New Zealand Government

briefing notes - road safety issues

Auckland Region

New Zealand Transport Agency has prepared this eleventh road safety issues report. It is based on reported crash data and trends for the 2005-2009 period. The intent of this 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 the Auckland Region (defined in this report as all the local bodies from Rodney District in the north to Franklin District in the south).

All the material unless otherwise stated in this report applies only to local roads. Local roads are all non-State Highway roads in the region. Information about State Highways can be found in the separate "Auckland State Highways" and "Auckland Motorways" reports.

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 based on crashes with the highest numbers of fatal and serious injuries, those that may be over-represented and also to reflect issues identified in the seven local bodies in the region.

Local authorities are encouraged to use their free access to the Ministry of Transport's Crash Analysis System (CAS) to delve deeper into data for the region and not just the five reported issues in the body of this briefing note.

All crash data and maps in this report are from CAS.

NZ TRANSPORT AGENCY

WAKA KOTAHI

Major road safety issues * 2009 road trauma **Auckland Region** Casualties **Auckland Region** Alcohol related Deaths 55 Crashes at intersections Serious casualties 407 2844 Crashes at night Minor casualties Pedestrian related Motorcycle crashes National priorities from Road Safety 2020 Crashes **Auckland Region** Safer Journeys Speed Fatal crashes 47 347 Alcohol / Drugs Serious injury crashes Young Drivers Minor injury crashes 2221 Roads and Roadsides Non-injury crashes 7626 Motorcyclists * not in any specific 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.

AREAS OF CONCERN WE WILL ADDRESS	WHERE WE WILL TAKE ACTION ACROSS THE SAFE SYSTEM				
	SAFE ROADS AND ROAD- SIDES	SAFE SPEEDS	SAFE VEHICLE	SAFE ROAD S USE	
Areas of high concern					
Reducing alcohol/drug impaired driving			1	1	
Increasing the safety of young drivers	1	1	1	1	
Safe roads and roadsides	1				
Safe speeds	1	1	1		
Increasing the safety of motorcycling	1	1	1	1	
Areas of medium conce	m				
Improving the safety of the light vehicle fleet			1	1	
Safe walking and cycling	1	1	1	1	
Improving the safety of heavy vehicles	1	1	1	1	
Reducing the impact of fatigue	1	1	1	1	
Addressing distraction	1		1	1	
Reducing the impact of high risk drivers		1	1	1	
Areas of continued and	emergir	g focus			
Increasing the level of restraint use			1	1	
Increasing the safety of older New Zealanders	1	1	1	1	

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	Sa	fer roads and road	Reducing speed related crashes	Increasing the safety of motorcycling	
Measure	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 Region overview

In 2009 on local roads in the Auckland Region there were 2615 injury crashes and 7626 non-injury crashes. In addition on State Highways in Auckland Region there were 667 injury crashes and 2118 non-injury crashes. The table below shows the number of injuries resulting from the 2615 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 2009

	Fatalities	Serious injuries	Minor injuries	Total
Rural	18	77	385	480
Urban	37	330	2458	2825
Total	55	407	2843	3305

In the last ten years fatal and serious crashes have been relatively stable but this does need to be viewed in the context of a rapidly growing region. Minor injury crashes rose sharply between 2001 and 2003 (almost certainly due to an improvement in Police reporting) and have been relatively stable since. Fatal and serious crashes involving alcohol are seen in much higher percentages than in other large, mainly urban, regions. Almost half of all injury crashes in the region occur at intersections.

Crash trends in the Auckland Region						
Year	Fatal crashes	Serious crashes	Minor crashes	Total crashes		
2000	43	367	1478	1888		
2001	51	385	1494	1930		
2002	62	427	1799	2288		
2003	61	371	2062	2494		
2004	60	389	2017	2466		
2005	52	359	2069	2480		
2006	58	422	2220	2700		
2007	46	333	2244	2623		
2008	34	376	2210	2620		
2009	47	347	2221	2615		

Local road crash characteristics 2005 to 2009						
Crash type or contributory cause	Percentage fatal and serious crashes of this type or contributory cause	Percentage all injury crashes of this type or contributory cause				
Alcohol	27	17				
Intersections	40	48				
At night	42	35				
Pedestrians	19	11				
Motorcyclists	17	10				
Speed	22	15				

Further information about the 13038 injury and 40952 non-injury crashes on **local** roads in the Auckland Region 2005 to 2009:

- 258 deaths, 2184 serious injuries and 10964 minor injuries
- Worst month May, best January
- Worst day Friday, best Sunday
- 24 percent on wet roads
- 33 percent at night
- 51 percent at intersections
- 22483 roadside objects struck *
- Most represented five year age block in at fault drivers in injury crashes, 15 to 19 years (18 percent of at fault drivers)
- Social cost of crashes in 2009 \$743.1m

Further information about the 3492 injury and 11418 non-injury crashes on **State Highways** in the Auckland Region 2005 to 2009:

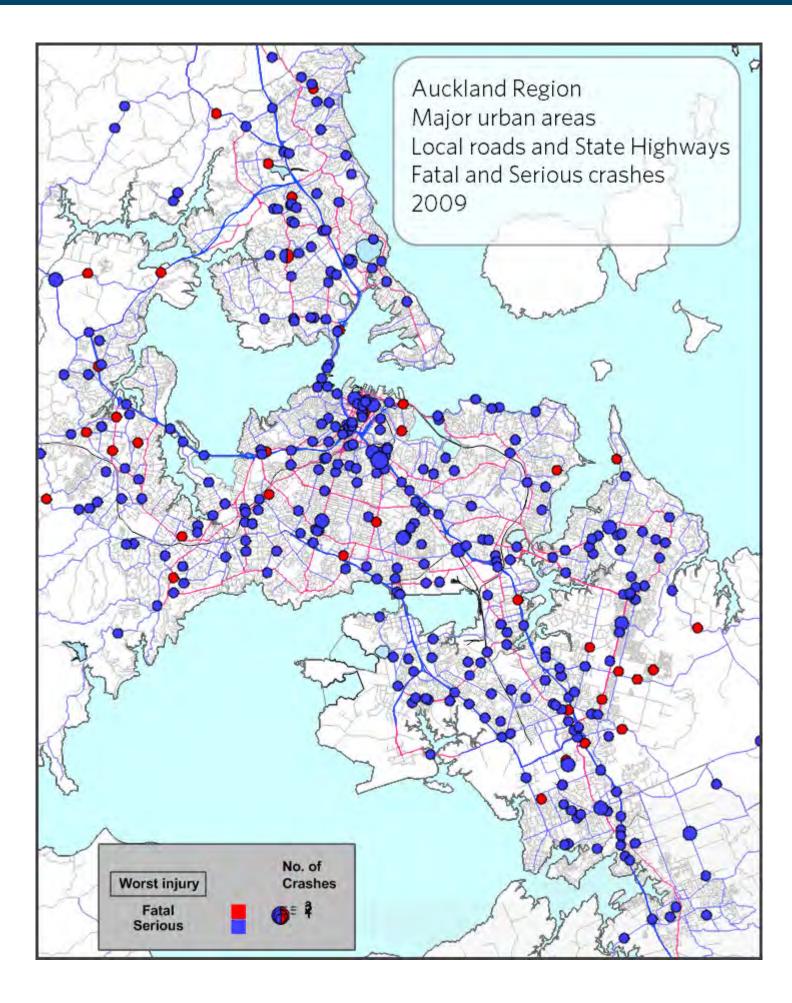
- 93 deaths, 469 serious injuries and 4244 minor injuries
- Worst month May, best January
- Worst day Friday, best Sunday
- 27 percent on wet roads
- 31 percent at night
- 25 percent at intersections
- 4691 roadside objects struck *
- Most represented five year age block in at fault drivers in injury crashes, 20 to 24 years (17 percent of at fault drivers)
- Social cost of crashes in 2009 \$252.2m

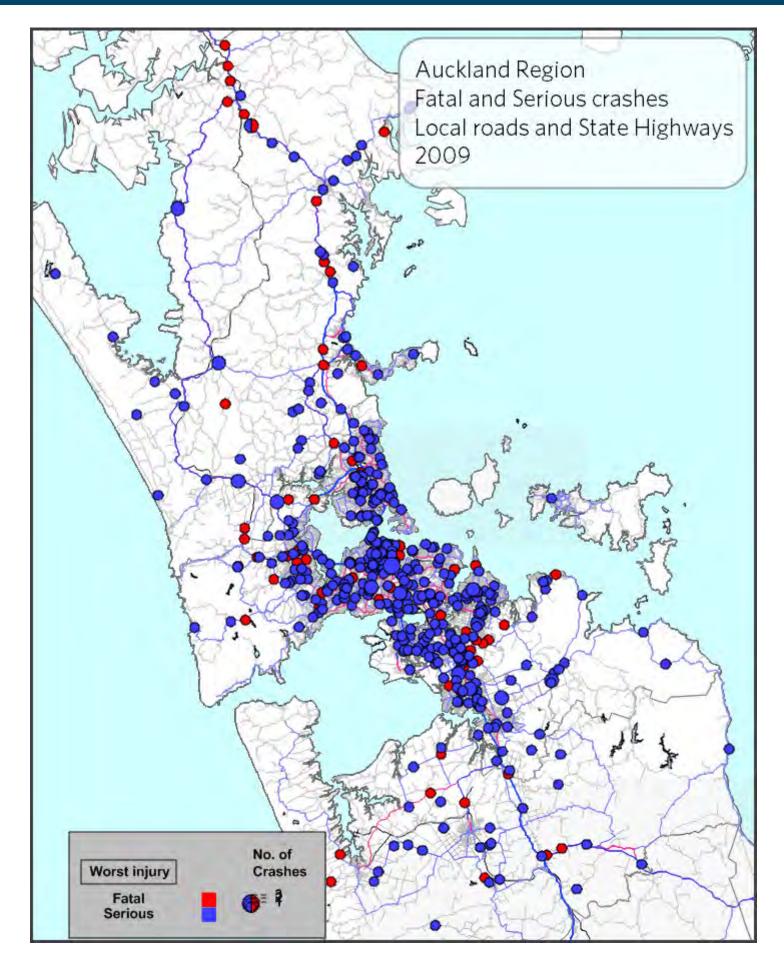
* It needs to be noted that if a vehicle hits the same type of object more than once it is only counted in CAS once.

Summary

Road safety issues for the Auckland Region — issues taken from the individual local body or State Highway briefing notes for the period 2005 to 2009

Briefing note title	Bends	Road factors and roadside hazards	Speed	Alcohol	Night	Intersections	Pedestrians	Motorcyclist	Rear end
Auckland Region				\checkmark	\checkmark	\checkmark	\checkmark	\checkmark	
Rodney District	\checkmark	\checkmark		\checkmark	\checkmark				
North Shore City				\checkmark	\checkmark	\checkmark	\checkmark	\checkmark	
Waitakere City	\checkmark		\checkmark	\checkmark	\checkmark				
Auckland City				\checkmark	\checkmark	\checkmark	\checkmark	\checkmark	
Manukau City			\checkmark	\checkmark	\checkmark	\checkmark			
Papakura District				\checkmark	\checkmark	\checkmark			
Franklin District	\checkmark			\checkmark	\checkmark	\checkmark			
Auckland State Highways	\checkmark		\checkmark	\checkmark					
Auckland Motorways				\checkmark	\checkmark				\checkmark





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.

In Auckland Region, alcohol was a factor in 27 percent of fatal and serious crashes and 17 percent of injury crashes.

Number of alcohol related injury crashes					
Crash year	Open road	Urban road	Total		
2005	71	304	375		
2006	55	448	503		
2007	65	348	413		
2008	79	377	456		
2009	75	378	453		
Total	345	1,855	2,200		

(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	22	20
20-24	22	29
25-29	13	16
30-34	11	12
35-39	10	8
40-44	8	5
45-49	5	3
50-54	3	2
55-59	2	2
60-64	1	1
65-69	1	1
70-74	0	0
75+	0	0

It is interesting to note the changing age patterns of those choosing to drink and crash.

In the Auckland region there has been a marked shift from being weighted to young drivers to a broader age spread.

Twenty-five years ago 65 percent of at fault drivers were aged under 30. Today this is 57 percent.

It would appear then that while very young people are targeted for their binge drinking culture, which may manifest in other health and law issues, in the region this has not translated into an increased proportion in youth alcohol related crashes.

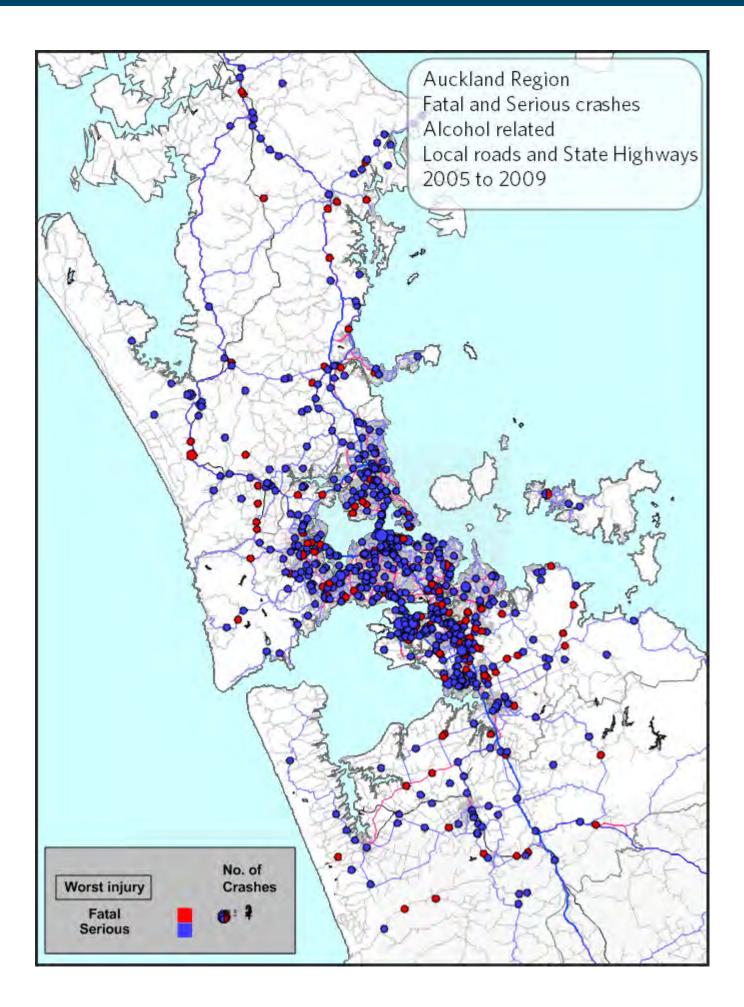
In addition it does need to be noted that despite a huge population increase in the region the number of alcohol related injury crashes has fallen from 2429 in over five years twenty-five years ago to the 2200 in the last five years.

Further information about the 2200 alcohol related injury crashes on **local** roads in Auckland Region 2005 to 2009:

- 108 deaths, 611 serious injuries and 2391 minor injuries
- 81 percent of at fault drivers were male
- 38 percent at intersections
- 84 percent urban
- 76 percent night time
- 34 percent travelling too fast for conditions
- Worst three hour time period, 9pm to midnight
- Worst month December, best January
- Worst day Saturday, best Monday
- Number of roadside objects struck 2068

Further information about the 415 alcohol related injury crashes on **State Highways** in Auckland Region 2005 to 2009:

- 22 deaths, 126 serious injuries and 503 minor injuries
- 79 percent of at fault drivers were male
- 26 percent at intersections
- 21 percent urban
- 75 percent night time
- 28 percent travelling too fast for conditions
- Worst three hour time period, midnight to 3am
- Worst month June, best April
- Worst day Sunday, best Tuesday
- Number of roadside objects struck 365



briefing notes road safety Auckland Region

Intersections

During the five year period 2005 to 2009 within Auckland Region there were a total of 6214 injury crashes at intersections.

Injuries at Intersections (casualties)						
Injury type	2005	2006	2007	2008	2009	
Fatality	15	16	11	12	10	
Serious	178	219	166	174	156	
Minor	1,319	1,475	1,450	1,456	1,380	
Total	1,512	1,710	1,627	1,642	1,546	

The most common crash type at intersections is when a driver turns right (typically into a side road or driveway) and is hit by a vehicle approaching from the opposite direction on the same road (1159 crashes). The second most common being a vehicle turning right (typically from a side road or driveway) and being hit by a vehicle approaching from the right (926 crashes). Drivers at fault aged below 25 account for 34 percent of all at fault drivers.

crashes at intersections 2005 to 2009					
Age group Female		Male	Total		
15-19	299	585	884		
20-24	330	645	975		
25-29	217	412	629		
30-34	167	347	514		
35-39	173	326	499		
40-44	217	320	537		
45-49	144	256	400		
50-54	112	181	293		
55-59	84	128	212		
60-64	67	104	171		
65-69	42	72	114		
70-74	24	49	73		
75+	83	112	195		

In the Auckland Region there are 730 intersection sites which have had three or more injury crashes in the last five years, a black spot, including 25 sites with 10 or more injury crashes in the past five years.

Sites with 12 or more injury crashes in the last five years and at least one in 2009 are listed in the following table.

Locations with the 12 or more injury crashes 2005 to 2009 and at least one crash in 2009

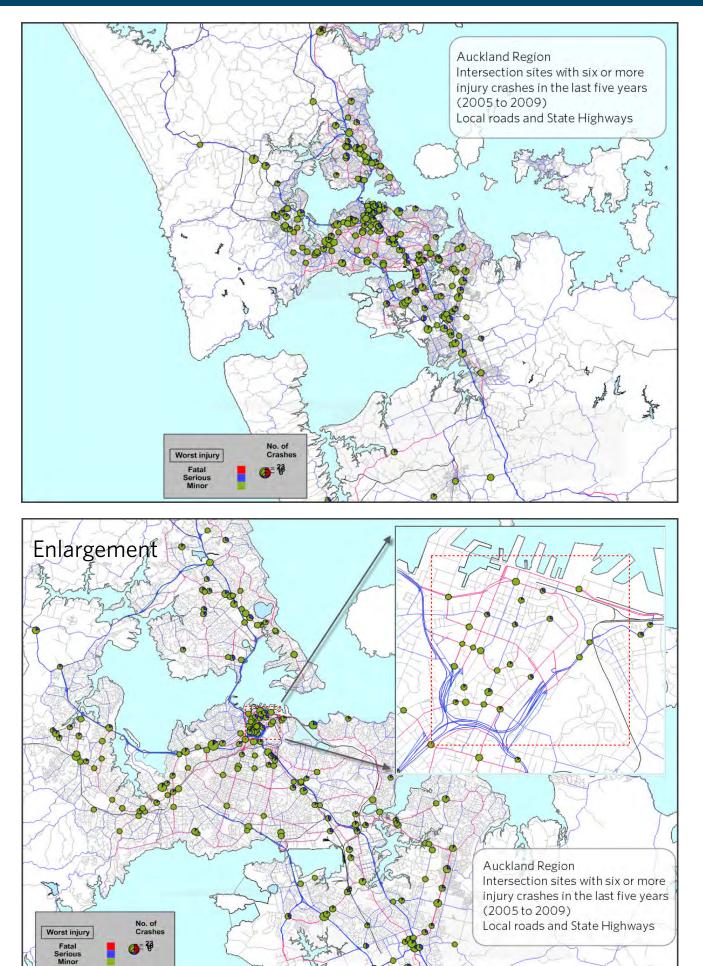
Intersection name	2005 to 2009	2009
Great North / Bullock Track	23	7
Ash / Rosebank	16	3
Tamaki / Ngapipi	14	4
Swanson / Lincoln	14	2
Great South / Ronwood	14	3
Great South / Spartan	13	3
Great North / Carrington	12	5
Smales / Te Irirangi	12	5
Queen / City	12	1

Further information about the 6214 injury crashes at intersections on **local** roads in Auckland Region 2005 to 2009:

- 64 deaths, 893 serious injuries and 7080 minor injuries
- 24 percent wet roads
- 34 percent night time
- 13 percent involve alcohol as a factor
- Worst month May, best January
- Worst day Friday, best Sunday
- Worst three hour time period, 3pm to 6pm

Further information about the 805 injury crashes at intersections on **State Highways** in Auckland Region 2005 to 2009:

- 15 deaths, 121 serious injuries and 961 minor injuries
- 25 percent wet roads
- 35 percent night time
- 13 percent involve alcohol as a factor
- Worst months March and April (equal), best January and February (equal)
- Worst day Friday, best Monday
- Worst three hour time period, 3pm to 6pm



Night time crashes

Between 2005 and 2009 forty-two percent of fatal and serious crashes in the region occurred at night.

Night time injury crashes						
Road type	2005	2006	2007	2008	2009	
Open	119	137	134	125	137	
Urban	737	865	767	761	765	
Total	856	1,002	901	886	902	

Almost half of all night time crashes in the Auckland Region 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 for all New Zealand 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.

time injury crashes 2005 to 2009				
Age group	Female	Male	Total	
15 to 19	255	716	971	
20 to 24	240	690	930	
25 to 29	132	394	526	
30 to 34	100	288	388	
35 to 39	87	253	340	
40 to 44	88	234	322	
45 to 49	76	159	235	
50 to 54	43	111	154	
55 to 59	27	78	105	
60 to 64	21	45	66	
65 to 69	11	38	49	
70 to 74	8	16	24	
75+	9	27	36	
Total	1097	3049	4146	

It is interesting to note in the bullet points below that alcohol and speed as a factor seems far more prevalent on local roads than State Highways.

This would suggest that drivers see local roads as the soft option in regards to avoiding probable enforcement intervention.

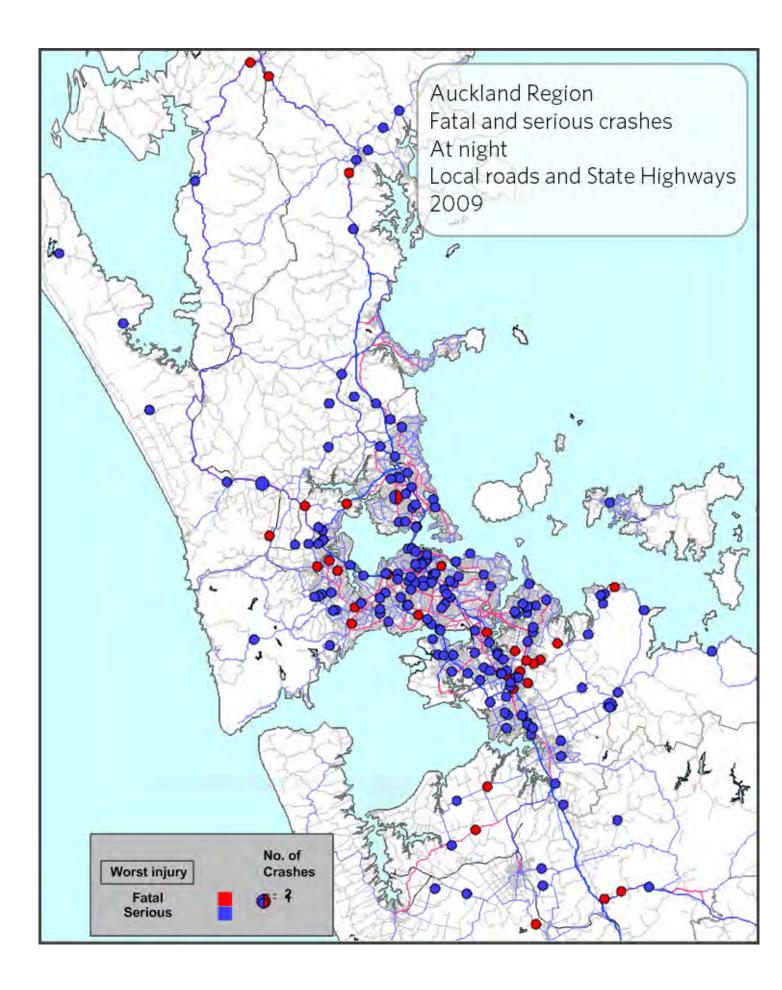
Some redistribution of alcohol check points in particular may be worth considering.

Further information about the 4547 injury night time crashes on **local** roads in the Auckland Region 2005 to 2009:

- 117 deaths, 939 serious injuries and 5042 minor injuries
- 73 percent of at fault drivers were male
- Most common crash type "loss of control at a bend" (1434 crashes)
- 37 percent of crashes involved alcohol
- 7 percent of crashes involved fatigue as a contributory factor
- 24 percent of crashes involved speed too fast for the conditions
- 32 percent were in the wet
- 46 percent of crashes were at intersections
- 47 percent of crashes involved a roadside object being struck

Further information about the 1190 injury night time crashes on **State Highways** in the Auckland Region 2005 to 2009:

- 53 deaths, 192 serious injuries and 1422 minor injuries
- 71 percent of at fault drivers were male
- Most common crash type "rear end" (395 crashes)
- 26 percent of crashes involved alcohol
- 8 percent of crashes involved fatigue as a contributory factor
- 19 percent of crashes involved speed too fast for the conditions
- 35 percent of crashes were in the wet
- 24 percent of crashes were at intersections
- 46 percent of crashes involved a roadside object being struck



Pedestrians

In the Auckland Region crashes involving pedestrians account for 11 percent of injury crashes. They do however represent 19 percent of all fatal and serious crashes.

Pedestrian injuries 2005 to 2009					
Pedestrian injuries	2005	2006	2007	2008	2009
Fatal	8	13	12	3	11
Serious	76	89	60	81	72
Minor	258	260	223	238	241
Total	342	362	295	322	324

The most common type of pedestrian crash occurs when a pedestrian is crossing the road and is hit by a vehicle approaching from their right (643 crashes).

There are 100 locations in the region with three or more injury crashes involving a pedestrian in the last five years.

Sites with five or more injury crashes involving a pedestrian in the last five years and at least one crash in 2009 are shown in the table below.

Locations with five or more injury pedestrian

7 Pitt / Karangahape 2 7 Queen / Wakefield 2 Albert / Wyndham 6 1 Queen / Shortland 6 2 Rosebank 60m W Great North 5 1 5 Dominion / Valley 1 Manukau / 10m S Great South 5 1 5 Victoria West / Hobson 1 Victoria West / Elliot 5 1

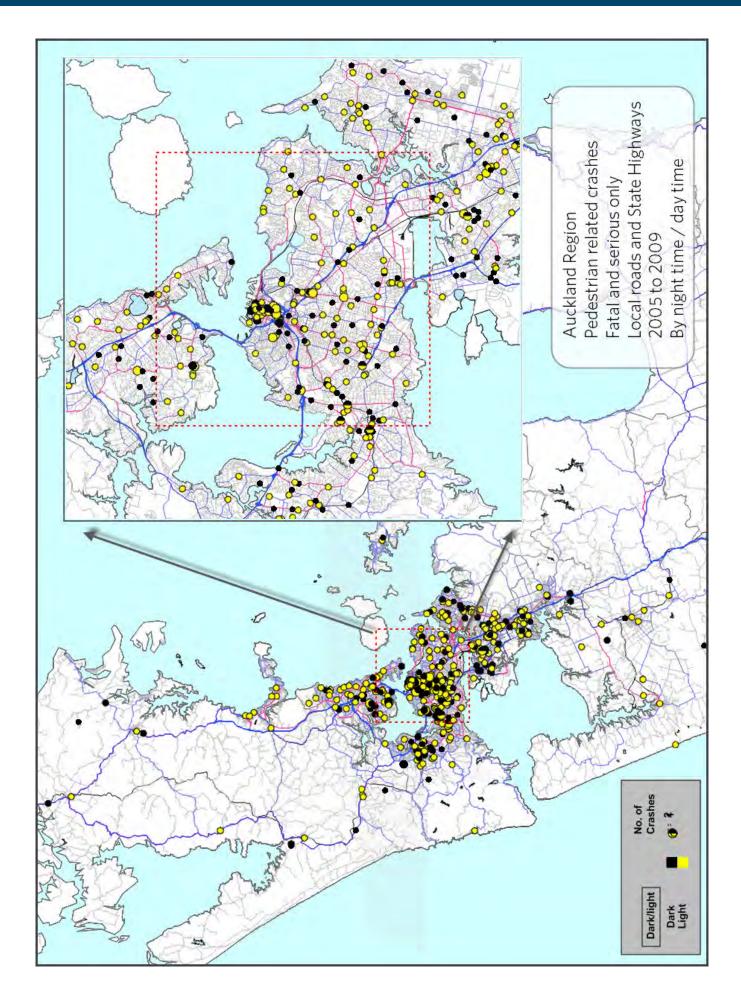
It is interesting to note in the table below the change in the age distribution of those injured in these crashes. A compounding factor here is the national drop in the number of young people walking to school.

The Ministry of Transport's Household Travel Survey shows that (nationally) twenty years ago 42 percent of children walked to school. Three years ago this had dropped to 25 percent.

2009 and 25 years ago—as a percentage of the total number of pedestrians injured			
Age group	2005 to 2009 (1596 crashes)	1980 to 1984 (1949 crashes)	
0 to 4	4	9	
5 to 9	12	20	
10 to 14	13	14	
15 to 19	12	13	
20 to 24	10	8	
25 to 29	6	5	
30 to 34	4	3	
35 to 39	6	3	
40 to 44	5	3	
45 to 49	4	2	
50 to 54	4	3	
55 to 59	3	3	
60 to 64	4	3	
65 to 69	4	3	
70 to 74	4	3	
75 and over	7	5	

Further information about the 1596 injury pedestrian crashes on **local** roads in the Auckland Region 2005 to 2009:

- 41 percent at intersections
- 27 percent at night
- Worst day of week Friday, best Sunday
- Pedestrians themselves contributed wholly or in part to 66 percent of the crashes
- There were an additional 40 crashes on State Highways, half of which were at night



Motorcyclists

In the Auckland Region 17 percent of all fatal and serious crashes involved a motorcyclist or moped rider. Crash numbers are increasing each year.

Motorcyclist and moped injuries					
	2005	2006	2007	2008	2009
Fatal	9	6	2	7	5
Serious	51	74	62	68	80
Minor	148	164	204	236	259
Total	208	244	268	311	344

The map opposite shows fatal and serious crashes for both groups of two wheeled road user groups. Regionally cyclists are represented in 8 percent of fatal and serious crashes, making 25 percent for the combined two wheeled group.

The table below shows a <u>national</u> analysis of the age of at fault riders in crashes cross referenced with distance ridden data from the MoT's Household travel survey. It shows that young riders are highly over-represent. The under 24 age group rides 7.8 percent of the kilometres but represents 34 percent of at fault riders. This reinforces the "young driver" thrust in Safer Journeys. Unfortunately the "distance driven" sample at a local body level is too small to make this comparison in Auckland Region.

All NZ Data - Motorcycle riders				
Age group	Percentage of total distance driven by all riders	Percentage of at fault riders in injury crashes		
10-14	0.2	1.8		
15-19	2.5	18.5		
20-24	5.1	14.1		
25-29	12.4	8.9		
30-34	4.2	9.5		
35-39	30.1	9.6		
40-44	10.0	10.2		
45-49	17.8	10.0		
50-54	3.6	7.7		
55-59	3.4	4.8		
60-64	7.8	2.5		
65-69	2.7	1.4		
70-74	0.0	0.5		
75+	0.3	0.6		

In the last 20 years there has been a significant shift in the age distribution of motorcyclists being injured in Auckland Region as illustrated in the table below.

between 2005 and 2009 and 25 years ago in the

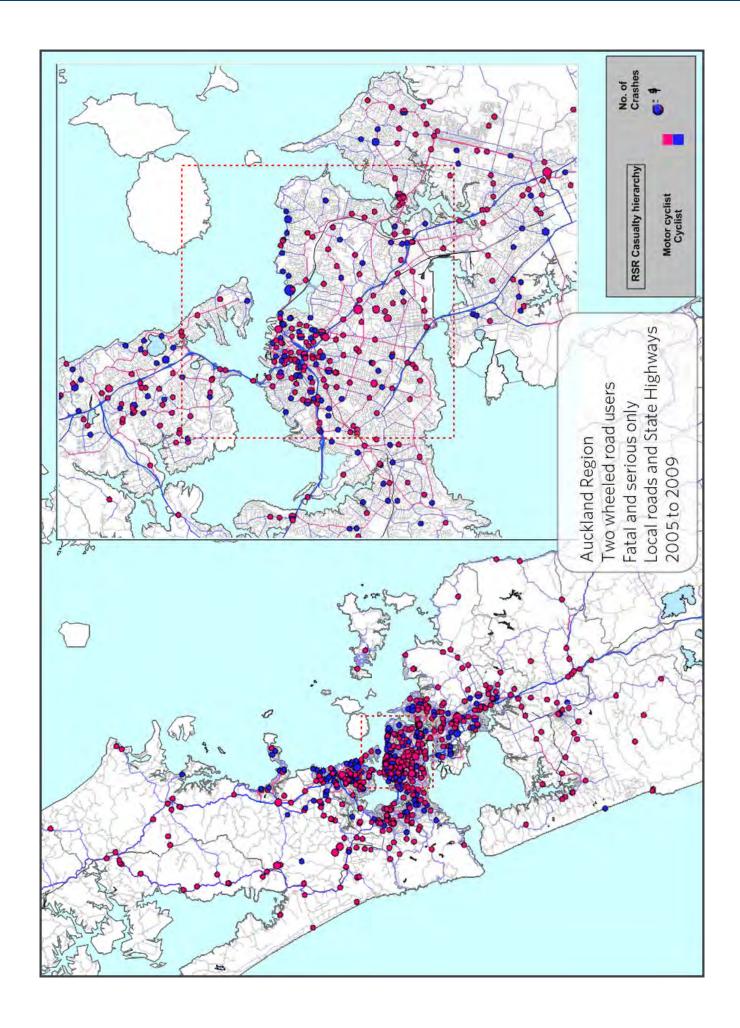
Auckland Region (by age group)			
Age group	2005 to 2009 (sample size 1343 crashes)	1980 to 1984 (sample size 3180 crashes)	
10 to 14	1	1	
15 to 19	12	48	
20 to 24	19	32	
25 to 29	13	10	
30 to 34	12	4	
35 to 39	10	2	
40 to 44	11	1	
45 to 49	9	1	
50 to 54	5	1	
55 to 59	3	1	
60 to 64	2	0	
65 to 69	1	0	
70 to 74	0	0	
75+	0	0	

Further information about the 1343 injury motorcyclist and moped crashes on **local** roads in Auckland Region 2005 to 2009:

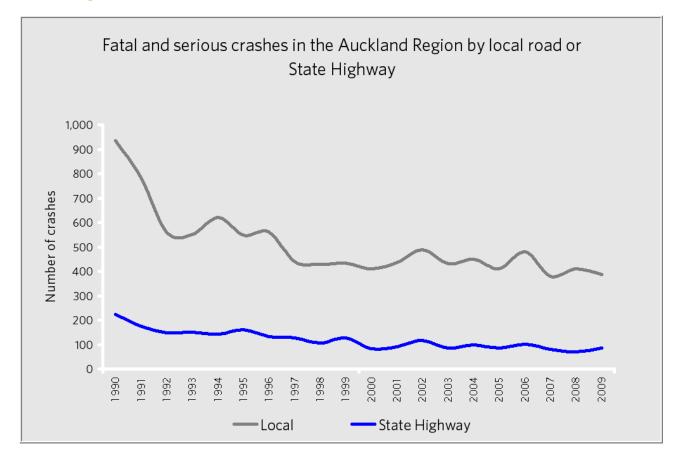
- 28 motorcyclists died, 285 received serious injuries and 803 minor injuries
- 18 percent were in the wet
- 26 percent at night
- From a total of 1398 at fault (or part fault) drivers 630 of these were motorcyclists
- Worst day Thursday, best Monday

Further information about the 270 injury motorcyclist and moped crashes on **State Highways** in Auckland Region 2005 to 2009:

- 11 motorcyclists died, 62 received serious injuries and 201 minor injuries
- 19 percent were in the wet
- 21 percent at night
- Worst day Friday, best Monday



Looking back—the last two decades ...



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