

road safety issues

July 2002

The Land Transport Safety Authority (LTSA) has prepared this Road Safety Issues 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 the Whangarei district.

Between 1997 and 2001, about 190 people were killed or injured each year in crashes in the Whangarei district. In 2001 the social cost of crashes in the district was \$73.2 million or over \$6 million each month.

Of all the crashes which involved injury, numbers were fairly evenly shared between open road crashes and urban road crashes. There were similar numbers of injury crashes on local authority roads compared to state highways. However, last year, of the 13 people who died on Whangarei district roads, most died as a result of crashes on the open road.

Whangarei district had the second highest number of fatal crashes on state highways of the cities or districts in the Auckland and Northland regions. In the five years 1997 to 2001 there were 45 fatal crashes on state highways in the Whangarei district. This total was exceeded by the Rodney district with 51 fatal crashes and closely followed by the Far North district with 44 fatal crashes.

Most injury crashes in Whangarei were loss of control crashes, and most crashes on the open road involved a driver losing control on a curve. This was also the most common crash type on urban roads with intersection crashes and pedestrian casualties also featuring highly.

Most injury crashes in the Whangarei district occurred between October and December. One third occurred at night and 30 percent occurred on a wet road.

Major road safety issues:

Whangarei district

Loss of control on curves

Alcohol

Speed

Pedestrians and cyclists

Nationally

Speed

Alcohol

Failure to give way

Restraints



2001 road toll for Whangarei district



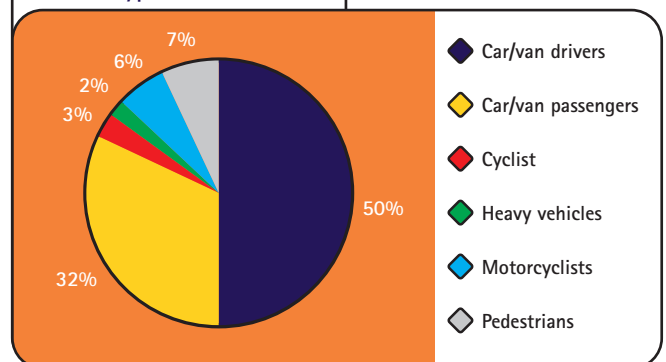
Deaths	13
Serious casualties	47
Minor casualties	131



Fatal crashes	12
Serious injury crashes	33
Minor injury crashes	70
Non-injury crashes	490

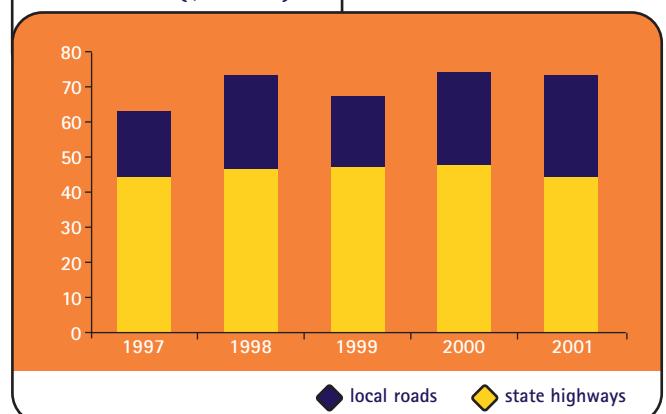
Road casualties 1997–2001

User type 1997–2001



Estimated social cost of crashes*

Social cost (\$ million)



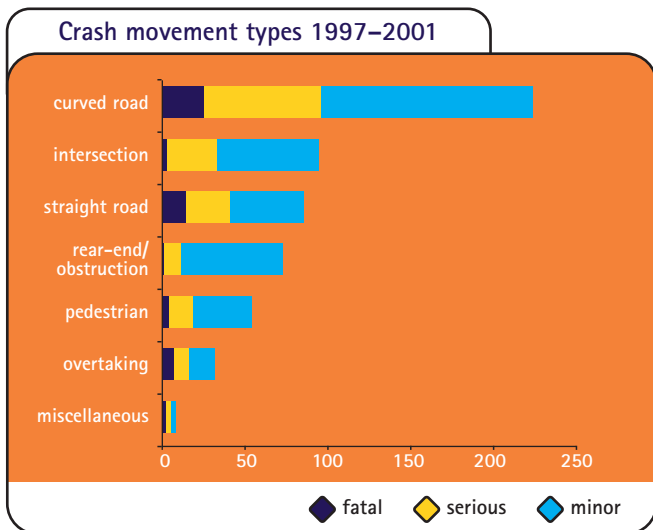
* The estimated social cost includes loss of life or life quality (estimated by the amount New Zealanders are prepared to pay to reduce their risk of fatal or non-fatal injury), loss of output due to injuries, medical and rehabilitation costs, legal and court costs, and property damage. These costs are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



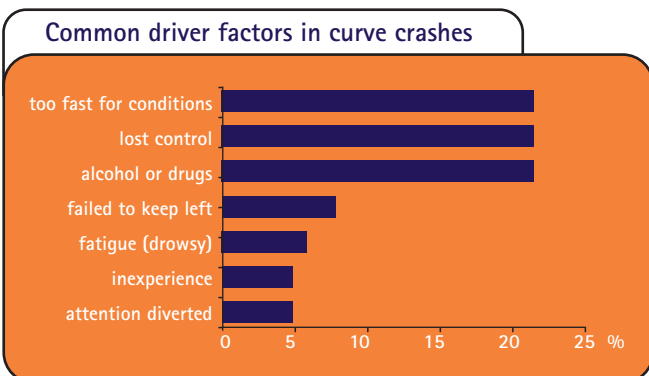
Loss of control on curves

Most fatal crashes in the district were loss of control crashes, the large majority of which occurred on a curve. Crashes on curves accounted for five or six fatal crashes each year and 30 to 40 other injury crashes.

Over 70 percent of these crashes were on the open road but crashes on curves were also the most common crash type on urban roads. This type of crash was common on state highways in the district and also on local roads.



The most common factors in these loss of control crashes were speed and alcohol. On the open road, drivers' failure to keep left was a common cause. Drivers were often inattentive, inexperienced or affected by tiredness (an increasing trend). Poor tyres and slippery or uneven surfaces were regularly mentioned as contributing factors.



Drivers were most commonly aged between 15 and 19 years old and male. Many of the loss of control crashes on curves were at night (43 percent) and many were on a wet road (42 percent). The crashes tended to occur throughout the year but with fewer in the winter months (June to September).

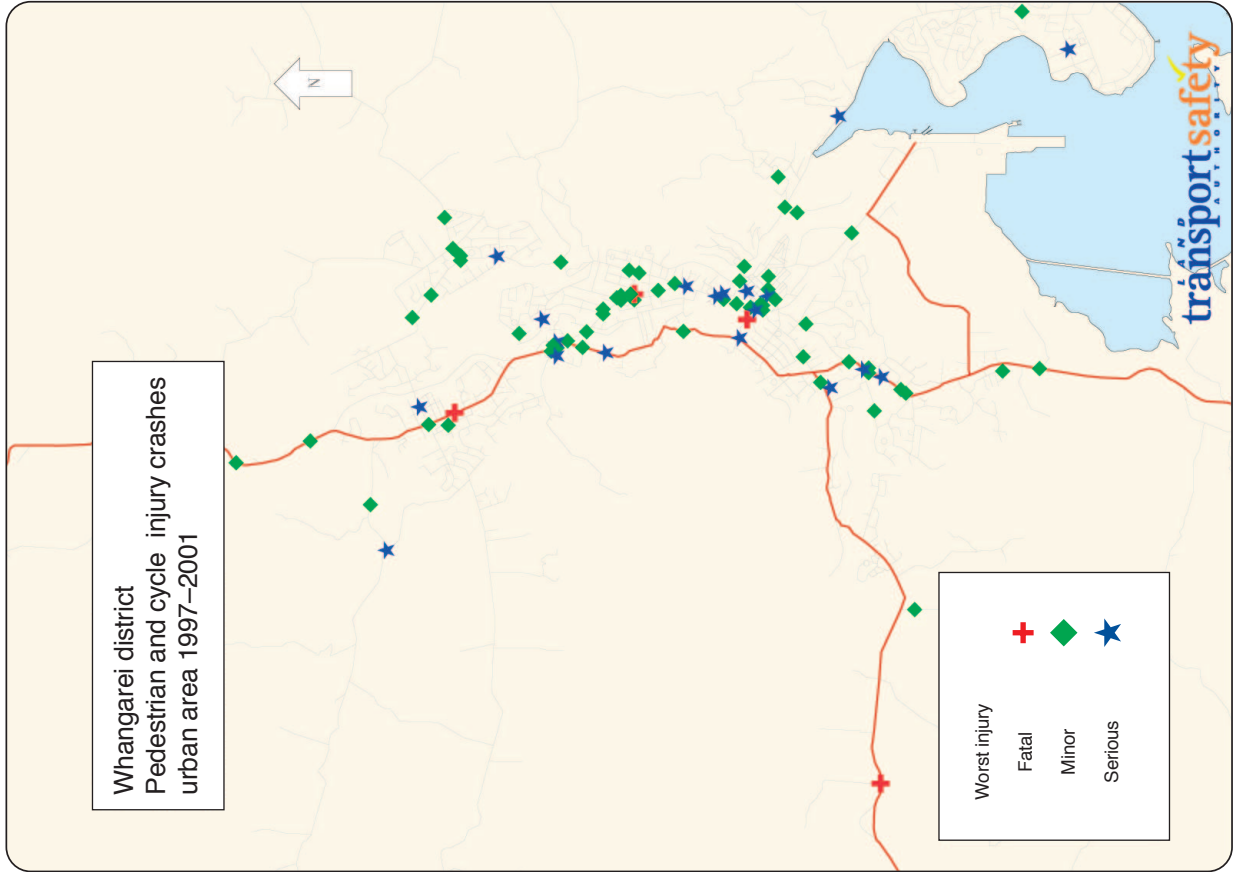
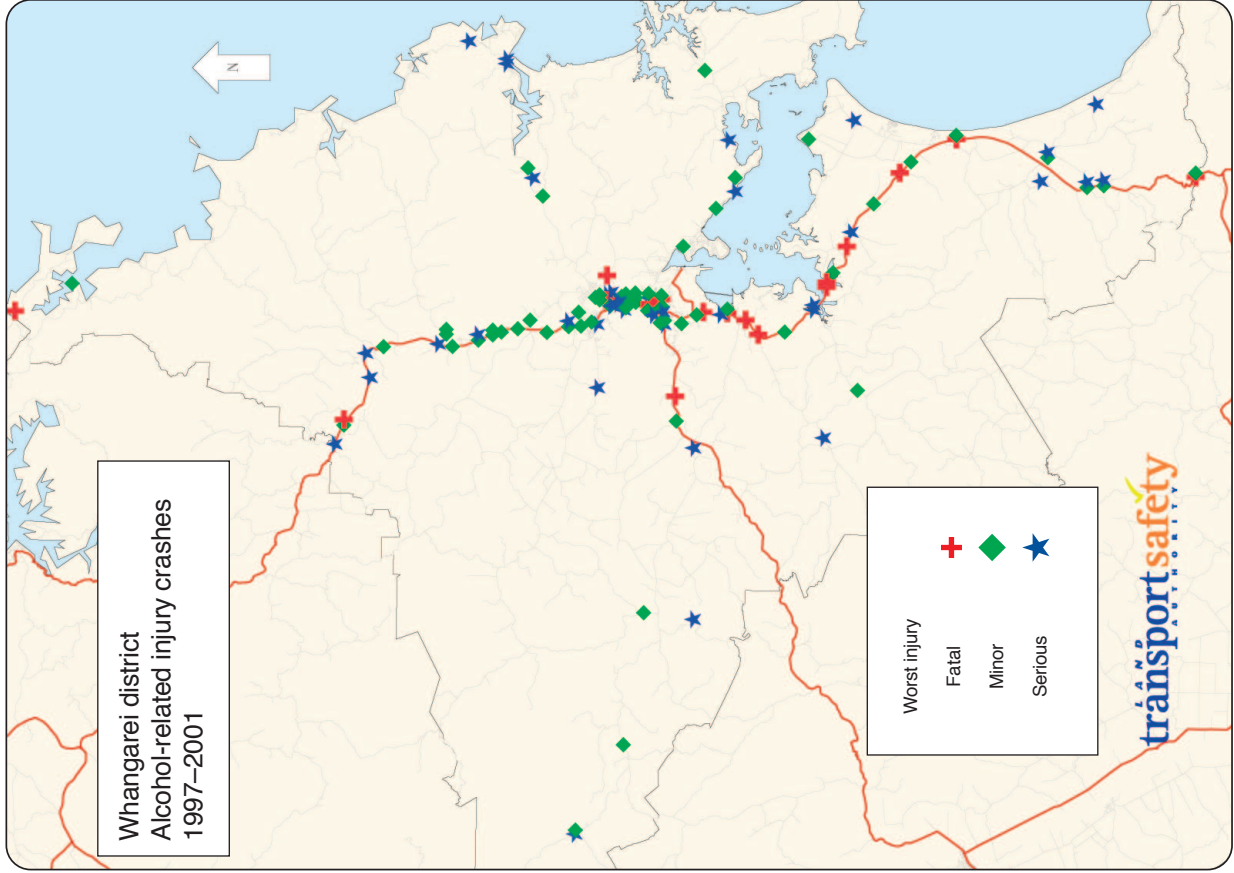
Of the crashes on curves, a roadside object was hit in 141 crashes with 15 of those being fatal crashes. If a vehicle left the road and hit an object, it was usually a ditch, cliff or bank, or a fence. Poles or trees were also commonly struck objects. Compared with other parts of the country, ditches were over-represented as objects struck after a vehicle left the road.

The three main movement types associated with these crashes were:



Recommended actions

- Conduct safety audits targeting curve delineation, clear zones, sealed shoulder width, drainage, surface friction and road condition.
- Identify substandard curves and set up a programme of safety improvement projects.
- Conduct crash reduction studies on high-risk spots and routes.
- Ensure the enforcement programme focuses on speed and alcohol while targeting high-risk locations.
- Conduct education campaigns targeted primarily at young male drivers, highlighting the need for appropriate speed, particularly on curves.
- Conduct campaigns on the dangers of fatigue and promote rest stops for drivers travelling over longer distances.





Alcohol

The Whangarei district had 116 crashes with alcohol as a factor in the five years 1997 to 2001. Fifty-seven percent were on the open road and 47 percent were on urban roads. Despite a drop in the number of alcohol-related crashes on urban roads in 2001, alcohol featured highly as a factor in urban crashes (18 percent) compared to a New Zealand average of 14 percent.

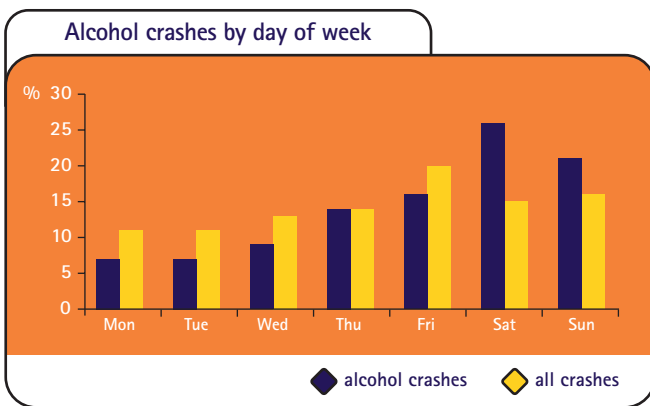
The trend for alcohol to be a factor in open road crashes remains higher than in other parts of the country. Alcohol featured in about 21 percent of the open road crashes compared with a national figure of under 17 percent.

Crashes involving alcohol were spread throughout the year but there tended to be more in the latter half of the year. They occurred mostly at weekends and between 9pm and 1am.

Many alcohol-related crashes involved hitting a roadside object, which can increase the severity of the injuries to drivers and passengers. In urban areas, poles were commonly hit. On the open road, vehicles often collided with ditches, fences and trees.

Many of the serious and fatal crashes involving alcohol occurred in the built-up area of Whangarei (particularly Kensington to Otangarei) and on the section of State Highway 1 between Whangarei and Ruakaka.

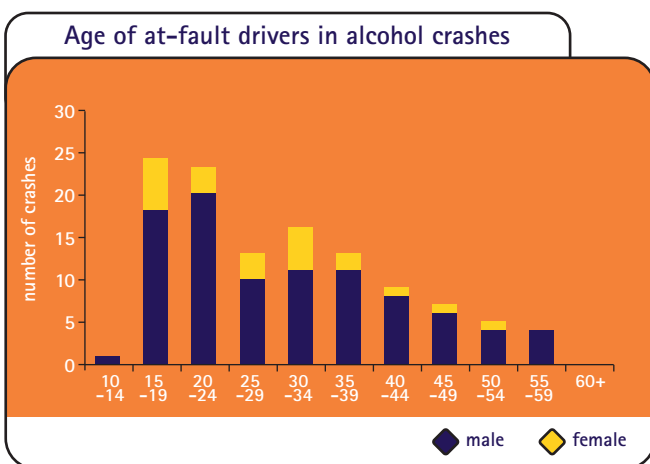
The three main movement types associated with alcohol-related crashes were:



Recommended actions

- Continue alcohol enforcement campaigns with particular emphasis at night and on weekends.
- Use targeted enforcement aimed at high-risk areas and times.
- Target both urban areas and the open road for drink-driving.
- Continue education and publicity campaigns targeting male drivers.
- Conduct studies of sections of road with high alcohol crash histories to identify improvements in delineation, markings, shoulder widths and clear zones.

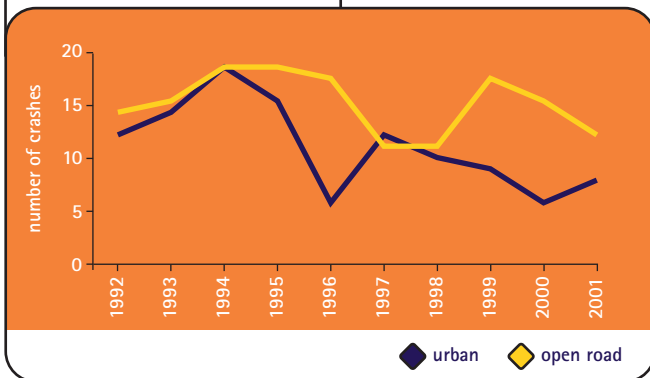
Drivers were usually aged between 15 and 25 years and most of the drivers involved in alcohol-related crashes were male (81 percent).



80 Speed

There were 111 injury crashes involving speed in the five-year period, of which 15 were fatal crashes. Speed as a factor in open road crashes was an increasing trend until 2001, when crash numbers reduced. Speed crashes were a problem in urban areas, making up 40 percent of Whangarei's urban injury crashes.

Speed-related crashes



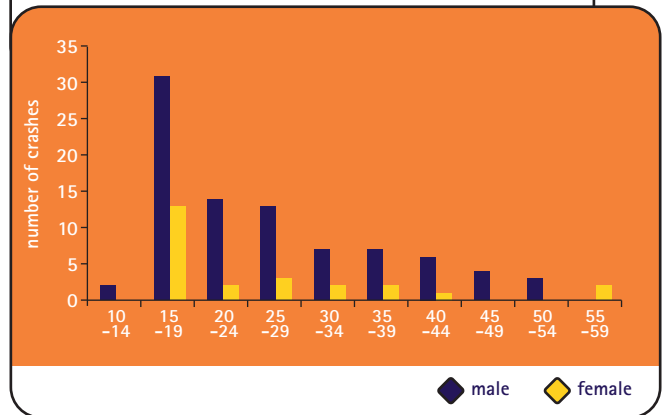
Most speed-related crashes were single vehicle loss of control crashes on right-hand curves. On rural roads another common speed-related crash type was a head-on crash after losing control on a curve.

The three main movement types associated with speed-related crashes were:



Most of the speed-related crashes involved a male driver. The at-fault drivers in speed-related crashes were usually in the 15 to 19 year age group. The gap between male and female casualties is narrowing though. In the past, male casualties outnumbered female casualties but females in urban areas have now overtaken males. The gap has also closed in rural crashes. Most female casualties are passengers in vehicles, however, rather than drivers.

At-fault driver age in speed-related crashes



A high percentage (52 percent) of speed-related crashes occurred at night compared with only 30 to 35 percent at night for all types of crashes in Whangarei.

Speed-related crashes were also much more common on wet roads, as 43 percent of the speed-related crashes occurred on a wet road surface compared with a wet road figure of 30 percent for all crash types.

Recommended actions

- Maintain the strict enforcement of speed on state highways and local roads, with attention given to speed in urban areas.
- Target enforcement to high-risk times and locations using various sources of information.
- Target enforcement and education campaigns on appropriate speed for conditions at night and in wet weather.
- Use education and publicity campaigns to raise awareness of the risks of speed, in both urban areas and on the open road.
- Conduct education campaigns and community programmes targeting young male drivers.
- Study areas with high numbers of speed-related crash rates to identify possible engineering improvements.



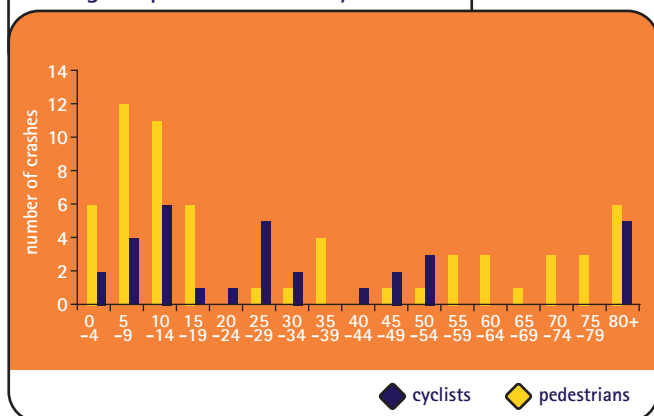
Pedestrians and cyclists

In the past five years there have been 64 pedestrians and 30 cyclists injured in the Whangarei district. Together, they make up just under 10 percent of all casualties in the district.

Pedestrians and cyclists are more vulnerable and can be seriously injured in a crash. In the five years 1997 to 2001 there were four deaths and 21 serious injuries resulting from cycle or pedestrian crashes in the Whangarei district.

The pedestrians were mainly aged under 20 with a fairly even split between males (55 percent) and females (45 percent). The cyclist casualties were mainly under 15 years old or aged between 25 to 29 years, and were mainly male (73 percent).

Age of pedestrians and cyclists

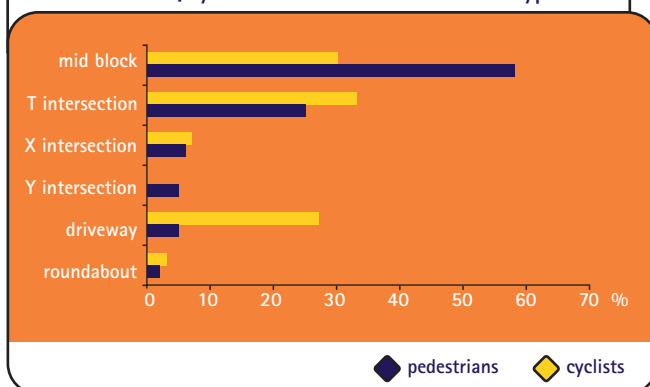


The common times of day for most crashes involving pedestrians and cyclists were before and after school, around 8am and 3pm. Most pedestrians were injured on a Wednesday, Thursday or Friday while many cyclist casualties were on Monday.

Whangarei cyclists were most commonly struck by right-turning vehicles or crossing vehicles at T junctions or driveways, or were struck from behind.

Pedestrians were usually hit while crossing the road away from a junction, ie mid block.

Pedestrian/cyclist crashes at intersection types



The most common locations for pedestrians to be injured were in the CBD, along Bank Street (Regent area) and along Kamo Road in Kensington. Most were during the day and many were on the weekends.

Cyclist crashes were more scattered over the urban area of Whangarei, but again with a number occurring along the Bank Street/Kamo Road route.

Recommended actions

- Ensure that central islands and/or kerb extensions with black and white poles are installed at pedestrian crossings spanning over 10 metres in road width.
- Review/audit pedestrian crossings to ensure kerb extensions, central islands, road markings and street lighting are installed, if the crossing warrants them.
- Encourage the development of pedestrian refuge islands on arterial roads.
- Continue to develop the arterial routes and discourage through traffic from using local streets.
- Continue to enforce cycle helmet wearing.
- Target increased enforcement to sites that are high-risk at before and after school times.
- Encourage safe cycling/pedestrian campaigns.
- Promote drivers' awareness of cyclists, particularly at T junctions and driveways.
- Promote safe cycling routes to schools.
- Where cyclists share the road with vehicles, consider marked cycle lanes, in other areas consider shared cycle/pedestrian facilities.
- Reduce pedestrian frustration by reducing waiting times at signals.

New Zealand Road Safety Programme

Reducing trauma involves a multi-pronged approach, which 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 Roothing 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 number of deaths and injuries in the district.

Funding for community projects across Northland from the NZRSP for the 2002/2003 year includes:

Project name	Funding	Police hours
Driver licensing	\$24,000	
Local road safety support	\$5,000	
Community road safety forum	\$5,000	
Youth road safety initiatives	\$10,000	
Community road safety initiatives	\$19,500	
Child restraint campaign/safety belt compliance	\$12,000	
He Oranga Poutama – Te Kohanga Reo training programme	\$5,000	
Driver education programme	\$5,000	
Pacific community safety campaign	\$5,900	
Road safety co-ordination	\$65,000	
Speed control for the conditions	\$22,000	200
Rural alcohol watch (RAW)	\$26,000	1,000
Restraint use programme	\$36,000	300
Intersection safety	\$10,000	
Driver licence training assistance	\$40,000	400
Safety culture	\$5,000	
Students against driving drunk (SADD)	\$9,500	
Small projects community involvement	\$12,300	
Sign project maintenance	\$4,500	

Police enforcement

In addition to the 1,900 police hours spent regionally on community projects, a further 29,630 hours will be delivered by police in the Whangarei district as follows:

Project	Police hours
Strategic – drinking or drugged driver, restraint device, speed, visible road safety enforcement	23,180
Traffic management – crash attendance events, incidents, emergencies and disasters, traffic flow supervision	5,040
School road safety education	1,000
Police community services	410

In addition to these hours there is delivery by the highway patrol, commercial vehicle investigation, enhanced alcohol CBT project and traffic camera operations.

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 48 percent in the Whangarei district (54 percent at state highway sites and 44 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

Whangarei District Road Safety Report 1997–2001

LTSA Crash Analysis System

Where to get more information

For more specific information relating to road crashes in the Whangarei district, 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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New Zealand Police

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Whangarei District Council

Traffic and Parking Engineer
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