

# *briefing notes - road safety issues*

## *Whangarei 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.

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 Whangarei District.

This report is the ninth road safety report for Whangarei District. All the material unless otherwise stated in this report applies to both State Highways and local roads.

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 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 Whangarei District is compared to similar local bodies or those with high social cost (high numbers of fatal and serious crashes mainly).

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

We encourage Whangarei District to use its free access to the Ministry of Transport's Crash Analysis System (CAS) to delve deeper into the highlighted issues. All data and maps in this note are from CAS.

### Major road safety issues

#### Whangarei District

Bends

Lost control—straights

Road factors

Alcohol

### 2007 road trauma

#### Casualties

#### Whangarei District

Deaths 11

Serious casualties 44

Minor casualties 194

### Nationally

Speed

Alcohol

Failure to give way

Restraints

### Crashes

#### Whangarei District

Fatal crashes 11

Serious injury crashes 35

Minor injury crashes 147

Non-injury crashes 575

## Overview

In 2007 on local roads in Whangarei District there were 121 injury crashes and 415 non-injury crashes. In addition there were 72 injury crashes and 160 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 193 crashes in 2007 by rural or urban areas (rural is defined as an area with a speed limit of 80km/h or more).

Casualties by injury type 2007				
	Fatalities	Serious injuries	Minor injuries	Total
Rural	9	25	96	130
Urban	2	19	98	123
Total	11	44	194	253

Fatal and serious crashes in the district have been relatively steady over the last ten years. The biggest change has been in the reporting of minor injury crashes. These were relatively stable at around 70 per year through the late 1990's, rising sharply between 2001 and 2003 and relatively stable at around 160 per year ever since. As other, more serious crash types have remained relatively constant there is a reasonable probability that the crash reporting rate has lifted in the District. This improvement should be seen as a positive for the district as it gives the councils engineers far more to work with when calculating the benefits of safety improvements and indeed in looking for sites to attend to.

Crash trends in Whangarei District				
Year	Fatalities	Serious injuries	Minor injuries	Total
1998	15	55	131	201
1999	13	50	158	221
2000	21	40	99	160
2001	13	48	132	193
2002	18	41	140	199
2003	21	42	230	293
2004	6	68	214	288
2005	6	46	243	295
2006	12	50	213	275
2007	11	44	194	250

## Crash types and contributory causes 2003 to 2007

Crash type or contributory cause	Percentage fatal and serious crashes of this type or contributory cause	Percentage all injury crashes of this type or contributory cause
Alcohol	29	18
Too fast	28	22
At bends	45	39
At intersections	22	31
Pedestrian related	10	8
Road factors	15	15
Lost control—head on straights	18	14
Night time	37	33
Fatigue	8	8
Poor observation	24	31

Further information about 2003 to 2007 injury and non-injury crashes on local roads:

- Worst month December, best January
- Worst day Friday, best Sunday
- 28 percent on wet roads
- 28 percent at night
- 39 percent at intersections
- 1446 number of roadside objects struck
- 54 percent of at fault drivers (injury crashes) held a full NZ drivers licence
- Social cost of crashes in 2007 \$59.6m

Further information about 2003 to 2007 injury and non-injury crashes on State Highways:

- Worst month December, best March
- Worst day Friday, best Monday
- 30 percent on wet roads
- 30 percent at night
- 33 percent at intersections
- 602 number of roadside objects struck
- 66 percent of at fault drivers (injury crashes) held a full NZ drivers licence
- Social cost of crashes in 2007 \$40.4m

## Crashes at bends

Between 2003 and 2007 thirty-nine percent of all injury crashes in Whangarei District occurred at bends. These crashes resulted in 22 fatalities, 115 serious injuries and 436 minor injuries.

Crash numbers rose in 2004 and fell again in 2007.

Crashes at bends 2003 to 2007				
Crash year	Fatal crashes	Serious crashes	Minor crashes	Total
2003	5	17	47	69
2004	2	27	59	88
2005	3	22	55	80
2006	6	18	72	96
2007	5	12	59	76
Total	21	96	292	409

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 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 bend related injury crashes in Whangarei District were cliffs or banks (92), trees (67), fences (37), posts or poles (29) and ditches (87) from a total of 235 objects struck.

Main characteristics of injury crashes at bends	
Crash characteristic	Percentage of crashes
Single vehicle	78
Alcohol	29
Excessive speed for the conditions	42
Road factors	25
Poor handling	36
Rural road	76
Wet road	40
Night time	42

Further information about the 286 injury crashes at bends (2003 to 2007) on local roads in Whangarei District :

- 13 deaths, 76 serious injuries and 293 minor injuries
- 70 percent of at fault drivers were male
- Most common crash type "loss of control turning right "
- Most common at fault driver age group 15 -19 years (29 percent of all at fault drivers)
- 34 percent of crashes involved alcohol
- 45 percent of crashes involved speed too fast for the conditions
- Worst month June, best March
- Worst day of week Saturday, best Wednesday
- Worst time period 3pm till 6pm

Further information about the 123 injury crashes at bends (2003 to 2007) on State Highways in Whangarei District:

- 9 deaths, 37 serious injuries and 143 minor injuries
- 60 percent of at fault drivers were male
- Most common crash type "loss of control turning right"
- Most common at fault driver age group 15—19 years (23 percent of at fault drivers)
- 18 percent of crashes involved alcohol
- 36 percent of crashes involved speed too fast for the conditions
- Worst month December, best September
- Worst day of week Saturday, best Wednesday
- Worst time period 3pm to 6pm

## Straight road –loss of control or head on

Between 2003 and 2007 fourteen percent of all injury crashes in Whangarei District involved loss of control or head on crashes on straight roads. Eighteen percent of fatal and serious crashes in the district were of this type. These 146 crashes resulted in 11 fatalities, 45 serious injuries and 150 minor injuries.

### Loss of control — straight roads injury crashes 2003 to 2007

Crash year	Fatal crashes	Serious crashes	Minor crashes
2003	6	2	19
2004	0	9	17
2005	2	11	23
2006	3	6	18
2007	0	8	22
Total	11	36	99

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 Whangarei District were ditches (46), fences (34), poles or posts (22) and trees (8) from a total of 196 objects struck.

### Main characteristics of injury loss of control crashes— straight roads 2003 to 2007

Crash characteristic	Percentage of crashes
Single vehicle	73
Alcohol	23
Excessive speed for the conditions	21
Road factors	14
Poor handling	16
Rural road	71
Wet road	28
Night time	39

Further information about the 66 injury loss of control crashes on straights (2003 to 2007) on local roads in Whangarei District:

- 4 deaths, 21 serious injuries and 65 minor injuries
- 40 percent of at fault drivers were female
- Most common crash type “off road to left”
- Most common at fault driver age group 15 to 19 years
- 32 percent of crashes involved alcohol
- 30 percent of crashes involved speed
- 12 percent involved “road factors”
- 12 percent involved fatigue
- 24 percent involved ditches as a struck object
- 33 percent in the wet
- 41 percent at night
- Worst month May and August (equal), best October
- Worst day of week Saturday, best Tuesday
- Worst time period 3pm to 6pm

Further information about the 80 injury loss of control crashes on straights (2003 to 2007) on State Highways in Whangarei District:

- 7 deaths, 24 serious injuries and 85 minor injuries
- 28 percent of at fault drivers were female
- Most common crash type “off road to left”
- Most common at fault driver age group 20 to 24 years
- 16 percent of crashes involved alcohol
- 13 percent of crashes involved speed
- 16 percent involved “road factors”
- 41 percent involved fatigue
- 38 percent involved ditches as a struck object
- 24 percent in the wet
- 38 percent at night
- Worst month December, best May and August (equal)
- Worst day of week Sunday, best Monday
- Worst time period 3pm to 6pm

## Road Factors

A safe road environment incorporates numerous design principles, appropriate geometric design standards, good delineation under all conditions, adequate surface skid resistance and a roadside free of unforgiving hazards.

It should also serve the safety needs of all vehicles and road users.

Road factors that contribute to crashes include those that affect the way a driver reacts to the driving conditions, such as

- a slippery road surface
- obstructions on the road, such as slips
- limited visibility
- signs, signals and/or road markings being damaged or in poor condition.

Nationally, road factors were a contributing factor in 14 percent of injury crashes in 2007 (a rise on 2006), with slippery road surfaces being the key factor.

In 2007 in the Whangarei District, "road factors" were a contributing factor in 15 of all crashes and 21 percent of injury crashes.

There were 160 road factor related injury crashes reported in the last five years.

Road factors have been predominantly a rural issue in the Whangarei District as illustrated in the table below.

Road factor related injury crashes					
Road type	2003	2004	2005	2006	2007
Urban	12	11	7	7	7
Rural	12	22	17	30	27
Total	25	33	24	37	41

Most common crash types in road factor related injury crashes	
Crash type	Number of crashes
Bend lost control / head on	104
Straight roads lost control / head on	21
Crossing turning (mainly intersections)	17

### Road factors in injury crashes

Number of occasions Police reported this factor 2003 to 2007	Local road	State Highways
Slippery road	49	46
Road surface in poor condition	30	15
Road obstructed	1	0
Visibility limited	18	8
Signs or signals (needed or faulty)	3	1
Markings (needed or faulty)	3	0
Street lighting	3	0

Further information about the 96 road factor related injury crashes in Whangarei District on local roads (2003 to 2007):

- 6 deaths, 16 serious injuries and 99 minor injuries
- Most common crash type, loss of control at bends
- 23 percent at intersections
- 46 percent urban
- 57 percent wet road
- 28 percent night time
- Worst month June, best September
- 57 percentage of at fault drivers with full NZ drivers licence

Further information about the 64 road factor related injury crashes in Whangarei District on State Highways (2003 to 2007):

- 4 deaths, 15 serious injuries and 71 minor injuries
- Most common crash type, loss of control at bend
- 8 percent at intersections
- 12 percent urban
- 72 percent wet road
- 33 percent night time
- Worst month December, best November
- 69 percentage of at fault drivers with full NZ drivers licence

## 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 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 33 percent of all fatal crashes (a slight increase on 2006) and 15 percent of all injury crashes (the same as 2006).

There were 8005 alcohol-related injury crashes reported in New Zealand in the last five years.

In Whangarei District, alcohol was a factor in 19 percent of injury crashes in 2007, the same as 2006.

Number of alcohol related injury crashes			
Crash year	Open road	Urban road	Total
2003	25	15	40
2004	23	11	34
2005	23	18	41
2006	21	17	38
2007	18	19	37
Total	110	80	190

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

The key crash locations of alcohol related crashes occurring between 2003 and 2007 are shown on the map on the following page.

From the beginning of 2007 Land Transport NZ has been adding driver factor codes to all non-injury crashes for the northern district.

In 2007 there were 51 non-injury alcohol related crashes reported by the Police in the Whangarei District

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

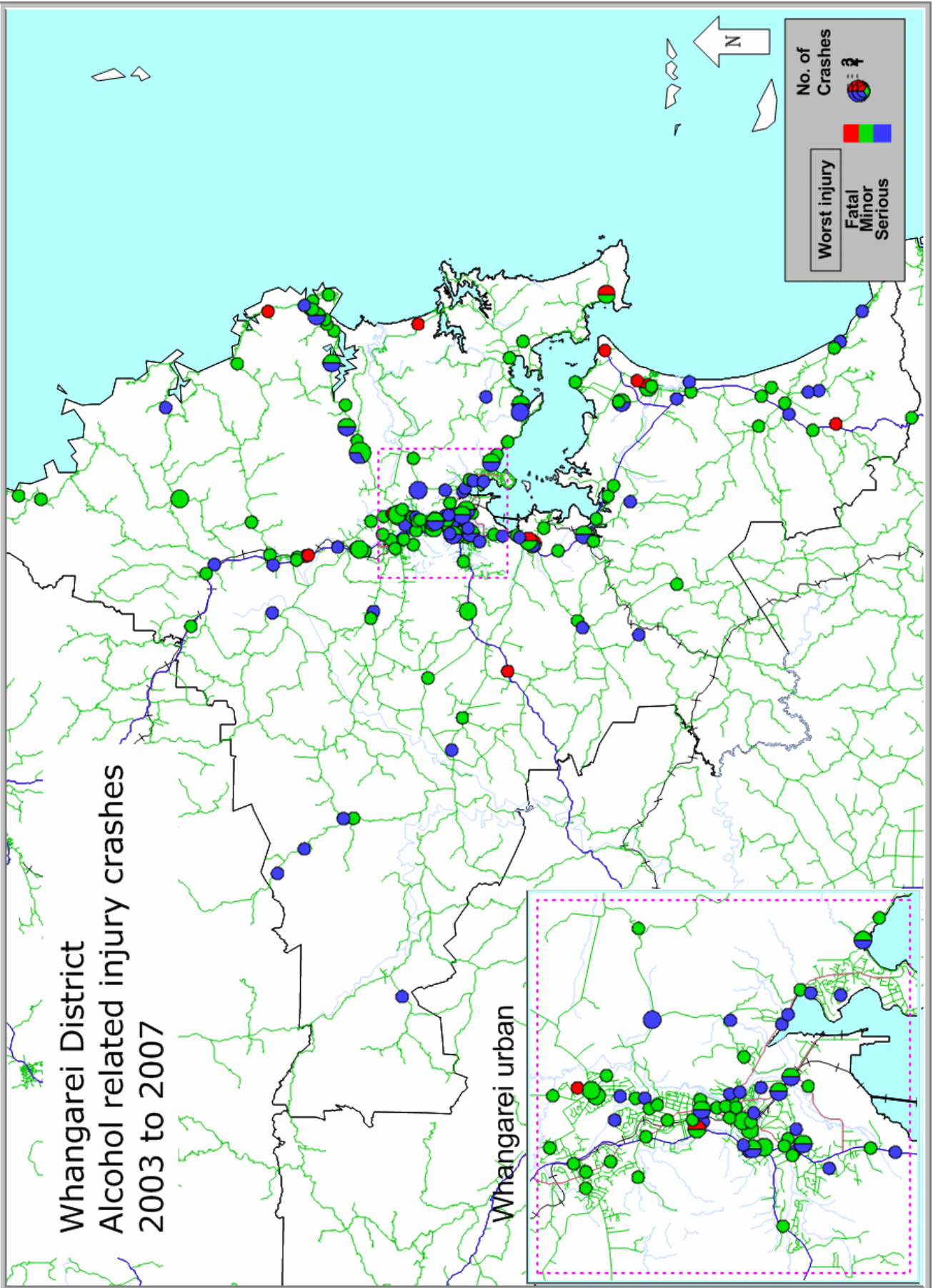
Further information about the 147 alcohol related injury crashes in Whangarei District on local roads 2003 to 2007:

- 7 deaths, 60 serious injuries and 145 minor injuries
- 76 percent of at fault drivers were male
- Most common crash type “loss of control turning right”
- 29 percent at intersections
- 38 percent urban
- 22 percent wet road
- 58 percent night time
- Worst time period midnight till 3am
- Worst months February, October and December (equal), best November and May (equal)
- Worst day of week Saturday, best Tuesday

Further information about the 43 alcohol related injury crashes in Whangarei District on State Highways 2003 to 2007:

- 8 deaths, 14 serious injuries and 48 minor injuries
- 84 percent of at fault drivers were male
- Most common crash type “loss of control turning right ”
- 17 percent at intersections
- 20 percent urban
- 26 percent wet road
- 69 percent night time
- Worst time period Midnight till 3pm then 6pm till 9pm
- Worst month February, best March
- Worst day of week Sunday, best Monday





## National issues

This section contains some brief information on the key national road safety issues as measured in Whangarei District. They may have been covered elsewhere in this document or not be a specific issue.

### Speed

'Too fast' was recorded in 22 percent of injury crashes in the District in the last five years resulting in 21 deaths and 312 other injuries.

Speed as a factor in crashes is not reducing in the District.

Seventy-six percent of speed-related crashes were 'loss of control on bends'. Alcohol and poor handling were the other driver factors often associated with speed.

At fault male drivers aged less than 25 were the most highly represented in speed-related crashes.

### Alcohol

Alcohol was involved in 18 percent of injury crashes in the District in the last five years resulting in 15 deaths and 267 other injuries.

The number of injury crashes involving alcohol is not decreasing.

Most alcohol crashes were in the rural areas of the District.

Speed and poor handling were the other factors often associated with alcohol.

### Failure to give way

Failure to give way or stop was reported in 17 percent of all reported injury crashes in the District for the last five years resulting in 7 deaths and 221 other injuries.

Most (76 percent) of crashes were on urban roads in the District.

Sixty two percent of at fault drivers were male.

### Restraints

The Ministry of Transport conducts surveys of restraint use. The results of these surveys are at a Regional Council, Police District and local body level. The front seat belt wearing rate in Whangarei District was 98 percent in 2007.

The results are obtainable from the Ministry of Transport website :

<http://www.transport.govt.nz/safety-belt-statistics-front-seat-200-1/>

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