

briefing notes road safety issues

Ruapehu District

Land Transport New Zealand has prepared this road safety issues report. It is based on reported crash data and trends for the 2003–2007 period.

This report is the ninth road safety report for Ruapehu district. Most of the information, unless otherwise stated in this report, applies to both local roads and State highways.

The intent of the report is to highlight the key road safety issues and assist in identifying possible ways to reduce the number of road deaths and injuries in the district. More detailed information may be obtained from either Ruapehu District Council (local roads) or Transit NZ (State highways). Please refer to the last page for contact details.

The issues chosen for this report are drawn from either the most common crash types or those with high social cost of crashes (relating mainly to high numbers of fatal and serious crashes) or those that appear over-represented when the Ruapehu district is compared to similar local authorities.

We have also included a brief overview of crashes in the district for 2007.

Major Road Safety Issues		2007 road trauma	
Ruapehu District		Casualties	Ruapehu District
Loss of control at bends		Deaths	5
Alcohol		Serious casualties	13
Speed		Minor casualties	73
Fatigue			
Nationally		Crashes	Ruapehu District
Speed		Fatal crashes	4
Alcohol		Serious injury crashes	11
Failure to give way		Minor injury crashes	52
Restraints		Non injury crashes	130

Overview 2007

In 2007 in Ruapehu district there were 67 injury crashes and 130 non-injury crashes reported by the New Zealand Police. Sixty seven percent of the total injury crashes in the district were on State highways.

Crashes by injury type in 2007

	State highways				Local roads			
	F	S	M	NI	F	S	M	NI
Rural ¹	3	9	32	76	1	1	6	11
Urban	0	0	1	15	0	1	13	28

Note: 1/ Rural - area with a speed limit of 80km/h or more

F - Fatal crashes S - Serious injury crashes

M - Minor injury crashes NI - Non-Injury crashes

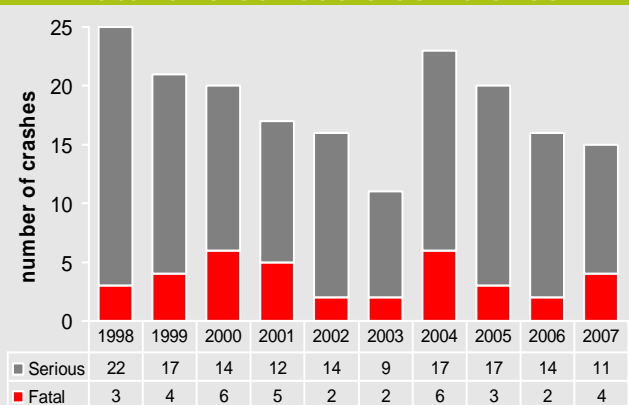
The table below shows the number of injuries resulting from these crashes in the district.

Casualties by injury type in 2007

	Fatalities	Serious injuries	Minor injuries	Total
Total	5	13	73	91

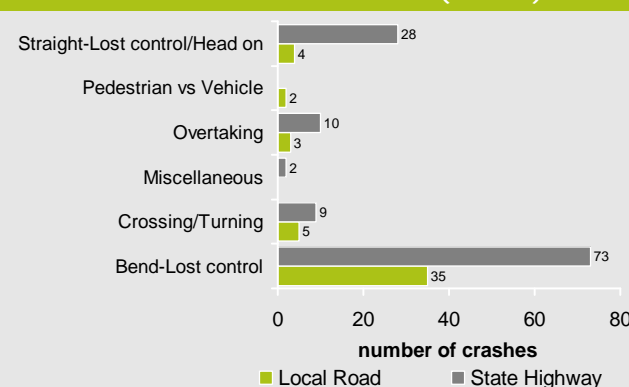
The total number of fatal and serious crashes is gradually decreasing again after a significant increase in 2004. It should be noted that the number of injury crashes on the local roads in 2007 was the highest in last five years.

Fatal and serious crash trends



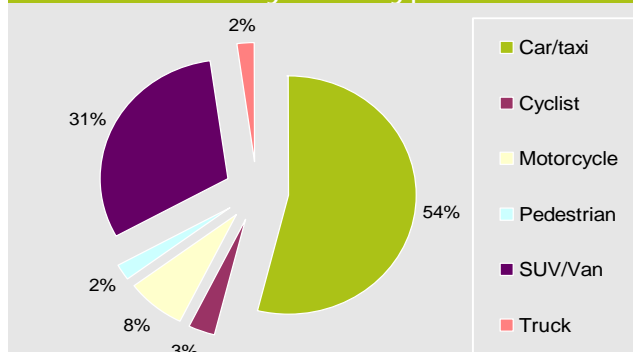
In 2007 *bend-lost control* was the main type of crash in the district followed by *straight-lost control/head on* crash type.

Crash characteristics (2007)



The highest number of casualties in 2007 were drivers and passengers of cars followed by those of SUV/Vans. Motorcycle crashes have also increased in 2007.

Casualties by user type in 2007



A matter of concern is that less than 40 percent of at fault drivers involved in injury crashes on local roads having full NZ driver licence and very high road factors (28 percent) in rural crashes.

Further information about all crashes in 2007 on:

Local roads

- Worst days of week: *Friday and Sunday (23 percent each)*.
- Wet road crashes: *28 percent*
- Night time crashes: *34 percent*
- With alcohol over limit (injury crashes): *18 percent*
- Too fast for conditions (injury crashes): *45 percent*
- Crashes at intersection: *26 percent*
- Road factors: *24 percent*
- At fault male driver (injury crashes): *94 percent*
- Full NZ licence held by at fault (injury crashes) drivers: *39 percent*

State highways

- Worst day of week: *Friday (19 percent)*
- Wet road crashes: *33 percent*
- Night time crashes: *32 percent*
- With alcohol over limit (injury crashes): *9 percent*
- Too fast for conditions (injury crashes): *20 percent*
- Crashes at intersection: *10 percent*
- Road factors: *20 percent*
- At fault male (injury crashes) driver : *53 percent*
- Full NZ licence held by at fault (injury crashes) drivers: *62 percent*

Social cost of crashes

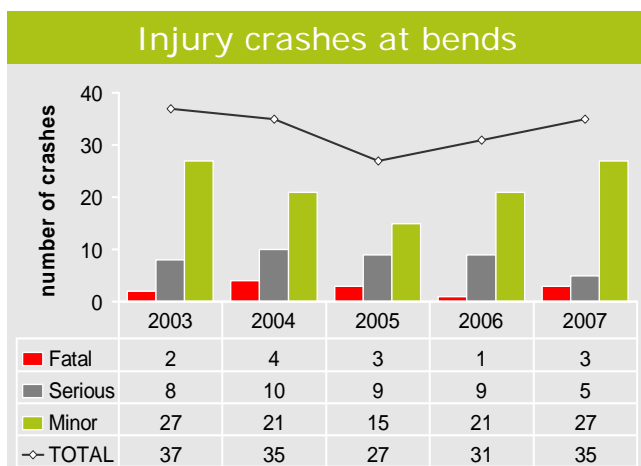
Local roads	\$ 8.03M
State highways	\$ 25.28M
Total	\$ 33.31M

NOTE: The estimated social cost includes loss of life or life quality, loss of output due to injuries, medical and rehabilitation costs, legal and court costs, and property damage.

Loss of control at bends

Between 2003 and 2007, 54 percent of all injury crashes in the Ruapehu district were due to loss of control at bends. These crashes resulted in 14 fatalities, 63 serious injuries and 197 minor injuries. There were also 344 non-injury crashes reported.

Loss of control injury crashes at bends have an increasing trend since 2005. Serious injury crashes have a decreasing trend for the last four years while minor injury crashes have an increasing trend for the last three years.



Two thirds of crashes at bends occurred on State highways and most of them were in rural areas.

	Local Urban	Local Rural	SH urban	SH Rural
Crash location	12%	20%	4%	64%

After drivers lose control at bends, their vehicles often crash into roadside hazards such as ditches, banks, poles or trees. Hitting these objects can result in a relatively minor off-road event turning into something far more serious.

The three most common roadside hazards struck in the Ruapehu district were *cliff banks* (24 percent), *fences* (19 percent) and *over banks* (17 percent) out of the total number of 550 objects struck.

Main characteristics of crashes at bends

Crash characteristic	Percentage of crashes
Single vehicle	79
Alcohol (injury crashes)	18
Too fast for the conditions (injury crashes)	31
Road factors	30
Poor handling (injury crashes)	39
Rural road	86
Wet road	37
Night time	40

Further information about all loss of control crashes at bends in the district between 2003 and 2007 on:

Local roads

- 2 deaths, 10 serious injuries and 63 minor injuries
- Worst day of week: *Sunday* (36 crashes)
- Wet road crashes: 34 percent
- Night time crashes: 35 percent
- Driver with alcohol over limit (injury crashes): 22 percent
- Most common injury crash factors: *too fast* (50 percent) followed by *poor handling* (28 percent)
- At fault (injury crashes) male driver: 84 percent
- 45 percent of drivers at fault (injury crashes) did not hold Full NZ licence
- Most common fault (injury crashes) drivers' age group: 15 to 19 and 30 to 49 years old

State highways

- 2 deaths, 53 serious injuries and 134 minor injuries
- Worst day of week: *Friday* (67 crashes)
- Wet road crashes: 42 percent
- Night time crashes: 38 percent
- Driver with alcohol over limit (injury crashes): 11 percent
- Most common injury crash factor: *poor handling* (44 percent)
- At fault (injury crashes only) male driver: 66 percent
- 32 percent of drivers at fault (injury crashes) did not hold Full NZ licence
- Most common fault (injury crashes) drivers' age group: 15 to 19 and 30 to 49 years old

Alcohol

Alcohol affects the way people drive. Studies show that the risk of being involved in a crash increases rapidly as a driver's blood alcohol level rises. A driver over the legal limit (80mg of alcohol per 100ml of blood) is three times more likely to be involved in a crash than a sober driver.

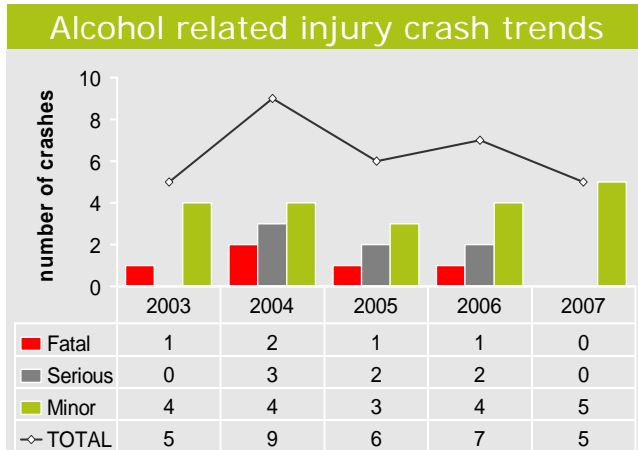
People with high blood alcohol levels are more likely to be injured or killed in a crash than sober drivers in the same crash.

Nationally in 2007, alcohol-affected drivers contributed to 34 percent of all fatal crashes and 15 percent of all injury crashes.

In the Ruapehu district, alcohol was a factor in 12 percent of all injury crashes in 2007 which is slightly lower than the national average. However in the case of local roads, 18 percent of the injury crashes were related to alcohol.

Alcohol was a factor in 32 reported injury crashes, and 48 reported non-injury crashes in the last five years. These crashes have resulted in 5 deaths, 14 serious and 35 minor injuries.

The total number of alcohol related injury crashes seems to be decreasing after a big spike in 2004. No fatal or serious injury crashes related to alcohol have occurred in 2007.



Most of the alcohol related crashes on local roads are concentrated in urban areas and in case of State highways these in rural areas.

More than 80 percent of at fault drivers in alcohol related injury crashes on local roads were holders of a learner or restricted licence or disqualified. Most of these crashes were associated with driving *too fast*.

Further information about alcohol related crashes in the district between 2003 and 2007 on:

Local roads

- 1 death, 2 serious injuries and 19 minor injuries
- Worst day of week: *Sunday (13 crashes)*
- Wet road crashes: *33 percent*
- Night time crashes: *77 percent*
- Crashes at intersection: *28 percent*
- Excessive speed (injury crashes): *79 percent*
- Most common injury crash factors: *too fast (79 percent)* followed by *poor handling (21 percent)*
- Road factors: *9 percent*
- At fault male driver (injury crashes): *100 percent*
- *85 percent* of drivers at fault (injury crashes) did not hold Full NZ licence
- Most common at fault drivers' age group (injury crashes): *15 to 24 years old*

State highways

- 4 deaths, 12 serious injuries and 16 minor injuries
- Worst day of week: *Friday (10 crashes)*
- Wet road crashes: *35 percent*
- Night time crashes: *59 percent*
- Crashes at intersection: *24 percent*
- Excessive speed (injury crashes): *28 percent*
- Most common injury crash factors: *poor handling (33 percent)* and *fatigue (11 percent)*
- Road factors: *8 percent*
- At fault male driver (injury crashes): *68 percent*
- *53 percent* of drivers at fault (injury crashes) did not hold Full NZ licence
- Most common at fault drivers' age group (injury crashes): *15 to 24 years old*

Speed

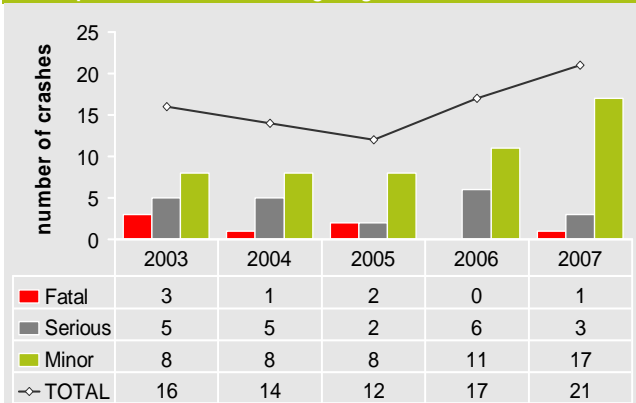
Nationally, speed is one of the major contributing factors to road crashes. In 2007, there were 2,115 injury crashes where the driver was travelling *too fast* for the conditions. Excessive speed contributed to 33 percent of fatal crashes and 18 percent of injury crashes nationally.

Reducing speeds to appropriate levels is an important road safety goal. Excessive speed increases the likelihood of a crash occurring by reducing the time available for drivers to respond to hazardous situations and it also leads to more serious injuries.

In the Ruapehu district, excessive speed was a factor in 28 percent of all injury crashes in 2007. There were 80 injury and 133 non-injury speed related crashes reported in the last five years.

The trend analysis shows that the total number of speed related injury crashes is increasing since 2005.

Speed related injury crash trends



Three quarters of the speed related crashes occurred in rural areas. More than 60 percent of speed related crashes occurred on State highways with more than 90 percent of these crashes occurring in rural areas. In case of local roads speed related crashes are evenly distributed in urban and rural areas.

Speed related crash trends

	2003	2004	2005	2006	2007
Urban	9	8	5	14	15
Rural	32	46	25	27	32
TOTAL	41	54	30	41	47

More than half of at fault drivers in speed related injury crashes were less than 25 years old. Males represented more than 80 percent of these at fault drivers.

Age and sex of at fault drivers

Drivers at fault in speed related injury crashes (2003- 2007)	Male	Female	Total
15 - 19 years	19	4	23
20 - 24	15	5	20
25 - 29	4	0	4
30 - 39	15	1	16
40 - 49	5	2	7
50 - 59	7	2	9
60 - 69	1	0	1
70+	1	0	1
Total	67	14	81

The license status being learner or restricted or never licensed for half of the drivers at-fault on speed related crashes on local roads and one third in State highways is a matter of concern.

Further information about speed related crashes in the district between 2003 and 2007 on:

Local roads

- 1 death, 7 serious injuries and 45 minor injuries
- Worst day of week: *Sunday (21 crashes)*
- Wet road crashes: *37 percent*
- Night time crashes: *49 percent*
- Driver with alcohol over limit (injury crashes): *33*
- Most common injury crash factor: *bend—loss of control (78 percent)*
- At fault male driver (injury crashes): *88 percent*
- Most common at fault drivers' age group (injury crashes): *15 to 24 years old*

State highways

- 6 deaths, 25 serious injuries and 55 minor injuries
- Worst days of week: *Thursday and Sunday (24 crashes each)*
- Wet road crashes: *52 percent*
- Night time crashes: *44 percent*
- Driver with alcohol over limit (injury crashes): *11 percent*
- Most common injury crash factor: *bend—loss of control (80 percent)*
- At fault male driver (injury crashes): *79 percent*
- Most common at fault drivers' age group (injury crashes): *15 to 24 and 30-39 years old*

Fatigue

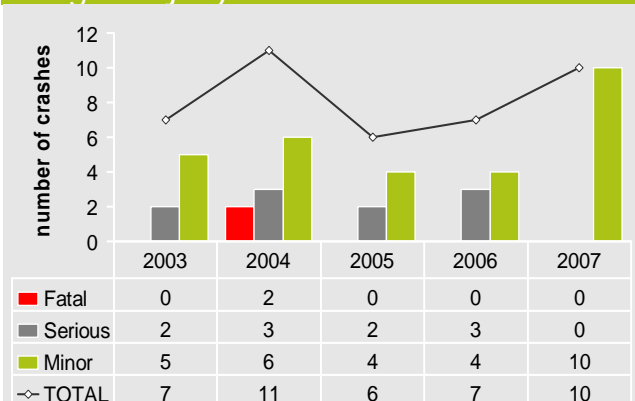
Fatigue remains a difficult cause to identify and it is accepted that the reported number of crashes where fatigue is a factor will be below the actual crash numbers.

Even though it is considered socially acceptable to drive while fatigued as opposed to drink driving, research indicates that the effects on cognitive skills are similar. It is however extremely difficult for Police to prevent people from driving while fatigued.

Fatigue was identified as a factor in 14 percent of injury crashes in the Ruapehu district in the last five years. In this five year period there were 82 crashes where fatigue was a contributory cause, 41 of which were injury crashes. These crashes resulted in 2 deaths, 19 serious injuries and 47 minor injuries.

The number of injury crashes have been fluctuating over the past five years with 2004 being the worst in terms of number of all injury crashes, as well as total of fatal and serious injury crashes. In 2007, there were no fatal and serious injury crashes, however the number of minor injury crashes were the highest in the last five years.

Fatigue injury crash trend 2003-2007



Most (87 percent) of the fatigue related crashes occurred on State highways in rural areas. Out of the 36 State highway injury crashes, 5 were on SH1N and 25 were on SH4.

The following table shows the specifically identified causes of fatigue and their contribution to injury crashes from 2003 to 2007.

Fatigue causes in 2003—2007

Fatigue causes	Percentage of injury crashes	
	Ruapehu District	New Zealand
General (drowsy, tired, fell asleep)	12.9%	4.9 %
Long trip	0.7%	0.2 %
Lack of sleep	0.1%	0.7 %
Worked long hours before driving	nil	0.3 %

Half of *fatigue* related crashes occurred on weekends, between 6pm Friday and 6am Monday. Just over half of (54 percent) the fatigue related crashes occurred during the hours of darkness/twilight.

Approximately 30 percent of drivers at fault in fatigue related injury crashes were between 15 and 24 years of age. Almost 63 percent of *at fault* drivers were males.

Of all *at fault* drivers it is reported that 27 percent of drivers held either a *restricted* or a *learner* licence.

Further information about fatigue related all crashes in the district between 2003 and 2007 on:

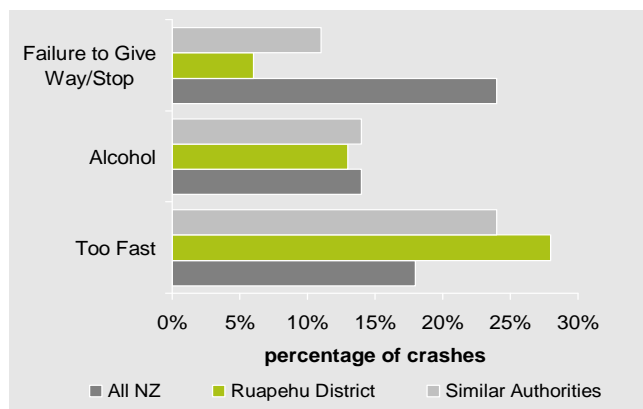
Local roads

- 1 serious injury and 4 minor injuries
- Worst day of week: *Sunday* (3 crashes)
- Wet road crashes: 9 percent
- Night time crashes: 64 percent
- Driver with alcohol over limit (injury crashes): 20 percent
- Most common injury crash factors: *poor handling, failed to keep left and too fast* (20 percent each)
- Road factors: *none*
- At fault male driver (injury crashes): 80 percent
- 40 percent of drivers at fault (injury crashes) did not hold Full NZ licence
- Most common at fault drivers' age group (injury crashes): 15 to 24 and 50-59 years old

State highways

- 2 deaths, 18 serious injuries and 43 minor injuries
- Worst day of week: *Sunday* (16 crashes)
- Wet road crashes: 25 percent
- Night time crashes: 52 percent
- With alcohol over limit (injury crashes): 8 percent
- Most common injury crash factors: *poor handling* (33 percent) followed by *alcohol* and *too fast* (8 percent each)
- Road factors: 7 percent
- At fault male driver (injury crashes): 61 percent
- 39 percent of drivers at fault (injury crashes) did not hold Full NZ licence
- Most common at fault drivers' age group (injury crashes): 15 to 24 and 30-49 years old

National issues



Speed

In Ruapehu district, *too fast* was recorded in 28 percent of injury crashes in the last five years, resulting in 7 deaths and 132 injures. Speed as a factor in crashes is increasing in the district.

Seventy-nine percent of *speed* related crashes involved *loss of control / heads-on at bends*. *Alcohol* and *poor handling* were the driver factors most often associated with *speed* related crashes. Male drivers aged under 25 years old were most involved in these crashes.

Alcohol

In Ruapehu district, *alcohol* was involved in 13 percent of injury crashes in the last five years, resulting in 7 deaths and 53 other injuries. The number of injury crashes involving *alcohol* is seems to be gradually decreasing.

Half of *alcohol* related crashes took place in urban areas. Sixty percent of these crashes were *loss of control/head-on* type. Travelling *too fast* and *poor handling* were the factors often associated with *alcohol* related crashes.

Failure to give way

In Ruapehu district, *failure to give way or stop* was reported in 6 percent of all reported injury crashes for the last five years resulting in 1 death and 30 other injuries. Most (85 percent) of these are related to *crossing/turning* manoeuvres and often associated with *failure to look for other parties*. Seventy-three percent of at fault drivers in these crashes were males.

Restraints

The Ministry of Transport conducts surveys of restraint use. According to 2007 survey results restraint rate in Ruapehu district for front seat and rear seat are 94 and 86 percent respectively (while corresponding national rates are 95 and 87 percent).

The results are obtainable from the Ministry of Transport website.

<http://www.transport.govt.nz/belts-index/>

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