

briefing notes - road safety issues

Auckland Region State Highways

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 on State Highways in the Auckland region.

This report is the ninth road safety report for State Highways in the Auckland region. All the material unless otherwise stated in this report applies only to State Highways. It also applies only to those parts of the State Highway network not patrolled by the NZ Police Motorways team. Crashes on these roads, which are very different in nature, can be found in the "Auckland Motorways" report.

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. However, this rolling five year analysis is very useful for identifying trends.

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

We have included a brief overview of crashes.

We encourage Network Managers and operational staff to use their 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

Auckland State Highways

Crashes at bends
 Speed related crashes
 Night time crashes

2007 road trauma

Casualties

Auckland State Highways

Deaths 7
 Serious casualties 38
 Minor casualties 199

Nationally

Speed
 Alcohol
 Failure to give way
 Restraints

Crashes

Auckland State Highways

Fatal crashes 6
 Serious injury crashes 29
 Minor injury crashes 136
 Non-injury crashes 350

Overview

In 2007 on State Highways in the Auckland region (not patrolled by the NZ Police Motorways team and henceforth referred to as "Auckland State Highways") there were 171 injury crashes and 350 non-injury crashes.

The table below shows the number of injuries resulting from the 171 injury crashes by rural or urban areas for State Highways (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	7	29	140	176
Urban	0	9	59	68
Total	7	38	199	244

The number of fatalities on Auckland State Highways has been fluctuating over the last decade, however the 2007 toll was the lowest in the period. Serious injuries have also fluctuated over the period and the number of serious injuries in 2007 was the second lowest in the decade.

Minor injuries have also fluctuated through the last decade and the 2007 total was the highest in the period, by a very small margin.

The relatively stable number of injuries occurring needs to be seen in the context of a very large rise in non-motorway State Highway traffic volumes in the past decade in the region.

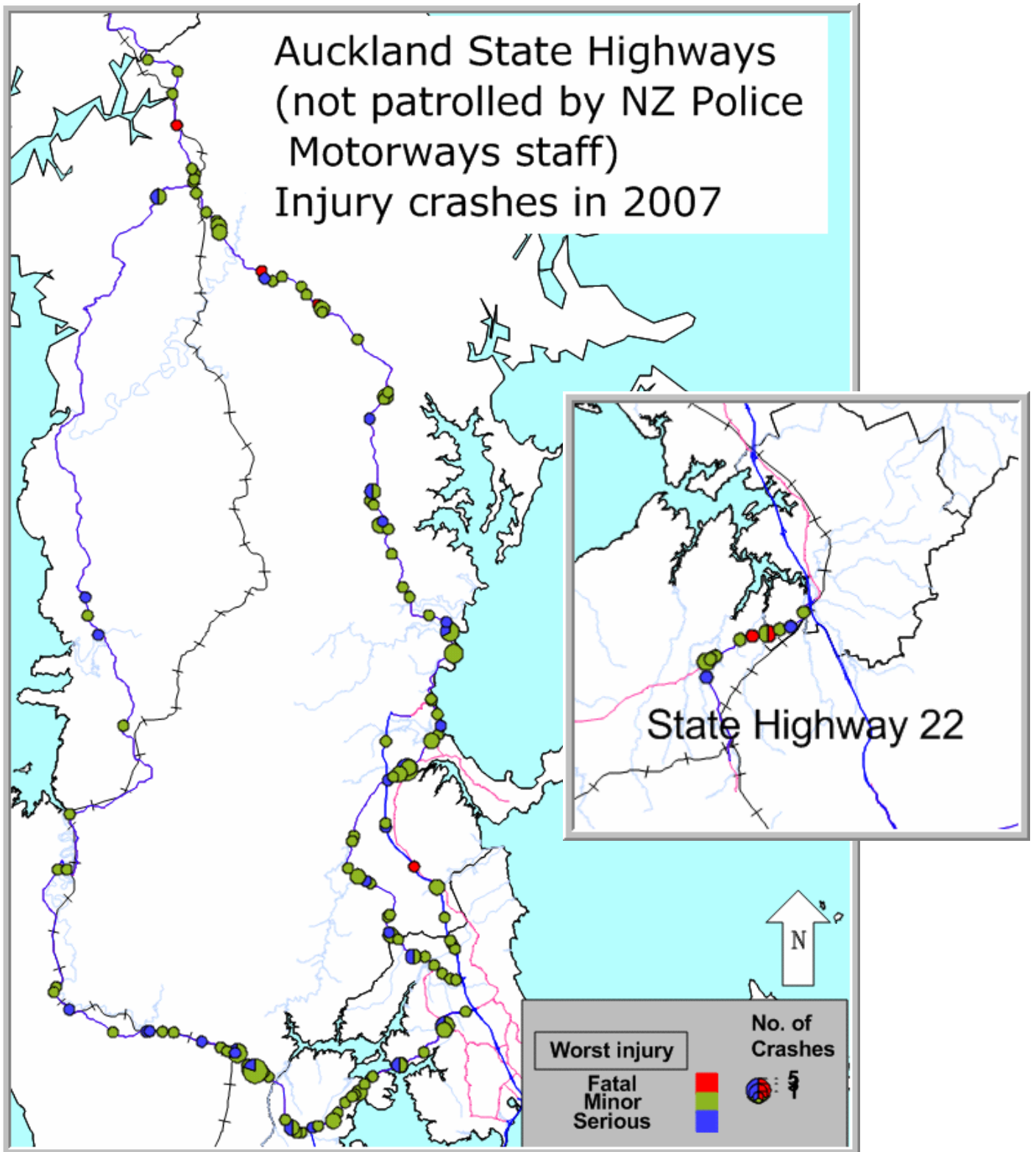
Crash trends on Auckland State Highways				
Year	Fatalities	Serious injuries	Minor injuries	Total
1998	15	49	160	224
1999	8	55	184	247
2000	12	52	127	191
2001	15	50	161	226
2002	8	63	163	234
2003	11	33	197	241
2004	10	57	182	249
2005	18	39	155	212
2006	13	51	188	252
2007	7	38	199	244
Total	117	487	1716	2320

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	23	14
Too fast	22	16
At bends	42	32
At intersections	23	32
Pedestrian related	6	3
Road factors	11	11
Lost control—head on straights	17	16
Night time	37	31
Fatigue	9	9
Poor observation	28	35

Further information about the 789 injury and 1658 non-injury crashes on Auckland State Highways (2003 to 2007):

- Worst month December, best May
- Worst day Friday, best Wednesday
- Worst time 3 hour period 3pm till 6pm, then 12 (midday) till 3pm
- 31 percent on wet roads
- 30 percent at night
- 34 percent at intersections
- 4592 vehicles involved
- Most represented at fault driver age group (injury crashes) 15 to 24 years, representing 31 percent of all at fault drivers
- 64 percent of at fault drivers (injury crashes) held a full NZ drivers licence
- 68 percent on rural roads
- 1235 roadside objects were struck crashes
- Social cost of crashes in 2007 \$61.5m



Crashes at bends

Between 2003 and 2007 thirty-two percent of all injury crashes and 42 percent of fatal and serious crashes on Auckland State Highways occurred at bends.

These crashes resulted in 34 fatalities, 93 serious injuries and 273 minor injuries.

Crash numbers have remained fairly constant for the past five years.

Crashes at bends 2003 to 2007				
Crash year	Fatal crashes	Serious crashes	Minor crashes	Total
2003	8	6	37	51
2004	5	16	27	48
2005	6	11	36	53
2006	6	12	37	55
2007	1	14	31	46
Total	26	59	168	253

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 injury crashes on Auckland State Highways were cliffs or banks (56), ditches (39), trees (35), fences (133) and posts or poles (28) from a total of 635 objects struck.

A number of highways have a high percentage of crashes at night as illustrated in the following table.

Injury crashes at bends 2003 to 2007 by Highway number and day / night (percentage in brackets)			
Highway number	Dark	Light	Total
SH 16	29 (45)	35	64
SH 17	7 (46)	8	15
SH 18	9 (36)	16	25
SH 1 & 1A	44 (36)	76	121
SH 22	14 (56)	11	25
Total	103 (41)	147	250

Main characteristics of injury crashes at bends	
Crash characteristic	Percentage of crashes
Single vehicle	67
Alcohol	28
Excessive speed for the conditions	35
Road factors	18
Poor handling	34
Rural road	82
Wet road	42
Night time	41

Further information about injury crashes on bends (2003 to 2007) on Auckland State Highways:

- 71 percent of at fault drivers were male
- Most common crash type "lost control turning right"
- Worst month September, best May
- Worst day of week Sunday, best Wednesday
- Worst 3 hour time period 3pm till 6pm
- 58 percent of at fault drivers held a full NZ drivers licence

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.

On Auckland State Highways, excessive speed for the conditions was a factor in 21 percent of all injury crashes in 2007.

There were 129 speed-related injury crashes reported in the last five years.

Speed related injury crashes

Road type	2003	2004	2005	2006	2007
Urban	7	4	3	8	3
Rural	20	19	24	23	18
Total	27	23	27	31	21

Overall speed related crashes numbers have fluctuated over the last five years.

Although fatal and serious speed related crashes on State Highways in all New Zealand have shown no downward trend in since 1997 speed related fatal and serious crashes on local roads have risen in the same period.

Speed related injury crashes by State Highway number

Road type	SH 16	SH 17	SH 18	SH 1	SH 22
Urban	6	5	10	3	1
Rural	18	3	6	67	9
Total	24	8	16	70	10

Age and gender of at fault drivers (note : age ranges are not equal)

Drivers at fault in speed related injury crashes (2003- 2007)	Male	Female	Total
15 - 19 years	17	12	29
20 - 24	16	2	18
25 - 29	12	4	16
30 - 39	22	10	32
40 - 49	16	3	19
50 - 59	7	4	11
60 - 69	1	2	3
70+	0	2	2
Total	91	39	130

Further information about the 129 speed related injury crashes on Auckland State Highways (2003 to 2007):

- 27 deaths, 55 serious injuries and 143 minor injuries
- 68 percent of crashes were loss of control at a bend
- 85 percent mid-block
- 45 percent wet road
- 40 percent night time
- Worst month February, best July and October (equal)
- Worst day of week Sunday, best Wednesday
- 56 percent of at fault drivers held a full NZ drivers licence
- Most common age group of at fault drivers 15 to 24 representing 36 percent of all at fault drivers
- 19 percent of crashes included road factors
- 22 percent also included alcohol as a factor
- 110 objects were struck including 15 trees

Night time crashes

Thirty-seven percent of fatal and serious crashes on Auckland State Highways occurred at night.

This is the same as the average for all New Zealand State Highways, however unlike nationally, the number of crashes on Auckland State Highways is increasing.

Between 2003 and 2007 there were a total of 214 night time injury crashes resulting in 23 fatalities, 71 serious injuries and 228 minor injuries.

Night time crashes by State Highway number and year

Highway Number	2003	2004	2005	2006	2007
SH 16	6	8	10	11	10
SH 17	4	4	6	4	5
SH 18	9	7	3	10	10
SH 1 & 1A	10	15	16	17	22
SH 22	7	7	5	2	3
Total	38	42	40	44	50

Just over half of the night time crashes occur during the weekend period when traffic volumes are generally lower.

It is therefore important that appropriate enforcement resources are allocated during these less congested times.

Night time crashes by weekday and weekend

Worst injury	Weekend	Weekday
Fatal	9	9
Injury	93	103
Non-injury	215	193
Total	317	305

Night time crashes by weekend and weekdays are shown on the map on the following page.

Younger male drivers are highly represented in night times crashes on Auckland State Highways.

Males account for 77 percent of at fault drivers and males under 30 for 41 percent.

Two factors can contribute to this:

– firstly younger people generally drive more at night

– secondly despite the fact that they see better at night than older drivers and have better glare recovery, they can underestimate how difficult it can be to see traffic hazards at night.

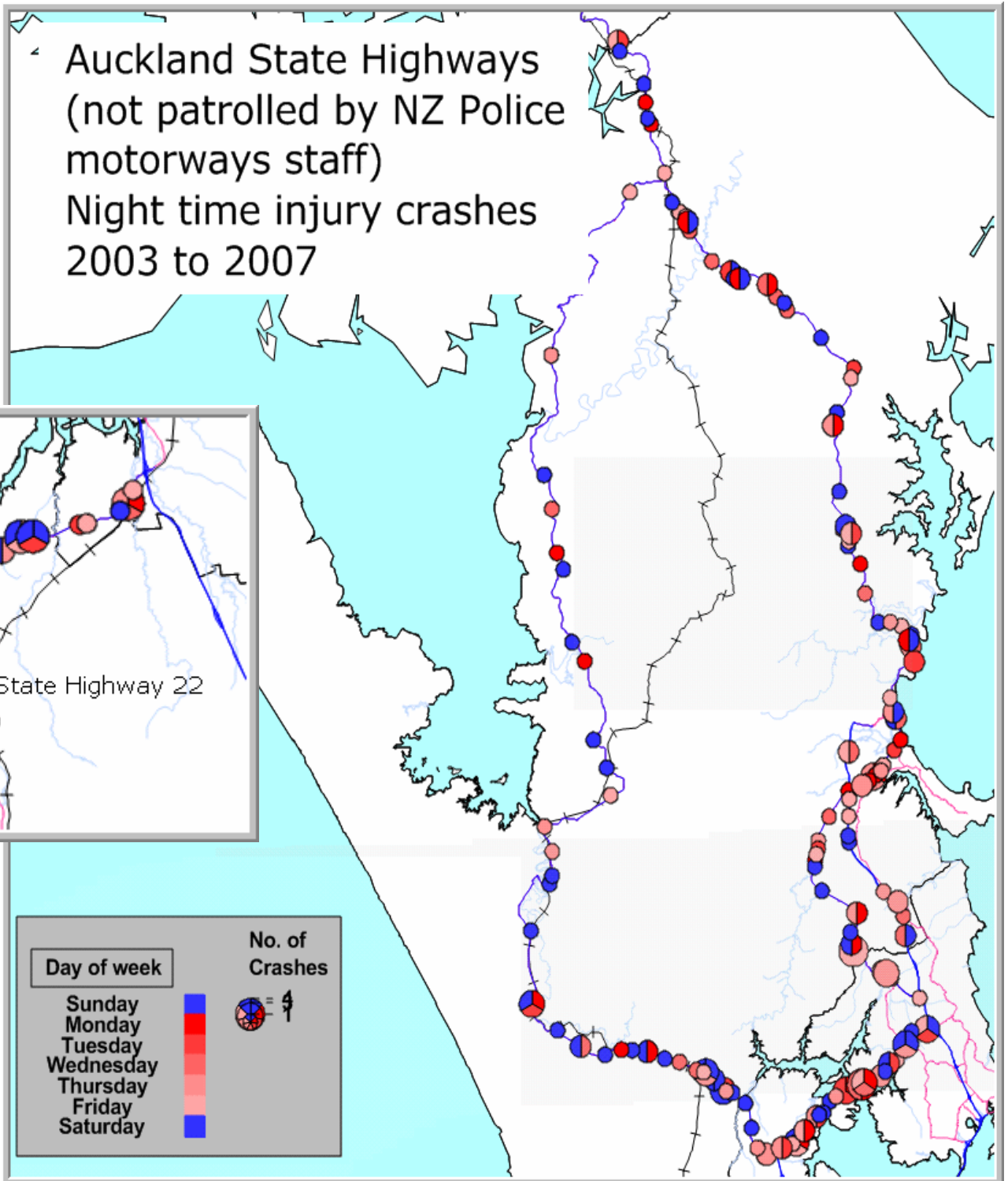
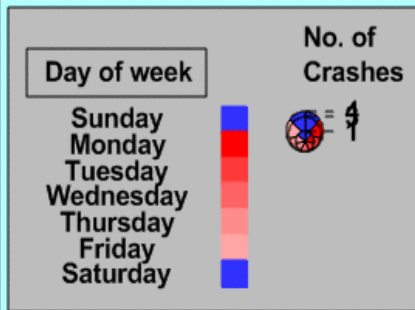
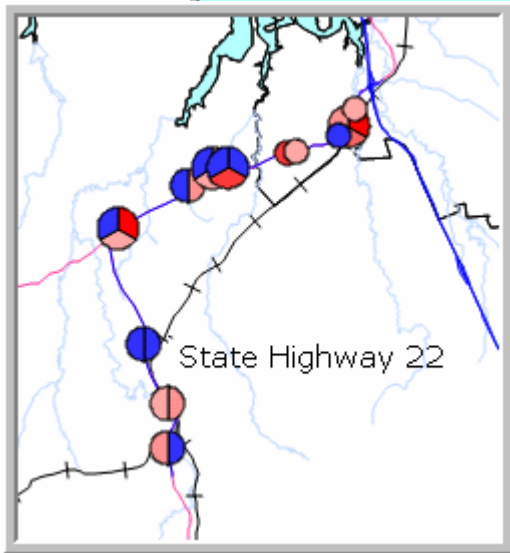
Age and gender of at fault drivers

Ages of drivers at fault in night time crashes	Male	Female
15- 19	28	16
20 - 24	32	4
25 - 29	22	6
30 - 39	25	7
40 - 49	26	9
50 - 59	7	1
60 - 69	7	3
70+	6	1
Total	153	47

Further information about injury night time crashes on Auckland State Highways 2003 to 2007:

- Most common crash types are is when a driver turning right at a junction hits an oncoming vehicle and loss of control turning right.
- 35 percent injury crashes include alcohol
- percent wet road
- 21 percent injury crashes speed related
- Worst months June, best January
- Worst day of week Saturday, best Tuesday

Auckland State Highways
(not patrolled by NZ Police
motorways staff)
Night time injury crashes
2003 to 2007



National issues

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

Speed

“Too fast” was recorded in 16 percent of injury crashes in the last five years resulting in 27 deaths and 198 other injuries.

Sixty-eight percent of speed-related crashes were “loss of control – at bends”.

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 14 percent of injury crashes in the last five years resulting in 13 deaths and 176 other injuries.

The number of injury crashes involving alcohol is not decreasing.

Most alcohol crashes were in rural areas.

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 240 other injuries.

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

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.

No specific State Highway only surveys are done however the front seat belt wearing rates for local bodies in Auckland can be found in the link below.

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

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