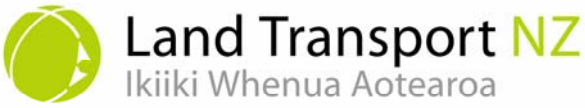
Wanganui District
Road Safety Report
2003 to 2007



Performance Information
Land Transport New Zealand
Level 9, 1-19 Fitzherbert Avenue
PO Box 1947
PALMERSTON NORTH

Ph. (06) 953 6296
Fax. (06) 953 6203

Web: www.landtransport.govt.nz

April 2008

Contents

Appendix

List of figures

List of figures continued

Local road statistics (pages 71–86)

Introduction and general information

Land Transport New Zealand 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 Land Transport New Zealand.

This report helps identify road safety issues in Wanganui 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 local 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 Wanganui 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 Land Transport New Zealand's crash database. This database includes all crashes involving injury and non–injury for which Police reports have been completed and forwarded to Land Transport New Zealand. Mostly five-year data (2003 to 2007) has been used, but 10-year data (1998 to 2007) has been used to analyse trends.

Local 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 district is compared with a peer group of similar local authorities (Group C) along with data for all New Zealand.

The peer group used for comparison with Wanganui District is Group C which consists of large provincial towns and hinterland. (Population 35000 - 75000 and/or rural crashes less than 55 percent). Local 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.

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:

Open road speed	http://www.transport.govt.nz/speed1/
Urban speed	http://www.transport.govt.nz/speed2/
Safety belts	http://www.transport.govt.nz/belts-index/
Cycle helmets	http://www.transport.govt.nz/cycle-helmets-2007-1/

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/public-attitudes-index/

General explanatory notes

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

2. Crash and casualty rates are based on 2007 populations estimates updated from the 2006 census, traffic flows from the year 2005, and the average of five year crash data (2003–2007).

3. Traffic flows are based on Road Asset Maintenance and Management (RAMM) data from December 2004. Caution should be exercised when comparing traffic flow based crash rates in one authority with those of other authorities. Different road controlling authorities update flow data in RAMM at different times and some data will be more up to date than other data.

4. With four to five categories of road for each local 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 2003 to 2007 is available. The graph includes all casualties irrespective of culpability.
   NOTE: Ethnicity data should be treated with cautions 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 the appendix for detailed descriptions of:
    - crash movement types and crash movement groupings (for Figures 4.1–4.4)
    - grouping of factors contributing to crashes and factors contributing to crashes (for Figures 5.1–5.14)

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	1997 1999	2001 2002	2002 2003	2003 2004	2004 2005
Northland	41%	52%	54%	59%	68%
Auckland	63%	63%	67%	67%	67%
Waikato	58%	65%	69%	68%	75%
Bay of Plenty	48%	54%	63%	60%	63%
Gisborne	53%	56%	56%	60%	55%
Hawkes Bay	57%	65%	72%	73%	79%
Taranaki	69%	70%	75%	70%	73%
Manawatu-Wanganui	64%	67%	63%	62%	69%
Wellington	62%	56%	65%	63%	72%
Nelson-Marlborough	74%	67%	72%	68%	71%
West Coast	58%	64%	71%	62%	70%
Canterbury	68%	69%	69%	68%	69%
Otago	62%	79%	79%	77%	83%
Southland	55%	68%	68%	61%	73%
New Zealand	60%	64%	67%	67%	**70%**

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

Figure 1.2 Crashes per 100 million vehicle kilometres travelled

	Local roads		State highways	
	Urban	Rural	Urban	Rural
Wanganui District	34	27	24	18
Group C	34	31	27	19
All NZ	36	26	32	16

Figure 1.3 Casualties per 100 million vehicle kilometres travelled

	Local roads		State highways	
	Urban	Rural	Urban	Rural
Wanganui District	44	52	41	32
Group C	43	46	38	29
All NZ	46	38	43	25

Figure 1.4 Peer group crash and casualty rates

Group C

City or District name	Crashes per 10,000 Population (5 year average)	Crashes per 100 million vehicle kilometres travelled: Local roads Urban	Local roads Rural	State highways Urban	State highways Rural	Casualties per 10,000 Population (5 year average)	Casualties per 100 million vehicle kilometres travelled: Local roads Urban	Local roads Rural	State highways Urban	State highways Rural	2007 Population	% of rural crashes
Gisborne	24	36	20	34	23	33	44	29	52	35	45900	47
Hastings	36	50	35	26	24	52	62	53	41	39	73600	54
Kapiti Coast	18	25	51	25	11	26	31	76	35	20	48000	47
New Plymouth	28	42	36	39	24	39	56	50	49	37	71400	42
Porirua	20	34	37	28	9	28	43	56	41	15	50700	28
Rotorua	27	34	29	23	20	38	42	42	32	33	68000	44
Timaru	21	34	21	20	13	29	44	33	27	17	43900	44
Upper Hutt	16	24	28	51	20	22	29	34	64	31	40000	48
Wanganui	20	34	27	24	18	30	44	52	41	32	43600	32
Whangarei	27	32	27	26	18	36	40	35	34	27	77500	53
Group C	25	35	29	28	18	35	45	43	38	29	562600	46
All New Zealand	26	36	26	32	16	36	46	38	43	25	4227700	41

Group C : Large provincial towns and hinterland. (Population 35000-75000 and/or rural crashes less than 55 percent)
Crashes and casualties per 100 million VKT are based on five years of reported injury on-road crash data (2003-2007) and December (2005) VKT.
Crashes and casualties per 10,000 population are based on five year average crash data (2003-2007) and Statistics NZ 2007 population estimates.

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

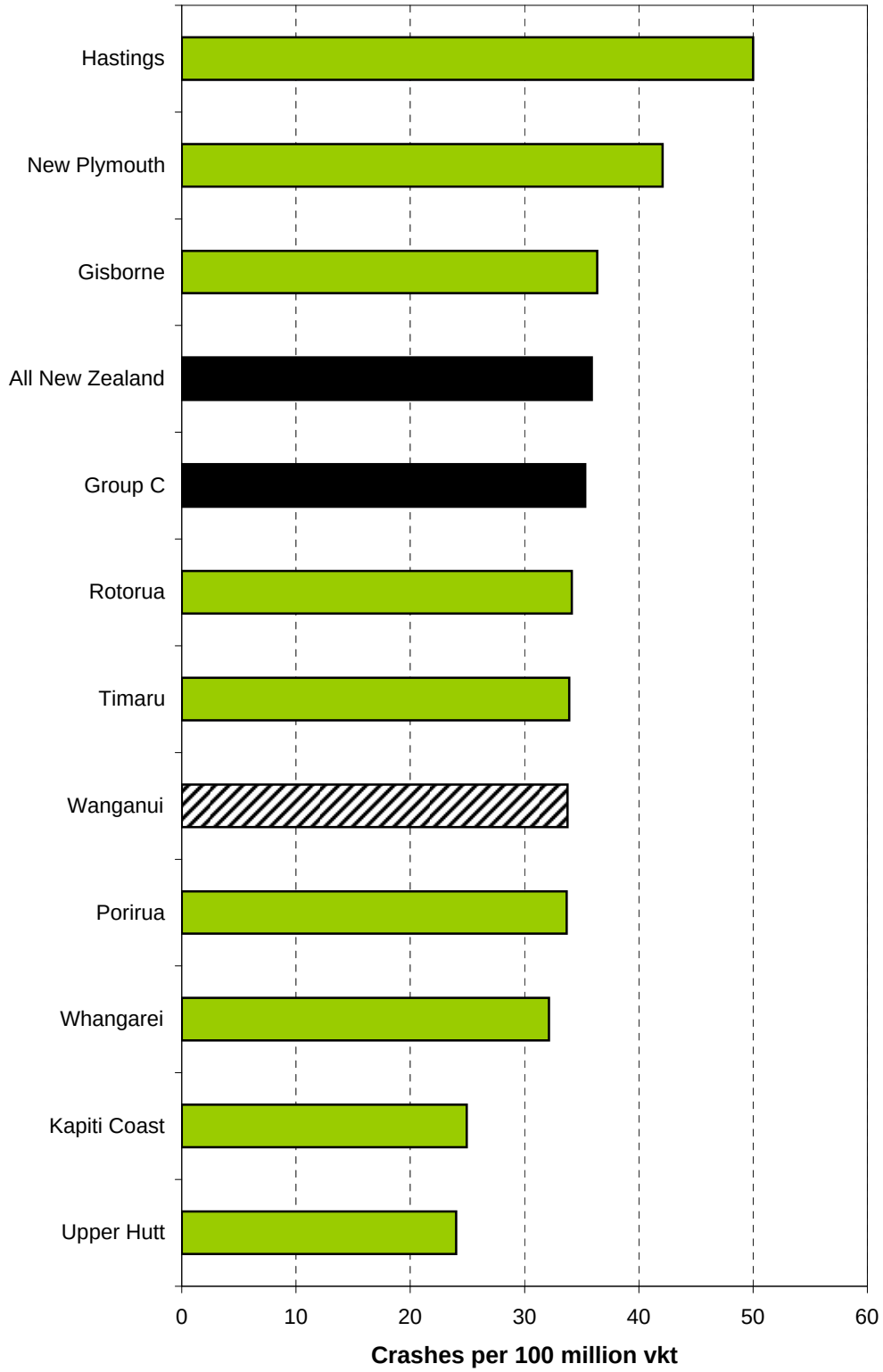


Figure 1.6 Crashes per 100 million vehicle-kilometres travelled - rural local roads

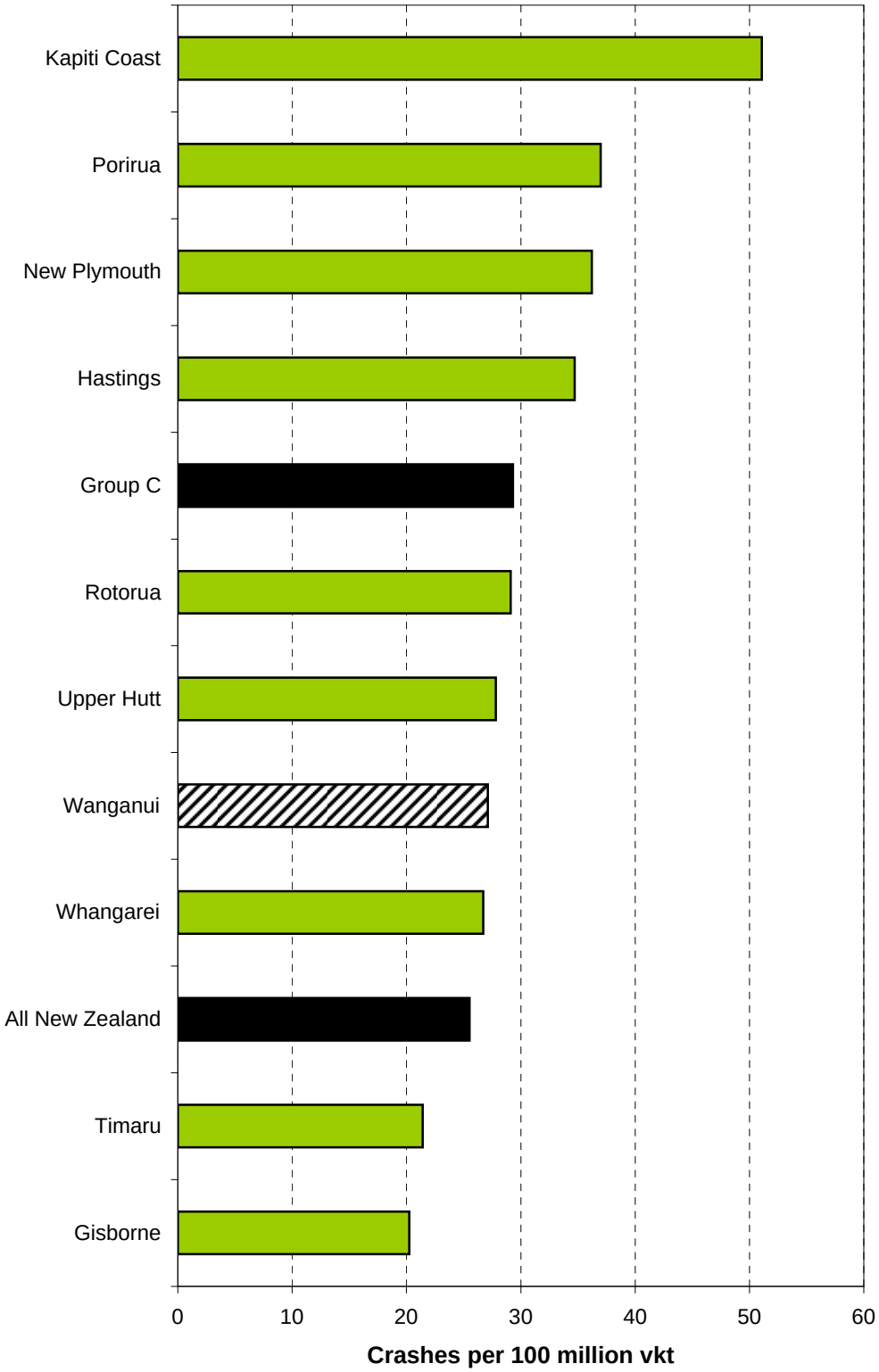


Figure 1.7 Crashes per 100 million vehicle kilometres travelled - urban state highways

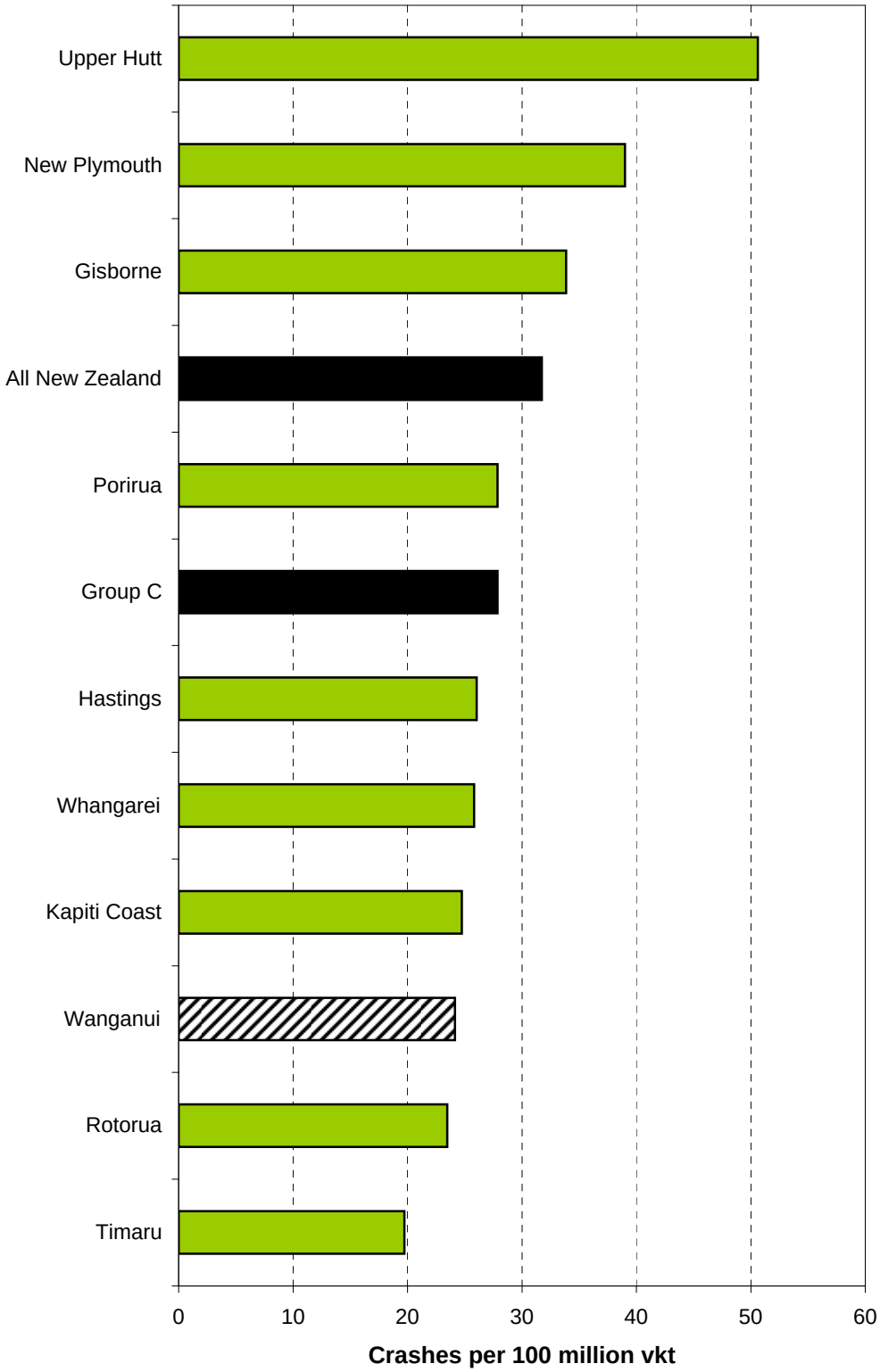


Figure 1.8 Crashes per 100 million vehicle-kilometres travelled - rural state highways

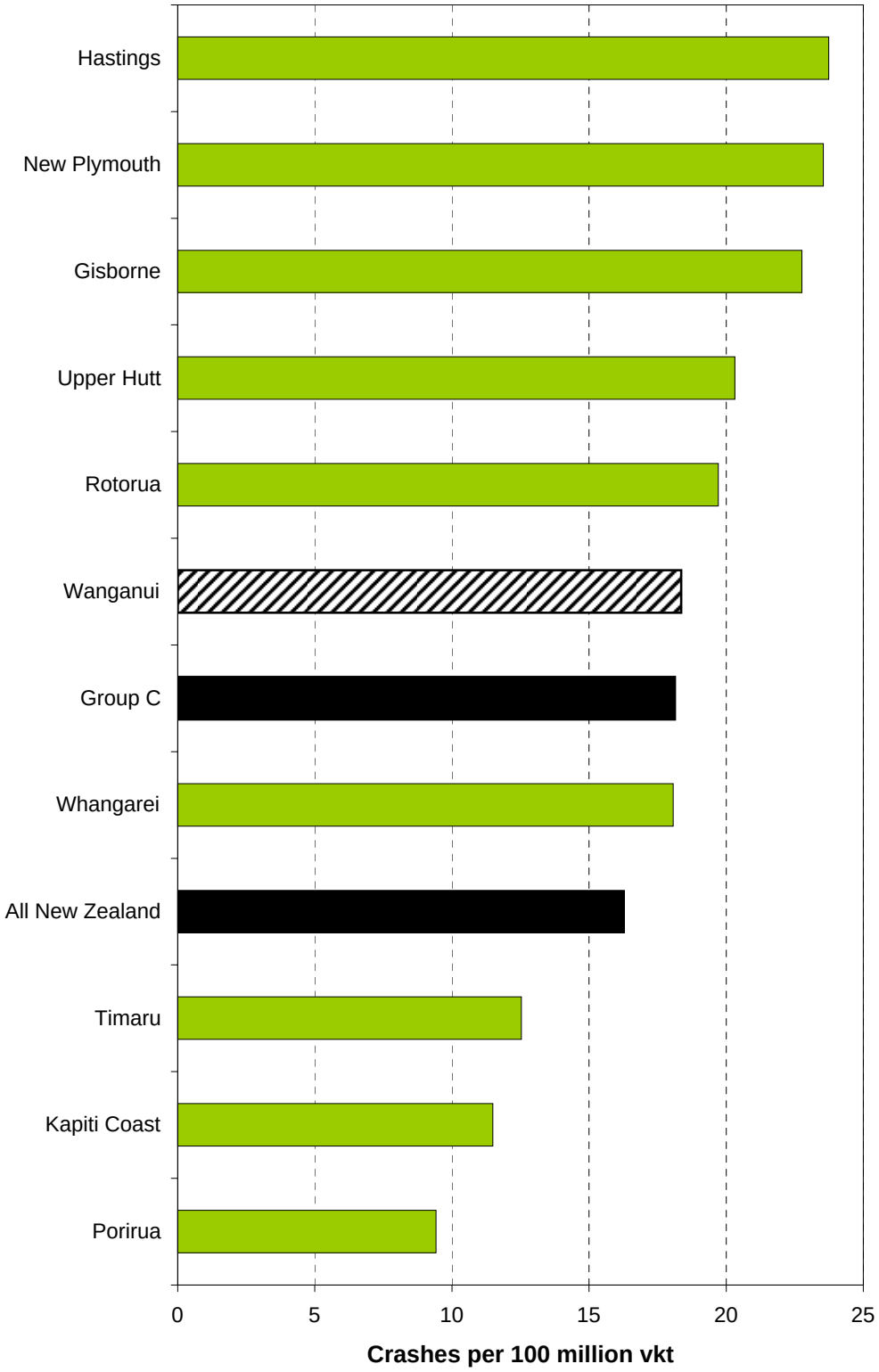


Figure 1.9 Crashes per 10,000 people
Wanganui District

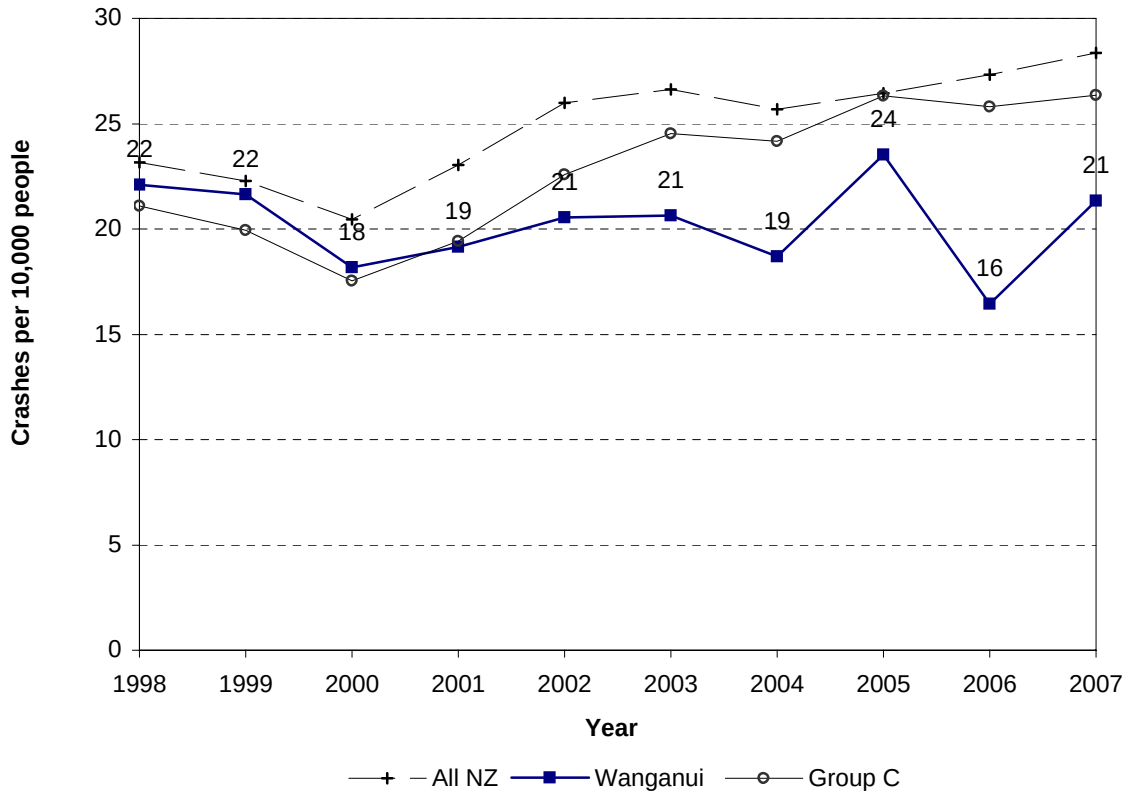


Figure 1.10 Casualties per 10,000 people
Wanganui District

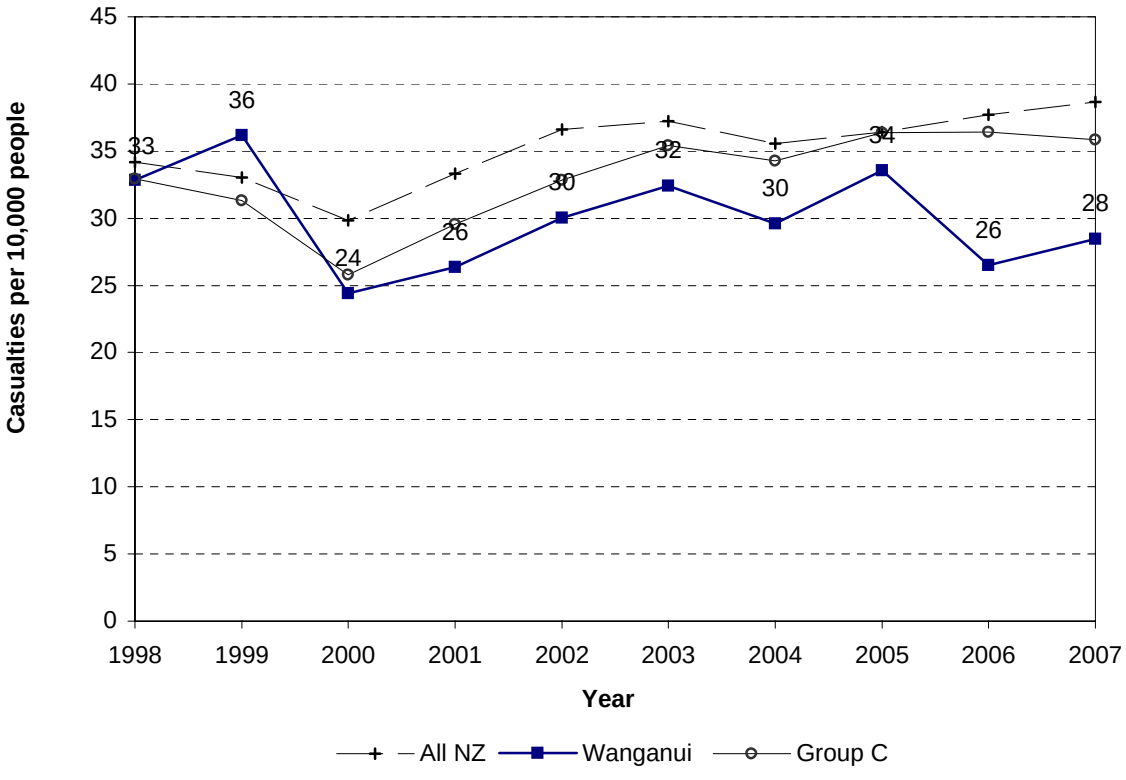


Figure 1.11 Social cost of crashes in Wanganui District in 2007

		Wanganui District	New Zealand
Local roads	urban	$18.06	$1,609.18
	rural	$3.29	$891.74
State highways	urban	$4.82	$323.26
	rural	$13.96	$1,533.31
Total		**$40.13**	**$4,357.48**

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 $3.19 million (in June 2007 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 2007 update', available at the Ministry of Transport's website:
http://www.transport.govt.nz/socialcost/Social-cost-June-2007-update[1].pdf

The average social cost per reported crash (in June 2007 dollars) are estimated at:

Rural fatal crash	$4,016,000
Rural serious crash	$735,000
Rural minor crash	$88,000
Urban fatal crash	$3,539,000
Urban serious crash	$626,000
Urban minor crash	$79,000

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 2003 to 2007 - whole District

	2003	2004	2005	2006	2007	Total	%	Group C
Fatal crashes	6	2	3	5	5	**21**	5%	4%
Serious crashes	29	23	22	24	17	**115**	26%	20%
Minor crashes	56	57	78	43	71	**305**	69%	76%
Total injury crashes	**91**	**82**	**103**	**72**	**93**	**441**	**100%**	**100%**
Non-injury crashes	267	248	253	253	190	1211		

Figure 2.2: Crash numbers and severity 2003 to 2007 - urban roads

	2003	2004	2005	2006	2007	Total	%	Group C
Fatal crashes	2	0	1	1	3	7	2%	2%
Serious crashes	15	16	14	12	10	67	22%	17%
Minor crashes	41	42	59	34	50	226	75%	81%
Total injury crashes	**58**	**58**	**74**	**47**	**63**	**300**	**100%**	**100%**
Non-injury crashes	214	198	207	208	143	970		

Figure 2.3: Crash numbers and severity 2003 to 2007 - rural roads

	2003	2004	2005	2006	2007	Total	%	Group C
Fatal crashes	4	2	2	4	2	14	10%	7%
Serious crashes	14	7	8	12	7	48	34%	25%
Minor crashes	15	15	19	9	21	79	56%	69%
Total injury crashes	**33**	**24**	**29**	**25**	**30**	**141**	**100%**	**100%**
Non-injury crashes	53	50	46	45	47	241		

Figure 2.4: Casualty numbers and severity 2003 to 2007 - whole District

	2003	2004	2005	2006	2007	Total	%	Group C
Fatal casualties	9	5	4	5	5	28	4%	3%
Serious casualties	43	29	28	33	22	155	23%	18%
Minor casualties	91	96	115	78	97	477	72%	78%
Total casualties	**143**	**130**	**147**	**116**	**124**	**660**	**100%**	**100%**

Figure 2.5: Casualty numbers and severity 2003 to 2007 - urban roads

	2003	2004	2005	2006	2007	Total	%	Group C
Fatal casualties	4	0	1	1	3	9	2%	2%
Serious casualties	27	17	16	14	11	85	21%	15%
Minor casualties	54	58	77	54	69	312	77%	83%
Total casualties	**85**	**75**	**94**	**69**	**83**	**406**	**100%**	**100%**

Figure 2.6: Casualty numbers and severity 2003 to 2007 - rural roads

	2003	2004	2005	2006	2007	Total	%	Group C
Fatal casualties	5	5	3	4	2	19	7%	5%
Serious casualties	16	12	12	19	11	70	28%	22%
Minor casualties	37	38	38	24	28	165	65%	73%
Total casualties	**58**	**55**	**53**	**47**	**41**	**254**	**100%**	**100%**

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

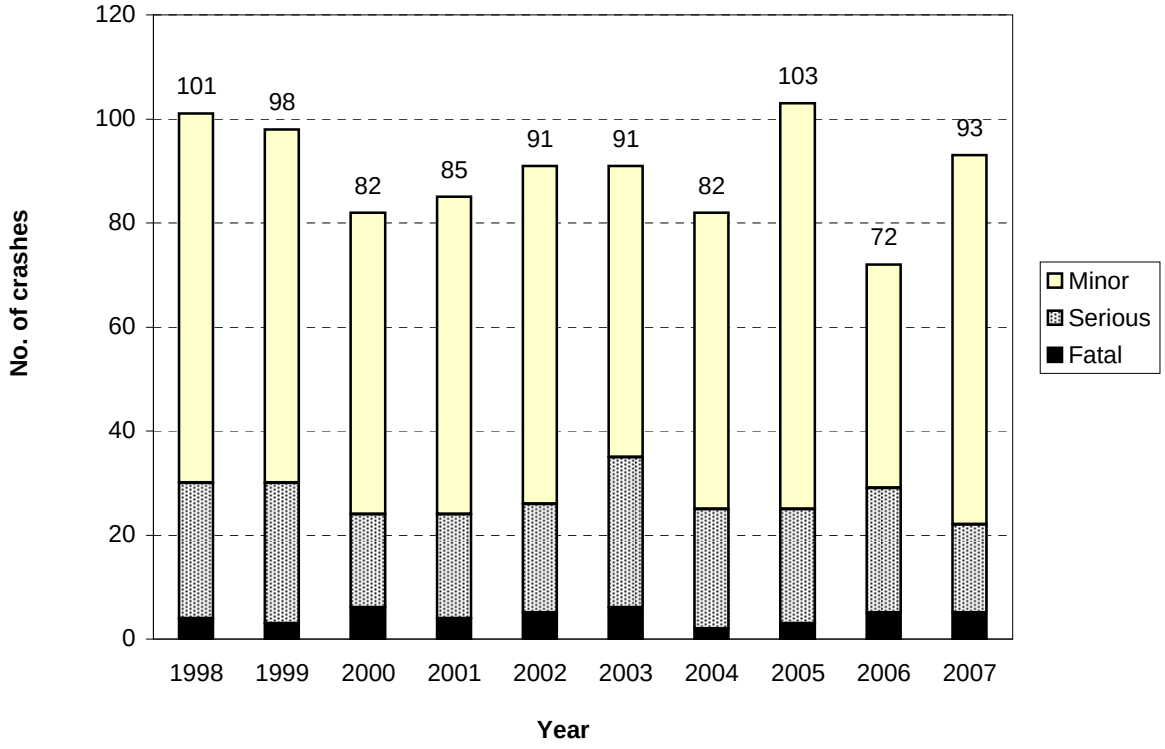


Figure 2.8 Number of casualties
Wanganui District all roads (urban & rural)

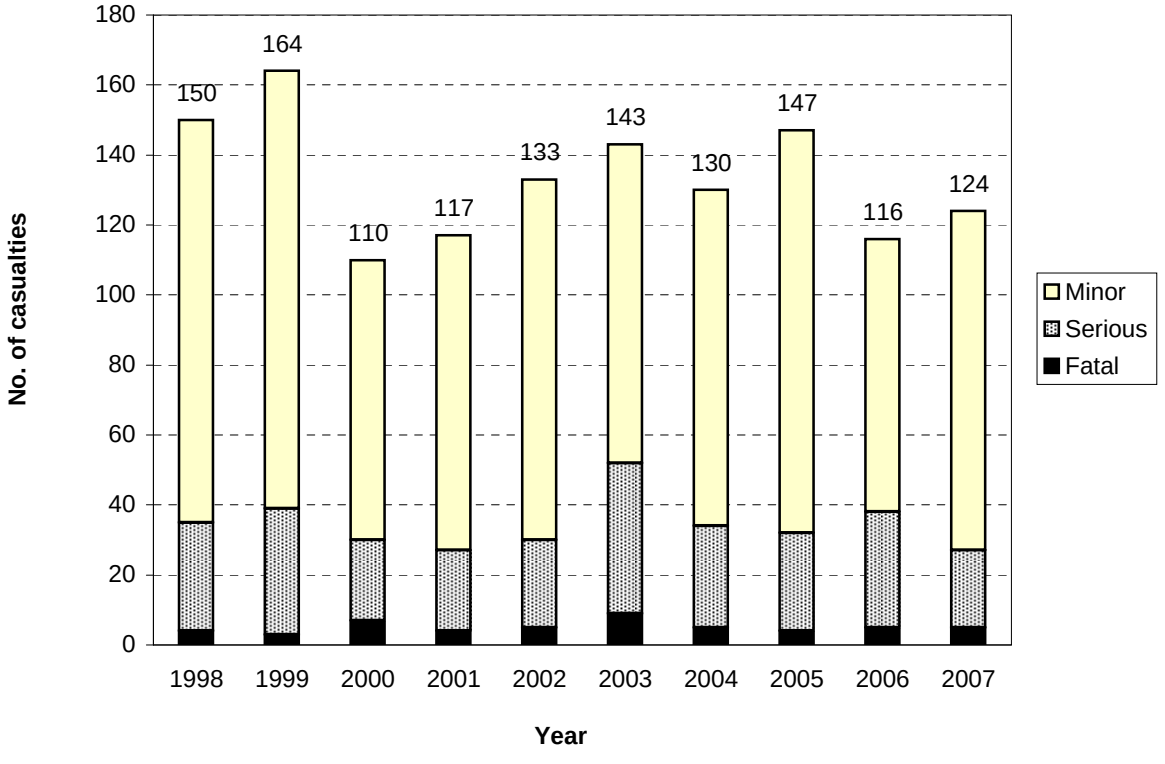


Figure 2.9 Number of injury crashes
Wanganui District - urban

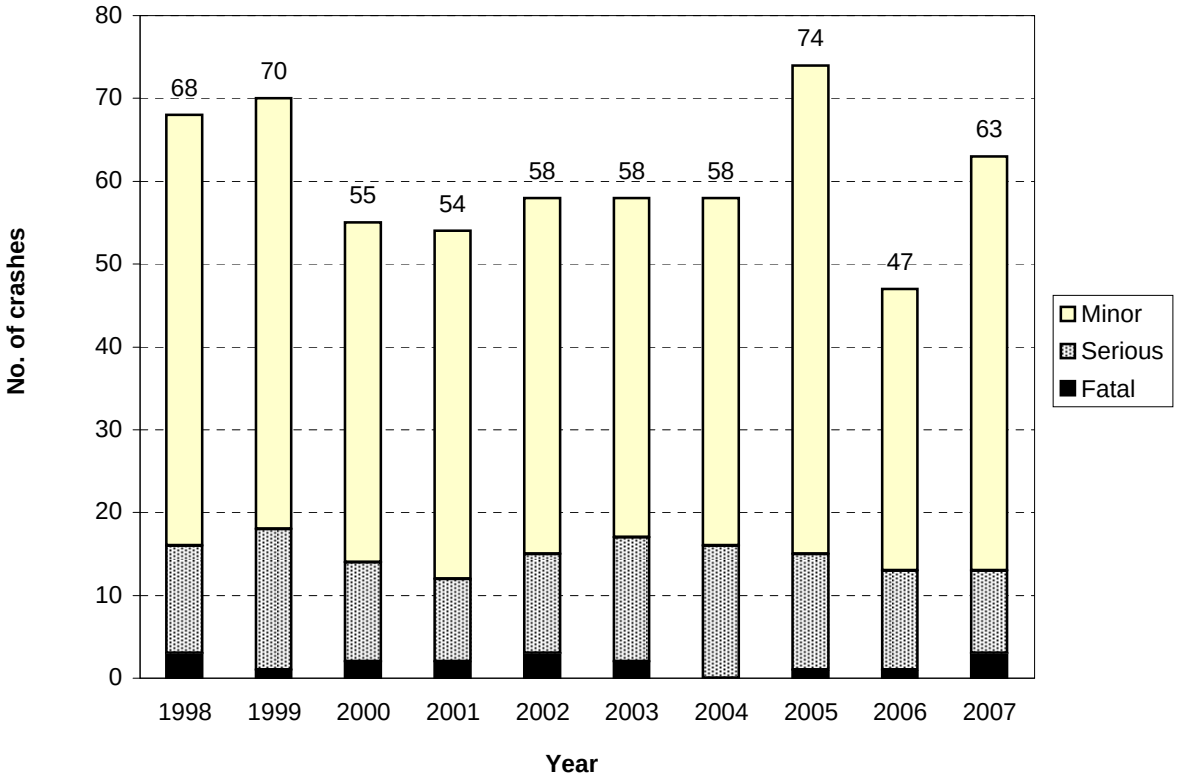


Figure 2.10 Number of casualties
Wanganui District - urban

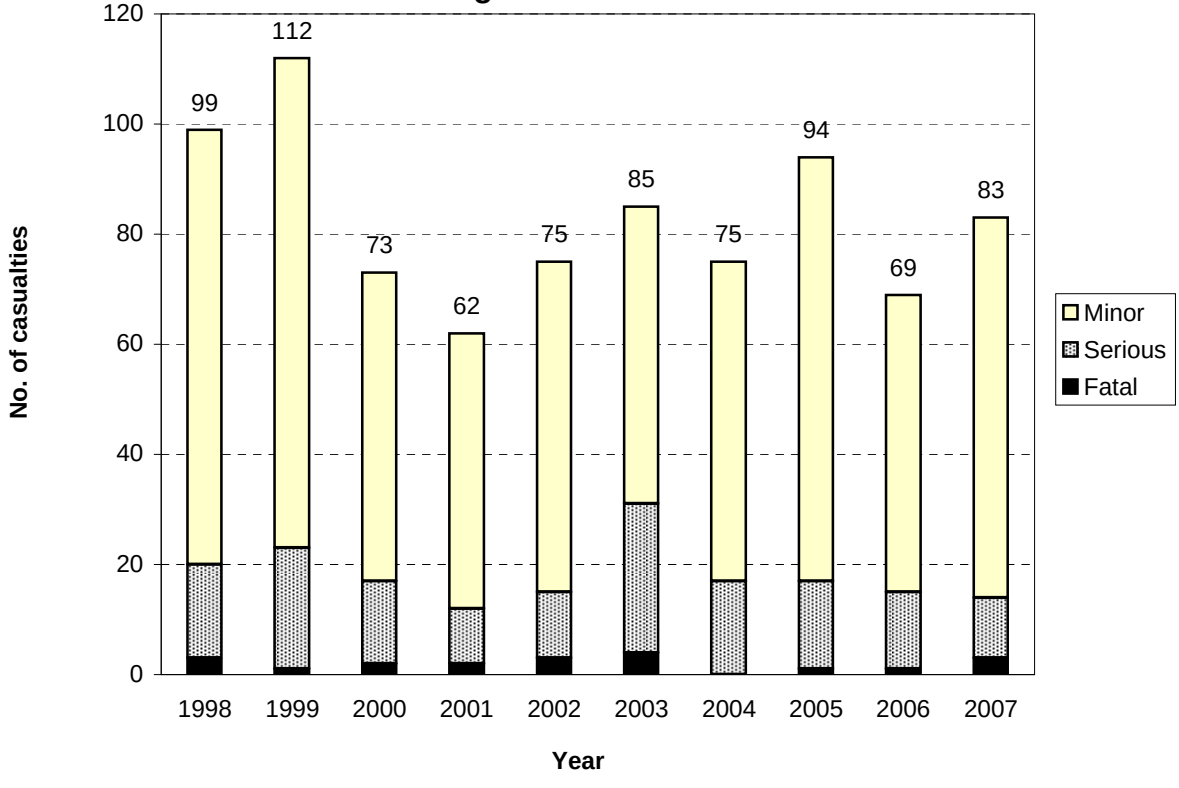


Figure 2.11 Number of injury crashes
Wanganui District - rural

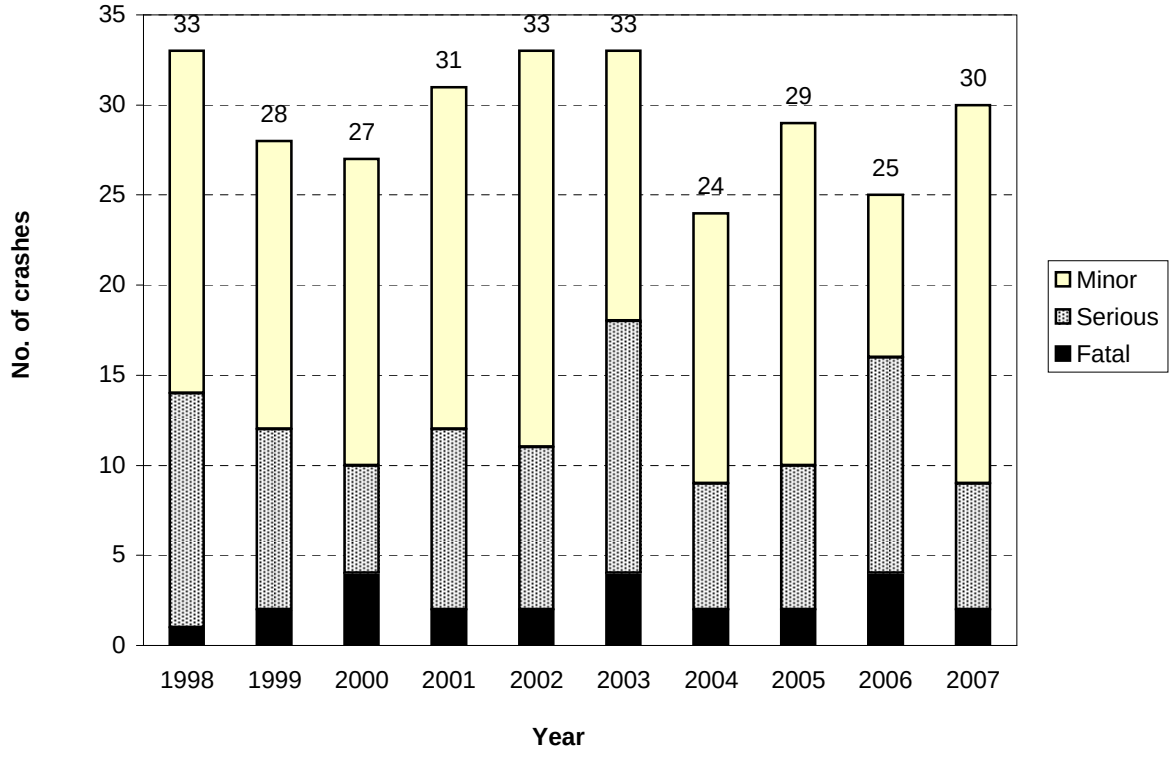


Figure 2.12 Number of casualties
Wanganui District - rural

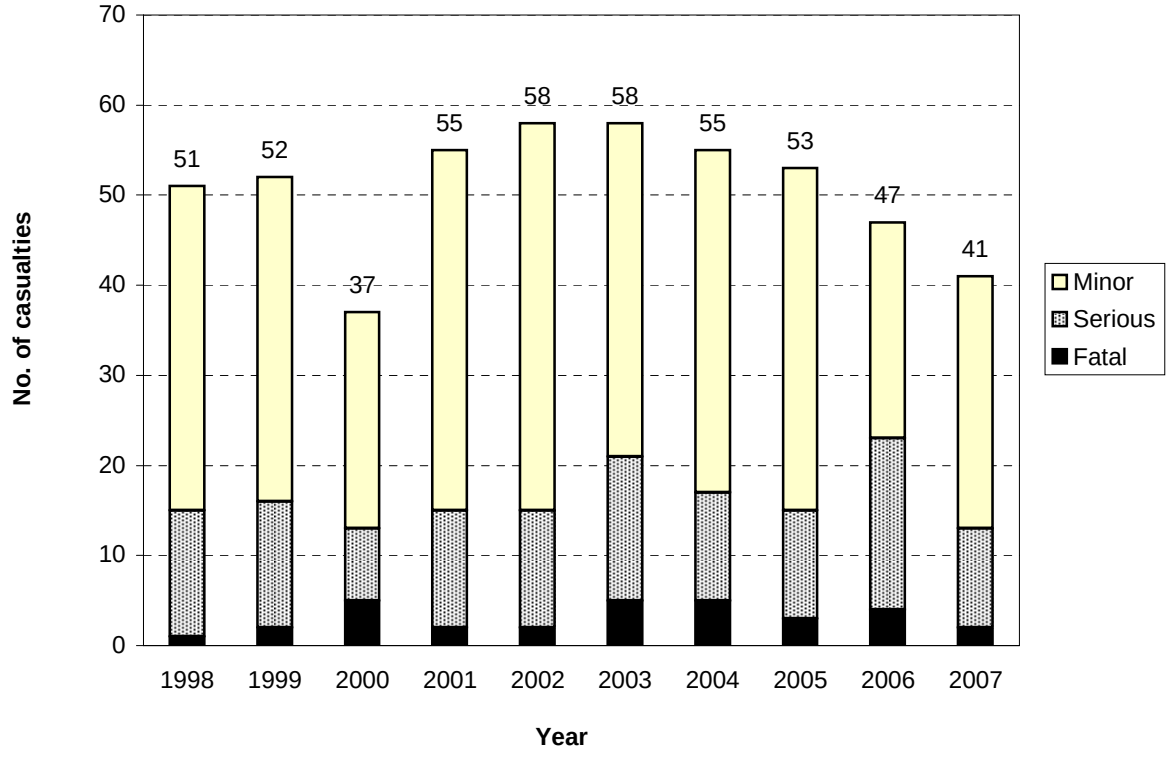
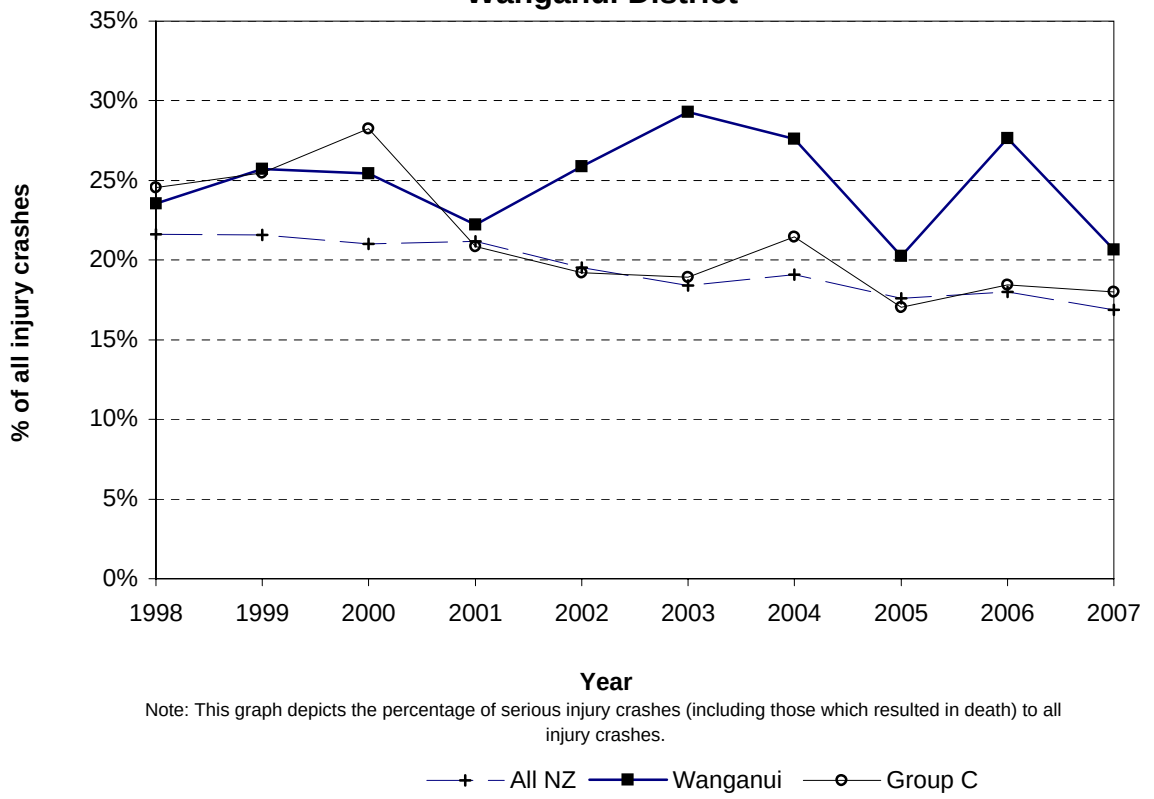
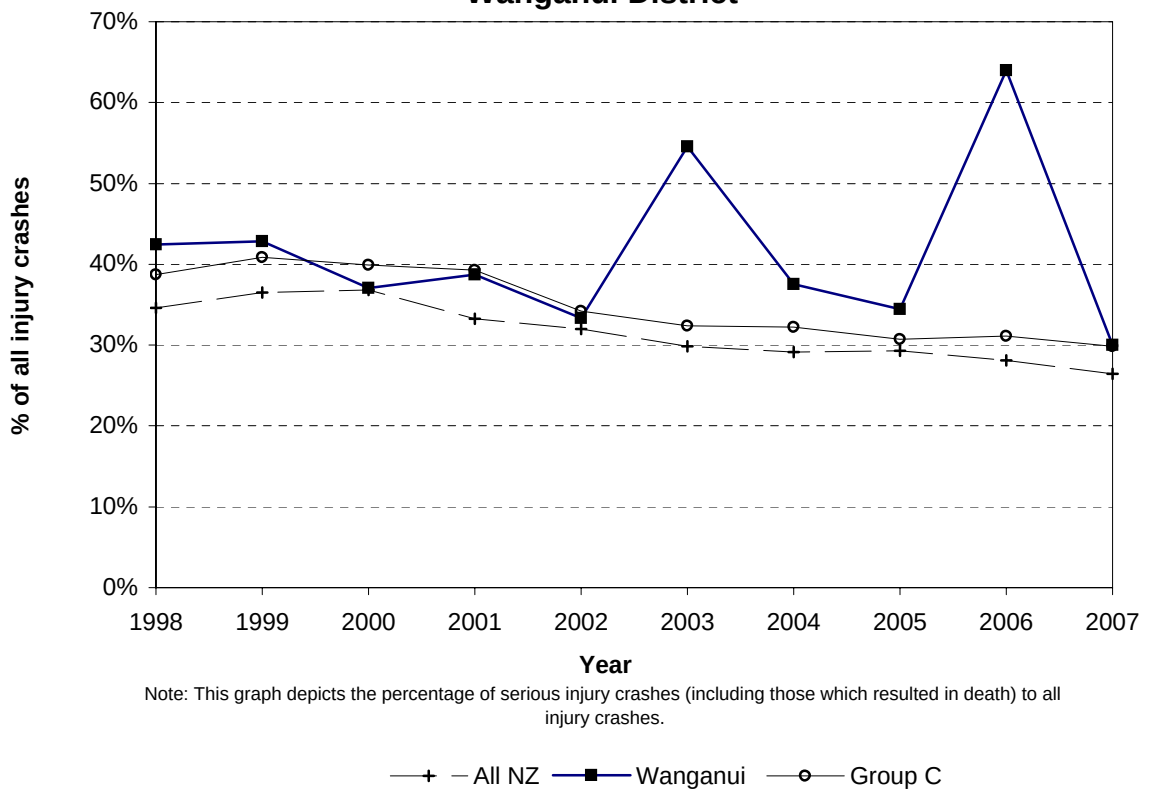


Figure 2.13 Severity ratio - urban
Wanganui District



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

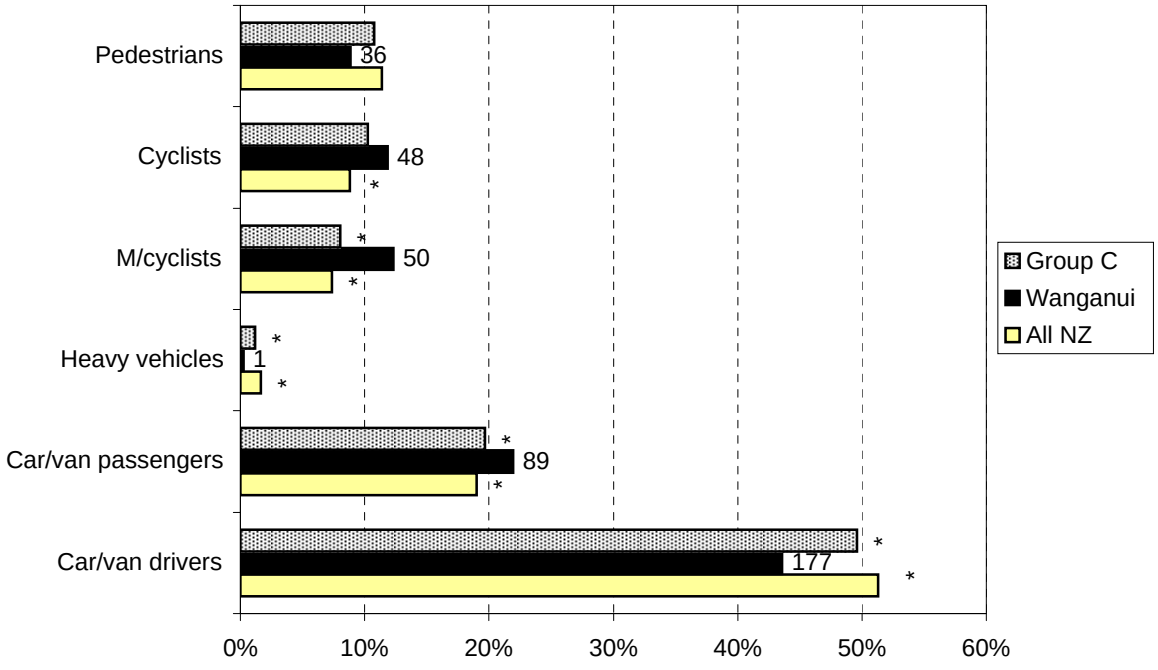
Figure 2.14 Severity ratio - rural
Wanganui District



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

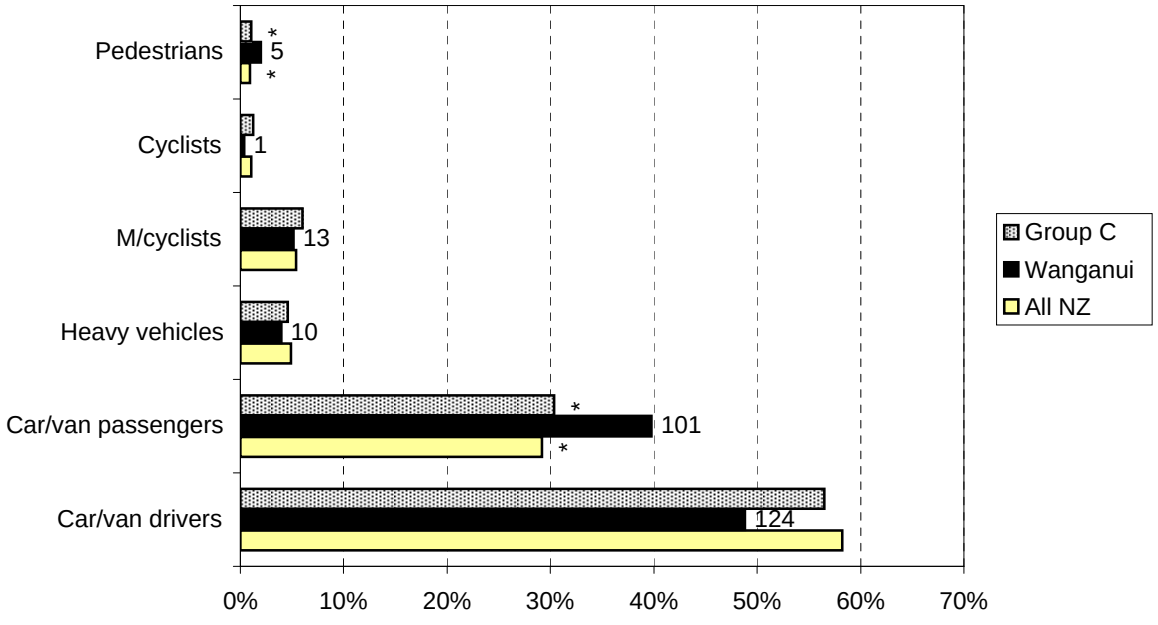
Road user statistics

Figure 3.1 Road user casualties - urban
Wanganui District (2003-2007)



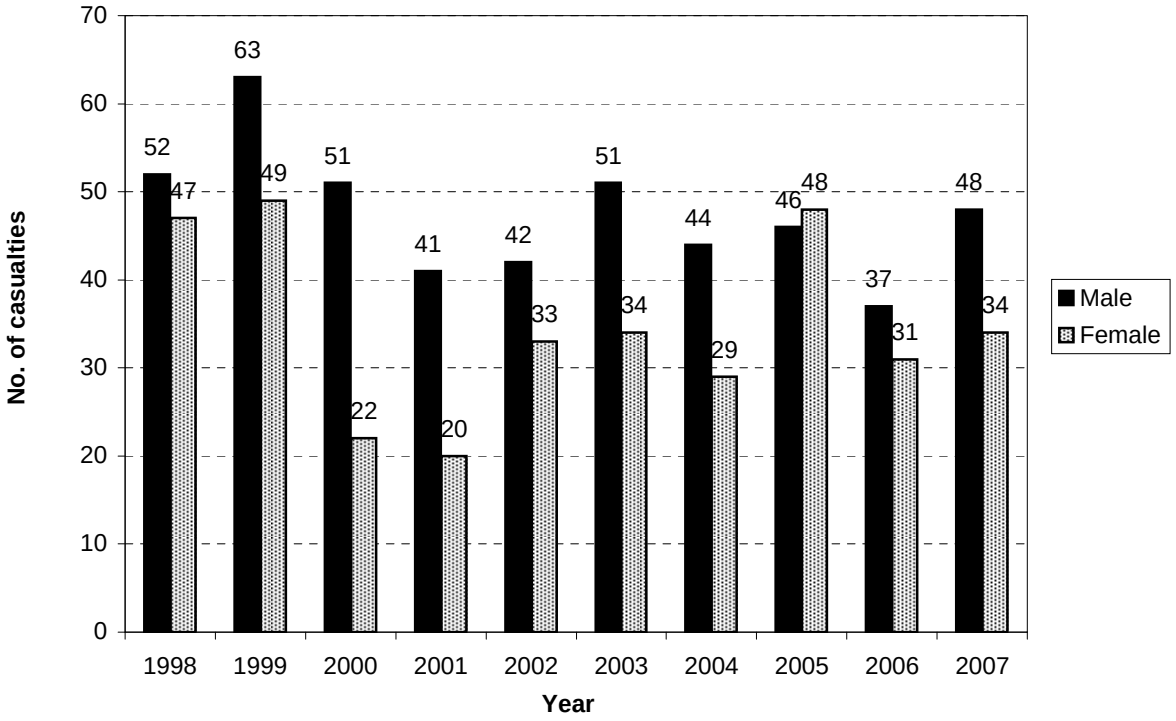
Note: While the graph plots percentages, the number of casualties is shown against the data points.
*Denotes statistically significant difference between Local Authority and National or Peer Group Proportions

Figure 3.2 Road user casualties - rural
Wanganui District (2003-2007)



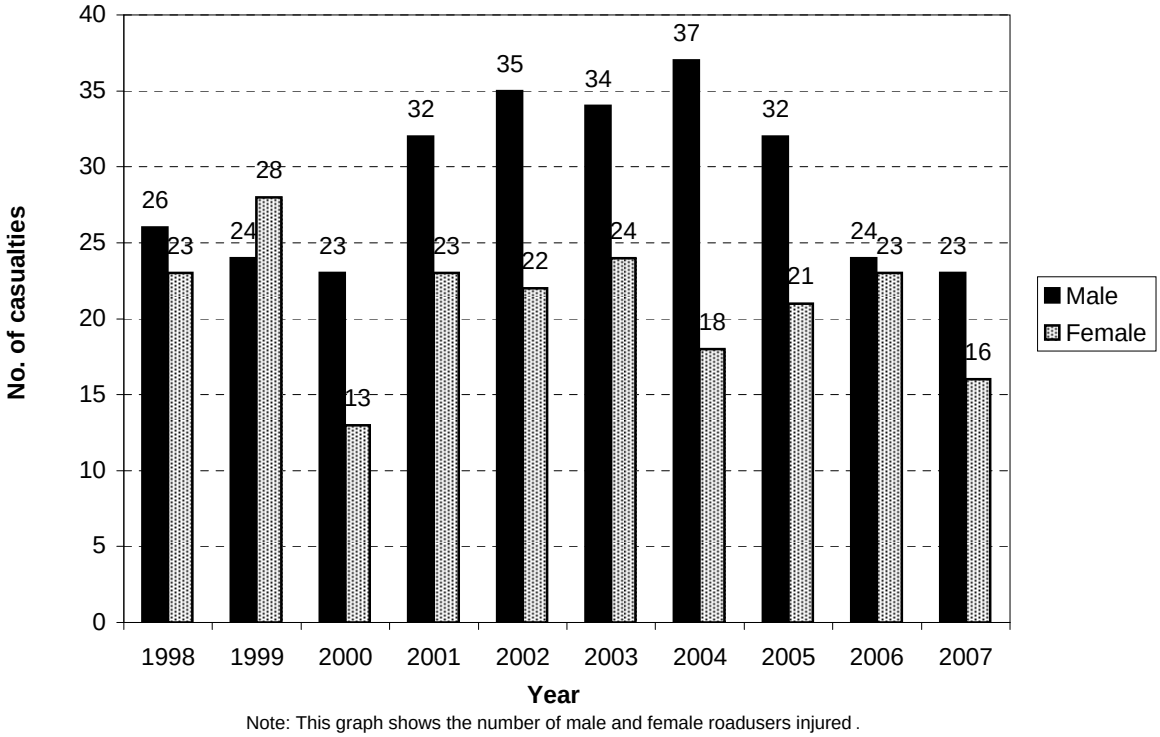
Note: While the graph plots percentages, the number of casualties is shown against the data points.
*Denotes statistically significant difference between Local Authority and National or Peer Group Proportions

Figure 3.3 Male/female casualties - urban Wanganui District



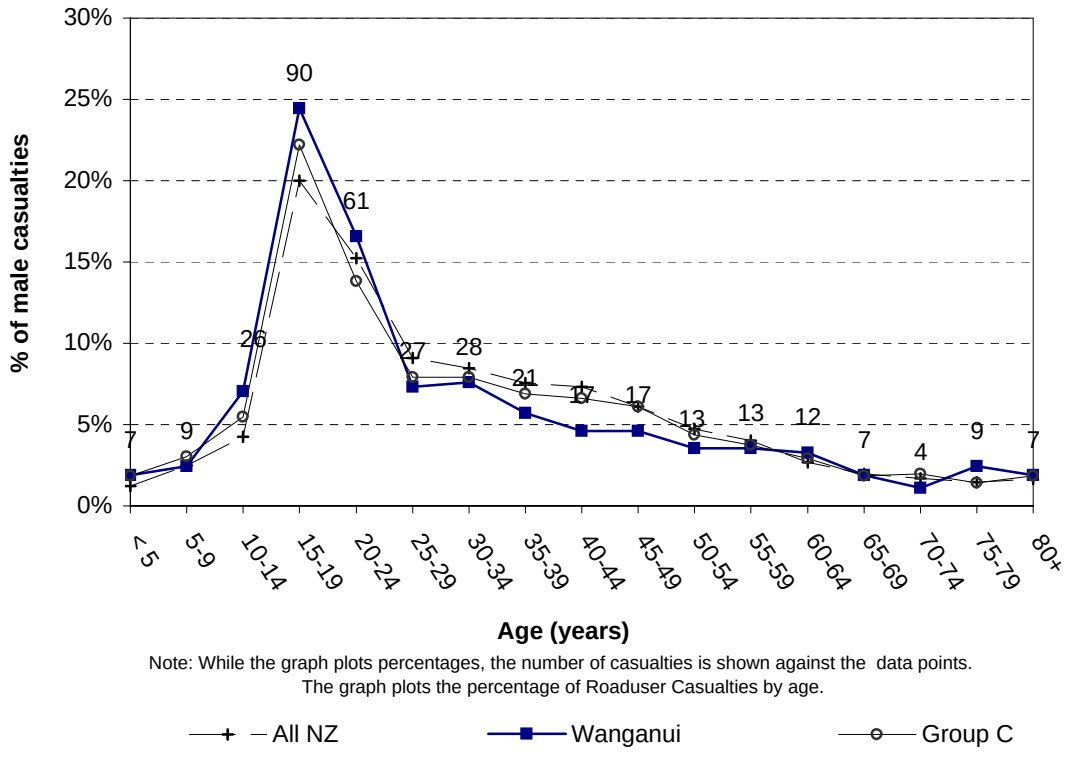
Note: This graph shows the number of male and female roadusers injured .

Figure 3.4 Male/female casualties - rural Wanganui District



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

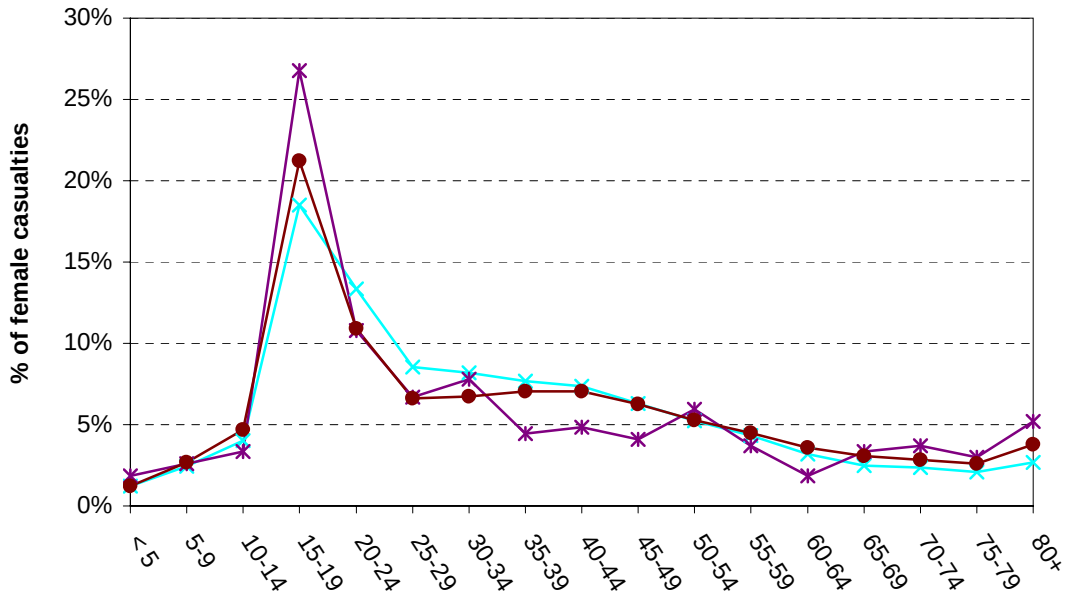
Figure 3.5 Male casualties by age
Wanganui District (2003-2007)



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.

All NZ — Wanganui — Group C

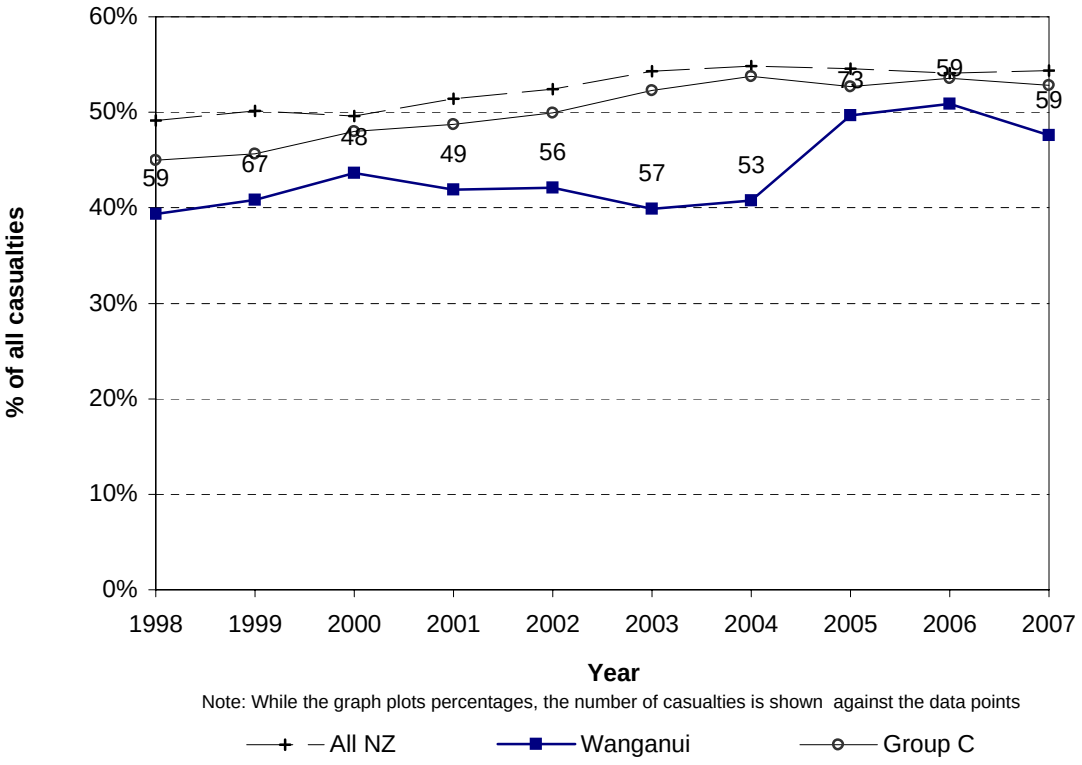
Figure 3.6 Female casualties by age
Wanganui District (2003-2007)



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.

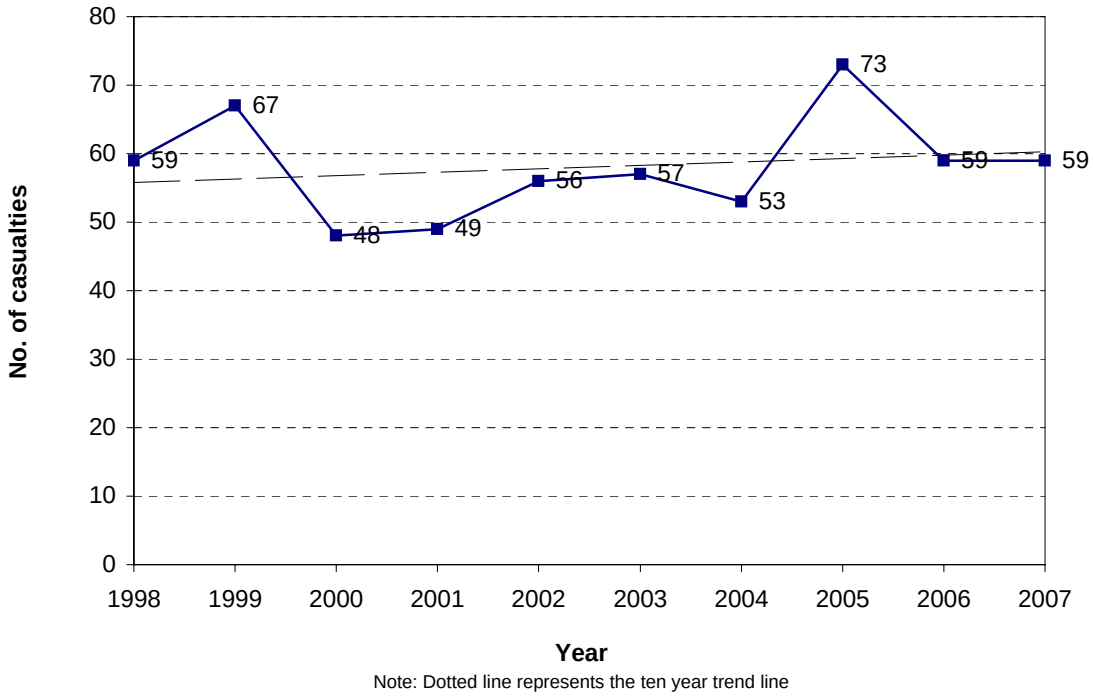
All NZ — Wanganui — Group C

Figure 3.7 Car/van driver casualties
Wanganui District



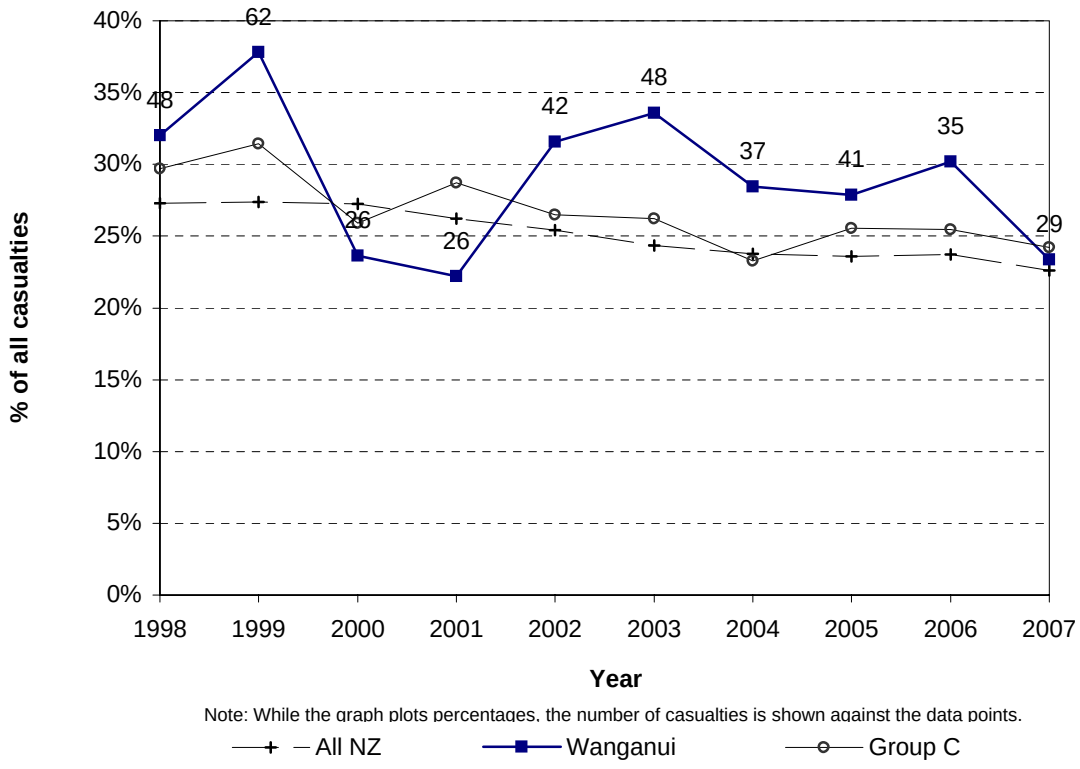
Note: While the graph plots percentages, the number of casualties is shown against the data points

Figure 3.8 Car/van driver casualties
Wanganui District



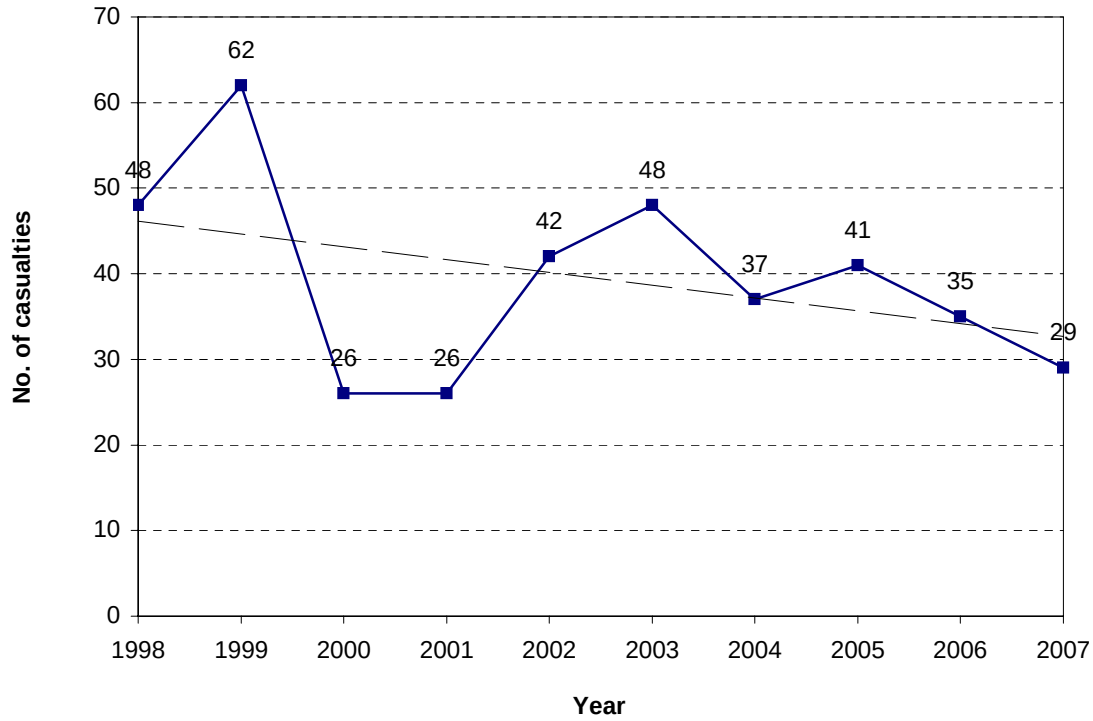
Note: Dotted line represents the ten year trend line

Figure 3.9 Car/van passenger casualties
Wanganui District



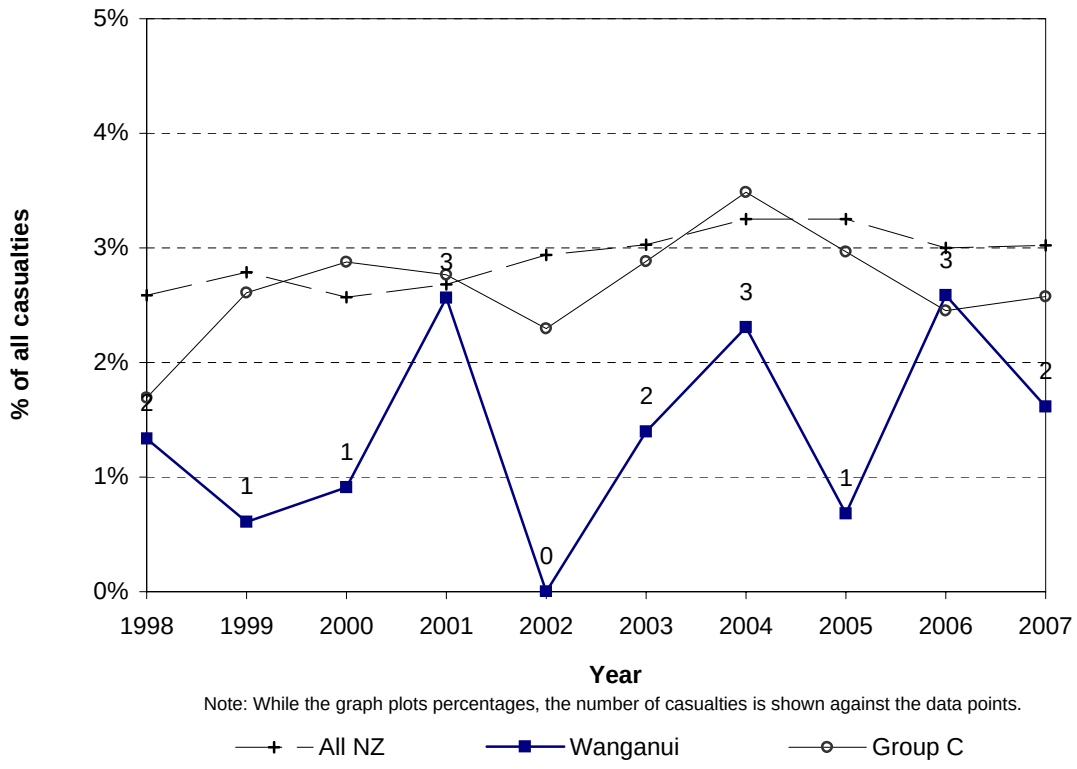
Note: While the graph plots percentages, the number of casualties is shown against the data points.

Figure 3.10 Car/van passenger casualties
Wanganui District



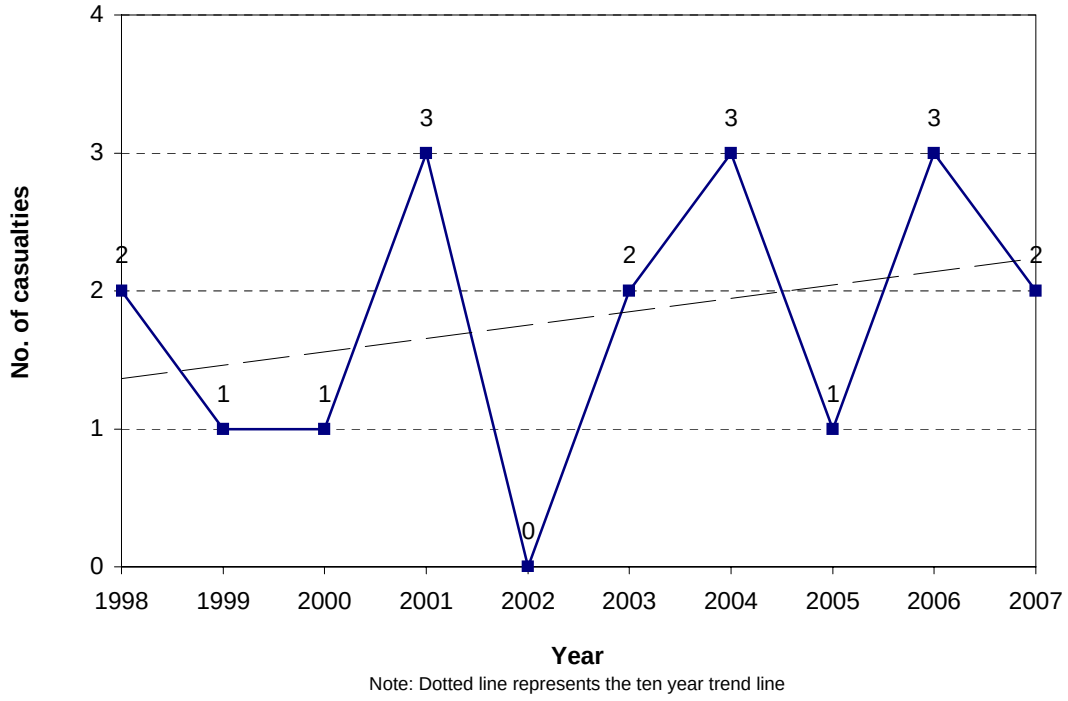
Note: Dotted line represents the ten year trend line

Figure 3.11 Heavy vehicle casualties
Wanganui District



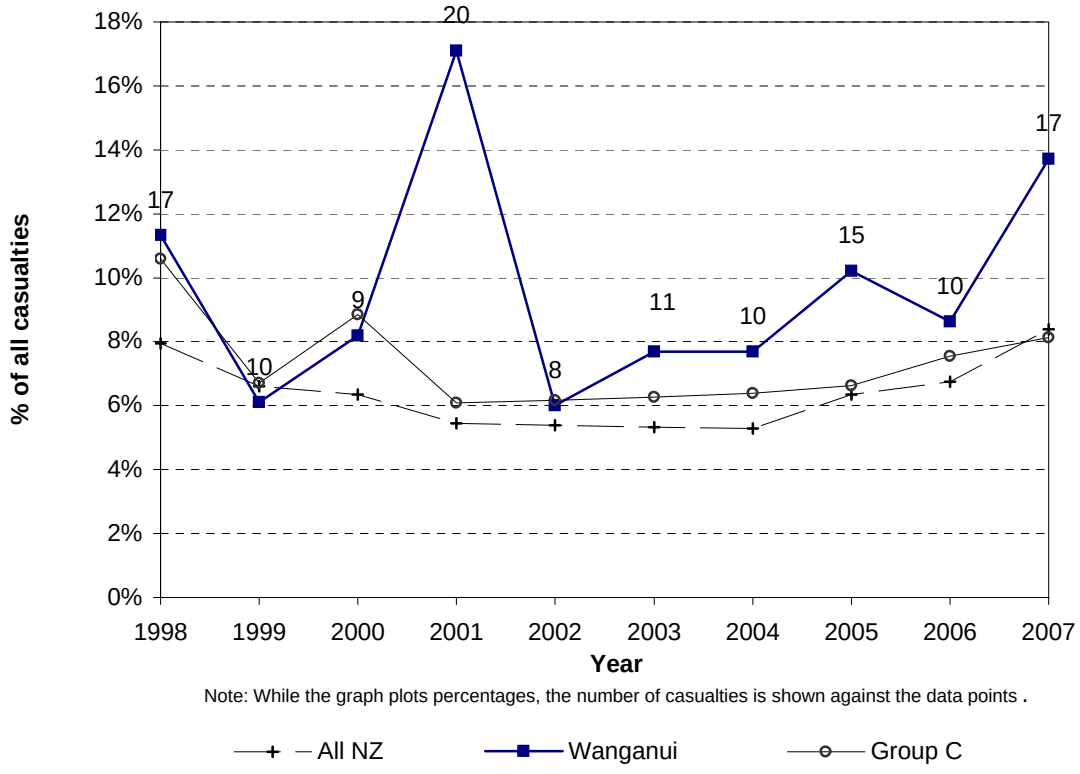
Note: While the graph plots percentages, the number of casualties is shown against the data points.

Figure 3.12 Heavy vehicle casualties
Wanganui District



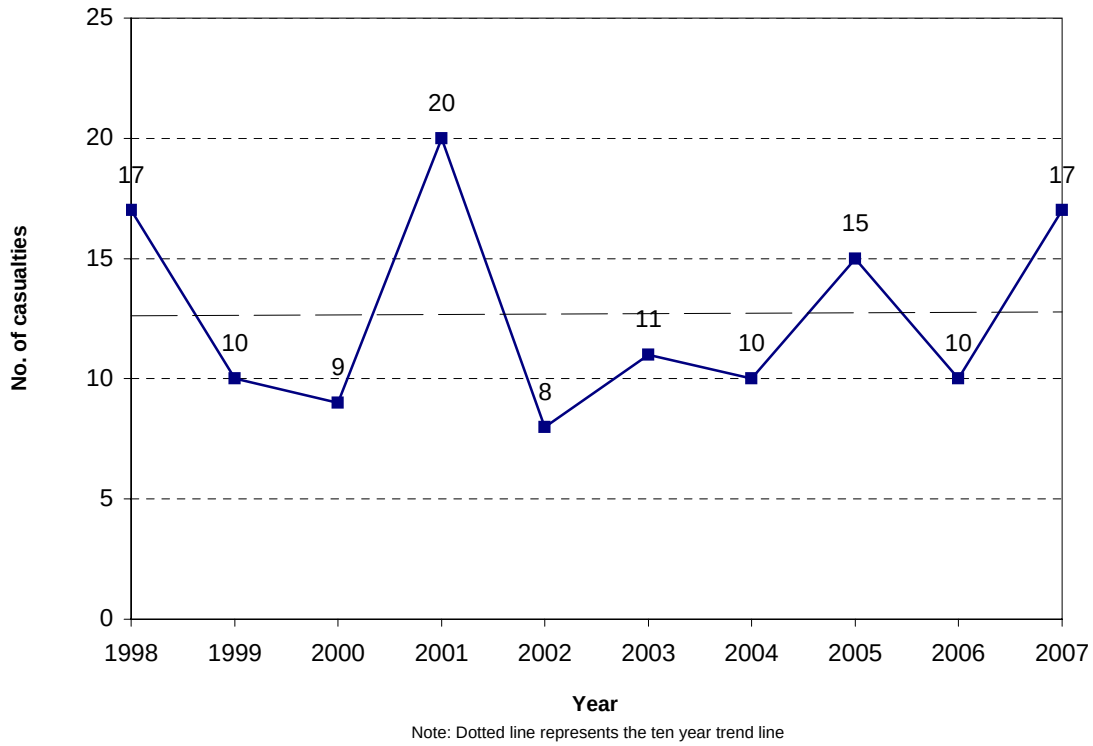
Note: Dotted line represents the ten year trend line

Figure 3.13 Motorcyclist casualties
Wanganui District



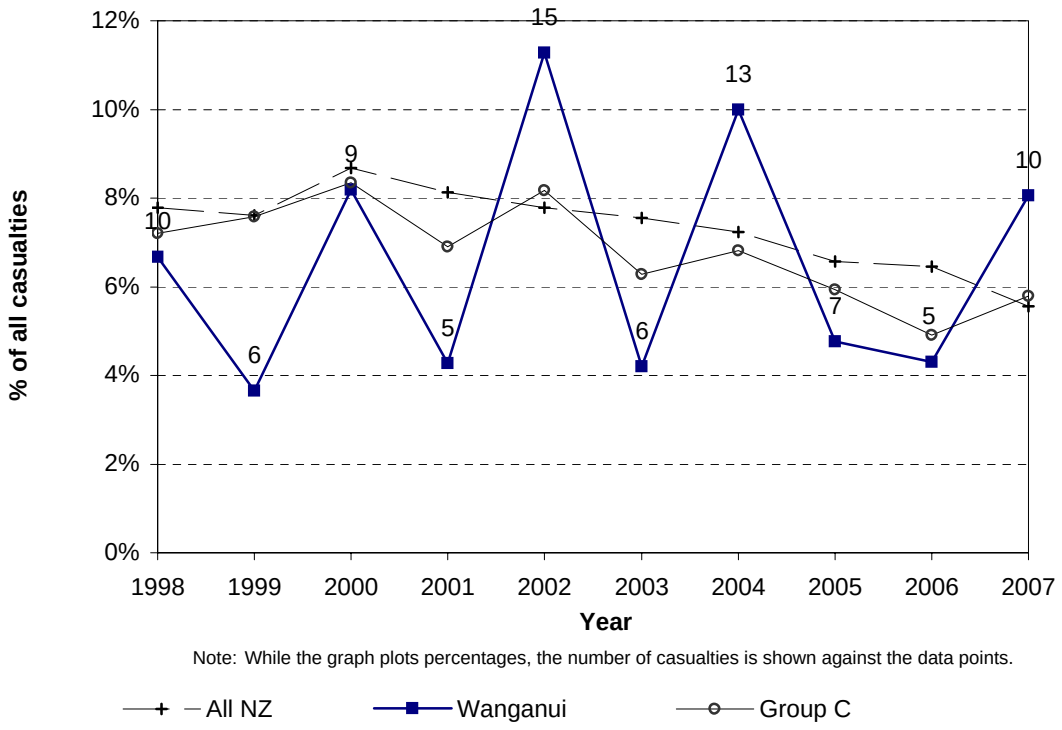
Note: While the graph plots percentages, the number of casualties is shown against the data points .

Figure 3.14 Motorcyclist casualties
Wanganui District



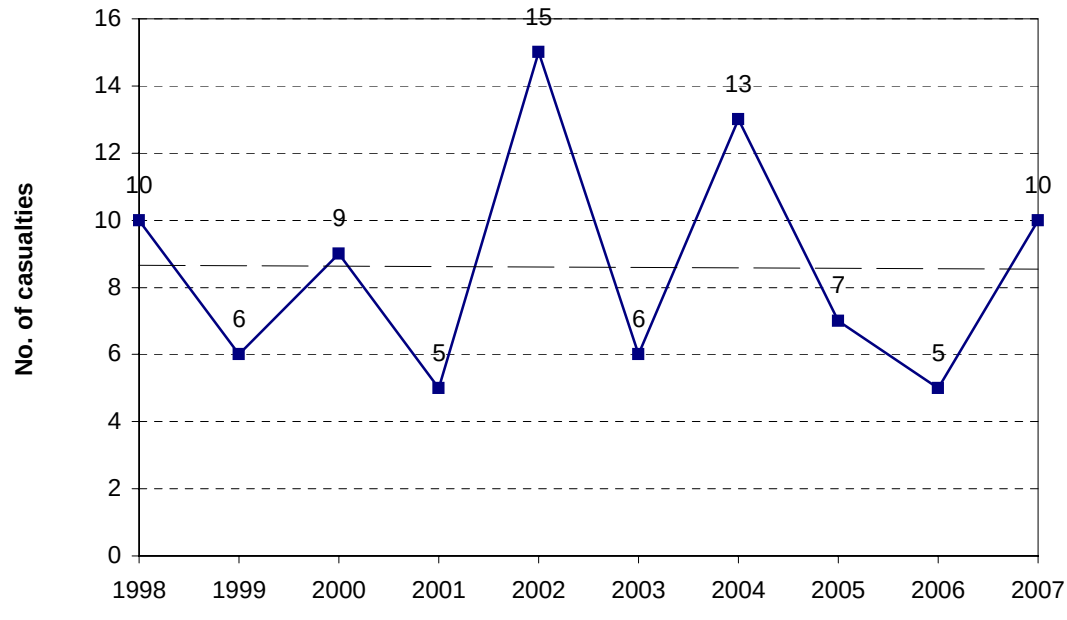
Note: Dotted line represents the ten year trend line

Figure 3.15 Pedestrian casualties
Wanganui District



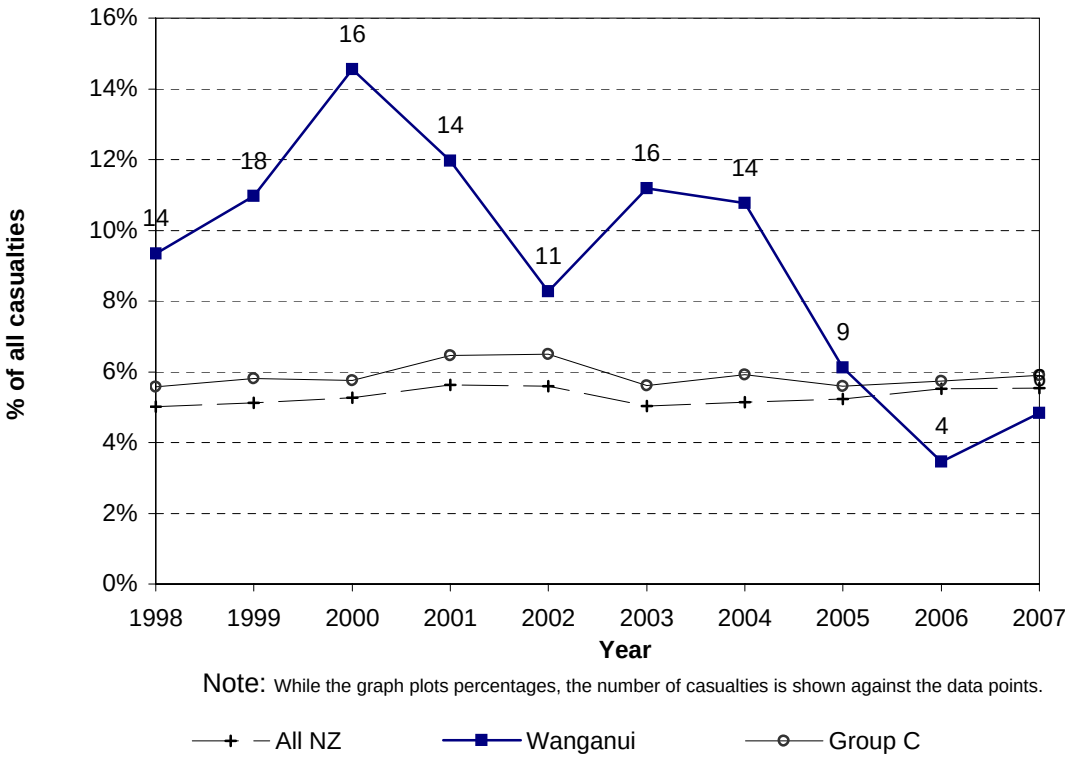
Note: While the graph plots percentages, the number of casualties is shown against the data points.

Figure 3.16 Pedestrian casualties
Wanganui District



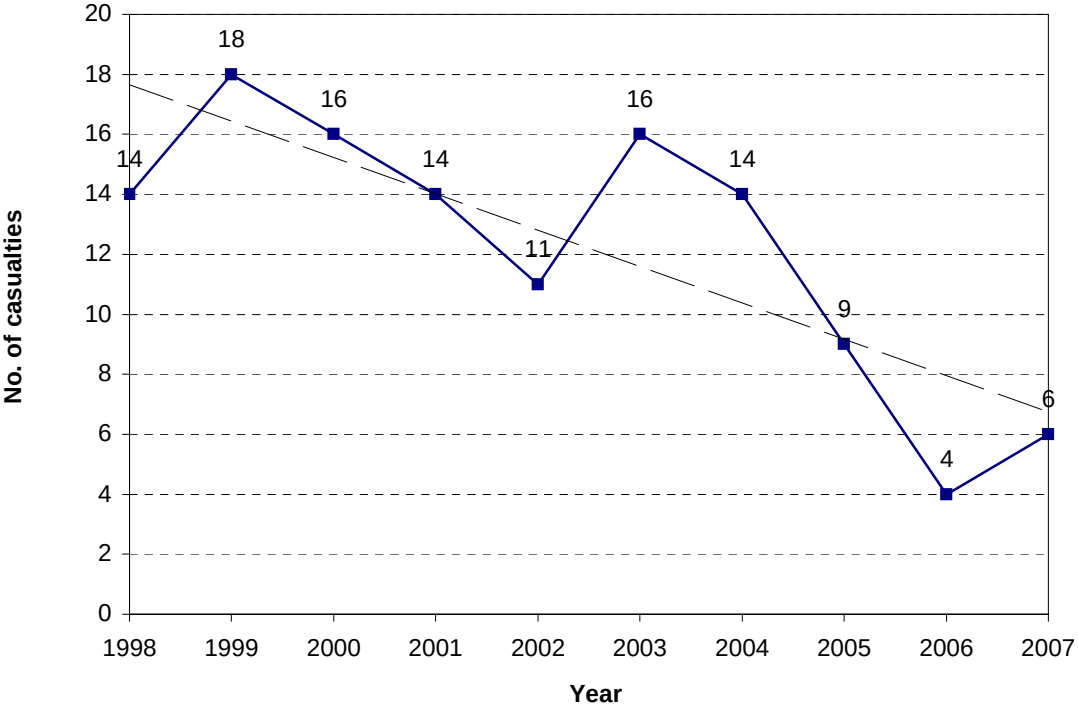
Note: Dottedline represents the ten year trend line

Figure 3.17 Cyclist casualties
Wanganui District



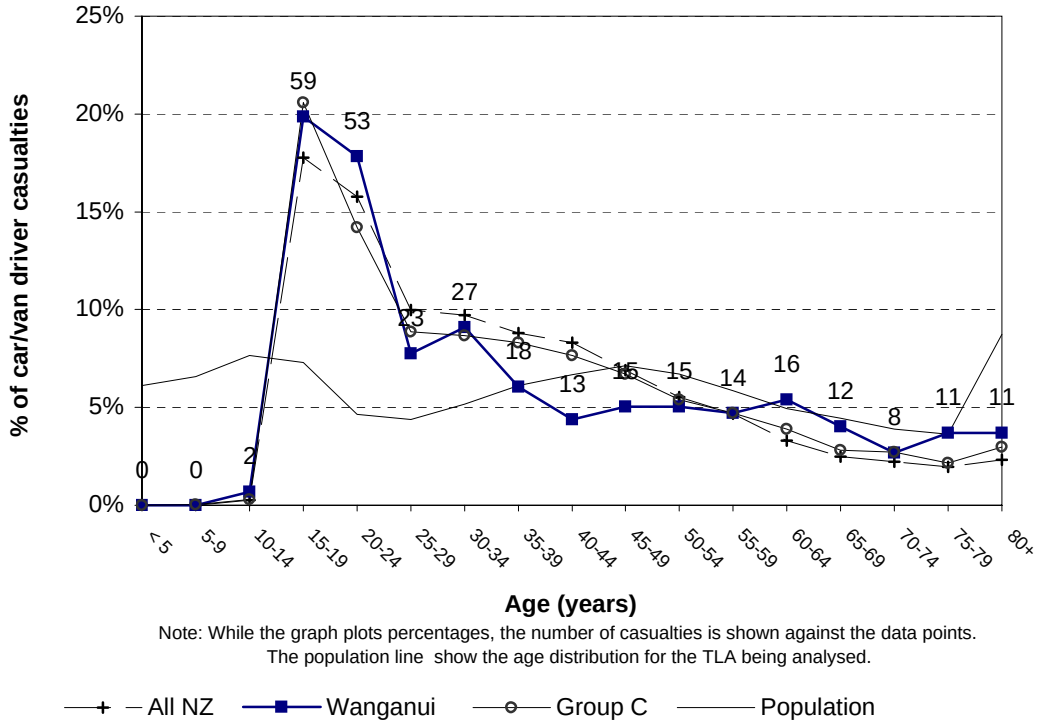
Note: While the graph plots percentages, the number of casualties is shown against the data points.

Figure 3.18 Cyclist casualties
Wanganui District



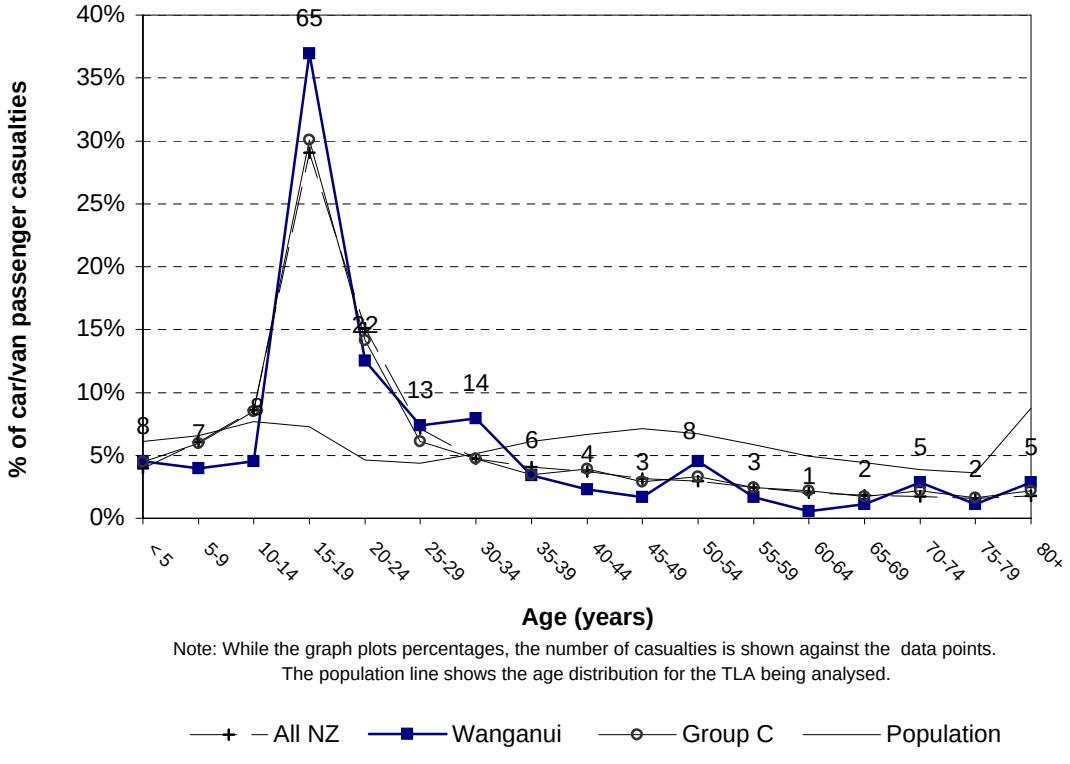
Note: Dotted line represents the ten year trend line

Figure 3.19 Car/van driver casualty age
Wanganui District (2003-2007)



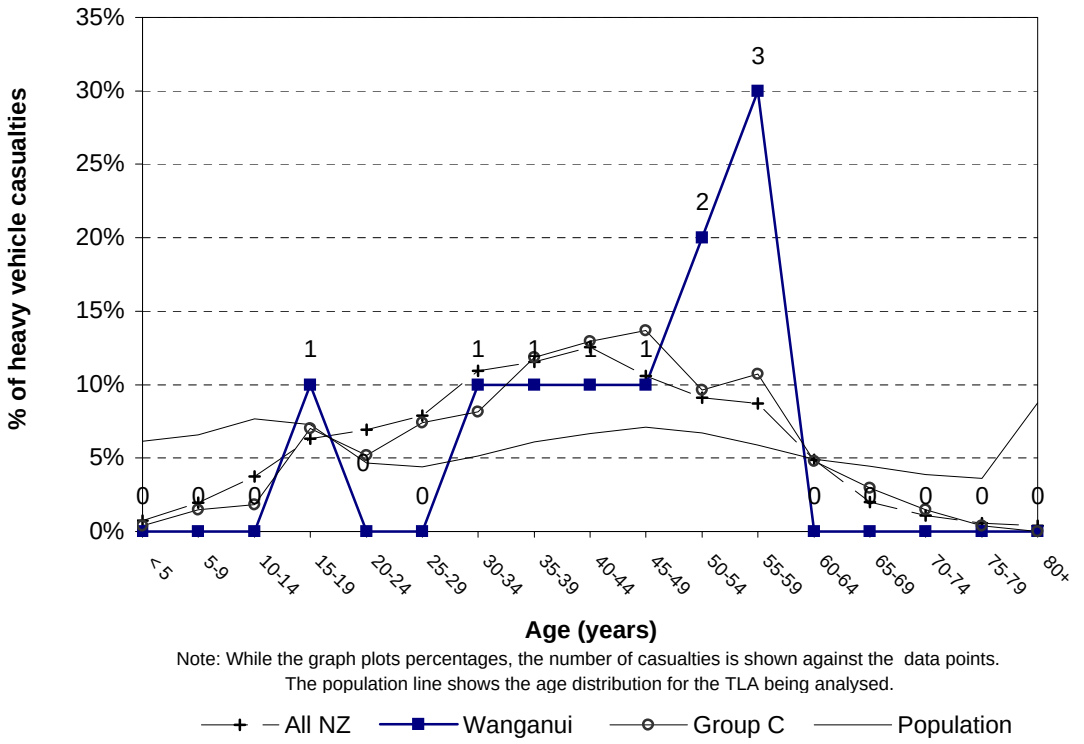
Note: While the graph plots percentages, the number of casualties is shown against the data points.
The population line show the age distribution for the TLA being analysed.

Figure 3.20 Car/van passenger casualty age
Wanganui District (2003-2007)



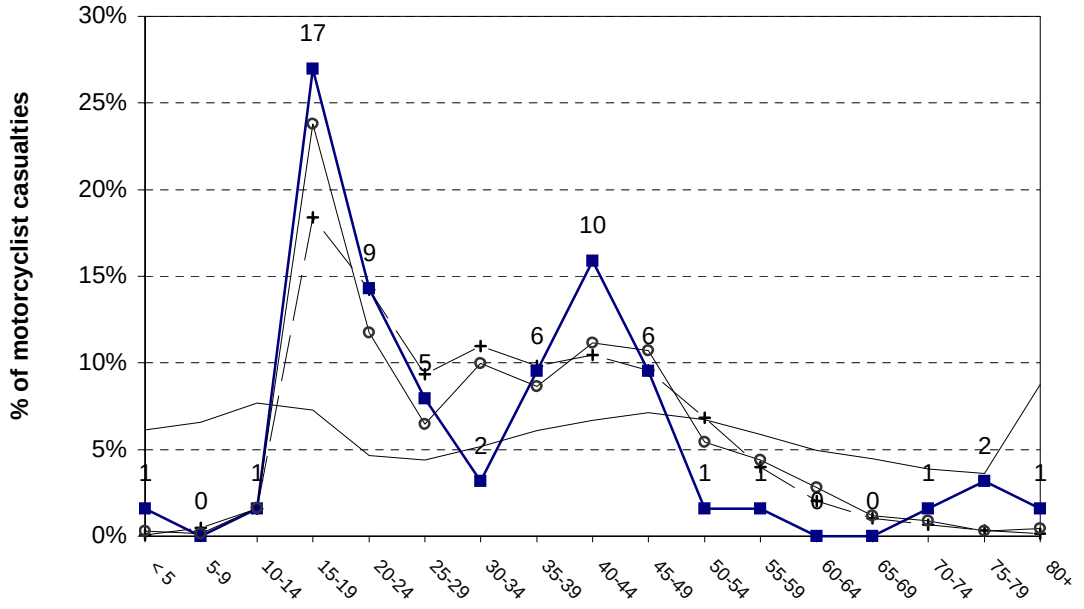
Note: While the graph plots percentages, the number of casualties is shown against the data points.
The population line shows the age distribution for the TLA being analysed.

Figure 3.21 Heavy vehicle casualty age
Wanganui District (2003-2007)



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
Wanganui District (2003-2007)



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
Wanganui District (2003-2007)

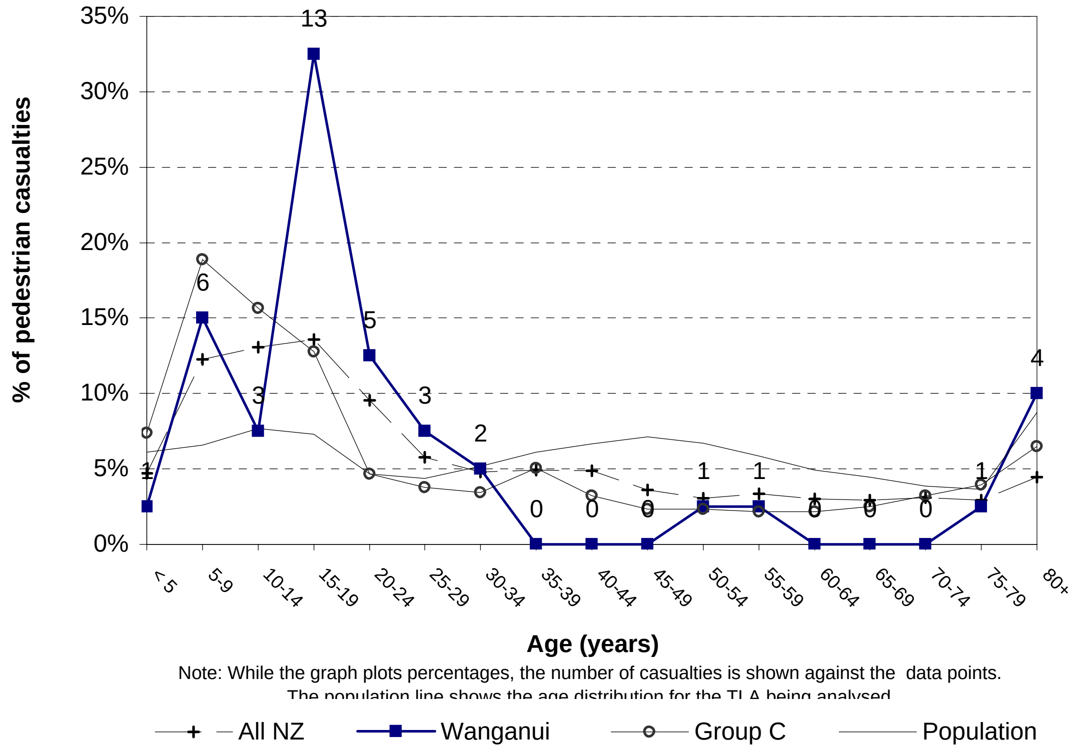


Figure 3.24 Cyclist casualty age
Wanganui District (2003-2007)

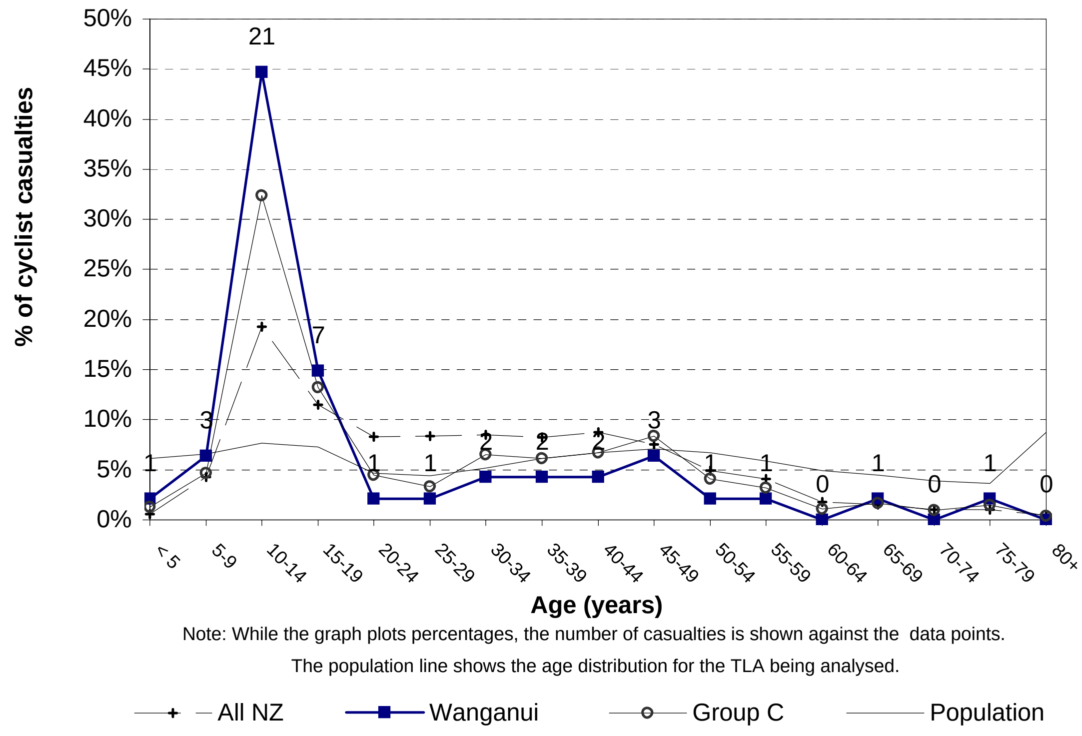
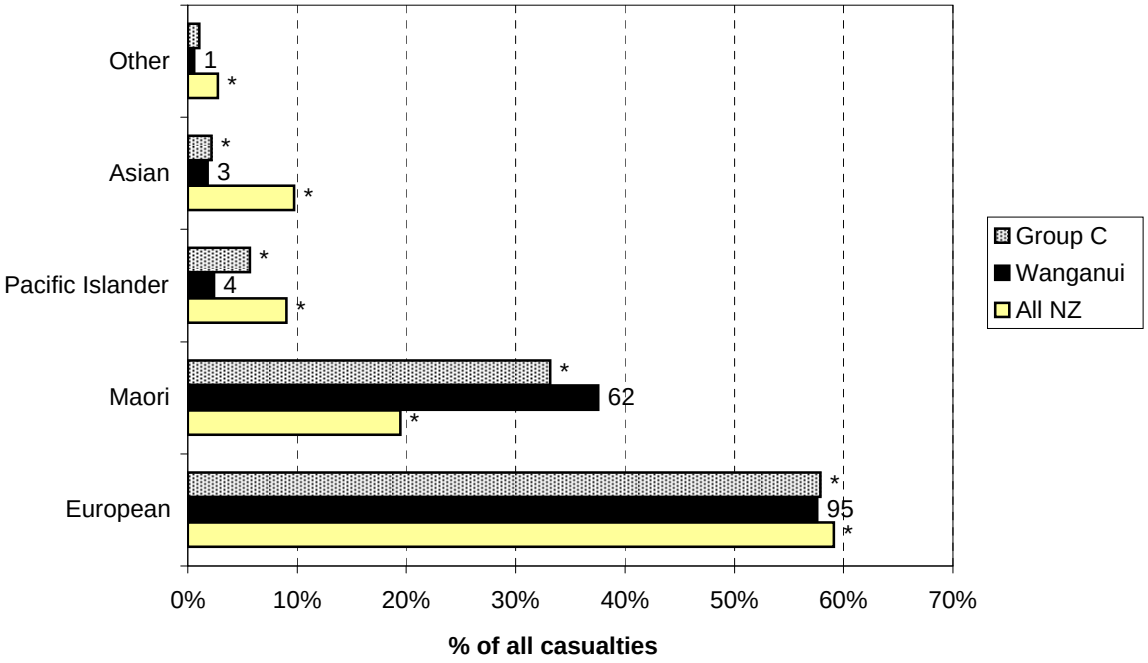
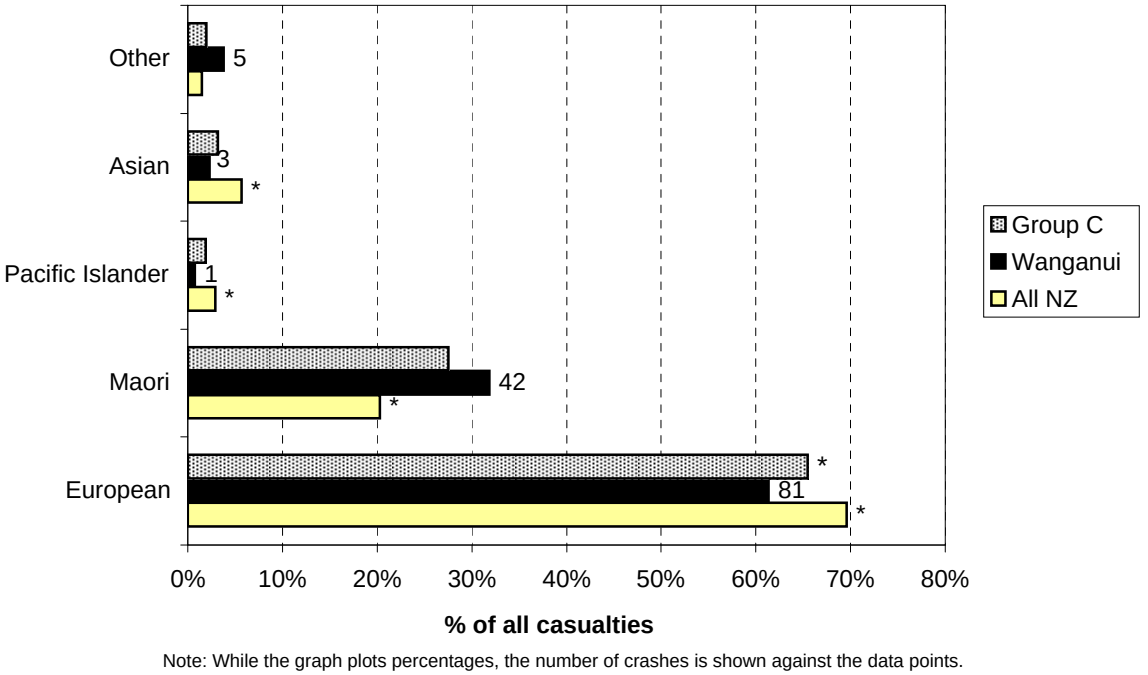


Figure 3.25 Casualty ethnicity - urban
Wanganui District (2003-2007)



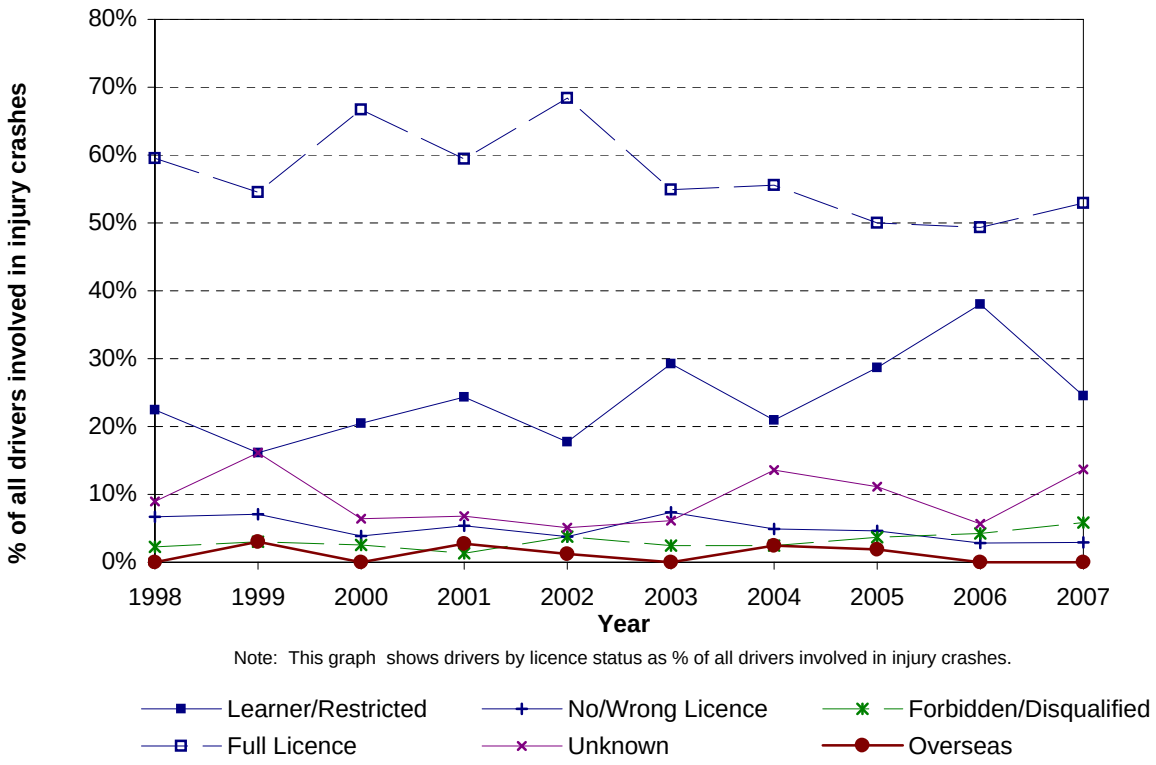
Note: While the graph plots percentages, the number of crashes is shown against the data points.
*Denotes statistically significant difference between Local Authority and National or Peer Group Proportions

Figure 3.26 Casualty ethnicity - rural
Wanganui District (2003-2007)



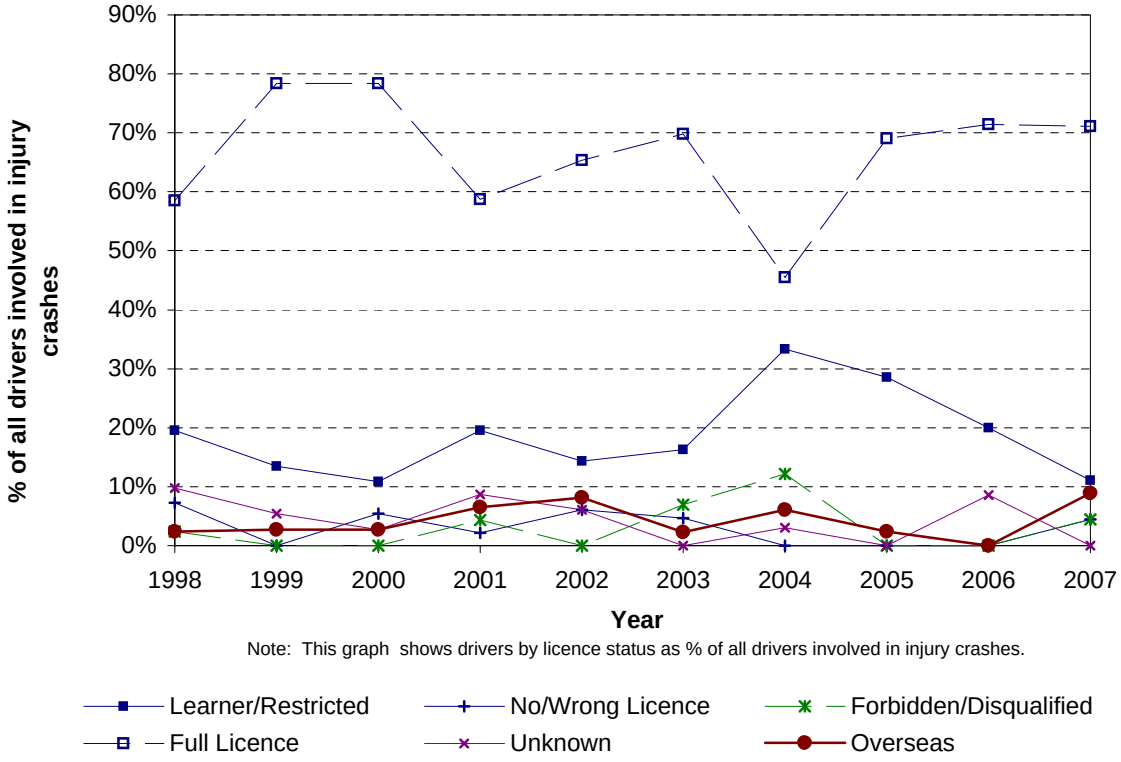
Note: While the graph plots percentages, the number of crashes is shown against the data points.
*Denotes statistically significant difference between Local Authority and National or Peer Group Proportions

Figure 3.27 Licence status - urban Wanganui District



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

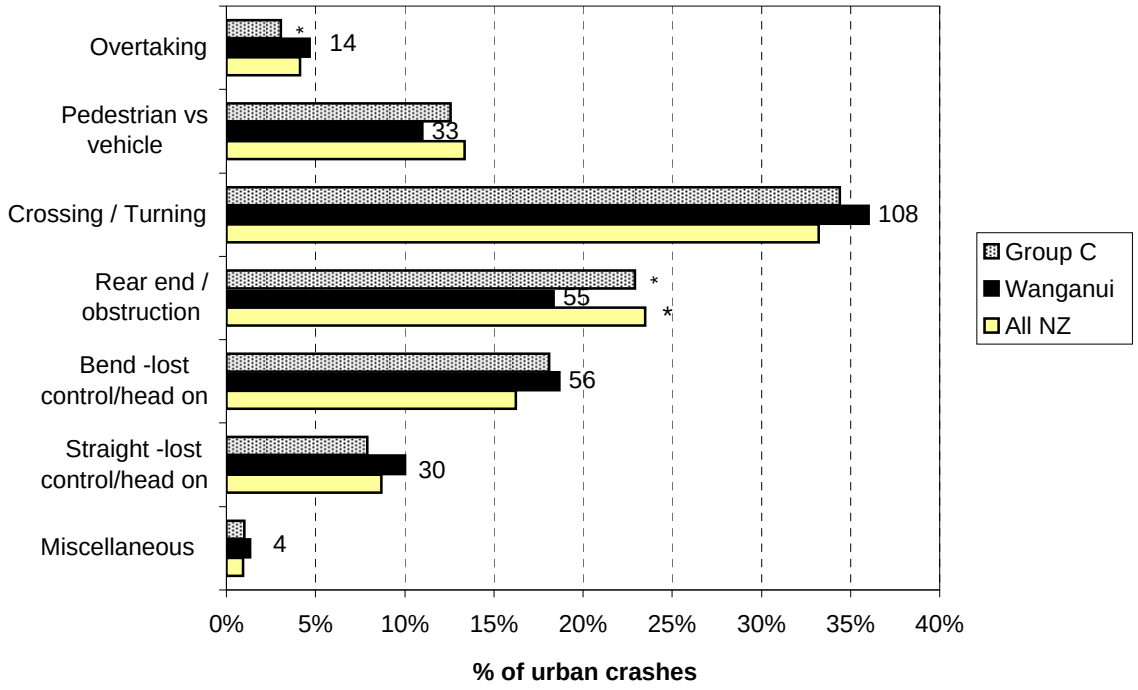
Figure 3.28 Licence status - rural Wanganui District



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

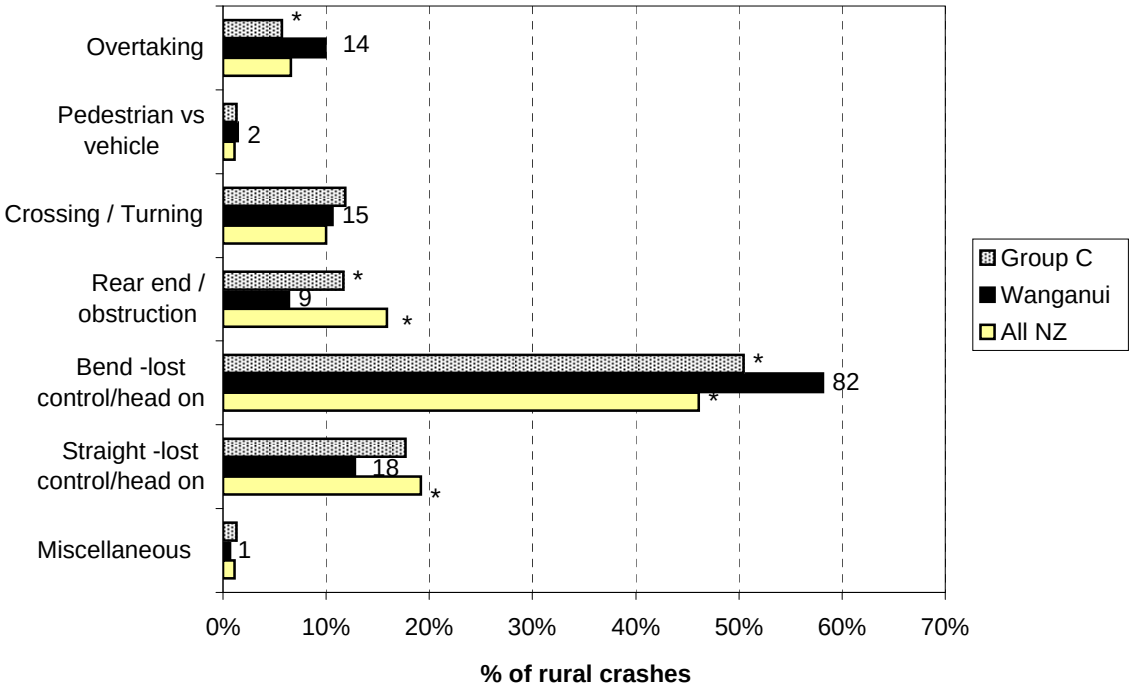
Crash type statistics

Figure 4.1 Crash movement type - urban Wanganui District (2003-2007)



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 Wanganui District roads (2003-2007)



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
Wanganui District - urban roads

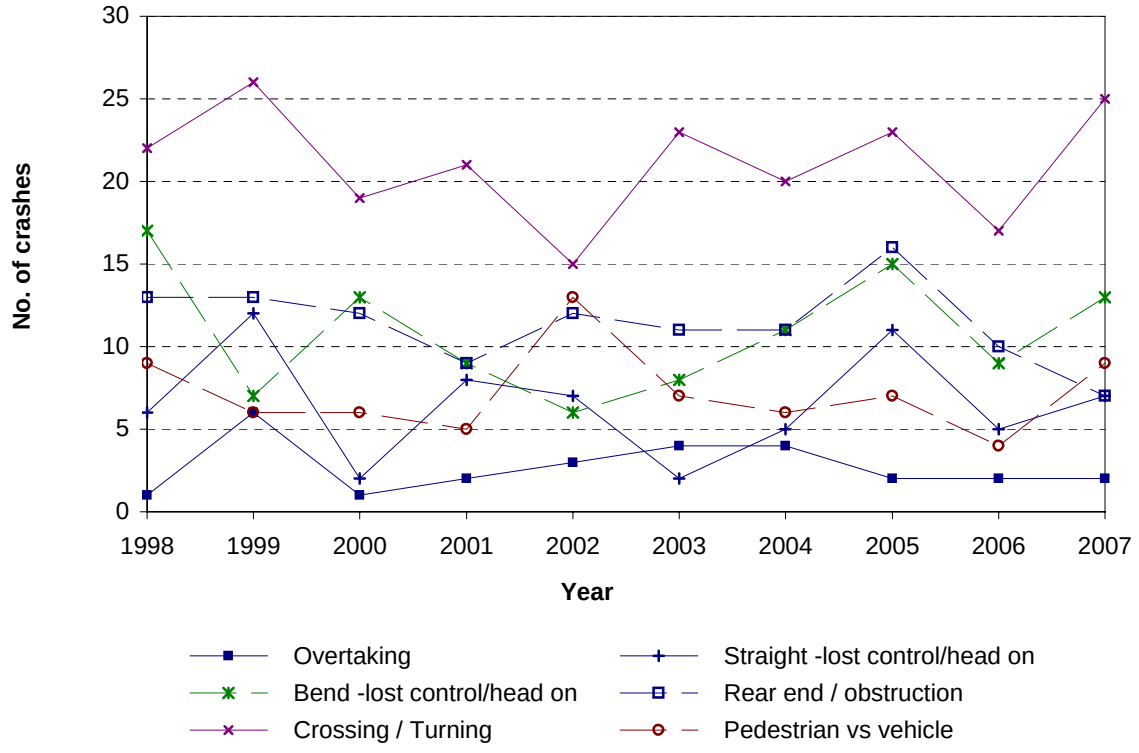


Figure 4.4 Crash movement type - trends
Wanganui District - rural roads

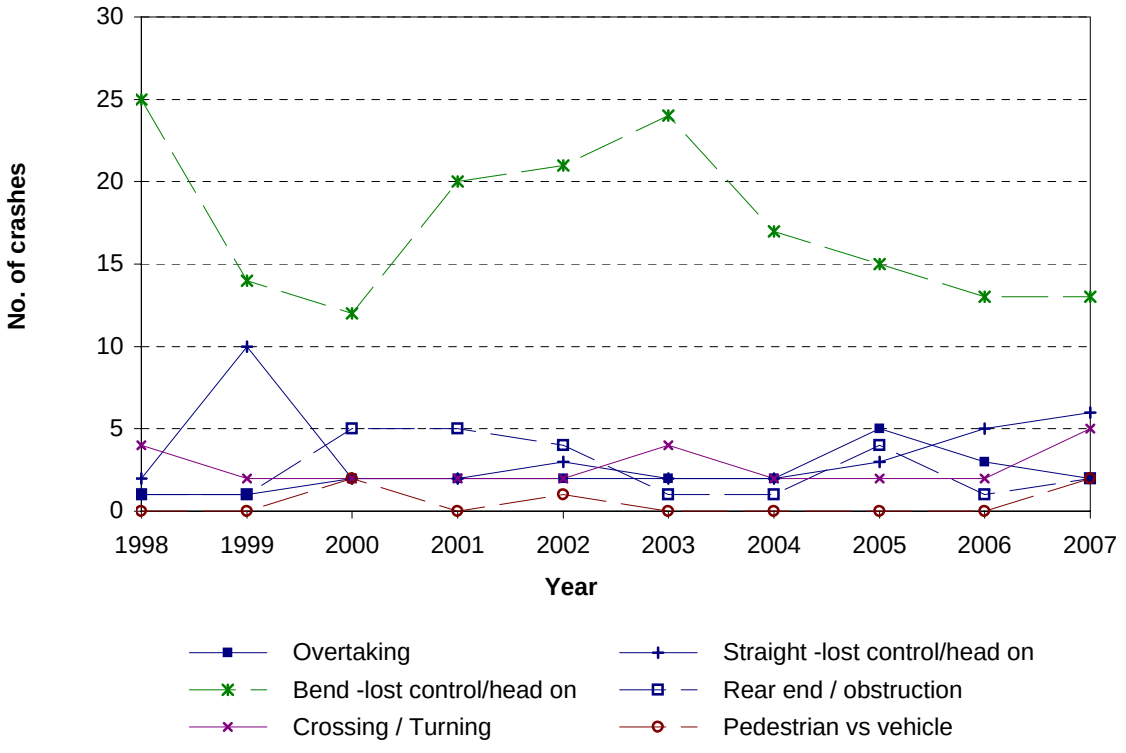
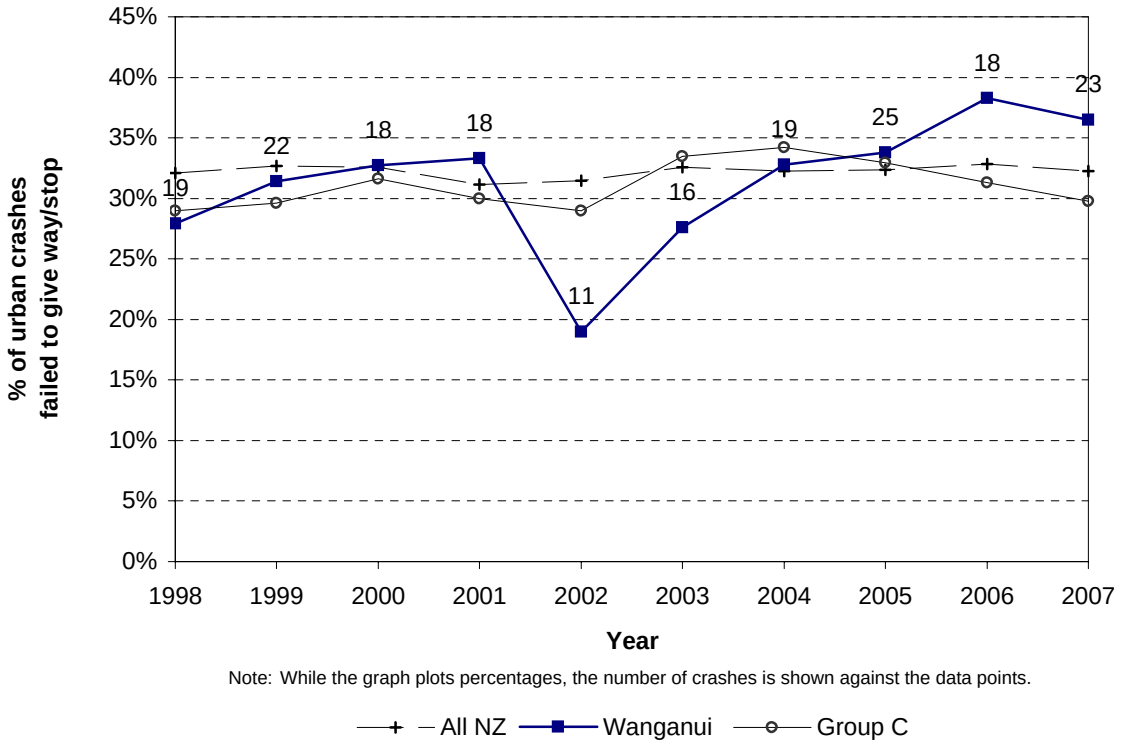
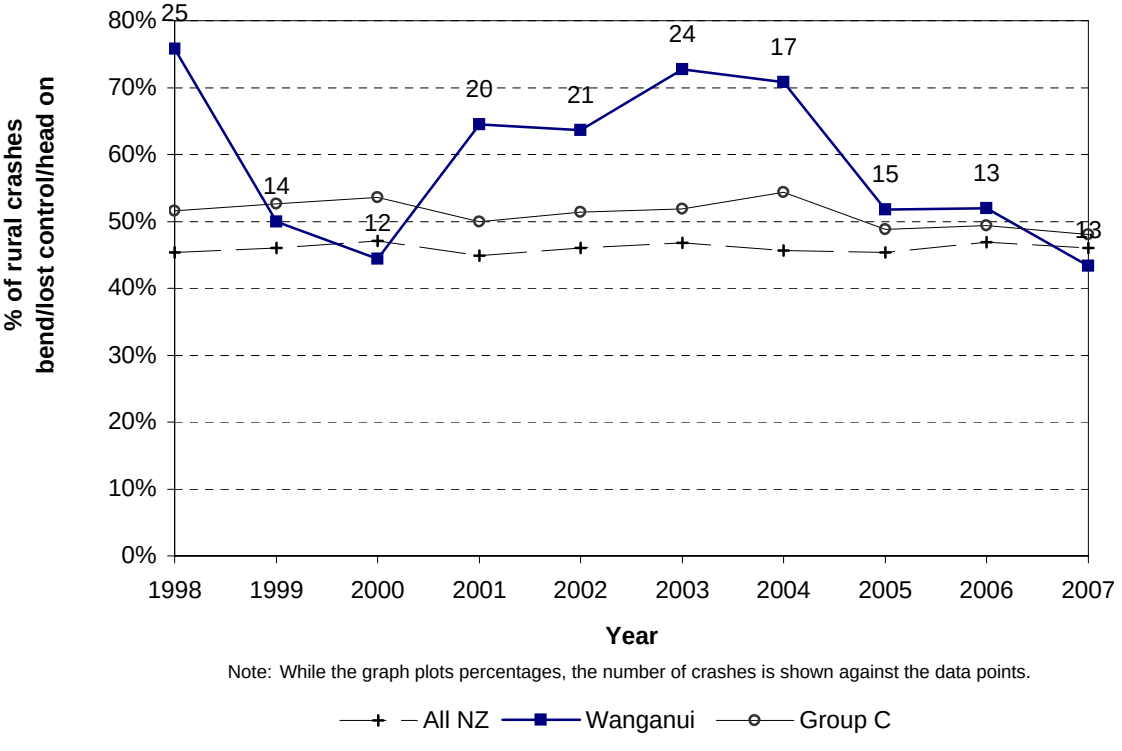


Figure 4.5 Failed to give way / stop
Wanganui District - urban roads



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

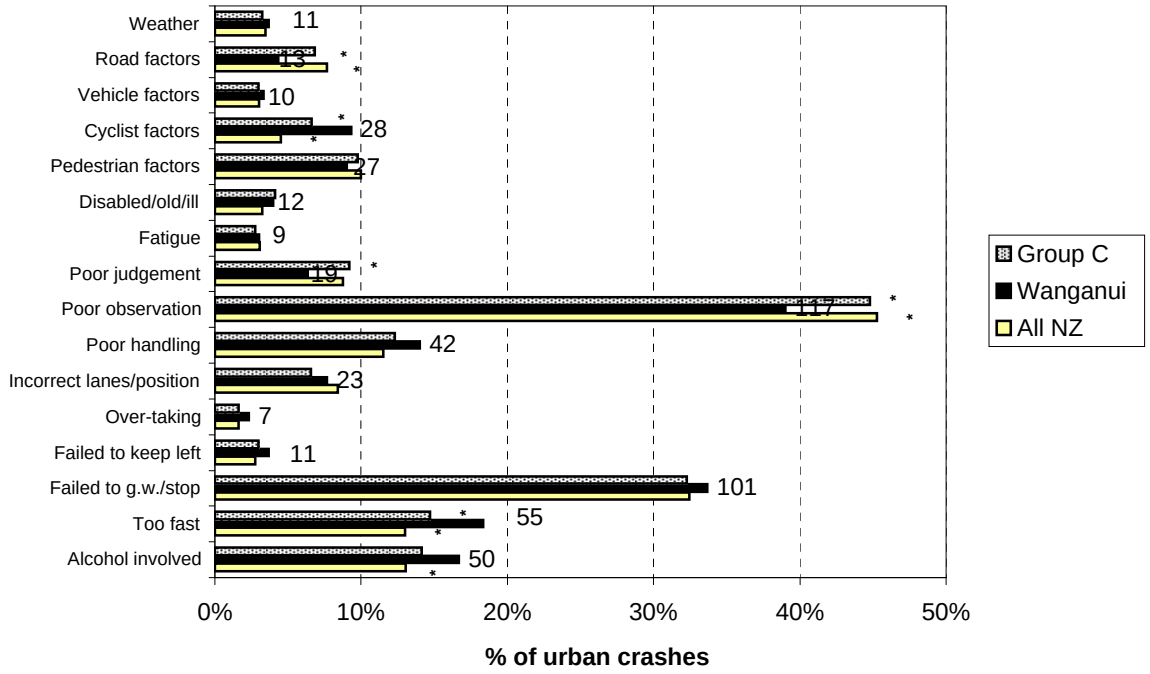
Figure 4.6 Bend - lost control / head - on
Wanganui District - rural roads



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

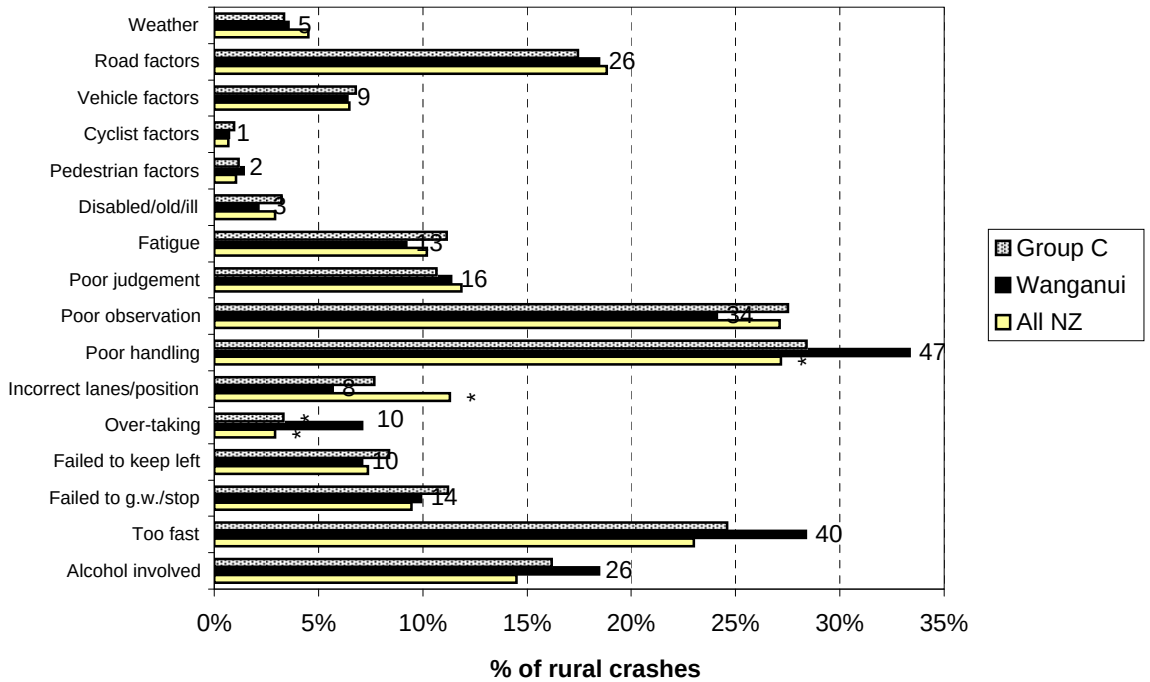
Crash factor statistics

Figure 5.1 Contributing factors - urban Wanganui District (2003-2007)



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 Wanganui District (2003-2007)



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
Wanganui District - urban roads

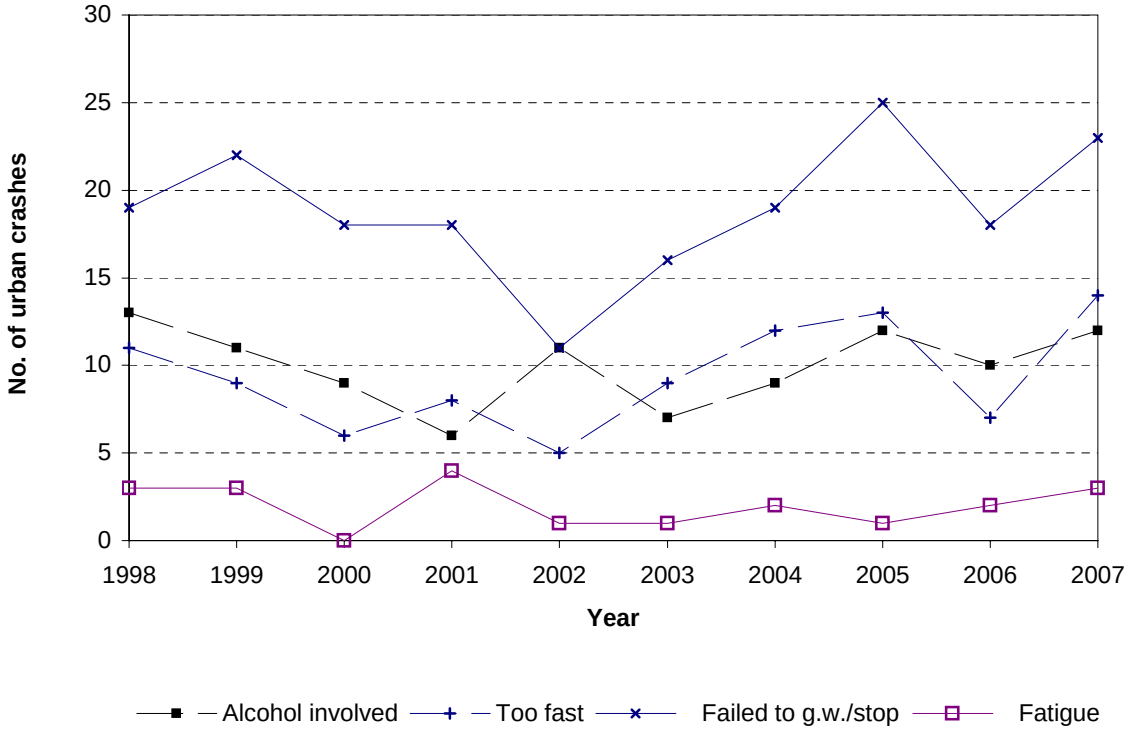


Figure 5.4 Contributing factor trends
Wanganui District - urban roads

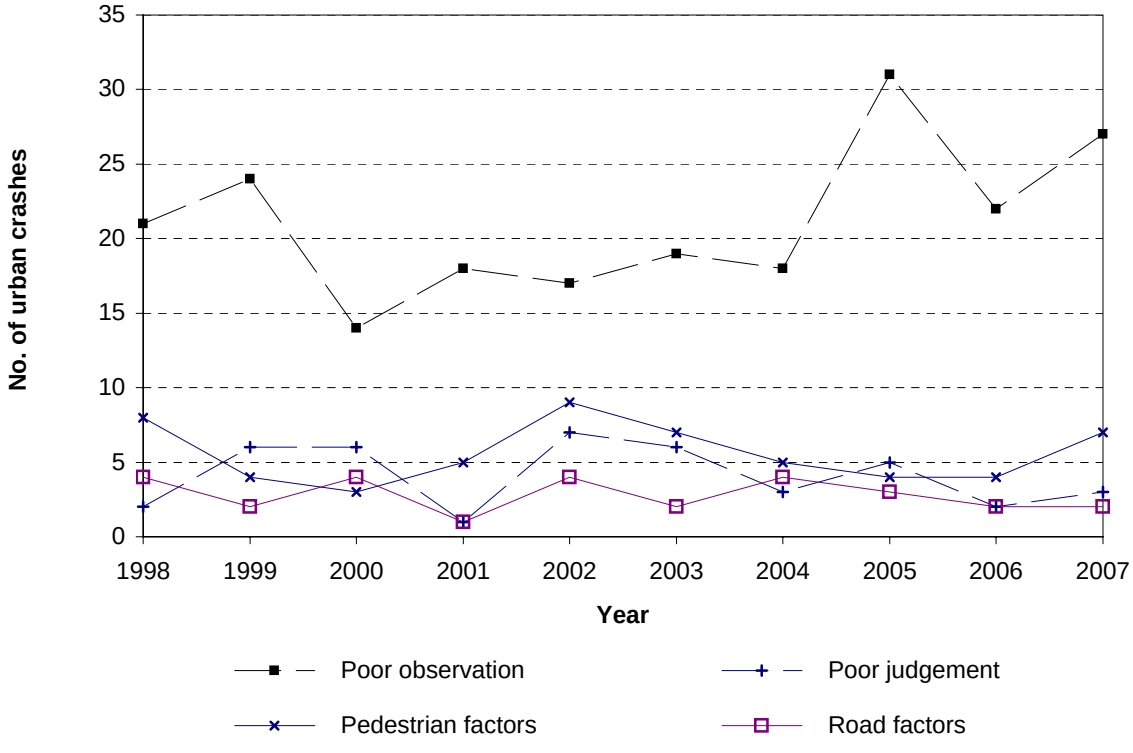


Figure 5.5 Contributing factor trends
Wanganui District - urban roads

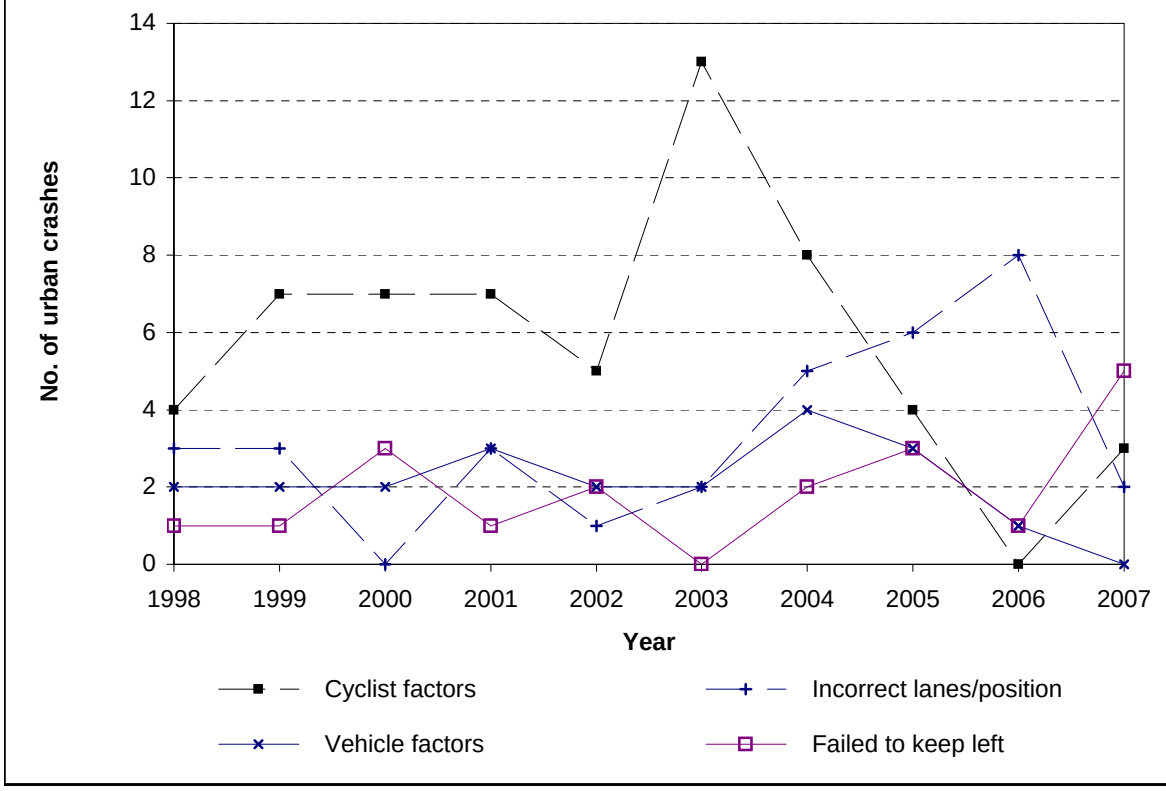


Figure 5.6 Contributing factor trends
Wanganui District - urban roads

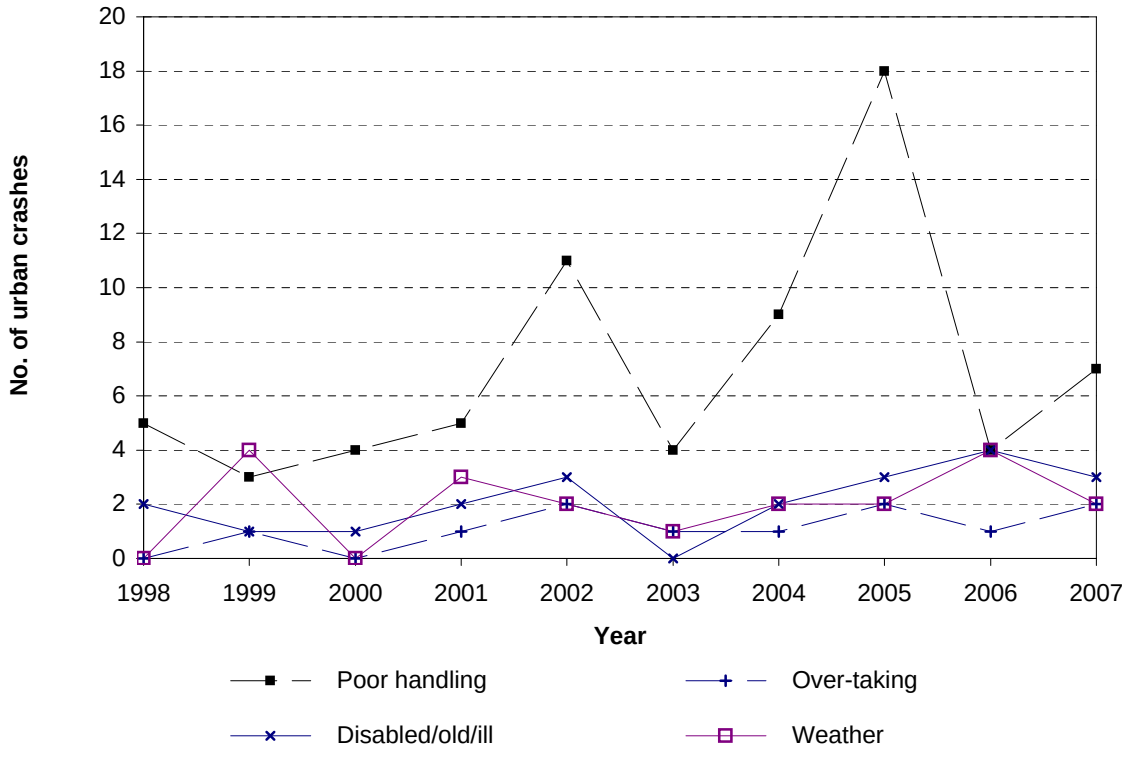
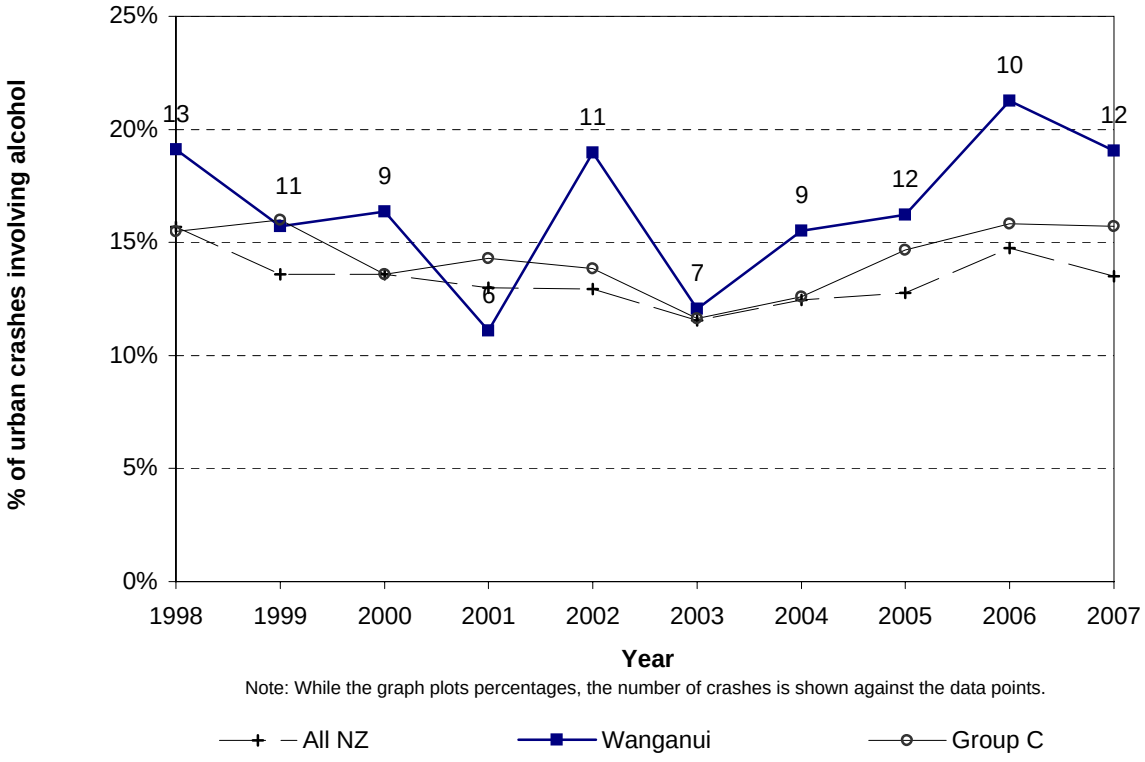
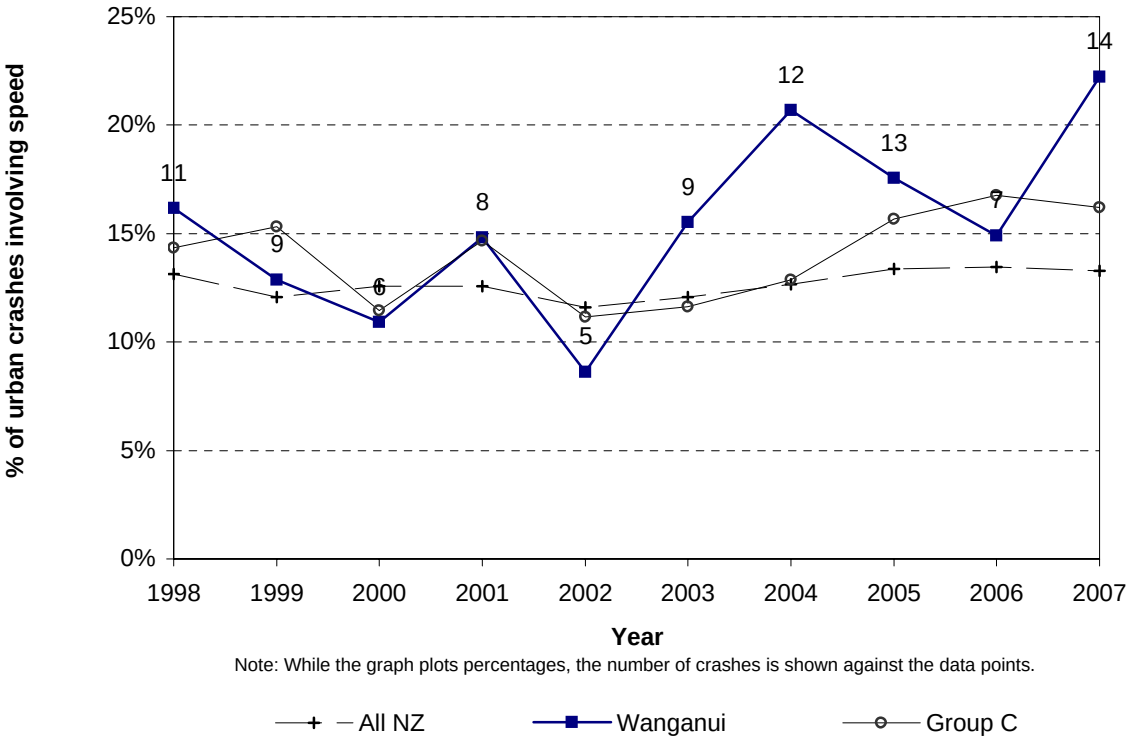


Figure 5.7 Alcohol involved trend
Wanganui District - urban roads



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

Figure 5.8 Speed involved trend
Wanganui 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
Wanganui District - rural roads

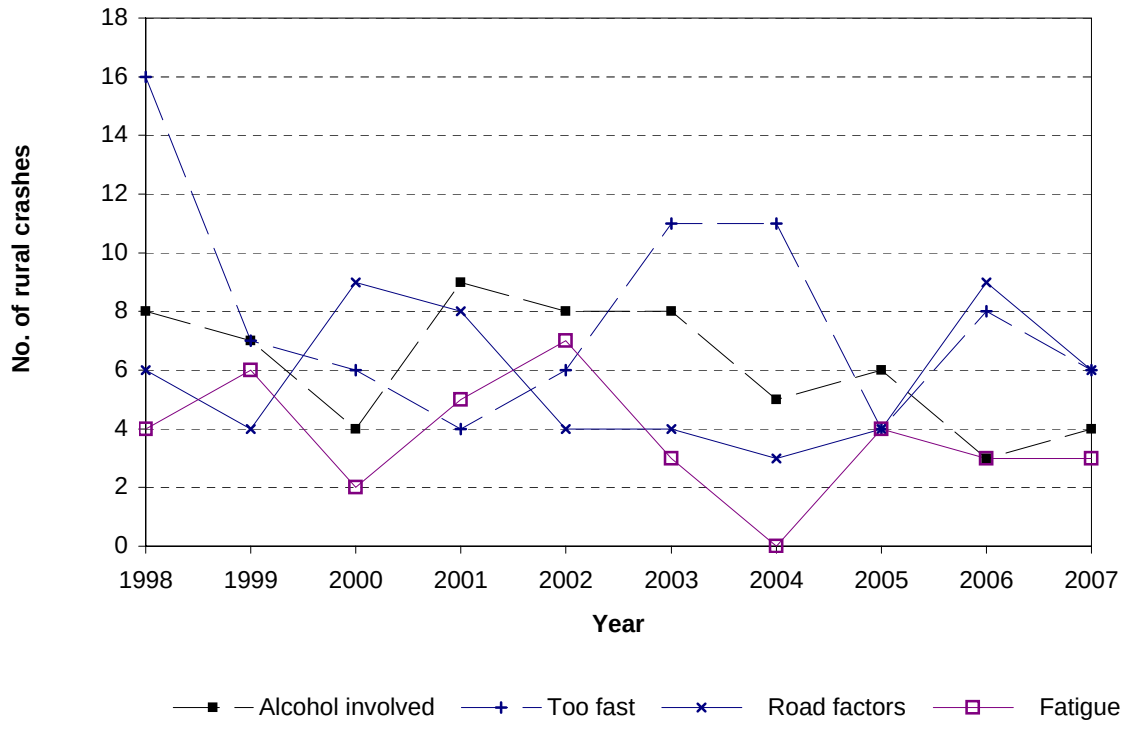


Figure 5.10 Contributing factor trends
Wanganui District - rural roads

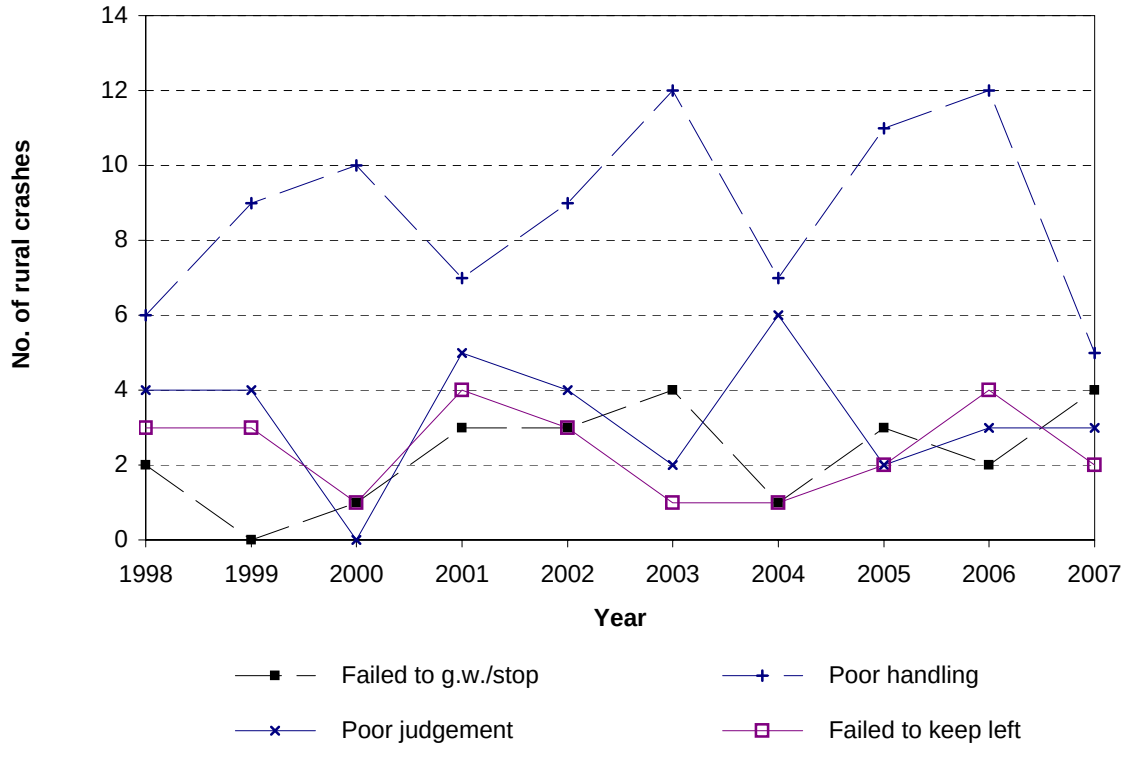


Figure 5.11 Contributing factor trends
Wanganui District - rural roads

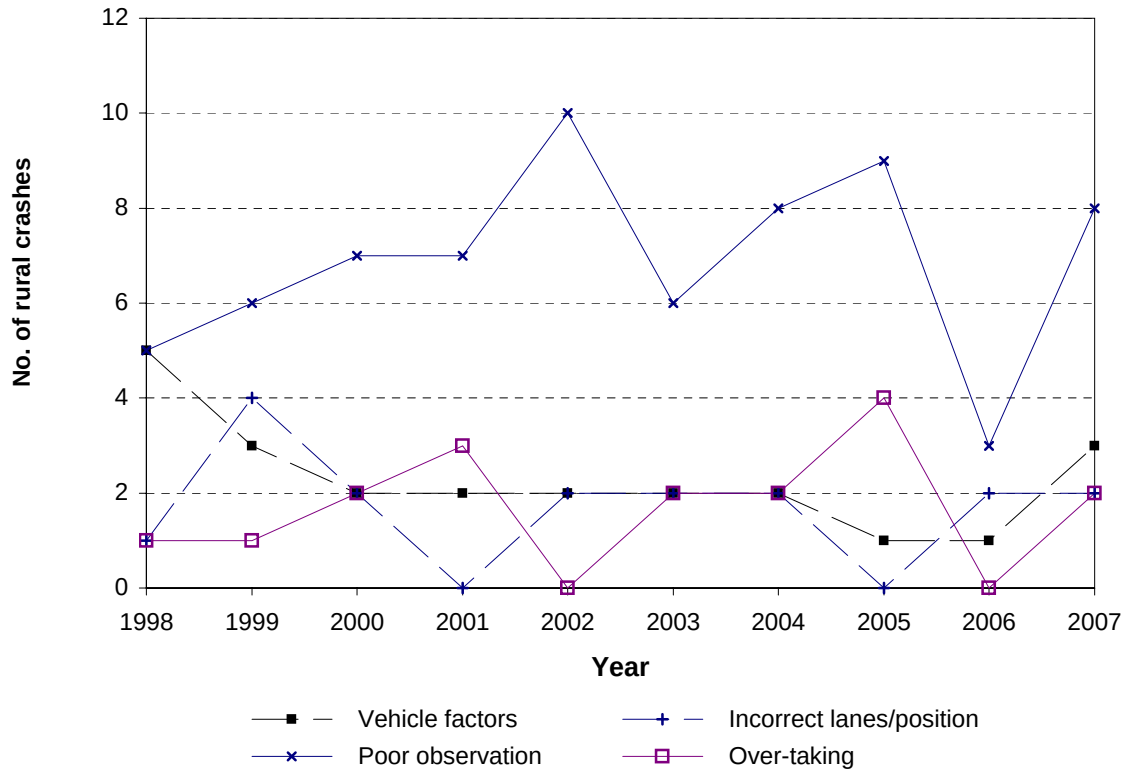


Figure 5.12 Contributing factor trends
Wanganui District - rural roads

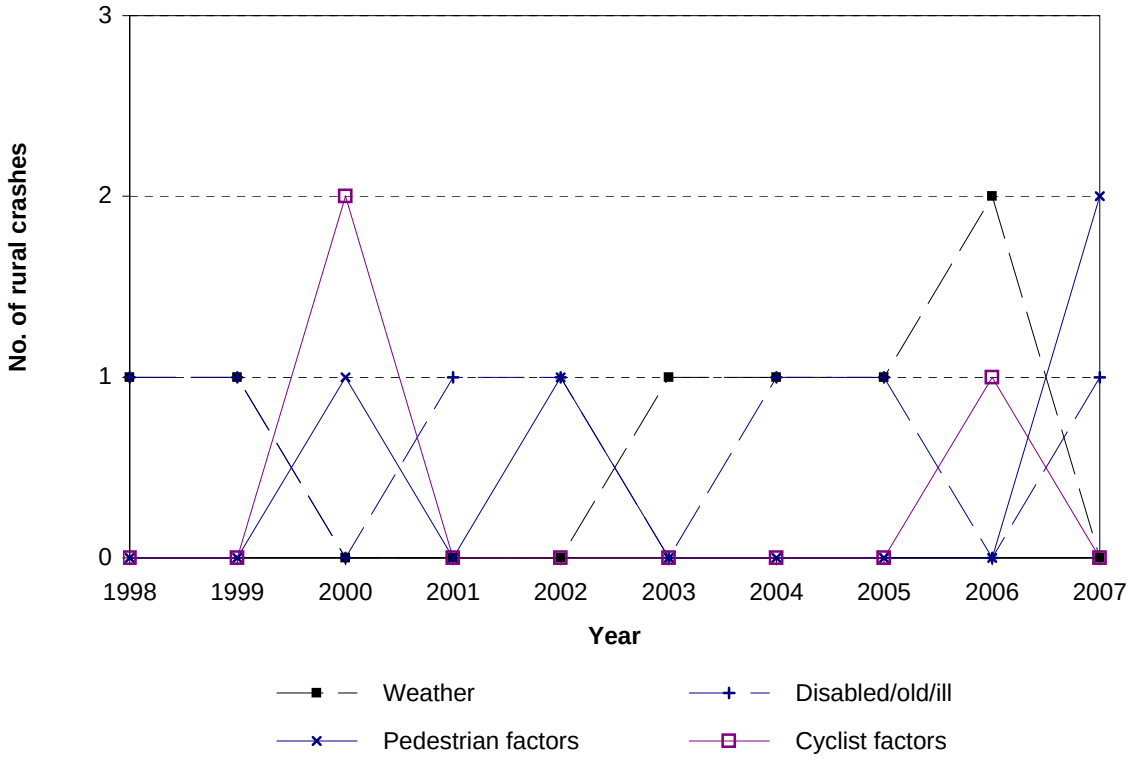
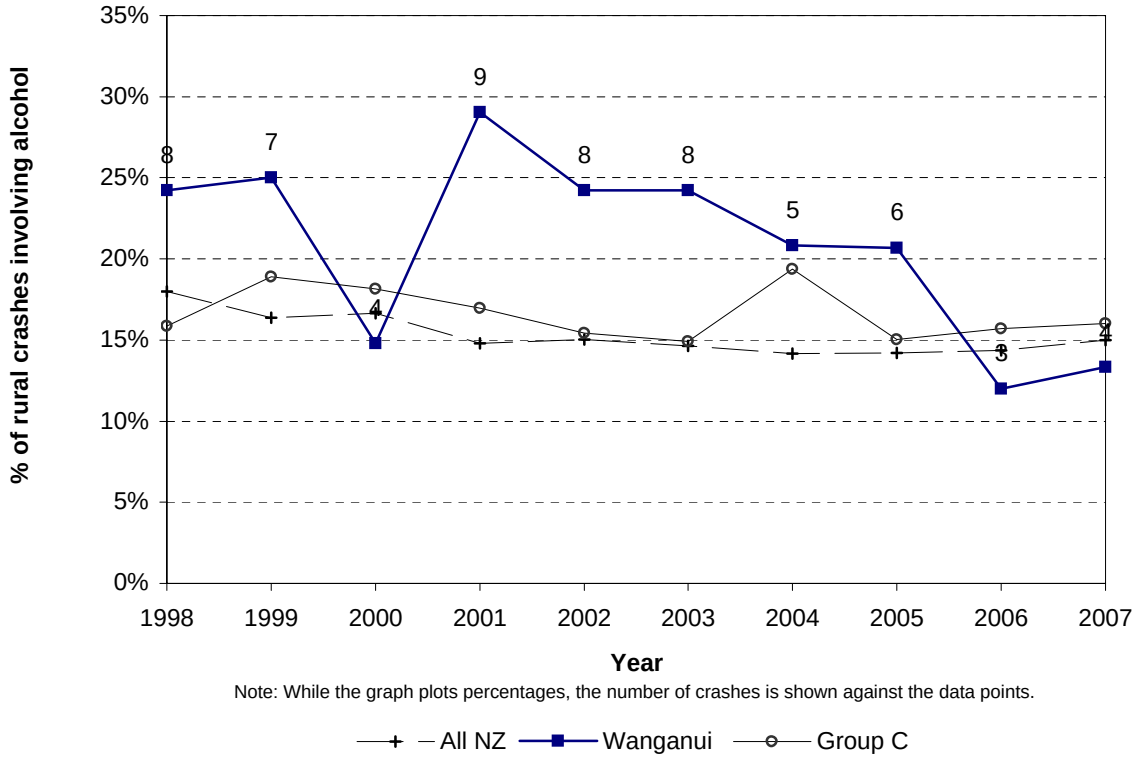
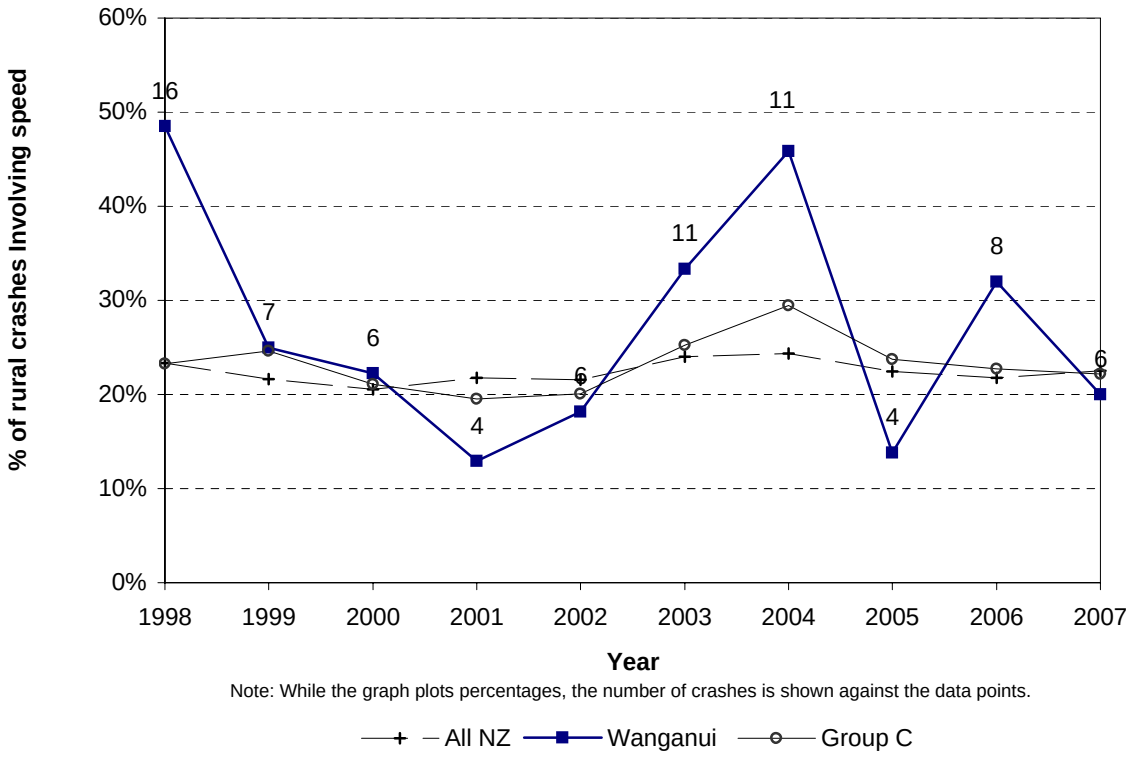


Figure 5.13 Alcohol involved trend
Wanganui District - rural roads



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

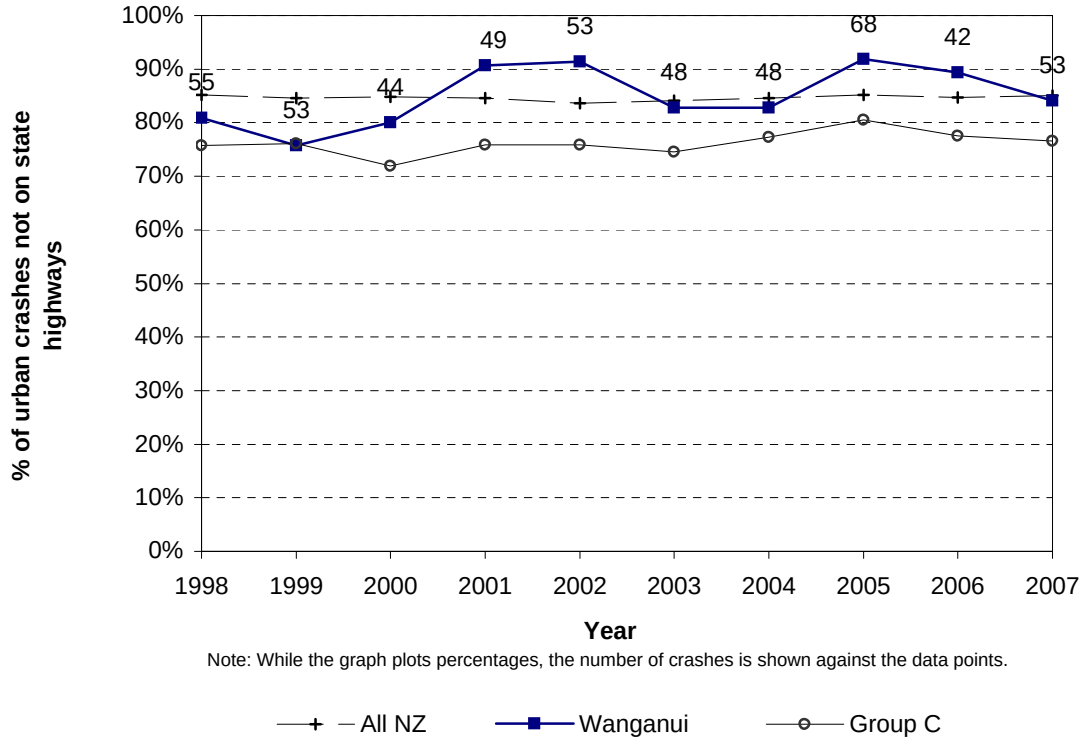
Figure 5.14 Speed involved trend
Wanganui District - rural roads



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

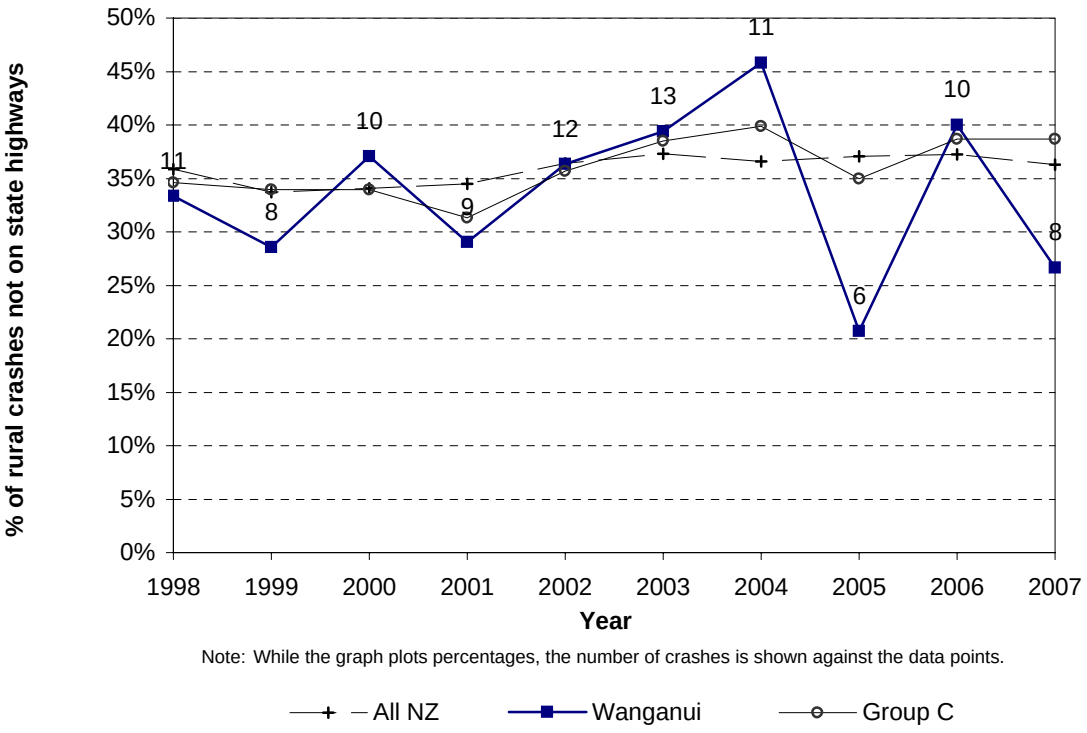
Environmental statistics

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



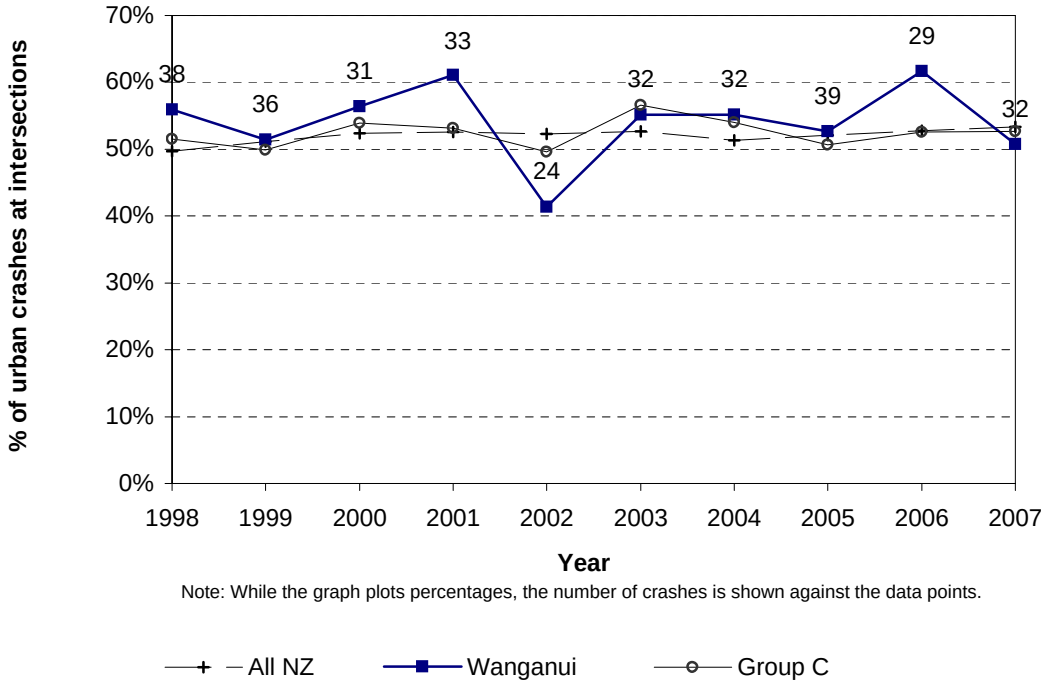
Note: While the graph plots percentages, the number of crashes is shown against the data points.

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



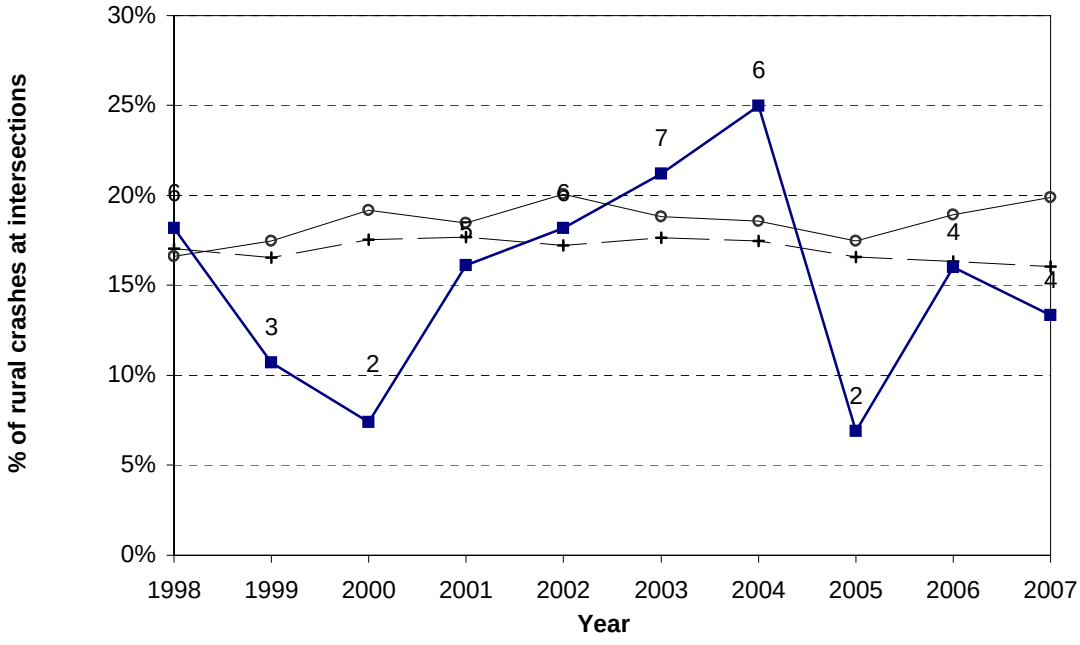
Note: While the graph plots percentages, the number of crashes is shown against the data points.

Figure 6.3 Intersection crashes
Wanganui District - urban roads



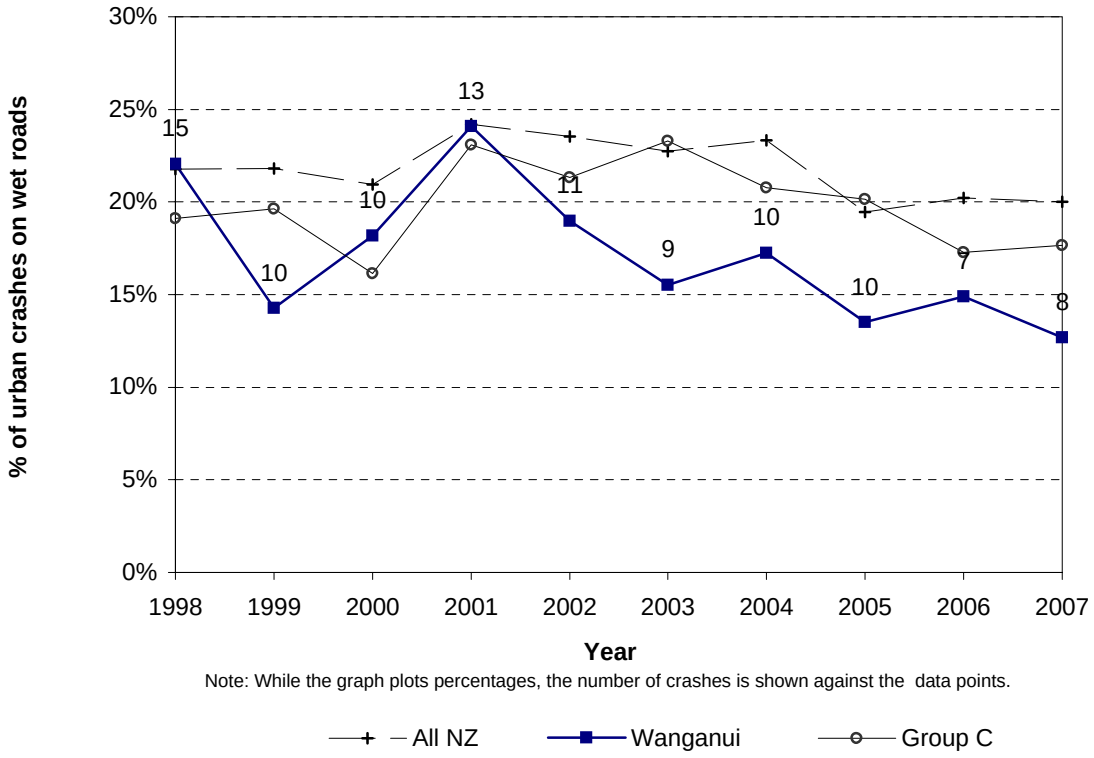
Note: While the graph plots percentages, the number of crashes is shown against the data points.

Figure 6.4 Intersection crashes
Wanganui District - rural roads



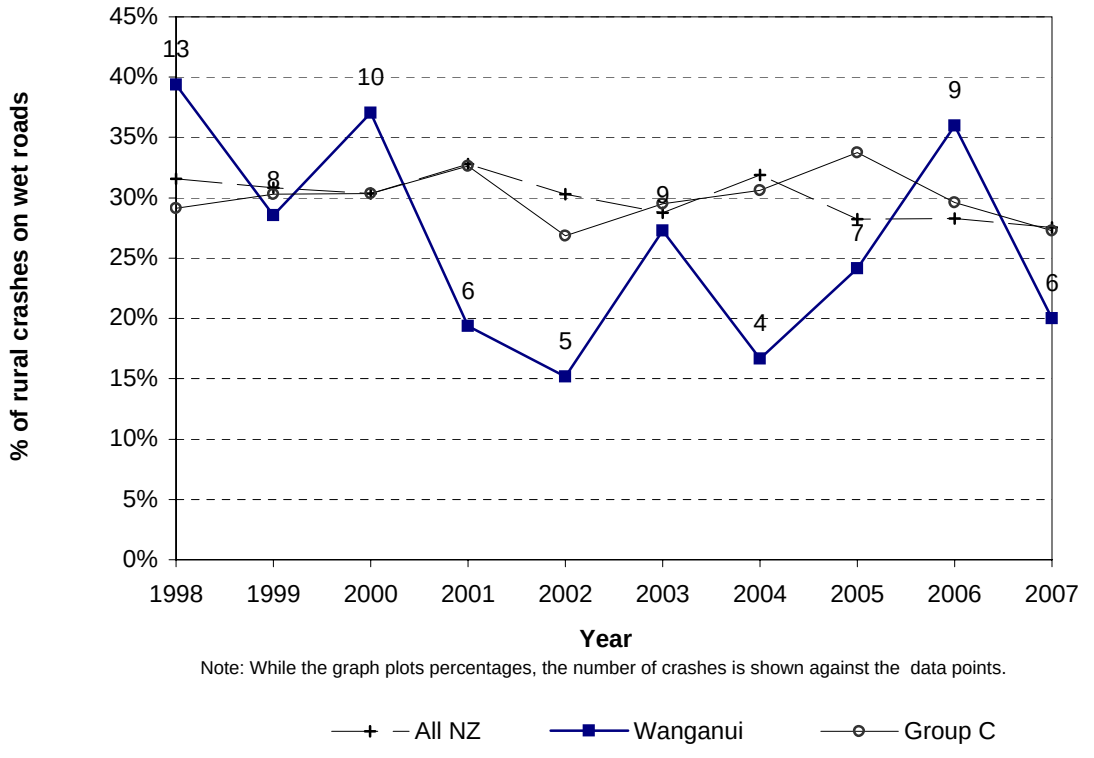
Note: While the graph plots percentages, the number of crashes is shown against the data points.

Figure 6.5 Wet road crashes
Wanganui District - urban roads



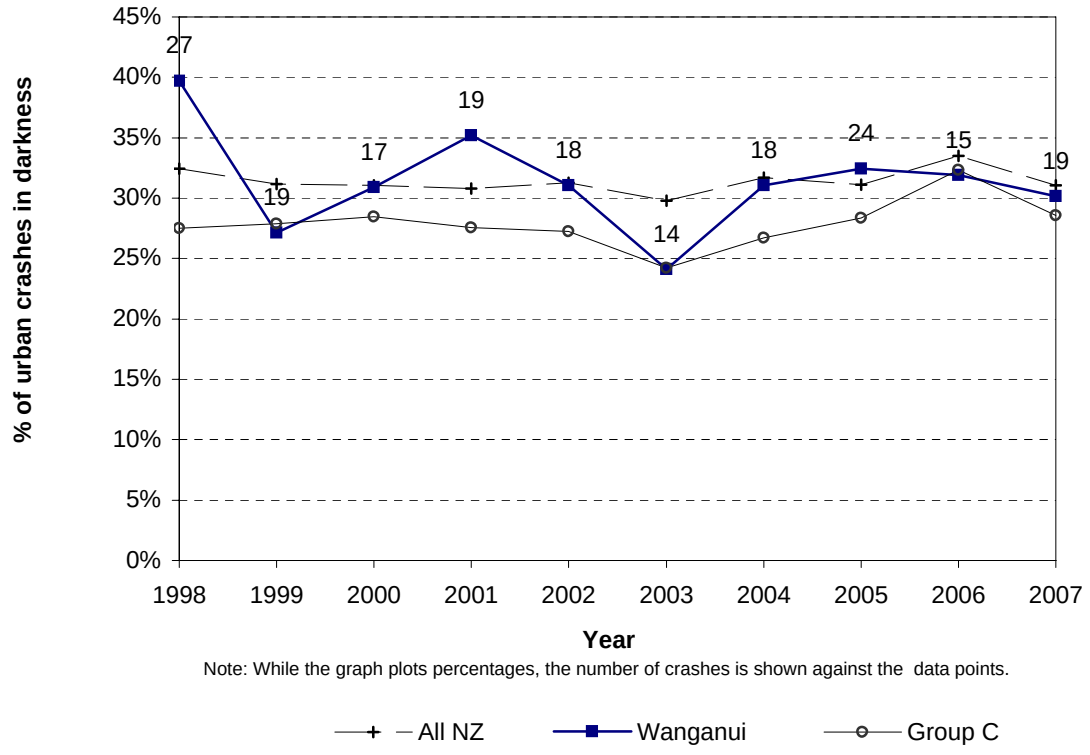
Note: While the graph plots percentages, the number of crashes is shown against the data points.

Figure 6.6 Wet road crashes
Wanganui District - rural roads



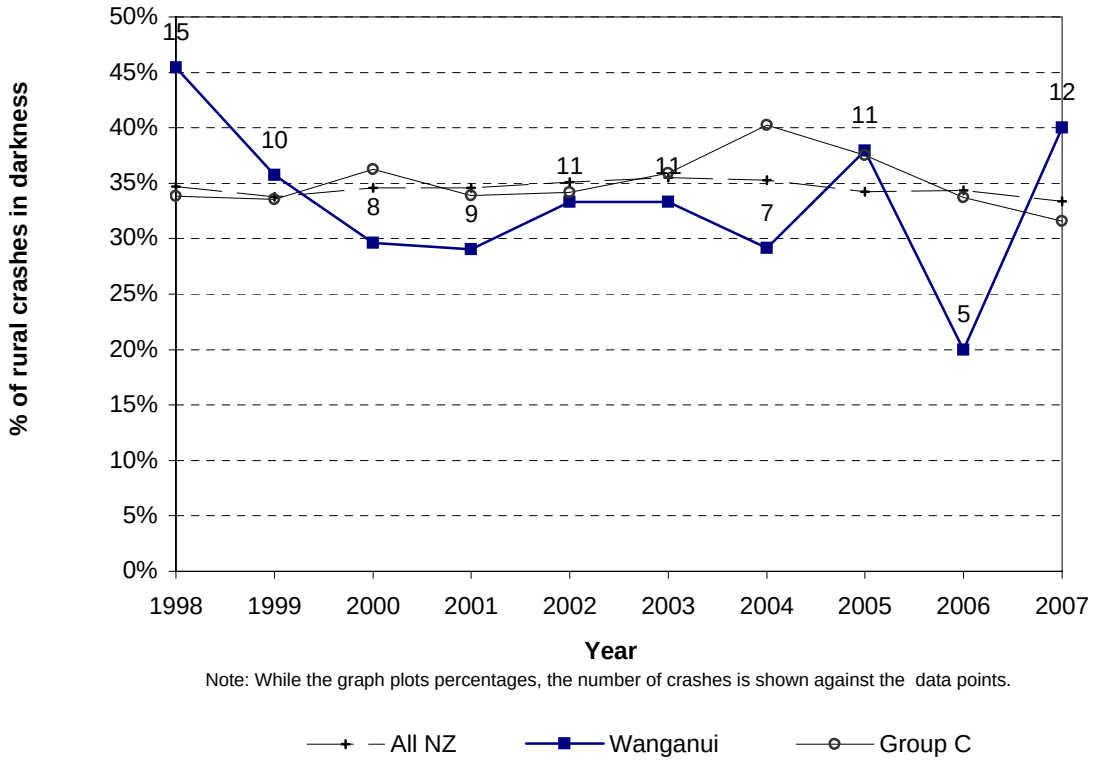
Note: While the graph plots percentages, the number of crashes is shown against the data points.

Figure 6.7 Crashes in darkness
Wanganui District - urban roads



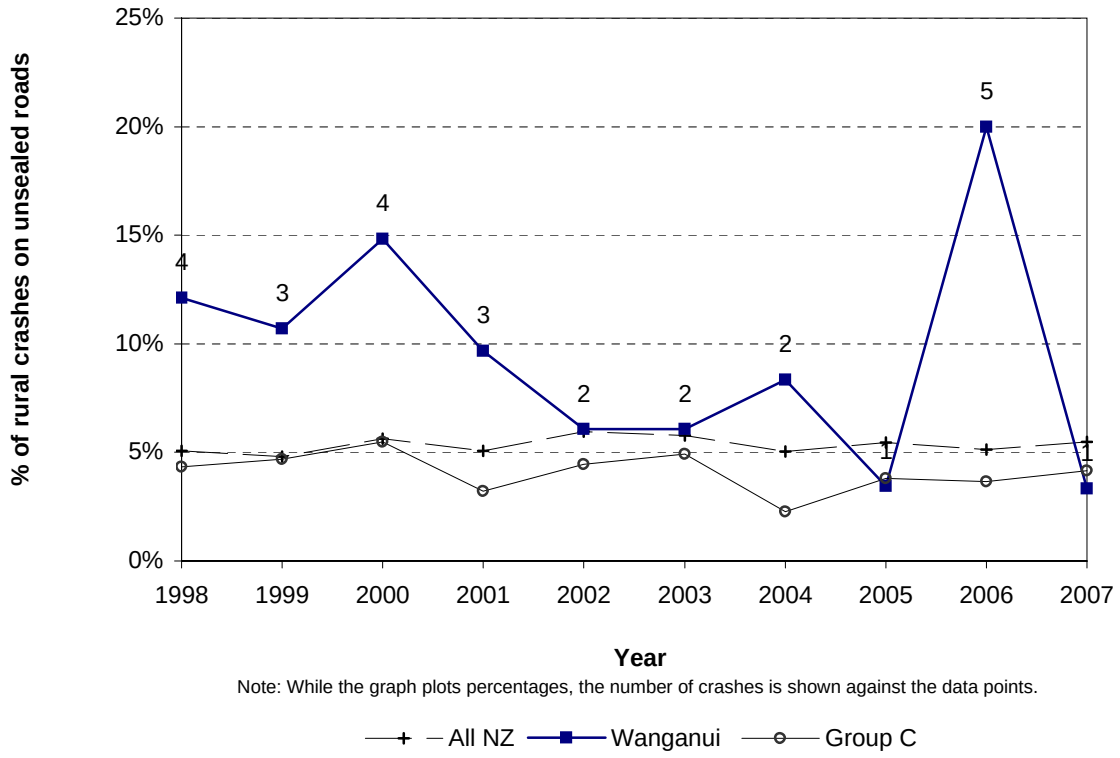
Note: While the graph plots percentages, the number of crashes is shown against the data points.

Figure 6.8 Crashes in darkness
Wanganui District - rural roads



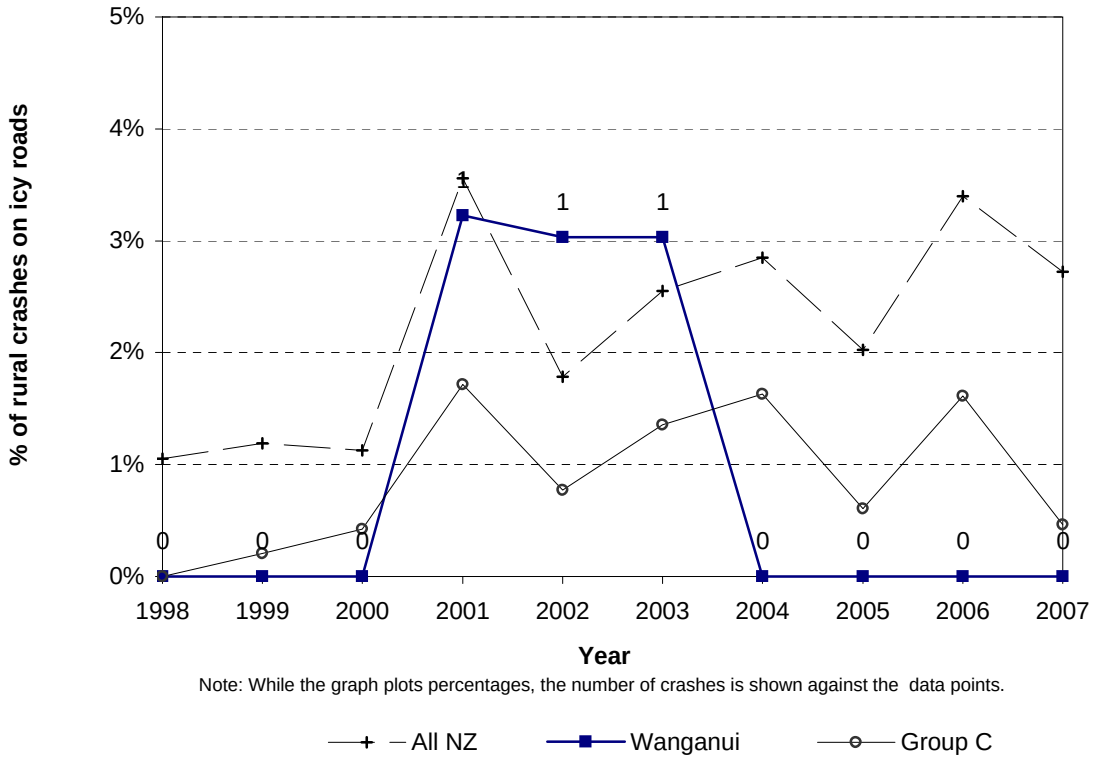
Note: While the graph plots percentages, the number of crashes is shown against the data points.

Figure 6.9 Unsealed road crashes
Wanganui District - rural roads



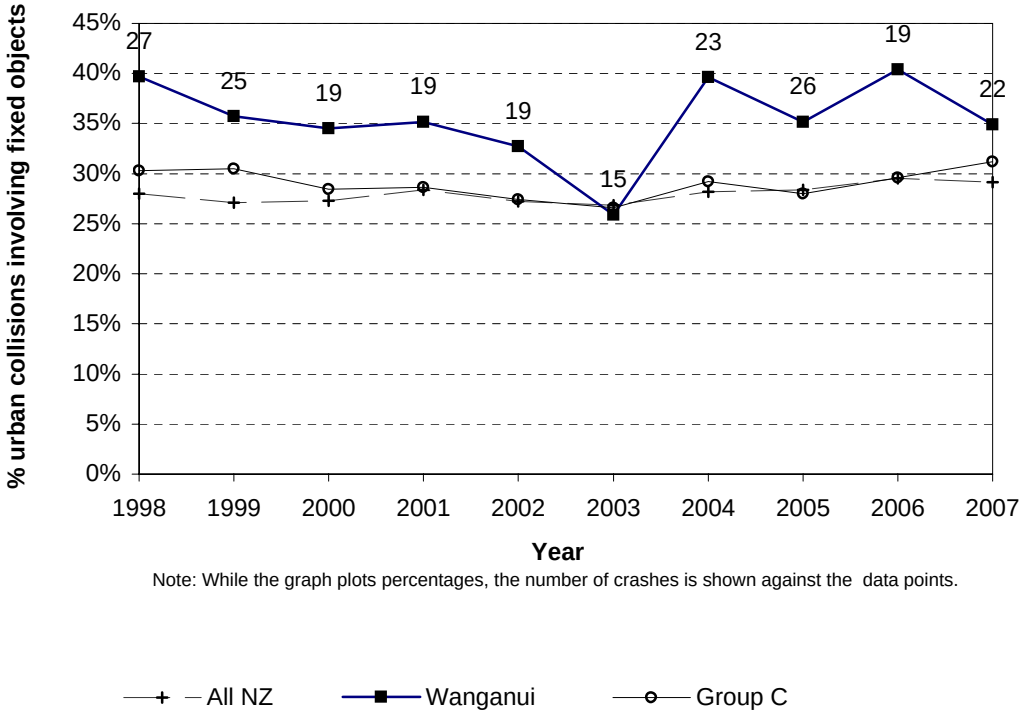
Note: While the graph plots percentages, the number of crashes is shown against the data points.

Figure 6.10 Icy road crashes
Wanganui District - rural roads



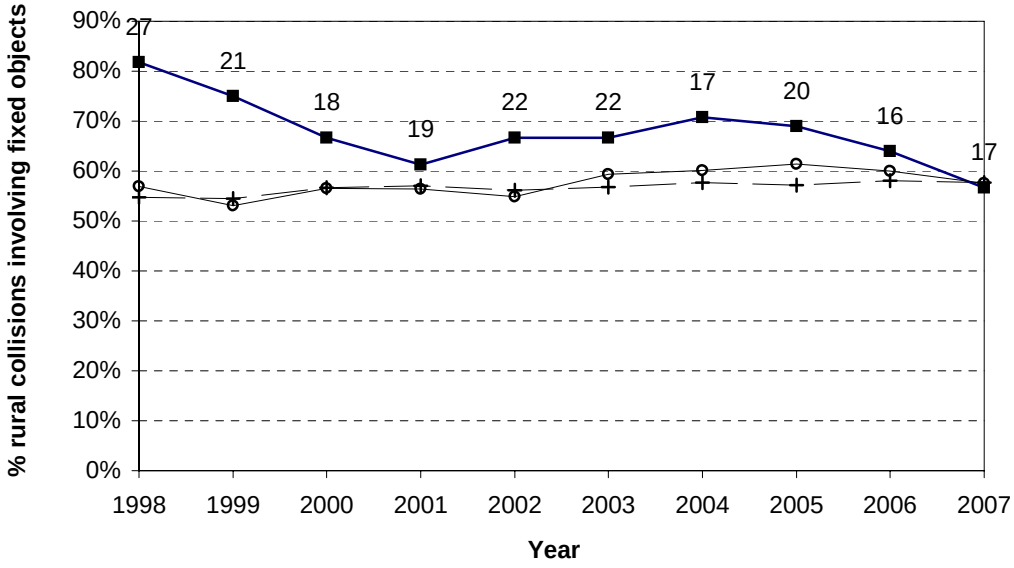
Note: While the graph plots percentages, the number of crashes is shown against the data points.

Figure 6.11 Collisions with objects
Wanganui District - urban roads



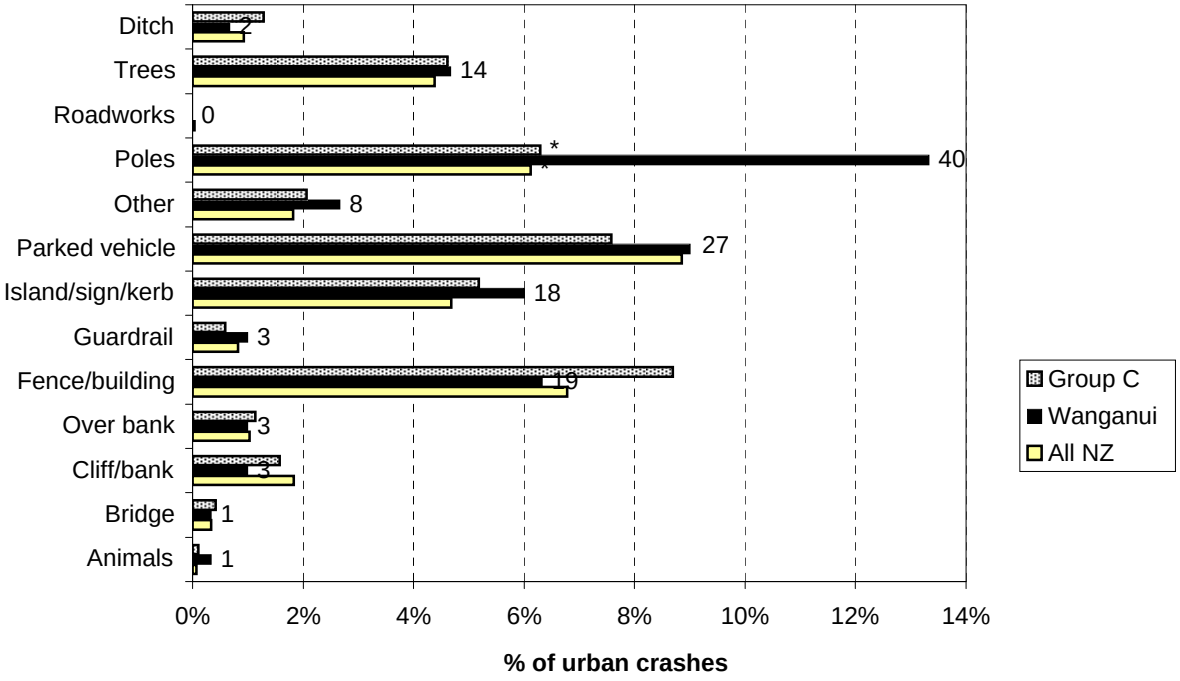
Note: While the graph plots percentages, the number of crashes is shown against the data points.

Figure 6.12 Collisions with objects
Wanganui District - rural roads



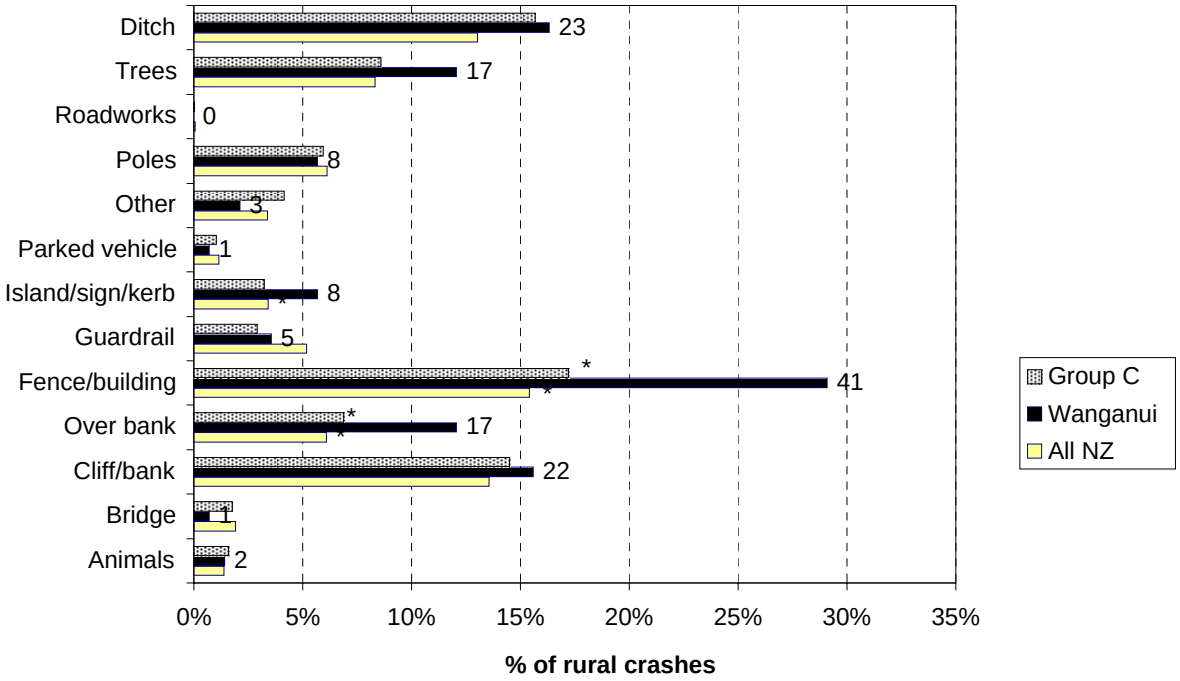
Note: While the graph plots percentages, the number of crashes is shown against the data points.

Figure 6.13 Objects struck - urban Wanganui District (2003-2007)



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 Wanganui District (2003-2007)



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

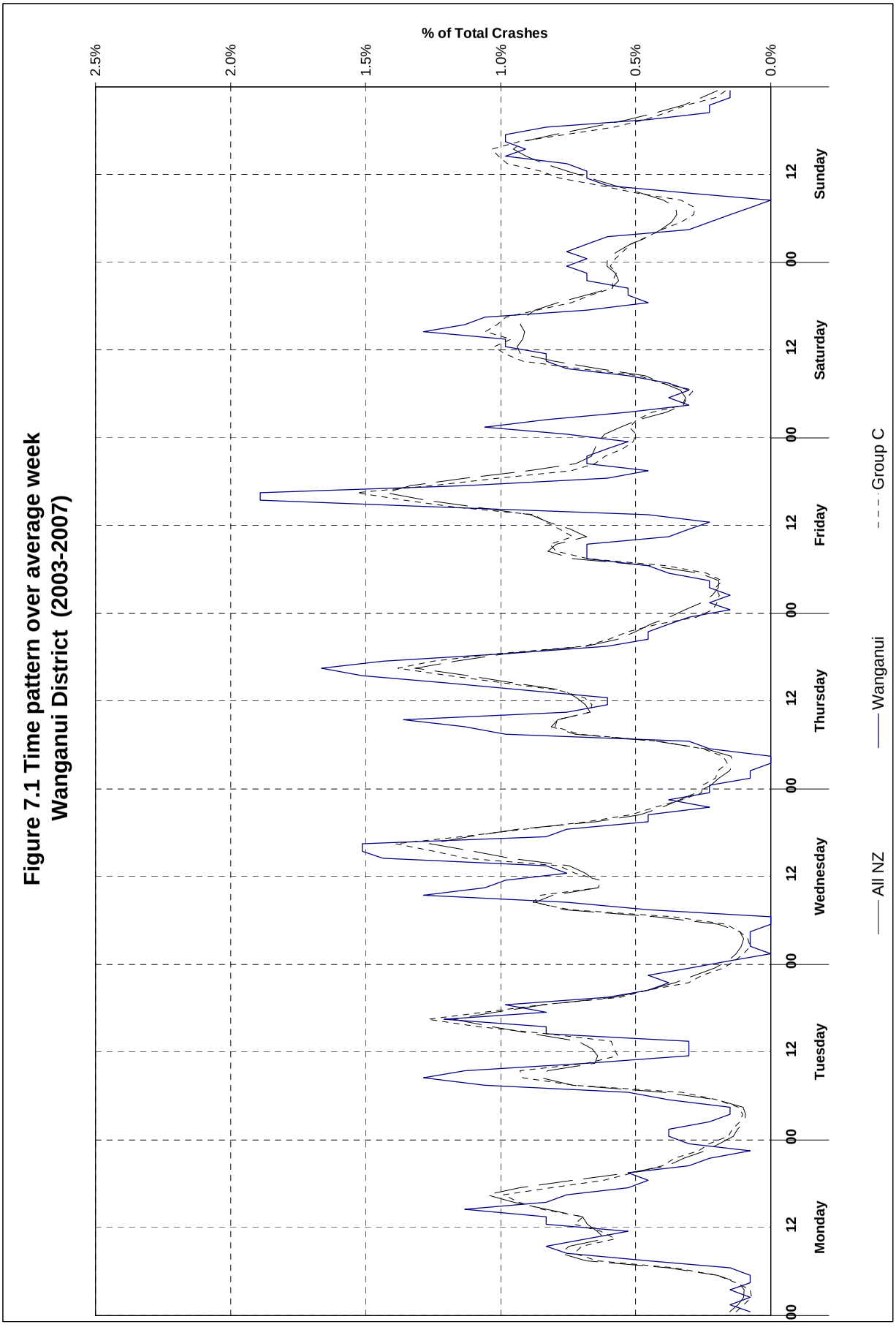
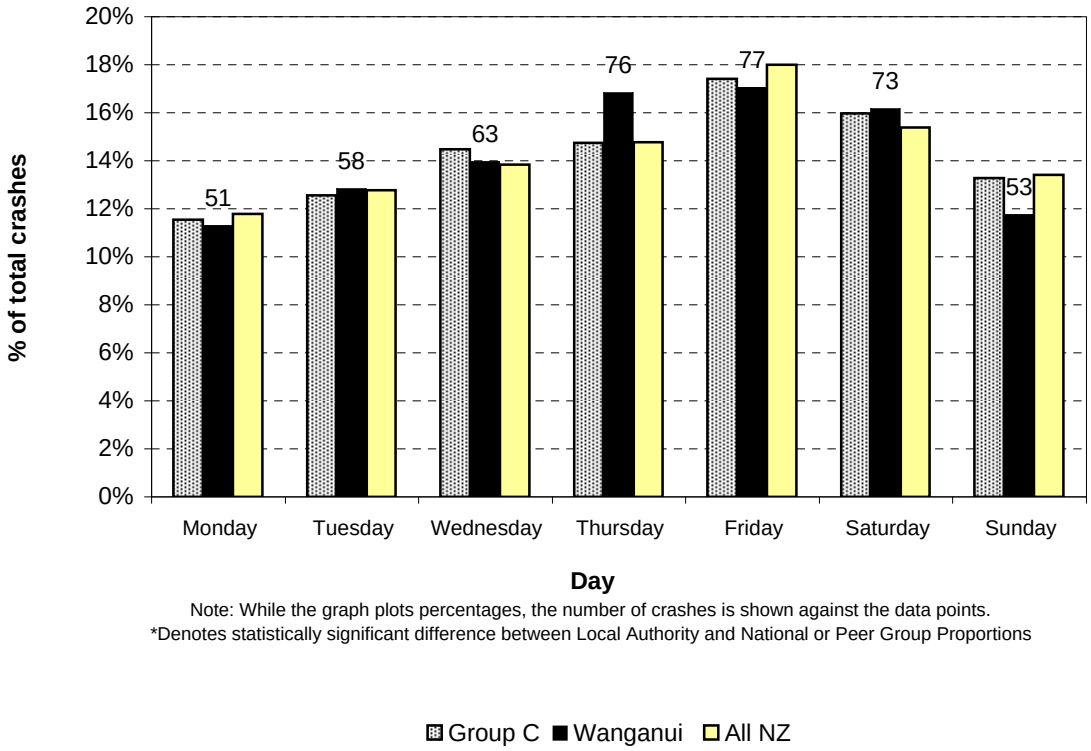


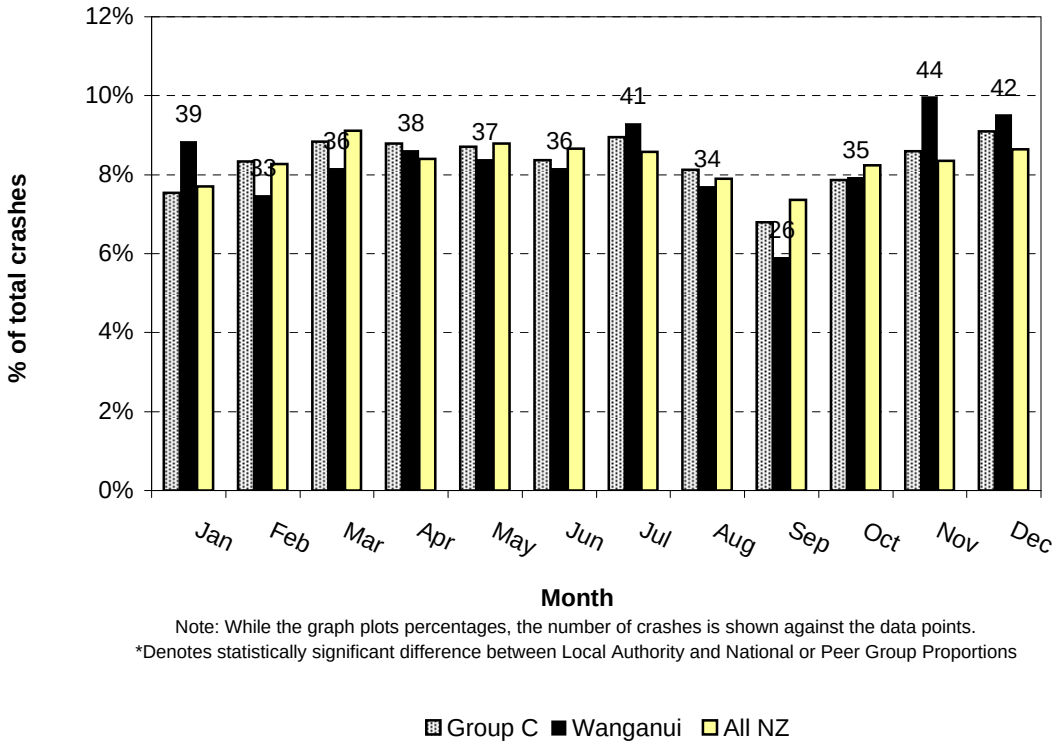
Figure 7.1 Time pattern over average week Wanganui District (2003-2007)

Figure 7.2 Day of week (6 a.m. to 6 a.m.)
Wanganui District (2003-2007)



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
Wanganui District (2003-2007)



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
Wanganui District - local roads (urban & rural)

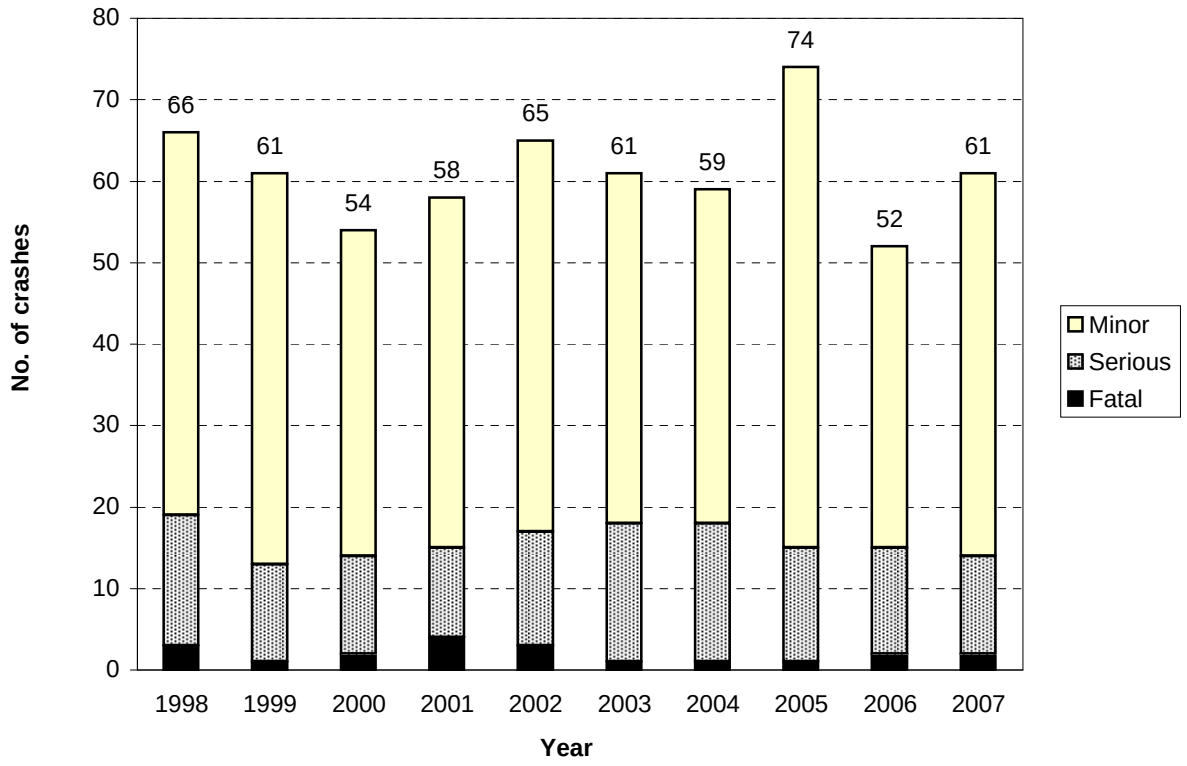


Figure 8.2 Number of casualties
Wanganui District - local roads (urban & rural)

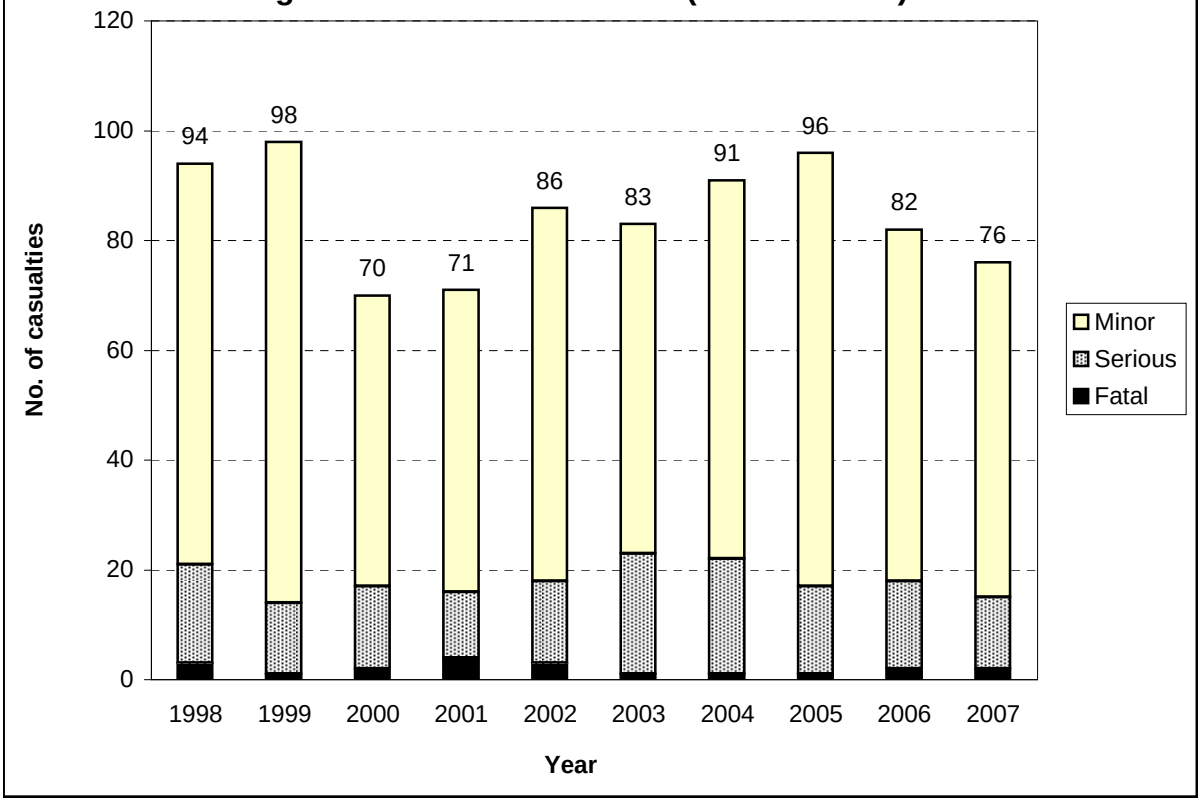


Figure 8.3 Number of injury crashes
Wanganui District - urban local roads

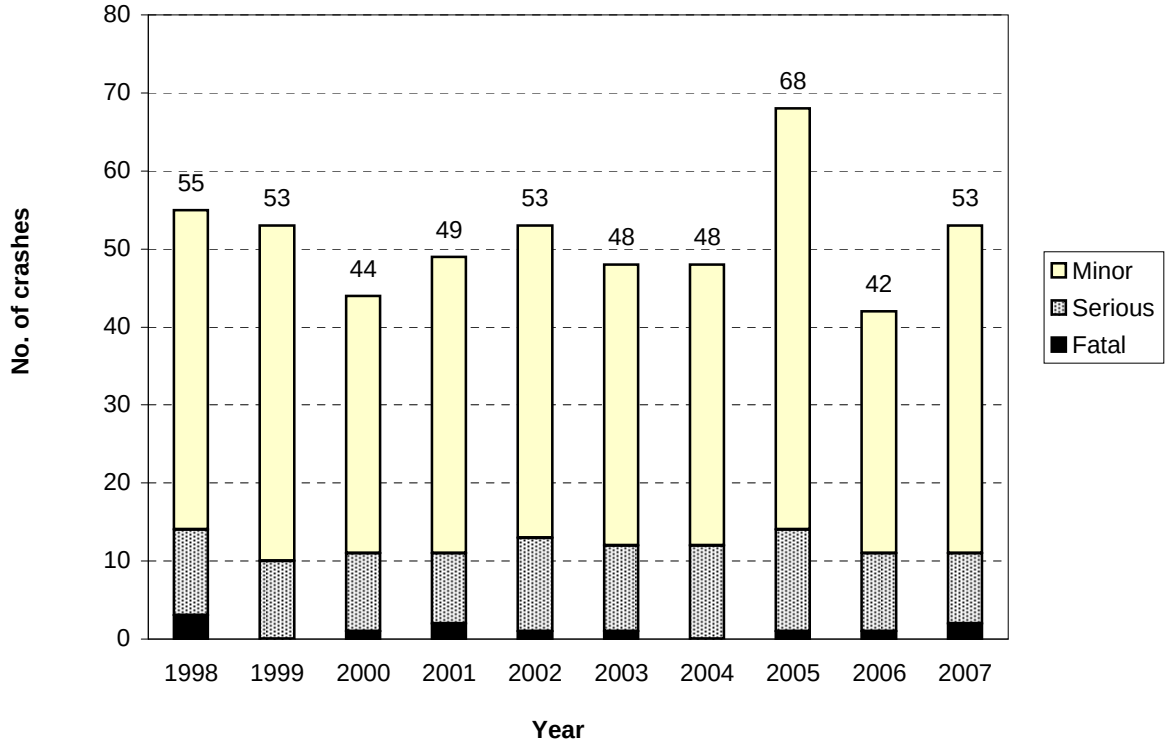


Figure 8.4 Number of casualties
Wanganui District - urban local roads

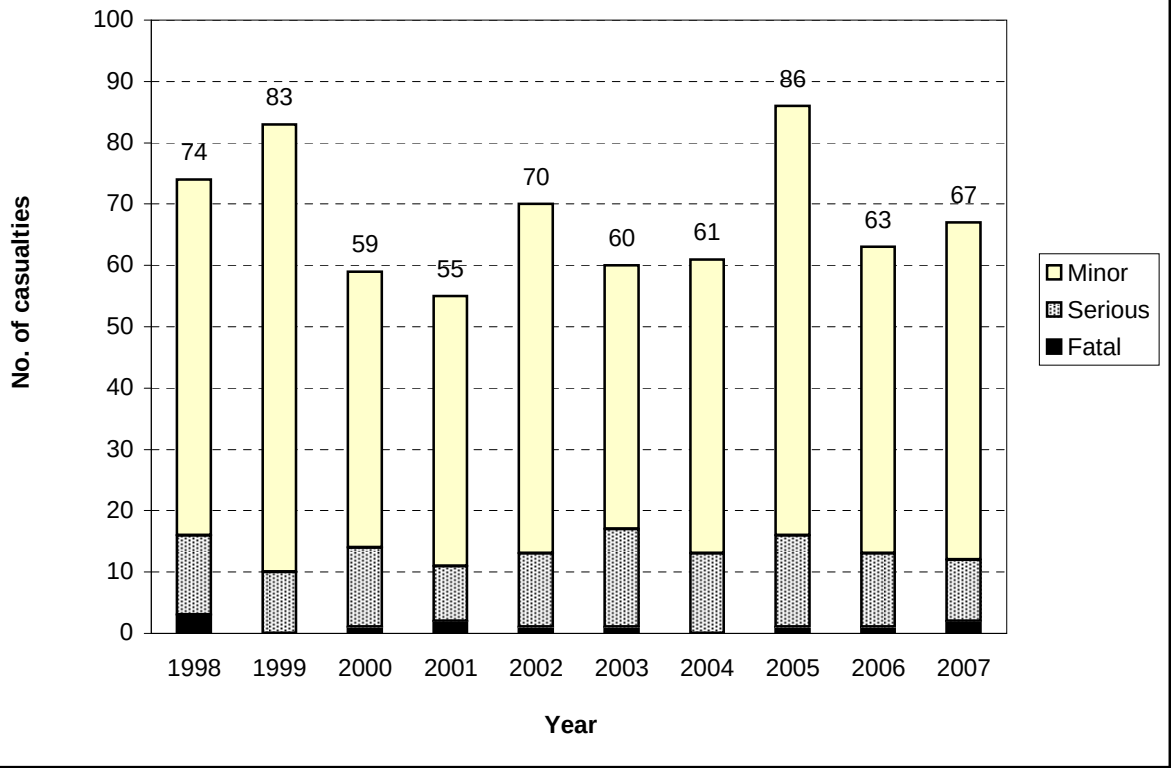


Figure 8.5 Number of injury crashes
Wanganui District - rural local roads

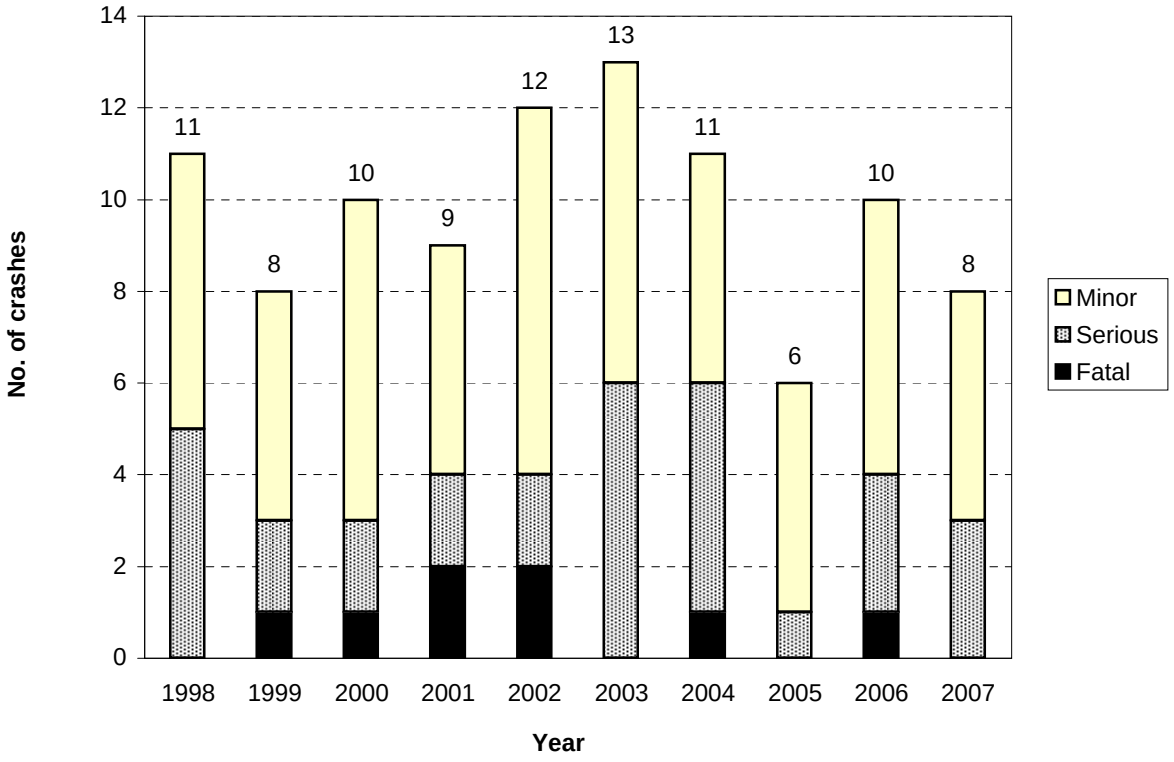


Figure 8.6 Number of casualties
Wanganui District - rural local roads

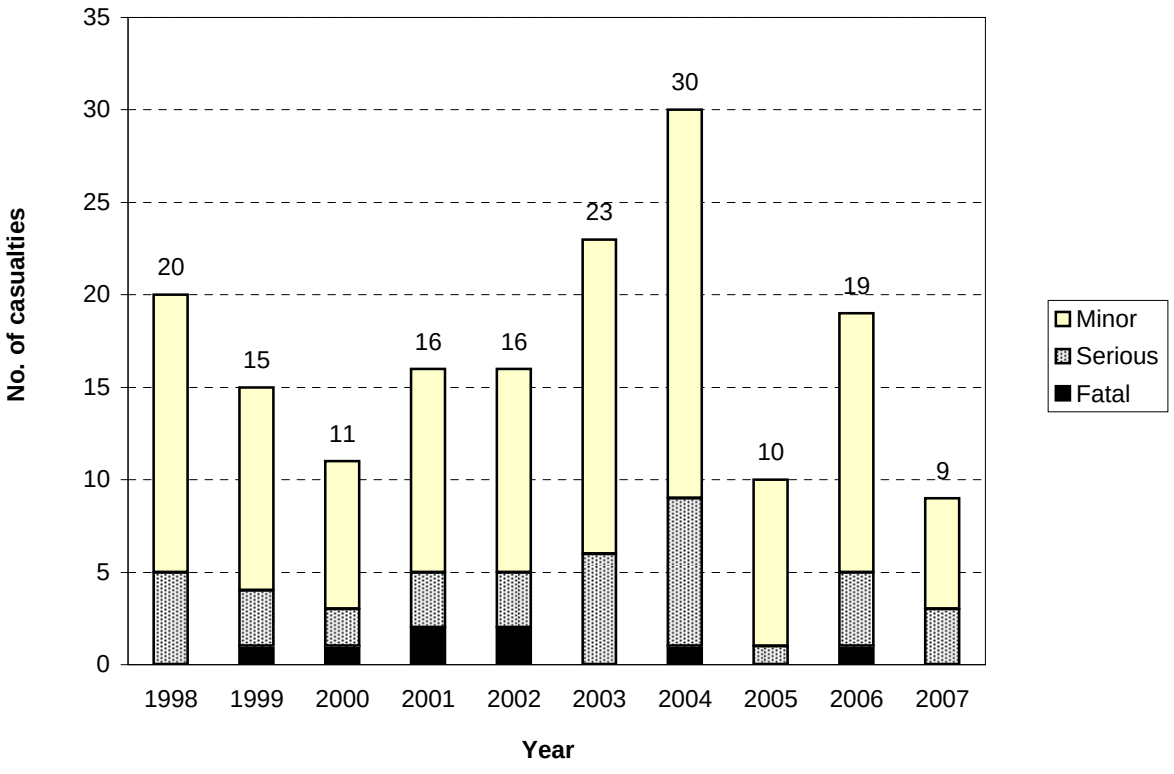
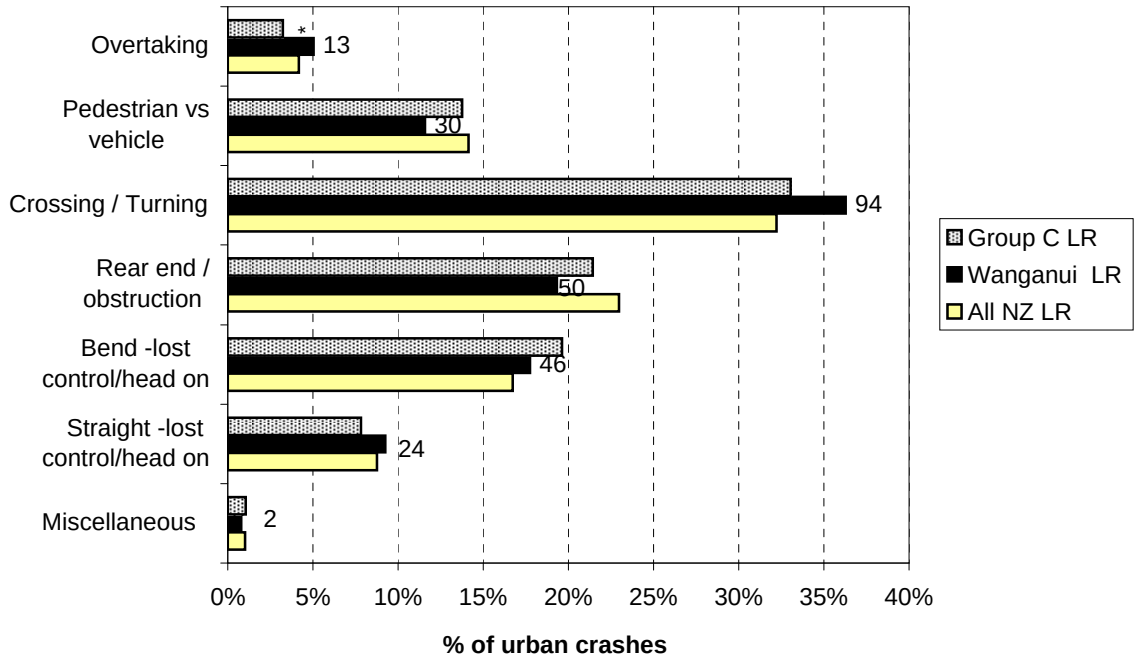
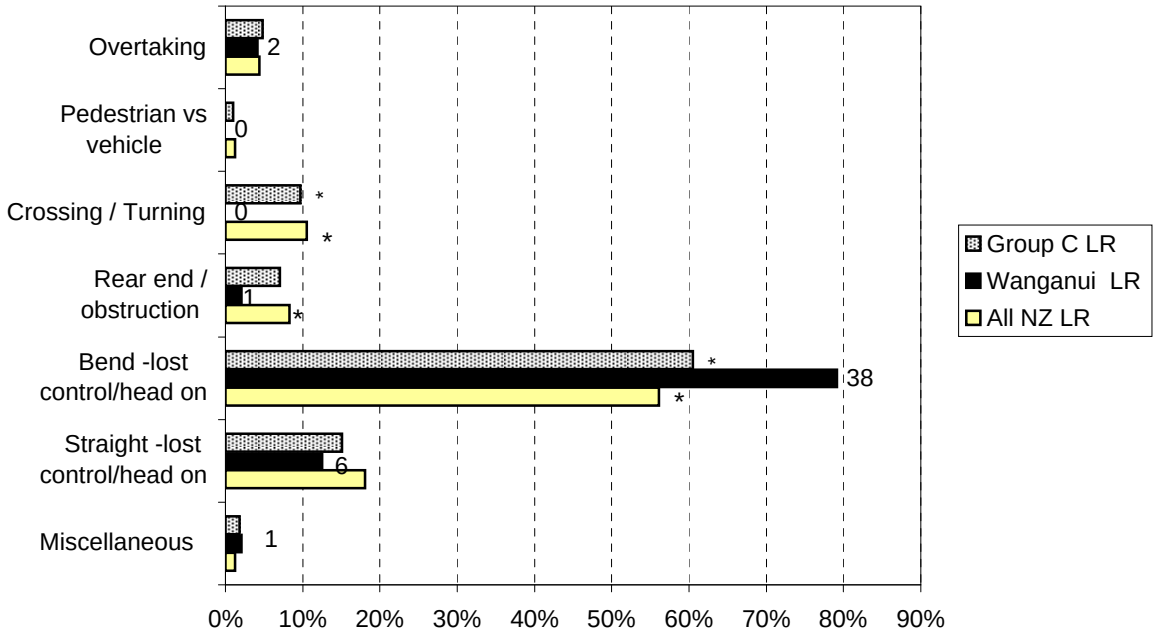


Figure 8.7 Crash movement type - urban
Wanganui District local roads (2003-2007)



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
Wanganui District local roads (2003-2007)



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
Wanganui District - urban local roads

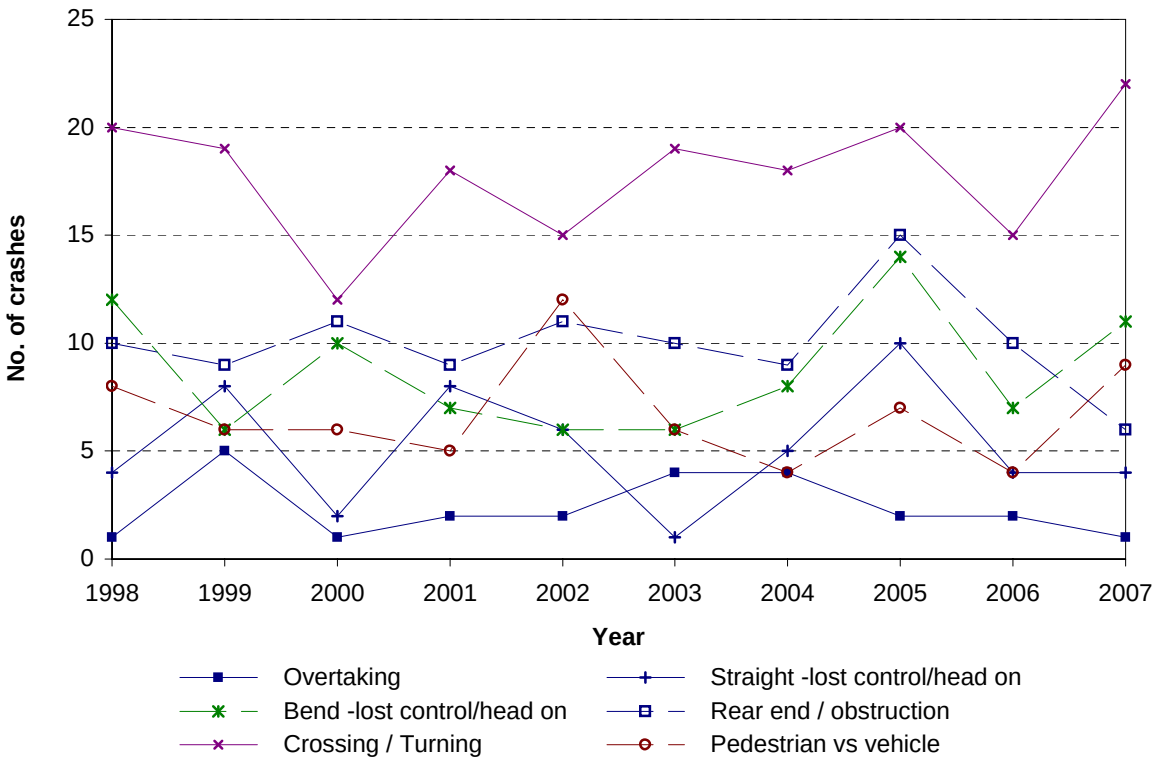


Figure 8.10 Crash movement type - Trends
Wanganui District - rural local roads

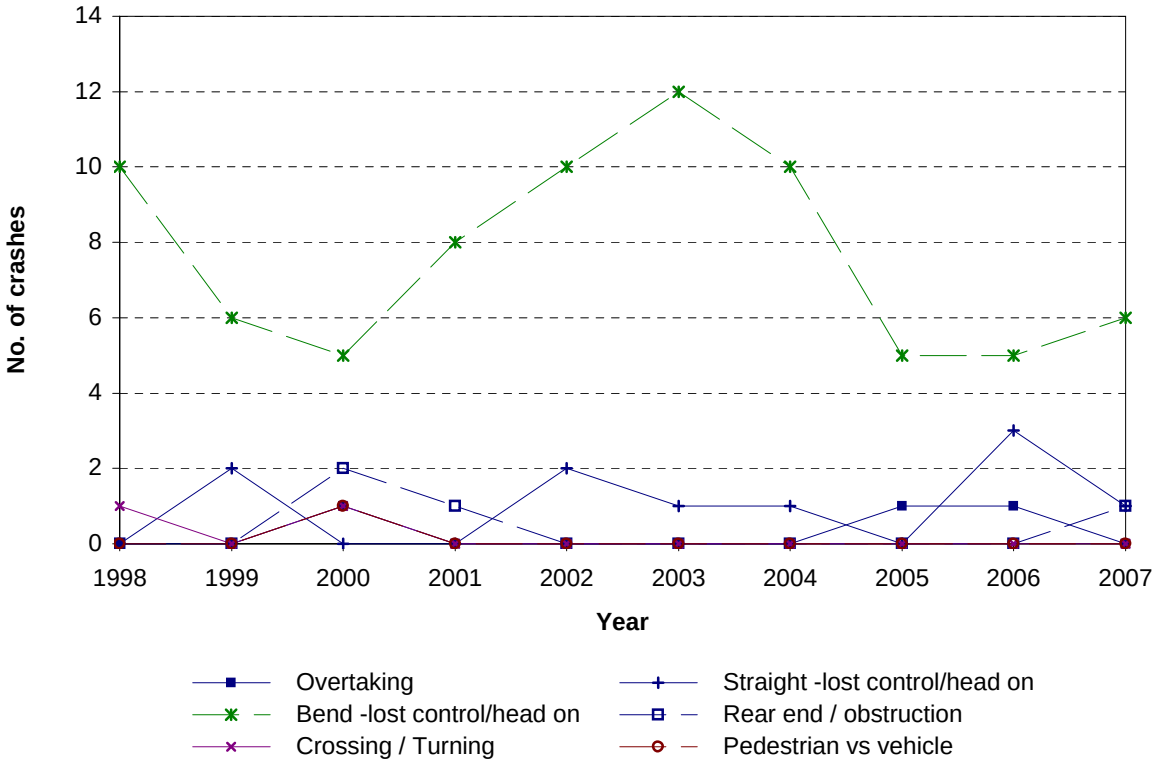
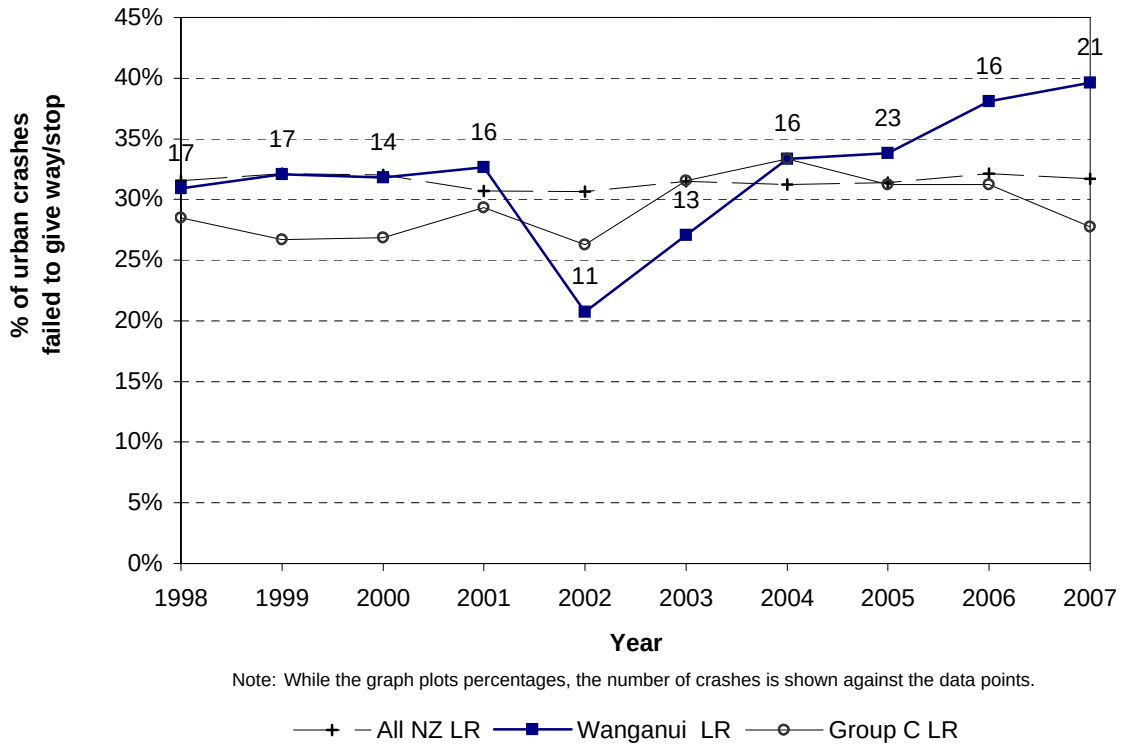
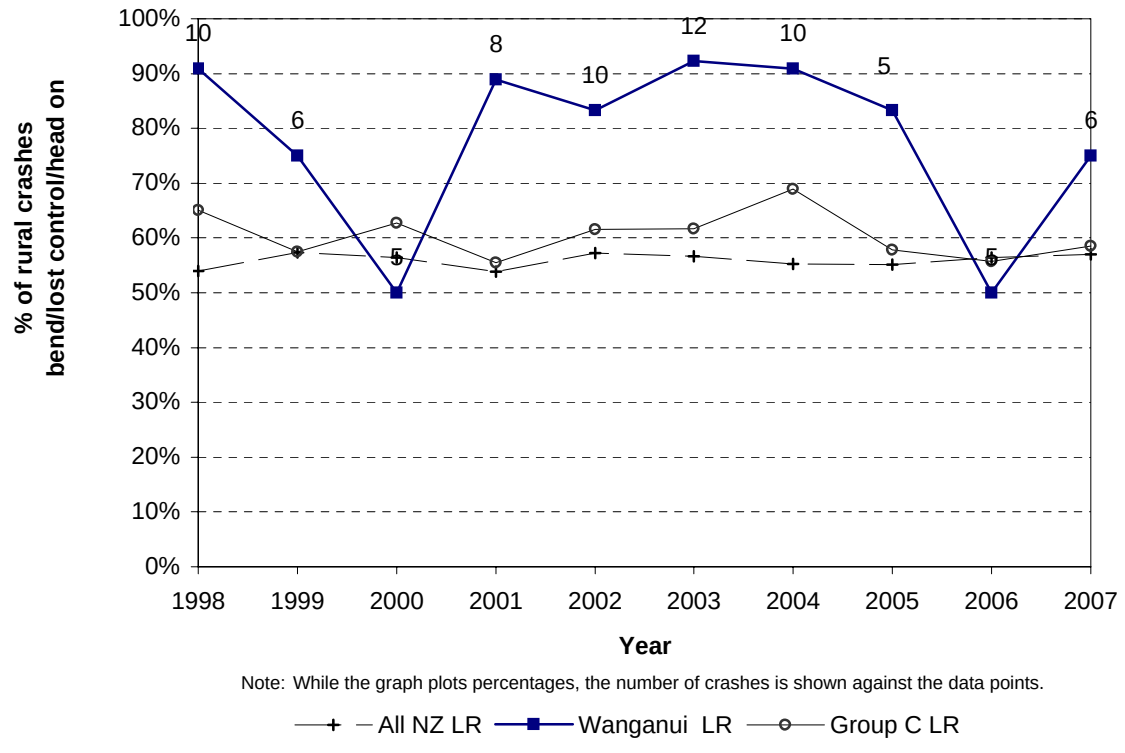


Figure 8.11 Failed to give way/stop
Wanganui District - urban local roads



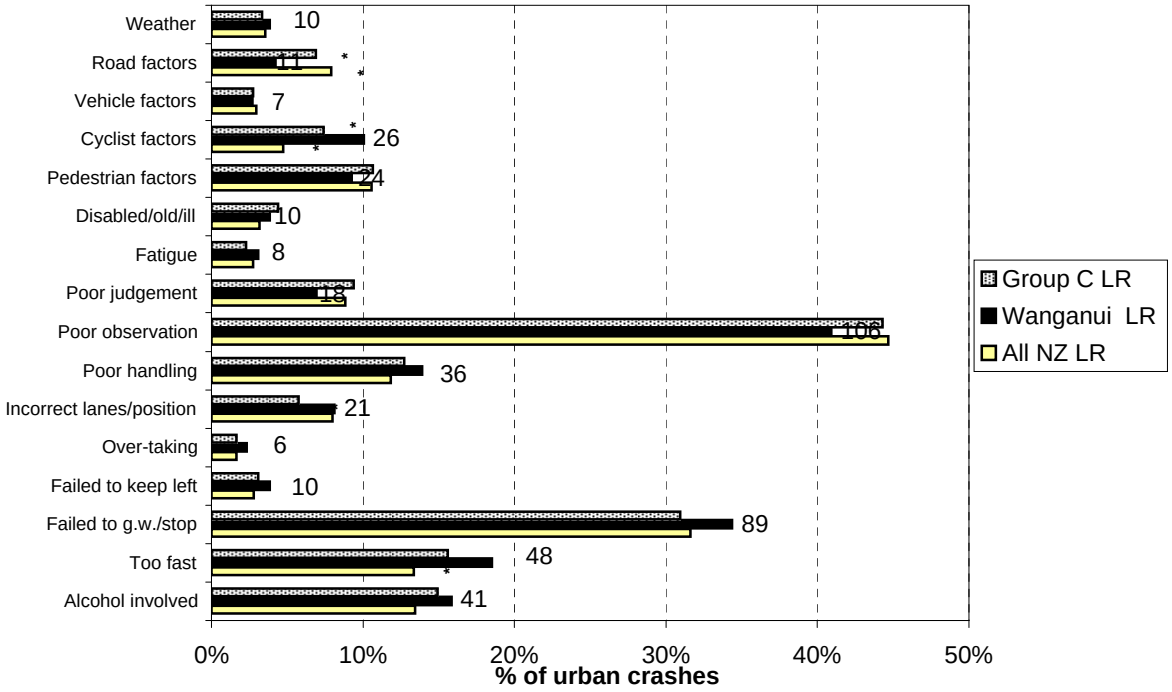
Note: While the graph plots percentages, the number of crashes is shown against the data points.

Figure 8.12 Bend - lost control / head - on
Wanganui District - rural local roads



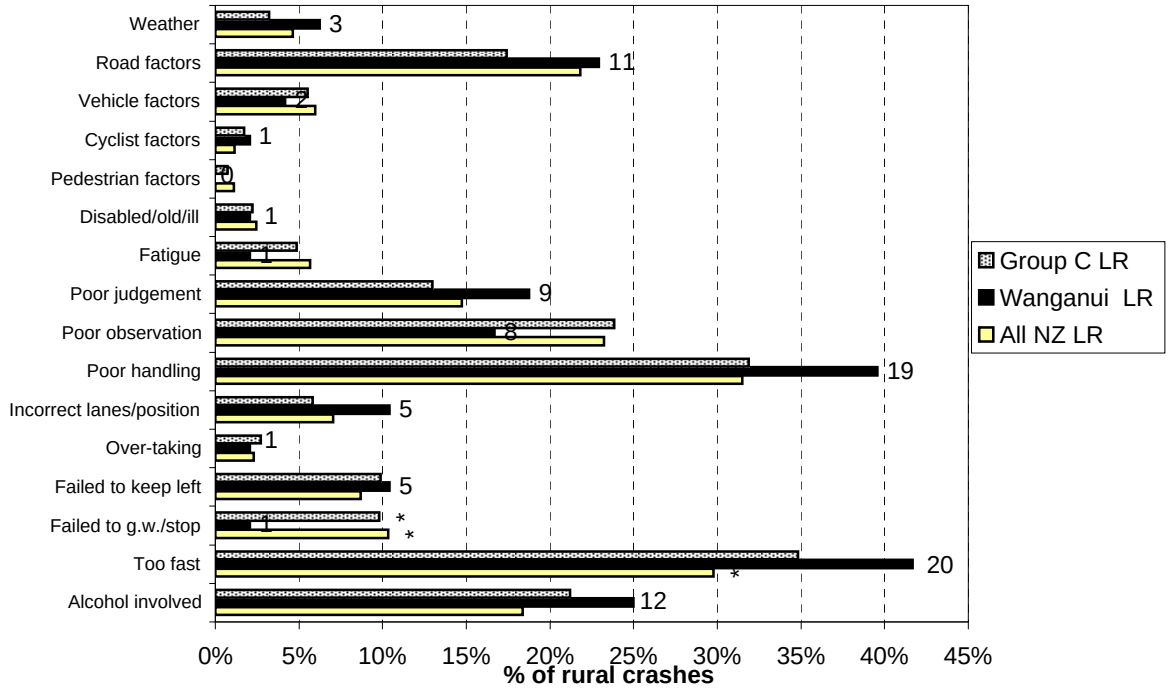
Note: While the graph plots percentages, the number of crashes is shown against the data points.

Figure 8.13 Contributing factors - urban Wanganui District local roads (2003-2007)



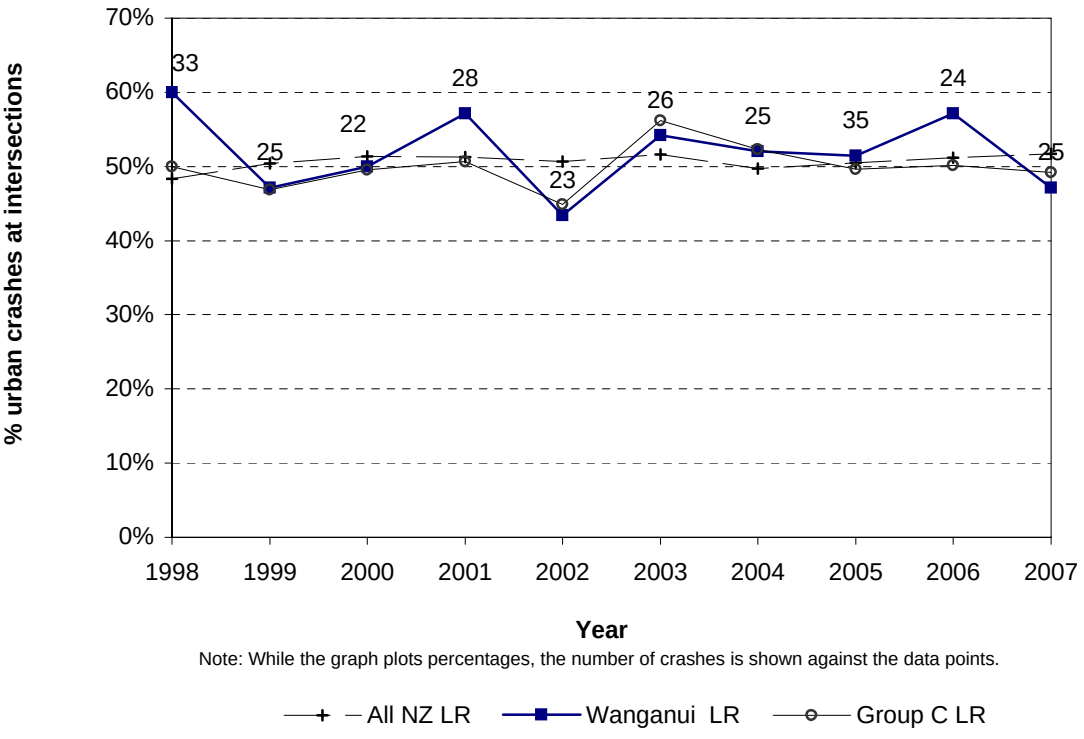
Note: While the graph plots percentages, the number of crashes is shown against the data points.
*Denotes statistically significant difference between Local Authority and National or Peer Group Proportions

Figure 8.14 Contributing factors - rural Wanganui District local roads (2003-2007)



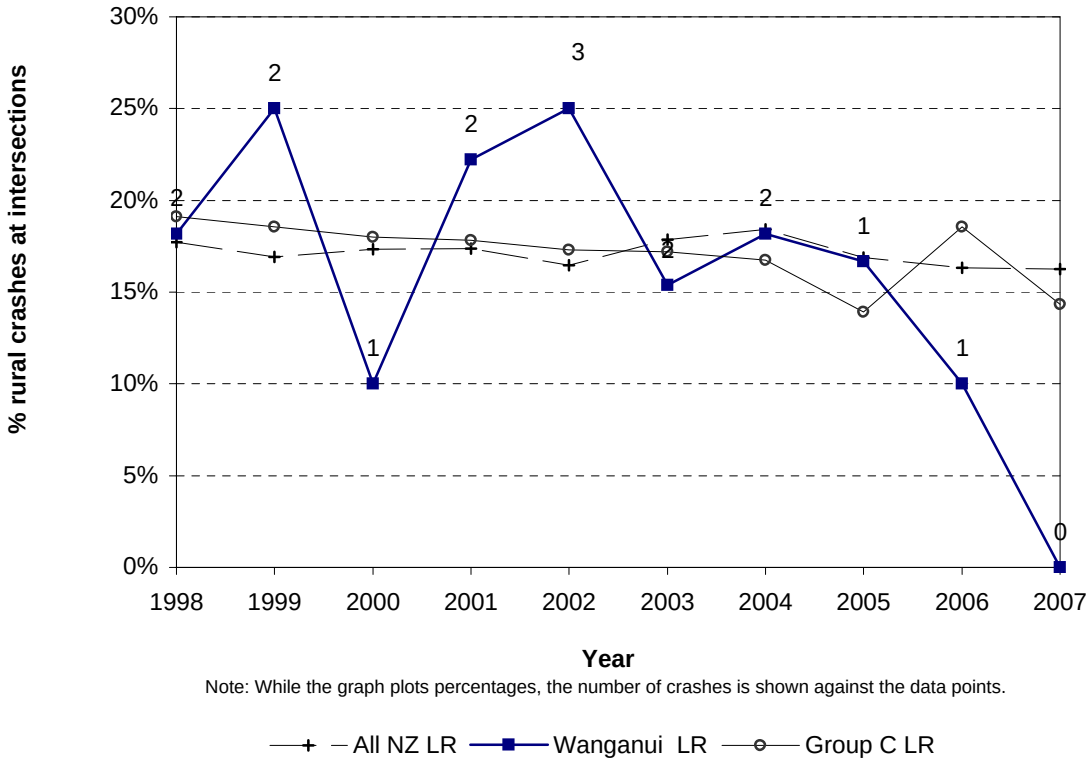
Note: While the graph plots percentages, the number of casualties is shown against the data points.
*Denotes statistically significant difference between Local Authority and National or Peer Group Proportions

Figure 8.15 Intersection crashes
Wanganui District - urban local roads



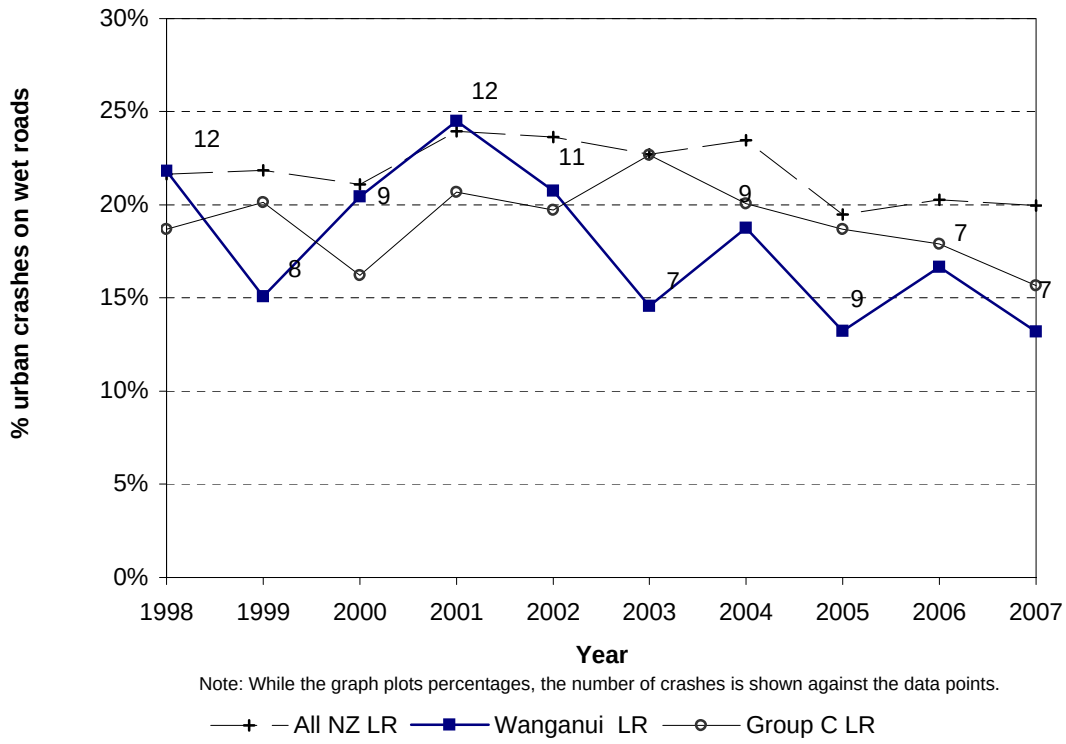
Note: While the graph plots percentages, the number of crashes is shown against the data points.

Figure 8.16 Intersection crashes
Wanganui District - rural local roads



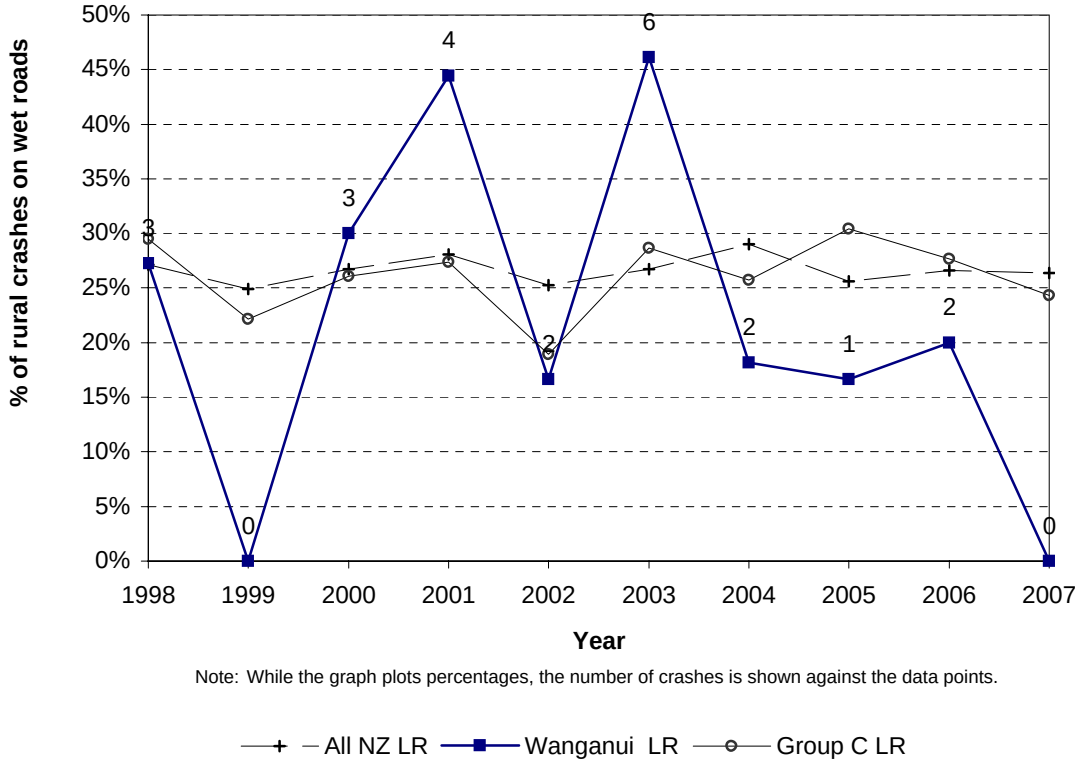
Note: While the graph plots percentages, the number of crashes is shown against the data points.

Figure 8.17 Wet road crashes
Wanganui District - urban local roads



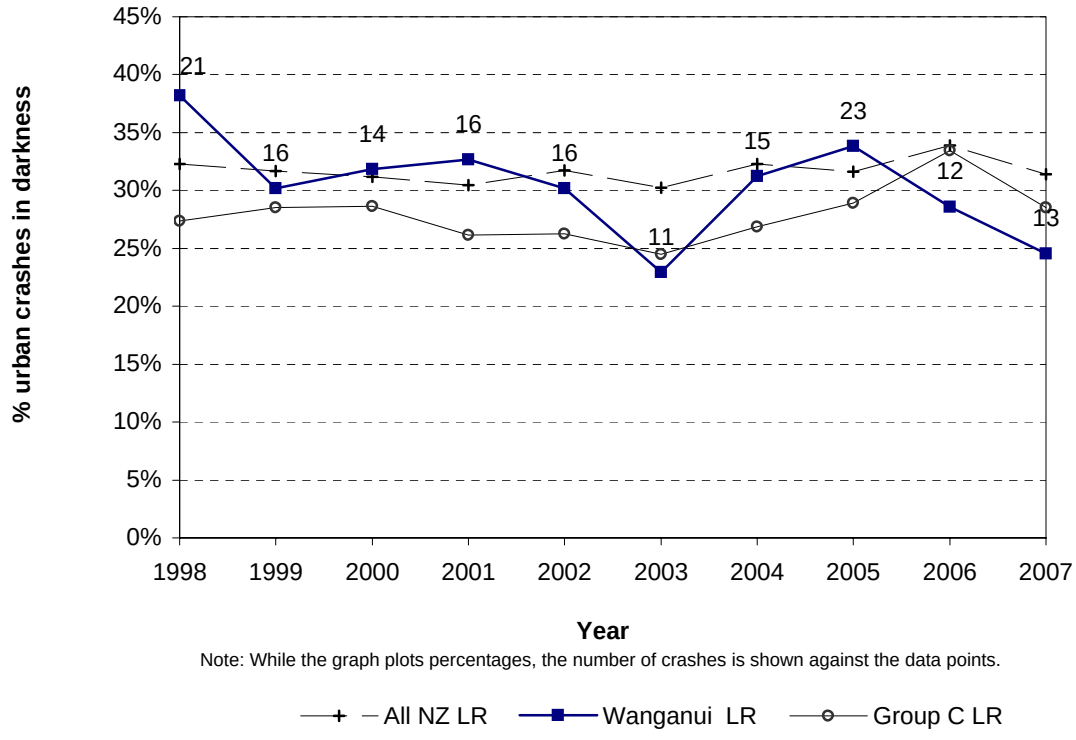
Note: While the graph plots percentages, the number of crashes is shown against the data points.

Figure 8.18 Wet road crashes
Wanganui District - rural local roads



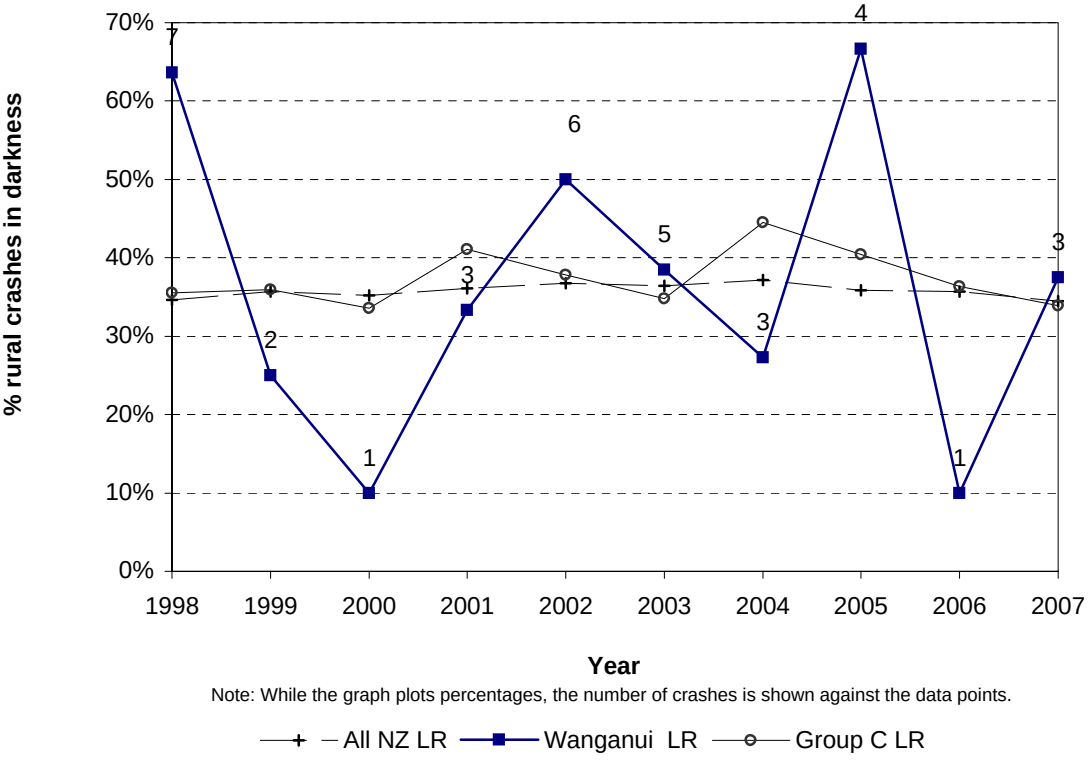
Note: While the graph plots percentages, the number of crashes is shown against the data points.

Figure 8.19 Crashes in darkness
Wanganui District - urban local roads



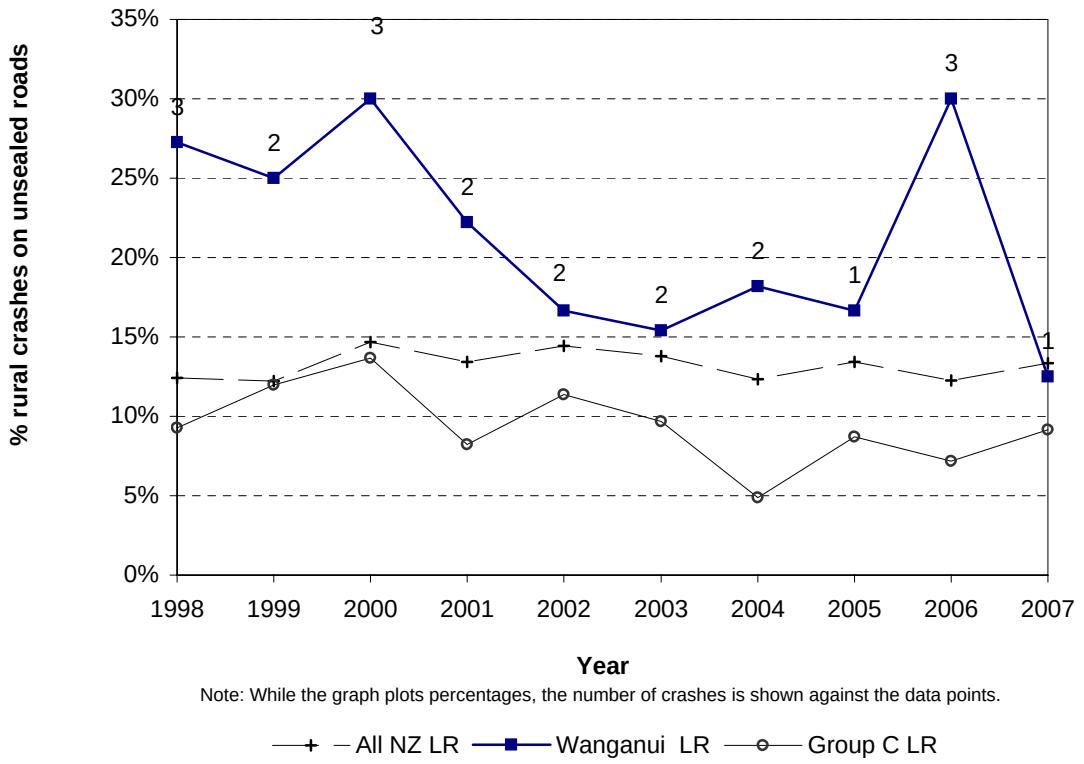
Note: While the graph plots percentages, the number of crashes is shown against the data points.

Figure 8.20 Crashes in darkness
Wanganui District - rural local roads



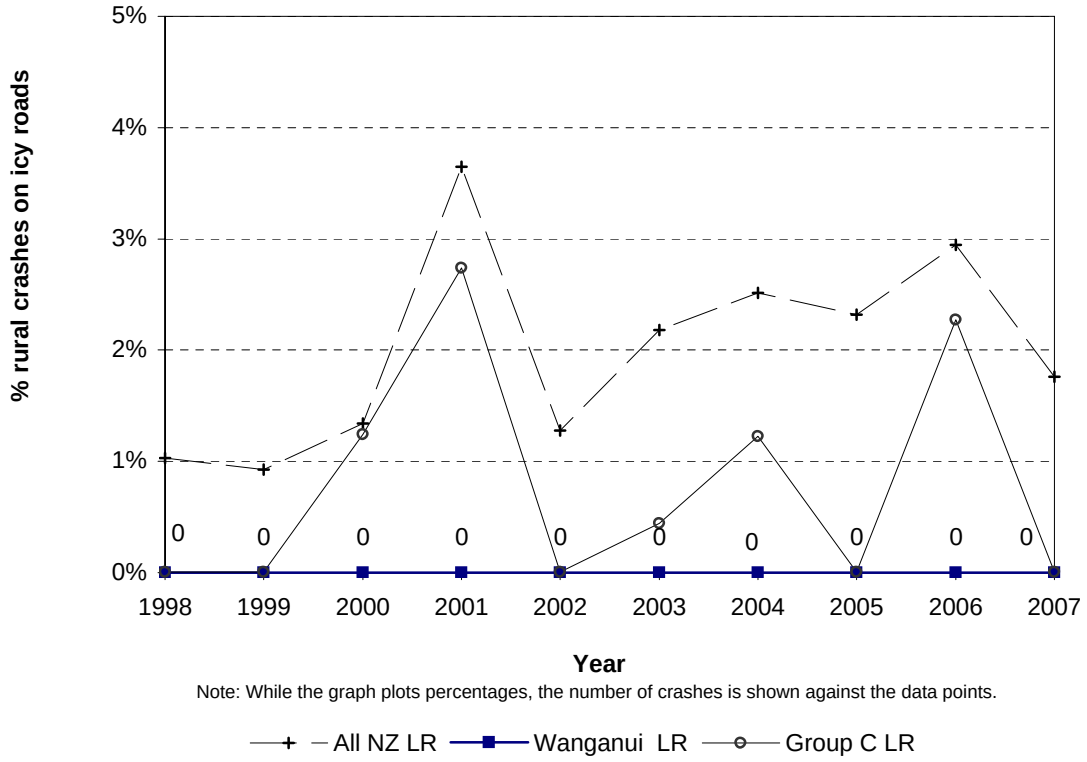
Note: While the graph plots percentages, the number of crashes is shown against the data points.

Figure 8.21 Crashes on unsealed roads
Wanganui District - rural local roads



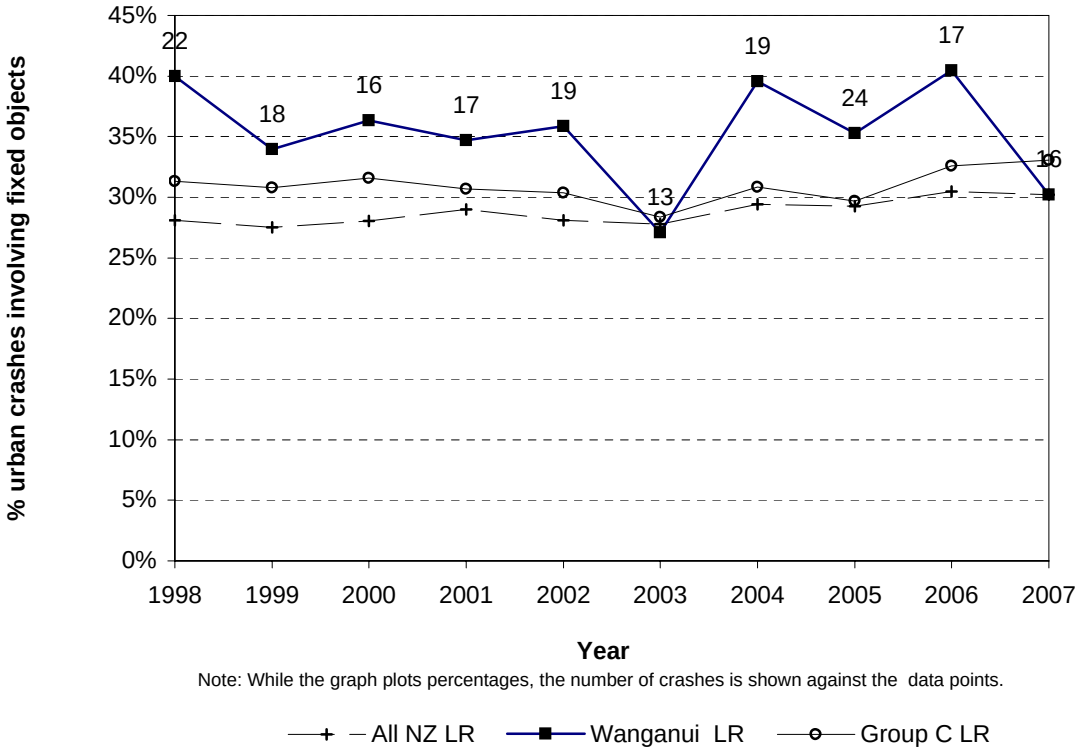
Note: While the graph plots percentages, the number of crashes is shown against the data points.

Figure 8.22 Icy road crashes
Wanganui District - rural local roads



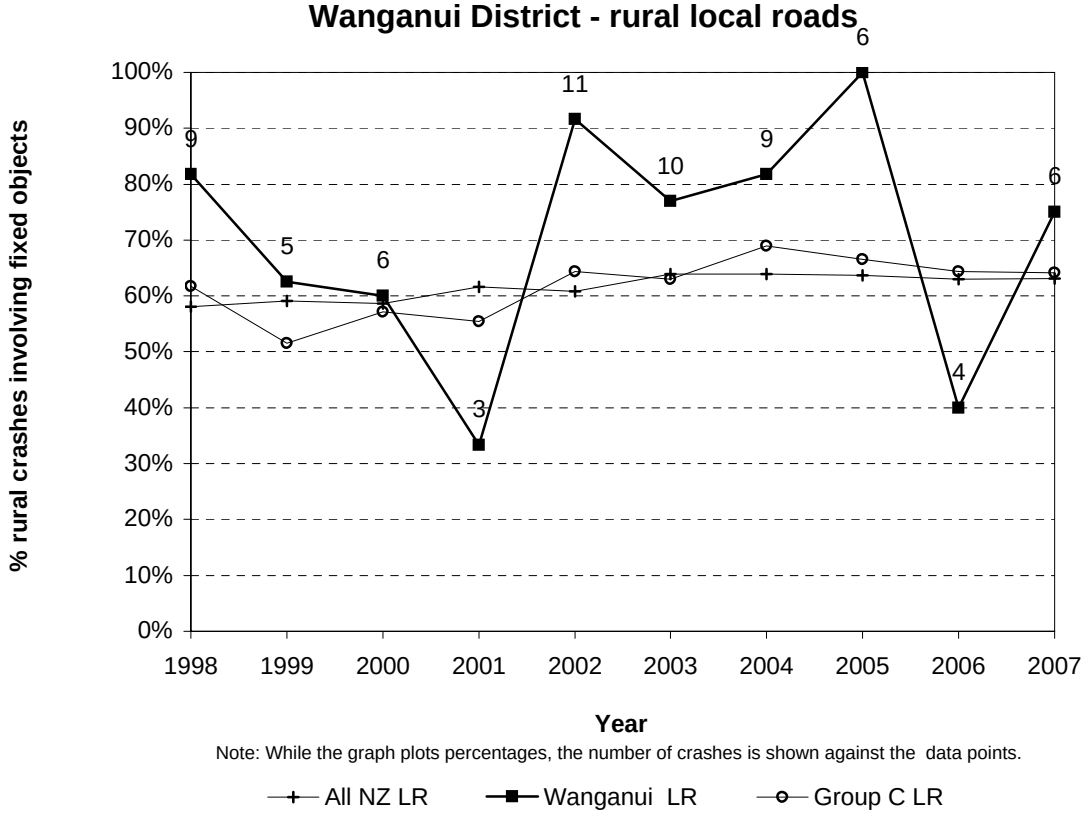
Note: While the graph plots percentages, the number of crashes is shown against the data points.

Figure 8.23 Collisions with objects
Wanganui District - urban local roads



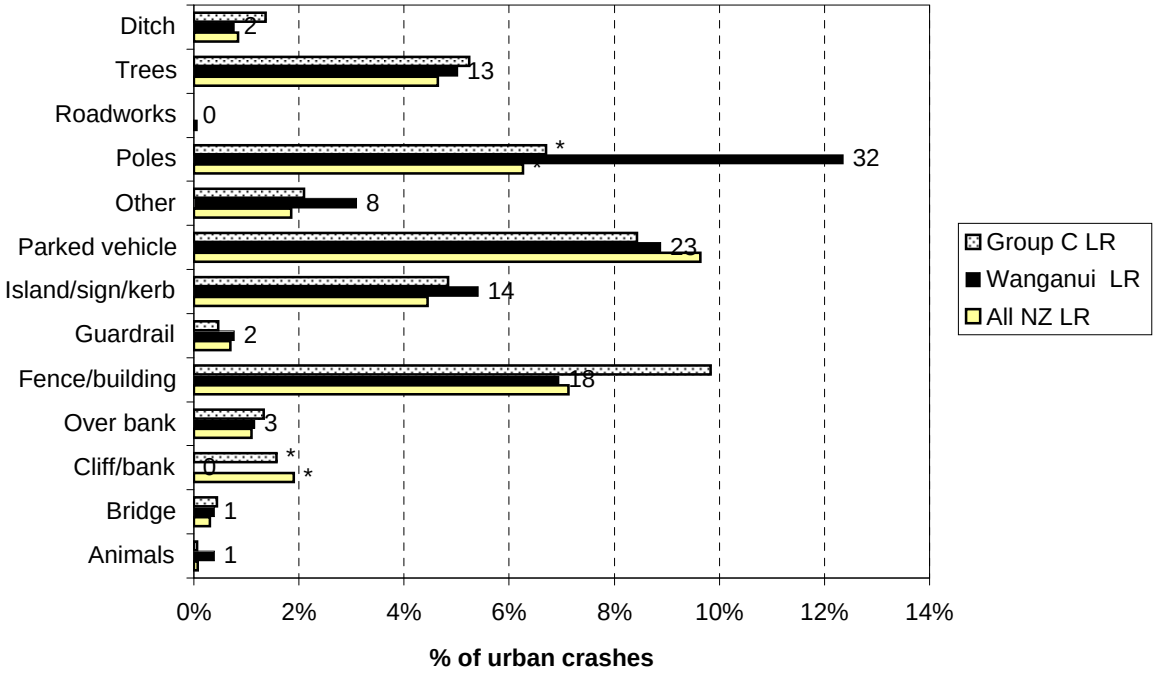
Note: While the graph plots percentages, the number of crashes is shown against the data points.

Figure 8.24 Collisions with objects
Wanganui District - rural local roads



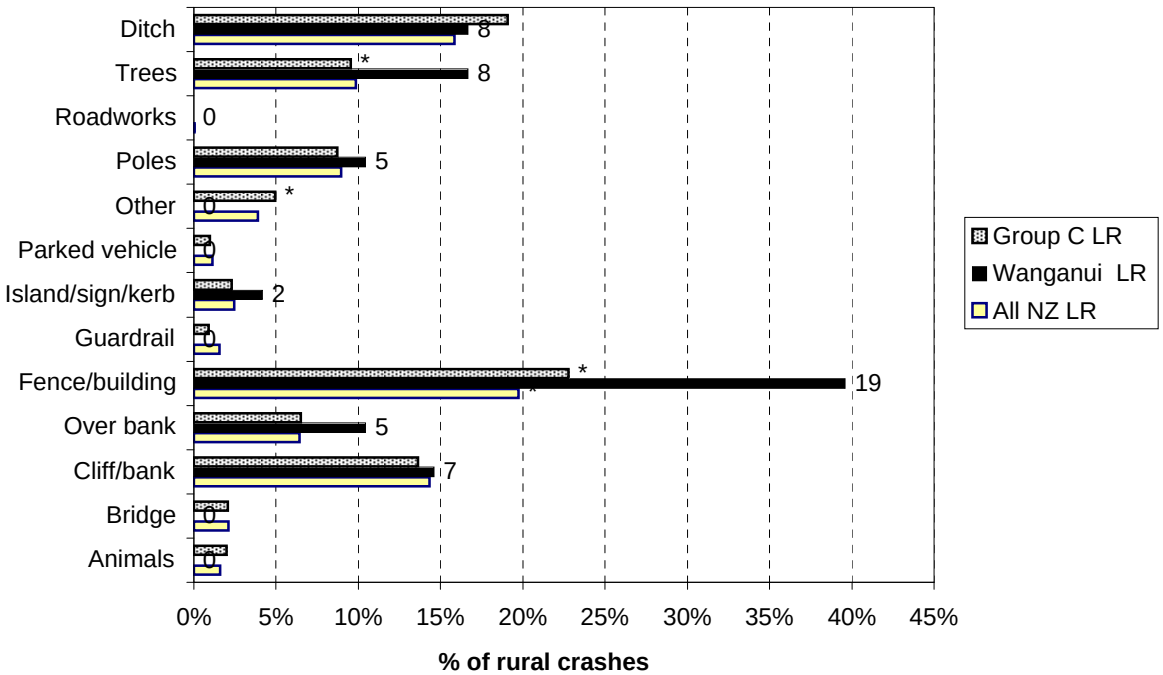
Note: While the graph plots percentages, the number of crashes is shown against the data points.

Figure 8.25 Objects struck - urban
Wanganui District local roads (2003-2007)



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
Wanganui District local roads (2003-2007)



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

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 Land Transport New Zealand 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 Land Transport New Zealand, 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.

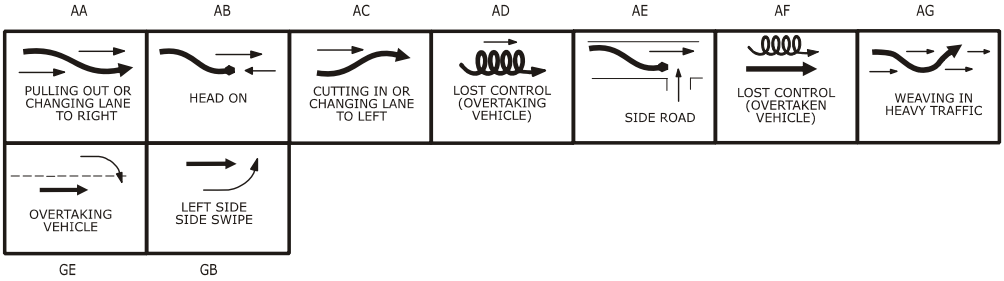
4. The factor group ‘poor handling’ includes factor codes that were only introduced in 1998. This could explain why there may have been a sudden change at this time.

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.

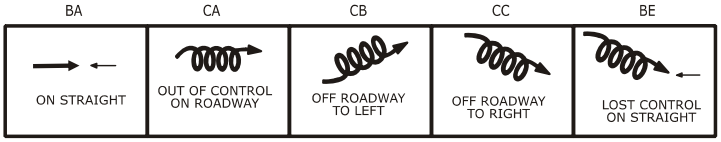
6. It should be noted that a traffic crash generally has more than one contributing factor. Therefore, adding the number of crashes on graphs showing the number of crashes with a given factor or factor group will be greater than the total number of crashes in the city or district.

Groupings of crash types

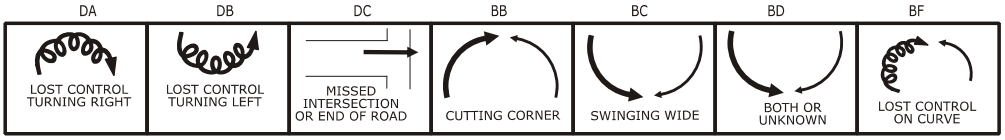
Overtaking



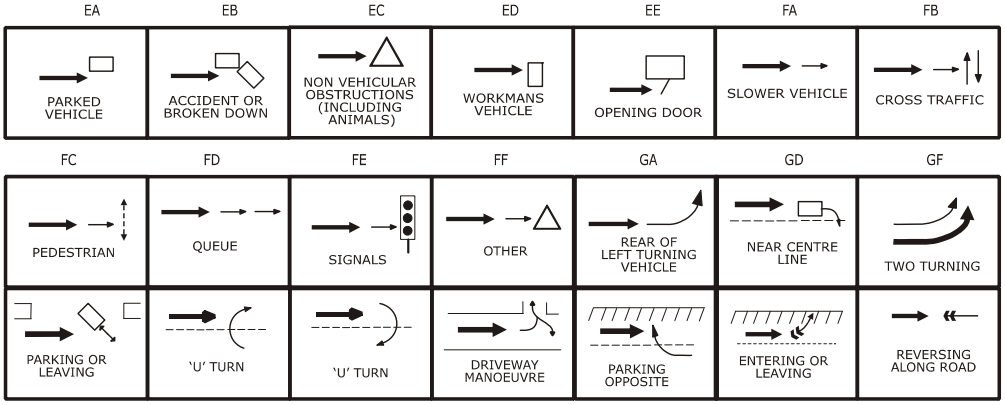
Straight - Lost control / Head on



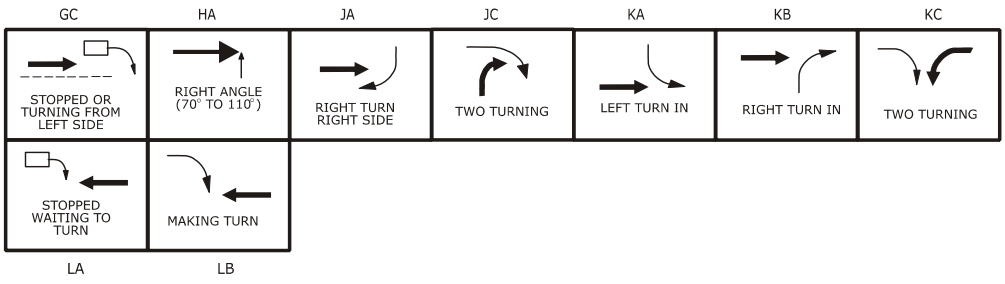
Bend - Lost control / Head on



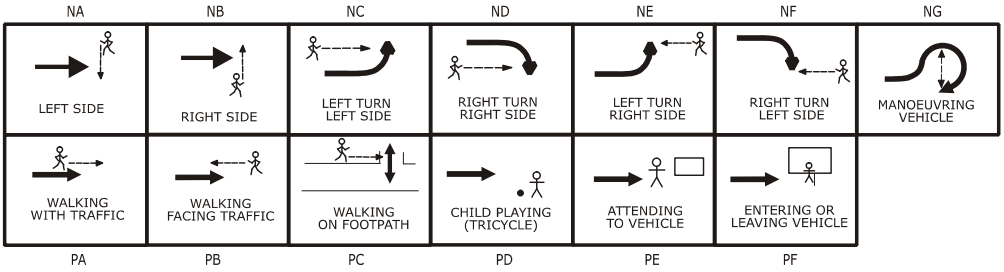
Rear end / Obstruction



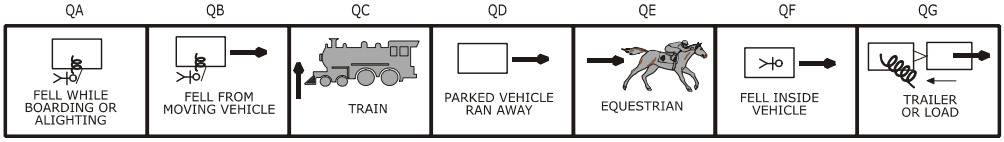
Crossing / Turning



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 (Version 1.6– March 2006)

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**