

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 Northland Region.

From the social cost of crashes chart below it is apparent that further safety gains have been made on Northland's state highways to bring the cost of crashes to a five-year low.

However, the small gains made on the state highway network have been more than offset by a very significant increase in non-state highway crash costs to something close to 50 percent of the total.

This increase may be more apparent than real if it is in fact due to an increase in the level of crash reporting by police. The number of fatal crashes, with a likely reporting rate of 100 percent, is at 31 for 2002 – very close to the average of the previous four years.

Open road crashes accounted for 68 percent of the total, including 88 percent of fatal crashes and 73 percent of serious injury crashes.

Major road safety issues

Northland Region

Crashes on bends

Alcohol and speed

Roadside hazards

Nationally

Speed

Alcohol

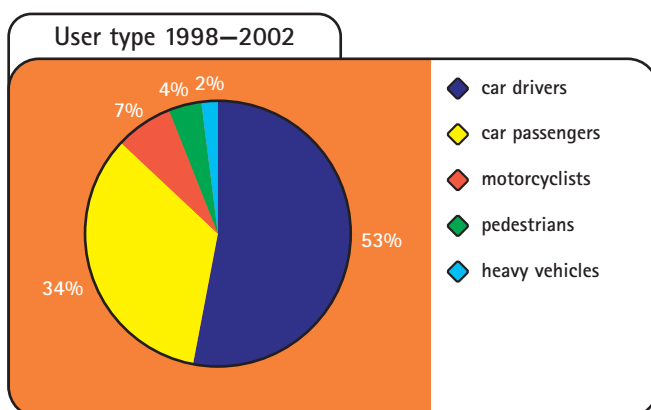
Failure to give way

Restraints

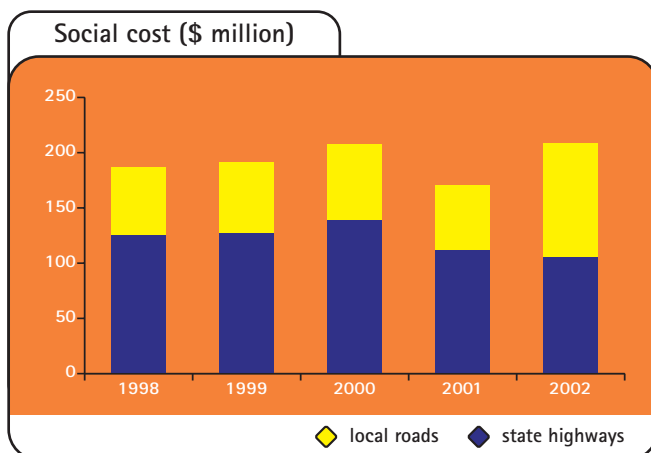
2002 road trauma for Northland Region

♀	Deaths	36
♀	Serious casualties	119
	Minor casualties	348
🚗	Fatal crashes	31
	Serious injury crashes	94
	Minor-injury crashes	215
	Non-injury crashes	862

Road deaths 1998–2002



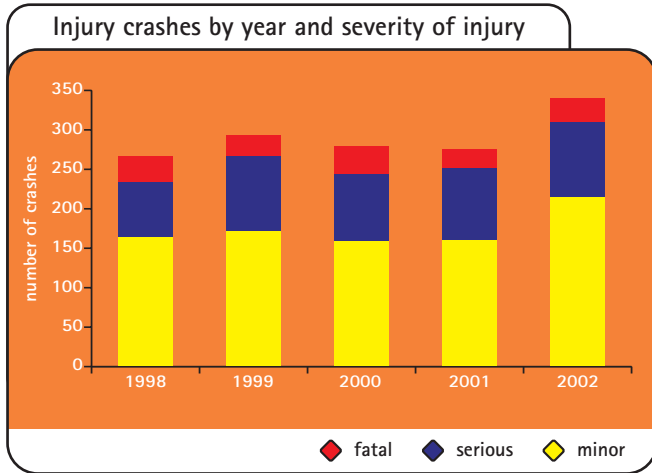
Estimated social cost of crashes*



* 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.

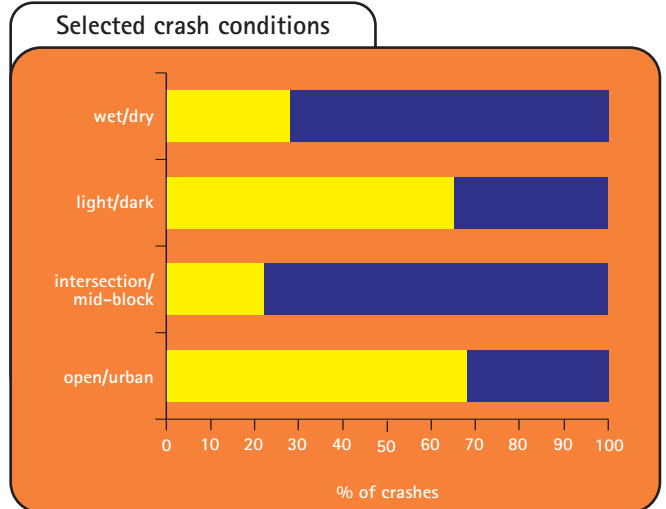
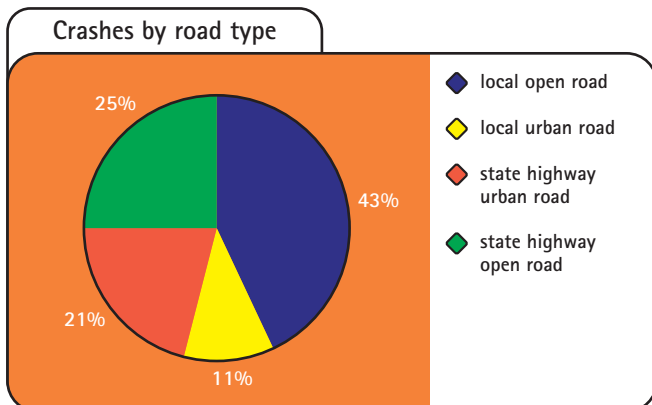
Overview of crashes

The rise in the social cost of crashes last year reflected an increase in reported crashes as illustrated by the next graph.



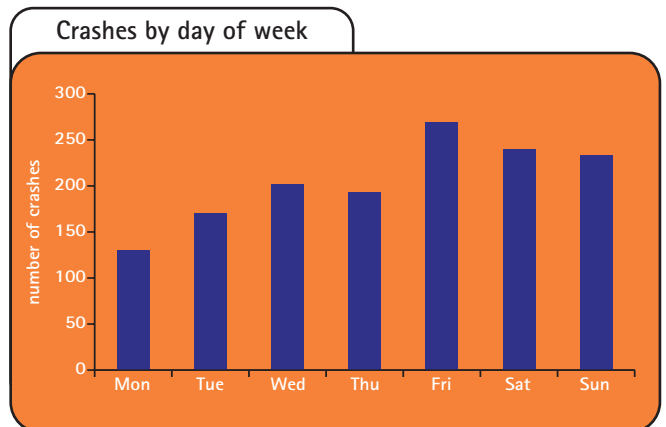
There has been a rise in estimated crash reporting rates for Northland from 41 percent (1997/1999) to 52 percent (2001/2002). The Police are to be highly commended for their efforts in this regard as crash reports are crucial for attracting funding to Northland's roads. At 52 percent there should still be opportunity for further gains in this area, despite the isolated nature of Northland's roads.

The chart below shows the split of crashes between state highway and local roads, urban and rural areas.



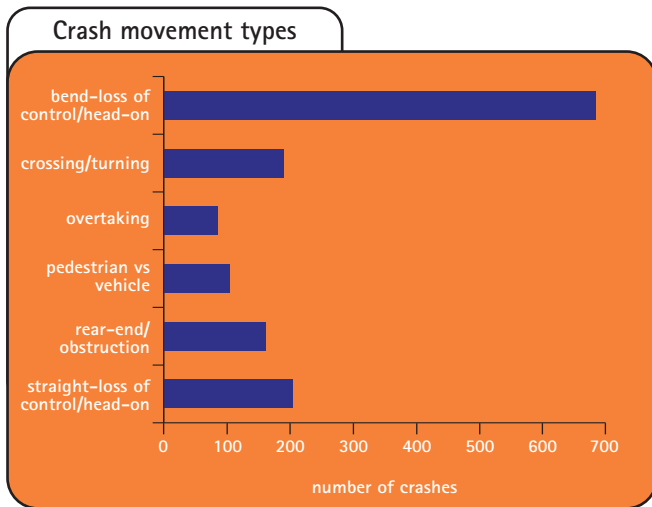
The 63:37 split of open to urban road crashes obviously reflects the rural character of Northland. The predominance of mid-block crashes also reflects this.

Historically, crash frequencies have increased towards the end of the week, especially Fridays and weekends.



Crashes on bends

The predominant movement type for crashes in Northland was loss of control and head-on crashes on bends.



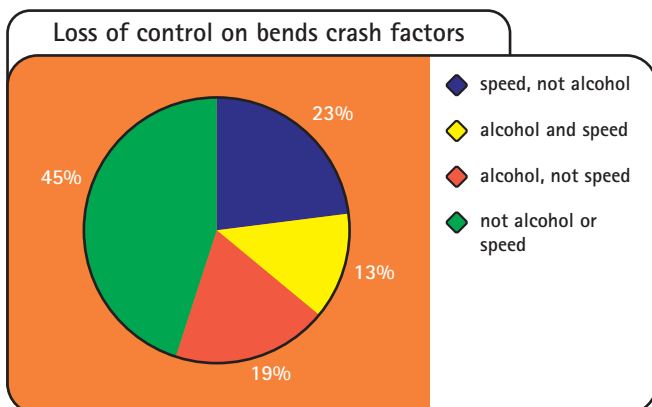
A large number of crashes on bends inevitably resulted from travelling at a speed too fast for the conditions (248 crashes).

Other recurring contributing factors were: driver inexperience (79 crashes), fatigue (65 crashes), road slippery due to rain (77 crashes), slippery road – other causes (44 crashes), deep loose metal (32 crashes) and inattentiveness (30 crashes). Faults with tyres were cited in 33 crashes.

Improving the conditions or getting drivers to slow down will need to be the main thrust of possible solutions. The conditions can be improved by maintaining a high level of skid resistance and by focusing on road conditions and vehicle road-worthiness (especially tyres).

In order to allow some room for error there should also be enough road shoulder for recovery, if necessary, and if all else fails, there needs to be adequate protection from severe consequences by the removal or mitigation of roadside hazards.

Alcohol also often contributes to the equation (198 crashes). Approximately 31 percent of crashes on bends are alcohol-related, compared with only 14 percent for other crash types.



This crash type, which dominates the statistics for Northland, should be addressed by the combined effects of enforcement (speed, alcohol, warrant of fitness), engineering (road surface, markings and delineation, hazard identification and reduction) and education.

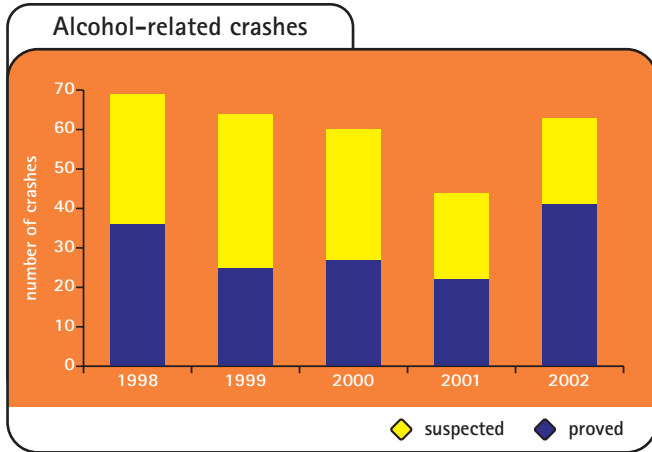
Recommended actions

- Encourage drivers to reduce speeds at bends through engineering measures such as better delineation of curves, bringing the edge lines in to narrow the apparent road width (where possible), and upgrading of advisory signs and chevrons.
- Support strategic enforcement of speed and alcohol limits, the use of restraints and vehicle warrants of fitness through the use of risk targeted patrol plans.
- Consider a campaign aimed at identifying worn treads on tyres (including vehicles with current warrants because tyres are sometimes borrowed for the test). Consider waiving fines on the production of receipts for new (not used import) tyres.
- Identify and monitor problem bends for skid resistance and signs of increased crash numbers. Develop intervention strategies that anticipate reduced skid resistance.
- Consider widening roads and sealing shoulders where possible.
- Consider the use of Vibraline edge lines and centre lines to alert fatigued or drunk drivers that they are leaving the road.
- Ensure metalled roads are swept of excess loose metal.
- Promote driver education. The high number of inexperienced drivers suggests that this could be very effective.



Alcohol and speed

Alcohol and speed are not as prevalent in the general crash data as they are for crashes on bends but are still cited in 36 percent of all injury crashes.



The chart above shows a large jump in alcohol-related crashes in 2002, particularly in the category that refers to alcohol tested above limit or test refused. At the same time the crashes merely suspected of having alcohol as a factor have reduced. This seems to indicate that the Police are attending more alcohol-related crashes.

To mitigate the effect of changes in reporting rates, it is useful to look at alcohol crashes as a proportion of all crashes. In 2002 this was 19 percent, up from 16 percent the previous year but still better than the preceding three years (26, 22 and 22 percent respectively).

Approximately 21 percent of crashes over five years were reported as involving excess speed for the conditions. However, no discernible trend was apparent.

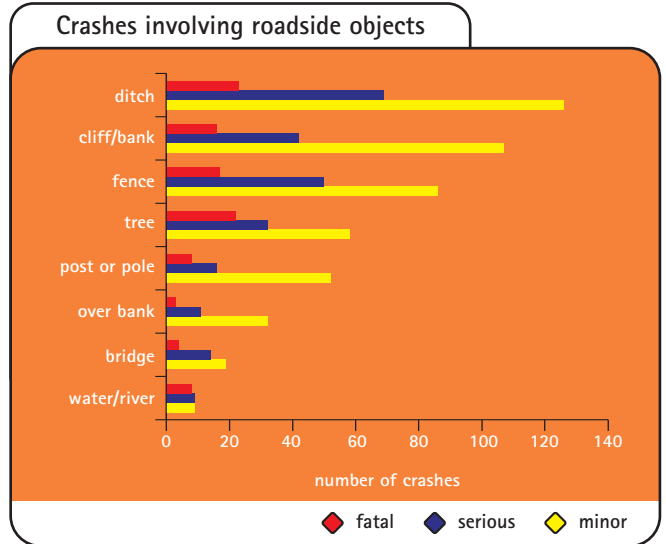
Recommended actions

- Police should be directing enforcement to the times and areas of greatest risk using risk targeted patrol plans.
- Police need to implement the recommendations of speed camera site reviews to increase the effectiveness of speed cameras in reducing crashes.



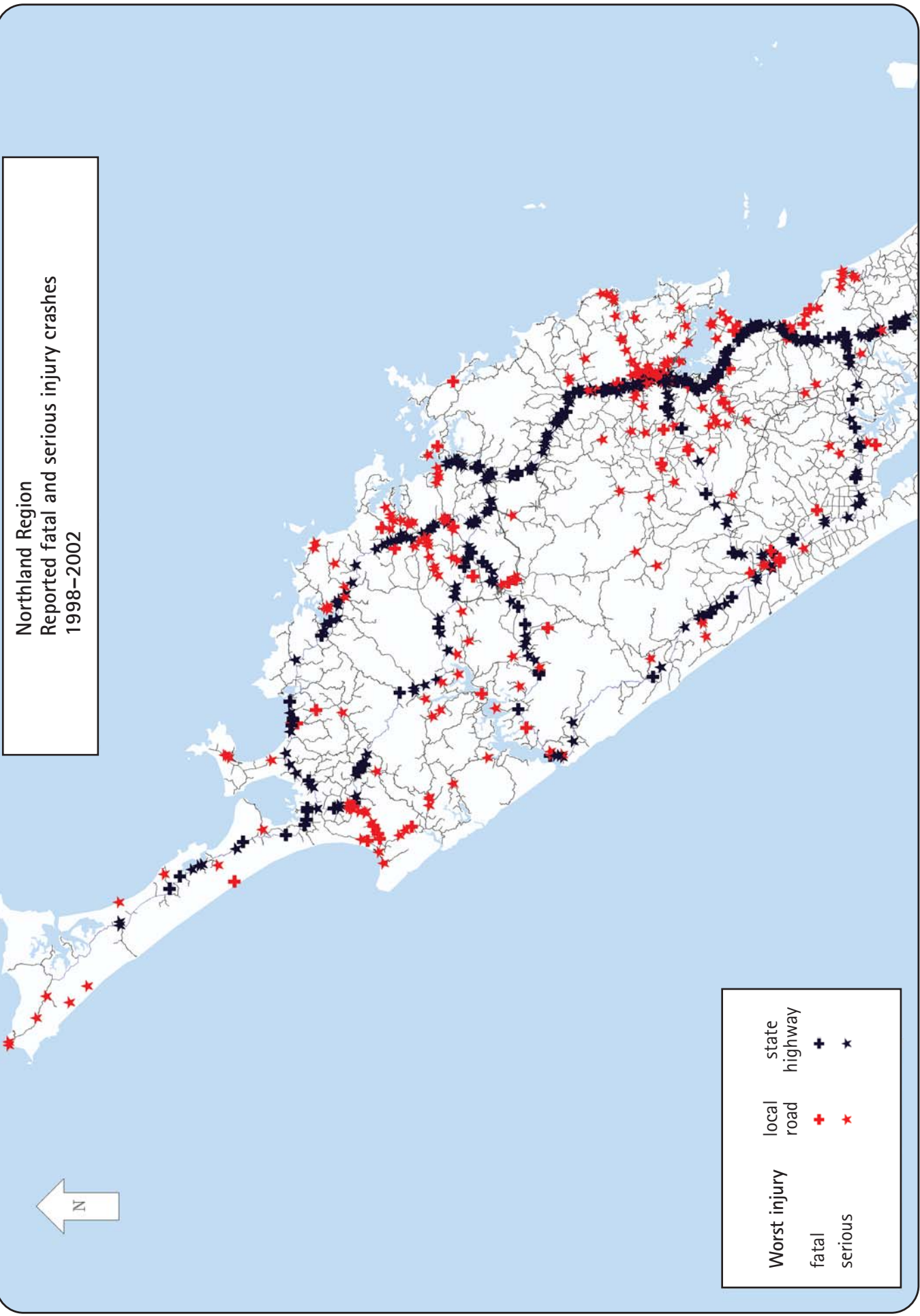
Roadside hazards

The following is a chart of the most commonly struck hazards divided into the severity of crashes. Particular attention should be given to hazards struck in fatal and serious crashes, rather than minor-injury ones.



Recommended actions

- Seek agreement on legal and funding issues from all agencies involved.
- Develop a roadside hazard management strategy to:
 - identify hazardous roadside objects
 - rank the hazards
 - develop a programme to either remove or protect hazards.
- Ensure adequate clear zones are included in all new road projects.
- Use the safety audit approach for all new projects and as a management tool for hazards in the existing road environment.



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 projects

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 initiatives aims to encourage local involvement and ownership of road safety issues, and to target local resources and effort to local risks. 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.

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 56,055 hours of road policing in the Northland Region as follows:

Project	Police hours
Strategic – alcohol/drugs, restraints, speed and visible road safety enforcement	41,755
Traffic management – crash attendance events, incidents, emergencies and disasters, traffic flow supervision	9,530
School road safety education	2,200
Police community services	2,570

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 a massive 42 percent in the Northland Region (45 percent at state highway sites and 39 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

Northland Region Road Safety Report 1998–2002

LTSA Crash Analysis System

Where to get more information

For more specific information relating to road crashes in the Northland Region, please refer to the 1998 to 2002 Road Safety Data Report or the Land Transport Safety Authority Crash Analysis System, or contact the people or organisations listed below:

Contacts

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