

briefing notes - road safety issues

Far North 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 Far North District.

This report is the ninth road safety report for Far North 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 Far North 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 Far North 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

Far North District

Bends

Alcohol

Speed

Road factors

Nationally

Speed

Alcohol

Failure to give way

Restraints

2007 road trauma

Casualties

Far North District

Deaths

17

Serious casualties

83

Minor casualties

301

Crashes

Far North District

Fatal crashes

13

Serious injury crashes

59

Minor injury crashes

172

Non-injury crashes

354

Overview

In 2007 on local roads in Far North District there were 104 injury crashes and 178 non-injury crashes. In addition there were 140 injury crashes and 176 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 598 crashes by rural or urban areas for all roads (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	12	72	258	342
Urban	3	11	43	57
Total	15	83	301	399

Fatal crashes have remained relatively stable for the last decade (as below) while serious and minor injury crashes (in particular) have been steadily increasing.

There is a reasonable possibility, since fatal crashes are stable, that some of the increase in serious and minor injuries may be the result of improved reporting by NZ Police.

Crash trends in Far North District				
Year	Fatalities	Serious injuries	Minor injuries	Total
1998	17	37	141	195
1999	17	52	133	202
2000	15	54	169	238
2001	9	52	142	203
2002	12	70	174	256
2003	10	65	286	361
2004	19	60	262	341
2005	12	61	214	287
2006	13	59	264	336
2007	15	83	310	399

Crash types and contributory crash 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	32	24
Too fast	36	28
Bends –lost control	59	56
At intersections	12	16
Pedestrian	7	4
Road factors	17	21
Night time	41	37
Fatigue	9	7

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

- Worst month December, best February
- Worst day Friday, best Tuesday
- 26 percent on wet roads
- 35 percent at night
- 21 percent at intersections
- 880 number of roadside object struck
- 46 percent of at fault drivers held a full NZ drivers licence (injury crashes)
- Social cost of crashes in 2007 \$46.9m

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

- Worst month December, best July
- Worst day Friday, best Monday
- 32 percent on wet roads
- 34 percent at night
- 21 percent at intersections
- 1131 number of roadside object struck
- 53 percent of at fault drivers held a full NZ drivers licence (injury crashes)
- Social cost of crashes in 2007 \$84.3m

Crashes at bends

Between 2003 and 2007 fifty-six percent of all injury crashes in Far North District occurred at bends. These crashes resulted in 46 fatalities, 201 serious injuries and 735 minor injuries.

Crash numbers have remained relatively constant over the past five years trending up slightly perhaps in 2007.

Crashes at bends 2003 to 2007				
Crash year	Fatal crashes	Serious crashes	Minor crashes	Total
2003	6	25	102	133
2004	9	21	97	127
2005	6	27	69	102
2006	9	27	90	126
2007	6	40	101	147
Total	36	140	459	635

Most crashes at bends involve a driver losing control of their vehicles 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 injury crashes in Far North District were cliffs or banks (130), trees (99) and fences (155) and ditches (123) from a total of 621 objects struck.

Main characteristics of injury crashes at bends (2003 –2007)	
Crash characteristic	Percentage of crashes
Single vehicle	76
Alcohol	30
Excessive speed for the conditions	40
Road factors	26
Poor handling	37
Rural road	88
Wet road	31
Night time	40

Further information about injury crashes on bends (2003 to 2007) on local roads in Far North District :

- 13 deaths, 91 serious injuries and 350 minor injuries
- 74 percent of at fault drivers were male
- Most common crash type "lost control turning right"
- Most common at fault driver age group 15 to 19 years
- 36 percent of crashes involved alcohol
- 46 percent of crashes involved travelling too fast for the conditions
- Worst month December , best May
- Worst day of week Saturday , best Tuesday
- Worst time period 3pm to 6pm

Further information about injury crashes on bends (2003 to 2007) on State Highways in Far North District :

- 33 deaths, 110 serious injuries and 403 minor injuries
- 79 percent of at fault drivers were male
- Most common crash type "lost control turning right"
- Most common at fault driver age group 15 to 19 years
- 24 percent of crashes involved alcohol
- 35 percent of crashes involved travelling too fast for the conditions
- Worst month December, best July
- Worst day of week Saturday, best Monday
- Worst time period 12 midday till 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 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 during the last five years.

In Far North District, alcohol was a factor in 22 percent of injury crashes in 2007, a large decline from the 28 percent in 2006.

Alcohol crashes			
Crash year	Open road	Urban road	Total
2003	41	11	52
2004	43	13	56
2005	36	15	51
2006	48	15	63
2007	43	10	53
Total	211	64	275

The 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 region.

In 2007 there were 59 non-injury alcohol related crashes reported by the Police in the Far North district

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

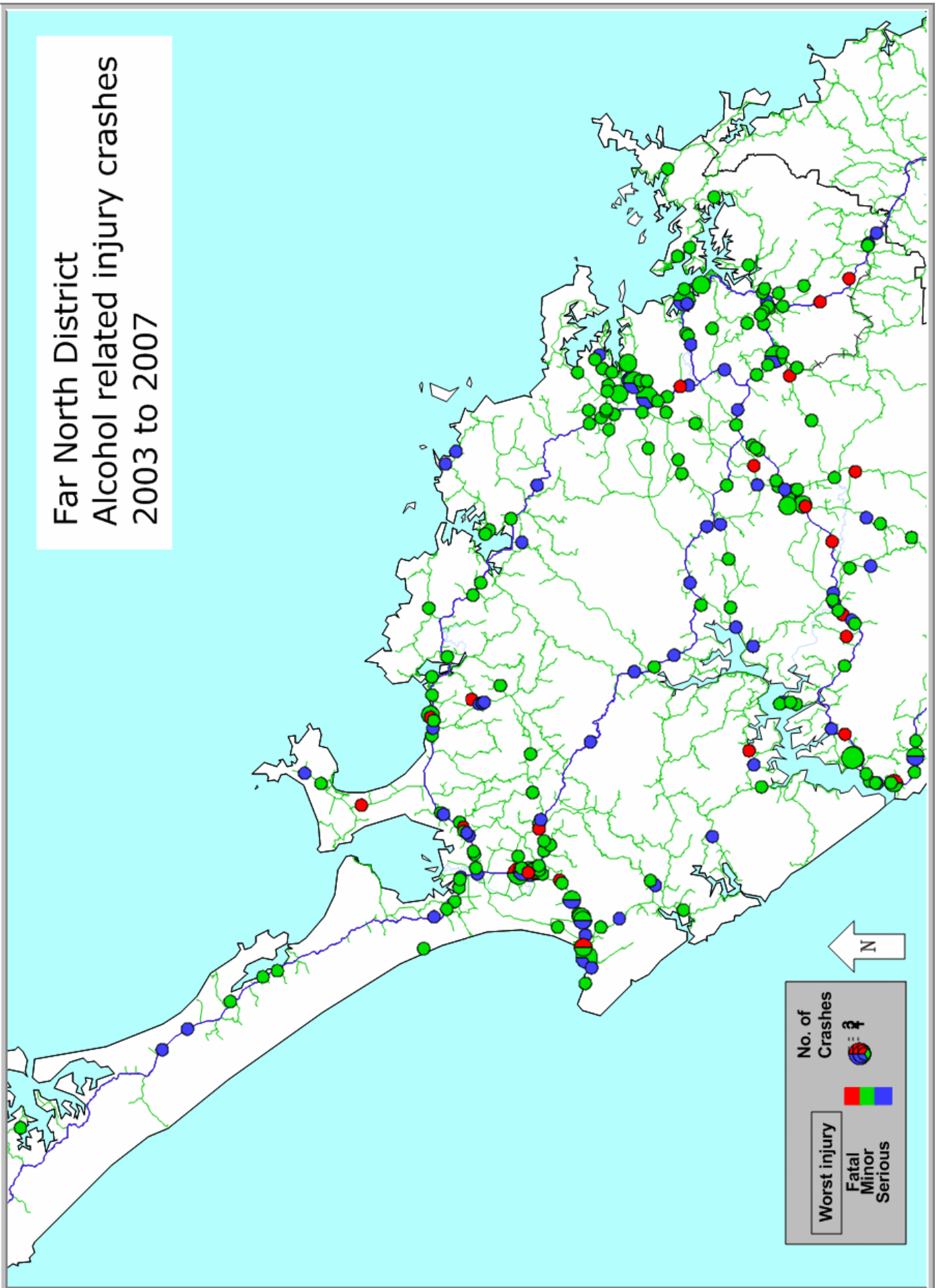
Further information about alcohol related injury crashes in Far North District on local roads (2003 to 2007):

- 12 deaths, 47 serious injuries and 157 minor injuries
- 79 percent of at fault drivers were male
- Most common crash type "lost control turning right"
- 8 percent at intersections
- 27 percent urban
- 23 percent wet road
- 68 percent night time
- Worst time period 6pm to 9pm, next worst midnight to 3am
- Worst month February, best March
- Worst day of week Sunday, best Monday

Further information about alcohol related injury crashes in Far North District on State Highways 2003 to 2007:

- 19 deaths, 49 serious injuries and 136 minor injuries
- 80 percent of at fault drivers were male
- Most common crash type "lost control turning right"
- 8 percent at intersections
- 19 percent urban
- 27 percent wet road
- 72 percent night time
- Worst time period 9pm to midnight, next worst midnight to 3am
- Worst months October , November and December (all with equal numbers), best April
- Worst day of week Friday, best Tuesday

Far North District
Alcohol related injury crashes
2003 to 2007



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, nationally there were 2103 injury crashes where the driver was travelling too fast for 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 speeds can produce up to a three percent reduction in injury crashes.

In the Far North District, excessive speed was a factor in 24 percent of all injury crashes in 2007.

There were 316 speed-related injury crashes reported in the last five years.

Speed related injury crashes

Road type	2003	2004	2005	2006	2007
Urban	57	54	50	43	49
Rural	18	13	9	14	9
Total	75	67	59	57	58

Overall speed related crashes numbers have been relatively stable for the last three years.

For Far North District long term trends are not encouraging with speed related injury crashes tripling in number terms from the early 1990s and showing a continuous (although not as dramatic) increase in percentage terms.

On local roads 83 percent of speed related crashes occur at bends (79 percent on State Highways) and a very high percentage of them occur at night (51 percent and 47 percent respectively).

This would suggest some investigation of night time curve delineation may be useful.

Age and sex of at fault drivers

Drivers at fault in speed related injury crashes (2003- 2007)	Male	Female	Total
15 - 19 years	72	30	91
20 - 24	49	10	70
25 - 29	11	18	18
30 - 39	60	7	73
40 - 49	26	1	35
50 - 59	7	6	14
60 - 69	3	1	3
70+	2	4	2
Total	230	77	306

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

- 11 deaths, 66 serious injuries and 194 minor injuries
- Most common crash type "lost control turning right"
- 90 percent mid-block
- 23 percent wet road
- 51 percent night time
- Worst month December, best March and July
- Worst day of week Sunday, best Tuesday

Further information about speed related injury crashes in Far North District on State Highways (2003 to 2006):

- 25 deaths, 61 serious injuries and 179 minor injuries
- Most common crash type "lost control turning right"
- 90 percent mid-block
- 41 percent wet road
- 47 percent night time
- Worst month December, best July
- Worst day of week Saturday, best Monday

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 the Far North District, "road factors" were a contributing factor in 20 percent of injury crashes in 2007.

There were 234 road factor related injury crashes reported in the last five years.

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

Road factor related injury crashes					
Road type	2003	2004	2005	2006	2007
Urban	7	3	2	6	6
Rural	54	51	23	33	49
Total	61	54	25	39	55

Road factors in injury crashes

Number of occasions Police reported this factor 2003 to 2007	Local road	State Highways
Slippery road	33	78
Road surface in poor condition	62	42
Road obstructed	3	4
Visibility limited	27	15
Signs or signals (needed or faulty)	2	4
Markings (needed or faulty)	2	0
Street lighting	1	2

Further information about the 109 road factor related injury crashes in Far North District on local roads (2003 to 2007):

- 3 deaths, 26 serious injuries and 149 minor injuries
- Most common crash type, loss of control at bends
- 12 percent at intersections
- 12 percent urban
- 29 percent wet road
- 29 percent night time
- Worst month January, best July
- 52 percentage of at fault drivers with full NZ drivers licence

Further information about the 125 road factor related injury crashes in Far North District on State Highways (2003 to 2007):

- 10 deaths, 31 serious injuries and 168 minor injuries
- Most common crash type, loss of control at bend
- 7 percent at intersections
- 9 percent urban
- 59 percent wet road
- 26 percent night time
- Worst month December, best July
- 54 percentage of at fault drivers with full NZ drivers licence

National issues

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

Speed

“Too fast” was recorded in 28 percent of injury crashes in the district in the last five years resulting in 36 deaths and 500 other injuries. Speed as a factor in crashes is not reducing in the district.

Eighty-one percent of speed-related crashes were “loss of control”. Alcohol and poor handling were the other driver factors often associated with speed.

At fault male drivers aged less than 30 were the most highly represented in speed-related crashes.

Alcohol

Alcohol was involved in 24 percent of injury crashes in the district in the last five years resulting in 31 deaths and 389 other injuries. The number of injury crashes involving alcohol is not decreasing.

Most alcohol crashes were in 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 nine percent of all reported injury crashes for the last five years resulting in three deaths and 179 other injuries.

Thirty-five percent of crashes were in urban areas of the district.

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 Far North District was 99 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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