



briefing notes - road safety issues

Rodney District

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 Rodney District.

This report is the eighth road safety report for Rodney District. All the material unless otherwise stated in this report applies to both local roads and to Transit New Zealand (Transit NZ) 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 for any local body 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 Rodney 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 Rodney District to use its free access to the Ministry of Transport's Crash Analysis System to delve deeper into the highlighted issues.

Major road safety issues		2006 road trauma	
Rodney District		Casualties	Rodney District
Speed		Deaths	19
Bends		Serious casualties	81
Roadside hazards		Minor casualties	274
Vulnerable road users			
Nationally		Crashes	Rodney District
Speed		Fatal crashes	16
Alcohol		Serious injury crashes	59
Failure to give way		Minor injury crashes	188
Restraints		Non-injury crashes	541

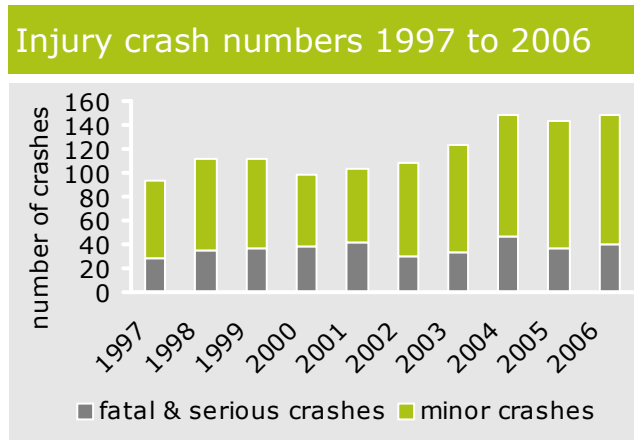
Overview

In 2006 on local roads in Rodney District there were 149 injury crashes and 291 non-injury crashes, in addition there were 114 injury crashes and 250 non-injury crashes on Transit NZ roads both as reported by the New Zealand Police.

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	2	27	77	106
Urban	4	11	69	90
Total	6	44	148	196

The number of minor crashes has been increasing since 2000, while fatal and serious crash numbers are trending up again since a sharp drop in 2002.



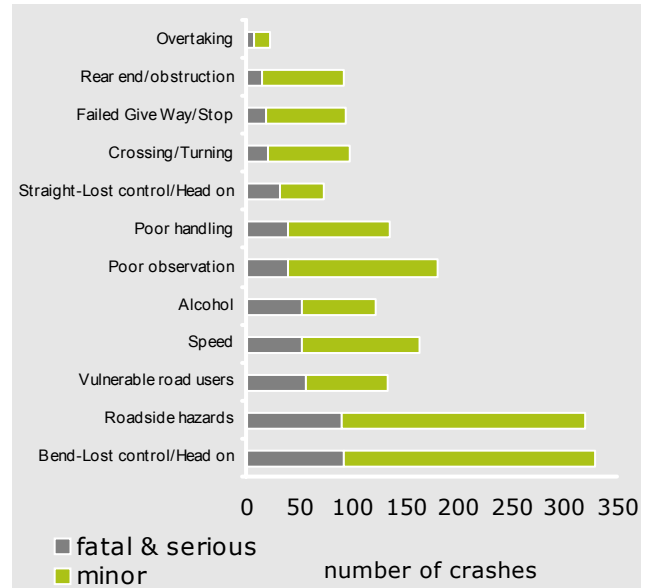
The following chart shows the main characteristics of local road crashes.

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.

Main crash characteristics



Further information about 2006 injury and non-injury crashes on local roads:

- Worst month June (50), best April (24)
- Worst day Friday (80), best Monday (48)
- 25 percent on wet roads
- 34 percent at night
- 30 percent at intersections
- Social cost of crashes in 2006 \$56m
- 54 percent of at fault drivers held a full NZ licence

Further information about 2006 injury and non-injury crashes on Transit NZ roads

- Worst month September (42), best November (20)
- Worst day Sunday (59), best Monday (43)
- 35 percent wet road
- 31 percent night time
- 27 percent at intersections
- Social cost of crashes in 2006 \$64m
- 60 percent of at fault drivers held a full NZ licence

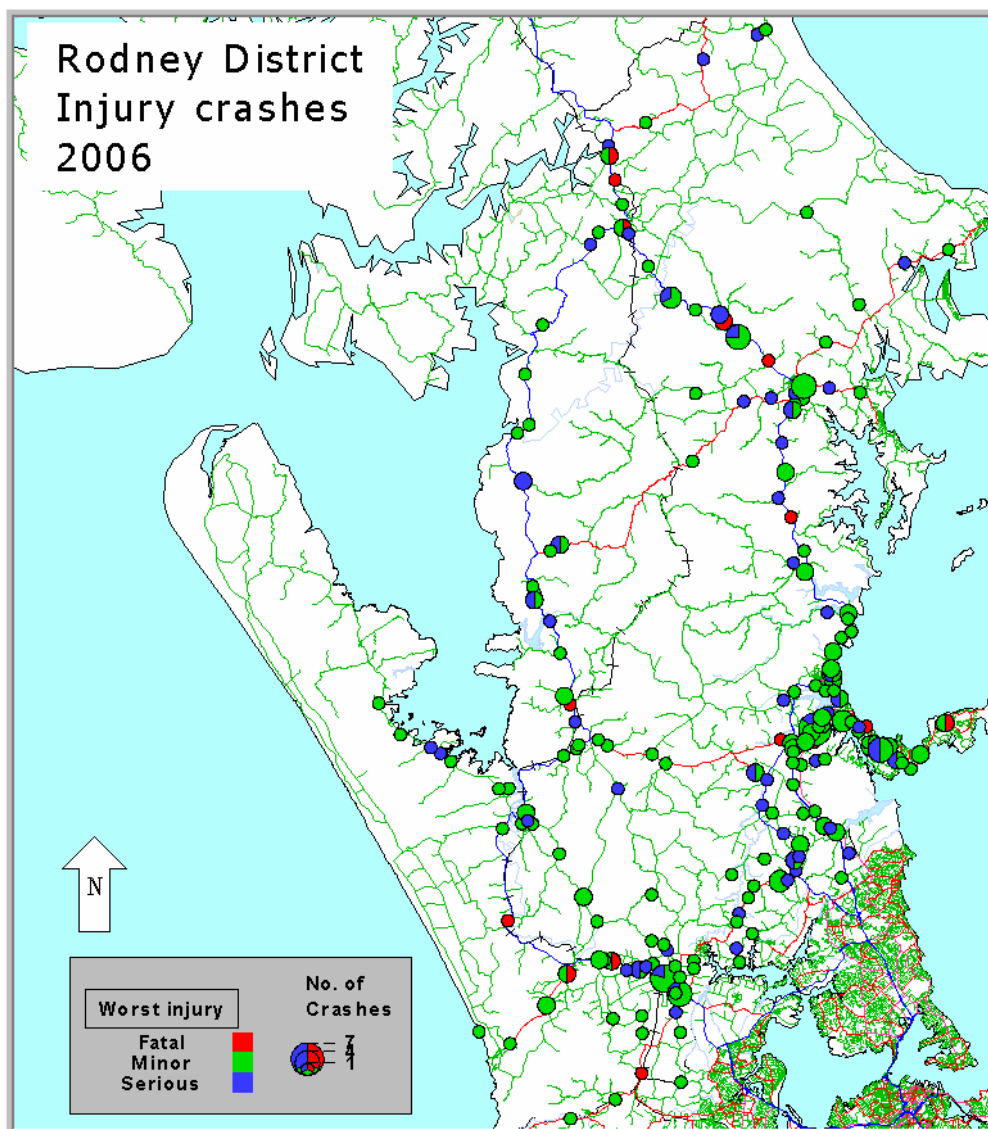
Overview continued

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 Rodney District with as little as 56 percent of at fault drivers in injury crashes being the holder of a full driving licence.

Driver licence status	
Driver licence status Rodney District 2006	Percentage of total 'at fault' drivers (NZ 2006 value in brackets)
Full	56.7 (58.4) %
Learner	7.3 (9.5) %
Restricted	16.5 (17.6) %
Never licenced	1.2 (2.2) %
Disqualified	2.4 (1.7) %
Overseas	6.1 (4.2) %
Expired	1.2 (0.5) %
Other / unknown	8.5 (5.6) %



Crashes at bends

Between 2002 and 2006 forty-four percent of all injury crashes in Rodney District occurred at bends. These crashes resulted in 47 fatalities, 183 serious injuries and 577 minor injuries.

Crash numbers have been generally rising over the last five years.

Crashes at bends 2002 to 2006				
Crash year	Fatal crashes	Serious crashes	Minor crashes	Total
2002	8	26	63	97
2003	7	18	65	90
2004	11	34	62	107
2005	8	21	82	111
2006	8	30	76	114
Total	42	129	348	519

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 Rodney District were cliffs or banks (115), ditches (77) and trees (75) from a total of 483 objects struck.

Main characteristics of injury crashes at bends	
Crash characteristic	Percentage of crashes
Single vehicle	69 %
Alcohol	25 %
Excessive speed for the conditions	39 %
Road factors	21 %
Poor handling	34 %
Rural road	82 %
Wet road	37 %
Night time	39 %

At fault driver licence status 2006	
Driver Licence status, bend related injury crashes, at fault drivers in Rodney District	Percentage of total at fault drivers in bend related crashes (New Zealand value in brackets)
Full	58.0 (51.1) %
Learner	8.6 (10.7) %
Restricted	15.0 (17.9) %
Never licenced	2.5 (4.1) %
Disqualified	1.2 (2.8) %
Overseas	6.2 (5.6) %
Expired	1.0 (0.9) %
Other / unknown	7.5 (6.8) %

Further information about injury crashes at bends on local roads in Rodney District 2002 to 2006:

- 16 deaths, 99 serious injuries and 387 minor injuries
- 68 percent of at fault drivers were male
- Most common at fault driver age group 15-19 years
- 25 percent of crashes alcohol involved
- Worst month July, best August
- Worst day of week Friday, best Tuesday

Further information about injury crashes on bends on Transit NZ roads in Rodney District 2002 to 2006:

- 31 deaths, 84 serious injuries and 190 minor injuries
- 74 percent of at fault drivers were male
- Most common at fault driver age group 15-19 years
- 26 percent alcohol involved
- Worst month December, best May
- Worst day of week Sunday, best Wednesday

Of particular note in these statistics is the high numbers of fatal and serious injuries occurring on State Highways (Transit NZ roads). State highway crashes make up only 37 percent of the total number of crashes at bends within Rodney District.

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 Rodney District, excessive speed was a factor in 21 percent of all injury crashes in 2006.

Speed related crashes

Speed related injury crashes	2002	2003	2004	2005	2006
Urban	13	11	11	16	14
Rural	28	39	42	42	43
Total	41	50	53	58	57

There were 259 speed-related injury crashes reported in the last five years.

Males represented 78 percent of at fault drivers in speed related crashes.

Age and sex of at fault drivers

Drivers at fault in speed related injury crashes (2002 to 2006)	Male	Female	Total
15- 19 years	61	17	78
20 - 24	30	5	35
25 - 29	29	6	35
30 - 39	42	12	54
40 - 49	19	9	28
50 - 59	13	4	17
60 - 69	5	2	7
70+	0	2	2
Total	199	57	256

At fault driver licence status

Driver Licence status, speed related injury crashes, at fault drivers Rodney District	Percentage of total at fault drivers in speed related crashes (New Zealand 2006 value in brackets)
Full	51.1 (43.0) %
Learner	10.7 (15.3) %
Restricted	19.5 (22.5) %
Never Licenced	3.4 (4.5) %
Disqualified	3.1 (4.1) %
Overseas	1.9 (3.7) %
Expired	1.5 (0.5) %
Other / unknown	8.8 (6.2) %

Further information about the 166 speed related injury crashes on Rodney District local roads 2002 to 2006:

- 19 deaths, 58 serious injuries and 203 minor injuries
- 80 percent of at fault drivers were male
- Most common crash type, lost control on bend (132)
- 39 percent wet road
- 46 percent night time
- Worst month March (20), best November (6)
- Worst day of week Saturday (31), best Tuesday (12)

Further information about the 93 speed related injury crashes in Rodney District on Transit NZ roads 2002 to 2006:

- 23 deaths, 42 serious injuries and 97 minor injuries
- 75 percent of at fault drivers were male
- Most common crash type, lost control on bend (72)
- 46 percent wet road
- 39 percent night time
- Worst month August (12), best July and October (4 each)
- Worst day Sunday (20) and best Tuesday (6)

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 Rodney District, representing only four percent of all injuries, they make up six percent of fatal and serious injuries.

Pedestrian injuries 2002 to 2006					
Pedestrian injuries	2002	2003	2004	2005	2006
Fatal	1	1	1	0	0
Serious	6	3	6	6	4
Minor	9	10	9	7	11
Total	16	14	16	13	15

Most (75 percent) pedestrian crashes occur on urban roads, the majority of these away from intersections (mid-block) and during daylight hours. There is a crash bias toward the afternoon.

Fifty percent of injuries in pedestrian crashes involve young people up to the age of 24 years old –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 (see map on following page).

The top three roads are shown in the table below.

Roads with the most pedestrian crashes	
Location	Number of pedestrian injury crashes
State Highway One (mainly in	13
State Highway 16 (main at	5
Whanagaparaoa Road	4

Further information about the 49 injury pedestrian crashes on local roads in Rodney District 2002 to 2006:

- The most common type of crash involved a pedestrian, crossing the road being hit by a vehicle approaching from the right (31 percent)
- The second most common type of crash was crossing the road and being hit by a vehicle approaching from the left (24 percent)
- Worst months August and December (7) best February and July (2)
- Worst day of week Saturday (9) best Sunday and Tuesday (5 each)

Pedestrians continued

Further information about the 20 injury pedestrian crashes on Transit NZ roads in Rodney District 2002 to 2006:

- The most common type of crash involved a pedestrian crossing the road being hit by a vehicle approaching from the right (45 percent)
- The second most common type of crash was crossing the road and being hit by a vehicle approaching from the left (25 percent)

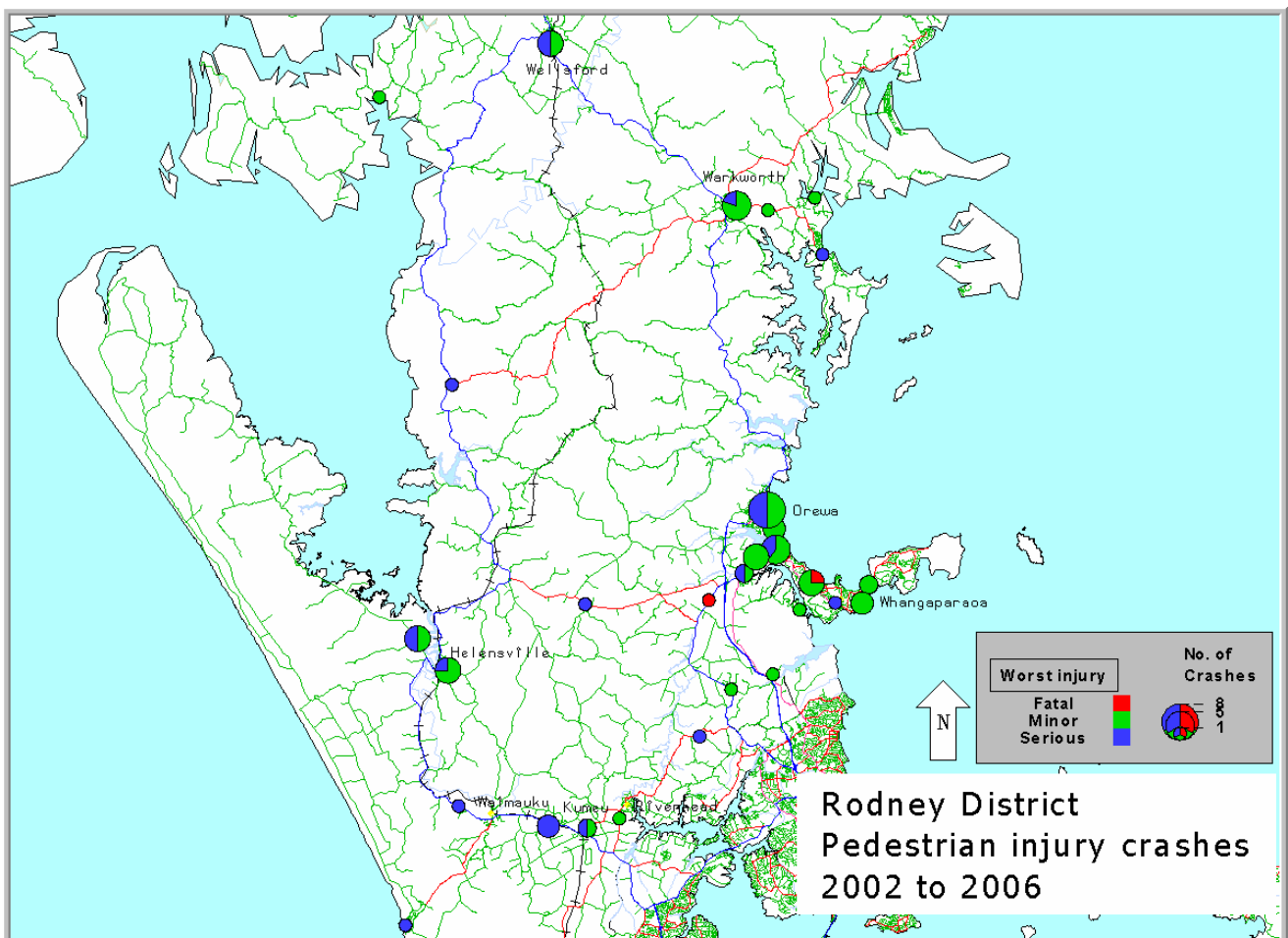
Cyclists

Cyclist injuries do not feature highly in the overall road injury picture in Rodney District, representing only two percent of all injuries, and two percent of fatal and serious injuries.

However in 2006 the number of injuries increased substantially.

Cyclist injuries					
	2002	2003	2004	2005	2006
Fatal	1	0	0	0	1
Serious	0	1	1	1	3
Minor	6	3	2	3	11
Total	7	4	3	4	15

Most (67 percent) cycling crashes occurred on urban roads, the majority of these away from intersections (mid-block) and during daylight hours.



Vulnerable road users continued

Cyclists continued

In 2006 more cycles than cars were imported into New Zealand.

In recent years the increase in cycle numbers on many roads in Rodney and New Zealand has become quite noticeable.

Cyclist injuries are spread evenly across all age groups.

Further information about the 19 cyclist injury crashes on local roads in Rodney District 2002 to 2006:

- 26 percent at intersections
- 5 percent at night
- 81 percent of cyclists injured were male

Further information about the 11 cyclist injury crashes on Transit NZ roads in Rodney District 2002 to 2006:

- 36 percent at intersections
- 18 percent at night
- 64 percent of cyclists injured were male

Motorcyclists

Although motorcyclist injuries do not feature highly in the overall road injury picture in Rodney District, representing only seven percent of all injuries, they make up 13 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.

Most (67 percent) motorcycle crashes occur on urban roads, the majority of these away from intersections (mid-block) and during daylight hours.

Motorcycling injuries are spread fairly evenly between age groups 15 to 54 years old.

Further information about the 65 motorcyclist injury crashes on local roads in Rodney District 2002 to 2006:

- The most common crash type was loss of control, followed by crossing or turning, rear end collision and overtaking
- 28 percent at intersections
- 17 percent at night
- 2 percent in the wet
- Worst month December (9), best September (2)
- Worst day of week Sunday (17), best Tuesday (2)
- 90 percent of motorcyclists injured were male

Further information about the 140 motorcyclist injury crashes on Transit NZ roads in Rodney District 2002 to 2006:

- The most common crash type was loss of control, followed by rear end collision, crossing or turning and overtaking
- 35 percent at intersections
- 20 percent at night
- 15 percent in the wet
- Worst month May (8), best June (0)
- Worst day of week Sunday (13), best Thursday (0)
- 88 percent of motorcyclists injured were male

Motorcyclist injuries					
	2002	2003	2004	2005	2006
Fatal	2	1	1	6	1
Serious	13	5	13	1	13
Minor	6	7	8	14	21
Total	21	13	22	24	35

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 Rodney District, roadside hazards were a factor in 45 percent of injury crashes between 2002 and 2006.

Roadside hazard injury crashes					
	2002	2003	2004	2005	2006
Urban	24	22	30	21	29
Rural	74	70	79	85	90
Total	98	92	109	106	129

Further information about roadside hazard related crashes on local roads in Rodney District 2002 to 2006:

- 21 deaths, 86 serious injuries and 334 minor injuries
- Most common crash type, "loss of control at bend (218)"
- 49 percent night time
- 32 percent wet road
- Worst month July (38), best August (22)

Further information about roadside hazard related crashes on Transit NZ roads in Rodney District 2002 to 2006:

- 19 deaths, 72 serious injuries and 210 minor injuries
- Most common crash type, "loss of control at bend (123)"
- 39 percent night time
- 34 percent wet road
- Worst month March, September and December (21 each), best April (11)

Types of hazard struck

Number of times hazard struck 2002 to 2006	Local road	State highway
Animals	1	0
Bridge ends	8	0
Cliff or bank	76	57
Debris on road	1	0
Ditch	69	40
Fence	61	36
Guard rail	12	31
House or building	5	3
Kerb	8	6
Object thrown at or dropped on vehicle	0	2
Over bank	19	11
Parked vehicle	21	15
Phone box etc	3	2
Post or pole	52	25
Slip or flood	0	2
Stray animal	5	5
Traffic island	2	2
Traffic sign	6	15
Train	1	0
Tree	63	30
Vehicle attended (e.g. broken down)	6	2
Water or river	3	2

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.

National issues

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

Speed

“Too fast” was recorded in 22 percent of injury crashes in the district in the last five years resulting in 42 deaths and 400 injures.

Speed as a factor in crashes is not reducing in the district.

Eighty-six 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 16 percent of injury crashes in the district in the last five years resulting in 27 deaths and 287 other injuries. The number of injury crashes involving alcohol is not decreasing.

Sixty-eight percent of 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 17 percent of all reported injury crashes for the last five years resulting in five deaths and 265 other injuries.

Fifty-three percent of crashes were in urban areas of the district.

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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