



briefing notes - road safety issues

Kaipara District

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 Kaipara District.

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

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 Kaipara 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 Kaipara 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 *

Kaipara District

Bends
Alcohol
Road factors and roadside hazards

2008 road trauma

Casualties Kaipara District

Deaths	4
Serious casualties	29
Minor casualties	72

Nationally *

Speed
Alcohol
Failure to give way
Restraints

Crashes Kaipara District

Fatal crashes	4
Serious injury crashes	25
Minor injury crashes	50
Non-injury crashes	122

* not in any specific order of priority

Overview

In 2008 on local roads in Kaipara District there were 37 injury crashes and 48 non-injury crashes. In addition there were 42 injury crashes and 74 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 79 injury crashes by rural or urban areas (rural is defined as an area with a speed limit of 80km/h or more).

Casualties by urban / rural 2008				
Road type	Fatalities	Serious injuries	Minor injuries	Total
Rural	4	22	51	77
Urban	0	7	21	28
Total	4	29	72	105

The table below shows crash numbers over the last ten years. Fatalities and serious crashes (those most likely to be reported) have fluctuated but remained relatively constant over the ten year period. Minor crashes on the other hand have risen, which can be a sign of an improving reporting rate. It is therefore of some concern that minor crashes (but not fatal and serious crashes) have fallen sharply in 2008 as this potentially suggests a fall in the reporting rate—this effect is especially noticeable in the “bend” issue on page three.

Crash trends in Kaipara District				
Year	Fatal Crashes	Serious Crashes	Minor Crashes	Total Crashes
1999	5	17	29	51
2000	7	16	26	49
2001	4	18	21	43
2002	6	12	34	52
2003	2	10	50	62
2004	5	20	65	90
2005	5	20	62	87
2006	5	16	71	92
2007	4	19	80	103
2008	4	25	50	79

Main crash characteristics		
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	26	19
Too fast	27	24
At bends	58	55
Fatigue	12	10
Object hit	63	59
Road factors	22	24
Night time	38	33

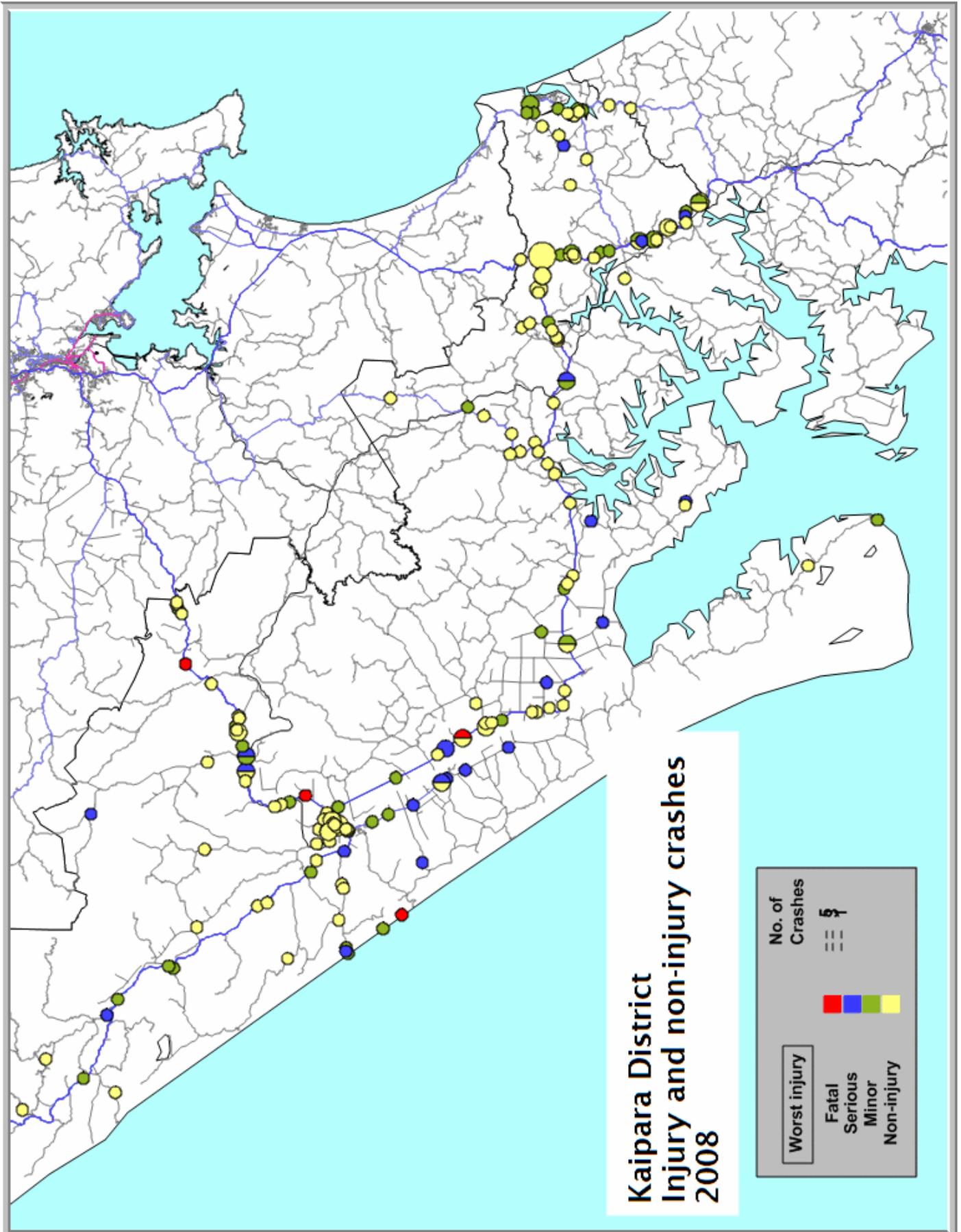
Although “fatigue” is not a specific issue in this briefing note it is mentioned above because at 12 percent involvement in fatal and serious crashes it is more than double the rate for local bodies that are similar to the district. It is also above the national fatal and serious value of eight percent. However actual numbers are small, 46 out of 807 injury crashes in five years.

Further information about the 203 injury and 244 non-injury crashes on **local** roads in Kaipara District 2004 to 2008:

- Worst month December, best July
- Worst day Saturday, best Wednesday
- 26 percent on wet roads
- 32 percent at night
- 19 percent at intersections
- 319 roadside objects struck
- Social cost of crashes in 2008 \$23.1 m

Further information about the 248 injury and 327 non-injury crashes on **State Highways** in Kaipara District 2004 to 2008:

- Worst month April, best July
- Worst day Saturday, best Tuesday
- 35 percent on wet roads
- 32 percent at night
- 19 percent at intersections
- 426 roadside objects struck
- Social cost of crashes in 2008 \$27.1 m



Bend - loss of control or head on

Between 2004 and 2008 55 percent of all injury crashes in Kaipara District were loss of control or head on bends. These crashes resulted in 12 fatalities, 74 serious injuries and 273 minor injuries.

Crashes at bends 2004 to 2008				
Crash year	Fatal crashes	Serious crashes	Minor crashes	Total
2004	4	14	38	56
2005	3	9	33	45
2006	2	8	42	52
2007	2	13	42	57
2008	1	15	21	37
Total	12	59	176	247

As mentioned on page two there does appear to have possibly been a drop in crash reporting of minor crashes in 2008 and this has reflected strongly in bend related crashes involving minor injuries.

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 Kaipara District were cliffs or banks (69), trees (80), fences (40), posts or poles (18) and ditches (53) from a total of 241 objects struck.

Main characteristics of injury lost control or head on crashes at bends	
Crash characteristic	Percentage of crashes
Single vehicle	80
Alcohol	23
Excessive speed for the conditions	34
Road factors	28
Poor handling	42
Rural road	90
Wet road	38 t
Night time	34

Further information about the 155 injury loss of control or head on crashes on bends (on local roads in Kaipara District 2004 to 2008:

- 5 deaths, 32 serious injuries and 124 minor injuries
- 69 percent of at fault drivers were male
- Most common crash type “loss of control turning right” (55 crashes)
- Most common at fault driver age group 15 to 19 years (24 percent of all at fault drivers)
- 28 percent of crashes involved alcohol
- 33 percent of crashes involved speed too fast for the conditions
- Worst month December, best June
- Worst day Saturday, best Wednesday
- Worst three hour time period 6pm till 9pm

Further information about the 132 injury loss of control or head on crashes on bends on State Highways in Kaipara District 2004 to 2008:

- 7 deaths, 42 serious injuries and 149 minor injuries
- 67 percent of at fault drivers were male
- Most common crash type “loss of control turning right” (72 crashes)
- Most common at fault driver age group 20 to 24 years (17 percent of at fault drivers)
- 20 percent of crashes involved alcohol
- 35 percent of crashes involved speed too fast for the conditions
- Worst month January, best May
- Worst day Saturday, best Thursday
- Worst three hour time period 3pm to 6pm

Road Factors - including roadside hazards

A safe road environment includes appropriate geometric design standards, good delineation, adequate surface skid resistance and a roadside free of unforgiving hazards.

In 2008 in Kaipara District, "road factors" were a contributing factor in 22 percent of fatal and serious crashes and 24 percent of injury crashes.

Additionally in Kaipara District between 2004 and 2008 63 percent of all fatal and serious crashes and 59 percent of injury crashes involved a roadside hazard being struck.

Road factor related injury crashes					
Road type	2004	2005	2006	2007	2008
Rural	24	14	20	21	16
Urban	0	0	3	2	7
Total	24	14	23	23	23

Roadside hazards normally contribute to the overall crash outcome by increasing injury severity but can in themselves be a contributory factor in a crash.

For example occupants in an errant vehicle striking a large tree close to the road edge are likely to sustain worse injuries than if the tree was not present. If the same tree had low branches and was located at an intersection it could also contribute to a lack of visibility.

In the 264 injury crashes in Kaipara District between 2004 and 2008 where a roadside hazard was struck 13 people died, 80 received serious injuries and 276 minor injuries.

The most commonly struck objects are shown below.

Type of hazard 2004 to 2008	Number of times hazard struck
Ditch	89
Fence	59
Cliff / bank	85
Tree	35
Post / Pole	28
Over a bank	14

Types of road factors in injury crashes

CAS Road factor group	Local roads	State Highways
Slippery road *	23	40
Road surface in poor condition	26	13
Road obstructed	5	3
Visibility limited	8	5
Signs or signals (needed or faulty)	0	2
Markings (needed or faulty)	0	0
Street lighting	0	0

* note that NZTA does not assume that a road that is "wet" is necessarily "slippery". This factor is only added to CAS if the attending Police Officer specifically mentions a "slippery road".

Further information about the 54 road factor related injury crashes in Kaipara District on **local** roads 2004 to 2008:

- 1 death, 16 serious injuries and 63 minor injuries
- Most common crash type, loss of control at bends (36 crashes)
- 5 percent at intersections
- 89 percent rural
- 26 percent wet road
- 29 percent night time
- Worst months February and March (equal)

Further information about the 53 road factor related injury crashes in Kaipara District on **State Highways** 2004 to 2008:

- 1 death, 11 serious injuries and 67 minor injuries
- Most common crash type, loss of control at bends (33 crashes)
- 13 percent at intersections
- 89 percent rural
- 66 percent wet road
- 34 percent night time
- Worst month March, best October

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 sixteen times more likely to be involved in a fatal 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 Kaipara District, between 2004 and 2008 alcohol was a factor in 26 percent of fatal and serious crashes and 19 percent of all injury crashes.

Number of alcohol related injury crashes			
Crash year	Open road	Urban road	Total
2004	11	6	17
2005	10	1	11
2006	13	4	17
2007	14	9	23
2008	10	8	18
Total	58	28	86

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

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

In 2008 there were 10 non-injury alcohol related crashes reported by the Police in the Kaipara District.

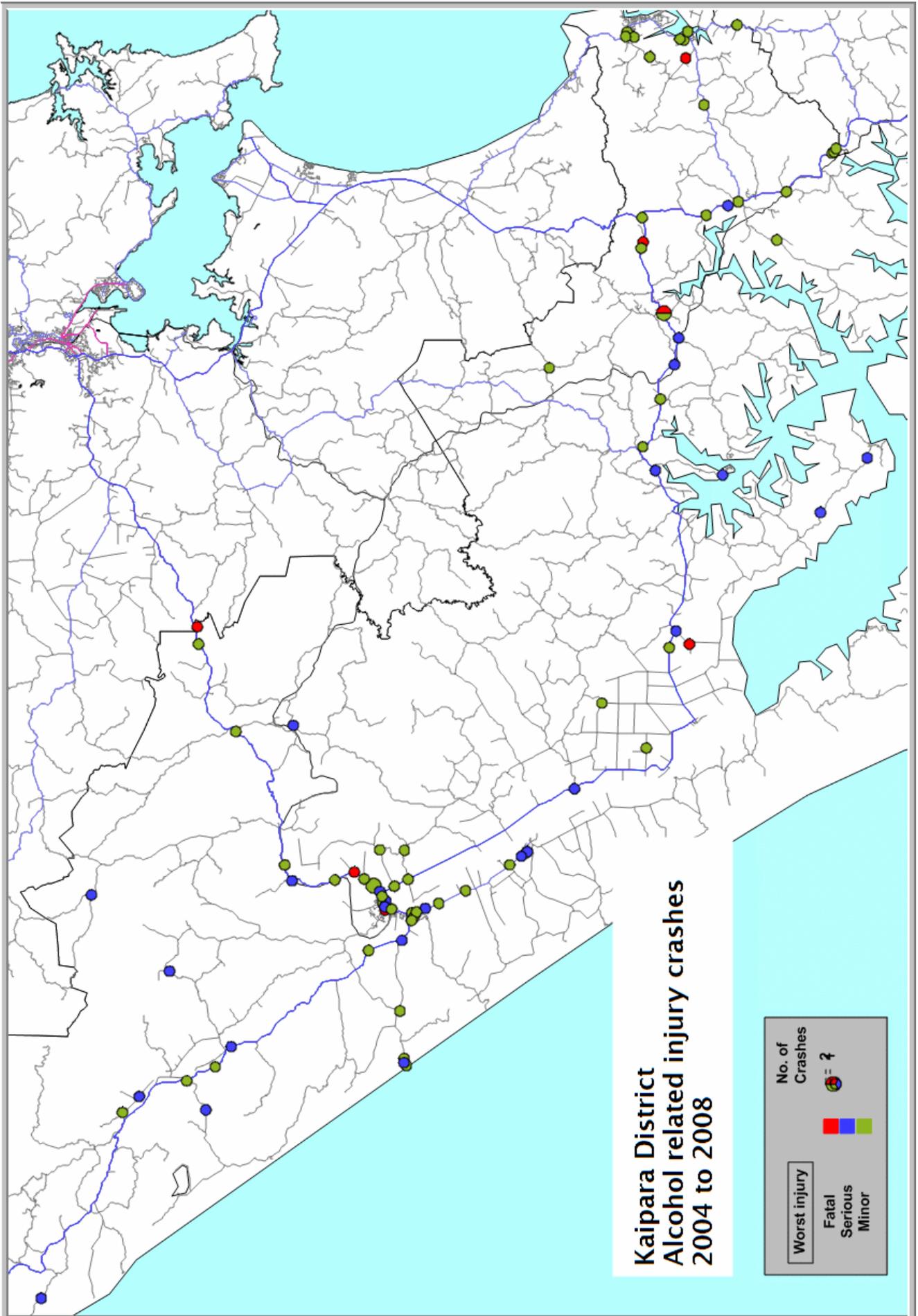
The key crash locations of alcohol related crashes occurring between 2004 and 2008 are shown on the map on the following page.

Further information about the 48 alcohol related injury crashes in Kaipara District on **local** roads 2004 to 2008:

- 3 deaths, 18 serious injuries and 43 minor injuries
- 82 percent of at fault drivers were male
- Most common crash type “loss of control turning right” (32 crashes)
- 27 percent at intersections
- 42 percent urban
- 21 percent wet road
- 66 percent night time
- Worst three hour time period 9pm to midnight
- Worst month March, best July
- Worst day Saturday, best Monday

Further information about the 38 alcohol related injury crashes in Kaipara District on **State Highways** 2004 to 2008:

- 4 deaths, 14 serious injuries and 37 minor injuries
- 86 percent of at fault drivers were male
- Most common crash type “loss of control at a bend” (26 crashes)
- 21 percent at intersections
- 21 percent urban
- 26 percent wet road
- 68 percent night time
- Worst three hour time period 9pm to midnight
- Worst month February, best December
- Worst day Saturday, best Tuesday



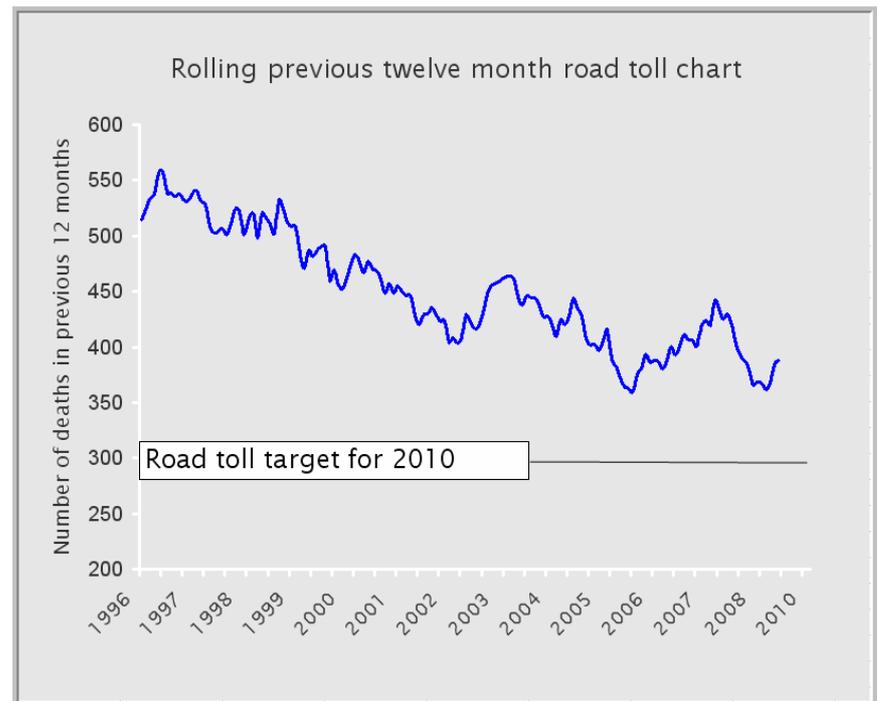
The next ten years—moving beyond Road Safety 2010

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 right illustrates the progress made during the life of the Road Safety 2010 strategy. 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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