

briefing notes - road safety issues

Manukau City

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 in Manukau City.

This report is the ninth road safety report for Manukau City. All the material unless otherwise stated in this report applies only to local 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 when Manukau City 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 city.

We encourage Manukau City 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

Manukau City

Intersections

Vulnerable road users

Crashes at bends

Alcohol

Nationally

Speed

Alcohol

Failure to give way

Restraints

2007 road trauma

Casualties

Manukau City

Deaths 14

Serious casualties 100

Minor casualties 675

Crashes

Manukau City

Fatal crashes 13

Serious injury crashes 74

Minor injury crashes 500

Non-injury crashes 2123

Overview

In 2007 on local roads in Manukau City there were 587 injury crashes and 2123 non-injury crashes. In addition there were 112 injury crashes and 355 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 587 crashes by rural or urban areas for local roads (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	5	18	66	89
Urban	9	82	609	700
Total	14	100	675	789

Fatal and serious crashes in Manukau City have been relatively steady over the last nine years.

In 2006 there was a large rise in the number of serious crashes reported, as there was not a corresponding rise in fatal crashes. This may have been due to improvements in Police reporting and if not this is of concern.

However for the year 2007, there was a drop in serious crashes and a slight rise in minor crashes.

Crash trends in Manukau City				
Year	Fatal Crashes	Serious Crashes	Minor Crashes	Total Crashes
1998	17	92	341	450
1999	15	82	311	408
2000	12	78	331	421
2001	14	79	345	438
2002	14	83	419	516
2003	13	86	423	522
2004	15	74	372	461
2005	15	57	380	452
2006	11	108	492	611
2007	13	74	500	587

Local road crashes

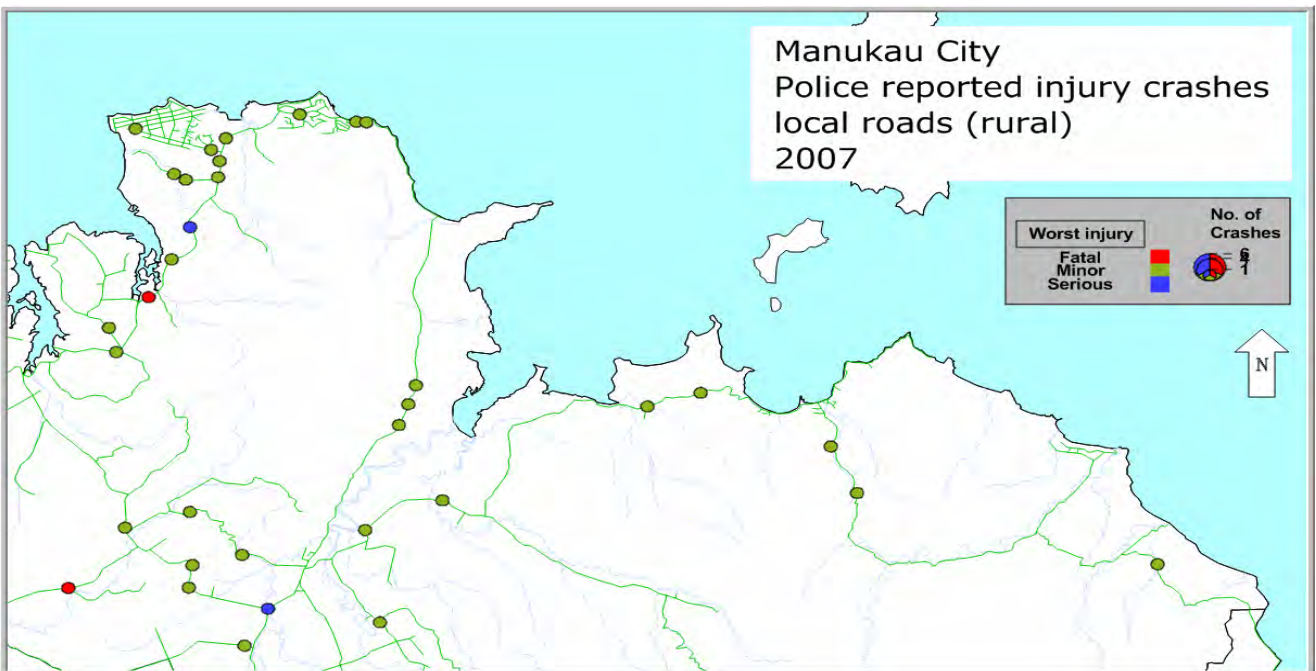
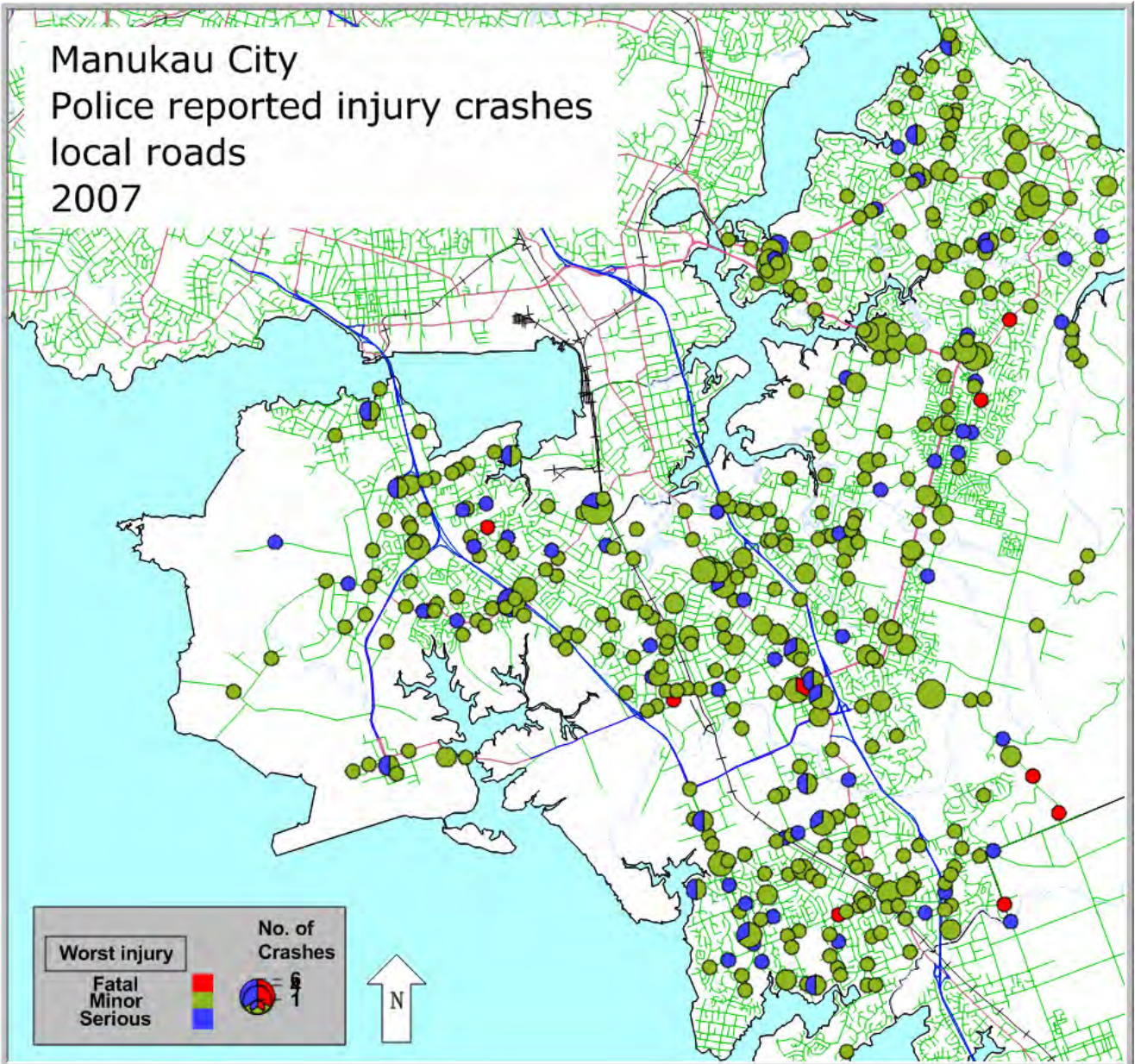
Crash type or contributory cause 2003 to 2007	Percentage fatal and serious crashes of this type or contributory cause	Percentage all injury crashes of this type or contributory cause
Alcohol	29	20
Too fast	27	18
At bends	26	20
At intersections	38	48
Pedestrians	24	13
Cyclists	5	6
Motorcyclists	11	6
Road factors	9	7
Night time	45	38

Further information about 2003 to 2007 injury and non-injury crashes on local roads:

- Worst month May, best January
- Worst day Friday, best Monday
- 24 percent on wet roads
- 34 percent at night
- 52 percent at intersections
- Number of roadside objects struck 5007
- 49 percent of at fault drivers in injury crashes held a full New Zealand drivers licence
- Social cost of crashes in 2007 \$168m

Further information about 2003 to 2007 injury and non-injury crashes on State Highways (mainly motorways) in Manukau City:

- Worst month May, best January
- Worst day Friday, best Sunday
- 27 percent on wet roads
- 34 percent at night
- 36 percent at intersections
- 57 percent of at fault drivers in injury crashes held a full New Zealand drivers licence
- Social cost of crashes in 2007 \$28m



Intersections

During the five year period 2003 to 2007 there were a total of 6501 crashes at intersections within Manukau City, 96 percent in urban areas.

Intersection conflicts resulted in 1263 injury crashes and 5238 non-injury crashes.

In these crashes, 8 people were killed, 205 received serious injuries and 1501 received minor injuries.

Crashes at Intersections					
	2003	2004	2005	2006	2007
Injury crash	254	217	201	303	288
Non-injury crash	1190	970	884	1087	1107
Total	1444	1187	1085	1390	1395

Locations with the most injury crashes 2003 to 2007

Intersection name (Within a radius of 50m)	Total crashes 2003 - 2007	Injury crashes 2003 - 2007	total 2007
Te Irirangi Drive / Ormiston Road	44	13	8
Pakuranga Highway / Ti Rakau Drive	69	12	17
Te Irirangi Drive / Ti Rakau Drive	92	11	17
Great South Road / Ronwood Avenue	47	10	7
Te Irirangi Drive / Smales Road	39	10	6

Junction type Injury and Non-injury crashes

Junction Type	Rural	Urban
Roundabout	3	482
Tee	104	3916
Cross (X)	107	1347
Y	11	129
Other (includes driveways)	9	393

The most common crash type at intersections is when a driver turns right and is hit by a vehicle approaching from the right.

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

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

Junction control Injury and non-injury

Junction control	2003	2004	2005	2006	2007
Traffic signals	412	341	310	401	397
Nil	481	356	342	431	471
Give Way	432	381	347	445	426
Stop	117	107	83	112	103

Further information about the 1263 injury crashes at intersections on local roads in Manukau City 2003 to 2007:

- 8 deaths, 205 serious injuries and 1501 minor injuries
- 23 percent wet roads
- 37 percent night time
- Worst month June, best January and February (equal)
- Worst day of week Saturday, best Monday
- Worst time three hour period 3pm till 6pm

Further information about injury crashes at intersections on State Highways in Manukau City 2003 to 2007:

- 5 deaths, 32 serious injuries and 199 minor injuries
- 24 percent wet roads
- 42 percent night time
- Worst month September, best June
- Worst day of week Saturday, best Monday
- Worst time three hour period 3pm till 6pm

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

Pedestrian injuries feature highly in the overall road injury picture in Manukau City, representing 13 percent of all injury crashes and they make up 24 percent of fatal and serious injury crashes.

Pedestrian injuries 2003 to 2007

Pedestrian injuries	2003	2004	2005	2006	2007
Fatal	4	4	4	3	5
Serious	23	15	13	23	17
Minor	59	44	40	50	57
Total	86	63	57	76	79

Most (99 percent) pedestrian crashes occur on urban roads.

Sixty-four percent occur at mid-block locations and mostly during daylight hours. There is strong crash bias from 3pm to 5pm, accounting for 33% of crashes.

A high proportion of injuries in pedestrian crashes involve young people aged 4-15 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 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.

Locations with three or more injury pedestrian crashes 2003 to 2007

Location	Number injury crashes
Massey Road 40m south of Yates Road	4
Pakuranga Road / Bucklands Beach Road	4
Ti Rakau Drive / Reeves Road	4
Massey Road 100m east of Gray Ave	3
Bairds Road 30m south of Everitt Road	3
Pakuranga Road 25m west of Greenhill Cres	3
Gt South Road 15m south of Halver Road	3
Kirkbride Road 200m north of Ascot Road	3
Te Irirangi Drive / Dawson Road	3

Further information about the 346 injury pedestrian crashes on local roads in Manukau City 2003 to 2007:

- The most common type of crash involved a pedestrian crossing the road being hit by a vehicle approaching from the right (44 percent)
- Worst month June, best January
- Worst day of week Thursday, best Sunday
- Worst three hour time period 3pm till 6pm

Cyclists

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

Cyclist injuries					
	2003	2004	2005	2006	2007
Fatal	0	0	1	0	0
Serious	7	6	1	6	3
Minor	27	21	25	25	24
Total	34	27	27	31	27

Most (96 percent) cycling crashes occurred on urban roads, the majority of these at intersections and during daylight hours.

Last year (2007) 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 eight and 49 years old.

Ages of injured cyclists (when known)				
	0 to 19 years	20 to 39 years	40 to 59 years	60+ years
Number of cyclists	54	36	32	11

Further information about the 144 reported cyclist injury crashes on local roads in Manukau City 2003 to 2007:

- 56 percent at intersections
- 19 percent at night
- Worst month March, best July and October (equal)
- Worst day Tuesday, best Sunday
- Worst three hour time period 3pm till 6pm

Motorcyclists

Although motorcyclist injuries do not feature highly in the overall road injury picture in Manukau City, representing only six 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 2007 motorcyclists accounted for more than nine percent of road fatalities in New Zealand, by mid 2008 this had risen to over 11 percent.

Motorcyclist injuries					
	2003	2004	2005	2006	2007
Fatal	2	2	2	3	0
Serious	11	6	7	9	7
Minor	14	11	21	25	34
Total	27	19	30	37	41

Most (84 percent) motorcycle crashes occur on urban roads. These are equally spread between intersections and away from intersections (mid-block).

Ages of injured motorcyclist (when known)				
	0 to 19 years	20 to 39 years	40 to 59 years	60+ years
Number of motor-cyclists	18	86	41	6

Further information about the 153 motorcyclist injury crashes on local roads in Manukau City 2003 to 2007:

- 49 percent at intersections
- 30 percent at night
- 12 percent in the wet
- Worst month May, best April
- Worst day Friday, best Tuesday

Further information about the 14 motorcyclist injury crashes on State Highways in Manukau City 2003 to 2007:

- 71 percent at intersections
- 21 percent at night
- 14 percent in the wet

Crashes at bends

Between 2003 and 2007, 20 percent of all injury crashes in Manukau City occurred at bends. These crashes resulted in 24 fatalities, 128 serious injuries and 592 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	5	23	76	104
2004	5	23	78	106
2005	6	16	76	98
2006	4	19	102	125
2007	4	16	81	101
Total	24	97	413	534

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 objects 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 objects struck in injury crashes in Manukau City were fences (119), posts (116) and trees (108) from a total of 592 objects struck.

Main characteristics of injury crashes at bends	
Crash characteristic	Percentage of crashes
Single vehicle	73
Alcohol	34
Excessive speed for the conditions	51
Road factors	16
Poor handling	46
Rural road	29
Wet road	37
Night time	51

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

Ages of drivers at fault in night time injury crashes (2003 to 2007)	Male	Female	Total
15- 19	97	37	134
20 - 24	92	28	120
25 - 29	45	18	63
30 - 39	70	23	93
40 - 49	37	12	49
50 - 59	11	9	20
60 - 69	7	5	12
70+	3	1	4
Total	362	133	495

Further information about the 534 injury crashes on bends (2003 to 2007) on local roads in Manukau City :

- 73 percent of at fault drivers were male
- Most common cause, entering a corner at too fast a speed for the conditions
- Most common at fault driver age group 15-19 years
- 34 percent of crashes involved alcohol
- Worst month October, best August
- Worst day of week Saturday, best Tuesday
- Worst three hour time period 6pm till 9pm

Further information about the 54 injury crashes on bends (2003 to 2007) on State Highways in Manukau City :

- 7 deaths, 14 serious injuries and 62 minor injuries
- 58 percent of at fault drivers were male
- Most common cause, entering a corner at too fast a speed for the conditions
- Most common age group 15-19 years
- 33 percent of crashes involved alcohol
- Worst month September, best February
- Worst day of week Sunday, best Tuesday and Wednesday (equal)
- Worst three hour time period midnight to 3am and 9am to midday (equal)

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 2007, alcohol-affected drivers contributed to 33 percent of all fatal crashes and 15 percent of all injury crashes.

Between 2003 and 2007 there were 517 alcohol-related injury crashes in the city.

In Manukau City, alcohol was a factor in 20 percent of injury crashes in 2007, a decrease from 2006.

Age and gender of at fault drivers (note: age ranges are not equal)			
Ages of drivers at fault in night time injury crashes (2003 to 2007)	Male	Female	Total
15 - 19	79	22	101
20 - 24	107	19	126
25 - 29	42	11	53
30 - 39	89	22	111
40 - 49	54	9	63
50 - 59	21	4	25
60 - 69	10	2	12
70+	3	0	3
Total	405	89	494

The key crash locations of alcohol related crashes occurring between 2003 and 2007 are shown on the map on the following page.

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

This will allow the Police and other agencies to target alcohol related crashes more quickly and with even more geographic accuracy than ever before.

Alcohol related injury crashes

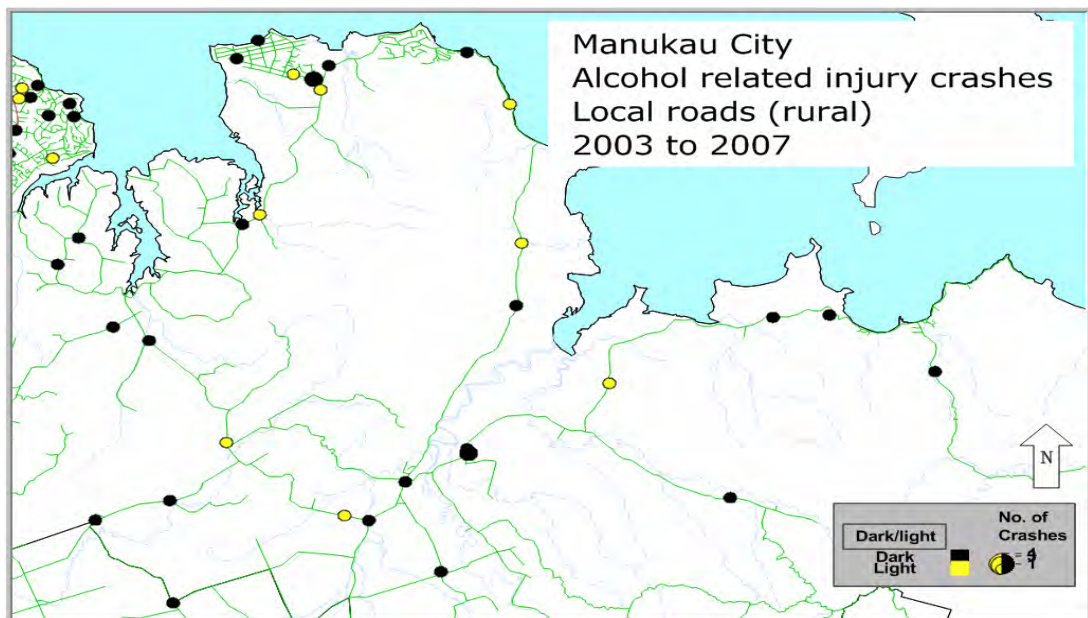
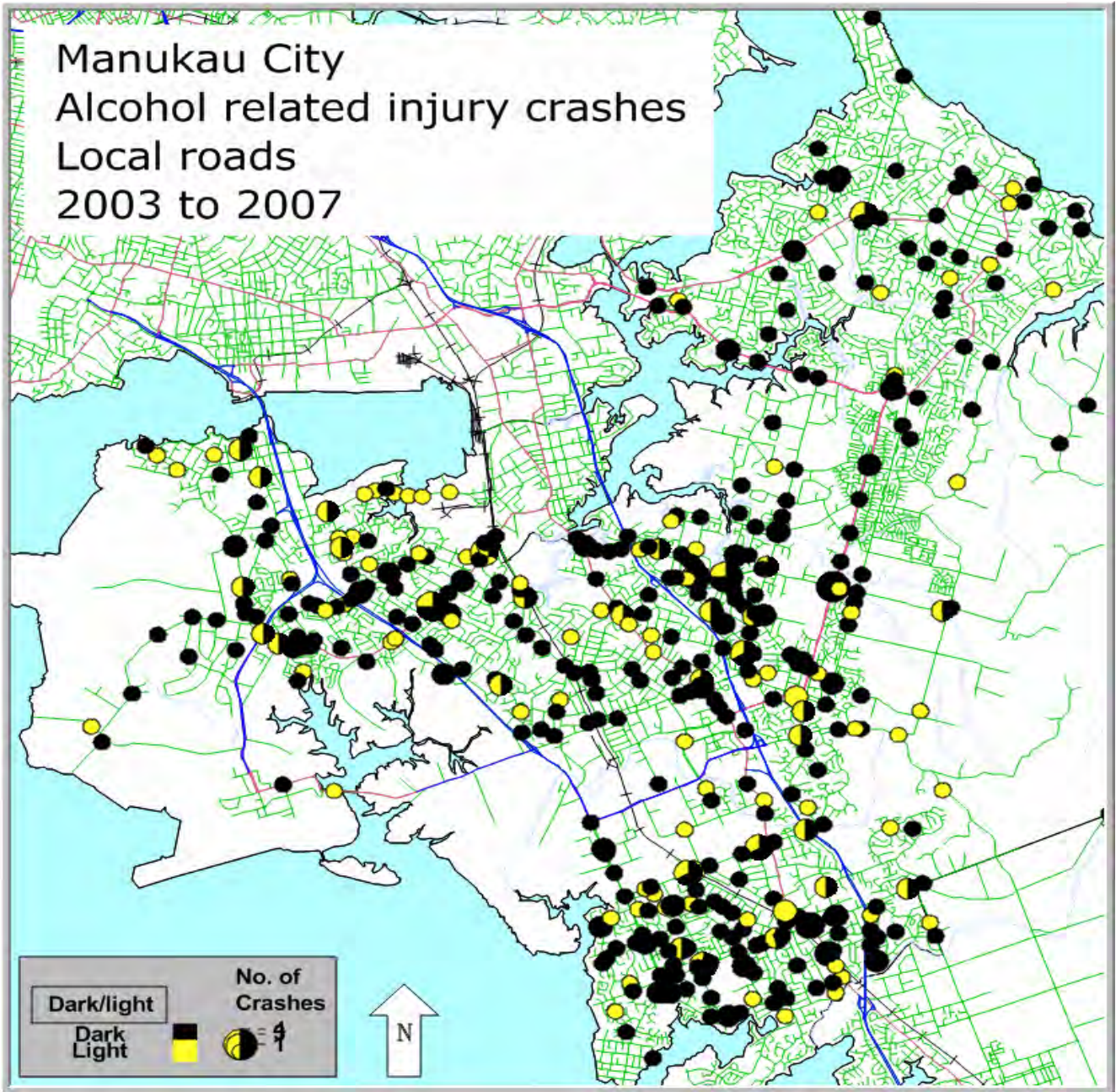
Crash year	Open road	Urban road	Total
2003	7	65	72
2004	9	83	92
2005	14	82	96
2006	10	133	143
2007	9	105	114
Total	49	468	517

Further information about the 517 alcohol related injury crashes in Manukau City on local roads 2003 to 2007:

- 27 deaths, 137 serious injuries and 548 minor injuries
- 82 percent of at fault drivers were male
- Most common crash type, lost control or head on crash on a bend
- 43 percent at intersections
- 91 percent urban
- 25 percent wet road
- 75 percent night time
- Worst December, best February
- Worst day of week Saturday, best Monday
- Worst three hour period 9pm till midnight

Further information about the 83 alcohol related injury crashes in Manukau City on State Highways 2003 to 2007:

- 6 deaths, 29 serious injuries and 114 minor injuries
- 77 percent of at fault drivers were male
- Most common crash type, loss of control or head on a straight road
- 40 percent at intersections
- 30 percent urban
- 25 percent wet road
- 75 percent night time
- Worst month June and September (equal), best May
- Worst day of week Saturday and Sunday (equal), best Tuesday and Wednesday (equal)
- Worst three hour period midnight to 3am



National issues

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

Speed

“Too fast” was recorded in 18 percent of injury crashes in the city in the last five years resulting in 35 deaths and 651 other injuries.

Speed as a factor in crashes is reducing in the city.

Seventy-one 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 25 were the most highly represented in speed-related crashes.

Alcohol

Alcohol was involved in 20 percent of injury crashes in the city in the last five years resulting in 27 deaths and 685 other injuries. The number of injury crashes involving alcohol is decreasing.

Most 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 31 percent of all reported injury crashes for the last five years resulting in 10 deaths and 1105 other injuries.

Ninety-five percent of crashes were in urban areas of the city.

Sixty 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 Council, Police District and local body level. The front seat belt wearing rate in Manukau City was 94 percent in 2007; this was the second lowest in the region.

The results are obtainable from the Ministry of Transport website:

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

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