

briefing notes - road safety issues

North Shore City

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 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 North Shore City.

All the material unless otherwise stated in this report applies only to local roads. Local roads are all non State Highway roads in North Shore City.

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 when North Shore 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 North Shore City and we encourage safety engaged staff at North Shore City 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 *

North Shore City

Alcohol

Intersections

Crashes at night

Crashes involving pedestrians

Crashes involving motorcyclists

National priorities from Road Safety 2020— Safer Journeys

Speed

Alcohol / Drugs

Young Drivers

Roads and Roadsides

Motorcyclists

* not in any specific order of importance

2009 road trauma

Casualties

North Shore City

Deaths

4

Serious casualties

50

Minor casualties

324

Crashes

North Shore City

Fatal crashes

4

Serious injury crashes

42

Minor injury crashes

270

Non-injury crashes

991

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
Areas of high concern				
Reducing alcohol/drug impaired driving			✓	✓
Increasing the safety of young drivers	✓	✓	✓	✓
Safe roads and roadsides	✓			
Safe speeds	✓	✓	✓	
Increasing the safety of motorcycling	✓	✓	✓	✓
Areas of medium concern				
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		✓	✓	✓
Areas of continued and emerging focus				
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

North Shore City overview

In 2009 on local roads in North Shore City there were 316 injury crashes and 991 non-injury crashes. In addition on State Highways in North Shore City there were 104 injury crashes and 367 non-injury crashes. The table below shows the number of injuries resulting from the 316 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	0	4	4	8
Urban	4	46	320	370
Total	4	50	324	378

Over the last ten years fatal and serious crashes in the city have not shown any sign of a downward trend. Minor crashes rose sharply between 2002 and 2004, almost certainly due to improved reporting by NZ Police.

This lack of downward progress does need to be viewed in the context of rapid development in the city especially in the north.

Alcohol related fatal and serious crashes in particular remain a problem in the city and appear at higher levels than in peer local bodies.

Crash trends in North Shore City				
Year	Fatal crashes	Serious crashes	Minor crashes	Total crashes
2000	4	43	227	274
2001	7	36	220	263
2002	6	56	242	304
2003	4	40	245	289
2004	1	56	309	366
2005	3	60	303	366
2006	6	51	320	377
2007	4	37	312	353
2008	3	30	293	326
2009	4	42	270	316

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	24	14
At intersections	43	49
At night	39	33
Pedestrian	20	10
Motorcyclist	18	11
Cyclist	14	10

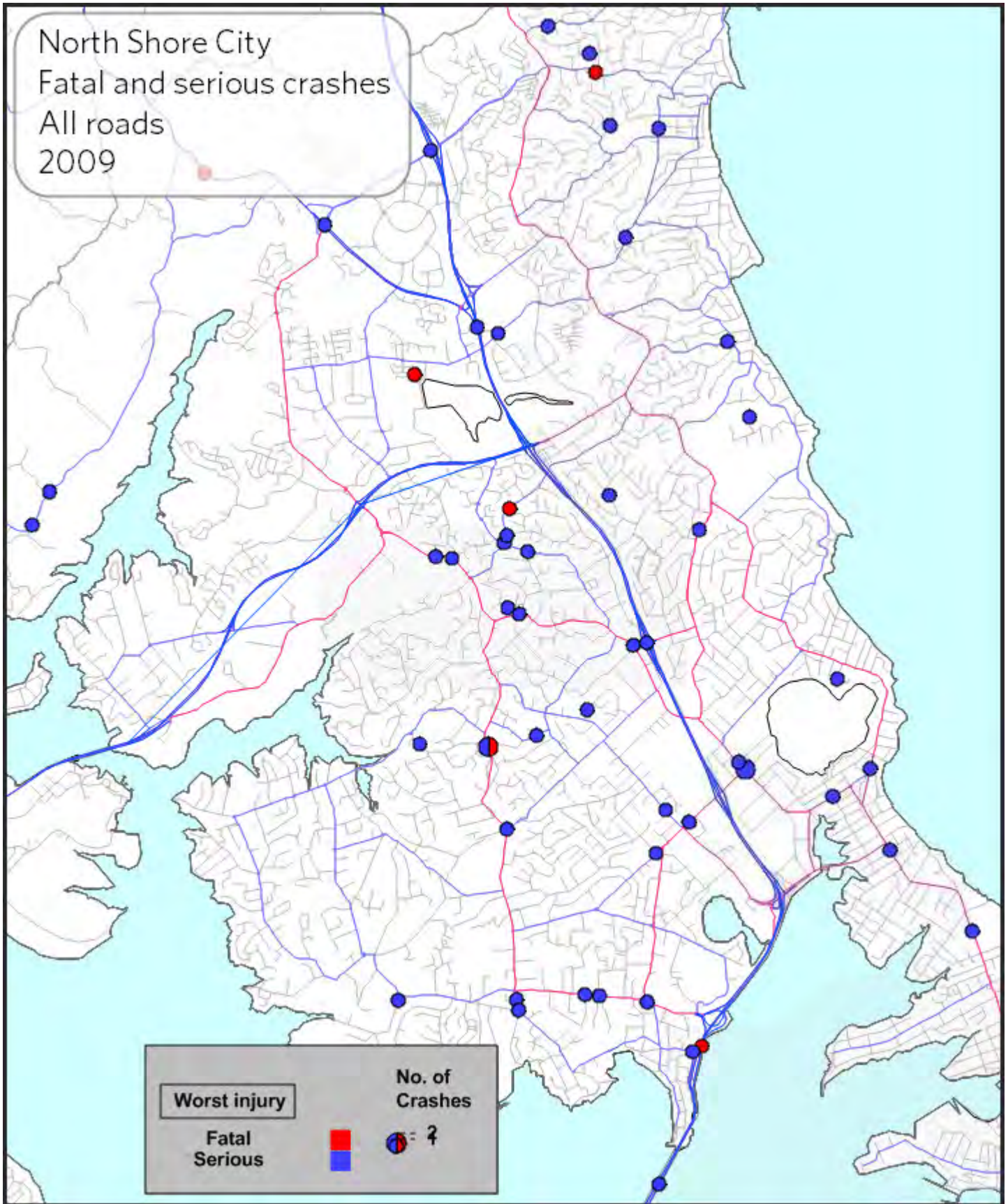
Further information about the 1738 injury and 5631 non-injury crashes on **local** roads in North Shore City 2005 to 2009:

- 21 deaths, 240 serious injuries and 1886 minor injuries
- Worst month May, best January
- Worst day Friday, best Sunday
- 25 percent on wet roads
- 31 percent at night
- 48 percent at intersections
- 3148 roadside objects struck *
- Most represented five year age block in at fault drivers in injury crashes, 15 to 19 years (20 percent of at fault drivers)
- Social cost of crashes in 2009 \$82.8m

Further information about the 481 injury and 1892 non-injury crashes on **State Highways** in North Shore City 2005 to 2009:

- 2 deaths, 32 serious injuries and 594 minor injuries
- Worst month May, best February
- Worst day Friday, best Sunday
- 25 percent on wet roads
- 28 percent at night
- 24 percent at intersections
- 505 roadside objects struck *
- Most represented five year age block in at fault drivers in injury crashes, 20 to 24 years (19 percent of at fault drivers)
- Social cost of crashes in 2009 \$33.2m

* 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.



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 North Shore City, alcohol was a factor in 24 percent of fatal and serious crashes and 14 percent of injury crashes.

Number of alcohol related injury crashes			
Crash year	Open road	Urban road	Total
2005	1	43	44
2006	1	55	56
2007	1	55	56
2008	2	38	40
2009	1	44	45
Total	6	235	241

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

Age groups 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	23	24
20-24	26	30
25-29	13	17
30-34	12	5
35-39	6	8
40-44	7	6
45-49	6	4
50-54	3	1
55-59	1	2
60-64	0	2
65-69	1	0
70-74	1	0
75+	0	0

It is interesting to note the changing age patterns of those choosing to drink and crash. In North Shore City there has been a shift from being weighted to young drivers to a broader age spread. Twenty-five years ago 71 percent of at fault drivers were aged under 30. Today this is 62 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, on the North Shore this has not translated into an increased proportion in youth alcohol related crashes.

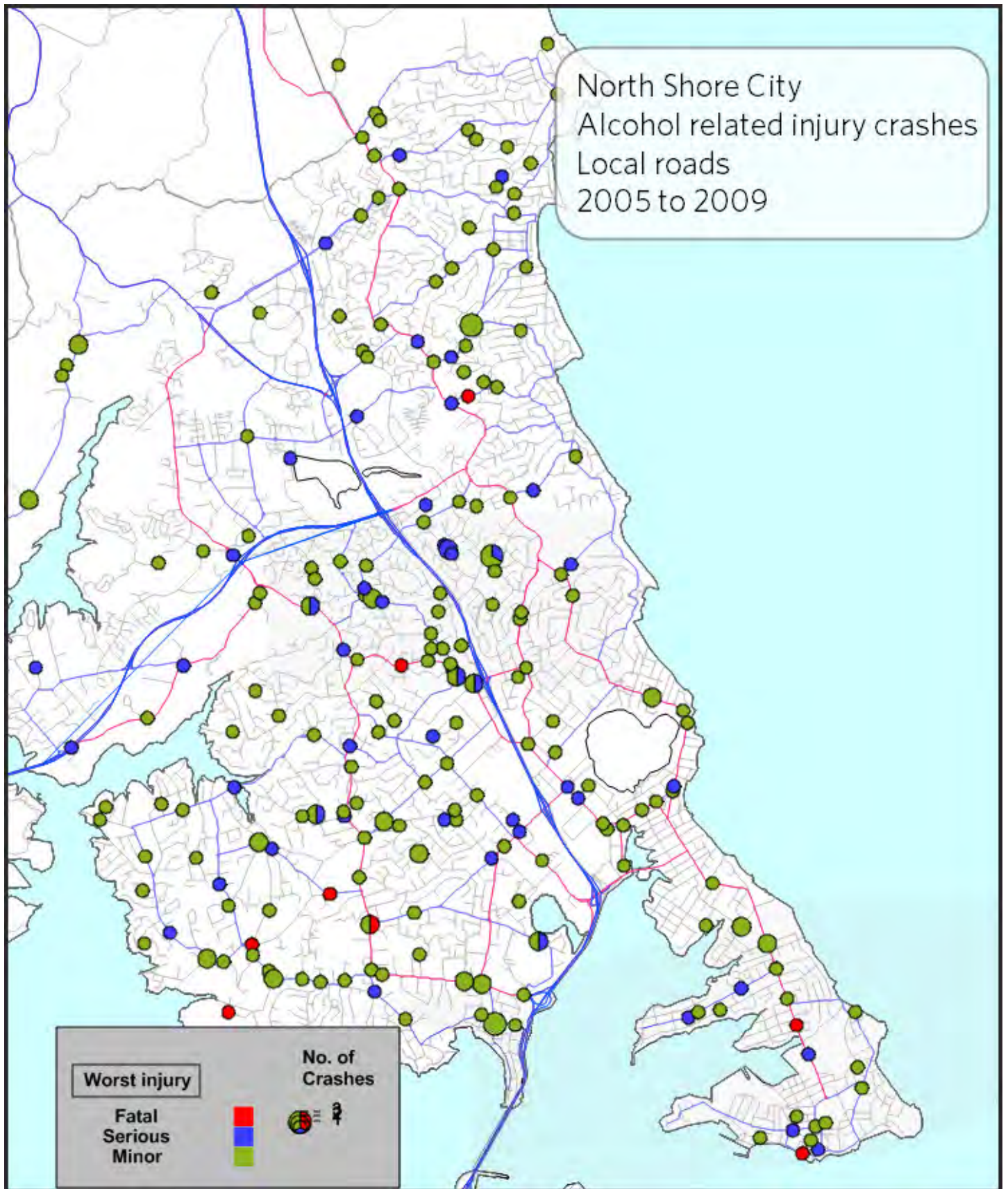
In addition it does need to be noted that the number of alcohol related injury crashes has fallen from 269 in five years 25 years ago to the 241 in the last five years.

Further information about the 241 alcohol related injury crashes on **local** roads in North Shore City 2005 to 2009:

- 9 deaths, 59 serious injuries and 254 minor injuries
- 81 percent of at fault drivers were male
- Most common crash type "lost control at a bend" (114 crashes)
- 35 percent at intersections
- 98 percent urban
- 29 percent wet road
- 78 percent night time
- Worst three hour time period, 9pm to midnight
- Worst month September, best January
- Worst day Saturday, best Monday

Further information about the 36 alcohol related injury crashes on **State Highways** in North Shore City 2005 to 2009:

- 1 death, 13 serious injuries and 40 minor injuries
- 79 percent of at fault drivers were male
- Most common crash type "lost control on straight" (17 crashes)
- 19 percent at intersections
- 14 percent urban
- 22 percent wet road
- 78 percent night time
- Worst three hour time period, midnight to 3am
- Worst month January, best October and December (equal)
- Worst day Friday, best Tuesday



Intersections

During the five year period 2005 to 2009 within North Shore City there were a total of 857 injury crashes at intersections.

Injuries at Intersections (casualties)					
Injury type	2005	2006	2007	2008	2009
Fatality	0	2	1	2	1
Serious	28	25	15	15	15
Minor	178	218	204	181	161
Total	206	245	220	198	177

The most common crash type at intersections is when a driver turns right and is hit by a vehicle approaching from the opposite direction on the same road (177 crashes).

Young drivers are heavily represented in intersection related crashes with 30 percent of all crashes occurring to the under 25 age group.

Males represent 60 percent of at fault drivers and in all 60 percent of at fault drivers held a full drivers licence.

Age group of at fault drivers in intersection related injury crashes 2005 to 2009 by gender			
Age group	Female	Male	Total
15-19	67	136	203
20-24	77	134	211
25-29	46	84	130
30-34	43	75	118
35-39	60	68	128
40-44	60	84	144
45-49	54	78	132
50-54	33	50	83
55-59	36	45	81
60-64	22	31	53
65-69	17	16	33
70-74	10	12	22
75+	23	28	51

In North Shore City there are 103 intersection sites which have had three or more injury crashes in the last five years (qualifying them as a black-spot).

Sites with eight or more crashes in the last five years including at least one in 2009 are in the table below.

Locations with eight or more crashes 2005 to 2009 including at least one in 2009		
Intersection name	2005 to 2009	2009
Shakespeare / Taharoto	10	2
Taharoto / Northcote	9	1
Lake / Bayswater	9	6
Glenfield / Downing	8	2
East Coast / Oteha Valley	8	3
James / Glenfield	8	1
Taharoto / Fred Thomas	8	1

Further information about the 857 injury crashes at intersections on **local** roads in North Shore City 2005 to 2009:

- 6 deaths, 98 serious injuries and 942 minor injuries
- 26 percent wet roads
- 32 percent night time
- 10 percent involved alcohol
- 8 percent involved pedestrians
- Worst three hour time period, 3pm to 6pm

Further information about the 102 injury crashes at intersections on **State Highways** in North Shore City 2005 to 2009:

- No deaths, 4 serious injuries and 119 minor injuries
- 18 percent wet roads
- 28 percent night time
- 7 percent involved alcohol
- 33 percent rural
- Worst three hour time period, 3pm to 6pm

Night time crashes

Between 2005 and 2009 there were a total of 574 night time injury crashes on in North Shore City.

Night time injury crashes					
Road type	2005	2006	2007	2008	2009
Open	4	6	4	3	2
Urban	117	126	124	89	99
Total	121	132	128	92	101

Over half of all night time crashes on the North Shore 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 a very approximate value for the amount of travel under taken at night for various age groups to give some perspective to the rate these age groups are crashing. (There is not enough data to approximate at a local body level).

Looking at night travel as a whole (nationally) approximately 14 percent is under taken 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	38	115	153
20 to 24	34	83	117
25 to 29	13	43	56
30 to 34	13	32	45
35 to 39	13	21	34
40 to 44	12	27	39
45 to 49	14	20	34
50 to 54	5	12	17
55 to 59	6	8	14
60 to 64	2	6	8
65 to 69	3	3	6
70 to 74	1	4	5
75+	0	5	5
Total	154	379	533

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 574 injury night time crashes on **local** roads in North Shore City 2005 to 2009:

- 10 deaths, 98 serious injuries and 639 minor injuries
- 71 percent of at fault drivers were male
- Most common crash type "loss of control at a bend" (176 crashes)
- 33 percent of crashes involved "alcohol"
- 6 percent of crashes involved "fatigue" as a contributory factor
- 21 percent of crashes involved speed "too fast for the conditions"
- 32 percent were in the wet
- 3 percent in rural areas
- 47 percent of crashes were at intersections
- 45 percent of crashes involved a roadside object being struck
- Most common object struck, parked vehicle (92)

Further information about the 153 injury night time crashes on **State Highways** in North Shore City 2005 to 2009:

- 1 death, 14 serious injuries and 187 minor injuries
- 67 percent of at fault drivers were male
- Most common crash type "Rear end" (84 crashes)
- 18 percent of crashes involved "alcohol"
- 5 percent of crashes involved "fatigue" as a contributory factor
- 14 percent of crashes involved speed "too fast for the conditions"
- 16 percent in urban areas
- 35 percent of crashes were in the wet
- 19 percent of crashes were at intersections
- 33 percent of crashes involved a roadside object being struck

Pedestrians

In the last five years in North Shore City 20 percent of fatal and serious crashes and 10 percent of all injury crashes involved a pedestrian.

Pedestrian injuries 2005 to 2009					
Pedestrian injuries	2005	2006	2007	2008	2009
Fatal	1	1	1	1	3
Serious	10	8	11	11	10
Minor	35	24	27	37	37
Total	46	33	39	49	50

The most common type of pedestrian crash is when a pedestrian is crossing the road and is hit by a vehicle approaching from their right (82 crashes). There are 11 locations in the city with three or more pedestrian injury crashes in the last five years. Sites with three or more injury crashes in the last five years and at least one in 2009 are in the table below.

Locations with three or more injury pedestrian crashes in the last five years - including at least one crash in 2009		
Location	Number of crashes 2005 to 2009	2009
Hammond / Birkenhead	4	1
The Strand / Gibbons	3	1
Glenfield / Downing	3	2
Hurstmere / Anzac	3	2

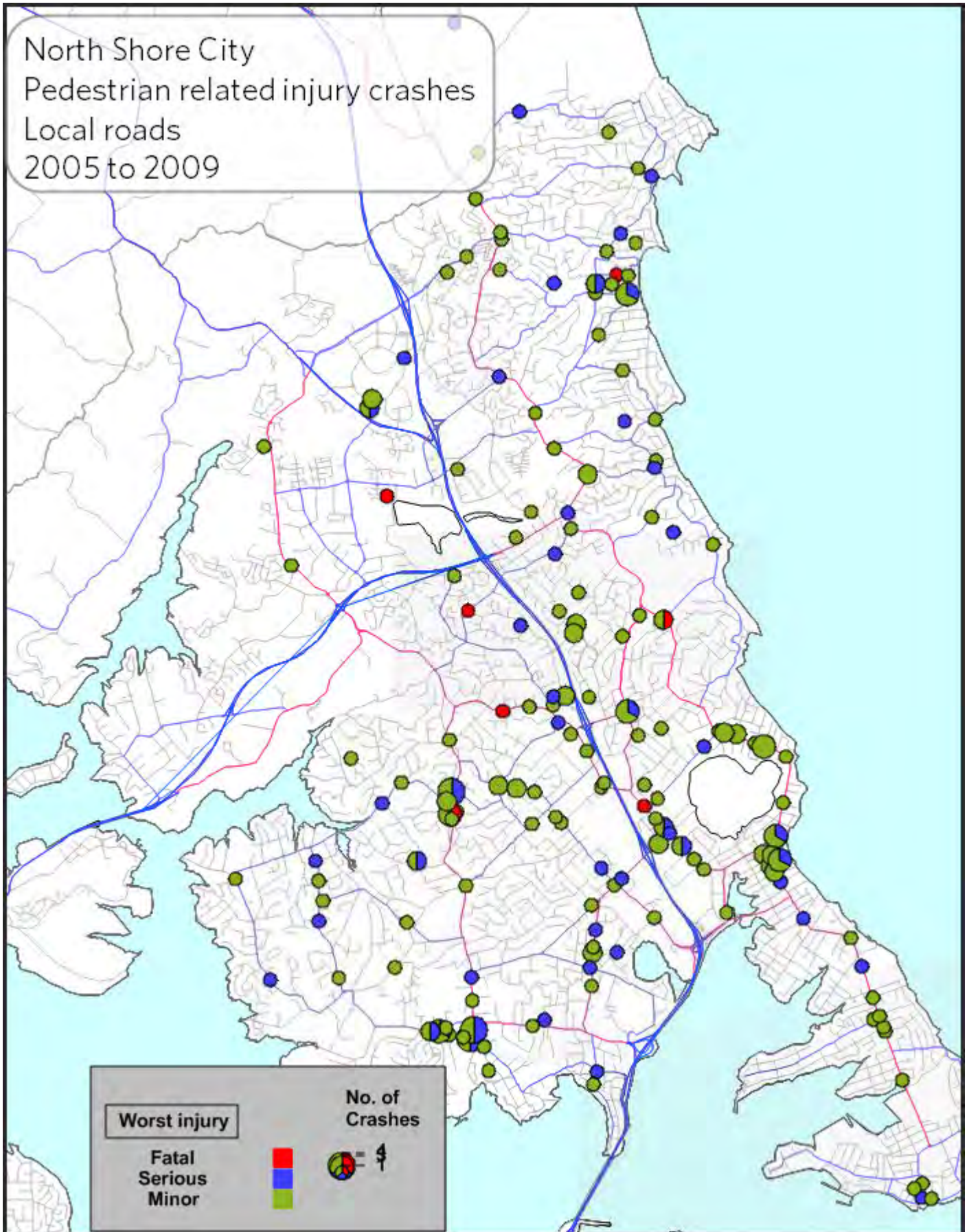
It is interesting to note in the following table how the age distribution of pedestrian crashes has changed in the city over time. Between 1980 and 1984 fifty-seven percent of crashes involved pedestrians aged 19 or less. In the last five years 42 percent of injured pedestrians are in this age range. Conversely the 50+ age group now accounts for 28 percent of injured pedestrians but was only 21 percent 25 years ago.

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 twenty years ago 42 percent of children walked to school. Three years ago this had dropped to 25 percent.

Ages of pedestrian casualties 2005 to 2009 and 25 years ago—as a percentage of the total pedestrians injured		
Age group	2005 to 2009	1980 to 1984
0 to 4	3	6
5 to 9	9	20
10 to 14	14	15
15 to 19	16	16
20 to 24	9	11
25 to 29	3	3
30 to 34	1	2
35 to 39	5	2
40 to 44	6	3
45 to 49	7	2
50 to 54	4	2
55 to 59	6	3
60 to 64	3	3
65 to 69	3	3
70 to 74	4	4
75 and over	9	7

Further information about the 209 injury pedestrian crashes on **local** roads in North Shore City 2005 to 2009:

- 37 percent at intersections
- 22 percent at night
- Worst month November, best January
- Worst day of week Thursday, best Sunday
- Pedestrians themselves contributed wholly (or in part) to 60 percent of the crashes
- In addition there were two pedestrian crashes on **State Highways** in the city
- 12 of the pedestrians were intoxicated



Motorcyclists

In North Shore City motorcyclists and mopeds are involved in 18 percent of fatal and serious crashes and 10 percent of all injury crashes.

Motorcyclist and moped injuries					
	2005	2006	2007	2008	2009
Fatal	1	1	0	1	0
Serious	8	12	4	5	12
Minor	24	18	39	31	34
Total	33	31	43	37	46

In the last 20 years there has been a significant shift in the age distribution of motorcyclists being injured in North Shore City as illustrated in the table opposite.

The table below shows a national analysis of the age of at fault riders in crashes cross referenced with distance ridden data from the Ministry of Transport’s Household Travel survey.

It shows that young riders are highly over-represented. The under 24 age group rides 7.8 percent of the kilometres but represents 34 percent of at fault riders and 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 North Shore City.

All NZ Data – Motorcycle riders		
Age group	Percentage of total distance driven	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

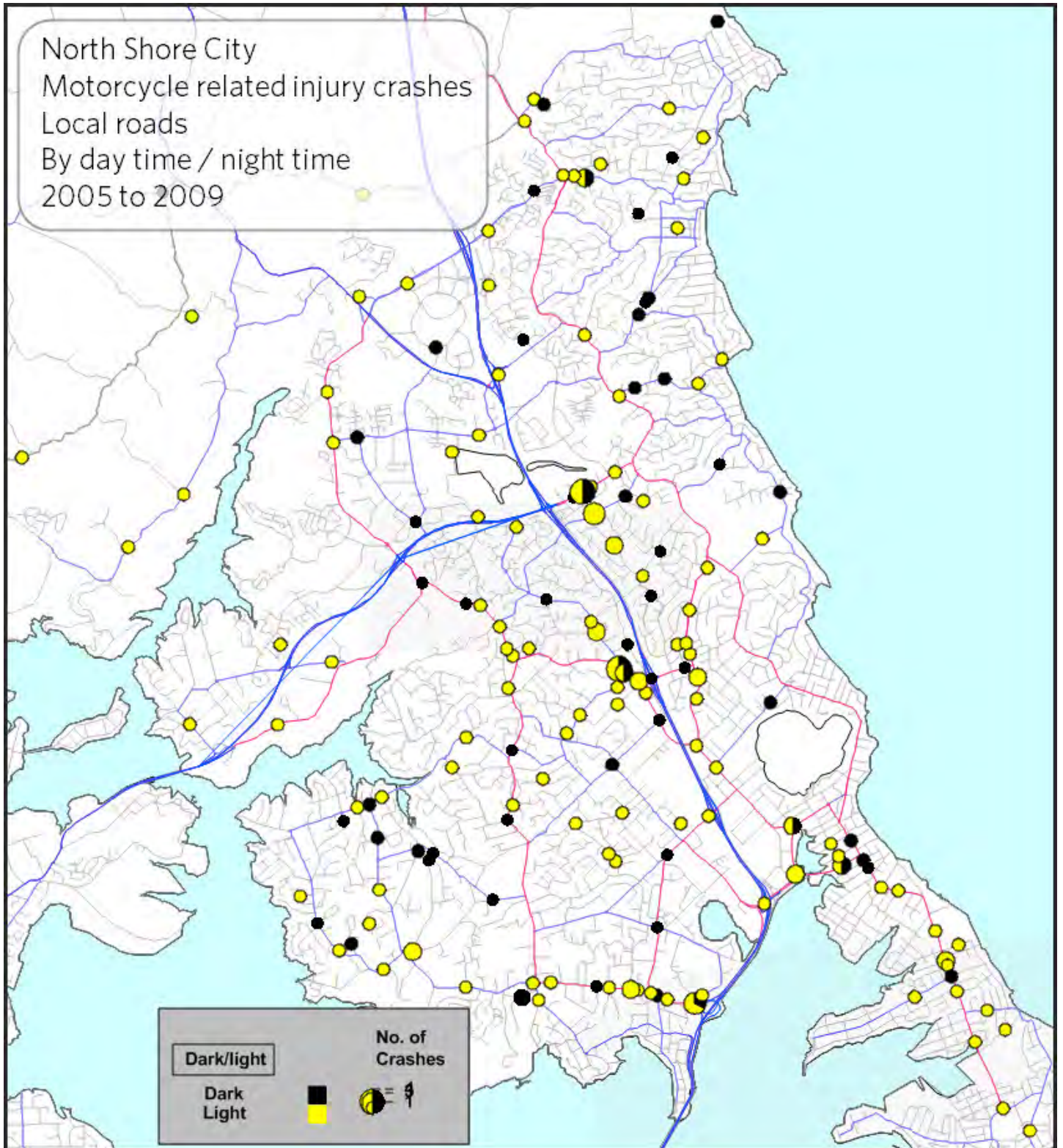
Percentage of motorcycle and moped casualties between 2005 and 2009 and 25 years ago in North Shore City (by age group)		
Age group	2005 to 2009 (sample size 188 crashes)	1980 to 1984 (sample size 491 crashes)
10 to 14	1	1
15 to 19	15	53
20 to 24	26	28
25 to 29	9	9
30 to 34	11	4
35 to 39	8	2
40 to 44	10	2
45 to 49	6	0
50 to 54	6	0
55 to 59	3	1
60 to 64	2	0
65 to 69	2	0
70 to 74	1	0
75+	0	0

Further information about the 188 injury motorcyclist and moped crashes on **local** roads in North Shore City 2005 to 2009:

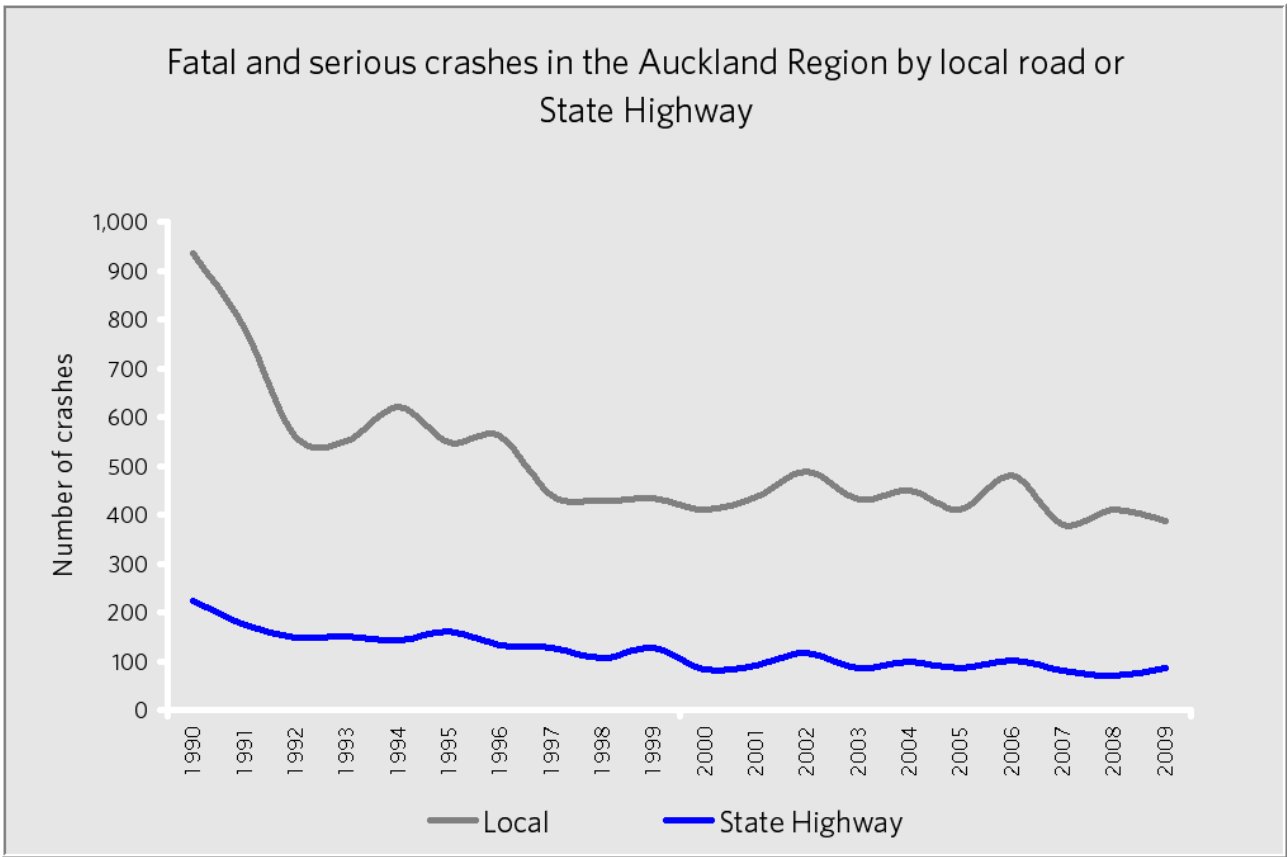
- 3 deaths, 41 serious injuries and 158 minor injuries
- 10 percent involved alcohol
- 11 percent involved speed
- 31 percent at night
- 54 percent at intersections
- Worst day Friday, best Sunday

Further information about the 40 injury motorcyclist and moped crashes on **State Highways** in North Shore City 2005 to 2009:

- No deaths, 3 serious injuries and 38 minor injuries
- 3 percent involved alcohol
- 3 percent involved speed
- 23 percent at night
- 25 percent at intersections
- Worst day Tuesday, best Friday



Looking back—the last two decades ...



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