Marlborough District
Road Safety Report
2004 to 2008

Performance Information
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Introduction and general information

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

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

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

Source of crash information

This report uses data from the New Zealand Transport Agency's crash database. This database includes all crashes involving injury and non–injury for which Police reports have been completed and forwarded to the New Zealand Transport Agency. Mostly five-year data (2004 to 2008) has been used, but 10-year data (1999 to 2008) has been used to analyse trends.

Council authority peer groups

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

The peer group used for comparison with Marlborough District is Group D which consists of provincial towns and hinterland. (Population 20000 - 75000 and/or rural crashes greater than 55 percent). Council authorities included in this group are listed in Figure 1.4.

Definitions of urban and rural

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

Definition of statistically significant

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

Road user compliance data

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

The appropriate web addresses are as follows:

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

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

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

The results of these surveys are available from:

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

General explanatory notes

1. Crash and casualty information in this report generally includes data for both council roads and state highways. Some tables and charts can separate this information, however figures 8.1–8.26 provide information for council roads only.

2. Crash and casualty rates are based on 2008 populations estimates updated from the 2006 census, traffic flows from the year 2008, and the average of five year crash data (2004–2008).

3. Traffic flows are based on Road Asset Maintenance and Management (RAMM) data from December 2008. As different road controlling authorities update flow data in RAMM at different times some data will be more up to date than other data, hence caution should be exercised when comparing traffic flow based crash rates in one authority with those of other authorities particularly as the traffic flow data (VKT) used in the calculations can not be considered definitive. Comparisons should be considered as indicative only.

4. With four to five categories of road for each council authority, some categories will only have short lengths of road. This may cause significant variation in the calculated crash and casualty rates.

5. The crash numbers include all those within the road controlling authority. The crash numbers used in the crash rate section can, however, vary slightly from the remainder of the document as only 'on road' crashes can be used. These are crashes on roads that have traffic volume information recorded. Crashes that occurred in car parks, reserves, beaches etc. are excluded.

6. The severity of a crash is determined as the most severely injured casualty in the crash. Injury severity is classified as fatal, serious, or minor as follows:

   Fatal: Injuries that result in death within 30 days of a crash.

   Serious: Fractures, concussion, internal injuries, crushing, severe cuts and lacerations, severe general shock necessitating medical treatment, and any injury involving removal to and detention in hospital.

   Minor: Injuries which are not serious but which require first aid, or cause discomfort or pain to the person injured, eg sprains and bruises.

7. Ethnicity of road users involved in crashes can now be recorded on traffic crash reports, although some reports may not include this data. Figures 3.25 and 3.26 shows the ethnicity of casualties, where known. Ethnicity is divided into five different groups. Only data for 2004 to 2008 is available. The graph includes all casualties irrespective of culpability.
   NOTE: Ethnicity data should be treated with caution as the data can be considered subjective and incomplete.

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

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

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

11. Alarm crash sites in section 9 as Figures 9.4 to 9.6 are crash sites that have shown a statistically significant increase (at the 95 percent level of confidence) in reported crashes in 2008 compared with the previous five years (2003 to 2007). The sites are initially selected on the basis of 3 or more reported crashes at the sites. Sites are listed regardless of any recent remedial treatments and they may already be under investigation for treatment.

Crash Rates and Costs

Crash reporting rates

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

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

Figure 1.1 Reporting rate serious injuries to hospital admissions

Region	2004	2005	2006	2007	2008
Northland	34%	30%	28%	34%	31%
Auckland	22%	17%	19%	16%	16%
Waikato	51%	40%	38%	49%	46%
Bay of Plenty	28%	32%	37%	38%	27%
Gisborne	28%	31%	26%	29%	26%
Hawkes Bay	73%	80%	75%	59%	60%
Taranaki	66%	55%	65%	77%	41%
Manawatu-Wanganui	50%	38%	34%	35%	34%
Wellington	61%	68%	61%	73%	64%
Nelson-Marlborough	63%	44%	52%	54%	49%
West Coast	43%	53%	55%	59%	53%
Canterbury	37%	47%	42%	50%	45%
Otago	107%	99%	85%	77%	53%
Southland	74%	78%	103%	73%	53%
New Zealand	39%	36%	35%	37%	**34%**

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

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

Note: These values should be considered indicative only.

Figure 1.2 Crashes per 100 million vehicle kilometres travelled

	Council roads		State Highways	
	Urban	Rural	Urban	Rural
Marlborough District	39	21	33	19
Group D	31	25	27	16
All NZ	35	27	30	16

Figure 1.3 Casualties per 100 million vehicle kilometres travelled

	Council roads		State Highways	
	Urban	Rural	Urban	Rural
Marlborough District	51	36	41	27
Group D	40	37	38	25
All NZ	45	39	42	25

Figure 1.4 Peer group crash and casualty rates

Group D

City or District name	Crashes per 10,000 Population (5 year average)	Crashes per 100 million vehicle kilometres travelled: Council roads Urban	Council roads Rural	State Highways Urban	State Highways Rural	Casualties per 10,000 Population (5 year average)	Casualties per 100 million vehicle kilometres travelled: Council roads Urban	Council roads Rural	State Highways Urban	State Highways Rural	2008 Population	% of rural crashes
Ashburton	20	32	13	18	7	28	41	19	26	11	28700	55
Far North	37	36	37	35	27	56	52	57	51	43	57900	81
Franklin	30	36	28	0	9	43	45	40	0	14	63200	76
Horowhenua	28	25	18	28	18	41	29	31	41	28	30600	64
Manawatu	32	23	26	21	13	49	28	40	29	21	29300	81
Marlborough	27	39	21	33	19	38	51	36	41	27	44500	59
Masterton	28	42	23	41	26	37	54	33	53	32	23100	39
Matamata-Piako	33	43	22	29	15	47	54	31	39	24	31400	77
Rodney	28	23	27	21	15	40	31	39	31	22	96400	69
Selwyn	23	13	17	29	11	34	15	23	38	18	37500	90
South Taranaki	29	40	30	13	21	42	51	49	20	31	26700	74
South Waikato	31	25	21	20	17	50	31	31	32	28	22800	78
Southland	56	53	29	48	26	88	68	46	76	42	29100	88
Tasman	26	26	19	26	20	36	31	28	34	29	46500	75
Taupo	39	39	24	23	15	59	48	34	34	26	33500	68
Thames Coromandel	62	21	17	19	8	81	26	27	27	13	26800	15
Waikato	43	41	29	18	15	61	52	39	29	22	46800	81
Waimakariri	18	24	21	23	8	25	31	30	33	11	46100	69
Waipa	27	32	26	26	14	40	43	36	39	22	44700	67
Waitaki	46	42	29	50	19	66	52	40	62	31	20700	60
Western Bay of Plenty	26	27	23	20	15	38	33	33	30	24	44400	83
Whakatane	26	26	25	59	17	41	37	42	73	28	34400	71
Group D	31	28	25	25	16	46	36	36	36	25	865100	70
All New Zealand	26	35	27	30	16	36	44	39	41	24	4267970	41

Group D : Provincial towns and hinterland. (Population 20000-75000 and/or rural crashes greater than 55 percent).
Crashes and casualties per 100 million VKT are based on five years of reported injury on-road crash data (2004-2008) and December (2007) VKT.
Crashes and casualties per 10,000 population are based on five year average crash data (2004-2008) and Statistics NZ 2008 population estimates.

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

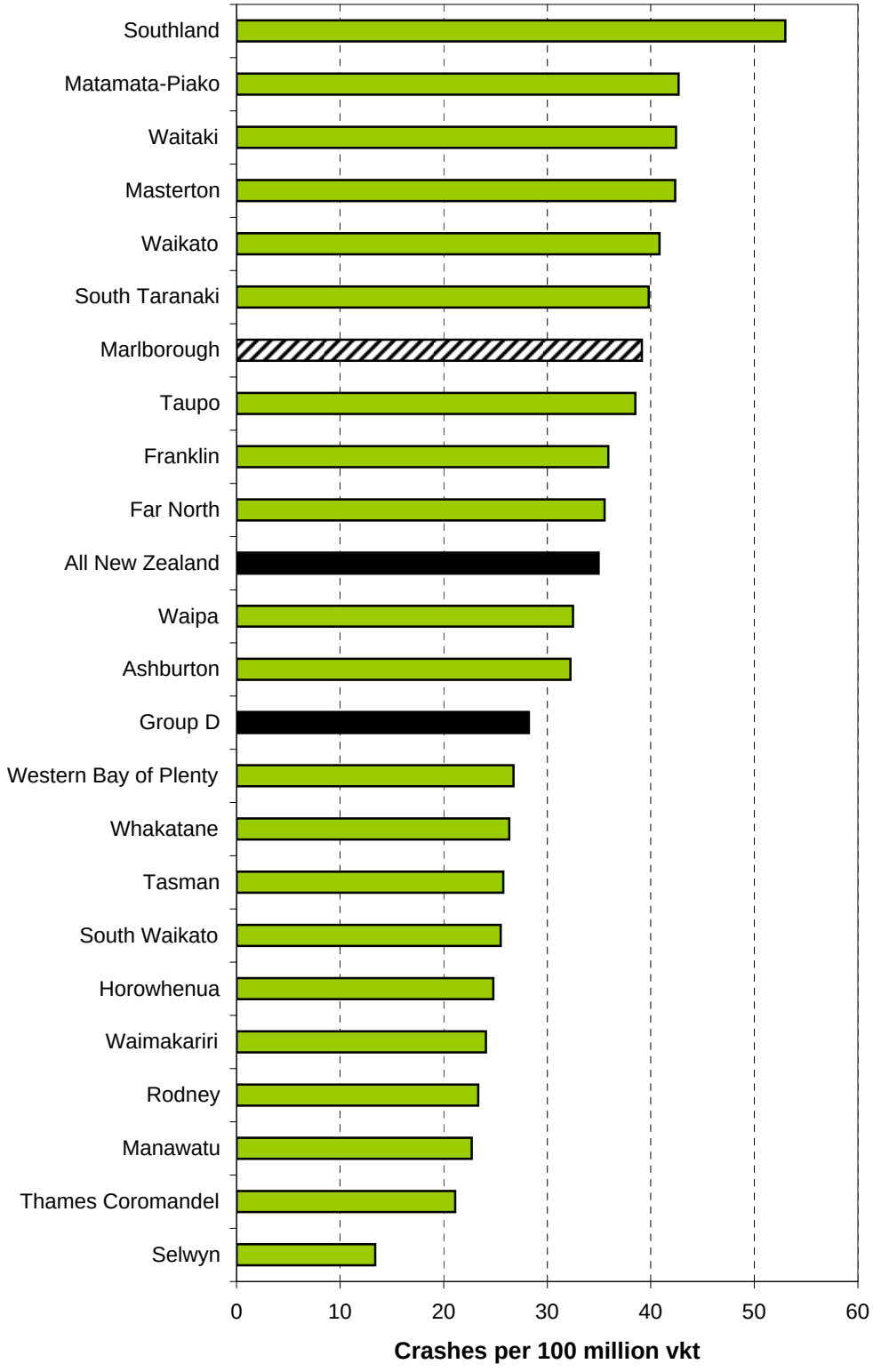


Figure 1.6 Crashes per 100 million vehicle-kilometres travelled - rural council roads

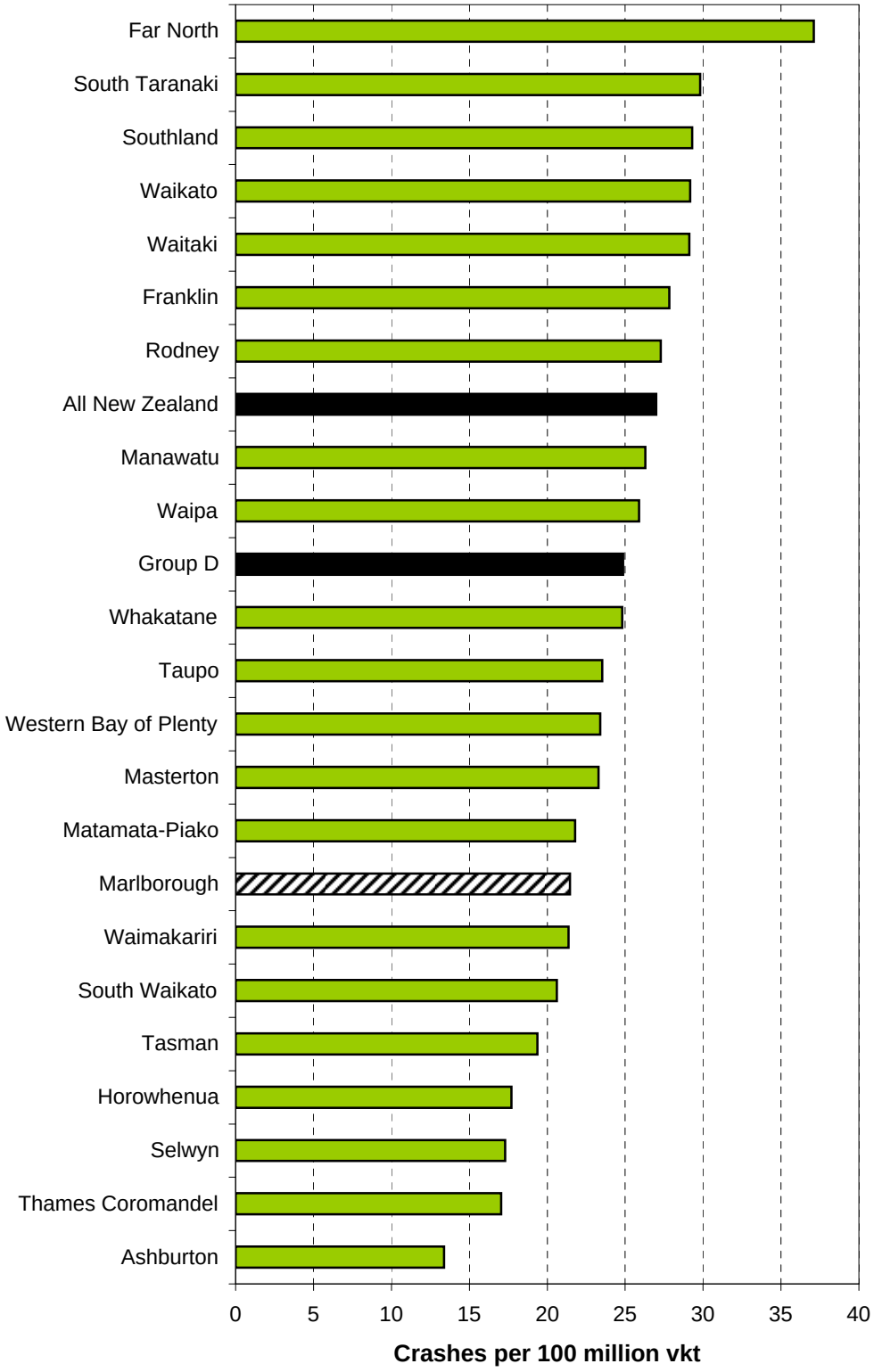


Figure 1.7 Crashes per 100 million vehicle kilometres travelled - urban state highways

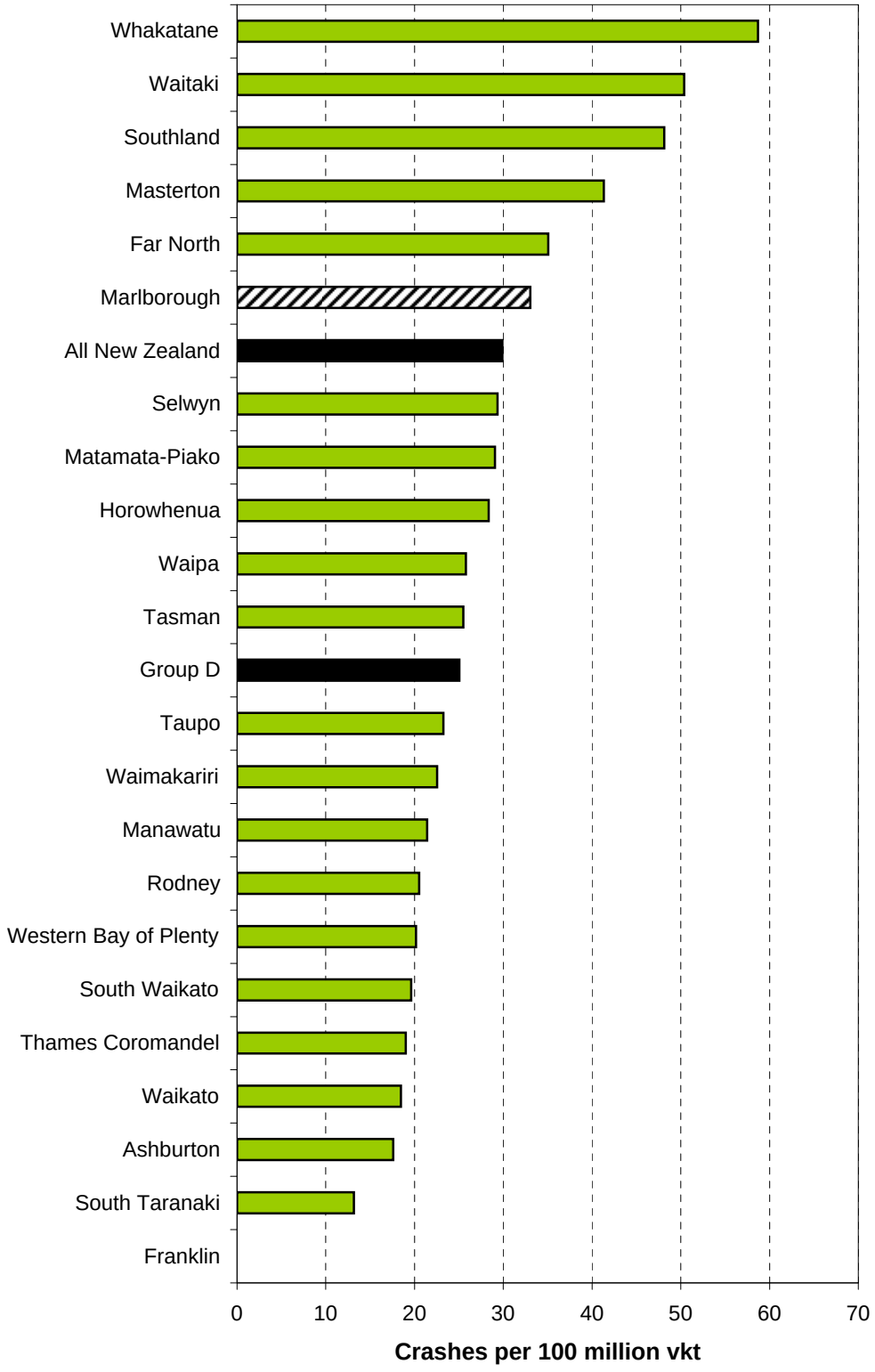


Figure 1.8 Crashes per 100 million vehicle-kilometres travelled - rural state highways

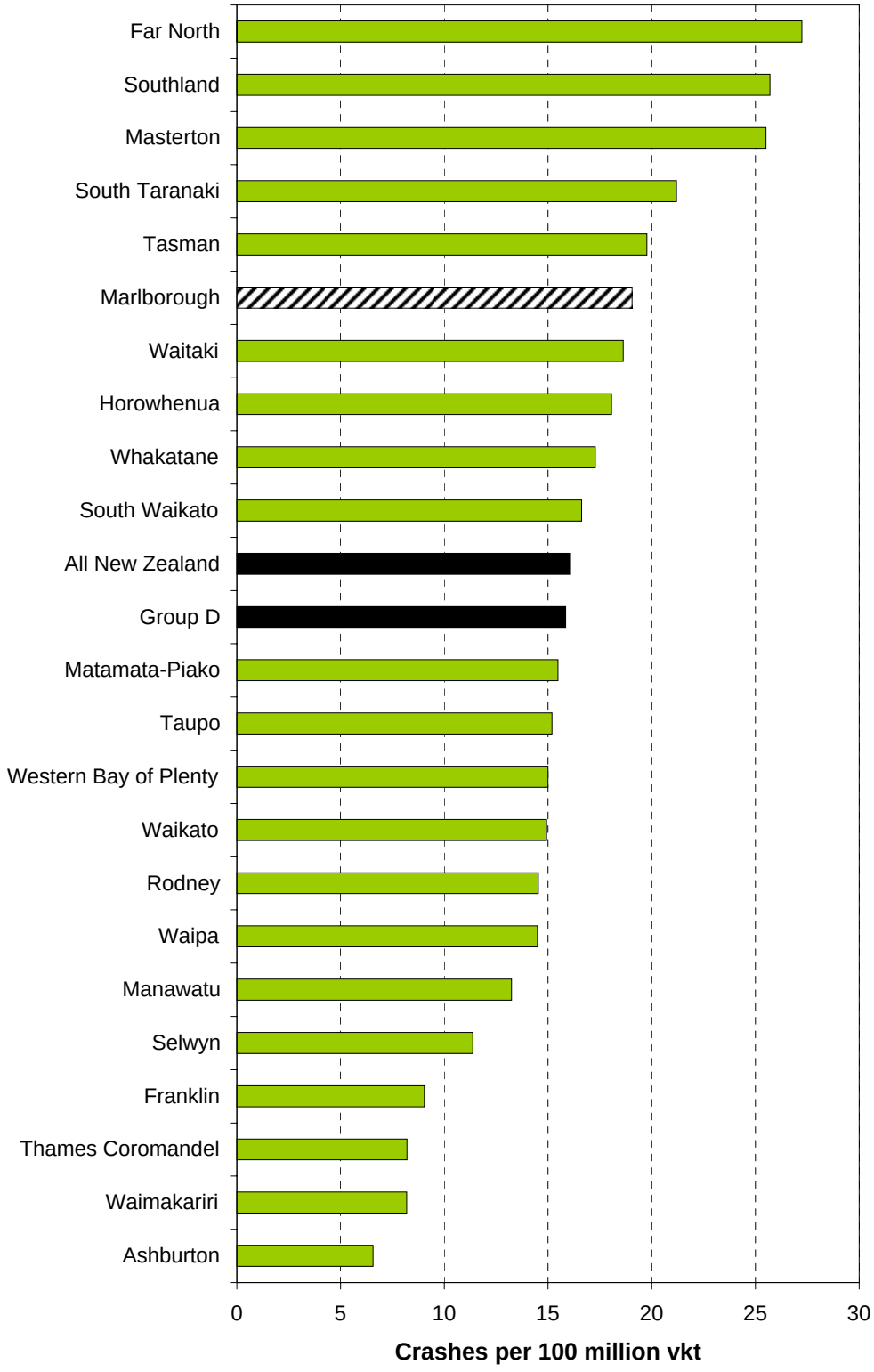


Figure 1.9 Crashes per 10,000 people
Marlborough District

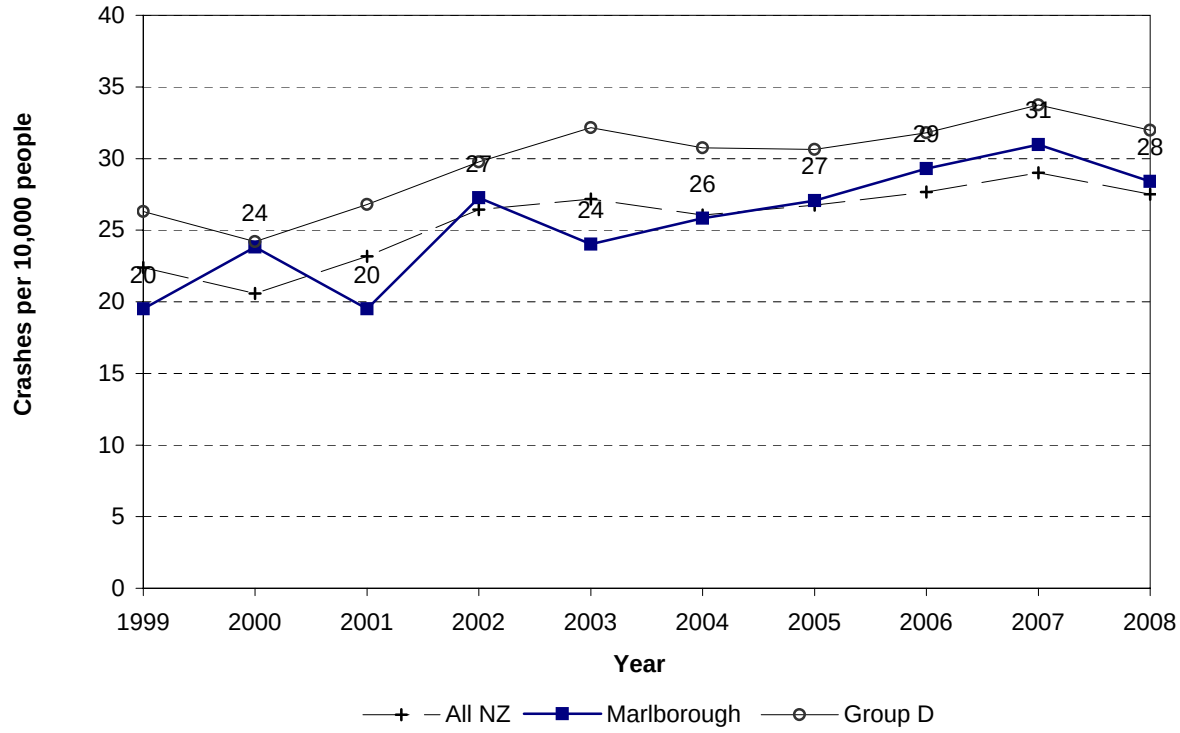


Figure 1.10 Casualties per 10,000 people
Marlborough District

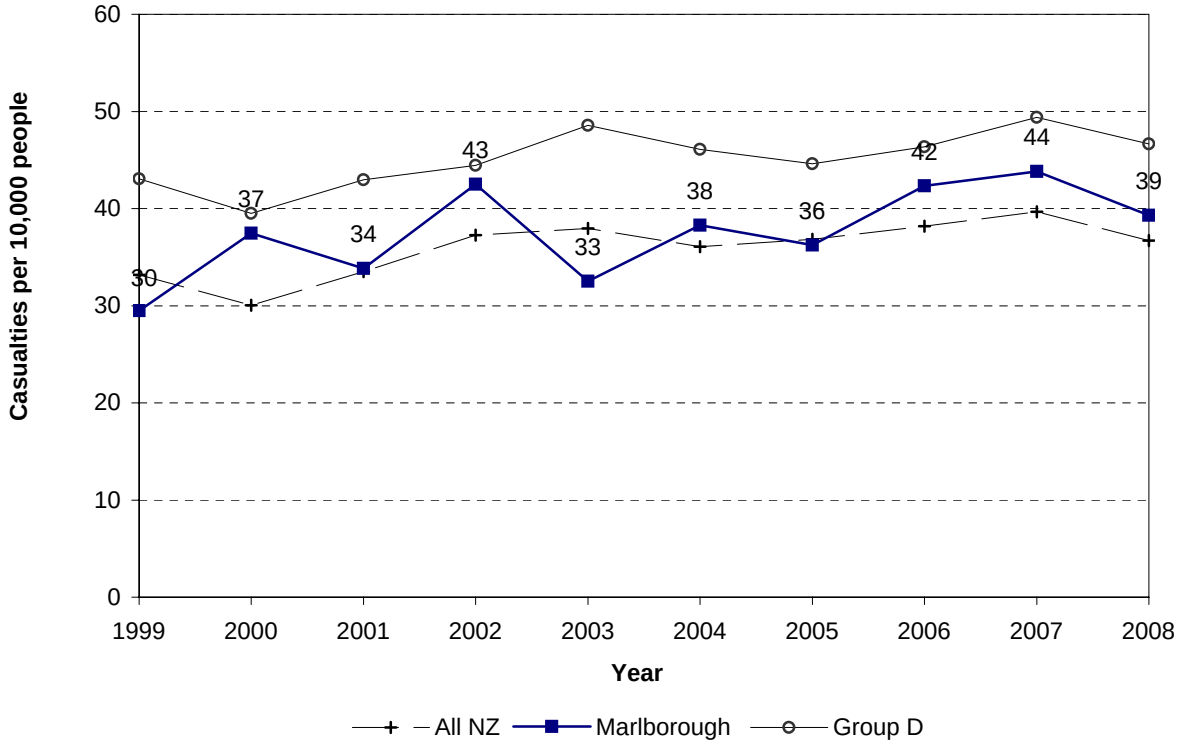


Figure 1.11 Social cost of crashes in Marlborough District in 2008

		Marlborough District	New Zealand
Council roads	urban rural	$8.65 $10.18	$1,636.63 $962.97
State Highways	urban rural	$2.40 $13.45	$303.03 $1,390.98
Total		**$34.68**	**$4,293.62**

Note: Crash costs are in $ millions

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

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

The average value of a loss of life due to a road crash is estimated by the amount of money the New Zealand population would be willing to pay for a safety improvement that would result in the expected avoidance of one premature death. This is the willingness to pay based value of statistical life or VOSL. The VOSL was established at $2 million in 1991. This has been indexed to the average hourly earnings (ordinary time) to express the value in current dollars. The updated VOSL is $3.35 million (in June 2008 dollars). Based on several international and New Zealand studies on VOSL, the average loss of life quality for permanent impairments due to a serious and a minor injury were estimated to be 10% and 0.4% of the VOSL respectively.

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

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

For a detail discussion on this, please refer to 'The social cost of road crashes and injuries: June 2008 update', available at the Ministry of Transport's website:
http://www.transport.govt.nz/assets/NewPDFs/NewFolder/Social-Cost-June-2008-update-final.pdf

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

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

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

Crash Counts

Figure 2.1: Crash numbers and severity 2004 to 2008 - whole District

	2004	2005	2006	2007	2008	Total	%	Group D
Fatal crashes	10	3	3	4	1	**21**	3%	6%
Serious crashes	30	25	32	29	26	**142**	23%	23%
Minor crashes	68	87	91	102	98	**446**	73%	72%
Total injury crashes	**108**	**115**	**126**	**135**	**125**	**609**	**100%**	**100%**
Non-injury crashes	270	283	286	285	261	1385		

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

	2004	2005	2006	2007	2008	Total	%	Group D
Fatal crashes	1	1	0	0	0	2	1%	3%
Serious crashes	7	8	11	10	7	43	17%	19%
Minor crashes	29	42	39	48	49	207	82%	78%
Total injury crashes	**37**	**51**	**50**	**58**	**56**	**252**	**100%**	**100%**
Non-injury crashes	169	181	193	189	172	904		

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

	2004	2005	2006	2007	2008	Total	%	Group D
Fatal crashes	9	2	3	4	1	19	5%	7%
Serious crashes	23	17	21	19	19	99	28%	24%
Minor crashes	39	45	52	54	49	239	67%	69%
Total injury crashes	**71**	**64**	**76**	**77**	**69**	**357**	**100%**	**100%**
Non-injury crashes	101	102	93	96	89	481		

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

	2004	2005	2006	2007	2008	Total	%	Group D
Fatal casualties	10	3	3	4	1	21	2%	4%
Serious casualties	38	29	37	37	32	173	20%	20%
Minor casualties	112	122	142	150	140	666	77%	75%
Total casualties	**160**	**154**	**182**	**191**	**173**	**860**	**100%**	**100%**

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

	2004	2005	2006	2007	2008	Total	%	Group D
Fatal casualties	1	1	0	0	0	2	1%	2%
Serious casualties	7	9	12	11	7	46	14%	17%
Minor casualties	43	58	48	68	59	276	85%	81%
Total casualties	**51**	**68**	**60**	**79**	**66**	**324**	**100%**	**100%**

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

	2004	2005	2006	2007	2008	Total	%	Group D
Fatal casualties	9	2	3	4	1	19	4%	5%
Serious casualties	31	20	25	26	25	127	24%	21%
Minor casualties	69	64	94	82	81	390	73%	74%
Total casualties	**109**	**86**	**122**	**112**	**107**	**536**	**100%**	**100%**

Figure 2.7 Number of injury crashes
Marlborough District all roads (urban & rural)

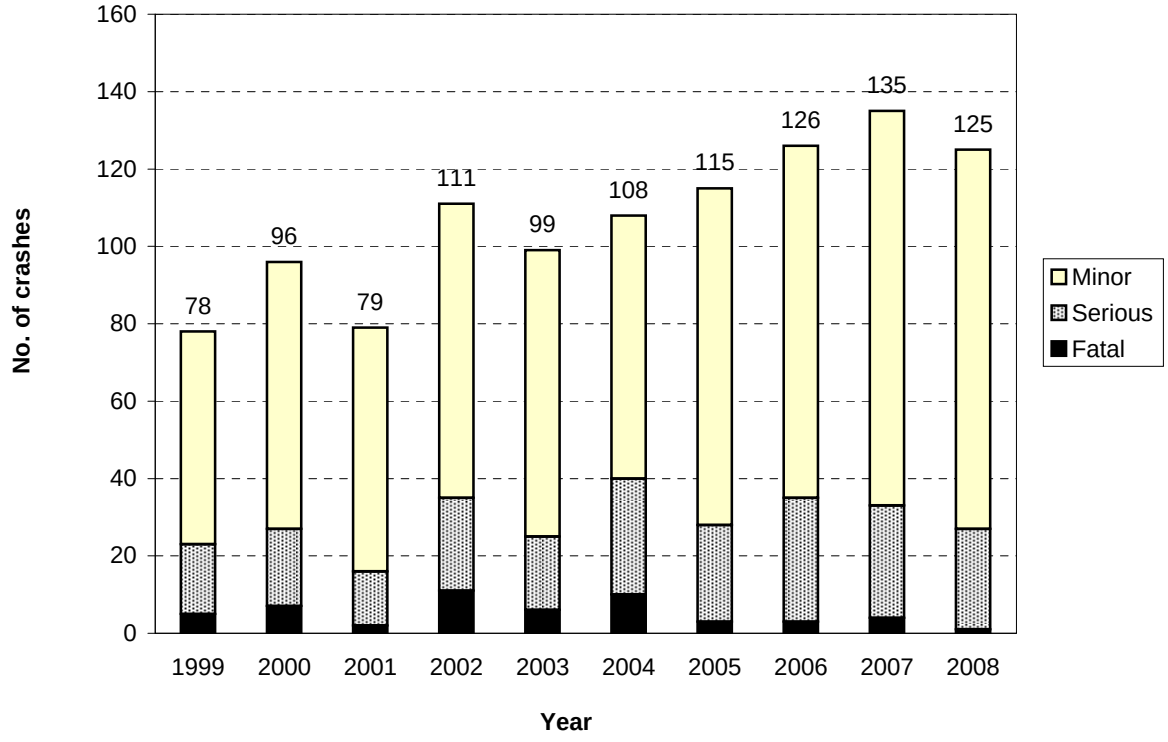


Figure 2.8 Number of casualties
Marlborough District all roads (urban & rural)

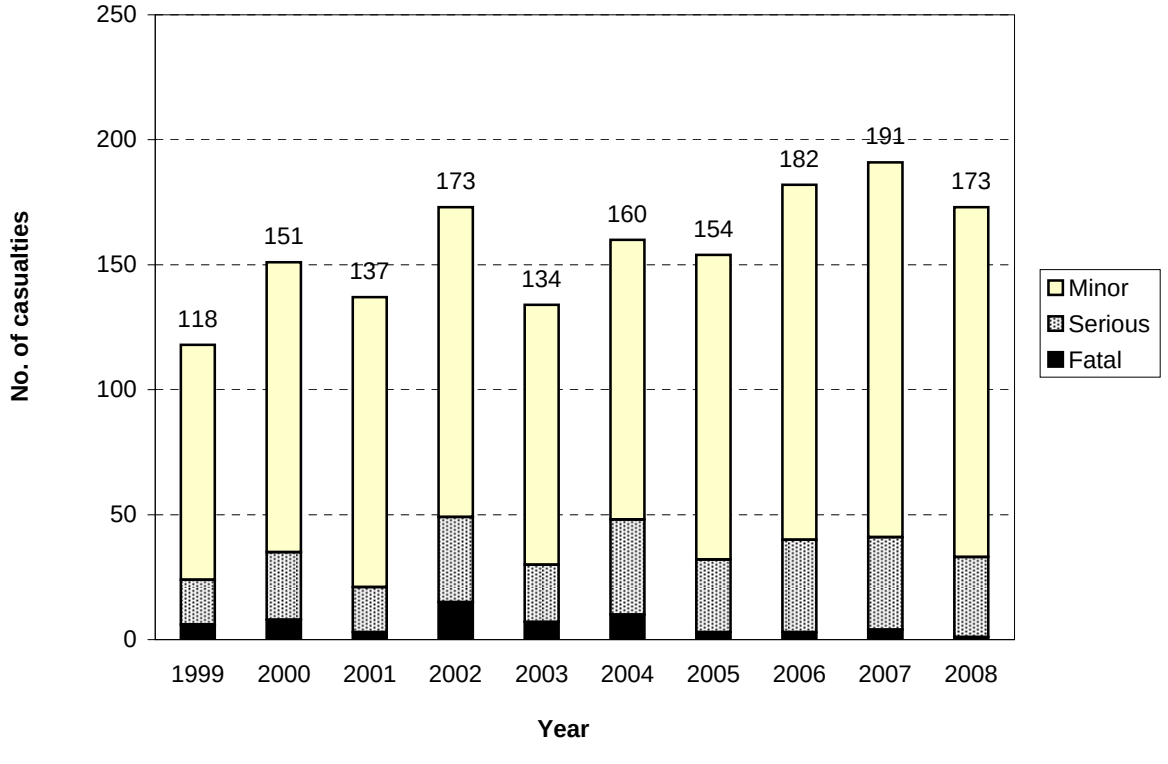


Figure 2.9 Number of injury crashes
Marlborough District - urban

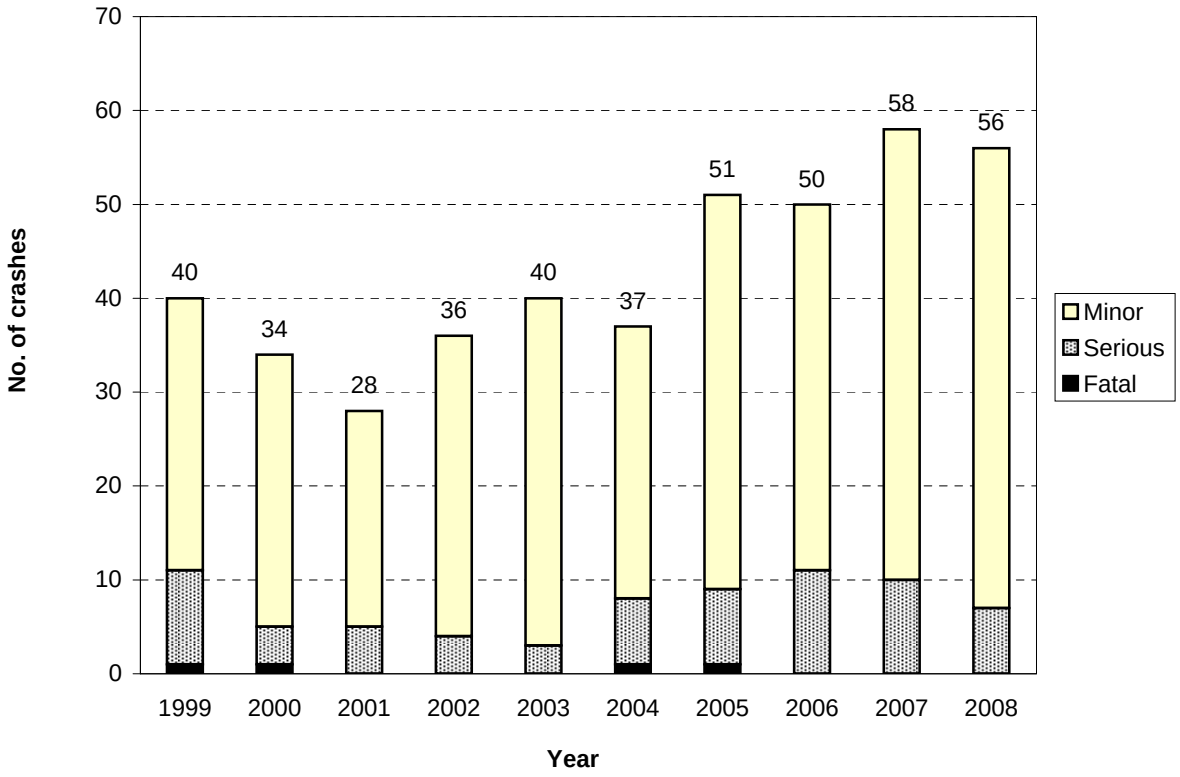


Figure 2.10 Number of casualties
Marlborough District - urban

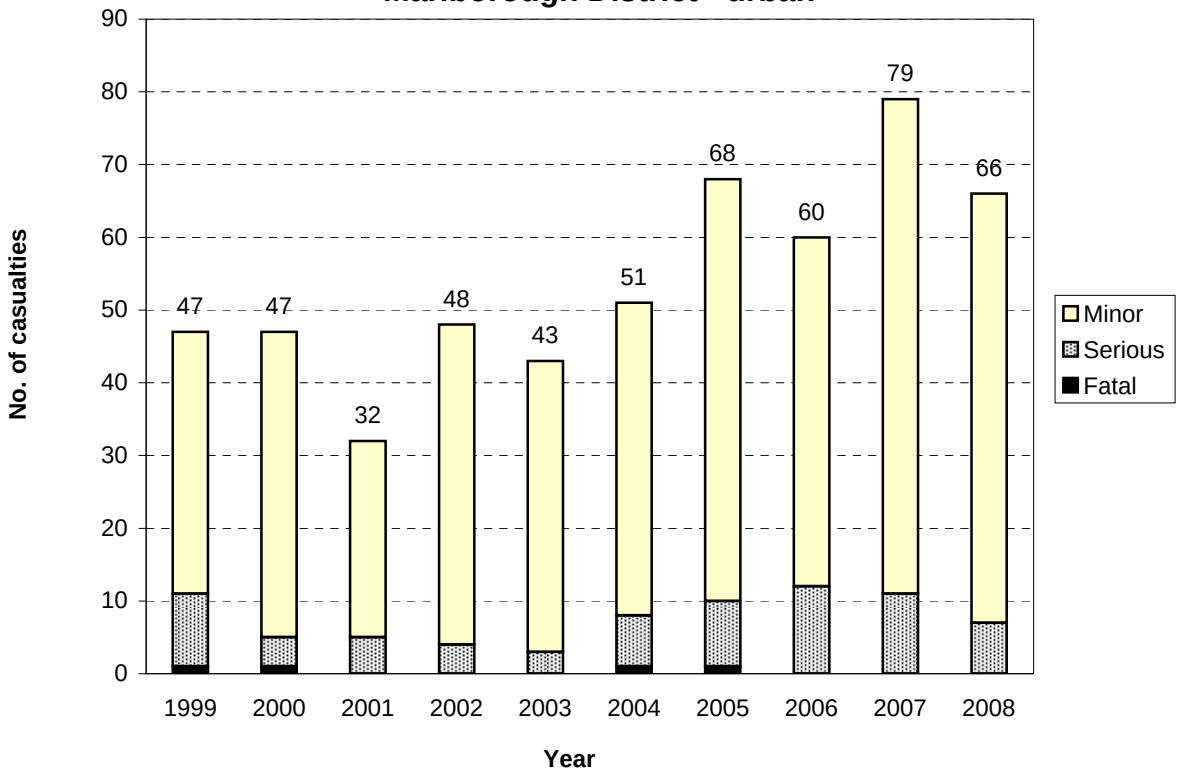


Figure 2.11 Number of injury crashes
Marlborough District - rural

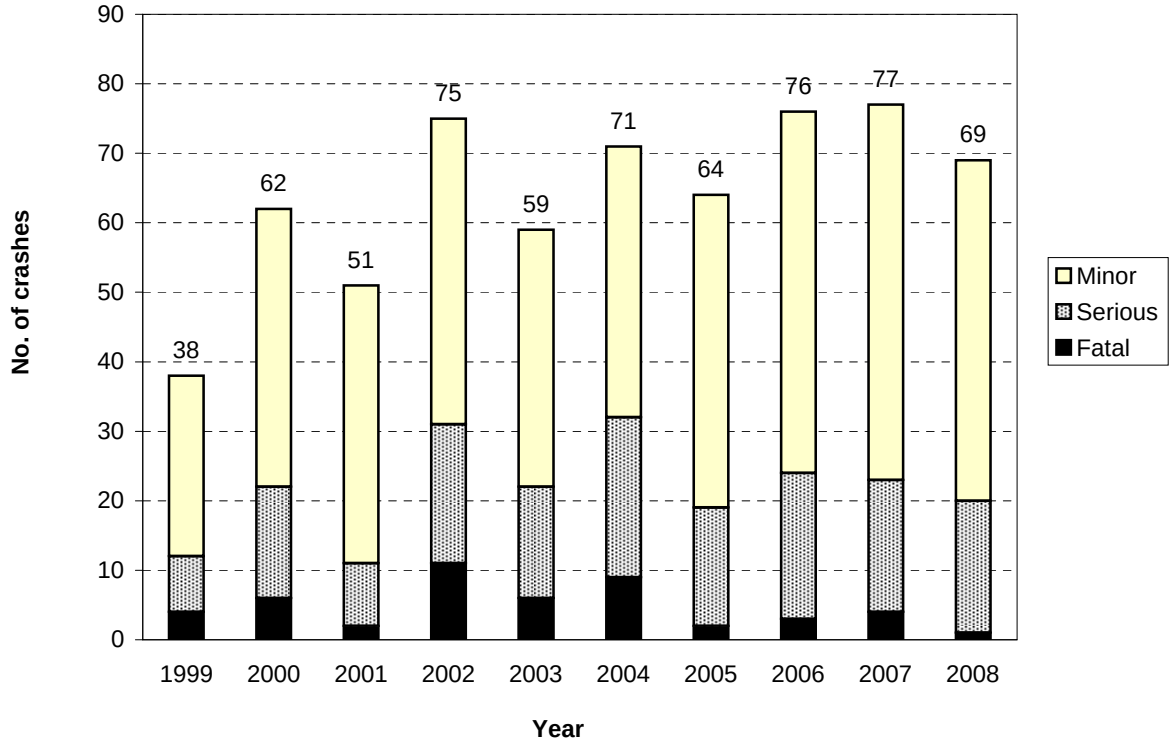


Figure 2.12 Number of casualties
Marlborough District - rural

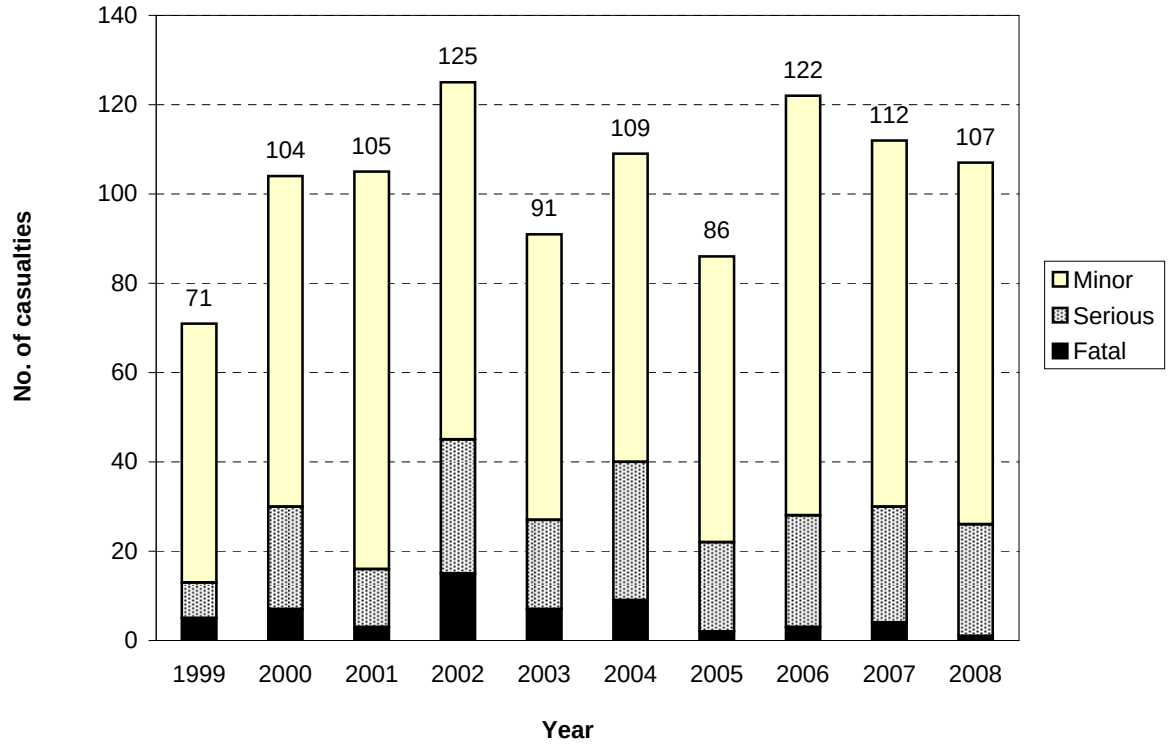
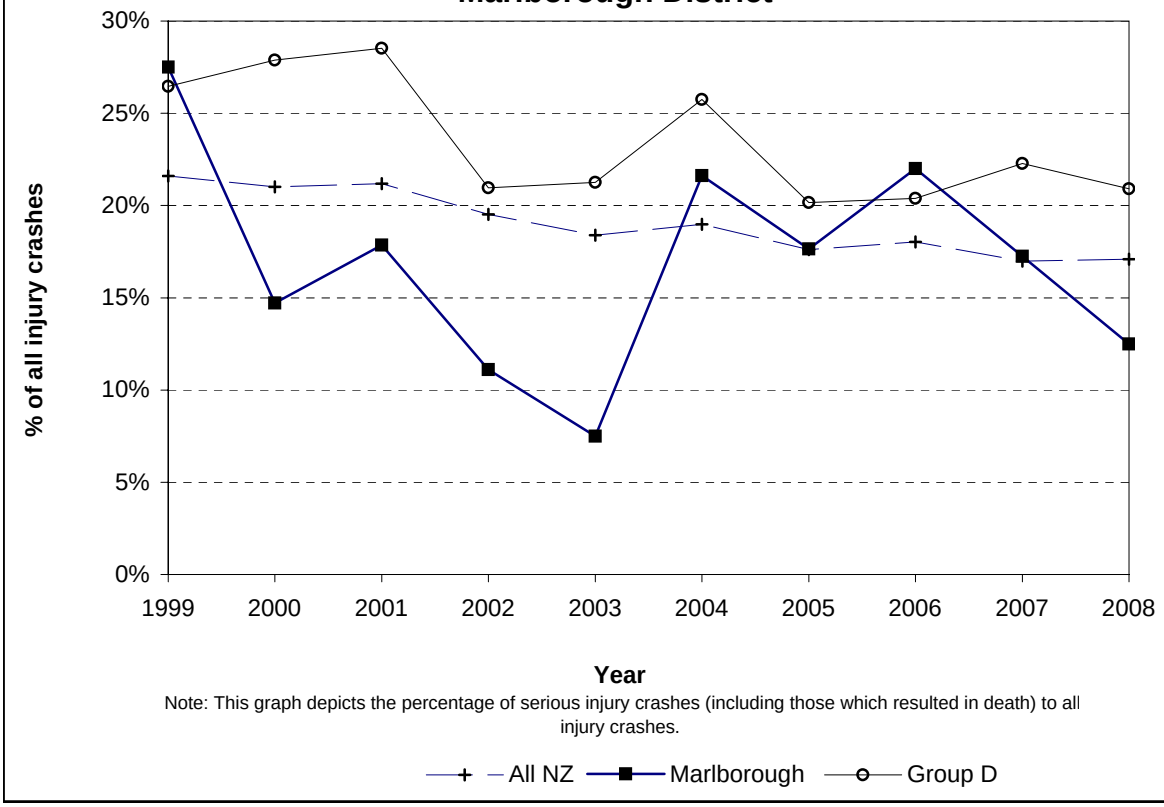
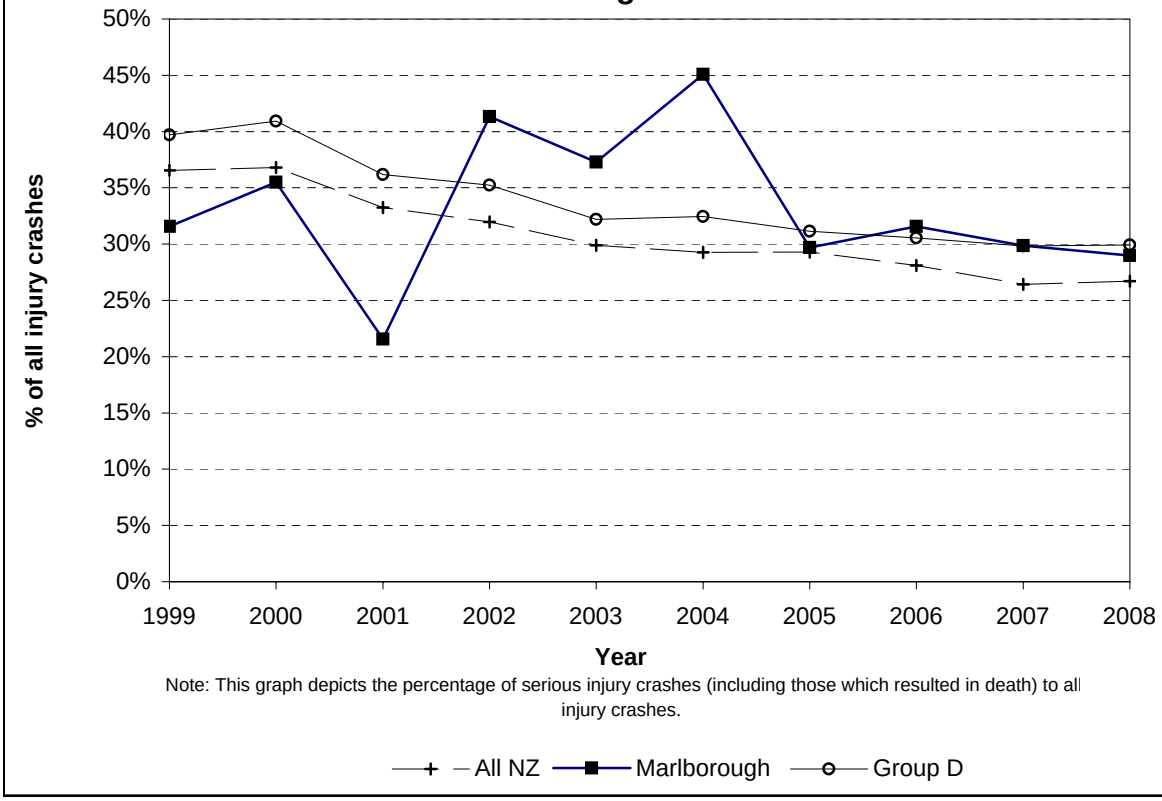


Figure 2.13 Severity ratio - urban Marlborough District



Note: This graph depicts the percentage of serious injury crashes (including those which resulted in death) to all injury crashes.

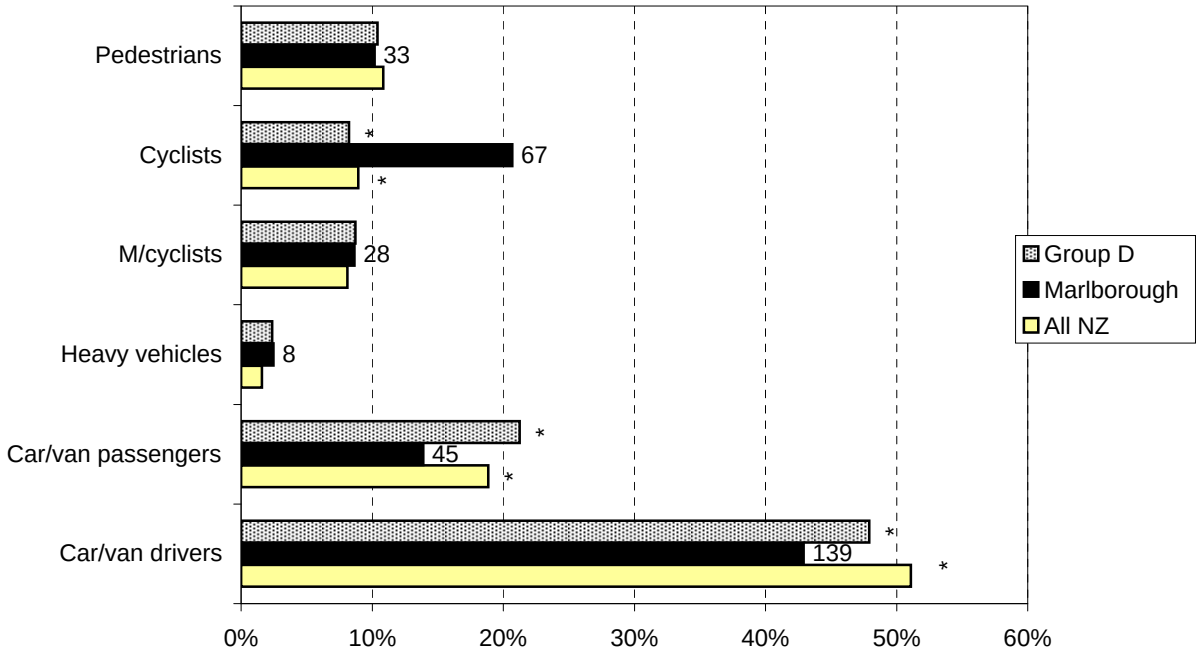
Figure 2.14 Severity ratio - rural Marlborough District



Note: This graph depicts the percentage of serious injury crashes (including those which resulted in death) to all injury crashes.

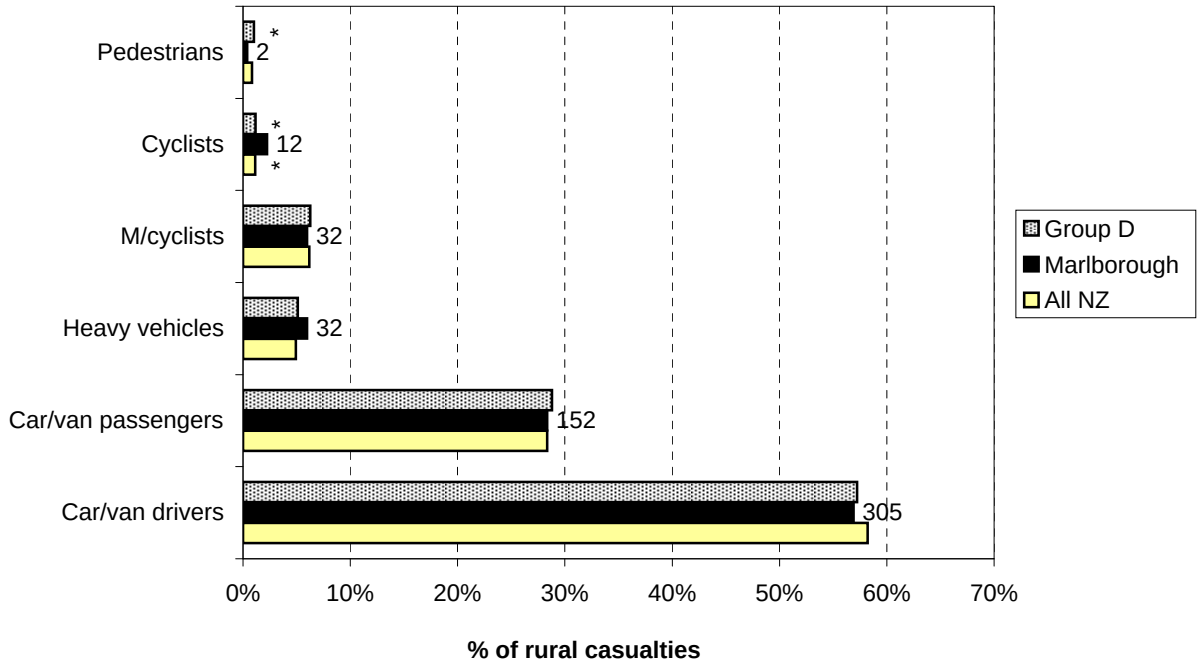
Road User Statistics

Figure 3.1 Road user casualties - urban Marlborough District (2004-2008)



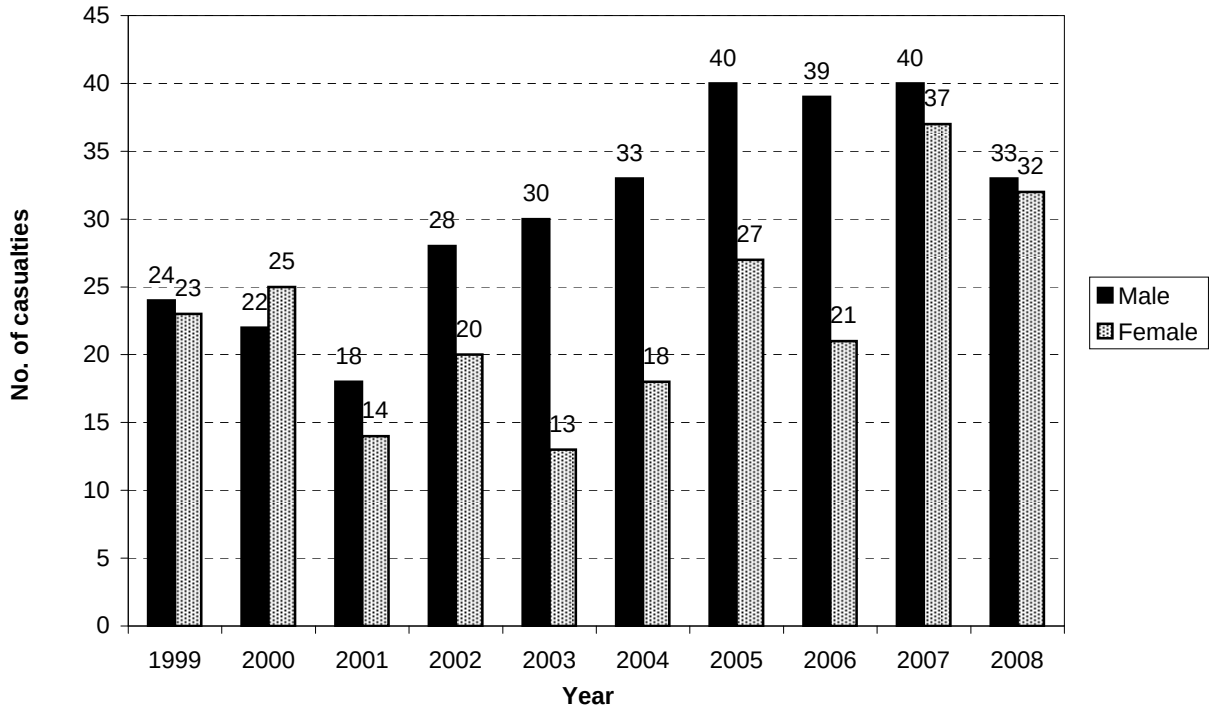
Note: While the graph plots percentages, the number of casualties is shown against the data points.
*Denotes statistically significant difference between Local Authority and National or Peer Group Proportions

Figure 3.2 Road user casualties - rural Marlborough District (2004-2008)



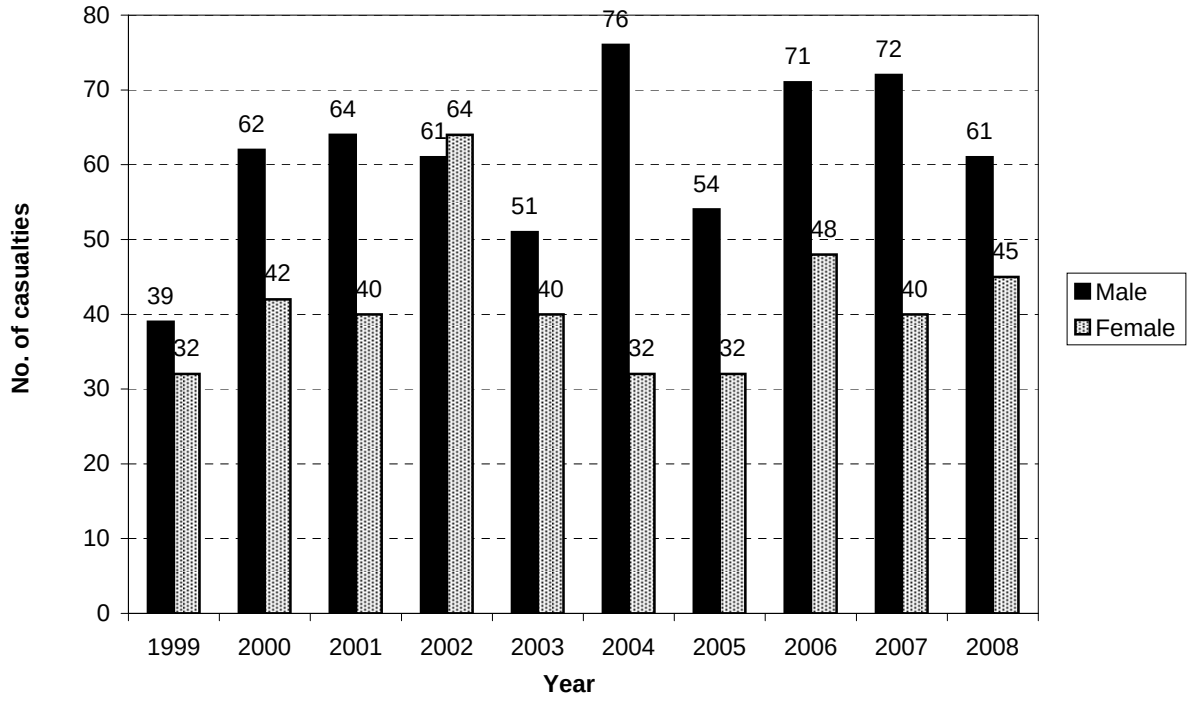
Note: While the graph plots percentages, the number of casualties is shown against the data points.
*Denotes statistically significant difference between Local Authority and National or Peer Group Proportions

Figure 3.3 Male/female casualties - urban Marlborough District



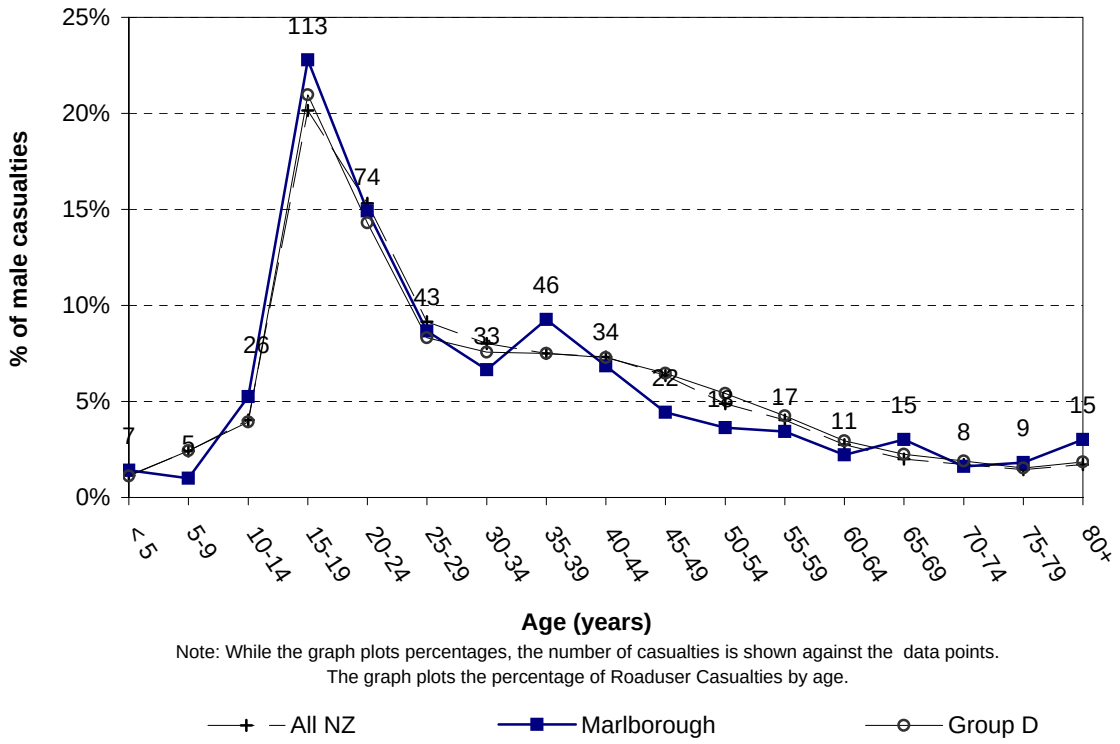
Note: This graph shows the number of male and female roadusers injured

Figure 3.4 Male/female casualties - rural Marlborough District



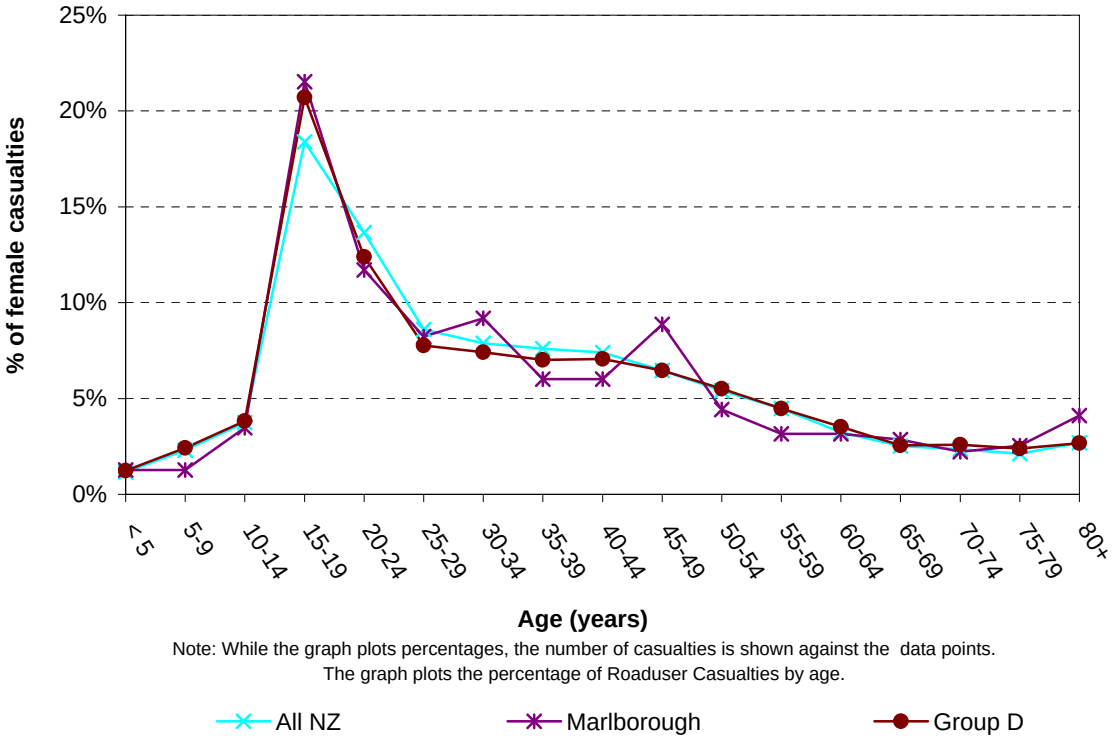
Note: This graph shows the number of male and female roadusers injured

Figure 3.5 Male casualties by age
Marlborough District (2004-2008)



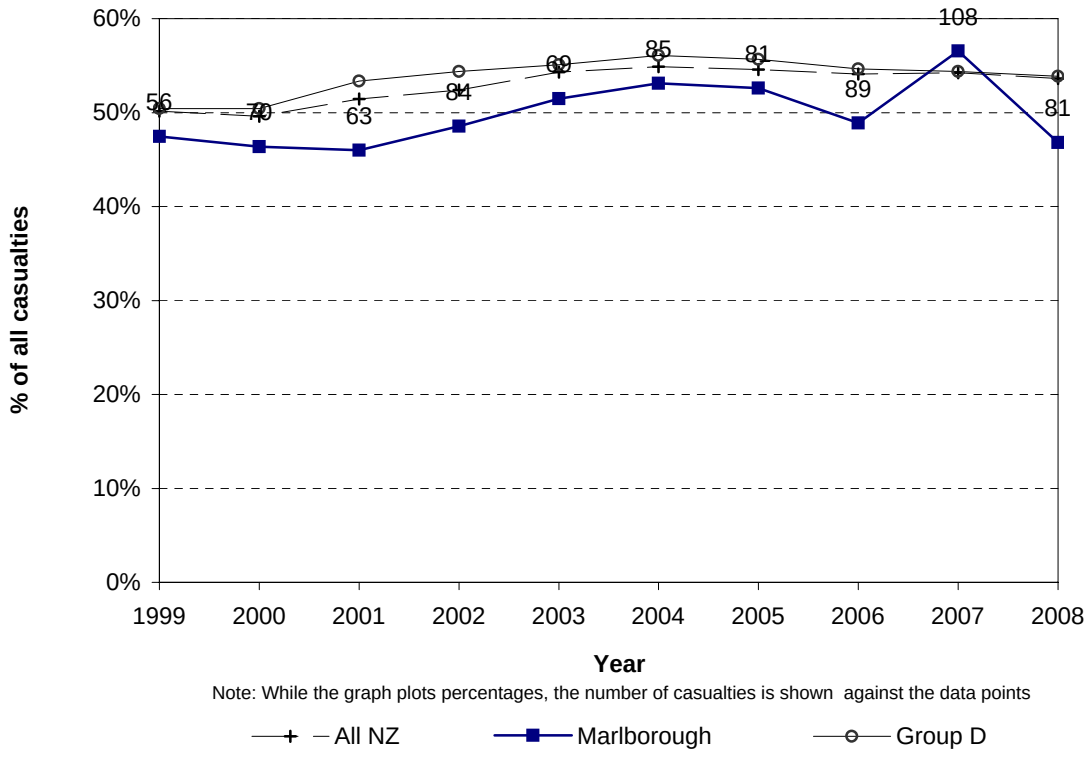
Note: While the graph plots percentages, the number of casualties is shown against the data points.
The graph plots the percentage of Roaduser Casualties by age.

Figure 3.6 Female casualties by age
Marlborough District (2004-2008)



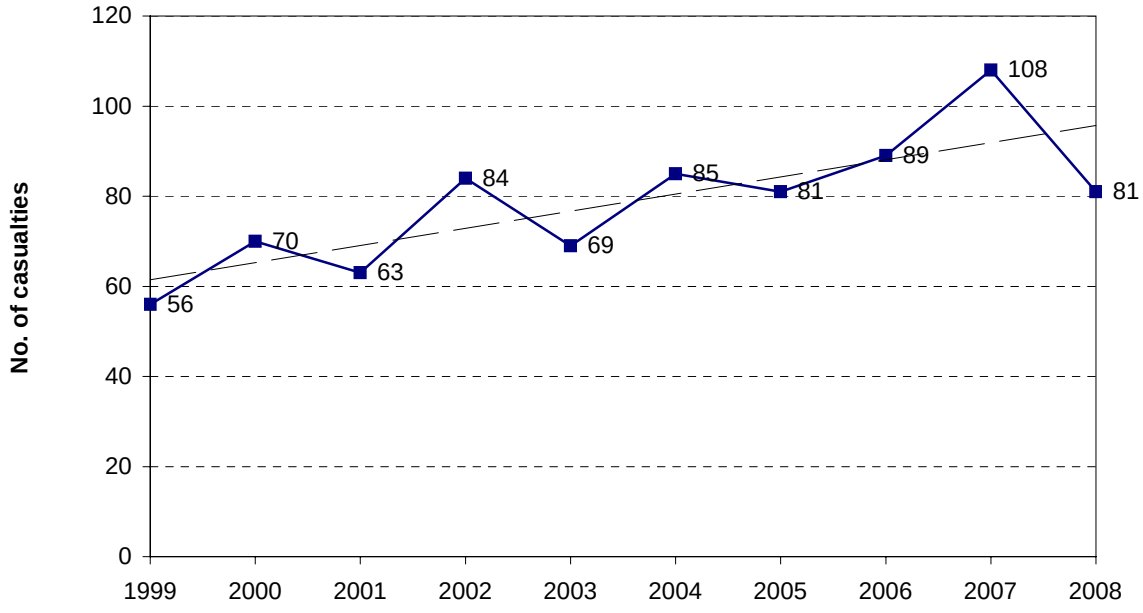
Note: While the graph plots percentages, the number of casualties is shown against the data points.
The graph plots the percentage of Roaduser Casualties by age.

Figure 3.7 Car/van driver casualties
Marlborough District



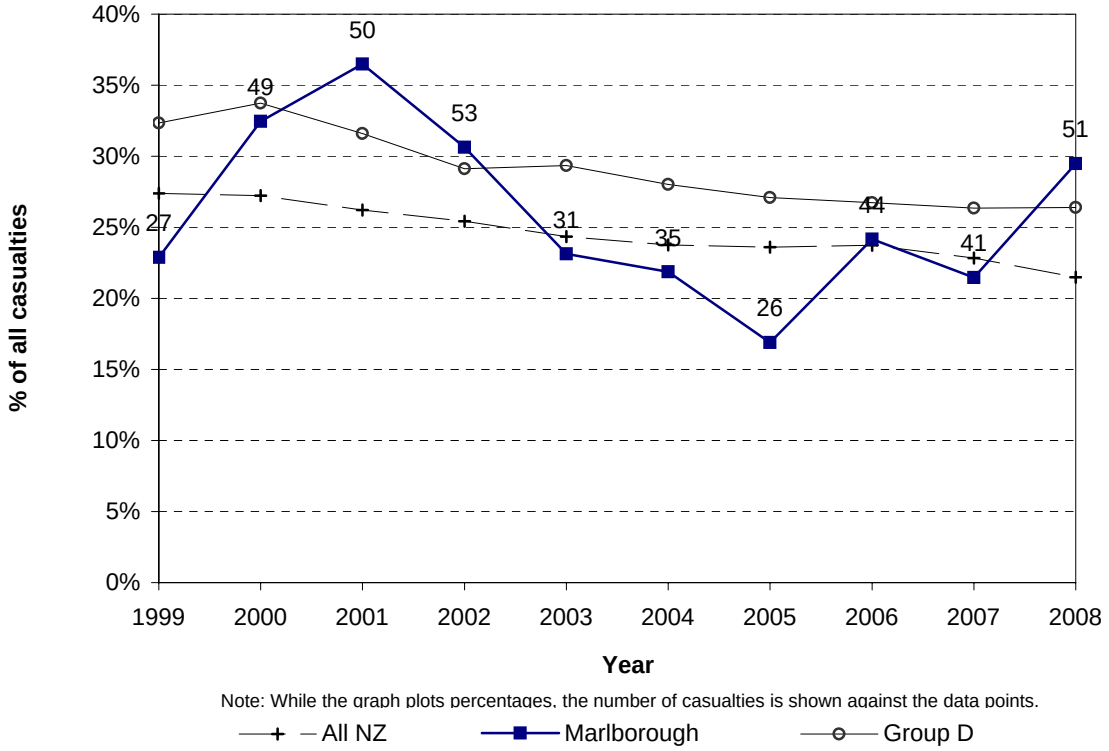
Note: While the graph plots percentages, the number of casualties is shown against the data points

Figure 3.8 Car/van driver casualties
Marlborough District



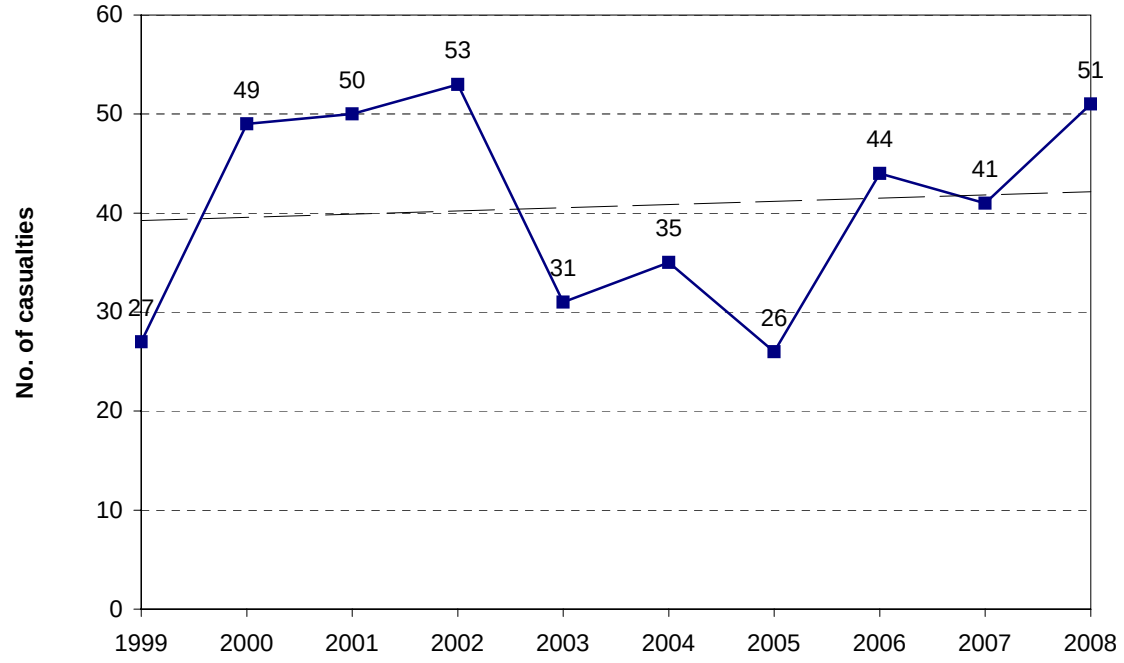
Note: Dotted line represents the ten year trend line

Figure 3.9 Car/van passenger casualties
Marlborough District



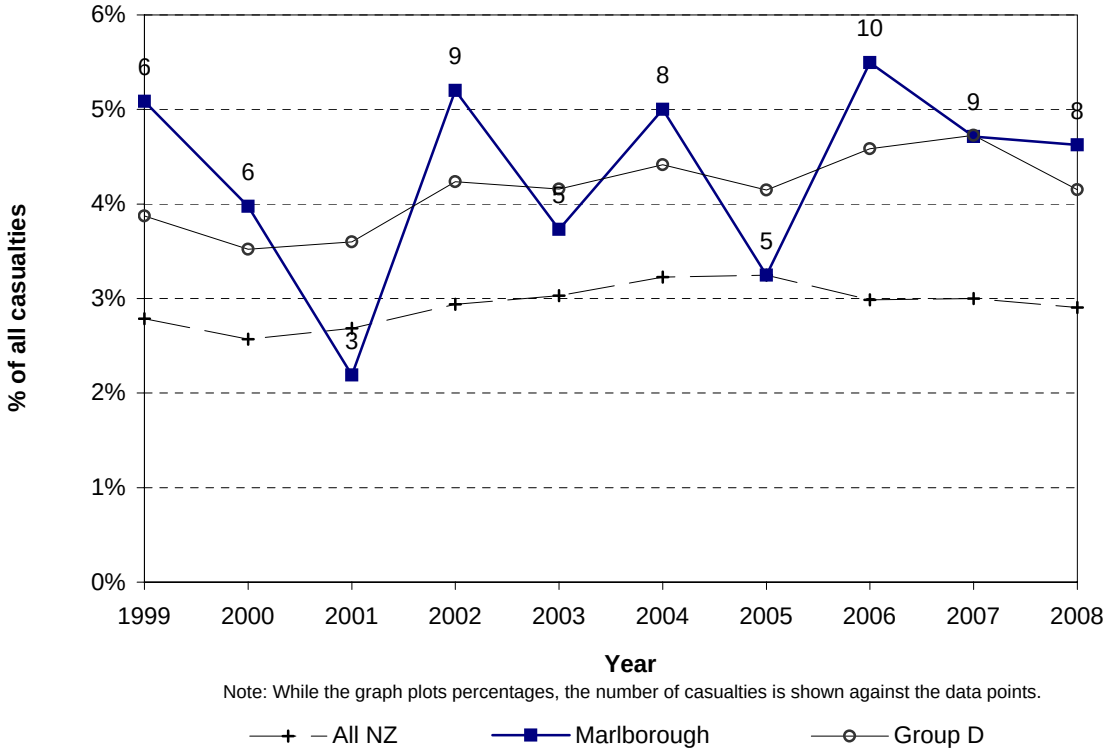
Note: While the graph plots percentages, the number of casualties is shown against the data points.

Figure 3.10 Car/van passenger casualties
Marlborough District



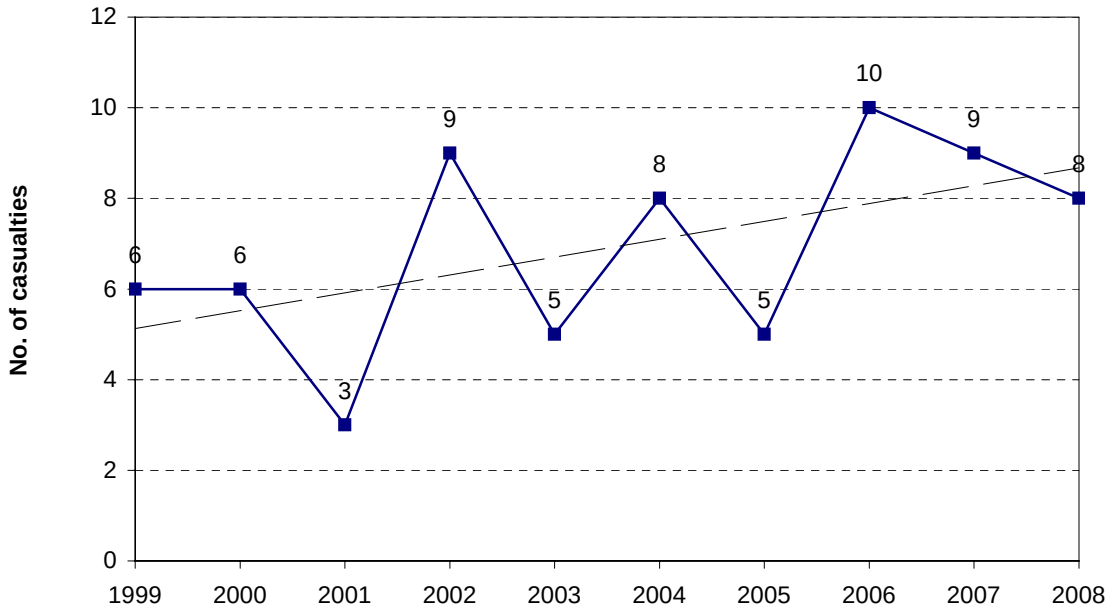
Note: Dotted line represents the ten year trend line

Figure 3.11 Heavy vehicle casualties
Marlborough District



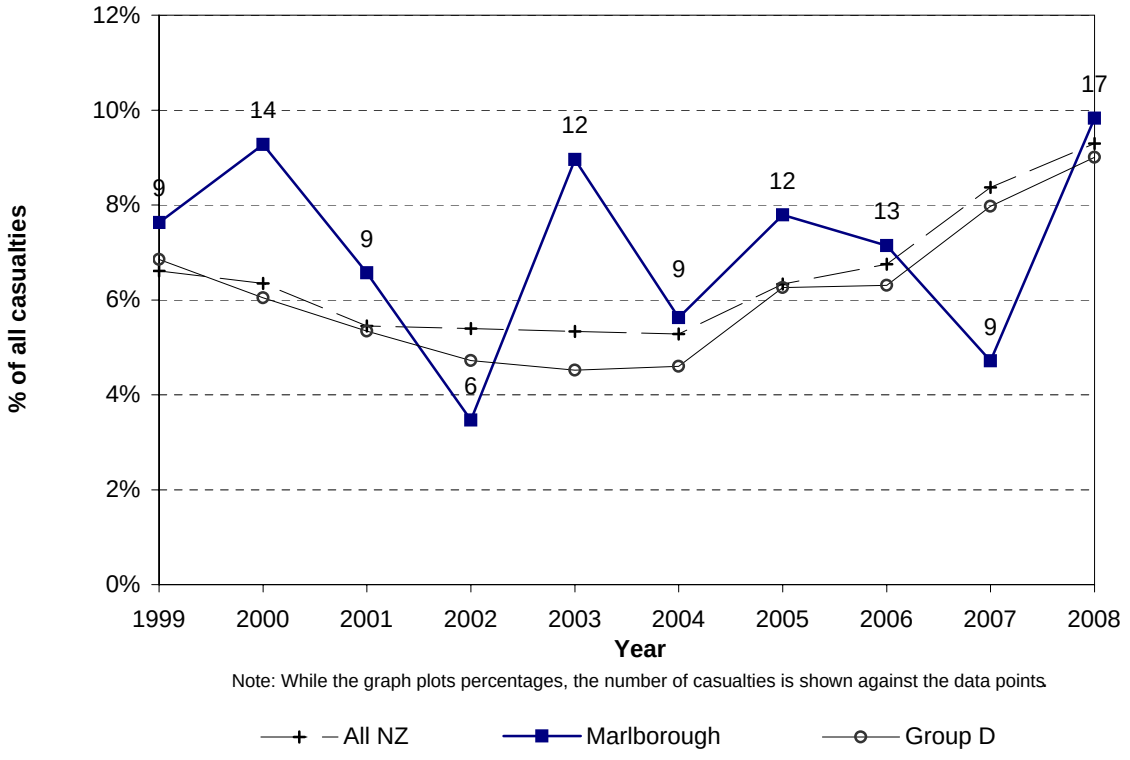
Note: While the graph plots percentages, the number of casualties is shown against the data points.

Figure 3.12 Heavy vehicle casualties
Marlborough District



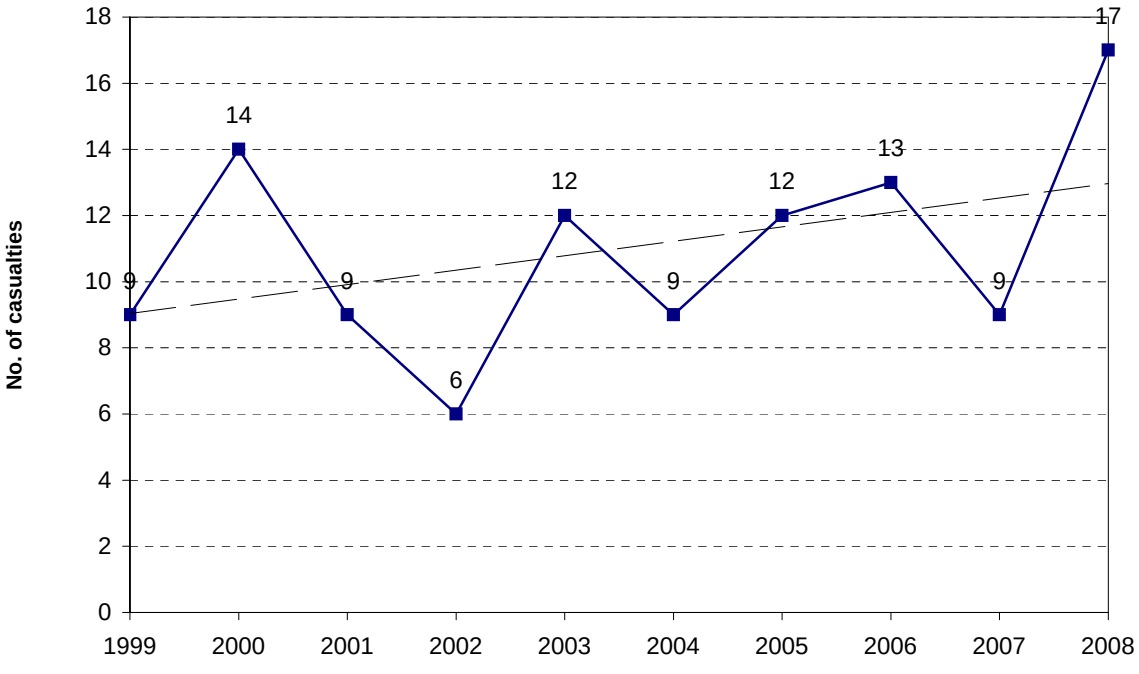
Note: Dotted line represents the ten year trend line

Figure 3.13 Motorcyclist casualties
Marlborough District



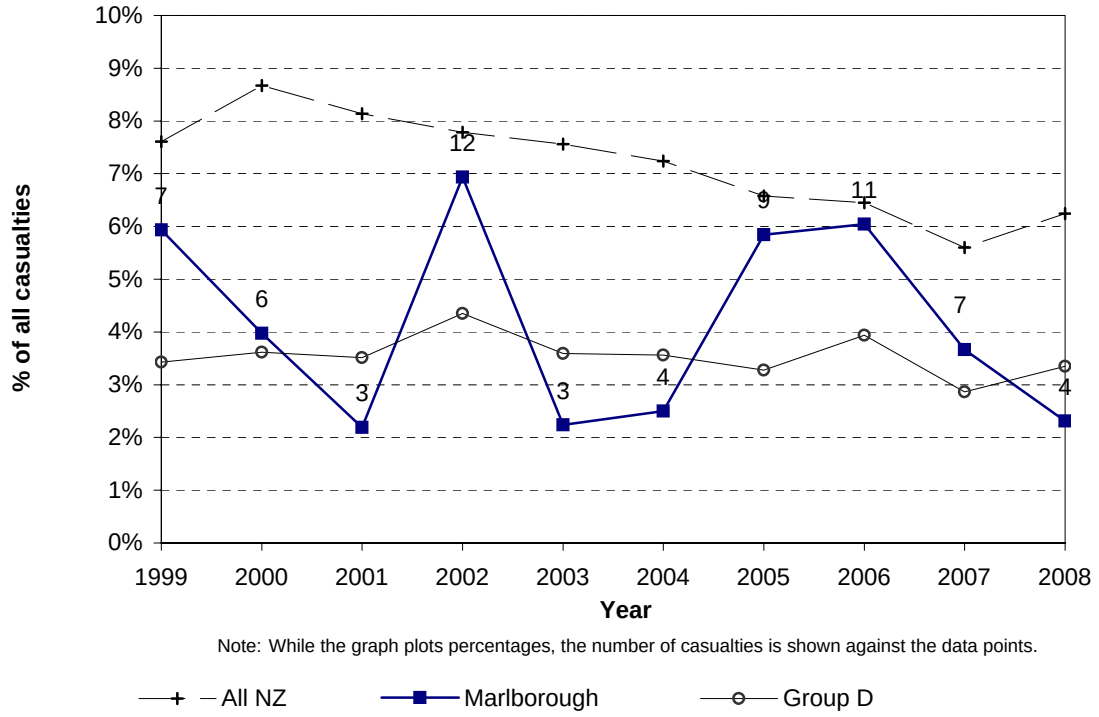
Note: While the graph plots percentages, the number of casualties is shown against the data points.

Figure 3.14 Motorcyclist casualties
Marlborough District



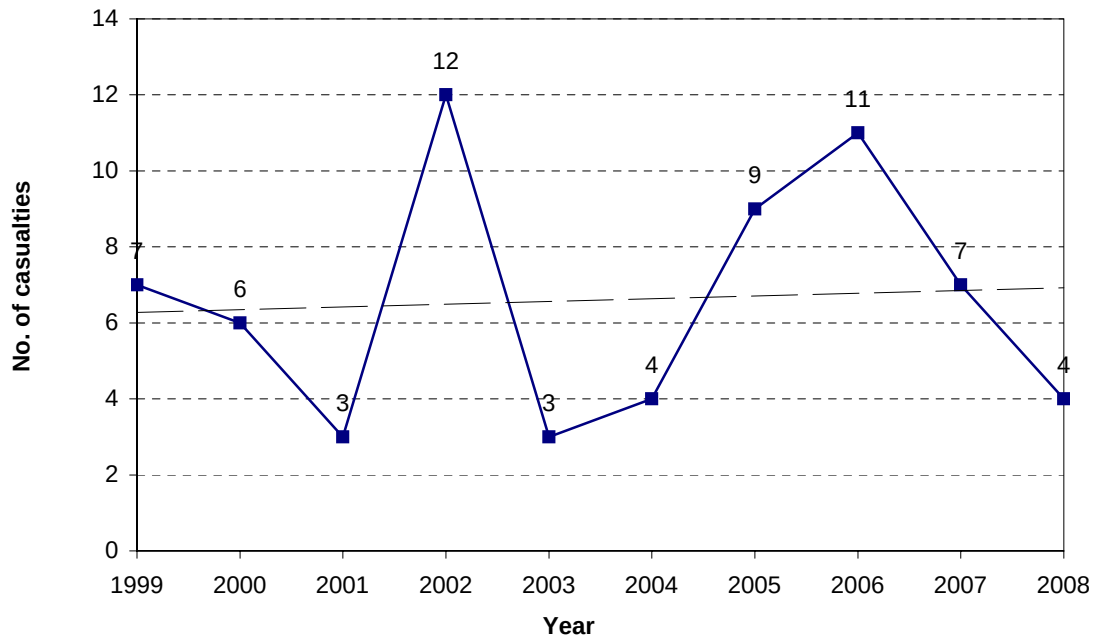
Note: Dotted line represents the ten year trend line

Figure 3.15 Pedestrian casualties
Marlborough District



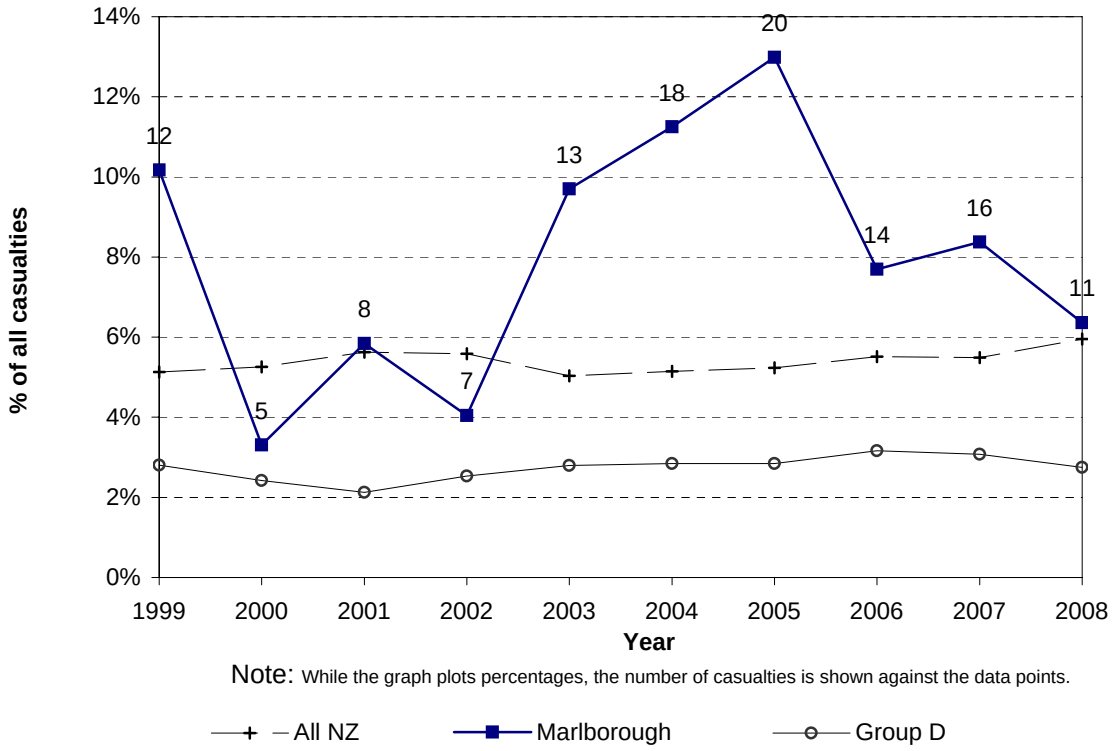
Note: While the graph plots percentages, the number of casualties is shown against the data points.

Figure 3.16 Pedestrian casualties
Marlborough District



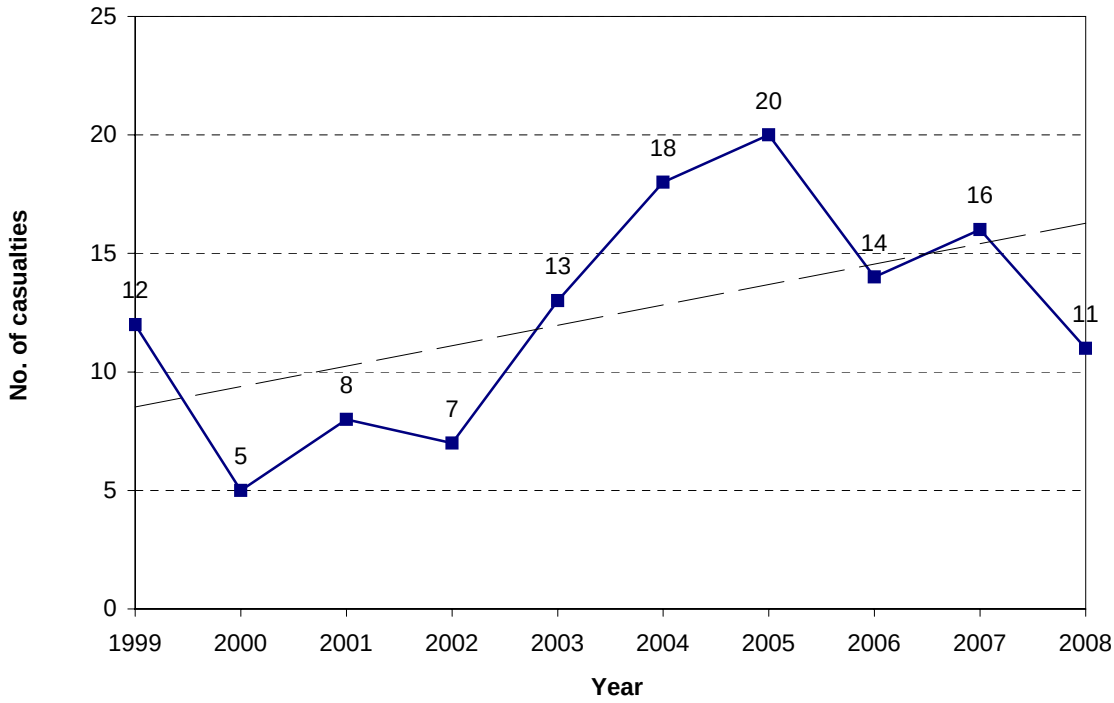
Note: Dottedline represents the ten year trend line

Figure 3.17 Cyclist casualties
Marlborough District



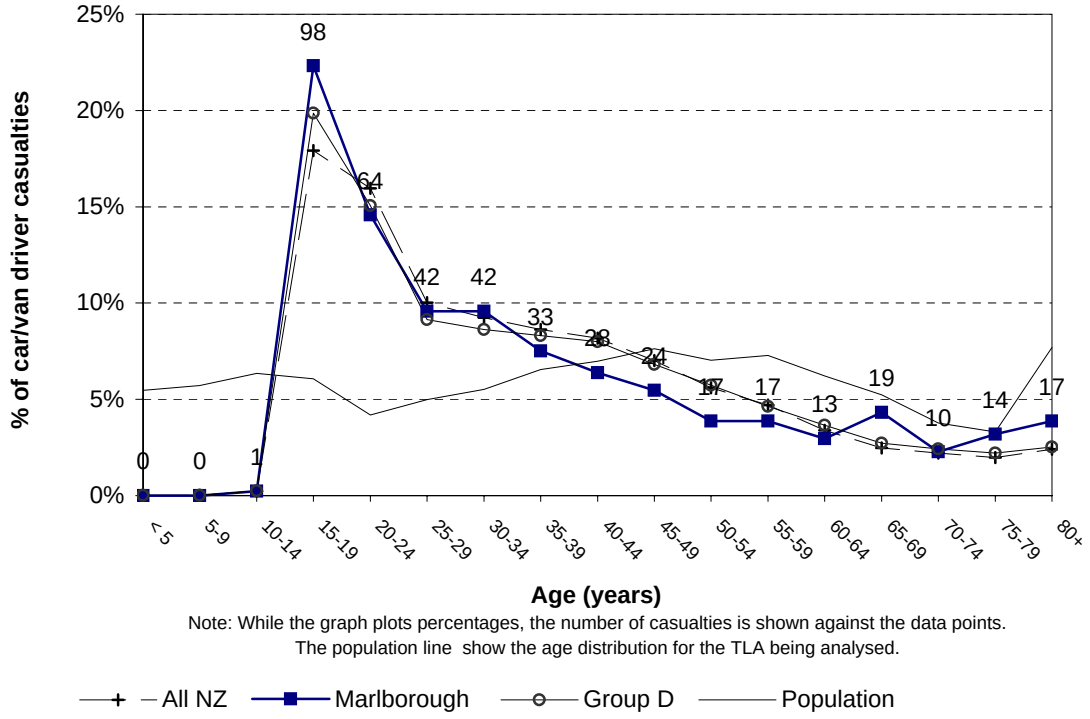
Note: While the graph plots percentages, the number of casualties is shown against the data points.

Figure 3.18 Cyclist casualties
Marlborough District



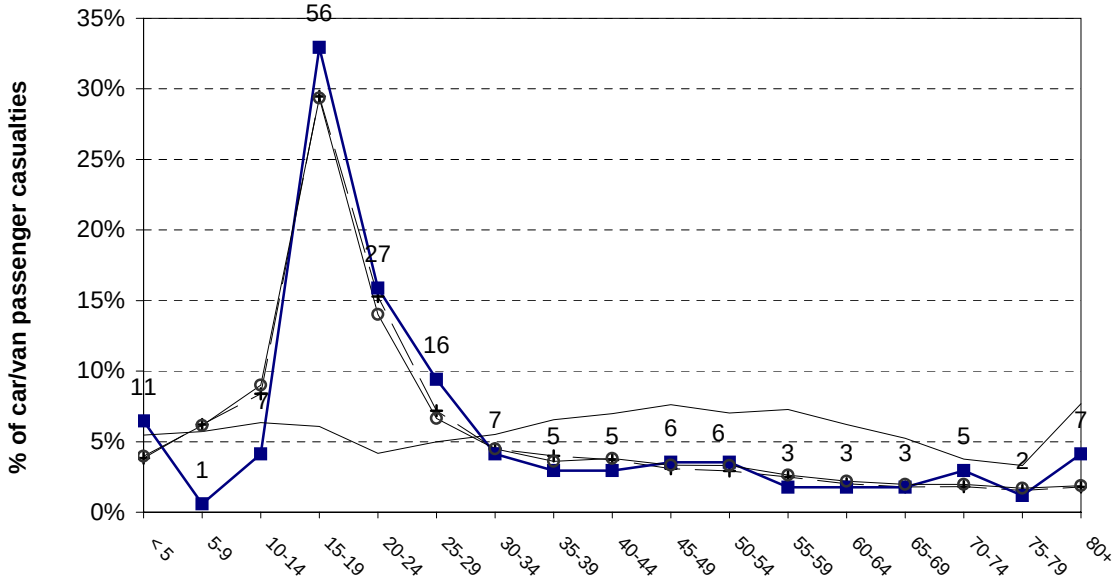
Note: Dotted line represents the ten year trend line

Figure 3.19 Car/van driver casualty age
Marlborough District (2004-2008)



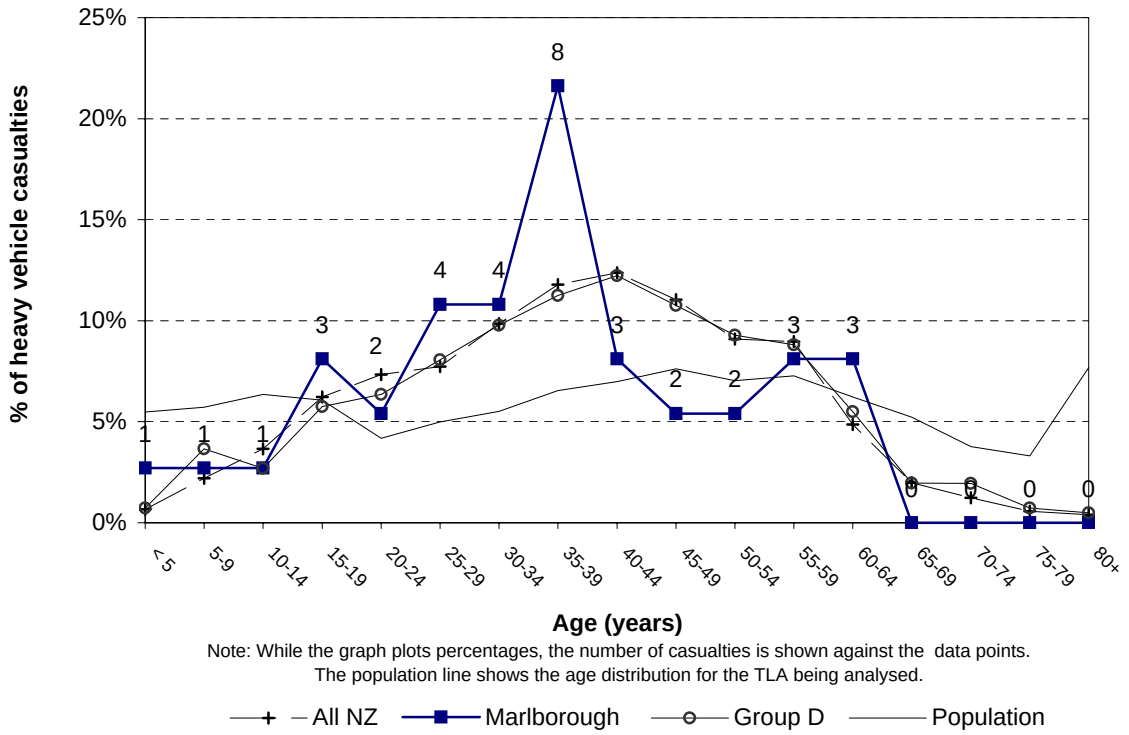
Note: While the graph plots percentages, the number of casualties is shown against the data points.
The population line show the age distribution for the TLA being analysed.

Figure 3.20 Car/van passenger casualty age
Marlborough District (2004-2008)



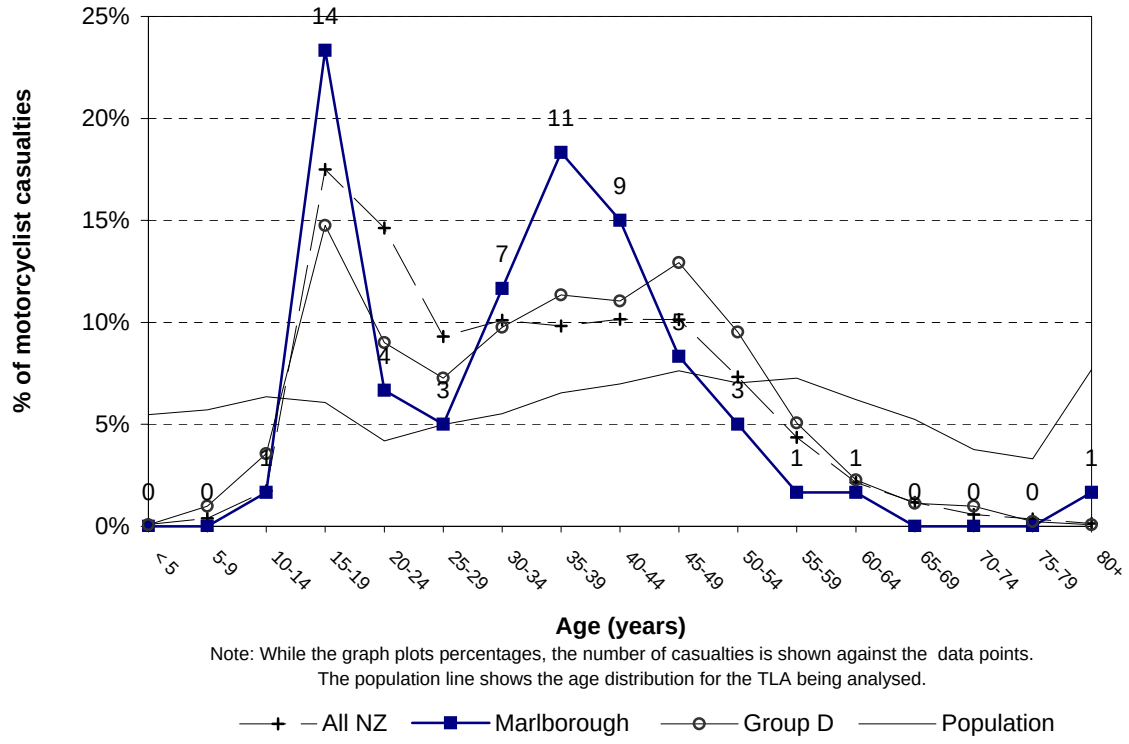
Note: While the graph plots percentages, the number of casualties is shown against the data points.
The population line shows the age distribution for the TLA being analysed.

Figure 3.21 Heavy vehicle casualty age
Marlborough District (2004-2008)



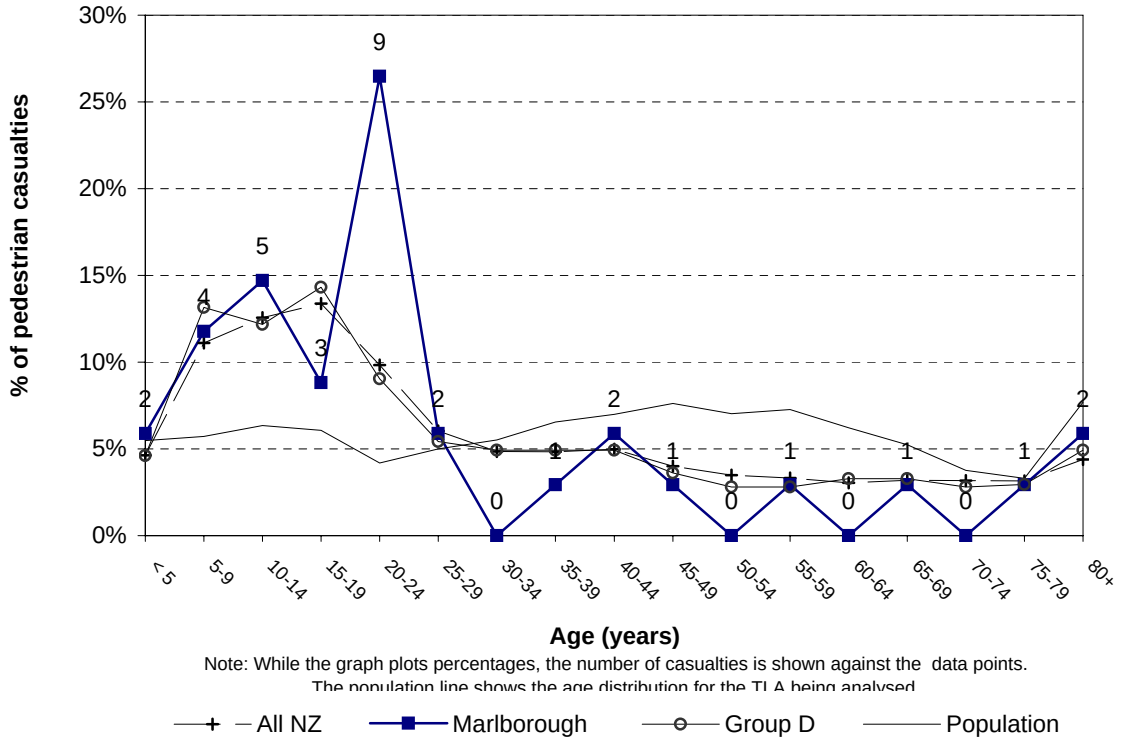
Note: While the graph plots percentages, the number of casualties is shown against the data points.
The population line shows the age distribution for the TLA being analysed.

Figure 3.22 Motorcyclist casualty age
Marlborough District (2004-2008)



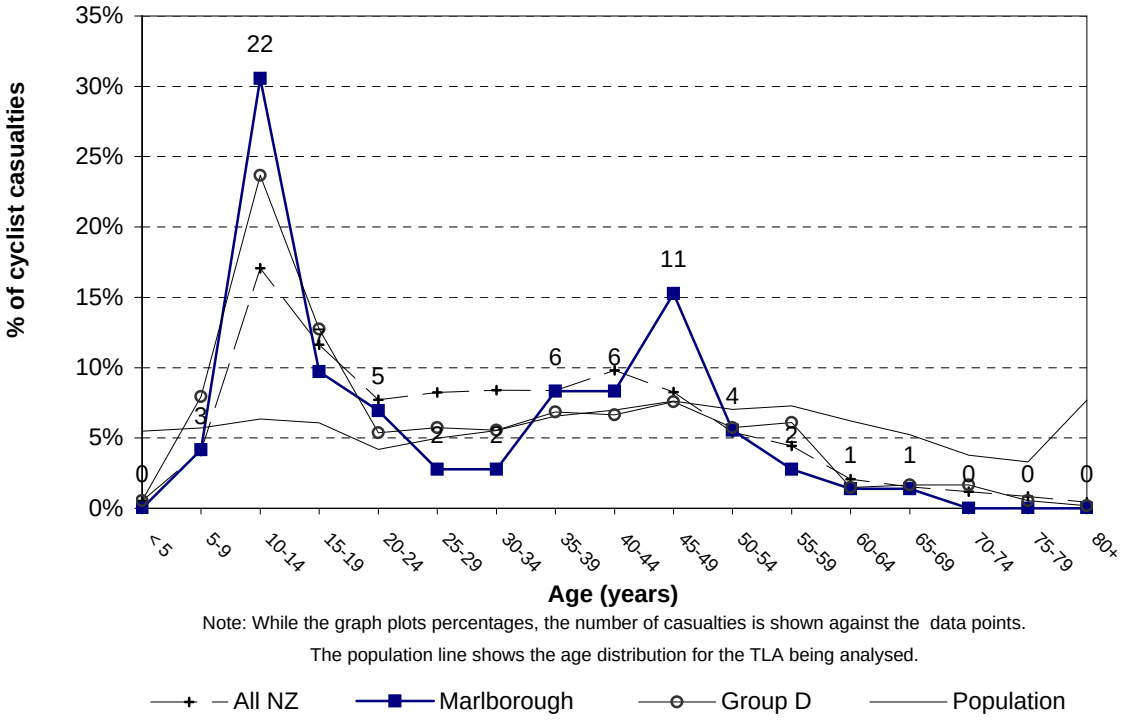
Note: While the graph plots percentages, the number of casualties is shown against the data points.
The population line shows the age distribution for the TLA being analysed.

Figure 3.23 Pedestrian casualty age
Marlborough District (2004-2008)



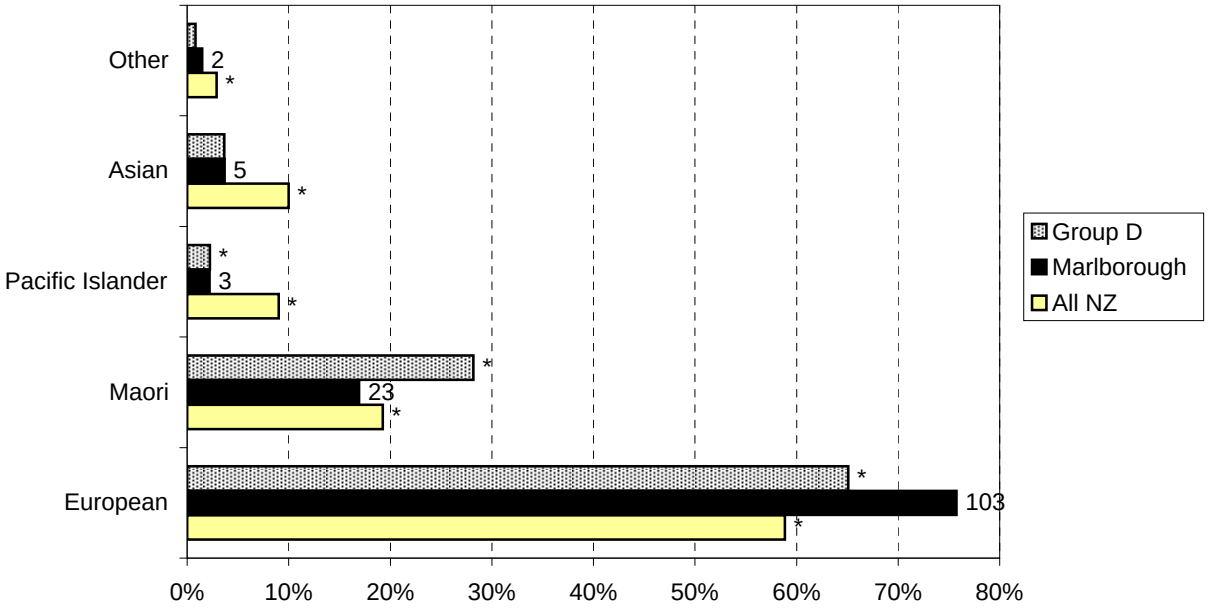
Note: While the graph plots percentages, the number of casualties is shown against the data points.
The population line shows the age distribution for the TLA being analysed

Figure 3.24 Cyclist casualty age
Marlborough District (2004-2008)



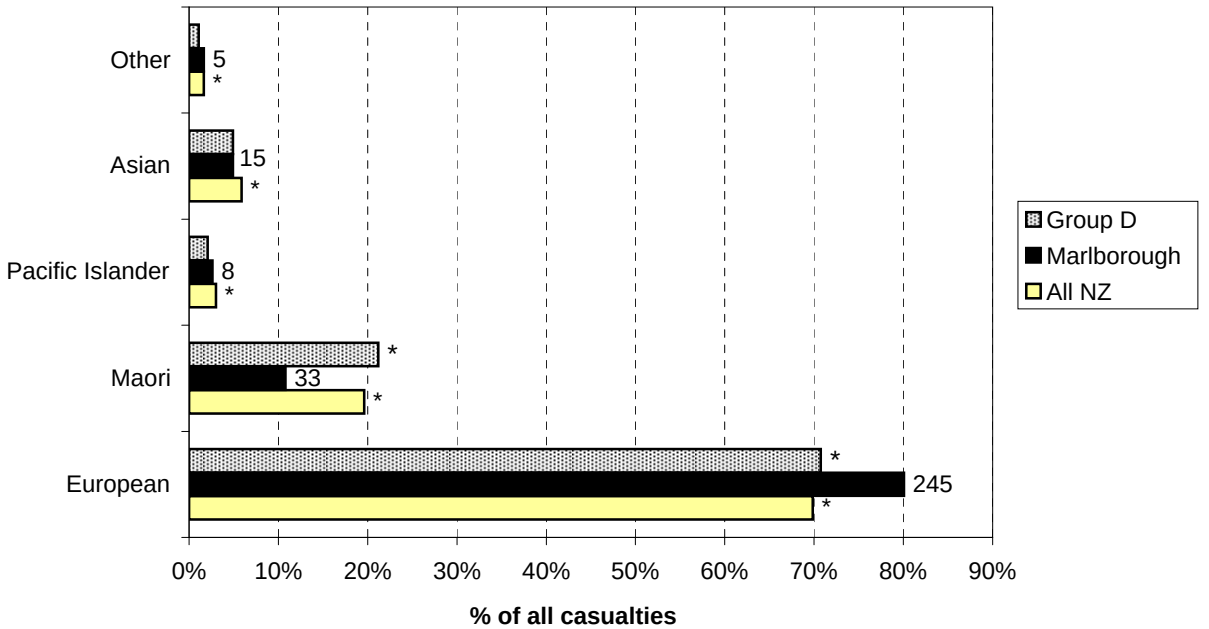
Note: While the graph plots percentages, the number of casualties is shown against the data points.
The population line shows the age distribution for the TLA being analysed.

Figure 3.25 Casualty ethnicity - urban Marlborough District (2004-2008)



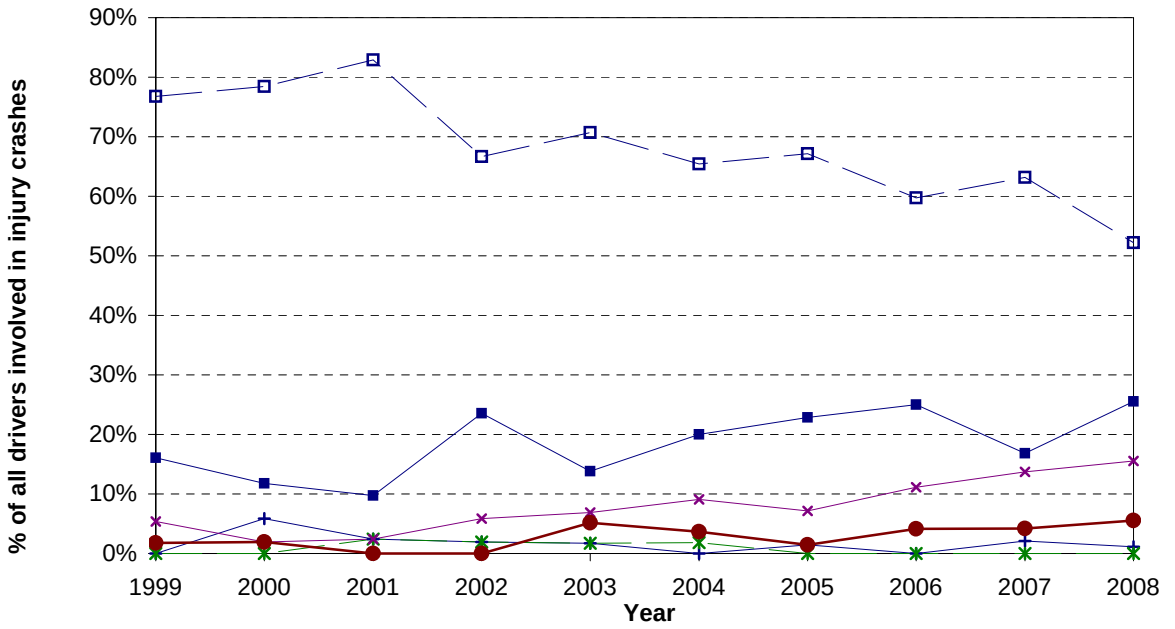
Note: While the graph plots percentages, the number of crashes is shown against the data points.
*Denotes statistically significant difference between Local Authority and National or Peer Group Proportions

Figure 3.26 Casualty ethnicity - rural Marlborough District (2004-2008)



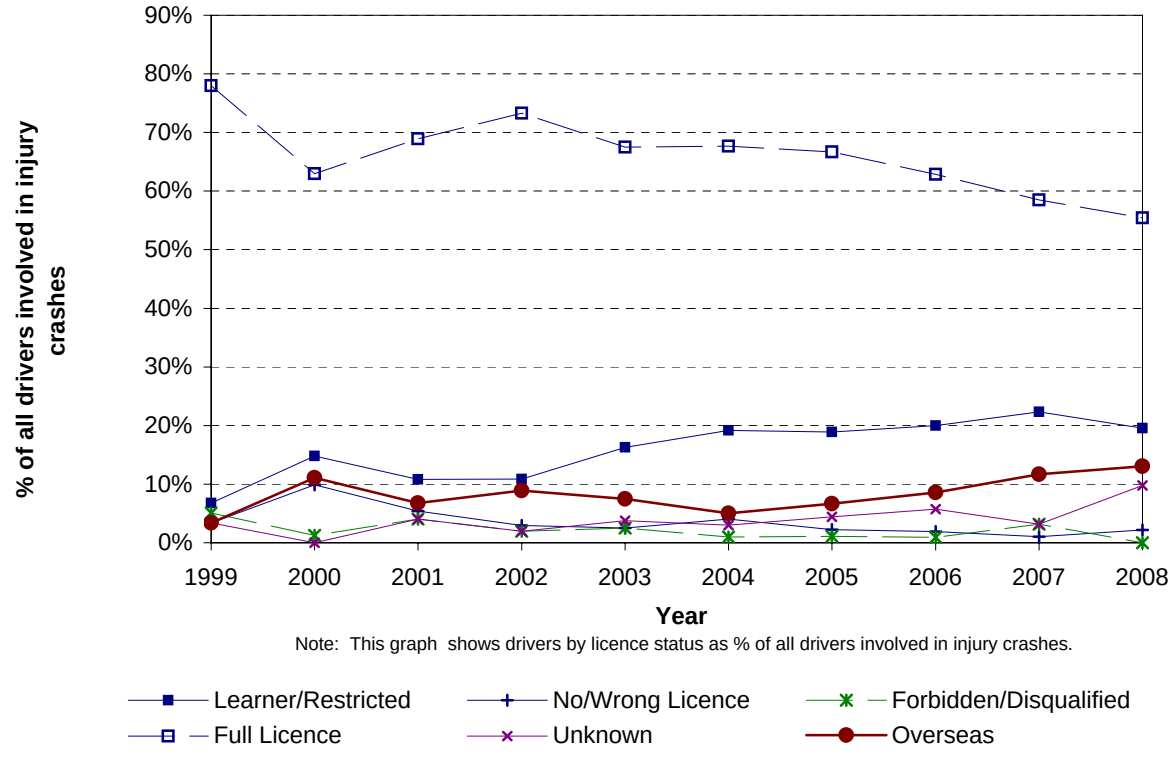
Note: While the graph plots percentages, the number of crashes is shown against the data points.
*Denotes statistically significant difference between Local Authority and National or Peer Group Proportions

Figure 3.27 Licence status - urban Marlborough District



Note: This graph shows drivers by licence status as % of all drivers involved in injury crashes.

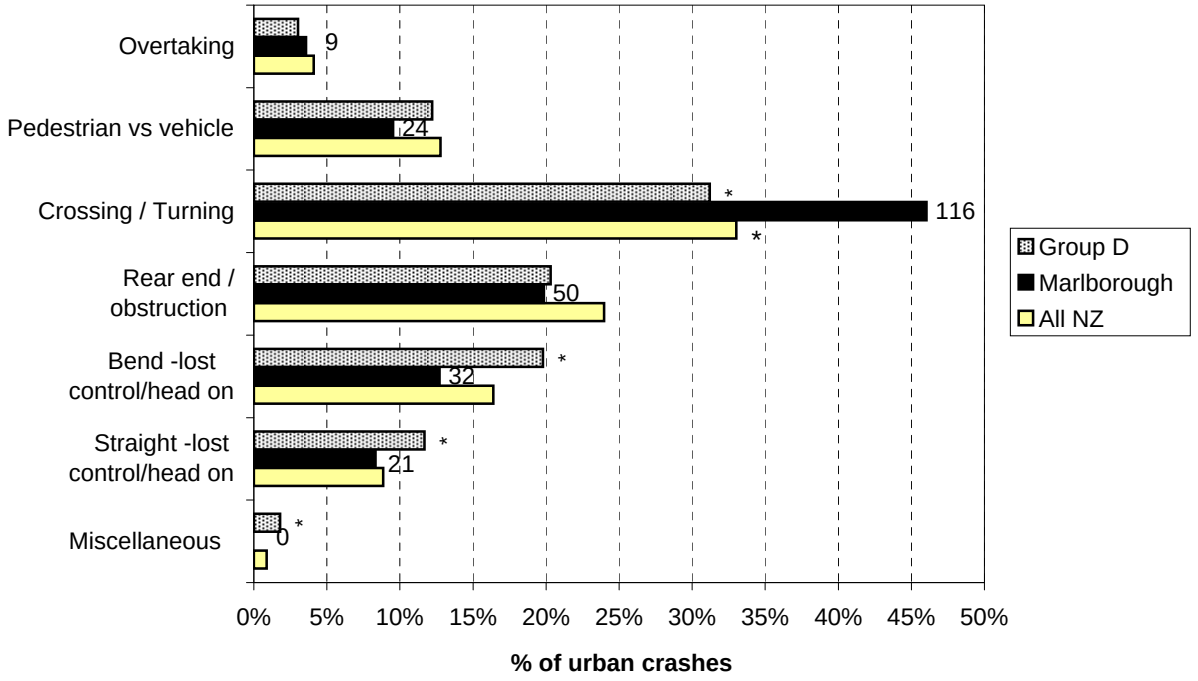
Figure 3.28 Licence status - rural Marlborough District



Note: This graph shows drivers by licence status as % of all drivers involved in injury crashes.

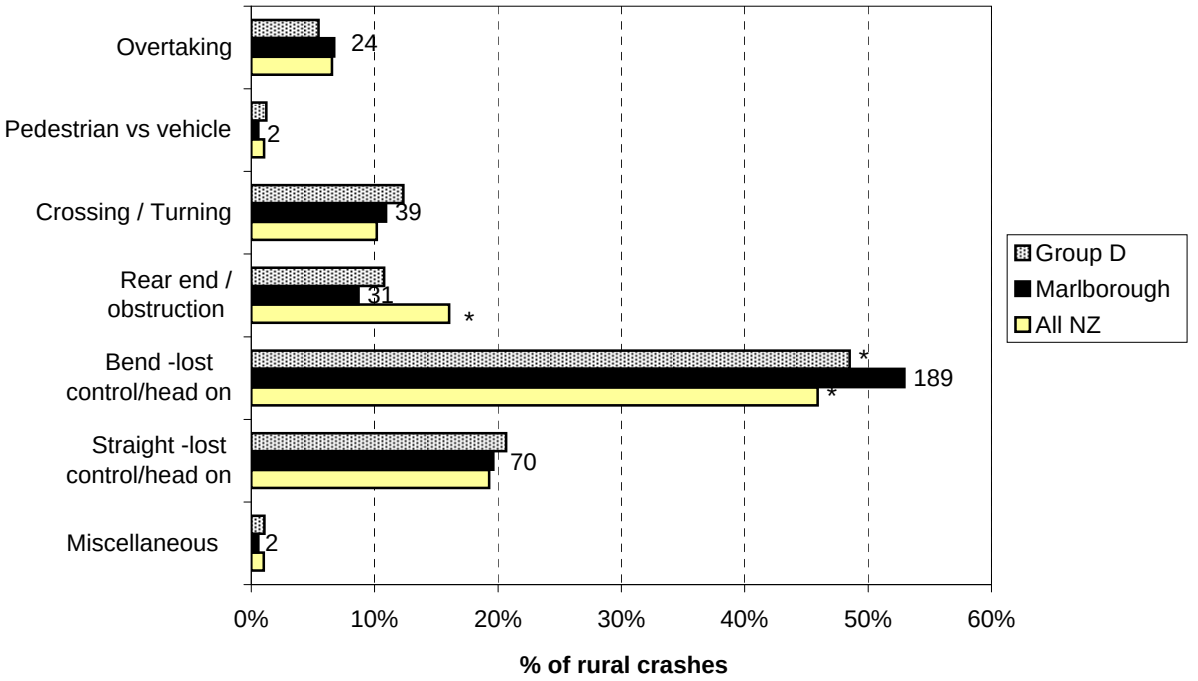
Crash Type Statistics

Figure 4.1 Crash movement type - urban Marlborough District (2004-2008)



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

Figure 4.2 Crash movement type - rural Marlborough District roads (2004-2008)



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

Figure 4.3 Crash movement type - trends
Marlborough District - urban roads

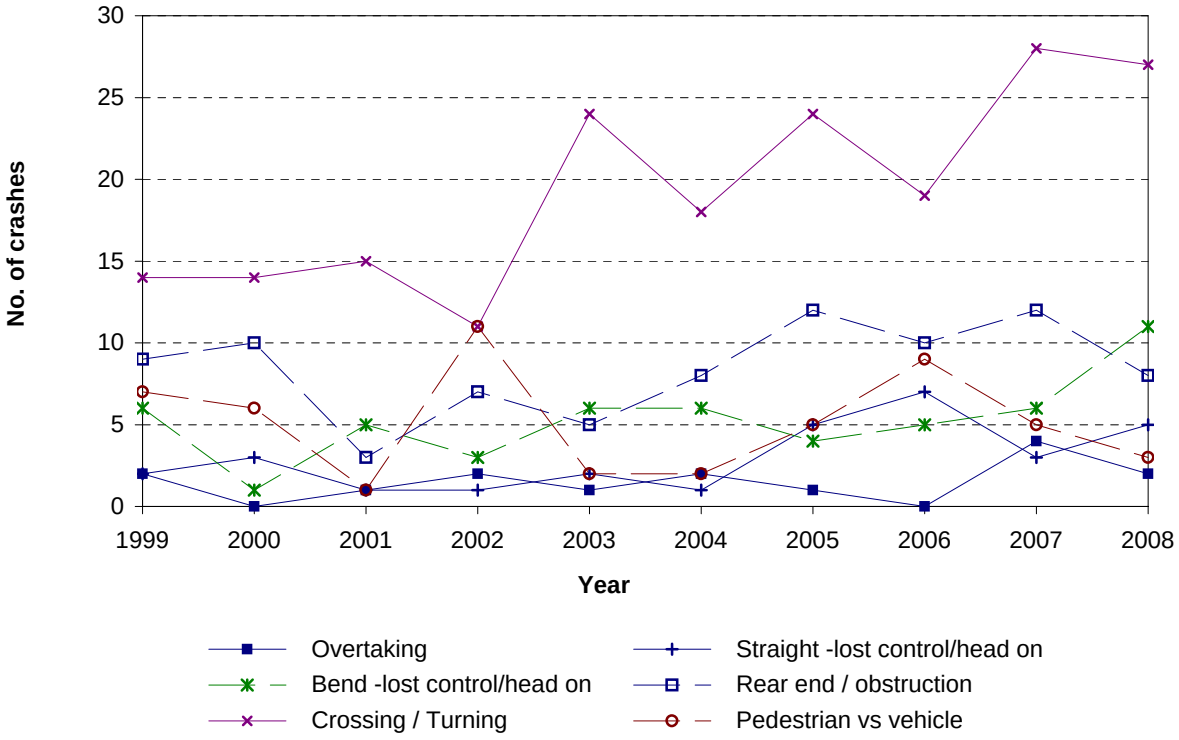


Figure 4.4 Crash movement type - trends
Marlborough District - rural roads

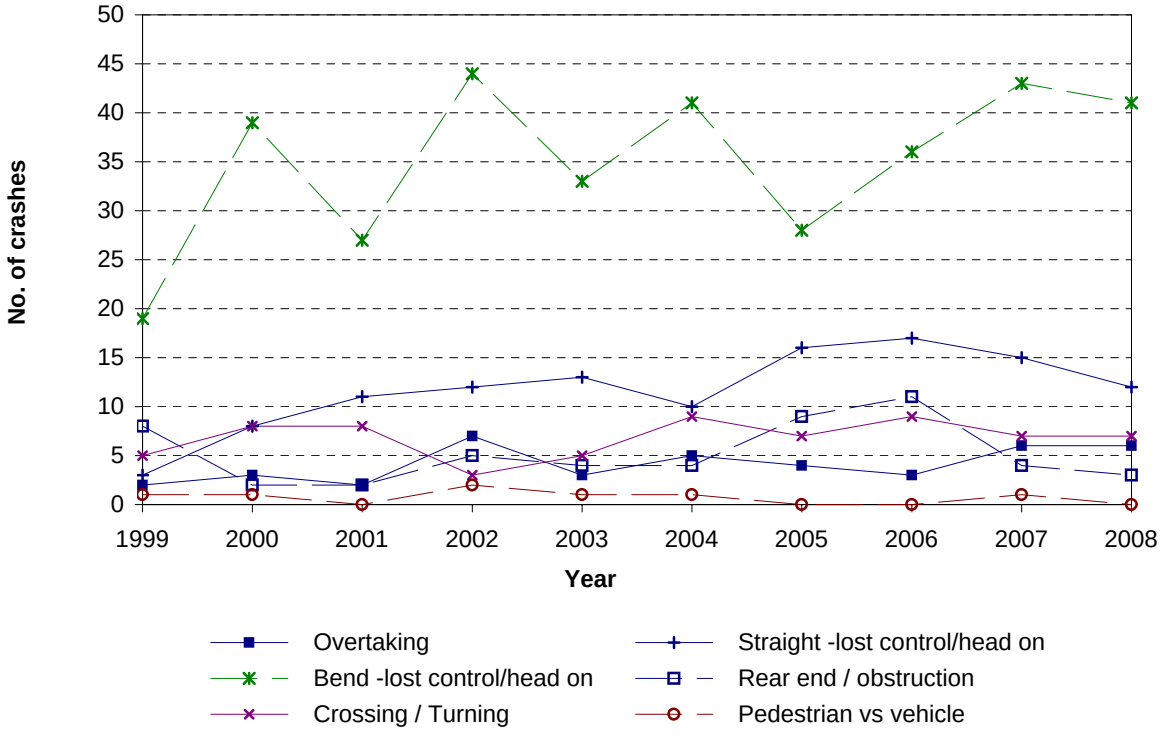
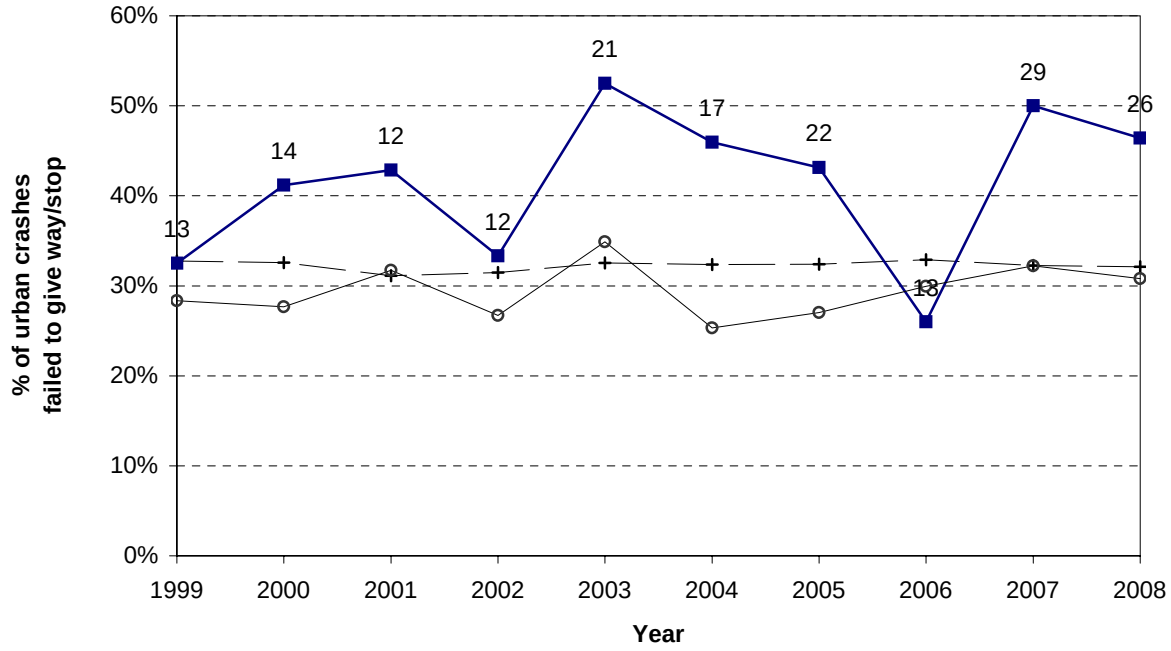
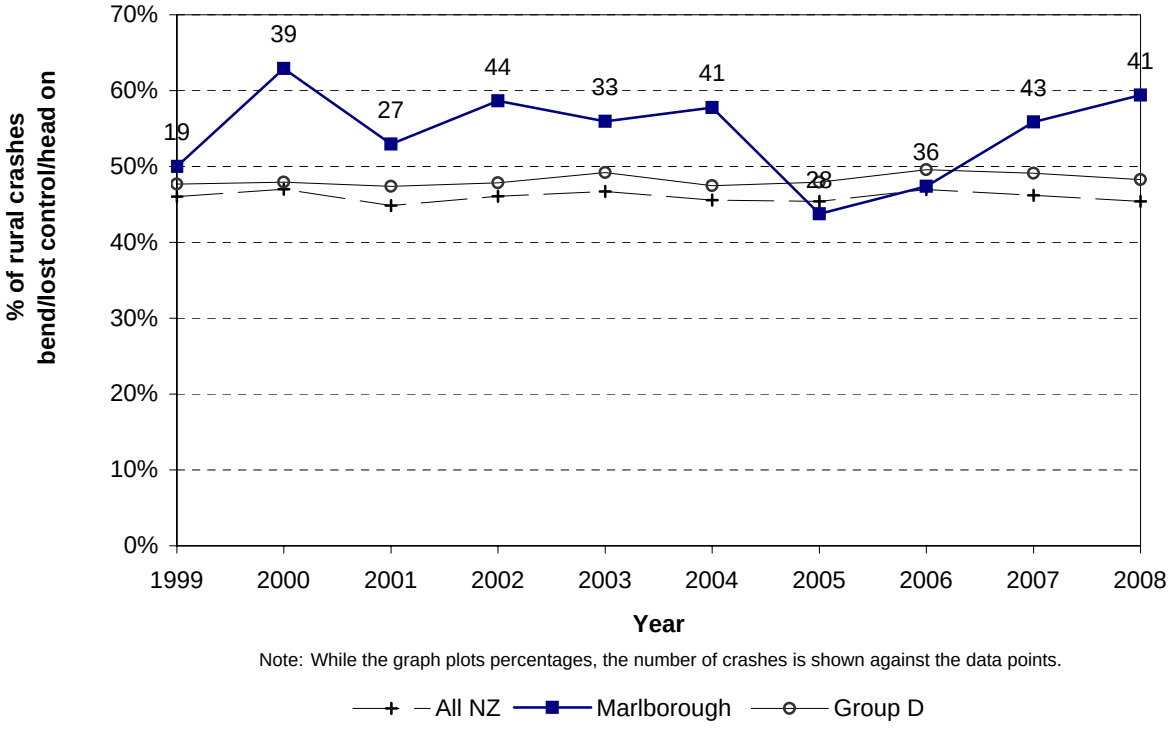


Figure 4.5 Failed to give way / stop
Marlborough District - urban roads



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

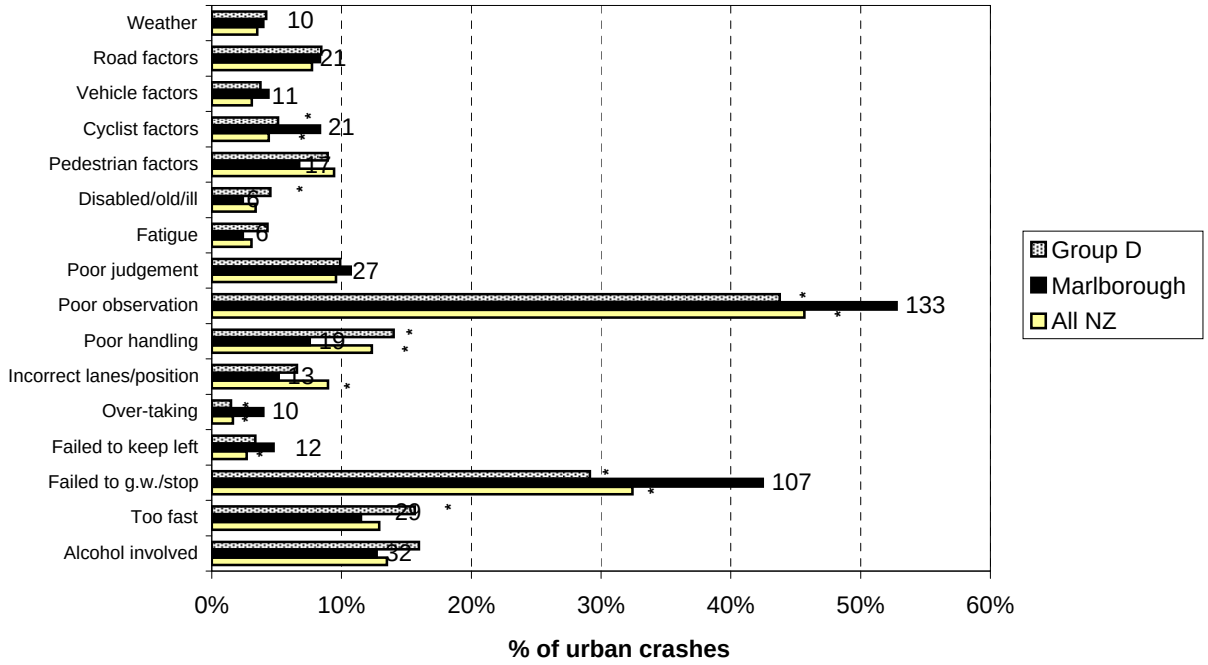
Figure 4.6 Bend - lost control / head - on
Marlborough District - rural roads



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

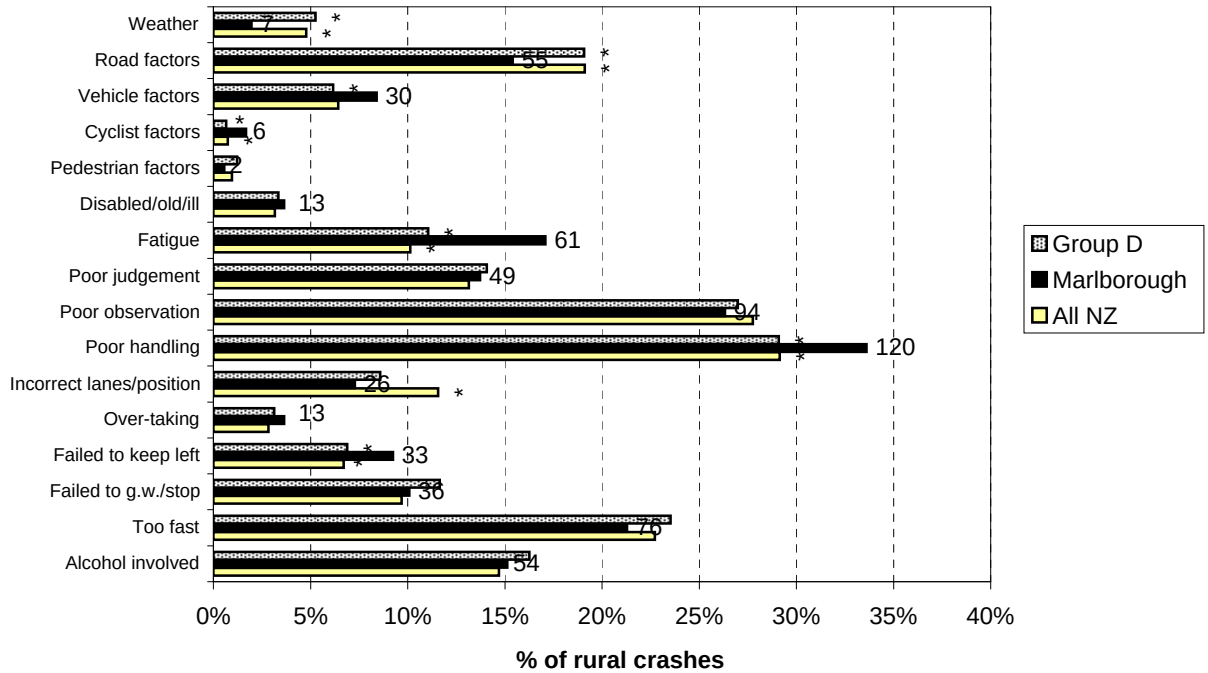
Crash Factor Statistics

Figure 5.1 Contributing factors - urban Marlborough District (2004-2008)



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

Figure 5.2 Contributing factors - rural Marlborough District (2004-2008)



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

Figure 5.3 Contributing factor trends
Marlborough District - urban roads

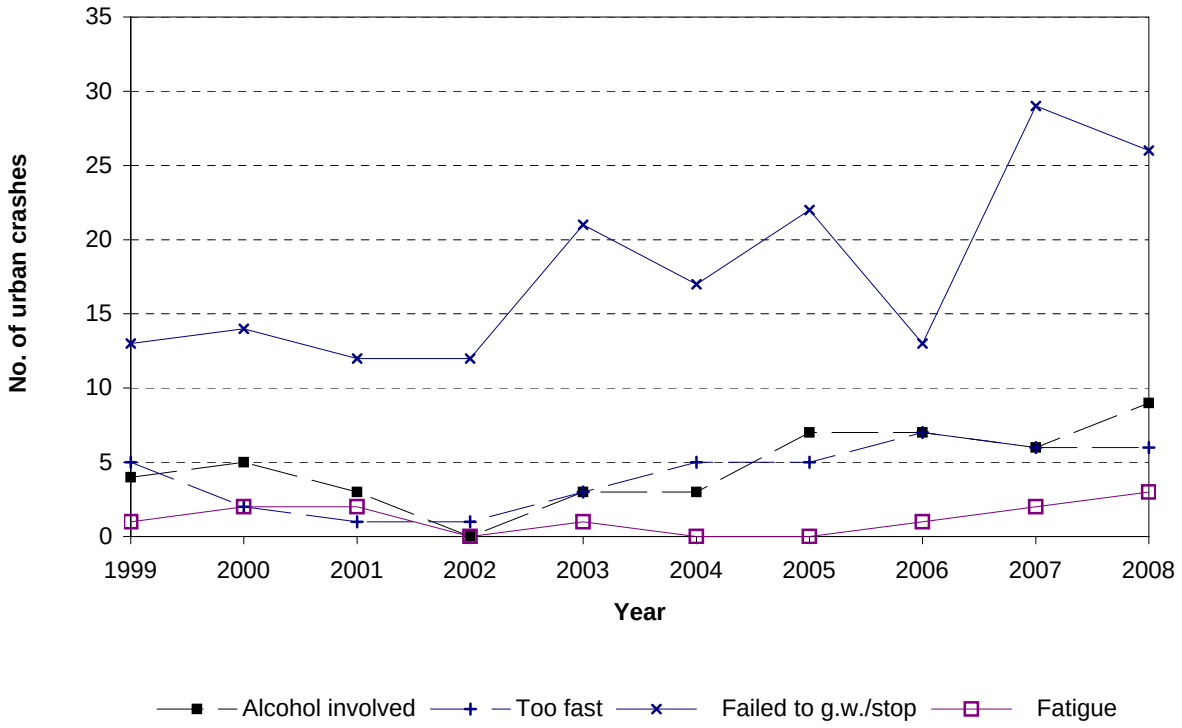


Figure 5.4 Contributing factor trends
Marlborough District - urban roads

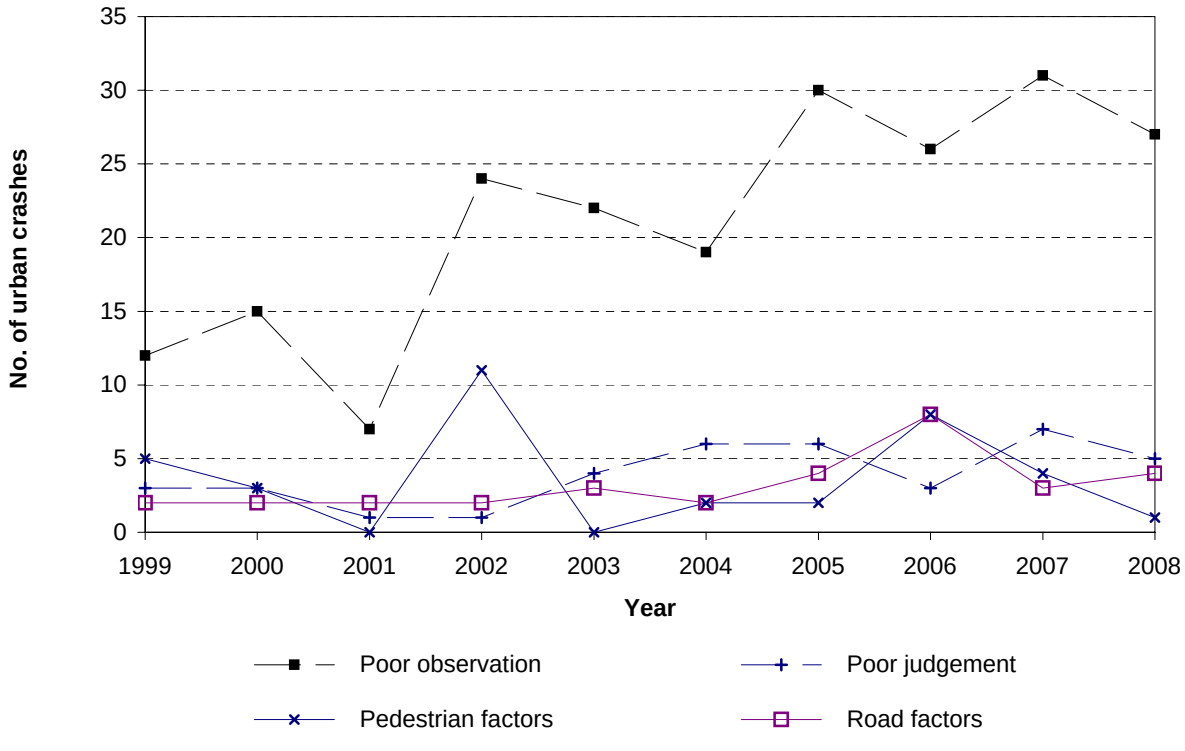


Figure 5.5 Contributing factor trends
Marlborough District - urban roads

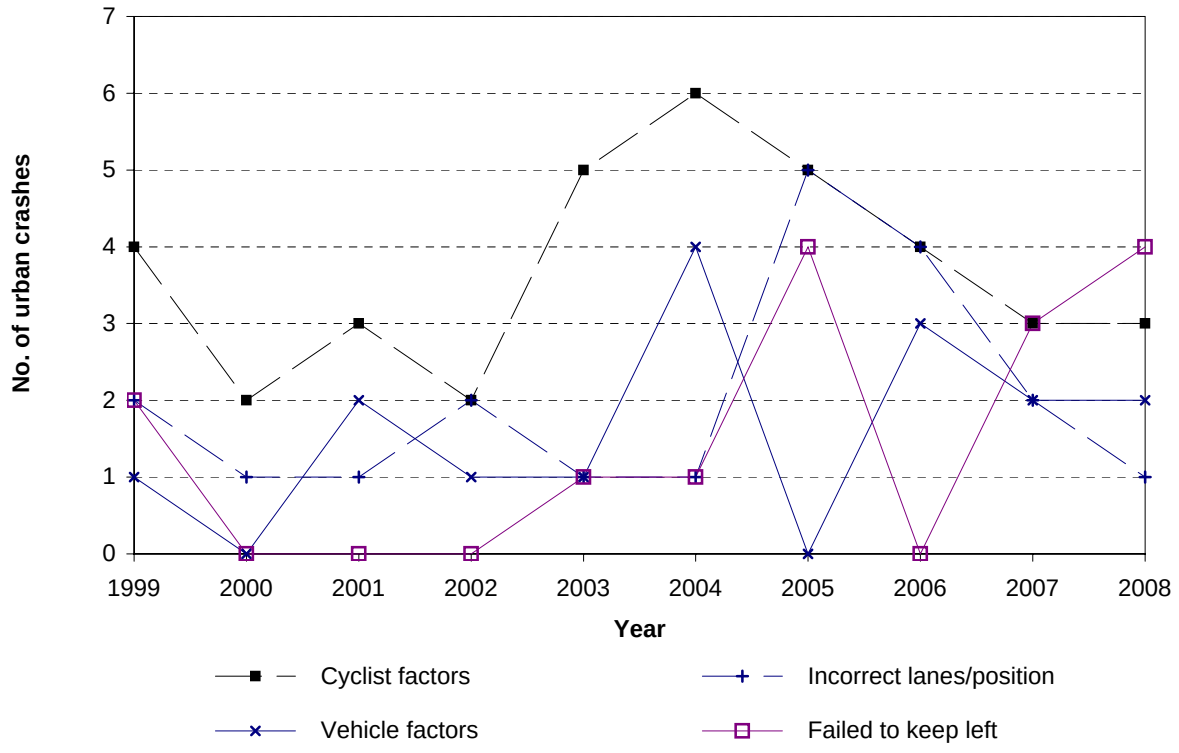


Figure 5.6 Contributing factor trends
Marlborough District - urban roads

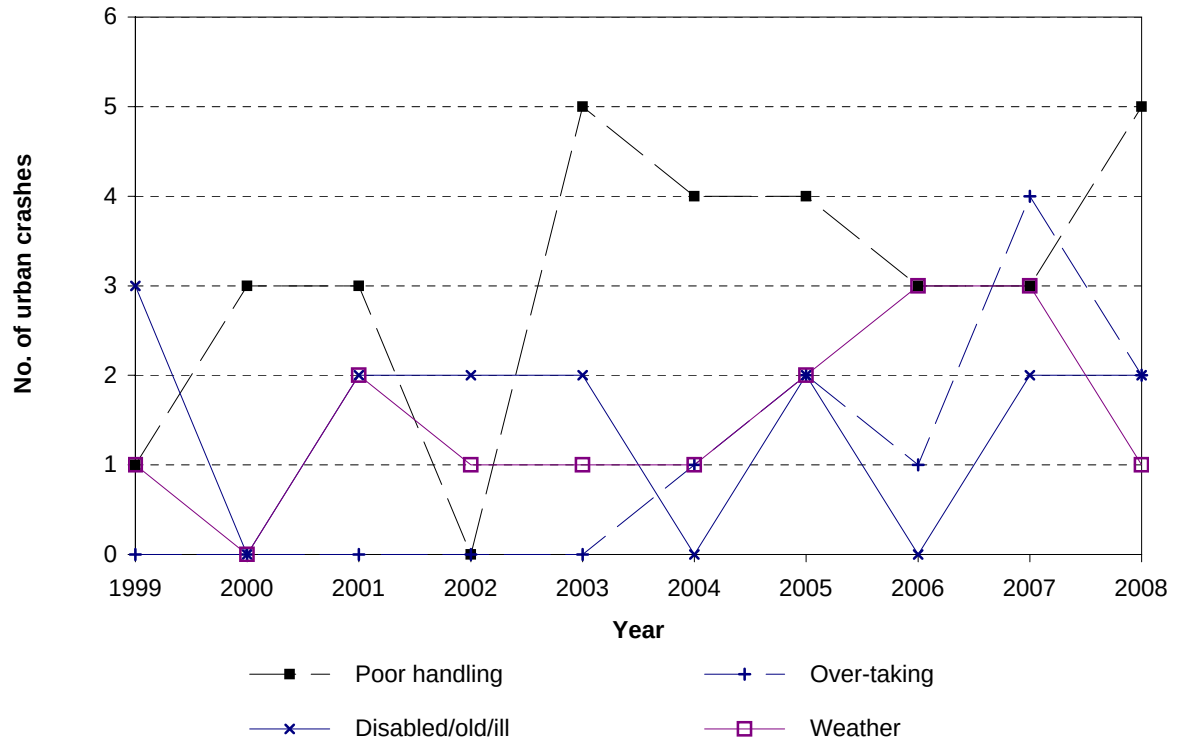
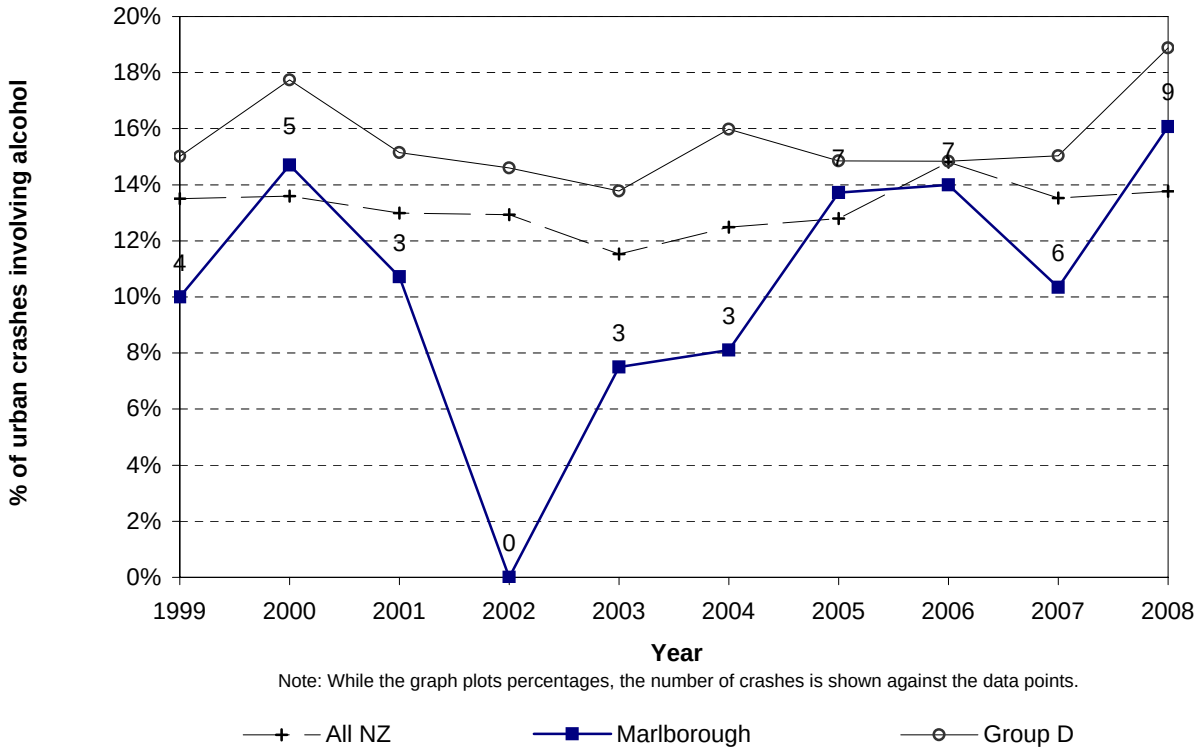
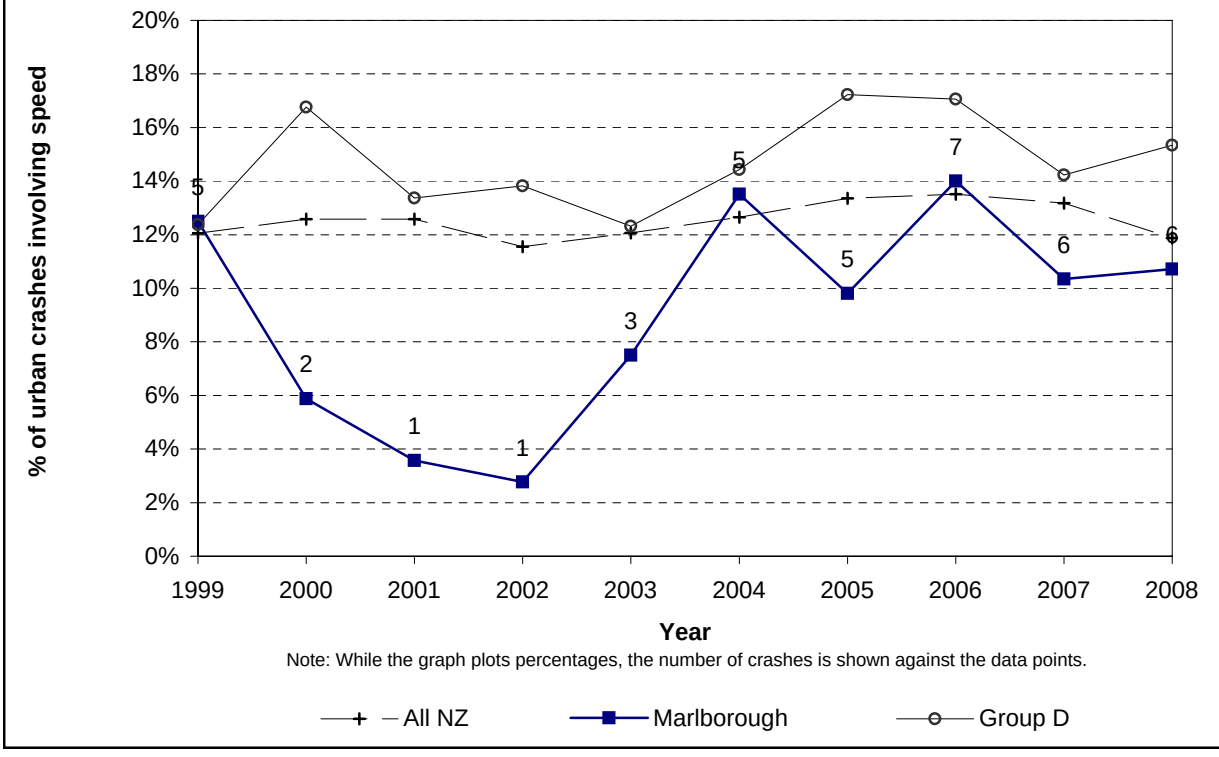


Figure 5.7 Alcohol involved trend
Marlborough District - urban roads



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

Figure 5.8 Speed involved trend
Marlborough District - urban roads



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

Figure 5.9 Contributing factor trends
Marlborough District - rural roads

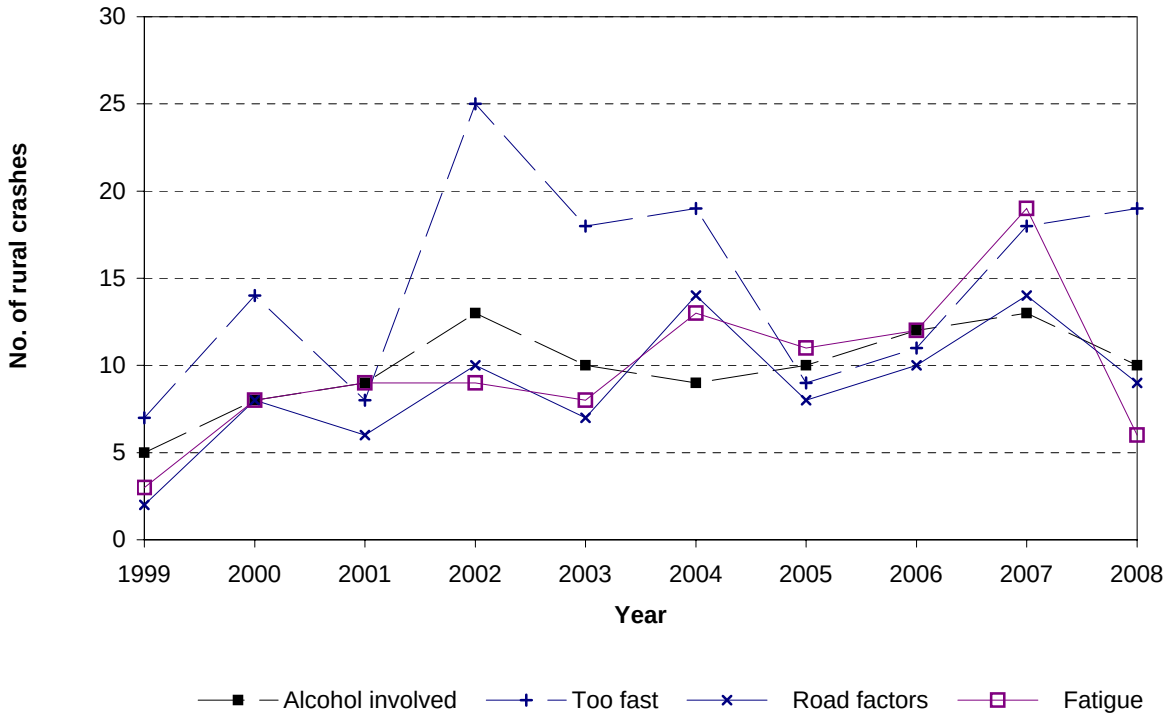


Figure 5.10 Contributing factor trends
Marlborough District - rural roads

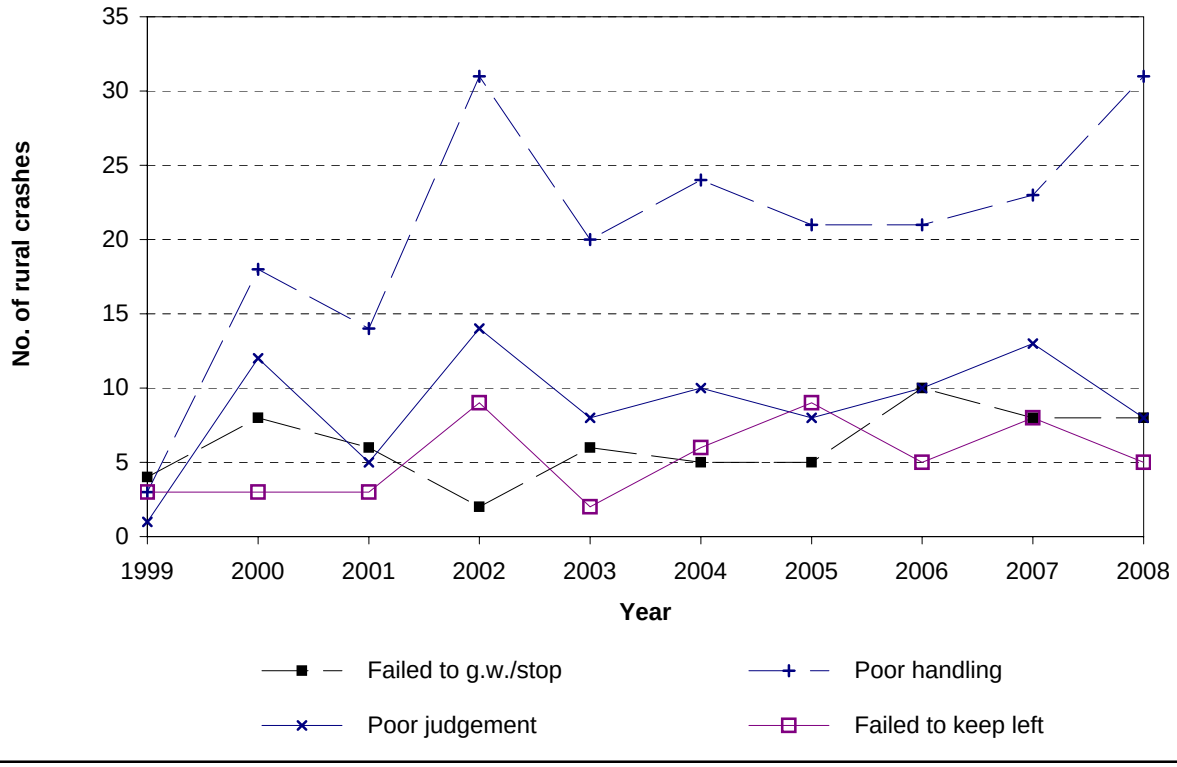


Figure 5.11 Contributing factor trends
Marlborough District - rural roads

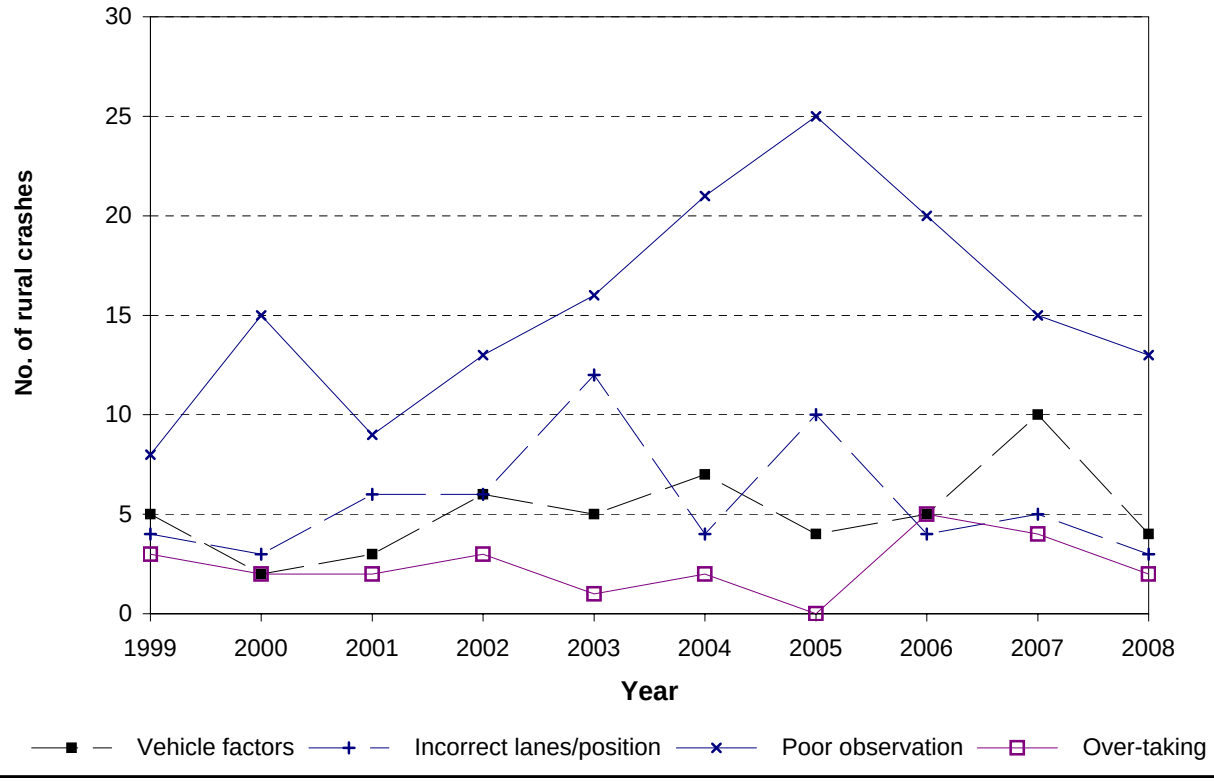


Figure 5.12 Contributing factor trends
Marlborough District - rural roads

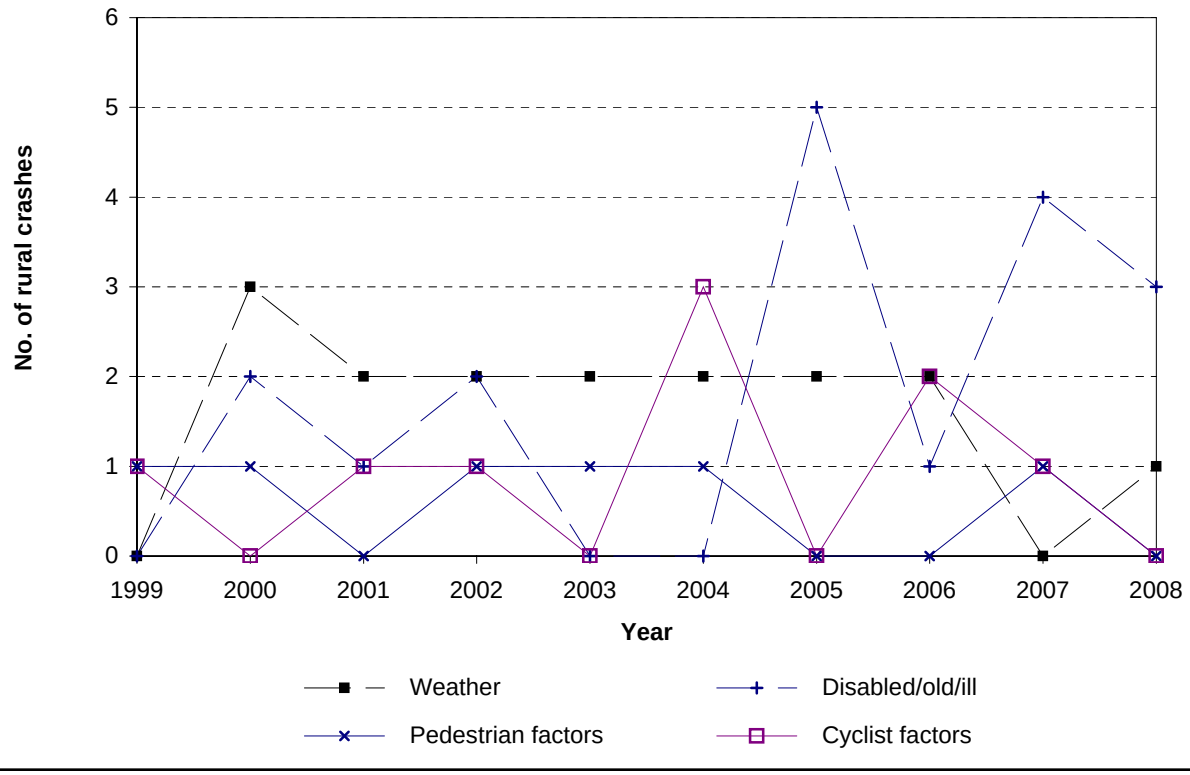
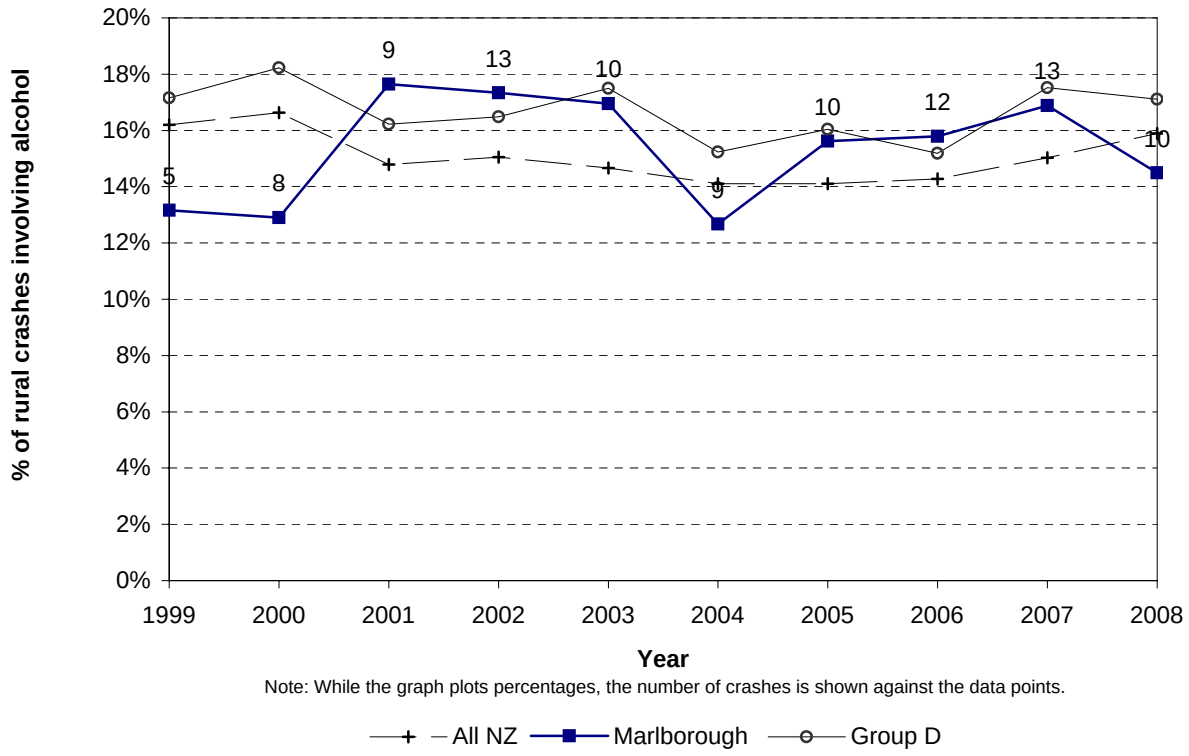
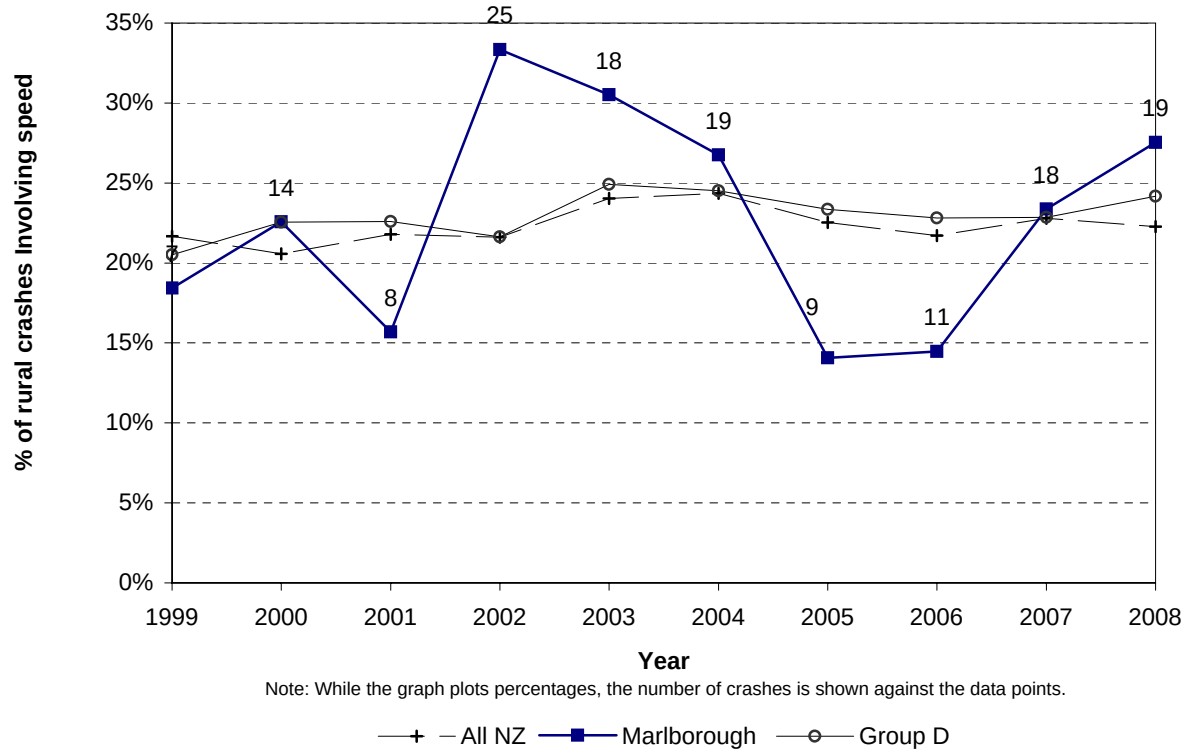


Figure 5.13 Alcohol involved trend
Marlborough District - rural roads



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

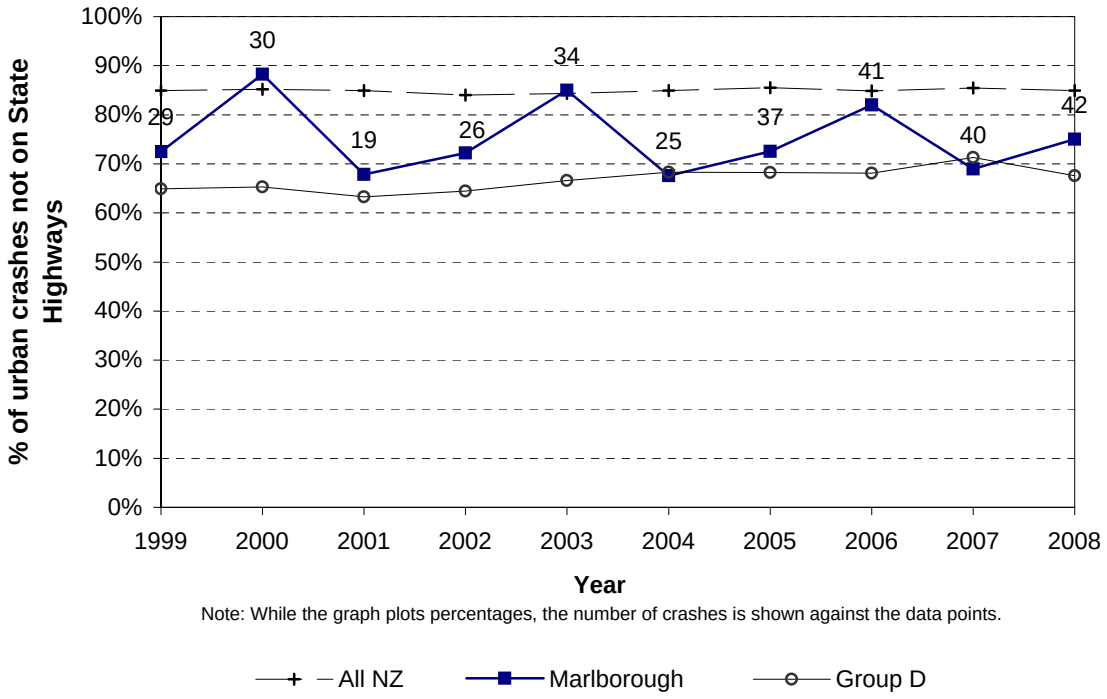
Figure 5.14 Speed involved trend
Marlborough District - rural roads



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

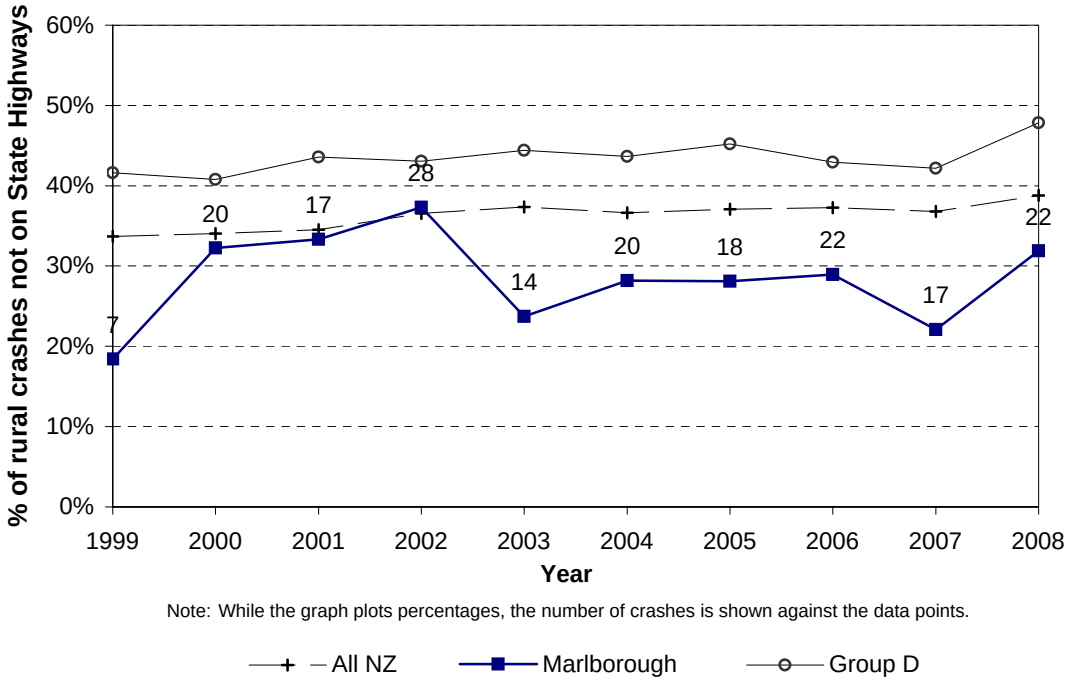
Environmental Statistics

Figure 6.1 Crashes not on state highways
Marlborough District - urban roads



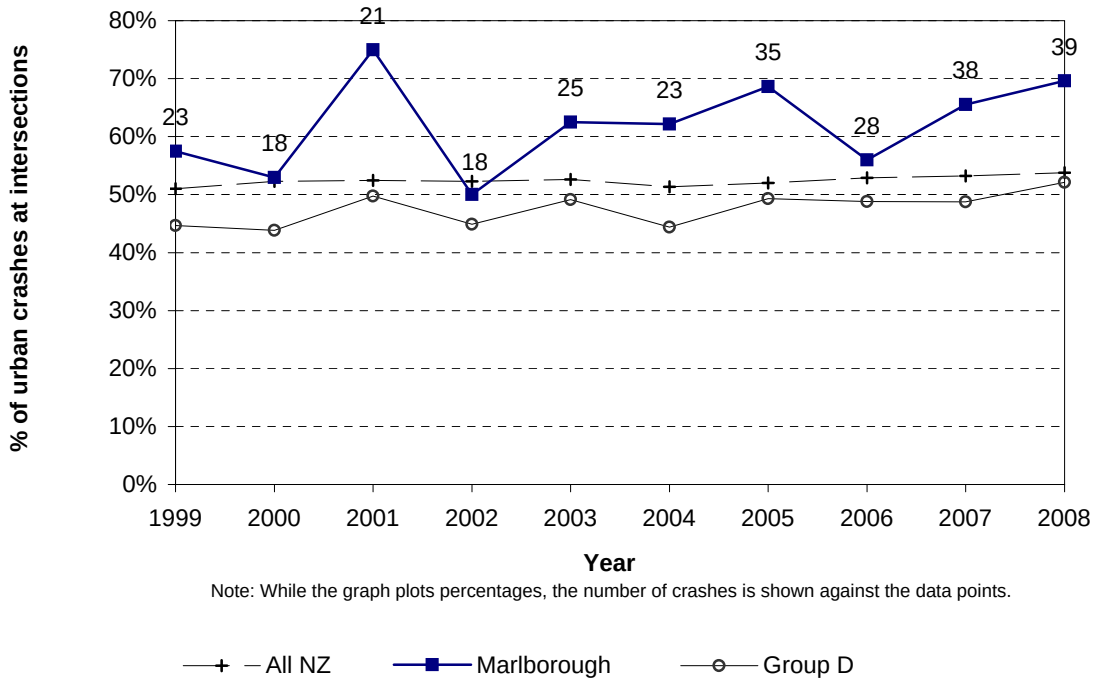
Note: While the graph plots percentages, the number of crashes is shown against the data points.

Figure 6.2 Crashes not on state highways
Marlborough District - rural roads



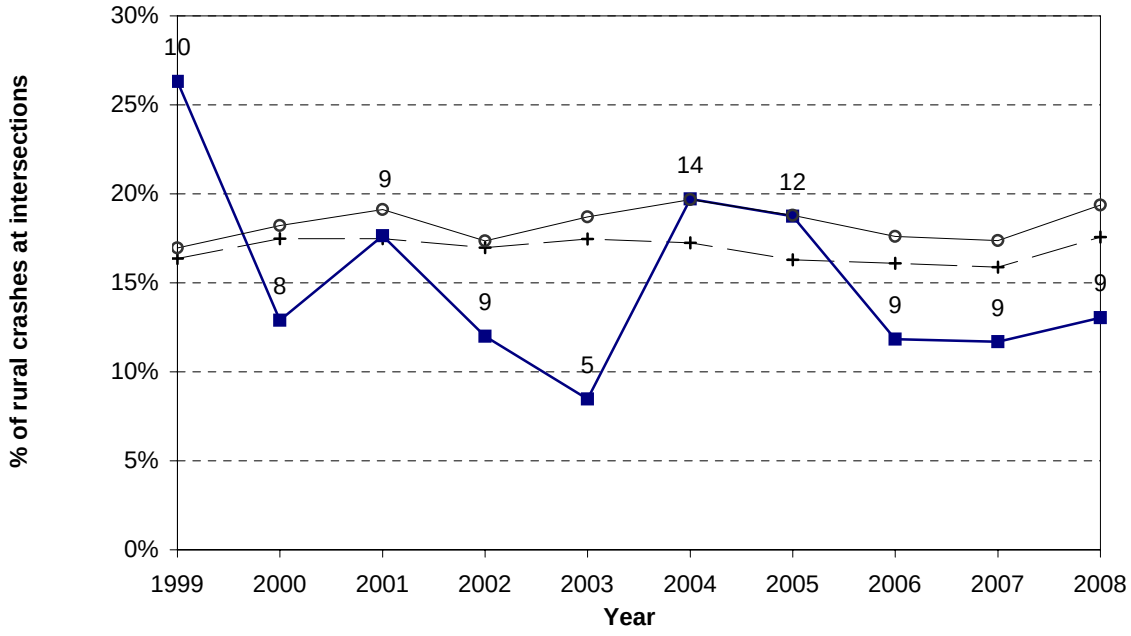
Note: While the graph plots percentages, the number of crashes is shown against the data points.

Figure 6.3 Intersection crashes
Marlborough District - urban roads



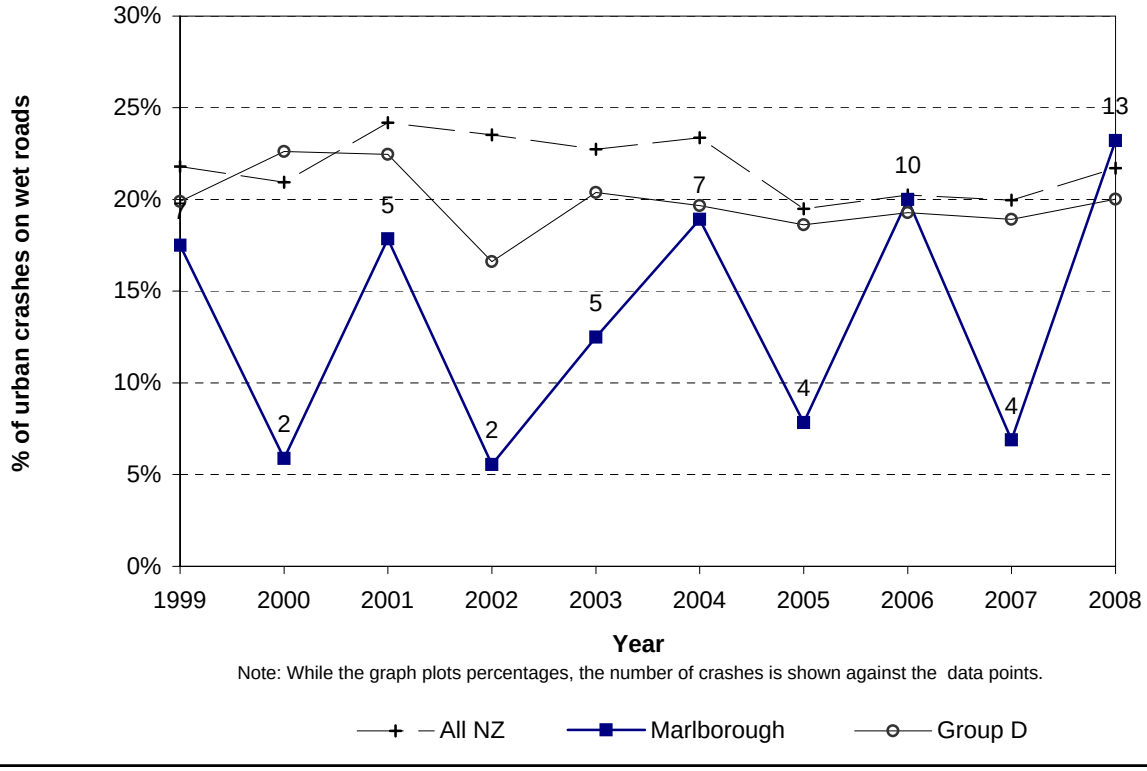
Note: While the graph plots percentages, the number of crashes is shown against the data points.

Figure 6.4 Intersection crashes
Marlborough District - rural roads



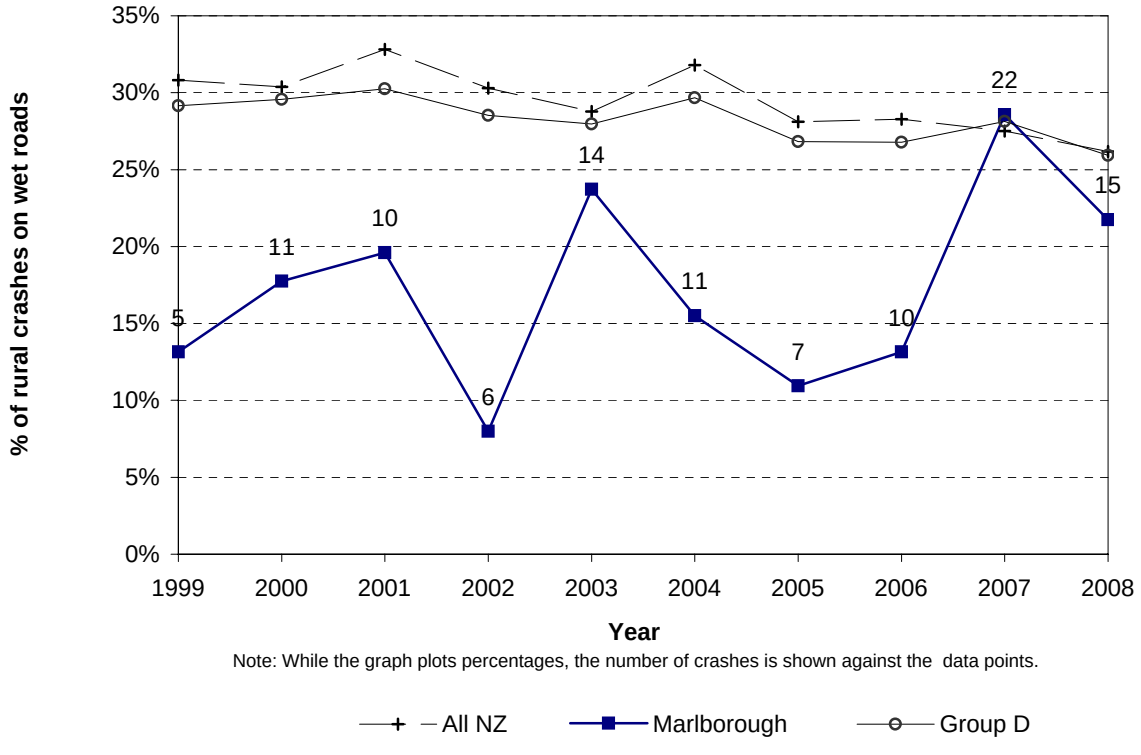
Note: While the graph plots percentages, the number of crashes is shown against the data points.

Figure 6.5 Wet road crashes
Marlborough District - urban roads



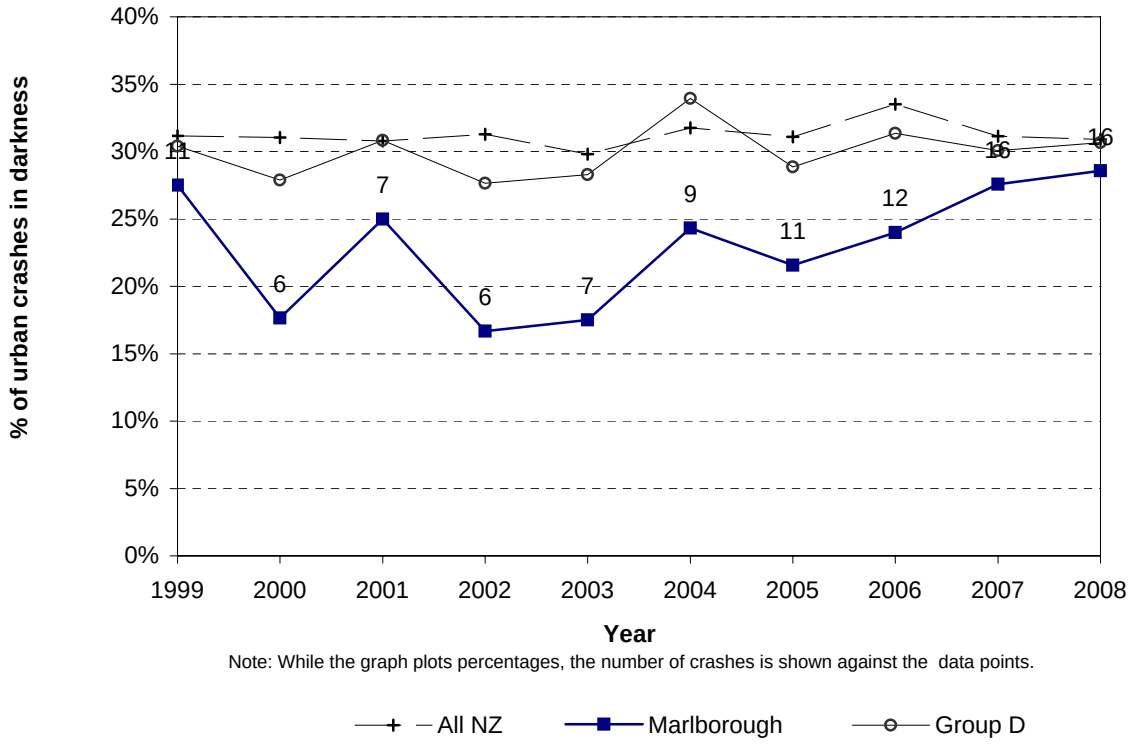
Note: While the graph plots percentages, the number of crashes is shown against the data points.

Figure 6.6 Wet road crashes
Marlborough District - rural roads



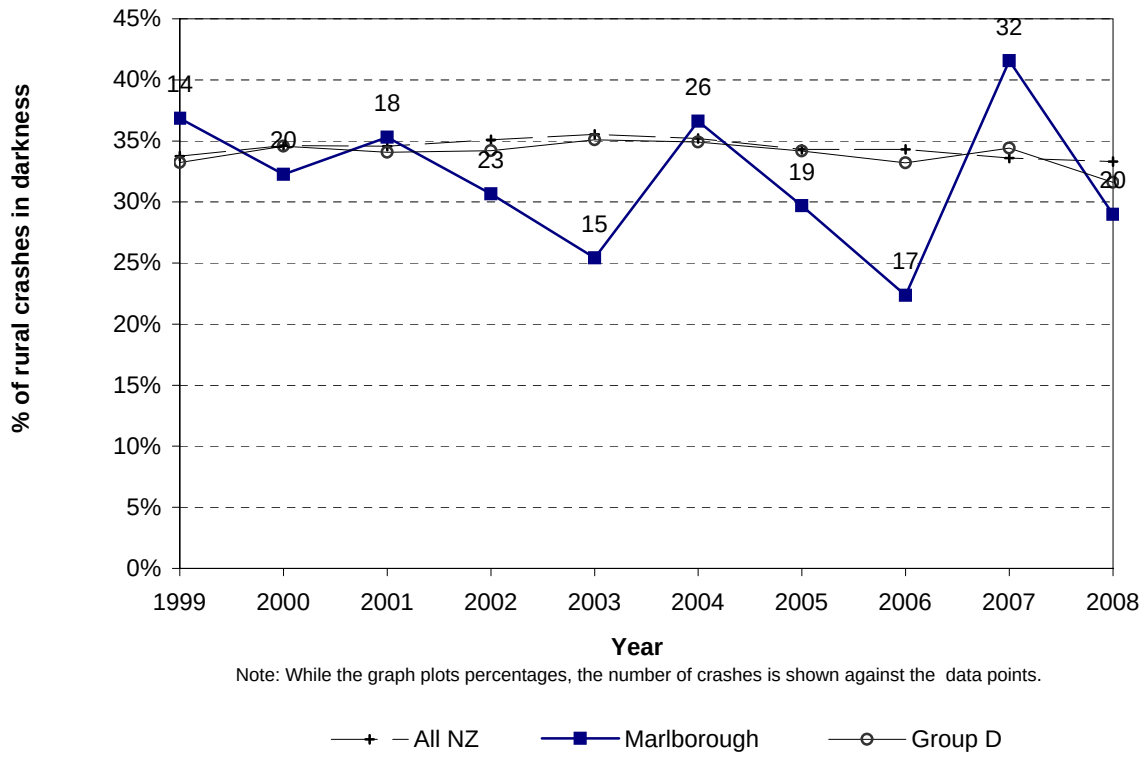
Note: While the graph plots percentages, the number of crashes is shown against the data points.

Figure 6.7 Crashes in darkness
Marlborough District - urban roads



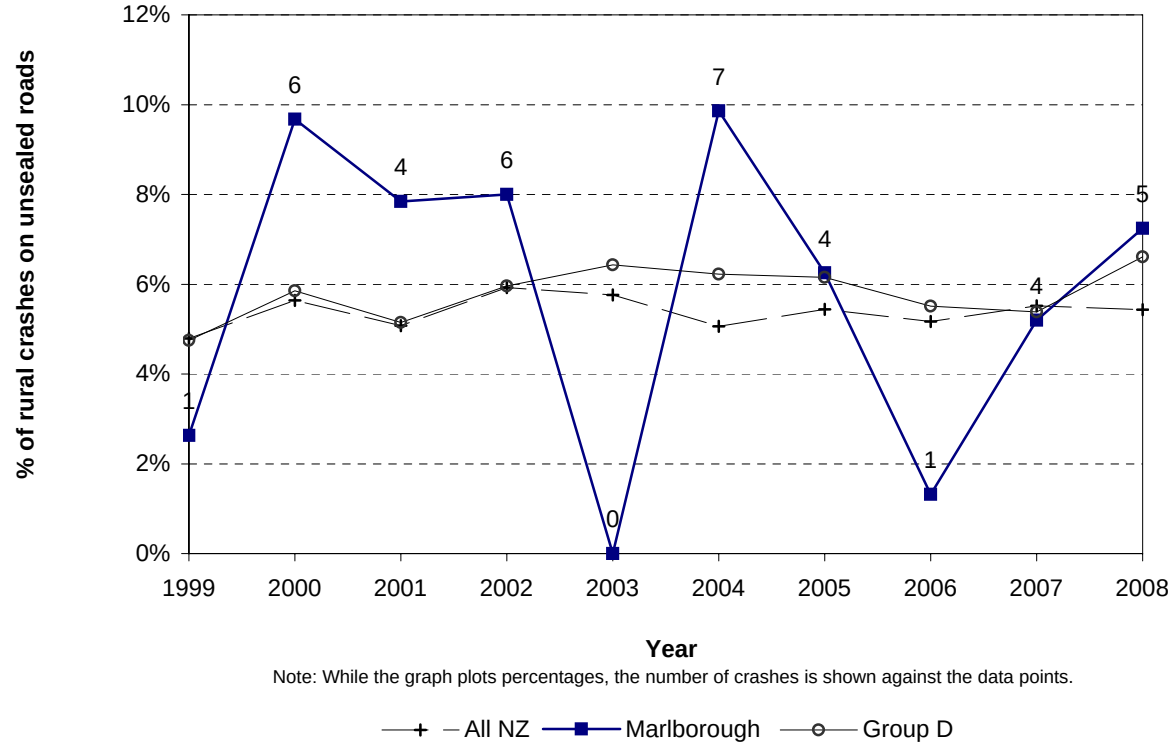
Note: While the graph plots percentages, the number of crashes is shown against the data points.

Figure 6.8 Crashes in darkness
Marlborough District - rural roads



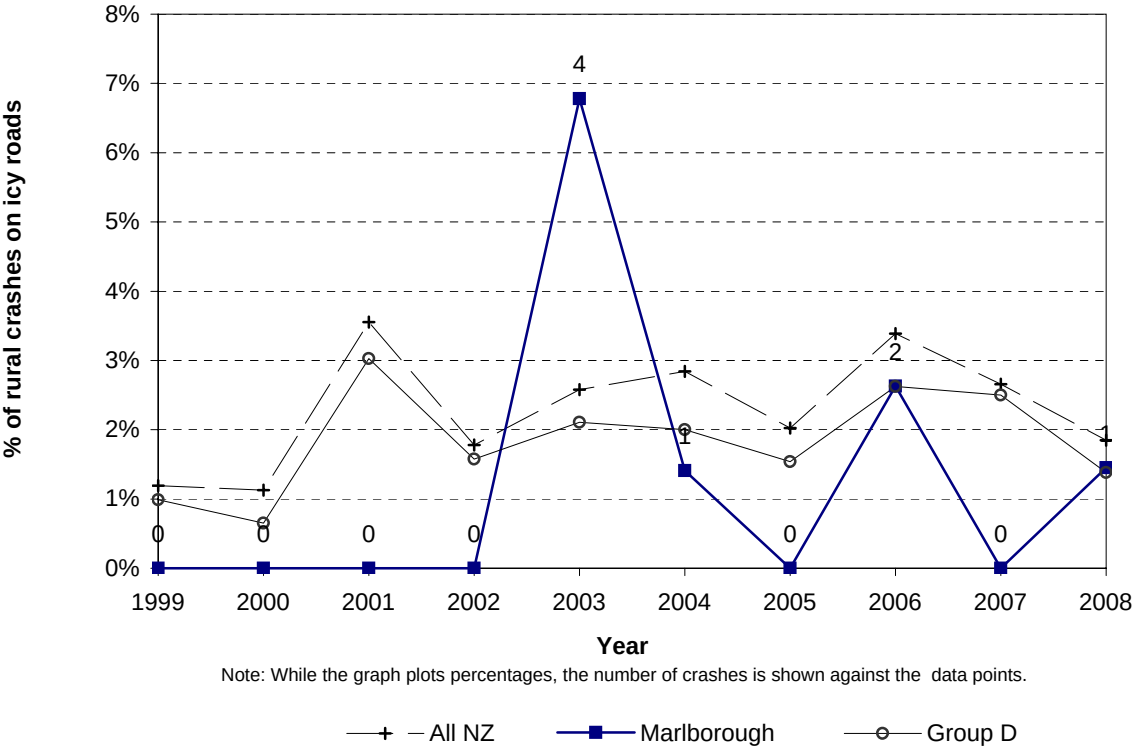
Note: While the graph plots percentages, the number of crashes is shown against the data points.

Figure 6.9 Unsealed road crashes
Marlborough District - rural roads



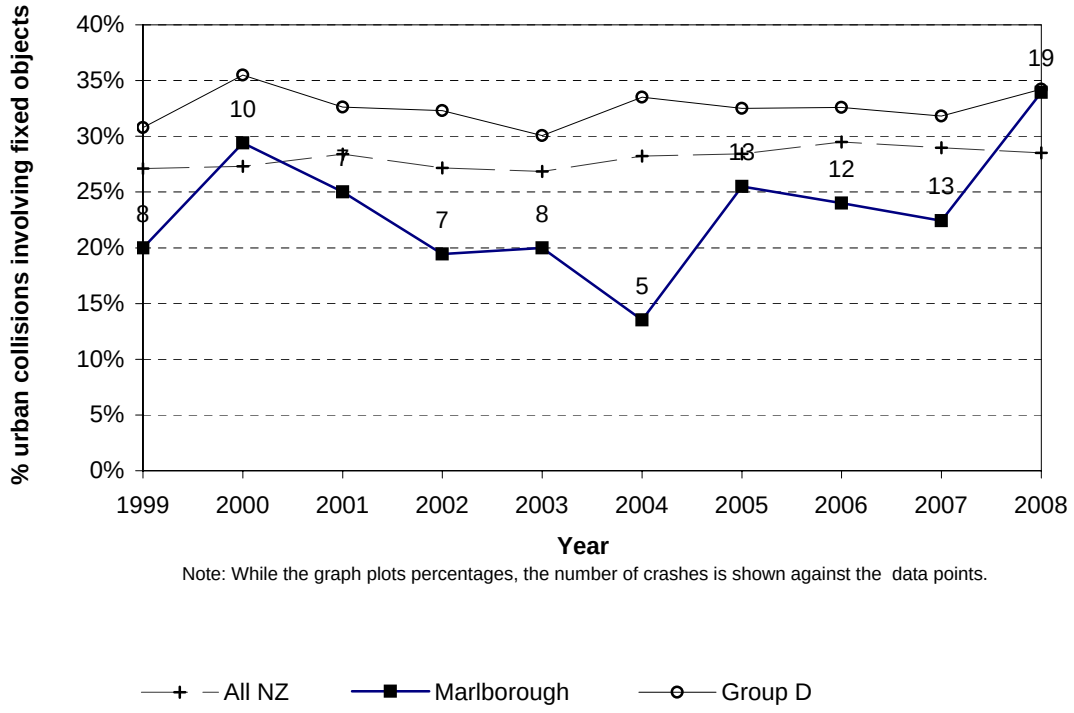
Note: While the graph plots percentages, the number of crashes is shown against the data points.

Figure 6.10 Icy road crashes
Marlborough District - rural roads



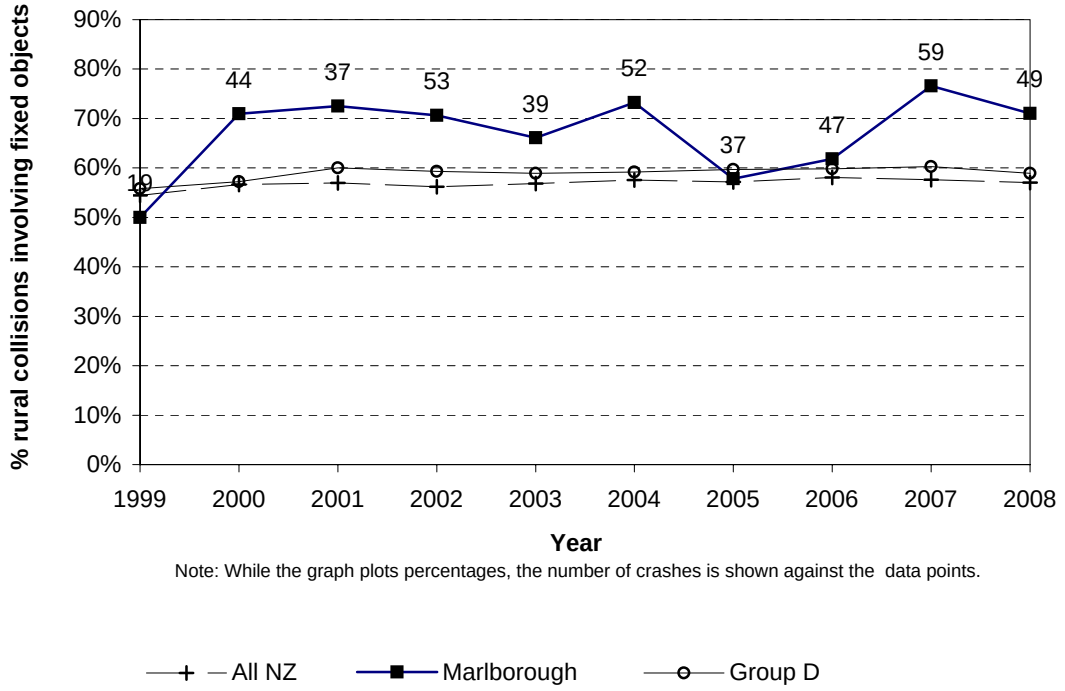
Note: While the graph plots percentages, the number of crashes is shown against the data points.

Figure 6.11 Collisions with objects
Marlborough District - urban roads



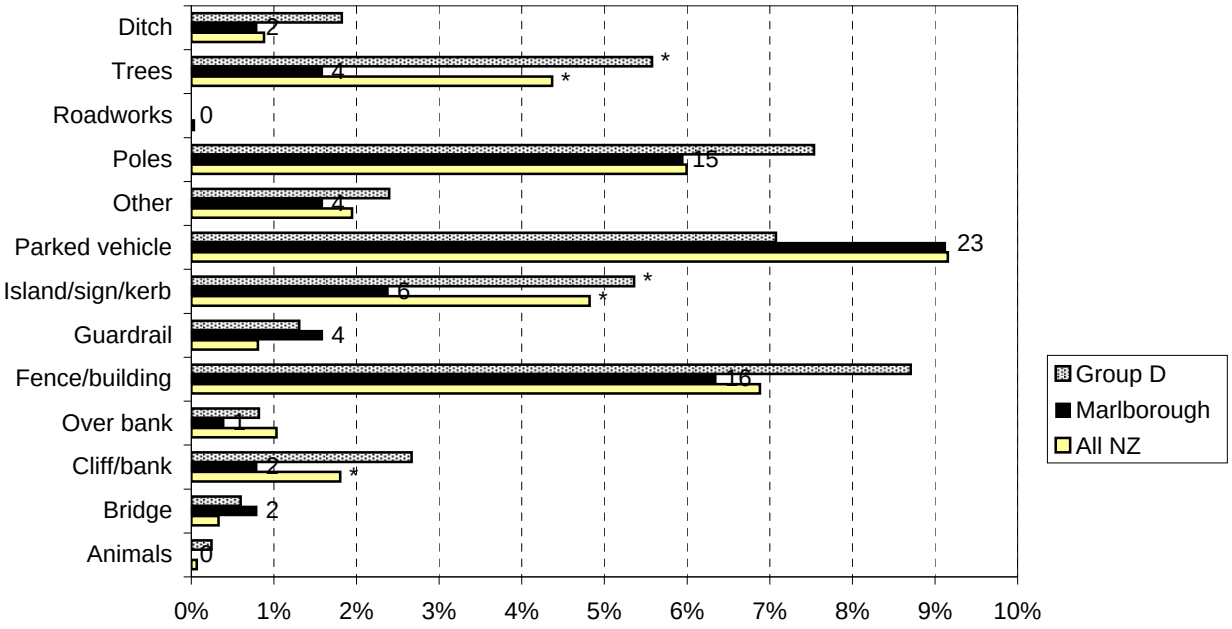
Note: While the graph plots percentages, the number of crashes is shown against the data points.

Figure 6.12 Collisions with objects
Marlborough District - rural roads



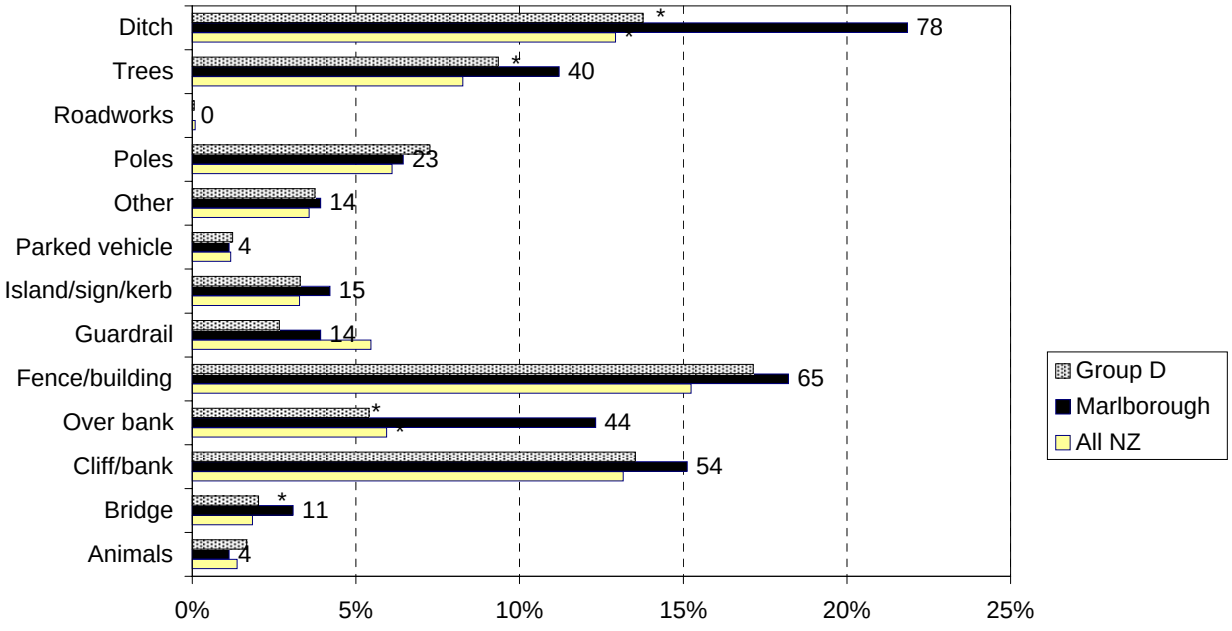
Note: While the graph plots percentages, the number of crashes is shown against the data points.

Figure 6.13 Objects struck - urban Marlborough District (2004-2008)



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

Figure 6.14 Objects struck - rural Marlborough District (2004-2008)



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

Date and Time Statistics

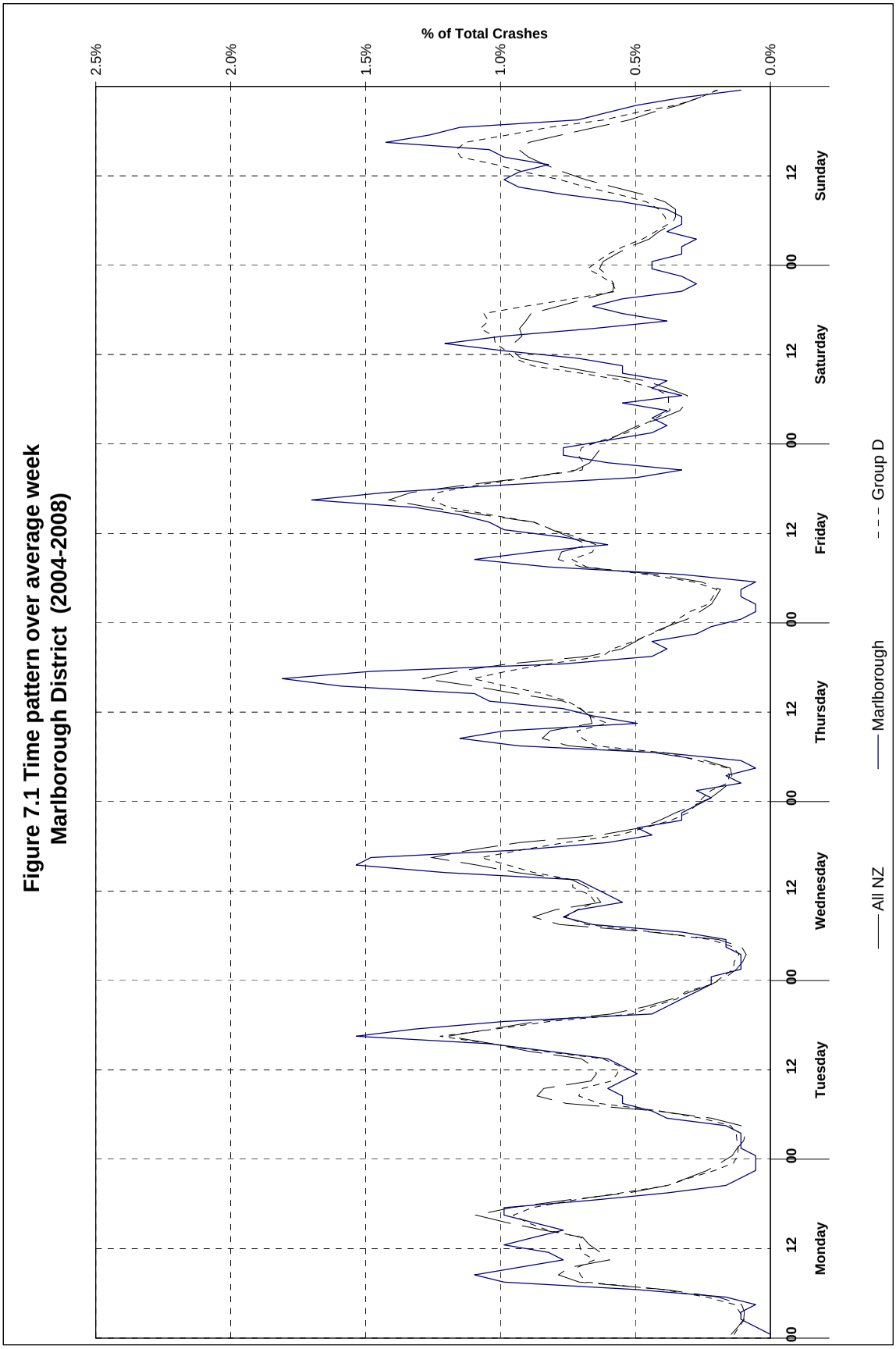
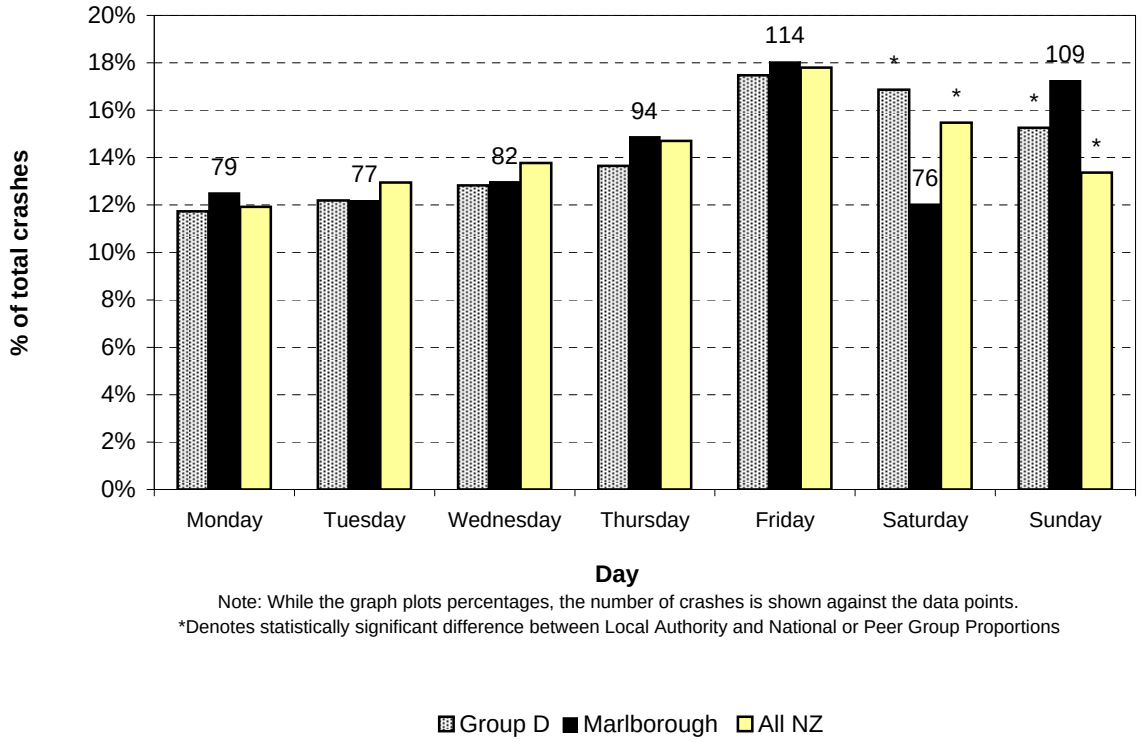


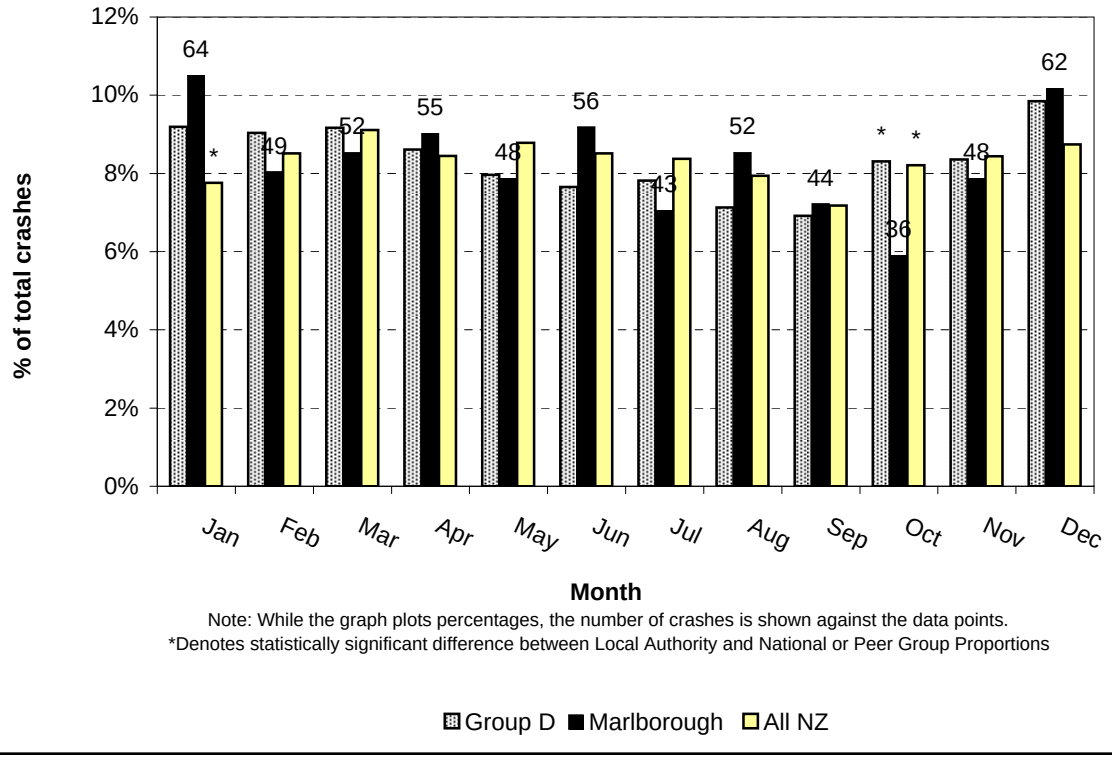
Figure 7.1 Time pattern over average week Marlborough District (2004-2008)

Figure 7.2 Day of week (6 a.m. to 6 a.m.)
Marlborough District (2004-2008)



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

Figure 7.3 Month of year
Marlborough District (2004-2008)



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

Local Road Statistics

Figure 8.1 Number of injury crashes
Marlborough District - council roads (urban & rural)

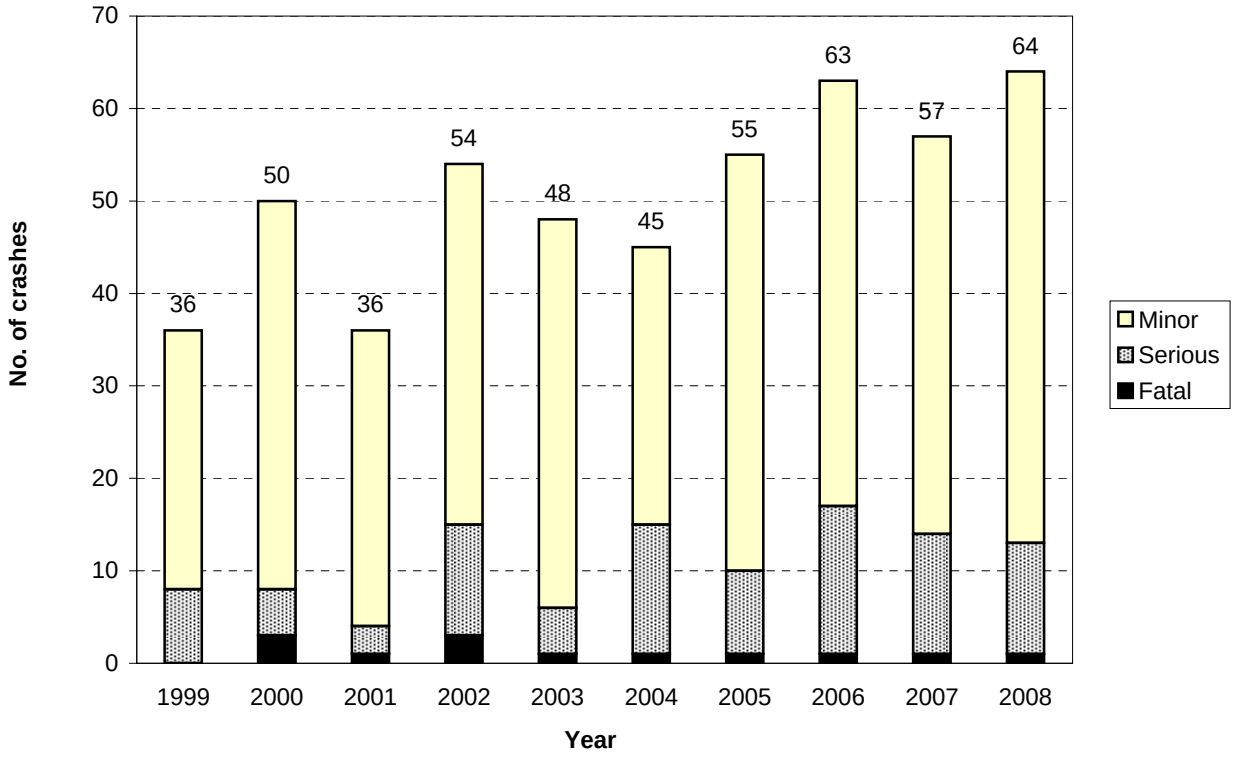


Figure 8.2 Number of casualties
Marlborough District - council roads (urban & rural)

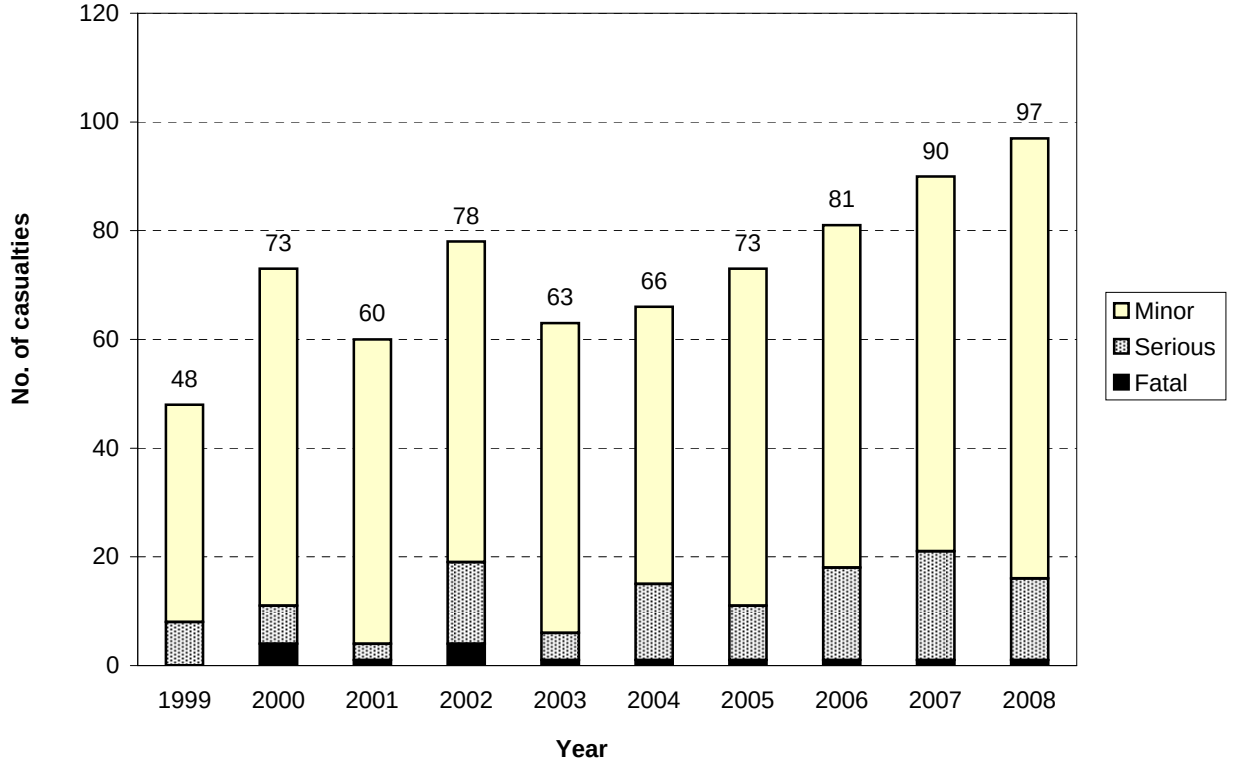


Figure 8.3 Number of injury crashes
Marlborough District - urban council roads

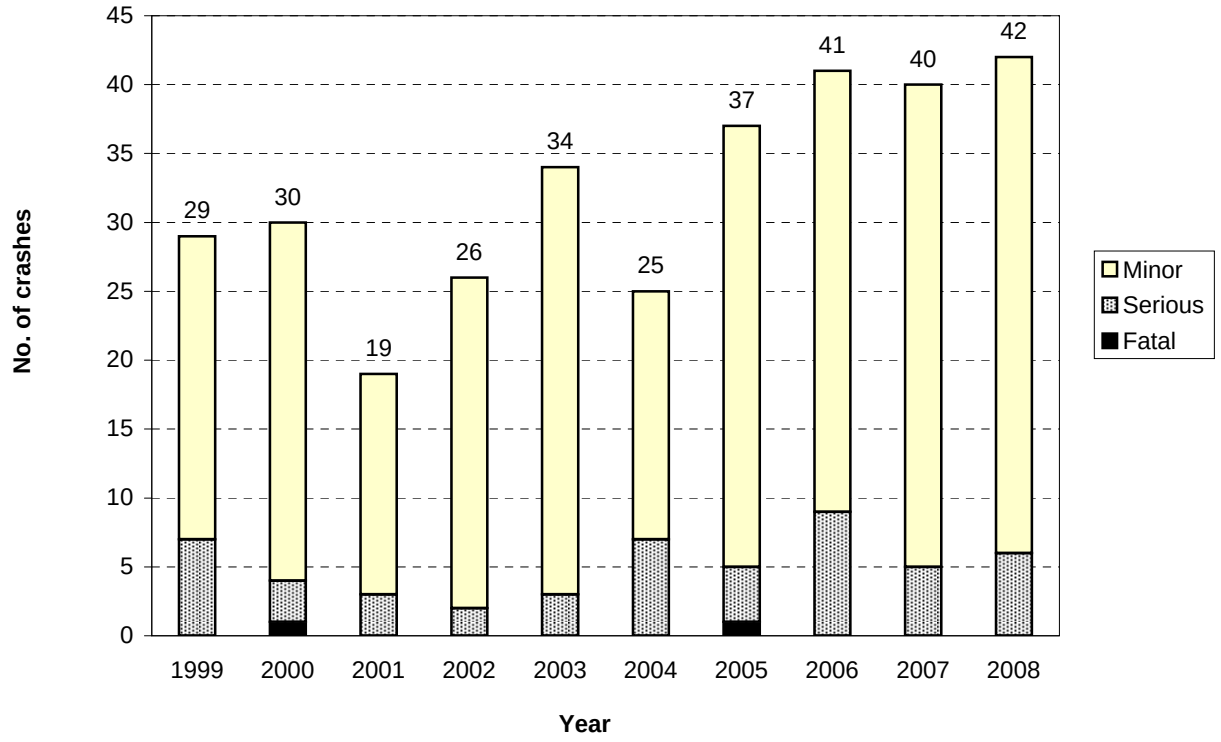


Figure 8.4 Number of casualties
Marlborough District - urban council roads

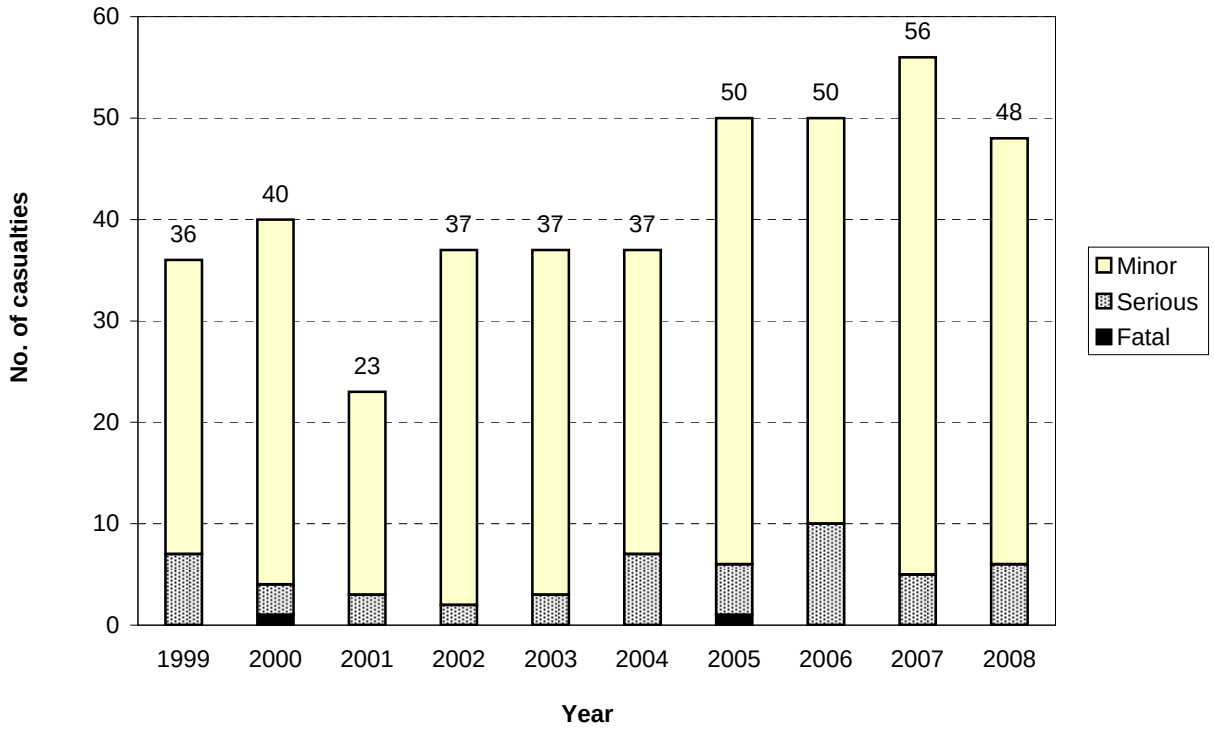


Figure 8.5 Number of injury crashes
Marlborough District - rural council roads

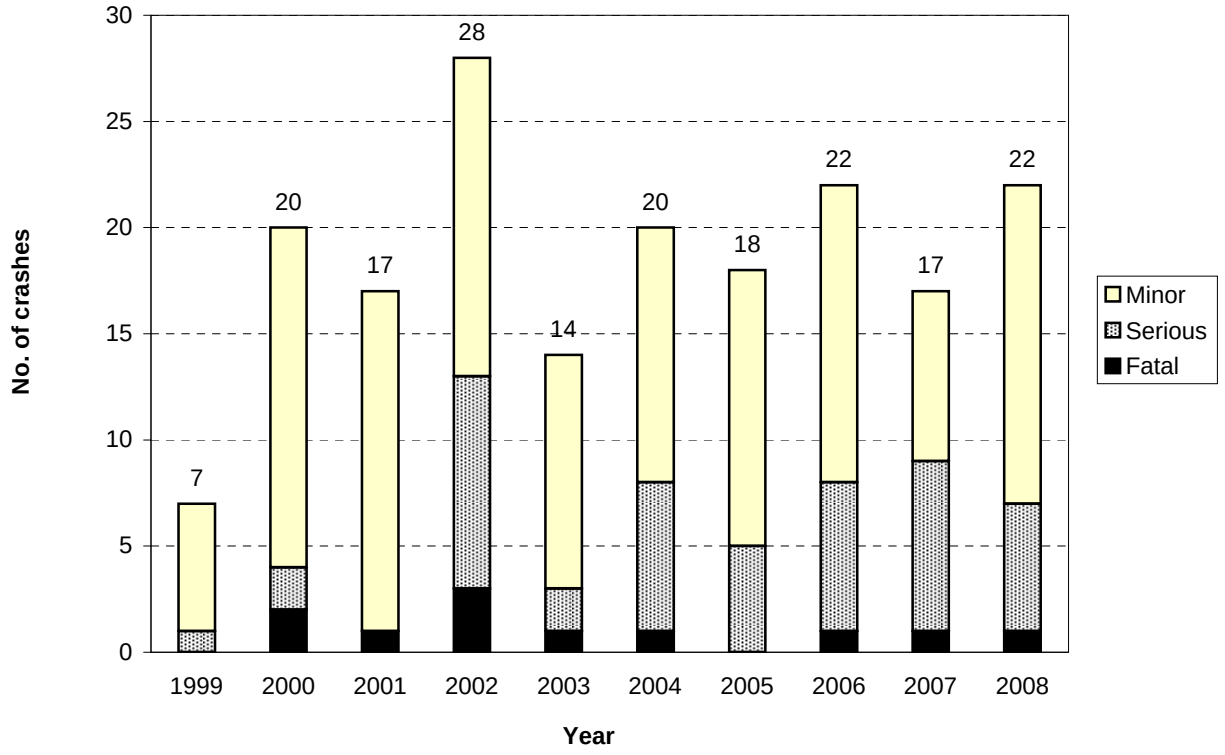


Figure 8.6 Number of casualties
Marlborough District - rural council roads

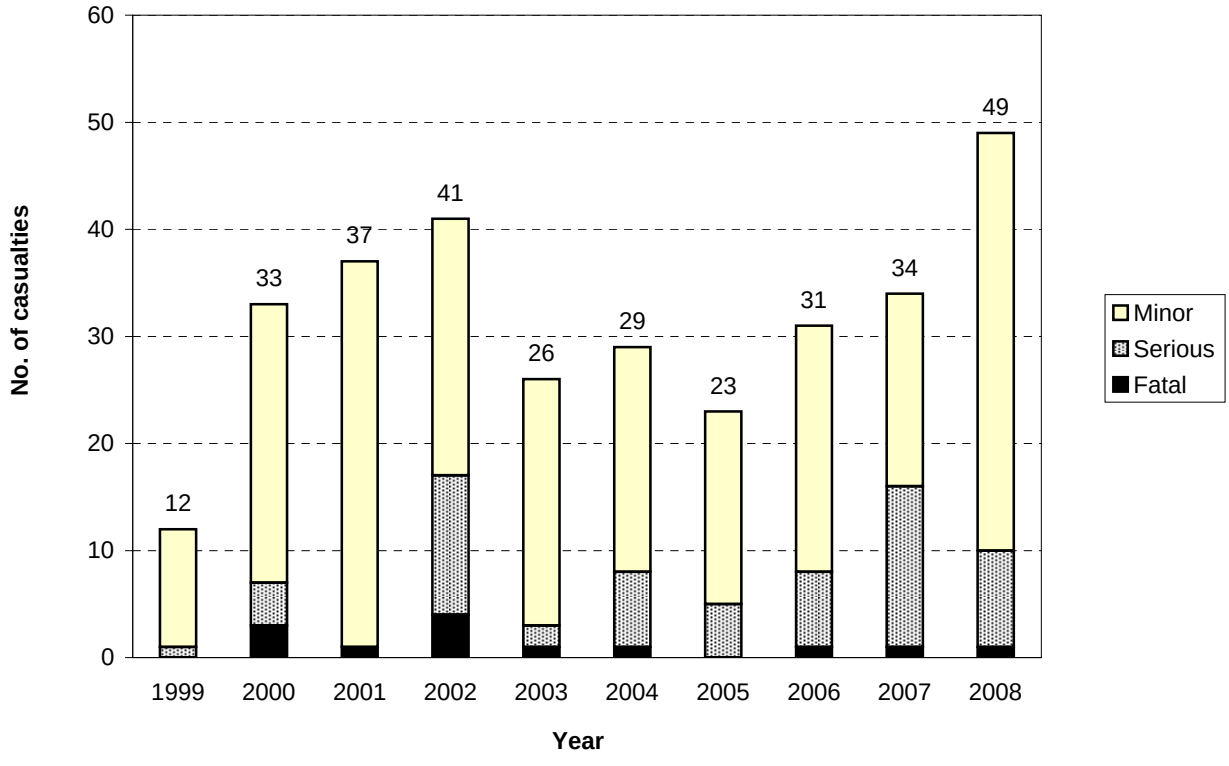
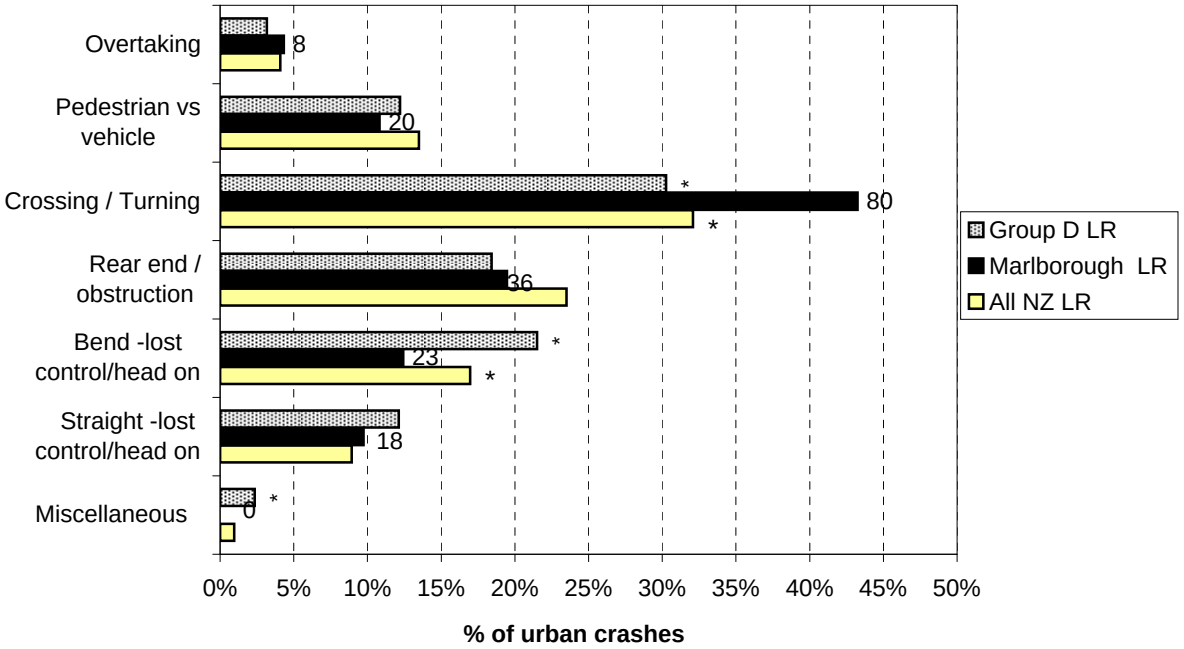
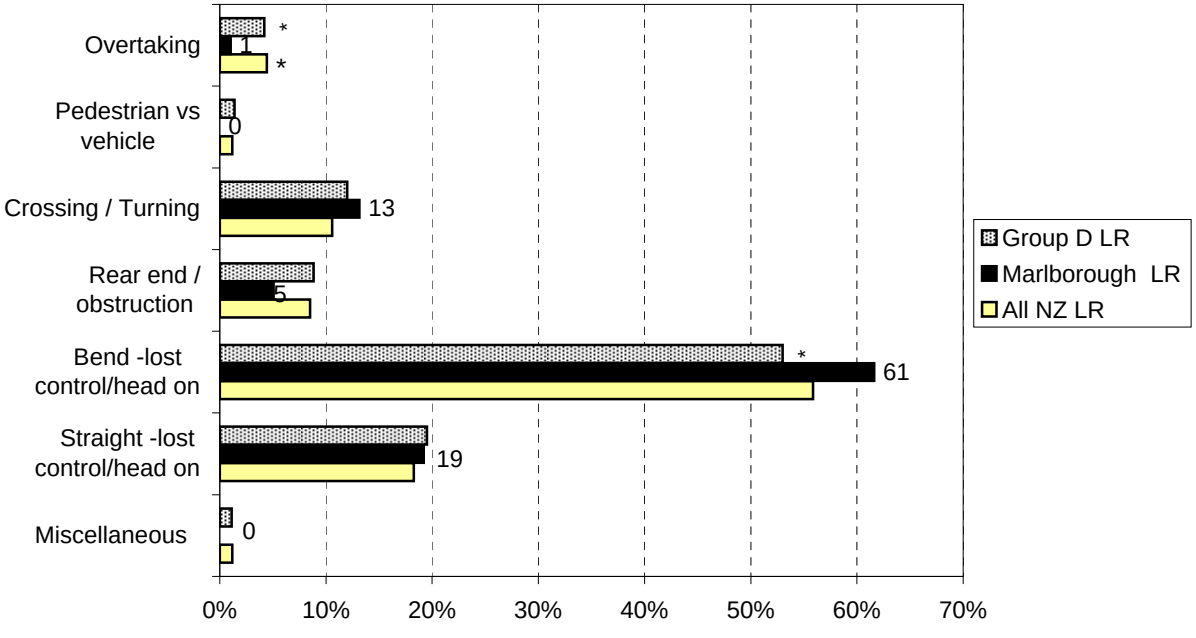


Figure 8.7 Crash movement type - urban Marlborough District council roads (2004-2008)



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

Figure 8.8 Crash movement type - rural Marlborough District council roads (2004-2008)



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

Figure 8.9 Crash movement type - Trends
Marlborough District - urban council roads

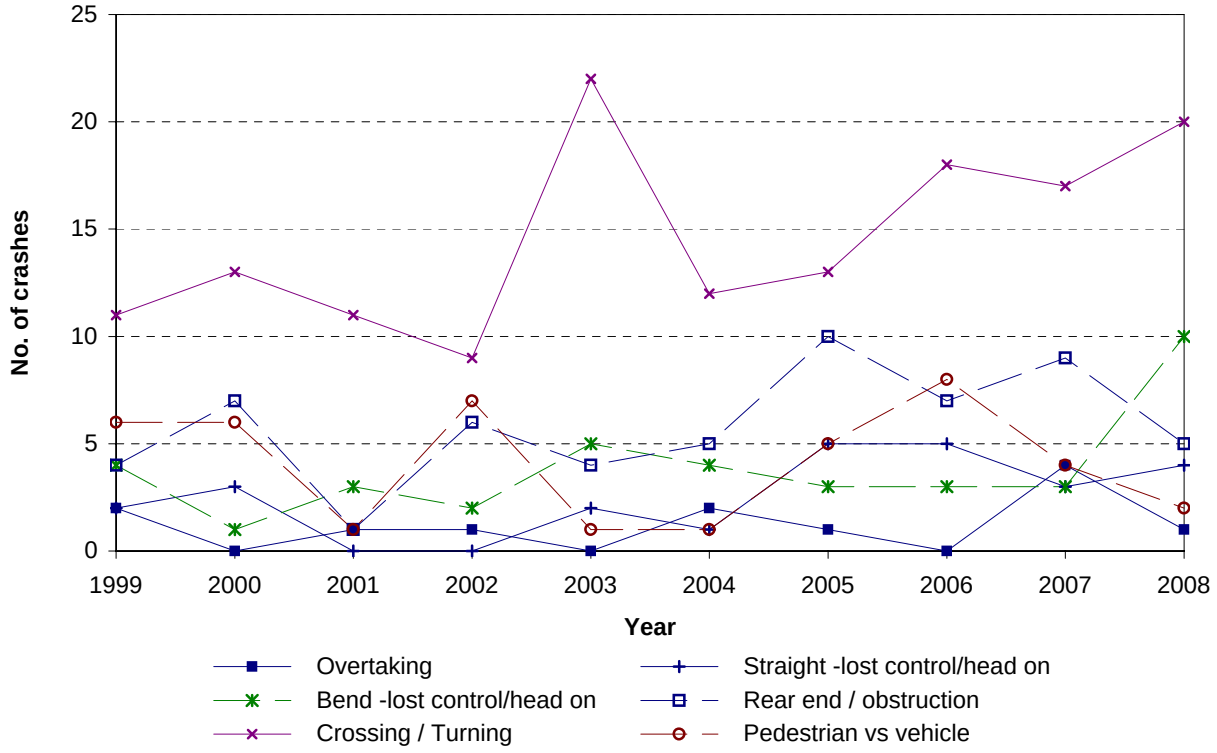


Figure 8.10 Crash movement type - Trends
Marlborough District - rural council roads

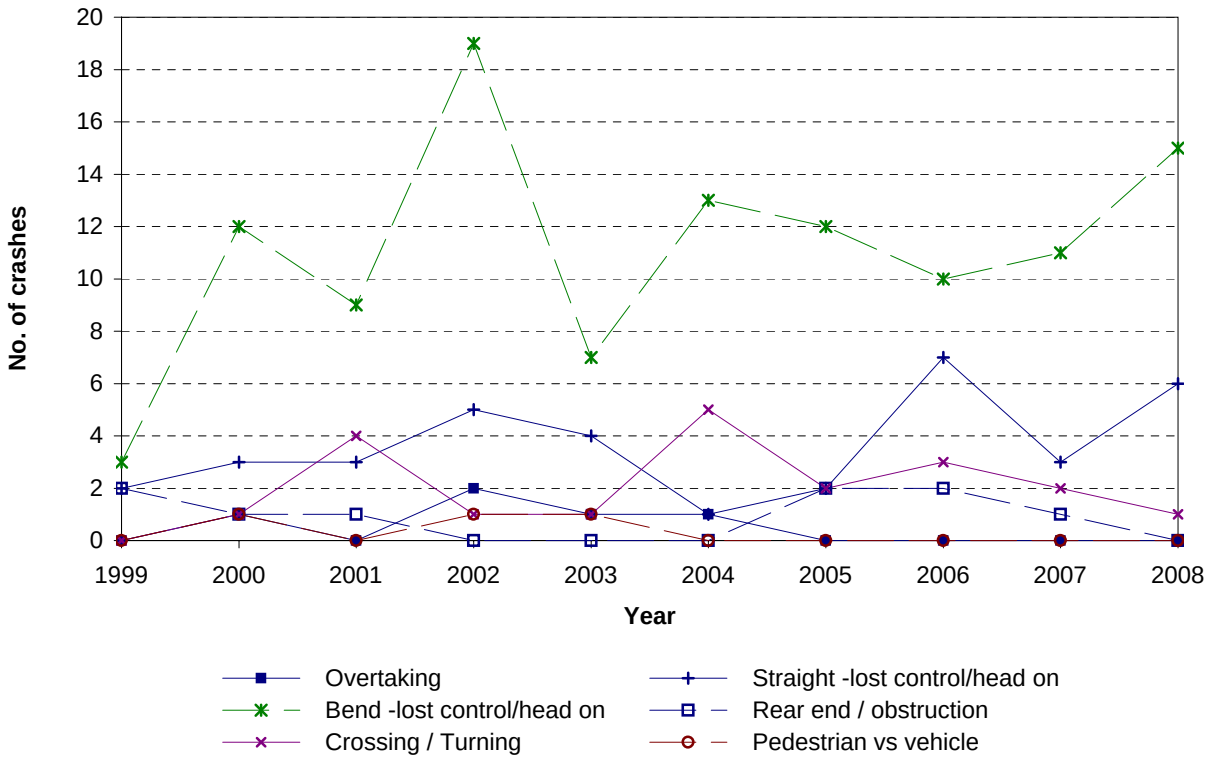
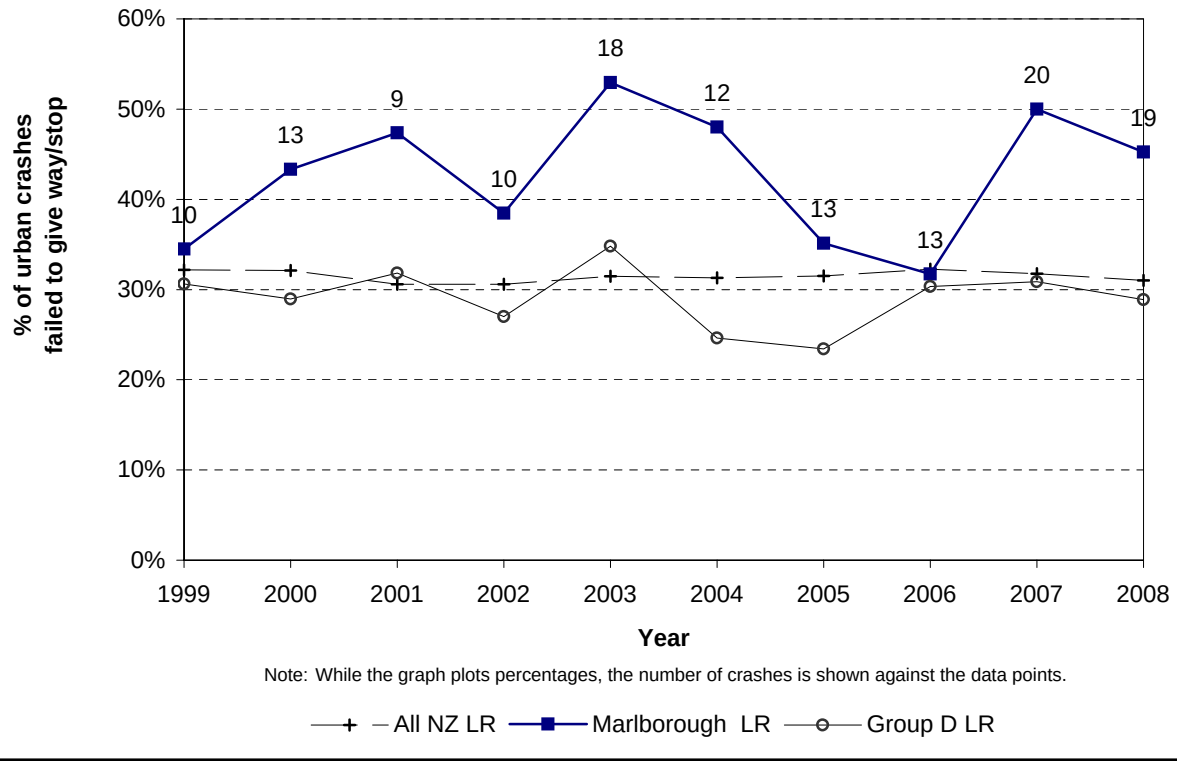
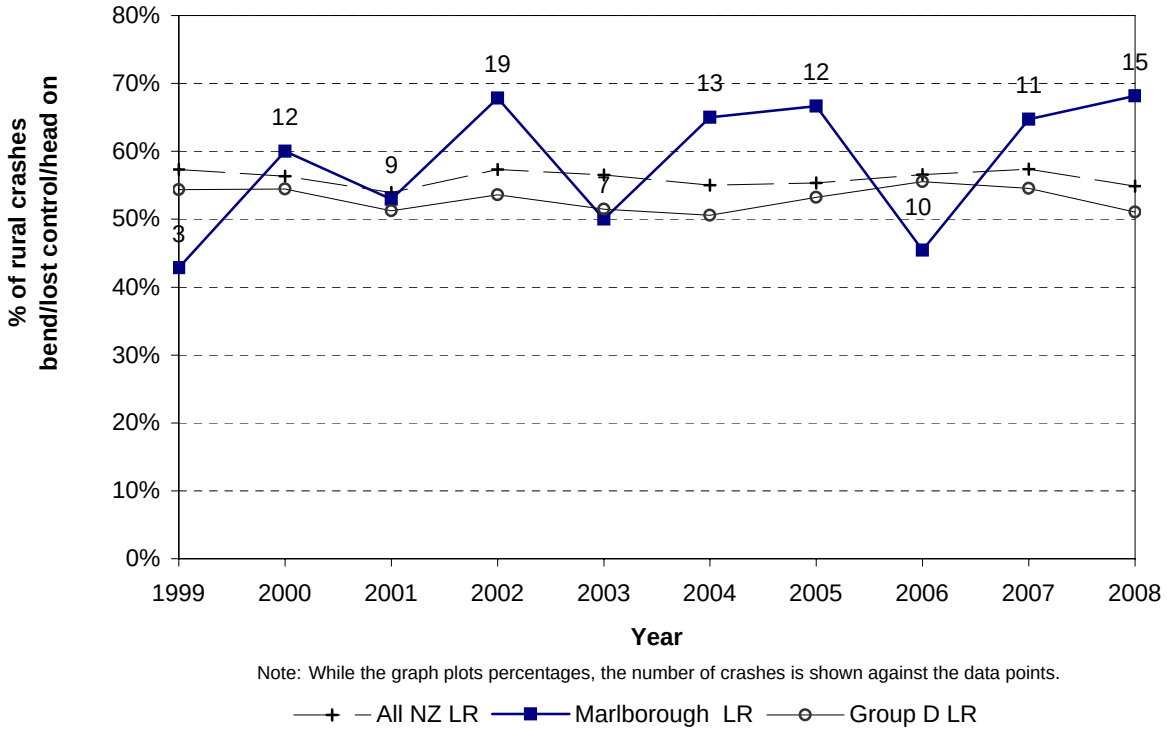


Figure 8.11 Failed to give way/stop
Marlborough District - urban council roads



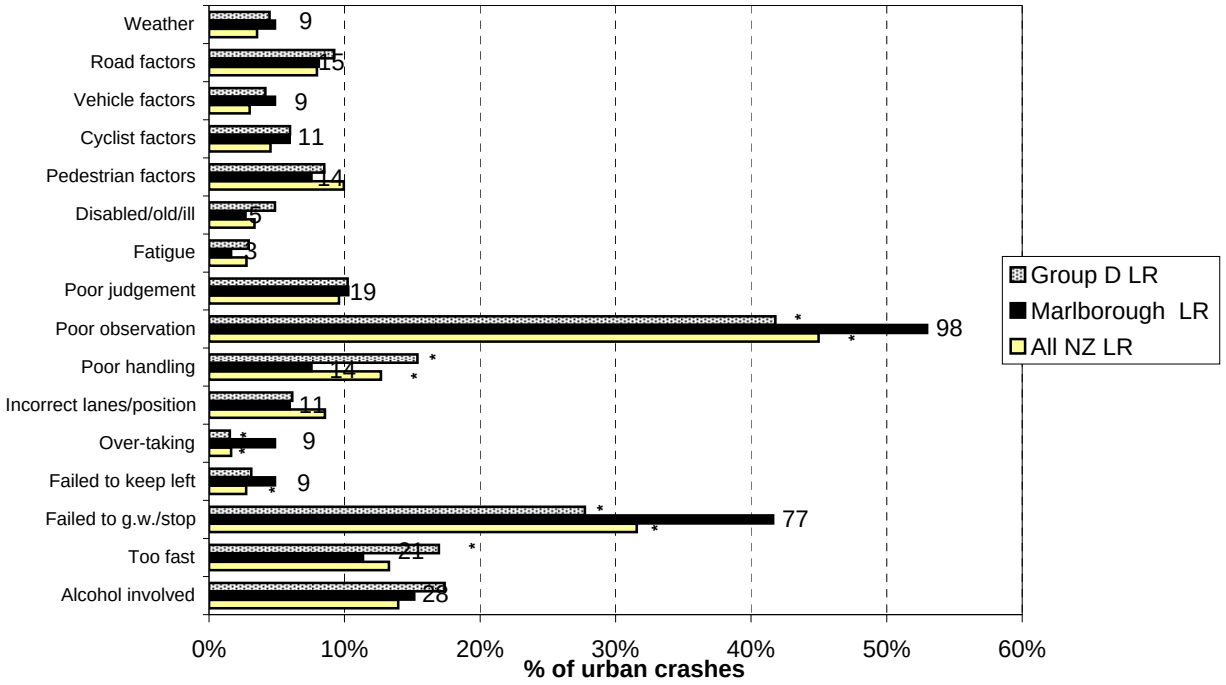
Note: While the graph plots percentages, the number of crashes is shown against the data points.

Figure 8.12 Bend - lost control / head - on
Marlborough District - rural council roads



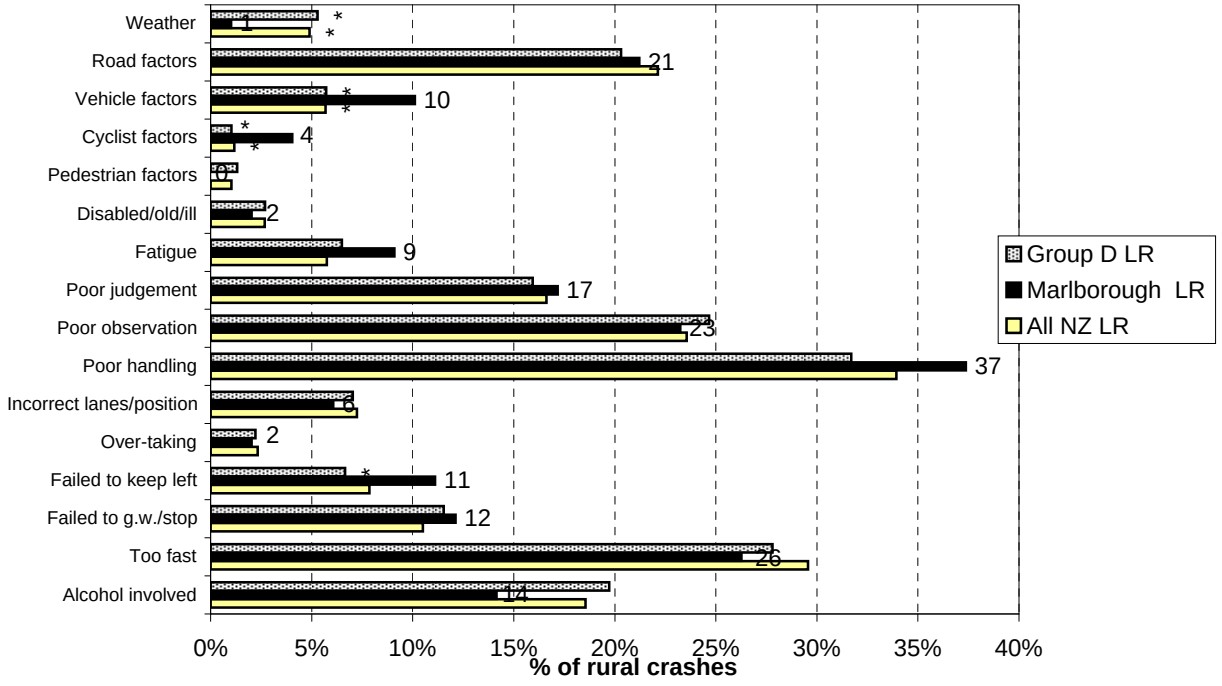
Note: While the graph plots percentages, the number of crashes is shown against the data points.

Figure 8.13 Contributing factors - urban Marlborough District council roads (2004-2008)



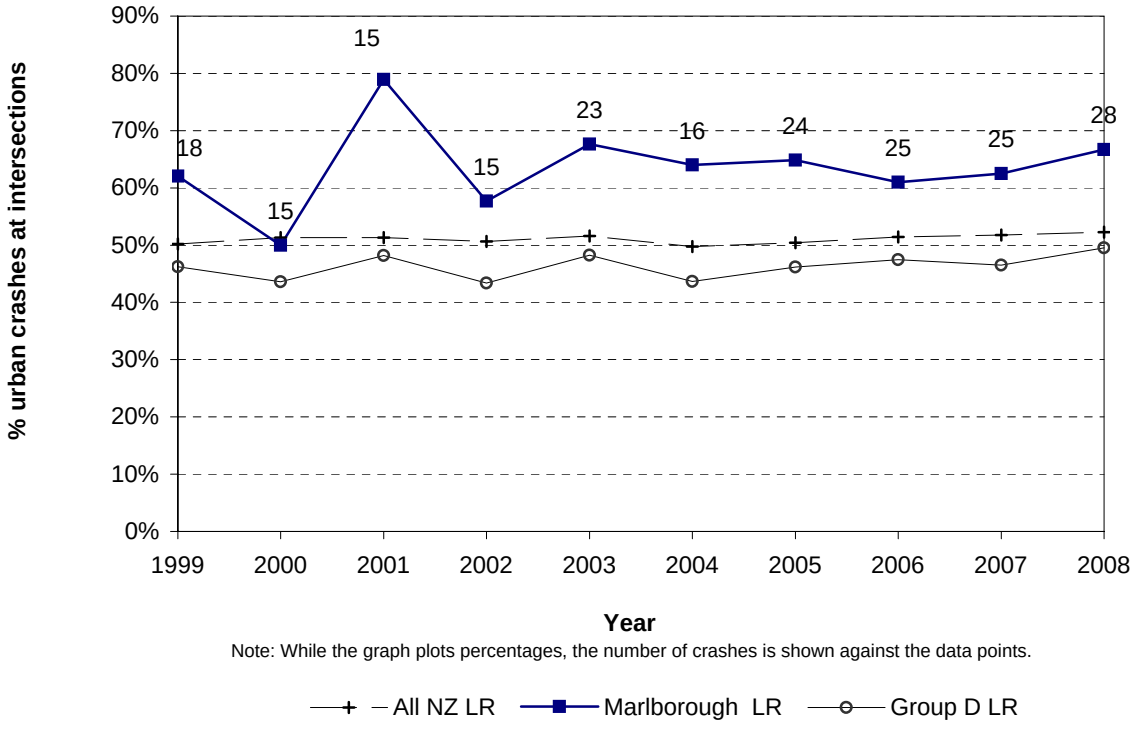
Note: While the graph plots percentages, the number of crashes is shown against the data points.
*Denotes statistically significant difference between Local Authority and National or Peer Group Proportions

Figure 8.14 Contributing factors - rural Marlborough District council roads (2004-2008)



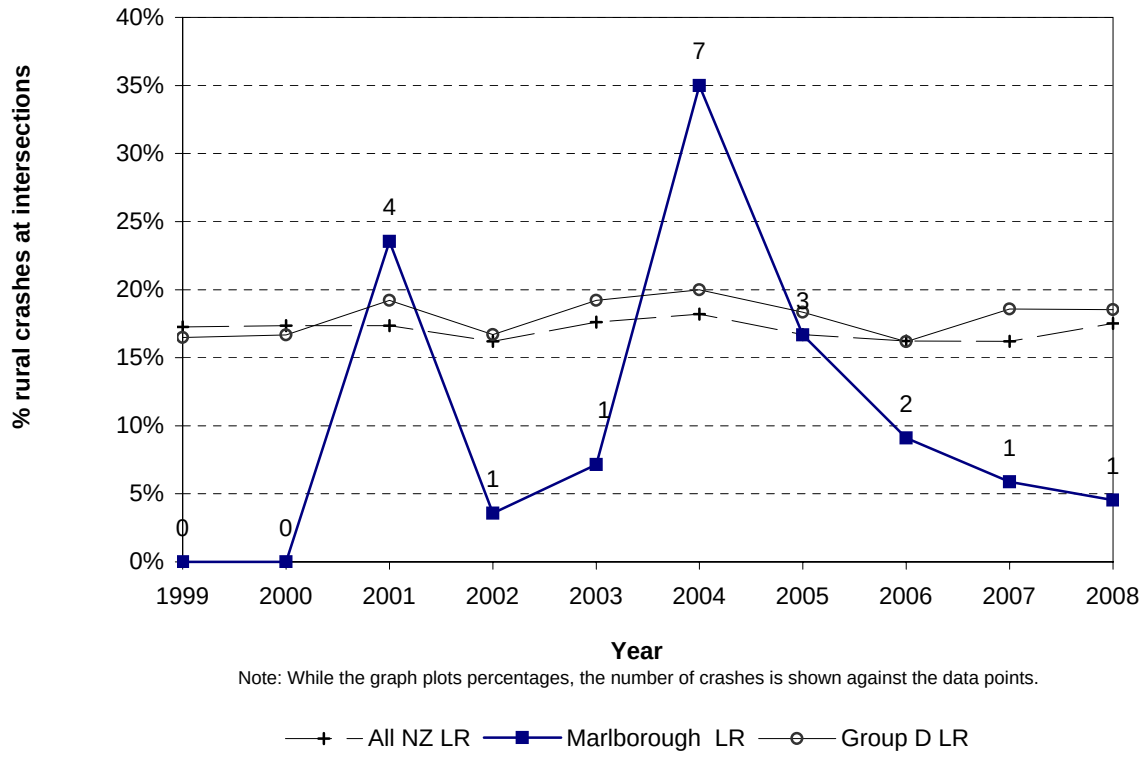
Note: While the graph plots percentages, the number of casualties is shown against the data points.
*Denotes statistically significant difference between Local Authority and National or Peer Group Proportions

Figure 8.15 Intersection crashes
Marlborough District - urban council roads



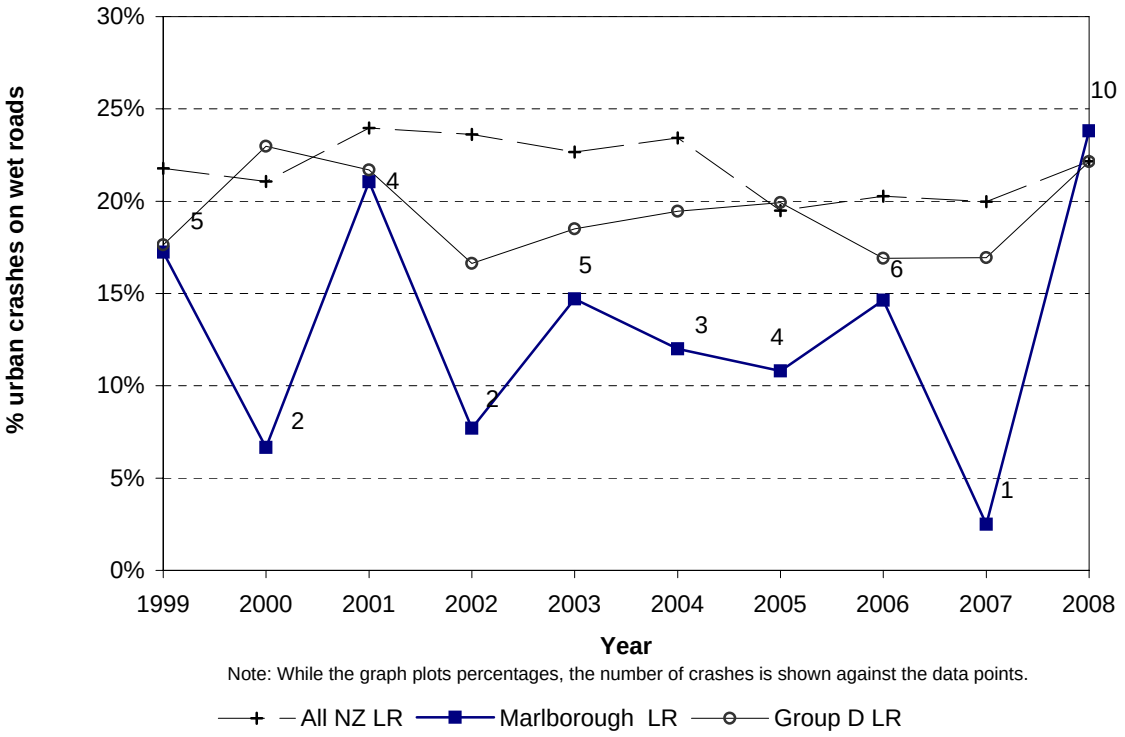
Note: While the graph plots percentages, the number of crashes is shown against the data points.

Figure 8.16 Intersection crashes
Marlborough District - rural council roads



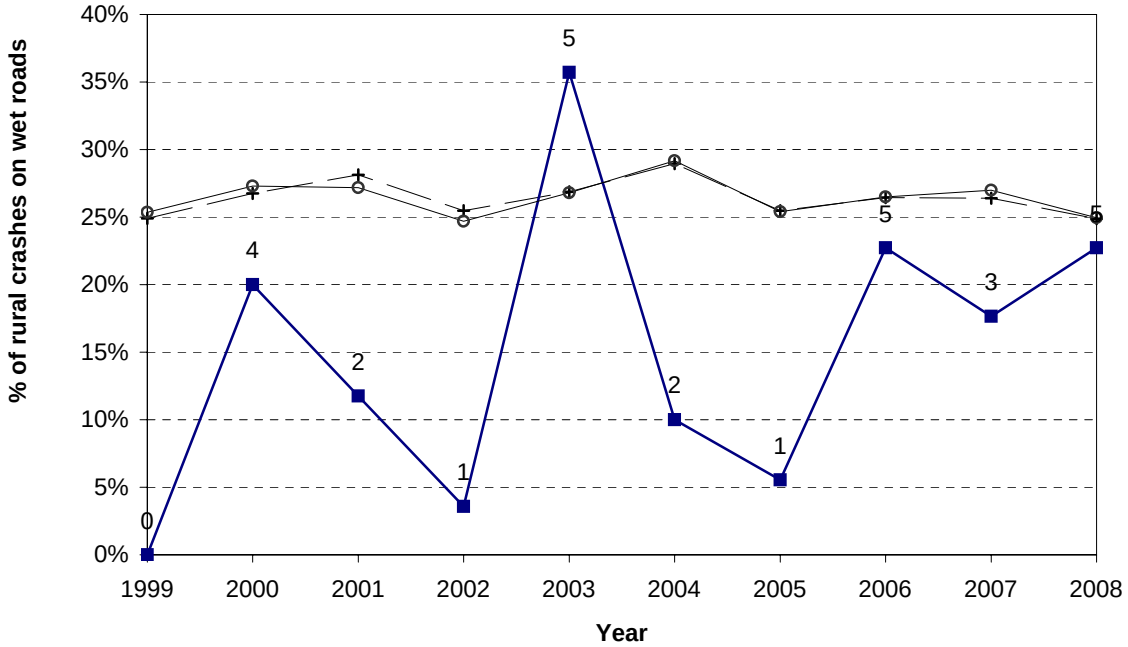
Note: While the graph plots percentages, the number of crashes is shown against the data points.

Figure 8.17 Wet road crashes
Marlborough District - urban council roads



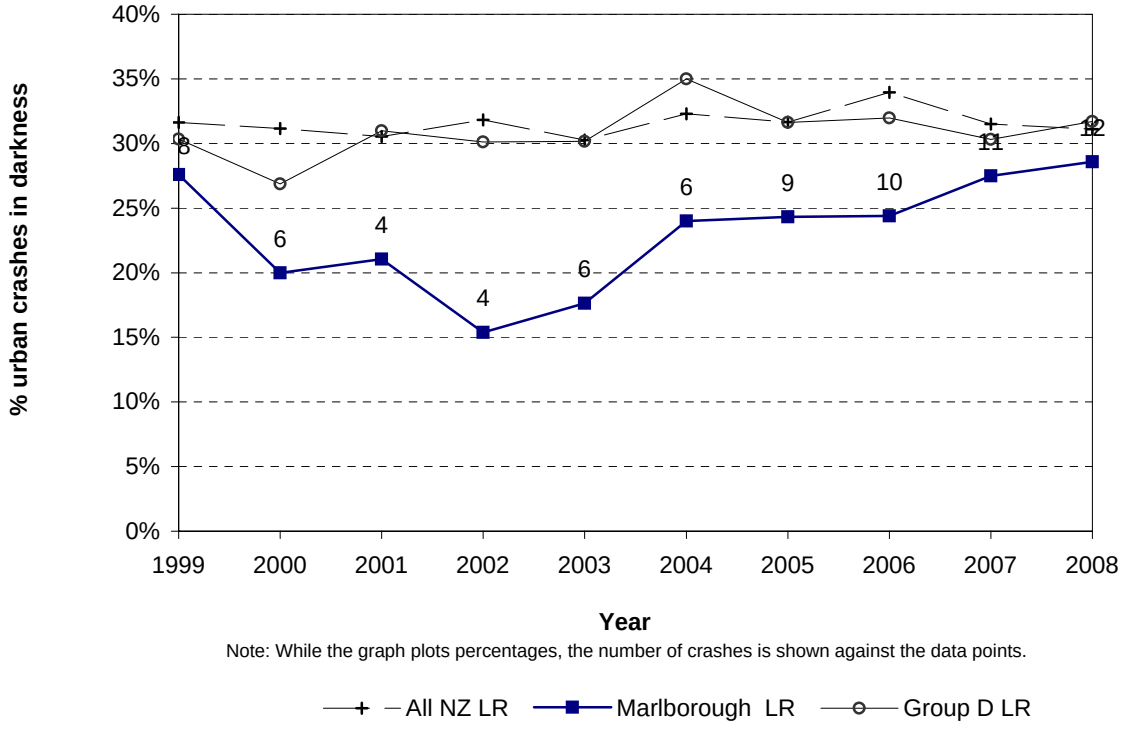
Note: While the graph plots percentages, the number of crashes is shown against the data points.

Figure 8.18 Wet road crashes
Marlborough District - rural council roads



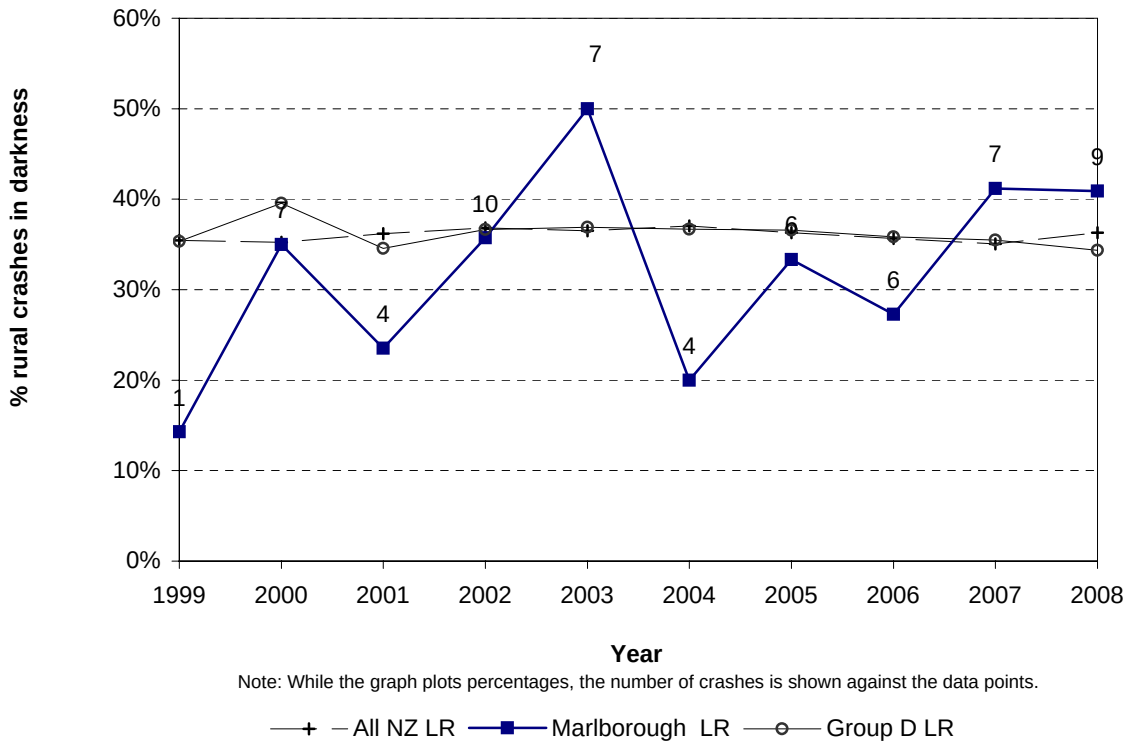
Note: While the graph plots percentages, the number of crashes is shown against the data points.

Figure 8.19 Crashes in darkness
Marlborough District - urban council roads



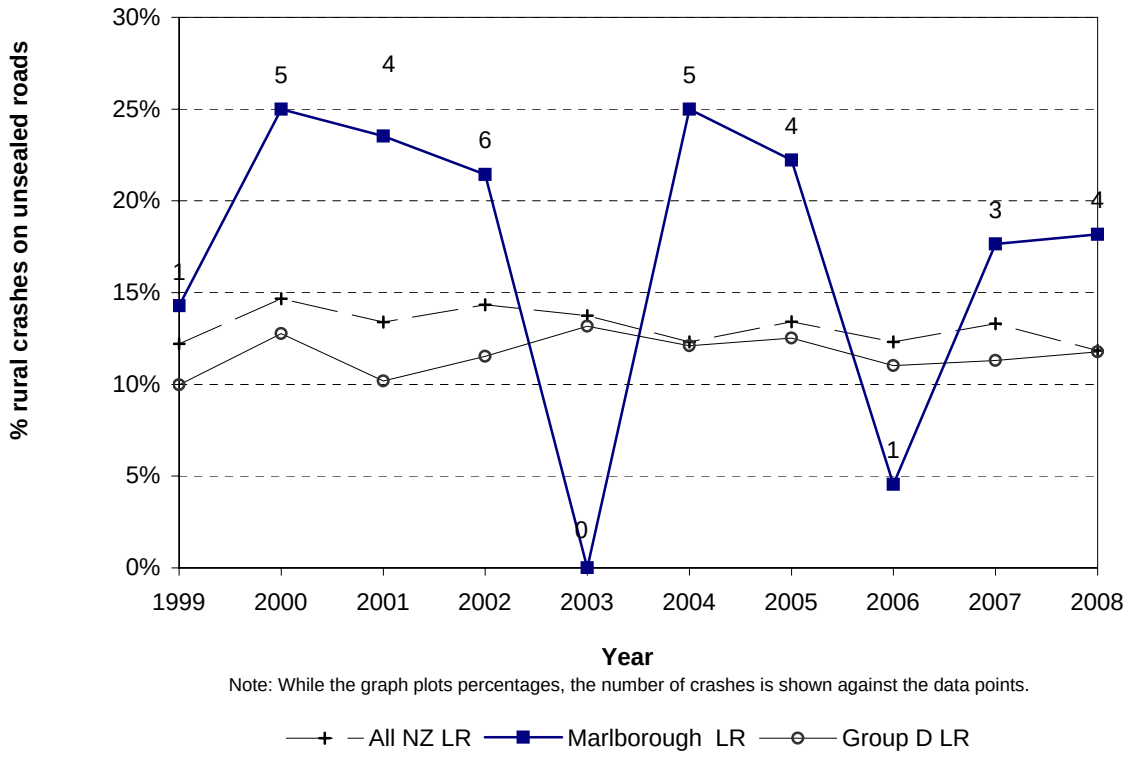
Note: While the graph plots percentages, the number of crashes is shown against the data points.

Figure 8.20 Crashes in darkness
Marlborough District - rural council roads



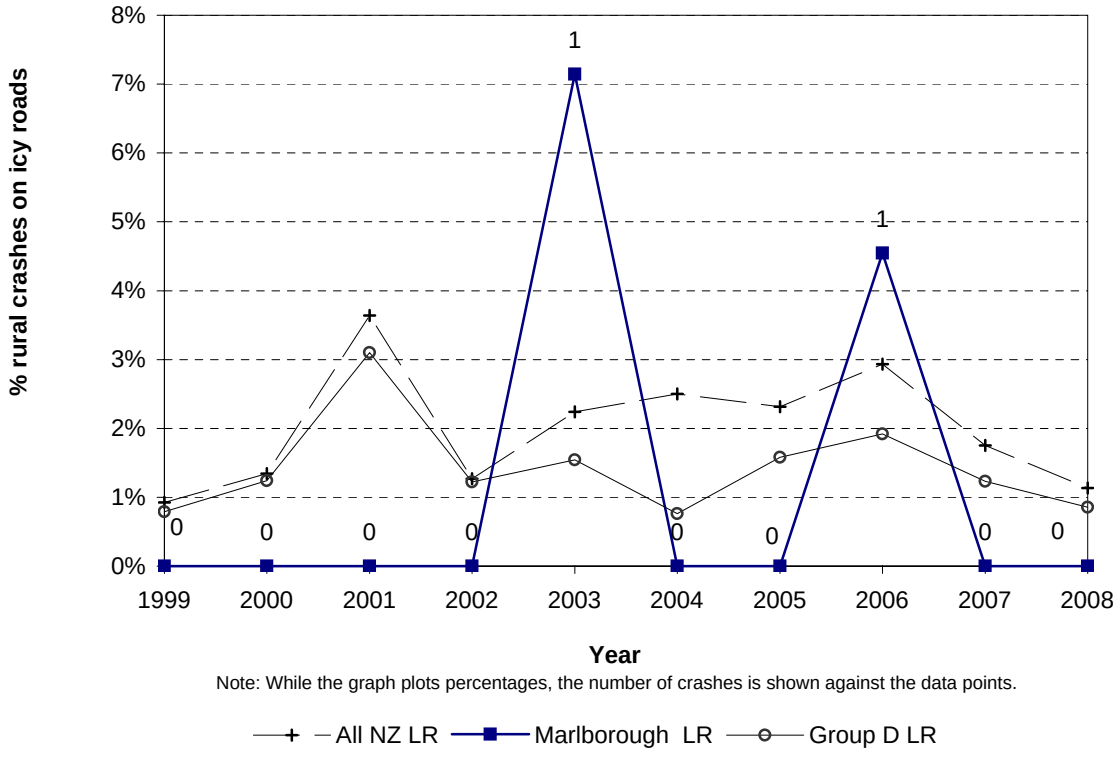
Note: While the graph plots percentages, the number of crashes is shown against the data points.

Figure 8.21 Crashes on unsealed roads
Marlborough District - rural council roads



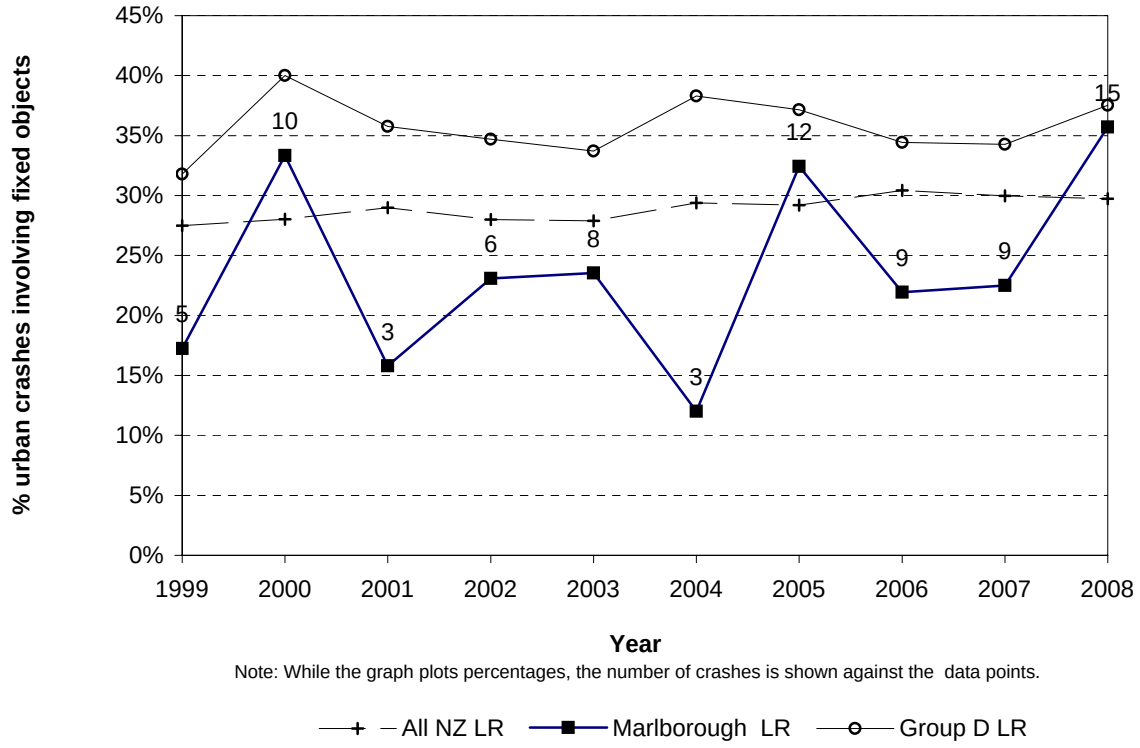
Note: While the graph plots percentages, the number of crashes is shown against the data points.

Figure 8.22 Icy road crashes
Marlborough District - rural council roads



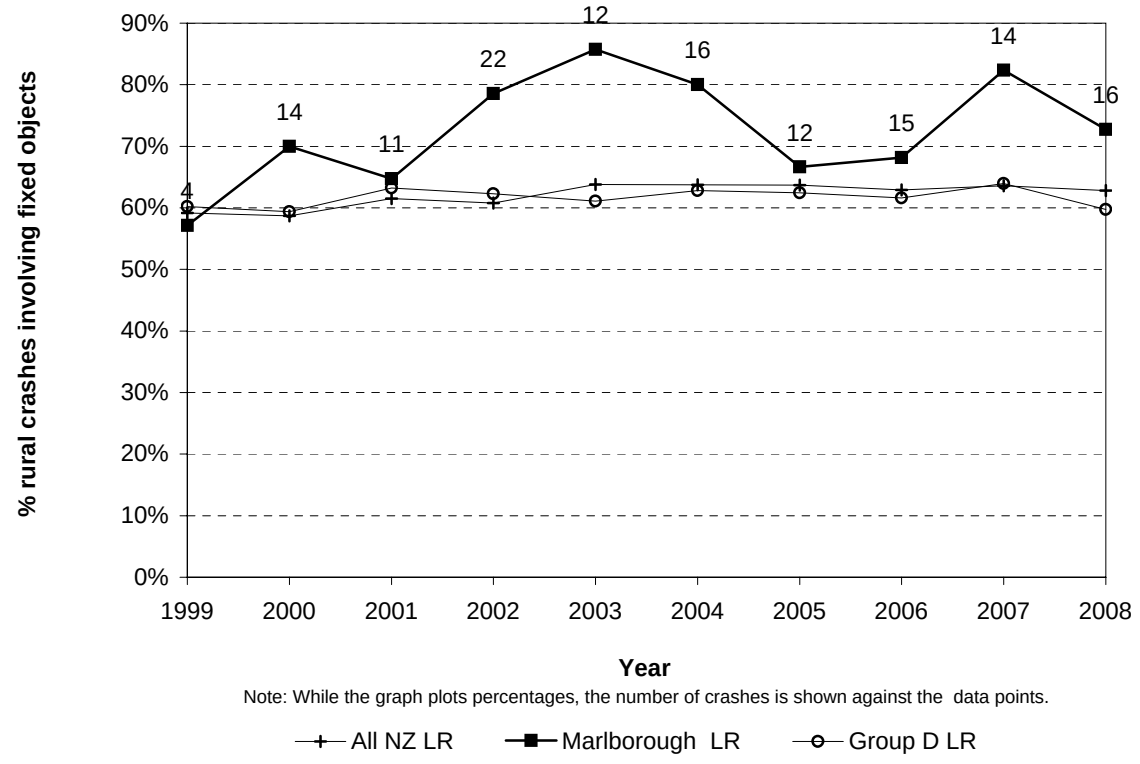
Note: While the graph plots percentages, the number of crashes is shown against the data points.

Figure 8.23 Collisions with objects
Marlborough District - urban council roads



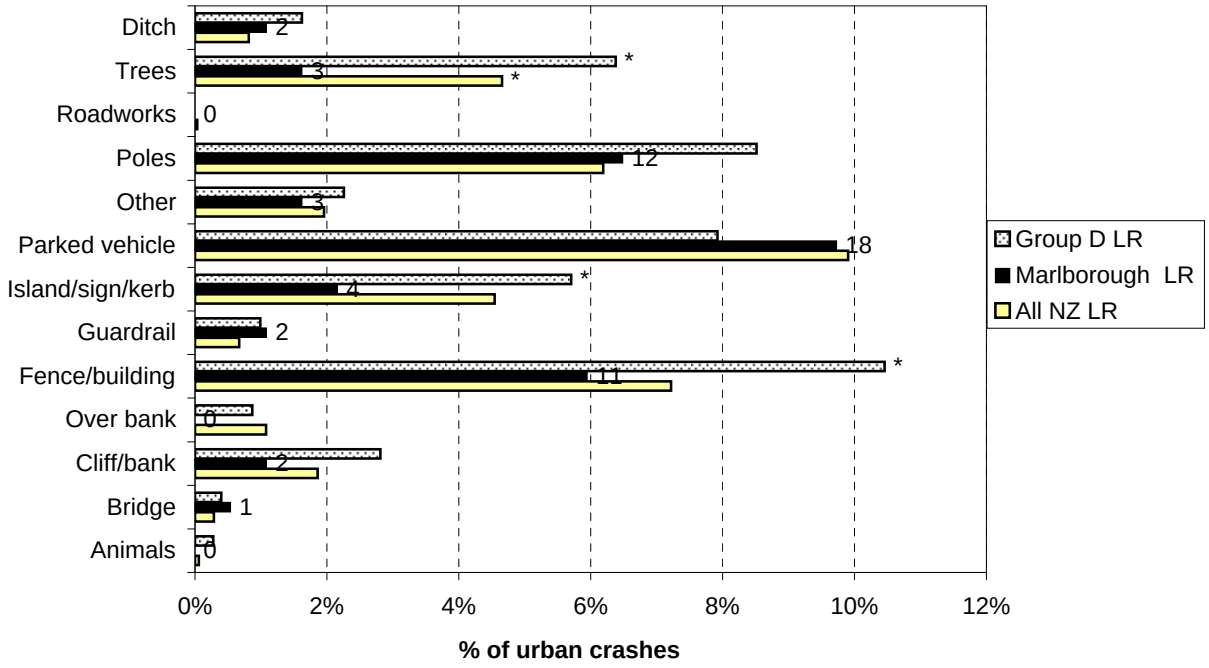
Note: While the graph plots percentages, the number of crashes is shown against the data points.

Figure 8.24 Collisions with objects
Marlborough District - rural council roads



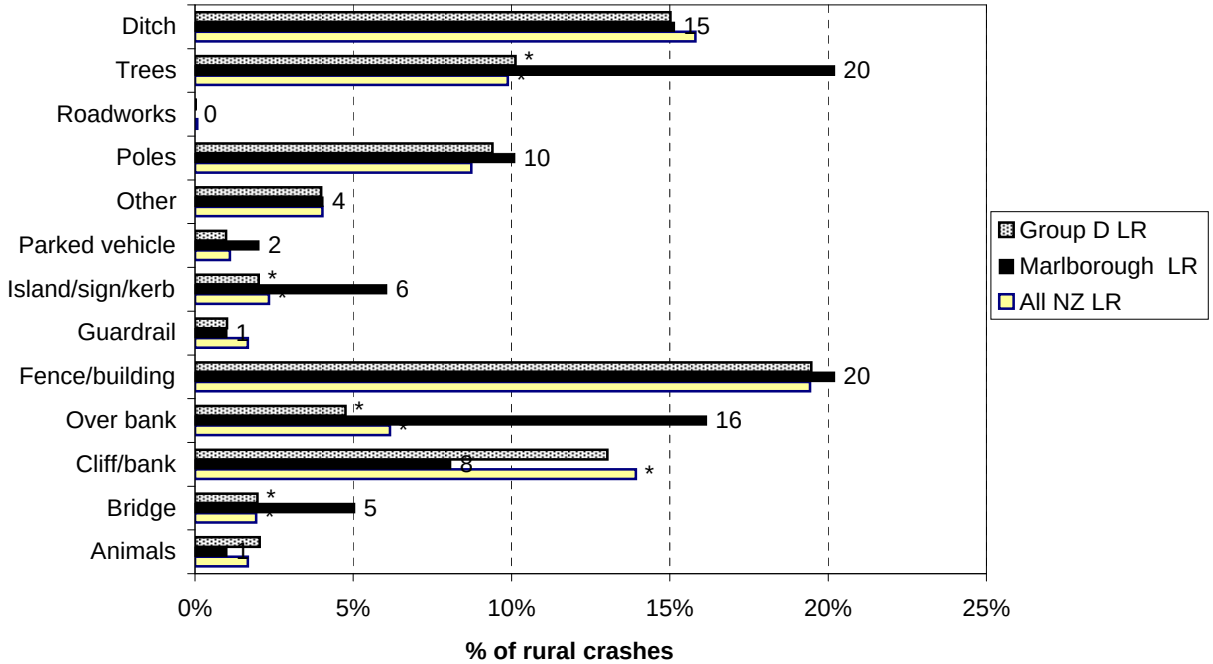
Note: While the graph plots percentages, the number of crashes is shown against the data points.

Figure 8.25 Objects struck - urban Marlborough District council roads (2004-2008)



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

Figure 8.26 Objects struck - rural Marlborough District council roads (2004-2008)



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

Crash Location Statistics

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

Site Radius = 30 metres

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

CRASH ROAD			SIDE ROAD	2004	2005	2006	2007	2008	TOTAL	Non-Injury	Wet Crash %	Dark Crash %	Crash Costs
SEYMOUR ST	I		GEORGE ST	1	2	4	3	3	13	11	23	38	$1,246,678
ALABAMA ROAD	I		REDWOOD ST	2		2	2		6	2		17	$1,232,071
HIGH ST	I		HENRY ST	1	1	4	4	2	12	9	17	25	$779,596
MAXWELL ROAD	I		ALABAMA ROAD	2	2	1	2		7	4	14	14	$761,139
MAXWELL ROAD	I		SEYMOUR ST	2	7	5	2	3	19	10	11	11	$751,696
MAXWELL ROAD	I		DILLON ST		2	1		2	5	2	20	40	$699,486
BUDGE ST	I		WARWICK ST	1		1	2	2	6	4		17	$694,715
WELLINGTON ST	I		WAIKAWA ROAD	1	2	1	1	1	6	4	33		$665,637
HOSPITAL ROAD	I		SCOTT ST		1	2	2		5	3	20	20	$650,251
ALFRED ST	I		RUSSELL TERRACE		2	1	1		4	2	75	50	$603,166
WELD ST	I		MULLER ROAD		1	1	1	3	6	5		17	$585,197
BUDGE ST		50 E	GROVE ROAD			2		1	3	2			$536,987
SEYMOUR ST	I		CHARLES ST			1	1	1	3	2	33		$536,987
MAXWELL ROAD	I		QUEEN ST		1	1	1		3	2		33	$536,946
HIGH ST		60 N	BROADWAY	1			1	1	3	2		33	$536,331
HIGH ST	I		SEYMOUR ST	1	8	6	3	2	20	16	15	15	$518,694
WELD ST	I		ALABAMA ROAD	4	2	4	1	3	14	10	7	14	$421,086

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

Site Radius = 250 metres

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

CRASH ROAD			SIDE ROAD	2004	2005	2006	2007	2008	TOTAL	Non-Injury	Wet Crash %	Dark Crash %	Crash Costs
OLD RENWICK ROAD	I		JACKSONS ROAD	1	1	2	3		7	3	29	29	$4,860,962
ALABAMA ROAD		300 E	DRY HILLS LANE	2				2	4	2	25	25	$892,978
DOG POINT ROAD	I		BROOKBY ROAD	1	3				4	3		75	$791,960
TAYLOR PASS ROAD		380 S	MEADOWBANK ROAD	1		2	1		4	2		25	$788,081
NEW RENWICK ROAD		800 W	AERODROME ROAD	1	1	1			3	2		33	$752,838
OLD RENWICK ROAD		1200 E	BLENHEIM ST		1	1	1		3	2	67		$699,801
BATTYS ROAD		110 S	WATERS AVENUE	1		1	1		3	2		33	$698,938

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

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

Sites with 3 or more injury crashes or more than $1500000 in social costs

CRASH ROAD				SIDE ROAD	2004	2005	2006	2007	2008	TOTAL	Non-Injury	Wet Crash %	Dark Crash %	Crash Costs
SH 1S	I			FACTORY ROAD	2	2	2	0	1	7	2	14	0	$7,781,319
SH 1S	A			DAZZLE CORNER	3	2	3	3	3	14	5	21	21	$5,849,116
SH 1S	I			MILLS AND FORD ROAD EA	1	2	2	1	2	8	5	13	25	$5,388,479
SH 1S		600	E	NOLANS XING	1	1	1	0	3	6	2	0	67	$5,009,841
SH 6		1400	S	RAI SDL	2	0	0	2	1	5	1	20	40	$4,680,598
SH 6	I			SH 62	1	1	0	2	1	5	2	40	40	$4,388,601
SH 1S	I			AWATERE VALLEY ROAD	1	1	1	0	0	3	1	0	0	$3,973,038
SH 1S		1970	S	PUKA PUKA BR	1	2	1	0	2	6	2	33	17	$3,933,801
SH 6	I			KAITUNA-TUAMARINA ROAI	3	0	0	1	0	4	2	0	25	$3,765,358
SH 6		450	N	LESLIES ROAD	1	0	0	1	2	4	3	50	50	$3,713,461
SH 6	I			LESLIES ROAD	2	0	3	2	0	7	2	29	57	$2,225,778
SH 6	I			HUTCHESON ST	3	5	5	6	5	24	19	8	29	$1,542,800
SH 1S		1100	N	HALFWAY HOUSE	2	1	1	0	0	4	1	25	0	$1,483,838
SH 1S	I			REDWOOD ST	5	5	7	4	2	23	19	22	22	$1,475,841
SH 1S	I			SH 6	7	7	5	5	7	31	21	26	26	$1,462,632
SH 1S	I			FERRY ROAD	4	3	2	4	3	16	12	6	31	$1,313,666
SH 1S		50	N	ELEVATION OBR	4	1	1	1	1	8	3	0	50	$1,193,839
SH 1S		2270	S	WELD PASS OBR	2	1	0	2	0	5	1	40	20	$1,028,138
SH 1S	I			BLIND RIVER LOOP ROAD	0	3	2	1	1	7	3	14	0	$997,802
SH 1S		1000	S	ELEVATION OBR	1	2	1	2	0	6	2	33	33	$961,461
SH 1S		1250	N	DAZZLE CORNER	2	0	2	0	2	6	3	17	33	$909,718
SH 1S		1000	N	RAPAURA ROAD	0	1	1	2	0	4	1	25	75	$884,040
SH 1S		910	N	TIROHANGA BR	1	0	1	0	1	3	0	33	0	$797,720
SH 1S	I			KAPARU ROAD	1	0	1	1	0	3	0	0	0	$797,720
SH 6		800	N	RONGA ROAD	1	0	0	1	1	3	0	33	33	$797,720
SH 1S		820	S	PUKA PUKA BR	0	0	2	0	1	3	0	33	0	$792,820
SH 6	I			COLEMANS ROAD	0	2	2	3	1	8	5	25	25	$715,876
SH 6	I			BELLS ROAD	2	2	3	4	2	13	10	8	15	$630,939
SH 6	I			BATTYS ROAD	3	3	3	3	2	14	8	14	14	$524,187
SH 1S	I			ALABAMA ROAD	2	1	0	4	2	9	5	22	33	$487,990
SH 1S		3640	S	WHARANUI BEACH ROAD	1	1	1	1	1	5	0	40	20	$430,220
SH 1S		100	N	ALABAMA ROAD	1	0	3	3	1	8	5	25	63	$425,349
SH 6	A			RAI SDL	1	1	1	1	3	7	4	71	14	$403,059
SH 1S	I			FREETHS ROAD	0	2	2	0	1	5	1	0	40	$382,280
SH 6		1000	S	CAMERONS ROAD	0	0	2	4	0	6	3	33	83	$364,801
SH 1S		400	N	STACES ROAD	1	0	1	1	1	4	1	0	50	$295,060

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

Site Radius = 30 metres

CRASH ROAD		SIDE ROAD	2003	2004	2005	2006	2007	2008	TOTAL	Non-Injury	Wet Crash %	Dark Crash %
WELD ST	I	MULLER ROAD			1	1	1	3	6	5		17
ARTHUR ST	I	HENRY ST	1				1	3	5	4		20
HIGH ST	I	DUBLIN ST						4	4	2	25	75
BROADWAY	I	YORK ST		1				2	3	1		
HOSPITAL ROAD	I	WELD ST			1			2	3	1		
TAYLOR PASS ROAD	I	HOSPITAL ROAD		1				2	3	3		

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

Site Radius = 250 metres

CRASH ROAD	SIDE ROAD	2003	2004	2005	2006	2007	2008	TOTAL	Non-Injury	Wet Crash %	Dark Crash %

There were no sites with a significant increase in crashes for 2008

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

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

CRASH ROAD				SIDE ROAD	2003	2004	2005	2006	2007	2008	TOTAL	Non-Injury	Wet Crash %	Dark Crash %
SH 1S		30	N	SH 6	1	1	1	1	2	4	10	8	0	0
SH 6	I			SH 63	0	2	1	0	1	4	8	6	38	25
SH 1S		280	N	BUSH ROAD	0	1	2	0	0	3	6	1	0	50
SH 1S	A			MIRZA BR	0	0	1	0	0	2	3	1	0	0
SH 63		1150	S	BRANCH NO 4 CULV	0	0	1	0	0	2	3	1	67	0
SH 1S		1650	N	BUSH ROAD	0	0	0	1	0	2	3	2	67	33
SH 6		60	N	WAIRAU BR S	1	0	0	0	0	2	3	2	0	0
SH 6		1600	N	KAIUMA BAY ROAD	1	0	0	0	0	2	3	2	0	33
SH 1S	I			LOWER WAIRAU ROAD	0	1	0	0	0	2	3	3	33	0

appendix

- Groupings of crash types
- Grouping of contributing factors

Explanatory notes for the appendix

1. Each traffic crash report has a diagram and a description of what happened. These are used to classify the movements the vehicles were making when they crashed eg ‘collided with parked vehicle’, or ‘lost control while overtaking’. In this report, crash types are grouped into seven categories. The following page shows the types of crashes which are included in each group.

2. Traffic crash reports also include information on why the crash occurred, or on factors contributing to the crash. In this report the hundreds of contributing factor codes used by New Zealand Transport Agency have been condensed into 16 groups for practical reasons. Lists of the factor groups used in this report, and of all the contributing factors used by New Zealand Transport Agency, are shown on the following pages.

3. Note that in the year 2000 there were some minor changes to the contributing factor groups. The most significant change was that ‘inattention’ was grouped with ‘inadequate check’ to form ‘poor observation’. This allowed a more accurate assessment of ‘fatigue’ as a contributing factor, as it now has its own grouping.

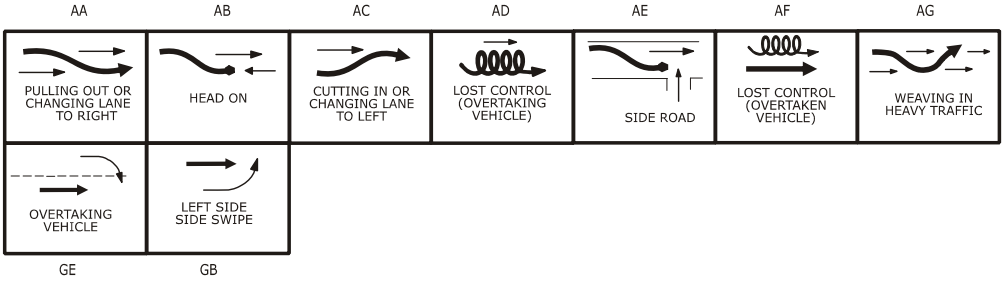
4. The factor group ‘poor handling’ includes factor codes that were only introduced in 1998. This could explain why there may have been a sudden change at this time.

5. The coding of the factors contributing to a crash is subjective. Therefore analysis using contributing factor groups needs to be interpreted with caution. Also, to effectively target safety or enforcement campaigns more analysis of the specific contributing factors involved may be needed.

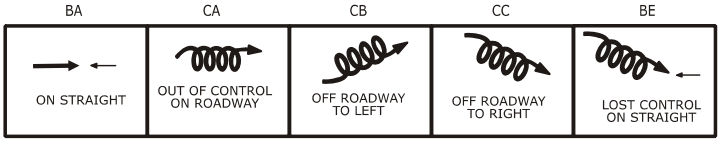
6. It should be noted that a traffic crash generally has more than one contributing factor. Therefore, adding the number of crashes on graphs showing the number of crashes with a given factor or factor group will be greater than the total number of crashes in the city or district.

Groupings of crash types

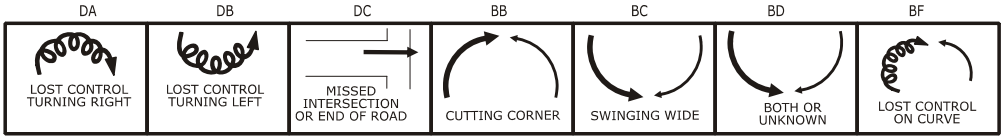
Overtaking



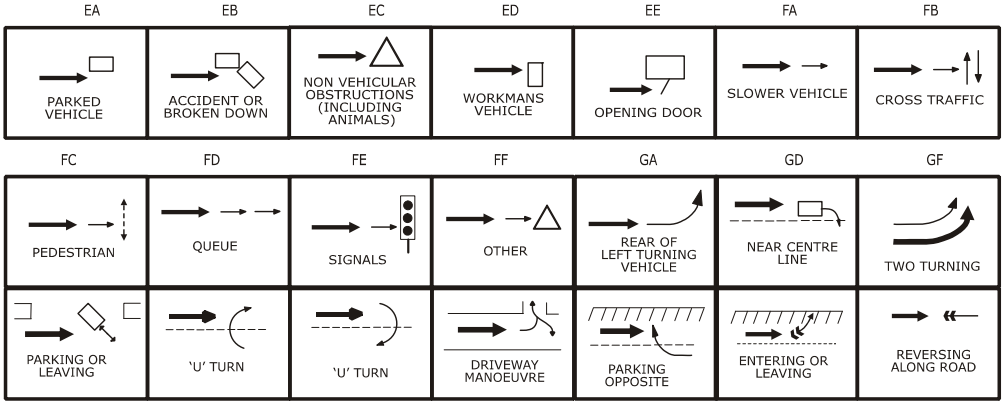
Straight - Lost control / Head on



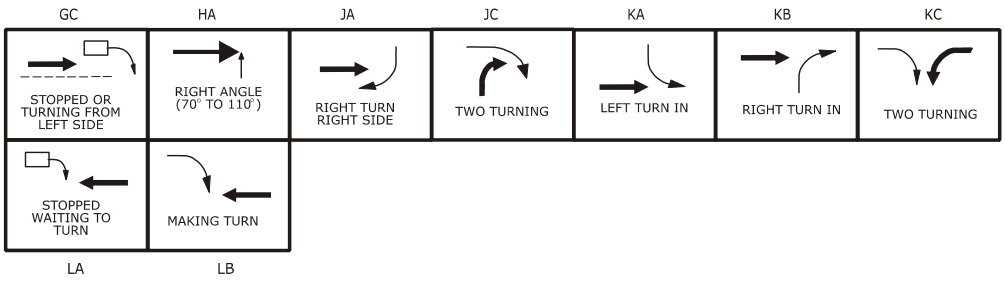
Bend - Lost control / Head on



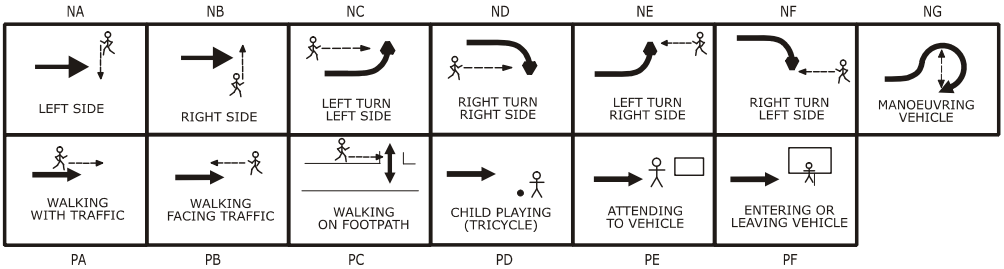
Rear end / Obstruction



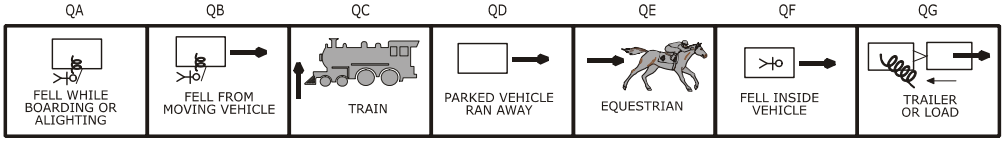
Crossing / Turning



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.

FACTORS PROBABLY CONTRIBUTING TO CRASHES

DRIVER CONTROL

100 **Alcohol or drugs**
- 101 Alcohol suspected
- 102 Alcohol test below limit
- 103 Alcohol test above limit or test refused
- 104 Alcohol test result unknown
- 105 Visibly intoxicated non-driver (pedestrian / cyclist / passenger)
- 106 Dead driver not suspected, tested negative (MOT only)
- 107
- 108 Drugs suspected
- 109 Drugs proven

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

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

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

140 **Failed to signal in time**
- 141 When moving to left, pulling over to left
- 142 When turning left
- 143 When pulling out or moving to the right
- 144 When turning right
- 145 Incorrect Signal

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

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

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

190 **Sudden action**
- 191 Braked
- 192 Turned left
- 193 Turned right
- 194 Swerved to avoid pedestrian
- 195 Swerved to avoid animal
- 196 Swerved to avoid crash or broken down vehicle
- 197 Swerved to avoid vehicle
- 198 Swerved to avoid object or for unknown reason

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

VEHICLE CONFLICTS

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

320 **Did not stop**
- 321 At stop sign
- 322 At steady red light
- 323 At steady red arrow
- 324 At steady amber light
- 325 At steady amber arrow
- 326 At flashing red lights (Rail Xing, Fire Stn etc)
- 327 For police or flag-person
- 328 For school patrol / kea crossing

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

350 **Attention diverted by:**
- 351 Passengers
- 352 Scenery or persons outside vehicle
- 353 Other traffic
- 354 Animal or insect in vehicle
- 355 Trying to find intersection, house number, destination
- 356 Advertising or signs
- 357 Emotionally upset
- 358 Cigarette, radio, glove box etc, obj under drivers feet/pedals etc
- 359 Cell phone / navigation device or any communications device
- 360 Driver dazzled

370 **Did not see or look for another party until too late**
- 371 Behind when reversing / manoeuvring
- 372 Behind when changing lanes position or direction (includes U-turns)
- 373 Behind when pulling out from parked position
- 374 Behind when opening door or leaving vehicle
- 375 When required to give way to traffic from another direction
- 376 When required to give way to pedestrians.
- 377 When visibility obstructed by other vehicles
- 378 When visibility limited by roadside features
- 379 When first in queue on receiving green light

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

GENERAL DRIVER

400 **Inexperience**
- 401 In driving in fast, complex or heavy traffic
- 402 New driver showed inexperience
- 403 Driving strange vehicle
- 404 Overseas driver fails to adjust to local conditions
- 405 Driver under instruction
- 406 At towing trailer / other vehicle
- 407 Driver over-reacted
- 408 Unsupervised cyclist

410 **Fatigue (drowsy, tired, fell asleep)**
- 411 Long trip
- 412 Lack of sleep
- 413 Exhaust fumes
- 414 Worked long hours before driving
- 415 Exceeded driving hours

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

430 **Showing off**
- 431 Racing
- 432 Playing chicken
- 433 Wheel spins / wheelies / doughnuts etc
- 434 Intimidating driving

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

GENERAL PERSON

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

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

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

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

VEHICLES

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

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

620 **Steering**
- 621 Defective
- 622 Failed suddenly

630 **Tyres**
- 631 Puncture or blowout
- 632 Worn tread on tyre
- 633 Incorrect tyre type
- 634 Mixed treads / space savers

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

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

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

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

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

PEDESTRIANS

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

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

720 **Miscellaneous**
- 721 Pushing, working on or unloading vehicle
- 722 Playing on road or unnecessarily on road
- 723 Working on road
- 724 Wearing dark clothing
- 725 Vision obscured by umbrella or clothing
- 726 Child escaped from supervision
- 727 Unsupervised child
- 728 Sitting / lying on road
- 729 Pedestrian from school bus
- 730 Pedestrian behind reversing / manoeuvring vehicle
- 731 Overseas pedestrian

ROAD

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

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

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

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

840 **Signs and signals**
- 841 Damaged, removed or malfunction
- 842 Badly located
- 843 Ineffective or inadequate
- 844 Necessary
- 845 Signals turned off

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

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

870 **Raised islands and roundabouts**
- 871 Traffic island(s) difficult to see
- 872 Traffic island(s) Ineffective, badly located or designed
- 873 Cyclist squeeze point

MISCELLANEOUS

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

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

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

999 **Unknown**