

# *briefing notes - road safety issues*

## *Manukau City*

New Zealand Transport Agency has prepared this road safety issues report. It is based on reported crash data and trends for the 2004–2008 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 tenth road safety report for Manukau City. All the material unless otherwise stated in this report applies only to local roads. Local roads are all non State Highway roads in the city.

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**

Alcohol

Speed

Night

Intersections

#### **Nationally \***

Speed

Alcohol

Failure to give way

Restraints

### **2008 road trauma**

#### **Casualties**

#### **Manukau City**

Deaths

17

Serious casualties

98

Minor casualties

596

#### **Crashes**

#### **Manukau City**

Fatal crashes

12

Serious injury crashes

85

Minor injury crashes

460

Non-injury crashes

2030

\* not in any specific order of priority

## Overview

In 2008 on local roads in Manukau City there were 557 injury crashes and 2030 non-injury crashes. In addition there were 537 injury crashes and 1677 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 557 injury 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 urban / rural 2008				
	Fatalities	Serious injuries	Minor injuries	Total
Rural	10	9	46	65
Urban	7	89	550	646
Total	17	98	596	711

Over the last ten years, fatal crashes along with serious injuries have been relatively steady, averaging 13 and 81crashes per year respectively. A large rise in the number of serious crashes in 2006 but no corresponding rise in fatal crashes could suggest improvements in Police reporting.

In contrast traffic volumes have risen significantly in the city. In the years 2003/4 there were an estimated 1568.6 million vehicle kilometres travelled (vkt) in the city and by 2007/8 this had risen to a vkt of 1774.1 million.

Crash trends in Manukau City				
Year	Fatal Crashes	Serious Crashes	Minor Crashes	Total Crashes
1999	15	82	308	405
2000	12	77	332	421
2001	14	79	345	438
2002	14	82	418	514
2003	13	85	423	521
2004	15	74	371	460
2005	15	58	378	451
2006	11	108	491	610
2007	13	75	504	592
2008	12	85	460	557

### Crash characteristics

Crash type or contributory cause 2004 to 2008	Percentage fatal and serious crashes of this type or contributory cause	Percentage all injury crashes of this type or contributory cause
Alcohol	31	21
Too fast	29	18
At bends	25	20
At intersections	39	49
Pedestrians	23	12
Cyclists	5	5
Motorcyclists	11	7
Road factors	8	7
Night time	48	39

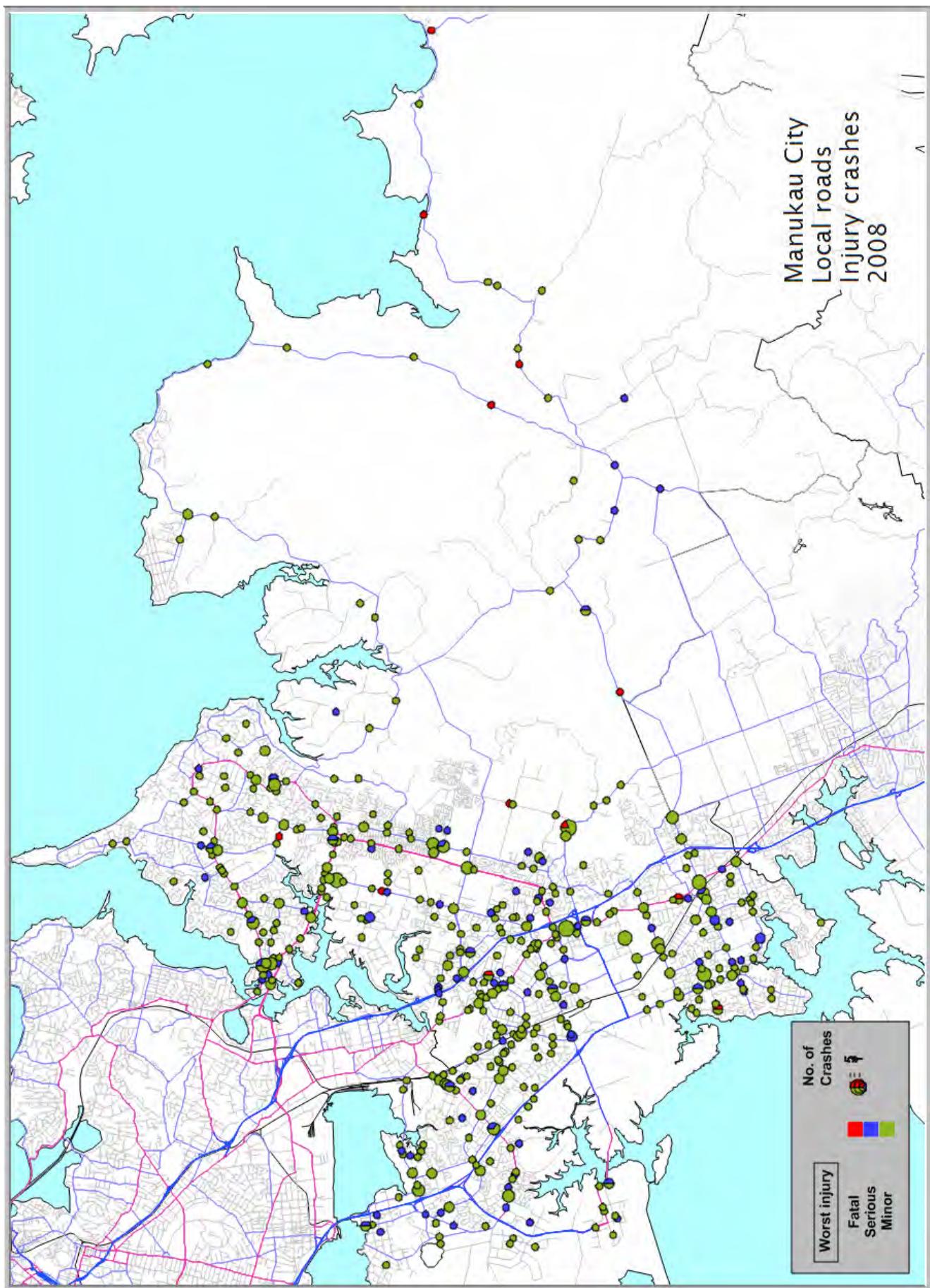
Further information about injury and non-injury crashes on **local roads** in Manukau City 2004 to 2008:

- Worst month May, best January
- Worst day Friday, best Sunday
- 23 percent on wet roads
- 35 percent at night
- 53 percent at intersections
- 5198 roadside objects struck
- Social cost of crashes in 2008 \$133 m

Further information about injury and non-injury crashes on **State Highways** in Manukau City 2004 to 2008

- Worst month May, best January
- Worst day Friday, best Sunday
- 27 percent on wet roads
- 34 percent at night
- 34 percent at intersections
- 742 roadside objects struck
- Social cost of crashes in 2008 \$35m

Social cost measures the total cost of road crashes to the nation, including loss of life and life quality, loss of productivity, medical, legal, court and property damage costs.



## 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 sixteen times more likely to be involved in a fatal 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 a sober driver 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 2008, alcohol-affected drivers contributed to 34 percent of all fatal crashes (the same as 2007) and 15 percent of all injury crashes (the same as 2007).

In Manukau City, alcohol was a factor in 21 percent of injury crashes in 2008.

Alcohol related injury crashes			
Crash year	Open road	Urban road	Total
2004	9	83	92
2005	14	82	96
2006	10	133	143
2007	9	106	115
2008	12	104	116
Total	54	508	562

(Open road is classified as any area with a speed limit of 80km/hr or more).

From the beginning of 2007 NZTA has been adding driver factor codes to all non-injury crashes for the northern district. This will allow the Police and other agencies to target alcohol related crashes more quickly and with even more geographic accuracy than ever before.

In 2008 there were 246 non-injury alcohol related crashes reported by the Police in Manukau City. The locations of alcohol related injury crashes occurring between 2004 and 2008 are shown on the map on the following page.

In the city there were 15 locations with three or more alcohol related injury crashes in the last five years including 3 with four or more. There are also some routes (of varying lengths) which stand out because of the number of alcohol related fatal and serious crashes on them. Of particular note are Massey Road, Brookby Road, North Road and Porchester Road.

### Locations with four or more alcohol related injury crashes 2004 to 2008

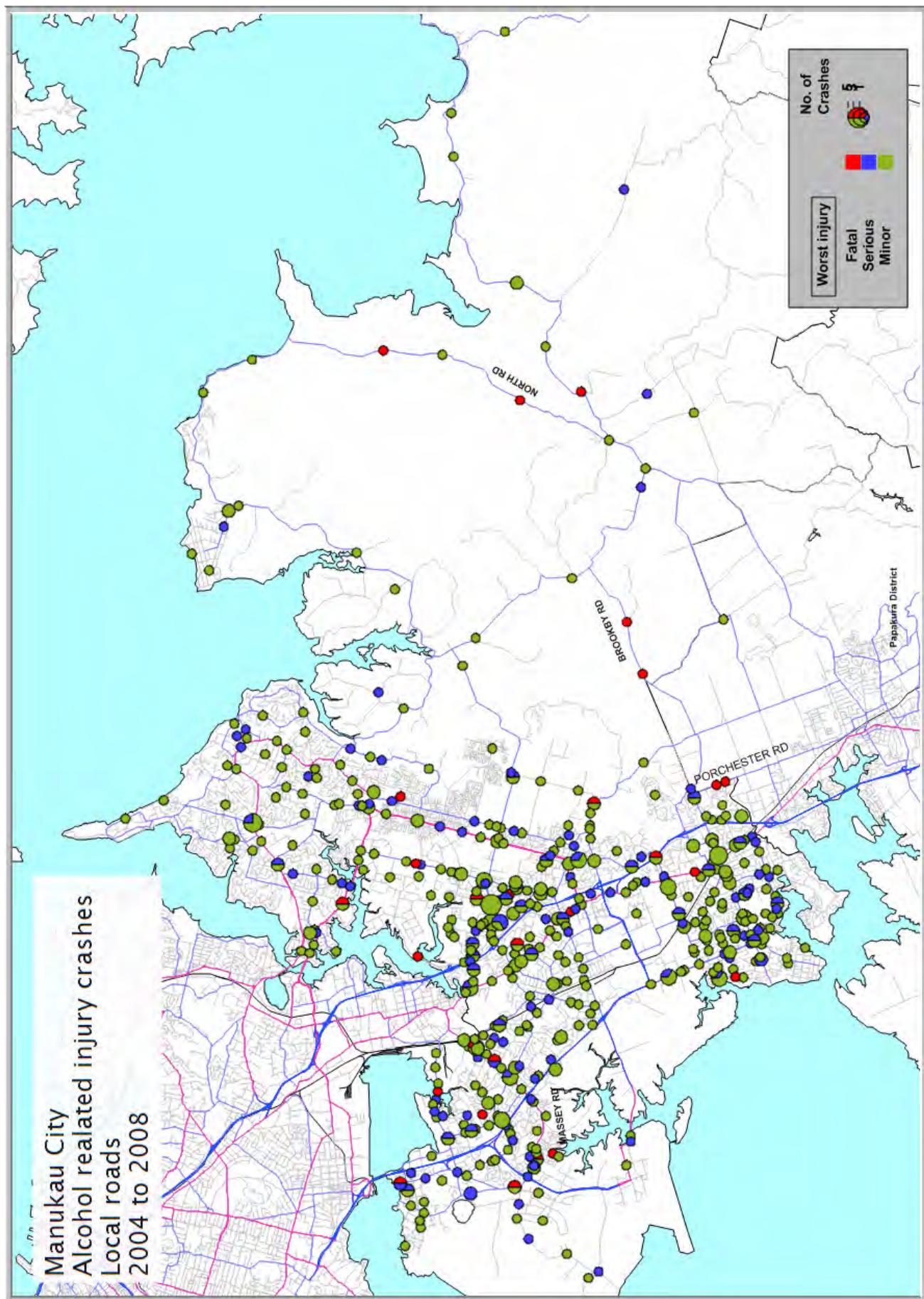
Intersection name	2004 - 2008	2008
East Tamaki Rd / Ferguson Rd	5	1
Pakuranga Rd / Aviemore Dr	4	1
Alfriston Rd / Gt South Rd	4	1

Further information about the 562 alcohol related injury crashes in Manukau City on local roads 2004 to 2008:

- 30 deaths, 145 serious injuries and 599 minor injuries
- 82 percent of at fault drivers were male
- Most common crash type "loss of control turning right"
- 46 percent at intersections
- 90 percent urban
- 24 percent wet road
- 76 percent night time
- Worst three hour time period 9pm till midnight
- Worst month December, best February
- Worst day Saturday, best Monday

Further information about the 82 alcohol related injury crashes in Manukau City on State Highways 2004 to 2008:

- 5 deaths, 26 serious injuries and 112 minor injuries
- 76 percent of at fault drivers were male
- Most common crash type "loss of control towards the left on straight roads"
- 39 percent at intersections
- 34 percent urban
- 21 percent wet road
- 74 percent night time
- Worst three hour time period Midnight till 3pm
- Worst months September and December (equal), best May
- Worst day Saturday, best Tuesday



## Speed

Nationally, speed is one of the major contributing factors to road crashes. Reducing speeds 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 situations and it leads to more serious injuries.

Research has shown that a one km/h reduction in mean speed can produce a three percent reduction in injury crashes.

Between 2004 and 2008, 18 percent of injury crashes in Manukau City involved travelling too fast for the conditions. These crashes resulted in 39 fatalities, 141 serious injuries and 548 minor injuries.

Speed related injury crashes					
Road type	2004	2005	2006	2007	2008
Rural	17	25	18	22	15
Urban	63	72	95	70	96
Total	80	97	113	92	111

In the city the number of speed related crashes has been fluctuating with urban crashes showing an upward trend.

There are 10 sites in Manukau that have three or more speed related injury crashes at them in the last five years. Seven of these sites have had at least one crash in 2008.

Speed related injury crashes (Sites with three or more injury crashes in the last five years and at least one in 2008)		
Road	Total	2008
Massey Rd / Vine St	4	2
Murphys Rd 50m north Flat Bush School Rd	3	1
Finlayson Ave 50m north Ngatira Pl	3	1
Ti Rakau Dr / Botany Rd	3	1
Kirkbride Rd / Mountain Rd	3	1
Bairds Rd 220m east Gt South Rd	3	1
Redoubt Rd 550 east Hilltop Rd	3	1

### Age and gender of at fault driver in speed related injury crashes

Driver age (2004- 2008)	Male	Female	Total
15-19 years*	125	29	154
20 - 24	111	22	133
25 - 29	56	9	65
30 - 39	54	11	65
40 - 49	26	2	28
50 - 59	6	6	12
60 - 69	9	2	11
70+	6	1	7
<b>Total</b>	<b>393</b>	<b>82</b>	<b>475</b>

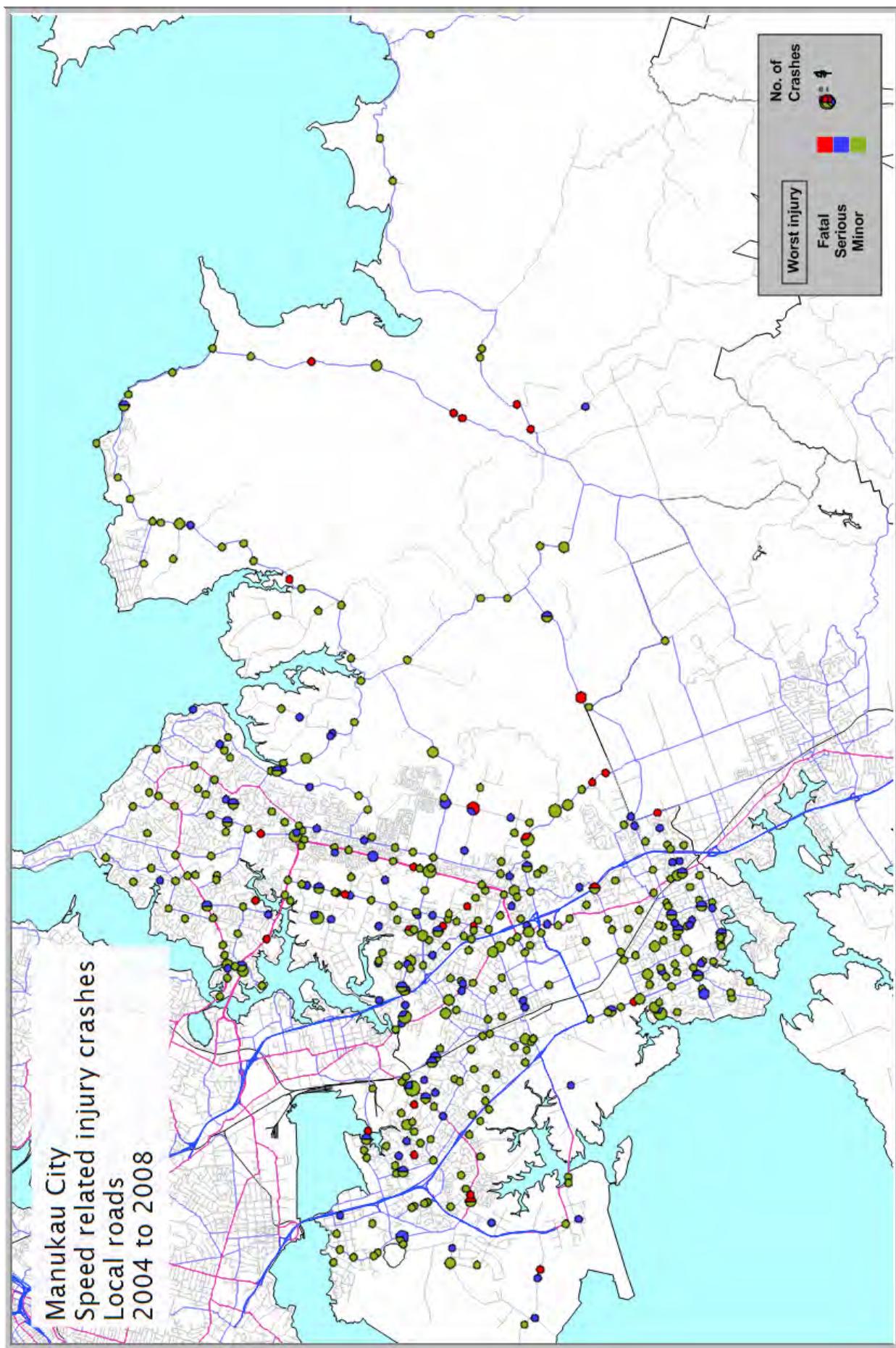
\*Note age ranges are not equal.

Further information about the 493 speed related injury crashes in Manukau City on **local roads** 2004 to 2008:

- 39 deaths, 141 serious injuries and 548 minor injuries
- Most common crash type “Lost control on a bend”
- 62 percent mid-block
- 31 percent wet road
- 55 percent night time
- Best month October, worst February
- Best days Tuesday and Wednesday (equal), worst Saturday
- Worst three hour time period 9pm till midnight

Further information about the 75 speed related injury crashes in Manukau City on **State Highways** 2004 to 2008:

- 5 deaths, 18 serious injuries and 101 minor injuries
- Most common crash type “Lost control on bend”
- 71 percent mid-block
- 27 percent wet road
- 58 percent night time
- Best months February and May (equal), worst June
- Best day Tuesday, worst Friday and Saturday (equal)
- Worst three hour time period 3pm till 6pm



## Night time crashes

Between 2004 and 2008 there were a total of 1029 night time injury crashes on local roads in Manukau City. These resulted in 37 fatalities, 230 serious injuries and 1122 minor injuries.

The proportion of fatal and serious injury crashes occurring at night on local roads in Manukau is much higher than the average for similar cities.

Night time injury crashes					
Road type	2004	2005	2006	2007	2008
Open road	24	27	24	20	18
Urban road	150	154	212	206	194
Total	174	181	236	226	212

Injury crashes were split almost evenly between the weekends and weekdays. Weekday time period is from Monday 6am till Friday 6pm.

Night time injury crashes 2004 to 2008			
Worst injury	Weekend	Weekday	Total
Fatal	13	20	33
Injury	502	494	996

In the city there are 64 locations with three or more injury night time crashes (2004 to 2008).

This includes 23 sites with four or more crashes and nine with five or more.

Locations with seven or more injury night time crashes 2004 to 2008	
Intersection name (Within a radius of 55m)	Total Injury crashes
Great South Road / Alfriston Road	10
Pakuranga Road / Aviemore Drive	9
Reeves Road / Ti Rakau Drive	8
Pakuranga Rd / Ti Rakau Drive	7

### Age and gender of at fault drivers in night time injury crashes

Age of drivers	Male	Female
15- 19 years *	151	53
20 - 24	169	57
25 - 29	92	34
30 - 39	149	45
40 - 49	85	24
50 - 59	44	14
60 - 69	24	5
70+	8	2
Total	722	234

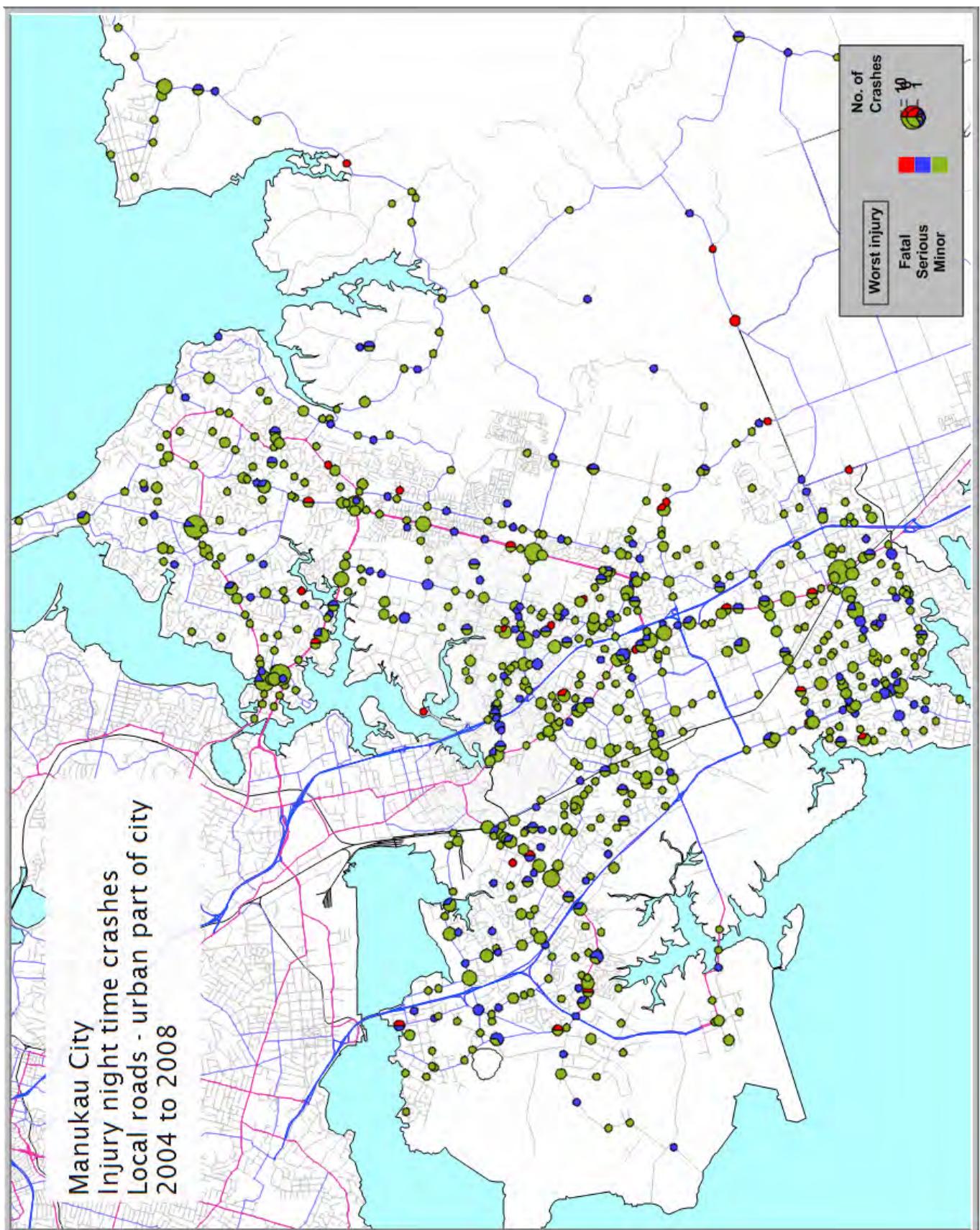
\* Note age ranges are not equal

Further information about the 1029 injury night time crashes in Manukau City on **local roads** 2004 to 2008:

- Most common crash type “loss of control turning right on a bend or intersection”
- 41 percent involve alcohol
- 30 percent wet road
- 26 percent speed related
- Worst month July, best January
- Worst day Saturday, best Tuesday
- Worst three hour time period 6pm till 9pm

Further information about the 207 night time injury crashes in Manukau City on **State Highways** 2004 to 2008:

- Most common crash type “rear end in queue”
- 29 percent involve alcohol
- 29 percent wet road
- 20 percent speed related
- Worst month June, best February
- Worst day Friday, best Monday
- Worst three hour time period 9pm till midnight



## Intersections

During the five year period 2004 to 2008 within Manukau City there were a total of 6513 crashes at intersections, 1305 of these were injury crashes and 5208 non-injury.

Crashes at Intersections					
	2004	2005	2006	2007	2008
Injury crash	217	202	304	292	290
Non-injury crash	972	888	1093	1118	1137
Total	1189	1090	1397	1410	1427

There are 148 intersection in Manukau City with three or more injury crashes in the last five years, including 32 with six or more and nine with nine or more.

Sites with ten or more injury crashes at an intersection are in the table below.

Intersections with ten or more injury crashes 2004 to 2008		
Intersection name (Within a radius of 50m)	2004 - 2008	2008
Great South Rd/ Ronwood Ave	14	5
Te Irirangi Dr / Ormiston Rd	14	3
Ti Rakau Dr / Botany Rd	10	2

Intersections with four or more injury crashes between 2004 and 2008 are shown in the following map.

Thirty-six percent of at fault drivers at intersections were aged between 15 and 24 and only 48 percent of at fault drivers held a full drivers licence.

Junction control Injury and non-injury crashes				
Junction control	Traffic signals	Nil	Give Way	Stop
Number of crashes	1970	1831	2165	536

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

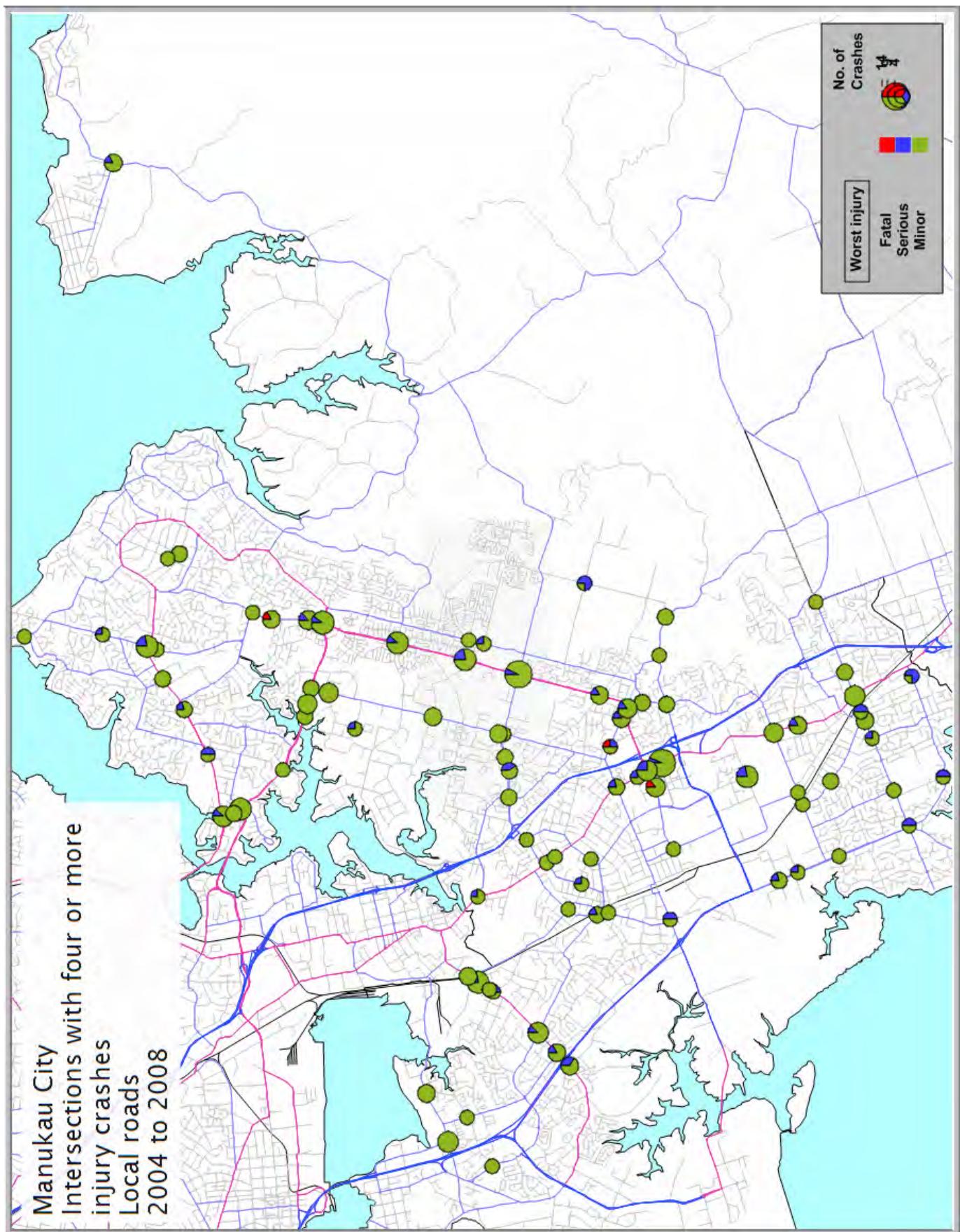
Junction type Injury and Non-injury crashes		
Junction Type	Rural	Urban
Roundabout	2	484
Tee	87	3908
Cross (X)	106	1381
Y	16	138
Other (includes driveways)	9	382

Further information about the 1305 injury crashes at intersections on **local roads** in Manukau City 2004 to 2008:

- 8 deaths, 215 serious injuries and 1537 minor injuries
- 22 percent wet roads
- 38 percent night time
- Worst month July, best January
- Worst day Saturday, best Monday
- Worst three hour time period 3pm till 6pm

Further information about the 158 injury crashes at intersections on **State Highways** in Manukau City 2004 to 2008:

- 2 deaths, 21 serious injuries and 200 minor injuries
- 23 percent wet roads
- 43 percent night time
- Worst month September, best June
- Worst day Saturday, best Tuesday
- Worst three hour time period 3pm till 6pm



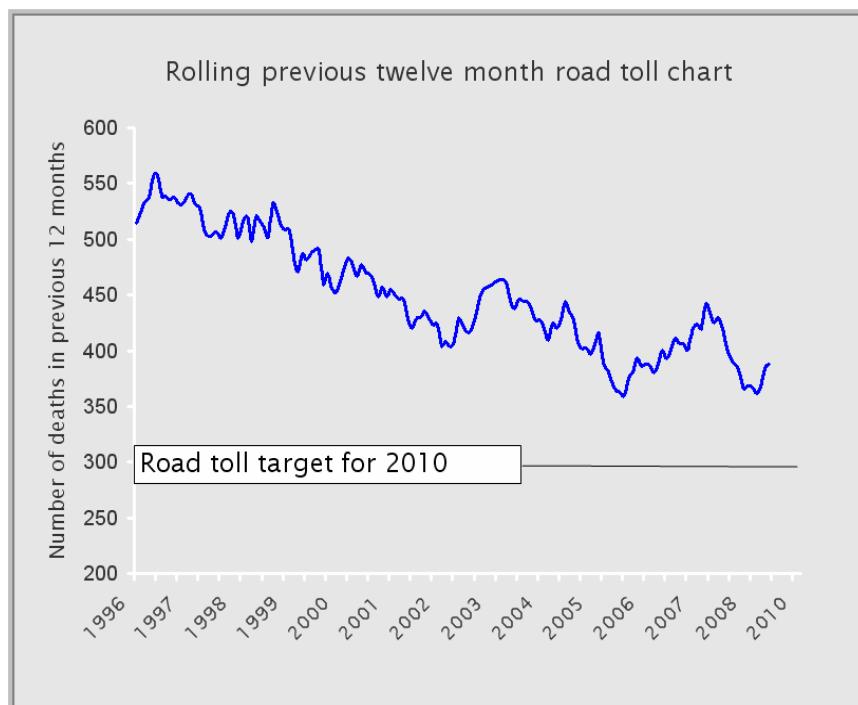
## The next ten years—moving beyond Road Safety 2010

In August this year the Ministry of Transport will embark on a nationwide road safety consultation programme as it moves to formulate priorities for the next ten years.

Information will be published on their web site and we would encourage any person or group with an interest in road safety to watch the site carefully for developments. Follow this link:

<http://www.transport.govt.nz/ourwork/Land/landsafety/SaferJourneys-RoadSafetyStrategyto2020/>

The chart on the right illustrates the progress made during the life of the Road Safety 2010 strategy. Although progress has been made it would seem highly unlikely that the target of 300 or fewer fatalities will be met.



### Restraints

The Ministry of Transport (MoT) conducts surveys of restraint use. Results are available for front, rear and child restraints although not all at a local authority level.

See the MoT website: <http://www.transport.govt.nz/research/safetybeltstatistics/>

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