



# *briefing notes - road safety issues*

## *Transit New Zealand Region Two*

Land Transport New Zealand has prepared this road safety issues report. It is based on reported crash data and trends for the 2002–2006 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 on State Highways in Transit New Zealand Region Two (Transit NZ R2).

This report includes only Transit NZ R2 roads not patrolled by the New Zealand Police Motorway patrol. An analysis of these roads can be found in Auckland Motorways report. The crash data has been split this way as it is impractical to compare the motorway system with the rest of the State Highway network in the region.

This report is the eighth road safety issues report for Transit NZ R2 and all the material unless otherwise stated in this report applies only to Transit NZ R2 roads.

The issues chosen for this report are drawn from either the most common crash types 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 Transit and their consultants to use their access to the Ministry of Transport's Crash Analysis System to delve deeper into the highlighted issues.

### Major road safety issues

#### Transit NZ Region 2

Intersections

Alcohol

Speed

Bends

#### Nationally

Speed

Alcohol

Failure to give way

Restraints

### 2006 road trauma

#### Casualties

#### Transit NZ R2

Deaths

13

Serious casualties

51

Minor casualties

188

#### Crashes

#### Transit NZ R2

Fatal crashes

10

Serious injury crashes

37

Minor injury crashes

124

Non-injury crashes

361

## Overview

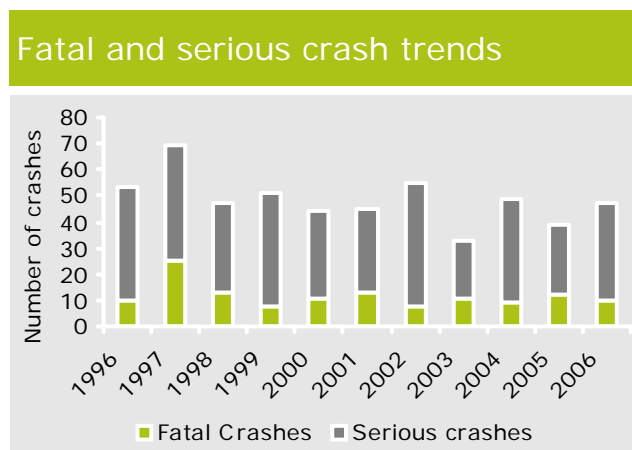
In 2006 on State Highways (not patrolled by the Motorways Police) in Transit NZ R2 there were 171 injury crashes and 361 non-injury crashes.

The table below shows the number of injuries resulting from 2006 crashes by rural or urban areas (rural is defined as an area with a speed limit of 80km/h or more).

Casualties by injury type 2006				
	Fatalities	Serious injuries	Minor injuries	Total
Rural	12	34	132	178
Urban	1	17	56	74
Total	13	51	188	252

Fatal and serious crashes over a ten year period in the region are shown in the chart below.

Both fatal and serious crashes are showing a gradual downward trend, against rising traffic volumes on the regions State Highway (SH) network.



Fatal and serious crashes	
Crash type or contributory cause 2002 to 2006	Percentage fatal or serious crashes of this type or contributory cause
Intersection	23 %
Alcohol	25 %
Too fast (for the conditions)	21 %
Bends	43 %
Dark	34 %
Fatigue	9 %

Further information about 2006 injury and non-injury crashes:

- Worst month January, best November
- Worst day of week Sunday, best Monday
- 33 percent on wet roads
- 31 percent at night
- 34 percent at intersections
- Social cost of crashes in 2006 \$77m
- At fault of part fault (injury crashes) male driver 64 percent
- 61 percent of at fault drivers held a full NZ licence (injury crashes)

It has been observed nationally that there is a growing group of drivers who have not been exiting the graduated licence system and who are choosing to stay on restricted licences.

This is making it increasingly difficult to distinguish drivers who are truly inexperienced from those that should have moved to a full licence.

As a consequence it is more difficult to target educational material.

This is certainly true in Transit NZ R2 with as few as 61 percent of at fault drivers in injury crashes being the holder of a full driving licence.

At fault driver licence status	
Driver licence status. Transit NZ R2 2002 to 2006	Percentage of total 'at fault' drivers (New Zealand 2006 value in brackets)
Full	61.0 (58.4) %
Learner	7.6 (9.5) %
Restricted	18.1 (17.6) %
Never licenced	1.7 (2.2) %
Disqualified	1.7 (1.7) %
Overseas	2.9 (4.2) %
Expired	1.2 (0.5) %
Other / unknown	5.8 (5.6) %

## Intersections

Thirty-three percent of crashes on State Highways in Transit NZ R2 are at intersections.

During the five year period 2002 to 2006 there were 252 injury crashes at intersections and 557 non-injury crashes.

In these 2 people died, 56 received serious injuries and 316 received minor injuries.

Crashes at Intersections					
	2002	2003	2004	2005	2006
Injury crash	41	64	46	34	67
Non-injury crash	110	117	107	110	113
Total	151	181	153	144	180

Locations with the most injury crashes		
Intersection name	Injury crashes 2002 -2006	Total in 2006
SH1 / Wainui Road	16	5
SH 16 / Taupaki Road	14	4
SH17 / Coatesville-Riverhead Highway	10	2
SH1 / Red Beach road	8	0
SH1 / Silverdale Street	7	2

Most common junction type Injury and Non-injury crashes		
Junction Type	Rural	Urban
Roundabout	21	18
Tee	283	274
Cross (X)	88	39

The most common crash type between 2002 and 2006 (182 injury or non-injury crashes) was when a driver turned right at an intersection and was hit by a vehicle approaching from the right (commonly at tee junctions).

The next most common crash (154 injury or non-injury crashes) was one in which a driver turned right across the path of a vehicle coming straight towards them.

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

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

Intersections can present most drivers with one of their biggest driving challenges and as a result less experienced drivers are highly represented in these crashes.

It is interesting to note that the Transit NZ R2 number for learner drivers is lower than the national figures which suggests, that the rural State Highways are avoided by these drivers, initially at least.

At fault driver licence status	
Driver Licence status, intersection related injury crashes, at fault drivers in Transit NZ R2	Percentage of total at fault drivers in intersection related crashes (New Zealand value in brackets)
Full	65.2 (60.9) %
Learner	5.5 (9.4) %
Restricted	14.6 (14.8) %
Never licenced	2.7 (2.5) %
Disqualified	0.8 (1.6) %
Overseas	4.3 (3.7) %
Expired	1.2 (0.8) %
Other / unknown	5.3 (6.3) %

Further information about injury crashes at intersections on State Highways in Transit NZ R2 (2002 to 2006):

- 61 percent of at fault drivers are male
- 8 percent of crashes also involved alcohol
- 39 percent urban
- 29 percent wet roads
- 27 percent night time
- Worst month December, best April
- Worst day of week Friday, best Monday

## 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 2006, alcohol-affected drivers contributed to 31 percent of all fatal crashes and 15 percent of all injury crashes.

In Transit NZ R2, alcohol was a factor in 13 percent of injury crashes in 2006 but 25 percent of fatal and serious crashes.

The majority of fatal and serious alcohol crashes can be found on State Highway 16 between Waitakere City and Helensville and on State Highway 1 between Orewa and Wellsford (see following map).

There were 114 alcohol-related injury crashes reported in the last five years.

Despite the efforts of the Police alcohol related injury crashes show no sign of decreasing in the region consistent with the trend nationally.

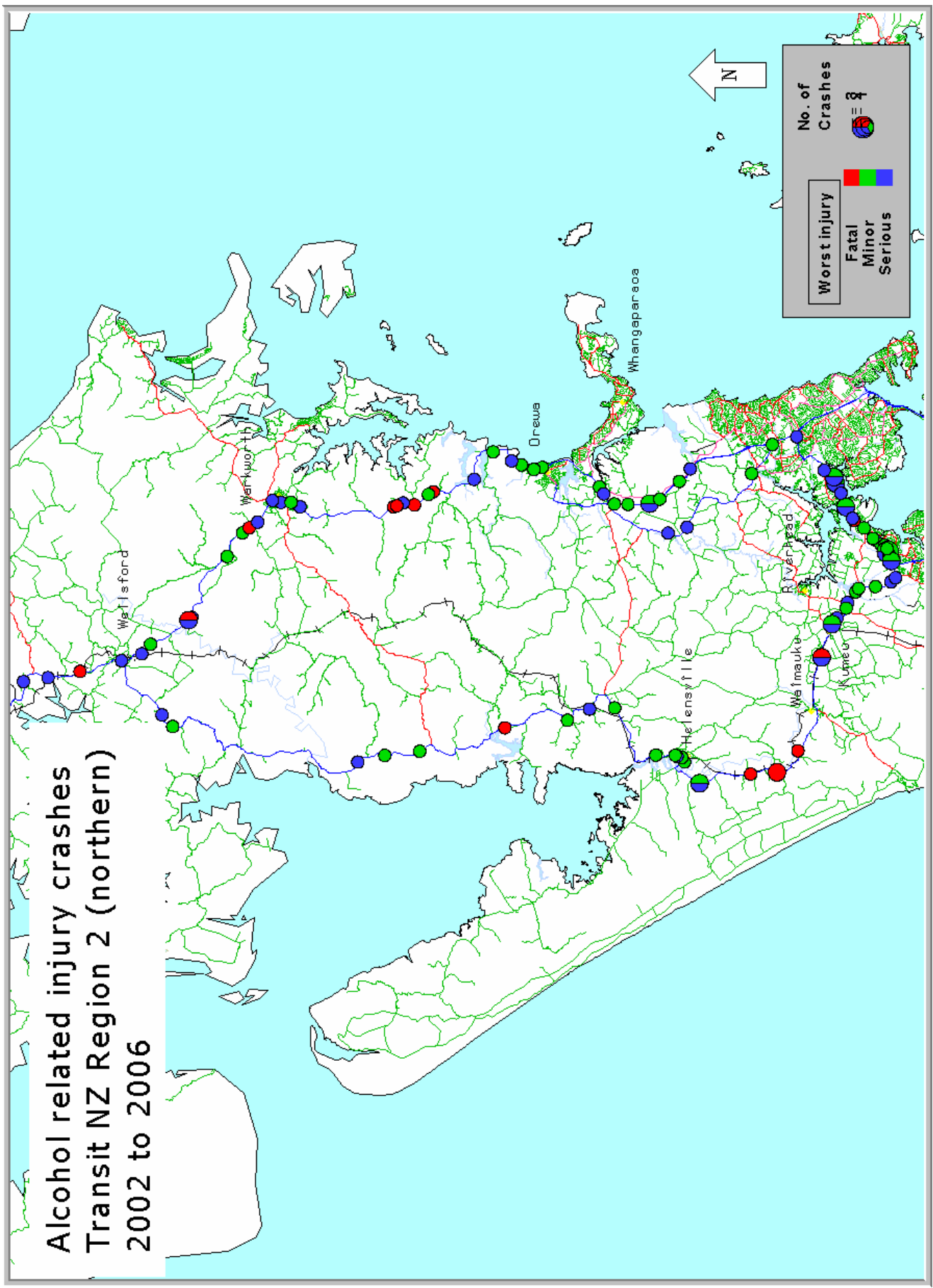
Alcohol crashes (injury crashes)			
Crash year	Open road	Urban road	Total
2002	17	10	27
2003	14	8	22
2004	14	6	20
2005	17	5	22
2006	11	12	23
Total	73	41	114

At fault driver licence status	
Driver Licence status, alcohol related injury crashes, at fault drivers in Transit NZ R2 2002—2006	Percentage of total at fault drivers in alcohol related crashes (New Zealand value in brackets)
Full	47.4 (41.6) %
Learner	11.9 (15.8) %
Restricted	17.8 (20.8) %
Never Licenced	3.4 (4.6) %
Disqualified	4.2 (6.2) %
Overseas	3.4 (1.0) %
Expired	0.8 (1.4) %
Other / unknown	11.0 (8.2) %

Further facts about alcohol related injury crashes on State Highways in Transit NZ R2 (2002 to 2006):

- 15 deaths, 68 serious injuries and 107 minor injuries
- 81 percent of at fault drivers were male
- Most common crash type ‘loss of control on bend’
- 17 percent at intersections
- 36 percent urban
- 28 percent wet road
- 65 percent night time
- Worst month December, best April
- Worst day of week Saturday, best Wednesday
- 18 percent of crashes also involved fatigue as a contributory factor

# Alcohol related injury crashes Transit NZ Region 2 (northern) 2002 to 2006



## Speed

Nationally, speed is one of the major contributing factors to road crashes. For the 12 months to the end of December 2006, excessive speed contributed to around 31 percent of fatal crashes and 16 percent of injury crashes.

During 2006, nationally there were 1,839 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 Transit NZ R2, excessive speed was a factor in 18 percent of all injury crashes in 2006.

There were 131 speed-related injury crashes reported in the last five years.

Speed related injury crashes					
Speed related injury crashes	2002	2003	2004	2005	2006
Urban	6	7	4	3	8
Rural	17	20	19	24	23
Total	23	27	23	27	31

Males are highly represented in speed related crashes accounting for 72 percent of at fault drivers.

Age and sex of at fault drivers			
Drivers at fault in speed related injury crashes (2002- 2006)	Male	Female	Total
15- 19 years	20	12	32
20 - 24	17	2	19
25 - 29	15	3	18
30 - 39	25	10	35
40 - 49	12	2	14
50 - 59	6	2	8
60 - 69	2	2	4
70+	0	2	2
<b>Total</b>	<b>97</b>	<b>35</b>	<b>132</b>

The licence status of at fault drivers is shown in the table below.

As with alcohol related crashes it appears that learner drivers and to a lesser extent restricted drivers are either more cautious than elsewhere or are avoiding the rural State Highway network.

Driver licence status	
Driver Licence status, speed related injury crashes, at fault drivers Transit NZ R2 2002 to 2006	Percentage of total at fault drivers in speed related crashes (New Zealand 2006 value in brackets)
Full	54.8 (43.0) %
Learner	11.1 (15.3) %
Restricted	18.5 (22.5) %
Never Licenced	2.2 (4.5) %
Disqualified	2.9 (4.1) %
Overseas	1.5 (3.7) %
Expired	1.5 (0.5) %
Other / unknown	7.4 (6.2) %

Further facts about speed related injury crashes on State Highways in Transit NZ R2 (2002 to 2006):

- 28 deaths, 57 serious injuries and 143 minor injuries
- 72 percent of at fault drivers were male
- Most common crash type "lost control on bend"
- 24 percent also include alcohol as a crash factor
- 47 percent wet road
- 44 percent night time
- Worst months August and June, best October
- Worst day Saturday, best Tuesday and Wednesday

## Crashes at bends

Between 2002 and 2006 thirty-four percent of all injury crashes in Transit NZ R2 occurred at bends. These crashes resulted in 39 fatalities, 105 serious injuries and 268 minor injuries.

Crash numbers have remained steady over the last five years.

Crashes at bends 2002 to 2006				
Crash year	Fatal crashes	Serious crashes	Minor crashes	Total
2002	6	21	26	53
2003	8	6	37	51
2004	6	16	27	49
2005	6	11	37	54
2006	6	12	37	55
Total	32	66	164	262

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.

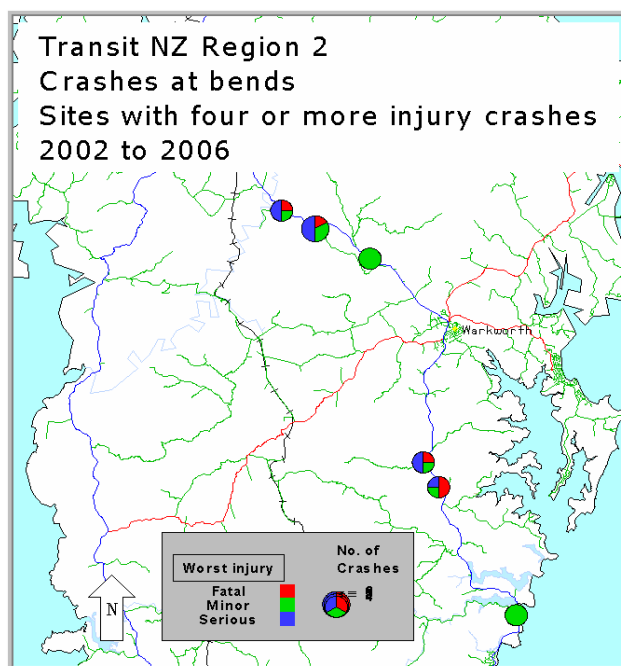
Hitting these objects can result in a relatively minor off-road event turning into something far more serious.

The four most common roadside hazards struck in injury crashes in Transit NZ R2 were cliffs or banks (58), ditches (37), fences (40) and trees (35) from a total of 265 objects struck.

Main characteristics of injury crashes at bends	
Crash characteristic	Percentage of crashes
Single vehicle	66 %
Alcohol	27 %
Excessive speed for the conditions	34 %
Road factors	18 %
Poor handling	32 %
Rural road	79 %
Wet road	40 %
Night time	39 %

At fault driver licence status	
Driver Licence status, bend related injury crashes, at fault drivers in Transit NZ R2 2002 to 2006	Percentage of total at fault drivers in bend related crashes (New Zealand 2006 value in brackets)
Full	57.5 (51.1) %
Learner	11.2 (10.7) %
Restricted	17.0 (17.9) %
Never licenced	0.7 (4.1) %
Disqualified	1.1 (2.8) %
Overseas	4.6 (5.6) %
Expired	0.4 (0.9) %
Other / unknown	7.3 (6.8) %

The map below shows crash sites with four or more injury crashes in the last five years. There is one other site not shown on this map and that is on SH22 near Bycroft Road (five crashes).



Further information about injury crashes on bends (2002 to 2006) on State Highways in Transit NZ R2:

- 71 percent of at fault drivers were male
- Most common at fault driver age group 15-19 years then 20-24 years
- Worst month December and February best May
- Worst day of week Sunday, best Wednesday

## National issues

This section contains some brief information on the key national road safety issues as measured on State Highways in Transit NZ R2. They may have been covered elsewhere in this document or not be a specific issue.

### Speed

“Too fast” was recorded in 17 percent of injury crashes in the region in the last five years resulting in 28 deaths and 200 other injuries. Speed as a factor in crashes is increasing in the region.

Sixty-nine percent of speed-related crashes were “loss of control at a bend” crashes.

Alcohol and poor handling were the other driver factors often associated with speed.

At fault male drivers aged 15 to 19 were the most highly represented of the five year age bands in speed-related crashes.

### Alcohol

Alcohol was involved in 15 percent of injury crashes in the city in the last five years resulting in 15 deaths and 175 other injuries. The number of injury crashes involving alcohol is not decreasing.

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

### Failure to give way

Failure to give way or stop was reported in 20 percent of all reported injury crashes for the last five years, resulting in two deaths and 242 other injuries.

Fifty-seven 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 level, and may not be fully appropriate to a Local Authority. The results are obtainable from the Ministry of Transport website.

<http://www.transport.govt.nz/belts-index/>

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