

Auckland Region State Highways Road Safety Report 2005 to 2009



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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 State Highways 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 State Highways. 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 is compared with a peer group of similar authorities (Group X) along with data for all New Zealand.

The peer group used for comparison with Auckland Region State Highways 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 1.4a, however this may not be the most appropriate comparison for the state highways and should be considered with caution.

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 roads and state highways.
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 Figure 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 listed in Figure 9.5 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 S.H.	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 S.H.	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

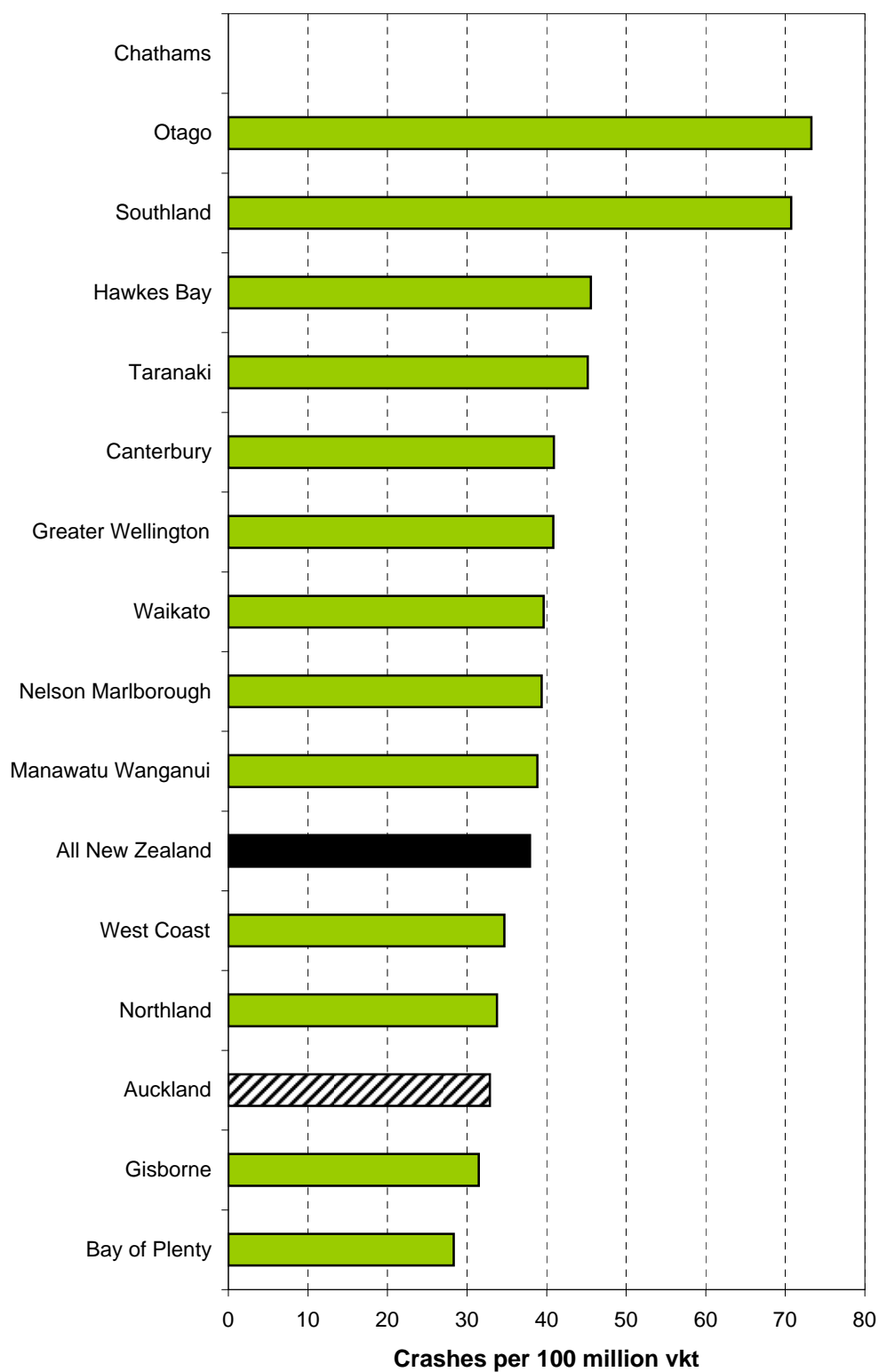


Figure 1.6 Crashes per 100 million vehicle-kilometres travelled - rural council roads

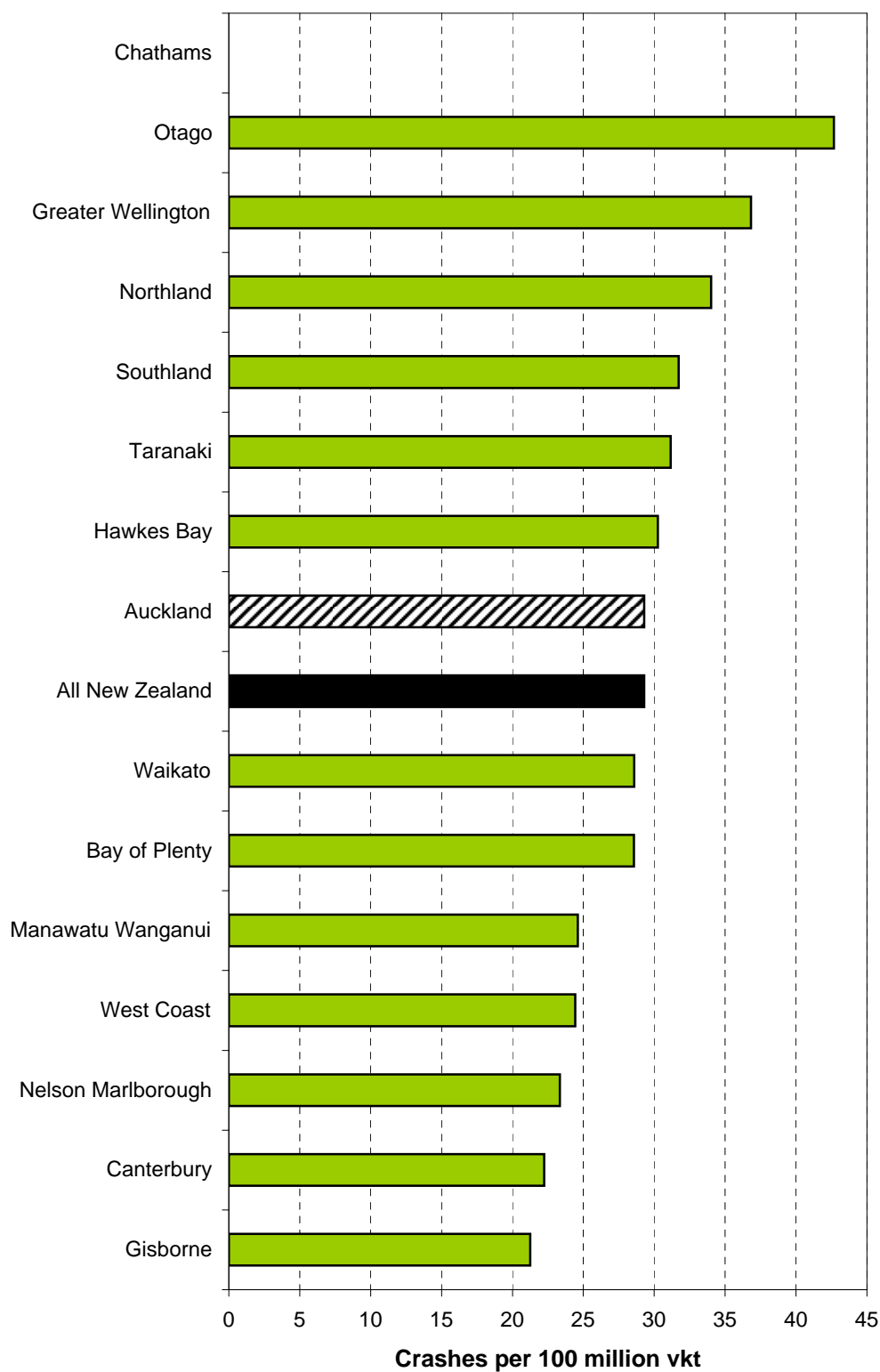
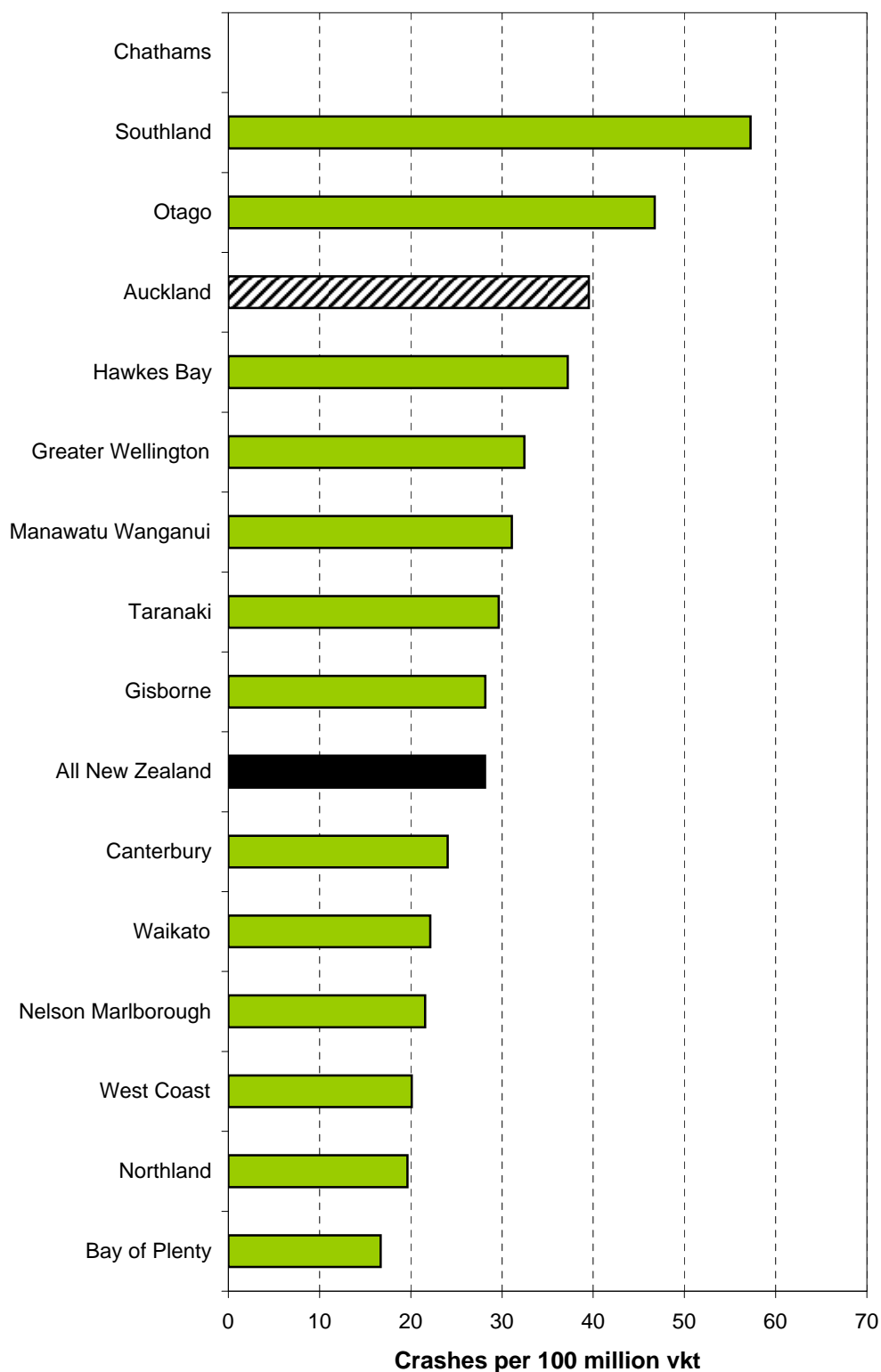


Figure 1.7 Crashes per 100 million vehicle kilometres travelled - urban state highways



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

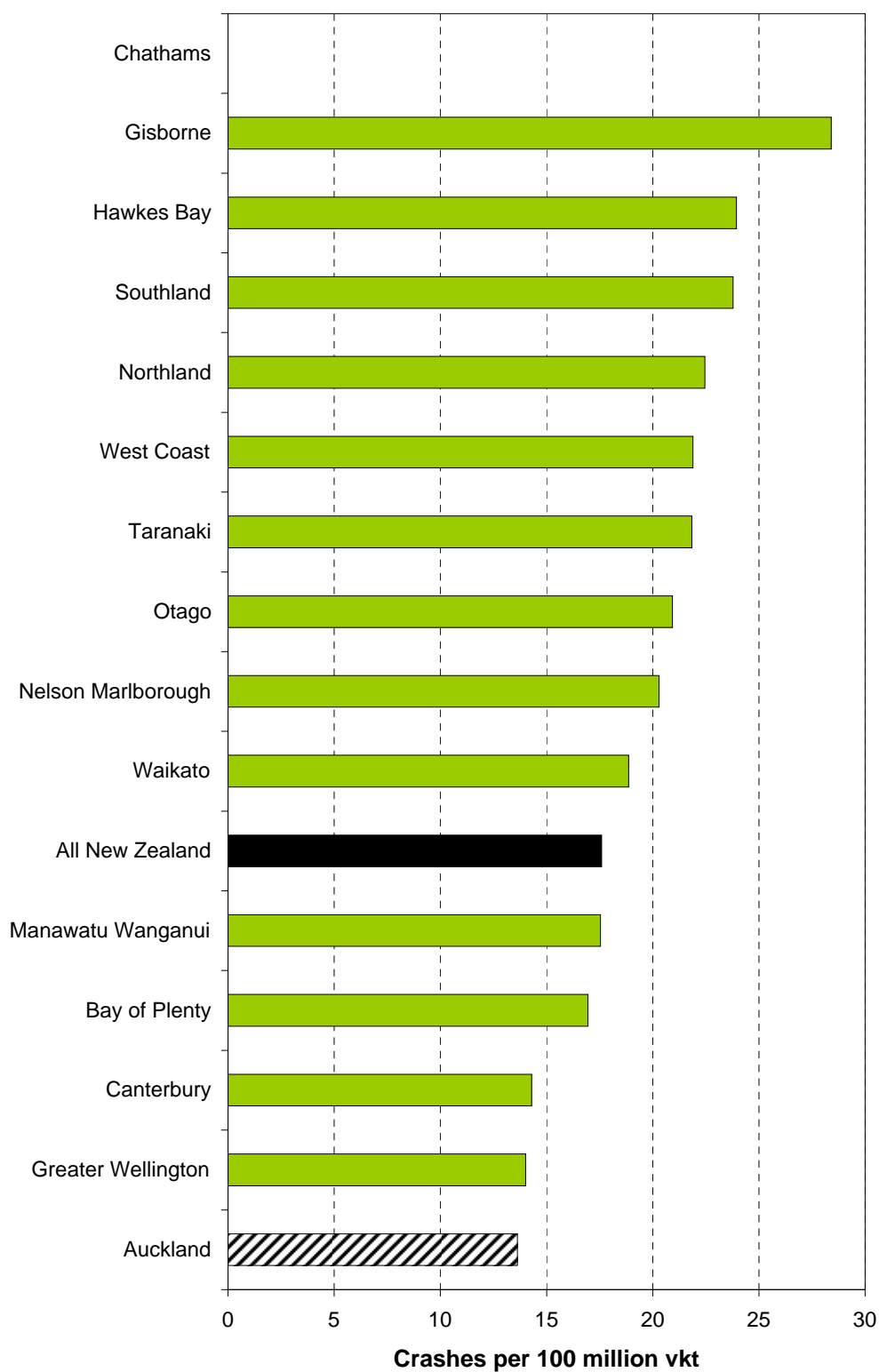


Figure 1.4a Peer group crash and casualty rates
Group X

City or District 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	26	32	74	54	15	33	40	111	71	19	444100	21
Christchurch	25	42	23	27	19	32	52	31	35	25	372600	9
Dunedin	40	83	67	63	19	57	118	95	91	32	123700	24
Hamilton	23	40	46	20	37	29	50	56	25	55	140700	10
Invercargill	40	78	37	67	27	59	114	62	89	44	51900	16
Kawerau	7	30	0	15	13	9	35	0	15	20	7010	16
Hutt	21	32	299	128	15	26	39	406	147	19	102100	23
Manukau	18	30	33	57	13	24	40	46	82	19	368600	22
Napier	26	44	31	40	23	34	53	40	52	36	57200	20
Nelson	23	37	72	16	16	28	43	89	19	21	45000	18
North Shore	19	31	32	54	14	24	39	46	66	19	225800	20
Palmerston North	22	45	38	45	22	27	53	58	61	32	80300	18
Papakura	25	34	27	n/a	11	34	46	35	n/a	17	48900	40
Tauranga	15	24	n/a	11	15	19	29	n/a	14	24	112600	14
Waitakere	20	44	15	20	18	26	57	22	25	23	204500	16
Wanganui	21	39	30	22	18	28	49	45	31	30	43400	30
Wellington	23	51	29	50	13	28	59	29	66	18	195500	15

Group X	23	38	33	32	15	30	48	47	42	22	2623910	18
All New Zealand	26	38	29	28	18	36	48	42	38	26	4331000	41

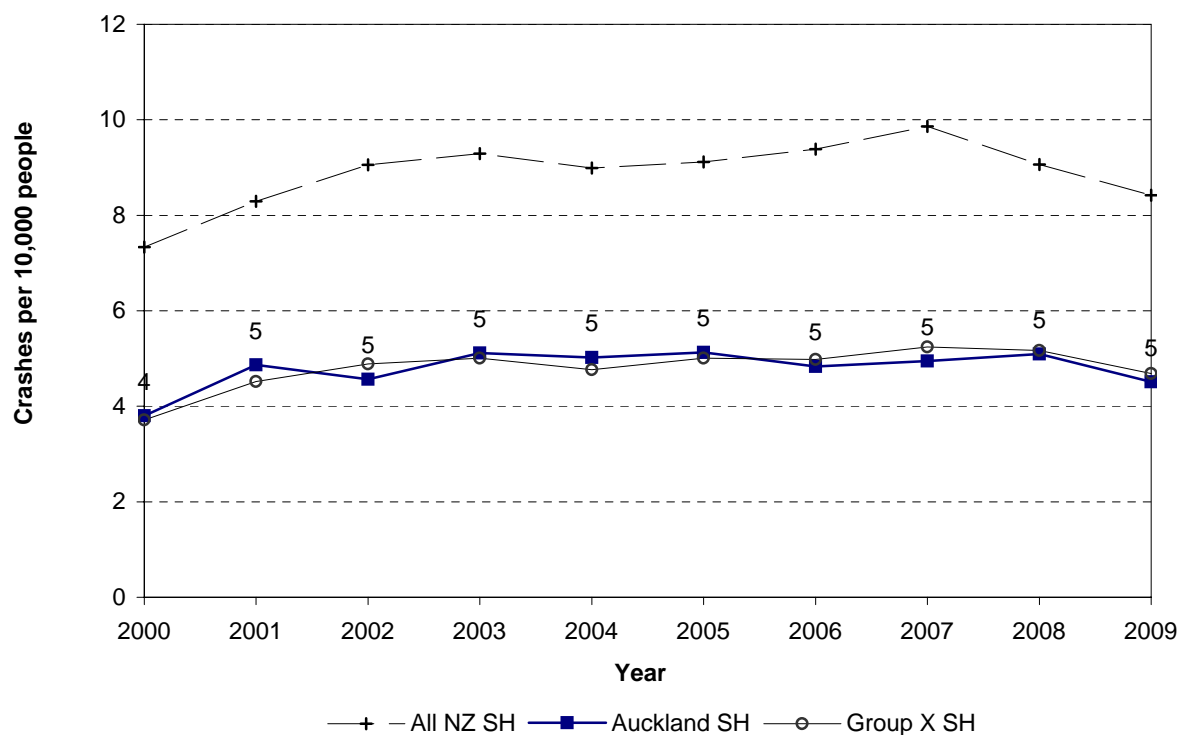
Group X : Cities and districts where the percentage of vehicle kilometres travelled in urban areas is less than 50 percent.

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 1.9 Crashes per 10,000 people
Auckland Region state highways**



**Figure 1.10 Casualties per 10,000 people
Auckland Region state highways**

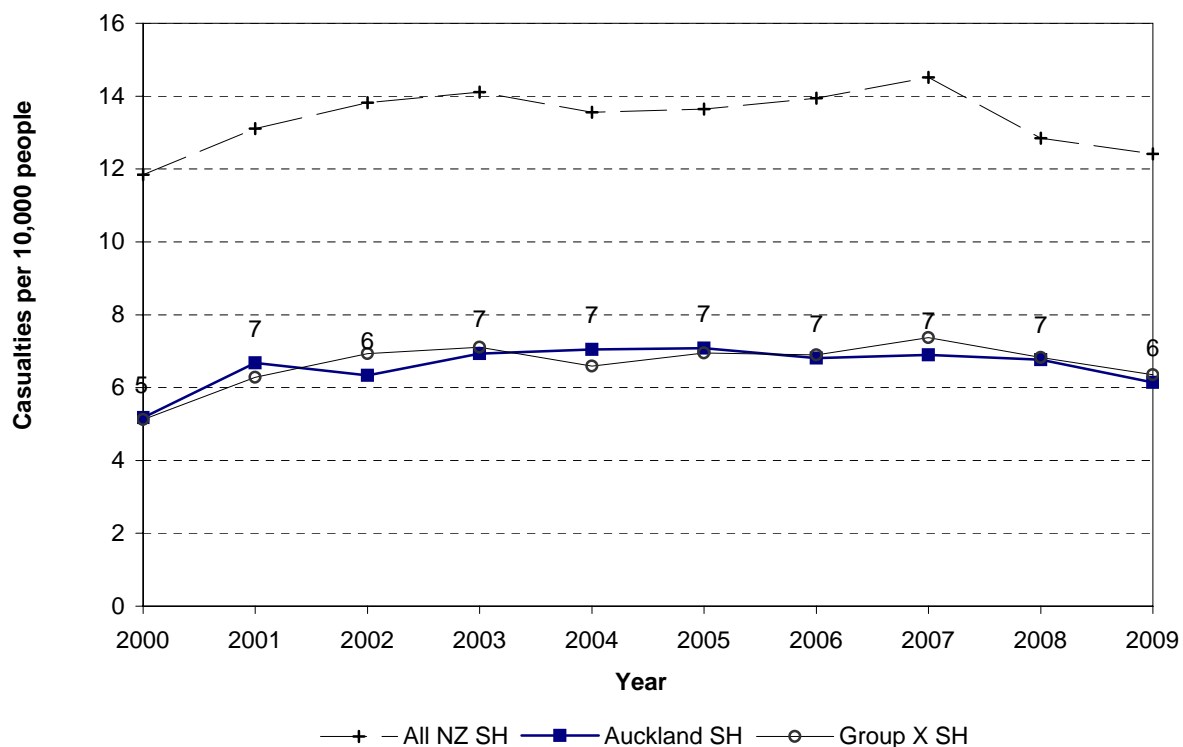


Figure 1.11 Social cost of crashes in Auckland Region in 2009

		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	16	19	9	13	18	75	2%	2%
Serious crashes	67	78	66	53	65	329	10%	13%
Minor crashes	608	566	615	655	565	3009	88%	85%
Total injury crashes	691	663	690	721	648	3413	100%	100%
Non-injury crashes	2347	2343	2346	2145	2098	11279		

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

	2005	2006	2007	2008	2009	Total	%	Group X
Fatal crashes	3	1	0	1	2	7	1%	1%
Serious crashes	14	25	13	6	11	69	11%	14%
Minor crashes	111	96	99	127	97	530	87%	85%
Total injury crashes	128	122	112	134	110	606	100%	100%
Non-injury crashes	420	437	444	439	431	2171		

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

	2005	2006	2007	2008	2009	Total	%	Group X
Fatal crashes	13	18	9	12	16	68	2%	2%
Serious crashes	53	53	53	47	54	260	9%	13%
Minor crashes	497	470	516	528	468	2479	88%	85%
Total injury crashes	563	541	578	587	538	2807	100%	100%
Non-injury crashes	1927	1906	1902	1706	1667	9108		

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

	2005	2006	2007	2008	2009	Total	%	Group X
Fatal casualties	22	24	11	13	18	88	2%	2%
Serious casualties	86	111	79	75	94	445	9%	12%
Minor casualties	846	798	872	869	770	4155	89%	87%
Total casualties	954	933	962	957	882	4688	100%	100%

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

	2005	2006	2007	2008	2009	Total	%	Group X
Fatal casualties	3	1	0	1	2	7	1%	1%
Serious casualties	14	29	17	9	11	80	10%	12%
Minor casualties	154	143	135	174	124	730	89%	87%
Total casualties	171	173	152	184	137	817	100%	100%

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

	2005	2006	2007	2008	2009	Total	%	Group X
Fatal casualties	19	23	11	12	16	81	2%	2%
Serious casualties	72	82	62	66	83	365	9%	12%
Minor casualties	692	655	737	695	646	3425	88%	86%
Total casualties	783	760	810	773	745	3871	100%	100%

Figure 2.7 Number of injury crashes
Auckland Region state highways (urban & rural)

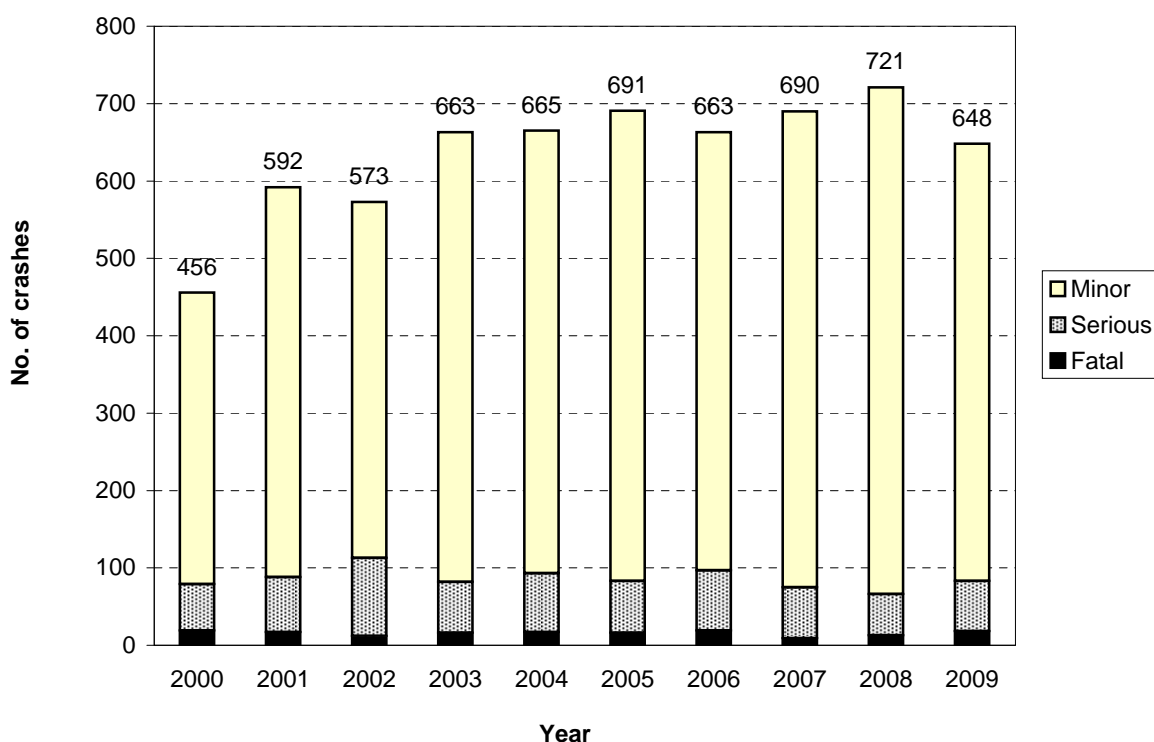
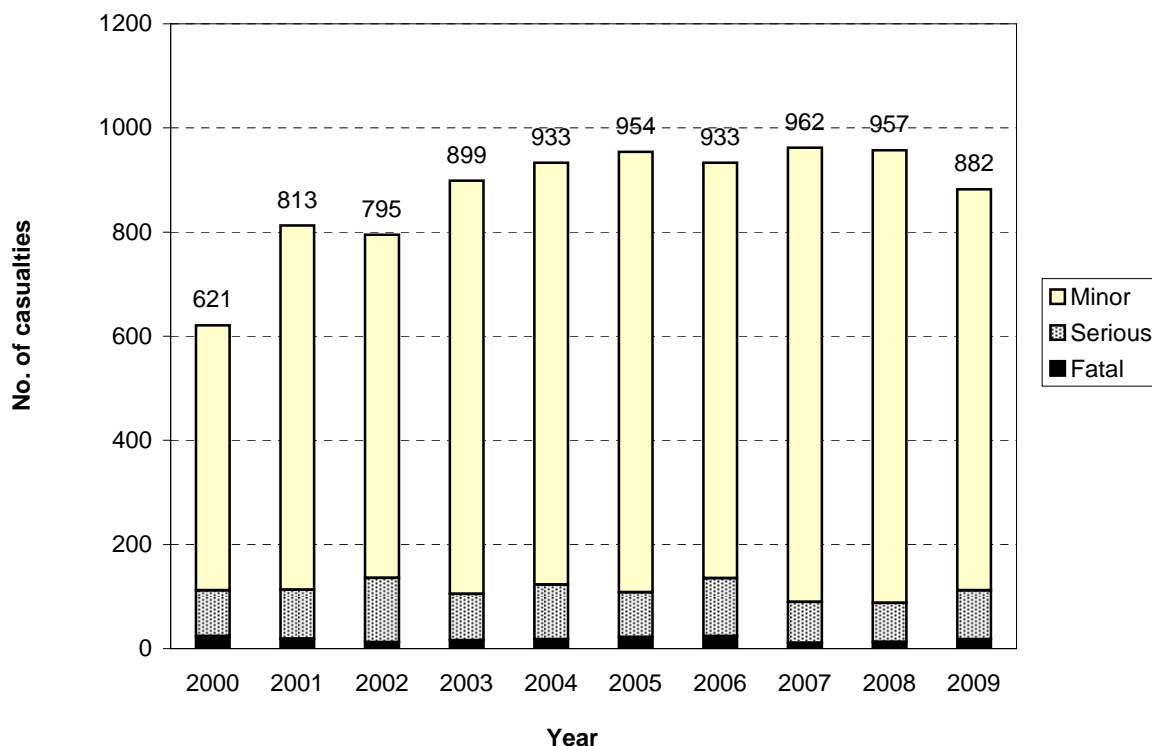
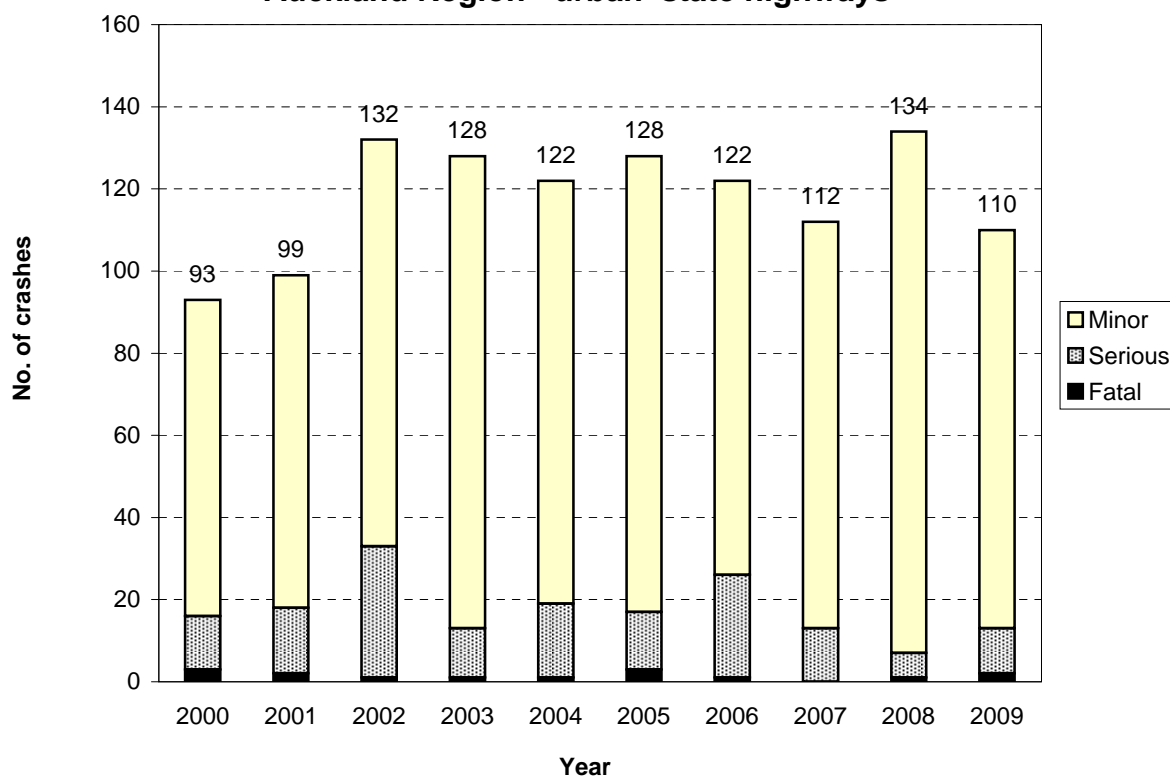


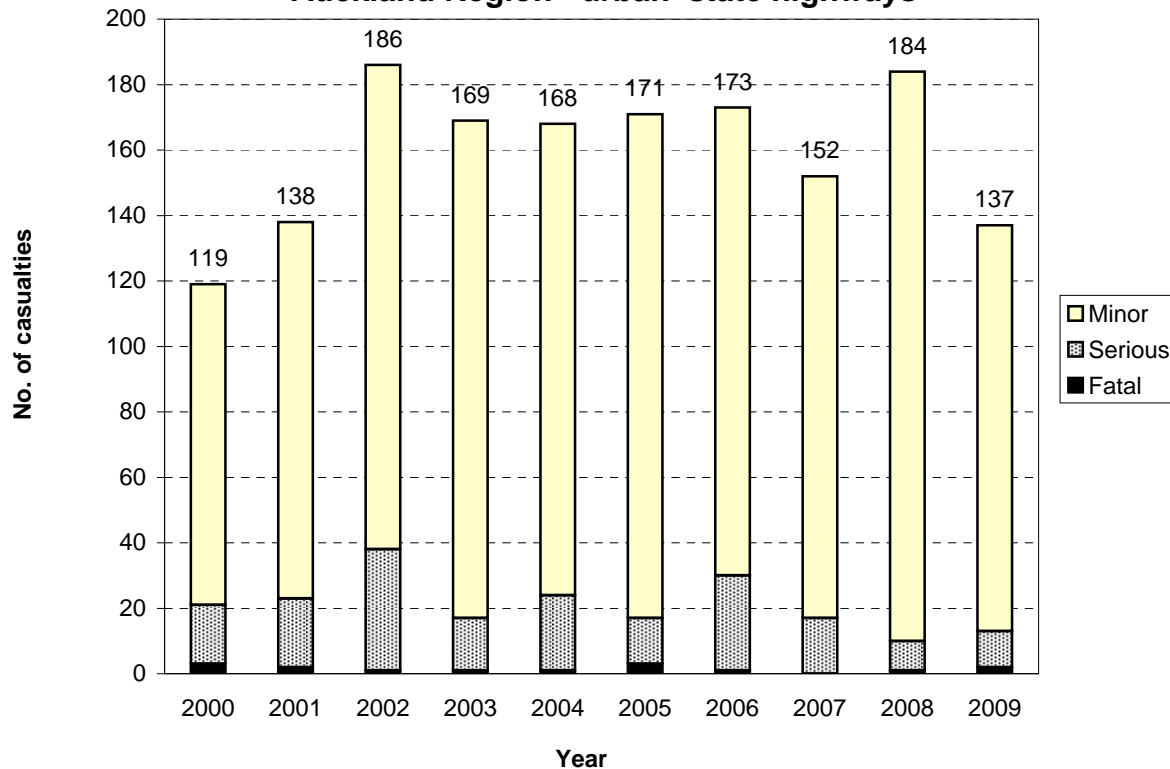
Figure 2.8 Number of casualties
Auckland Region state highways (urban & rural)



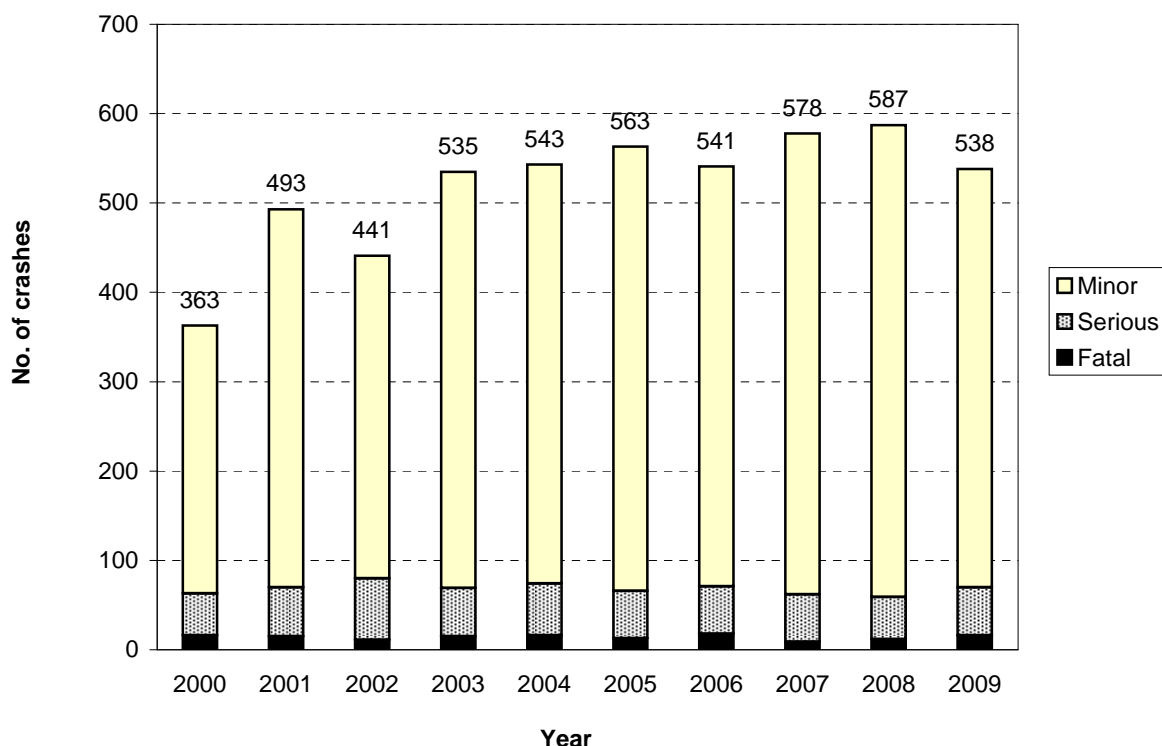
**Figure 2.9 Number of injury crashes
Auckland Region - urban state highways**



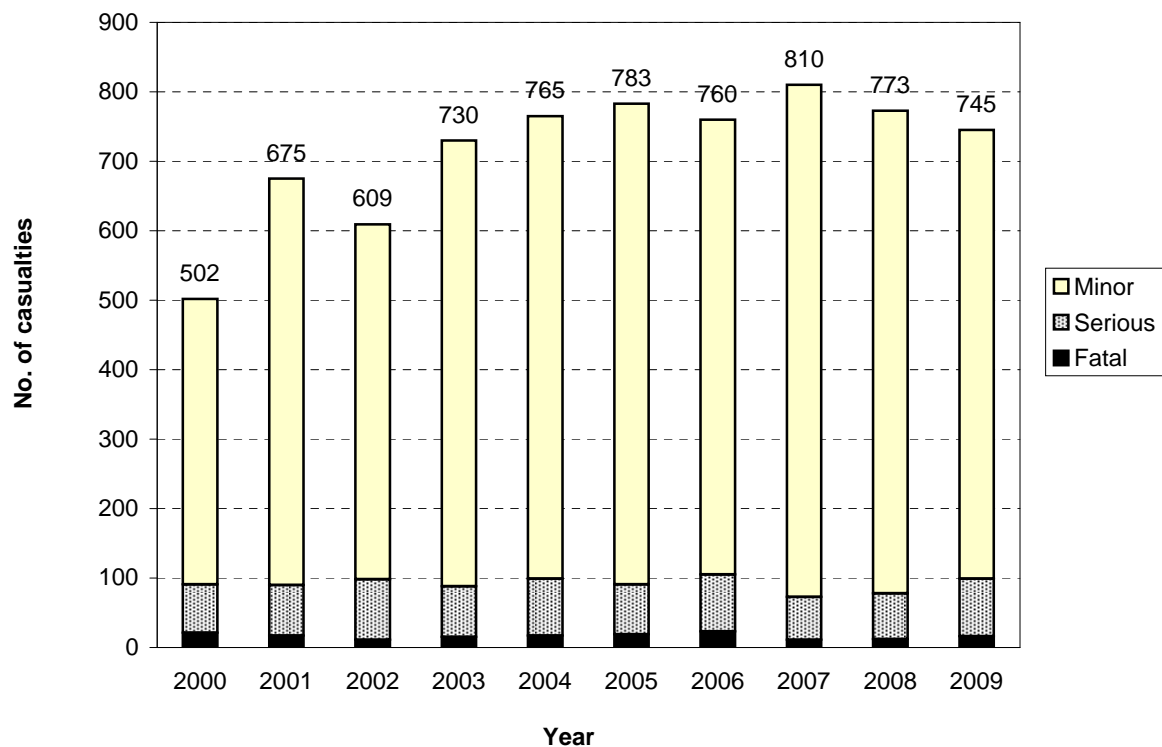
**Figure 2.10 Number of casualties
Auckland Region - urban state highways**



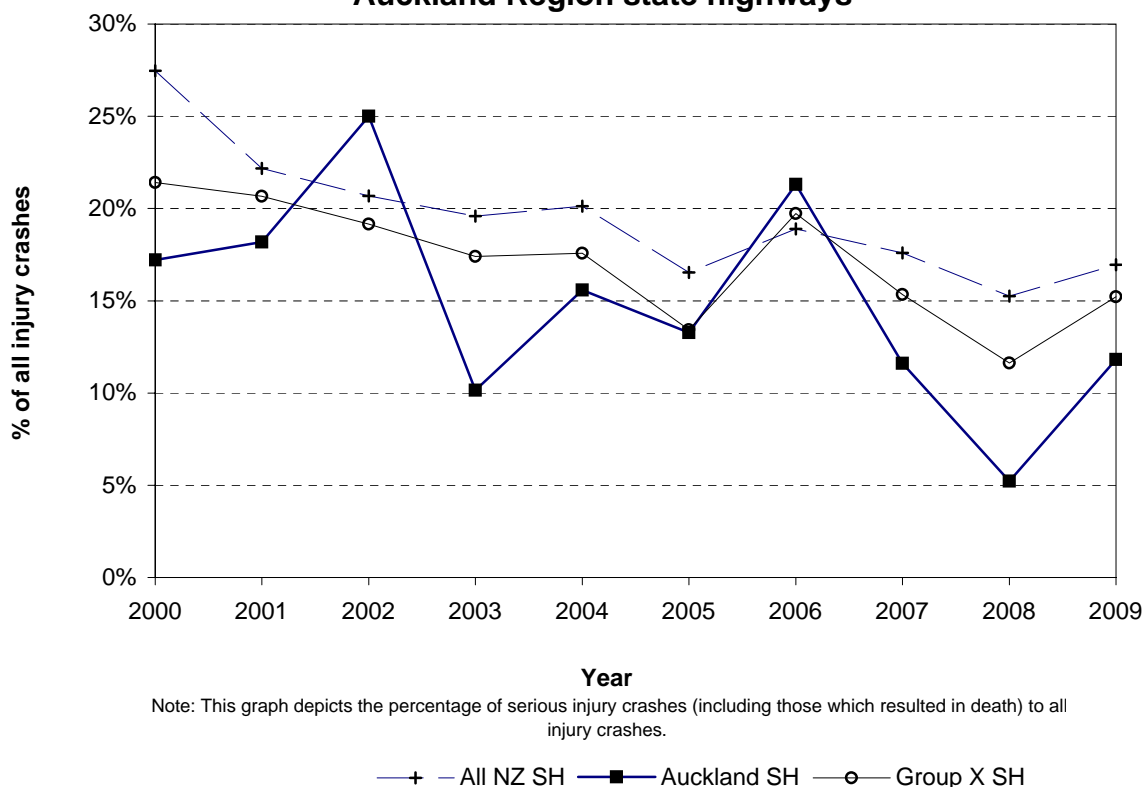
**Figure 2.11 Number of injury crashes
Auckland Region - rural state highways**



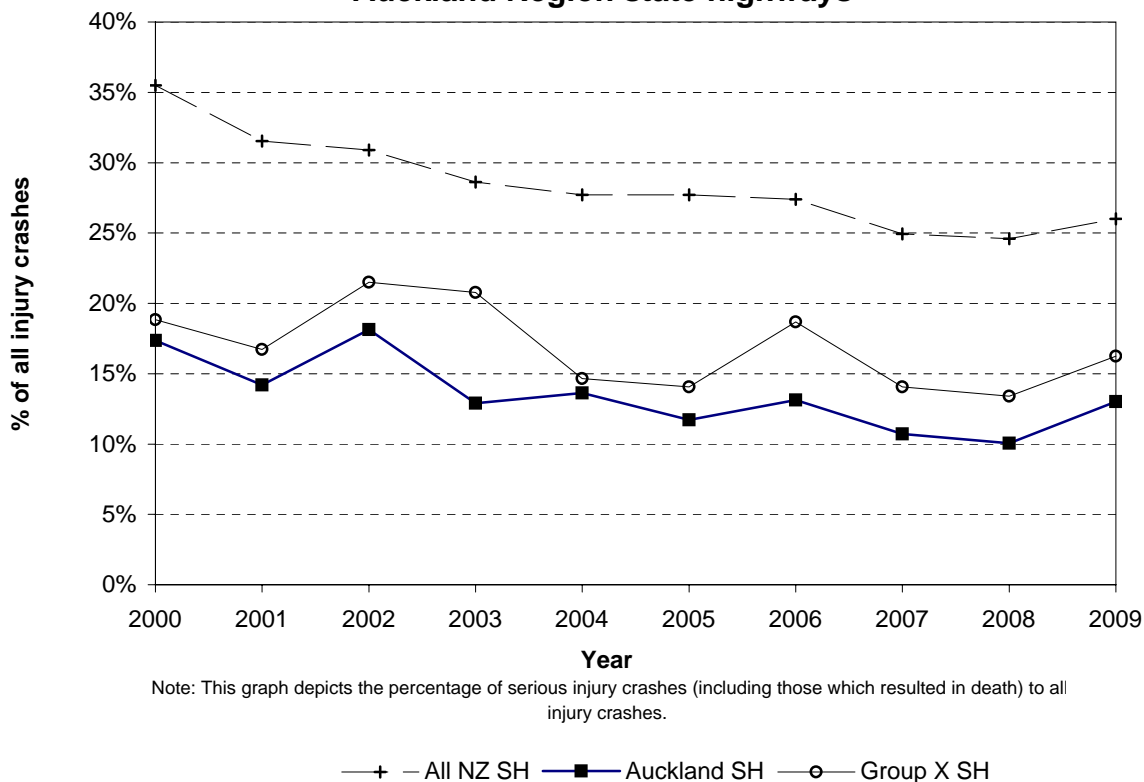
**Figure 2.12 Number of casualties
Auckland Region - rural state highways**



**Figure 2.13 Severity ratio - urban
Auckland Region state highways**

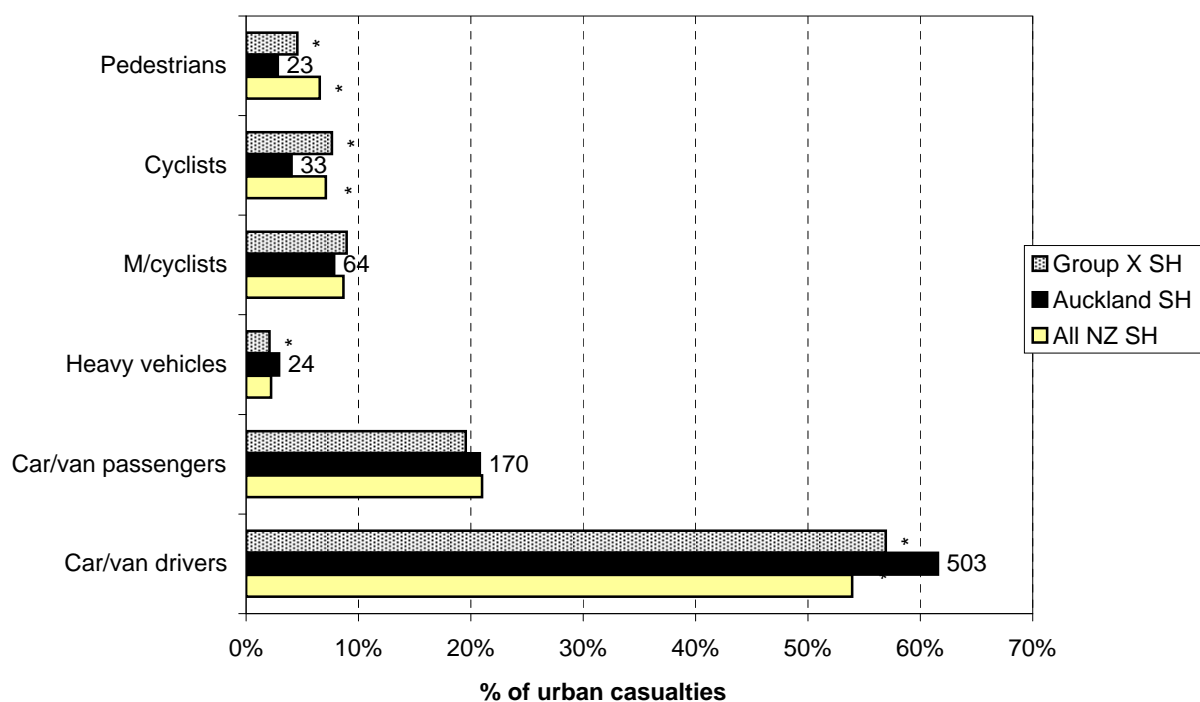


**Figure 2.14 Severity ratio - rural
Auckland Region state highways**



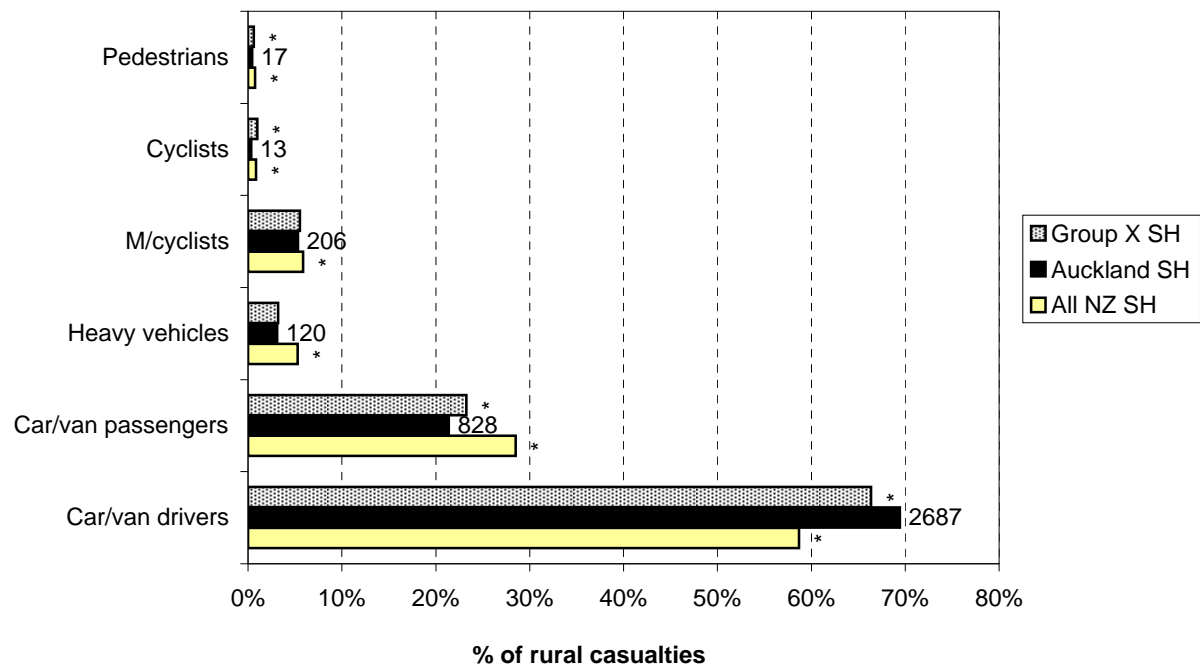
Road User Statistics

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



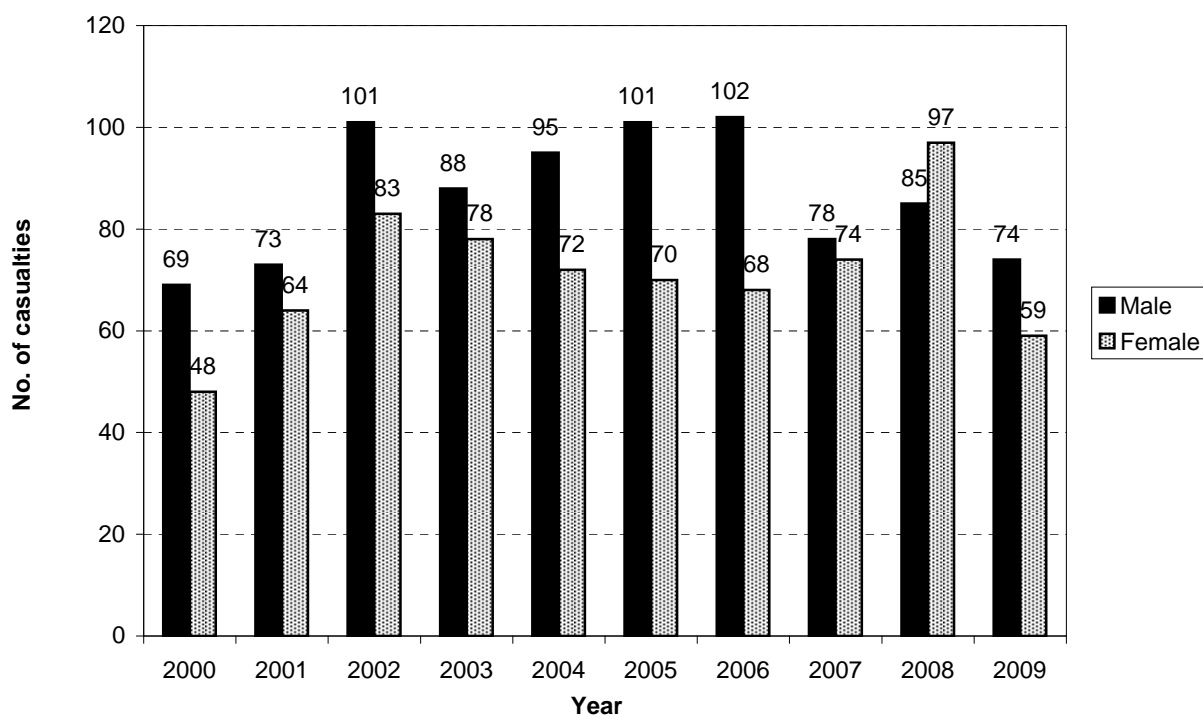
Note: While the graph plots percentages, the number of casualties is shown against the data points.
*Denotes statistically significant difference between Local Authority and National or Peer Group Proportions

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



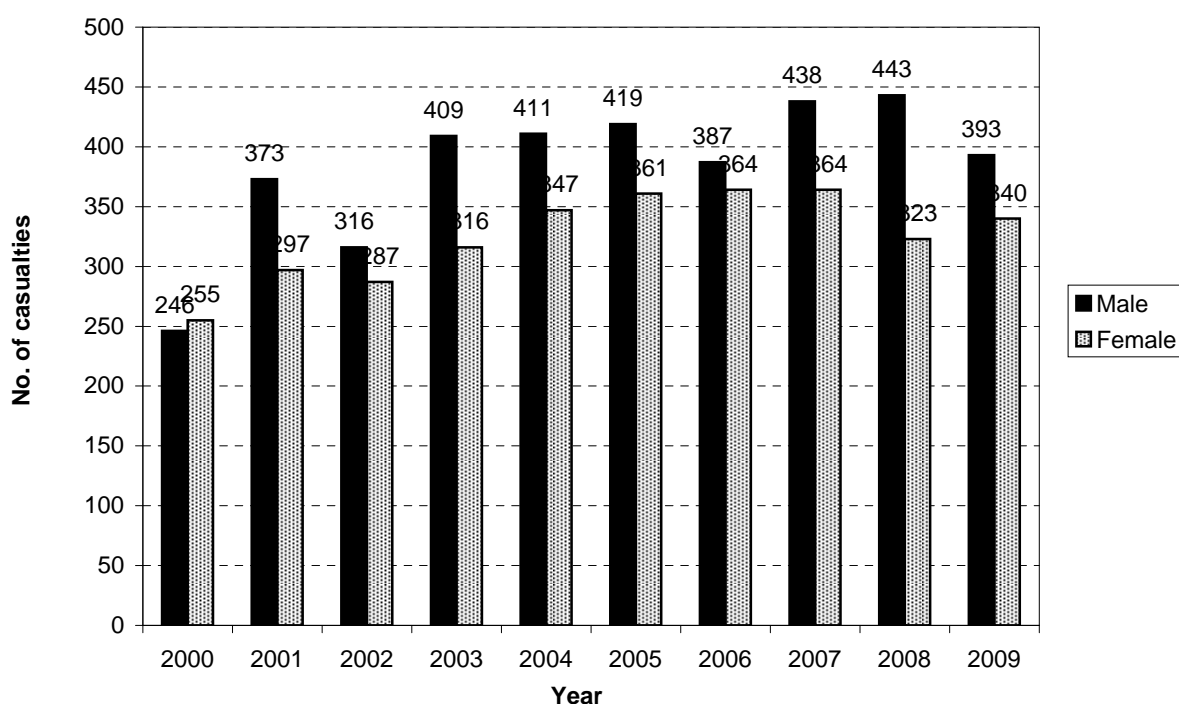
Note: While the graph plots percentages, the number of casualties is shown against the data points.
*Denotes statistically significant difference between Local Authority and National or Peer Group Proportions

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



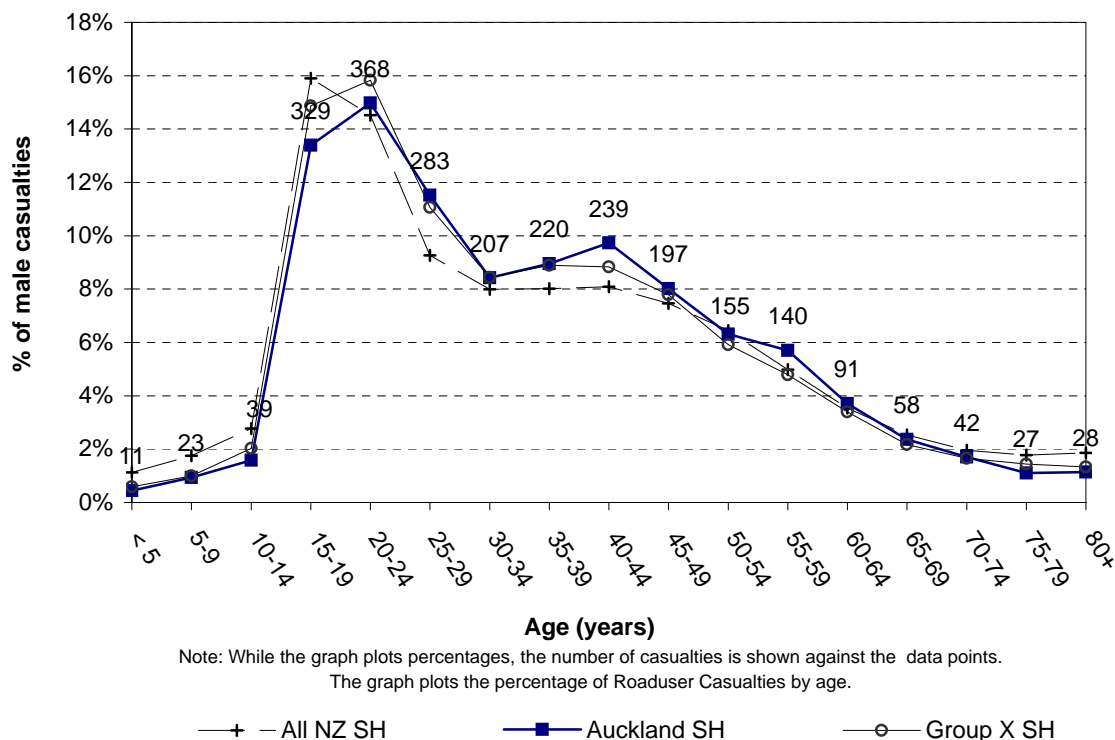
Note: This graph shows the number of male and female roadusers injured

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

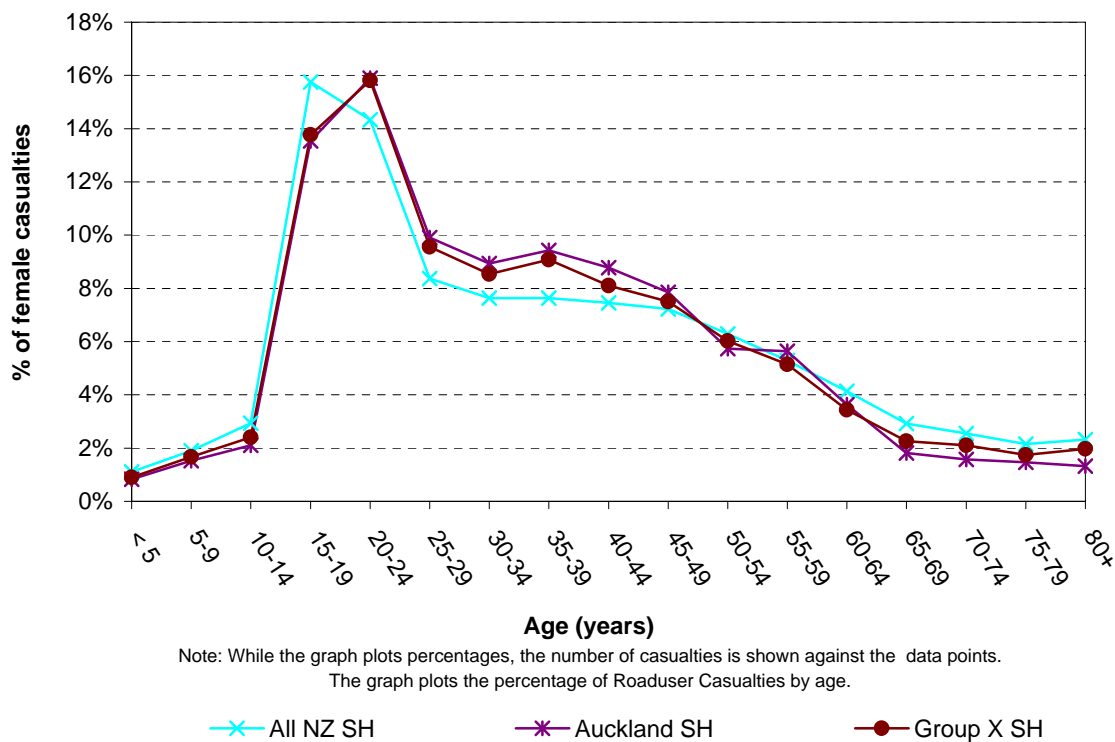


Note: This graph shows the number of male and female roadusers injured

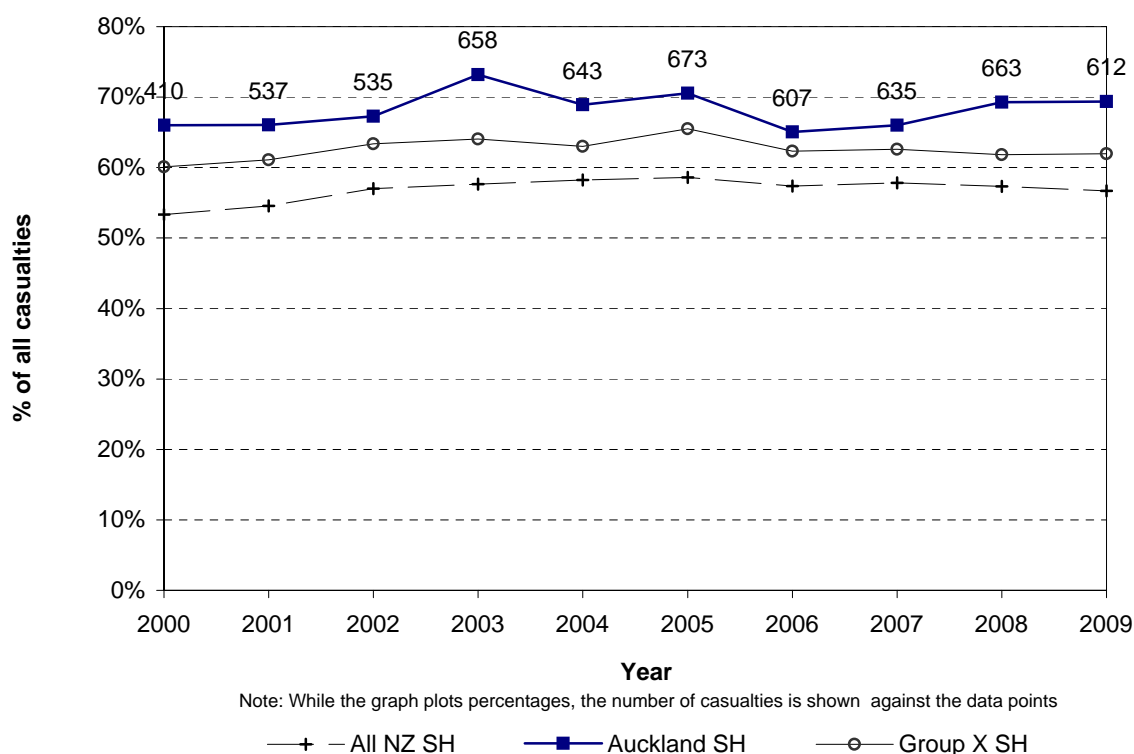
**Figure 3.5 Male casualties by age
Auckland Region state highways (2005-2009)**



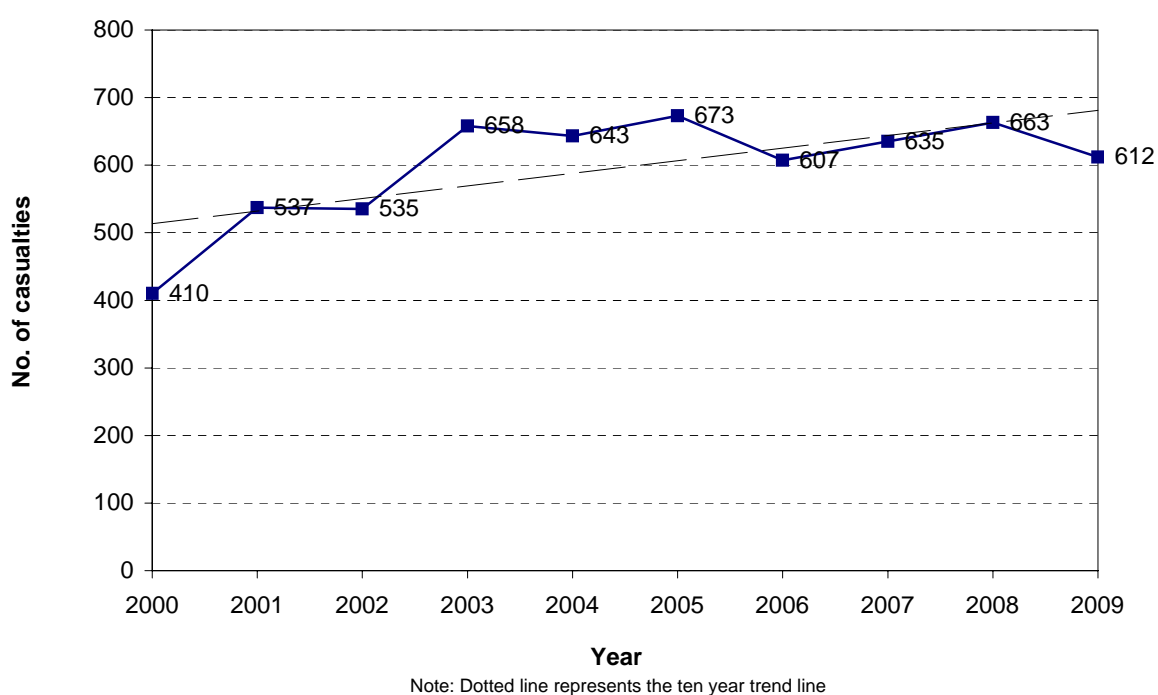
**Figure 3.6 Female casualties by age
Auckland Region state highways (2005-2009)**



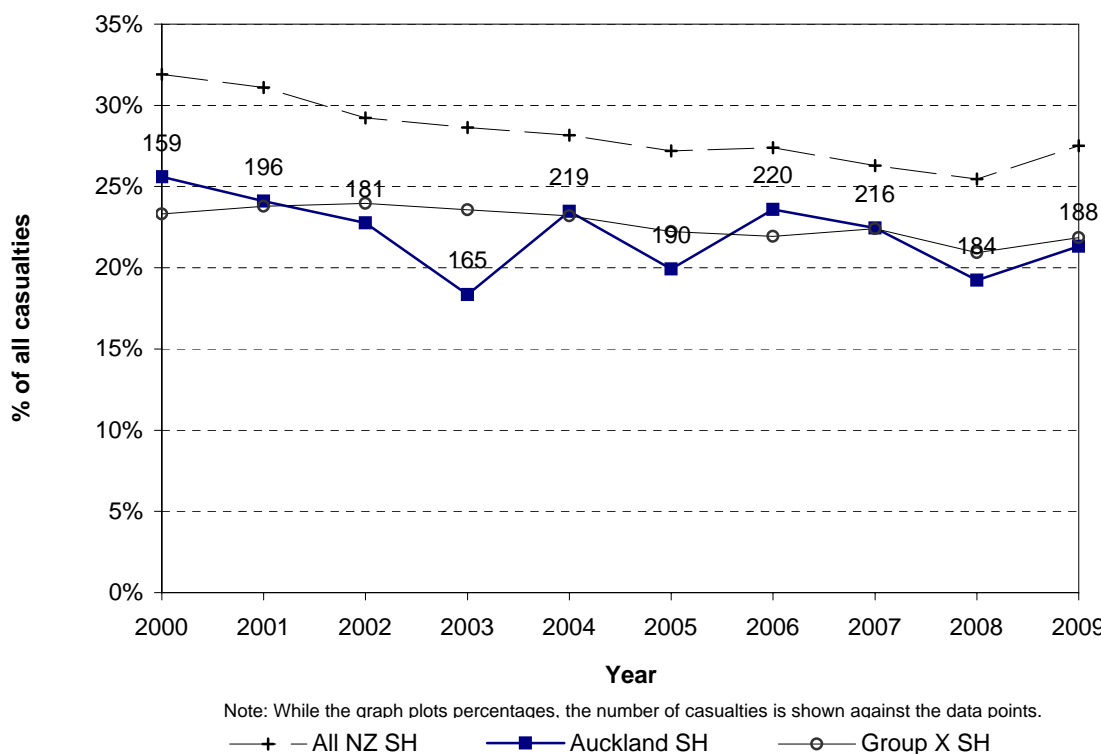
**Figure 3.7 Car/van driver casualties
Auckland Region state highways**



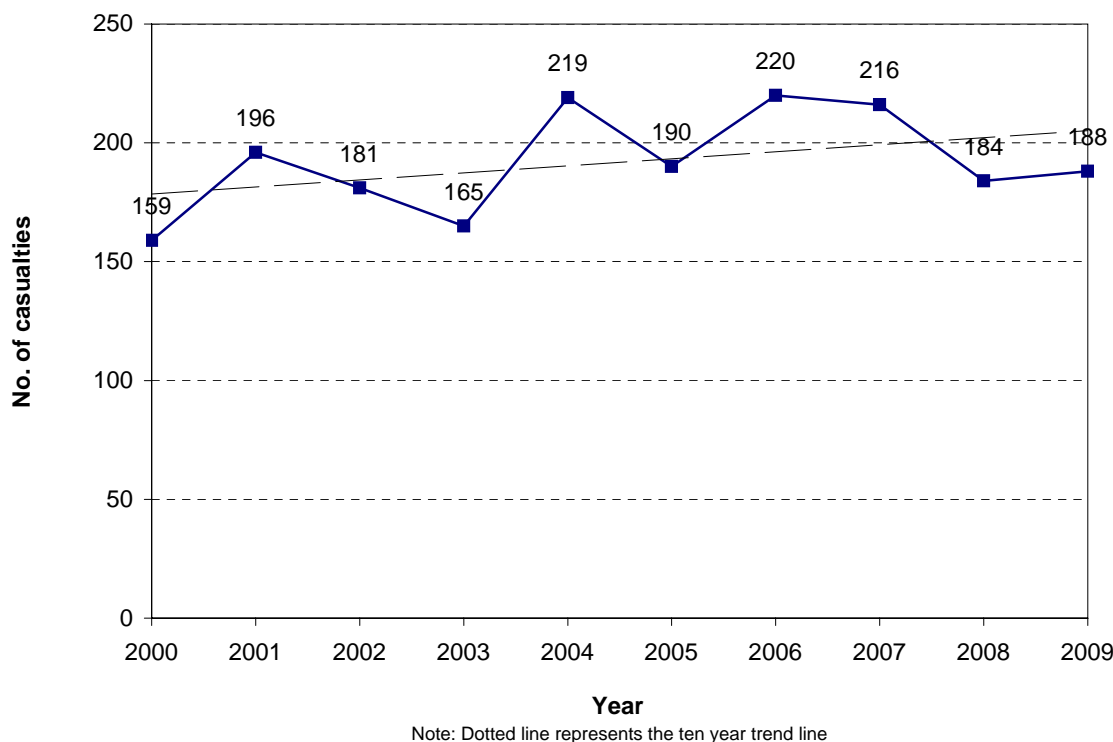
**Figure 3.8 Car/van driver casualties
Auckland Region state highways**



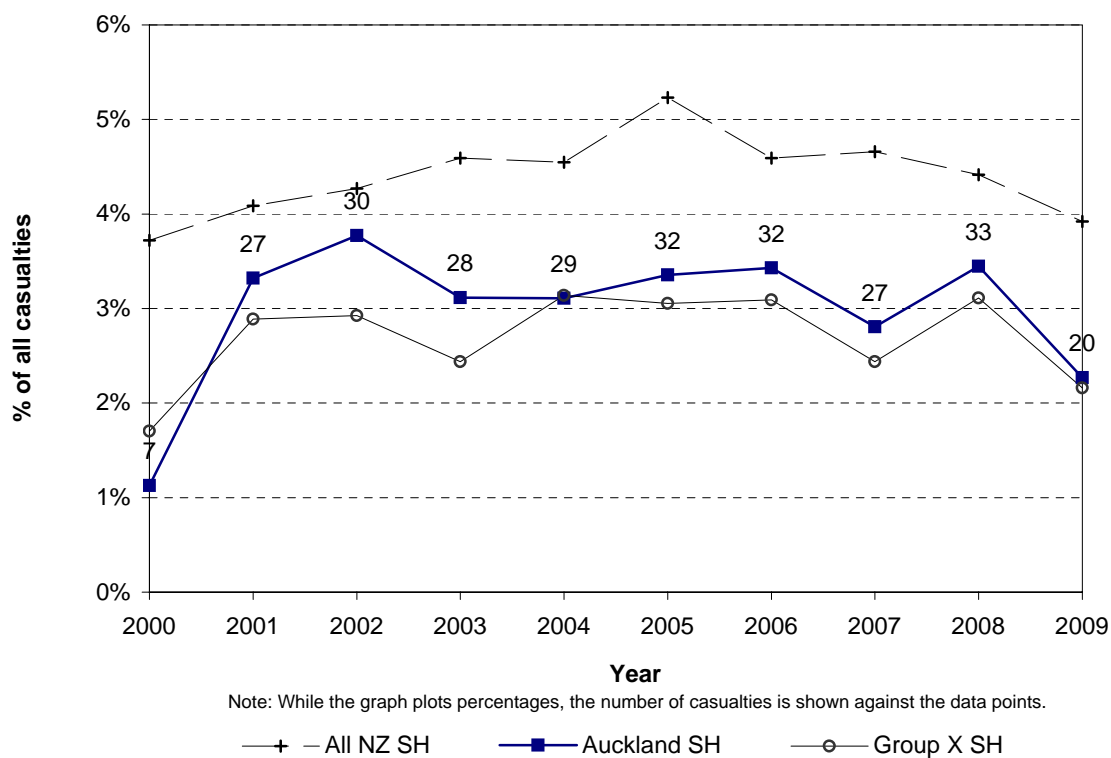
**Figure 3.9 Car/van passenger casualties
Auckland Region state highways**



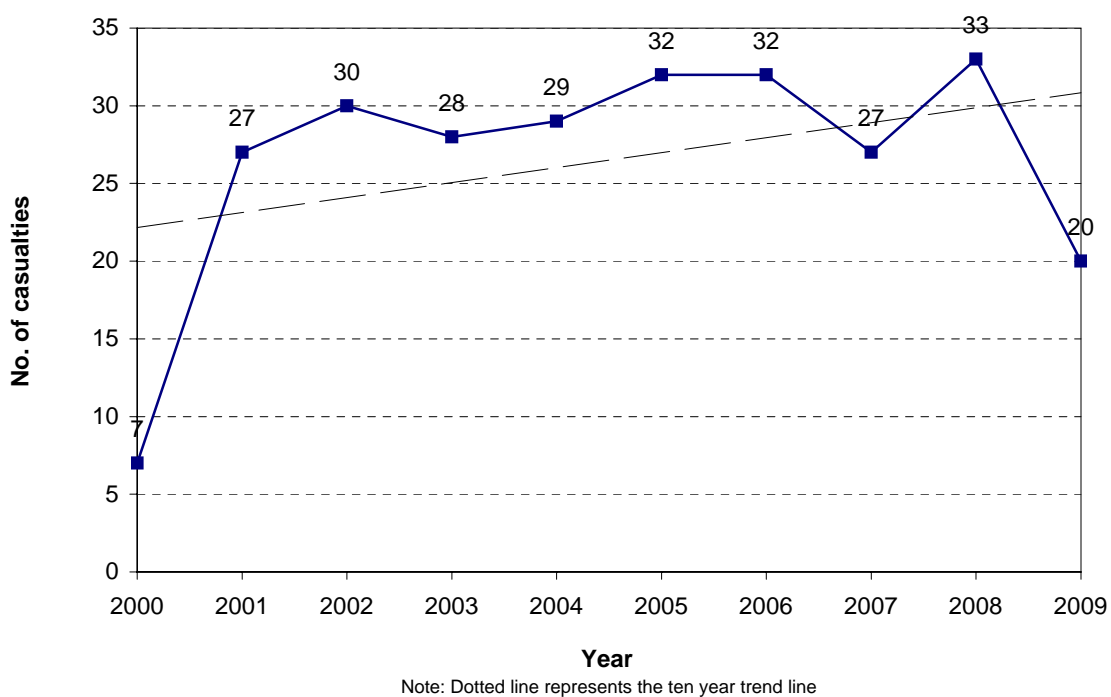
**Figure 3.10 Car/van passenger casualties
Auckland Region state highways**



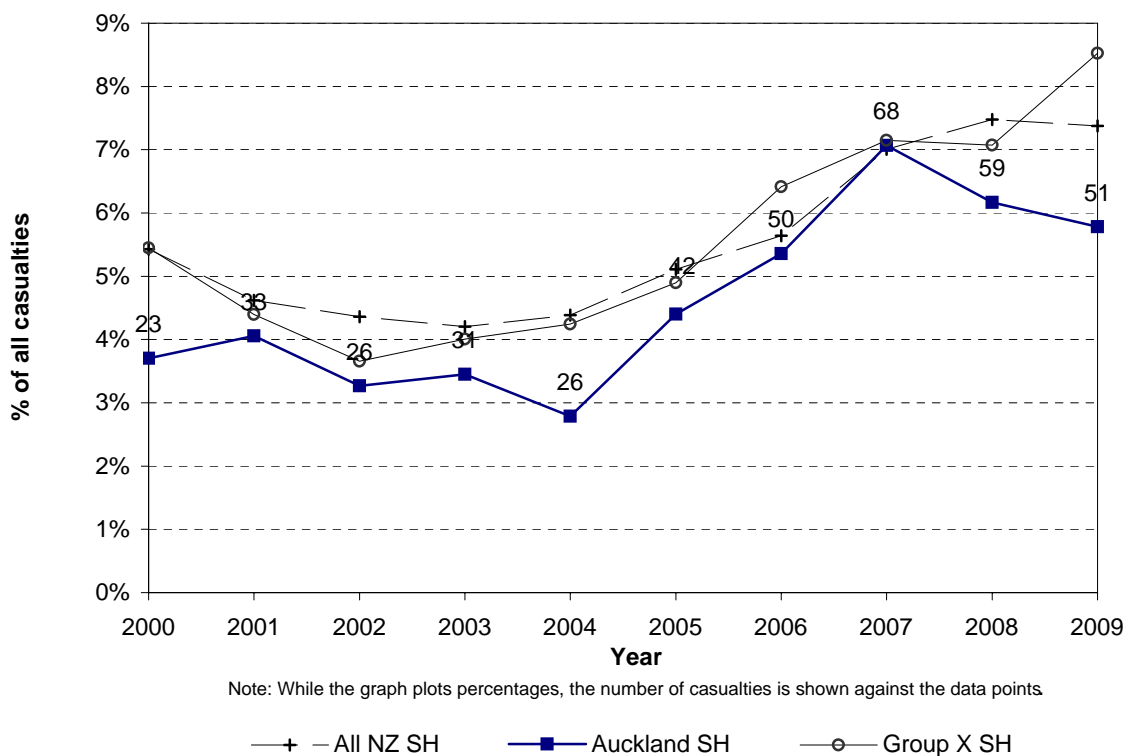
**Figure 3.11 Heavy vehicle casualties
Auckland Region state highways**



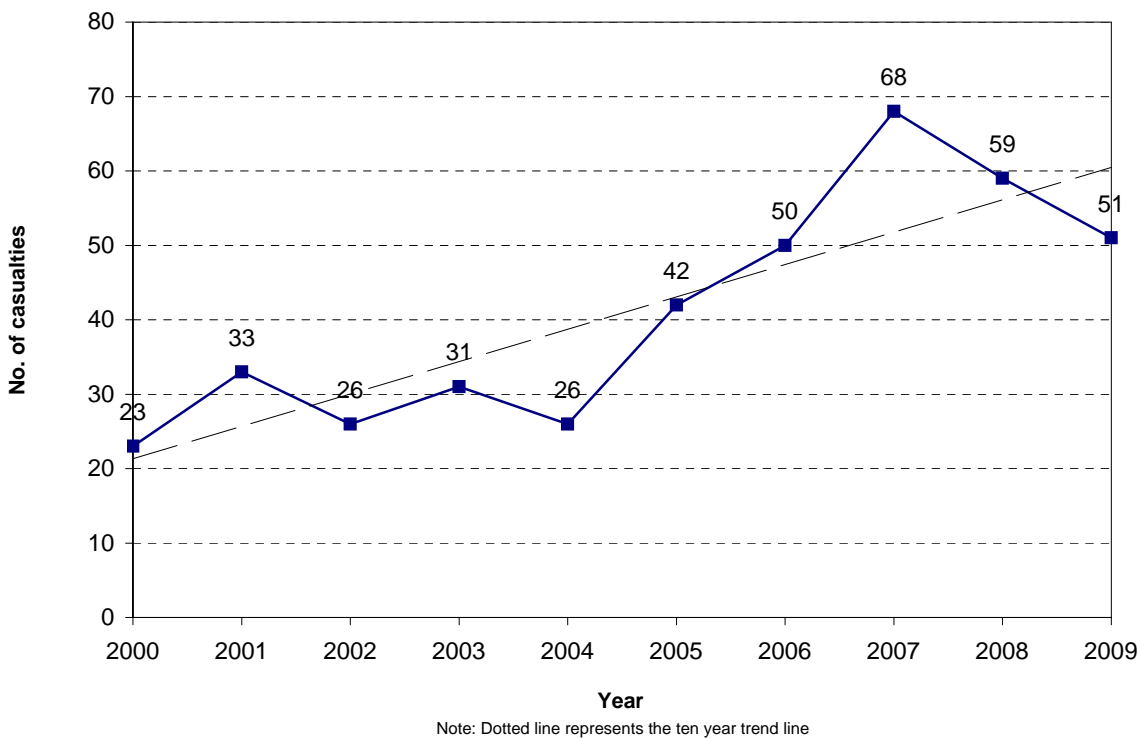
**Figure 3.12 Heavy vehicle casualties
Auckland Region state highways**



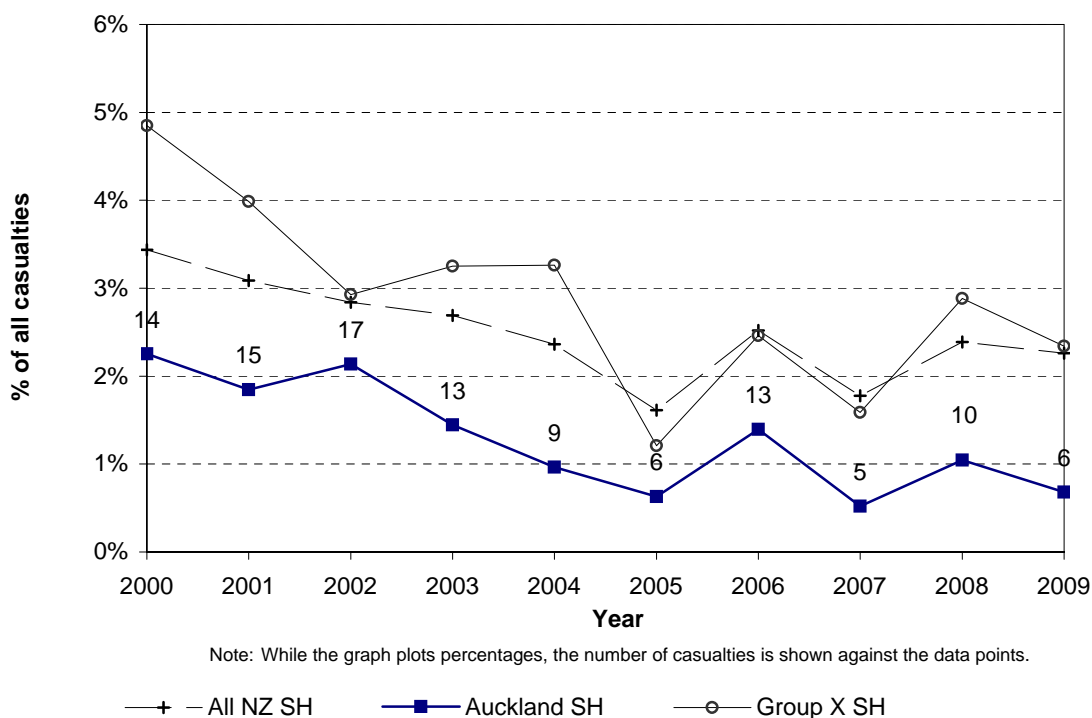
**Figure 3.13 Motorcyclist casualties
Auckland Region state highways**



**Figure 3.14 Motorcyclist casualties
Auckland Region state highways**



**Figure 3.15 Pedestrian casualties
Auckland Region state highways**



**Figure 3.16 Pedestrian casualties
Auckland Region state highways**

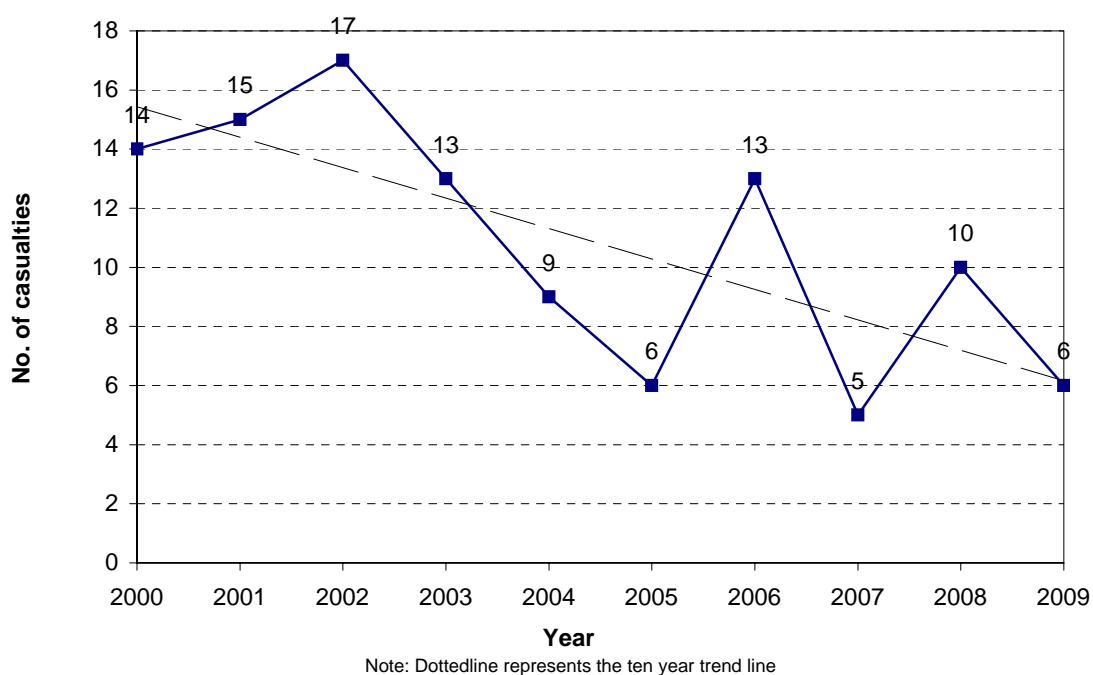


Figure 3.17 Cyclist casualties
Auckland Region state highways

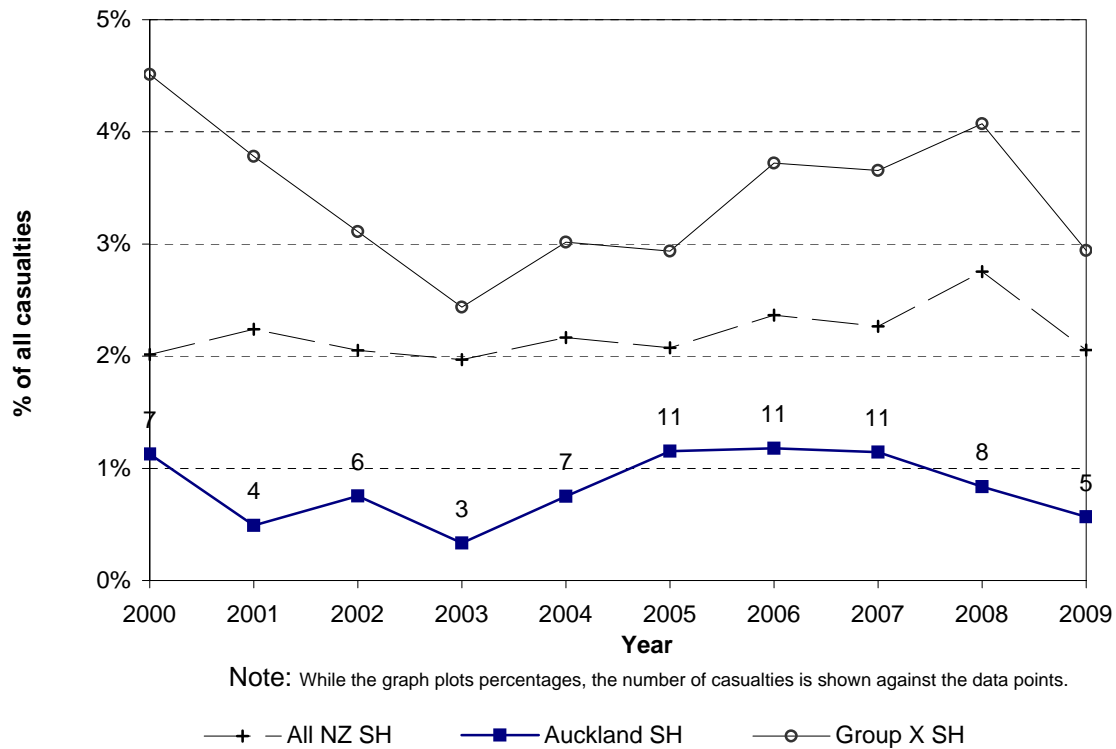
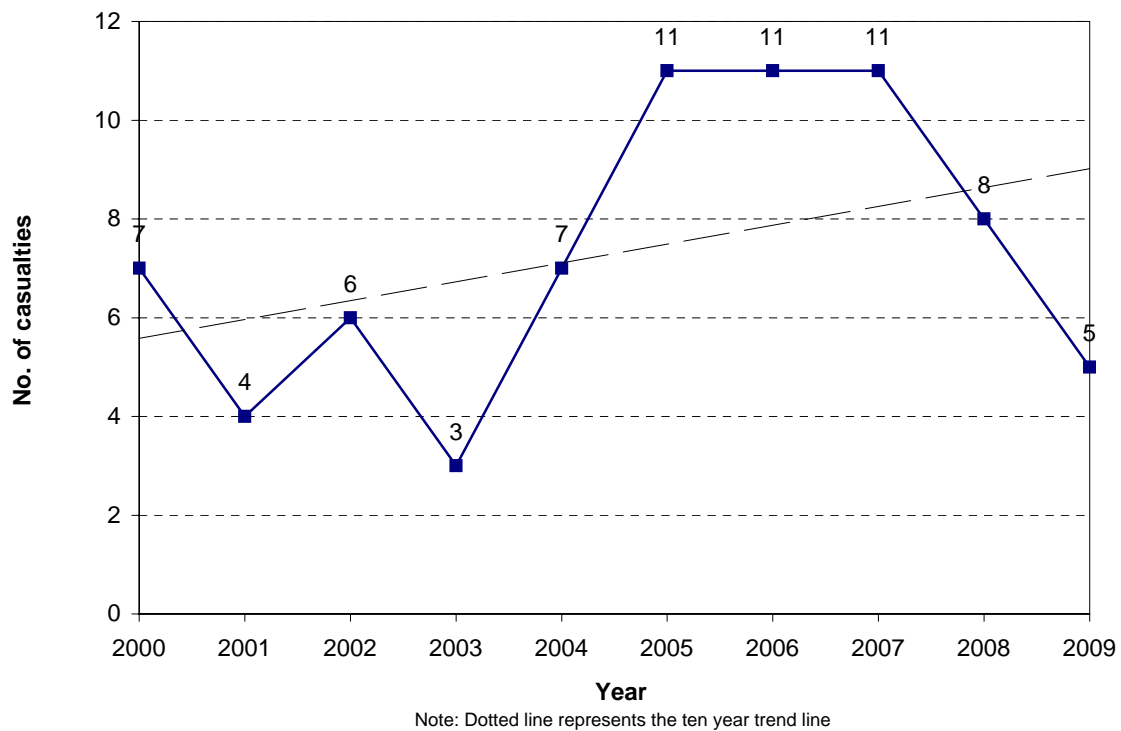
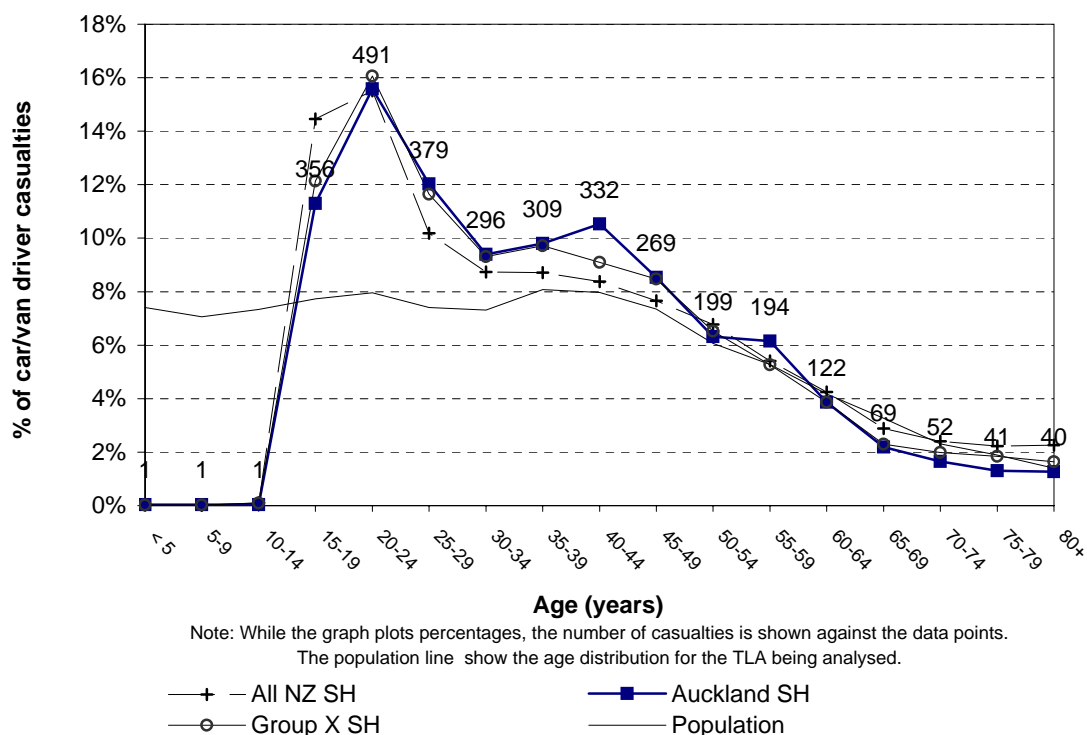


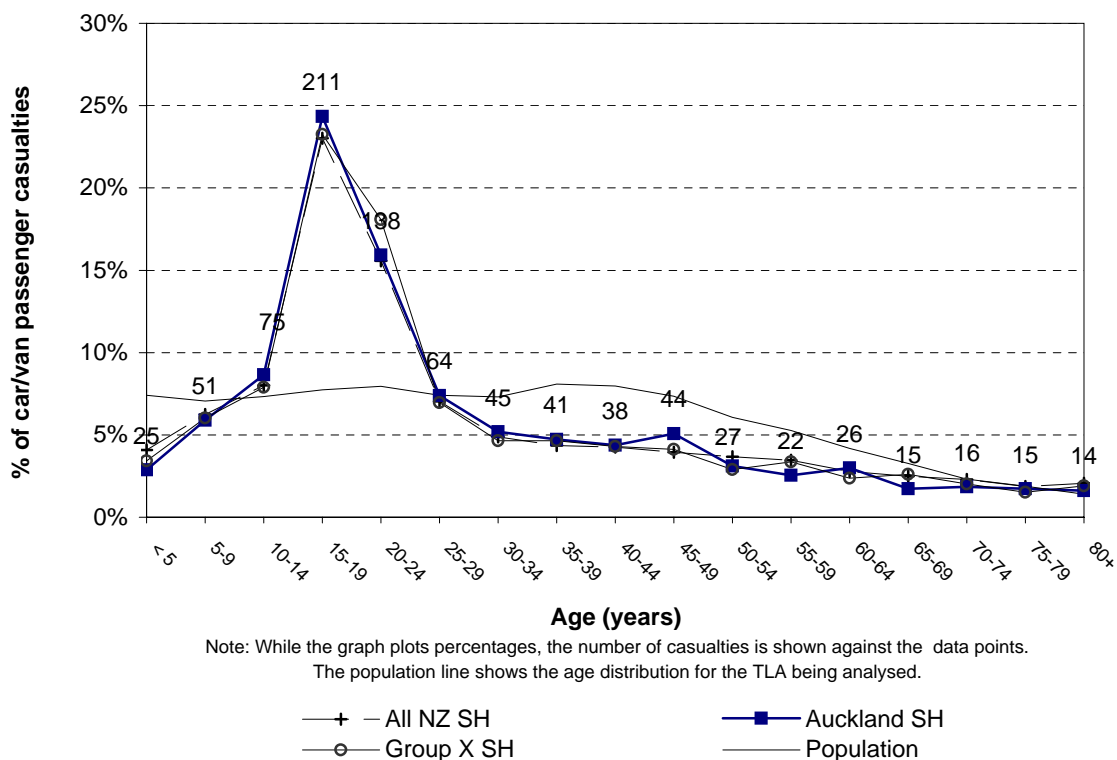
Figure 3.18 Cyclist casualties
Auckland Region state highways



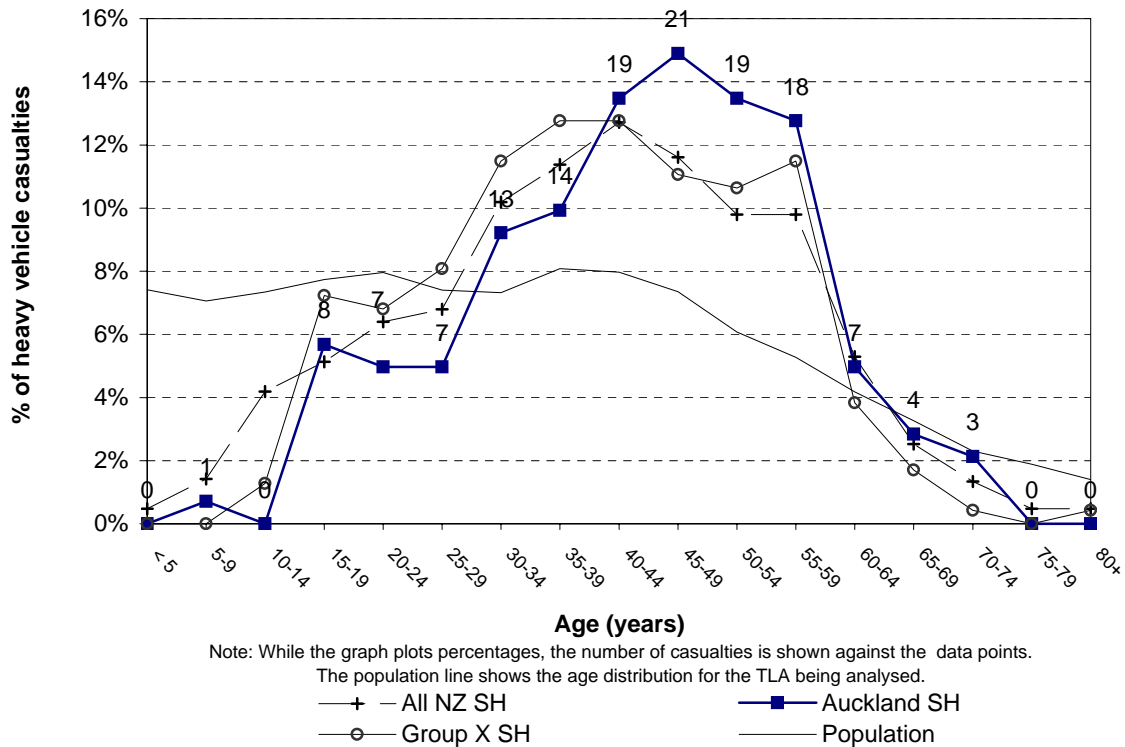
**Figure 3.19 Car/van driver casualty age
Auckland Region state highways (2005-2009)**



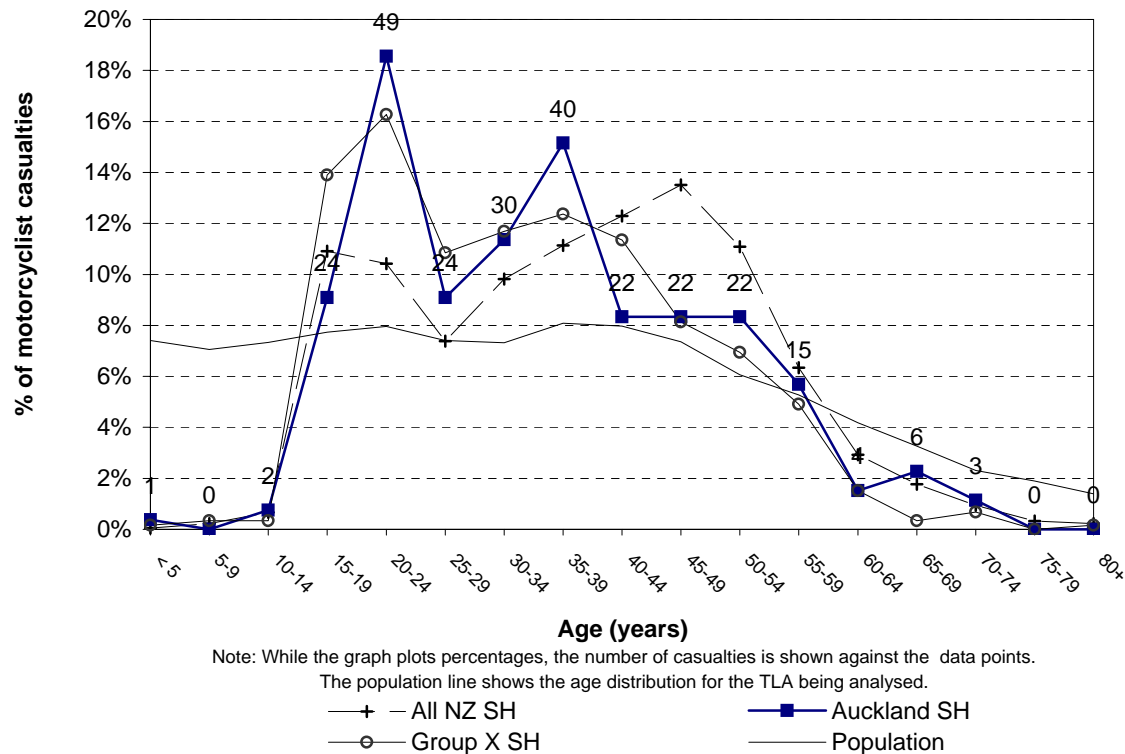
**Figure 3.20 Car/van passenger casualty age
Auckland Region state highways (2005-2009)**



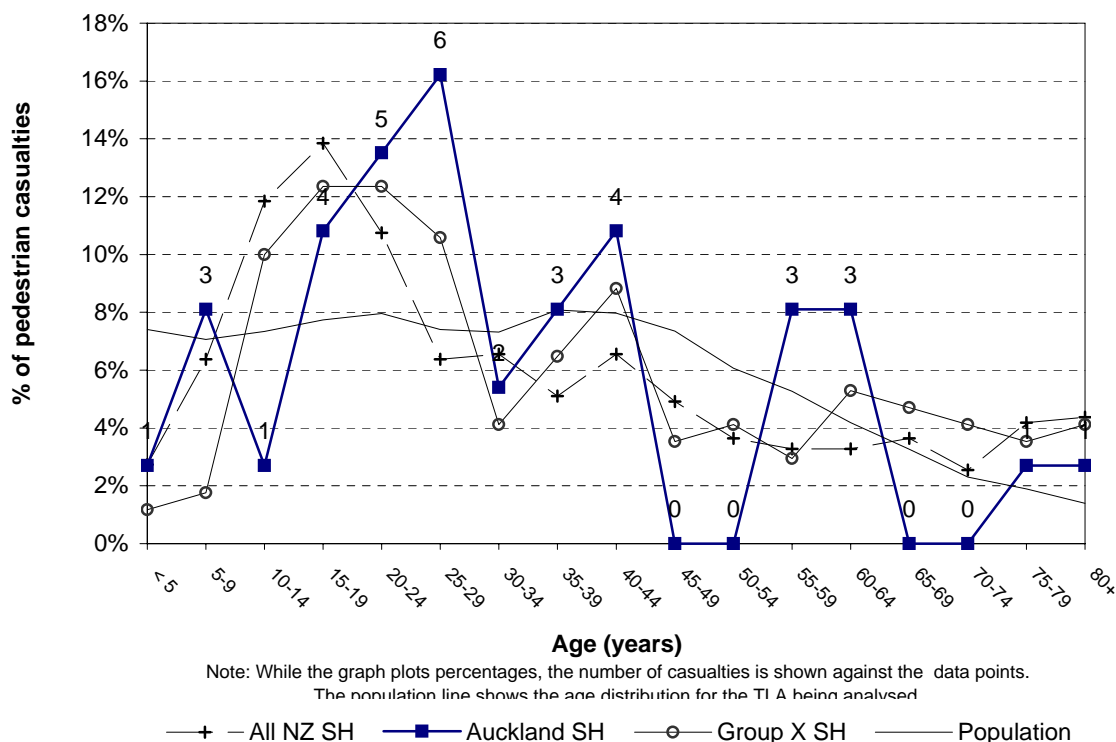
**Figure 3.21 Heavy vehicle casualty age
Auckland Region state highways (2005-2009)**



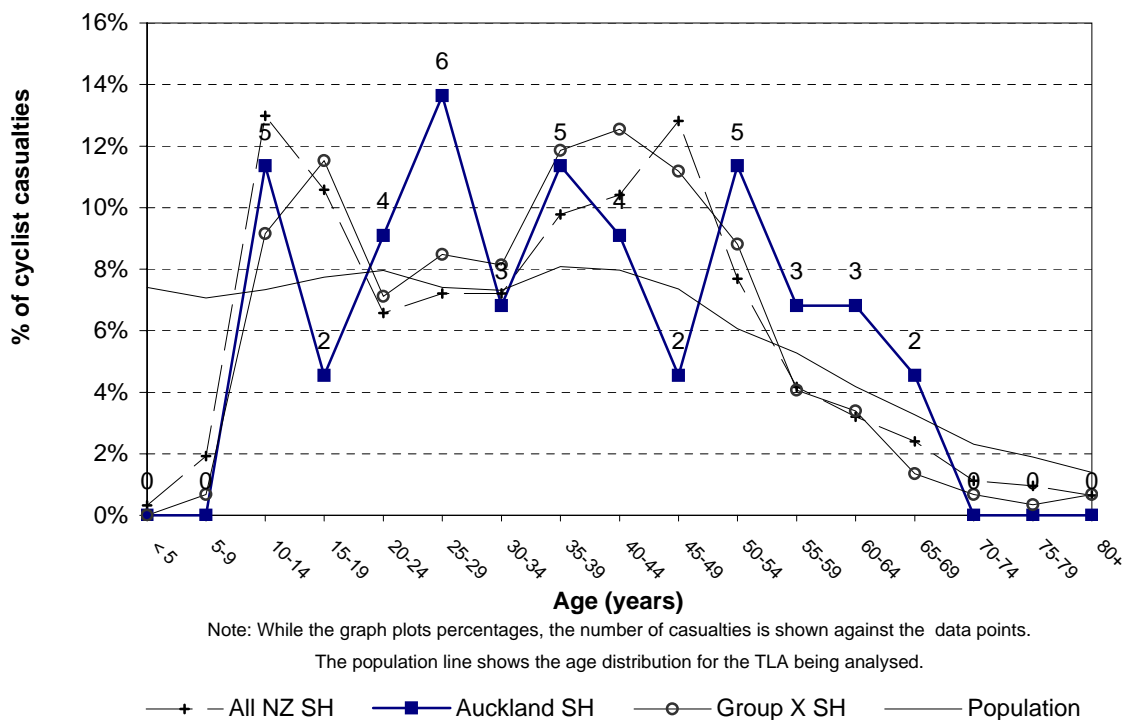
**Figure 3.22 Motorcyclist casualty age
Auckland Region state highways (2005-2009)**



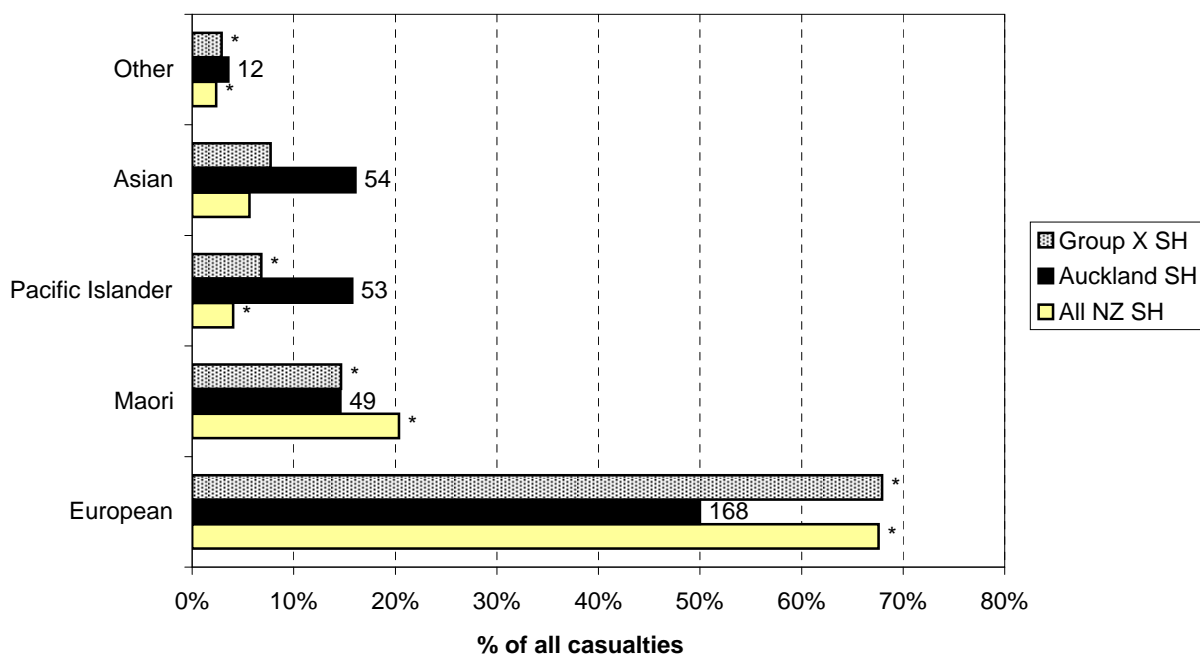
**Figure 3.23 Pedestrian casualty age
Auckland Region state highways (2005-2009)**



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



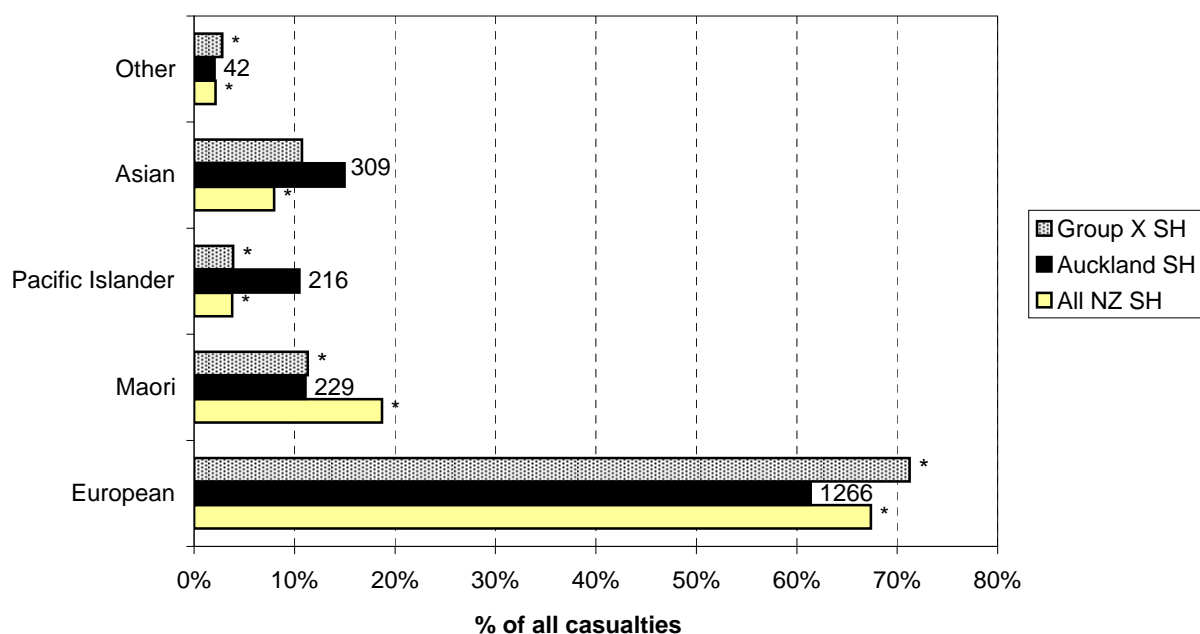
**Figure 3.25 Casualty ethnicity - urban
Auckland Region state highways (2005-2009)**



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

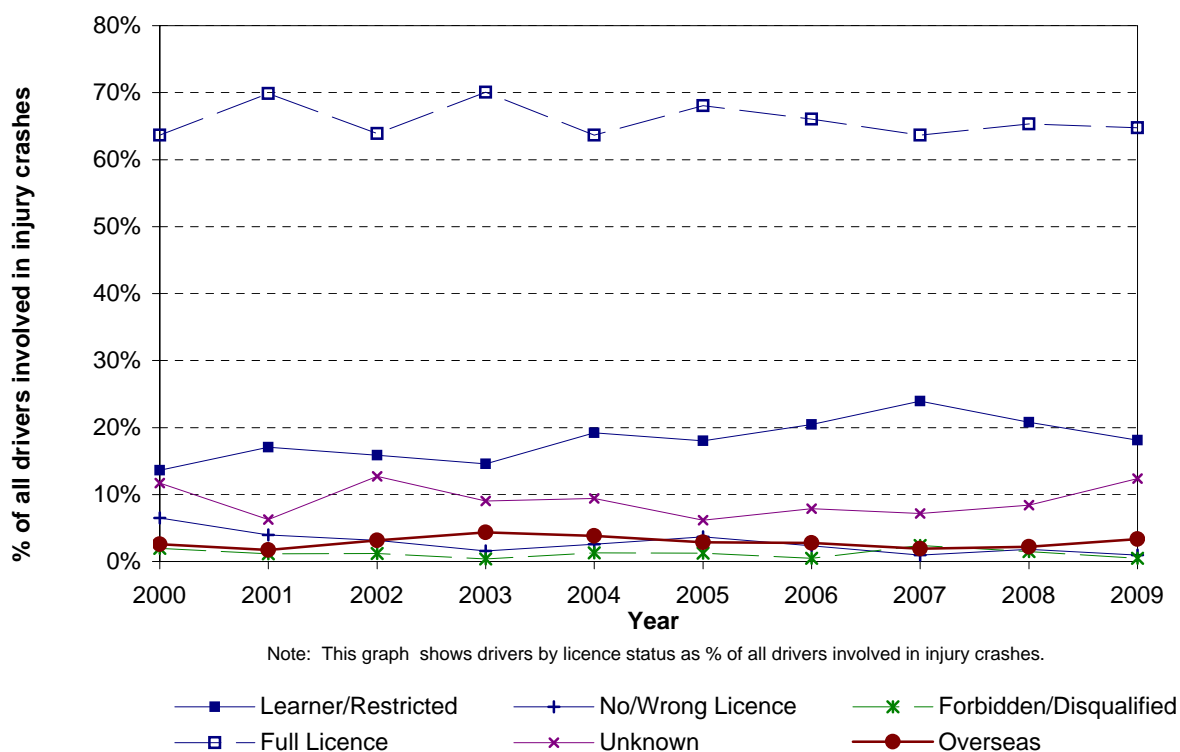
**Figure 3.26 Casualty ethnicity - rural
Auckland Region state highways (2005-2009)**



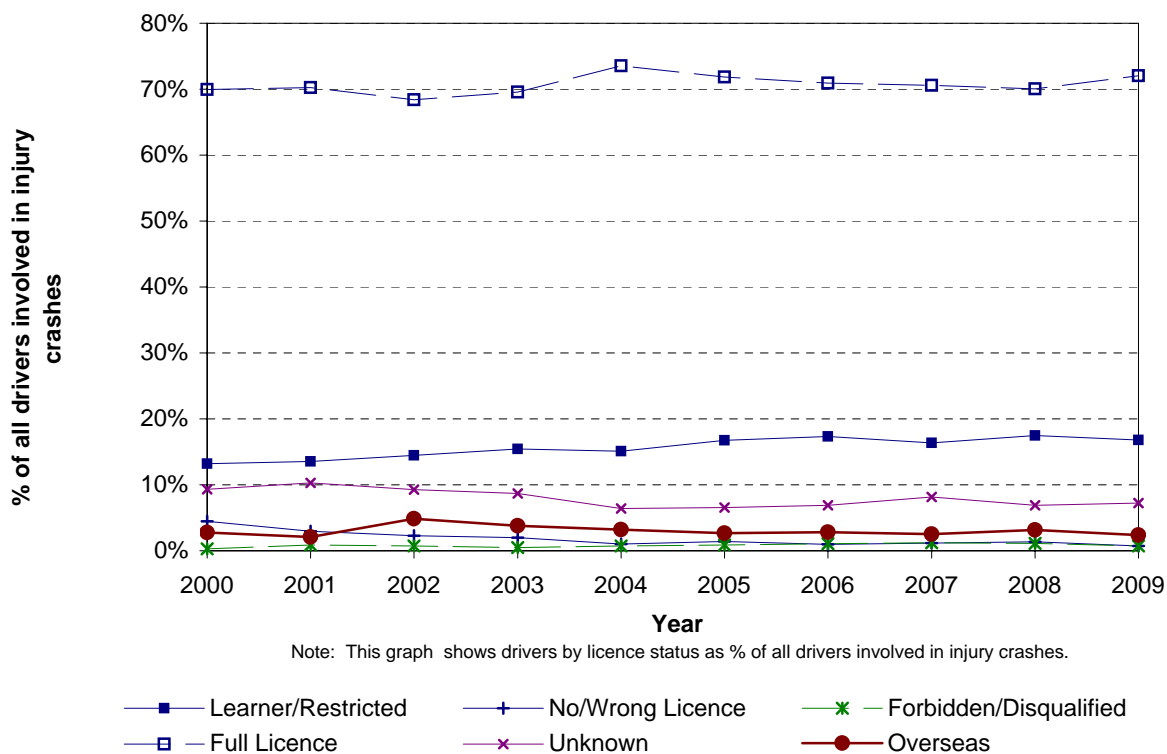
Note: While the graph plots percentages, the number of crashes is shown against the data points.

*Denotes statistically significant difference between Local Authority and National or Peer Group Proportions

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

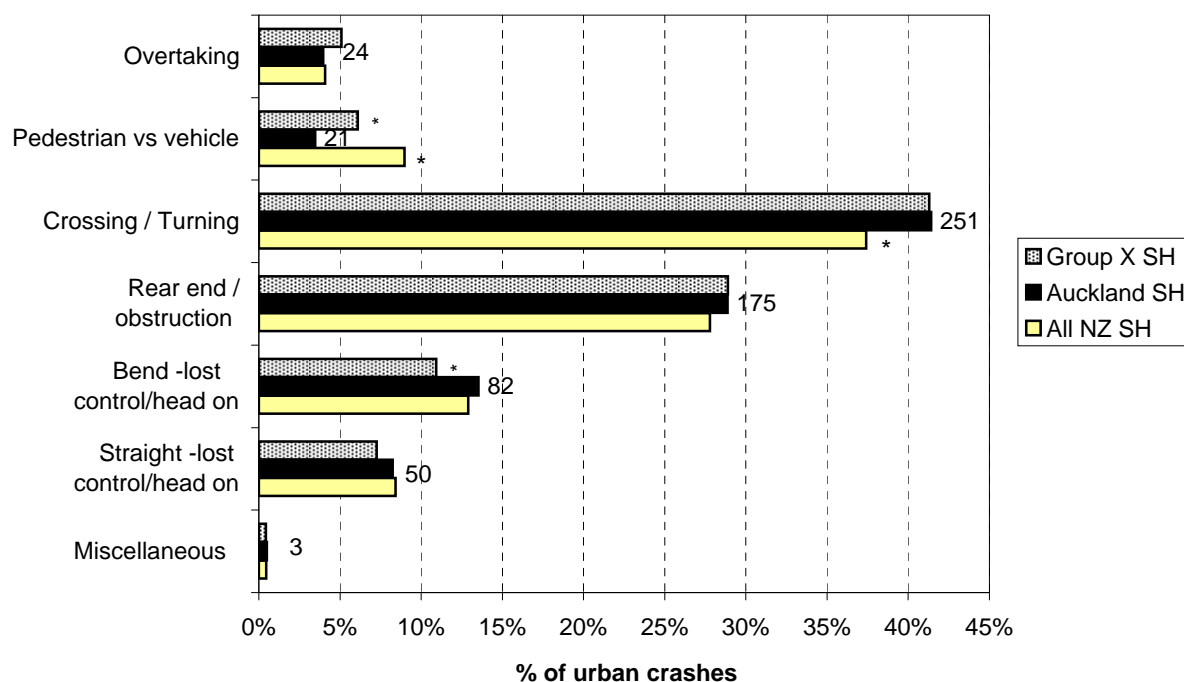


**Figure 3.28 Licence status - rural
Auckland Region state highways**



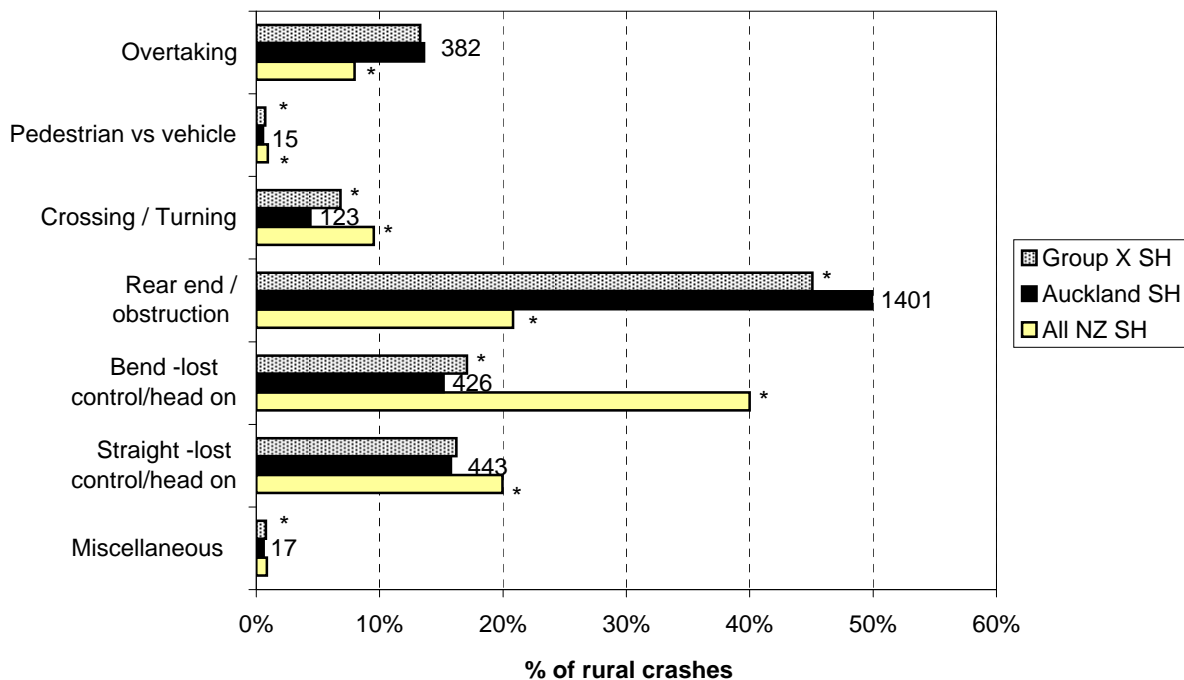
Crash Type Statistics

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



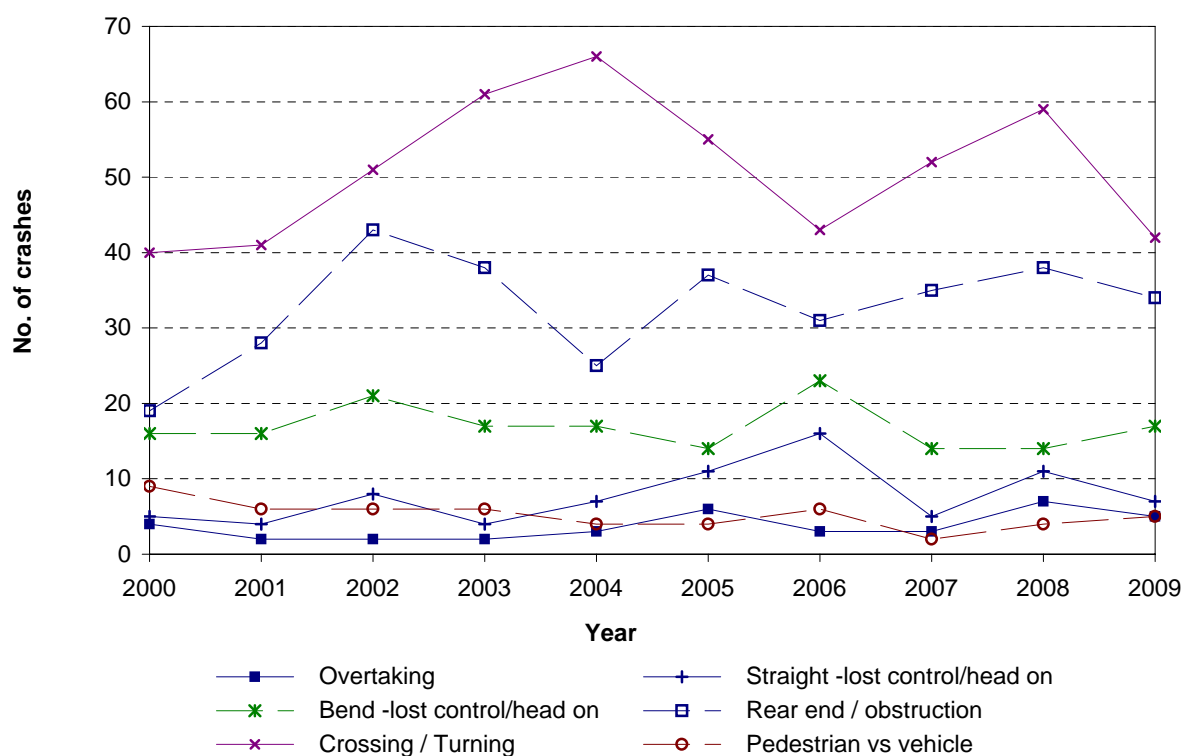
Note: While the graph plots percentages, the number of crashes is shown against the data points.
*Denotes statistically significant difference between Local Authority and National or Peer Group Proportions

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

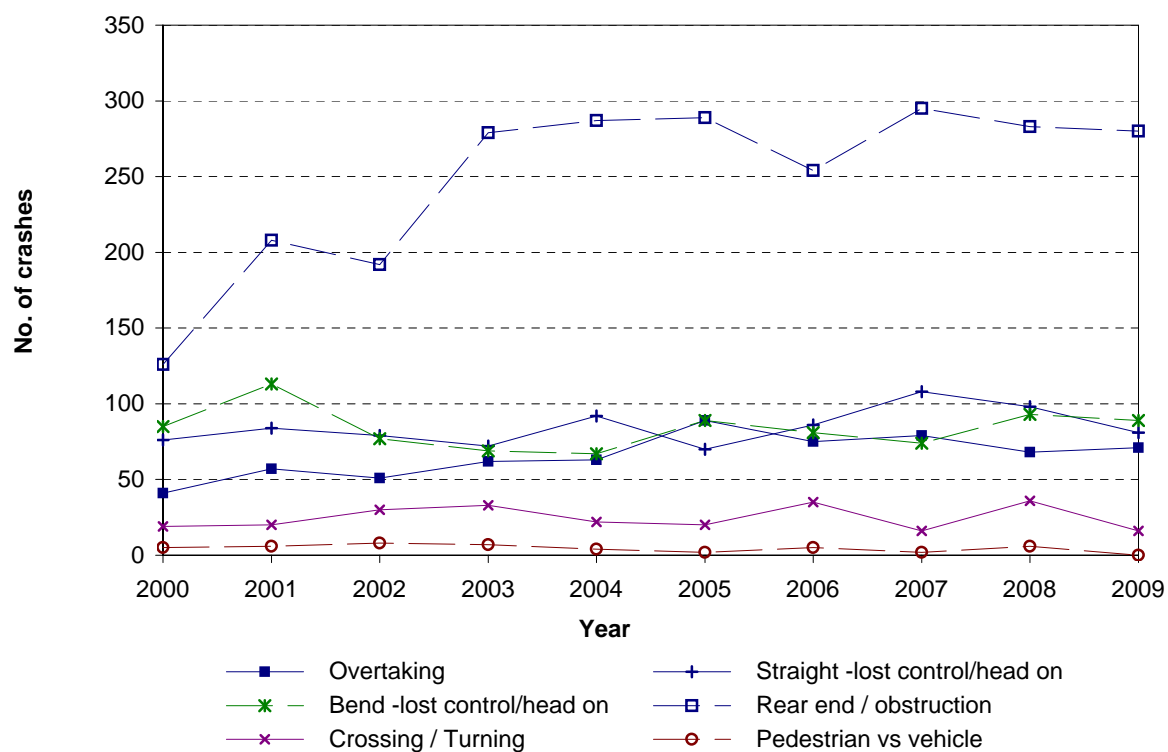


Note: While the graph plots percentages, the number of crashes is shown against the data points.
*Denotes statistically significant difference between Local Authority and National or Peer Group Proportions

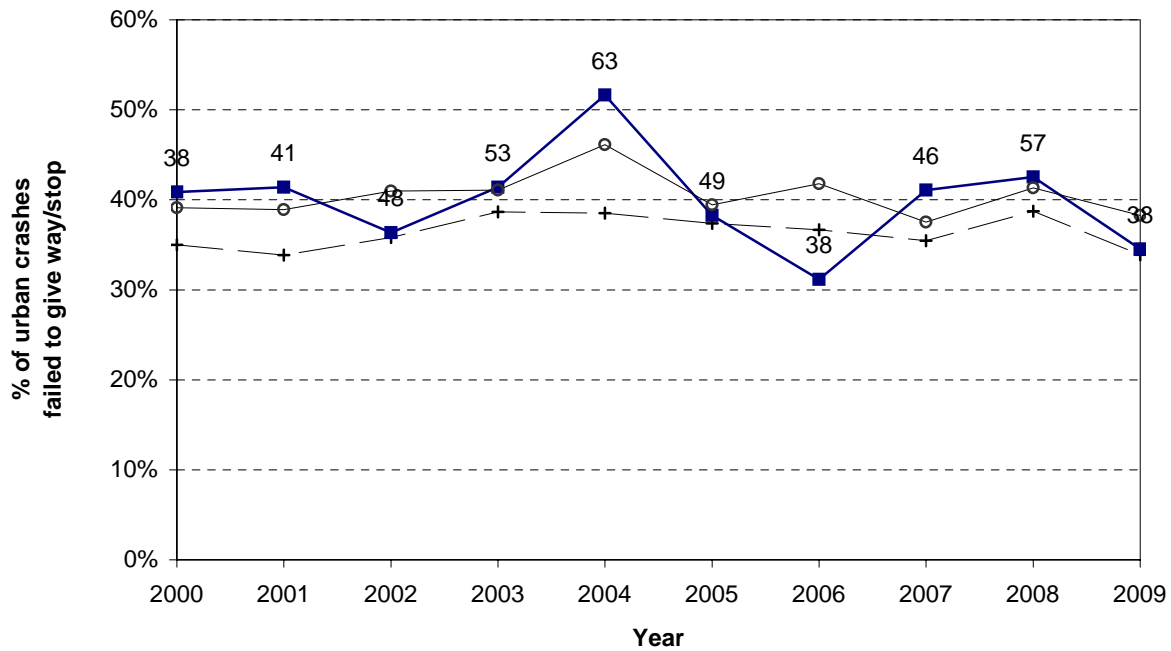
**Figure 4.3 Crash movement type - trends
Auckland Region - urban state highways**



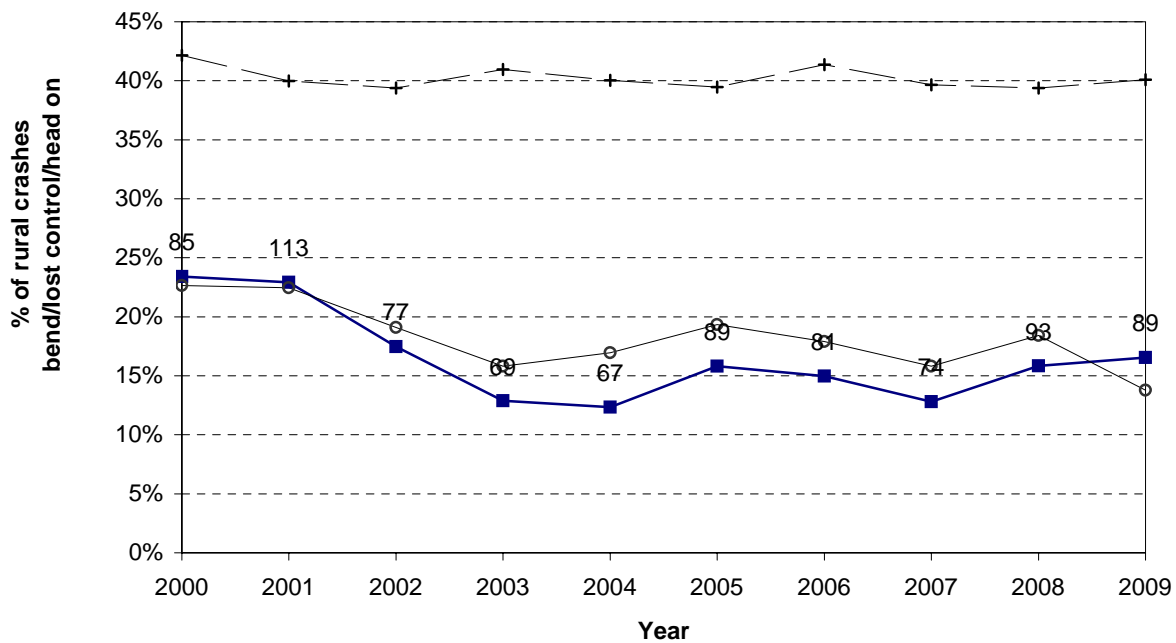
**Figure 4.4 Crash movement type - trends
Auckland Region - rural state highways**



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

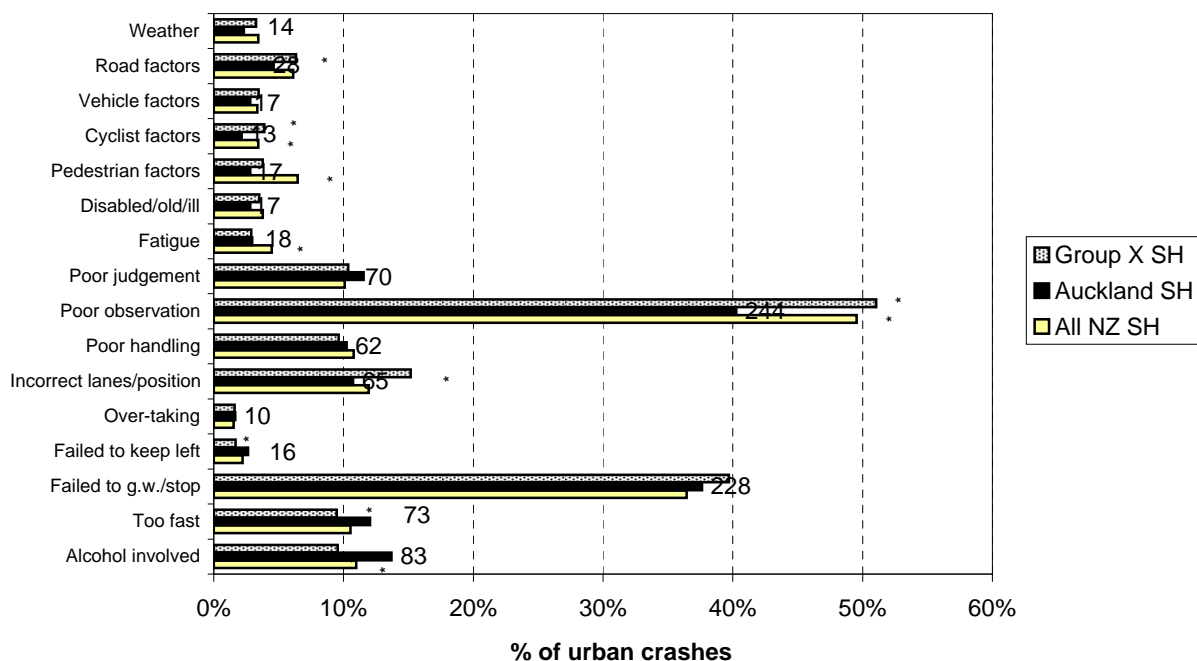


**Figure 4.6 Bend - lost control / head - on
Auckland Region - rural state highways**



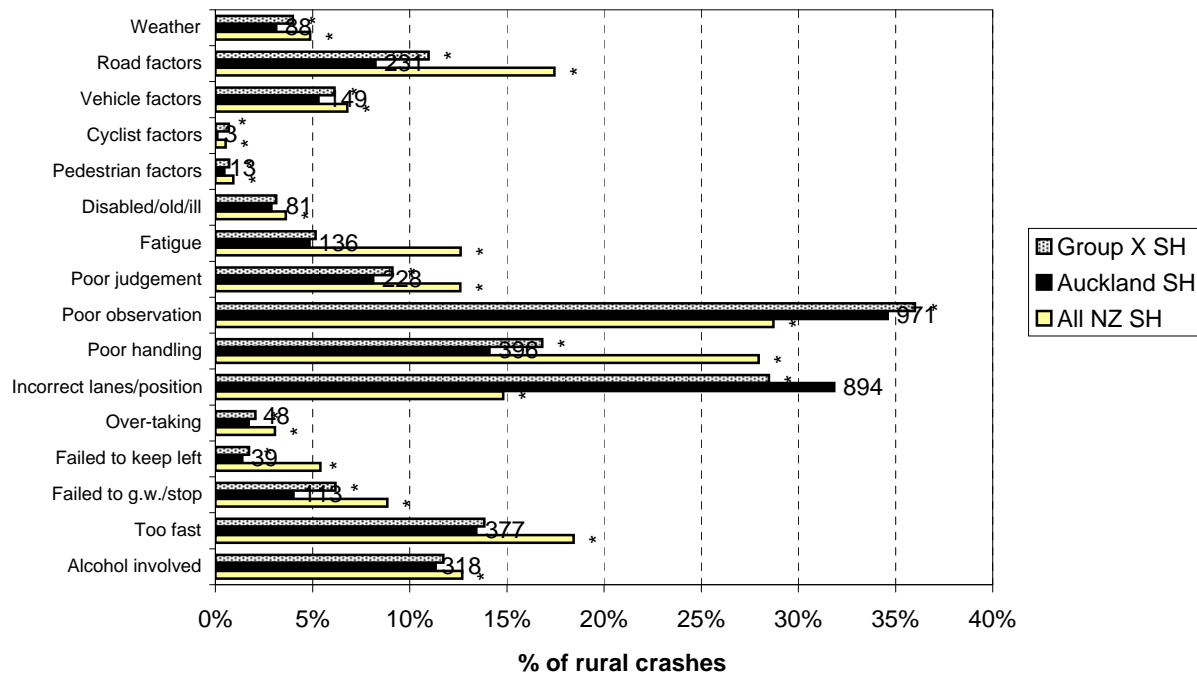
Crash Factor Statistics

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



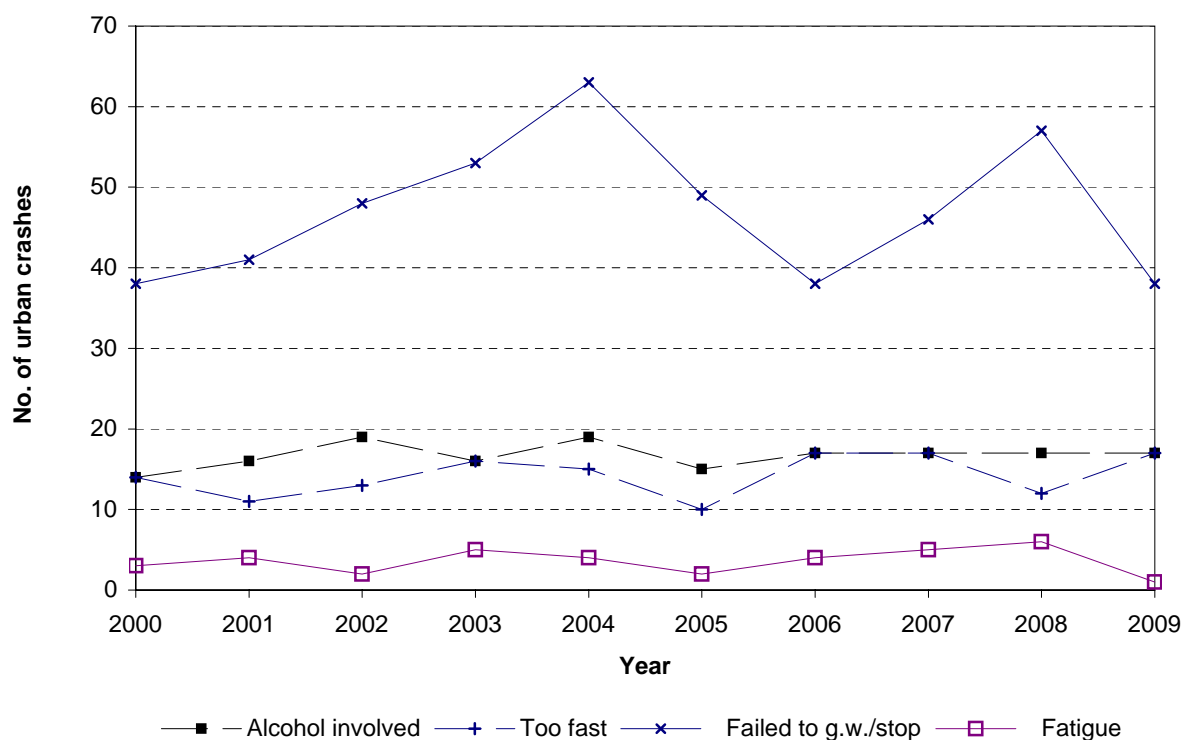
Note: While the graph plots percentages, the number of crashes is shown against the data points.
*Denotes statistically significant difference between Local Authority and National or Peer Group Proportions

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

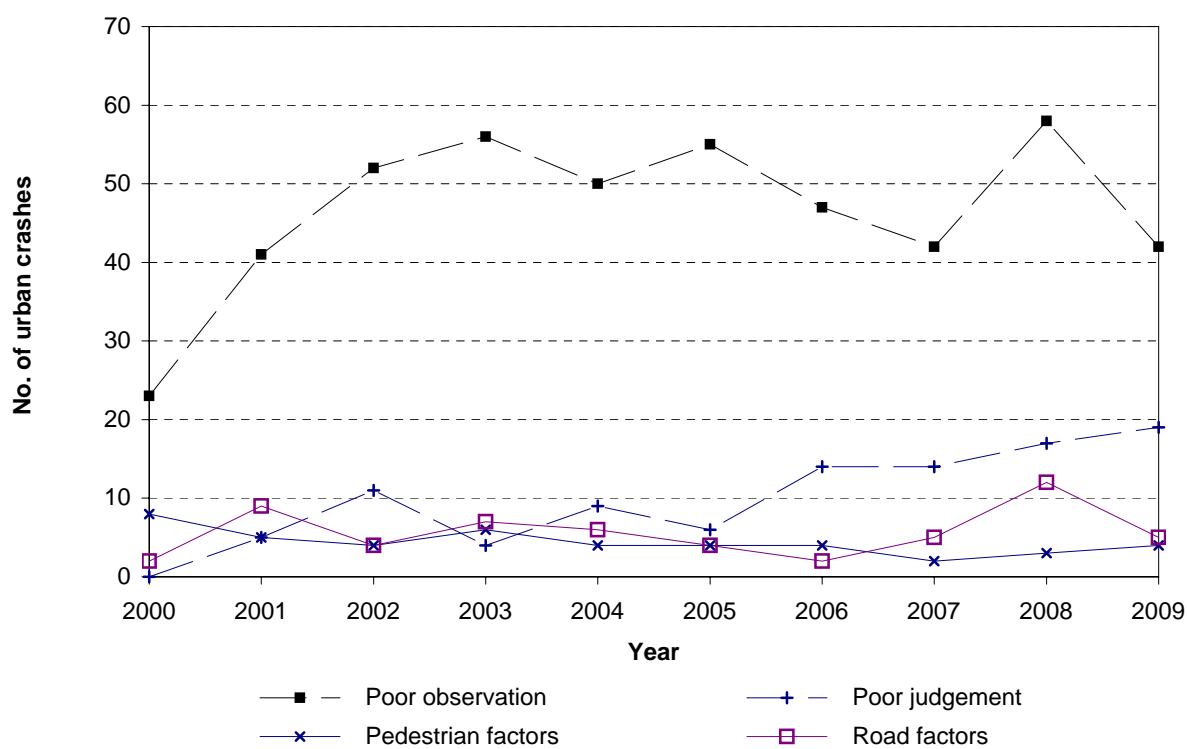


Note: While the graph plots percentages, the number of casualties is shown against the data points.
*Denotes statistically significant difference between Local Authority and National or Peer Group Proportions

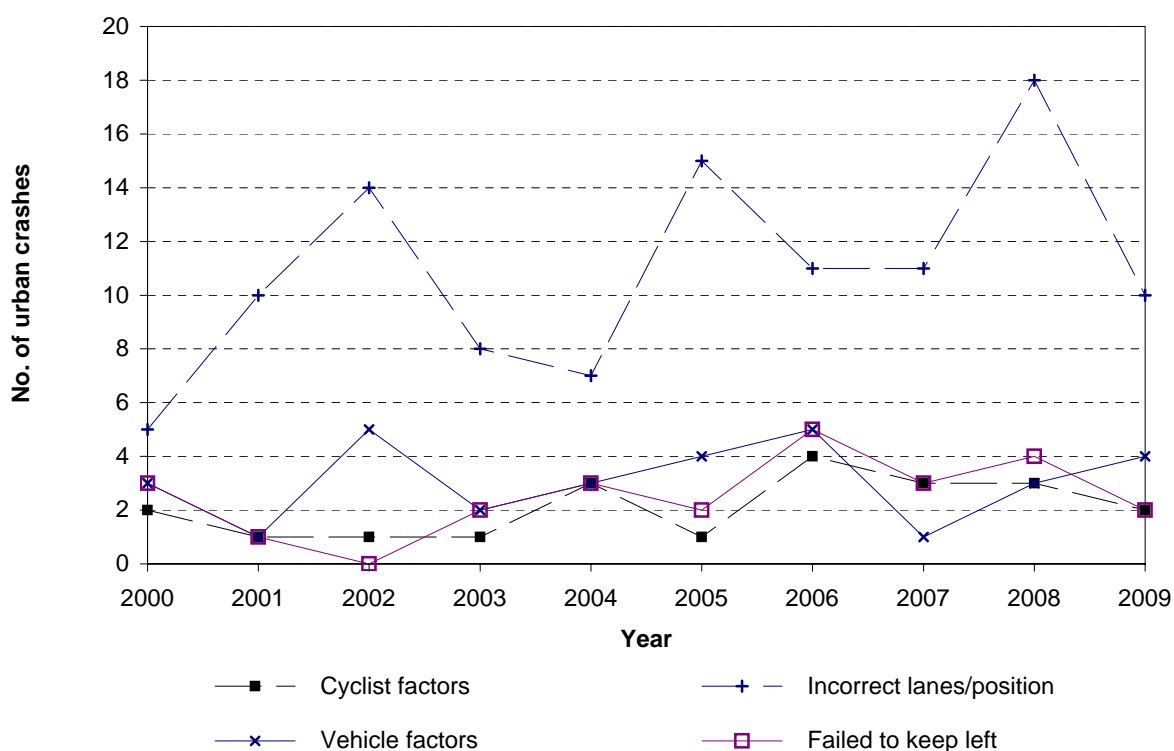
**Figure 5.3 Contributing factor trends
Auckland Region - urban state highways**



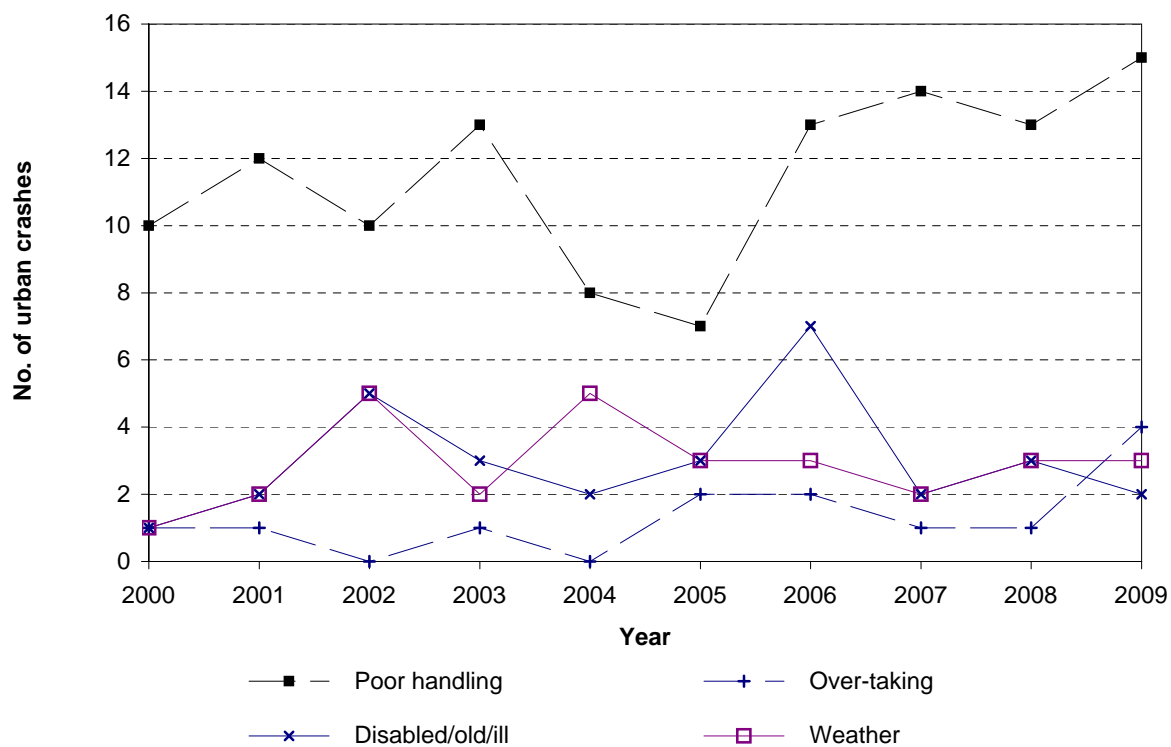
**Figure 5.4 Contributing factor trends
Auckland Region - urban state highways**



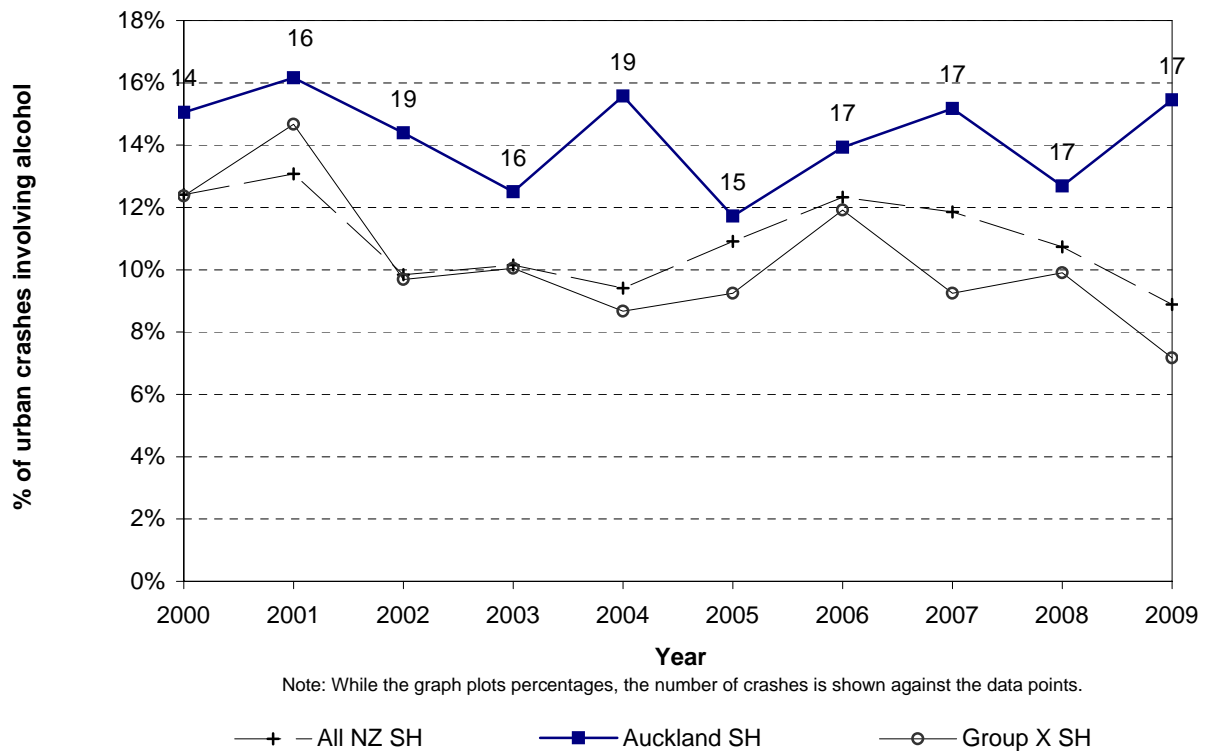
**Figure 5.5 Contributing factor trends
Auckland Region - urban state highways**



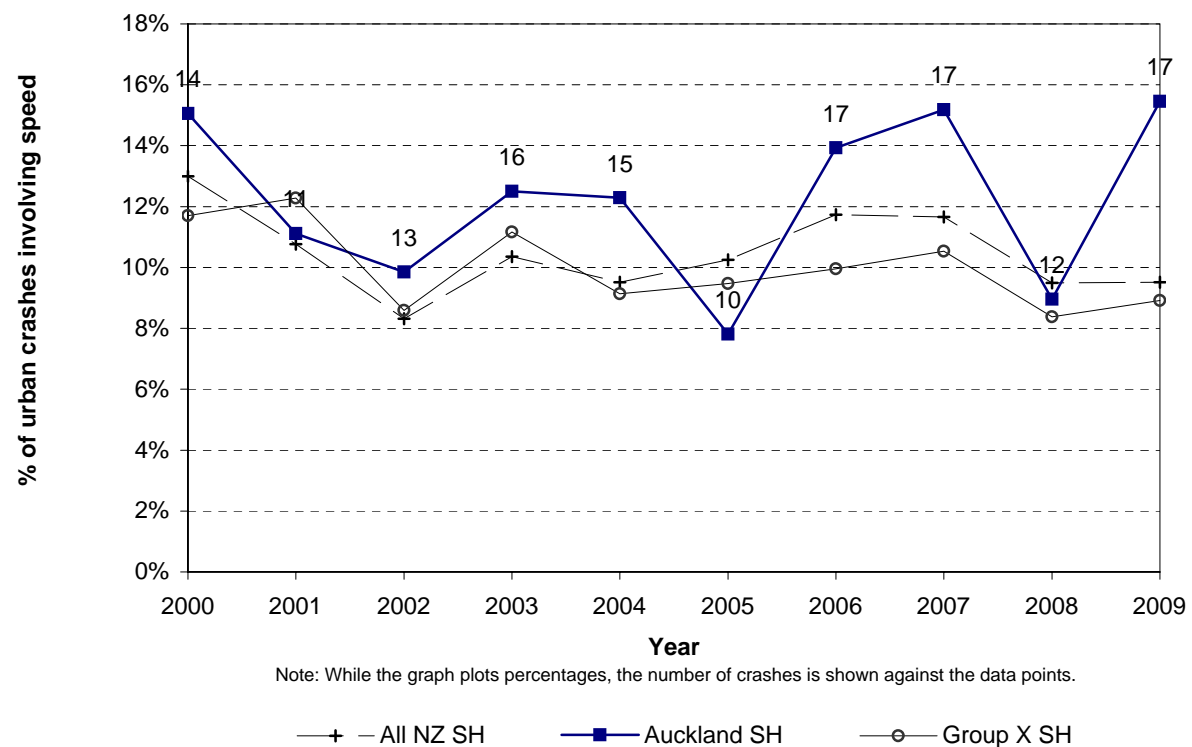
**Figure 5.6 Contributing factor trends
Auckland Region - urban state highways**



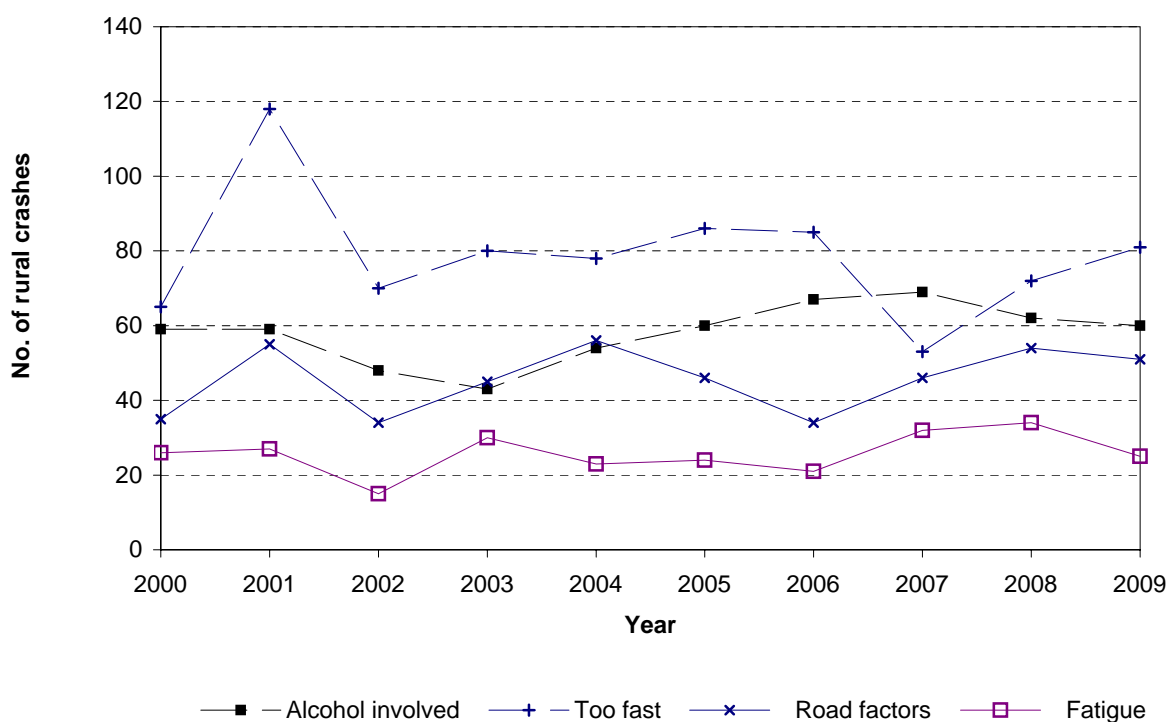
**Figure 5.7 Alcohol involved trend
Auckland Region - urban state highways**



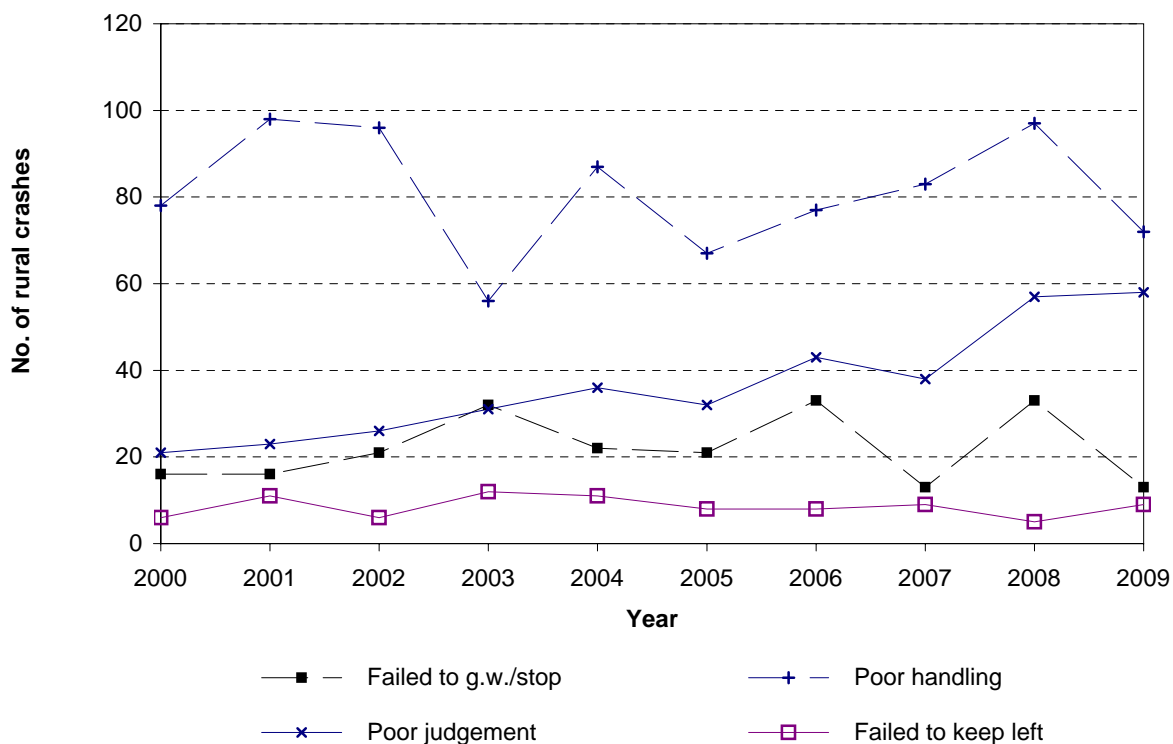
**Figure 5.8 Speed involved trend
Auckland Region - urban state highways**



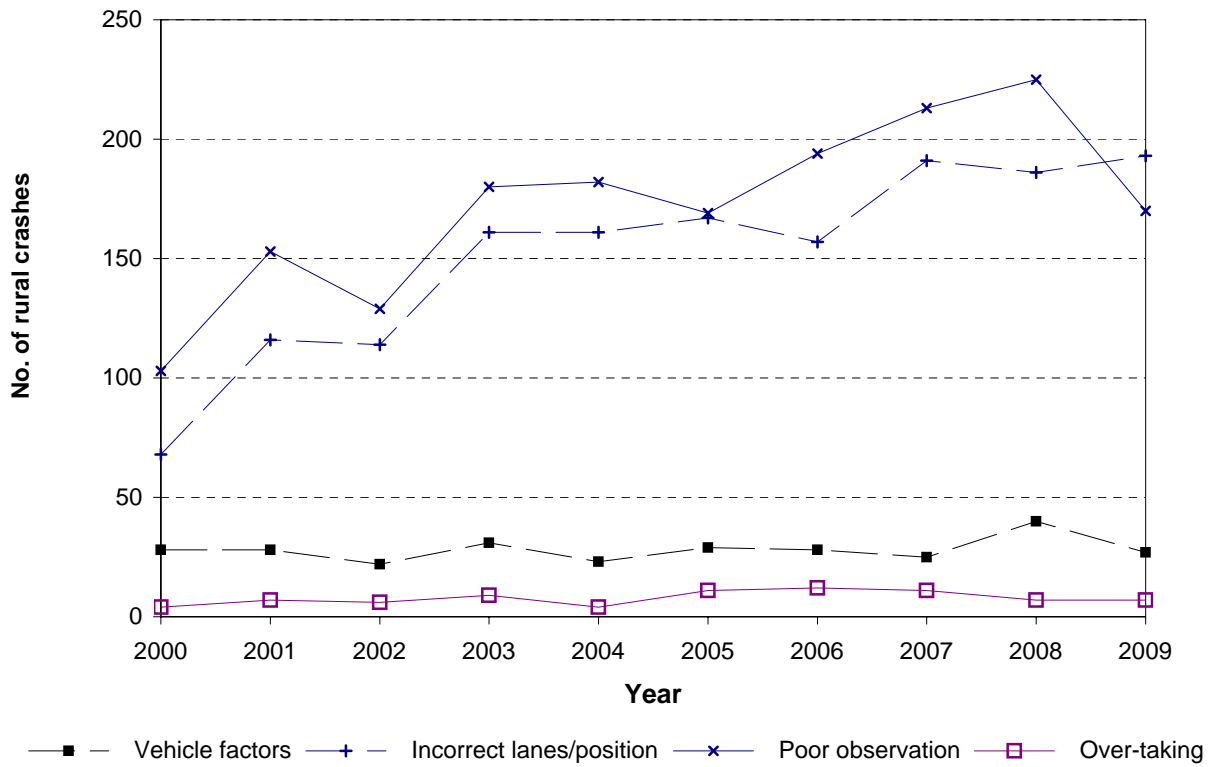
**Figure 5.9 Contributing factor trends
Auckland Region - rural state highways**



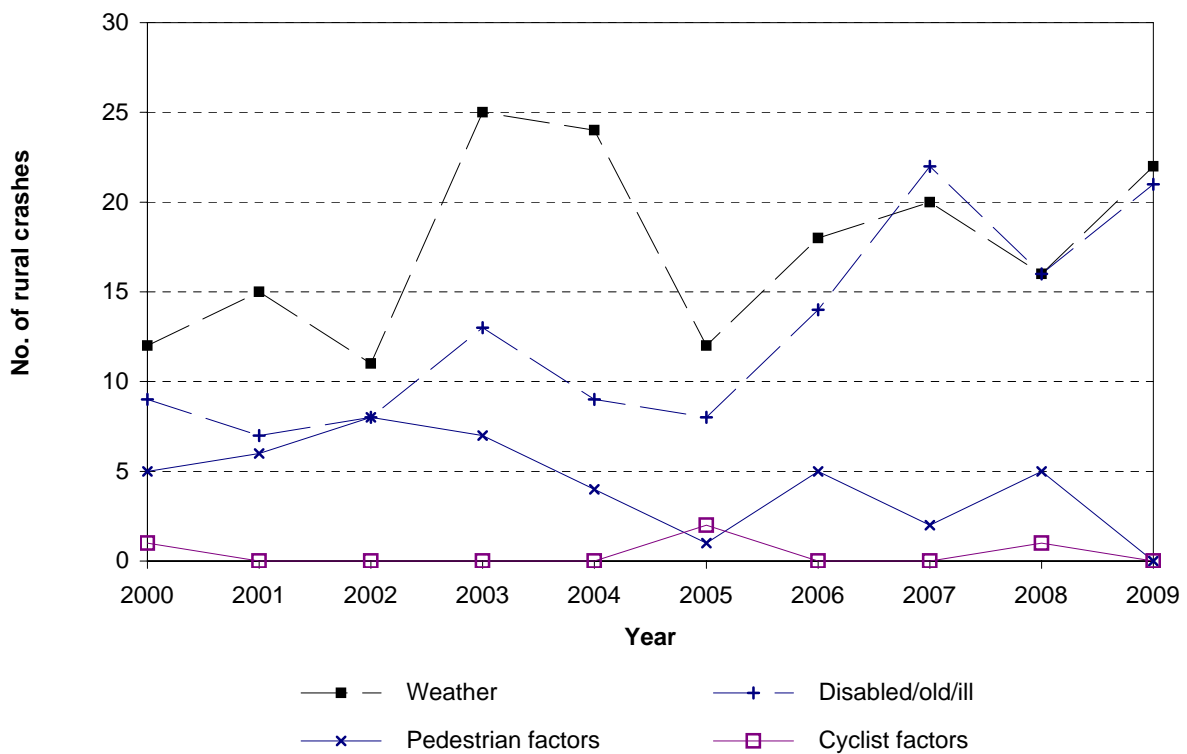
**Figure 5.10 Contributing factor trends
Auckland Region - rural state highways**



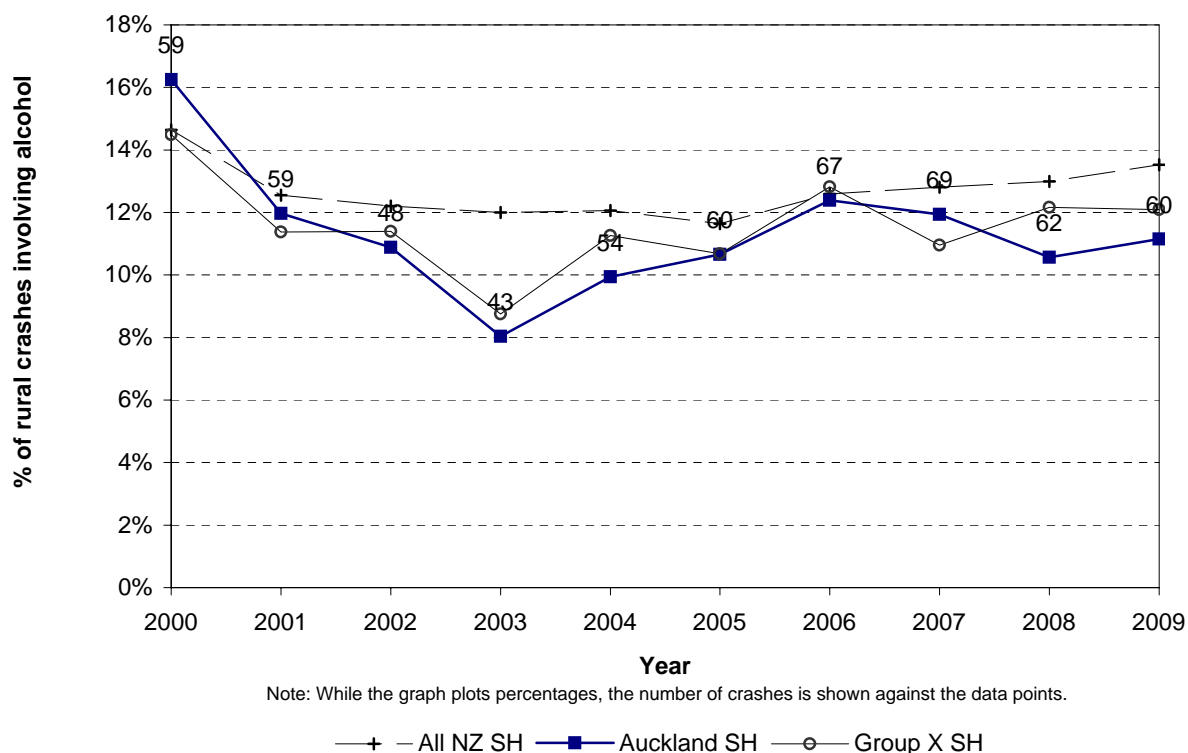
**Figure 5.11 Contributing factor trends
Auckland Region - rural state highways**



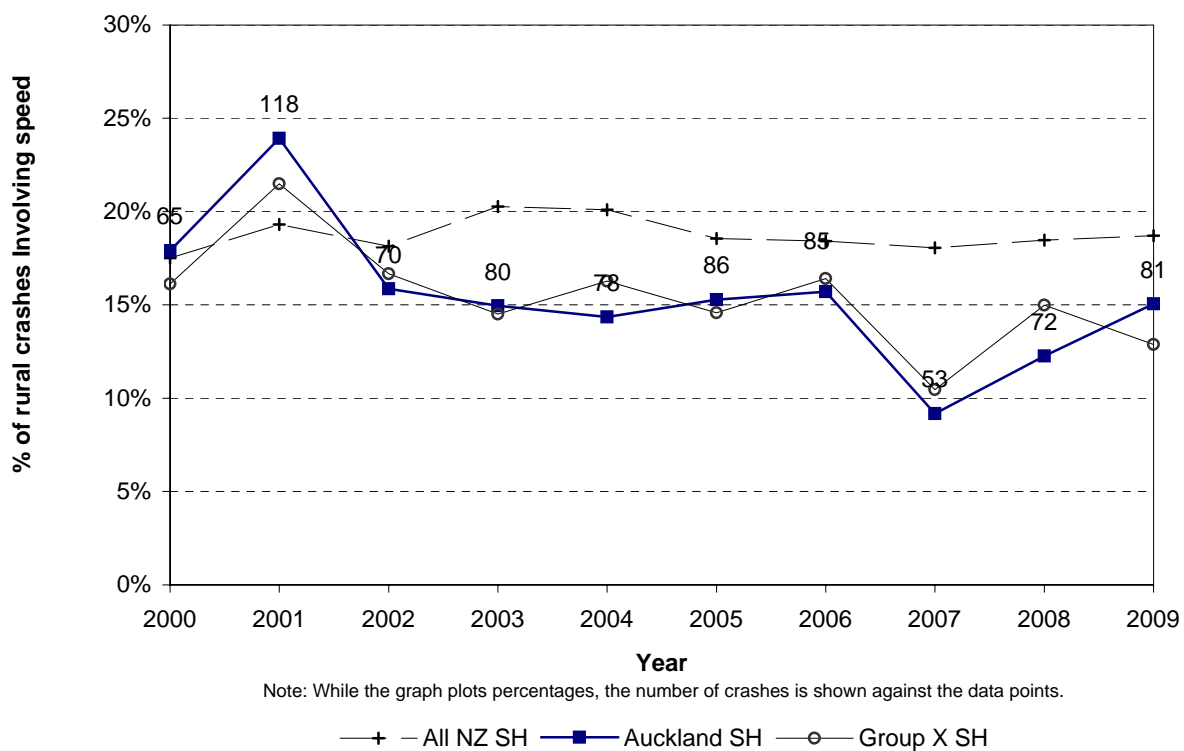
**Figure 5.12 Contributing factor trends
Auckland Region - rural state highways**



**Figure 5.13 Alcohol involved trend
Auckland Region - rural state highways**

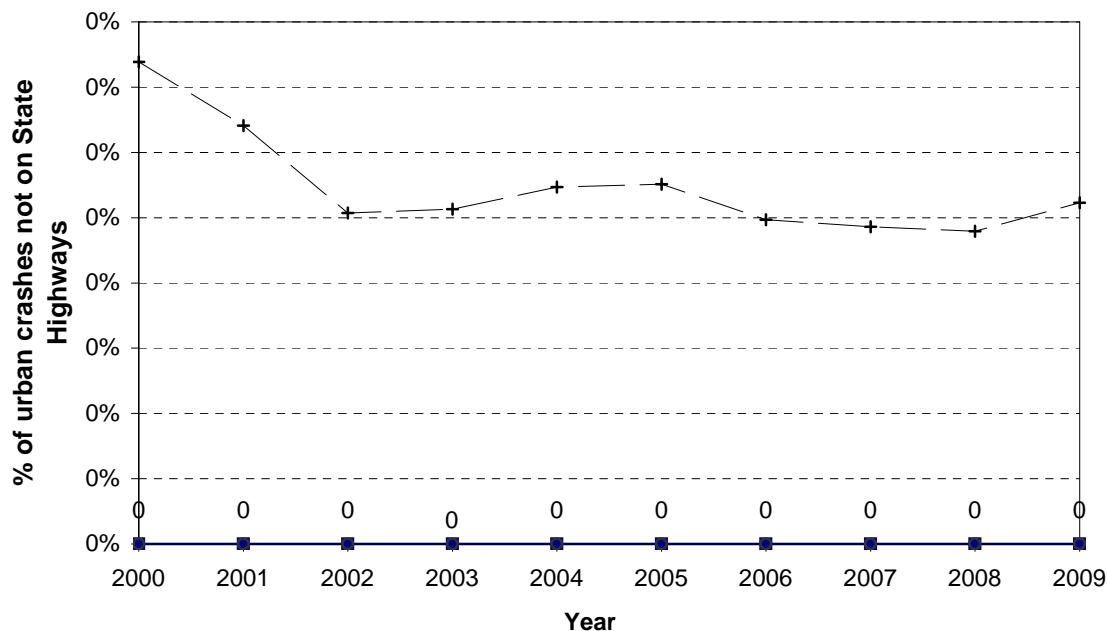


**Figure 5.14 Speed involved trend
Auckland Region - rural state highways**



Environmental Statistics

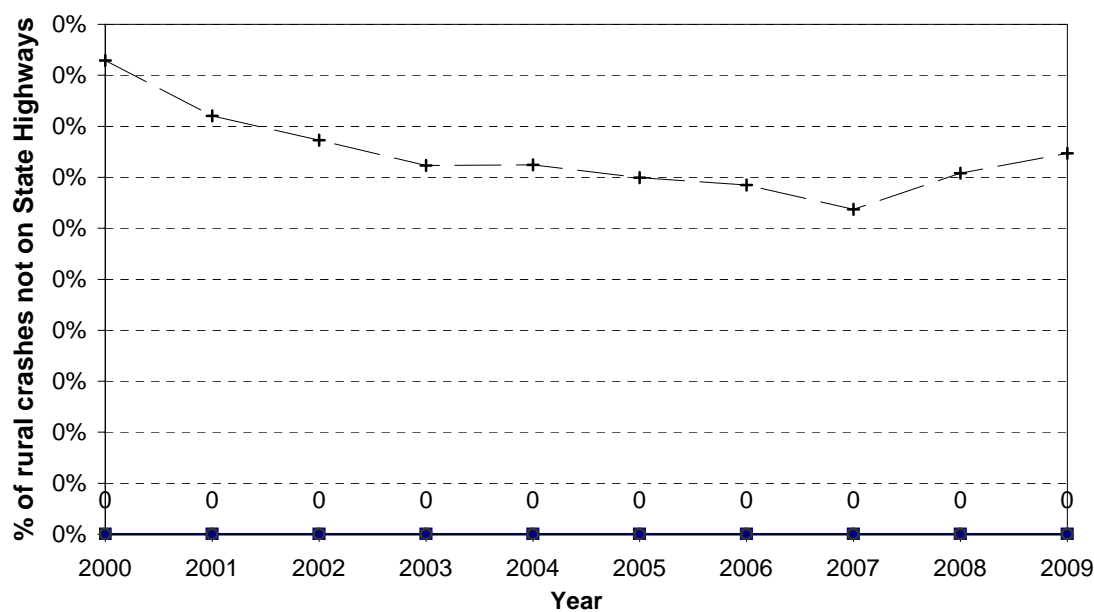
**Figure 6.1 Crashes not on state highways
Auckland Region - urban state highways**



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

—+— All NZ SH —■— Auckland SH —○— Group X SH

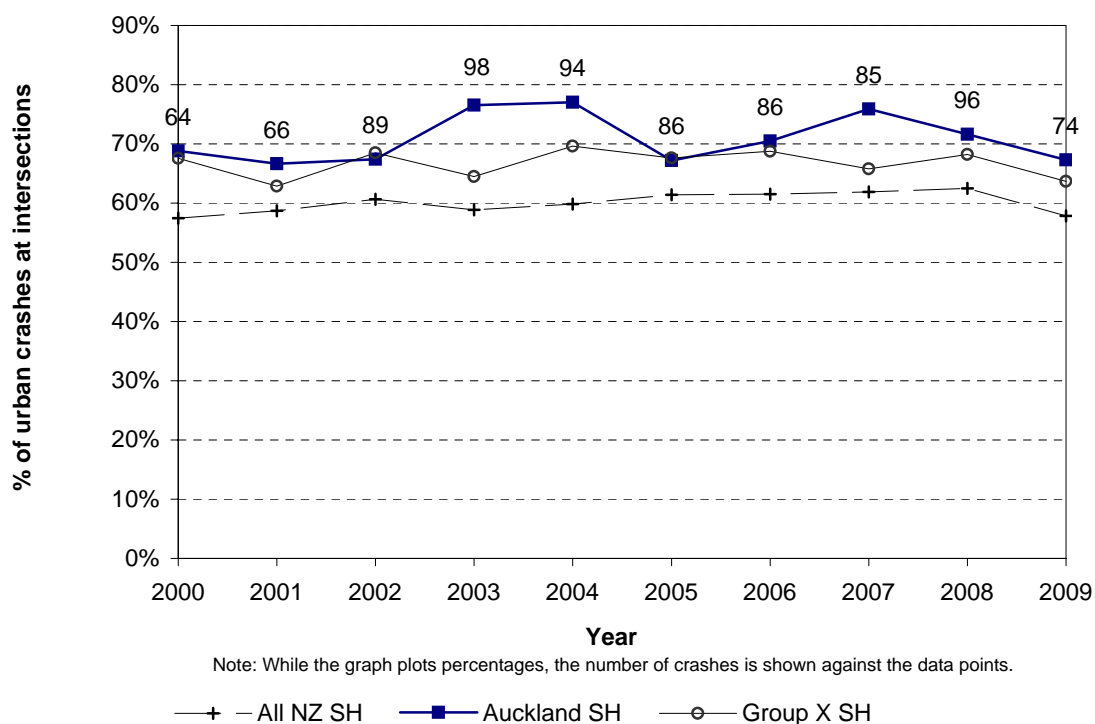
**Figure 6.2 Crashes not on state highways
Auckland Region - rural state highways**



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

—+— All NZ SH —■— Auckland SH —○— Group X SH

**Figure 6.3 Intersection crashes
Auckland Region - urban state highways**



**Figure 6.4 Intersection crashes
Auckland Region - rural state highways**

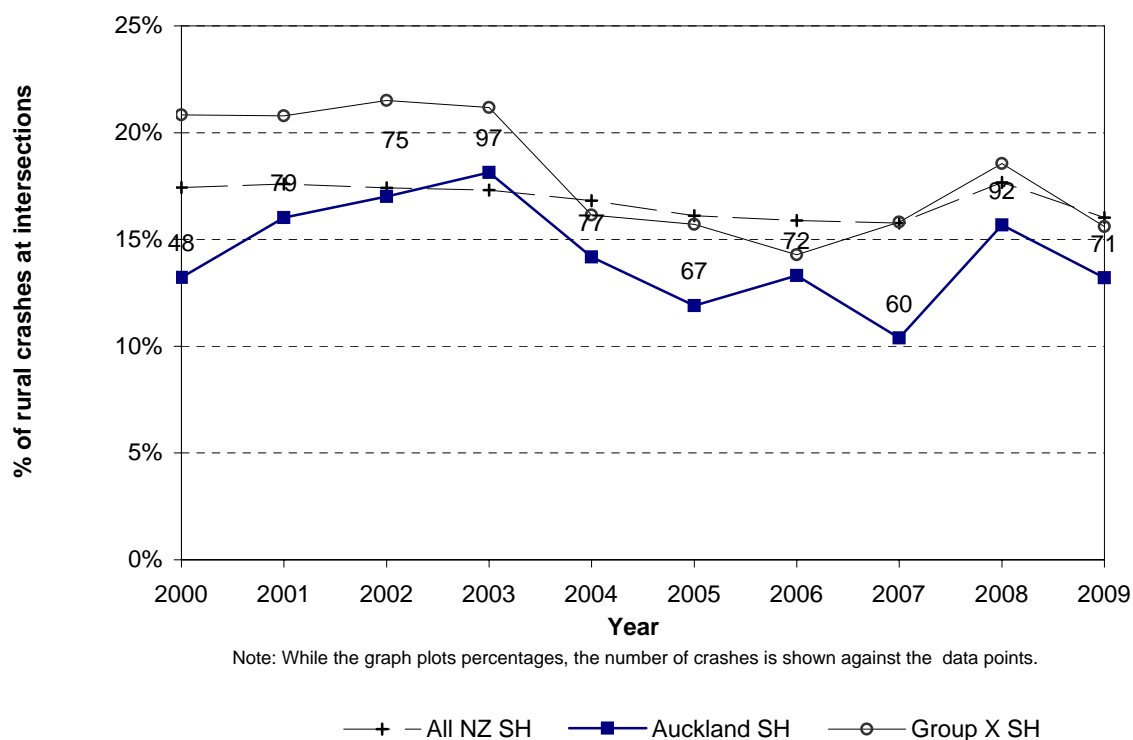


Figure 6.5 Wet road crashes
Auckland Region - urban state highways

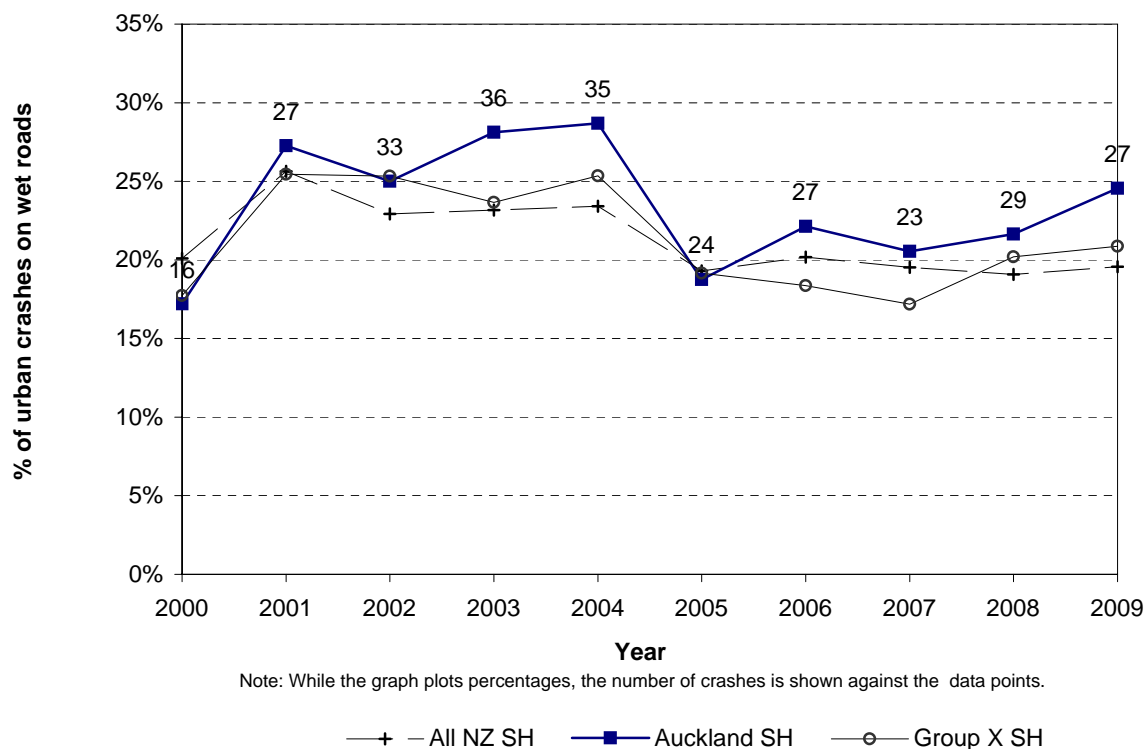
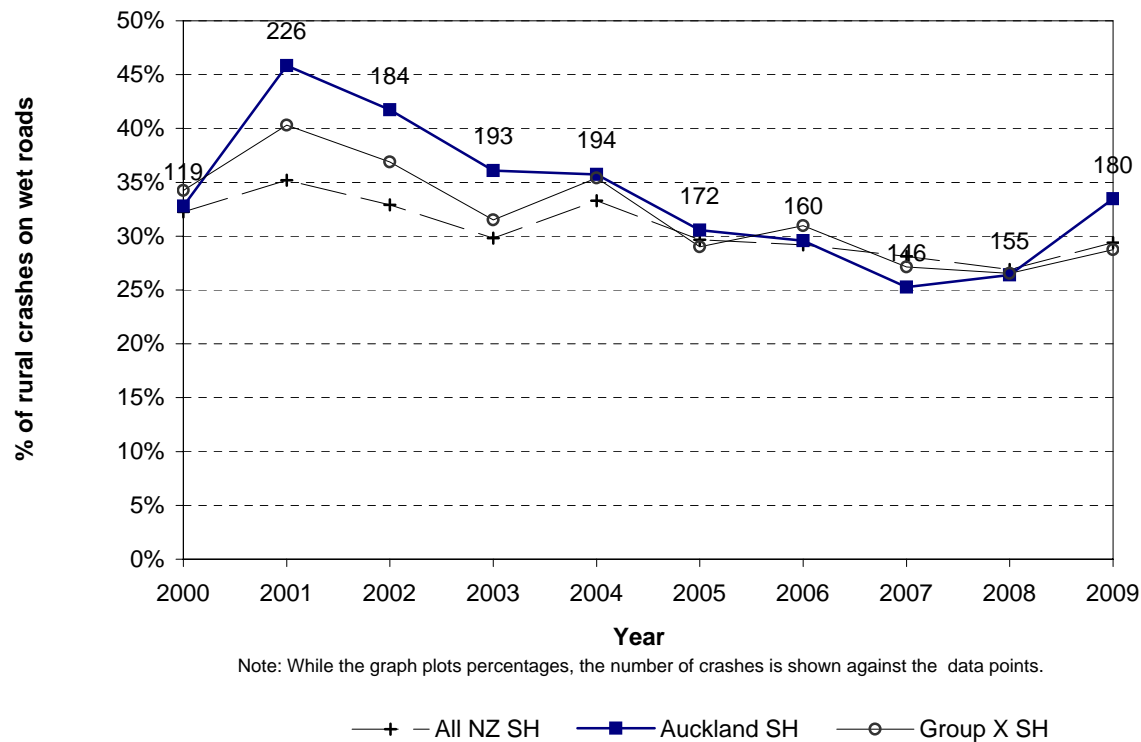
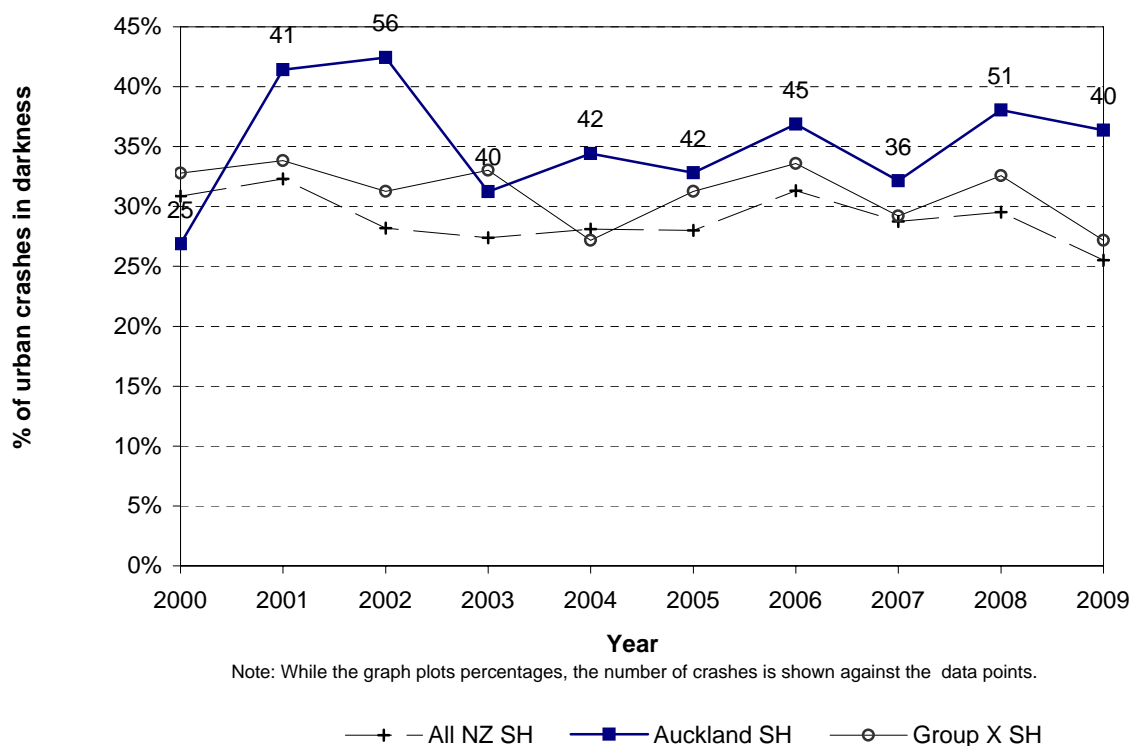


Figure 6.6 Wet road crashes
Auckland Region - rural state highways



**Figure 6.7 Crashes in darkness
Auckland Region - urban state highways**



**Figure 6.8 Crashes in darkness
Auckland Region - rural state highways**

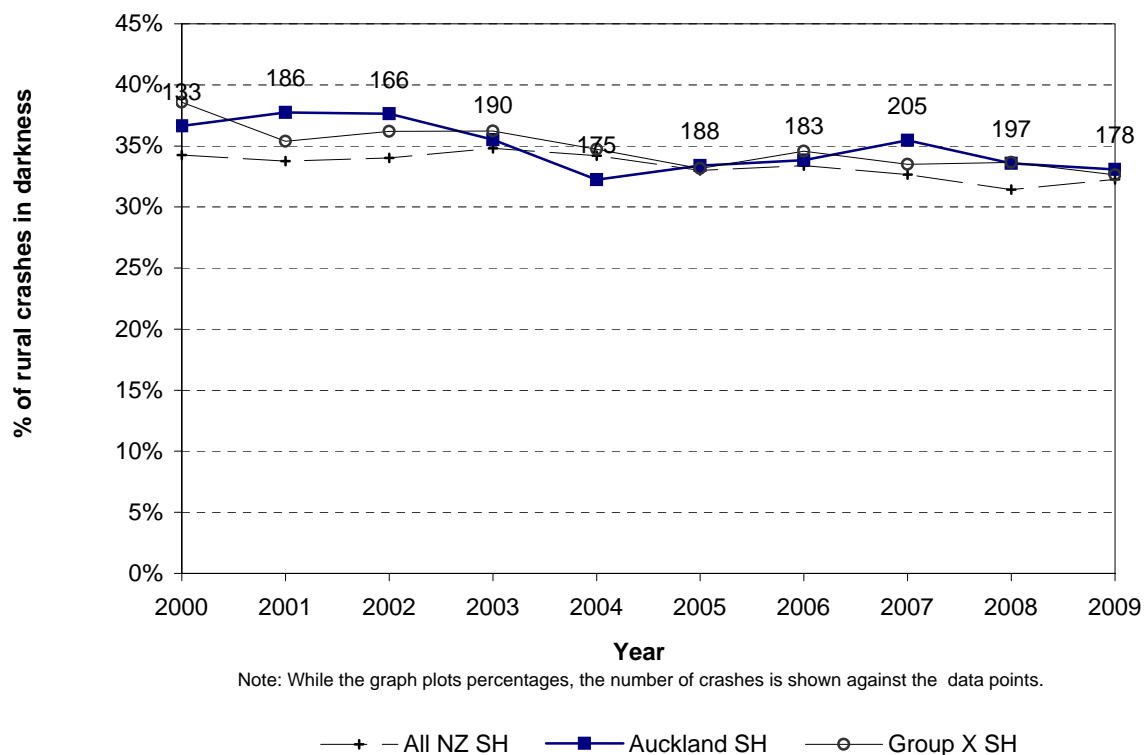


Figure 6.9 Unsealed road crashes
Auckland Region - rural state highways

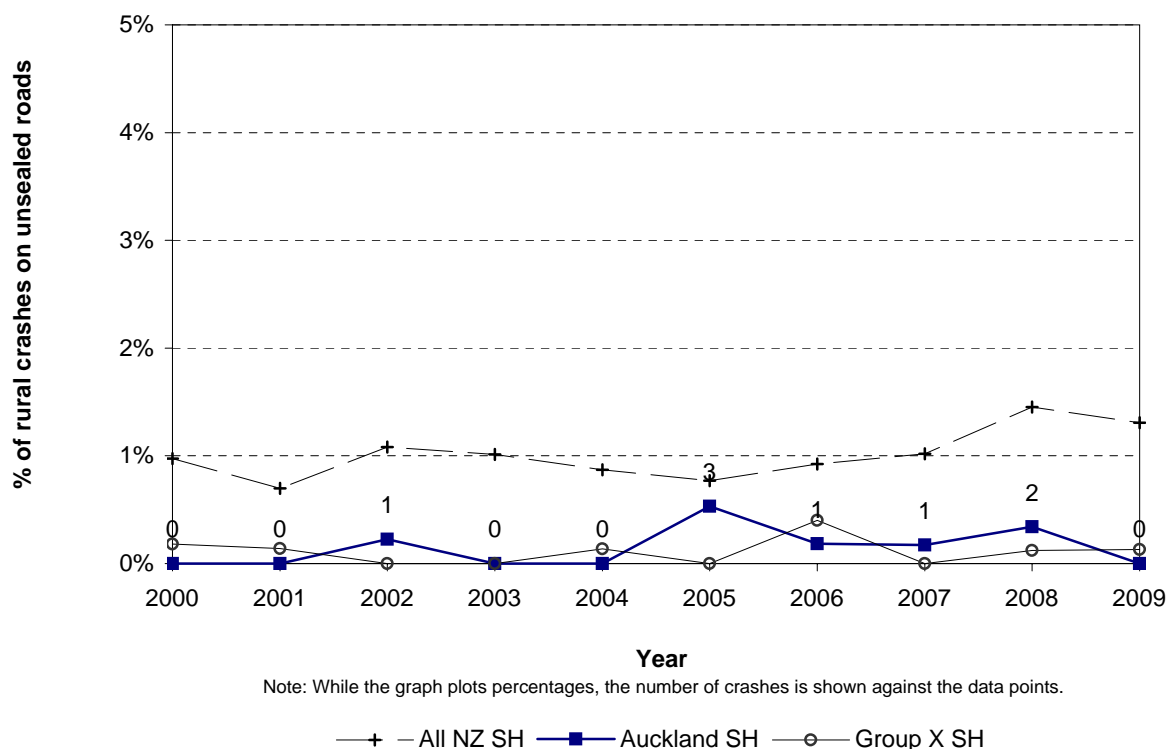
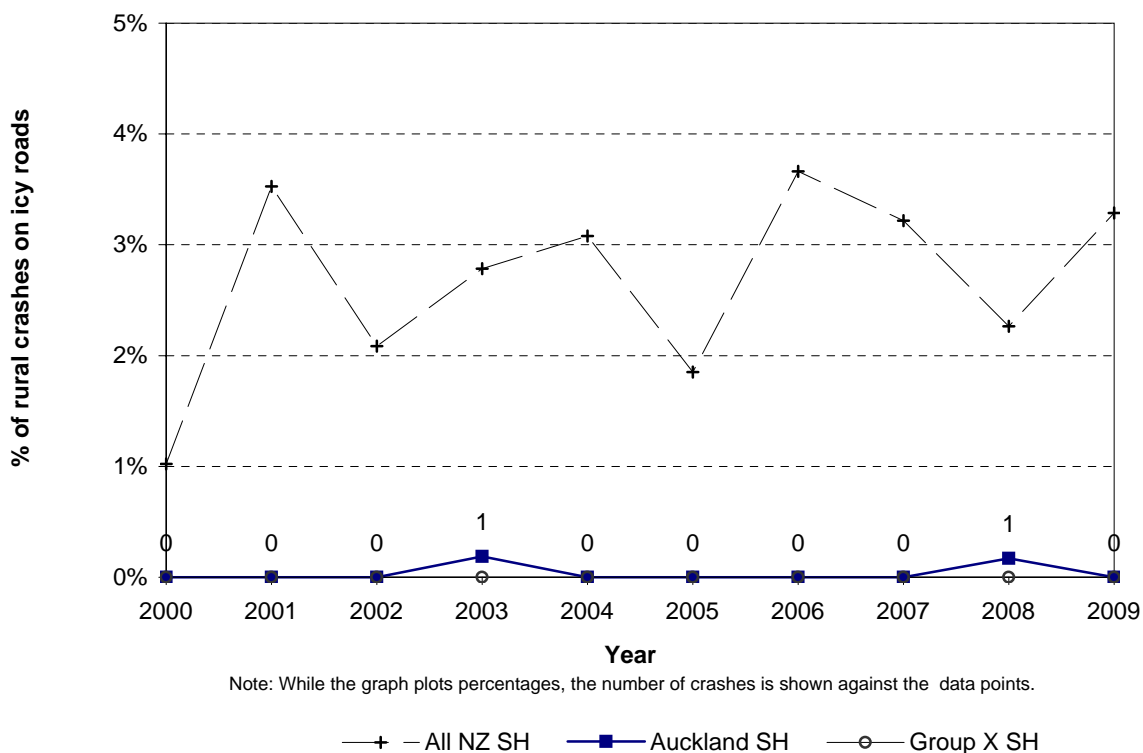
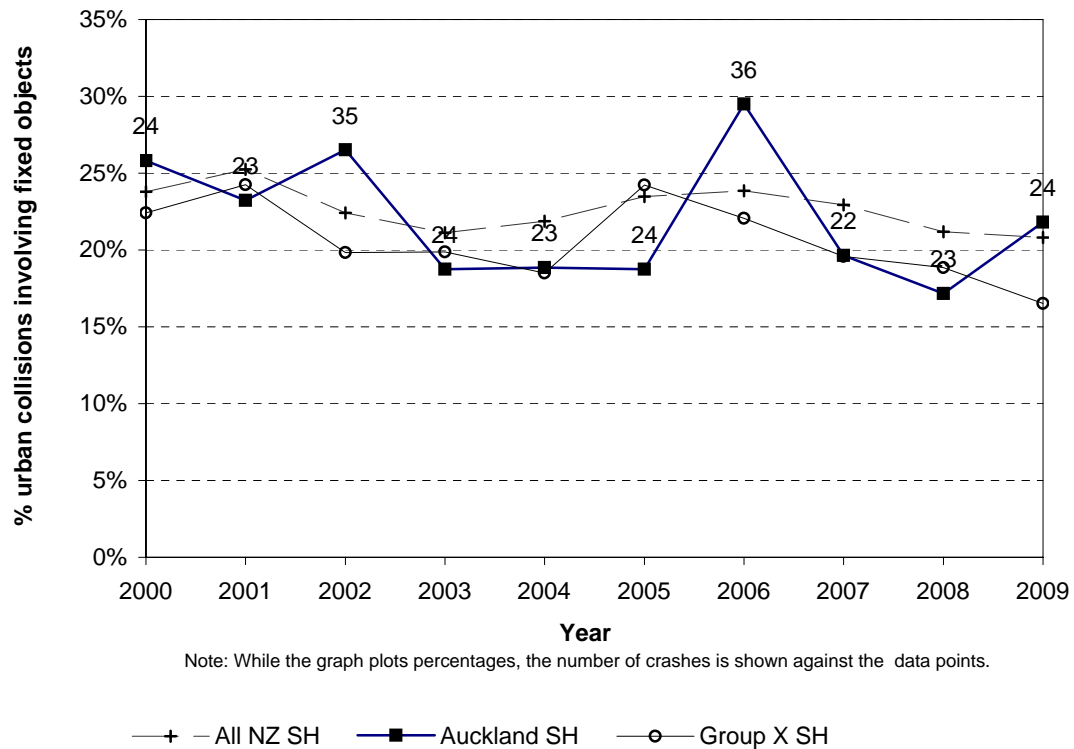


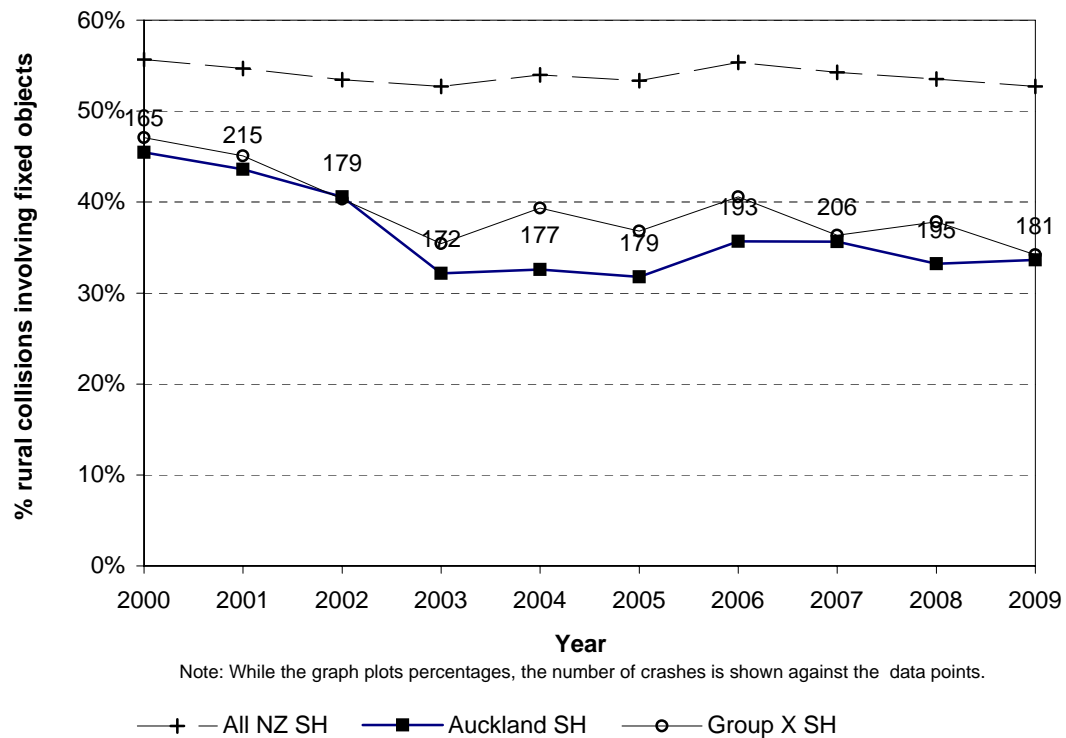
Figure 6.10 Icy road crashes
Auckland Region - rural state highways



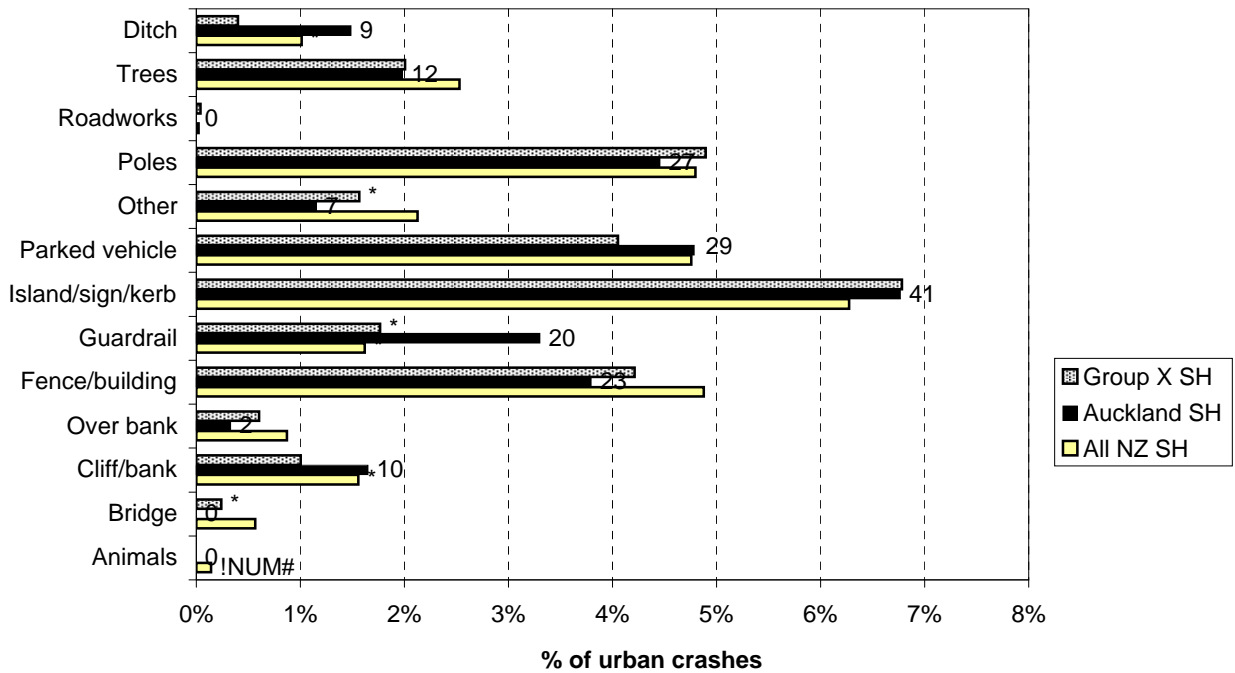
**Figure 6.11 Collisions with objects
Auckland Region - urban state highways**



**Figure 6.12 Collisions with objects
Auckland Region - rural state highways**

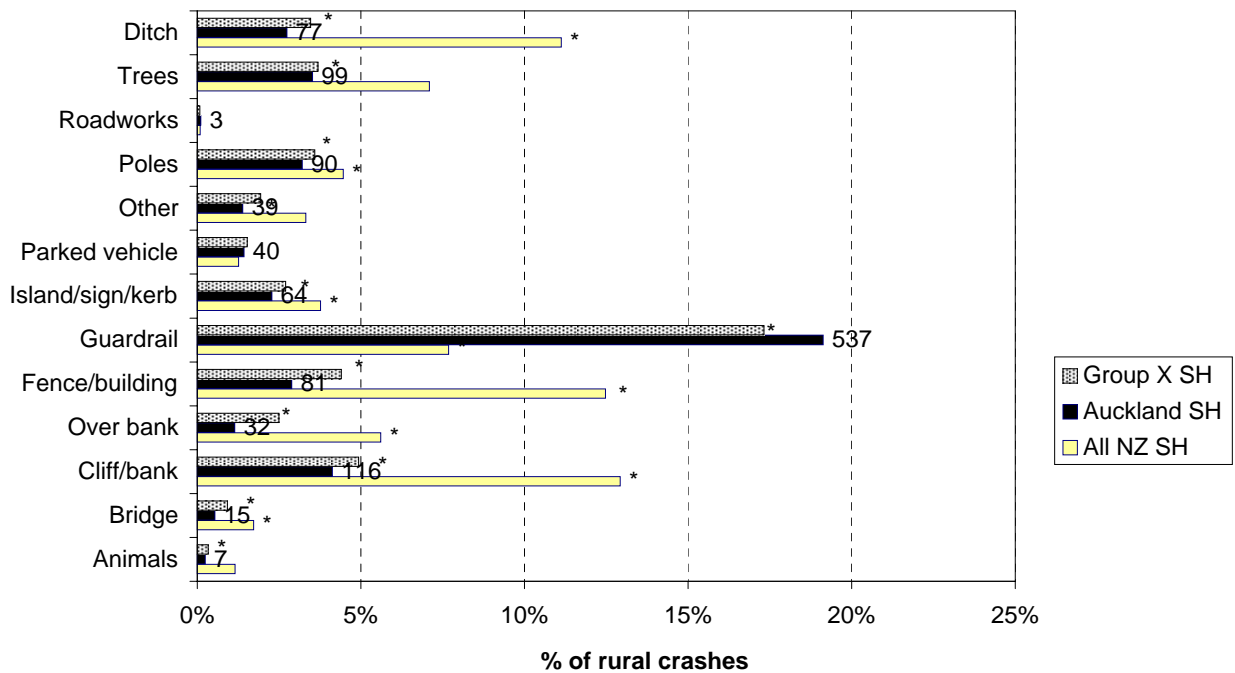


**Figure 6.13 Objects struck - urban
Auckland Region state highways (2005-2009)**



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

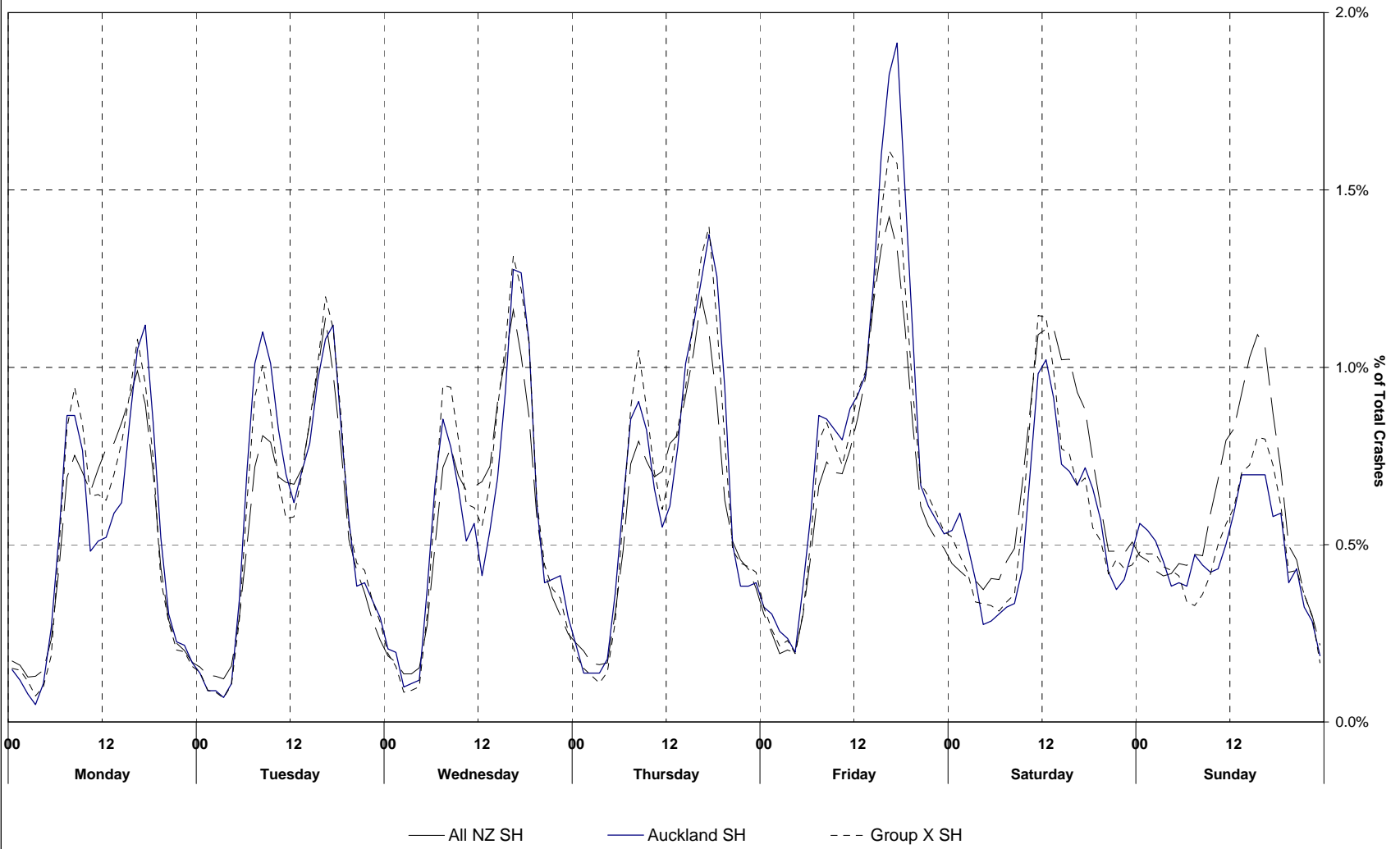
**Figure 6.14 Objects struck - rural
Auckland Region state highways (2005-2009)**



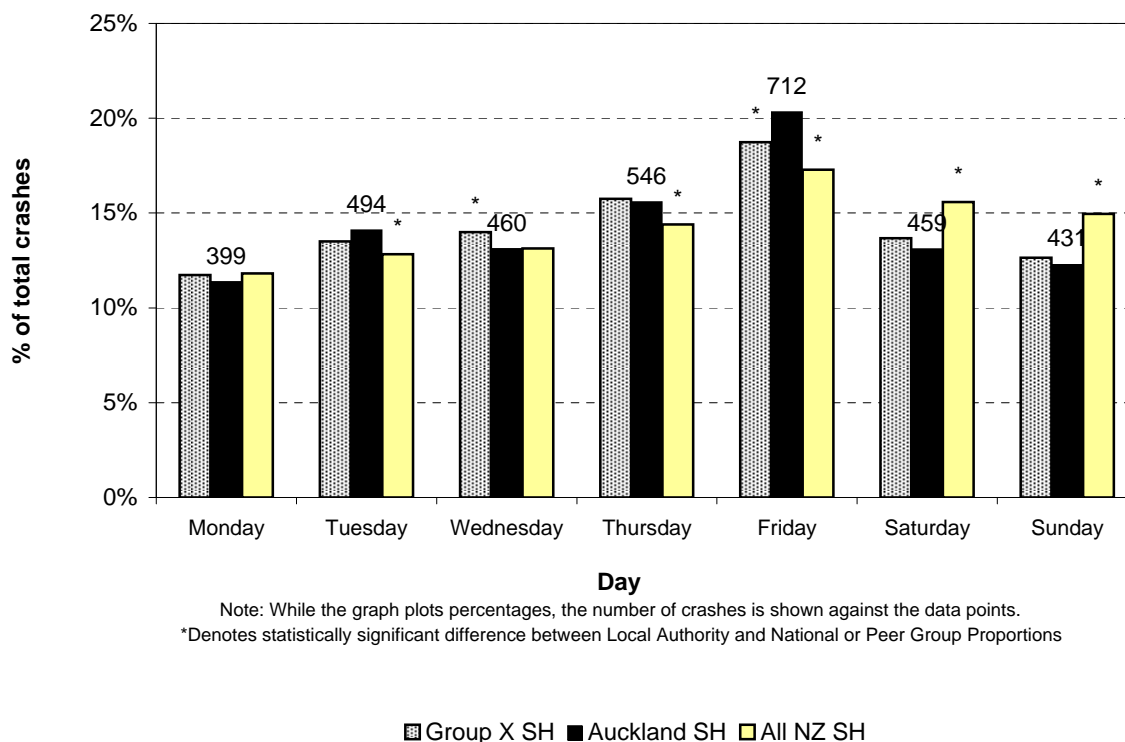
Note: While the graph plots percentages, the number of crashes is shown against the data points.
*Denotes statistically significant difference between Local Authority and National or Peer Group Proportions

Date and Time Statistics

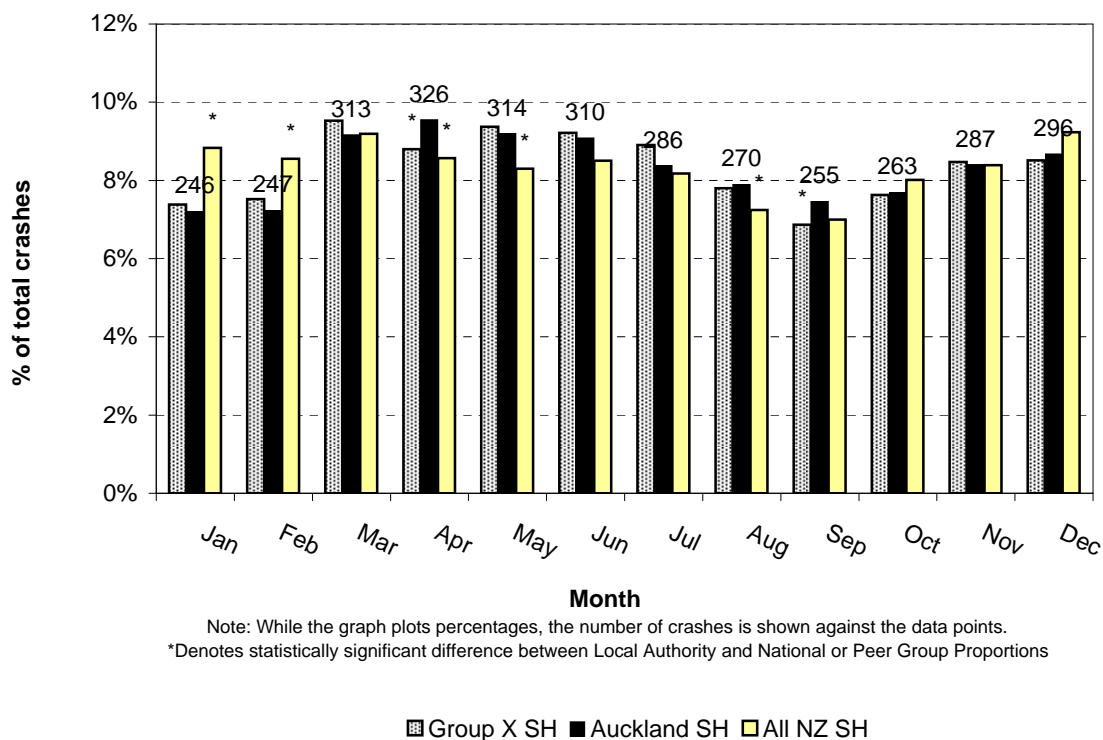
Figure 7.1 Time pattern over average week
Auckland Region state highways (2005-2009)



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



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



Crash Location Statistics

**Table 9.3: State Highway
Urban and Rural Black Spot List
(Injury and Non-Injury Crashes)**
**Urban Site Radius = 30 metres
Rural Site Radius = 200 metres**
Sites with 3 or more injury crashes or more than \$500000 in social costs

CRASH ROAD		SIDE ROAD	2005	2006	2007	2008	2009	TOTAL	Non-Injury	Wet Crash %	Dark Crash %	Crash Costs
SH 1N	I	GILLIES ON NBD	61	74	55	49	56	295	247	19	26	\$14,089,919
SH 1N	I	ONEWA ON SBD	40	32	50	33	37	192	161	19	32	\$14,059,086
SH 1N	A	PENROSE OBR	62	56	53	41	34	246	186	20	18	\$12,332,978
SH 1N	I	MANUKAU OFF NBD	11	8	8	19	13	59	43	34	22	\$11,973,231
SH 1N	I	SCHOLLUM ACCESS ROAD	6	5	4	3	6	24	17	67	38	\$10,116,088
SH 1N	I	FANSHAWE ON NBD	43	37	35	25	29	169	147	27	31	\$9,747,470
SH 1N	A	SHELLY BEACH OBR	31	21	27	23	42	144	110	26	33	\$9,360,920
SH 1N	I	SEART OFF SBD	18	24	10	13	9	74	54	20	27	\$9,121,126
SH 1N	I	MANUKAU ON SBD	13	15	15	16	16	75	53	39	29	\$8,969,716
SH 1N	I	KHYBER PASS OFF NBD	32	41	27	36	31	167	138	13	21	\$8,856,089
SH 16		400 S KIWITAHİ ROAD	2	1	2	0	0	5	1	40	60	\$8,695,057
SH 1N	I	WELLESLEY OFF NBD	32	34	37	38	31	172	140	24	36	\$8,611,063
SH 1N	I	TAKANINI OFF SBD	18	10	19	11	12	70	50	23	30	\$8,382,351
SH 1N	A	GREENLANE OFF NBD	20	25	24	27	23	119	89	22	25	\$8,192,040
SH 16	I	NEWTON ON WBD	39	33	38	19	17	146	116	25	21	\$8,145,994
SH 16		300 W BOND OBR	15	19	15	8	8	65	48	32	26	\$8,097,037
SH 16	I	TE ATATU ON WBD	9	11	4	14	7	45	33	29	38	\$7,618,967
SH 1N	I	OTAHUHU ON SBD	20	20	15	19	23	97	76	26	40	\$7,546,310
SH 16	I	PT CHEV ON EBD	13	14	18	12	10	67	50	49	42	\$7,497,652
SH 1N	I	CURRAN ON NBD	27	28	22	32	42	151	118	23	21	\$7,299,893
SH 1N	I	MAIN OBR	14	11	6	13	9	53	43	21	26	\$7,248,953
SH 1N	I	TE COMA OFF SBD	10	13	13	9	14	59	48	19	41	\$6,866,890
SH 16	I	ROYAL ON EBD	9	5	10	7	5	36	26	33	36	\$6,614,550
SH 1N	I	OTAHUHU OFF SBD	15	10	7	8	12	52	44	27	29	\$6,570,946
SH 17	I	SILVERDALE ST	5	6	9	8	9	37	28	16	16	\$6,570,550
SH 1N		500 N CURRAN ON NBD	25	8	19	19	30	101	81	26	22	\$6,460,708
ROSCOMMON ROAD	I	WIRI STATION ROAD S	6	19	9	14	11	59	48	17	36	\$6,440,297
SH 16	I	ST LUKES ON WBD	5	14	11	5	7	42	30	33	52	\$6,377,317
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		400 S REDOUBT OBR	5	5	4	6	10	30	24	40	37	\$6,183,606
SH 1N	I	WAYBY VALLEY ROAD	2	1	1	5	3	12	5	17	17	\$6,112,520
SH 1N	I	PENROSE OFF NBD	26	24	16	31	23	120	104	23	28	\$5,894,309
SH 1N		40 S ALFRISTON OBR	7	8	4	2	6	27	20	33	41	\$5,577,792
SH 1N		500 N SAUNDERS ROAD	4	3	6	0	4	17	12	82	53	\$5,549,212
SH 1N		500 N SHELLY BEACH OBR	26	11	13	10	14	74	56	27	20	\$5,432,413
SH 22	I	BLACKBRIDGE ROAD	2	2	1	2	3	10	7	30	30	\$5,303,952
SILVERDALE OFF SBD	I	SH 17	1	0	3	2	2	8	4	0	25	\$5,230,804
SH 16		500 S OLD RAILWAY ROAD	3	1	2	1	3	10	7	10	50	\$5,204,073
SH 1N	A	MT WGTN OBR	21	24	20	16	21	102	86	25	21	\$5,190,912
SH 1N	I	SEART ON NBD	16	27	30	18	9	100	83	19	26	\$5,172,084
SH 22	I	JESMOND ROAD	0	1	3	1	3	8	6	50	0	\$5,154,760
SH 1N	I	PENROSE ON NBD	20	17	17	28	19	101	85	22	35	\$5,098,472
SH 1N	I	MOIRS HILL ROAD	1	2	2	0	2	7	4	57	0	\$5,091,046
SH 1N		220 S TOOVEY ROAD	0	1	2	2	1	6	4	0	33	\$5,081,246
SH 16	I	TE ATATU ON EBD EAST	15	16	19	25	18	93	72	33	25	\$5,078,871
SH 1N	I	VIPOND ROAD	1	1	0	0	1	3	1	33	0	\$4,993,516
SH 20A		400 S KIRKBRIDE ROAD	2	6	2	3	0	13	7	31	23	\$4,982,150
SH 16	I	UNION OFF EBD	17	14	26	18	15	90	69	26	21	\$4,975,799
SH 1N		3430 S FALLS BR	2	5	3	2	2	14	10	86	36	\$4,932,880

**Table 9.3: State Highway
Urban and Rural Black Spot List
(Injury and Non-Injury Crashes)**
**Urban Site Radius = 30 metres
Rural Site Radius = 200 metres**
Sites with 3 or more injury crashes or more than \$500000 in social costs

CRASH ROAD		SIDE ROAD	2005	2006	2007	2008	2009	TOTAL	Non-Injury	Wet Crash %	Dark Crash %	Crash Costs
SH 1N	I	MARKET OFF NBD	13	22	22	15	19	91	73	27	41	\$4,880,278
SH 22	I	WHANGAPOURI ROAD	1	4	2	2	2	11	7	36	36	\$4,817,974
SH 1N	I	GREENLANE ON NBD	18	16	21	22	17	94	80	24	30	\$4,787,601
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		2000 N ARARIMU OBR	2	0	1	4	1	8	4	38	63	\$4,700,904
SH 1N	I	MILL ON NBD	1	1	3	1	3	9	6	44	78	\$4,688,280
SH 16	I	LINCOLN OFF WBD	15	18	16	13	16	78	54	24	18	\$4,676,578
SH 1N		1200 N KRAACK ROAD	3	1	2	1	0	7	3	43	43	\$4,668,864
SH 16	I	KENNEDYS ROAD	2	3	1	0	2	8	5	50	63	\$4,660,078
SH 16		500 S RIMMER ROAD	1	2	2	1	1	7	4	86	43	\$4,616,645
SH 1N		460 N KAIPARA FLATS ROAD	1	2	1	1	0	5	1	40	20	\$4,591,716
SH 1N		1240 S CENTENNIAL PARK ROAD	1	0	1	1	2	5	1	60	60	\$4,587,877
SH 1N		1300 N PAPAKURA OFF SBD	1	1	3	0	0	5	2	20	40	\$4,539,190
SH 16	I	WATERVIEW OFF WBD	10	12	19	17	22	80	60	39	43	\$4,527,488
SH 16	I	PATIKI ON WBD	13	16	18	15	12	74	62	20	30	\$4,514,009
SH 1N		670 N BOSHER ROAD	2	2	0	0	0	4	1	50	25	\$4,513,316
SH 16		500 E MATUA ROAD W	0	2	1	0	1	4	1	50	75	\$4,501,637
SH 22		90 E WOODLYN DRIVE	1	0	2	0	2	5	3	40	20	\$4,490,871
SH 18		300 N BUCKLEY AVENUE	0	0	1	1	2	4	1	50	25	\$4,490,857
SH 1N		1000 S MAHURANGI WEST ROAD	1	2	1	0	1	5	3	20	0	\$4,490,525
SH 1N		400 S ONEWA ON SBD	29	10	17	15	11	82	66	7	28	\$4,465,879
SH 1N		330 N BAWDEN OBR	1	1	1	1	0	4	2	25	25	\$4,455,992
SH 1N		300 N FOWLER ACCESS ROAD	4	1	1	0	1	7	5	14	29	\$4,455,028
SH 1N		60 N TE HANA RAIL OBR	0	3	0	2	0	5	4	40	20	\$4,441,225
SH 1N	I	TRISTRAM ON SBD	13	16	13	9	18	69	55	30	25	\$4,429,273
SH 1N	I	MARKET OFF SBD	26	17	17	14	21	95	78	20	36	\$4,421,561
SH 1N		800 S SILVER HILL ROAD	0	0	2	0	1	3	1	67	67	\$4,410,497
SH 1N		200 N VALERIE CLOSE N	1	1	0	1	1	4	3	50	50	\$4,403,386
SH 16		100 N STONEY CREEK ROAD	0	1	2	1	0	4	3	75	75	\$4,400,629
SH 1N	I	BOSHER ROAD	0	0	0	1	3	4	3	0	50	\$4,398,751
SH 16		20 S KANOHI ROAD	0	2	1	0	0	3	2	0	67	\$4,365,832
SH 1N		1220 N CROWTHER ROAD	0	1	1	1	0	3	2	100	0	\$4,363,954
SH 1N	I	L PHILLIPS ROAD	0	1	0	1	1	3	2	33	33	\$4,363,872
SH 1N		3000 S WAYBY VALLEY ROAD	0	0	2	0	1	3	2	100	100	\$4,361,994
SH 17	I	FOLEY QUARRY ROAD	1	0	0	2	0	3	0	0	33	\$4,361,000
SH 17	I	RED BEACH ROAD	8	3	5	1	2	19	15	0	37	\$4,304,727
SH 22		330 W BYCROFT ROAD	1	1	0	0	1	3	2	33	100	\$4,265,872
SH 16	A	ST LUKES ROAD	12	13	4	16	15	60	43	37	35	\$4,242,886
SH 1N		500 N FANSHAWE OBR	28	18	15	7	12	80	69	18	21	\$4,188,969
SH 1N	I	STAFFORD OFF NBD	23	21	23	14	14	95	83	20	24	\$4,153,397
SH 1N		200 S NORTHCOTE OBR	18	21	14	12	17	82	64	37	22	\$3,952,190
SH 1N	I	SYMONDS ON SBD	17	9	23	12	14	75	64	27	31	\$3,925,061
SH 1N	I	MT WGTN ON NBD	18	22	15	17	19	91	82	29	21	\$3,867,703
SH 1N	I	UPPER HWY ON SBD	11	10	13	16	17	67	51	30	24	\$3,866,966
SH 1N	I	NORTHCOTE ON NBD	11	15	19	4	15	64	47	33	27	\$3,816,613
SYMONDS ST	I	GRAFTON BRIDGE	7	8	0	0	1	16	12	13	31	\$3,810,634
SH 1N	I	ONEWA OFF SBD	15	28	12	6	18	79	63	24	25	\$3,794,271
SH 1N	I	HIGHBROOK ON SBD	12	8	10	11	10	51	36	31	31	\$3,789,633
SH 20	I	GREAT SOUTH ROAD	22	19	26	15	24	106	95	18	37	\$3,780,981

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

Urban Site Radius = 30 metres
Rural Site Radius = 200 metres

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

CRASH ROAD		SIDE ROAD	2005	2006	2007	2008	2009	TOTAL	Non-Injury	Wet Crash %	Dark Crash %	Crash Costs
SH 16		960 S PRICTOR ROAD	1	0	0	0	2	3	2	33	33	\$3,766,566
SH 20	I	ONEHUNGA OFF SBD	19	8	6	8	11	52	39	25	15	\$3,764,743
SH 16	I	LINCOLN OFF EBD	16	15	13	9	18	71	59	28	30	\$3,748,442
SH 16	I	1 LINK 16	15	13	12	9	13	62	46	35	47	\$3,680,863
SH 20	I	ONEHUNGA OFF NBD	16	7	5	6	12	46	32	33	41	\$3,540,287
TRISTRAM ON SBD E	I	TRISTRAM AVENUE	11	11	14	12	12	60	43	38	42	\$3,532,698
OLD NORTH ROAD	I	SH 17	1	3	1	2	1	8	5	38	25	\$3,500,408
SH 20		100 E QUEENSTOWN OBR	15	13	6	11	3	48	38	29	21	\$3,484,190
SH 1N	I	1 LINK 16	13	15	9	12	2	51	43	22	29	\$3,447,925
SH 1N	I	OTARA OFF NBD	15	16	11	7	11	60	48	28	28	\$3,385,376
SH 16	I	ROSEBANK ON EBD	7	10	10	8	10	45	34	40	47	\$3,373,786
SH 1N		50 S SH 16	0	1	1	1	0	3	1	0	0	\$3,330,970
SOUTH-EASTERN HIGHWAY I		SEART ON NBD	18	8	3	9	8	46	37	24	20	\$3,297,626
SH 16		300 E ST LUKES OBR	9	15	12	7	6	49	42	31	29	\$3,291,957
SH 1N		500 S MANUKAU OFF NBD	7	7	9	7	8	38	24	42	24	\$3,258,403
SH 1N	A	PANAMA OBR	17	16	15	11	4	63	46	33	17	\$3,245,840
SH 1N	I	OTAHUHU ON NBD	15	20	17	12	7	71	60	28	27	\$3,204,728
SH 1N	I	MT WGTN OFF SBD	13	15	10	14	14	66	52	24	30	\$3,181,303
SH 20	I	QUEENSTOWN OFF NBD	11	11	11	7	11	51	39	27	29	\$3,074,779
SH 1N	A	OTAHUHU OFF NBD	18	10	16	11	5	60	44	27	35	\$3,059,824
SH 17	I	COATESVILLE-RIVERHEAD	8	5	9	4	6	32	20	28	31	\$2,923,297
SH 1N	I	TAKANINI OFF NBD	5	8	10	7	13	43	27	30	33	\$2,910,555
SH 1N	I	WELLINGTON ON NBD	12	6	15	14	12	59	46	22	37	\$2,818,241
SH 1N		50 S MARKET OBR	13	10	5	7	7	42	30	21	45	\$2,787,515
SH 16		30 W BOND OBR	13	10	13	7	6	49	31	27	20	\$2,751,325
SH 16	I	TAUPAKI ROAD	5	8	8	9	7	37	21	8	5	\$2,749,456
SH 1N		500 S CONSTELLATION OBR	9	11	21	7	6	54	40	22	28	\$2,725,762
SH 1N		250 S EAST TAMAKI OBR	6	9	11	11	20	57	45	32	30	\$2,706,209
SH 1N		50 S ST MARKS OBR	10	12	6	7	6	41	30	15	32	\$2,688,372
SH 1N		250 S PANAMA OBR	19	11	6	11	6	53	41	25	21	\$2,633,938
SH 1N	I	MT WGTN ON SBD	10	13	15	10	8	56	45	30	36	\$2,615,450
SH 1N		600 S PRINCES OBR	7	7	7	5	4	30	23	33	40	\$2,597,638
SH 1N		500 N FANSHAW ON NBD	7	7	10	8	11	43	36	28	30	\$2,506,215
SH 1N	I	ESMONDE ON SBD	8	9	20	13	11	61	55	20	31	\$2,502,580
SH 17	I	WAINUI ROAD	8	9	6	7	2	32	18	34	31	\$2,500,106
SH 1N	I	TE IRIRANGI OFF SBD	9	12	7	8	11	47	32	34	38	\$2,476,779
SH 1N	I	TRISTRAM OFF SBD	11	14	6	10	11	52	42	31	31	\$2,463,241
SH 16		200 W OLD NORTH ROAD	2	3	3	4	1	13	7	31	31	\$2,457,849
SH 16	I	BRIGHTON CREEK ROAD	4	6	2	7	5	24	13	33	17	\$2,456,438
SH 1N		600 S STAFFORD OFF NBD	9	9	8	10	7	43	38	16	40	\$2,449,307
SH 20	I	MANUKAU ON SBD	4	5	2	9	15	35	26	17	29	\$2,433,755
SH 17		100 W SCHISCHKA ROAD	3	1	7	16	8	35	25	89	20	\$2,340,270
SH 1N	A	REAGAN OBR	10	5	10	10	12	47	36	36	36	\$2,314,481
SH 16		700 E ST LUKES OFF WBD	9	7	7	7	4	34	25	24	18	\$2,307,587
SH 1N	I	UPPER HWY OFF SBD	5	10	11	6	17	49	39	35	14	\$2,305,830
SH 1N	I	HIGHBROOK ON NBD	6	2	14	12	15	49	39	37	35	\$2,299,723
SH 1N		1300 S MT WGTN OFF NBD	10	14	3	5	2	34	26	41	18	\$2,282,279
SH 17		150 S EAST COAST ROAD	4	1	0	2	2	9	4	11	11	\$2,281,896
SH 1N	I	TWIN STREAM ROAD	6	1	0	2	1	10	7	30	0	\$2,247,742
SH 1N		120 S TE IRIRANGI OBR	9	0	7	10	10	36	29	25	28	\$2,241,549

**Table 9.3: State Highway
Urban and Rural Black Spot List
(Injury and Non-Injury Crashes)**
**Urban Site Radius = 30 metres
Rural Site Radius = 200 metres**
Sites with 3 or more injury crashes or more than \$500000 in social costs

CRASH ROAD		SIDE ROAD	2005	2006	2007	2008	2009	TOTAL	Non-Injury	Wet Crash %	Dark Crash %	Crash Costs
SH 1N		200 N OTARA OFF SBD	8	5	5	2	1	21	15	38	48	\$2,221,808
SH 1N		500 N MAHURANGI WEST ROAD	5	4	6	4	2	21	15	57	38	\$2,212,461
SH 1N		1000 N SHELLY BEACH OBR	14	10	8	6	8	46	38	15	22	\$2,148,511
SH 16	I	KAHIKATEA FLAT ROAD	2	0	1	1	3	7	3	29	14	\$2,132,624
SH 20B	I	ORRS ROAD	1	2	1	1	1	6	3	33	50	\$2,088,809
SH 16		500 E TE ATATU ON EBD EAST	6	4	7	8	4	29	20	24	31	\$2,087,174
SH 1N		2000 S GT SOUTH OBR	2	2	7	3	4	18	12	17	22	\$2,079,113
SH 1N		1000 S MT WGTN OBR	7	6	7	9	3	32	27	44	38	\$2,033,832
SH 16		300 W LINCOLN OBR	3	6	5	7	5	26	16	19	42	\$2,029,100
SH 1N		150 S ROSS ROAD	4	1	0	1	1	7	4	43	57	\$1,988,000
SH 1N		100 S ORAMS OBR	5	6	4	7	12	34	31	26	18	\$1,983,002
SH 1N	I	ST MARKS ON SBD	19	5	8	11	3	46	42	15	20	\$1,956,847
SH 16	I	PATIKI OFF EBD	6	6	4	5	6	27	21	30	33	\$1,896,672
SH 16		250 E CARRINGTON OBR	3	7	8	8	4	30	16	23	30	\$1,819,542
SH 1N	I	PAPAKURA OFF SBD	9	4	5	3	3	24	17	13	29	\$1,803,156
SH 16	I	SH 18	5	9	3	9	10	36	29	25	36	\$1,796,069
SH 1N		200 S Highbrook OBR	3	7	11	11	7	39	32	31	31	\$1,783,665
SH 1N	I	CONSTELLATION OBR	5	8	6	10	11	40	34	33	30	\$1,779,311
KRAACK ROAD	I	SH 1N	3	2	6	5	3	19	9	74	16	\$1,766,349
MOUNT WELLINGTON HIGH-I		MT WGTN OFF SBD S	5	7	5	4	2	23	15	52	57	\$1,757,041
SH 1N		400 N TOP OF HARBOUR BRIDGE	9	3	11	12	1	36	28	14	36	\$1,749,905
SH 20B	I	CAMPANA ROAD	1	0	2	2	5	10	5	20	50	\$1,749,824
MASSEY ROAD	I	MASSEY ON SBD	2	7	5	6	4	24	16	8	46	\$1,733,665
SH 1N		250 N TAKANINI OFF SBD	2	2	3	6	5	18	8	11	39	\$1,724,774
SH 1N		1000 S TAKANINI ON SBD	6	4	4	2	3	19	11	26	32	\$1,697,908
SH 20		150 E HILLSBOROUGH ROAD	4	3	7	3	4	21	14	33	24	\$1,696,927
SH 1N		1100 S EAST TAMAKI OBR	5	5	3	2	7	22	16	27	50	\$1,691,674
SH 1N	A	GREVILLE ON NBD	10	8	4	5	4	31	21	52	23	\$1,685,525
MARKET ROAD	I	MARKET OFF NBD	3	9	6	5	9	32	25	34	28	\$1,674,712
SH 1N		300 E GILLIES OBR	10	7	5	8	9	39	35	31	33	\$1,672,331
SH 16		1000 W ST LUKES OBR	6	1	6	6	4	23	18	35	26	\$1,669,046
UPPER HWY OFF NBD	I	SH 18 W	7	11	11	6	14	49	39	14	20	\$1,660,118
SH 20	I	RIMU ON NBD	7	6	7	9	6	35	28	14	29	\$1,658,623
SH 1N	I	PAPAKURA ON NBD	10	7	6	8	6	37	32	27	46	\$1,651,423
SH 20	I	CORONATION ON NBD	4	4	6	5	2	21	15	14	29	\$1,648,245
SH 16		200 N ROSEBANK OFF WBD	9	3	6	5	6	29	18	24	21	\$1,646,343
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 1N	I	BEAVER OFF NBD	1	4	1	0	1	7	4	43	29	\$1,570,723
SH 16	I	WATERVIEW ON WBD	5	8	8	4	6	31	23	35	39	\$1,570,631
SH 1N		1000 N PRINCES OBR	4	12	12	6	1	35	30	40	29	\$1,568,721
SH 1N		100 S WALTER STREVS OBR	5	5	1	2	7	20	15	20	20	\$1,563,533
SH 16	I	ST GEORGES BAY ROAD	4	2	2	2	4	14	6	21	36	\$1,559,510
SH 1N		900 N TE IRIRANGI OBR	6	7	6	9	4	32	25	31	22	\$1,555,680
SH 20	I	MASSEY OFF NBD	3	1	6	5	4	19	13	32	32	\$1,553,248
SH 1N	I	HOBSON ON SBD	12	4	8	4	8	36	31	19	28	\$1,543,669
SH 17	I	KAHIKATEA FLAT ROAD	1	2	3	1	1	8	6	0	13	\$1,535,437
SH 1N		900 N WAIWHIU ROAD	1	3	2	0	0	6	3	100	67	\$1,532,966
SH 17	I	SILVERDALE PARKWAY	5	3	2	6	3	19	13	21	26	\$1,529,079

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**Urban Site Radius = 30 metres
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Sites with 3 or more injury crashes or more than \$500000 in social costs

CRASH ROAD		SIDE ROAD	2005	2006	2007	2008	2009	TOTAL	Non-Injury	Wet Crash %	Dark Crash %	Crash Costs
SH 1N		150 N WILKS OBR	1	1	3	0	0	5	1	20	60	\$1,521,457
SH 17		1300 N HATFIELDS BR	1	0	4	5	5	15	7	60	27	\$1,520,518
SH 1N		200 N ESMONDE OBR	3	5	4	3	5	20	16	20	25	\$1,508,256
ONEWA OFF SBD	I	ONEWA ON SBD	2	5	10	11	2	30	22	30	30	\$1,505,638
PUHINUI ROAD	I	SH 20	3	1	4	2	7	17	11	29	41	\$1,501,981
SH 18	I	CARIBBEAN DRIVE	1	11	0	5	3	20	15	20	15	\$1,494,173
SH 1N	I	MANUREWA OFF SBD	6	3	7	7	7	30	22	30	20	\$1,487,213
SH 17	I	WAIWERA ROAD	4	7	4	2	1	18	13	28	39	\$1,471,296
SH 20		100 S PUHINUI OFF NBD	1	1	6	5	4	17	12	35	35	\$1,455,382
SH 1N		100 S NORTHCOTE ON SBD	7	10	4	2	3	26	17	15	27	\$1,448,745
SH 20B	I	PRICES ROAD	2	1	0	2	0	5	3	20	60	\$1,426,044
MANUKAU OFF SBD	I	SH 1N	4	4	3	1	7	19	16	16	37	\$1,423,073
SH 1N		500 N REAGAN OBR	2	2	3	4	1	12	4	8	50	\$1,405,185
SH 1N		1500 N GT SOUTH OBR	6	5	5	3	5	24	14	13	17	\$1,399,254
SH 16		800 E ST LUKES OBR	3	8	5	5	8	29	23	52	31	\$1,384,350
TE ATATU ROAD	I	TE ATATU OFF EBD S	5	3	2	2	0	12	7	8	75	\$1,374,862
SH 16		2000 S OGLE ROAD	0	0	0	1	2	3	0	33	67	\$1,372,980
SH 16		100 W JOYCE ADAMS PLACE	2	0	2	0	0	4	2	25	75	\$1,366,747
SH 1N		1000 S ONEWA ON SBD	2	11	5	6	4	28	22	25	32	\$1,350,472
MT WGTN OFF NBD	I	MOUNT WELLINGTON HIGH-	5	6	2	4	6	23	17	26	30	\$1,349,682
SH 1N		1200 S TRISTRAM OBR	4	3	5	2	2	16	13	25	25	\$1,331,585
MASSEY ROAD	I	MASSEY OFF NBD	7	7	3	4	5	26	19	31	35	\$1,328,047
SH 1N		100 S PENROSE INT	5	3	7	10	4	29	24	34	17	\$1,327,884
SH 1N		700 S GREVILLE OBR	4	4	4	4	6	22	12	41	14	\$1,324,513
SH 1N		2000 N PAPAKURA ON NBD	2	1	2	2	5	12	6	17	42	\$1,321,980
SH 20		220 S PORTAGE OBR	1	1	5	5	2	14	9	14	29	\$1,320,347
SH 20		50 S RIMU OBR	6	3	3	8	7	27	21	22	44	\$1,319,982
UNION ST	I	UNION ON WBD	6	8	13	0	4	31	28	13	48	\$1,319,891
SH 1N	I	DRURY OFF SBD	5	3	8	5	3	24	16	38	25	\$1,301,899
SH 1N	I	RAMARAMA OFF NBD	3	3	4	3	4	17	15	24	53	\$1,294,379
SH 16	I	DUNLOP ROAD	2	2	3	3	2	12	6	25	25	\$1,280,268
SH 1N		200 S HILL OBR	2	5	2	3	3	15	12	20	20	\$1,272,410
SH 16		700 E ROSEBANK OFF WBD	5	8	3	7	4	27	22	19	44	\$1,267,847
SH 1N		400 S PENROSE OFF NBD	2	5	7	5	5	24	17	21	17	\$1,246,821
SH 1N		1000 N GT SOUTH OBR	1	4	5	0	3	13	9	15	15	\$1,242,764
SH 1N		200 N SUNNYSNOOK OBR	2	6	3	7	6	24	17	38	38	\$1,240,513
SH 16		400 E ROSEBANK OFF WBD	3	2	3	2	1	11	6	27	55	\$1,240,171
SH 20	A	PUHINUI OBR	4	1	3	4	2	14	10	36	21	\$1,236,764
SH 16	A	WAIMUMU OBR	1	8	4	7	1	21	12	29	38	\$1,232,353
SH 1N		500 N GREENLANE INT N	1	4	2	5	2	14	11	21	50	\$1,226,118
SH 1N		700 S NORTHCOTE OBR	9	8	4	3	1	25	20	36	24	\$1,213,566
SH 1N		1000 N MILL OBR	4	4	2	3	1	14	12	21	29	\$1,212,630
GILLIES AVENUE	I	GILLIES OFF SBD	4	6	1	4	3	18	11	44	50	\$1,209,534
SH 17		1200 S WAIWERA ROAD	4	3	1	3	3	14	11	36	29	\$1,206,078
SH 1N		530 S SCHOLLUM ACCESS ROAD	0	0	4	1	6	11	6	27	36	\$1,205,441
SH 16	I	TRIGG ROAD	0	1	2	0	3	6	3	33	50	\$1,200,332
SH 1N		370 S KRAACK ROAD	0	6	1	3	1	11	7	55	36	\$1,194,995
SH 1N		1000 S UPPER HWY OFF NBD	2	9	7	4	3	25	20	44	40	\$1,189,983
SH 20A		200 S SH 20 OBR	2	0	2	4	4	12	9	42	42	\$1,174,592
SH 20	I	PLUNKET AVENUE	7	6	7	12	4	36	29	19	22	\$1,165,233

**Table 9.3: State Highway
Urban and Rural Black Spot List
(Injury and Non-Injury Crashes)**
**Urban Site Radius = 30 metres
Rural Site Radius = 200 metres**
Sites with 3 or more injury crashes or more than \$500000 in social costs

CRASH ROAD		SIDE ROAD	2005	2006	2007	2008	2009	TOTAL	Non-Injury	Wet Crash %	Dark Crash %	Crash Costs
SH 17	I	GREEN ROAD	2	1	2	2	2	9	4	33	33	\$1,159,103
SYMONDS ST	I	SYMONDS OFF NBD	6	6	7	0	3	22	19	32	23	\$1,158,900
SH 1N		300 N MOUNTAIN OBR	4	4	7	9	4	28	26	25	11	\$1,148,843
SH 1N		800 S ESMONDE OBR	11	3	5	1	6	26	23	8	23	\$1,141,251
SH 1N		1000 S GREVILLE OBR	0	2	4	3	4	13	11	23	46	\$1,139,244
SH 17	I	THE AVENUE	3	5	3	3	3	17	10	29	12	\$1,126,100
SH 1N	I	MCKINNEY ROAD	0	3	4	0	1	8	3	25	0	\$1,123,509
SH 16	I	GLADSTONE ROAD	1	4	4	3	5	17	10	29	35	\$1,119,158
SH 1N		100 N MANGAWHAI ROAD	1	0	2	4	1	8	3	50	50	\$1,097,927
SH 20		400 N BADER OBR	1	3	2	3	0	9	5	22	44	\$1,093,858
SH 16	I	RIVERHEAD ROAD	1	3	4	0	2	10	4	10	30	\$1,092,930
SH 1N		500 S TRISTRAM OFF NBD	9	3	3	5	6	26	24	42	15	\$1,087,235
SH 17	I	ALBANY HIGHWAY	0	0	2	6	7	15	12	27	47	\$1,076,260
SH 17	I	POSTMAN ROAD	1	0	2	4	3	10	7	50	40	\$1,074,435
GREENLANE OFF NBD	I	GREENLANE INT	10	11	9	4	8	42	37	17	7	\$1,072,840
SH 17	I	SILVERDALE ON NBD	2	4	2	2	1	11	8	18	18	\$1,070,153
SH 20		50 N WIRI STATION ROAD	2	3	4	3	1	13	10	54	38	\$1,066,897
SH 1N		1000 S NORTHCOTE OBR	6	6	5	4	3	24	21	42	54	\$1,061,631
SH 1N	I	VALERIE CLOSE S	2	3	1	2	4	12	11	33	42	\$1,059,335
SH 1N		800 S EAST TAMAKI OBR	0	1	2	4	2	9	6	11	22	\$1,057,461
BEAUMONT ST	I	FANSHAW ST	9	7	3	0	2	21	17	19	38	\$1,055,457
KHYBER PASS OFF NBD	I	KHYBER PASS ROAD	4	4	4	0	4	16	14	38	19	\$1,041,046
SH 16		150 N ROSEBANK OBR	4	5	3	8	1	21	16	29	43	\$1,038,913
SH 20		1000 S MASSEY OBR	0	1	4	0	4	9	6	67	67	\$1,036,800
SH 1N	I	MT WGTN OFF NBD	5	7	2	7	6	27	26	30	26	\$1,036,033
SH 1N	I	GREVILLE OFF NBD	3	2	0	2	3	10	8	30	40	\$1,020,303
SH 1N	I	COWAN BAY ROAD	3	2	2	1	0	8	5	50	25	\$1,014,295
SH 16		740 E LINCOLN ON EBD	6	4	4	1	5	20	15	45	30	\$1,013,997
SH 1N		200 S BAIRDS OBR	3	7	5	3	4	22	18	18	50	\$1,013,289
SH 20		400 E HILLSBOROUGH ROAD	4	8	3	2	0	17	10	53	24	\$1,006,817
SH 20	I	MCLAUGHLINS ROAD	3	3	2	1	0	9	7	0	33	\$1,004,507
SH 1N	I	WHITAKER ROAD	6	5	1	4	3	19	15	16	16	\$999,815
SH 1N		50 N COOK OFF SBD	3	3	6	6	2	20	15	20	40	\$999,766
SH 1N	I	NELSON OFF NBD	5	2	7	6	4	24	22	25	33	\$998,753
TRISTRAM AVENUE	I	TRISTRAM ON SBD	6	5	9	6	2	28	22	18	18	\$997,541
SH 16		500 E LINCOLN ON EBD	7	1	6	2	5	21	17	33	19	\$995,289
SH 1N	I	PENROSE OFF SBD	4	6	2	4	4	20	15	10	5	\$989,389
SH 16	I	OLD RAILWAY ROAD	3	1	1	2	1	8	4	25	25	\$987,404
SH 17		100 N THE AVENUE	5	1	0	1	0	7	2	29	43	\$977,685
GREENLANE OFF SBD	I	GREENLANE INT	8	8	5	4	7	32	25	16	13	\$956,487
SH 17		500 S WAIWERA ROAD	3	6	4	6	0	19	14	32	58	\$949,643
SH 22	I	GREAT SOUTH ROAD	2	0	1	1	1	5	1	60	20	\$945,217
SH 20	I	SH 20A	2	5	1	4	5	17	11	29	47	\$943,081
SH 20		300 N RIMU OFF SBD	2	2	0	1	2	7	5	0	29	\$941,958
SH 1N		200 N PENROSE OFF SBD	4	6	4	3	4	21	18	19	19	\$941,744
SH 22	I	GLENBROOK ROAD	2	4	5	4	4	19	14	26	47	\$939,025
SH 20	I	WALMSLEY ON SBD	3	7	2	6	2	20	16	25	30	\$937,967
SH 1N		800 N HILL OBR	4	4	5	4	5	22	20	14	18	\$926,240
SH 16		1500 S TUHIRANGI ROAD	0	2	1	0	1	4	0	50	0	\$926,100
SH 22		600 S GLENBROOK ROAD	1	1	2	1	1	6	3	50	67	\$918,490

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

Urban Site Radius = 30 metres
Rural Site Radius = 200 metres

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

CRASH ROAD		SIDE ROAD	2005	2006	2007	2008	2009	TOTAL	Non-Injury	Wet Crash %	Dark Crash %	Crash Costs
SH 16		700 E CARRINGTON OBR	3	3	1	5	6	18	13	33	61	\$918,045
SH 16		300 E COATESVILLE-RIVERHEAD	0	2	2	2	1	7	5	29	14	\$916,662
SH 20		1000 N WALMSLEY OBR	5	5	2	3	1	16	10	19	44	\$914,595
SH 1N		50 S GILLIES OBR	2	0	2	0	4	8	5	25	38	\$914,120
SH 20		200 N QUEENSTOWN OBR	5	4	2	6	3	20	17	55	25	\$906,048
PENROSE OFF SBD	I	PENROSE INT	12	12	1	4	6	35	30	9	40	\$900,814
SH 16		100 E GT NORTH OBR	0	1	4	5	9	19	15	53	53	\$894,272
SH 16	I	TE ATATU OFF WBD	2	1	6	3	6	18	13	33	33	\$881,754
SH 22	I	MCPHERSON ROAD	1	1	0	3	1	6	4	17	83	\$880,783
TAWA DRIVE	I	SH 17	6	9	5	7	12	39	36	5	21	\$875,601
SH 16		190 E TAUPAKI ROAD	2	0	3	0	0	5	3	40	40	\$868,791
UNION ST	I	NELSON ST	13	5	4	4	4	30	24	20	37	\$867,408
SH 16		500 W BOND OBR	9	5	2	1	3	20	18	45	15	\$866,347
SH 16		1600 W DAVIES ROAD	1	1	0	2	0	4	1	25	25	\$861,917
SH 1N		200 N NORTHCOTE OFF SBD	5	2	4	6	2	19	16	16	32	\$861,431
TE IRIRANGI DRIVE	I	TE IRIRANGI OFF SBD	2	5	4	10	3	24	19	29	42	\$858,774
SH 17		640 N RICHARDS ROAD	0	2	2	1	1	6	5	33	50	\$852,063
SH 16	I	FERNHILL DRIVE	3	4	3	4	2	16	9	25	19	\$844,791
SH 20	I	MASSEY ON NBD	2	3	3	6	2	16	11	38	38	\$843,816
SH 1N	I	TOLL BOOTH ENT STH	1	0	2	0	2	5	3	20	20	\$842,147
SH 22		1560 N CROWN ROAD	0	1	0	1	1	3	0	0	0	\$836,920
OTEHA VALLEY ROAD	I	OTEHA VALLEY OFF NBD	3	2	0	2	3	10	6	10	20	\$835,458
SH 18		1200 W TAUHINU OBR	2	0	0	1	1	4	2	25	25	\$832,034
SH 20		400 N PUHINUI OBR	3	3	3	4	1	14	8	14	50	\$827,728
SH 17	I	WEST HOE ROAD	4	2	1	2	0	9	5	0	0	\$822,294
SH 1N	I	TAKANINI ON NBD	4	2	1	2	8	17	13	29	18	\$818,042
SH 1N		10 S WECH DRIVE N	0	0	1	1	1	3	0	0	33	\$814,380
SH 20	I	MANUKAU ON NBD E	4	1	4	1	3	13	11	8	62	\$814,244
RIMU ROAD	I	RIMU ON NBD	2	1	2	2	1	8	6	25	63	\$812,626
SH 1N		800 S GT SOUTH OBR	0	1	1	0	2	4	2	50	50	\$806,554
SH 17	I	PINE VALLEY ROAD	1	2	0	2	0	5	4	0	40	\$797,402
SH 1N		200 N ORAMS OBR	4	5	3	3	2	17	14	24	24	\$796,941
GREAT NORTH ROAD	I	WATERVIEW ON WBD N	4	6	8	4	3	25	19	32	48	\$794,803
SH 1N		4700 S SILVERDALE OBR	0	2	1	2	0	5	4	40	20	\$794,645
SH 1N		2400 N MILL OFF SBD	1	0	0	2	2	5	4	40	20	\$793,644
SH 17		500 N POTTER ROAD	0	2	0	1	0	3	1	33	67	\$790,296
SH 1N	I	OTEHA VALLEY OFF NBD	2	4	1	5	5	17	14	47	29	\$787,507
SH 1N		500 S CENTENNIAL PARK ROAD	0	0	2	1	1	4	2	25	0	\$785,693
SH 16		500 N BRIGHAM CREEK ROAD	3	0	0	0	1	4	3	0	25	\$782,184
SH 16		700 N WOODHILL PARK ROAD	1	1	1	0	1	4	3	25	50	\$778,549
TE ATATU OFF EBD	I	SH 16	4	4	7	1	2	18	16	39	56	\$777,538
SH 16		500 E ROYAL ON EBD	0	1	2	1	0	4	3	50	25	\$776,671
SH 16	I	SLIP ROAD	1	2	3	6	7	19	11	42	53	\$773,880
SH 1N		500 N WAYBY STATION ROAD	1	0	0	2	0	3	1	67	33	\$772,737
ST LUKES OFF WBD	I	ST LUKES ROAD N	4	1	6	7	1	19	12	37	42	\$772,726
TE ATATU OFF WBD	I	TE ATATU ROAD	4	6	7	11	2	30	28	7	10	\$772,307
SH 20A	I	MONTGOMERIE ROAD	4	3	3	3	5	18	15	22	33	\$770,211
SH 20	I	PUHINUI OFF NBD	3	2	1	4	3	13	7	15	15	\$770,090
SH 16		250 N MAKARAU ROAD	0	1	1	0	1	3	1	33	67	\$767,756
SH 1N		100 S GREVILLE OFF NBD	2	4	3	2	4	15	11	13	20	\$766,580

**Table 9.3: State Highway
Urban and Rural Black Spot List
(Injury and Non-Injury Crashes)**
**Urban Site Radius = 30 metres
Rural Site Radius = 200 metres**
Sites with 3 or more injury crashes or more than \$500000 in social costs

CRASH ROAD		SIDE ROAD	2005	2006	2007	2008	2009	TOTAL	Non-Injury	Wet Crash %	Dark Crash %	Crash Costs
SH 17		580 S HORSESHOE BUSH ROAD	0	0	1	0	2	3	1	33	67	\$765,877
SH 22	I	DRURY ON NBD E	2	5	2	2	2	13	7	31	46	\$765,210
NORTHCOTE ROAD	I	NORTHCOTE OFF NBD W	3	8	6	0	2	19	12	21	47	\$759,844
SH 22		300 E OIRA ROAD	1	1	0	2	0	4	3	25	25	\$758,766
SH 1N		100 N HIGHBROOK OBR	2	0	3	5	5	15	11	27	53	\$754,982
SH 22	I	BUTCHER ROAD	1	1	0	0	1	3	0	67	67	\$753,620
SH 20		300 S RIMU OBR	6	1	4	4	1	16	13	31	13	\$752,038
PUHINUI OFF NBD	I	PUHINUI ROAD	1	5	4	7	7	24	20	25	38	\$751,471
EAST TAMAKI ROAD	I	OTARA ON SBD	6	4	5	6	5	26	21	27	54	\$749,886
SH 20		1000 N MASSEY OBR	3	4	2	1	6	16	13	38	50	\$749,404
SH 1N		100 S RIVER ROAD N	1	1	0	0	1	3	2	67	0	\$742,670
SH 1N	I	ESMONDE OBR	8	2	2	2	1	15	11	13	27	\$737,914
NORTHCOTE OFF NBD	I	SH 1N	6	4	5	2	2	19	16	21	16	\$735,739
SH 16	I	WELLESLEY OFF EBD	4	1	3	7	2	17	15	24	29	\$734,779
SH 16		100 E TE ATATU OBR	3	3	2	6	5	19	18	11	53	\$726,909
HINGAIA ROAD	I	PAPAKURA OFF NBD	1	2	1	2	1	7	4	29	43	\$726,724
SH 1N		1000 S MANGAWHAI ROAD	1	2	0	0	0	3	2	0	33	\$724,845
SH 18	I	OREIL AVENUE	2	1	3	2	2	10	8	40	10	\$723,908
SH 16		500 W TE ATATU OBR	1	4	3	3	3	14	10	29	14	\$720,921
SH 1N	A	ARARIMU OBR	0	1	0	1	1	3	2	33	0	\$719,252
SH 16		300 W MCPIKE ROAD	0	0	1	1	1	3	2	67	67	\$717,374
SH 16		800 N MAKARAU ROAD	0	0	0	3	0	3	2	0	33	\$717,374
TE IRIRANGI DRIVE	I	TE IRIRANGI ON NBD	6	3	6	3	0	18	12	28	56	\$716,872
SH 18		90 N HENDRIKA COURT	0	2	0	4	0	6	3	0	17	\$713,572
SH 1N		500 N HILL OBR	2	4	3	4	2	15	12	53	40	\$709,890
SH 17	I	VERONICA CLOSE	0	2	1	1	1	5	4	40	0	\$707,926
OTARA ON NBD	I	EAST TAMAKI ROAD	4	3	5	7	0	19	14	32	47	\$703,047
SH 16		200 E ST LUKES OFF WBD	2	2	3	5	2	14	10	21	29	\$699,131
SH 16	I	MURIWAI ROAD	6	0	0	5	4	15	9	7	20	\$693,102
SH 1N		1300 S PAPAKURA OFF NBD	3	1	5	2	2	13	9	38	8	\$692,248
SH 1N		15 N FANSHAWE OBR	3	0	1	0	0	4	3	50	75	\$684,884
SH 1N		50 N NORTHCOTE OBR	3	0	6	2	2	13	9	31	31	\$684,225
SH 1N	I	RAMARAMA ON NBD	2	3	5	2	1	13	9	23	31	\$683,001
ST MARKS ROAD	I	ST MARKS ON SBD	7	4	4	5	1	21	17	10	43	\$682,028
OTEHA VALLEY OFF NBD		40 S OTEHA VALLEY ROAD	1	6	4	1	3	15	12	47	13	\$679,539
SH 17	I	GREVILLE ROAD	2	0	6	10	13	31	29	3	16	\$678,518
SH 16		1500 E ROSEBANK OFF WBD	7	2	1	2	3	15	13	27	27	\$677,558
SH 20		100 N WALMSLEY OBR	4	0	2	3	4	13	9	31	23	\$674,145
GREAT SOUTH ROAD	I	GT SOUTH LINK	2	0	1	2	2	7	5	0	14	\$673,464
SH 17	I	KELL DRIVE	2	0	0	3	2	7	5	14	14	\$673,464
SH 20	I	ASH ROAD	4	4	4	5	6	23	21	35	17	\$673,337
SH 1N		1500 S EAST TAMAKI OBR	1	1	3	3	2	10	4	20	30	\$667,326
SH 20	I	VOGLER DRIVE	1	2	4	3	4	14	10	29	36	\$663,580
ROYAL ROAD	I	ROYAL ON EBD	1	1	4	0	2	8	7	25	38	\$656,890
GRANDE VUE ROAD	I	MANUREWA ON NBD	3	8	3	2	3	19	13	32	32	\$654,772
SH 16		100 E NGAOHO PLACE	2	1	0	0	1	4	3	50	75	\$652,336
SH 1N		1000 N PAPAKURA OFF SBD	2	2	4	3	1	12	8	17	33	\$650,510
SH 17	I	EAST COAST ROAD	2	3	4	3	2	14	11	14	29	\$649,415
SH 20		1000 N PUHINUI OBR	4	4	2	2	0	12	8	8	33	\$648,985
SH 20		150 N ONEHUNGA ON SBD	2	0	2	5	3	12	8	25	42	\$644,712

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**Urban Site Radius = 30 metres
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Sites with 3 or more injury crashes or more than \$500000 in social costs

CRASH ROAD		SIDE ROAD	2005	2006	2007	2008	2009	TOTAL	Non-Injury	Wet Crash %	Dark Crash %	Crash Costs
SH 1N	I	DAVIES ROAD	0	1	1	1	2	5	3	20	20	\$642,990
SH 1N	I	ESMONDE OFF NBD	4	3	6	3	1	17	16	24	53	\$635,596
SH 1N		700 N GT SOUTH OBR	2	2	3	4	2	13	10	38	31	\$632,619
SH 16		200 E PATIKI OBR	2	2	5	2	3	14	12	21	21	\$620,873
SH 17	I	BEACH ROAD	0	0	1	3	0	4	2	25	0	\$617,860
SH 16		600 E SH 18	2	3	2	1	3	11	7	36	0	\$617,673
SH 1N		800 N BEACH OBR	8	1	2	2	0	13	11	31	38	\$602,881
TRISTRAM AVENUE	I	TRISTRAM OFF NBD	2	4	3	6	6	21	17	19	38	\$599,397
SH 18	I	UPPER HWY ON SBD W	7	3	3	2	6	21	17	0	24	\$597,825
SH 16		200 N ROYAL OBR	1	0	6	2	3	12	9	25	42	\$589,348
SH 1N	I	SILVERDALE OFF NBD	3	2	1	2	2	10	6	30	30	\$581,795
SH 16	I	FOSTER ROAD	2	2	4	2	0	10	6	10	30	\$574,935
SH 18	I	BUCKLEY AVENUE	0	3	0	0	0	3	2	33	33	\$571,657
SH 17		80 N FLORENCE AVENUE	2	0	1	1	0	4	3	0	50	\$566,444
PENROSE INT	I	PENROSE INT S	6	5	9	5	1	26	24	8	19	\$565,567
BADER OFF NBD	I	BADER DRIVE	1	0	2	0	0	3	2	0	67	\$564,625
SH 16	I	16 LINK 1	4	1	4	1	0	10	6	30	30	\$558,886
SH 1N		250 S GREVILLE OBR	0	3	1	6	1	11	8	45	0	\$557,512
SH 1N		50 S ESMONDE OBR	3	2	6	0	0	11	8	27	45	\$555,348
SH 16	I	TAPU ROAD	1	1	0	0	1	3	2	33	0	\$549,122
SH 16	I	PARNELL RISE	0	3	3	5	5	16	11	13	38	\$547,393
SH 20	I	LANGLEY ROAD	3	3	3	4	1	14	12	21	29	\$546,347
SH 17	I	SMALL ROAD	1	4	5	2	3	15	15	33	53	\$544,684
SH 1N		500 S PAKAKURA OFF NBD	3	4	4	0	2	13	12	46	38	\$542,127
GREAT SOUTH ROAD	I	MANUKAU OFF NBD	2	4	4	5	8	23	22	35	48	\$535,342
SH 17	I	TOTARA VIEWS DRIVE	3	4	1	1	1	10	7	20	20	\$535,007
OTEHA VALLEY ROAD	I	OTEHA VALLEY ON SBD	1	3	3	7	1	15	10	13	13	\$531,784
SH 1N		50 S GREENLANE INT	4	1	1	2	6	14	14	36	0	\$527,502
SH 20		150 S VOGLER DRIVE	2	2	2	1	2	9	5	33	22	\$527,403
SH 16		1500 E ROSEBANK OBR	3	1	1	2	3	10	7	40	50	\$527,330
SH 16		1680 W ABEL ROAD	0	1	2	2	4	9	5	56	11	\$526,703
AKORANGA OFF NBD		200 W ESMONDE OFF NBD	3	0	5	2	2	12	10	33	17	\$526,655
SH 17		50 E FOWLER ACCESS ROAD	3	3	5	2	1	14	13	21	7	\$526,185
SH 20	I	DAVIES AVENUE	3	4	4	2	1	14	10	29	29	\$523,646
SH 22	I	MERCER ST	3	0	1	6	3	13	12	15	38	\$514,909
NORTHCOTE ROAD	I	NORTHCOTE ON SBD W	1	8	3	7	0	19	16	5	37	\$506,814
SH 17	I	UNIVERSITY AVENUE	1	1	4	1	3	10	6	30	20	\$505,677
SH 1N		100 S WELLINGTON OBR	3	1	3	4	3	14	14	14	21	\$505,041
SH 1N		300 S MT WGTN OBR	4	2	1	1	1	9	6	22	22	\$499,291
SH 1N	I	PUHOI ROAD	0	3	2	2	1	8	4	50	50	\$497,786
SH 1N		1000 S MANUKAU ON SBD	2	1	2	3	1	9	6	33	33	\$485,755
SH 1N		1200 S WAYBY STATION ROAD	4	0	1	1	3	9	6	78	11	\$474,511
SH 1N		750 S ROSS ROAD	1	0	2	1	2	6	1	50	17	\$469,917
SH 1N		50 N QUARRY OBR	2	1	4	1	0	8	5	25	75	\$451,060
SH 17	I	POTTER ROAD	2	2	4	0	0	8	5	13	50	\$450,876
SH 22	I	OIRA ROAD	0	3	3	1	1	8	5	38	25	\$447,242
SH 20	I	RIMU OFF SBD	1	0	6	2	0	9	6	11	56	\$445,197
SH 16		1000 S BRIGHAM CREEK ROAD	3	1	0	1	2	7	4	43	14	\$419,101
SH 1N	I	OTEHA VALLEY OFF SBD	0	1	2	1	2	6	2	33	17	\$416,432
SH 16		1000 W LINCOLN OBR	2	1	2	1	1	7	4	0	57	\$412,241

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

Urban Site Radius = 30 metres

Rural Site Radius = 200 metres

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

CRASH ROAD		SIDE ROAD	2005	2006	2007	2008	2009	TOTAL	Non-Injury	Wet Crash %	Dark Crash %	Crash Costs
MATUA ROAD W	I	SH 16	1	1	2	3	0	7	4	43	43	\$409,484
SH 16	I	MCLACHLAN ROAD	0	3	1	1	0	5	1	40	20	\$387,516
SH 16	I	ANDERSON ROAD	2	2	0	1	1	6	3	67	0	\$381,466
SH 17	I	BAWDEN ROAD	1	2	1	2	0	6	3	0	33	\$376,668
SH 22		320 E GLENBROOK ROAD	1	2	2	0	1	6	3	33	67	\$376,668
SH 22		600 W GELLERT ROAD	2	1	2	0	1	6	3	17	33	\$373,443
SH 17		280 N RICHARDS ROAD	1	0	0	2	3	6	3	50	33	\$372,911
SH 18	I	GREENHITHE OFF WBD	0	0	0	3	3	6	3	17	67	\$349,110
SH 1N		750 N WAYBY VALLEY ROAD	0	1	2	1	0	4	0	50	25	\$344,960
SH 16	I	ORAHA ROAD	2	3	2	3	0	10	7	0	10	\$335,122
SH 22		2000 S GLENBROOK ROAD	1	0	0	3	1	5	2	40	20	\$332,050
ESMONDE ON SBD		50 S ESMONDE ROAD	2	0	0	3	0	5	2	0	20	\$325,007
SH 18	A	BRIGHAM CREEK ROAD	0	1	3	4	1	9	6	11	22	\$315,962
HINGAIA ROAD	I	PAPAKURA ON NBD	1	2	2	3	0	8	5	25	63	\$303,732
SH 1N		400 S VALERIE CLOSE	2	0	0	1	0	3	0	33	100	\$269,500
SH 1N	I	MANGAWHAI ROAD	0	0	0	1	2	3	0	67	67	\$250,880
RIVER ROAD	I	HIBISCUS COAST HIGHWA'	1	0	2	0	1	4	1	25	25	\$232,390
PRINCES ST	I	OTAHUHU ON NBD	0	0	1	1	2	4	1	0	75	\$228,950

Auckland Region S.H. Road Safety Report 2005 - 2009

**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 = 200 metres

CRASH ROAD		SIDE ROAD	2004	2005	2006	2007	2008	2009	TOTAL	Non-Injury	Wet Crash %	Dark Crash %
SH 1N	I	CURRAN ON NBD	40	27	28	22	32	42	191	147	23	22
SH 1N	A	SHELLY BEACH OBR	34	31	21	27	23	42	178	135	28	33
SH 1N		500 N CURRAN ON NBD	18	25	8	19	19	30	119	95	25	24
SH 1N		250 S EAST TAMAKI OBR	11	6	9	11	11	20	68	54	31	28
UPPER HWY OFF NBD	I	SH 18	5	7	11	11	6	14	54	44	13	20
SH 1N	I	UPPER HWY OFF SBD	5	5	10	11	6	17	54	44	33	15
SH 1N	I	TAKANINI OFF NBD	9	5	8	10	7	13	52	34	27	33
SH 20	I	MANUKAU ON SBD	5	4	5	2	9	15	40	30	18	28
SH 1N		100 S ORAMS OBR	4	5	6	4	7	12	38	34	24	24
SH 1N	I	MANUKAU ON SBD	6	5	5	4	6	10	36	27	39	36
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
MANUKAU OFF SBD	I	SH 1N	4	4	4	3	1	7	23	20	22	35
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 16		100 E GT NORTH OBR	1	0	1	4	5	9	20	16	50	50
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 1N		50 S GREENLANE INT	4	4	1	1	2	6	18	17	28	0
SH 20B	I	PUHINUI ON SBD	1	3	1	4	2	7	18	12	28	44
SH 1N		2000 N PAPAKURA ON NBD	3	2	1	2	2	5	15	8	20	33
SH 17		1300 N HATFIELDS BR	0	1	0	4	5	5	15	7	60	27
SH 1N		600 N TRISTRAM OBR	2	2	4	0	1	6	15	13	40	40
SH 1N		530 S SCHOLLUM ACCESS ROAD	2	0	0	4	1	6	13	7	31	38
SH 20		300 S BADER OBR	1	2	2	1	1	5	12	10	33	50
SH 20B	I	CAMPANA ROAD	1	1	0	2	2	5	11	6	18	45
SH 20		1000 S MASSEY OBR	1	0	1	4	0	4	10	7	60	60
HIGHBROOK DRIVE	I	HIGHBROOK ON NBD	0	0	2	1	2	5	10	8	20	40
SH 16		1680 W ABEL ROAD	0	0	1	2	2	4	9	5	56	11
SH 16	I	DON BUCK ROAD	1	2	1	1	0	4	9	8	33	56
SH 1N		50 S GILLIES OBR	0	2	0	2	0	4	8	5	25	38
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 18	I	GREENHITHE OFF WBD	0	0	0	0	3	3	6	3	17	67
GRAFTON ON SBD		10 S GRAFTON OBR	0	1	1	0	1	3	6	5	33	33
BARROWCLIFFE PLACE	I	WIRI STATION ROAD S	1	0	0	1	1	3	6	6	33	0
SH 17		280 N RICHARDS ROAD	0	1	0	0	2	3	6	3	50	33
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
SH 1N		1000 N SCHOOL ROAD	1	0	0	0	1	3	5	4	60	0
TE ATATU ROAD	I	TE ATATU OFF EBD	0	0	0	1	0	3	4	2	0	25
ESMONDE ON SBD		160 S ESMONDE ROAD	0	0	0	0	1	3	4	4	75	50
SH 17		580 S HORSESHOE BUSH ROAD	0	0	0	1	0	2	3	1	33	67
SH 1N	I	MANGAWHAI ROAD	0	0	0	0	1	2	3	0	67	67
SH 16	I	COTESMORE WAY	0	0	0	1	0	2	3	1	0	67
SH 16		100 E MATUA ROAD E	1	0	0	0	0	2	3	1	33	33
SLIP ROAD	I	SH 1N	0	0	1	0	0	2	3	3	33	33
GREVILLE ROAD	I	GREVILLE OFF SBD	0	0	0	0	1	2	3	2	67	0
SH 20		100 N DOMINION ON WBD	0	0	0	0	0	3	3	1	33	67
SH 16		80 E ACCESS ROAD	0	1	0	0	0	2	3	2	33	0
SH 22		280 W OIRA ROAD	0	0	0	1	0	2	3	2	33	0

**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 = 200 metres

CRASH ROAD	SIDE ROAD	2004	2005	2006	2007	2008	2009	TOTAL	Non-Injury	Wet Crash %	Dark Crash %
SH 16	2300 N WEST COAST ROAD	0	0	1	0	0	2	3	2	33	0
SH 16	960 S PRICTOR ROAD	0	1	0	0	0	2	3	2	33	33
SH 16	80 S HUTCHINSON ROAD	0	0	0	0	0	3	3	2	33	33
SH 1N	510 N COWAN BAY ROAD	0	0	1	0	0	2	3	3	0	67
SH 18	200 W ALBANY HIGHWAY ON WBD	0	0	0	0	0	3	3	2	0	33
SH 16	2000 S OGLE ROAD	0	0	0	0	1	2	3	0	33	67

appendix



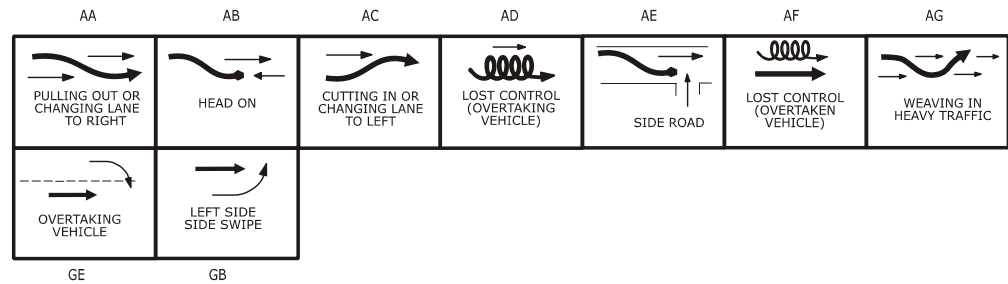
- Groupings of crash types
- Grouping of contributing factors
- General factor list
- General movement types

Explanatory notes for the appendix

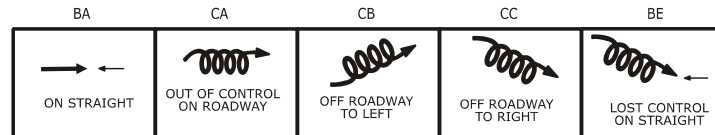
1. Each traffic crash report has a diagram and a description of what happened. These are used to classify the movements the vehicles were making when they crashed eg 'collided with parked vehicle', or 'lost control while overtaking'. In this report, crash types are grouped into seven categories. The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

Groupings of crash types

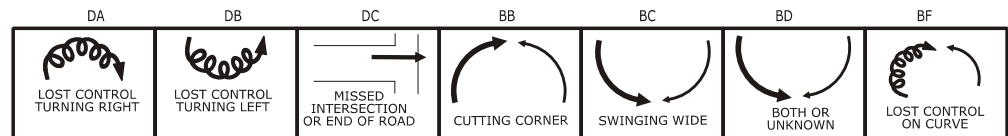
Overtaking



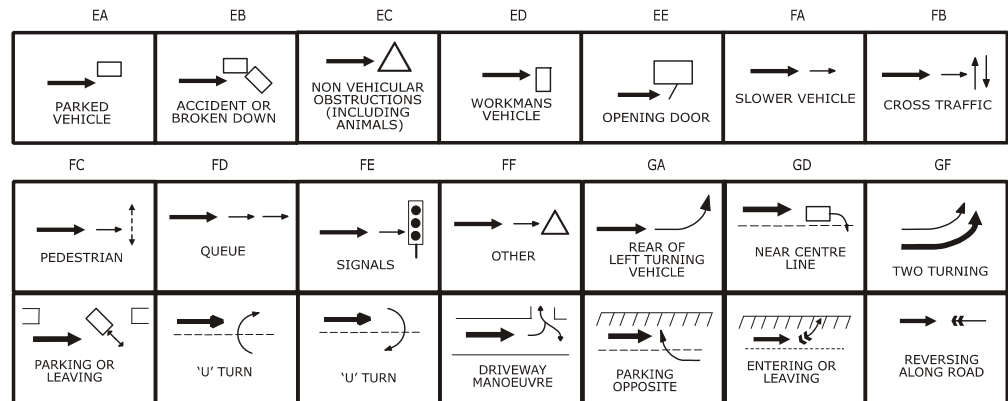
Straight - Lost control / Head on



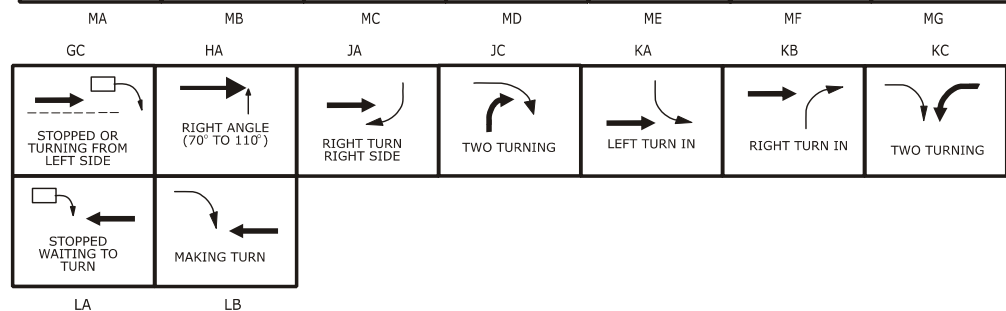
Bend - Lost control / Head on



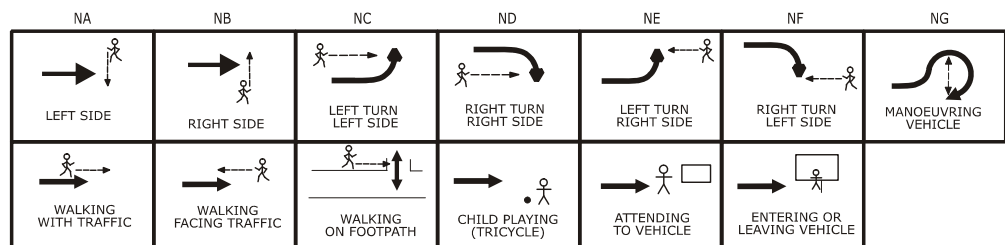
Rear end / Obstruction



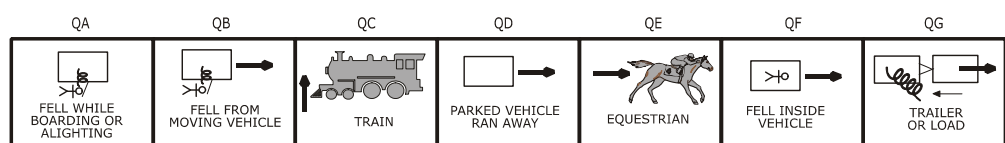
Crossing / Turning



Pedestrian vs Vehicle



Miscellaneous



Groupings of contributing factors








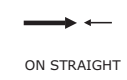
















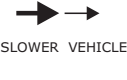











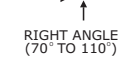









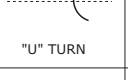
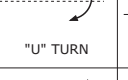

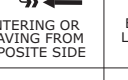
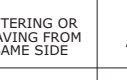






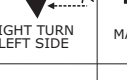





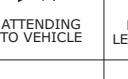
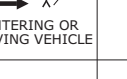

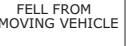





Factor group	Factor codes included
Alcohol involved	100 – 101 103 – 109
Too fast	110 – 119 430 – 432
Failed to give way or stop	300 – 314 320 – 328
Failed to keep left	120 – 128 205
Overtaking	150 – 161
Incorrect lanes or position	129 170 – 183 200 – 204 206 – 209 440 – 448
Poor handling	130 – 134 137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