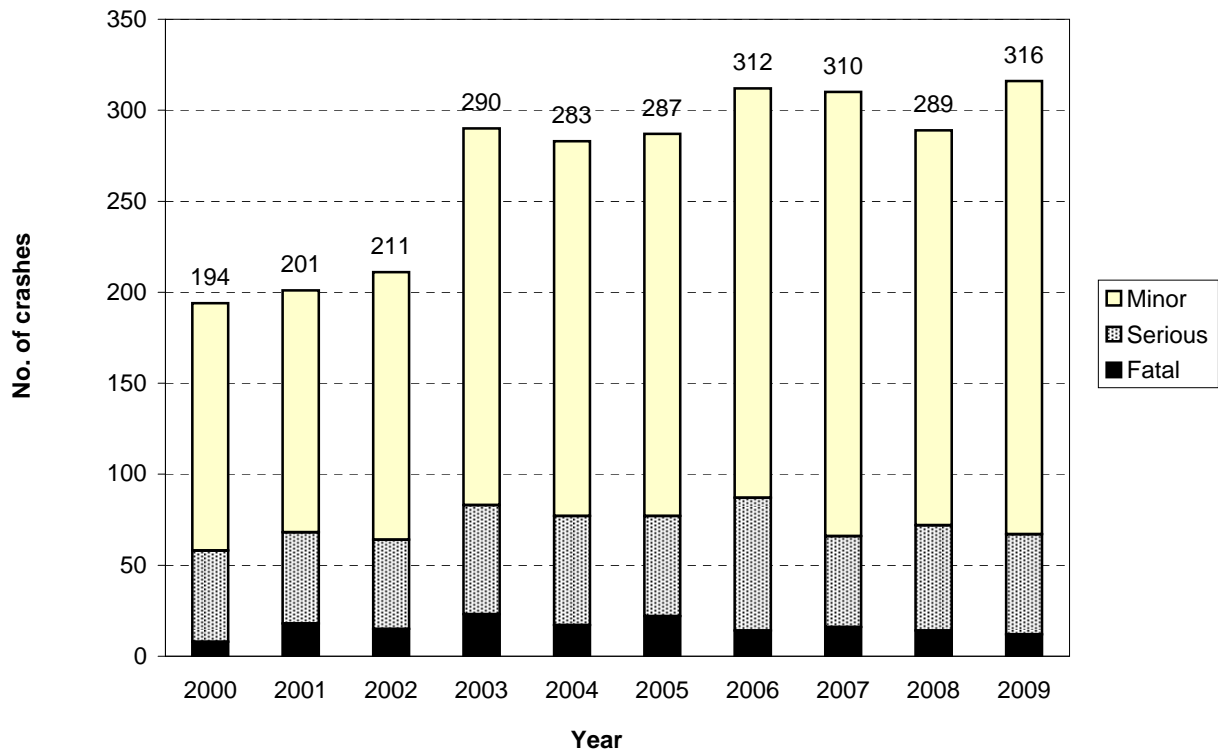
**Figure 8.3 Number of injury crashes
Auckland Region - urban council roads**



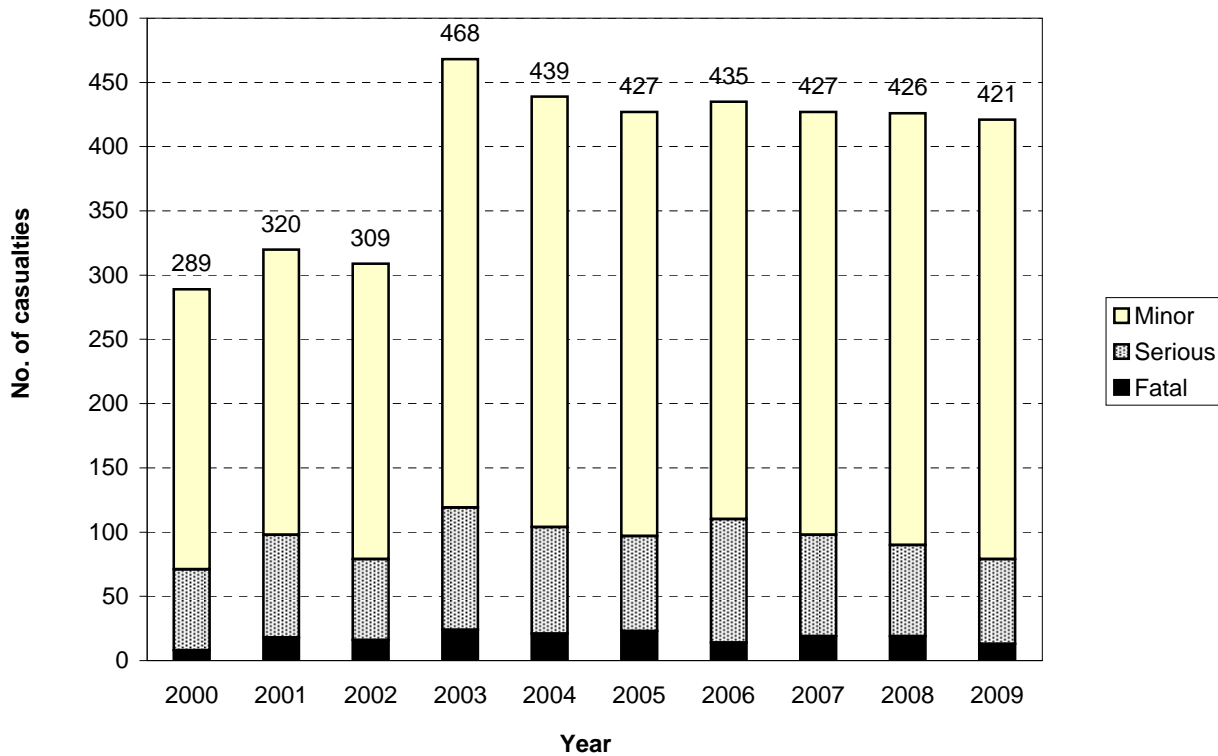
**Figure 8.4 Number of casualties
Auckland Region - urban council roads**



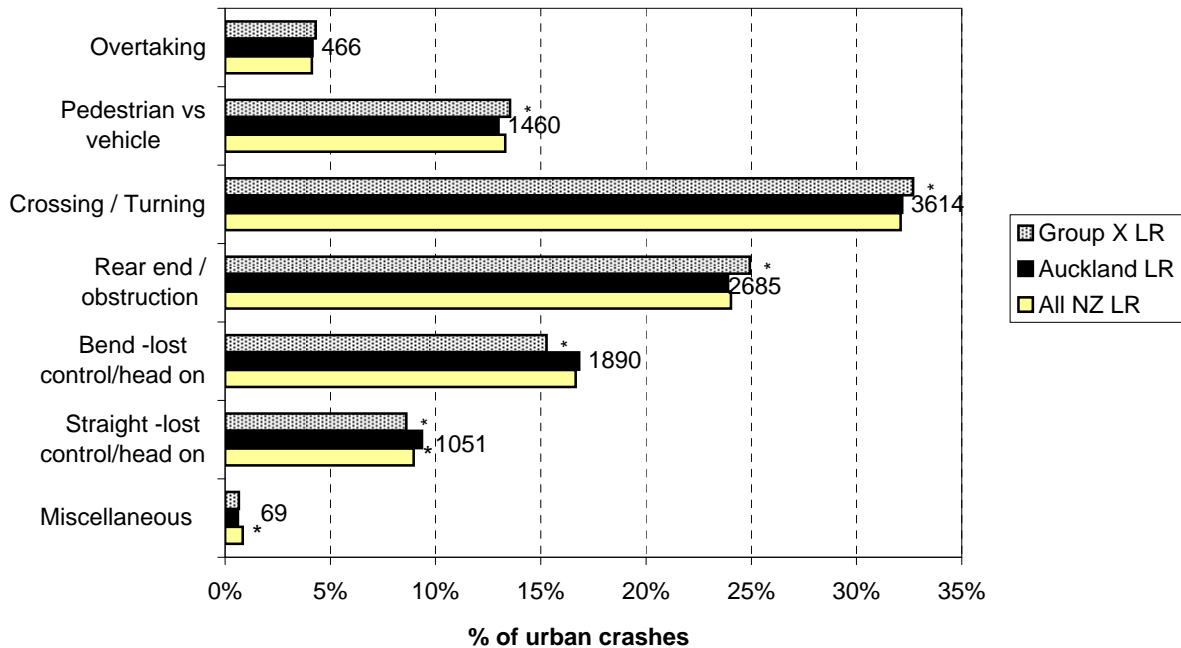
**Figure 8.5 Number of injury crashes
Auckland Region - rural council roads**



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

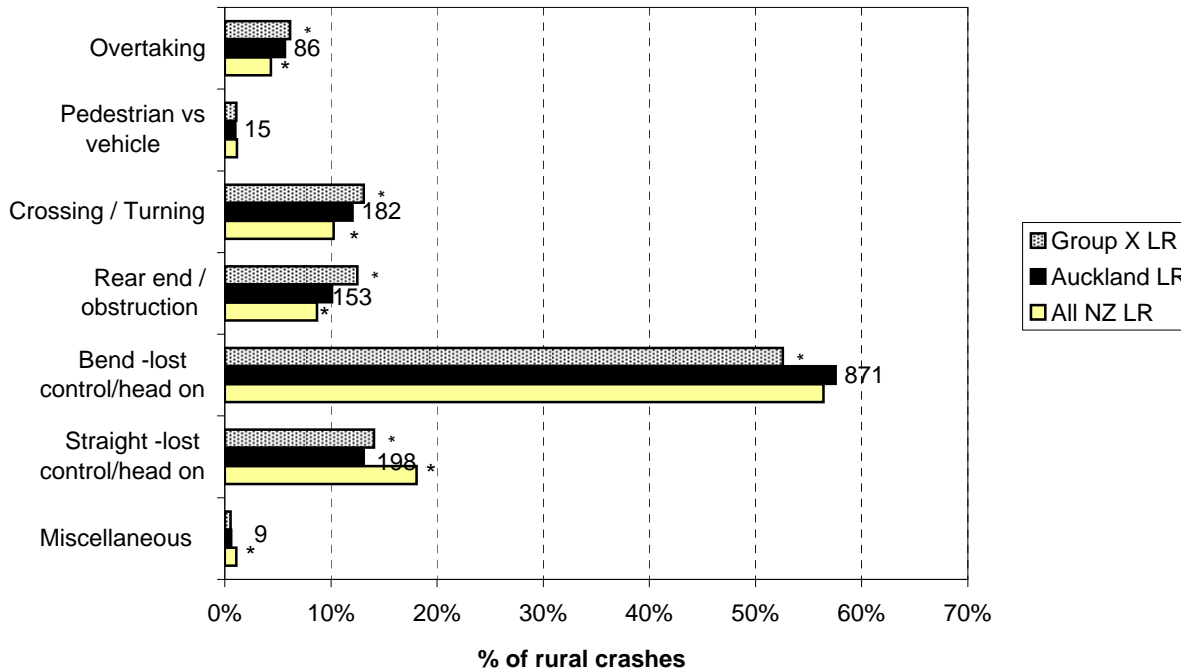


**Figure 8.7 Crash movement type - urban
Auckland Region council roads (2005-2009)**



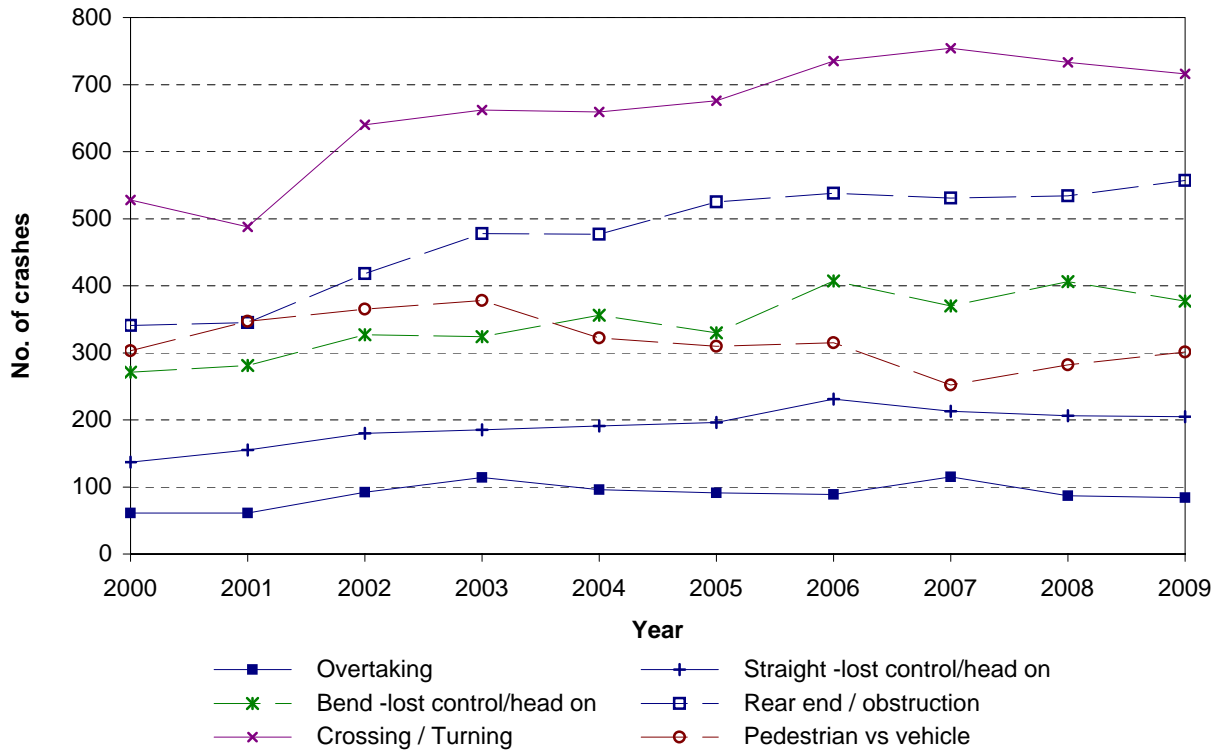
Note: While the graph plots percentages, the number of crashes is shown against the data points.
*Denotes statistically significant difference between Local Authority and National or Peer Group Proportions

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

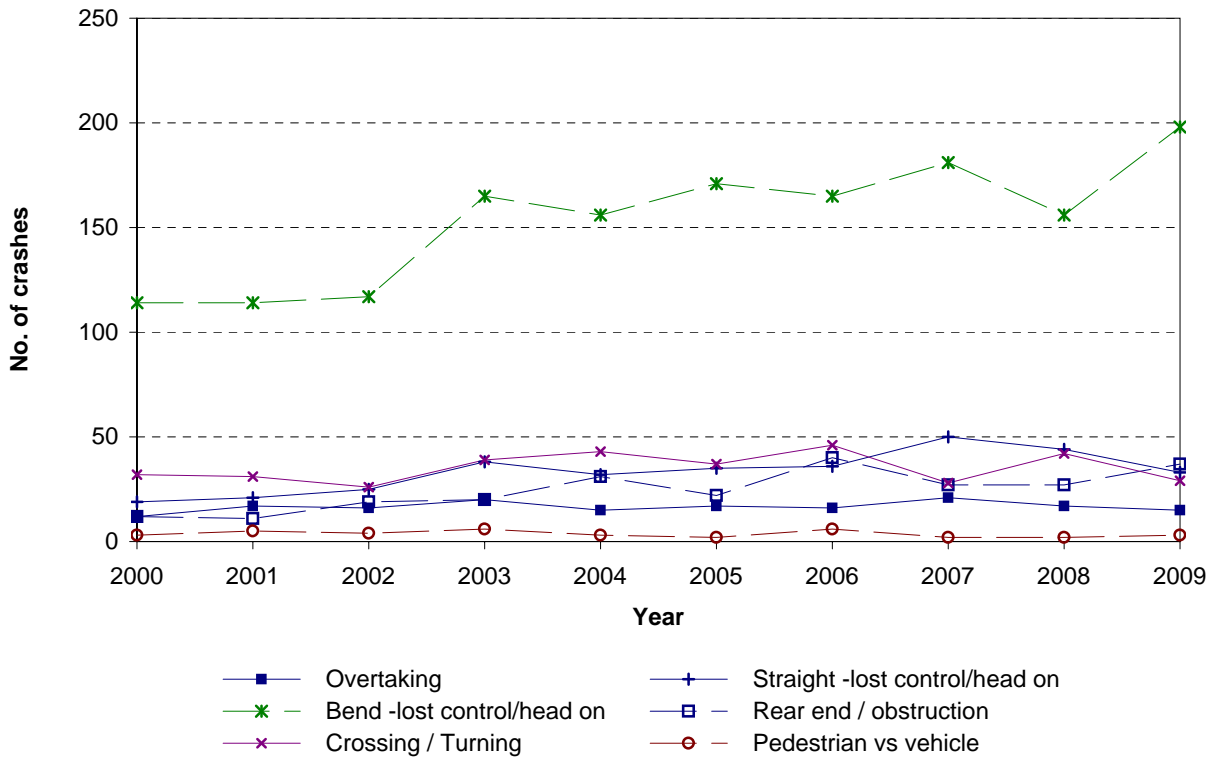


Note: While the graph plots percentages, the number of crashes is shown against the data points.
*Denotes statistically significant difference between Local Authority and National or Peer Group Proportions

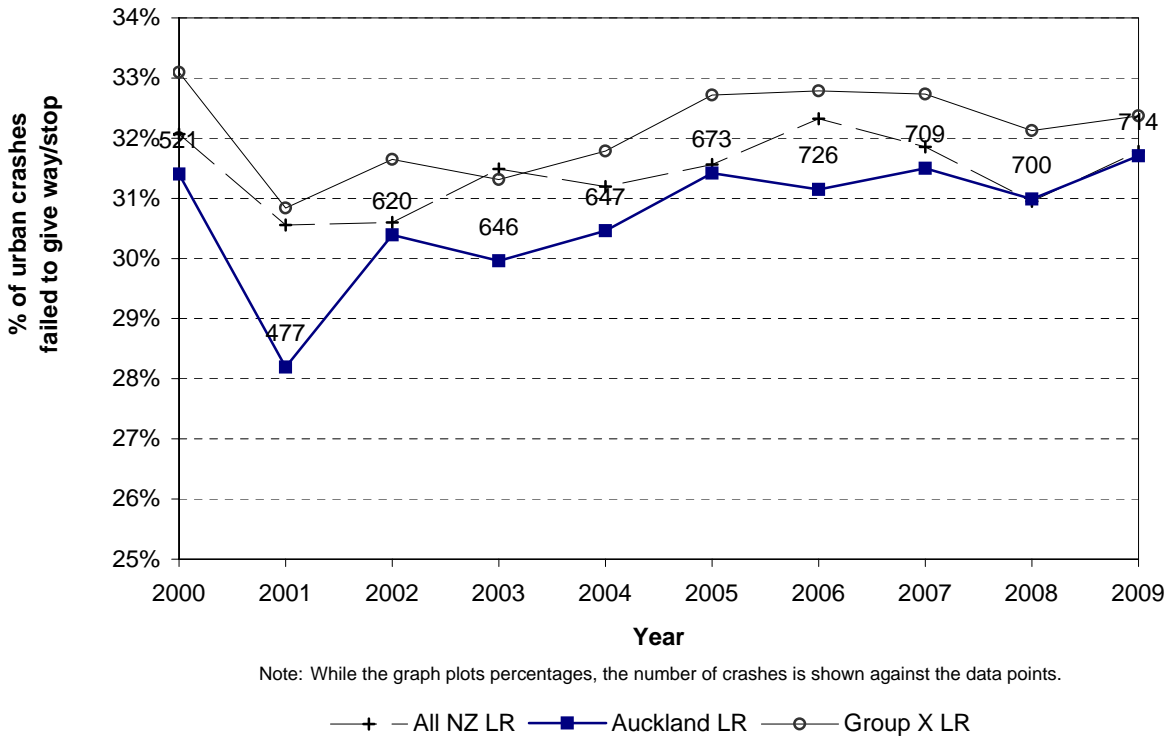
**Figure 8.9 Crash movement type - Trends
Auckland Region - urban council roads**



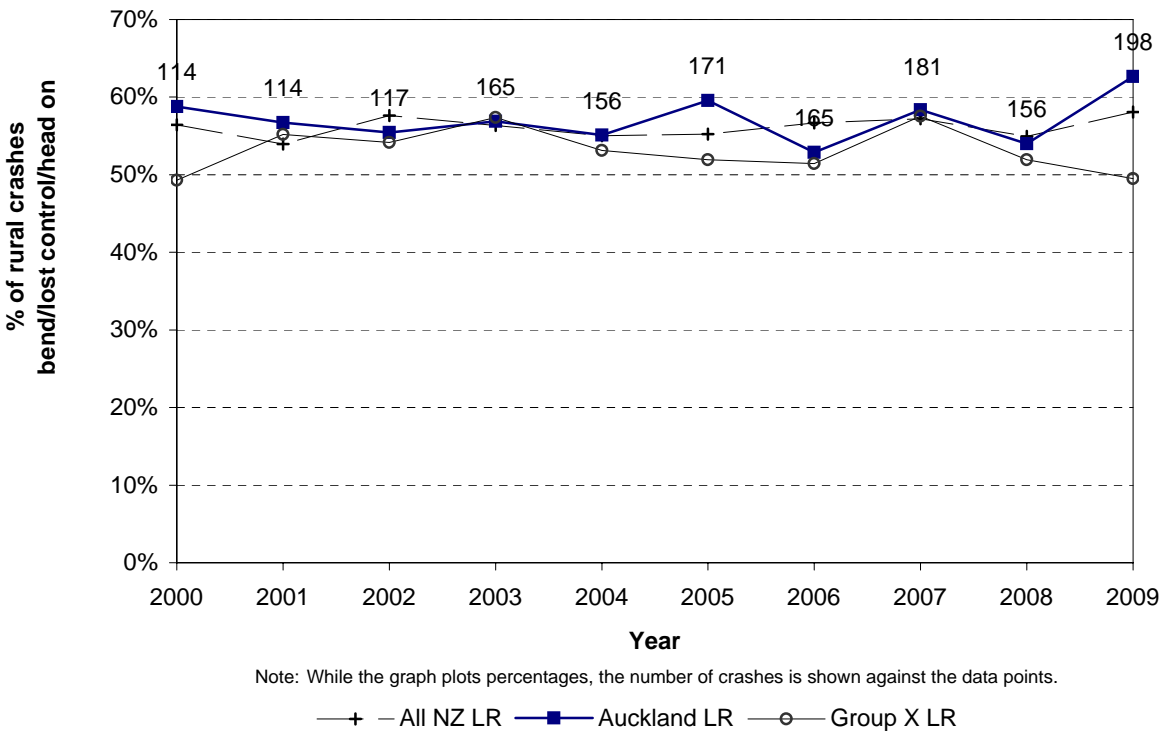
**Figure 8.10 Crash movement type - Trends
Auckland Region - rural council roads**



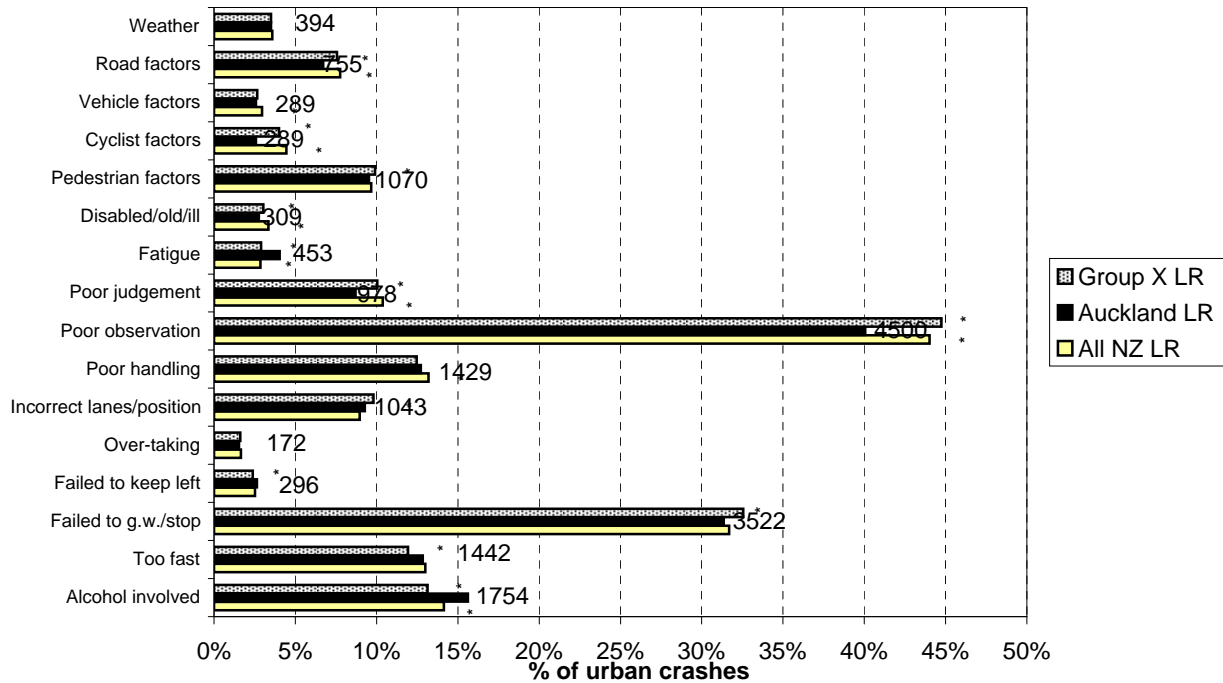
**Figure 8.11 Failed to give way/stop
Auckland Region - urban council roads**



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

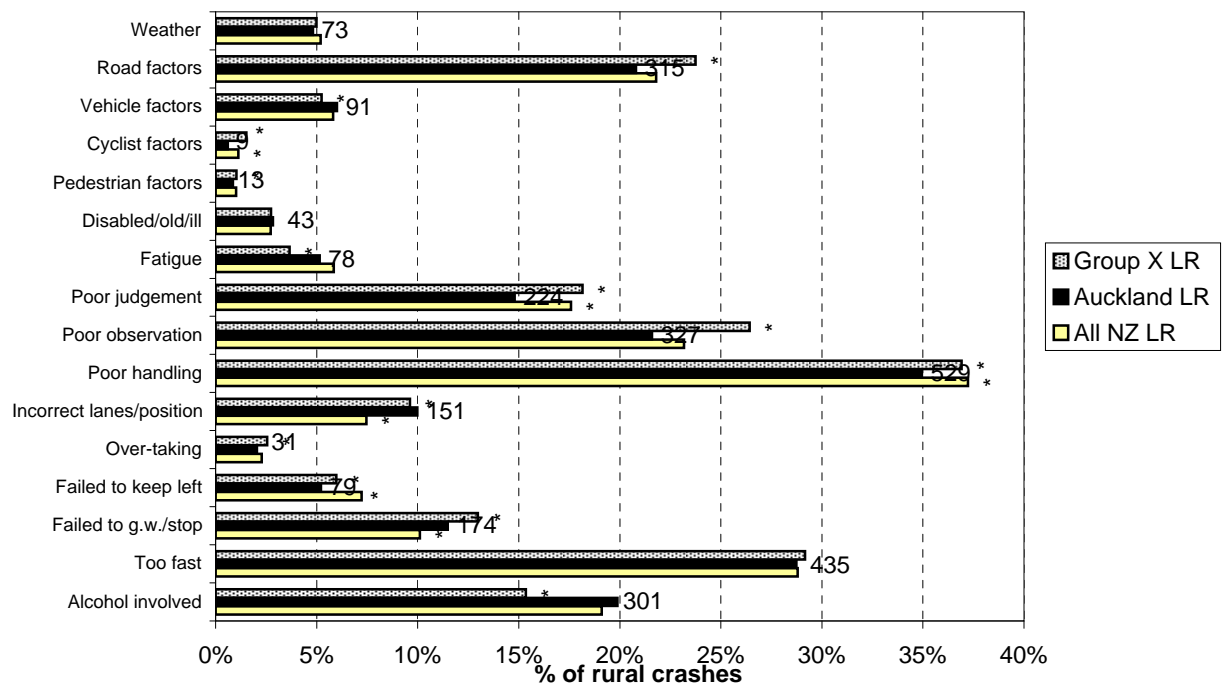


**Figure 8.13 Contributing factors - urban
Auckland Region council roads (2005-2009)**

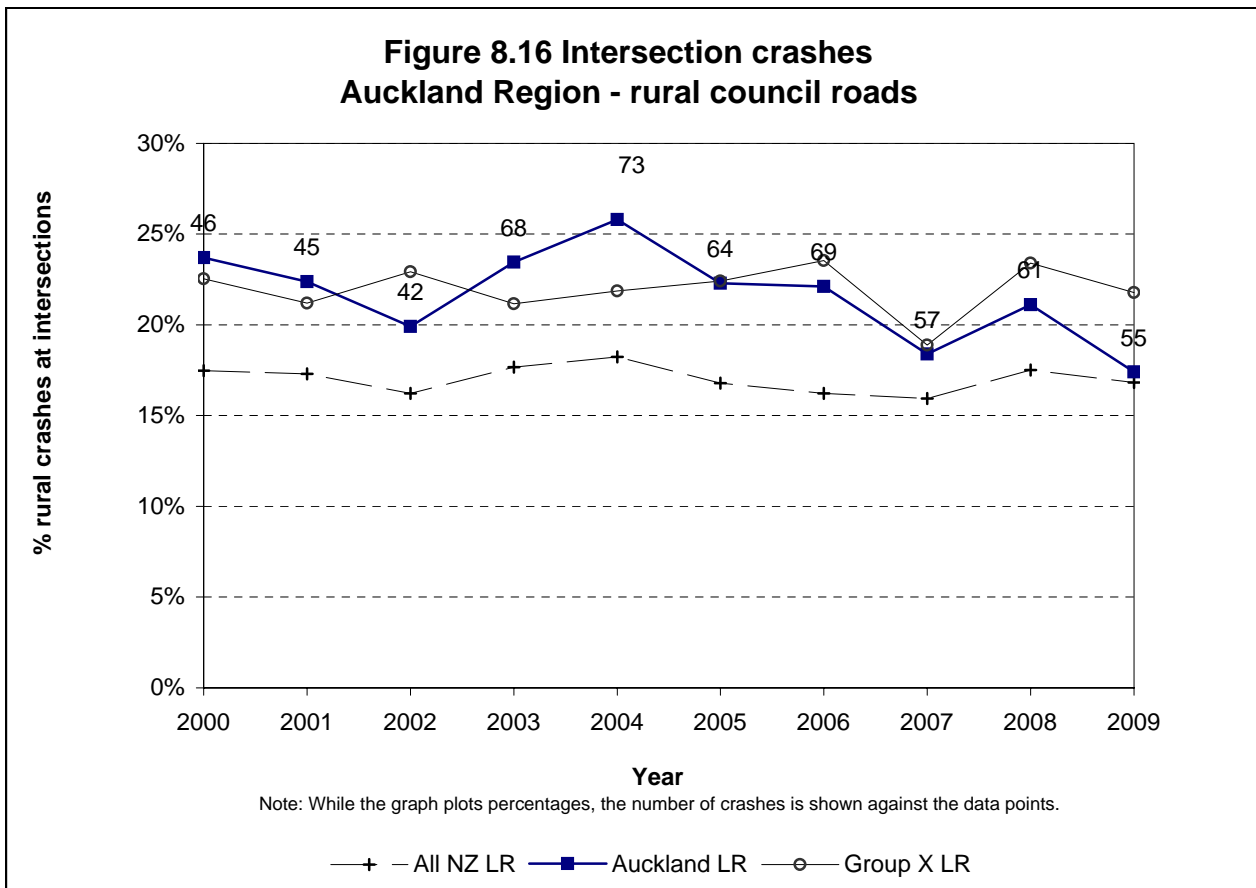
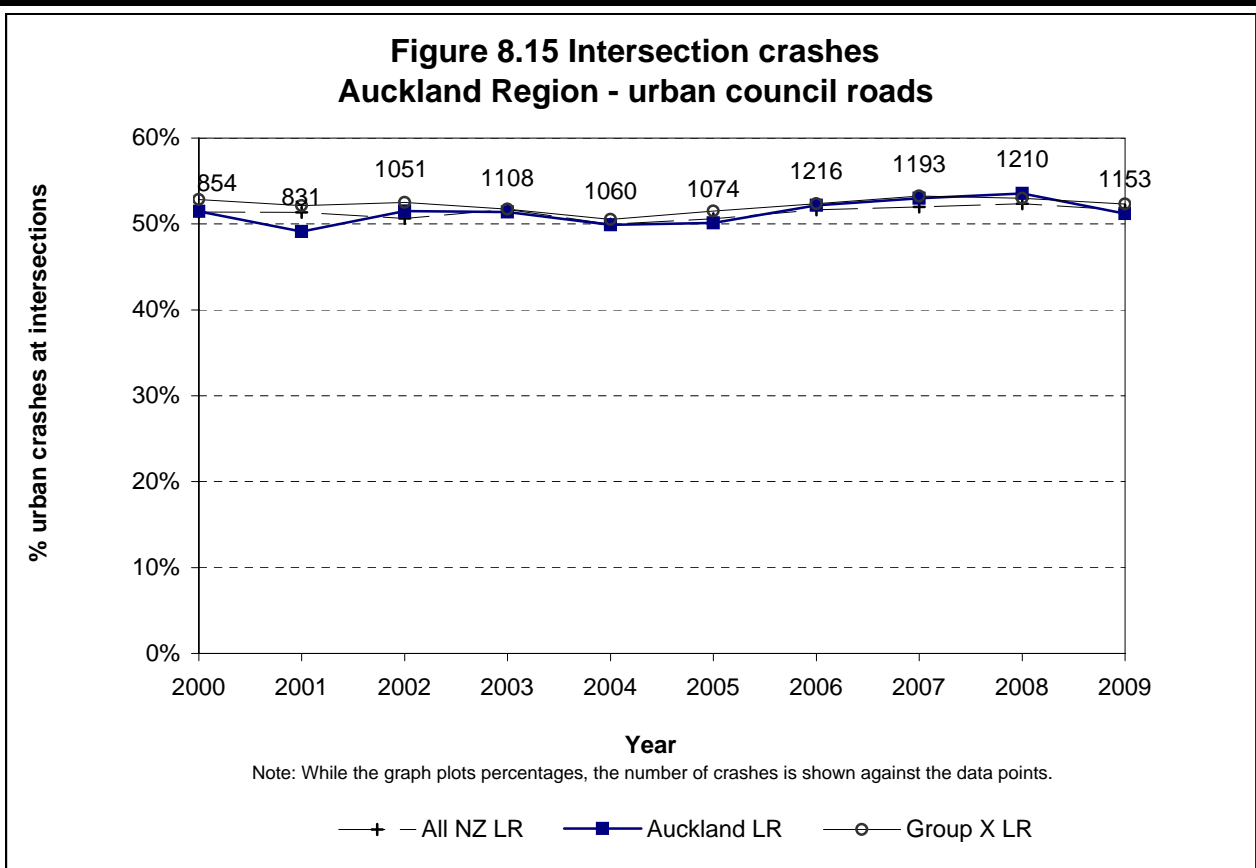


Note: While the graph plots percentages, the number of crashes is shown against the data points.
*Denotes statistically significant difference between Local Authority and National or Peer Group Proportions

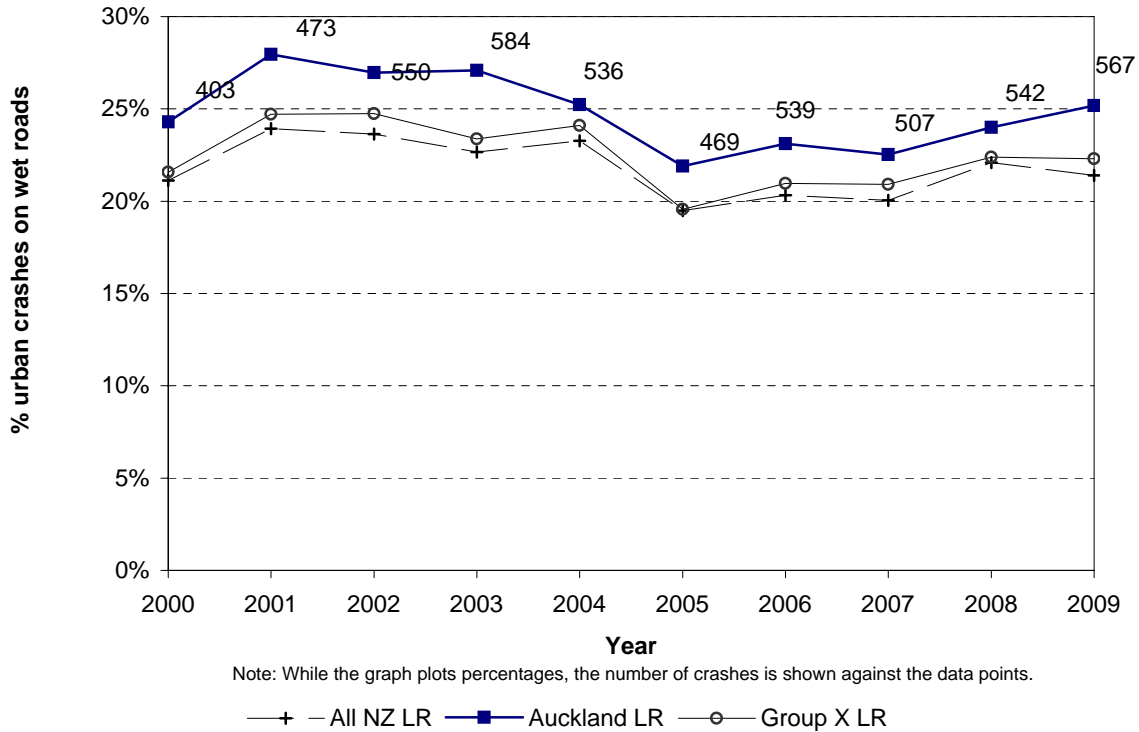
**Figure 8.14 Contributing factors - rural
Auckland Region council roads (2005-2009)**



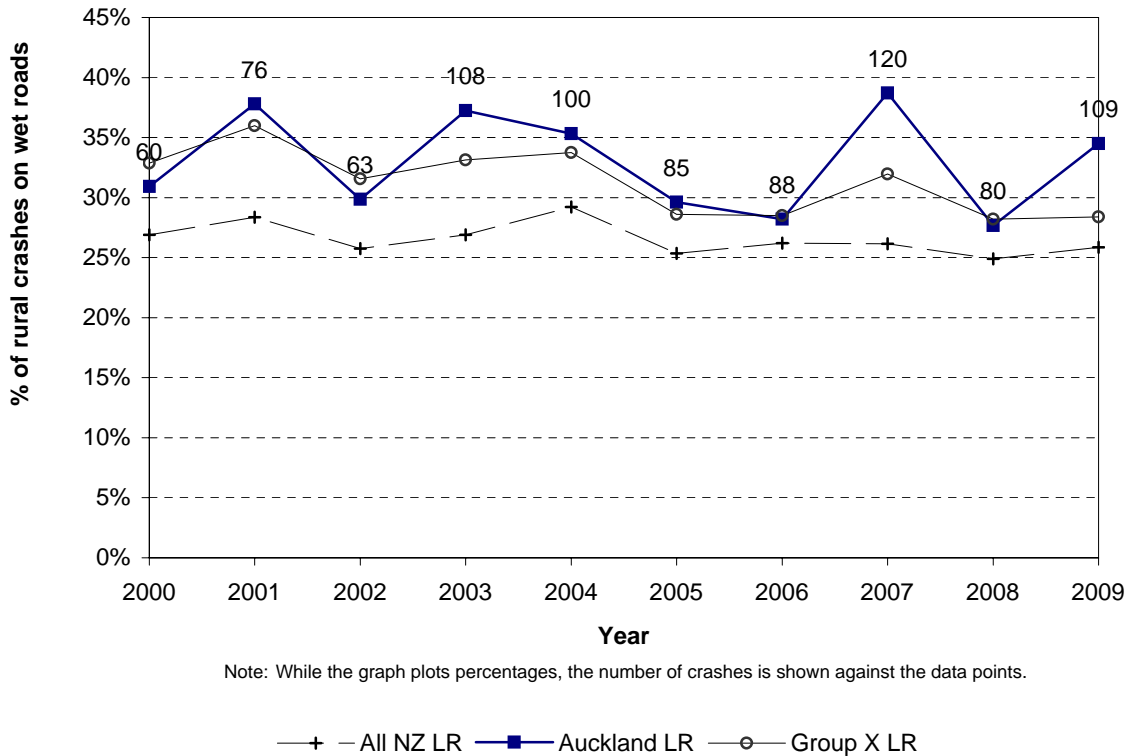
Note: While the graph plots percentages, the number of casualties is shown against the data points.
*Denotes statistically significant difference between Local Authority and National or Peer Group Proportions

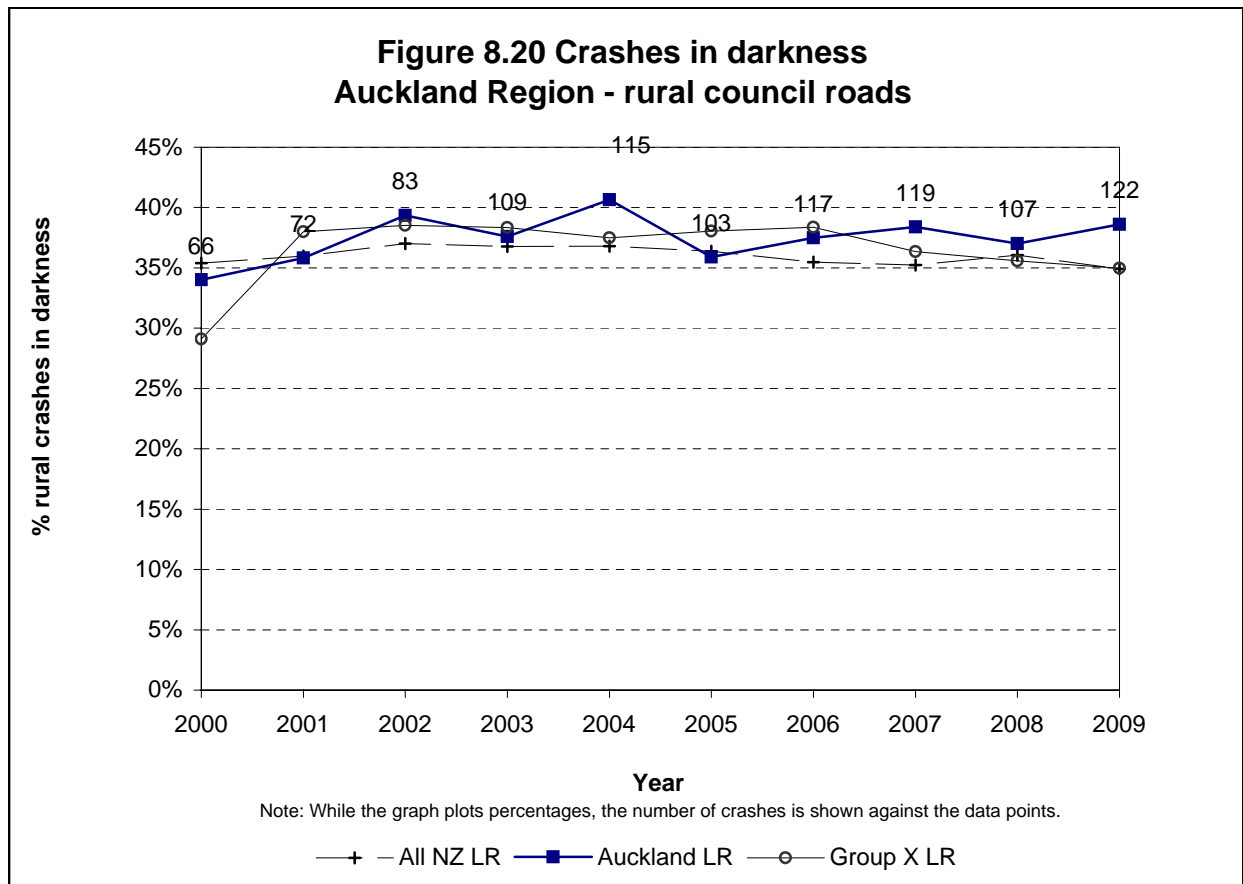
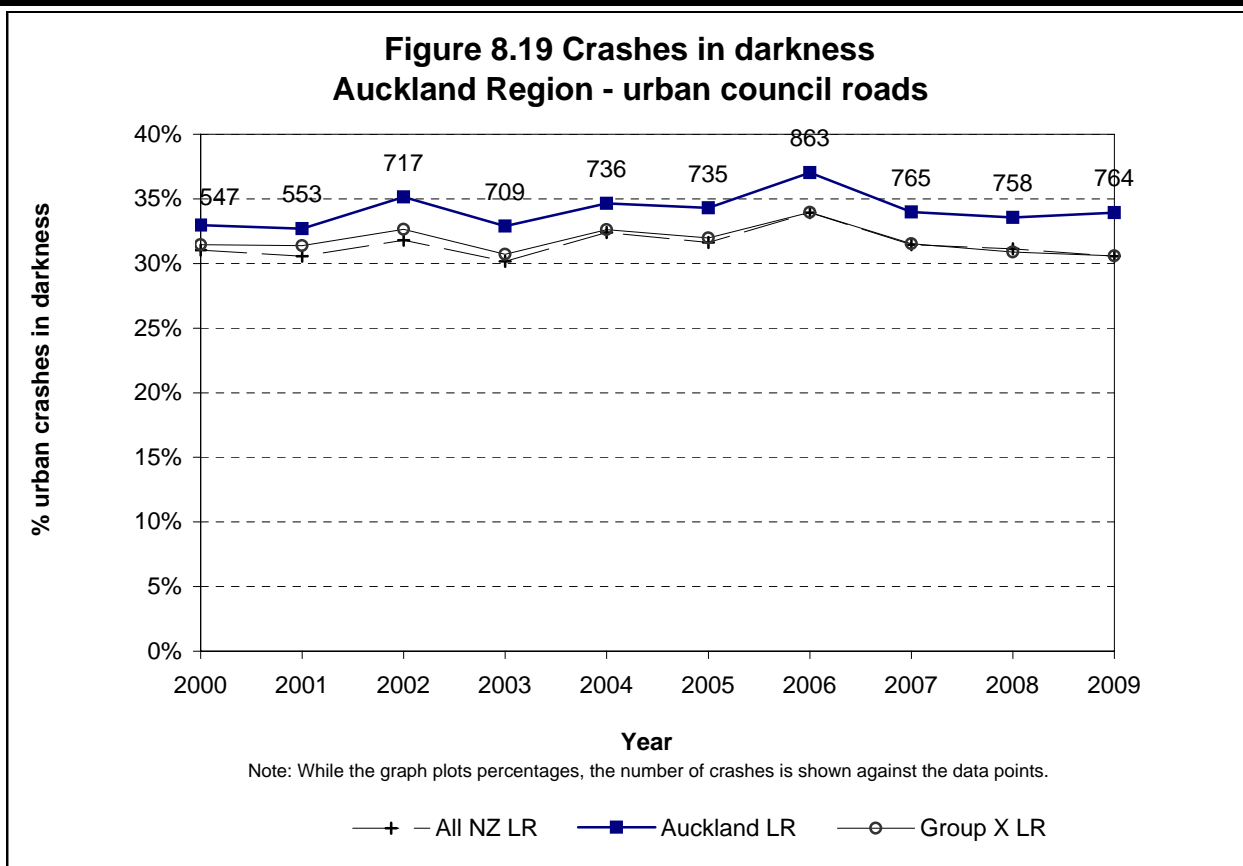


**Figure 8.17 Wet road crashes
Auckland Region - urban council roads**

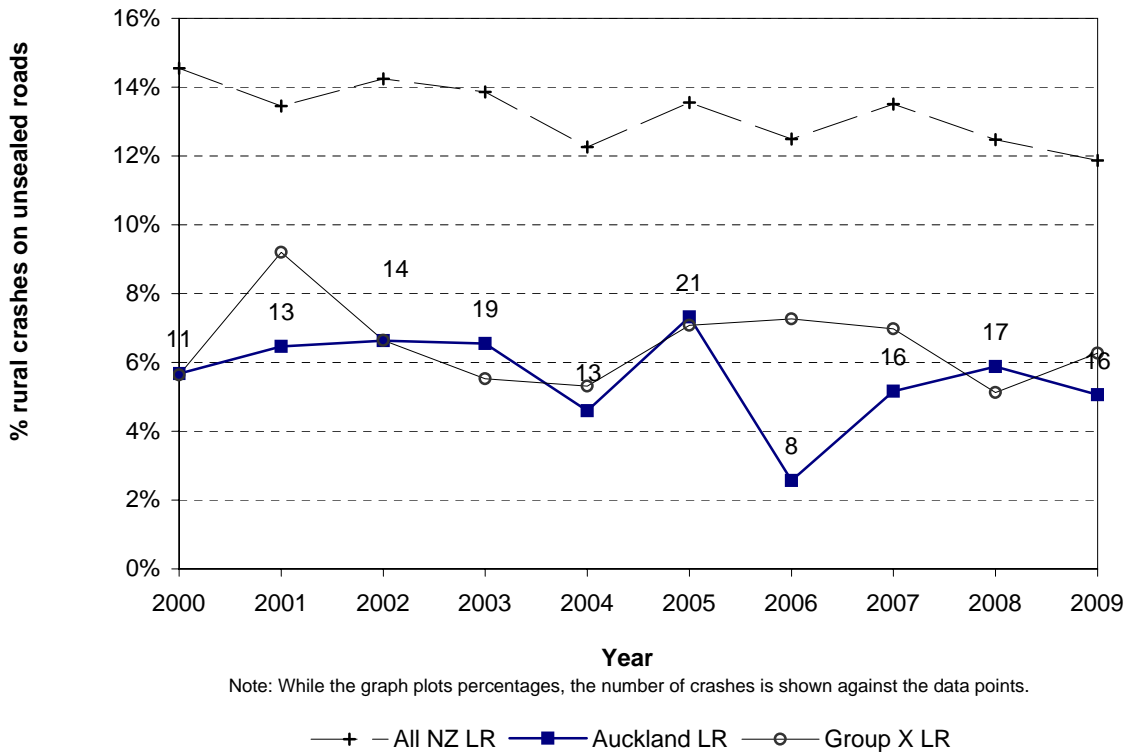


**Figure 8.18 Wet road crashes
Auckland Region - rural council roads**

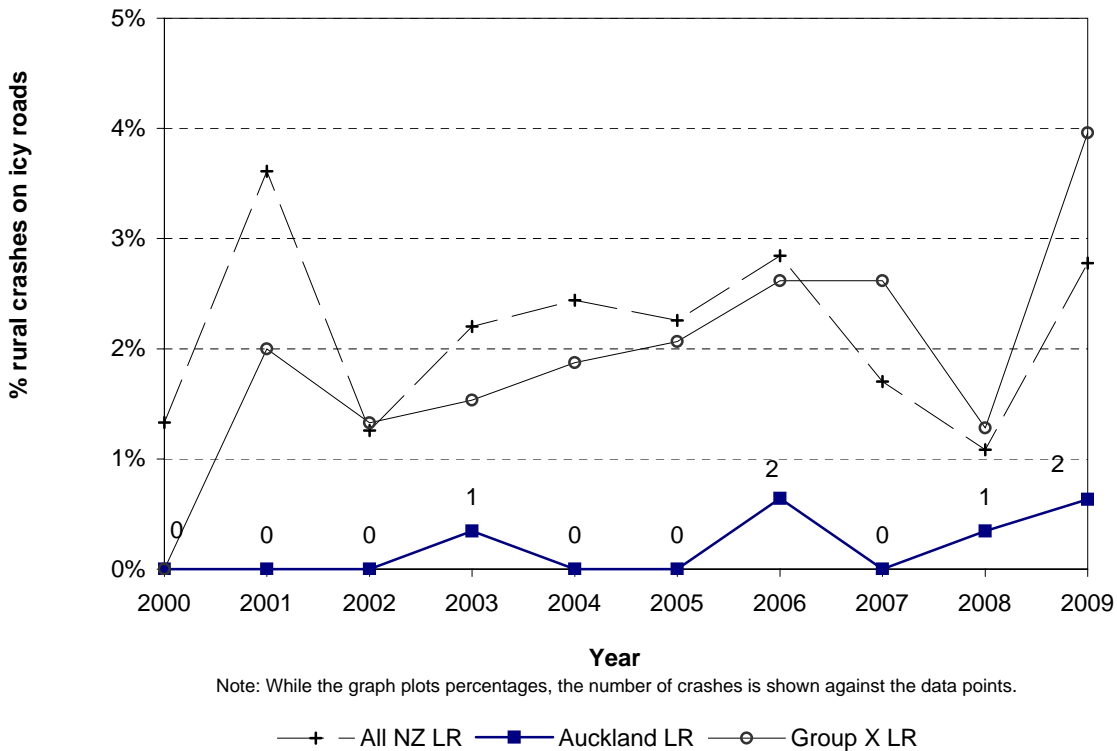


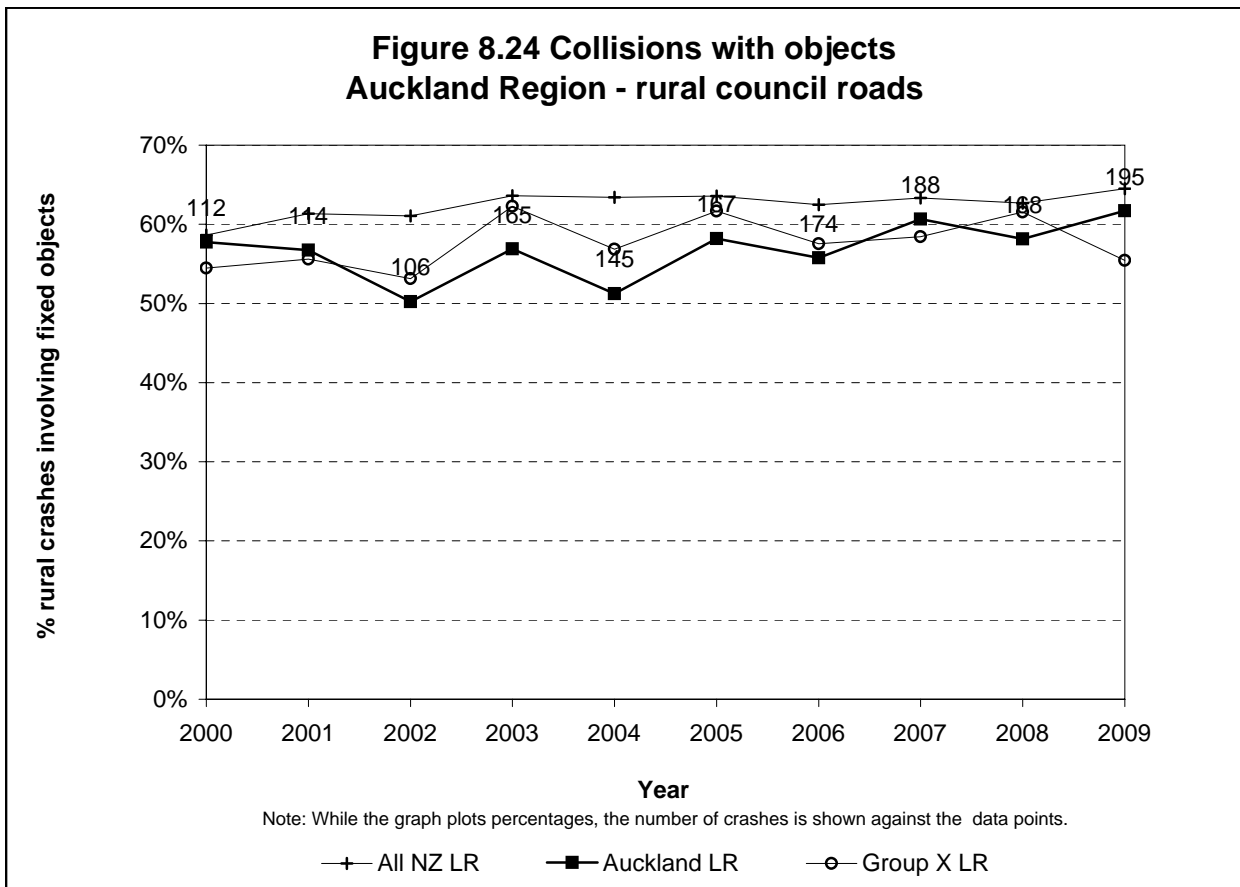
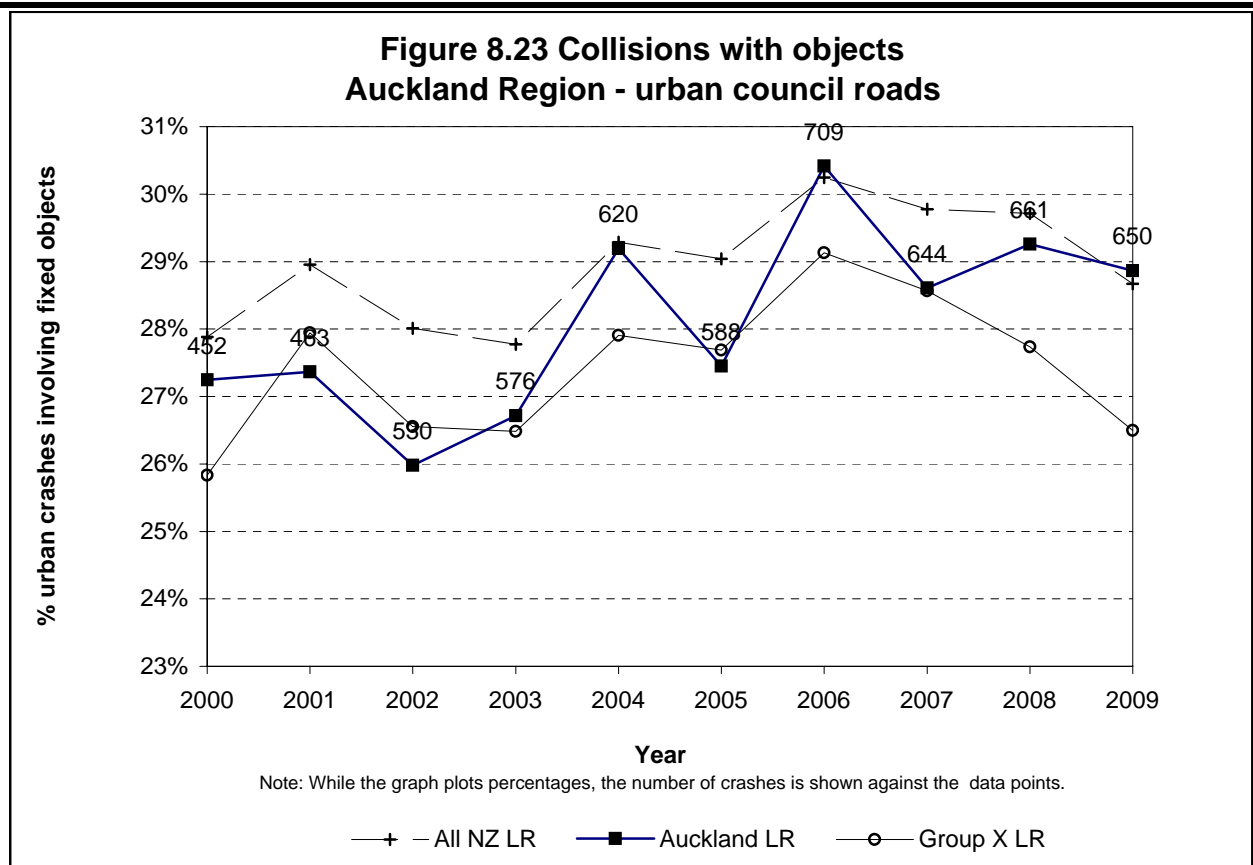


**Figure 8.21 Crashes on unsealed roads
Auckland Region - rural council roads**

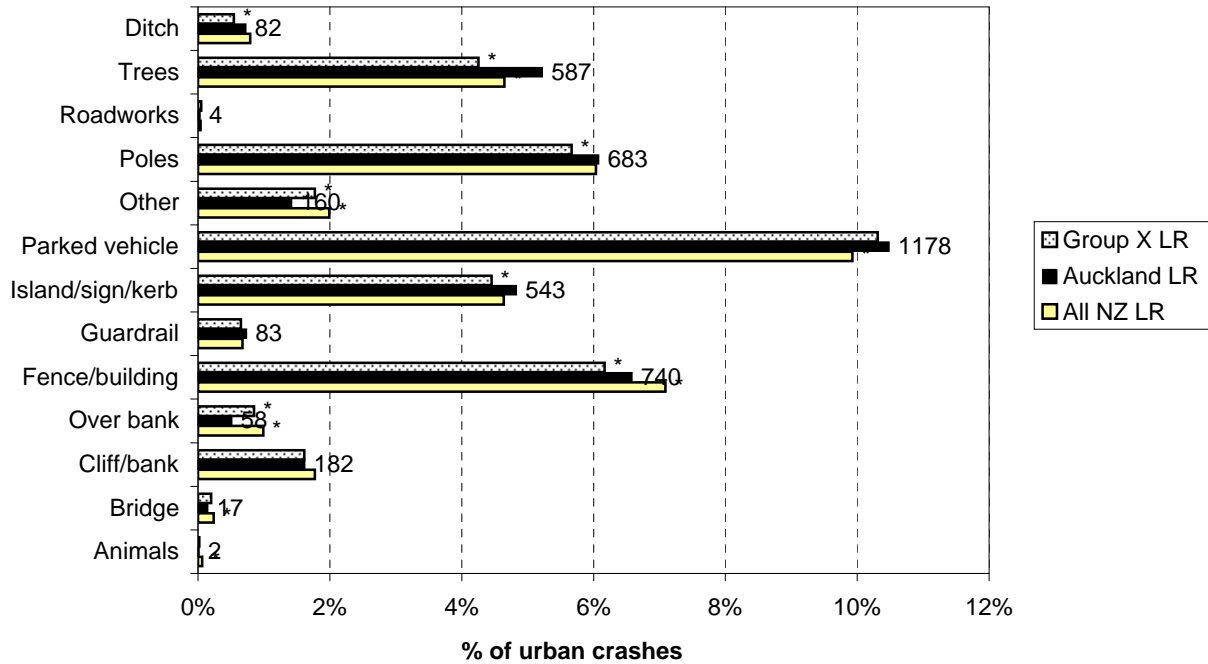


**Figure 8.22 Icy road crashes
Auckland Region - rural council roads**



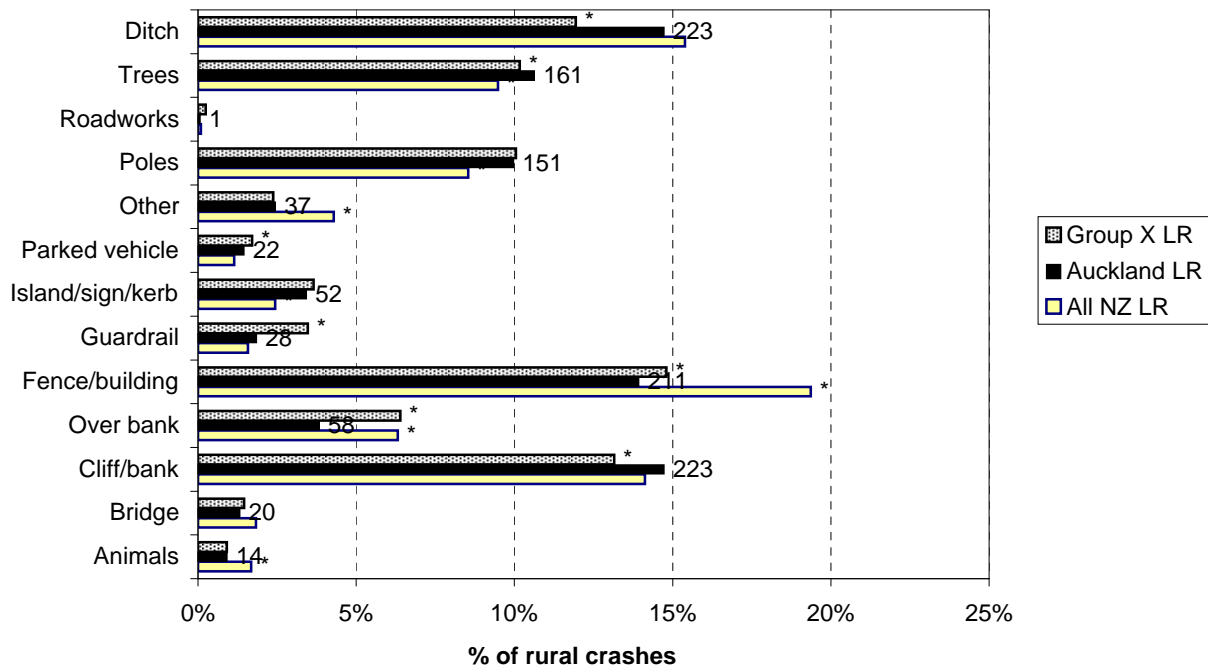


**Figure 8.25 Objects struck - urban
Auckland Region council roads (2005-2009)**



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

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



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

Crash Location Statistics

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

Site Radius = 30 metres

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

CRASH ROAD	SIDE ROAD	2005	2006	2007	2008	2009	TOTAL	Non-Injury	Wet Crash %	Dark Crash %	Crash Costs
GREAT NORTH ROAD	BULLOCK TRACK	10	12	12	8	15	57	34	21	25	\$6,427,743
GLENFIELD ROAD	DOWNING ST	9	4	2	1	3	19	11	21	16	\$4,851,848
NEILSON ST	CAPTAIN SPRINGS ROAD	4	2	2	2	4	14	8	21	14	\$4,770,202
CENTRAL PARK DRIVE	PARAMOUNT DRIVE	2	3	3	3	2	13	8	23	8	\$4,548,452
ALBERT ST	WYNDHAM ST	5	7	5	2	6	25	18	20	24	\$4,437,811
SWANSON ROAD	RATHGAR ROAD	3	3	1	7	4	18	12	22	44	\$4,279,173
PONSONBY ROAD	COLLINGWOOD ST	3	3	4	1	6	17	13	18	47	\$4,266,463
GORDON ROAD	ATKINSON AVENUE	5	6	4	4	2	21	16	14	24	\$4,249,146
GREAT SOUTH ROAD	SOUTH-EASTERN HIGHWA	2	7	6	7	3	25	22	24	40	\$4,210,807
PENROSE ROAD	BARRACK ROAD	4	3	3	2	8	20	16	35	50	\$4,204,241
TAMAKI DRIVE	PATTESON AVENUE	2	8	8	3	4	25	16	8	32	\$4,120,097
WELLESLEY ST EAST	MAYORAL DRIVE	4	6	1	3	3	17	14	6	65	\$4,100,914
TITIRANGI ROAD	GOLF ROAD	2	1	2	4	3	12	9	42	58	\$4,013,666
PORCHESTER ROAD	HYPERION DRIVE	3	3	2	1	2	11	9	36	45	\$3,989,767
MANUKAU ROAD	PAH ROAD		4	2		4	10	7	20	40	\$3,984,974
VERRAN ROAD	WAIPA ST	2	10	4	4	3	23	16	48	39	\$3,946,624
PRESTON ROAD	FLAT BUSH ROAD	11	3	4	2		20	15	15	40	\$3,938,355
GREAT SOUTH ROAD	KERRS ROAD	4	1	10	4	6	25	22	16	28	\$3,912,071
CAVENDISH DRIVE	SHARKEY ST	5	5	6	4	2	22	16	23	9	\$3,910,251
NEILSON ST	CHURCH ST	4	5	4	5	6	24	21	42	17	\$3,891,483
BOTANY ROAD	MILLHOUSE DRIVE	6	7	4	3	7	27	23	11	33	\$3,858,373
GREAT NORTH ROAD	AWAROA ROAD	1	2	4	3	4	14	11	21	14	\$3,717,415
CRACROFT ST	GREAT SOUTH ROAD	4	2	4		3	13	8	23	23	\$3,667,744
ROCKFIELD ROAD	MOUNT SMART ROAD	1	3	5	3	1	13	9	46		\$3,642,276
EAST ST	WOOD ST	2	4	2	3	2	13	10	15	23	\$3,589,072
GLENFIELD ROAD	PUPUKE ROAD	4	2	4	4	1	15	13	40	33	\$3,570,717
GREAT NORTH ROAD	CARRINGTON ROAD	14	10	11	11	13	59	42	27	27	\$3,277,210
TAHAROTO ROAD	NORTHCOTE ROAD	14	16	14	10	9	63	52	13	21	\$3,017,238
GREAT SOUTH ROAD	TE IRIRANGI DRIVE	10	19	14	16	23	82	71	18	33	\$2,913,497
GREAT SOUTH ROAD	SPARTAN ROAD	9	9	11	11	11	51	37	14	10	\$2,881,756
GREAT SOUTH ROAD	ALFRISTON ROAD	11	11	17	11	20	70	57	20	47	\$2,799,451
TAMAKI DRIVE	NGAPIPI ROAD	8	3	5	7	9	32	17	19	9	\$2,692,539
KERRS ROAD	DRUCES ROAD	4	8	7	14	7	40	29	18	23	\$2,617,617
TI RAKAU DRIVE	TE IRIRANGI DRIVE E	11	18	18	17	12	76	67	20	38	\$2,559,792
GREAT SOUTH ROAD	RONWOOD AVENUE	6	15	9	16	9	55	43	22	40	\$2,484,089
MOUNT WELLINGTON HIGH I	WAIPUNA ROAD	11	15	14	8	10	58	48	28	29	\$2,442,752
ONEWA ROAD	LAKE ROAD	10	3	4	7	7	31	21	26	39	\$2,410,427
GREAT SOUTH ROAD	MOUNT RICHMOND DRIVE	4	6	8	3	5	26	16	23	27	\$2,327,795
ASH ST	ROSEBANK ROAD	8	11	10	14	8	51	33	12	24	\$2,297,709
DOMINION ROAD	MOUNT ALBERT ROAD	13	12	15	14	13	67	55	21	22	\$2,264,224
PENROSE ROAD	GREAT SOUTH ROAD	7	4	9	6	5	31	24	32	35	\$2,245,005
VICTORIA ST WEST	HOBSON ST	9	5	16	13	10	53	45	25	47	\$2,234,432
EAST TAMAKI ROAD	BAIRDS ROAD	19	19	13	10	19	80	73	18	33	\$2,213,109
MASSEY ROAD	ROSELLA ROAD	7	5	13	10	9	44	34	25	20	\$2,185,852
GREAT SOUTH ROAD	REAGAN ROAD	12	22	16	17	13	80	74	28	35	\$2,153,314
WAIRAU ROAD	VIEW ROAD E	17	5	10	3	6	41	31	15	20	\$2,149,261
PAKURANGA ROAD	TI RAKAU DRIVE	14	16	8	24	10	72	64	26	28	\$2,128,620
KHYBER PASS ROAD	MOUNTAIN ROAD	5	7	6	4	5	27	21	15	22	\$2,127,555
QUEEN ST	MAYORAL DRIVE	16	11	12	10	12	61	50	28	46	\$2,105,604
KARANGAHAPE ROAD	PITT ST	14	12	9	12	11	58	46	31	47	\$2,099,090

**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	2005	2006	2007	2008	2009	TOTAL	Non-Injury	Wet Crash %	Dark Crash %	Crash Costs
QUEEN ST	CITY ROAD	8	4	9	2	2	25	11	16	44	\$2,089,416
HAYR ROAD	CARR ROAD	19	14	9	6	1	49	43	22	20	\$2,066,063
EAST COAST ROAD	SUNRISE AVENUE S	5	7	2	3	3	20	13	35	45	\$2,058,236
MASSEY ROAD	VINE ST	5	5	2	3	4	19	12	21	42	\$2,043,290
QUEEN ST	VICTORIA ST WEST	14	8	7	9	9	47	41	17	55	\$2,035,112
MASSEY ROAD	BUCKLAND ROAD	13	12	10	21	7	63	54	24	51	\$2,034,334
MANUKAU ROAD	GREEN LANE WEST	8	9	11	8	11	47	41	21	21	\$2,022,428
PAKURANGA ROAD	AVIEMORE DRIVE	10	8	10	9	13	50	37	20	40	\$2,019,768
TRISTRAM AVENUE	WAIRAU ROAD	15	10	9	8	16	58	48	12	16	\$2,003,168
EAST COAST ROAD	OTEHA VALLEY ROAD	7	10		6	7	30	20	27	43	\$1,961,565
PUHINUI ROAD	ROSCOMMON ROAD NORT	1	2	1	6	8	18	12	28	28	\$1,959,697
WAIRAU ROAD	ARCHERS ROAD	17	13	12	9	4	55	45	25	27	\$1,950,040
GREAT NORTH ROAD	HENRY ST	7	5	5	6	10	33	24	33	27	\$1,947,451
SUNSET ROAD	TARGET ROAD	4	3	2	2	2	13	6	38	31	\$1,937,112
SALEYARDS ROAD	STATION ROAD	3	5	6	1	3	18	13	33	28	\$1,931,563
JAMES ST	GLENFIELD ROAD	9	3	4	9	5	30	21	30	13	\$1,907,271
BROADWAY	MORROW ST	3	7	2	3	2	17	12	12	12	\$1,904,830
TRIANGLE ROAD	LINCOLN ROAD	9	11	12	26	13	71	59	18	28	\$1,884,747
TI RAKAU DRIVE	PAKURANGA HIGHWAY	7	19	17	15	15	73	62	30	47	\$1,861,670
GLENFIELD ROAD	BENTLEY AVENUE	9	7	4	5	9	34	27	18	29	\$1,851,077
SWANSON ROAD	LINCOLN ROAD	17	10	10	14	11	62	48	18	35	\$1,844,854
ELLICE ROAD	WAIRAU ROAD	10	6	9	2	6	33	26	12	39	\$1,844,743
GREAT SOUTH ROAD	MAIN HIGHWAY	3	4	5	6	3	21	10	29	43	\$1,844,077
GREAT SOUTH ROAD	MANGERE ROAD	18	9	5	6	7	45	34	18	42	\$1,830,017
MOUNT WELLINGTON HIGH	ARANUI ROAD	4	7	7	10	10	38	25	37	32	\$1,810,189
RICHARDSON ROAD	ROGAN ST	3	2	6	1		12	7	25	25	\$1,805,728
EAST TAMAKI ROAD	FERGUSON ROAD	3	10	9	6	2	30	23	30	27	\$1,798,623
DENBIGH AVENUE	DOMINION ROAD	13	11	13	15	10	62	57	24	24	\$1,789,860
TITIRANGI ROAD	GREAT NORTH ROAD	14	12	14	17	20	77	69	23	40	\$1,771,495
MAHIA ROAD	HOLMES ROAD	3	6	2	1		12	8	33	42	\$1,770,708
SYMONDS ST	KHYBER PASS ROAD	10	13	17	11	10	61	48	13	46	\$1,765,752
BEACH ROAD	ANZAC AVENUE	4	2	8	5	5	24	16	25	38	\$1,733,343
GREAT SOUTH ROAD	BROWNS ROAD	18	12	9	10	19	68	58	16	43	\$1,724,796
HILLCREST ROAD	STATION ROAD	1	7	5	3	10	26	19	15	27	\$1,723,915
LAMBIE DRIVE	CAVENDISH DRIVE S	11	10	14	11	11	57	52	18	18	\$1,702,922
MOUNT ALBERT ROAD	SANDRINGHAM ROAD	7	7	16	8	10	48	44	23	42	\$1,697,535
BROADWAY	ALPERS AVENUE	10	7	10	11	6	44	35	18	20	\$1,689,062
QUEEN ST	TURNER ST	8	8	3	3	5	27	21	26	33	\$1,687,347
MOUNT SMART ROAD	ONEHUNGA MALL	4	7	2	7	10	30	25	30	30	\$1,687,197
METCALFE ROAD	SWANSON ROAD	5	5	8	8	4	30	25	27	23	\$1,682,835
HARRIS ROAD	TI RAKAU DRIVE	9	11	12	15	9	56	47	18	20	\$1,674,672
SANDRINGHAM ROAD	BALMORAL ROAD	4	6	10	10	10	40	30	33	23	\$1,672,735
DON BUCK ROAD	WOODSIDE ROAD	7	5	2	3	4	21	14	38	33	\$1,641,190
ROGERS ROAD	WEYMOUTH ROAD	11	5	3	7	5	31	27	13	35	\$1,637,661
GREEN LANE EAST	GREAT SOUTH ROAD	9	10	8	7	15	49	43	12	18	\$1,616,814
UPPER QUEEN ST	KARANGAHAPE ROAD	16	15	11	16	7	65	56	14	52	\$1,614,460
GREAT SOUTH ROAD	PORTAGE ROAD	9	11	7	9	6	42	34	31	17	\$1,609,955
ST JUDE ST	BLOCKHOUSE BAY ROAD	6	10	9	8	9	42	34	14	33	\$1,603,149
SYMONDS ST	MOUNT ST	2	3	6	7	1	19	12	32	26	\$1,599,357
MEDALLION DRIVE	OTEHA VALLEY ROAD	2	7	4	7	5	25	20	36	32	\$1,596,027
GREEN LANE WEST	WHETURANGI ROAD	1	4	6	4	3	18	11	33	44	\$1,582,035

**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	2005	2006	2007	2008	2009	TOTAL	Non-Injury	Wet Crash %	Dark Crash %	Crash Costs
ANZAC ST	A	BARRYS POINT ROAD	12	13	6	2	1	34	24	24	35	\$1,580,585
BOUNDARY ROAD	I	OTHELLO DRIVE	3	3	4	5	3	18	11	39	39	\$1,577,728
LINCOLN ROAD	I	TE PAI PLACE	10	2	6	5	14	37	28	22	43	\$1,574,829
SWANSON ROAD		5 W DON BUCK ROAD	8	6	4	7	18	43	36	7	26	\$1,573,980
CUSTOMS ST EAST	I	GORE ST	6	2	3	4	5	20	14	20	60	\$1,559,305
CARRINGTON ROAD	I	MOUNT ALBERT ROAD	10	8	10	10	7	45	39	27	29	\$1,548,980
SYMONDS ST	I	WAKEFIELD ST W	5	2	4	3	5	19	13	5	47	\$1,541,983
LINCOLN ROAD	I	UNIVERSAL DRIVE	14	12	10	15	12	63	55	24	35	\$1,528,034
PRINCES ST	I	BOWEN AVENUE	3	3	1	3	5	15	8	33	53	\$1,522,112
GREAT NORTH ROAD	I	PONSONBY ROAD	6	10	5	9	13	43	37	16	56	\$1,514,279
DOMINION ROAD	I	DUKE ST	2	3	3	1	5	14	7	14	21	\$1,502,940
WHITE SWAN ROAD	I	HILLSBOROUGH ROAD	5	5	8	4	6	28	18	14	50	\$1,469,091
GREAT NORTH ROAD	I	TUARANGI ROAD E	5	3	5	8	2	23	13	22	39	\$1,378,509
CUSTOMS ST WEST	I	LOWER ALBERT ST	12	12	6	4	5	39	28	18	46	\$1,276,967
NEW NORTH ROAD	I	BOLLARD AVENUE	6	5	11	9	5	36	26	31	36	\$1,160,931
SHAKESPEARE ROAD	I	TAHAROTO ROAD	13	9	1	2	6	31	21	23	29	\$1,089,629
FANSHAWE ST	I	HALSEY ST	4	6	7	9	4	30	20	33	50	\$1,058,323
WELLESLEY ST WEST	I	NELSON ST	5	5	7	6	4	27	17	15	37	\$1,011,319
DOMINION ROAD	I	BURNLEY TERRACE	7	7	4	4	2	24	14	13	33	\$959,130

**Table 9.2: Council Roads Black Spot List Rural
(Injury and Non-Injury Crashes)**
Site Radius = 250 metres
Sites with 5 or more injury crashes or more than \$1500000 in social costs

CRASH ROAD	SIDE ROAD	2005	2006	2007	2008	2009	TOTAL	Non-Injury	Wet Crash %	Dark Crash %	Crash Costs
PORCHESTER ROAD I	POPES ROAD	2	3	3	4	3	15	11	20	20	\$9,742,379
MILL ROAD I	POLO PRINCE DRIVE	3	2	4	3	2	14	8	29	29	\$9,129,470
AWHITU ROAD I	KAIHAU ROAD	3	6	2	7	1	19	8	26	47	\$7,755,144
SOUTH-EASTERN HIGHWAY I	CARBINE ROAD	5	7	5	8	6	31	22	39	45	\$6,952,193
OLD NORTH ROAD	500 E ARARIMU VALLEY ROAD	1		2	3	4	10	3	30	20	\$5,929,511
RANFURLY ROAD I	MILL ROAD	3	2	3	2	1	11	8	36	73	\$5,902,066
OLD NORTH ROAD I	DEACON ROAD	1	2	1	5	2	11	5	45	18	\$5,488,443
GEORGE BOLT MEMORIAL I	IHUMATAO ROAD	5	10	5	1	1	22	14	27	36	\$5,444,735
WAIUKU ROAD I	PATUMAHOE ROAD	3	2	1	3	5	14	6	14	29	\$5,126,075
PIHA ROAD	2100 W ANAWHATA ROAD	3	3	1	5	12	12	9	83	25	\$4,795,448
PAPAKURA-CLEVEDON ROAD I	HAMLIN ROAD	3	1	3	2	1	10	4	40	10	\$4,781,447
SMALES ROAD I	TE IRIRANGI DRIVE E	6	8	5	2	9	30	19	23	23	\$3,382,705
GLENBROOK ROAD I	KINGSEAT ROAD	3	4	6	9	6	28	17	21	21	\$3,301,779
WHITFORD ROAD	740 E POINT VIEW DRIVE	7	7	6	2	2	24	15	83	29	\$3,080,553
TE IRIRANGI DRIVE I	ORMISTON ROAD	7	12	7	11	7	44	29	18	52	\$2,984,365
EAST COAST ROAD I	SPUR ROAD	3	3	1	4	2	13	7	46	46	\$2,464,709
ROSCOMMON ROAD I	HAUTU DRIVE	5	4	5	1	2	17	9	24	47	\$2,165,741
MILL ROAD I	ALFRISTON ROAD	3	3	5	3	3	17	11	18	29	\$2,070,878
WAIUKU ROAD I	MORLEY ROAD	4	4	2		1	11	5	64	36	\$1,877,675
PAREMOREMO ROAD	300 N PRIMROSE LANE	1	3	3	3	1	11	7	82	27	\$1,746,633
REDOUBT ROAD I	MILL ROAD	4	6	5	4	2	21	14	57	24	\$1,704,604
TE IRIRANGI DRIVE I	ACCENT DRIVE	5	4	4	4		17	9	35	35	\$1,626,904
COATESVILLE-RIVERHEAD I	SCREEN ROAD	2	3	11	1	2	19	12	89	21	\$1,607,652
COSGRAVE ROAD I	WALTERS ROAD	4	7		4	1	16	11	25	44	\$1,442,271
WAIUKU ROAD	530 W GLENBROOK STATION ROAD	3	2	2	6		13	6	54	23	\$1,415,958
ROSCOMMON ROAD I	BOLDERWOOD PLACE	3	3	5	2	1	14	9	21	36	\$1,355,546
BRIGHAM CREEK ROAD I	KAURI ROAD	5	1	2	3		11	6	45	36	\$1,225,207
WAIUKU ROAD I	BALD HILL ROAD		1	2	3	4	10	4	40	20	\$1,219,066
PAKURANGA HIGHWAY I	WAIKURANGA ROAD	4		8	7	5	24	19	29	42	\$1,139,811
PAKURANGA HIGHWAY I	TI RAKAU DRIVE	3	6	5	3	5	22	17	45	50	\$1,074,791
WHITFORD-MARAETAI ROAD I	BEACHLANDS ROAD	3	4	3	3	1	14	6	29	50	\$930,695
ONEWA ROAD	70 N ONEWA OFF SBD	5	5	1		1	12	7	42	42	\$717,002
COATESVILLE-RIVERHEAD I	WAKE ROAD		2	4	2	4	12	7	67	17	\$689,397
MATAKANA ROAD	200 N MELWOOD DRIVE	4	2		1	4	11	6	55	82	\$669,832

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

CRASH ROAD		SIDE ROAD	2005	2006	2007	2008	2009	TOTAL	Non-Injury	Wet Crash %	Dark Crash %	Crash Costs
SH 1N	I	GILLIES ON NBD	79	90	71	60	74	374	310	18	25	\$18,899,620
SH 1N	I	ONEWA ON SBD	47	36	58	40	43	224	184	19	32	\$15,700,687
SH 1N	I	MANUKAU OFF NBD	14	9	11	22	15	71	52	37	25	\$12,572,013
SH 1N	A	SHELLY BEACH OBR	43	27	36	28	49	183	145	24	34	\$11,038,947
SH 1N	I	FANSHAWE ON NBD	51	42	38	25	32	188	164	28	32	\$11,035,683
SH 1N	A	PENROSE OBR	54	49	48	42	30	223	172	21	17	\$10,991,259
SH 1N	I	SHELLY OFF SBD	40	34	28	34	49	185	141	25	18	\$10,308,431
SH 1N	I	SCHOLLUM ACCESS ROAD	6	5	5	3	6	25	18	64	36	\$10,152,845
SH 1N	I	MANUKAU ON SBD	13	18	17	19	22	89	64	37	31	\$9,635,457
SH 1N	I	WELLESLEY OFF NBD	38	36	42	43	36	195	162	26	33	\$9,525,272
SH 1N		300 N WAIWHIU ROAD	3	2	3	2	0	10	5	60	30	\$9,032,818
SH 16	I	NEWTON ON WBD	40	34	44	21	22	161	125	25	21	\$8,995,043
SH 1N	I	SEART OFF SBD	18	23	9	12	8	70	52	20	29	\$8,875,213
SH 16		300 W BOND OBR	21	20	19	9	10	79	59	35	24	\$8,775,562
SH 1N	I	TAKANINI OFF SBD	18	10	20	12	13	73	51	22	30	\$8,589,627
SH 1N	I	OTAHUHU ON SBD	21	27	17	21	27	113	89	25	40	\$8,299,939
SH 16	I	PT CHEV ON EBD	14	15	20	14	16	79	58	48	44	\$8,118,634
SH 1N	A	GREENLANE OFF NBD	24	23	18	28	25	118	91	25	24	\$8,017,043
SH 16	I	TE ATATU ON WBD	9	12	7	15	8	51	38	27	35	\$7,858,051
SH 1N		300 N SHELLY OFF SBD	30	10	19	23	33	115	92	23	22	\$7,696,954
SH 1N	I	MAIN OBR	15	13	10	14	10	62	52	21	24	\$7,586,279
SH 1N	I	TE COMA OFF SBD	9	16	18	10	17	70	56	17	37	\$7,419,605
SH 1N	I	PENROSE OFF NBD	31	28	24	41	26	150	129	25	27	\$7,260,829
SH 16	I	ROYAL ON EBD	12	9	10	10	5	46	35	33	35	\$7,026,703
SH 1N	I	SEART ON NBD	24	35	40	19	15	133	106	18	26	\$6,931,754
SH 1N	I	OTAHUHU OFF SBD	17	13	7	8	13	58	49	29	31	\$6,853,181
SH 1N	I	MARKET OFF NBD	19	25	23	16	21	104	82	25	43	\$6,708,430
SH 17	I	SILVERDALE ST	5	6	9	8	9	37	28	16	16	\$6,570,550
SH 1N	I	MT WGTN OFF SBD	27	34	20	27	32	140	115	26	25	\$6,523,465
ROSCOMMON ROAD	I	WIRI STATION ROAD S	6	19	9	14	11	59	48	17	36	\$6,440,297
SH 20A	I	KIRKBRIDE ROAD	9	6	6	8	10	39	29	26	44	\$6,367,983
SH 1N	A	FALLS BR	5	3	6	5	5	24	19	79	29	\$6,365,805
SH 1N	A	MT WGTN OBR	26	30	26	22	24	128	110	25	21	\$6,253,753
SH 16	I	TE ATATU ON EBD EAST	19	20	24	34	23	120	96	28	29	\$6,201,476
SH 1N	I	MARKET OFF SBD	34	24	22	21	26	127	100	20	35	\$6,142,595
SH 16	I	ST LUKES ON WBD	5	11	12	4	6	38	28	34	50	\$6,125,606
SH 1N	I	WAYBY VALLEY ROAD	2	1	1	5	3	12	5	17	17	\$6,112,520
SH 16	I	1 LINK 16	22	19	14	19	11	85	64	33	40	\$5,916,535
SH 1N		400 S REDOUBT OBR	4	4	2	4	7	21	17	29	29	\$5,751,153
SH 1N		40 S ALFRISTON OBR	8	8	4	3	6	29	21	38	34	\$5,706,668
SH 1N	I	KHYBER PASS OFF NBD	18	28	18	30	20	114	97	15	22	\$5,685,887
SH 16	I	LINCOLN OFF WBD	20	20	19	15	22	96	66	23	18	\$5,650,864
SH 1N		500 N SAUNDERS ROAD	4	4	6	0	4	18	13	83	50	\$5,587,847
SH 1N		300 N FANSHAWE ON NBD	26	17	20	14	17	94	78	21	21	\$5,492,388
SH 16	A	ST LUKES ROAD	13	17	7	19	17	73	52	33	33	\$5,455,490
SH 16	I	WATERVIEW OFF WBD	13	13	21	20	26	93	66	37	42	\$5,365,246
SH 22	I	BLACKBRIDGE ROAD	2	2	1	2	3	10	7	30	30	\$5,303,952
SH 20	I	MCLAUGHLINS ROAD	3	3	2	2	0	10	7	0	40	\$5,292,987
SH 16	I	PATIKI ON WBD	17	20	18	19	16	90	75	20	30	\$5,270,273
SH 1N	I	TRISTRAM ON SBD	19	19	17	13	19	87	71	32	25	\$5,214,182

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

CRASH ROAD	SIDE ROAD	2005	2006	2007	2008	2009	TOTAL	Non-Injury	Wet Crash %	Dark Crash %	Crash Costs
SH 16	500 S OLD RAILWAY ROAD	3	1	2	1	3	10	7	10	50	\$5,204,073
SH 1N	I PENROSE ON NBD	20	17	17	28	20	102	85	22	34	\$5,183,732
SH 1N	I GREENLANE ON NBD	18	19	22	25	18	102	88	25	30	\$5,087,292
SH 20A	400 S KIRKBRIDE ROAD	3	6	2	3	0	14	8	36	29	\$5,021,664
SH 22	I WHANGAPOURI ROAD	1	6	2	3	2	14	9	43	43	\$4,982,546
SH 1N	3430 S FALLS BR	2	5	3	2	2	14	10	86	36	\$4,932,880
SH 1N	I UPPER HWY ON SBD	17	12	19	22	18	88	68	34	23	\$4,857,274
SH 1N	2000 N ARARIMU OBR	3	1	1	4	1	10	5	50	50	\$4,831,660
SH 16	I UNION OFF EBD	18	15	27	16	13	89	71	26	25	\$4,802,271
SH 1N	I NORTHCOTE ON NBD	16	16	25	8	17	82	59	30	26	\$4,793,124
SH 1N	I STAFFORD OFF NBD	26	27	23	16	16	108	94	19	24	\$4,751,867
SH 1N	I MILL ON NBD	1	1	4	1	3	10	7	40	80	\$4,725,037
SH 16	I ST LUKES OFF WBD	2	3	3	3	3	14	13	29	50	\$4,709,789
SH 22	I DRURY OFF SBD	5	0	4	5	1	15	12	13	20	\$4,709,071
SH 1N	300 N WHAKAPIRAU ROAD	2	4	3	1	0	10	7	80	20	\$4,673,293
SH 1N	I SYMONDS ON SBD	20	14	26	16	14	90	78	24	33	\$4,542,580
SH 1N	A PANAMA OBR	19	19	19	15	6	78	59	33	22	\$4,483,732
SH 1N	I ONEWA OFF SBD	16	32	18	11	18	95	79	24	25	\$4,392,652
SH 1N	I HIGHBROOK ON SBD	13	11	14	11	14	63	45	29	33	\$4,386,658
SH 17	I RED BEACH ROAD	8	3	5	1	2	19	15	0	37	\$4,304,727
SH 20	I ONEHUNGA OFF SBD	22	10	7	11	12	62	46	24	16	\$4,293,951
SH 20	I ONEHUNGA OFF NBD	19	7	6	9	14	55	37	31	44	\$4,072,585
SYMONDS ST	I GRAFTON BRIDGE	7	8	0	0	1	16	12	13	31	\$3,810,634
SH 20	I GREAT SOUTH ROAD	22	19	26	15	24	106	95	18	37	\$3,780,981
SH 16	I ROSEBANK ON EBD	9	10	12	8	12	51	37	37	47	\$3,749,454
SH 16	I LINCOLN OFF EBD	15	18	11	12	16	72	61	26	33	\$3,741,616
SH 1N	A OTAHUHU OFF NBD	18	13	14	12	5	62	46	29	37	\$3,701,294
SH 1N	250 S EAST TAMAKI OBR	8	12	12	11	21	64	50	30	27	\$3,634,217
SH 1N	400 S ONEWA ON SBD	21	5	15	12	7	60	46	10	28	\$3,524,692
SH 1N	I OTARA OFF NBD	17	16	11	8	11	63	51	29	32	\$3,521,970
SH 20	100 E QUEENSTOWN OBR	15	14	6	12	1	48	38	29	25	\$3,486,069
SH 1N	I WELLINGTON ON NBD	14	7	17	18	15	71	55	21	35	\$3,420,431
SOUTH-EASTERN HIGHWAY	I SEART ON NBD	18	9	4	9	8	48	39	23	17	\$3,373,018
SH 1N	I MT WGTN ON SBD	16	15	17	13	8	69	54	33	33	\$3,319,889
SH 1N	500 S MANUKAU OFF NBD	7	7	9	7	8	38	24	42	24	\$3,258,403
TRISTRAM ON SBD E	I TRISTRAM AVENUE	9	11	13	9	12	54	39	37	37	\$3,209,637
SH 1N	100 S NORTHCOTE OBR	16	16	8	11	16	67	53	37	24	\$3,192,633
SH 20	I QUEENSTOWN OFF NBD	11	11	11	7	13	53	41	28	28	\$3,148,293
SH 16	700 E ST LUKES OFF WBD	14	13	7	9	10	53	42	34	25	\$3,130,071
SH 1N	I TAKANINI OFF NBD	7	8	10	7	14	46	28	28	33	\$3,127,449
SH 1N	300 S PANAMA OBR	20	14	11	13	6	64	51	30	25	\$3,095,159
SH 16	300 E ST LUKES OBR	9	15	14	11	7	56	47	30	30	\$3,084,896
SH 1N	300 N OTAHUHU OFF SBD	10	20	10	9	2	51	40	35	16	\$3,068,030
SH 1N	I HIGHBROOK ON NBD	8	3	18	15	18	62	49	37	39	\$2,930,464
SH 17	I COATESVILLE-RIVERHEAD	8	5	9	4	6	32	20	28	31	\$2,923,297
SH 1N	I TRISTRAM OFF SBD	13	14	7	13	12	59	47	34	36	\$2,823,059
SH 16	I TAUPAKI ROAD	5	8	8	9	7	37	21	8	5	\$2,749,456
SH 1N	I ESMONDE ON SBD	9	9	24	13	11	66	59	20	33	\$2,700,980
SH 1N	I TE IRIRANGI OFF SBD	10	12	8	11	12	53	38	34	40	\$2,700,077
SH 17	100 W SCHISCHKA ROAD	3	2	9	17	11	42	30	86	24	\$2,696,453

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

CRASH ROAD		SIDE ROAD	2005	2006	2007	2008	2009	TOTAL	Non-Injury	Wet Crash %	Dark Crash %	Crash Costs
SH 1N	I	PAPAKURA ON NBD	12	10	8	8	10	48	41	23	44	\$2,671,215
SH 17	I	WAINUI ROAD	9	10	6	9	2	36	22	33	31	\$2,651,769
SH 1N		400 N TOP OF HARBOUR BRIDGE	10	3	13	14	2	42	32	14	43	\$2,648,592
SH 1N	I	OTAHUHU ON NBD	15	13	15	11	4	58	49	31	26	\$2,612,629
SH 16		300 E CARRINGTON OBR	4	7	11	12	5	39	27	26	28	\$2,608,560
SH 16		500 N LINCOLN OBR	3	9	8	11	4	35	20	29	34	\$2,608,063
SH 1N		1500 S ONEWA OBR	9	16	11	14	8	58	50	21	33	\$2,582,978
SH 1N		500 S GILLIES OBR	10	17	2	7	3	39	31	18	31	\$2,474,619
SH 16	I	BRIGHAM CREEK ROAD	4	6	2	7	5	24	13	33	17	\$2,456,438
SH 1N	A	REAGAN OBR	10	5	10	10	13	48	35	40	33	\$2,452,347
SH 20	I	MANUKAU ON SBD	4	5	2	9	15	35	26	17	29	\$2,433,755
SH 16		30 W BOND OBR	12	9	10	6	6	43	27	26	19	\$2,427,100
SH 1N	I	UPPER HWY OFF SBD	5	10	11	8	18	52	42	37	13	\$2,416,101
SH 1N		20 N ST MARKS ON SBD	19	5	10	11	7	52	44	15	23	\$2,375,504
SH 1N		500 N EAST TAMAKI OBR	6	7	6	2	3	24	17	33	54	\$2,361,885
SH 17		150 S EAST COAST ROAD	4	1	1	2	2	10	5	10	10	\$2,318,653
SH 20		100 S PUHINUI OFF NBD	3	2	8	5	4	22	15	32	32	\$2,303,123
SH 1N		400 N REDOUBT OBR	8	2	4	2	6	22	15	14	32	\$2,301,432
SH 1N		100 S WALTER STREUVENS OBR	5	6	2	2	7	22	15	18	23	\$2,296,573
SH 1N		500 N MAHURANGI WEST ROAD	5	4	6	5	3	23	17	57	35	\$2,285,974
SH 1N		600 N SHELLY OFF SBD	15	10	9	6	8	48	39	19	21	\$2,277,388
SH 1N	I	TWIN STREAM ROAD	6	1	0	2	1	10	7	30	0	\$2,247,742
SH 1N		200 S ORAMS OBR	5	7	7	7	13	39	35	21	15	\$2,217,168
SH 1N		50 N ESMONDE OBR	8	7	12	4	4	35	28	23	29	\$2,216,146
SH 20	I	RIMU ON NBD	8	8	9	12	9	46	37	15	35	\$2,170,572
SH 1N		2000 S GT SOUTH OBR	3	3	7	3	4	20	14	20	20	\$2,157,262
SH 1N	I	CONSTELLATION OBR	6	10	8	11	11	46	38	28	30	\$2,085,710
SH 20	I	CORONATION ON NBD	6	5	8	5	4	28	19	21	25	\$2,062,548
SH 1N		1100 S EAST TAMAKI OBR	5	5	4	4	10	28	19	21	43	\$2,057,725
KRAACK ROAD	I	SH 1N	3	4	6	5	3	21	9	67	14	\$1,944,709
SH 1N		120 S HIGHBROOK OBR	4	7	12	13	7	43	36	30	35	\$1,937,552
SH 1N	A	GREVILLE ON NBD	11	11	4	5	4	35	23	54	23	\$1,936,256
SH 16		400 W PATIKI ON WBD	7	8	5	2	4	26	19	31	27	\$1,912,871
SH 1N	I	HOBSON ON SBD	13	4	10	7	11	45	39	20	29	\$1,906,036
SH 16		200 W OLD NORTH ROAD	2	3	3	4	1	13	7	38	23	\$1,899,249
SH 1N	I	MANUREWA OFF SBD	9	4	9	7	11	40	32	35	23	\$1,864,930
SH 17	I	WAIWERA ROAD	5	9	5	5	1	25	18	24	48	\$1,832,114
SH 16	I	SH 18	5	9	3	9	10	36	29	25	36	\$1,796,069
SH 1N		700 S GREVILLE OBR	6	6	4	5	8	29	15	34	14	\$1,793,280
SH 20B	I	CAMPANA ROAD	1	1	2	2	5	11	6	18	45	\$1,788,460
SH 1N		400 S NORTHCOTE OBR	6	13	10	1	4	34	24	26	26	\$1,787,322
MOUNT WELLINGTON HIGH I		MT WGTN OFF SBD S	5	7	5	4	2	23	15	52	57	\$1,757,041
SH 1N		1000 S TAKANINI ON SBD	6	4	4	2	4	20	12	30	30	\$1,734,665
MASSEY ROAD	I	MASSEY ON SBD	2	7	5	6	4	24	16	8	46	\$1,733,665
SH 16	I	WATERVIEW ON WBD	5	10	10	4	6	35	27	37	37	\$1,721,416
SH 1N		500 S PRINCES OBR	6	3	6	4	4	23	17	26	35	\$1,719,244
SH 1N		1600 S EAST TAMAKI OBR	3	2	5	5	1	16	5	13	50	\$1,704,582
SH 20		300 E HILLSBOROUGH ROAD	6	8	8	4	4	30	19	40	23	\$1,690,347
SH 1N		50 S SUNSET OBR	5	8	14	1	5	33	24	12	33	\$1,688,545
SH 1N		400 N GT SOUTH OBR	2	2	3	7	4	18	9	11	44	\$1,676,270

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

CRASH ROAD		SIDE ROAD	2005	2006	2007	2008	2009	TOTAL	Non- Injury	Wet Crash %	Dark Crash %	Crash Costs
MARKET ROAD	I	MARKET OFF NBD	3	9	6	5	9	32	25	34	28	\$1,674,712
UPPER HWY OFF NBD	I	SH 18 W	7	11	11	6	14	49	39	14	20	\$1,660,118
SH 17		1600 S WAIWERA ROAD	2	1	5	4	5	17	8	65	29	\$1,649,212
GILLIES AVENUE	I	GILLIES ON NBD N	8	7	4	6	3	28	20	21	46	\$1,643,889
SH 20	I	HILLSBOROUGH ROAD	16	9	5	8	3	41	32	22	32	\$1,640,591
NEWTON ROAD	I	NEWTON ON WBD	9	5	8	12	0	34	26	12	44	\$1,635,041
SH 16		100 E ROSEBANK OBR	9	4	6	5	4	28	17	25	14	\$1,609,403
SH 1N		1500 N GT SOUTH OBR	7	5	5	6	6	29	19	10	17	\$1,568,855
SH 16	I	ST GEORGES BAY ROAD	4	2	2	2	4	14	6	21	36	\$1,559,510
SH 1N		500 N NORTHCOTE OFF SBD	7	2	5	3	5	22	19	18	14	\$1,558,518
SH 16		500 E TE ATATU OFF WBD	3	0	6	7	3	19	13	26	42	\$1,556,269
SH 20	I	MASSEY OFF NBD	3	1	6	5	4	19	13	32	32	\$1,553,248
SH 17	I	SILVERDALE PARKWAY	5	3	2	6	3	19	13	21	26	\$1,529,079
SH 1N		1000 S GREVILLE OBR	1	4	7	4	6	22	19	32	45	\$1,525,073
SH 20		200 S RIMU OBR	11	2	4	9	6	32	26	25	22	\$1,511,568
PUHINUI ROAD	I	SH 20	3	1	4	2	7	17	11	29	41	\$1,501,981

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

**Site Radius =
30 metres**

CRASH ROAD		SIDE ROAD	2004	2005	2006	2007	2008	2009	TOTAL	Non-Injury	Wet Crash %	Dark Crash %
GREAT SOUTH ROAD	I	TE IRIRANGI DRIVE	7	10	19	14	16	23	89	78	20	33
GREAT SOUTH ROAD	I	ALFRISTON ROAD	10	11	11	17	11	20	80	64	24	49
GREAT SOUTH ROAD	I	BROWNS ROAD	11	18	12	9	10	19	79	68	15	44
BLOCKHOUSE BAY ROAD		5 S TIVERTON ROAD	9	10	5	10	11	18	63	56	21	19
GREEN LANE EAST	I	GREAT SOUTH ROAD	6	9	10	8	7	15	55	49	15	24
NEWTON ROAD	I	GREAT NORTH ROAD	9	6	10	5	9	13	52	45	15	52
SWANSON ROAD		5 W DON BUCK ROAD	5	8	6	4	7	18	48	38	6	23
LINCOLN ROAD	I	TE PAI PLACE	9	10	2	6	5	14	46	35	20	41
ST LUKES ROAD	I	NEW NORTH ROAD	3	7	4	5	6	11	36	30	17	33
HENDERSON VALLEY ROAD	I	FOREST HILL ROAD	3	2	4	7	3	14	33	28	15	27
SYMONDS ST	A	GRAFTON BRIDGE	7	3	6	3	4	10	33	24	24	42
STATION ROAD	I	HILLCREST ROAD	6	1	7	5	3	10	32	23	19	22
GREAT SOUTH ROAD	I	CAMPBELL ROAD	7	3	1		9	9	29	25	14	31
TI RAKAU DRIVE	I	TRUGOOD DRIVE	4	4	2	3	5	11	29	21	21	14
GREAT SOUTH ROAD	I	LAKEWOOD COURT	5	5	3	2	5	8	28	24	21	50
GREAT NORTH ROAD	I	RAILSIDE AVENUE	3	4	6	3	4	8	28	25	29	25
PAKURANGA ROAD	I	CASCADES ROAD	4	1	3	4	7	8	27	23	22	30
ONEWA ROAD	I	ONEWA OFF NBD	2	2	5	4	3	9	25	18	32	24
ONEHUNGA MALL		5 S ARTHUR ST	3	2	2	4	5	8	24	21	42	33
ORAKEI ROAD	I	REMUERA ROAD	4	2	5	4	1	7	23	19	22	48
PUHINUI ROAD	I	ROSCOMMON ROAD NORTH	4	1	2	1	6	8	22	15	36	27
BARRACK ROAD	I	PENROSE ROAD	2	4	3	3	2	8	22	18	36	50
DOMINION ROAD	I	GEORGE ST	3	1	1	3	6	8	22	15	9	45
AKORANGA DRIVE	I	COLLEGE ROAD	4	4	2		3	7	20	16	25	25
GRAFTON ROAD	I	SYMONDS ST	2	3	4	4		6	19	14	26	53
PAKURANGA ROAD	I	SIR LLOYD DRIVE	4	2	1	3	2	6	18	10	33	39
TITIRANGI ROAD	I	CROYDON ROAD	2	2	1	5	2	6	18	14	22	39
ESMONDE ROAD	I	FRED THOMAS DRIVE					9	9	18	14	11	17
ST LUKES ROAD	I	ASQUITH AVENUE	2	1		2	6	7	18	13	50	22
WYLLIE ROAD	I	PUHINUI ROAD	6	1		3	2	6	18	14	6	6
PONSONBY ROAD	I	COLLINGWOOD ST		3	3	4	1	6	17	13	18	47
MARGAN AVENUE	I	HUTCHINSON AVENUE	1	1	1	4	3	7	17	12	35	29
ROYAL ROAD	I	MAKORA ROAD	2	3	4	2		6	17	14	47	24
RIMU ST	I	LYNWOOD ROAD	3	2	2	1	1	7	16	13	25	38
PUHINUI ROAD	A	KENDERDINE ROAD	2	1	3	1	3	6	16	13	38	56
RICHARDSON ROAD	I	MAIORO ST	1	4	1		3	7	16	13	25	25
HILLSIDE ROAD	I	PAH ROAD	1	2	2	2	3	5	15	10	33	13
OTEHA VALLEY ROAD	I	APPIAN WAY	4	2	2			7	15	11	47	40
EDSEL ST	I	VITASOVICH AVENUE	2		3	3	2	5	15	12	20	13
DOMINION ROAD	I	ROCKLANDS AVENUE	3	1	2	2	1	5	14	11	14	36
MOUNT ALBERT ROAD	I	ERSON AVENUE	1	3	2		3	5	14	11	7	21
CARRUTH ROAD	I	ALLENBY ROAD	1	2	3	1	2	5	14	11	21	29
GREAT NORTH ROAD	I	ASH ST	3	1	1	2	1	5	13	10	38	54
ESMONDE ROAD	I	BARRY POINT ROAD	1	2			2	7	12	9	25	17
EAST COAST ROAD	I	HASTINGS ROAD		2	1		3	6	12	8	42	50
WOLVERTON ST	I	MIRANDA ST	3			2	2	4	11	8	27	9
WHANGAPARAOA ROAD	I	WADE RIVER ROAD		2	1	2	1	5	11	7		18
ST LUKES ROAD	I	DUNCAN MACLEAN LINK	2				3	6	11	7	27	27
PAKURANGA ROAD	I	GRAMMAR SCHOOL ROAD	2		1	2	2	4	11	5	36	9
AVIEMORE DRIVE	I	BRADBURY ROAD		1	1	4	1	4	11	7	18	18
EAST COAST ROAD	I	WINDSOR PLACE	3		1	1	1	4	10	6	30	10
SWALLOW DRIVE	I	WORDSWORTH ROAD	2	1	3			4	10	7	20	70

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

**Site Radius =
30 metres**

CRASH ROAD		SIDE ROAD	2004	2005	2006	2007	2008	2009	TOTAL	Non-Injury	Wet Crash %	Dark Crash %
ALFRED ST	I	GREY ST		2			3	4	9	6	22	22
BOLLARD AVENUE	I	METHUEN ROAD	3			1	1	4	9	6	22	33
BEACH ROAD	I	MONTGOMERY AVENUE	1		2	1		5	9	6	11	11
GREAT NORTH ROAD	I	ROBERTON ROAD	2		1	1		4	8	5	13	38
NEW NORTH ROAD	I	CENTRAL ROAD			2	1	1	4	8	5	13	25
MILL ROAD	I	AIRFIELD ROAD	1	2			1	3	7	4	29	29
TE ATATU ROAD		80 N ROBERTS ROAD	1	1	2			3	7	3	43	57
WEST COAST ROAD	I	SELAK PLACE		1	1	2		3	7	3		29
GILLIES AVENUE	I	GILLIES ON NBD N		1	1	1	1	3	7	4		43
MOTUTARA ROAD		300 N MURIWAI ROAD	1	1			1	4	7	4	86	43
MAURICE PAYKEL PLACE	I	HIGHBROOK DRIVE					3	3	6	3	17	17
PARNELL RISE	I	THE STRAND	1	1	1			3	6	3	17	50
LAKE ROAD	I	MONTGOMERY AVENUE				3		3	6	2	33	
ASH ST		150 E WAIRAU AVENUE		1		1	1	3	6	3	17	50
BLOCKHOUSE BAY ROAD	I	HOLBROOK ST		1			1	4	6	3		50
LOWER DOMAIN DRIVE		50 S LOVERS LANE	1		1		1	3	6	3	33	
SWANSON ROAD		80 E STURGES ROAD				1	1	3	5	2	40	20
LAKE ROAD		300 N WINSCOMBE ST			1	1		3	5	2	20	
COLLEGE ROAD	I	NGAHUE DRIVE				1	1	3	5	2	20	

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

Site Radius =
250 metres

CRASH ROAD	SIDE ROAD	2004	2005	2006	2007	2008	2009	TOTAL	Non-Injury	Wet Crash %	Dark Crash %
PIHA ROAD	800 E LONE KAURI ROAD	1	3	1	1	4	5	15	12	87	40
HEIGHTS ROAD	I BEATTY ROAD	1		3	4	1	6	15	13	67	33
OLD NORTH ROAD	500 E ARARIMU VALLEY ROAD	1	1		2	3	4	11	4	27	18
DEACON ROAD	200 W FORESTRY ROAD	2	1		3		5	11	5	100	45
WAIUKU ROAD	I BALD HILL ROAD			1	2	3	4	10	4	40	20
PIHA ROAD	I ANAWHATA ROAD	1	3				5	9	5	56	44
WHITFORD-MARAETAI ROAD	I JACK LACHLAN DRIVE	1		1	2	1	4	9	4	33	44
EAST COAST ROAD	I BAWDEN ROAD	1	1	2	1		4	9	4	22	22
PORCHESTER ROAD	I MARENGO PARKWAY		1	2		1	4	8	6	25	25
WHITFORD-MARAETAI ROAD	200 N OKARORO DRIVE		1		1	2	3	7	3	29	43
BURTT ROAD	I MCPHERSON ROAD		1		1	2	3	7	5	29	43
CLEVEDON-TAKANINI ROAD	I PAPAKURA-CLEVEDON ROAD		1	1	1	1	3	7	2		43
PAREMOREMO ROAD	I ATTWOOD ROAD			1	1	1	3	6	4	50	33
MATAKANA ROAD	I OAK RIVER DRIVE			1		1	4	6	5	50	83
PIHA ROAD	830 N TE AHUAHU ROAD		1		1		4	6	5	33	83
KARIOITAHU ROAD	I PARK ROAD		1	1	1		3	6	5	17	33
RANFURLY ROAD	I STRATFORD ROAD				1	1	4	6	6	33	17
PAPAKURA-CLEVEDON ROAD	I WEST ROAD	2			1		3	6	1	50	33
OLD NORTH ROAD	500 S PEAK ROAD	1	1		1		3	6	1	50	
WAIHOEHOE ROAD	150 E FITZGERALD ROAD	1		1			3	5	4	80	40

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

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

CRASH ROAD		SIDE ROAD	2004	2005	2006	2007	2008	2009	TOTAL	Non-Injury	Wet Crash %	Dark Crash %
SH 1N	I	SHELLY OFF SBD	42	40	34	28	34	49	227	170	25	19
SH 1N	A	SHELLY BEACH OBR	44	43	27	36	28	49	227	177	27	35
SH 1N		300 N SHELLY OFF SBD	17	30	10	19	23	33	132	105	23	23
SH 16	I	WATERVIEW OFF WBD	18	13	13	21	20	26	111	81	33	43
SH 1N		250 S EAST TAMAKI OBR	17	8	12	12	11	21	81	63	30	26
SH 1N	I	HIGHBROOK ON NBD	13	8	3	18	15	18	75	59	36	39
SH 1N	I	UPPER HWY OFF SBD	8	5	10	11	8	18	60	49	37	17
UPPER HWY OFF NBD	I	SH 18	5	7	11	11	6	14	54	44	13	20
SH 1N		200 S ORAMS OBR	4	5	7	7	7	13	43	38	19	21
SH 20	I	MANUKAU ON SBD	5	4	5	2	9	15	40	30	18	28
SH 17	I	GREVILLE ROAD	3	2	0	6	10	13	34	31	3	15
GREAT SOUTH ROAD	I	MANUKAU OFF NBD	5	2	4	4	5	8	28	25	36	50
SH 16	I	SLIP ROAD	3	1	2	3	6	7	22	14	36	45
SH 17	I	ALBANY HIGHWAY	6	0	0	2	6	7	21	15	24	38
SH 1N	I	TAKANINI ON NBD	3	4	2	1	2	8	20	16	35	20
SH 18	I	LUCKENS ROAD	3	3	1	3	2	7	19	15	16	16
SH 20B	I	PUHINUI ON SBD	1	3	1	4	2	7	18	12	28	44
SH 1N		2000 N PAPA KURA ON NBD	3	2	2	2	2	6	17	9	18	35
SH 20B	I	CAMPANA ROAD	1	1	1	2	2	5	12	7	17	42
SH 20		300 S BADER OBR	1	2	2	1	1	5	12	10	33	50
SH 1N		530 S SCHOLLUM ACCESS ROAD	2	0	0	3	1	6	12	6	33	42
SH 20		1000 S MASSEY OFF NBD	2	1	2	2	0	5	12	11	25	58
HIGHBROOK DRIVE	I	HIGHBROOK ON NBD	0	0	2	1	2	5	10	8	20	40
SH 16	I	DON BUCK ROAD	1	2	1	1	0	4	9	8	33	56
SH 16		1680 W ABEL ROAD	0	0	1	2	2	4	9	5	56	11
SH 1N	I	GREVILLE ON SBD	1	2	0	0	1	4	8	7	50	50
SH 18	I	MARINA VIEW DRIVE	0	0	3	0	1	4	8	6	25	63
SH 18	I	UPPER HWY ON SBD	0	1	0	0	1	5	7	7	14	14
SH 1N		2000 S ARARIMU OBR	1	0	0	2	1	3	7	4	29	14
SH 18	I	GREENHITHE OFF WBD	0	0	0	0	3	3	6	3	17	67
SH 1N		1000 N SCHOOL ROAD	1	0	0	1	1	3	6	5	50	0
BARROWCLIFFE PLACE	I	WIRI STATION ROAD S	1	0	0	1	1	3	6	6	33	0
SH 1N		1000 N OTEHA VALLEY OBR	0	0	1	0	2	3	6	5	33	17
SH 16	I	TRIGG ROAD	0	0	1	2	0	3	6	3	33	50
SH 1N	I	BOSHER ROAD	1	0	0	0	1	3	5	3	20	40

appendix

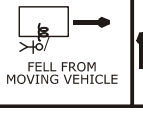
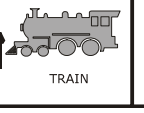
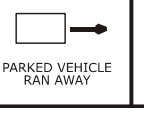
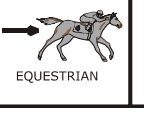
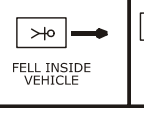
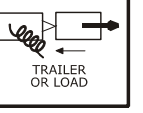


- Groupings of crash types
- Grouping of contributing factors
- General factor list
- General movement types

Explanatory notes for the appendix

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

Groupings of crash types

Overtaking	AA	AB	AC	AD	AE	AF	AG
	 PULLING OUT OR CHANGING LANE TO RIGHT	 HEAD ON	 CUTTING IN OR CHANGING LANE TO LEFT	 LOST CONTROL (OVERTAKING VEHICLE)	 SIDE ROAD	 LOST CONTROL (OVERTAKEN VEHICLE)	 WEAVING IN HEAVY TRAFFIC
	GE	GB					
	 OVERTAKING VEHICLE	 LEFT SIDE SIDE SWIPE					
Straight - Lost control / Head on	BA	CA	CB	CC	BE		
	 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
	FC	FD	FE	FF	GA	GD	GF
	 PEDESTRIAN	 QUEUE	 SIGNALS	 OTHER	 REAR OF LEFT TURNING VEHICLE	 NEAR CENTRE LINE	 TWO TURNING
	 PARKING OR LEAVING	 'U' TURN	 'U' TURN	 DRIVEWAY MANOEUVRE	 PARKING OPPOSITE	 ENTERING OR LEAVING	 REVERSING ALONG ROAD
Crossing / Turning	MA	MB	MC	MD	ME	MF	MG
	 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
	GC	HA	JA	JC	KA	KB	KC
	 STOPPED WAITING TO TURN	 MAKING TURN					
Pedestrian vs Vehicle	NA	NB	NC	ND	NE	NF	NG
	 LEFT SIDE	 RIGHT SIDE	 LEFT TURN LEFT SIDE	 RIGHT TURN RIGHT SIDE	 LEFT TURN RIGHT SIDE	 RIGHT TURN LEFT SIDE	 MANOEUVRING VEHICLE
	 WALKING WITH TRAFFIC	 WALKING FACING TRAFFIC	 WALKING ON FOOTPATH	 CHILD PLAYING (TRICYCLE)	 ATTENDING TO VEHICLE	 ENTERING OR LEAVING VEHICLE	
Miscellaneous	PA	PB	PC	PD	PE	PF	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








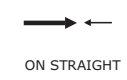
















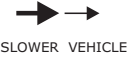











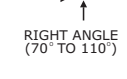









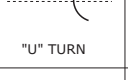
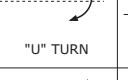

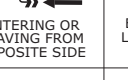
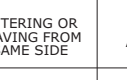






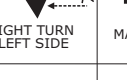





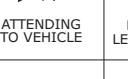
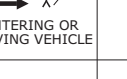
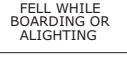


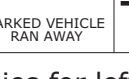

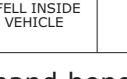
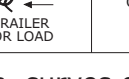
Factor group	Factor codes included
Alcohol involved	100 – 101 103 – 109
Too fast	110 – 119 430 – 432
Failed to give way or stop	300 – 314 320 – 328
Failed to keep left	120 – 128 205
Overtaking	150 – 161
Incorrect lanes or position	129 170 – 183 200 – 204 206 – 209 440 – 448
Poor handling	130 – 134 137 – 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.

VEHICLE MOVEMENT CODING SHEET

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

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

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

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

DRIVER CONTROL

100 Alcohol or drugs

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

110 Too fast for conditions

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

120 Failed to keep left

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

130 Lost control

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

140 Failed to signal in time

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

150 Overtaking

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

170 Wrong lane or turned from wrong position

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

180 In line of traffic

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

190 Sudden action

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

200 Forbidden movements

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

VEHICLE CONFLICTS

300 Failed to give way

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

320 Did not stop

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

330 Inattentive: failed to notice

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

350 Attention diverted by:

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

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

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

380 Misjudged speed, distance, size or position of:

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

GENERAL DRIVER

400 Inexperience

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

410 Fatigue (drowsy, tired, fell asleep)

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

420 Incorrect use of vehicle controls

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

430 Showing off

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

440 Parked or stopped

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

GENERAL PERSON

500 Illness and disability

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

510 Intentional or criminal

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

520 Driver or passenger, boarding, leaving , in vehicle

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

530 Miscellaneous person

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

VEHICLES

600 Lights and reflectors at fault or dirty

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

610 Brakes

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

620 Steering

- 621 Defective
- 622 Failed suddenly

630 Tyres

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

640 Windscreen or mirror

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

650 Mechanical

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

660 Body or chassis

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

680 Load

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

690 Miscellaneous vehicle

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

PEDESTRIANS

700 Walking along road

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

710 Crossing road

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

720 Miscellaneous

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

ROAD

800 Slippery

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

810 Surface

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

820 Obstructed

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

830 Visibility limited

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

840 Signs and signals

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

850 Markings

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

860 Street lighting

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

870 Raised islands and roundabouts

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

MISCELLANEOUS

900 Weather

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

910 Animals

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

920 Entering or leaving land use

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

999 Unknown