

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 Manukau City. The issues identified in this report are based on analysis of crash data for the city’s local roads only. State highways, which are covered in a separate report, are excluded except for the road toll figures given opposite.

When compared with other New Zealand cities, Manukau City has a relatively low number of crashes per 10,000 population. However, it does have a relatively high rate of crashes per 100 million vehicle kilometres travelled.

Crash rates in other countries, including Australia, are well below those found in New Zealand. If New Zealand is to improve its level of road safety, all road controlling authorities must endeavour to further lower their crash rates. Injury crash numbers in Manukau City for the past five years have remained relatively static, so there is plenty of scope for improvement. The issues outlined in this report will hopefully contribute to this process.

Major road safety issues:

Manukau City

Young pedestrians

Intersections

Alcohol

Collisions with objects

Nationally

Speed

Alcohol

Failure to give way

Restraints



2001 road toll for Manukau City



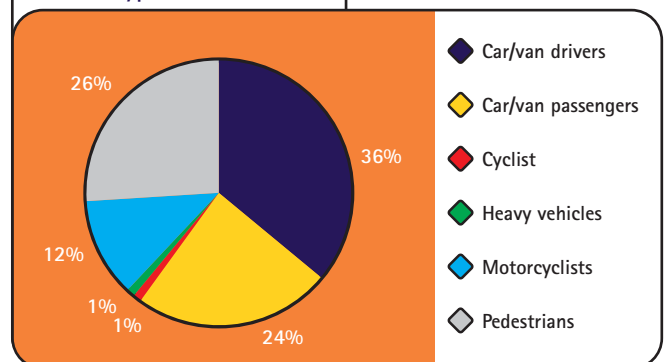
Deaths	16
Serious casualties	111
Minor casualties	603



Fatal crashes	16
Serious injury crashes	88
Minor injury crashes	413
Non-injury crashes	2,273

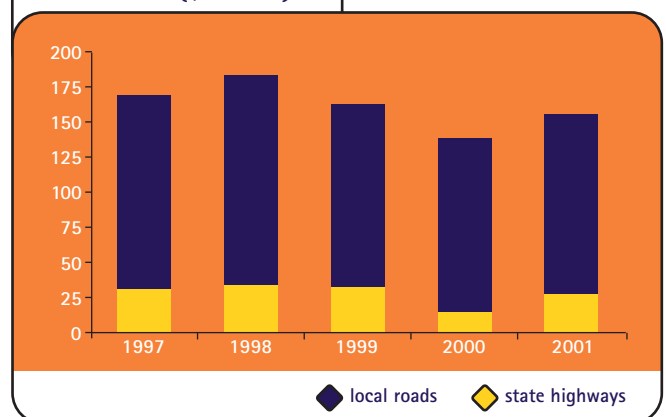
Road deaths 1997–2001

User type 1997–2001



Estimated social cost of crashes*

Social cost (\$ million)

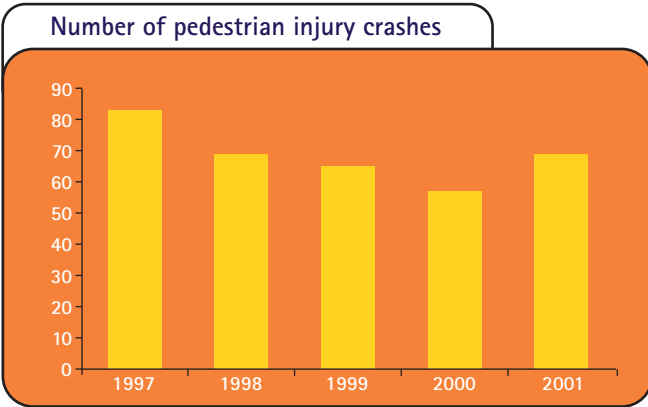


* The estimated social cost includes loss of life or life quality (estimated by the amount New Zealanders are prepared to pay to reduce their risk of fatal or non-fatal injury), loss of output due to injuries, medical and rehabilitation costs, legal and court costs, and property damage. These costs are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

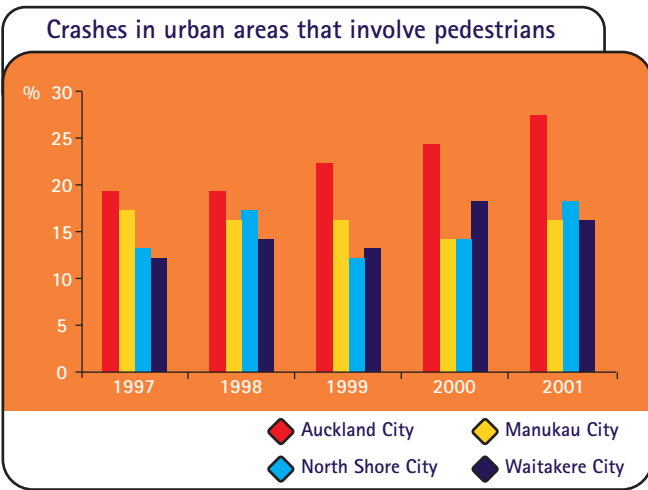


Young pedestrians

Between 1997 and 2000 the number of pedestrians injured on Manukau roads declined. 2001, however, saw a small rise.



Within the context of all injury crashes on urban roads in Manukau City, the pedestrians' share has remained relatively static. This is the opposite to other regional cities, which show rising proportions of pedestrian crashes. In the face of an expanding and young population in Manukau this is commendable.



Manukau City is New Zealand's third largest city with a population of 283,000. It has a young population with 27 percent of residents aged below 15 years (the all New Zealand value is 23 percent).

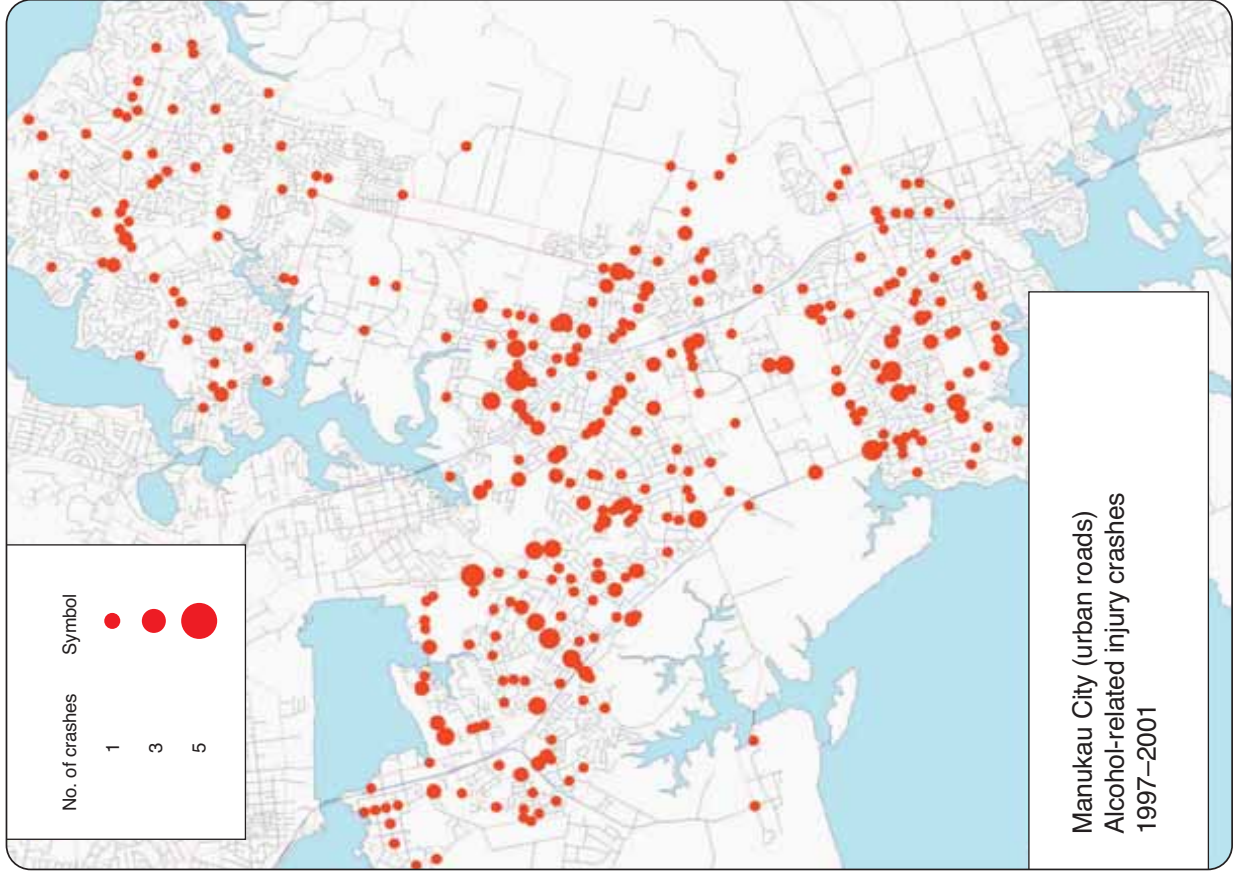
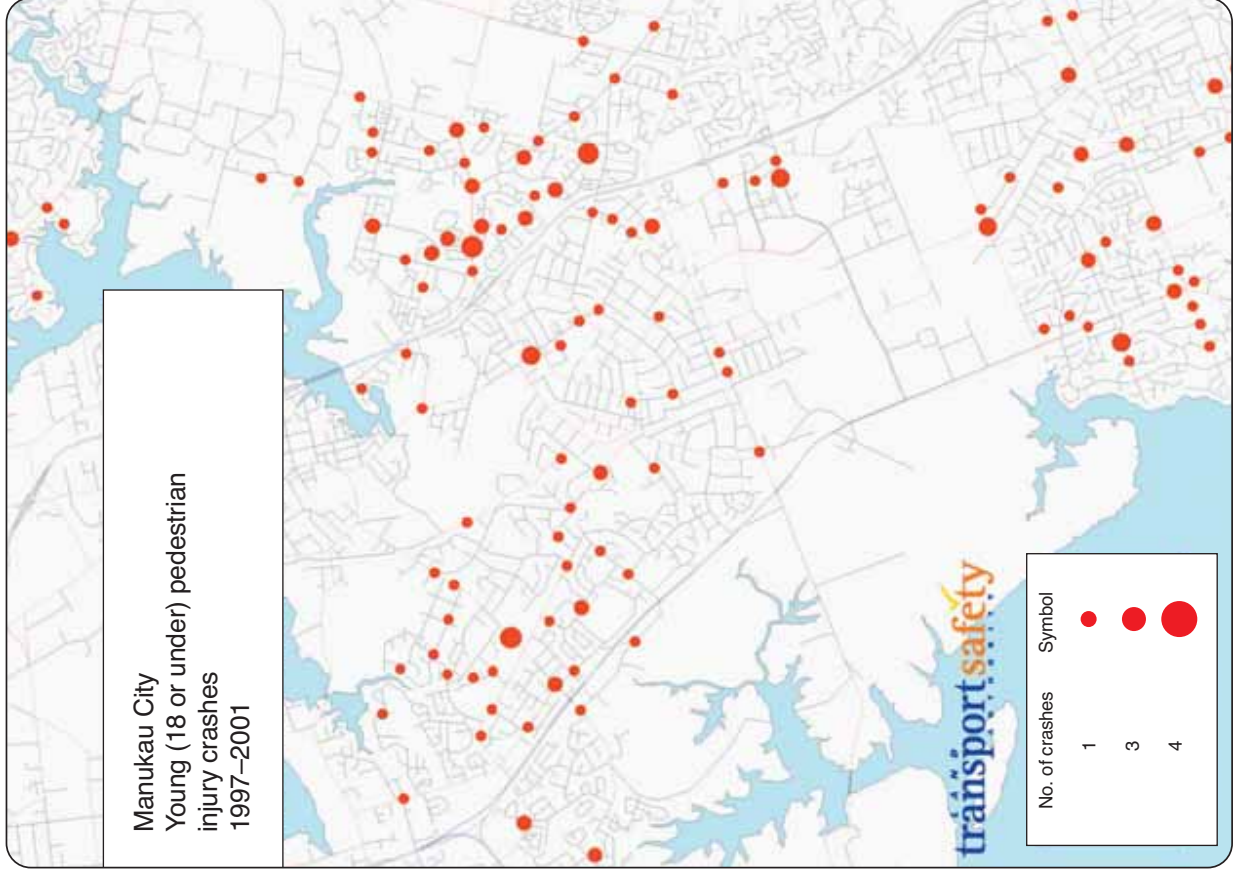
It is of little surprise then that 191 of the 343 pedestrian casualties in Manukau City involved people aged 18 or under.

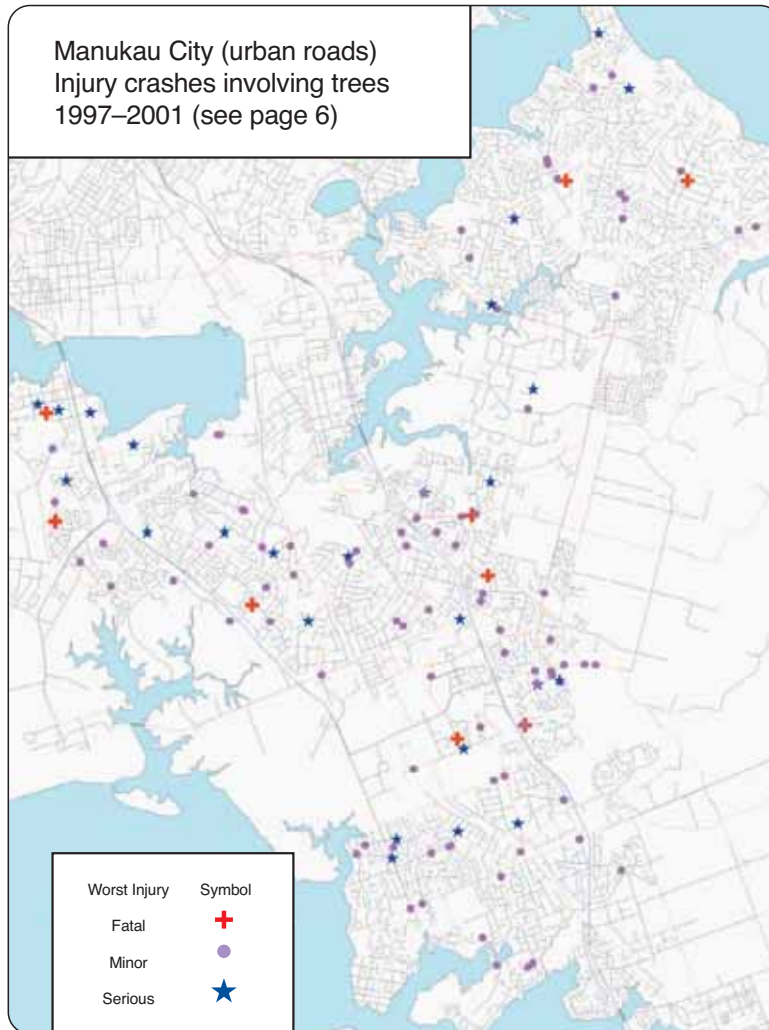
Looking at the under-18 year-old group in more detail we find that:

- most crashes occurred in the afternoon, especially between 3pm and 5pm (47 percent of the total)
- 40 percent of injured pedestrians were under 11 years old
- Friday was the worst day of the week; Sunday was the best
- January was the worst month; May was the best
- 74 percent of the crashes occurred away from intersections
- 98 percent of the crashes occurred on roads with a speed limit of 70km/hr or less
- 89 percent of the crashes occurred on dry road conditions
- 63 percent of the pedestrians injured were male
- between 1997 and 2001 there were 10 fatalities, 41 serious injuries and 146 minor injuries to school-age pedestrians
- most crashes occurred on main roads
- because these were younger pedestrians it is of little surprise that many (65 percent) were reported 'running' across the road
- police attending the 191 crashes identified 320 contributing factors – 227 related to the pedestrians themselves, 55 related to drivers and 17 to the road environment.

Recommended actions

- Target increased enforcement at sites that are high risk before and after school hours.
- Support strategic enforcement campaigns aimed at drivers who fail to give way or stop, or who speed.
- Continue with initiatives designed to help school children to use roads safely.
- Help parents to understand that a busy road is not a safe place for young children.
- Encourage safe pedestrian campaigns aimed at younger pedestrians.
- Encourage the development of pedestrian friendly arterial roads.
- 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.
- Implement appropriate pedestrian crossing facilities as highlighted in recent audits.





Intersections

Crashes at intersections accounted for almost half of all injury crashes on local roads in the city.

As Manukau City is highly urbanised it is not surprising that 94 percent of these crashes occurred in areas with a speed limit of 70km/hr or less.

Crashes at intersections accounted for 11 fatalities (10 vehicle drivers or occupants and one pedestrian), 200 serious injuries and 1,313 minor injuries.

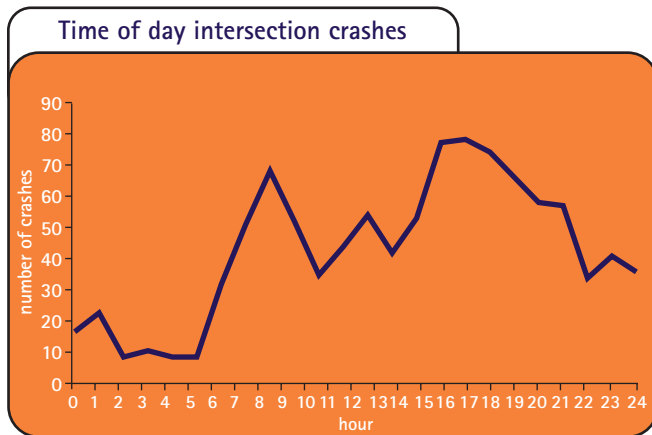
Seventy percent of crashes occurred at intersections with some form of control.

Traffic control at intersection	No. of injury crashes
Give Way sign	336
Nil	308
Traffic signal	251
Stop sign	139
School patrol	1

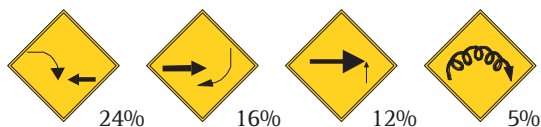
The largest number of crashes occurred at T intersections.

Intersection type	No. of injury crashes
T intersection	649
X type	239
Roundabout	73
Y type	30
Driveway	25
Multi road	21

Crashes at intersections occurred throughout the day with small peaks around the commuter times.



The four most common types of intersection crashes are shown below.



A total of 1,780 contributing factors were identified by police in the 1,038 crashes.

Failure to give way and stop accounted for many of them.

Alcohol, however, was indicated in around 18 percent of crashes and speed in around 11 percent of crashes.

Recommended actions

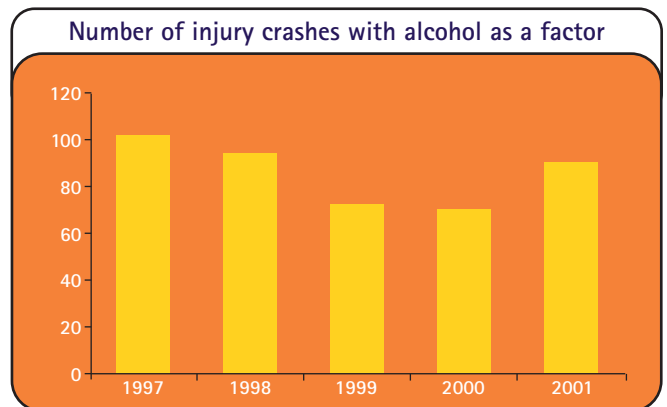
- Support strategic enforcement campaigns aimed at T junctions and crossroads.
- Encourage enforcement campaigns targeting drivers who fail to stop or give way.
- Encourage education programmes to address driving at an appropriate speed, keeping a safe distance, signalling correctly, choosing a safe gap, and checking for pedestrians and cyclists.
- Encourage crash reduction studies of known black spots.
- Investigate the level of control at T junctions.
- Consider installing roundabouts, where feasible, to reduce the severity of crash injuries.
- Remove any vegetation that might make signs, signals, vehicles and markings difficult to see.



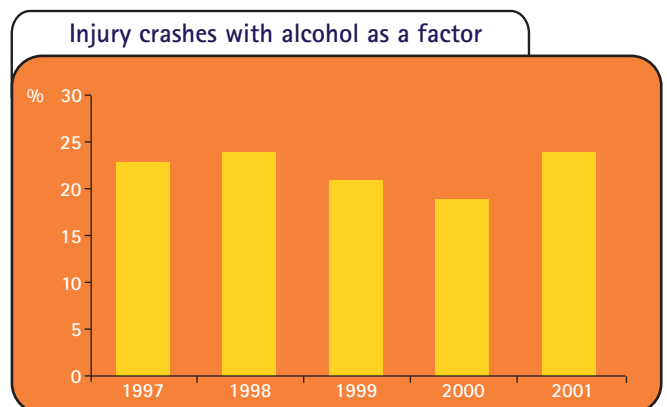
Alcohol

On local urban roads in Manukau City, alcohol, while not the most common factor in crashes, is statistically over-represented as a crash factor when compared with similar authority statistics or all of New Zealand urban figures.

This factor can be found in approximately 20 percent of urban injury crashes in the city while the peer value is around 14 percent.



The actual number of crashes where alcohol is a factor had been declining up to 2001. In 2001 there was a modest increase in urban injury crashes in Manukau City but this does not account for all of the extra alcohol crashes.



The LTSA has seven categories in its crash database for alcohol or drug-related crashes.

The table on the next page shows the number of times each factor was recorded in urban local road crashes over the past five years. (For completeness any drug-related crashes have been included.)

Description	No. of incidences
Alcohol test above limit (or refused test)	224
Alcohol suspected	150
Alcohol test below limit	40
Visibly intoxicated non-driver (pedestrian/cyclist/passenger)	17
Suspected and tested but result not yet known	9
Drugs suspected	7
Drugs proven	2

This gives a total of 449 alcohol or drug factors in 433 crashes, which means that in some instances more than one of the drivers in the crash may have consumed alcohol or taken drugs.

Further facts about these crashes:

- 40 percent of urban alcohol crashes occurred at intersections
- Sunday was the worst day; Monday was the best
- July and December were the worst-equal months; February was the best
- 11pm-midnight was the worst hour; 1pm to 2pm was the best
- these crashes resulted in 24 fatalities, 133 serious injuries and 501 minor injuries
- the youngest affected driver was 15; the oldest was 74
- the most common type of crash was losing control turning right
- 28 percent of the crashes occurred on wet road conditions
- 77 percent of the crashes occurred after dark.

Recommended actions

- Promote and support random alcohol checks by the police.
- Support the use of roving roadblocks and the booze bus.
- Investigate ways of identifying recidivist drink-drivers and, where appropriate, direct them to alcohol awareness programmes.
- Continue existing and initiate new education programmes to promote safe drinking and transport practices, particularly among young drivers.
- Remove roadside obstacles which might be hit by drivers having problems controlling their vehicle.
- Provide consistent 'no surprises' road environments.



Collisions with objects

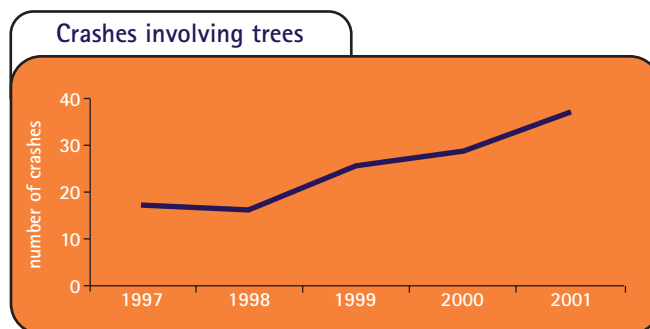
Within urban Manukau City there were four categories of roadside objects that were struck at a disproportionately high rate compared with other cities in New Zealand. These objects were trees, poles, islands and signs, and fences or buildings.

Collisions with trees and poles resulted in the highest number of fatalities and these are discussed in more detail.

Object	No. hit	No. of fatalities
Tree	127	10
Pole	188	10
Island or kerb	105	5
Fence or building	172	5

Trees

In the past five years there has been a rise in the number of vehicles hitting trees in the city.



As a result 10 people died, 38 were seriously injured and 134 received minor injuries.

Every 12th injury crash with a tree resulted in one death, while only every 32nd injury crash resulted in a fatality. This illustrates that while trees have undeniable value in the urban environment they are hazardous and there needs to be care taken in their placement and selection.

Further information about collisions with trees:

- July was the worst month; February was the best
- Friday was the worst day of the week; Monday was the best
- 11pm–midnight was the worst hour; midday–1pm was the best
- the most likely associated crash cause was alcohol, followed by speed
- 56 percent of the crashes occurred after dark
- 38 percent of the crashes occurred on wet road conditions
- 56 percent of the crashes occurred on a straight road.

Poles

The number of collisions with poles in urban parts of Manukau showed a drop between 1997 and 2000. The number in 2001, however, has risen substantially.

Year	No. of crashes
1997	44
1998	40
1999	34
2000	30
2001	40
Total	188

In these crashes 10 people died, 40 were seriously injured and 217 received minor injuries.

Every 18th injury crash with a pole resulted in a death while only every 32nd injury crash resulted in a fatality. As with trees this illustrates the need for care in pole placement and the selection of pole type.

Further information about pole crashes:

- March was the worst month
- Sunday was the worst day of week; Thursday was the best
- 11pm–midnight was the worst hour; 1pm–2pm was the best
- the most likely associated crash causes were alcohol, speed and fatigue (drowsiness)
- 57 percent of the crashes occurred after dark
- 32 percent of the crashes occurred in wet road conditions
- 55 percent occurred on a straight road.

Island or kerb

In brief:

- there were five fatalities, 34 serious injuries and 135 minor injuries
- there was an upward trend in numbers
- 56 percent of the crashes occurred after dark
- 59 percent of the crashes occurred on a straight road.

Fence, building or phone box

In brief:

- there were five fatalities, 56 serious injuries and 188 minor injuries
- crashes involved 135 fences, 38 buildings and 18 phone boxes
- 33 percent of the crashes occurred at intersections
- 56 percent of the crashes occurred on a straight road.

Recommended actions

- Use frangible poles when replacing poles.
- Develop a roadside hazard management strategy to identify hazardous roadside objects, rank the hazards and develop a programme to either remove or protect hazards.
- Use the safety audit approach for all new projects and as a management tool for hazards in the existing road environment.
- Continue to work with utility companies to eliminate poles and relocate services within the road reserve 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 Roding 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 Manukau City.

Funding for community projects over \$6,000 in Manukau City from the NZRSP for the 2002/2003 year includes:

Project name	Funding
Road safety co-ordinators	\$76,000
Alcohol and speed	\$9,500
Child pedestrian safety (safe schools)	\$13,500
Crossing and turning	\$10,000
Impact 2003 (youth road safety awareness)	\$8,000
Focused road safety	\$9,500
Count on Me road safety parent network (stage 2) targeting Clendon School district	\$10,100
Pacific youth drink-drive education programmes – being part of the solution not the problem	\$8,000
Eight learners – eight restricted licence courses and a mural project	\$20,000
Road safety for youth	\$25,000
Samoa Taiala Itole Soifua Puipua I Auala	\$10,000
Kia Tupato	\$8,800

Police enforcement

A total of 89,750 police hours will be delivered in Manukau City as follows:

Project	Hours
Strategic – alcohol/drugs, restraint, speed and visible road safety enforcement	61,930
Traffic management – crash attendance events, incidents, emergencies and disasters and traffic flow supervision	22,150
School road safety education	4,620
Police community services	1,050

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 26 percent in Manukau City (30 percent at state highway sites and 26 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

Manukau City Road Safety Report 1997–2001

LTSA Crash Analysis System

Where to get more information

For more specific information relating to road crashes in Manukau 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:

Land Transport Safety Authority

Regional Manager
Peter Kippenberger

Regional Education Advisor
Rae-Anne Kurucz

Senior Road Safety Engineer (South Auckland)
Chris Hewitt

See LTSA contact details below

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