



briefing notes - road safety issues

Whangarei 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 Whangarei 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 Whangarei 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 Whangarei 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	
Whangarei District		Casualties	Whangarei District
Alcohol		Deaths	16
Speed		Serious casualties	42
Bends		Minor casualties	223
Road factors and roadside objects			
National priorities from Road Safety 2020—Safer Journeys		Crashes	Whangarei District
Speed		Fatal crashes	14
Alcohol / Drugs		Serious injury crashes	33
Young Drivers		Minor injury crashes	157
Roads and Roadsides		Non-injury crashes	595
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 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

Whangarei District overview

In 2009 on local roads in Whangarei District there were 143 injury crashes and 419 non-injury crashes.

In addition on State Highways in Whangarei District there were 61 injury crashes and 176 non-injury crashes.

The table below shows the number of injuries resulting from the 204 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	11	32	95	138
Urban	5	10	128	143
Total	16	42	223	281

Fatal and serious crashes in Whangarei District have remained at around the same levels for the last decade. Minor injury crashes rose sharply in 2003, attributed to a previous poor reporting rate and have remained at much the same levels ever since.

Crashes on wet roads for fatal and serious crashes (which featured in last years briefing note) are well above that for peer local bodies. Alcohol and speed related fatal and serious crashes are also well above peer values as are crashes involving road factors.

Crash trends in Whangarei District				
Year	Fatal crashes	Serious crashes	Minor crashes	Total crashes
2000	14	27	58	99
2001	12	34	71	117
2002	14	33	99	146
2003	20	33	150	203
2004	6	57	154	217
2005	6	42	179	227
2006	12	40	158	210
2007	11	36	152	199
2008	15	41	173	229
2009	14	33	157	204

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	29	18
Speed related	30	23
At bends	47	40
Road factors	15	16
Youth (at fault aged under 25)	45	39
Wet roads	29	31

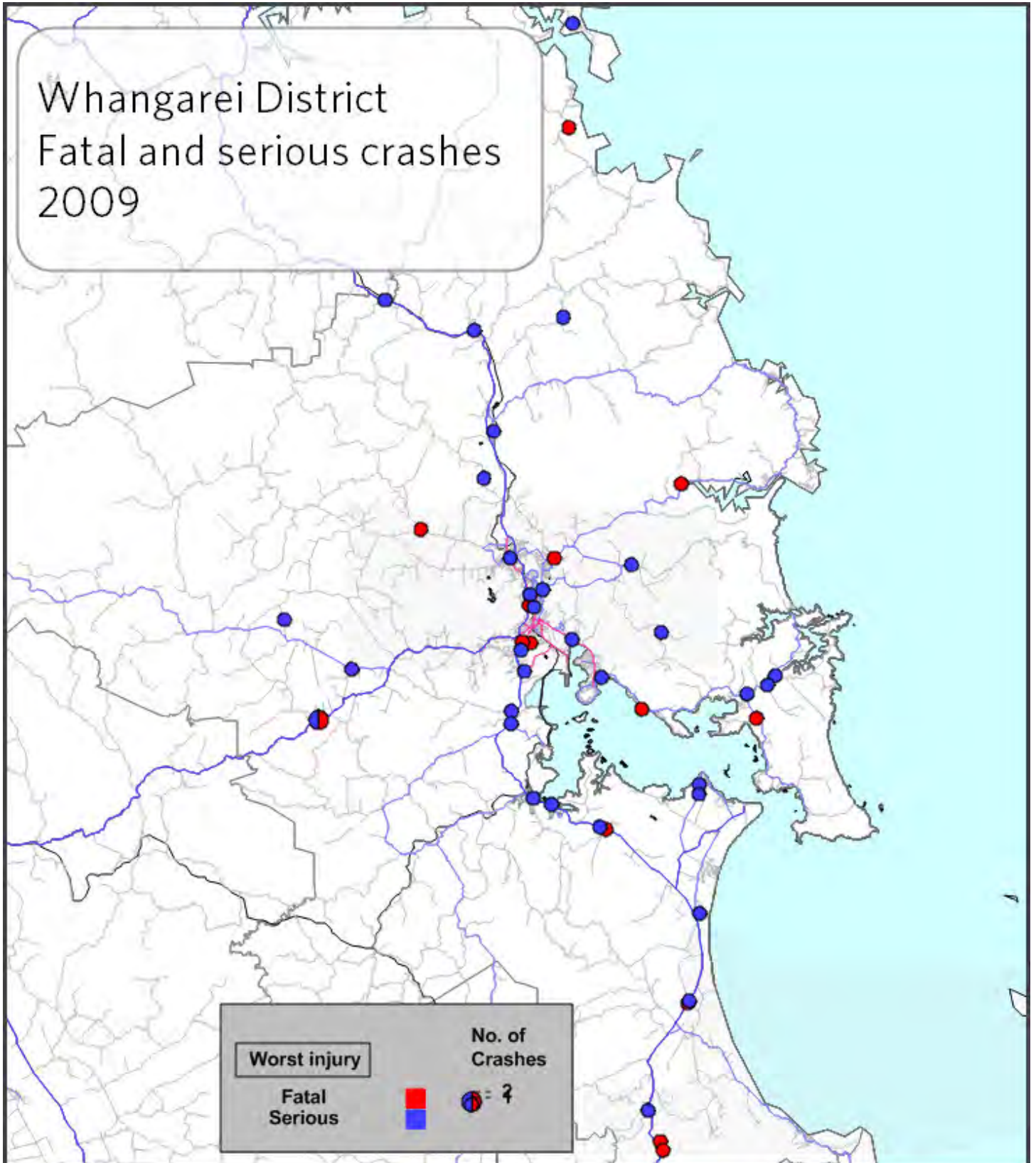
Further information about the 713 injury and 2057 non-injury crashes on **local** roads in Whangarei District 2005 to 2009:

- 29 deaths, 156 serious injuries and 720 minor injuries
- Worst month June, best January
- Worst day Friday, best Sunday
- 28 percent on wet roads
- 29 percent at night
- 39 percent at intersections
- 1536 roadside objects struck *
- Most represented five year age block in at fault drivers in injury crashes: 15 to 19 years (26 percent of at fault drivers)
- Social cost of crashes in 2009 \$60.9 m

Further information about the 356 injury and 803 non-injury crashes on **State Highways** in Whangarei District 2005 to 2009:

- 31 deaths, 78 serious injuries and 410 minor injuries
- Worst month December, best March
- Worst day Friday, best Monday
- 33 percent on wet roads
- 29 percent at night
- 35 percent at intersections
- 641 roadside objects struck *
- Most represented five year age block in at fault drivers in injury crashes: 20 to 24 years (15 percent of at fault drivers)
- Social cost of crashes in 2009 \$41.4m

* 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 Whangarei District, alcohol was a factor in 29 percent fatal and serious crashes and 18 percent of injury crashes.

Number of alcohol related injury crashes			
Crash year	Open road	Urban road	Total
2005	24	17	41
2006	22	16	38
2007	20	17	37
2008	18	16	34
2009	21	20	41
Total	105	86	191

(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 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	25	22
20-24	23	31
25-29	11	15
30-34	10	9
35-39	6	7
40-44	8	6
45-49	5	2
50-54	5	3
55-59	3	0
60-64	2	2
65-69	1	1
70-74	1	0
75+	1	0

As can be seen the previous table alcohol remains a youth issue with 48 percent of at fault drivers being aged under 24 in alcohol related injury crashes. Twenty-five years ago the equivalent number was 53 percent.

Twenty-five years ago there were 227 injury alcohol related crashes reported over five years while between 2005 and 2009 there were 191.

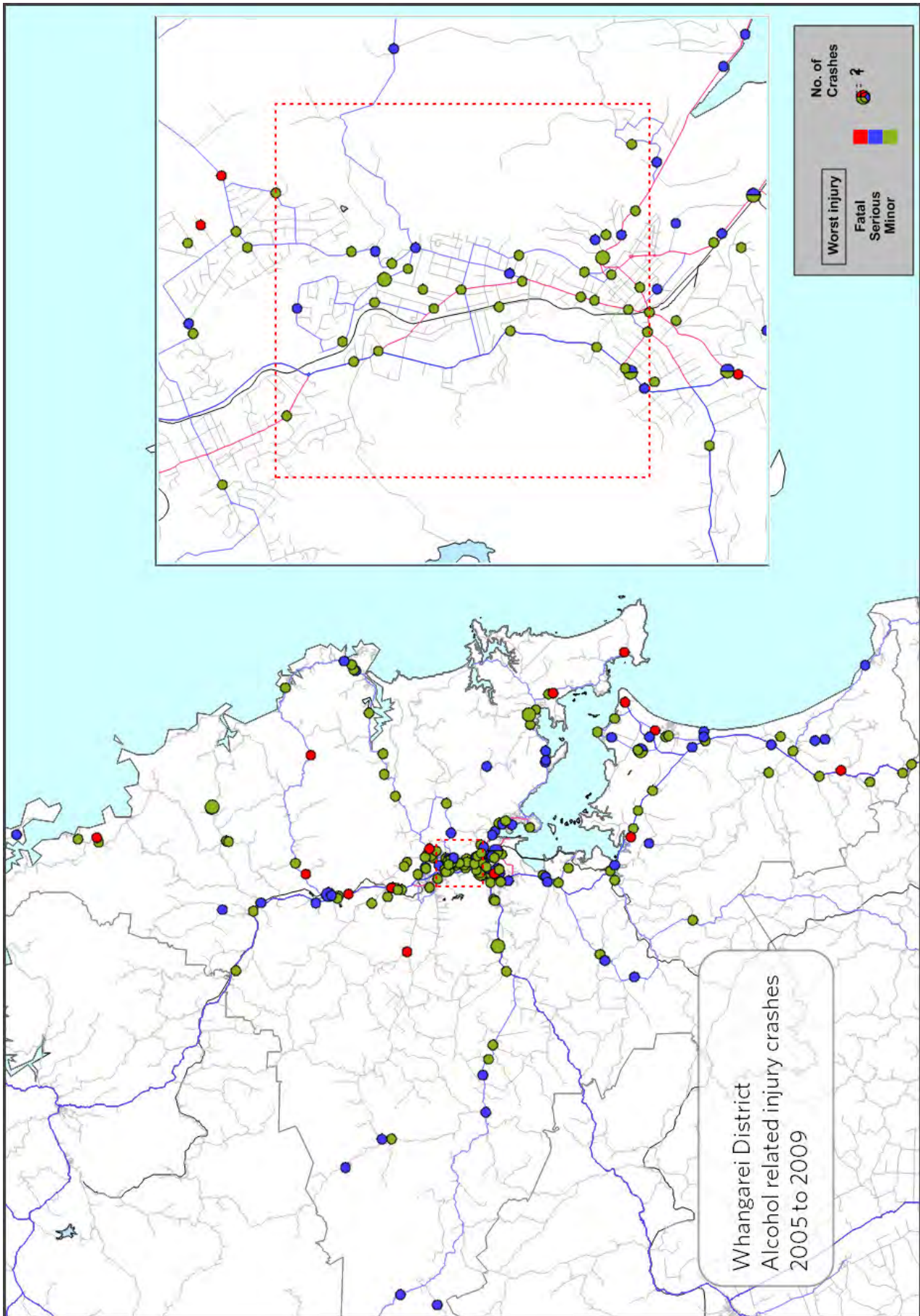
The locations of alcohol related crashes occurring in the district between 2005 and 2009 are shown on the map on the following page.

Further information about the 151 alcohol related injury crashes on **local** roads in Whangarei District 2005 to 2009:

- 10 deaths, 57 serious injuries and 152 minor injuries
- 79 percent of at fault drivers were male
- Most common crash type "lost control at a bend" (105 crashes)
- 23 percent at intersections
- 50 percent urban
- 32 percent wet road
- 70 percent night time
- Worst three hour time period, midnight to 3am
- Worst month February, best January
- Worst day Saturday, best Monday and Tuesday (equal)
- Number of roadside objects struck 171

Further information about the 40 alcohol related injury crashes on **State Highways** in Whangarei District 2005 to 2009:

- 5 deaths, 8 serious injuries and 36 minor injuries
- 70 percent of at fault drivers were male
- Most common crash type "lost control at a bend" (18 crashes)
- 20 percent at intersections
- 28 percent urban
- 28 percent wet road
- 28 percent night time
- Worst three hour time period, midnight to 3am
- Worst months January and February (equal), best May and September (equal)
- Worst day Saturday, best Monday and Tuesday (equal)
- Number of roadside objects struck 44



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-three percent of injury crashes in Whangarei District involved travelling too fast for the conditions.

Speed related injury crashes					
	2005	2006	2007	2008	2009
Rural	32	32	27	40	29
Urban	10	20	14	12	25
Total	42	52	41	52	54

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 here 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 Whangarei District.

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

Age group	Male	Female	Total
15-19 years *	65	22	87
20 - 24	32	13	45
25 - 29	13	4	14
30 - 39	21	18	39
40 - 49	19	7	26
50 - 59	15	3	18
60 - 69	4	0	4
70+	3	1	4
Total	172	68	240

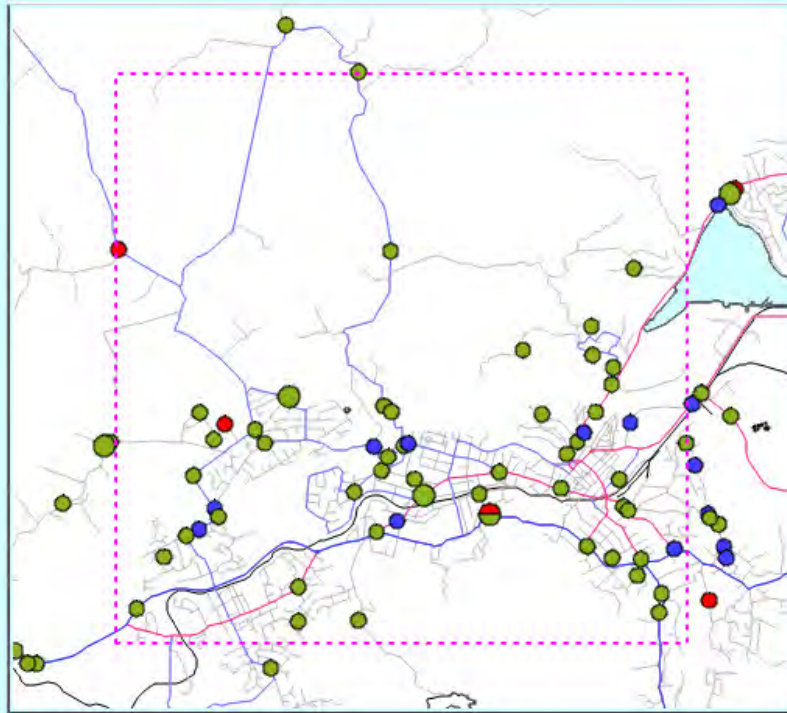
Further information about the 186 speed related injury crashes on **local** roads in Whangarei District 2005 to 2009:

- 15 deaths, 59 serious injuries and 189 minor injuries
- Most common crash type "lost control on a bend" (143 crashes)
- 42 percent wet road
- 47 percent night time
- Worst month June, best November
- Worst day Saturday, best Thursday
- Worst three hour time period, 3pm to 6pm

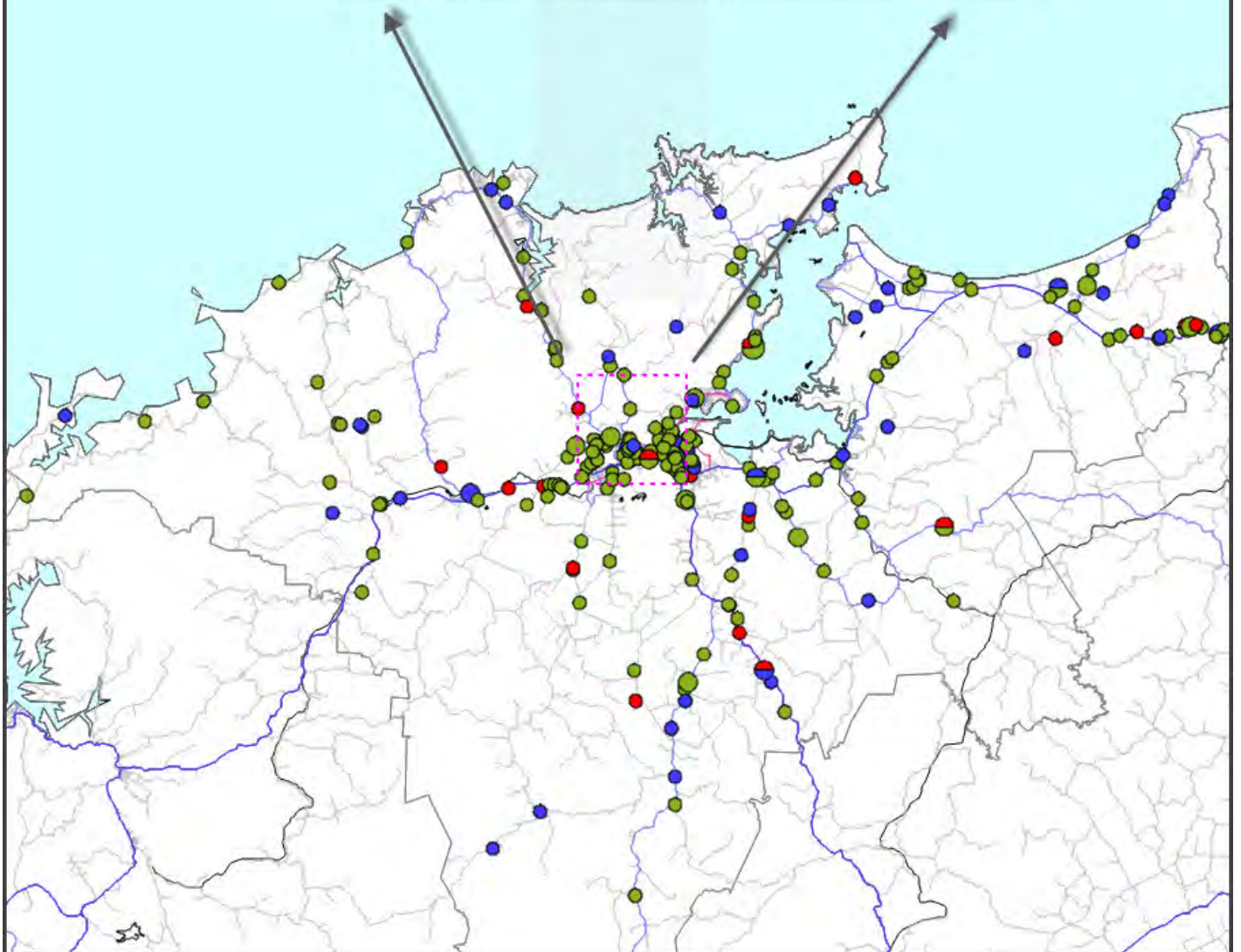
Further information about the 55 speed related injury crashes on **State Highways** in Whangarei District 2005 to 2009:

- 7 deaths, 9 serious injuries and 59 minor injuries
- Most common crash type "lost control on a bend" (41 crashes)
- 55 percent wet road
- 44 percent night time
- Worst month, December
- Worst day Saturday, best Wednesday
- Worst three hour time period, 3pm to 6pm

Whangarei District
Speed related injury crashes
2005 to 2009



Worst injury				No. of Crashes



Bends

Between 2005 and 2009 forty percent of all injury crashes in Whangarei District were loss of control or head on bends. These crashes resulted in 33 fatalities, 108 serious injuries and 447 minor injuries.

Injury crashes at bends 2005 to 2009				
Crash year	Fatal crashes	Serious crashes	Minor crashes	Total
2005	3	22	55	80
2006	6	18	76	100
2007	5	12	61	78
2008	8	18	61	87
2009	9	16	54	79
Total	31	86	307	424

Bend related crashes in Whangarei District are showing no sign of being on the decline with overall numbers remaining relatively static over the last five years.

Young drivers are often at fault in speed related crashes with 46 percent of them being aged under 24.

Age group and gender of at fault drivers in bend related injury crashes 2005 to 2009			
Age group	Female	Male	Total
15 to 19	33	76	109
20 to 24	25	56	81
25 to 29	10	23	33
30 to 34	10	22	32
35 to 39	19	21	40
40 to 44	8	20	28
45 to 49	9	16	25
50 to 54	5	16	21
55 to 59	5	9	14
60 to 64	6	5	11
65 to 69	1	7	8
70 to 74	3	4	7
75+	3	2	5
Total	137	277	414

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 common roadside hazards struck in injury loss of control or head on crashes on bends in Whangarei District were cliffs and banks (97), ditches (88), trees (55) and poles (44) from a total of 455 objects struck.

It is interesting to note in the bullet points below that alcohol and speed seem far more prevalent as contributing factors in crashes on local roads than State Highways. This could suggest drivers see local roads as the soft option in regards to probable enforcement intervention. Some redistribution of alcohol check points may be worth considering.

Further information about the 305 injury loss of control or head on crashes on bends on **local** roads in Whangarei District 2005 to 2009:

- 18 deaths, 77 serious injuries and 313 minor injuries
- 69 percent of at fault drivers were male
- Most common crash type "loss of control turning right" (140 crashes)
- 34 percent of crashes involved alcohol
- 47 percent of crashes involved speed too fast for the conditions
- Worst month June, best January
- Worst day Sunday, best Thursday
- Worst three hour time period, 3pm to 6pm
- Number of roadside objects struck, 329

Further information about the 119 injury loss of control or head on crashes on bends on **State Highways** in Whangarei District 2005 to 2009:

- 15 deaths, 31 serious injuries and 134 minor injuries
- 61 percent of at fault drivers were male
- Most common crash type "loss of control turning left" (45 crashes)
- 15 percent of crashes involved alcohol
- 34 percent of crashes involved speed too fast for the conditions
- Worst month January
- Worst day Sunday, best Monday
- Worst three hour time period, 3pm to 6pm
- Number of roadside objects struck, 126

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 Roadside" as one of the five areas of "High concern".

In Whangarei District between 2005 and 2009 fifteen percent of all fatal and serious crashes and 16 percent of injury crashes involved a "road factor" as a crash contributor.

In addition a total of 116 roadside objects were struck in these crashes from a total of 725 objects in all injury crashes.

Road factor related injury crashes					
	2005	2006	2007	2008	2009
Rural	18	32	28	32	16
Urban	6	6	14	14	4
Total	24	38	42	46	20

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 2005 to 2009	Local roads	State Highways
Slippery road*	64	53
Road surface in poor condition	27	16
Road obstructed	2	0
Visibility limited	15	6
Signs or signals (needed or faulty)	1	1
Markings (needed or faulty)	2	0
Street lighting	2	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".

Most common types of hazard struck 2005 to 2009 (all injury crashes in the district)	
Type of hazard	Number of times hazard struck
Ditch	149
Cliff or bank	118
Fence	106
Post or pole	64
Tree	76
Parked vehicle	43

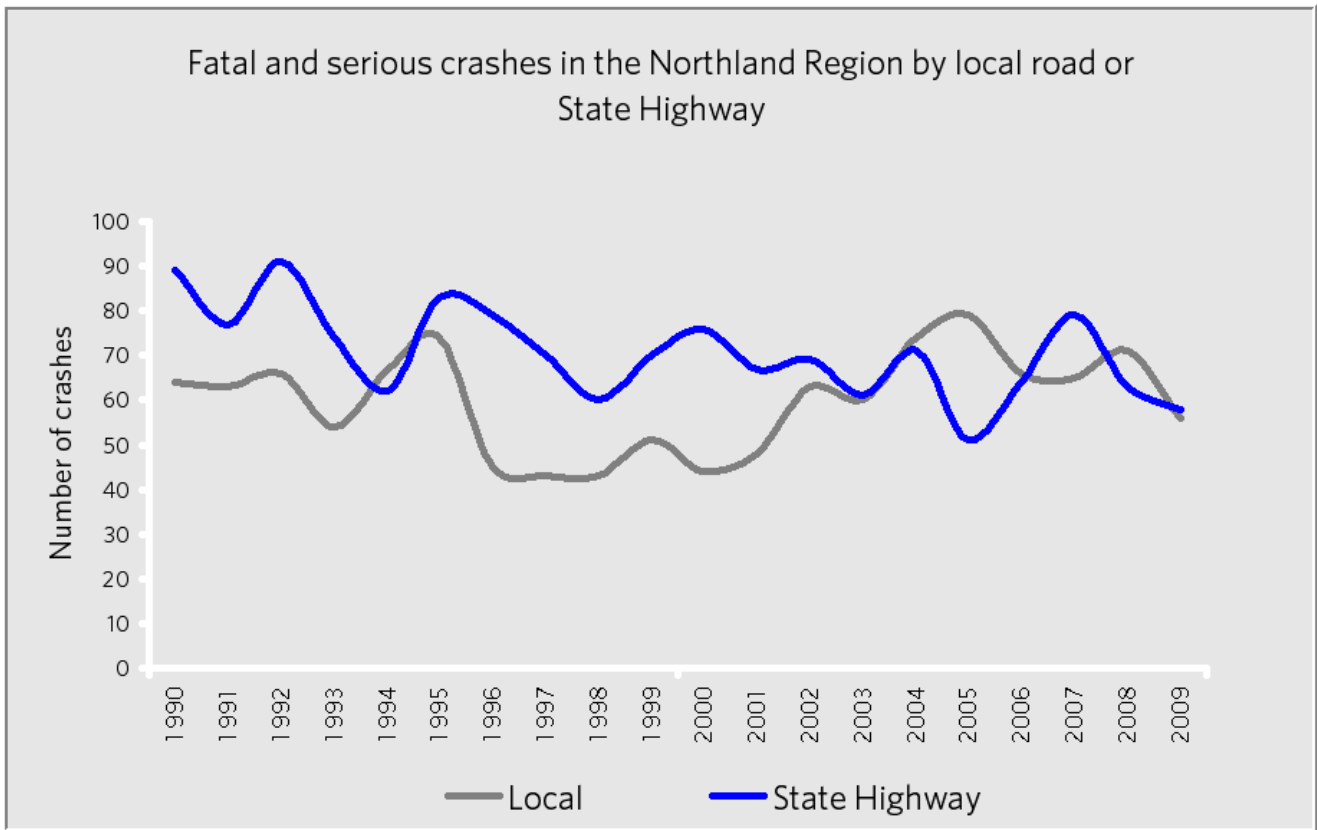
Further information about the 101 road factor related injury crashes on **local** roads in Whangarei District 2005 to 2009:

- 6 deaths, 20 serious injuries and 100 minor injuries
- Most common crash type "loss of control at a bend" (71 crashes)
- 18 percent at intersections
- 59 percent wet road
- 29 percent night time
- Most common at fault driver age group, 15 to 19 years (28 percent of at fault drivers)
- Worst month August, best February

Further information about the 69 road factor related injury crashes on **State Highways** in Whangarei District 2005 to 2009:

- 5 deaths, 13 serious injuries and 82 minor injuries
- Most common crash type "loss of control at a bend" (38 crashes)
- 7 percent at intersections
- 75 percent wet road
- 25 percent night time
- Most common at fault driver age group, 15 to 19 years (17 percent of at fault drivers)
- Worst month January, best May

Looking back—the last two decades



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