

# road safety issues

July 2003

The Land Transport Safety Authority (LTSA) has prepared this road safety issues report. It is based on reported crash data and trends for the 1998–2002 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 Rangitikei District.

During 2002, the Manawatu Wanganui Region experienced the lowest recorded number of road deaths in over 20 years (28 deaths from 27 fatal crashes). This result was largely due to the efforts of many motivated and keen individuals and organisations determined to improve road safety throughout the region. While the human cost of road deaths continues to be a major problem, it is hoped that 2002 saw the start of a sustained reduction in road trauma.

While the reduction in road deaths is welcomed, this report notes a small increase in injuries in most districts within the wider region. Planned implementation of road safety strategies would ideally lead to a reduction in all injury crashes. Practitioners should not, however, lose sight of the fact that reducing the severity of a crash can deliver significant safety benefits and is a legitimate measure of success.

The social cost of crashes in the Rangitikei District during 2002 was:

- \$20.19 million on state highways
- \$10.71 million on local roads.

Compared with 2001 this is a decrease from \$38.58 million on state highways and an increase from \$7.99 million on local roads.

## Major road safety issues

### Rangitikei District

Driver behaviour

Fatigue

Speed

Pedestrians

### Nationally

Alcohol

Speed

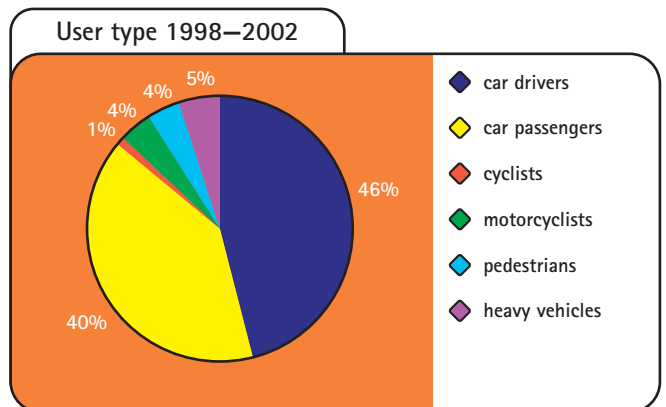
Failure to give way

Restraints

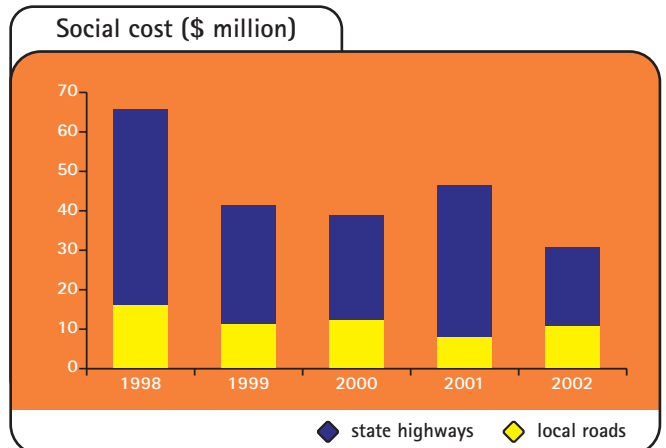
## 2002 road trauma for Rangitikei District

Deaths	6
Serious casualties	17
Minor casualties	77
Fatal crashes	5
Serious injury crashes	10
Minor-injury crashes	40
Non-injury crashes	140

## Road user casualties 1998–2002



## Estimated social cost of crashes\*



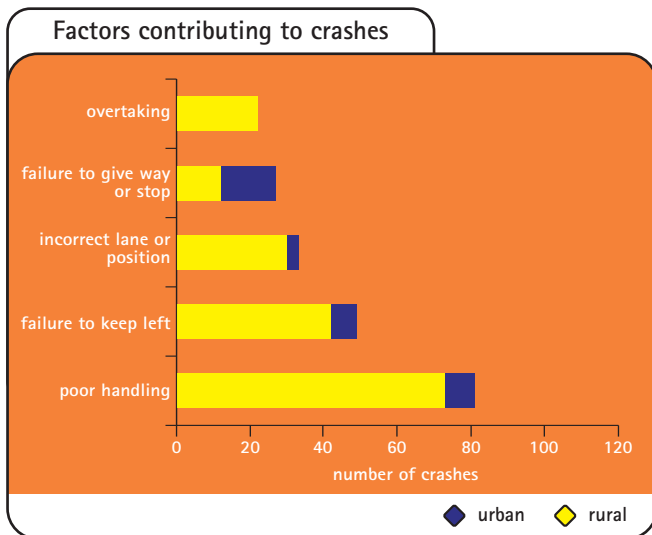
\* The estimated social cost includes loss of life or life quality (estimated by the amount New Zealanders are prepared to pay to reduce their risk of fatal or non-fatal injury), loss of output due to injuries, medical and rehabilitation costs, legal and court costs, and property damage. These costs are expressed at June 2002 prices.

# Driver behaviour

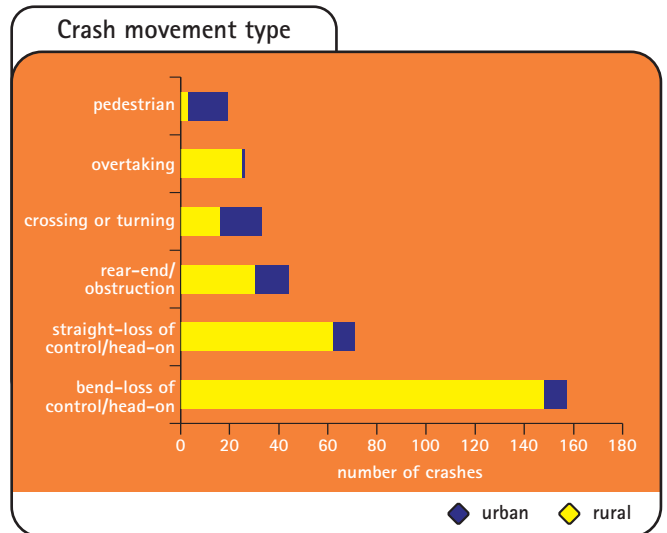
A significant majority of all crashes involve some driver factor as the most significant factor leading to a crash. Road safety initiatives seek to address this problem by focusing on three key interventions.

- Education initiatives seek to raise awareness of driving behaviour that contributes to crashes and encourage more appropriate driving choices.
- Engineering initiatives, while acknowledging that drivers will make mistakes, seek to raise the standard of roading networks to reduce the scope for error and to provide a forgiving environment when errors do occur.
- Enforcement initiatives are aimed at detecting unsafe driving behaviour and discouraging continued non-compliance with driving rules.

In the Rangitikei District, driver behaviour features as a leading cause of crashes, particularly in rural areas, which account for over two thirds of all casualty crashes. Key issues are speed, overtaking, failure to give way, incorrect position on the road and poor handling.



Such driver behaviour often results in multiple vehicle crashes in high-speed environments. Loss of control crashes and head-on crashes were the most heavily represented, with a total of 210 crashes on rural roads in the last five years. Of these, 148 crashes occurred on bends while 62 occurred on straight sections of road.



## Recommended actions

### Education

- Highlight the need to drive to the conditions and to be fully alert while driving.
- Raise awareness of problems at crash black spots.
- Support public education campaigns.
- Advocate appropriate driving behaviour.
- Teach drivers techniques to handle differing road conditions.

### Enforcement

- Target enforcement at high-risk sites.
- Support promotional activities and local campaigns.
- Focus enforcement on speed, alcohol and drivers' observance of priority driving rules.
- Identify best practice methods for enforcing overtaking and cross-centre line breaches.

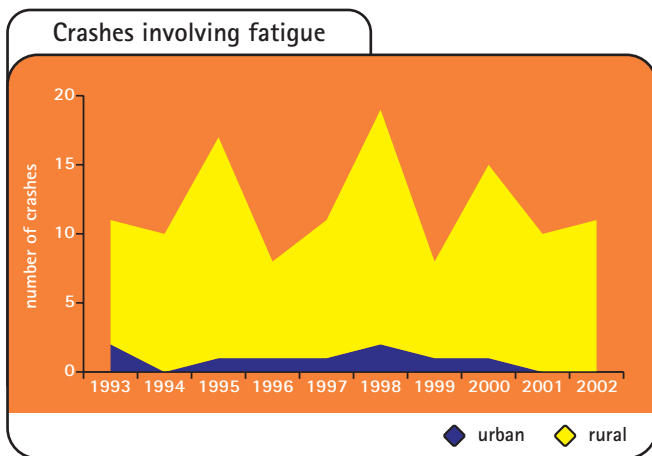
### Engineering

- Ensure advisory speed signs are of an appropriate, consistent standard.
- Consider safer road design and better delineation techniques where possible.
- Maintain good road surfaces and drainage.
- Support education programmes highlighting the need for care on bends and emphasising correct lane position and speed control.
- Ensure roadside areas are kept clear of solid objects.
- Provide sealed shoulders where appropriate.

## Fatigue

Of all driver factors in crashes, fatigue is likely to be one of the least understood and most widely under-reported. Long periods of driving, insufficient rest stops and driving at certain times of the day are all known to contribute to driver fatigue and to crashes.

In the Rangitikei District, fatigue was identified as a contributing factor in 59 rural crashes and four urban crashes from 1998 to 2002. It is a factor in over 20 percent of rural crashes and is significantly above the level experienced in similar authorities and throughout New Zealand. Fatigue crashes peaked in 1998 with 19 crashes reported.



The proximity of SH 1 and the travelling distance to major traffic generators, ie Wellington to the south, Taupo and Tongariro National Park to the north, mean that the Rangitikei District is exposed to high levels of long distance driving. Crashes involving fatigue tend to be more widely reported in areas that are more than two hours driving time from a major traffic generator. Local efforts to support driver fatigue stops are likely to be very beneficial.

## Recommended actions

### Education

- Promote awareness of fatigue as a safety issue.
- Raise profile of education courses for professional drivers.
- Promote fatigue stops and use of roadside facilities.

### Enforcement

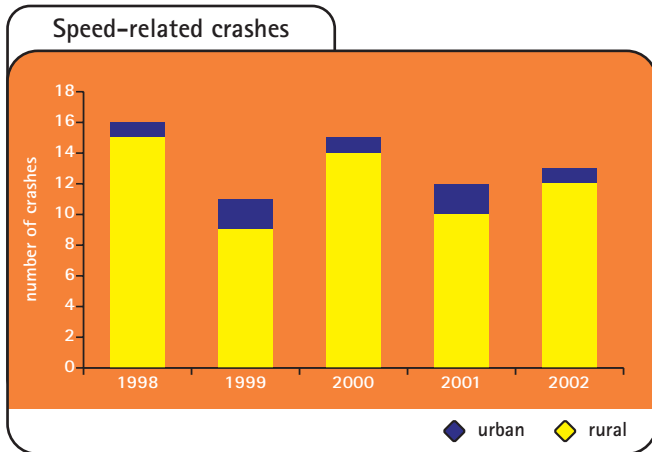
- Support education programmes aimed at fatigue.
- Maintain high-visibility patrolling at identified high-risk locations.
- Support fatigue stops at holiday times and high-risk locations.
- Monitor driving hours among commercial drivers.

### Engineering

- Maintain signs and roadside delineation to an appropriate standard.
- Ensure roadside areas are kept clear of solid objects.
- Support local efforts to curb fatigue.
- Investigate audible edge markings in high-risk locations.
- Maintain roadside facilities such as rest areas.
- Provide a 'no surprises' driving environment.

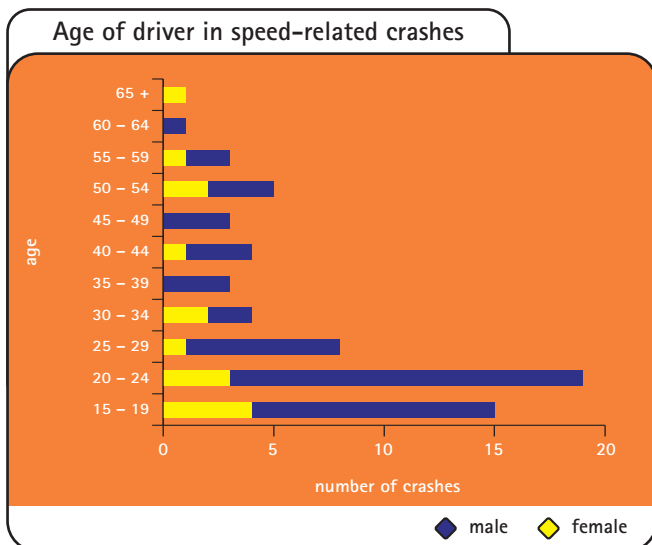
# 80 Speed

Driving at a speed too fast for the conditions was a significant contributory factor in rural crashes in the Rangitikei District for the period 1998 to 2002. Speed can be attributed to 60 rural crashes (over 20 percent) and seven urban crashes (eight percent). While rural speed-related crashes have fallen, in line with the reduction in all crashes in the region, its involvement remains at the same level experienced in similar regions and all New Zealand.



Speed was more likely to be a contributory factor in crashes for young drivers than for older drivers. Most crashes where speed was a factor involved a driver younger than 30 years of age. Males were over-represented in speed crashes, with four male drivers involved in a speed crash for every one female. Younger females aged between 15 and 24 years were more likely than older women to be involved in a speed crash.

Vehicle speed is a major determinant of the outcome of a crash. Research has shown that as speed increases, the likelihood of a crash also increases. Faster speeds will result in more severe injuries in a crash.



## Recommended actions

### Education

- Promote awareness of the risks of speed.
- Identify appropriate speeds for conditions and reinforce the need to be fully alert when driving.
- Improve attitudes to fast driving.

### Enforcement

- Focus on speed enforcement at high-risk times and places.
- Ensure a strict enforcement tolerance is observed.
- Investigate thoroughly crashes where speed is suspected.
- Target enforcement at high-risk sites, including:
  - speed at bends with advisory speed signs
  - identified crash black spots
  - travelling speeds and following distances, especially in wet weather.

### Engineering

- Ensure there is a clear delineation of curves.
- Ensure advisory speed signs are of an appropriate, consistent standard and are in the correct position.
- Maintain good road surfaces and drainage.
- Ensure roadside areas are kept clear of solid objects.
- Provide sealed road shoulders, where appropriate.
- Continue realignment projects where possible.

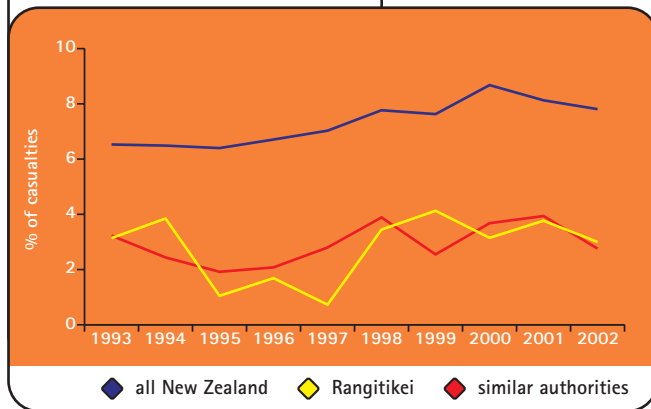


# Pedestrians

Pedestrians are a particularly vulnerable road-user group and often suffer death or serious injury when in conflict with a motor vehicle. Safety issues for pedestrians are largely confined to urban centres in the Rangitikei District. In recent years pedestrian safety has been recognised as an important road safety issue.

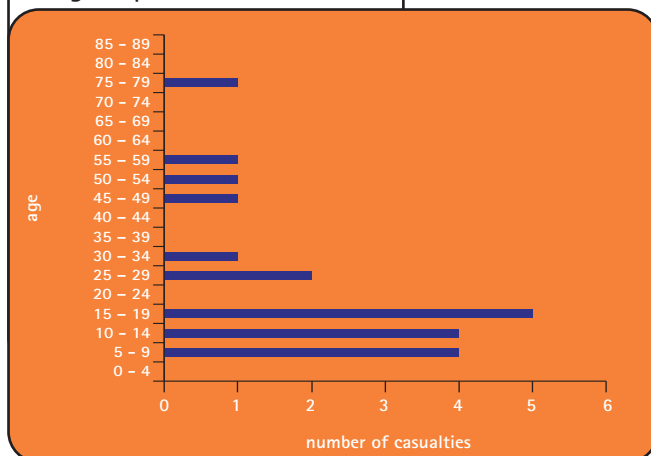
While the proportion of pedestrian casualties in the Rangitikei District was at around the same level experienced in similar authorities and below the level experienced in all New Zealand, crashes involving pedestrians were more common than in other regions. Pedestrian factors were identified as leading to a crash in 12 cases in the last five years (18 percent of crashes), a level significantly higher than experienced elsewhere. In 2002, the number of pedestrian casualties reported was three, down from four the previous year.

Pedestrian casualty trends



Pedestrian casualties tend to be very young, or older adults. Night-time crashes involving intoxicated pedestrians can also be a problem.

Age of pedestrian casualties



## Recommended actions

### Education

- Raise profile of education courses for older road users such as Safe With Age and Road Rules Refreshers.
- Raise awareness of problems at pedestrian crossings.
- Promote road safety education aimed at school age children.
- Emphasise the need to be fully alert when driving.
- Continue with school-based education programmes.

### Enforcement

- Target enforcement at high-risk sites, including:
  - intersection enforcement at regular intervals
  - monitoring driving at pedestrian crossings.
- Support promotional activities and local campaigns.
- Report and remove obstacles to vision at intersections and crossings.
- Support education programmes aimed at cyclists.
- Maintain high-visibility patrolling at identified high-risk locations.
- Undertake periodic monitoring of driver behaviour at intersections.
- Discourage unsafe driving practices among cyclists.

### Engineering

- Ensure sight lines at road crossing points are maintained.
- Ensure crossings are appropriately sited and remain conspicuous.
- Ensure regular review of crash trends. Consider safer crossing design or controls where possible.
- Consider curb extensions at crossings to improve visibility.

# New Zealand Road Safety Programme

Reducing road trauma involves a multi-pronged approach, which includes education, engineering and enforcement. The New Zealand Road Safety Programme (NZRSP) is the primary planning and funding programme for road safety activity undertaken by the New Zealand Police, LTSA and community groups. Transfund New Zealand provides funding to Transit New Zealand and local authorities for roading projects through its National Land Transport Programme.

## Community Road Safety Programme

Through the Community Road Safety Programme (CRSP), the NZRSP provides funding for community development and community programmes to support road safety and to bring about positive and sustainable changes in community attitudes and behaviours. CRSP funding of community development aims to encourage local involvement in and ownership of road safety issues. This year's review of the programme initiates a re-focus of effort and funding into community development. This involves working with and within different communities of people to assist them in becoming aware of their own local road safety issues and developing solutions to achieve better road safety outcomes.

There is a community development general fund allocation for the Manawatu Wanganui Region of \$271,500, as well as a community development dedicated fund of \$61,500. Road Safe Central, the inter-agency group responsible for regional road safety, has developed a road safety action plan for 2003/2004, where projects and initiatives will be developed and funding will be allocated to them during the year.

CRSP programmes are established, community-based road safety initiatives which meet community needs. They address road safety issues and enhance road safety in the community, eg Safe with Age, child restraints and driver licence schemes. The LTSA's general and dedicated programme allocation for the Manawatu Wanganui Region is \$178,000. The LTSA allocates funds upon application.

## Road policing

Police enforcement hours to support community projects are now allocated to police community services hours rather than to individual projects. The delivery of these hours to support community initiatives will need to be negotiated by the road safety co-ordinator.

In 2003/2004 the Police are funded to deliver 10,580 hours of road policing in the Rangitikei District (the same as in 2002/2003) as follows:

Project	Police hours
Strategic – alcohol/drugs, speed, restraints and visible road safety enforcement	8,100
Traffic management including crash attendance, incidents, emergencies and events	2,100
School road safety education	250
Police community services	130

## Road environment

The Rangitikei District has an allocation for minor safety projects on local roads in Transfund New Zealand's National Land Transport Programme 2003/2004.

## Where to get more information

For more specific information relating to road crashes in the Rangitikei District, please refer to the 1998 to 2002 Road Safety Data Report or the LTSA Crash Analysis System, or contact the people or organisations listed below:

## Contacts

Land Transport Safety Authority

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Phone 06 350 1899

Regional Road Safety Co-ordinator  
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