

# briefing notes - road safety issues

## Auckland Motorways

New Zealand Transport Agency has prepared this eleventh road safety issues report for the Auckland Motorways.

It is based on reported crash data and trends for the 2005–2009 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 on the Auckland Motorways.

All the material unless otherwise stated in this report applies only to the area generally considered to be Motorway, but also includes a small amount of non motorway road also patrolled by the Police Motorway team. Information about crashes on State Highways outside this area can be found in the separate “Auckland State Highways” report.

We have also included a brief overview of crashes on the Motorway.

In March the Government released Safer Journeys the road safety strategy for the next ten years. The two following pages contain a brief introduction to the strategy and a link to find more information.

The issues chosen for this report are drawn from either the most common crash types, those that appear over-represented and those with high social cost (high numbers of fatal and serious crashes mainly).

We encourage Auckland Motorway Police Intel staff to use their 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 \*

#### Auckland Motorways

Alcohol  
Rear end crashes  
Night time crashes

### 2009 road trauma

#### Casualties

	Auckland Motorways
Deaths	6
Serious casualties	56
Minor casualties	614

### National priorities from Road Safety 2020— Safer Journeys

Speed  
Alcohol / Drugs  
Young Drivers  
Roads and Roadsides

Motorcyclists

#### Crashes

	Auckland Motorways
Fatal crashes	6
Serious injury crashes	43
Minor injury crashes	461
Non-injury crashes	1791

\* not in any particular order of importance

## Safer Journeys

For the past decade road safety in New Zealand has been directed by the Road Safety 2010 strategy.

This strategy was introduced in 2003 and aimed to reduce deaths and casualties from road crashes.

In March 2010 the Government released a new strategy, "Safer Journeys", to build on the gains made under the Road Safety to 2010.

Under the new strategy, road safety will be looked at from a system wide approach rather than focusing so strongly on the road user.

The emphasis will be on improving all the parts of the road transport system that impact on safety; the road, the vehicle, travel speeds and the road user.

A number of areas were chosen as the areas of focus under the 2020 strategy.

These areas were assigned a priority, based on research that shows five major areas of concern, six areas of lesser concern, and two areas where continued focus is needed, or concern is emerging.

These divisions are shown in "table 3" opposite.

This table is a direct extract from page 12 of the Safer Journeys document which can be found here:

<http://www.transport.govt.nz/saferjourneys/Documents/SaferJourneyStrategy.pdf>

We have made changes to the wording and way data is presented in these briefing notes to reflect and emphasize the connections to the new strategy.

In particular we have included more tables showing age distribution as problems with the safety of young drivers as a particular focus of Safer Journeys.

We have also prepared a table on the following page which shows the areas of "high concern" under Safer Journeys 2020 strategy.

This table allows some relative comparison of Safer Journeys priorities across the local bodies in the area covered by the Auckland NZTA Office.

**Table 3 – Safer Journeys' areas of concern and the Safe System**

AREAS OF CONCERN WE WILL ADDRESS	WHERE WE WILL TAKE ACTION ACROSS THE SAFE SYSTEM			
	SAFE ROADS AND ROAD-SIDES	SAFE SPEEDS	SAFE VEHICLES	SAFE ROAD USE
<b>Areas of high concern</b>				
Reducing alcohol/drug impaired driving			✓	✓
Increasing the safety of young drivers	✓	✓	✓	✓
Safe roads and roadsides	✓			
Safe speeds	✓	✓	✓	
Increasing the safety of motorcycling	✓	✓	✓	✓
<b>Areas of medium concern</b>				
Improving the safety of the light vehicle fleet			✓	✓
Safe walking and cycling	✓	✓	✓	✓
Improving the safety of heavy vehicles	✓	✓	✓	✓
Reducing the impact of fatigue	✓	✓	✓	✓
Addressing distraction	✓		✓	✓
Reducing the impact of high risk drivers		✓	✓	✓
<b>Areas of continued and emerging focus</b>				
Increasing the level of restraint use			✓	✓
Increasing the safety of older New Zealanders	✓	✓	✓	✓

For some priorities (eg motorcycling), complementary action will be taken across all four areas of the Safe System. For others (eg reducing the impact of drink driving or safe roads), more effort would be focussed on one or two of the four Safe System areas.

Table source: Ministry of Transport 2020 Safer Journeys

## Status of the areas of "high concern" from Safer Journeys 2020 for the Northland and Auckland Regions 2005 to 2009

(table below refers only to fatal and serious crashes except for the "intersection" column for reasons of sample size and includes local roads as well as State Highways)

Safer Journeys area of concern	Reducing alcohol and drug impaired driving	Increase the safety of young drivers	Safer roads and roadsides			Reducing speed related crashes	Increasing the safety of motorcycling
	Percentage of fatal and serious crashes with this factor	Percentage of fatal and serious crashes with at fault drivers aged 24 years or less	Percentage of fatal and serious crashes with an object struck	Number of urban intersections with three or more injury crashes in the last five years	Number of rural intersections with three or more injury crashes in the last five years	Percentage of fatal and serious crashes with this factor	Percentage of fatal and serious crashes involving a motorcyclist
Far North District	31	32	53	3	5	30	13
Kaipara District	28	38	63	3	1	26	13
Whangarei District	29	42	51	19	6	30	15
Rodney District	29	32	53	13	13	24	20
North Shore City	26	36	33	113	2	15	17
Waitakere City	27	34	41	93	6	27	16
Auckland City	24	32	29	345	12	16	19
Manukau City	33	42	40	158	17	29	13
Papakura District	22	34	46	23	4	20	21
Franklin District	25	28	53	8	10	26	18
Northland Region	30	37	54	25	12	29	14
Auckland Region	27	35	37	753	64	22	17
New Zealand	23	34	45	1938	320	23	18

## Auckland Motorways overview

In 2009, on Auckland Motorways there were 510 injury crashes and 1791 non-injury crashes.

The table below shows the number of injuries resulting from the 510 injury crashes by rural or urban areas. (rural is defined as an area with a speed limit of 80km/h or more).

Casualties by urban / rural 2009				
	Fatalities	Serious injuries	Minor injuries	Total
Rural	6	49	538	593
Urban	0	7	76	83
Total	6	56	614	676

Fatal and serious crashes on the motorway have not shown a downward trend over the decade. On the other hand minor injury crashes rose to around 2005 and then levelled out.

Fatal and serious alcohol related crashes are found at a much higher level than motorways outside this region 32 percent vs. 22 percent.

Crash trends on Auckland Motorways				
Year	Fatal crashes	Serious crashes	Minor crashes	Total crashes
2000	9	28	308	345
2001	5	36	414	455
2002	6	60	366	432
2003	6	46	465	517
2004	8	36	478	522
2005	4	42	511	557
2006	9	41	450	500
2007	4	40	485	529
2008	5	26	500	531
2009	6	43	461	510

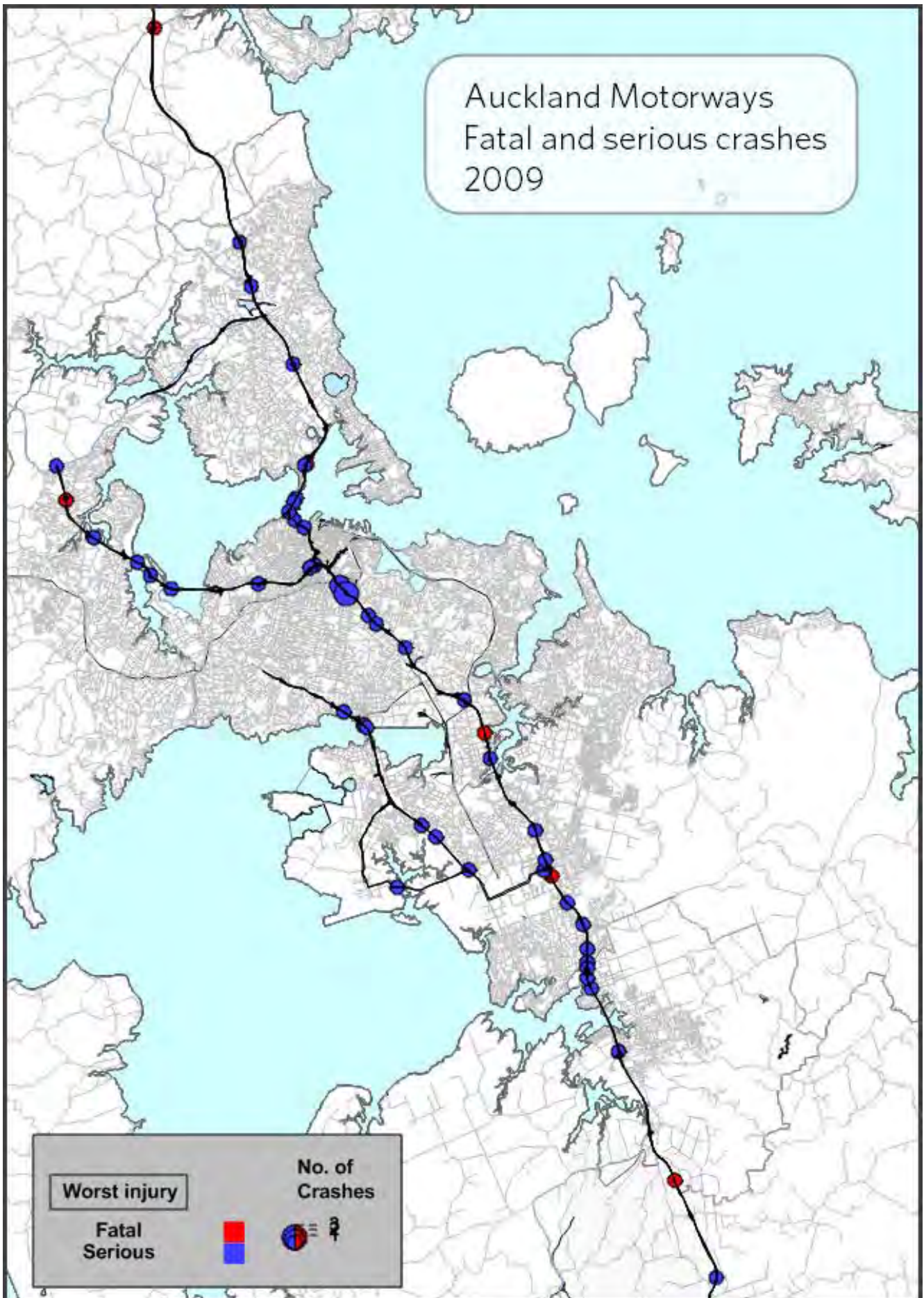
Crash characteristics 2005 to 2009		
Crash type or contributory cause	Percentage of fatal and serious crashes of this type or contributory cause	Percentage of all injury crashes of this type or contributory cause
Alcohol	32	12
Rear end crashes	23	53
Night time crashes	51	36
Head on or loss of control on Straight roads	26	36
At an intersection (mainly ramp)	25	20
Incorrect lane or position	18	34

Further information about the 2627 injury and 9729 non-injury crashes on Auckland Motorways 2005 to 2009:

- 31 deaths, 240 serious injuries and 3258 minor injuries
- Worst month May, best January
- Worst day Friday, best Sunday
- 79 percent of crashes occurred on weekdays
- 26 percent on wet roads
- 30 percent at night
- 82 percent involved multiple parties in a crash
- 23 percent at intersections
- 22 percent of crashes involved a roadside object being struck
- 3317 roadside objects struck \*
- Most common object struck, guard rail
- Most represented five year age group in at fault drivers in injury crashes: 20 to 24 years (19 percent of at fault drivers)
- Social cost of crashes in 2009 - \$156m

\* It needs to be noted that if a vehicle hits the same type of object more than once it is only counted in CAS once.





## 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.

On the Auckland Motorways, alcohol was a factor in 32 percent fatal and serious crashes and 12 percent of injury crashes.

Number of alcohol related injury crashes			
Crash year	Open	Urban (mainly ramps)	Total
2005	45	11	56
2006	58	9	67
2007	51	11	62
2008	52	13	65
2009	49	10	59
Total	255	54	309

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

Age group of at fault drivers in alcohol related injury crashes 2005 to 2009 and 25 years ago (prior to lowering the drinking age)		
Age group	Percentage drivers in this age group 2005 to 2009	Percentage drivers in this age group 1980 to 1984
15-19	20	16
20-24	20	26
25-29	15	24
30-34	13	15
35-39	10	7
40-44	10	4
45-49	5	4
50-54	3	1
55-59	3	3
60-64	1	1
65-69	0	1
70-74	0	0
75+	0	0

There has been a change in the percentage of drivers involved in alcohol crashes compared to 25 years ago. Twenty-five years ago drivers aged user 30 accounted for 66 percent of alcohol related injury crashes. Today this is 55 percent.

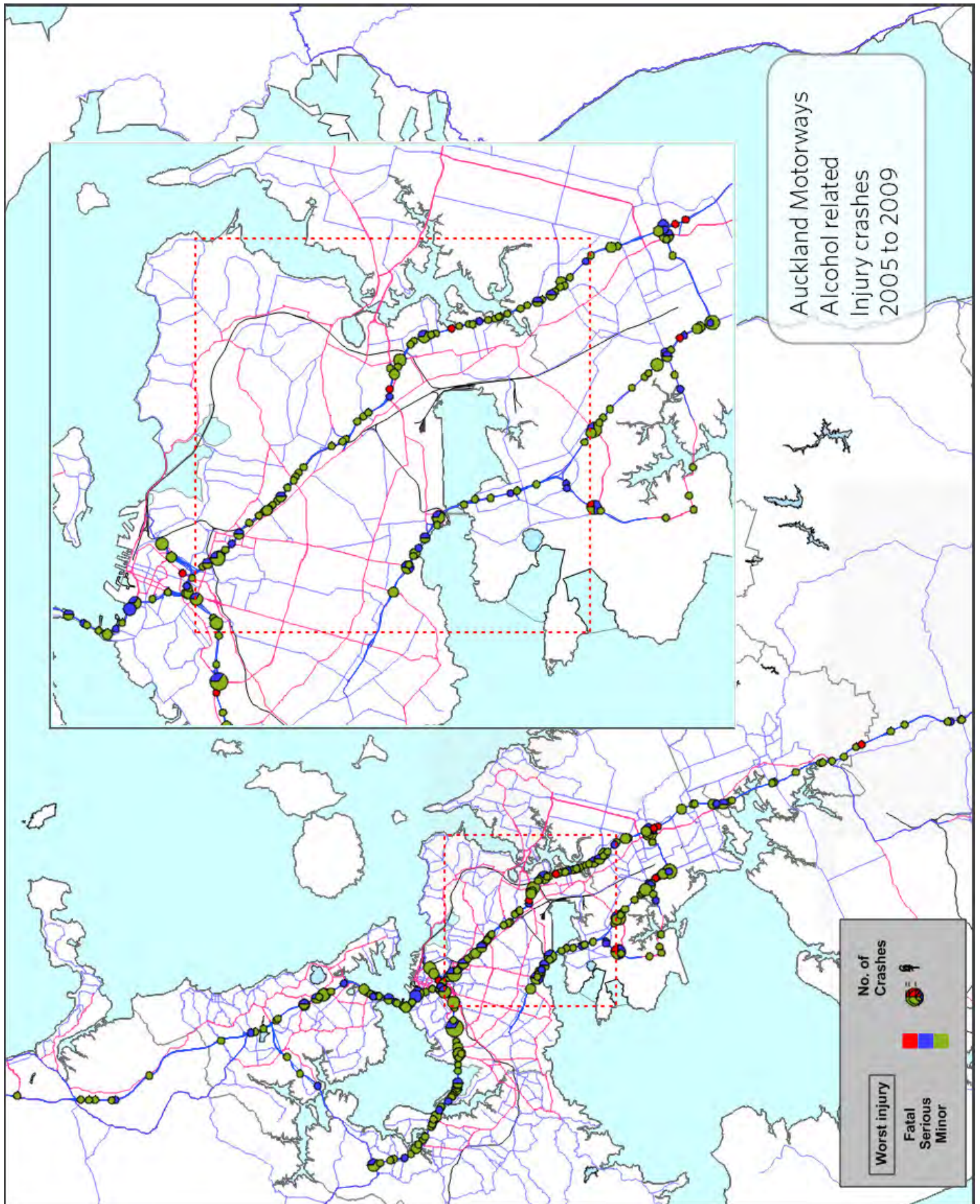
Locations with the most alcohol related injury crashes 2005 to 2009	
Location name (Within a radius of 100m)	Total Injury crashes
Intersection of St Lukes off ramp westbound / St Lukes Road	6
Intersection of Waterview on westbound / Great North Road	5
SH 1, 400m north of Northcote overbridge	5
Intersection of, SH 1 / Khyber Pass off ramp northbound	5
Intersection of, Massey on ramp northbound / Massey Road	4
Intersection of, Tristram off ramp northbound / Tristram Avenue	4

The locations of alcohol related injury crashes occurring on Auckland Motorways between 2005 and 2009 are shown on the map on the following page.

Further information about the 309 alcohol related injury crashes on Auckland motorways 2005 to 2009:

- 12 deaths, 81 serious injuries and 386 minor injuries
- 77 percent of at fault drivers were male
- Most common crash type "loss of control on straight roads off towards the left" (55 crashes)
- 27 percent at intersections
- 17 percent urban
- 29 percent wet road
- 75 percent night time
- Worst three hour time period, midnight to 3am
- Worst month June, best May
- Worst day Sunday, best Monday and Tuesday (equal)
- Number of roadside objects struck, 262
- Most common object struck, guard rail
- Social cost of crashes in 2009 - \$30m





## Rear end crashes

Between 2005 and 2009, fifty-three percent of all injury crashes on Auckland Motorways involved rear end collisions. These crashes resulted in two fatalities, 60 serious injuries and 1859 minor injuries.

Injury rear end collisions 2005 to 2009				
Crash year	Fatal crashes	Serious crashes	Minor crashes	Total
2005	1	14	284	299
2006	1	10	243	254
2007	0	8	269	277
2008	0	5	270	275
2009	0	11	281	292
Total	2	48	1347	1397

Most rear end crashes involve a driver following too closely with 56 percent of all injury rear end crashes including this factor. In addition, 31 percent of drivers failed to notice cars slowing, stopping or stopped in front of them.

Locations with the most injury rear end crashes 2005 to 2009	
Location name (Within a radius of 100m)	Total
SH 1, 50m South of Penrose Overbridge	25
Intersection of SH 1 / Kyber Pass Off Ramp Northbound	22
Intersection of Northcote Off Ramp Northbound / Northcote Road	19
SH 1, 200m South of Penrose Overbridge	19
Intersection of SH 1 / Gillies Off Ramp Southbound	17
Intersection of SH 1 / Shelly Beach Off Ramp Southbound	16

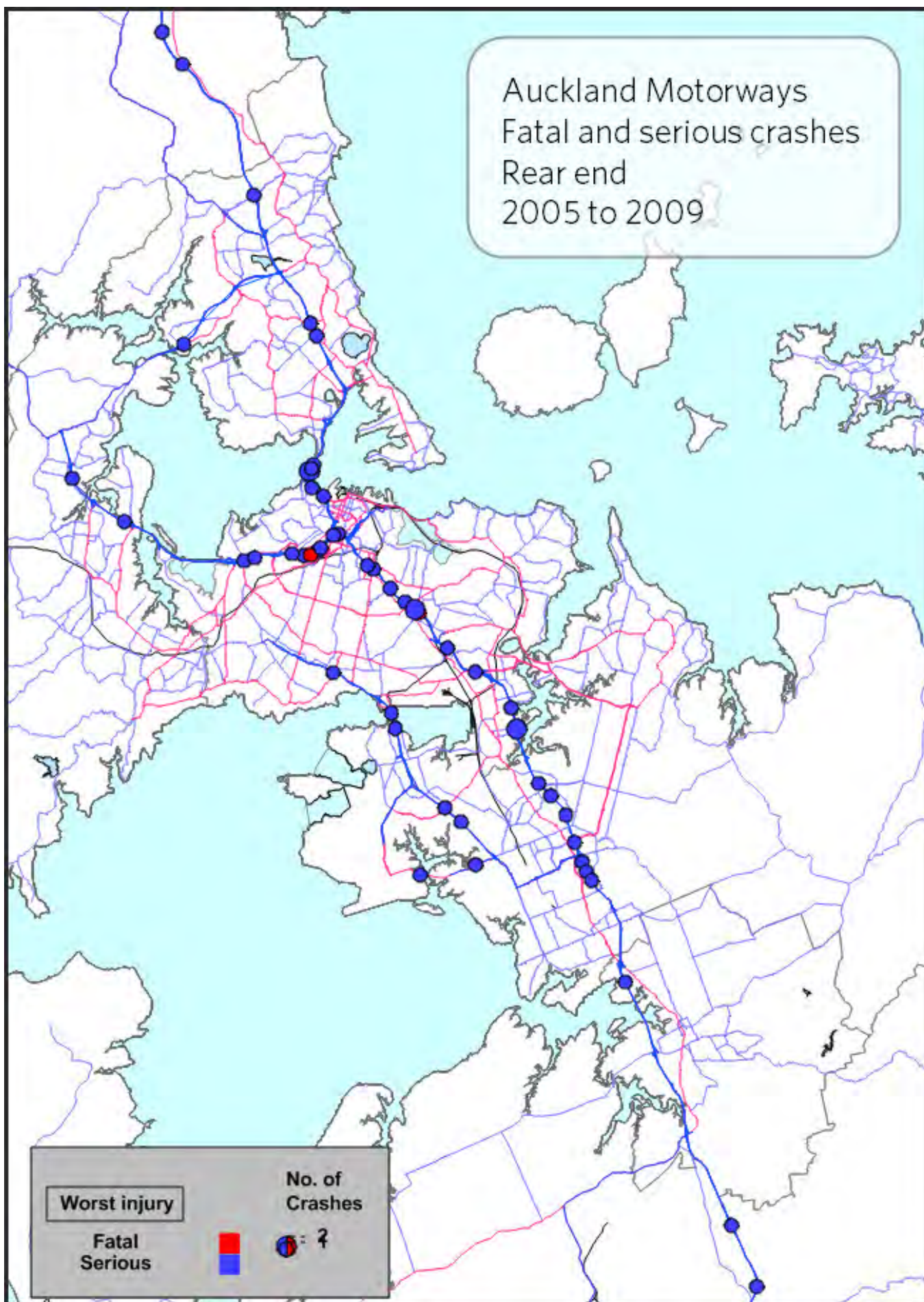
Age group and gender of at fault drivers in injury rear end crashes 2005 to 2009  
(note—age ranges are not equal)

Age group	Male	Female	Total
15 - 19	116	76	192
20 - 24	154	116	270
25 - 29	148	68	216
30 - 39	163	110	273
40 - 49	204	68	272
50 - 59	119	47	166
60 - 69	55	20	75
70+	38	18	56
Total	997	523	1520

Further information about the 1397 injury rear end crashes 2005 to 2009 on Auckland Motorways:

- 2 deaths, 60 serious injuries and 1859 minor injuries
- 5 percent involved alcohol
- 9 percent involved “too fast for the conditions”
- 26 percent at night
- 27 percent in the wet
- 71 percent of drivers with a “full” licence
- 66 percent of at fault drivers were male
- Most common cause of crashes, following too closely
- Worst month May, best January
- Worst day of week Friday, best Sunday
- Worst three hour time period, 3pm to 6pm
- Social cost of crashes in 2009 - \$31m





## Night time crashes

Between 2005 and 2009, fifty-one percent of fatal and serious crashes on the Auckland Motorways occurred at night.

Night time injury crashes					
Road type	2005	2006	2007	2008	2009
Open	154	154	166	159	152
Urban	32	30	23	42	25
Total	186	184	189	201	177

Thirty-nine percent of all night time crashes on Auckland Motorways are the responsibility of drivers under the age of 25 years and male drivers in particular. Data from the Ministry of Transport’s Household Travel Survey can give an approximate value for the amount of travel undertaken at night for various age groups to give some perspective to the rate these age groups are crashing.

Looking at night travel as a whole (nationally), approximately 14 percent is undertaken by 15 to 24 year olds, 20 percent by 25 to 34 year olds, 24 percent by 35 to 44 year olds, 24 percent by 45 to 54 year olds and 19 percent by all other age groups.

Age group and gender of at fault drivers in night time injury crashes 2005 to 2009			
Age group	Female	Male	Total
15 to 19	51	112	163
20 to 24	68	133	201
25 to 29	31	99	130
30 to 34	43	53	96
35 to 39	23	60	83
40 to 44	17	59	76
45 to 49	13	48	61
50 to 54	14	22	36
55 to 59	9	29	38
60 to 64	5	22	27
65 to 69	4	1	5
70 to 74	2	5	7
75+	3	5	8
Total	283	648	931

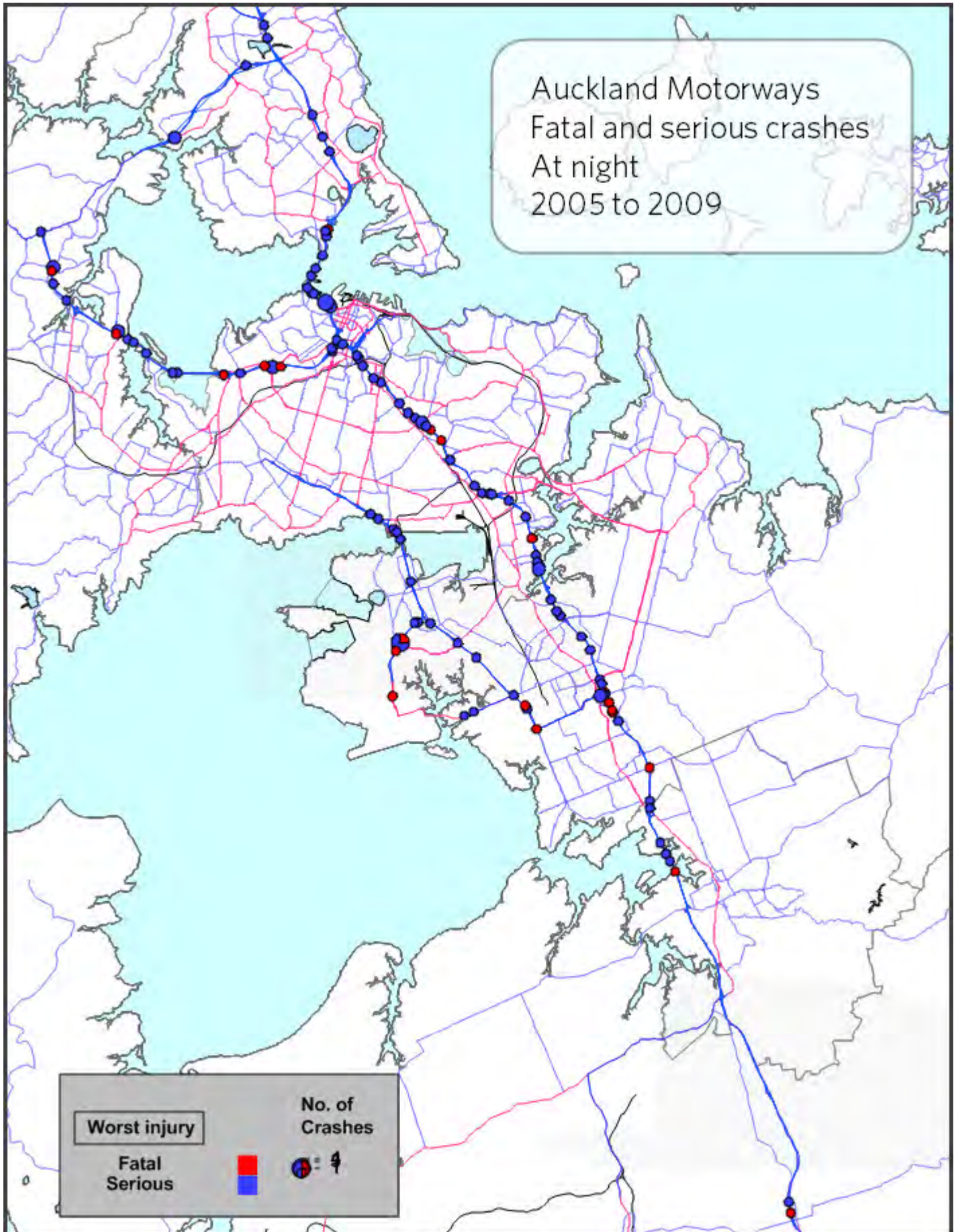
The map on the following page shows the locations of night time fatal and serious crashes on Auckland Motorways for 2005 to 2009.

Locations with the most night time injury crashes 2005 to 2009	
Location name (Within a radius of 100m)	Total Injury crashes
Intersection of Gillies Avenue / Gillies on ramp northbound	15
Intersection of St Lukes off ramp westbound / St Lukes Road	13
Intersection of Northcote on ramp northbound / Northcote Road	12
Intersection of SH 1 / Wellesley off ramp northbound	11
SH 1, 200m south of Penrose overbridge	11
Intersection of SH 1 / Khyber Pass off ramp northbound	10

Further information about the 937 injury night time crashes on Auckland Motorways 2005 to 2009:

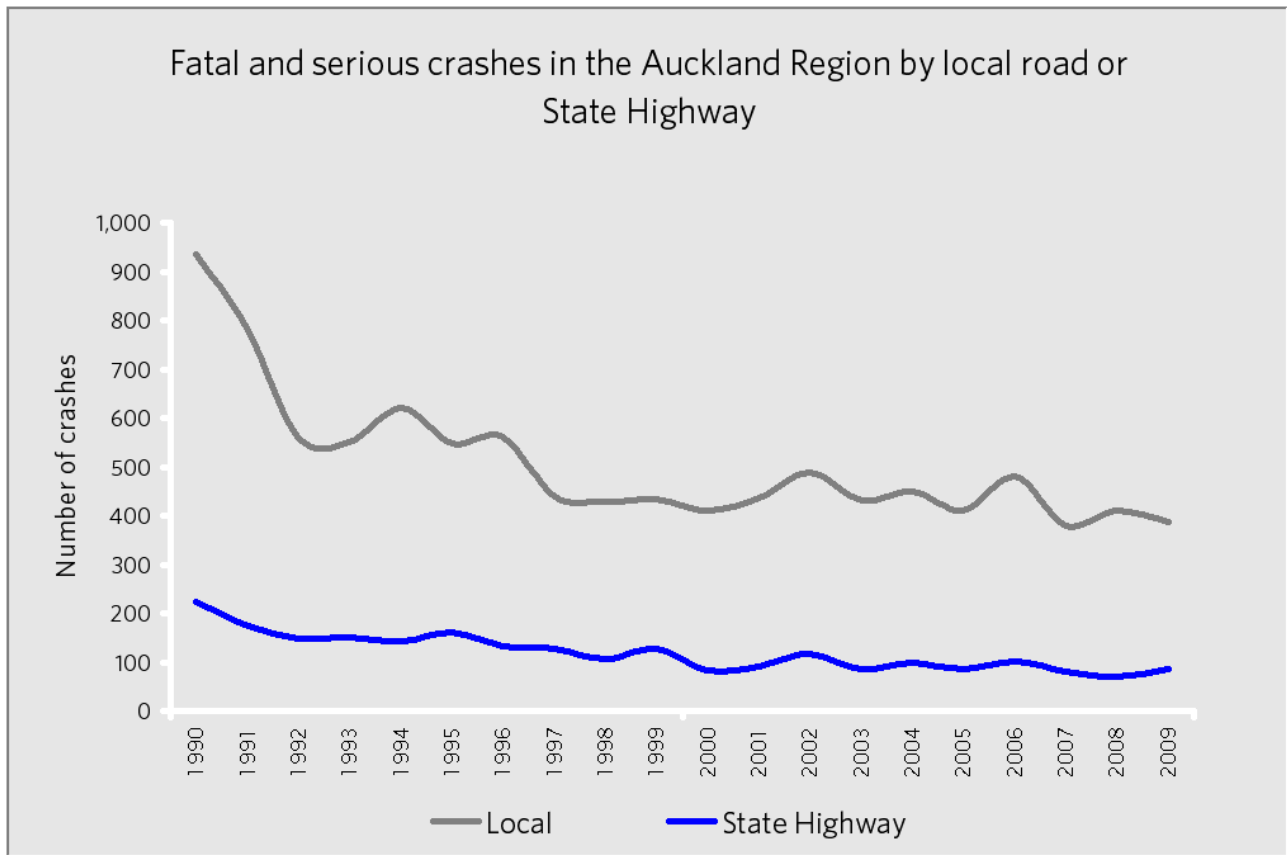
- 23 deaths, 115 serious injuries and 1155 minor injuries
- 70 percent of at fault drivers were male
- Most common crash type “rear end in a queue” (261 crashes)
- 25 percent of crashes involved alcohol
- 7 percent of crashes involved fatigue as a contributory factor
- 18 percent of crashes involved speed too fast for the conditions
- 34 percent were in the wet
- 23 percent of crashes were at intersections
- 44 percent of crashes involved a roadside object being struck
- Most common object struck, guard rail
- Social cost of crashes in 2009 - \$44m.







## Looking back—the last two decades ...



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