WAITAKERE CITY

road safety issues

July 2002

The Land Transport Safety Authority (LTSA) has prepared this report. It is based on reported crash data and trends for the 1997–2001 period. The intent of the report is to highlight the key road safety issues and to identify possible ways to reduce the number of road deaths and injuries in Waitakere City.

The issues identified in this report are based on analysis of crash data for the city's local roads only. Although state highway issues are covered in a separate report, crashes on state highways are included in the casualty and social cost charts on this page.

Injury crash numbers in Waitakere City have shown an encouraging downward trend over the past five years. While this is a positive sign, Waitakere roads as a whole are still relatively unsafe compared with other cities in New Zealand. Crash and casualty rates per 100 million vehicle kilometres of travel on roads in the city are considerably higher than the national average.

The good work of recent years must continue if Waitakere City's roads are to match levels of safety found elsewhere. Focusing on the issues identified in this report will hopefully contribute significantly to this process.

Major road safety issues:

Waitakere City

- Loss of control at bends
- Speed
- Alcohol
- Failure to give way

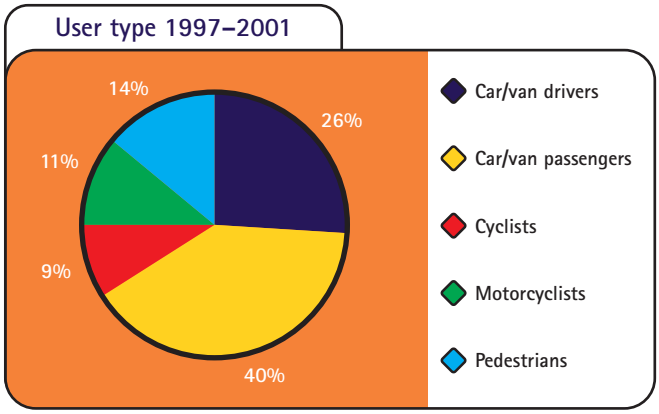
Nationally

- Speed
- Alcohol
- Failure to give way
- Restraints

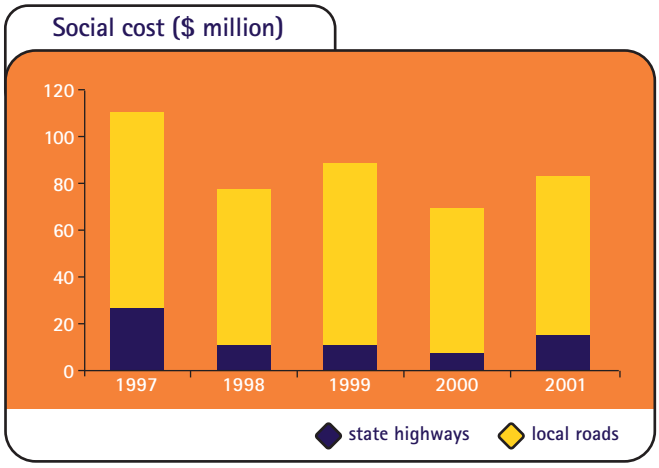
2001 road toll for Waitakere City

Deaths	6
Serious casualties	75
Minor casualties	348
Fatal crashes	6
Serious injury crashes	62
Minor injury crashes	250
Non-injury crashes	1,176

Road deaths 1997–2001



Estimated social cost of crashes*



* The estimated social cost includes loss of life or life quality (estimated by the amount New Zealanders are prepared to pay to reduce their risk of fatal or non-fatal injury), loss of output due to injuries, medical and rehabilitation costs, legal and court costs, and property damage. These costs are expressed at June 2001 prices.

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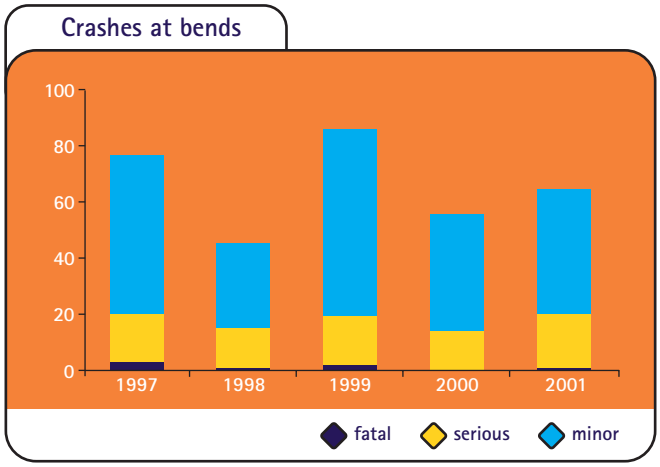
LAND transport safety AUTHORITY

Loss of control at bends

Vehicles losing control at bends was the most serious issue within Waitakere City in terms of crash severity, with almost a third of fatal and serious crashes being of this type. Twenty-one percent of all accidents involved loss of control at bends.

Crash numbers have fluctuated in the past five years and no clear trend has emerged (see chart below). The challenge is to show significant improvement in the years ahead.



Just over two thirds of loss of control crashes involved a single vehicle. Most of the remaining crashes resulted in head-on collisions with other vehicles, although a handful (around two percent) of out of control vehicles collided with vulnerable road users, namely pedestrians or cyclists.

A high proportion (67 percent) of loss of control crashes resulted in roadside objects being struck. Injuries suffered by the vehicle occupants were often more severe because of this. Posts or poles, trees, cliffs and fences were the objects most frequently struck that resulted in fatal or serious injuries. The city needs to be aware of the damage that roadside objects can inflict and plan to mitigate the effects.

Drivers at fault in loss of control crashes tended to be male (74 percent) and young. Exactly half the drivers were aged between 15 and 24 years, and a further 39 percent were aged between 25 and 44 years.

Alcohol and speed were major factors in these crashes, while poor handling was also frequently cited in crash reports. The percentage of loss of control crashes with these factors is shown in the table following and compared with Waitakere City's average. Other points of interest are also shown in the table.

Description	Loss of control	City average
Alcohol	32%	17%
Speed	34%	13%
Poor handling	23%	7%
Wet road	42%	29%
Dark	48%	35%
Hill road	55%	35%
Rural road	23%	7%
Weekend	41%	29%

The high percentage of wet road crashes indicates that surface friction could be an issue, while crashes occurring in the dark could be indicative of the need for improved delineation.

Recommended actions

Engineering

- Waitakere City should consider a strategic approach to reduce crash numbers and injury severity. This could include:
  - realigning or improving the geometric standards of routes or individual sites where high crash numbers occur, based on a priority list
  - a systematic investigation of surface friction, drainage, shoulder width, delineation, lighting and signposting standards
  - removing or relocating dangerous roadside objects and, where this is not possible, protecting the hazard or ensuring it is frangible.

Enforcement

- Support targeted enforcement of speed and alcohol at bends.
- Support targeted enforcement of young drivers.

Education

- Continue programmes aimed at improving cornering behaviour, including driving at appropriate speeds.
- Conduct programmes targeting young male drivers.

80 Speed

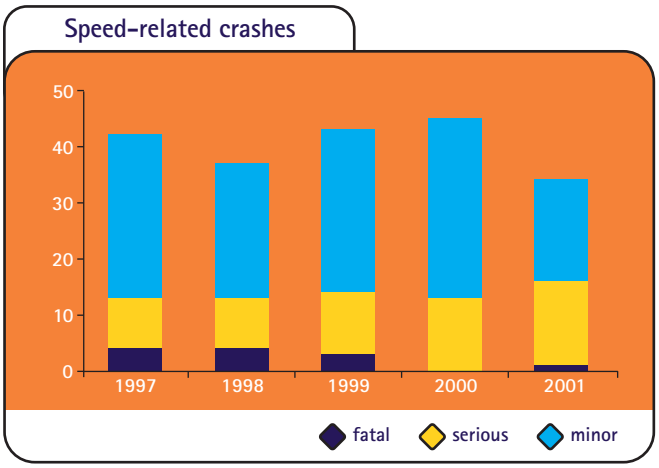
Excessive speed for the conditions was a factor in a quarter of crashes involving fatal or serious injury and 13 percent of all injury crashes between 1997 and 2001.

Restricting speeds to appropriate levels must remain a major road safety focus. Excessive speed hampers safety by increasing:

- the chances of having a crash, because the time available for a driver to respond to a hazardous situation is reduced
- the severity of injuries in a crash.

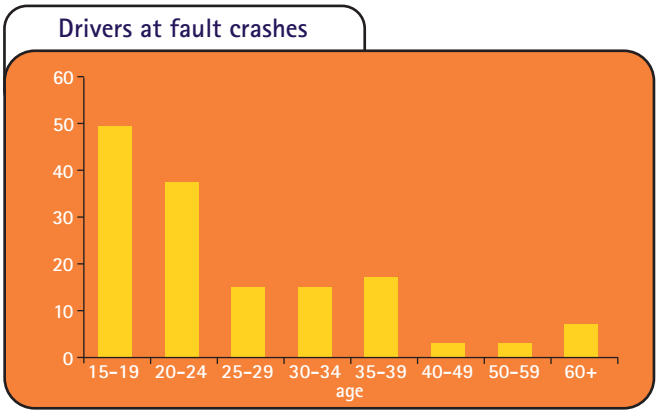
Average speeds in the greater Auckland region are higher than most other places in New Zealand. On rural roads, these speeds are actually increasing in defiance of the national trend towards lower speeds.

The chart below shows crash numbers in Waitakere City for the past five years. While there has been improvement in some areas, the number of crashes resulting in serious injury has increased.



Excessive speed was most commonly identified as a factor in loss of control crashes (68 percent), although it also featured prominently in rear-end crashes and, to a lesser extent, crashes at intersections or driveways. Other factors often associated with these crashes were alcohol, poor handling and slippery road surface.

Roadside objects were struck in 61 percent of crashes where excessive speed was a factor. This was not surprising as so many crashes involved drivers losing control of their vehicle. A very high proportion of drivers at fault were male (82 percent) and an even higher than usual number of drivers were young (59 percent were aged between 15 and 24, and a further 32 percent were between 25 and 39). The following chart shows the details.



Over half (55 percent) of speed-related crashes occurred between Friday and Sunday, with the peak day being Saturday. Around two thirds of crashes also occurred between noon and midnight.

The table below highlights areas where crashes involving excessive speed for the conditions are over-represented compared with all crashes in Waitakere City:

Description	Speed	City average
Wet road	35%	29%
Dark	48%	35%
Hill road	50%	35%
Rural road	16%	7%

Recommended actions

Engineering

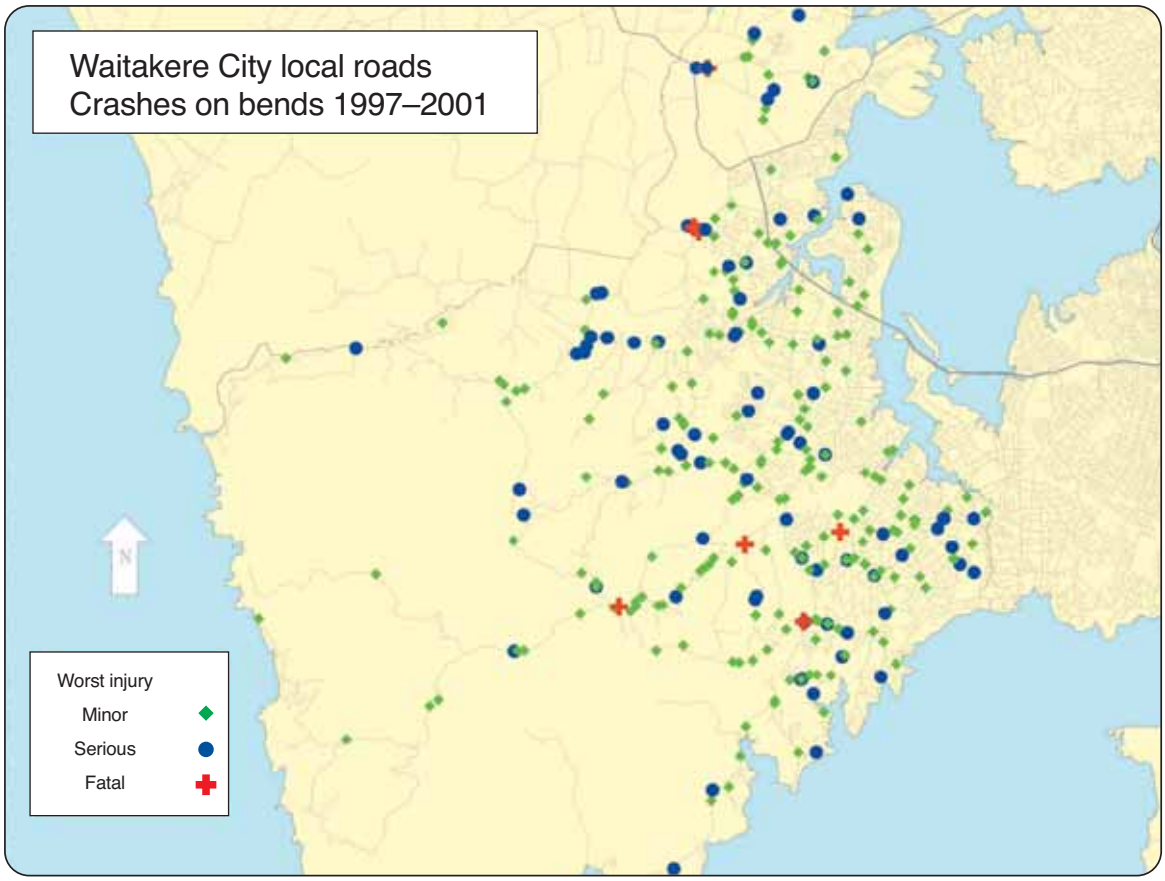
- Mitigate the effects of roadside objects being struck by removing or relocating dangerous hazards or, where this is not possible, protecting the hazards or making them frangible.
- Conduct studies of roads/routes where excessive speed is a problem, with the purpose of improving or upgrading to appropriate standards eg surface friction, delineation, lighting, signposting, shoulder width, alignment etc.

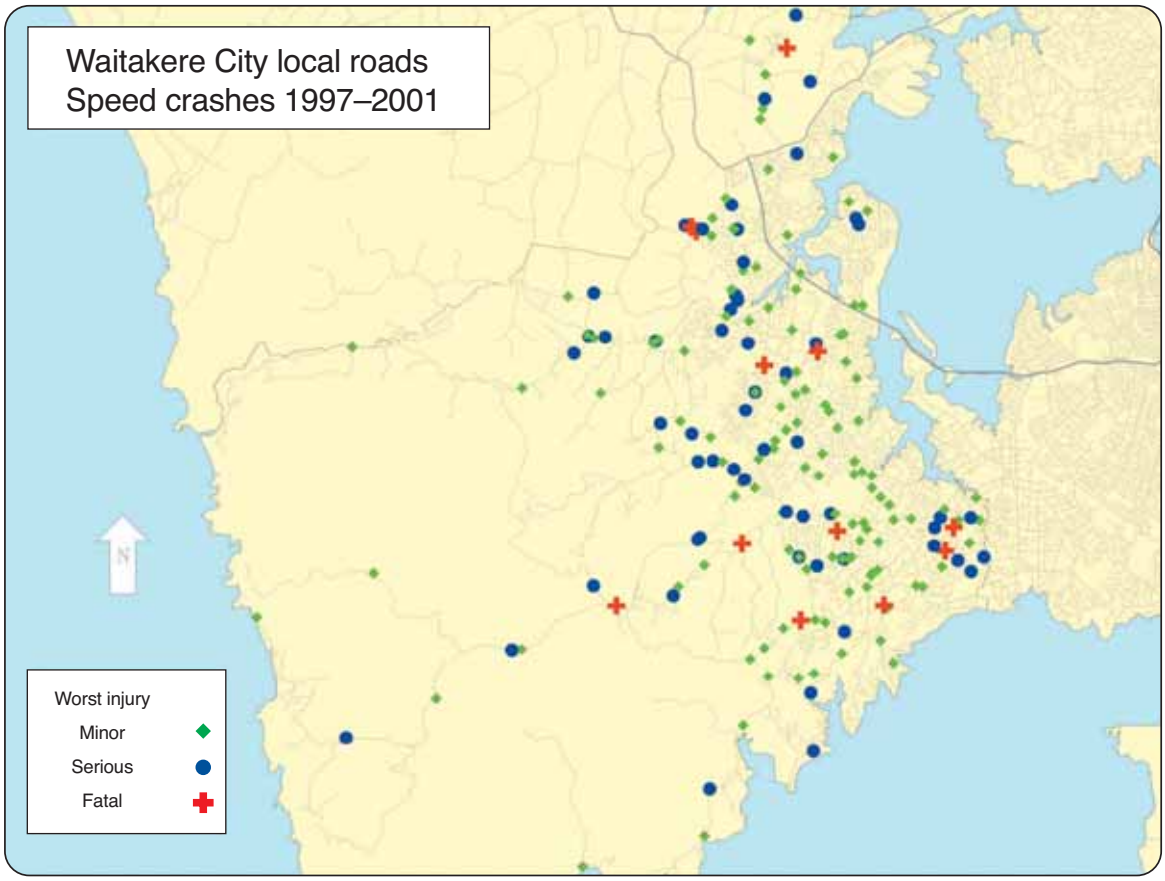
Enforcement

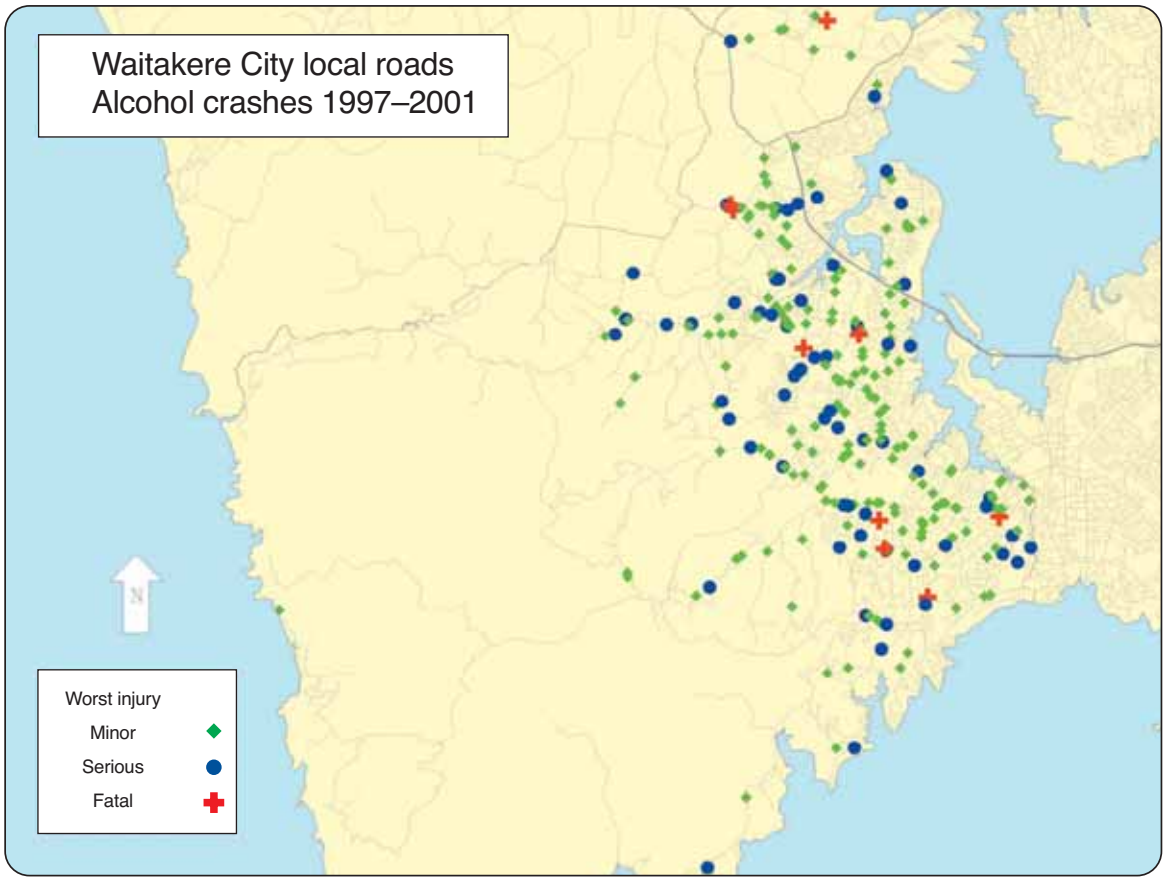
- Continue targeted enforcement of high-risk times and locations.
- Implement stricter enforcement of speed limits.

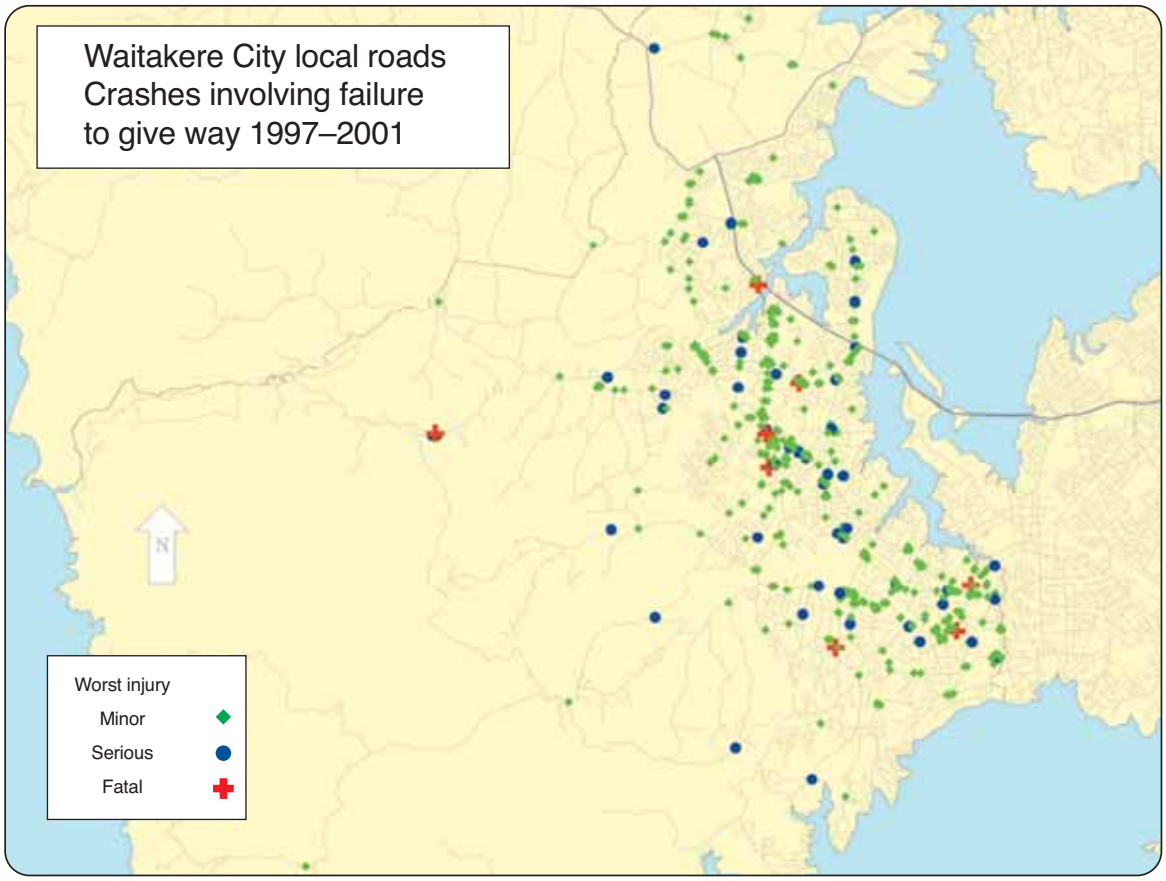
Education

- Continue programmes to improve awareness of driving at appropriate speeds for the conditions, particularly on winding roads.
- Implement programmes designed to influence young male drivers.


Waitakere City local roads
Crashes on bends 1997–2001
N
Worst injury
Minor
Serious
Fatal


Waitakere City local roads
Speed crashes 1997–2001
N
Worst injury
Minor
Serious
Fatal


Waitakere City local roads
Alcohol crashes 1997–2001
Worst injury
Minor
Serious
Fatal

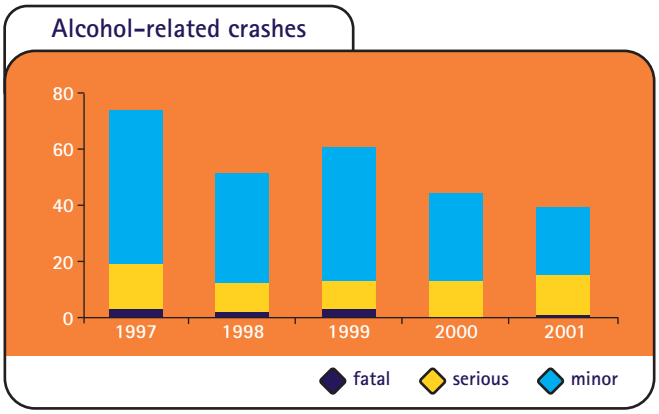

Waitakere City local roads
Crashes involving failure
to give way 1997–2001
Worst injury
Minor
Serious
Fatal

Alcohol

Just over a quarter of crashes involving fatal and serious injury and 17 percent of all injury crashes between 1997 and 2001 listed alcohol as a contributing factor.

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 (of 80 mg of alcohol per 100 ml of blood) is three times more likely to be involved in a crash than a sober driver.

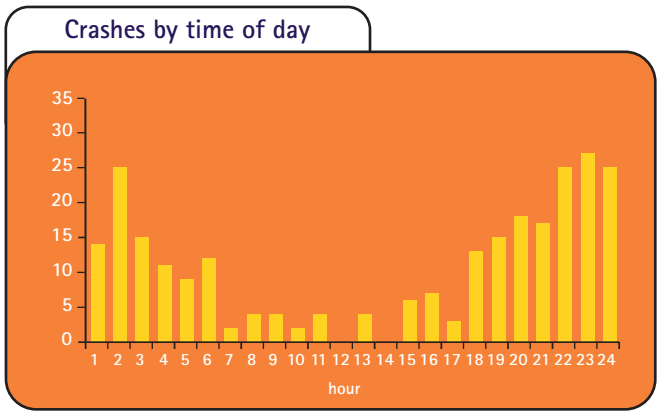
The good news is that the number of alcohol-related crashes in Waitakere City has been steadily reducing in the past five years (see chart below). This improvement saw the city last year catch up with the rest of New Zealand in terms of the proportion of injury crashes involving alcohol.



Over half (58 percent) of alcohol-related crashes involved the driver losing control of the vehicle and running off the road. As usual this often resulted in roadside objects being struck. Rear-end collisions and crossing or turning movements were the next most frequent crash types. Speed, failure to give way, inadequate checking and fatigue were other factors often associated with alcohol crashes.

As with speed-related crashes, male drivers were at fault in a high proportion of alcohol crashes (79 percent). Drink-driving crashes were primarily the domain of younger drivers with well over three quarters (83 percent) aged between 15 and 39 years.

Two thirds of alcohol crashes occurred between Friday and Sunday, with Saturday being the peak period. An extremely high proportion of crashes (82 percent) occurred during the hours of darkness, which is reflected in the chart below.



Recommended actions

Engineering

- Conduct studies of roads/routes where alcohol crashes are a problem with the purpose of improving or upgrading to appropriate standards. Street lighting, delineation, signposting, and road marking including the use of wider or profiled edge lines, could be considered.

Enforcement

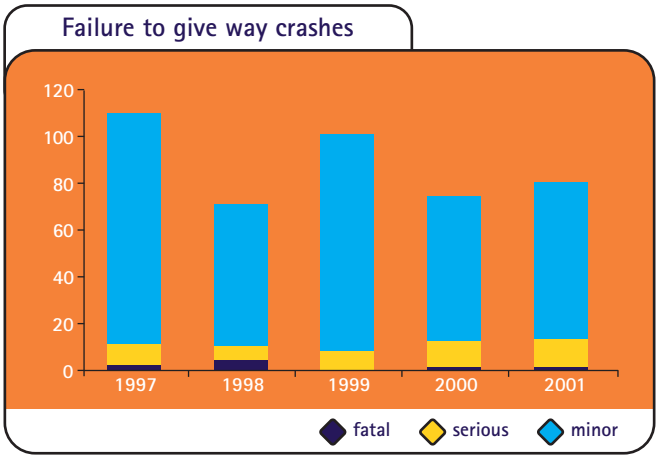
- Continue targeted enforcement of high-risk times and locations.

Education

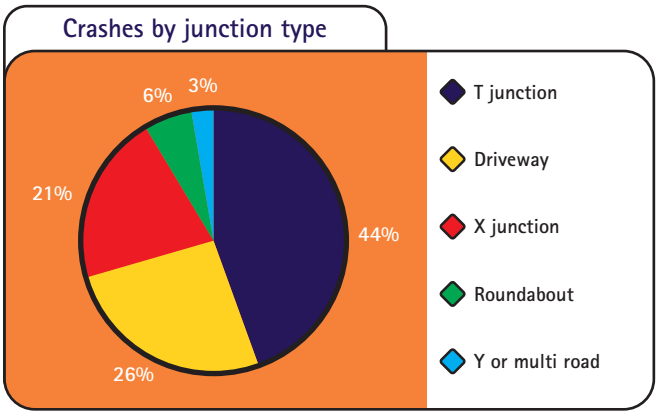
- Continue programmes targeting young male drivers.

Failure to give way

One fifth of crashes involving fatal or serious injury, and over a quarter of all injury crashes in Waitakere City involved failure on the part of one or more drivers to give way or stop in time. While overall crash numbers improved slightly in the past five years, the number of crashes resulting in serious injury increased (see chart below).



Most of these crashes occurred at intersections, although just over a quarter were located at driveways in mid-block locations. The chart below gives further details.



The most common single factor in these crashes was where one vehicle was turning and failed to give way to a non-turning vehicle. Failure to give way at driveways was also a common problem, and around five percent of crashes involved failure to give way at pedestrian crossings. Where vehicles were required to come to a stop, most crashes occurred at traffic signals rather than at Stop signs. The other main factor associated with these crashes was failure of drivers to check properly for other traffic.

The most common crash movements involved right turns into and out of side roads or driveways, and right-angle collisions as shown below.

Both cyclists and motorcyclists are over-represented in crashes of this type. A reason for this could be that they are more difficult to see than other vehicles, particularly in busy or more complex situations. Most cyclists are also young and relatively inexperienced in dealing with demanding traffic situations.

Analysis of drivers at fault reveals a reasonably even split between males (53 percent) and females (47 percent). Although young drivers (between 15 and 24 years of age) accounted for a third of crashes, there was a fairly even spread amongst other age groups, with drivers over 60 years of age involved in 20 percent of crashes.

Crashes were spread fairly evenly throughout weekdays and numbers were slightly lower on weekends, with the bulk occurring between 7am and 8pm.

Recommended actions

Engineering

- Continue crash reduction studies at black spot sites.

Enforcement

- Conduct campaigns targeting drivers who fail to give way or stop.

Education

- Conduct programmes to improve knowledge of right of way rules.
- Conduct programmes to promote appropriate behaviour at intersections and driveways, including adequate checking for other traffic, and selecting a safe gap.
- Conduct programmes to educate cyclists and motorcyclists in the need to take special care and be visible eg using bright clothing and headlights.

New Zealand Road Safety Programme

Reducing trauma involves a multi-pronged approach that includes education, engineering and enforcement. The New Zealand Road Safety Programme (NZRSP) provides funding to educate road users to change their behaviour through projects delivered by road safety co-ordinators and community groups. The programme also funds the New Zealand Police for their targeted enforcement activities and support of community road safety projects. Transfund New Zealand provides funding to local authorities for roading projects through its National Roading Programme.

Community projects

Community funding of road safety projects aims to encourage local involvement and ownership of issues, and target local resources and effort to local risks. Central to community programmes is the need to develop and motivate local partnerships in road safety to help reduce the level of deaths and injuries in Waitakere City.

Funding for community projects in Waitakere City from the NZRSP for the 2002/2003 year includes:

Project	LTSA funding	Police hours
Road safety co-ordinators	$76,000	
Crash reduction	$10,000	300
Alcohol project	$7,000	
Get licensed	$10,000	
Child pedestrian safety	$5,000	
Reward good driver behaviour	$10,000	
Tu Mana – road safety (drama & arts)	$5,000	
Learner licence course 2002/2003	$5,000	
Restricted/full licence	$5,000	

Police enforcement

In addition to the 300 police hours spent on community projects, a further 47,080 hours will be delivered by police in Waitakere City as follows:

Project	Police hours
Strategic – alcohol/drugs, restraint, speed and visible road safety enforcement	33,470
Traffic management – crash attendance events, incidents, emergencies and disasters, traffic flow supervision	9,950
School road safety education	2,150
Police community services	1,510

Road environment

The LTSA's Crash Reduction Monitoring database shows that works implemented as a result of crash reduction studies have reduced crashes at the study sites by 30 percent in Waitakere City (27 percent at state highway sites and 30 percent at local road sites).

Recommendations from recent studies should be implemented and further studies undertaken to consider mass action or local area traffic management to reduce crash problems.

References

Waitakere City Road Safety Report 1997–2001

LTSA Crash Analysis System

Where to get more information

For more specific information relating to road crashes in Waitakere City, please refer to the 1997 to 2001 Road Safety Report or the LTSA Accident Investigation System, or contact the people or organisations listed below:

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