



# *briefing notes - road safety issues*

## *Auckland Region*

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 in the Auckland Region.

This report is the eighth road safety issues report for the Auckland Region and all the material unless otherwise stated in this report applies to both local and Transit New Zealand 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 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 for 2006.

We encourage local bodies and the Regional Council to use their free access to the Ministry of Transport's Crash Analysis System to delve deeper into the highlighted issues.

### Major road safety issues

#### Auckland Region

Intersections

Bends

Roadside hazards

Vulnerable road users

#### Nationally

Speed

Alcohol

Failure to give way

Restraints

### 2006 road trauma

#### Casualties

#### Auckland Region

Deaths	84
Serious casualties	616
Minor casualties	3779

#### Crashes

#### Auckland Region

Fatal crashes	77
Serious injury crashes	496
Minor injury crashes	2787
Non-injury crashes	10620

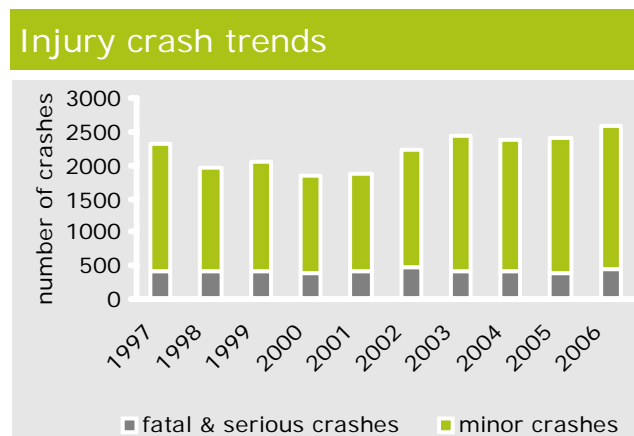
## Overview

In 2006 on local roads in the Auckland Region there were 2661 injury crashes and 8210 non-injury crashes. In addition there were 699 injury crashes and 2410 non-injury crashes on Transit New Zealand (Transit NZ) roads as reported by the New Zealand Police. (Transit NZ manages the State Highway network including motorways).

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

Local road casualties 2006				
	Fatalities	Serious injuries	Minor injuries	Total
Rural	16	98	355	469
Urban	44	396	2562	3002
Total	60	494	2917	3471

While the number of minor crashes has been increasing in recent years, there is no clear trend emerging for the combined number of fatal and serious crashes. On local roads for the past five years there have been just over 60 fatalities annually except for 2005 when there were 53.

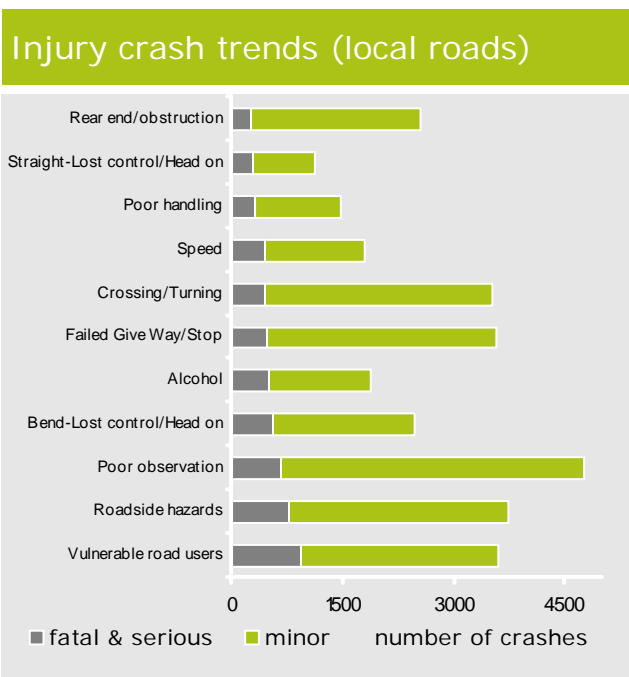


The following chart shows the main characteristics of local road crashes.

These are prioritised by the number of fatal and serious crashes, and the main issues discussed in this report are based on this.

Note that some of these are similar or overlap, for instance failure to give way or stop is a factor in most turning or crossing crashes.

Likewise most crashes involving poor observation are turning and crossing crashes, generally at intersections.



Further information about 2006 injury and non-injury crashes in the Auckland Region on local roads:

- Worst month March (981), best January (731)
- Worst day Friday (1781), best Sunday (1287)
- 23 percent on wet roads
- 33 percent at night
- 51 percent at intersections
- Social cost of crashes in 2006 \$732m
- 47 percent of at fault drivers held a full NZ licence (injury crashes)

Further information about 2006 injury and non-injury crashes in the Auckland Region on Transit NZ roads:

- Worst month May (310), best February (220)
- Worst day Friday (622), best Sunday (294)
- 28 percent wet road
- 31 percent night time
- 26 percent at intersections
- Social cost of crashes in 2006 \$239m
- 45 percent of at fault drivers held a full NZ licence (injury crashes)

## Overview continued

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 the Auckland region with as few as 48 percent of at fault drivers in injury crashes being the holder of a full driving licence.

### At fault driver licence status

Driver licence status. Auckland Region 2006 Local roads	Percentage of total 'at fault' drivers (New Zealand 2006 value in brackets)
Full	48.0 (58.4) %
Learner	15.6 (9.5) %
Restricted	16.7 (17.6) %
Never licenced	5.7 (2.2) %
Disqualified	1.8 (1.7) %
Overseas	2.9 (4.2) %
Expired	0.9 (0.5) %
Other / unknown	7.9 (5.6) %

### Road Safety Issues for roads in the region

Local body	Bends	Roadside hazards	Vulnerable road users	Speed	Intersections	Alcohol	Night
Auckland Region	✓	✓	✓		✓		
Rodney District	✓	✓	✓	✓			
North Shore City	✓	✓	✓		✓		
Waitakere City	✓	✓	✓		✓		
Auckland City		✓	✓		✓	✓	
Manukau City			✓	✓	✓	✓	
Papakura District					✓	✓	✓
Franklin District	✓			✓		✓	

### Road Safety Issues for Transit New Zealand roads in the region

	Bends	Rear end	Speed	Intersections	Alcohol
Transit NZ Region 2	✓		✓	✓	✓
Auckland Motorways	✓	✓	✓		

## Intersections

During the five year period 2002 to 2006 there were a total of 32,789 crashes at intersections within Auckland Region. Of these crashes, 92 percent occurred in urban areas and 87 percent were on local roads.

Intersections conflicts resulted in 6671 injury crashes and 26,118 non-injury crashes. In these 92 people died, 1063 received serious injuries and 7615 received minor injuries.

Crashes at Intersections					
	2002	2003	2004	2005	2006
Injury crash	1259	1371	1307	1298	1436
Non-injury crash	6119	5581	4852	4737	4829
Total	7378	6952	6159	6035	6265

Locations with the most crashes			
Intersection name	Total crashes 2002 - 2006	Injury crashes 2002-2006	Total 2006
Ti Rakau / Te Irirangi Drive	94	12	20
SH 20 / Gt South	93	6	21
Queen / Karangahape	83	14	13
Remuera / Ladies Mile	81	10	8
Queen / Victoria	80	10	7

Junction type Injury and Non-injury crashes		
Junction Type	Rural	Urban
Roundabout	76	2915
Tee	841	16,615
Cross (X)	327	7190
Y	1071	917
Other	219	2559

The most common crash was one in which a vehicle turning right from the side road at an urban 'T' junction pulled out in front of a car approaching from the right on the main road.

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

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

Intersections can present drivers with one of their biggest driving challenges, particularly less experienced drivers.

Driver licence status 2006	
Driver Licence status, intersection related injury crashes, at fault drivers in Auckland Region	Percentage of total at fault drivers in intersection related crashes (New Zealand value in brackets)
Full	56.5 (60.9) %
Learner	11.2 (9.4) %
Restricted	14.8 (14.8) %
Never licenced	3.3 (2.5) %
Disqualified	1.3 (1.6) %
Overseas	4.2 (3.7) %
Expired	0.8 (0.8) %
Other / unknown	8.0 (6.3) %

Further information about injury crashes at intersections on local roads in the Auckland Region 2002 to 2006:

- 76 deaths, 909 serious injuries
- 13 percent alcohol involved
- 97 percent urban
- 25 percent wet roads
- 32 percent night time
- Worst month May, best January
- Worst day of week Friday, best Sunday

Further information about injury crashes at intersections on Transit NZ roads in the Auckland Region 2002 to 2006:

- 16 deaths, 154 serious injuries
- 57 percent urban
- 12 percent alcohol involved
- 26 percent wet roads
- 31 percent night time
- Worst month May, best January
- Worst day of week Friday, best Sunday

## Crashes at bends

Between 2002 and 2006 19 percent of all injury crashes in Auckland Region occurred at bends. These crashes resulted in 154 fatalities, 757 serious injuries and 3355 minor injuries.

Overall crash numbers have been increasing for the past five years, mostly due to an increase in minor crashes. Fatal and serious crash numbers decreased between 2002 and 2005, but rose again in 2006.

### Crashes at bends 2002 to 2006

Crash year	Fatal crashes	Serious crashes	Minor crashes	Total
2002	29	126	384	539
2003	28	117	427	572
2004	26	118	452	596
2005	23	99	482	604
2006	31	112	522	665
Total	137	572	2267	2976

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 three most common roadside hazards struck in injury crashes at bends in Auckland Region were fences (490), posts or poles (480) and trees (445) from a total of 3135 objects struck.

### Main characteristics of injury crashes at bends

Crash characteristic	Percentage of crashes
Single vehicle	71 %
Alcohol	30 %
Excessive speed for the conditions	44 %
Road factors	16 %
Poor handling	37 %
Urban road	62 %
Wet road	40 %
Night time	50 %

### At fault driver licence status 2006

Driver Licence status, bend related injury crashes, at fault drivers in Auckland Region	Percentage of total at fault drivers in bend related crashes (New Zealand value in brackets)
Full	46.1 (51.1) %
Learner	13.3 (10.7) %
Restricted	19.4 (17.9) %
Never licenced	5.4 (4.1) %
Disqualified	2.5 (2.8) %
Overseas	3.6 (5.6) %
Expired	0.9 (0.9) %
Other / unknown	8.8 (6.8) %

Further information about injury crashes at bends on local roads in the Auckland Region 2002 to 2006:

- 103 deaths, 609 serious injuries and 2835 minor injuries
- 70 percent of at fault drivers were male
- Most common age group 15-19 years
- 31 percent involved alcohol
- Worst month December (257), best September (172)
- Worst day of week Saturday (473), best Tuesday (257)

Further information about injury crashes at bends on Transit NZ roads in the Auckland Region 2002 to 2006:

- 51 deaths, 148 serious injuries and 520 minor injuries
- 68 percent of at fault drivers were male
- Most common age groups 15-19 years
- 29 percent involved alcohol
- Worst month December (52), best May (27)
- Worst day of week Sunday (111), best Wednesday (40)

## Roadside hazards

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.

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.

Nationally, road side objects (small and large) are struck in almost 40 percent of all injury crashes.

In the Auckland Region roadside hazards were a factor in 31 percent of injury crashes between 2002 and 2006.

Roadside hazard injury crashes					
	2002	2003	2004	2005	2006
Urban	564	599	648	615	734
Rural	284	336	316	335	355
Total	848	935	964	950	1100

Further information about roadside hazard related crashes on local roads in the Auckland Region 2002 to 2006:

- 150 deaths, 802 serious injuries and 3970 minor injuries
- Most common crash type: loss of control at bend (1771)
- 30 percent at intersections
- 51 percent night time
- 31 percent wet road
- Worst month July, best March

Further information about roadside hazard related crashes on Transit NZ roads in the Auckland Region 2002 to 2006:

- 48 deaths, 245 serious injuries and 1173 minor injuries
- Most common crash type: loss of control at bend (371)
- 20 percent at intersections
- 48 percent night time
- 36 percent wet road
- Worst month December, best January

The following table shows the number of various road side hazards involved in injury crashes for the Auckland Region during the period 2002-2006.

Note that the same hazard can be struck more than once in the same crash and that each crash can result in many different hazards being struck.

As a result the number of hazards shown in this table will be greater than the number of crashes.

Types of hazard struck		
Number of times hazard struck 2002 to 2006	Local road	State Highway
Animals	2	0
Bridge ends	49	9
Cliff or bank	364	122
Debris on road	6	13
Ditch	261	83
Fence	759	90
Guard rail	126	518
House or building	172	14
Kerb	212	25
Object thrown at or dropped on vehicle	2	9
Over bank	121	31
Parked vehicle	943	34
Phone box etc	86	5
Post or pole	805	142
Road works	3	1
Slip or flood	6	3
Stray animal	14	9
Traffic island	168	52
Traffic sign	184	69
Train	4	0
Tree	644	121
Vehicle attended (e.g. broken down)	237	29
Water or river	25	7

## Vulnerable road users

### (Pedestrians, Cyclists and Motorcyclists)

Vulnerable road users are those who have very little physical protection in the event of a crash and are therefore susceptible to severe injuries.

In February 2005, the Government launched 'Getting there – on foot, by cycle' its strategy to advance walking and cycling in New Zealand transport. This strategy aims to improve the environment for walking and cycling and at the same time improve safety, as well as increase the choices available for walking and cycling as day-to-day transport options.

Land Transport NZ expects local authorities to take a proactive approach to this subject. This should include the development of a walking and cycling strategy and submitting appropriate projects for funding to progress that strategy.

It is vitally important to recognise that promotion alone of walking and cycling will not be effective at increasing mode share unless these activities can be made safer.

## Pedestrians

Although pedestrian injuries do not feature highly in the overall road injury picture in the Auckland Region, representing only 10 percent of all injuries, they make up 17 percent of fatal and serious injuries.

Pedestrian injuries					
	2002	2003	2004	2005	2006
Fatal	14	15	14	8	12
Serious	116	95	82	77	96
Minor	293	321	286	259	269
Total	423	431	382	344	377

Most (97 percent) pedestrian crashes occur on urban roads, the majority of these away from intersections (mid-block) and during daylight hours. There is a strong crash bias toward the afternoon.

Young people under the age of 20 make up a high proportion of injuries in pedestrian crashes, making them the most at-risk group.

This may be because they walk more than other age groups. However many of them may not be mature enough to make the correct road crossing decisions. For example young children have difficulty in judging the speed and distance of approaching vehicles.

Children are also easily distracted and unable to focus on multiple events at a time, so when they want to cross a road their attention can be easily distracted by say, a friend shouting out from across the street, a dog coming towards them or a noisy car passing by.

Road designers and motorists alike need to understand that children do not think like "mini adults" when they are walking and playing near the road. The road environment needs to be made as safe as possible to mitigate against the unpredictable actions that children take.

The recent decision by Police to enforce a lower speed tolerance around schools is a strong step in creating a safer lower speed environment for young pedestrians.

Pedestrian crashes are concentrated on arterial and collector roads. (A map with regional indicative fatal and serious crash locations is at the end of the vulnerable road user section).

### Locations with the most pedestrian crashes

Location	Number of pedestrian injury crashes
Queen St Int. City Rd	8
Queen St Int. Karangahape Rd	6
Albert St Int. Victoria St West	6
Queen St Int. Turner St	6
Symonds St Int. Karangahape Rd	6

Further information about the 1825 pedestrian related injury crashes on local roads in the Auckland Region 2002 to 2006:

- The most common type of crash involved a pedestrian crossing the road being hit by a vehicle approaching from the right (43 percent).
- Worst month October (177) best January (106)
- Worst day of week Thursday (320) best Sunday (161)

Further information about pedestrian related injury crashes on Transit NZ roads in the Auckland Region 2002 to 2006:

- Number of pedestrian crashes 62 (3 percent)

## Vulnerable road users continued

### Cyclists

Cyclist injuries do not feature highly in the overall road injury picture in the Auckland Region, representing only five percent of all injuries and six percent of fatal and serious injuries.

Cyclist injuries					
	2002	2003	2004	2005	2006
Fatal	3	1	0	1	2
Serious	38	32	40	33	32
Minor	163	147	139	187	163
Total	204	180	179	221	197

Most (97 percent) cycling crashes occurred on urban roads, the majority of these at intersections and during daylight hours.

Last year (2006) more cycles than cars were imported into New Zealand. In recent years the increase in cycle numbers on many roads in New Zealand has become quite noticeable.

Cyclist injuries are spread fairly evenly across age groups between 5 to 50 years old, with a peak between 10 to 14 years old.

Further information about the 921 cycling related injury crashes on local roads in the Auckland Region (2002 to 2006):

- The most common type of crash was a crossing or turning movement, followed by rear end collision.
- 56 percent at intersections
- 16 percent at night
- Worst month March, best December
- Worst day of the week Tuesday (164) best Sunday (84 each)
- Number of crashes involving riding on the footpath 81
- 79 percent of cyclists injured were male

Further information about 39 cycling related injury crashes on Transit NZ roads in the Auckland Region (2002 to 2006):

- 62 percent at intersections
- 31 percent at night

### Motorcyclists

Although like cyclists motorcyclist injuries do not feature highly in the overall road injury picture in Auckland Region, representing only five percent of all injuries, they make up 11 percent of fatal and serious injuries.

Nationally motorcycling fatalities dropped from a high of 20 percent of all fatalities in 1988 to just six percent in 2003.

Since then there has been a significant increase in motorcycle registrations and this has reversed the downward trend. In 2006 motorcyclists accounted for 9.5 percent of road fatalities in New Zealand.

Motorcyclist injuries					
	2002	2003	2004	2005	2006
Fatal	7	8	6	12	7
Serious	62	57	51	53	91
Minor	119	135	128	179	190
Total	188	200	185	244	288

Most (79 percent) motorcycle crashes occur on urban roads, these are split fairly evenly between intersections and mid-block locations and occur mostly during daylight hours.

Motorcycling injuries are spread fairly evenly between age groups 15 to 45 years old, with a peak in the 20 to 24 age group.

Further information about the 877 motorcycling related injury crashes on local roads in the Auckland Region 2002 to 2006:

- The most common crash type was crossing or turning followed by rear end collision, loss of control and overtaking
- 52 percent at intersections
- 27 percent at night
- 16 percent in the wet
- Worst month May (94) best January (54)
- Worst day of week Friday (166) best Monday (99)
- 86 percent of motorcyclists injured were male



## Motorcyclists continued

Further information about the 165 motorcycling related injury crashes on Transit NZ roads in the Auckland Region 2002 to 2006:

- The most common crash type was rear-end collision followed by overtaking, crossing or turning and loss of control
- 35 percent at intersections
- 24 percent at night
- 22 percent in the wet
- Worst month February (23), best June/September (8)
- Worst day of week Friday (32), best Wednesday (17)
- 89 percent of motorcyclists injured were male

## Visibility of vulnerable road users

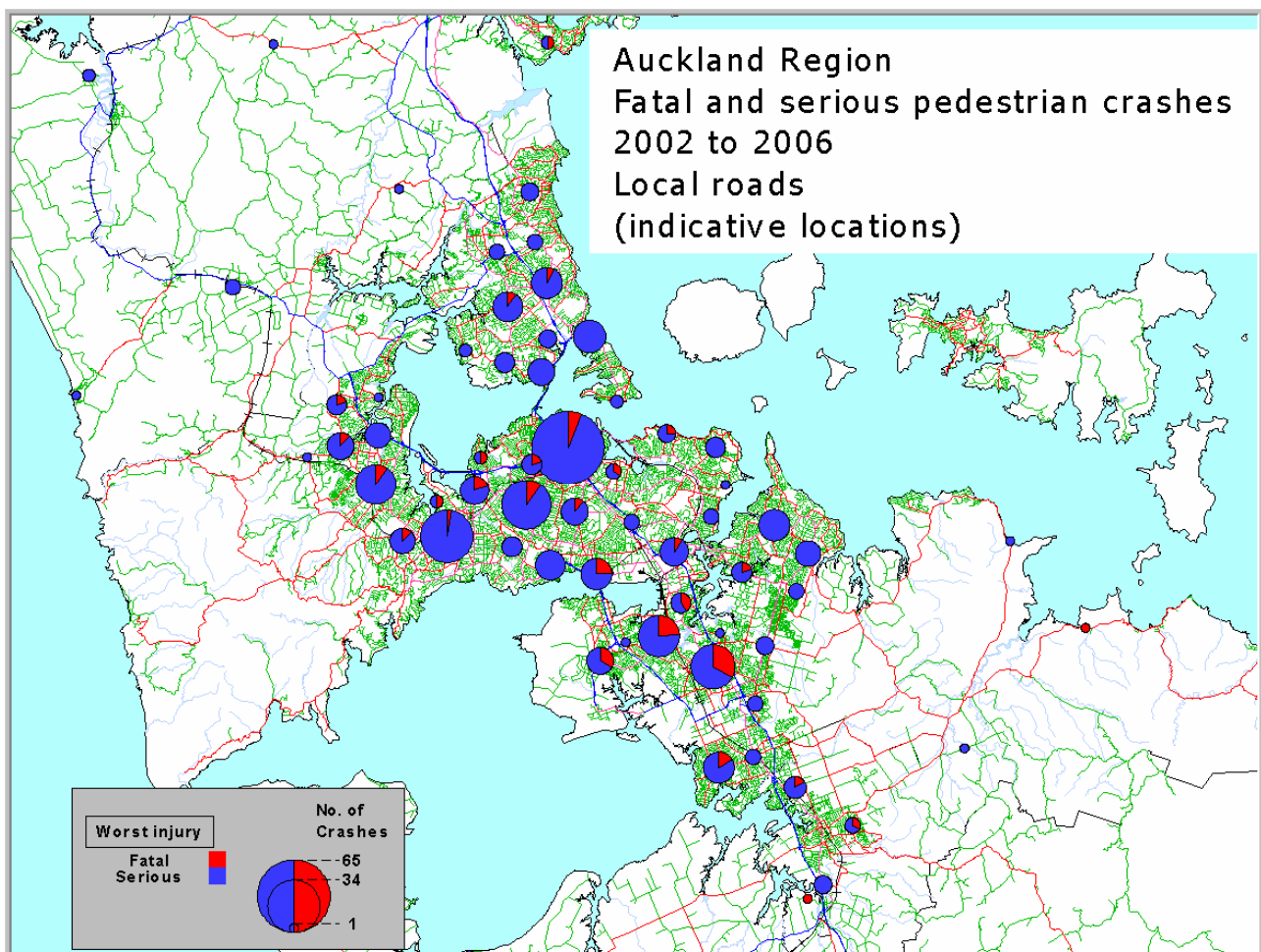
Between 2002 and 2006 there were 12 fatalities and 80 other injuries in crashes involving pedestrians and cyclists where the Police noted "wearing dark clothing" as a contributory crash cause.

While most of these crashes occur at night cyclists and pedestrians need to better consider their own safety when selecting riding and walking apparel especially at night, dusk and dawn.

There are a growing number of mainly (but not exclusively) training cyclists using our rural roads and many seem unaware particularly at dusk and dawn they are hard to see in dark coloured clothing, as compared to the lime-yellow apparel now available.

State Highway 17 for example, is increasingly being used by cyclists even though the route has inconsistent shoulder widths and in places lips caused by successive seal overlays.

There have been eight injury crashes involving cyclists on this route between 2004 and 2006. A number of these were at dawn or dusk and many at pinch points where brighter clothing may have alerted motorists earlier.



## National issues

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

### Speed

“Too fast” was recorded in 15 percent of injury crashes in the region in the last five years resulting in 180 deaths and 3286 injures. Speed as a factor in crashes is not reducing in the region.

Sixty-nine percent of speed-related crashes were loss of control crashes.

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

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

### Alcohol

Alcohol was involved in 15 percent of injury crashes in the region in the last five years resulting in 152 deaths and 3194 other injuries. The number of injury crashes involving alcohol is not decreasing.

Seventy-seven percent of alcohol crashes were in urban areas of the city.

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 26 percent of all reported injury crashes for the last five years, resulting in 40 deaths and 5344 other injuries. Ninety-two percent of crashes were in urban parts of the city.

Fifty-nine 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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