



briefing notes - road safety issues

West Waikato

Land Transport New Zealand has prepared this road safety issues report, it is based on reported crash data and trends for the 2002–2006 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 West Waikato area.

This report is the eighth road safety report for the West Waikato area. The data in this report applies to local roads and State Highways in the West Waikato area.

In each new report one year's data is added to a five year block and the oldest dropped so it is unlikely that the core issues for any local body would change radically from report to report.

The issues chosen for this report are drawn from either the most common crash types, those that appear over-represented when the West Waikato area 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 for 2006.

We encourage local authorities to use the Ministry of Transport's Crash Analysis System (CAS) to further investigate the highlighted issues.

Major Road Safety Issues

West Waikato

Intersections
Alcohol
Speed
Bends – Loss of Control

Nationally

Speed
Alcohol
Failure to give way
Restraints

2006 road trauma

Casualties

| | |
|--------------------|-----|
| Deaths | 17 |
| Serious casualties | 61 |
| Minor casualties | 279 |

Crashes

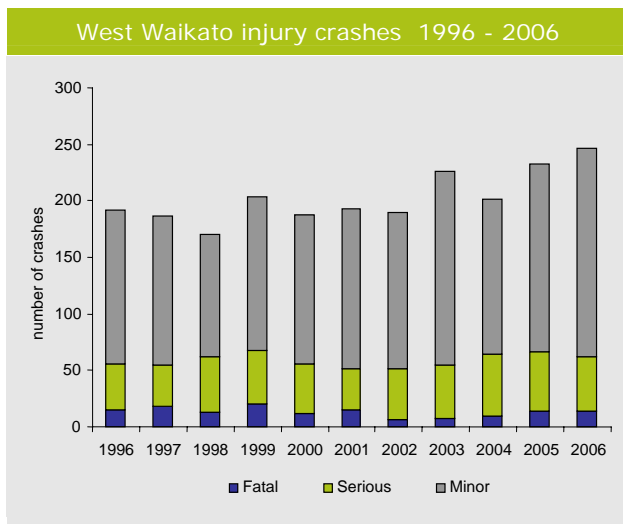
| | |
|------------------------|-----|
| Fatal crashes | 14 |
| Serious injury crashes | 48 |
| Minor injury crashes | 184 |
| Non-injury crashes | 402 |

Overview of 2006

In 2006 on local roads in West Waikato there were 104 injury crashes and 198 non-injury crashes, in addition there were 142 injury crashes and 204 non-injury crashes on State Highways, as reported by the New Zealand Police.

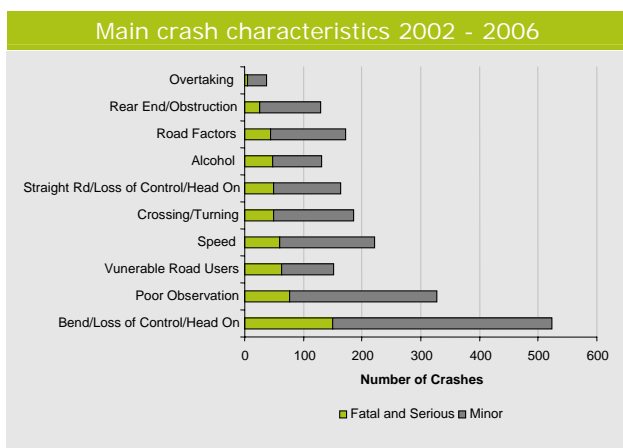
The table below shows the number of injuries resulting from 2006 crashes by rural or urban areas for both local and Transit roads (rural is defined as an area with a speed limit of 80km/h or more).

| | Fatalities | Serious injuries | Minor injuries | Total |
|-------|------------|------------------|----------------|-------|
| Rural | 13 | 55 | 212 | 280 |
| Urban | 4 | 6 | 67 | 77 |
| Total | 17 | 61 | 279 | 357 |



Fatalities in the district have been rising over the last 5 years.

Serious injuries also rose between 2001 and 2004 but now seem to be steady.



Further information about 2006 injury and non-injury crashes on local roads:

- Worst month July (32), best February (17)
- Worst day Wednesday (54), best day Tuesday (29)
- Wet road 28 percent
- Night time 35 percent
- Midblock 69 percent
- At fault or part fault (injury crashes) male driver, 61 percent
- Full NZ licence 51 percent of at fault drivers

Further information about 2006 injury and non injury crashes on Transit roads

- Worst month July (39), best December (19)
- Worst day Friday (68), best Monday (37)
- Wet road 36 percent
- Night time 37 percent
- Midblock 70 percent
- At fault or part fault (injury crashes) male driver, 66 percent
- Full NZ licence 54 percent of at fault drivers

It has been observed nationally that there is a growing group of drivers who have not been exiting the graduated licence system and who are choosing to stay on restricted licences. This is making it increasingly difficult to distinguish drivers who are truly inexperienced from those that should have moved to a full licence. As a consequence it is more difficult to target educational material.

This is certainly true in West Waikato District with only 54 percent of at fault drivers in injury crashes being the holder of a full driving licence.

| Driver licence status (injury crashes, at fault drivers West Waikato roads) | Percentage of total at fault drivers (NZ value in brackets) |
|---|---|
| Full | 52.6 (58.4) percent |
| Learner | 12.3 (9.5) percent |
| Restricted | 19.9 (17.6) percent |
| Never Licenced | 0.8 (2.2) percent |
| Disqualified | 2.2 (1.7) percent |
| Overseas | 4.4 (4.2) percent |
| Expired | 0.4 (0.5) percent |
| Other / unknown | 7.0 (5.6) percent |

Speed

Nationally, speed is one of the major contributing factors to road crashes. For the 12 months to the end of December 2006, excessive speed contributed to around 31 percent of fatal crashes and 16 percent of injury crashes.

During 2006, there were 1,839 injury crashes where the driver was travelling too fast for conditions.

Reducing speeds to appropriate levels is an important road safety goal. Excessive speed increases the likelihood of a crash occurring by reducing the time available for drivers to respond to hazardous situations and it also leads to more serious injuries. Research has shown that a one km/h reduction in mean speeds can produce up to a three percent reduction in injury crashes.

In the West Waikato, excessive speed was a factor in 24 percent of injury crashes in 2006.

| Speed related injury crashes | 2002 | 2003 | 2004 | 2005 | 2006 |
|------------------------------|------|------|------|------|------|
| Urban | 3 | 8 | 7 | 6 | 9 |
| Rural | 29 | 33 | 30 | 47 | 49 |
| Total | 32 | 41 | 37 | 53 | 58 |

There were 221 speed-related injury crashes reported in the last five years.

Males are also highly represented as at fault drivers in speed related crashes, accounting for 70 percent of drivers

| Drivers at fault or part fault in speed related injury crashes (2002-2006) * | Male | Female | Total |
|--|------------|-----------|------------|
| 15- 19 years | 39 | 22 | 61 |
| 20 - 24 | 28 | 12 | 40 |
| 25 - 29 | 13 | 7 | 20 |
| 30 - 39 | 32 | 9 | 41 |
| 40 - 49 | 16 | 8 | 24 |
| 50 - 59 | 16 | 3 | 19 |
| 60 - 69 | 4 | 3 | 7 |
| 70+ | 1 | 0 | 1 |
| Total | 149 | 64 | 213 |

* (note ranges are not equal)

The following table illustrates the licence status of at fault drivers in speed related crashes in West Waikato and all New Zealand (2006).

| Driver licence status, speed related injury crashes, at fault drivers West Waikato | Percentage of total at fault drivers in speed related crashes (NZ value in brackets) |
|--|--|
| Full | 37.0 (43.0) percent |
| Learner | 16.7 (15.3) percent |
| Restricted | 29.6 (22.5) percent |
| Never Licenced | 0 (4.5) percent |
| Disqualified | 5.6 (4.1) percent |
| Overseas | 3.7 (3.7) percent |
| Expired | 0 (0.5) percent |
| Other / unknown | 7.4 (6.2) percent |

Further facts about speed related crashes in West Waikato (divided into local roads and Transit roads) (2002 -2006)

Local roads

- 5 deaths, 39 serious injuries, 126 minor injuries
- Male drivers 68.5 percent
- Most common crash type, Bend – (lost control/head on)
- 18 percent at intersections 82 percent at midblock
- 35 percent wet road
- 43 percent night time
- Worst month January, best June
- Worst day of week Friday, best Thursday

Transit roads

- 14 deaths, 31 serious injuries, 138 minor injuries
- Male 72 percent
- Most common crash type, Bend – (lost control/head on)
- 10 percent at intersections
- 49 percent wet road
- 41 percent night time
- Worst month December, best January
- Worst day Friday, best Monday

Intersections

Crashes at intersections are the most common crash type in urban areas of the West Waikato.

During the five year period 2002 to 2006 there were 265 injury crashes at intersections and 606 non-injury crashes. In these 5 people died, 69 received serious injuries and 339 received minor injuries.

| Intersection crashes | 2002 | 2003 | 2004 | 2005 | 2006 |
|----------------------|------|------|------|------|------|
| Injury crash | 52 | 45 | 51 | 61 | 56 |
| Non-injury crash | 91 | 104 | 128 | 144 | 139 |
| Total | 143 | 149 | 179 | 205 | 195 |

The table below shows the locations of the five intersections with the highest number of crashes in the West Waikato between 2002 and 2006.

| Intersection name | Total crashes 2002 - 2006 | Injury crashes 2002 - 2006 | Total crashes in 2006 |
|---------------------|---------------------------|----------------------------|-----------------------|
| SH1/SH1B | 39 | 4 | 13 |
| SH1/Duke Street | 22 | 8 | 6 |
| SH1/Queen Street | 21 | - | 1 |
| SH 3/Rickit Road | 18 | 4 | 3 |
| SH 3/Carroll Street | 15 | 5 | 2 |

Crashes at Tee junctions in urban areas are the most common type of intersection crash reported, followed by crashes at Tee rural junctions.

| Junction type | Rural | Urban |
|-----------------------------|-------|-------|
| Roundabout | - | 41 |
| Tee | 227 | 254 |
| Cross (X) | 39 | 218 |
| Y | 19 | 21 |
| Other (includes driveways) | 11 | 41 |

The main causes contributing to crashes described in Police reports were:

- Failure to stop and give way
- Not checking properly
- Too fast.

Intersections present most drivers with one of their biggest driving challenges and as a result less experienced drivers are highly represented in these crashes as illustrated in the table below showing licence class of at fault drivers.

| Driver licence status, intersection related injury crashes, at fault drivers in the West Waikato | Percentage of total at fault drivers in intersection related crashes (NZ value in brackets) |
|--|---|
| Full | 65.5 (60.9) percent |
| Learner | 7.8 (9.4) percent |
| Restricted | 14.9 (14.8) percent |
| Never Licenced | 1.6 (2.5) percent |
| Disqualified | 2 (1.6) percent |
| Overseas | 3.9 (3.7) percent |
| Expired | 0.4 (0.8) percent |
| Other / unknown | 3.9 (6.3) percent |

Further facts about Intersection related crashes in the West Waikato 2002 to 2006 (divided into local roads and Transit roads):

Local roads

- 4 deaths, 32 serious injuries, 154 minor injuries
- Male driver 63 percent
- Most common crash type, crossing/turning
- 9 percent alcohol over limit
- 62 percent urban
- 24 percent wet roads
- 31 percent night time
- Worst month July, best September
- Worst day of week Friday, best Sunday

Transit roads

- 1 death, 37 serious injuries, 185 minor injuries
- Male driver 64 percent
- Most common crash type, crossing/turning
- 4 percent alcohol over limit
- 47 percent urban
- 71 percent wet roads
- 23 percent night time
- Worst month April, best March
- Worst day of week Friday, best Monday

Drink-driving

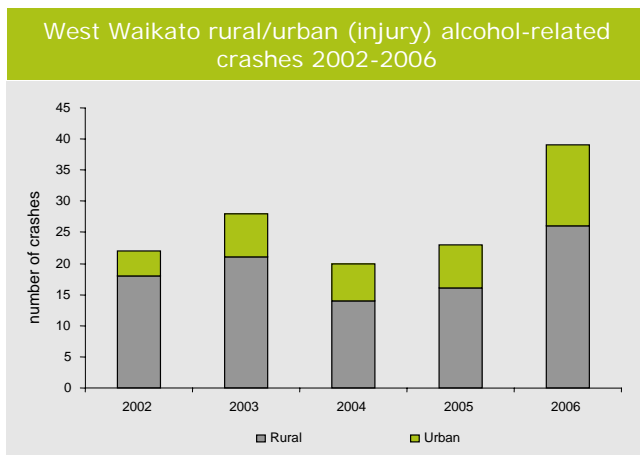
Alcohol affects the way people drive. Studies show that the risk of being involved in a crash increases rapidly as a driver's blood alcohol level rises. A driver over the legal limit (80mg of alcohol per 100ml of blood) is three times more likely to be involved in a crash than a sober driver.

Contrary to popular opinion, people with high blood alcohol levels are more likely to be injured or killed in a crash than sober drivers in the same crash and if injured, they are also more likely to encounter complications in their recovery.

In New Zealand for the 12 months to December 2006, alcohol-affected drivers contributed to 31 percent of all fatal crashes and 15 percent of all injury crashes.

In West Waikato, alcohol was a factor in 16 percent of injury crashes in 2006, an increase from 2005, and increasing in line with the national trend.

There were 132 alcohol-related injury crashes reported in the last five years.



Key locations

The following provides a breakdown of the key locations in West Waikato at which drink-driving crashes occurred during the 2002 to 2006 period.

| West Waikato |
|--------------------------------------|
| SH 30, 600m south of Beros Road |
| SH 3, 100m south of Ye Old Mill Road |
| SH 1, 600m east of Peake Road |
| SH 1, 300m east of Hydro Road |

The following table illustrates the licence status of at fault drivers in alcohol related crashes in West Waikato and all New Zealand (2006).

| Driver licence status, alcohol related injury crashes, at fault drivers in West Waikato | Percentage of total at fault drivers in alcohol related crashes (NZ value in brackets) |
|---|--|
| Full | 28.2 (41.6) percent |
| Learner | 15.4 (15.8) percent |
| Restricted | 23.1 (20.8) percent |
| Never Licenced | 2.6 (4.6) percent |
| Disqualified | 10.3 (6.2) percent |
| Overseas | 5.1 (1.0) percent |
| Expired | 2.6 (1.4) percent |
| Other / unknown | 12.8 (8.2) percent |

Further facts about alcohol related crashes in West Waikato (divided into local roads and Transit roads) (2002 -2006)

Local roads

- 5 deaths, 21 serious injuries, 74 minor injuries
- Male driver 74.2 percent
- Most common crash type, loss of control/head on
- 18.2 percent at intersections
- 39.4 percent urban
- 25.8 percent wet road
- 68.2 percent night time
- Worst month November, best January
- Worst day of week Saturday, best Monday

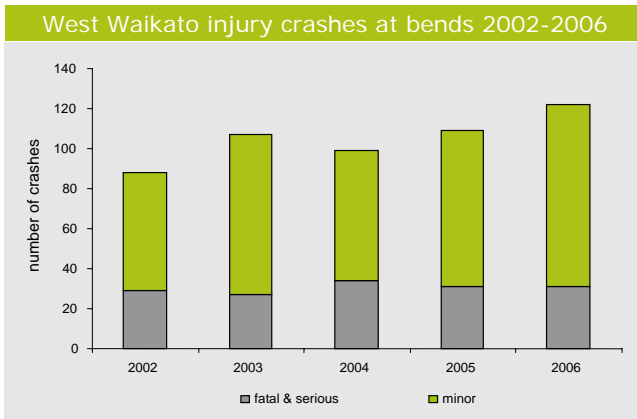
Transit roads

- 7 deaths, 35 serious injuries, 70 minor injuries
- Male drivers 80.3 percent
- Most common crash type, loss of control/head on
- 9.0 percent at intersections
- 16.4 percent urban
- 23.9 percent wet road
- 64.2 percent night time
- Worst month March, best April
- Worst day of week Sunday, best Wednesday

Crashes at bends

Between 2002 and 2006 48 percent of all injury crashes in the West Waikato area occurred at bends. These crashes resulted in 35 fatalities, 172 serious injuries and 576 minor injuries.

Crash numbers have risen for the past 3 years.



Most crashes at bends involved a driver losing control of their vehicle and either running off the road or colliding with another vehicle.

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 three most common roadside hazards struck in injury crashes in West Waikato were fences (172), banks (116) and ditches (63) from a total of 587 objects struck.

The following table lists the main characteristics of these crashes.

| Crash characteristic | Crashes |
|------------------------------------|------------|
| Single vehicle | 77 percent |
| Alcohol | 14 percent |
| Excessive speed for the conditions | 37 percent |
| Road factors | 22 percent |
| Poor handling | 29 percent |
| rural road | 90 percent |
| Wet road | 39 percent |
| Night time | 37 percent |

The following table illustrates the licence status of at fault drivers for crashes occurring at bends in West Waikato and all New Zealand (2006).

| Driver licence status, bend related injury crashes, at fault drivers in the West Waikato area | Percentage of total at fault drivers in bend related crashes (NZ value in brackets) |
|---|---|
| Full | 54.2 (51.1) percent |
| Learner | 8.9 (10.7) percent |
| Restricted | 21.4 (17.9) percent |
| Never Licenced | 2.4 (4.1) percent |
| Disqualified | 2.2 (2.8) percent |
| Overseas | 4.2 (5.6) percent |
| Expired | 0.8 (0.9) percent |
| Other / unknown | 5.9 (6.8) percent |

Further information about crashes on bends in West Waikato:

Local roads

- 11 deaths, 67 serious injuries, 227 minor injuries
- Male drivers 62.4 percent
- Most common crash type, loss of control/head on
- Most common age group 15-19 years
- 18 percent alcohol over limit
- Worst month February, best June
- Worst day of week Friday, best Thursday

Transit roads

- 24 deaths, 105 serious injuries, 349 minor injuries
- Male drivers 70.4 percent
- Most common crash type, loss of control/head on
- Most common age group 20-24 years
- 12 percent over alcohol limit
- Worst month December, best September
- Worst day of week Sunday, best Thursday

Fatigue

Fatigue ranks 7th as a contributory cause of injury crashes in West Waikato.

However fatigue remains a difficult cause to identify and it is accepted that the reported numbers of crashes will be below actual crash numbers.

Even though it is considered socially acceptable to drive while fatigued as opposed to drink driving research indicates that the effects on cognitive skills are similar. It is extremely difficult for Police to prevent people from driving while fatigued.

For the years 2002 to 2006 fatigue was reported as a contributory factor in around six percent of all injury crashes reported by the Police in New Zealand. However for the same period fatigue has been implicated in between 11 and 14 percent of all fatal crashes.

In West Waikato between 2002 and 2006 there were 129 injury crashes where fatigue was a contributory cause. In these crashes 6 people died, 43 received serious injuries and 142 received minor injuries.

Different types of Driver Fatigue identified in Police in West Waikato.

| Type of fatigue identified by Police | Percentage of Injury crashes in West Waikato | Percentage of Injury crashes in New Zealand |
|--------------------------------------|--|---|
| General (unspecified) | 9.9 | 4.9 percent |
| Long trip | 0.6 | 0.3 percent |
| Lack of sleep | 0.9 | 0.5 percent |
| Worked long hours before driving | 0.5 | 0.6 percent |

The following table illustrates the licence status of at fault drivers in fatigue related crashes in West Waikato and all New Zealand (2002 - 2006).

It is far more common for relatively inexperienced drivers to be involved in fatigue-related crashes than in speed or alcohol related crashes.

| Driver licence status, fatigue related injury crashes, at fault drivers in West Waikato | Percentage of total at fault drivers in fatigue related crashes (NZ value in brackets) |
|---|--|
| Full | 57.1 (57.7) percent |
| Learner | 9.5 (10.1) percent |
| Restricted | 18.3 (16.2) percent |
| Never Licenced | 0.8 (2.3) percent |
| Disqualified | 4.0 (2.2) percent |
| Overseas | 4.8 (4.2) percent |
| Expired | 1.6 (1.3) percent |
| Other / unknown | 4.0 (6.0) percent |

Further facts about fatigue related crashes in West Waikato (divided into local roads and Transit roads) (2002 - 2006)

Local roads

- 1 death, 7 serious injuries, 16 minor injuries
- Male drivers 90 percent
- Most common crash type, Bend - (loss of control/head on)
- 5 percent at intersections
- 5 percent urban
- 30 percent wet road
- 25 percent night time
- Worst month November, best February
- Worst day of week Sunday, best Tuesday/Wednesday

Transit roads

- 5 deaths, 36 serious injuries, 126 minor injuries
- Male drivers 74.5 percent
- Most common crash type, Bend - (loss of control/head on)
- 8.3 percent at intersections
- 11 percent urban
- 17 percent wet road
- 49 percent night time
- Worst month January, best July and October
- Worst day of week Sunday, best Tuesday

Partnerships

Land Transport NZ works closely with many road safety partners at national, regional and local levels. These include government departments, enforcement agencies, territorial local authorities, health authorities and local service providers.

Some of the key road safety partners in the West Waikato area include:

New Zealand Police

Waikato District Road Policing Manager
Inspector Leo Tooman
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Road Safety Co-ordinator

Waipa District
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