



# briefing notes - road safety issues

## Rotorua

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.

The intent of the report is to highlight the key road safety issues and be a resource to identify possible ways to reduce the number of road deaths and injuries in the Rotorua district.

This report is the ninth road safety report for the Rotorua district. All material unless otherwise stated in this report applies to both local roads and Transit New Zealand (Transit NZ) roads in the Rotorua district.

In each new report one year's data is added to a five year block and the oldest dropped, so it is unlikely that the core issues for any local body would change radically from report to report.

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

We encourage local authorities to use the Ministry of Transport's Crash Analysis System (CAS) to further investigate the highlighted issues.

Major Road Safety Issues	2007 road trauma
<b>Rotorua</b>	<b>Casualties</b>
Intersections	Deaths 10
Alcohol	Serious casualties 65
Speed	Minor casualties 189
Bends – Loss of Control	
<b>Nationally</b>	<b>Crashes</b>
Speed	Fatal crashes 6
Alcohol	Serious injury crashes 51
Failure to give way	Minor injury crashes 127
Restraints	Non-injury crashes 542

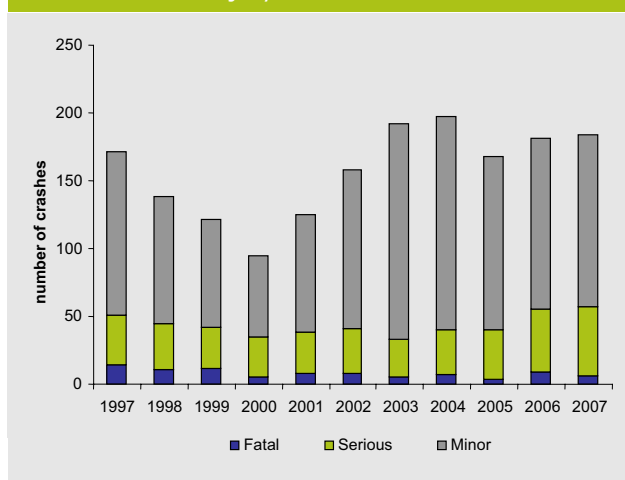
## Overview of 2007

In 2007 on local roads in Rotorua there were 92 injury crashes and 312 non-injury crashes, in addition there were 92 injury crashes and 230 non-injury crashes on Transit NZ roads, as reported by the New Zealand Police.

The table below shows the number of injuries resulting from 2007 crashes by rural or urban areas for both local and Transit NZ roads (rural is defined as an area with a speed limit of 80km/h or more).

	Fatalities	Serious injuries	Minor injuries	Total
Rural	9	36	100	146
Urban	1	29	89	119
Total	10	65	189	265

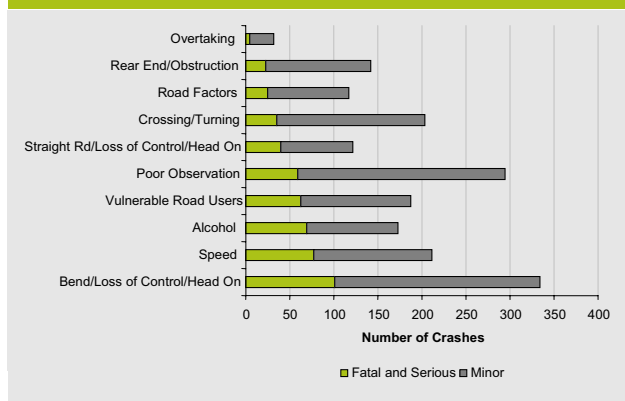
Rotorua injury crashes 1997 - 2007



Serious injury crashes have risen between 2003 and 2007

Fatal, serious and minor injury crash numbers, as a whole, in Rotorua have also risen over the last 3 years.

Main crash characteristics 2003 - 2007



Local road fatal and serious crashes		
Crash type or contributory cause 2003-2007	Percentage fatal and serious crashes of this type or contributory cause	Percentage all injury crashes of this type or contributory cause
Alcohol	33	19
Too fast	40	26
At bends	48	36
At intersections	28	38
Vulnerable road users		
1. Pedestrians	13	13
2. Cyclists	7	9
3. Motorcyclists	18	7
Roadside hazard struck	73	61
Road factors	9	11
Night time	39	33
Loss of control	58	51

Further information about 2007 injury and non-injury crashes on local roads in Rotorua:

- Worst month June, best October
- Worst day Friday, best day Monday
- 30 percent wet road
- 32 percent night time
- 43 percent at intersections
- 72 percent of at fault drivers are male (injury crashes)
- Social cost of crashes in 2007 \$38m

Further information about 2007 injury and non injury crashes on Transit NZ roads in Rotorua:

- Worst month July, best February
- Worst day Friday, best Thursday
- 32 percent wet road
- 30 percent night time
- 42 percent at intersections
- 77 percent of at fault drivers are male (injury crashes)
- Social cost of crashes in 2007 \$54m

## Speed

Nationally, speed is one of the major contributing factors to road crashes. For the 12 months to the end of December 2007, excessive speed contributed to around 33 percent of fatal crashes and 18 percent of injury crashes.

During 2007, there were 2103 injury crashes where the driver was travelling too fast for the conditions.

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. Research has shown that a one km/h reduction in mean speed can produce up to a three percent reduction in injury crashes.

In the Rotorua, excessive speed was a factor in 26 percent of injury crashes in 2007.

There were 223 speed related injury crashes reported in the last five years

Speed related injury crashes	2003	2004	2005	2006	2007
Urban	13	18	15	33	17
Rural	15	28	27	27	30
Total	28	46	42	60	47

Males represented 76 percent of at fault drivers in speed related injury crashes.

Drivers at fault or part fault in speed related injury crashes (2003-2007) *	Male	Female	Total
15- 19 years	61	13	<b>74</b>
20 - 24	35	17	<b>52</b>
25 - 29	22	8	<b>30</b>
30 - 39	17	10	<b>27</b>
40 - 49	17	2	<b>19</b>
50 - 59	8		<b>10</b>
60 - 69	3	0	<b>3</b>
70+	1	0	<b>1</b>
<b>Total</b>	<b>164</b>	<b>52</b>	<b>216</b>

\* (note ranges are not equal)

Further information about speed related injury crashes (2003 to 2007) on local roads in Rotorua:

- 4 deaths, 39 serious injuries, 126 minor injuries
- 78 percent of at fault drivers were male
- Most common crash type, Bend – loss of control/head on
- 79 percent midblock
- 38 percent wet road
- 52 percent night time
- Worst month April, best June
- Worst day of week Sunday, best Tuesday

Further information about speed related injury crashes (2003 to 2007) on Transit NZ roads in Rotorua:

- 16 deaths, 51 serious injuries, 127 minor injuries
- 74 percent of at fault drivers were male
- Most common crash type, Bend – loss of control/head on
- 71 percent midblock
- 46 percent wet road
- 48 percent night time
- Worst month July, best October
- Worst day of week Sunday, best Thursday

## Intersections

Crashes at intersections are the most common crash type in urban areas of the Rotorua district.

During the five year period 2003 to 2007 there were 315 injury crashes at intersections and 1380 non-injury crashes. In these 4 people died, 62 received serious injuries and 357 received minor injuries.

Intersection crashes	2003	2004	2005	2006	2007
Injury crash	78	69	54	59	55
Non-injury crash	284	233	329	280	254
Total	362	302	383	339	309

The table below shows the locations of the five intersections with the highest number of crashes in the Rotorua between 2003 and 2007.

Intersection name	Total crashes 2003 - 2007	Injury crashes 2003 - 2007	Total crashes in 2007
SH 5 / Lake Road	43	6	6
SH 30A / Fenton Street	42	7	9
Hinemoa Street / Hinemaru Street	40	5	7
SH 30 / Tarawera Road	30	4	8
Tutanekai Street / Arawa Street	31	6	4

Crashes at Tee junctions in urban areas are the most common type of intersection crash reported, followed by crashes at cross (X) type urban junctions.

Junction type	Rural	Urban
Roundabout	11	177
Tee	123	866
Cross (X)	2	424
Y	6	14
Other (includes driveways )	2	70

The main causes contributing to crashes described in Police reports were:

- Failure to stop and give way
- Not checking properly
- Alcohol

The most common crash is one when a driver fails to give way and crosses the path of a vehicle coming at a right angle to them. The second most common crash is when a driver turns right at an intersection and is hit by a vehicle approaching from the right.

Further information about injury crashes at intersections (2003 to 2007) on local roads in Rotorua district:

- 27 serious injuries, 183 minor injuries
- 65 percent of at fault drivers were male
- 21 percent involved alcohol
- 27 percent wet roads
- 31 percent night time
- Worst month June, best January
- Worst day of week Wednesday, best Monday

Further information about injury crashes at intersections (2003 to 2007) on Transit NZ roads in Rotorua district:

- 4 deaths, 35 serious injuries, 174 minor injuries
- 66 percent of at fault drivers were male
- 18 percent involved alcohol
- 28 percent wet roads
- 29 percent night time
- Worst month July, best September
- Worst day of week Friday, best Monday

## Drink-driving

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.

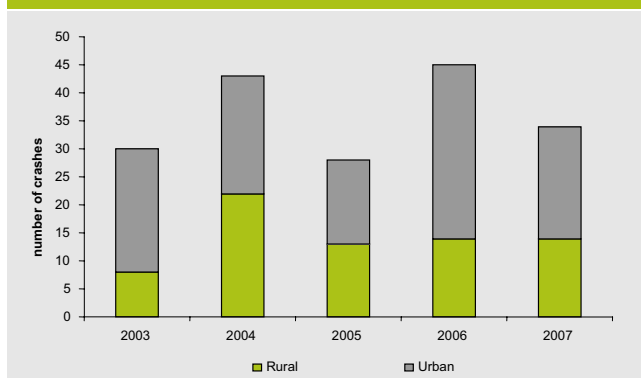
Contrary to popular opinion, people with high blood alcohol levels are more likely to be injured or killed in a crash than sober drivers in the same crash and if injured, they are also more likely to encounter complications in their recovery.

In New Zealand for the 12 months to December 2007, alcohol-affected drivers contributed to 34 percent of all fatal crashes and 15 percent of all injury crashes.

In Rotorua district, alcohol was a factor in 18 percent of injury crashes in 2007, a decrease from 2006.

There were 180 alcohol-related injury crashes reported in the last five years.

Rotorua rural/urban (injury) alcohol-related crashes 2003-2007



### Key locations

The following provides a breakdown of the key locations in Rotorua at which drink-driving crashes occurred during the 2003 to 2007 period.

Rotorua
Sunset Road, 300m east of Pukehangi Road
SH 5, 1500m south of SH 30
SH 5, Western Road intersection
SH 5, 500m north of Barnard Road

Further information about alcohol related injury crashes (2003 to 2007) on local roads in Rotorua:

- 2 deaths, 32 serious injuries, 99 minor injuries
- 78 percent of at fault drivers were male
- 41 percent at intersections
- 81 percent urban
- 28 percent wet road
- 75 percent night time
- Worst month January, best July
- Worst day of week Sunday, best Monday

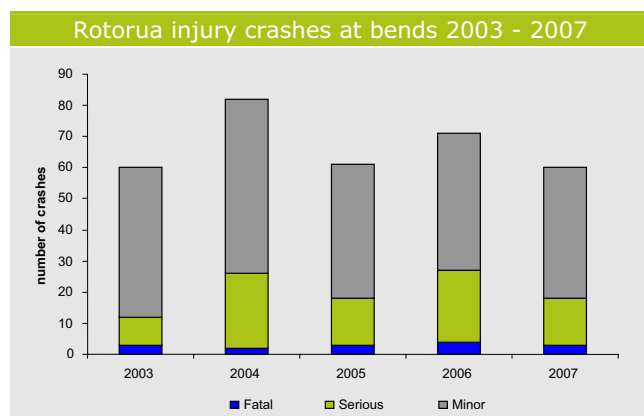
Further information about alcohol related injury crashes (2003 to 2007) on Transit NZ roads in Rotorua:

- 12 deaths, 42 serious injuries, 96 minor injuries
- 74 percent of at fault drivers were male
- 28 percent at intersections
- 42 percent urban
- 31 percent wet road
- 67 percent night time
- Worst month November, best February
- Worst day of week Saturday, best Tuesday

## Crashes at bends

Between 2003 and 2007 36 percent of all injury crashes in the Rotorua district occurred at bends. These crashes resulted in 21 fatalities, 121 serious injuries and 393 minor injuries.

Fatal crash numbers rose between 2004 and 2006 but declined in 2007.



Most crashes at bends involved a driver losing control of their vehicle and either running off the road or colliding with another vehicle.

After drivers lose control their vehicles they often crash into roadside hazards such as ditches, banks, poles and 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 injury crashes in Rotorua were fences (73), banks (71) and trees (45) from a total of 707 objects struck.

The following table lists the main characteristics of these crashes.

Crash characteristic	Crashes
Single vehicle	82 percent
Alcohol	29 percent
Excessive speed for the conditions	50 percent
Road factors	23 percent
Poor handling	30 percent
Rural road	69 percent
Wet road	37 percent
Night time	47 percent

Further information about injury crashes on bends (2003 to 2007) on local roads in Rotorua district:

- 5 deaths, 47 serious injuries, 188 minor injuries
- 77 percent of at fault drivers were male
- Most common crash type, Too fast for conditions causing loss of control
- Most common age group 15-19 years
- 31 percent of crashes involved alcohol
- Worst month April, best November
- Worst day of week Sunday, best Tuesday
- Worst time period, 6 – 9pm

Further information about injury crashes on bends (2003 to 2007) on Transit NZ roads in Rotorua district:

- 16 deaths, 74 serious injuries, 205 minor injuries
- 66 of at fault drivers were male
- Most common crash type, Too fast for conditions causing loss of control
- Most common age group 20-24 years
- 26 percent of crashes involved alcohol
- Worst month July, best May
- Worst day of week Saturday, best Friday
- Worst time period, 12 - 3pm

## Rear End Crashes

Between 2003 and 2007 15 percent of all injury crashes in Rotorua district involved rear end collisions. These crashes resulted in 1 fatality, 22 serious injuries and 159 minor injuries.

Crash numbers have fluctuated over the last 5 years.

Rear End collisions 2003 to 2007				
Crash year	Fatal crashes	Serious crashes	Minor crashes	Total
2003	0	6	22	28
2004	1	1	25	27
2005	0	3	25	28
2006	0	8	25	33
2007	0	4	22	26

Most rear end crashes involve a driver failing to see a vehicle slowing with 18 percent of all rear end crashes including this factor.

Characteristics of rear end crashes are shown in the table below.

Main characteristics of injury rear end crashes	
Crash characteristics	Percentage of crashes
Following to closely	<b>11</b>
Alcohol	<b>11</b>
Excessive speed for conditions	<b>7</b>
Road factors	<b>8</b>
Poor handling	<b>4</b>
Wet road	<b>23</b>
Night time	<b>22</b>
Incorrect lane position	<b>13</b>

Further information about rear end injury crashes (2003 to 2007) on local roads in Rotorua:

- 9 serious injuries, 68 minor injuries
- 66 percent of at fault drivers were male
- Most common crash type, Failing to see a slowing or stopped vehicle
- Most common age group 20 – 24 years
- Worst month March, best September
- Worst day of week Friday, best Sunday
- Worst time period 12 – 3pm

Further information about rear end injury crashes (2003 to 2007) on Transit NZ roads in Rotorua:

- 1 death, 13 serious injuries, 91 minor injuries
- 74 percent of at fault drivers were male
- Most common crash type, Failing to see a slowing or stopped vehicle
- Most common age group 15 – 19 years
- Worst month November, best August
- Worst day of week Friday, best Sunday
- Worst time period 3 – 6pm

## Partnerships

Land Transport NZ works closely with many road safety partners at national, regional and local levels. These include government departments, enforcement agencies, territorial local authorities, health authorities and local service providers.

Some of the key road safety partners in the Rotorua District include:

### **New Zealand Police**

Bay of Plenty District Road Policing Manager  
Kevin Taylor  
PO Box 741  
Rotorua  
Phone 07 349 9554

### **Travel Safety and Sustainability Co-ordinator**

Rotorua District Council  
Niki Carling  
Private Bag 3029  
Rotorua  
Phone 07 348 4199

### **Local Authority Engineers**

Rotorua District Council  
Kevin Thompson  
Private Bag 3029  
Rotorua  
Phone 07 348 4199

### **Accident Compensation Corporation**

Rotorua Area  
ACC Injury Prevention Consultant  
Louise Kirk  
PO Box 649  
Rotorua  
Phone 07 350 0315

## Contacts

### **Land Transport New Zealand**

Rosalie Orr  
Partnership Manager - Midlands  
See contact details at end.

Andrew McKillop  
Manager Programmes – Waikato/Bay of Plenty/Taranaki  
See contact details at end.



### **Midland Regional Office**

183 Collingwood Street  
Private Bag 3081  
HAMILTON

Telephone 07 958 7840  
Fax 07 958 7866

[www.landtransport.govt.nz](http://www.landtransport.govt.nz)