



briefing notes - road safety issues

Waikato Region

New Zealand Transport Agency has prepared this road safety issues report. It is based on reported crash data and trends for the 2004-2008 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 Waikato region. In this report the Waikato region includes Thames-Coromandel, Hauraki, Matamata-Piako, Waikato, Waipa, Otorohanga, Waitomo, South Waikato and Taupo District Councils and Hamilton City Council.

A report for the Waikato region has not been produced for the last few years. All the material unless otherwise stated in this report applies to both local roads and state highways.

The issues chosen for this report are drawn from either the most common crash types, those that appear over-represented in local bodies within the region or those with high social cost (high numbers of fatal and serious crashes mainly).

We have included a brief overview of crashes in the region.

We encourage councils in the Waikato region to use their free access to the Ministry of Transport's Crash Analysis System (CAS) to delve deeper into the highlighted issues. All data in this report is from CAS.

Major road safety issues *		2008 road trauma	
Waikato region		Casualties	Waikato region
Alcohol		Deaths	73
Speed		Serious casualties	312
Bend / Loss of Control		Minor casualties	1366
Intersections			
Nationally		Crashes	Waikato region
Speed		Fatal crashes	64
Alcohol		Serious injury crashes	249
Failure to give way		Minor injury crashes	957
Restraints		Non-injury crashes	2389

* Issues are not in any specific order of importance

Overview

In 2008 on local roads in the Waikato region there were 693 injury crashes and 1355 non-injury crashes. In addition there were 577 injury crashes and 1064 non-injury crashes on state highways both as reported by the New Zealand Police.

The table below shows the number of injuries resulting from the 1270 injury crashes on local roads and state highways

Casualties by urban / rural 2008

	Fatalities	Serious injuries	Minor injuries	Total
Rural	61	207	720	988
Urban	12	105	646	763
Total	73	312	1366	1751

	Fatalities	Serious injuries	Minor injuries	Total
Local roads	28	153	732	913
State highways	45	159	634	838
Total	73	312	1366	1751

Crash trends in the Waikato region

Year	Fatal Crashes	Serious Crashes	Minor Crashes	Total Injury Crashes
1999	72	227	755	1054
2000	72	216	673	961
2001	65	197	696	984
2002	53	218	799	1070
2003	68	241	855	1164
2004	61	221	833	915
2005	72	217	875	1164
2006	55	226	909	1190
2007	78	221	1000	1299
2008	64	249	957	1270

Local road and state highway crashes

Crash type or contributory cause 2004 to 2008	Percentage fatal and serious crashes of this type or contributory cause	Percentage all injury crashes of this type or contributory cause
Alcohol	23	15
Too fast	26	21
At bends	44	36
At intersections	23	32
Pedestrians	6	5
Cyclists	5	5
Motorcyclists	16	9
Road factors	14	14
Night time	34	33

Further information about 2004 to 2008 injury and non-injury crashes on **local roads** in the Waikato region:

- Worst month May, best January
- Worst day Friday, best Monday
- 24 percent on wet roads
- 35 percent at night
- 44 percent at intersections
- 5784 roadside objects struck
- Social cost of crashes in 2008 \$281m

Further information about 2004 to 2008 injury and non-injury crashes on **state highways** in the Waikato region:

- Worst month December, best September
- Worst day Friday, best Monday
- 32 percent on wet roads
- 32 percent at night
- 22 percent at intersections
- 5384 roadside objects struck
- Social cost of crashes in 2008 \$315m

Speed

Nationally, speed is one of the major contributing factors to road crashes. Reducing speeds 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 situations and it leads to more serious injuries. Research has shown that a 1 km/h reduction in mean speed can produce a 3 percent reduction in injury crashes.

Between 2004 and 2008 21 percent of injury crashes in the Waikato region involved travelling too fast for the conditions. These crashes resulted in 136 fatalities, 389 serious injuries and 1382 minor injuries.

Total crash numbers increased each year between 2004 and 2007 and fell in 2008.

Speed related crashes

Speed related crashes	2004	2005	2006	2007	2008
Rural	156	164	190	200	186
Urban	61	69	69	80	82
Total	217	233	259	280	268

The other main causes contributing to speed related crashes were:

- Handling errors
- Alcohol
- Speed

Speed related crashes by location

Road (road lengths may differ)	Social cost of crashes
SH 1—800m north of Oturere Bridge, Rangipo	\$1,900,000
SH 1 / SH 5 intersection, Tirau	\$6,300,000
SH 3 500m south of Maraetaua Rd, Te Kuiti	\$470,000
SH 30 / Limmer Rd intersection,	\$1,200,000
Cambridge Rd—400m north of Kaipaki Rd, Cambridge	\$1,800,000

Age and sex of at fault drivers in speed related injury crashes

Drivers age *	Male	Female	Total
2004 - 2008			
15-19 years	254	97	351
20 - 24	190	71	261
25 - 29	113	30	143
30 - 39	158	50	208
40 - 49	132	34	166
50 - 59	61	16	77
60 - 69	24	14	38
70+	11	1	12
Total	943	313	1256

* note age ranges are not equal

Further information about the 655 speed related injury crashes in the Waikato region on **local roads** 2004 to 2008:

- 55 deaths, 189 serious injuries and 705 minor injuries
- Most common crash type 'Lost control on a bend'
- 75 percent midblock
- 32 percent wet road
- 49 percent night time
- Worst month February, best October
- Worst day of week Saturday, best Monday & Tuesday (equal)
- Worst three hour time period 3pm to 6pm

Further information about the 602 speed related injury crashes in the Waikato region on **state highways** 2004 to 2008:

- 81 deaths, 200 serious injuries and 677 minor injuries
- Most common crash type 'Lost control on bend'
- 85 percent midblock
- 46 percent wet road
- 38 percent night time
- Worst month December, best September
- Worst day of week Friday, best Monday
- Worst three hour time period 3pm to 6pm

Intersections

During the five year period 2004 to 2008 within the Waikato region there were a total of 7522 crashes at intersections, 1932 of these were injury crashes and 5590 non-injury.

79 percent of these were in urban areas and 63 people were killed, 361 received serious injuries and 2278 received minor injuries.

Crashes at Intersections					
	2004	2005	2006	2007	2008
Injury crash	370	370	359	402	431
Non-injury crash	1027	1245	1208	1147	963
Total	1397	1615	1567	1549	1394

Locations with the most injury crashes 2004 to 2008		
Intersection name	Injury crashes 2004 - 2008	total Injury crashes 2008
Mill St / Victoria St, Hamilton	17	3
SH 1 / Poihipi Rd, Taupo	16	5
SH 26 / SH 25, Kopu	16	3
SH 1 / SH 5, Tirau	16	4
SH 1 / Kahikatea Drive extension intersection, Hamilton	13	2

Junction control Injury and non-injury crashes				
Junction control	Traffic signals	Nil	Give Way	Stop
Number of crashes	995	1594	3778	1147

The most common crash type at intersections is when a driver turns right and is hit by a vehicle approaching from the right.

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

- Failure to stop and give way
- Not checking properly
- General errors of judgement

Junction type Injury and Non-injury crashes		
Junction Type	Open	Urban
Roundabout	102	815
Tee	1189	2825
Cross (X)	200	1989
Y	53	73
Other (includes driveways)	37	219

Further information about the 1151 injury crashes at intersections on **local roads** in the Waikato region 2004 to 2008:

- 29 deaths, 182 serious injuries and 1289 minor injuries
- 27 percent wet roads
- 31 percent night time
- Worst month June, best October
- Worst day of week Thursday, best Tuesday
- Worst three hour time period 3pm to 6pm

Further information about the 781 injury crashes at intersections on **state highways** in the Waikato region 2004 to 2008:

- 34 deaths, 179 serious injuries and 989 minor injuries
- 23 percent wet roads
- 27 percent night time
- Worst month March, best October
- Worst day of week Friday, best Monday
- Worst three hour time period 3pm to 6pm

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.

Contrary to popular opinion, people with high blood alcohol levels are more likely to be injured or killed in a crash than a sober driver 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 2008, alcohol-affected drivers contributed to 34 percent of all fatal crashes (the same as 2007) and 15 percent of all injury crashes (the same as 2007).

In the Waikato region alcohol was a factor in 17 percent of injury crashes in 2008.

Number of alcohol related injury crashes

Crash year	Open road	Urban road	Total
2004	83	66	149
2005	96	66	162
2006	114	68	182
2007	141	78	219
2008	120	93	213
Total	554	371	925

(Open road is classified as any area with a speed limit of 80km/hr or more)

From the beginning of 2007 New Zealand Transport Agency (formerly Land Transport NZ) has been adding driver factor codes to all non-injury crashes for the Waikato region .

This will allow the Police and other agencies to target alcohol related crashes more quickly and with even more geographic accuracy than ever before.

In 2008 there were 383 non-injury alcohol related crashes reported by the Police in the Waikato region.

Alcohol related injury crashes

Road (road lengths may differ)	Social cost of crashes
Victoria St / Marlborough Place	\$4,300,000
SH 1—70m north of Bern Rd, Horotiu	\$4,900,000
Bridge St / Victoria St intersection, Hamilton	\$850,000
Te Ohaki Rd / Harris St intersection, Huntly	\$950,000
SH 1 / Kaihikatea Drive extension intersection, Hamilton	\$1,300,000

Further information about the 536 alcohol related injury crashes in the Waikato region on **local roads** 2004 to 2008:

- 50 deaths, 161 serious injuries and 543 minor injuries
- 79 percent of at fault drivers were male
- Most common crash type 'Lost control on bend'
- 29 percent at intersections
- 56 percent urban
- 27 percent wet road
- 78 percent night time
- Worst three hour time period 9pm to midnight
- Worst months February & September (equal), best March & June (equal)
- Worst day of week Sunday, best Monday

Further information about the 389 alcohol related injury crashes in the Waikato region on **state highways** 2004 to 2008:

- 64 deaths, 171 serious injuries and 358 minor injuries
- 74 percent of at fault drivers were male
- Most common crash type 'Lost control on bend'
- 17 percent at intersections
- 19 percent urban
- 29 percent wet road
- 66 percent night time
- Worst three hour time period 9pm to midnight
- Worst month October, best July
- Worst day of week Saturday, best Monday

Bends – loss of control or head on

Between 2004 and 2008 36 percent of all injury crashes in the Waikato region were loss of control or head on crashes on bends. These crashes resulted in 200 fatalities, 685 serious injuries and 2260 minor injuries.

Total injury crashes increased each year between 2004 and 2007 and fell again in 2008.

Crashes at bends 2004 to 2008				
Crash year	Fatal crashes	Serious crashes	Minor crashes	Total
2004	38	97	269	404
2005	34	88	307	429
2006	23	104	310	450
2007	35	93	344	483
2008	29	107	307	450
Total	159	489	1537	2185

After drivers lose control 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 most common roadside hazards struck in injury loss of control or head on crashes on bends in the Waikato region were fences (112), posts or poles (92), trees (68) and cliffs or banks (54), from a total of 613 objects struck.

Main characteristics of injury lost control or head on crashes at bends	
Crash characteristic	Percentage of crashes
Single vehicle	75
Alcohol	23
Excessive speed for the conditions	43
Road factors	23
Poor handling	37
Rural road	82
Wet road	37
Night time	39

Further information about the 948 injury loss of control or head on crashes on bends on **local roads** in the Waikato region 2004 to 2008:

- 60 deaths, 263 serious injuries and 972 minor injuries
- 72 percent of at fault drivers were male
- Most common at fault driver age group was 15 to 19 years (29 percent of all at fault drivers)
- 31 percent of crashes involved alcohol
- 51 percent of crashes involved 'too fast for the conditions'
- Worst month January, best October
- Worst day of week Saturday, best Monday
- Worst three hour time period 3pm to 6pm

Further information about the 1237 injury loss of control or head on crashes on bends on **state highways** in the Waikato region 2004 to 2008:

- 140 deaths, 422 serious injuries and 1288 minor injuries
- 70 percent of at fault drivers were male
- Most common at fault driver age group was 30 to 39 years (19 percent of at fault drivers)
- 17 percent of crashes involved alcohol
- 37 percent of crashes involved 'too fast for the conditions'
- Worst month December, best September
- Worst day of week Sunday, best Tuesday
- Worst three hour time period 3pm to 6pm

Straight road – loss of control or head on

Between 2004 and 2008 16 of all injury crashes in the Waikato region involved loss of control or head on crashes on straight roads. 18 percent of fatal and serious crashes in the district were of this type. These 949 crashes resulted in 78 fatalities, 251 serious injuries and 1053 minor injuries.

Loss of control — straight roads injury crashes 2004 to 2008			
Crash year	Fatal crashes	Serious crashes	Minor crashes
2004	10	39	109
2005	15	43	143
2006	14	40	155
2007	14	37	162
2008	15	30	123
Total	68	189	692

Most of these crashes occurred when a driver loses control of their vehicle and either runs off the road or collides with another vehicle.

After drivers lose control 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 most common roadside hazards struck in injury crashes in the Waikato region were fences (197), ditches (166), cliffs or banks (121), poles or posts (129) and trees (122) from a total of 1009 objects struck.

Main characteristics of injury loss of control crashes— straight roads 2004 to 2008	
Crash characteristic	Percentage of crashes
Single vehicle	79
Alcohol	22
Excessive speed for the conditions	11
Road factors	12
Poor handling	22
Rural road	77
Wet road	23
Night time	41

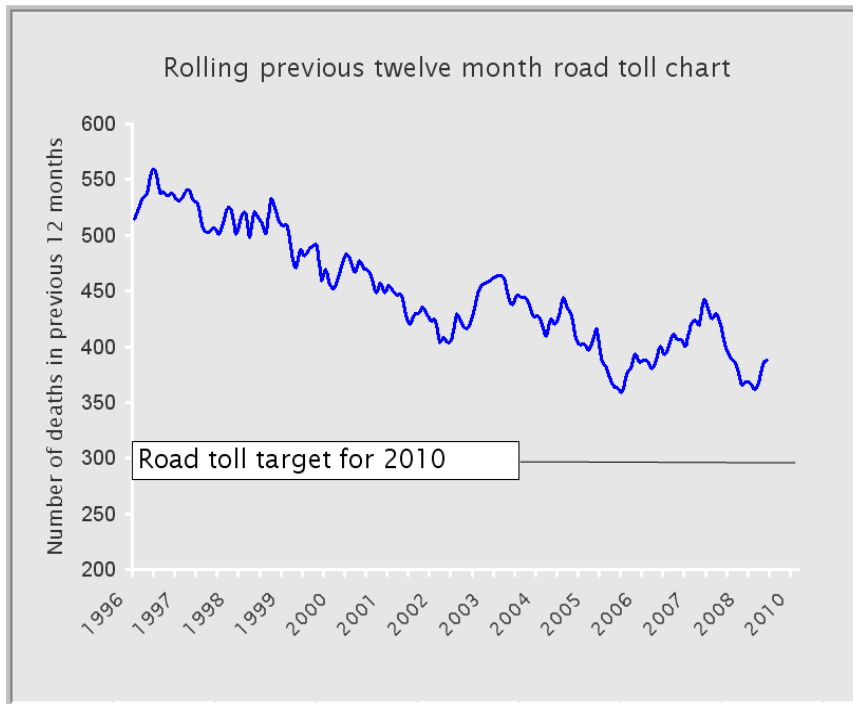
Further information about the 405 injury loss of control crashes on straights on **local roads** in the Waikato region 2004 to 2008:

- 25 deaths, 93 serious injuries and 410 minor injuries
- 67 percent of at fault drivers were male
- Most common crash type 'off road to left'
- Most common at fault driver age group was 15 to 19 years
- 30 percent of crashes involved alcohol
- 17 percent of crashes involved speed
- 13 percent involved 'road factors'
- 16 percent involved fatigue
- 22 percent involved posts or poles as a struck object
- 24 percent in the wet
- 45 percent at night
- Worst month March, best June
- Worst day of week Sunday, best Tuesday
- Worst three hour time period 3pm to 6pm

Further information about the 159 injury loss of control crashes on straights on **state highways** in the Waikato region 2004 to 2008:

- 53 deaths, 158 serious injuries and 643 minor injuries
- 66 percent of at fault drivers were male
- Most common crash type 'off road to left'
- Most common at fault driver age group was 15 to 19 years
- 17 percent of crashes involved alcohol
- 7 percent of crashes involved speed
- 11 percent involved 'road factors'
- 38 percent involved fatigue
- 19 percent involved ditches as a struck object
- 23 percent in the wet
- 38 percent at night
- Worst month December, best August
- Worst day of week Sunday, best Wednesday
- Worst three hour time period 3pm to 6pm

The next ten years—moving beyond Road Safety 2010



In August this year the Ministry of Transport will embark on a nationwide road safety consultation programme as it moves to formulate priorities for the next ten years.

Information will be published on their web site and we would encourage any person or group with an interest in road safety to watch the site carefully for developments. Follow this link :

<http://www.transport.govt.nz/ourwork/Land/landsafety/SaferJourneys-RoadSafetyStrategyto2020/>

The chart on the left illustrates the progress made during the life of the Road Safety 2010 strategy and although progress has been made it would seem highly unlikely that the target of 300 or fewer fatalities will be met.

Restraints

The Ministry of Transport (MoT) conducts surveys of restraint use. Results are available for front, rear and child restraints although not all at a local authority level.

See the MoT website : <http://www.transport.govt.nz/research/safetybeltstatistics/>

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