



New Zealand Government

briefing notes - road safety issues

Auckland 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 Auckland City.

This report is the ninth road safety report for Auckland 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 Auckland 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 Auckland City to use its free access to the Ministry of Transport's Crash Analysis System (CAS) to delve deeper into the highlighted issues. All the data and maps in this note are from CAS.

Major road safety issues

Auckland City

Intersections

Vulnerable road users

Crashes at bends

Night time crashes

2007 road trauma

Casualties

Auckland City

Deaths 4

Serious casualties 116

Minor casualties 960

Nationally

Speed

Alcohol

Failure to give way

Restraints

Crashes

Auckland City

Fatal crashes 4

Serious injury crashes 104

Minor injury crashes 763

Non-injury crashes 3019

Overview

In 2007 on local roads in Auckland City there were 871 injury crashes and 3019 non-injury crashes. In addition there were 256 injury crashes and 1003 non-injury crashes on State Highways roads both as reported by the New Zealand Police. The table below shows the number of injuries resulting from the on road injury crashes by road type for local roads (rural is defined as an area with a speed limit of 80km/h or more).

Casualties by road type 2007				
	Fatalities	Serious injuries	Minor injuries	Total
Major urban	3	89	697	789
Minor urban	0	25	249	274
Rural	1	2	9	12
Total	4	116	955	1,075

Local road fatal crashes in the city have been relatively steady over the last eight years (except in 2003). In 2007 there was a large drop in the number of fatal crashes.

Serious and minor crashes in 2007 were also lower than reported in recent years.

One notable area of improvement is the reduction of night time alcohol related crashes in the city, from 110 injury crashes reported in 2006 down to 66 in 2007. The percentage of all alcohol related injury crashes also reduced from a high of 15 percent in 2006 to 11 percent in 2007.

Crash trends in Auckland City				
Year	Fatalities	Serious injuries	Minor injuries	Total
1998	21	147	832	1,000
1999	13	127	808	948
2000	10	155	744	909
2001	10	150	684	844
2002	12	167	801	980
2003	23	130	1,032	1,185
2004	15	140	901	1,056
2005	10	134	1,032	1,176
2006	12	139	1,004	1,155
2007	4	116	960	1,080

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	21	13
Too fast	16	10
At bends	17	11
At intersections	50	57
Vulnerable road users (1-3 as below)	50	34
1, Pedestrians	27	17
2, Cyclists	10	10
3, Motorcyclists	13	7
Roadside hazard struck	28	25
Road factors	7	3
Night time	42	32

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

- Worst month May, best January
- Worst day Friday, best Sunday
- 23 percent on wet roads
- 32 percent at night
- 57 percent at intersections
- 58 percent of at fault drivers in injury crashes held a full New Zealand drivers licence
- \$186 m social cost of crashes in 2007

Further information about 2003 to 2007 injury and non-injury crashes on State Highways:

- Worst month June, best January
- Worst day Friday, best Sunday
- 27 percent on wet roads
- 30 percent at night
- 22 percent at intersections
- 67 percent of at fault drivers in injury crashes held a full New Zealand drivers licence
- \$63 m social cost of crashes in 2007

Intersections

During the five year period 2003 to 2007 there were a total of 12,308 crashes at local road intersections within Auckland City. Of these crashes, more than 99 percent occurred in urban areas.

Intersection conflicts resulted in 2492 injury crashes and 9816 non-injury crashes. In these 24 people were killed, 321 received serious injuries and 2736 received minor injuries.

Crashes at intersections					
	2003	2004	2005	2006	2007
Injury crash	523	462	507	503	497
Non-injury crash	2,344	1,965	1,937	1,810	1,760
Total	2,867	2,427	2,444	2,313	2,257

Locations with the most injury crashes			
Intersection name (50 m Radius)	Total crashes 2003 - 2007	Injury crashes 2003 - 2007	Total 2007
Great North Road / Bullock track	45	19	12
Tamaki Drive / Ngapipi Road	33	14	4
Queen Street / City Road	28	14	8
Karangahape Road / Queen Street	76	13	8
Symonds Street / Newton Road	50	13	17

Junction type Injury and non-injury crashes 2003–2007		
Junction type	Major urban	Minor urban
Roundabout	850	127
Tee	4,627	1,789
Cross (X)	2,464	1,015
Y	273	75
Other (includes driveways)	751	246

The most common crash type at intersections is when a driver turning right into a side road or driveway hits an oncoming vehicle (15 percent).

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

- Failure to stop and / or give way
- Not checking adequately
- Being inattentive or attention being diverted
- Impaired by alcohol
- Pedestrians failure to check adequately before crossing at the intersection

Intersections controlled by traffic signals represented almost a third of the injury crashes.

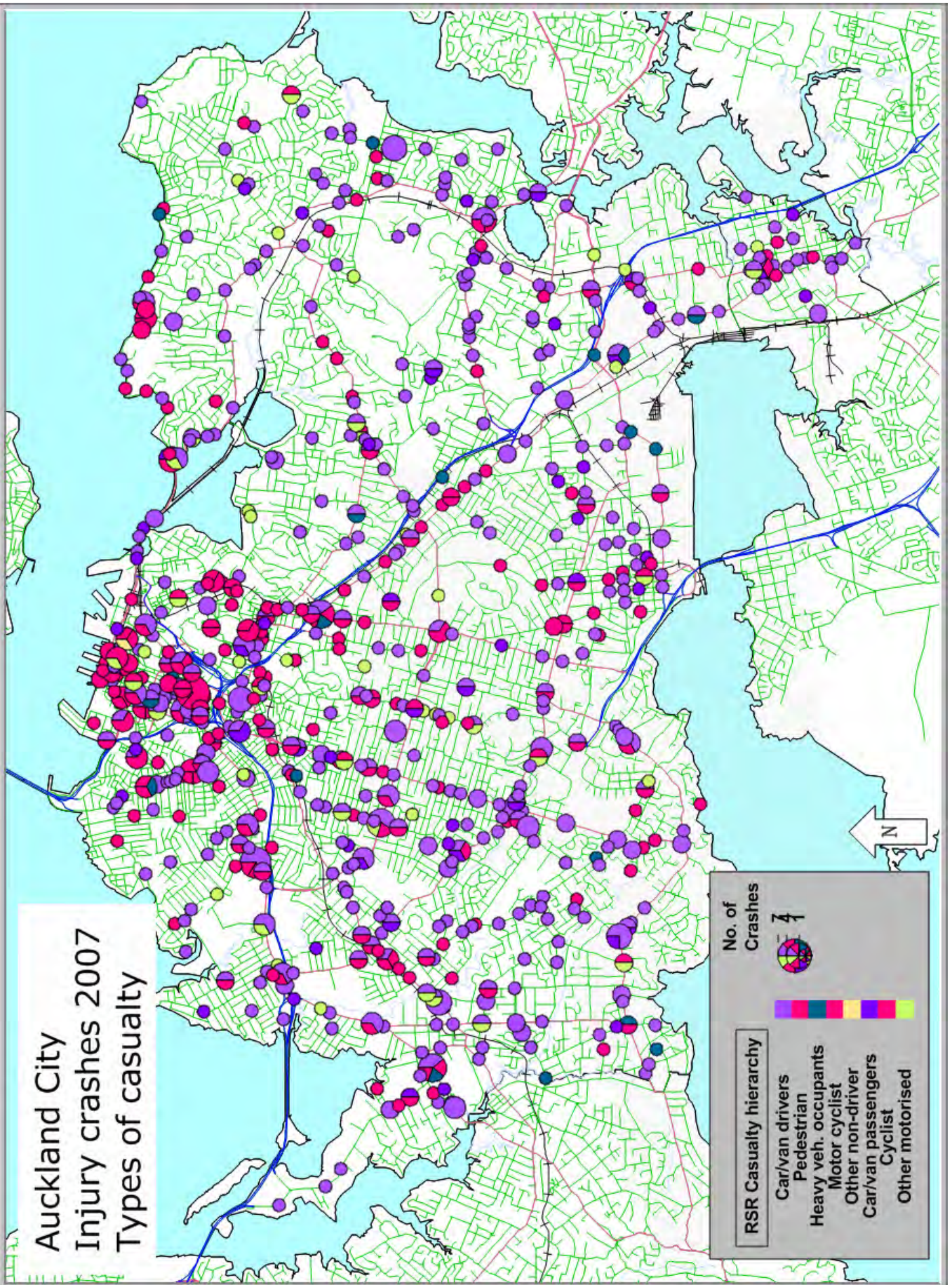
Junction control Injury and non-injury crashes 2003–2007		
Junction Control	Injury	Non-injury
Traffic signals	773	2,901
Nil control	718	3,759
Give way sign	501	2,253
Stop sign	493	1,599
Other	7	22

Further information about injury and non-injury crashes at intersections on local roads in Auckland City 2003 to 2007:

- 24 deaths and 321 serious injuries
- 10 percent injury crashes involved alcohol
- 23 percent wet roads
- 31 percent night time
- Worst month May, best January
- Worst day of week Friday, best Sunday

Further information about injury and non-injury crashes at intersections on State Highways in Auckland City 2003 to 2007:

- 8 deaths and 38 serious injuries
- 14 percent injury crashes involved alcohol
- 26 percent wet roads
- 34 percent night time
- Worst month May, best January
- Worst day of week Friday, best Sunday



Vulnerable road users (Pedestrians, Cyclists and Motorcyclists)

Vulnerable road users are those who have very little physical protection in the event of a crash with a vehicle 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. 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 Auckland City, representing 14 percent of all injuries and 24 percent of fatal and serious injuries.

Pedestrian injuries 2003 to 2007					
Pedestrian injuries	2003	2004	2005	2006	2007
Fatal	7	5	3	4	3
Serious	29	28	38	35	20
Minor	166	130	133	121	85
Total	202	168	175	161	108

Most (73 percent) pedestrian crashes occur on major urban roads. These are split fairly evenly between intersections and mid-block locations and mostly during daylight hours. There is strong crash bias toward the afternoon (3 pm–6 pm).

A high proportion 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. Younger age groups may also 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 enforcement of a lower speed tolerance around schools and greater use of 40 km/h school speed zones is a strong step in creating a safer lower speed environment for young pedestrians. Pedestrian crashes are concentrated on arterial and collector roads.

The top five locations 2003 to 2007 are shown in the table below.

Locations with the most pedestrian crashes

Location (100 m Radius)	Number of pedestrian crashes
Queen Street & Victoria Street area	17
Victoria Street & Federal Street area	16
Queen Street & City Road area	15
Karangahape Road & Queen Street area	15
Customs Street East & Gore Street area	10

Further information about the 907 injury and non-injury pedestrian crashes on local roads in Auckland 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 (43 percent)
- 40 percent of the pedestrian crashes at intersections had traffic signal controls
- Worst month May
- Worst day of week Thursday, best Sunday

Further information about injury and non injury pedestrian crashes on State Highways in Auckland City 2003 to 2007:

- Number of pedestrian crashes 13

Cyclists

Cyclist vs. vehicle injuries do not feature highly in the overall local road injury picture in Auckland City, representing eight percent of all injuries. However serious and minor injuries to cyclists in 2007 were slightly higher than those recorded in 2006.

Cyclist injuries					
	2003	2004	2005	2006	2007
Fatal	1	0	0	0	0
Serious	14	14	14	5	12
Minor	82	70	93	79	84
Total	97	84	107	84	96

Most (77 percent) cycling crashes occurred on major urban roads, the majority of these at intersections (62 percent) and during daylight hours.

In the last two years 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 injury numbers are highest for those in the 25 to 34 year old age group. The oldest cyclist injured was 89 years old.

Further information about the 629 injury and non-injury cyclist vs vehicle crashes on local roads in Auckland City 2003 to 2007:

- The most common type of crash was when a vehicle turning right into a side road or driveway hits an oncoming cyclist
- 27 percent of cycle crashes were recorded as non-injury
- Worst months February and May, best December
- Worst day of the week Thursday, best Sunday
- Number of crashes involving riding on the footpath, 31
- 67 percent of cyclists injured were male

Further information about the 18 injury and non-injury cyclist crashes on State Highways in Auckland City 2003 to 2007:

- 94 percent at intersections
- 28 percent at night
- 69 percent of the 13 cyclists injured were male

Motorcyclists

Although motorcyclist injuries do not feature highly in the overall local road injury picture in Auckland City, representing eight percent of all injuries, they make up 15 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 9.6 percent of road fatalities in New Zealand.

Motorcyclist injuries					
	2003	2004	2005	2006	2007
Fatal	1	1	1	1	0
Serious	16	20	18	30	21
Minor	66	55	69	71	62
Total	83	76	88	102	83

Most (80 percent) motorcycle crashes occur on major urban roads, the majority of these at intersections (62 percent) and during daylight hours.

Motorcyclist injuries are highest for those in the 30 to 39 year age group.

Further information about the 501 injury and non-injury motorcyclist crashes on local roads in Auckland City 2003 to 2007:

- The most common type of crash was when a vehicle turning right into a side road or driveway hits an oncoming motorcyclist
- 21 million riders were injured
- 34 percent of motor cycle crashes were recorded as non-injury
- Worst month March, best December
- Worst day of week Thursday, best days Saturday and Sunday
- 72 percent of motorcyclists injured were male

Further information about the 104 injury and non-injury motorcyclist crashes on State highways in Auckland City 2003 to 2007:

- 23 percent at intersections
- 15 percent in the wet
- 89 percent of motorcyclists injured were male

Crashes at bends

Between 2003 and 2007 just 13 percent of all local road injury crashes in Auckland City occurred at bends but they made up 21 percent of the social cost of all fatal and serious 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	22	91	118
2004	2	17	105	124
2005	2	14	100	116
2006	7	20	101	128
2007	1	17	99	117
Total	17	90	496	603

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 parked cars, fence, poles or trees. Hitting these objects can result in a relatively minor off-road event turning into something far more serious.

The four most common roadside hazards struck in bend crashes in Auckland City were parked vehicles (461), fences (397), poles (383) and trees (250) from a total of 2404 hazards struck.

Main characteristics of crashes at bends	
Crash characteristic	Percentage of crashes
Single vehicle	56%
Alcohol	33%*
Excessive speed for the conditions	43%*
Road factors	3%
Poor handling	41%*
At intersections	51%
Wet road	40%
Night time	53%

* Injury crash percentage only

A very high percentage of bend crashes occur during the hours of darkness, especially the higher severity crashes.

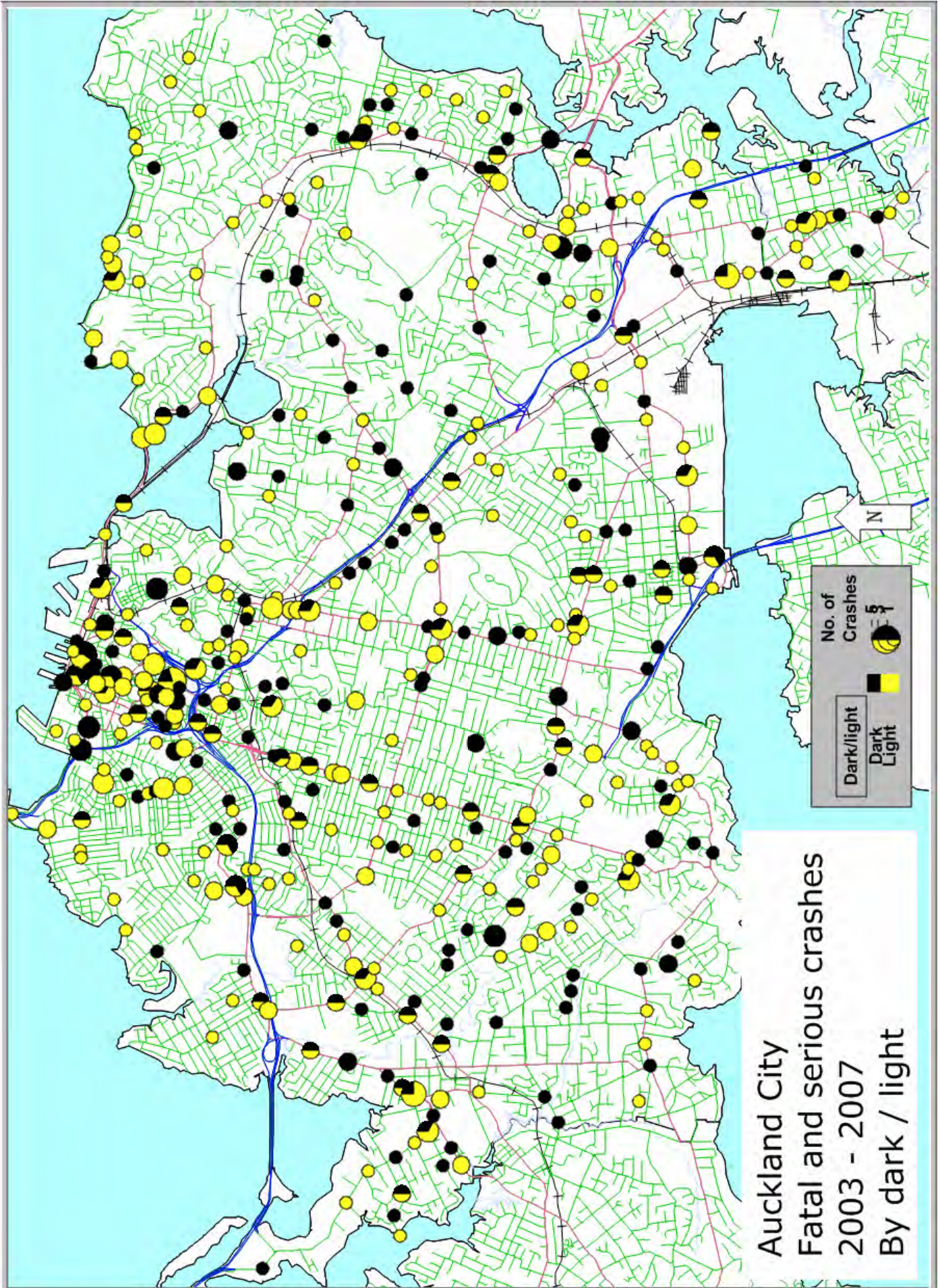
Bend crashes in dark	
Crash injury type	Percentage of crash type in dark
Fatal	76%
Serious	57%
Minor	53%
Non-injury	53%

Further information about the 2399 injury and non-injury crashes on bends (2003 to 2007) on local roads in Auckland City:

- 18 deaths, 117 serious injuries and 699 minor injuries
- 75 percent of at fault drivers were male (injury crashes)
- Most common crash type, 'loss of control turning right' (43 percent)
- Most common age group of at fault drivers, 15–19 year olds (injury crashes)
- Worst month, December, best January
- Worst day of week, Saturday, best Monday
- Worst time period, midnight to 3 am

Further information about the 454 injury and non-injury crashes on bends (2003 to 2007) on State Highways in Auckland City:

- 6 deaths, 21 serious injuries and 139 minor injuries
- 73 percent of at fault drivers were male (injury crashes)
- Most common crash type, 'loss of control turning right' (49 percent)
- Most common age group of at fault drivers 20–24 year olds (injury crashes)
- 36 percent of injury crashes involved alcohol
- 42 percent of injury crashes involved excessive speed for the conditions
- Worst month, July, best January
- Worst day of week, Saturday, best days Monday and Tuesday
- Worst time period, midnight to 3 am



Auckland City
Fatal and serious crashes
2003 - 2007
By dark / light

Night time crashes

The proportion of fatal and serious injury crashes occurring during the hours of darkness on local roads in Auckland City is higher than the New Zealand average.

Between 2003 and 2007 there were a total of 1522 night time injury crashes and 5313 non-injury crashes on local roads resulting in 42 fatalities, 286 serious injuries and 1,696 minor injuries.

Night time crashes on minor urban roads increased between 2003 – 2006 while crashes on major urban roads have been in constant decline over the whole five year period.

Night time crashes					
Road type	2003	2004	2005	2006	2007
Major urban	1,121	941	916	865	840
Minor urban	382	390	401	426	367
Open road	19	16	8	19	10

Almost half of the night time crashes (48 percent) occur during the weekend period when traffic volumes are generally less. It is therefore important that appropriate enforcement resources are allocated during these less congested times.

Night time crashes		
Worst injury	Weekend	Weekday
Fatal	17	19
Injury	680	806
Non-injury	2,600	2,713
Total	3,297	3,538

Younger drivers are highly represented in night time crashes on local roads in Auckland City.

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 underestimate how difficult it can be to see traffic hazards at night.

Age and gender of at fault drivers in injury crashes (Note ages ranges are not equal)

Ages of drivers at fault in night time crashes	Male	Female
15- 19	180	59
20 - 24	219	73
25 - 29	129	50
30 - 39	169	65
40 - 49	151	43
50 - 59	74	28
60 - 69	32	4
70+	15	7
Total	969	329

A high proportion of night time crashes occur at intersections (56 percent), of these 38 percent had traffic signal controls. Sites with the highest proportion of night time crashes include:

Ponsonby Rd/Brown St, 19 crashes (74% dark)
Green Lane West/The Drive, 16 crashes (69% dark)
Federal St/Victoria St, 34 crashes (68% dark)
Queen St/Wakefield St, 24 crashes (67% dark)

Further information about injury and non-injury night time crashes in Auckland City on local roads 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.
- 30 percent injury crashes include alcohol
- 31 percent wet road
- 16 percent injury crashes speed related
- Worst months May and July
- Worst day of week, Saturday

Further information about night time injury and non-injury crashes in Auckland City on State Highways 2003 to 2007:

- 12 deaths, 63 serious and 549 minor injuries
- Most common crash type is a driver running into the rear of a queue of traffic
- 23 percent injury crashes include alcohol
- 36 percent wet road
- 17 percent injury crashes speed related
- Worst month June
- Worst day of week Friday

National issues

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

Speed

'Too fast' was recorded as a factor in 10 percent of injury crashes in the city in the last five years resulting in 33 deaths and 632 other injuries. Speed as a factor in crashes is below the New Zealand city average but is not generally reducing in the city.

Seventy percent of speed-related crashes were 'loss of control or head on'. Alcohol and poor handling were the other driver factors often associated with speed related crashes.

At fault male drivers aged less than 25 were the most highly represented in speed-related crashes.

Alcohol

Alcohol was involved in 13 percent of injury crashes in the city in the last five years resulting in 28 deaths and 747 other injuries. The number of injury crashes involving alcohol reduced in 2007 following a five year high in 2006.

Most alcohol related crashes occur during the hours of darkness (46 percent, 9 pm – 3 am).

Speed, poor handling and poor observation were the other factors often associated with alcohol.

Failure to give way

Failure to give way or stop was reported in 33 percent of all reported injury crashes for the last five years resulting in 10 deaths and 1887 other injuries.

There were 398 crashes were at traffic signals, 375 at stop signs, 316 at give way signs and 385 at uncontrolled junctions.

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 Auckland City was 98 percent in 2007.

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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