



briefing notes - road safety issues

Waikato 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 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 the Waikato Region. In this report the Waikato region includes Thames-Coromandel, Hauraki, Matamata-Piako, Waikato, Waipa, Otorohanga, Waiotomo, South Waikato and Taupo District Councils and Hamilton City Council.

All the material unless otherwise stated in this report applies to both local roads and state highways. Local roads are all non state highway roads in the Waikato Region.

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 Waikato Region 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 Waikato Region and we encourage safety engaged staff in the Waikato Region 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

Waikato Region

Speed
Roads and roadsides
Fatigue

2009 road trauma

Casualties

Waikato Region

Deaths	67
Serious casualties	321
Minor casualties	1334

National priorities from Road Safety 2020— Safer Journeys

Speed
Alcohol / drugs
Young drivers
Roads and roadsides
Motorcyclists

Crashes

Waikato Region

Fatal crashes	55
Serious injury crashes	243
Minor injury crashes	900
Non-injury crashes	2435

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.

Under the 2020 strategy a number of priority areas have been chosen as the areas of focus.

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 at: <http://www.transport.govt.nz/saferjourneys/Documents/SaferJourneyStrategy.pdf>

To reflect the new strategy, changes to the wording and the way data is presented in these briefing notes to reflect and emphasise 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.

However, as these reports are based on crash data, particularly fatal and serious crashes, the actual "issues" identified by our analysis remain as before, fact based. It would be irresponsible of us to ignore an area of high social cost in a particular local body or region just because it wasn't a national priority.

We have 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 Hamilton 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 Waikato Region

(table below refers only to fatal and serious crashes on both local roads and State Highways for the years 2005—2009 except for the “intersection” columns which also include minor crashes for reasons of sample

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 where speed was a factor
Thames Coromandel - District	31	27	52	5	0	30	29
Hauraki District	25	24	51	3	2	29	18
Matamata—Piako District	25	31	46	2	6	28	17
Waikato District	25	25	53	5	15	25	18
Hamilton City	23	35	30	97	8	19	17
Waipa District	17	40	47	5	8	26	15
Otorohanga District	29	25	50	2	0	15	23
Waitomo District	21	29	65	1	0	32	14
South Waikato District	21	27	42	1	3	28	15
Taupo District	25	31	47	15	6	26	21
Waikato Region	24	31	46	136	47	26	18
New Zealand	23	34	45	1938	320	23	18

Waikato Region overview

In 2009 on local roads in the Waikato Region there were 632 injury crashes and 1381 non-injury crashes. In addition on state highways in the Waikato Region there were 566 injury crashes and 1054 non-injury crashes.

The tables below show the number of injuries resulting from the 1198 injury crashes by rural or urban areas for local roads and state highways (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	62	232	779	1073
Urban	5	89	555	649
Total	67	321	1334	1722

Casualties by state highway / local road 2009				
	Fatalities	Serious injuries	Minor injuries	Total
Local road	15	161	643	819
State highway	52	160	691	903
Total	67	321	1334	1722

Crash trends in Waikato Region				
Year	Fatal Crashes	Serious Crashes	Minor Crashes	Total Crashes
2000	72	216	675	963
2001	65	197	696	958
2002	53	219	801	1073
2003	68	241	857	1166
2004	61	221	833	1115
2005	72	217	876	1165
2006	55	226	909	1190
2007	78	223	1000	1301
2008	64	253	970	1287
2009	55	243	900	1198

Local road crash characteristics		
Crash type or contributory cause 2005 to 2009	Percentage fatal and serious crashes of this type or contributory cause	Percentage all injury crashes of this type or contributory cause
Speed	26	20
Crashes on bends	44	36
Road factor crashes	15	15
Youth	31	34
Alcohol	24	16

Further information about the 3207 injury and 7820 non-injury crashes on **local roads** in Waikato Region 2005 to 2009:

- 124 deaths, 693 serious and 3352 minor injuries
- Worst month May, best January
- Worst day Friday, best Monday
- 27 percent on wet roads
- 35 percent at night
- 44 percent at intersections
- 4648 roadside objects struck *
- Most represented five year age block in 'at fault' drivers in injury crashes: 15 to 19 years (23 percent of at fault drivers)
- Social cost of crashes in 2009 \$239m

Further information about the 2934 injury and 5561 non-injury crashes on **state highways** in Waikato Region 2005 to 2009:

- 264 deaths, 817 serious and 3415 minor injuries
- Worst month December, best September
- Worst day Saturday, best Tuesday
- 31 percent on wet roads
- 32 percent at night
- 31 percent at intersections
- 4211 roadside objects struck *
- Most represented five year age block in 'at fault' drivers in injury crashes: 15 to 19 years (15 percent of at fault drivers)
- Social cost of crashes in 2009 \$335m

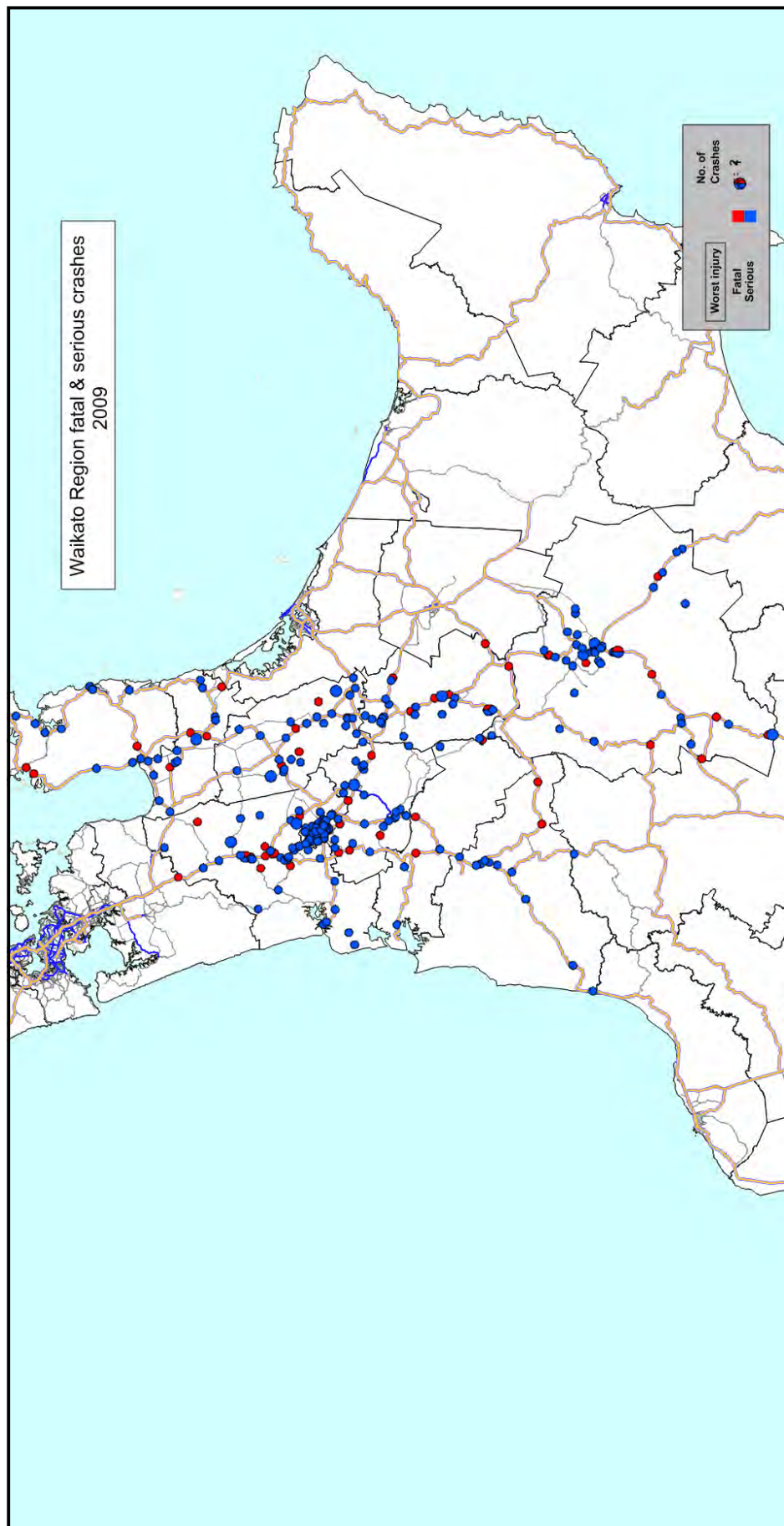
* It needs to be noted that if a vehicle hits the same type of object more than once it is only counted in CAS once.

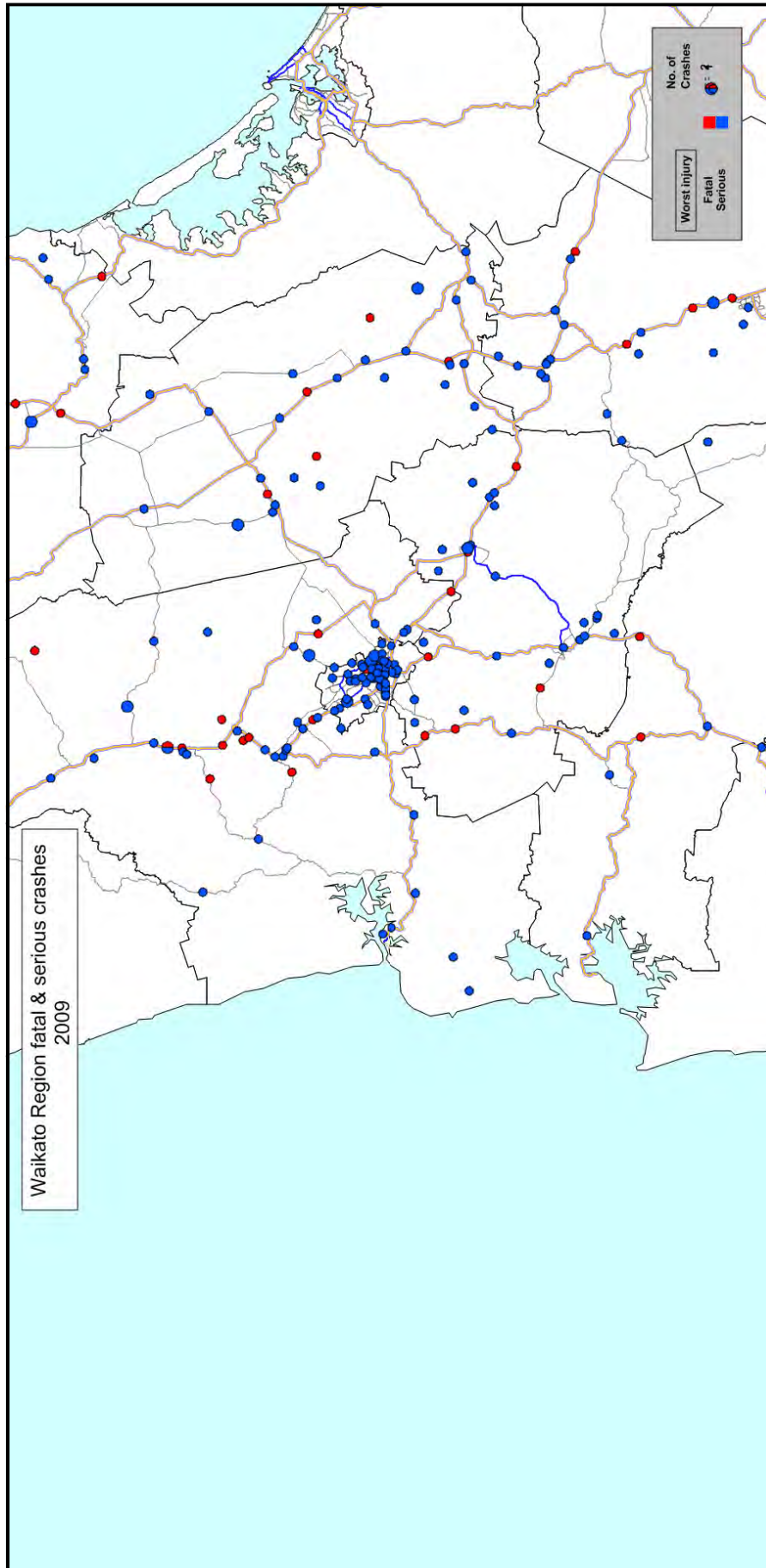
Summary

Road safety issues for the Waikato Region — issues taken from the individual local body or state highway briefing notes for the period 2005 to 2009

Briefing note title	Crashes on bends	Straight road crashes	Road factors and roadside hazards	Speed	Alcohol	Intersections	Fatigue	Motorcyclist	Youth
Waikato Region	✓		✓	✓			✓*		
Waikato District		✓	✓		✓				
Hamilton City						✓			✓
Waipa District				✓		✓	✓		✓
Otorohanga District	✓		✓						
Waitomo District	✓		✓	✓					
Taupo District	✓		✓			✓			
South Waikato District	✓			✓			✓		
Matamata—Piako District		✓	✓	✓					
Hauraki District		✓			✓	✓	✓		✓
Thames—Coromandel District	✓			✓	✓			✓	

* Fatigue is an issue in less than a third of the local council areas in the Waikato region, however it has been included in this report as it is over represented in fatal and serious crashes when compared to the whole of New Zealand.





Fatigue

Fatigue is a condition that is present long before a driver falls asleep. It has negative impacts on reaction time, the ability to concentrate, and a driver's understanding of the prevailing road and traffic conditions.

In New Zealand in 2009 fatigued drivers were reported as contributing to 8 percent of all fatal and serious crashes and 6 percent of all injury crashes.

In the Waikato Region between 2005 and 2009, fatigue was reported as a factor in 12 percent of fatal and serious crashes and 9 percent of injury crashes.

Injury fatigue related crashes Waikato Region 2005 - 2009				
Crash year	Fatal crashes	Serious crashes	Minor crashes	Total
2005	15	30	65	110
2006	13	25	90	128
2007	14	15	82	111
2008	10	22	55	87
2009	13	22	76	111
Total	65	114	368	547

The table below shows that young male drivers are overrepresented in fatigue related crashes with 32 percent being under the age of 25.

Age and gender of at fault drivers in injury fatigue related crashes 2005 - 2009 (note : age ranges are not equal)			
Drivers age	Male	Female	Total
15-19 years	78	16	94
20 - 24	63	16	79
25 - 29	48	20	68
30 - 39	82	12	94
40 - 49	67	16	83
50 - 59	37	20	57
60 - 69	18	16	34
70+	24	14	38
Total	417	129	547

A large proportion of at fault drivers in fatigue related injury crashes live in or relatively close to the Waikato Region with 63 percent living in the region. This is illustrated in the table below.

Home locations of at fault drivers in fatigue related injury crashes in Waikato Region 2005 - 2009	
Town of residence	No. of at fault drivers
Cambridge	15
Hamilton	76
Te Awamutu	15
Tokoroa	20

Further information about the 130 fatigue related injury crashes in the Waikato Region on **local roads** 2005 to 2009:

- 14 deaths, 36 serious and 104 minor injuries
- 81 percent of at fault drivers were male
- 14 percent at intersections
- 27 percent urban
- 19 percent wet road
- 53 percent night time
- Worst time period 3am to 6am
- Worst month November, best January & July
- Worst day of week Sunday, best Tuesday

Further information about the 417 fatigue related injury crashes in the Waikato Region on **state highways** 2005 to 2009:

- 57 deaths, 116 serious and 456 minor injuries
- 75 percent of at fault drivers were male
- 6 percent at intersections
- 11 percent urban
- 21 percent wet road
- 43 percent night time
- Worst time period 3pm to 6pm
- Worst months December, best April
- Worst day of week Saturday, best Tuesday

Speed

Nationally, speed is one of the major contributing factors to road crashes. Appropriate speeds is an important road safety goal for road safety strategy 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 20 percent of injury crashes in the Waikato Region involved travelling too fast for the conditions.

Speed related crashes					
Speed related crashes	2005	2006	2007	2008	2009
Rural	165	191	200	186	157
Urban	69	68	79	84	55
Total	234	259	279	270	212

The other main causes contributing to speed related crashes were:

- Handling errors
- Alcohol
- General errors of judgement

Speed related crashes in CAS are not necessarily 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 authorities and highway managers can do their part by ensuring speed limits, including temporary speed limits at road work sites are appropriate, comply with the Speed Limits Rule and are adequately signposted. When inappropriate speed limits are used there is a poor level of speed compliance by motorists and require a higher level of police enforcement.

Age and gender of at fault drivers in speed related injury crashes 2005 to 2009

* note age ranges are not equal

Drivers age	Male	Female	Total
15-19 years *	247	82	329
20 - 24	191	78	269
25 - 29	115	33	148
30 - 39	163	53	216
40 - 49	118	33	151
50 - 59	67	18	85
60 - 69	25	15	40
70+	13	2	15
Total	939	314	1253

Further information about the 670 speed related injury crashes on **local roads** in the Waikato Region 2005 to 2009:

- 45 deaths, 190 serious and 726 minor injuries
- Most common crash type "Lost control on a bend" (482 crashes)
- 34 percent wet road
- 48 percent night time
- 35 percent include alcohol as a factor
- Worst day Saturday, best Tuesday
- Worst three hour time period 3pm to 6pm

Further information about the 584 speed related injury crashes on **state highways** in the Waikato Region 2005 to 2009:

- 82 deaths, 198 serious and 648 minor injuries
- Most common crash type "Lost control on a bend" (446 crashes)
- 45 percent wet road
- 39 percent night time
- 23 percent include alcohol as a factor
- Worst day Saturday, best Monday
- Worst three hour time period 3pm to 6pm

Crashes at bends

Between 2005 and 2009 44 percent of fatal and serious crashes and 36 percent of all injury crashes in the Waikato Region were loss of control or head on at bends.

Crashes at bends 2005 to 2009				
Crash year	Fatal crashes	Serious crashes	Minor crashes	Total
2005	34	88	308	430
2006	23	104	310	437
2007	35	94	344	473
2008	29	110	310	449
2009	27	104	287	418
Total	148	500	1559	2207

49 percent of 'at fault' drivers involved in crashes at bends were aged under 30 and 20 percent were aged under 20.

Drivers fuelled by alcohol and travelling too fast for their own abilities and those appropriate to the conditions especially in the wet are all too common themes in bend related crashes in the city. (see bullet points)

Ages of at fault drivers in bend related injury crashes 2005 to 2009			
Ages	Female	Male	Total
15 to 19	127	252	379
20 to 24	116	239	355
25 to 29	78	161	239
30 to 34	54	140	194
35 to 39	53	142	195
40 to 44	57	132	189
45 to 49	54	132	186
50 to 54	35	103	138
55 to 59	37	65	102
60 to 64	21	40	61
65 to 69	17	23	40
70 to 74	8	15	23
75+	23	40	63
Total	675	1484	2164

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. Appropriate clear zones and roadside management will continue to help improve road safety.

The most common roadside hazards struck in injury loss of control or head on crashes on bends in the Waikato Region were cliffs and banks (471), ditches (252), fences (479), trees (252) and posts and poles (184) from a total of 1623 objects struck.

Further information about the 978 injury loss of control or head on crashes on bends on **local roads** in the Waikato Region 2005 to 2009:

- 54 deaths, 285 serious and 989 minor injuries
- 71 percent of at fault drivers were male
- Most common crash type "loss of control turning right" (487 crashes)
- 32 percent of crashes involved alcohol
- 32 percent in the wet
- 49 percent of crashes involved speed too fast for the conditions
- Worst month February, best October
- Worst day Saturday, best Tuesday
- Worst three hour time period 3pm to 6pm
- Number of objects struck 743

Further information about the 1229 injury loss of control or head on crashes on bends on **state highways** in the Waikato Region 2005 to 2009:

- 129 deaths, 382 injuries and 1310 minor injuries
- 70 percent of at fault drivers were male
- Most common crash type "loss of control turning right" (516 crashes)
- 18 percent of crashes involved alcohol
- 39 percent in the wet
- 36 percent of crashes involved speed too fast for the conditions
- Worst month December, best September
- Worst day Sunday, best Tuesday
- Worst three hour time period 3pm to 6pm
- Number of objects struck 880

Straight road – loss of control or head on

Between 2005 and 2009, sixteen percent of all fatal and injury crashes in the Waikato Region were straight road - loss of control or head on crashes.

Straight road - loss of control or head on crashes 2005 to 2009				
Crash year	Fatal crashes	Serious crashes	Minor crashes	Total
2005	15	43	143	201
2006	14	40	155	209
2007	14	38	162	214
2008	15	31	129	175
2009	13	46	136	195
Total	71	198	725	994

These crashes occur when a driver has lost control and either runs off the road or collides with another vehicle.

When drivers lose control, they may crash into roadside hazards such as ditches, banks, poles or trees. Hitting roadside objects can result in a minor off-road event becoming far more serious.

Ages of at fault drivers in straight road related crashes 2005 to 2009			
Age group	Female	Male	Total
15-19	71	124	195
20-24	61	86	147
25-29	39	59	98
30-34	27	60	87
35-39	23	51	74
40-44	23	60	83
45-49	18	51	69
50-54	24	33	57
55-59	21	33	54
60-64	11	20	31
65-69	8	18	26
70-74	9	17	26
75+	15	31	46

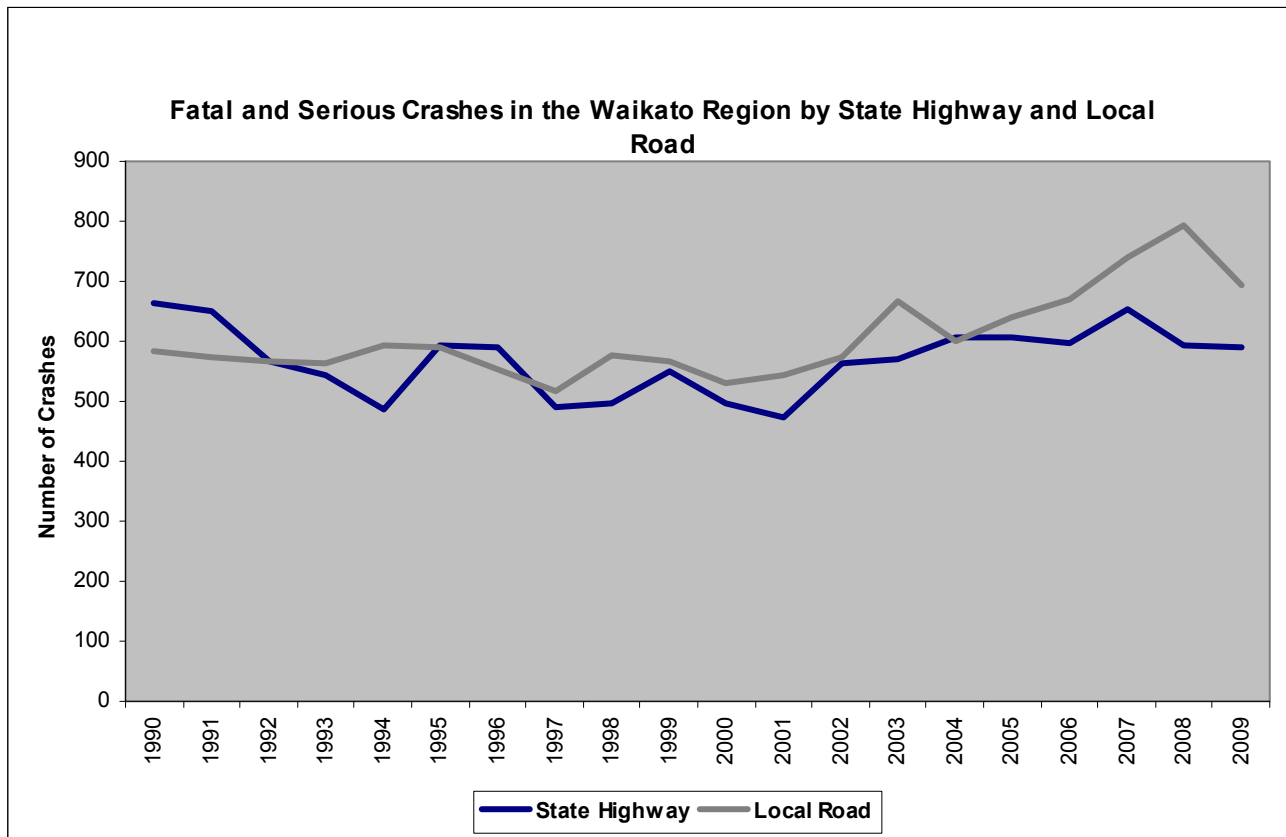
Further information about the 441 injury straight road - loss of control or head on crashes on **local roads** in the Waikato Region: (2005 to 2009)

- 24 deaths, 97 serious and 449 minor injuries
- Most common crash type "off road to left"
- 29 percent of crashes involved alcohol
- 19 percent of crashes involved speed
- 15 percent involved "road factors"
- 10 percent involved fatigue
- 81 percent resulted in a roadside hazard being struck
- 24 percent on wet or icy roads
- 45 percent at night
- Worst month June, best May
- Worst day of week Sunday, best Tuesday
- Worst three hour time period 3pm to 6pm

Further information about the 553 injury straight road - loss of control or head on crashes on **state highways** in the Waikato Region: (2005 to 2009):

- 57 deaths, 172 injuries and 649 minor injuries
- Most common crash type "off road to left"
- 18 percent of crashes involved alcohol
- 8 percent of crashes involved speed
- percent involved "road factors"
- 38 percent involved fatigue
- percent resulted in a roadside hazard being struck
- 24 percent on wet or icy roads
- 39 percent at night
- Worst month March, best August
- Worst day of week Sunday, best Wednesday
- Worst three hour time period 3pm to 6pm

Looking back—the last two decades ...



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