



briefing notes - road safety issues

Rodney District

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 Rodney District.

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

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 Rodney District 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 Rodney District and we encourage safety engaged staff at Rodney District 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 *

Rodney District

Alcohol

Bends

Crashes at night

Road factors and roadside hazards

National priorities from Road Safety 2020— Safer Journeys

Speed

Alcohol / Drugs

Young Drivers

Roads and Roadsides

Motorcyclists

2009 road trauma

Casualties

Rodney District

Deaths

6

Serious casualties

31

Minor casualties

181

Crashes

Rodney District

Fatal crashes

5

Serious injury crashes

28

Minor injury crashes

140

Non-injury crashes

279

* 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.

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
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

Rodney District overview

In 2009 on local roads in Rodney District there were 173 injury crashes and 279 non-injury crashes. In addition on State Highways in Rodney District there were 107 injury crashes and 218 non-injury crashes.

The table below shows the number of injuries resulting from the 173 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	3	21	114	138
Urban	3	10	67	80
Total	6	31	181	218

In the past decade fatal and serious crashes on local roads in Rodney District have remained relatively stable, minor crashes have been rising at almost the same rate since 2001. This may in part be the result of improved Police reporting as well as the increased urbanisation in Rodney which tends to generate less severe injury crashes due to the lower speeds on these roads.

The top four items in the crash characteristic table have values in the district which are higher than those found in peer local bodies.

Crash trends in Rodney District				
Year	Fatal crashes	Serious crashes	Minor crashes	Total crashes
2000	8	30	61	99
2001	5	36	63	104
2002	8	22	78	108
2003	4	28	89	121
2004	9	36	101	146
2005	8	29	108	145
2006	6	34	111	151
2007	7	33	129	169
2008	3	40	125	168
2009	5	28	140	173

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 related	32	21
Crashes at bends	54	52
Crashes at night	39	34
Road factors	17	20
Speed related	26	26
Motorcycle related	21	15

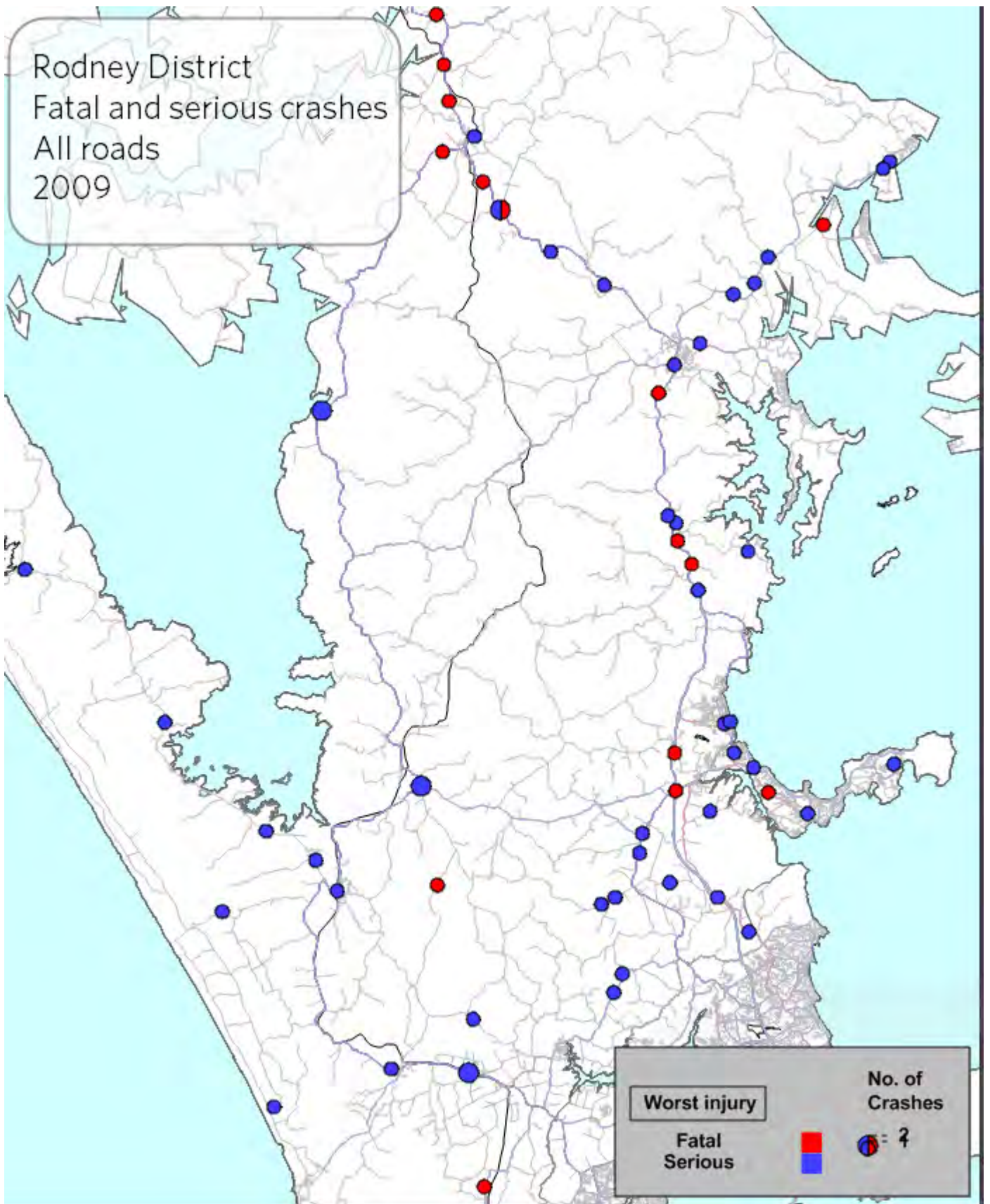
Further information about the 806 injury and 1492 non-injury crashes on **local** roads in Rodney District 2005 to 2009:

- 32 deaths, 216 serious injuries and 855 minor injuries
- Worst month March, best September
- Worst day Friday, best Tuesday
- 27 percent on wet roads
- 36 percent at night
- 26 percent at intersections
- 1526 roadside objects struck *
- Most represented five year age block in at fault drivers in injury crashes, 15 to 19 years (24 percent of at fault drivers)
- Social cost of crashes in 2009 \$25.5m

Further information about the 578 injury and 1186 non-injury crashes on **State Highways** in Rodney District 2005 to 2009:

- 48 deaths, 152 serious injuries and 647 minor injuries
- Worst month December, best June
- Worst day Saturday, best Tuesday
- 34 percent on wet roads
- 30 percent at night
- 30 percent at intersections
- 959 roadside objects struck *
- Most represented five year age block in at fault drivers in injury crashes, 15 to 19 years (19 percent of at fault drivers)
- Social cost of crashes in 2009 \$67.6m

* 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 Rodney District, alcohol was a factor in 32 percent of fatal and serious crashes and 21 percent of injury crashes.

Number of alcohol related injury crashes			
Crash year	Open road	Urban road	Total
2005	21	10	31
2006	15	11	26
2007	17	14	31
2008	19	18	37
2009	29	17	46
Total	101	70	171

(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 of drivers in this age group 2005 to 2009	Percentage of drivers in this age group 1980 to 1984
15-19	30	31
20-24	12	20
25-29	10	20
30-34	11	12
35-39	10	4
40-44	9	8
45-49	8	2
50-54	4	4
55-59	2	0
60-64	1	0
65-69	2	0
70-74	1	0
75+	0	0

It is interesting to note the changing age patterns of those choosing to drink and crash. There has been a marked shift from being heavily weighted to drivers under 30 to a much broader age spread.

Twenty-five years ago 71 percent of at fault drivers were aged under 30, today this is 52 percent.

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

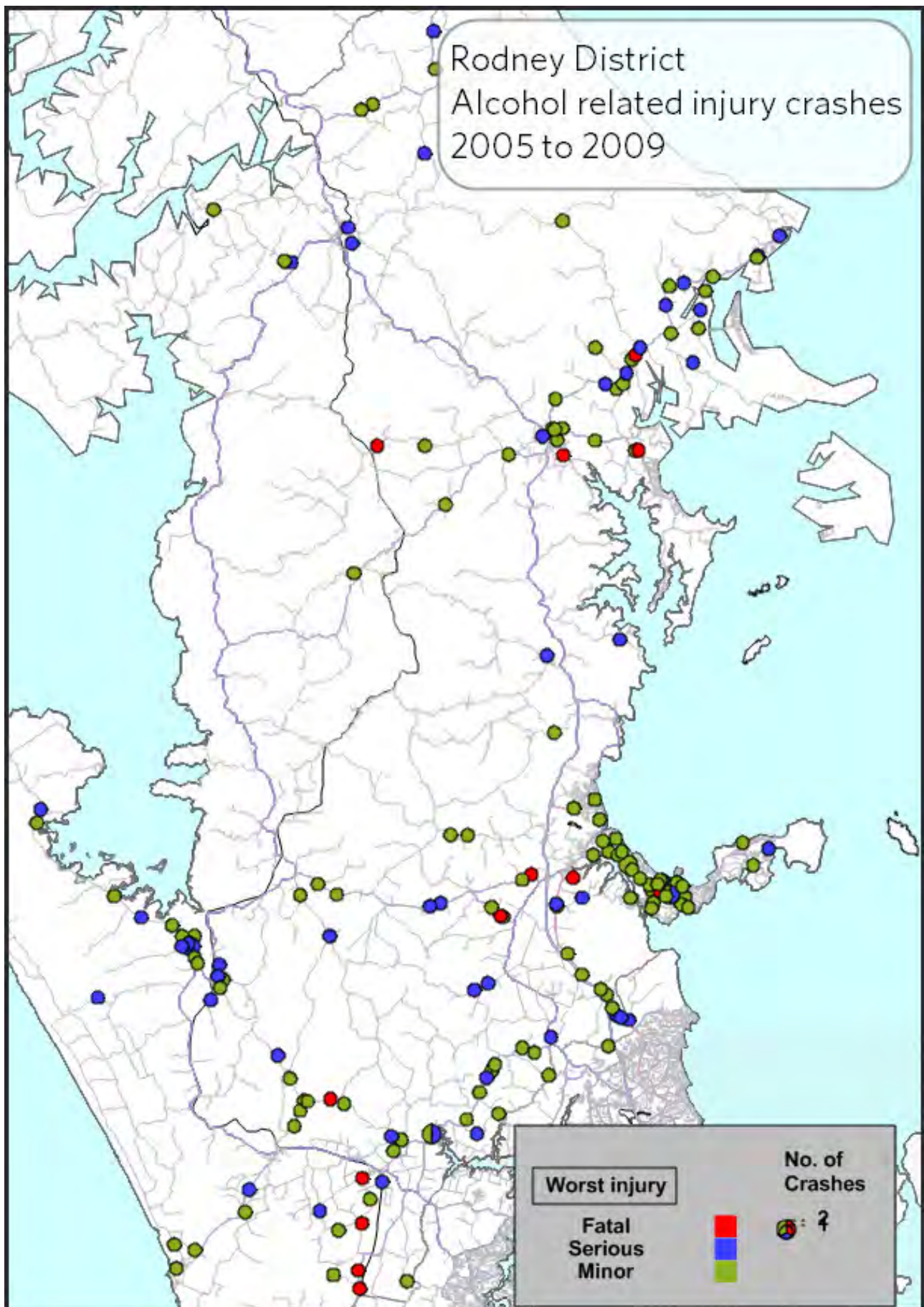
It does need to be noted though that the number of alcohol related injury crashes has increased from 49 over five years 25 years ago to 171 in the last five years.

Further information about the 171 alcohol related injury crashes on **local** roads in Rodney District 2005 to 2009:

- 13 deaths, 69 serious injuries and 171 minor injuries
- 81 percent of at fault drivers were male
- Most common crash type "lost control at a bend" (113 crashes)
- 41 percent urban
- 71 percent night time
- Worst three hour time period, 9pm to midnight
- Worst month December, best January
- Worst day Saturday, best Tuesday
- Number of roadside objects struck, 187

Further information about the 75 alcohol related injury crashes on **State Highways** in Rodney District 2005 to 2009:

- 9 deaths, 33 serious injuries and 82 minor injuries
- 82 percent of at fault drivers were male
- Most common crash type "lost control at a bend" (46 crashes)
- 2 percent urban
- 76 percent night time
- Worst three hour time period, midnight to 3am
- Worst months February and March (equal), best April
- Worst day Sunday, best Wednesday
- Number of roadside objects struck, 63



Bends

Between 2005 and 2009 fifty-two percent of all injury crashes in Rodney District were loss of control or head on bends.

Injury crashes at bends 2005 to 2009				
Crash year	Fatal crashes	Serious crashes	Minor crashes	Total
2005	3	14	56	73
2006	2	18	50	70
2007	6	16	68	90
2008	2	25	65	92
2009	3	16	75	94
Total	16	89	314	419

Almost half of all at fault drivers involved in crashes at bends were aged under 30 and 25 percent were aged under 20.

Many drivers overestimate their own abilities and those of their vehicles to negotiate bends especially in the wet (see bullet points).

Age group and gender of at fault drivers in bend related injury crashes 2005 to 2009			
Age group	Female	Male	Total
15 to 19	32	69	101
20 to 24	20	31	51
25 to 29	4	36	40
30 to 34	12	24	36
35 to 39	18	29	47
40 to 44	10	30	40
45 to 49	6	30	36
50 to 54	5	12	17
55 to 59	6	12	18
60 to 64	0	3	3
65 to 69	2	4	6
70 to 74	3	1	4
75+	6	5	11
Total	124	286	410

After drivers lose control their vehicles often crash into roadside hazards such as ditches, banks, poles or trees. Hitting these objects can result in a relatively minor off-road event turning into something far more serious.

The most common roadside hazards struck in injury loss of control or head on crashes on bends in Rodney District were cliffs and banks (95), ditches (59), fences (59), trees (55) and posts and poles (49) from a total of 386 objects struck.

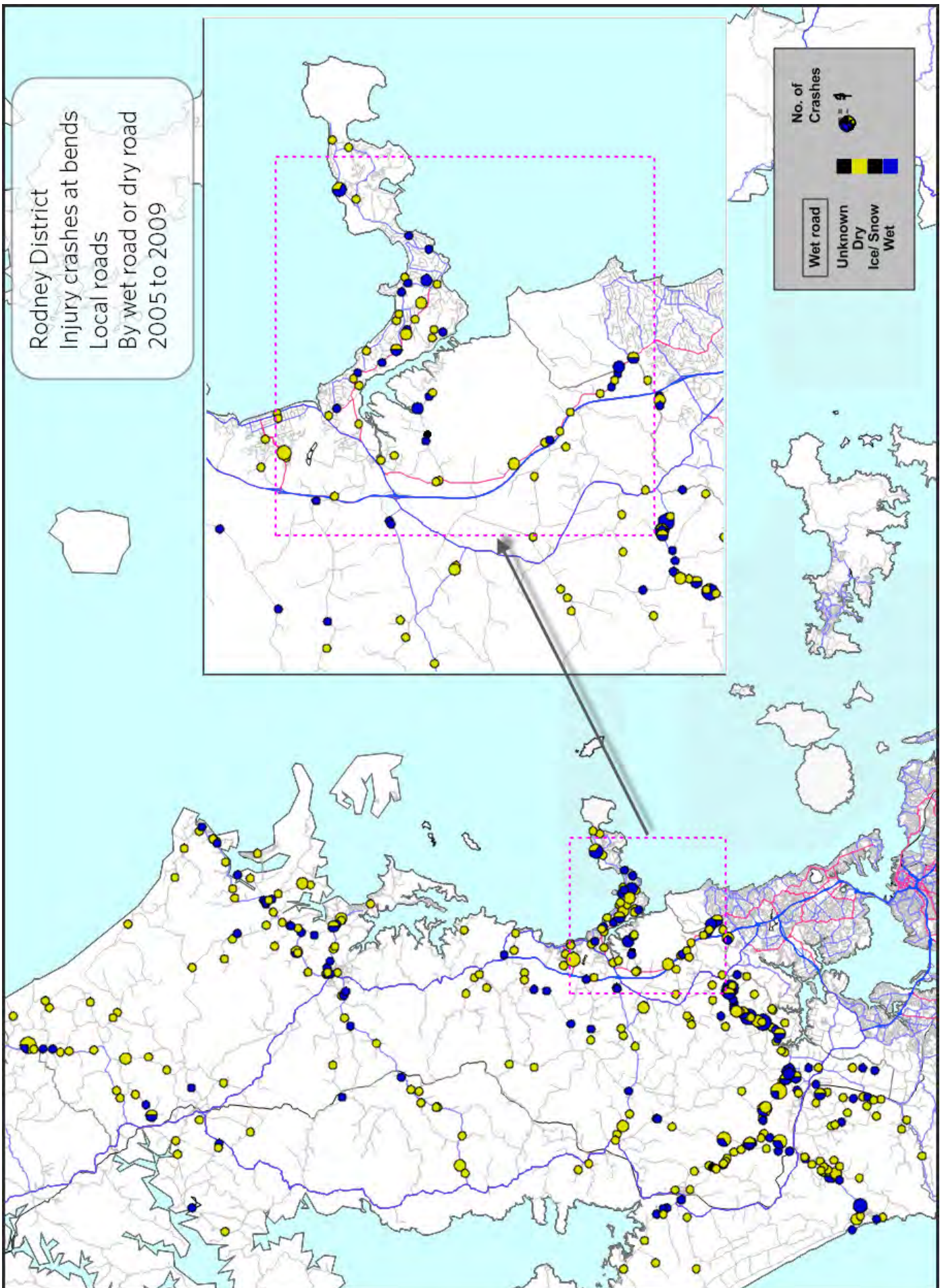
Note also the high level of crashes in the wet on State Highways which may suggest an issue with surface friction (nationally 42 percent of rural State Highway bend crashes occur in the wet).

Further information about the 419 injury loss of control or head on crashes on bends on **local** roads in Rodney District 2005 to 2009:

- 17 deaths, 121 serious injuries and 460 minor injuries
- 70 percent of at fault drivers were male
- Most common crash type "loss of control turning right" (203 crashes)
- 27 percent of crashes involved alcohol
- 38 percent of crashes involved speed too fast for the conditions
- 39 percent in the dark
- 34 percent in the wet
- Worst month March, best October

Further information about the 219 injury loss of control or head on crashes on bends on **State Highways** in Rodney District 2005 to 2009:

- 26 deaths, 74 serious injuries and 220 minor injuries
- 71 percent of at fault drivers were male
- Most common crash type "loss of control turning right" (84 crashes)
- 21 percent of crashes involved alcohol
- 37 percent of crashes involved speed too fast for the conditions
- 37 percent at night
- 51 percent of crashes in the wet
- Worst month February, best June



Night time crashes

Between 2005 and 2009 there were a total of 276 night time injury crashes on in Rodney District.

Night time injury crashes					
Road type	2005	2006	2007	2008	2009
Open	31	29	36	33	39
Urban	19	23	21	28	17
Total	50	52	57	61	56

Almost half of all night time crashes in Rodney District 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 undertaken at night for various age groups and give some perspective to the rate these age groups are crashing (note: there is not enough data to approximate this at a local body level).

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	20	62	82
20 to 24	16	34	50
25 to 29	1	17	18
30 to 34	7	17	24
35 to 39	11	14	25
40 to 44	2	14	16
45 to 49	2	17	19
50 to 54	3	11	14
55 to 59	2	6	8
60 to 64	2	3	5
65 to 69	3	1	4
70 to 74	0	1	1
75+	1	1	2
Total	70	198	268

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

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

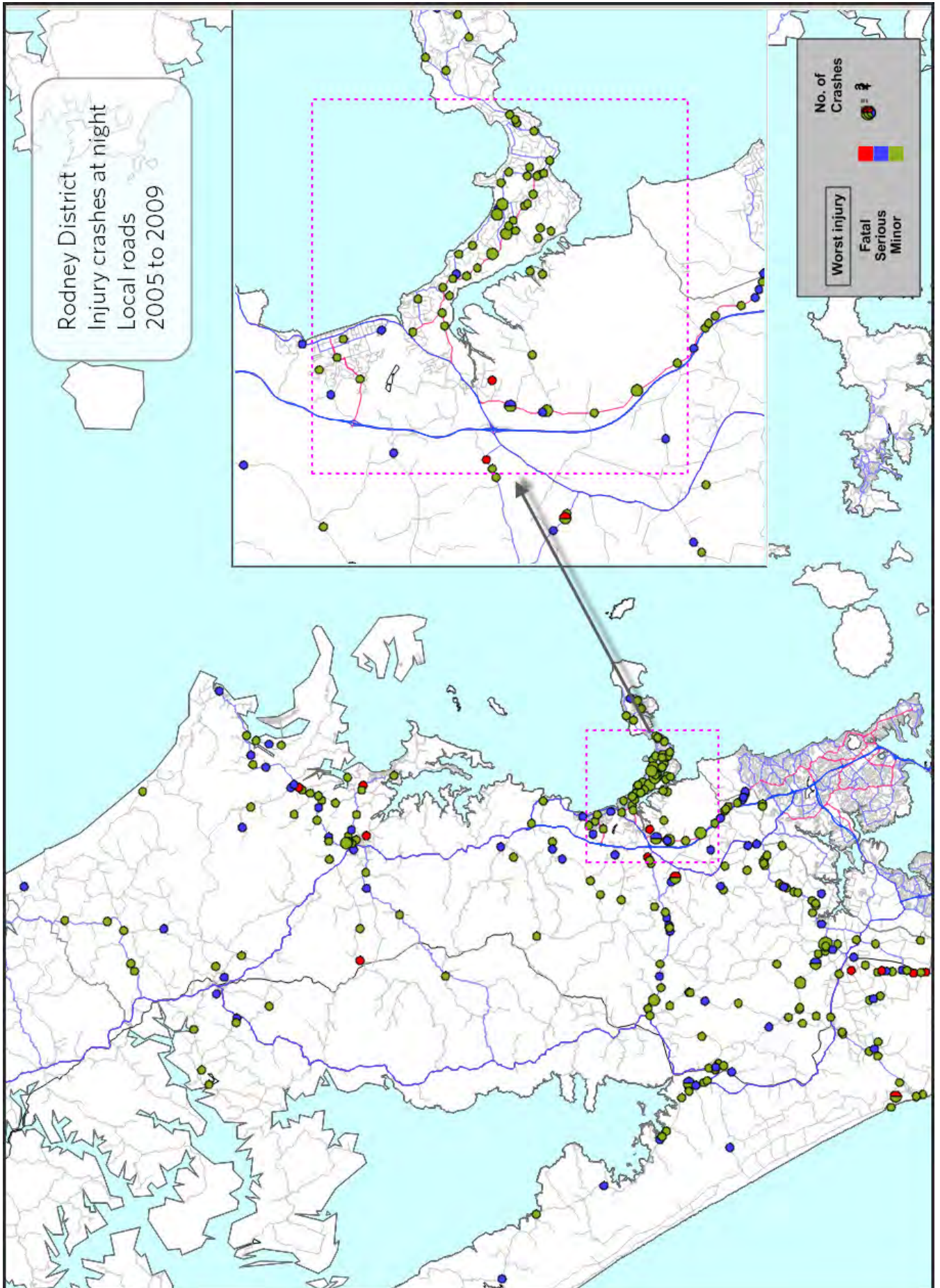
Some redistribution of alcohol check points in particular may be worth considering.

Further information about the 276 injury night time crashes on **local** roads in Rodney District 2005 to 2009:

- 12 deaths, 82 serious injuries and 285 minor injuries
- 74 percent of at fault drivers were male
- Most common crash type “loss of control at a bend ” (165 crashes)
- 44 percent of crashes involved alcohol
- 7 percent of crashes involved fatigue as a contributory factor
- 37 percent of crashes involved speed too fast for the conditions
- 34 percent were in the wet
- 17 percent of crashes were at intersections
- 72 percent of crashes involved a roadside object being struck

Further information about the 176 injury night time crashes on **State Highways** in Rodney District 2005 to 2009:

- 19 deaths, 49 serious injuries and 176 minor injuries
- 79 percent of at fault drivers were male
- Most common crash type “loss of control at a bend” (82 crashes)
- 32 percent of crashes involved alcohol
- 15 percent of crashes involved fatigue as a contributory factor
- 23 percent of crashes involved speed too fast for the conditions
- 40 percent of crashes were in the wet
- 21 percent of crashes were at intersections
- 58 percent of crashes involved a roadside object being struck



Road Factors - including roadside hazards

A safe road environment includes appropriate geometric design, good delineation, adequate surface skid resistance and a roadside free of unforgiving hazards.

Safer Journeys places “Safer Roads and Roadside” as one of the five areas of “High concern”.

In 2009 in Rodney District “road factors” were a contributing factor in 17 percent of fatal and serious crashes and 20 percent of injury crashes.

Additionally in Rodney District between 2005 and 2009 fifty-one percent of all fatal and serious crashes and 51 percent of injury crashes involved roadside hazards being struck.

Road factor related injury crashes					
	2005	2006	2007	2008	2009
Rural	13	17	36	25	34
Urban	4	7	8	10	6
Total	17	24	44	35	40

Roadside hazards normally contribute to the overall crash outcome by increasing injury severity but can in themselves be a contributory factor in a crash. For example occupants in an errant vehicle striking a large tree close to the road edge are likely to sustain worse injuries than if the tree was not present. If the same tree had low branches and was located at an intersection it could also contribute to a lack of visibility.

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.

Types of road factors in injury crashes	
Road factor type	Number of times reported
Slippery road*	97
Road surface in poor condition	46
Road obstructed	1
Visibility limited	30
Signs or signals (needed or faulty)	5
Markings (needed or faulty)	1
Street lighting	2

* note that NZTA does not assume that a road that is “wet” is necessarily “slippery”. This factor is only added to CAS if the attending Police Officer specifically mentions a “slippery road”.

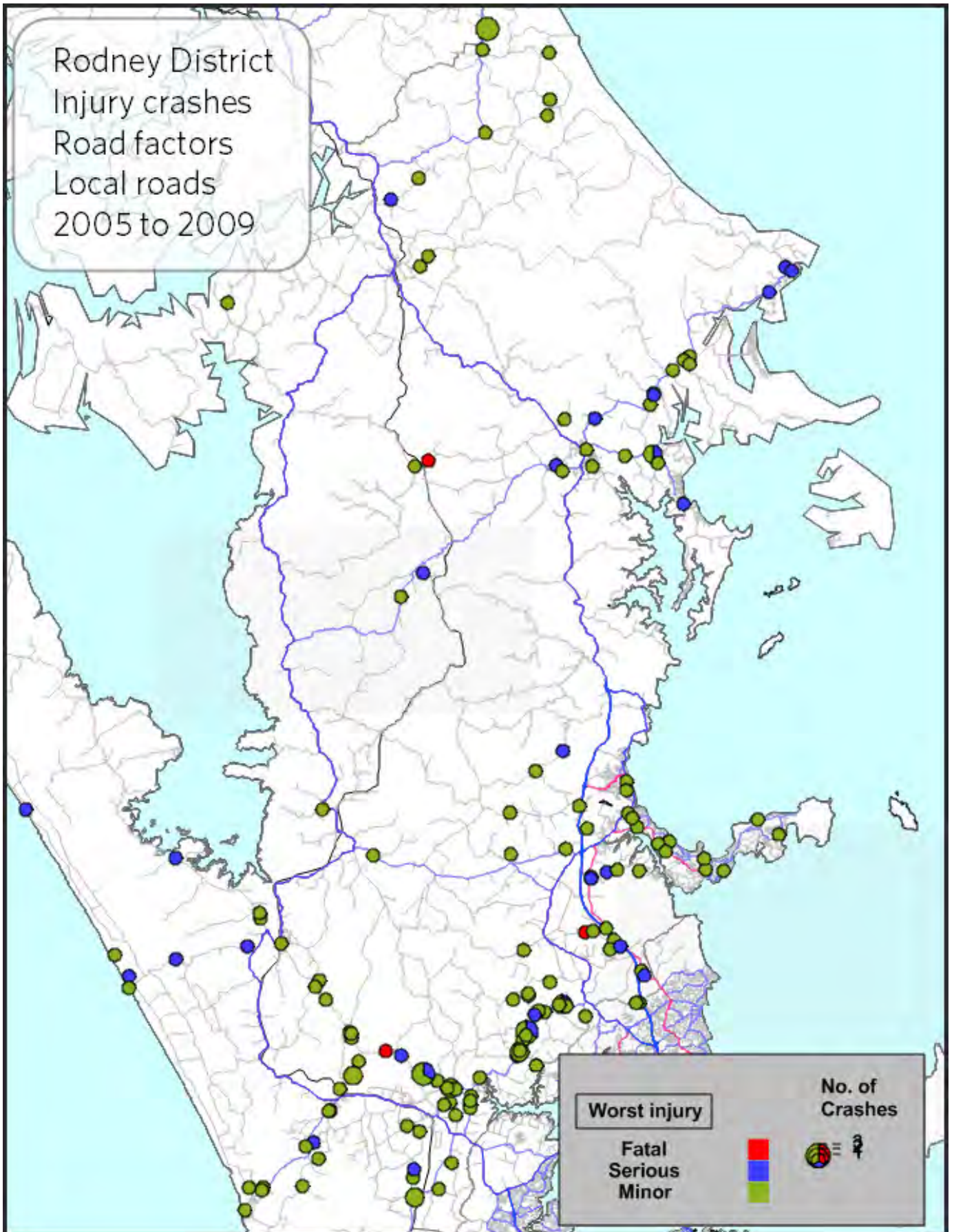
Most common types of hazard struck (all injury crashes in Rodney) 2005 to 2009	
Type of hazard	Number of times hazard struck
Ditch	95
Cliff or bank	108
Fence	83
Post or pole	70
Tree	66
Parked vehicle	31

Further information about the 160 road factor related injury crashes on **local** roads in Rodney District 2005 to 2009:

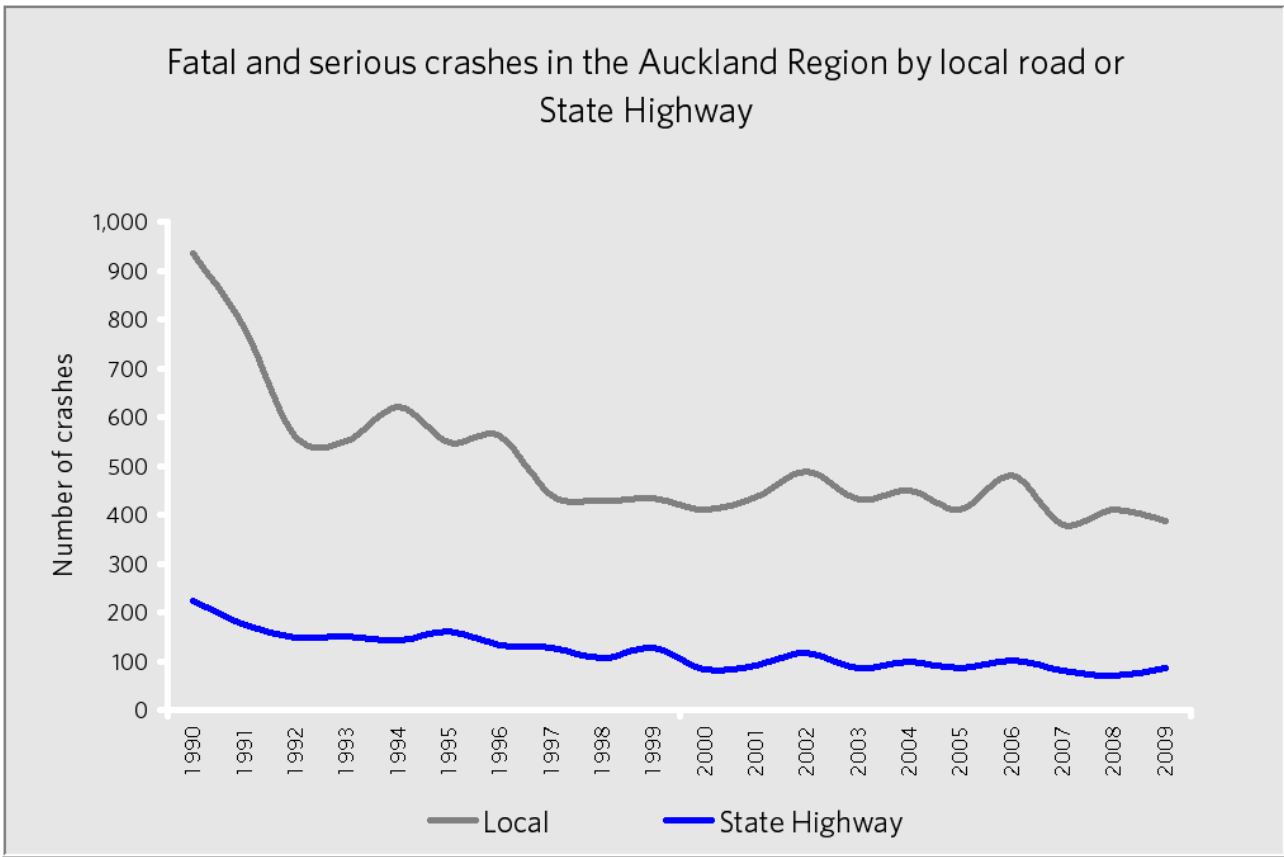
- 5 deaths, 41 serious injuries and 181 minor injuries
- Most common crash type “loss of control at bends” (118 crashes)
- 16 percent at intersections
- 51 percent wet road
- 28 percent night time
- 22 percent in urban areas
- Most common at fault driver age group, 15 to 19 years (24 percent of at fault drivers)
- Worst month March, best October

Further information about the 85 road factor related injury crashes on **State Highways** in Rodney District 2005 to 2009:

- 3 deaths, 21 serious injuries and 91 minor injuries
- Most common crash type “loss of control at a bend” (52 crashes)
- 20 percent at intersections
- 73 percent wet road
- 92 percent rural
- 26 percent night time
- Most common at fault driver age group, 15 to 19 years (18 percent of at fault drivers)
- Worst month February, best May



Looking back—the last two decades ...



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