



briefing notes - road safety issues

Kaipara 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 Kaipara District.

All the material unless otherwise stated in this report applies to both local roads and to State Highways.

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 Kaipara 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 the district.

We encourage Kaipara 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 *		2009 road trauma	
Kaipara District		Casualties	Kaipara District
Alcohol		Deaths	4
Speed		Serious casualties	17
Bends		Minor casualties	98
Road factors and roadside hazards			
National priorities from Road Safety 2020—Safer Journeys		Crashes	Kaipara District
Speed		Fatal crashes	4
Alcohol / Drugs		Serious injury crashes	15
Young Drivers		Minor injury crashes	65
Roads and Roadsides		Non-injury crashes	115
Motorcyclists			

* not in any specific order of priority

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 2005-2009

(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

Kaipara District overview

In 2009 on local roads in Kaipara District there were 34 injury crashes and 49 non-injury crashes. In addition on State Highways in Kaipara District there were 50 injury crashes and 66 non-injury crashes. All four fatal crashes were on State Highways.

The table below shows the number of injuries resulting from the 84 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	4	13	84	101
Urban	0	4	14	18
Total	4	17	98	119

In 2009 Kaipara District had the lowest number of serious crashes since 2002 while fatal crashes have remained stable over the last ten years.

The percentage of crashes involving alcohol, in particular, are well above that which is found in peer local bodies.

Crashes involving young at fault drivers is a problem in the district with 40 percent of fatal crashes or serious crashes being the responsibility of the under 25 year old group. In similar (peer) local bodies this value is 32 percent.

Crash trends in Kaipara District				
Year	Fatal crashes	Serious crashes	Minor crashes	Total crashes
2000	7	16	26	49
2001	4	18	21	43
2002	6	12	34	52
2003	2	10	50	62
2004	5	20	65	90
2005	5	20	62	87
2006	5	16	71	92
2007	4	19	79	102
2008	4	25	52	81
2009	4	15	65	84

Local road crash characteristics		
Crash type or contributory cause 2005 to 2008/9	Percentage fatal and serious crashes of this type or contributory cause	Percentage all injury crashes of this type or contributory cause
Alcohol	28	20
Speed	26	25
At bends	56	54
Road factors	24	24
Youth (drivers under 25 at fault)	40	33

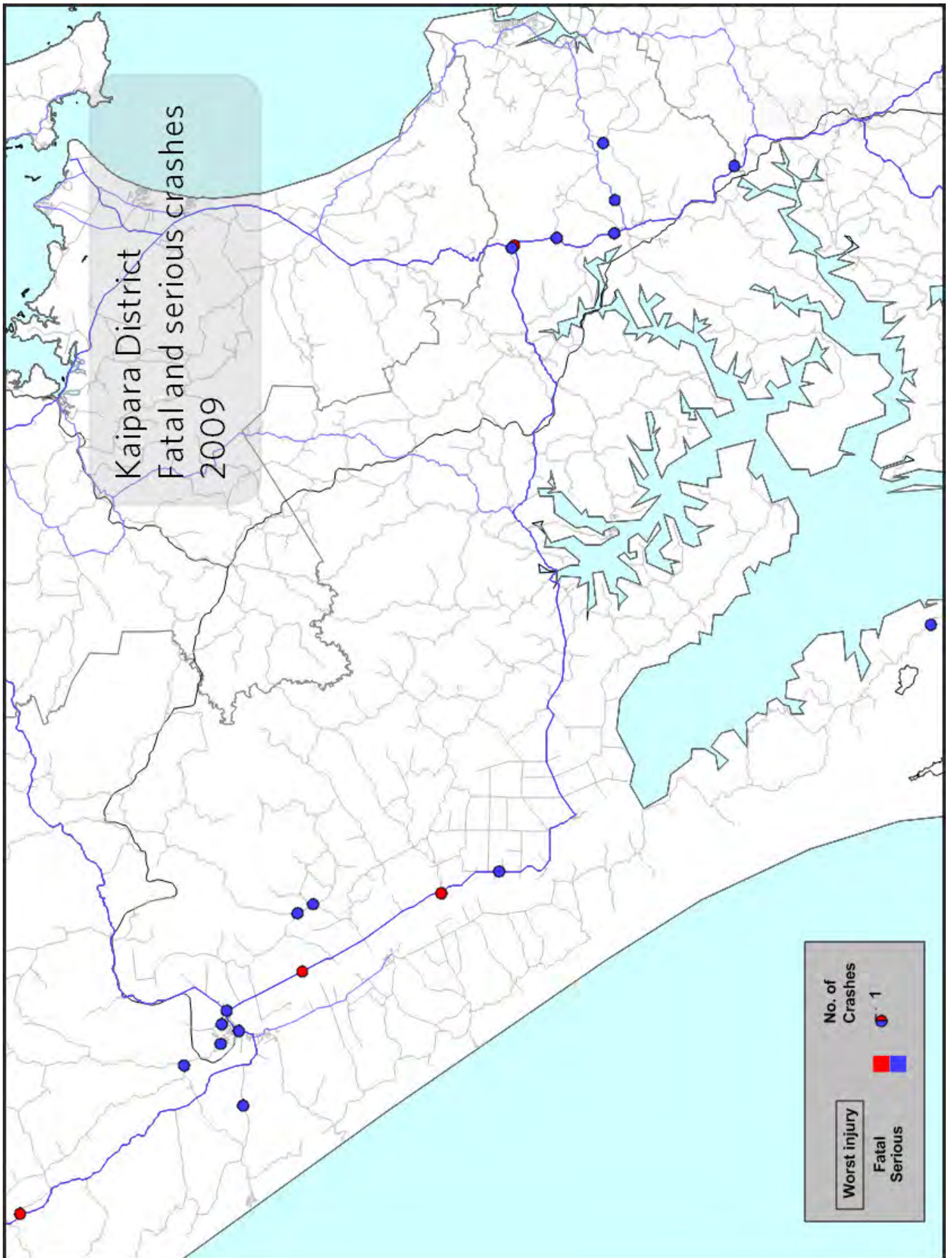
Further information about the 207 injury and 253 non-injury crashes on **local** roads in Kaipara District 2005 to 2009:

- 7 deaths, 53 serious injuries and 226 minor injuries
- Worst month December, best October
- Worst day Friday, best Wednesday
- 25 percent on wet roads
- 31 percent at night
- 20 percent at intersections
- 318 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 \$13.5 m

Further information about the 239 injury and 328 non-injury crashes on **State Highways** in Kaipara District 2005 to 2009:

- 15 deaths, 64 serious injuries and 273 minor injuries
- Worst month March, best July
- Worst day Saturday, best Tuesday
- 36 percent on wet roads
- 34 percent at night
- 19 percent at intersections
- 412 roadside objects struck *
- Most represented five year age block in at fault drivers in injury crashes: 15 to 19 years (17 percent of at fault drivers)
- Social cost of crashes in 2009 \$28m

* 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 Kaipara District, alcohol was a factor in 28 percent of fatal and serious crashes and 20 percent of injury crashes.

Number of alcohol related injury crashes			
Crash year	Open road	Urban road	Total
2005	11	0	11
2006	13	4	17
2007	15	8	23
2008	12	7	19
2009	16	4	20
Total	67	23	90

(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	21	21
20-24	21	36
25-29	16	7
30-34	10	7
35-39	11	10
40-44	5	7
45-49	6	2
50-54	2	2
55-59	4	5
60-64	2	2
65-69	2	0
70-74	0	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 young drivers to a much broader age spread.

So while very young people are targeted for their binge drinking culture, which may manifest in other health and law issues, in Kaipara at least, this has not translated to an increased proportion in youth alcohol related crashes.

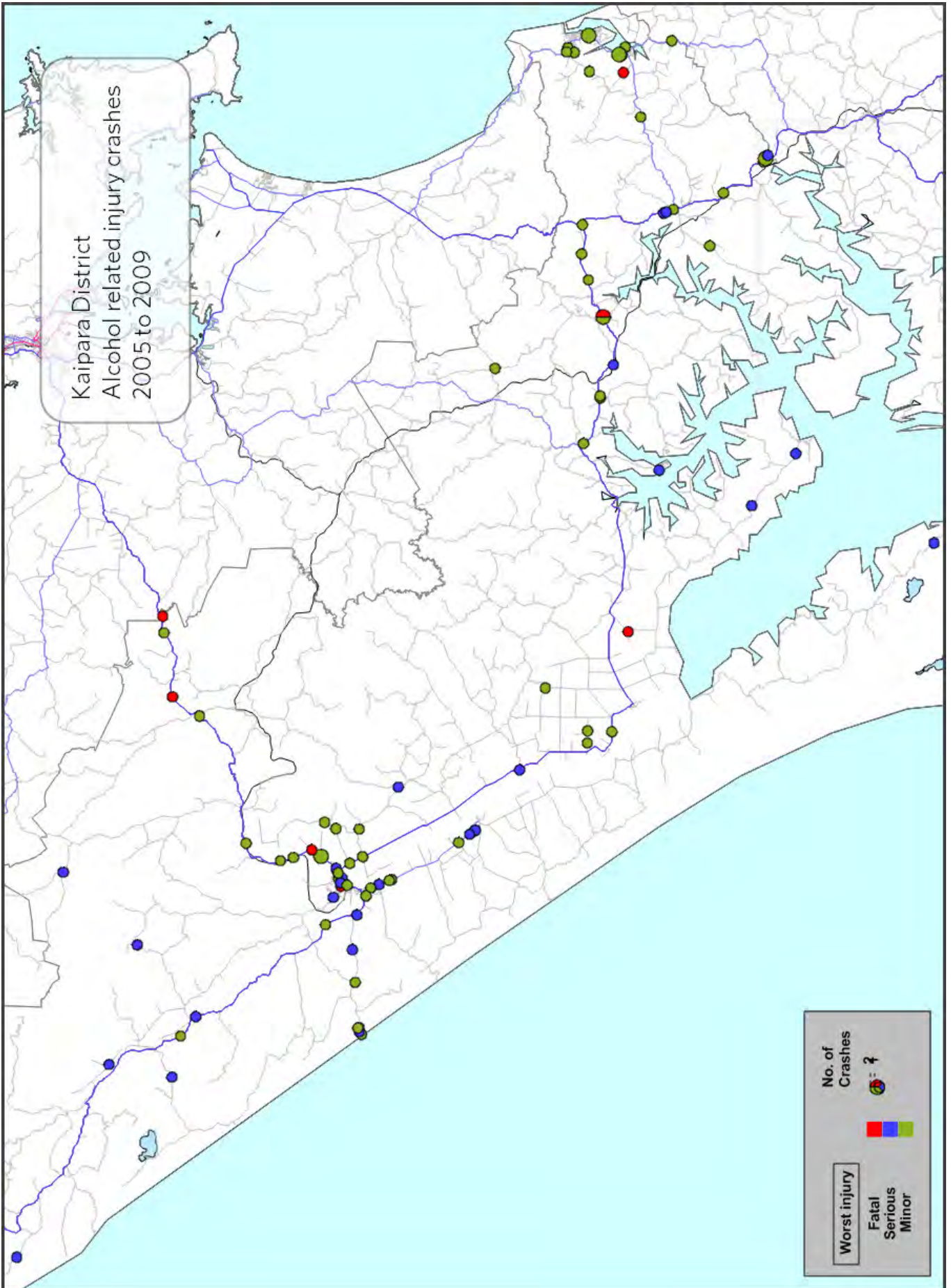
Although it does need to be noted that the number of alcohol related crashes has more than doubled from the 40 in five years 25 years ago to the 90 in the last five years.

Further information about the 53 alcohol related injury crashes on **local** roads in Kaipara District 2005 to 2009:

- 3 deaths, 19 serious injuries and 45 minor injuries
- 85 percent of at fault drivers were male
- Most common crash type "lost control at a bend" (36 crashes)
- 21 percent at intersections
- 36 percent urban
- 21 percent wet road
- 62 percent night time
- Worst three hour time period, 6pm to 9pm
- Worst month January, best July
- Worst day Saturday, best Tuesday
- Number of roadside objects struck, 53

Further information about the 37 alcohol related injury crashes on **State Highways** in Kaipara District 2005 to 2009:

- 4 deaths, 13 serious injuries and 38 minor injuries
- 79 percent of at fault drivers were male
- Most common crash type "lost control at a bend" (23 crashes)
- 19 percent at intersections
- 11 percent urban
- 32 percent wet road
- 73 percent night time
- Worst three hour time period, 9pm to midnight
- Worst months, March and November (equal)
- Worst day Saturday, best Monday and Tuesday (equal)
- Number of roadside objects struck, 42



Speed

Nationally, speed is one of the major contributing factors to road crashes. Reducing speeds is an important road safety goal for road safety 2020 as it was for 2010. Excessive speed increases the likelihood of a crash occurring by reducing the time available for drivers to respond to situations and it leads to more serious injuries.

Between 2005 and 2009 twenty-five percent of injury crashes in Kaipara District involved drivers travelling too fast for the conditions.

Speed related injury crashes					
	2005	2006	2007	2008	2009
Rural	16	18	22	19	23
Urban	2	2	3	3	4
Total	18	20	25	22	27

Speed related crashes in CAS are not crashes where the driver was exceeding the posted speed limit (although that may also be the case) but are crashes where in the opinion of the reporting Police officer the driver was travelling too fast for the prevailing conditions.

Certainly getting the message through that the posted speed limit is a maximum, but not necessarily a safe speed for every bend, crest, dip or isolated development (or driver) is the key to lowering the injury rate.

Local bodies and highway managers can do their part by making sure limits are reasonable, comply with the Speed Limits Rule and are adequately signposted.

Temporary speed limits at road works in particular need to be better monitored to make sure that they are reasonable and only in place when hazards exist.

The poor level of speed compliance at road works is almost certainly motorists reaction to decades of poor and often unreasonable posting of temporary limits.

The Police can do their part by using CAS crash data to put special emphasis where there is demonstrated risk. In this way there is a better chance that drivers will accept that the enforcement is not simply "revenue gathering".

The broad motorist acceptance of the lowered tolerance near schools is evidence that connecting enforcement to risk or perceived risk works.

The map on the following page shows the locations of injury speed related crashes in Kaipara District.

Age group and gender of at fault drivers in speed related injury crashes 2005-2009 (note age ranges are not equal)

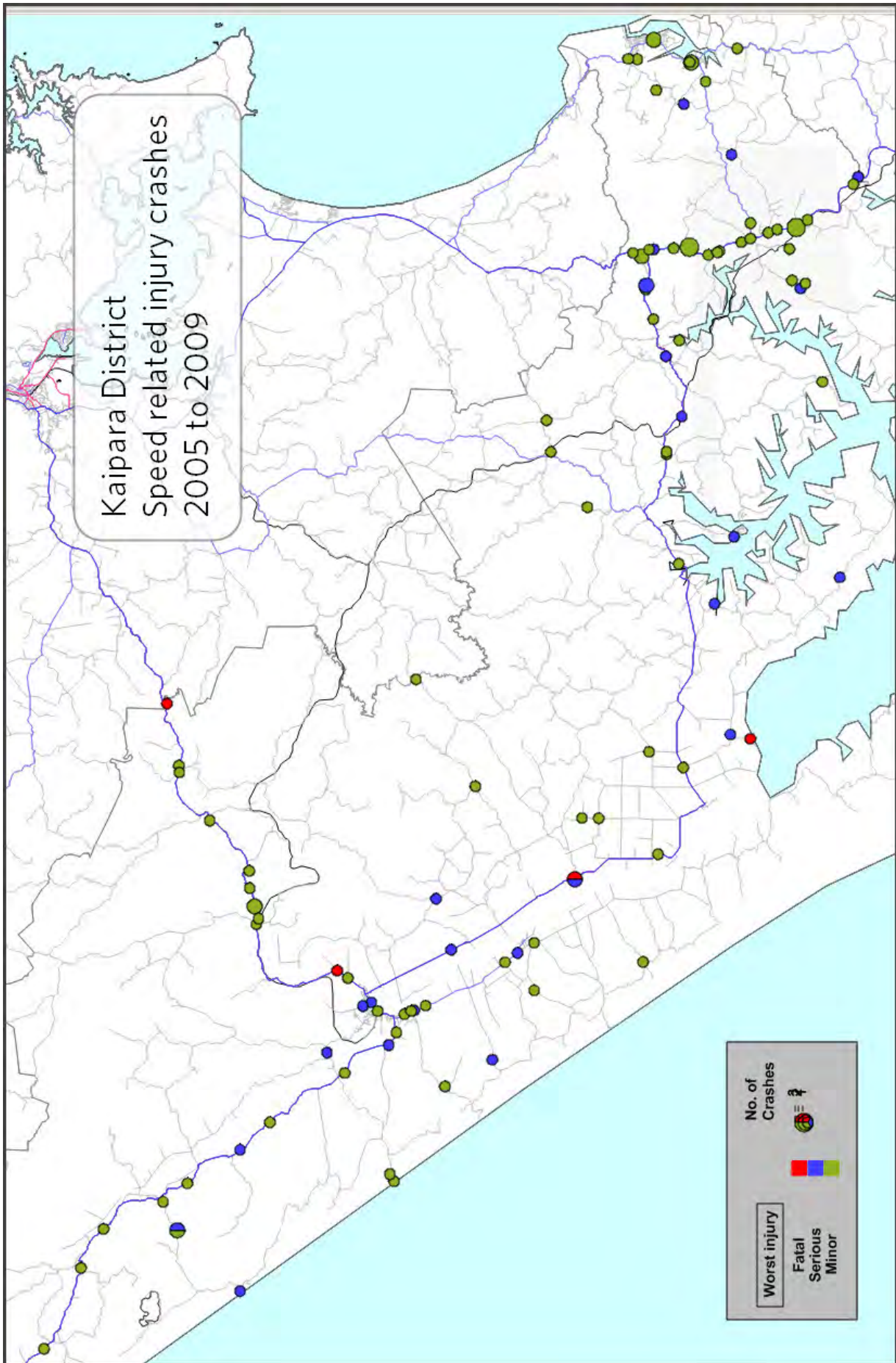
Age group	Male	Female	Total
15-19 years *	26	7	33
20 - 24	17	2	19
25 - 29	7	3	10
30 - 39	15	10	25
40 - 49	9	1	10
50 - 59	5	2	7
60 - 69	2	1	3
70+	1	1	2
Total	82	27	109

Further information about the 53 speed related injury crashes on **local** roads in Kaipara District 2005 to 2009:

- 1 death, 17 serious injuries and 64 minor injuries
- Most common crash type "lost control on a bend" (38 crashes)
- 21 percent wet road
- 26 percent night time
- Worst month February, best May
- Worst day Friday, best Thursday
- 33 percent of crashes include a road factor

Further information about the 59 speed related injury crashes on **State Highways** in Kaipara District 2005 to 2009:

- 3 deaths, 17 serious injuries and 72 minor injuries
- Most common crash type "lost control on a bend" (46 crashes)
- 47 percent wet road
- 39 percent night time
- Worst months December, September and October (equal)
- Worst day Saturday, best Wednesday
- 34 percent of crashes included a road factor



Bends

Between 2005 and 2009 fifty-four percent of all injury crashes in Kaipara District were loss of control or head on bends. These crashes resulted in 11 fatalities, 67 serious injuries and 270 minor injuries.

Injury crashes at bends 2005 to 2009				
Crash year	Fatal crashes	Serious crashes	Minor crashes	Total
2005	3	9	33	45
2006	2	8	42	52
2007	2	13	41	56
2008	1	15	22	38
2009	3	9	38	50
Total	11	54	176	241

Inexperienced drivers (who are often young) are strongly reported in crashes at bends in Kaipara District. In fact 36 percent of at fault drivers are aged below 25 and the majority of these drivers are male. Many drivers overestimate their own abilities and those of their vehicles to negotiate bends especially in the wet.

Age and gender of at fault drivers in injury crashes at bends 2005 to 2009 (note age ranges are not equal)			
Age group	Male	Female	Total
15-19 years *	39	12	51
20 - 24	26	7	33
25 - 29	13	7	20
30 - 39	19	19	38
40 - 49	25	8	33
50 - 59	23	11	34
60 - 69	7	7	14
70+	8	5	13
Total	160	76	236

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 Kaipara District were cliffs and banks (26 percent) and ditches (20 percent) from a total of 231 objects struck.

Further information about the 115 injury loss of control or head on crashes on bends on **local** roads in Kaipara District 2005 to 2009:

- 4 deaths, 34 serious injuries and 122 minor injuries
- 70 percent of at fault drivers were male
- Most common crash type “loss of control turning right” (56 crashes)
- 31 percent of crashes involved alcohol
- 28 percent in the wet
- 30 percent at night
- 33 percent of crashes involved speed too fast for the conditions
- Worst months, December and January (equal) best May
- Worst day Monday, best Wednesday
- Number of roadside objects struck 101
- Most common roadside object struck cliff or bank (21 percent)

Further information about the 126 injury loss of control or head on crashes on bends on **State Highways** in Kaipara District 2005 to 2009:

- 7 deaths, 33 serious injuries and 148 minor injuries
- 66 percent of at fault drivers were male
- Most common crash type “loss of control turning right” (67 crashes)
- 18 percent of crashes involved alcohol
- 43 percent in the wet
- 37 percent at night
- 37 percent of crashes involved speed too fast for the conditions
- Worst month March, best May
- Worst day Saturday, best Thursday
- Number of roadside objects struck, 130
- Most common roadside object struck, cliff or bank (30 percent)

Road Factors - including roadside hazards

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

Safer Journeys places "Safer Roads and Roadsides" as one of the five areas of "High concern".

Between 2005 and 2009 in Kaipara District "road factors" were a contributing factor in 24 percent of fatal and serious crashes and 24 percent of injury crashes.

Additionally in Far North District between 2005 and 2009 sixty-three percent of all fatal and serious crashes and 59 percent of injury crashes involved roadside hazards being struck.

Road factor related injury crashes					
	2005	2006	2007	2008	2009
Rural	14	22	22	21	21
Urban	0	2	1	3	1
Total	14	24	23	24	22

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 2005 to 2009		
Road factor type	Local roads	State Highways
Slippery road*	25	31
Road surface in poor condition	28	15
Road obstructed	4	3
Visibility limited	9	5
Signs or signals (needed or faulty)	1	2
Markings (needed or faulty)	0	0
Street lighting	1	0

* 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".

Common types of hazard struck 2005 to 2009 (all injury crashes in Kaipara District)

Type of hazard	Number of times hazard struck on local roads	Number of times hazard struck on State Highways
Ditch	39	46
Cliff or bank	27	50
Fence	21	36
Post or pole	22	10
Tree	15	19
Water / river	1	1

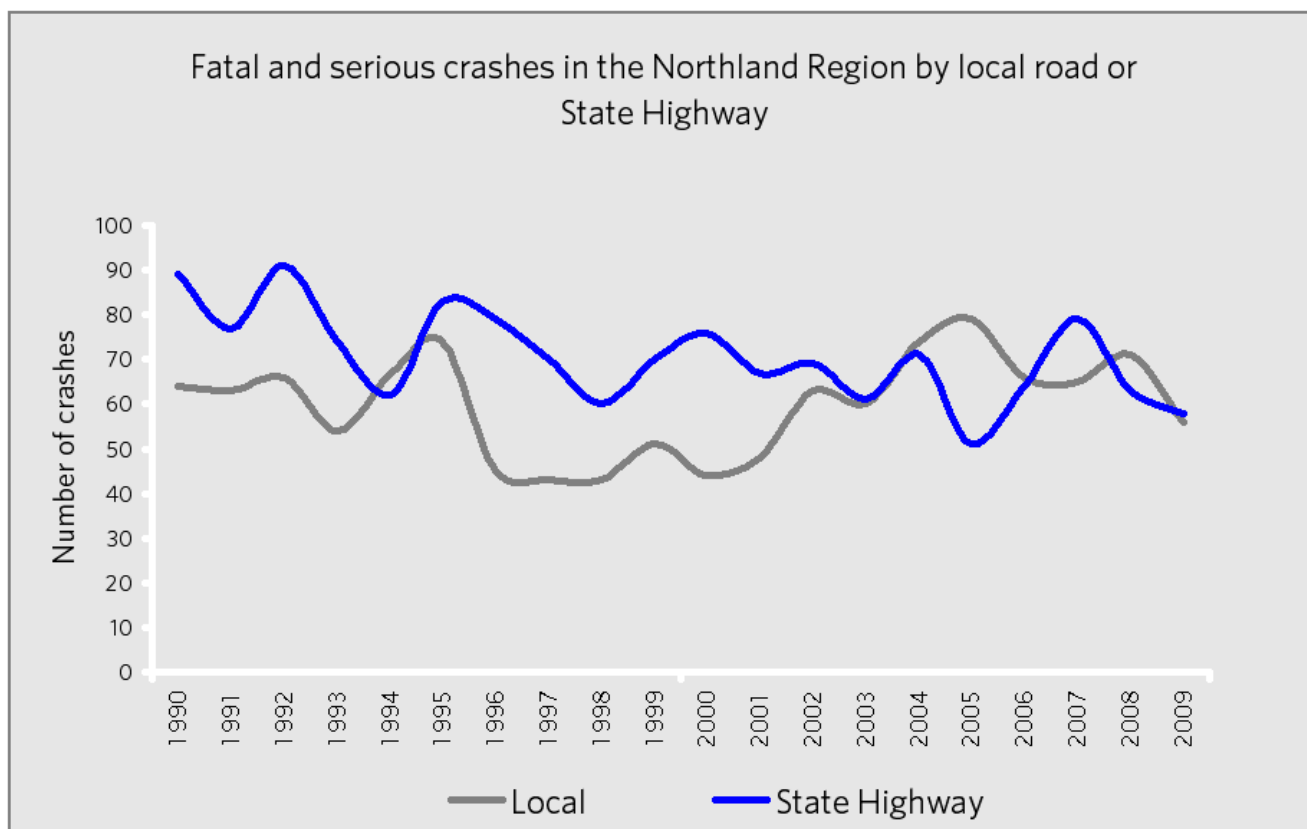
Further information about the 58 road factor related injury crashes on **local** roads in Kaipara District 2005 to 2009:

- 1 death, 18 serious injuries and 62 minor injuries
- Most common crash type "loss of control at a bend" (40 crashes)
- 12 percent at intersections
- 28 percent wet road
- 29 percent night time
- Most common at fault driver age group, 15 to 19 years (26 percent of at fault drivers)
- Worst month February
- 52 percent of at fault drivers had a "full" drivers licence

Further information about the 49 road factor related injury crashes on **State Highways** in Kaipara District 2005 to 2009:

- 1 death, 10 serious injuries and 61 minor injuries
- Most common crash type "loss of control at a bend" (33 crashes)
- 10 percent at intersections
- 53 percent wet road
- 33 percent night time
- Most common at fault driver age group, 15 to 19 years (13 percent of at fault drivers)
- Worst month March
- 62 percent of at fault drivers had a "full" drivers licence

Looking back—the last two decades



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