

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 Auckland.

As previously noted, the issues identified each year are likely to remain reasonably constant, taking into account the nature of the Auckland environment and level of activity, and the fact that 80 percent of the data analysed each year was also included in last year's analysis.

Accordingly, the issues identified again suggest the best gains can be made in Auckland by focusing the road safety effort for the coming year on vulnerable road users, crossing and turning at intersections, road environment management and speed.

Note: This report considers only urban road crashes (speed limit less than 80km/h).

Major road safety issues:

Auckland

Vulnerable road users

Crossing and turning

Road environment

Speed

Nationally

Speed

Alcohol

Failure to give way

Restraints



2001 road toll for Auckland



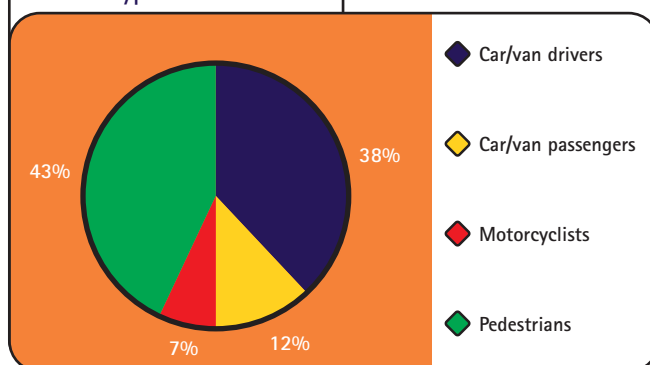
Deaths	12
Serious casualties	168
Minor casualties	983



Fatal crashes	11
Serious injury crashes	153
Minor injury crashes	757
Non-injury crashes	5,679

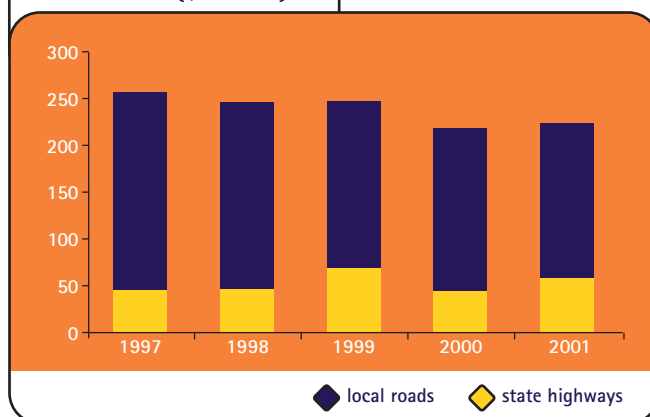
Road deaths 1997–2001

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.

Vulnerable road users

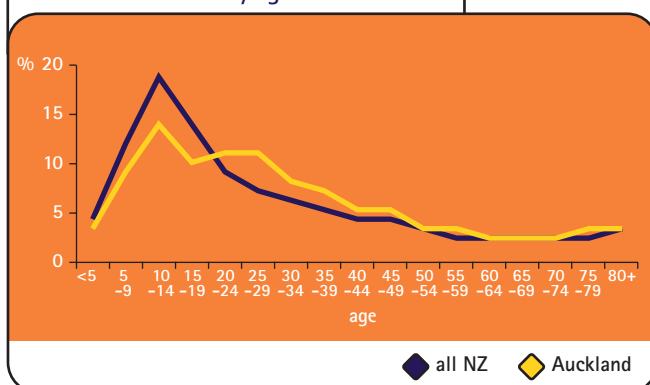
Vulnerable road users, particularly pedestrians, continue to be the group most likely to suffer a fatal injury while using roads in Auckland. Eight of the 12 fatalities in the city in 2001 involved the death of a road user on foot. As a percentage of all casualties, those resulting from a crash between a pedestrian and a vehicle were both over-represented and trending upwards in Auckland (from 13 percent of all casualties in 1997 to almost 18 percent in 2001).

This is not surprising, as the metropolitan nature of the city means that people and communities are operating and interacting within a bustling road-based transport network. From 1997 to 2001, pedestrian casualties continued to be over-represented in Auckland when comparison is made with peer group cities and data for the whole of New Zealand. Pedestrians represented around 18 percent of all casualties in Auckland, whereas only 14 percent of all casualties were on foot in the rest of New Zealand.

Interestingly, the other vulnerable group, cyclists, at around eight percent of all casualties, were slightly under-represented in comparison with the rest of the country. This may be explained by a lower number of cyclists per capita in relation to other metropolitan areas and a low reporting rate for this type of crash.

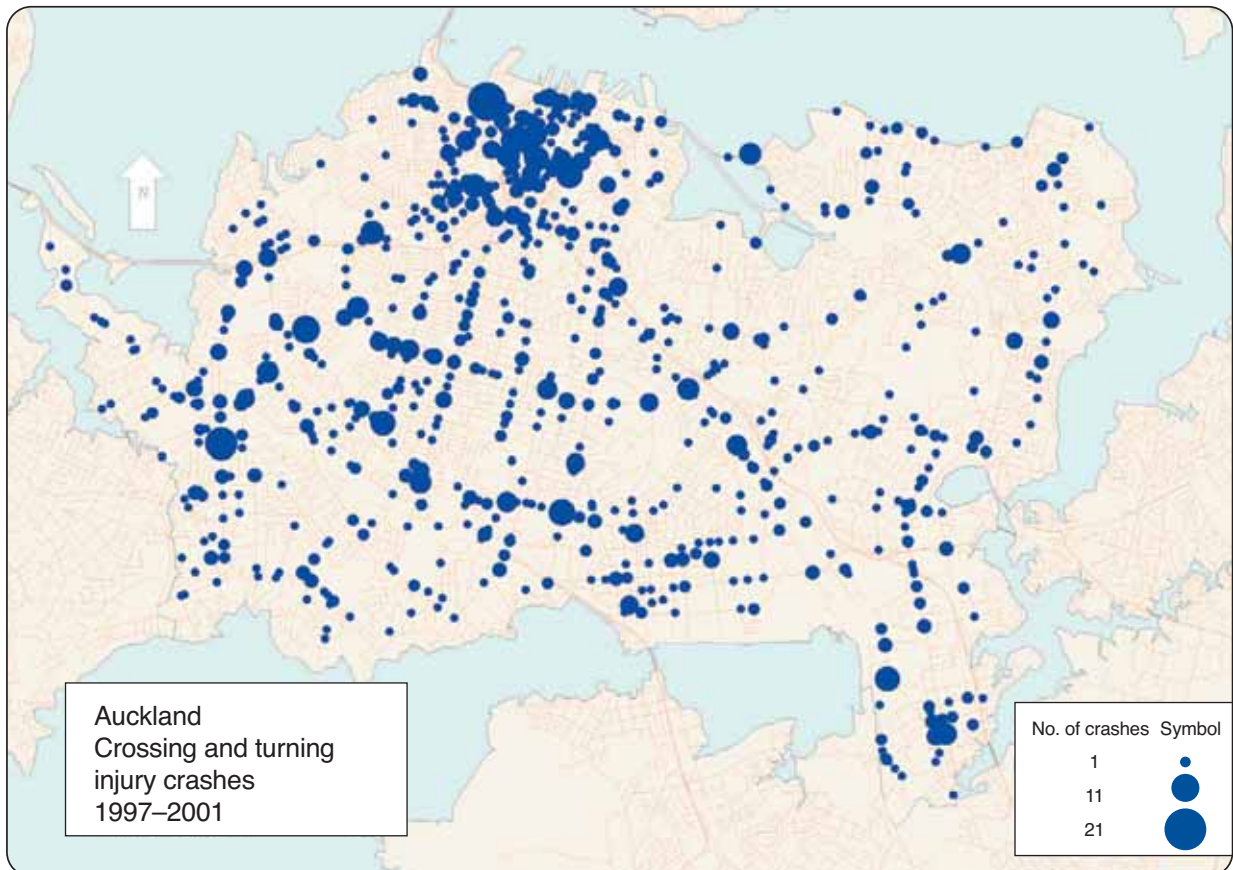
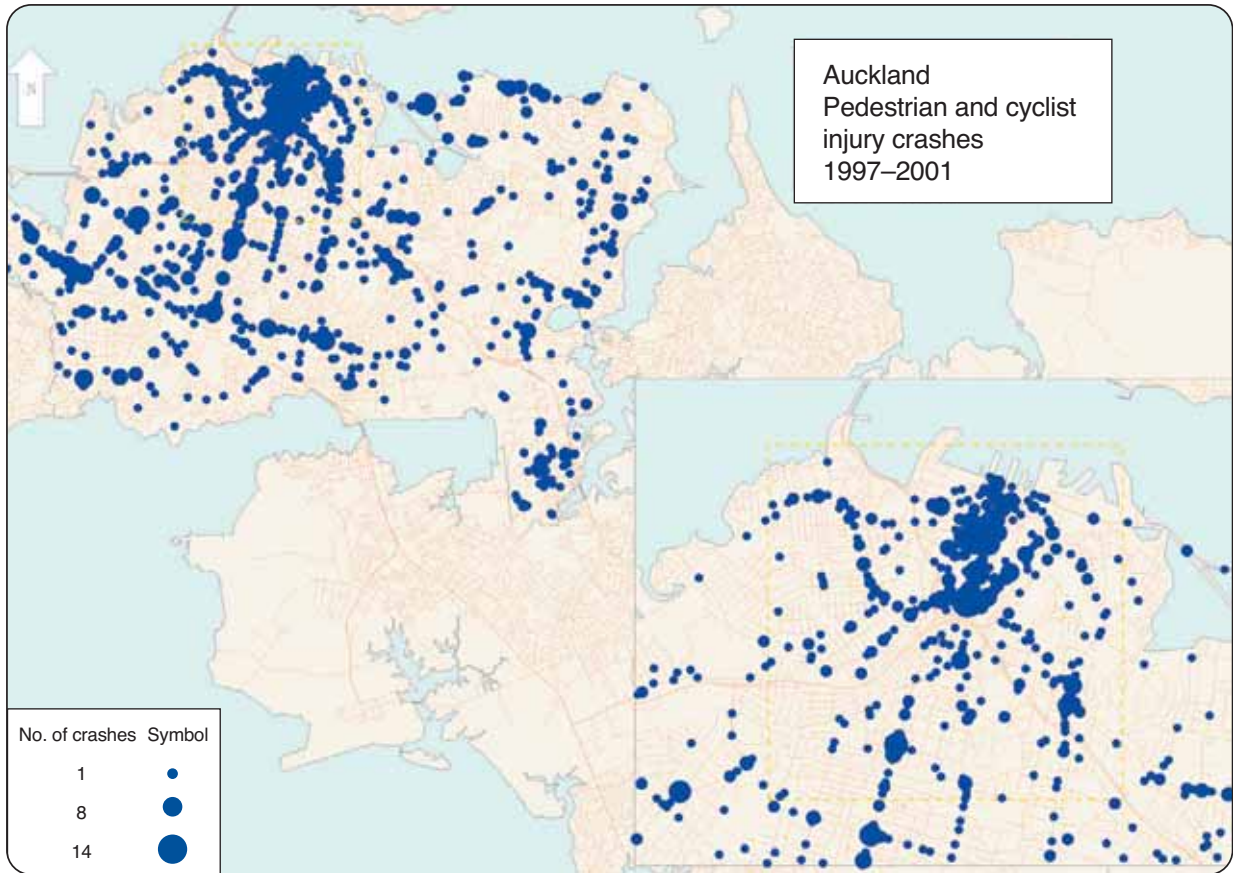
The age distribution of vulnerable users injured in Auckland also showed a difference from the rest of the country. In Auckland, both pedestrians and cyclists in the 20 to 44 year-old age group were at higher risk than nationally, while children were at a lower risk in comparison. However, child pedestrians remained the group facing by far the greatest risk overall, in line with national statistics.

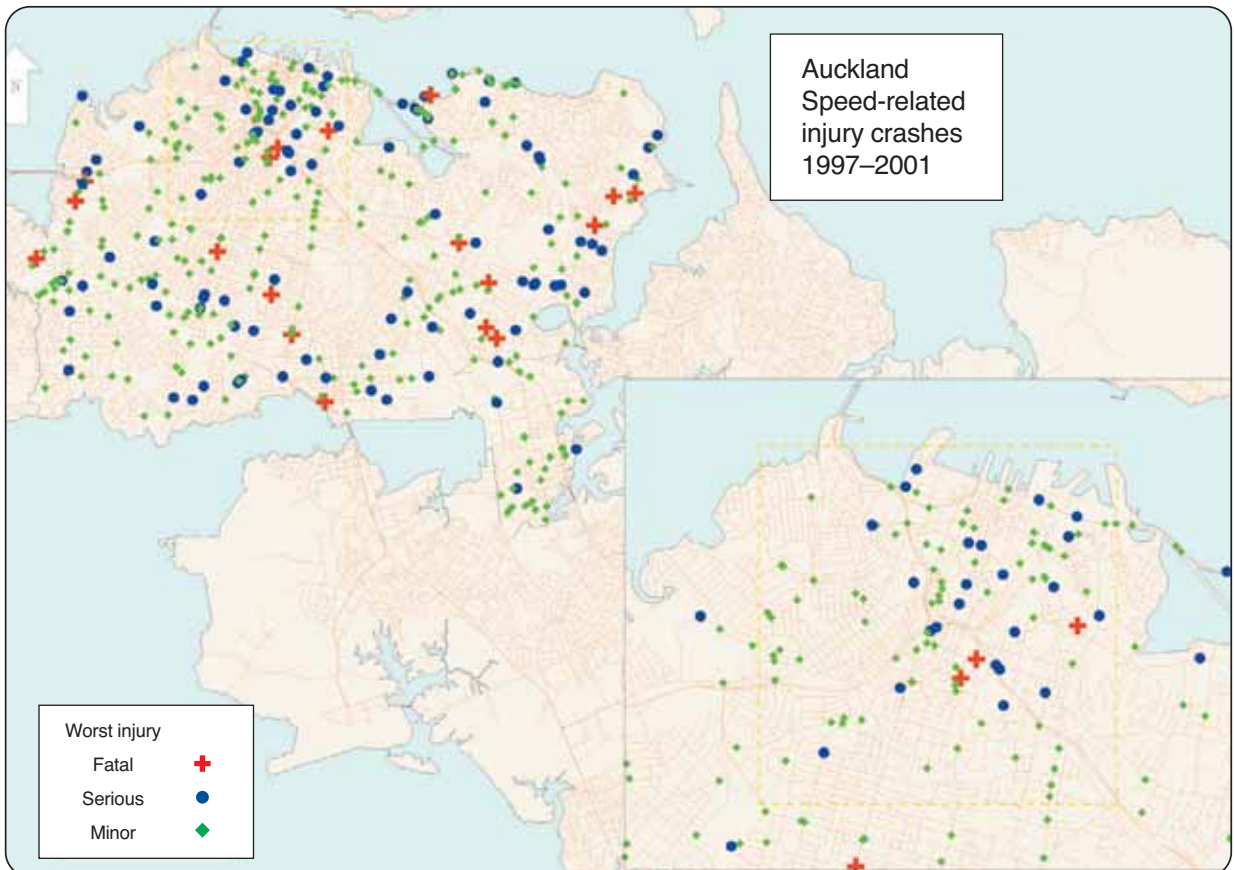
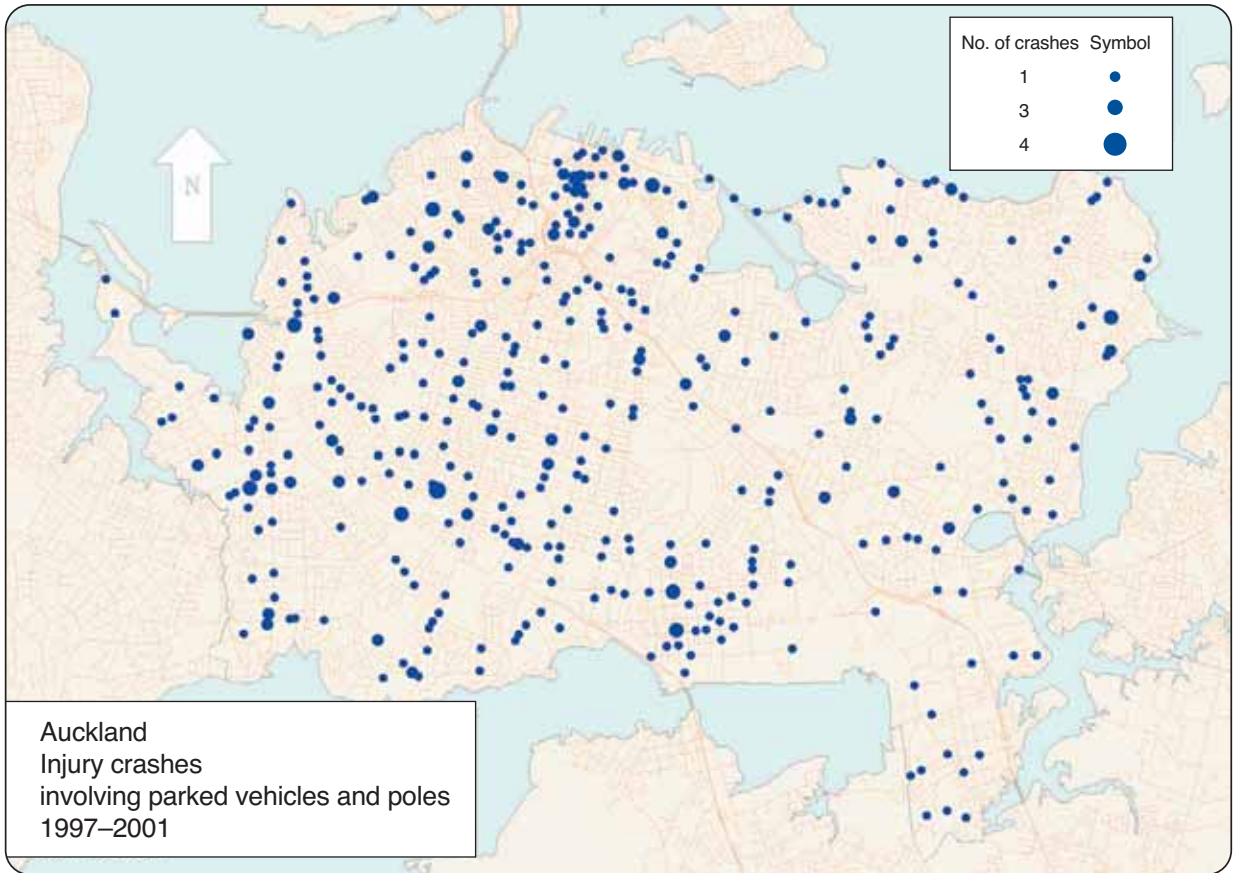
Vulnerable users by age 1997–2001



Recommended actions

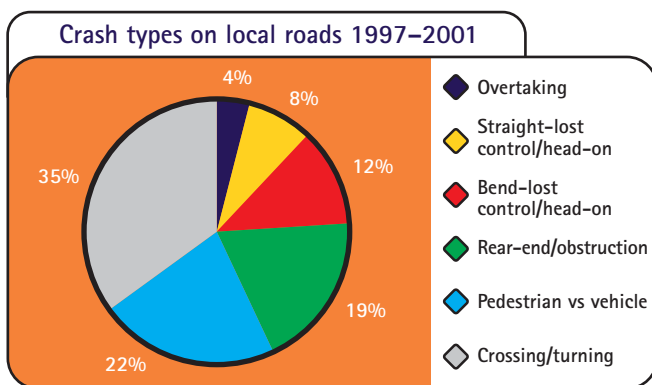
- Continue to develop and support education programmes aimed at improving pedestrian discipline.
- Continue to investigate and provide improved access across busy roads for pedestrians, particularly in the vicinity of activities that generate pedestrian activity, such as schools and shopping areas.
- Ensure that pedestrians are well provided for in the development of new projects or changes in land use.





Crossing and turning

Because of the huge number of potential conflicts, crossing and turning type crashes continued to be the most prevalent type in Auckland. These accounted for 35 percent of all crashes reported in the period 1997–2001. The vast majority of these crashes occurred at urban intersections where crossing conflicts principally occur.



However, the number of crashes of this type is trending downwards and Auckland is not now over-represented when compared with peer group cities and the data for all New Zealand. A failure to give way or stop continued to be the predominant factor contributing to crossing and turning crashes, while poor observation remained the second most prevalent factor. The number of crashes with a failure to give way or stop recorded as a factor continued a gradual downward trend.

While many crossing or turning crashes do not result in injury due to low impact speeds, it is this type of crash that can result in fatal or serious injury as speeds increase.

Recommended actions

- Establish a system for monitoring crash rates at individual intersections, following up with investigation and remedial treatments where indicated.
- Establish flush medians on major routes where possible, to facilitate safe crossing and turning movements in uncontrolled situations.
- Monitor off-peak traffic speeds at key intersections and ensure that signal timings, particularly the amber phase, reflect actual operating speed rather than an assumed or theoretical speed.
- Continue to support and encourage police enforcement of intersection discipline, including compliance with signals and sign controls.
- Continue to use roundabouts, where feasible, to reduce crossing and turning conflicts.
- Develop community-based projects highlighting the risks of intersection driving and failure to give way when turning.



Road environment

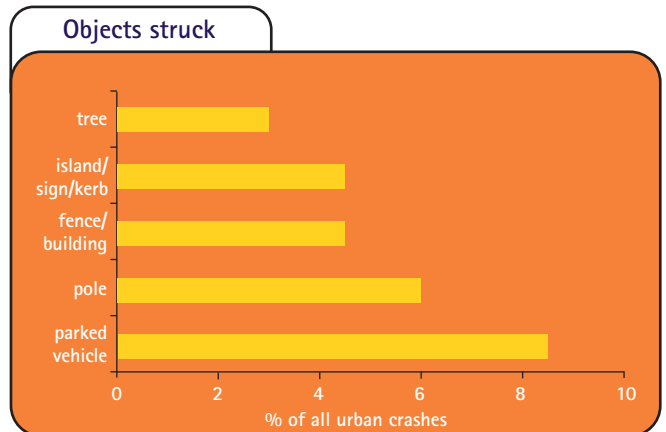
The contribution that good design and management of the road environment can make to better road safety outcomes is increasingly recognised internationally. Knowledge and application of sound traffic engineering principles and the proactive and effective management of hazards can reduce the number and severity of traffic crashes, and the injuries resulting from them.

While the generally lower speed environment in urban Auckland meant that many crashes did not result in fatal or serious injuries, the huge volume of activity in the city still resulted in a substantial contribution to the national social cost of road crashes.

Accordingly, Auckland must continue to face the challenge of progressively making its road environments safer.

Collisions with objects were not over-represented in Auckland in comparison with either the peer group cities or data for all of New Zealand. However, as a proportion of all crashes, this crash type has been gradually increasing since 1995 (21 percent in 1995, up to 24 percent in 2001).

Parked vehicles represented the objects most commonly struck (8.5 percent of all urban crashes), while poles (six percent of all urban crashes) were still prevalent. Fences and buildings and signs, islands and kerbs both represented around 4.5 percent. Collisions with objects, in total, accounted for around 24 percent of all urban crashes in Auckland.



While the first step in good hazard management is to eliminate items that do not need to be in the road environment, it is equally important that traffic control devices and other items of street furniture that need to be there, are designed and installed to minimise the risk of injury.

Recommended actions

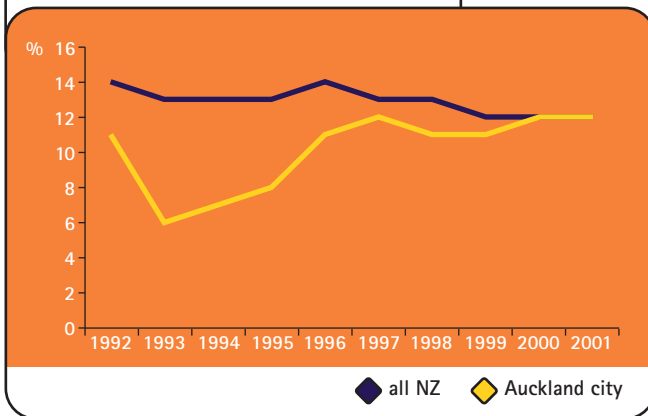
- Examine and review parking controls to minimise isolated parked vehicles on arterial routes, particularly at night.
- Ensure that well maintained edge lines separate parked and moving traffic on arterial routes.
- Adopt safety audit as a tool for identifying and improving deficiencies on existing routes.
- Continue a commitment to the elimination of service poles within the road environment by working with service authorities to have services located underground.
- Continue to support the crash reduction study programme, which uses crash data to identify existing and emerging black spots and recommends low cost remedial treatments.

Speed

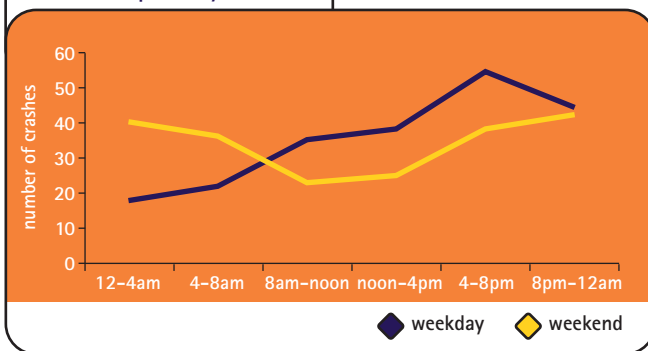
Speed too fast for the prevailing conditions continues to be the greatest single contributor to injury and trauma on New Zealand roads.

Crashes due to excessive speed on the Auckland urban network have continued an upward trend since the early 1990s, despite a gradual downward trend nationally and in peer group cities. This means that additional effort, particularly police enforcement effort on key arterial routes, will be required in the short to medium term to halt and reverse this trend.

Auckland city urban speed trend



Urban speed by time



On weekdays, speed-related crashes increased as the day progressed, peaking in the 4pm to 8pm period.

On weekends, the peak occurred in the late evening and early hours of the morning (generally between 8pm and 4am).

Recommended actions

- Continue developing an effective speed measurement programme to ascertain on which roads and at what times speeds are inappropriately high.
- Continue to work with police to address the identified locations and times through their patrol planning processes.
- Continue programmes aimed at influencing the highest risk groups, principally males between 15 and 29 (the highest risk group remains the 20 to 24 age group).
- Focus on addressing the safety of curves, particularly at night and in the wet. Over half of all speed-related crashes still occur at or near curves.
- A quarter of speed-related crashes still involve collision with a roadside pole, despite the substantial progress made in recent years towards moving services underground.

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 Auckland.

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

Project	Funding	Police hours
Road safety co-ordinators	\$76,000	
Speed	\$20,100	300
Intersection safety	\$40,000	1,000
Pedestrian safety	\$40,000	400
Road user safety priority projects	\$20,000	800
Good Shepherd Tongan Drivers Licence Group	\$3,000	
'Drive ahead'	\$3,000	
Kaumatua and road safety	\$10,000	
Road safety and Tongan protocol	\$3,000	

Police enforcement

In addition to the 2,500 police hours spent in the city on community projects, a further 181,150 police hours will be delivered by police in Auckland as follows:

Project	Hours
Strategic – alcohol/drugs, restraint, speed and visible road safety enforcement	121,670
Traffic management – crash attendance events, incidents, emergencies and disasters, traffic flow supervision	48,300
School road safety education	6,300
Police community services	4,880

Road environment

The LTSA's Crash Reduction Monitoring database shows that works implemented as a result of crash reduction studies have only reduced crashes at the study sites by nine percent in Auckland (30 percent at state highway sites and just five percent at local road sites). This is well below the national reduction of 35 percent.

A review and investigation of those sites showing the least crash reduction should be carried out and recommendations from recent studies should be implemented as soon as possible. Further studies undertaken could consider mass action treatments or local area traffic management schemes to reduce crash problems.

References

Auckland City Road Safety Report 1997–2001

LTSA Crash Analysis System

Where to get more information

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

Land Transport Safety Authority

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