

road safety issues

The Land Transport Safety Authority (LTSA) has prepared this road safety issues report. It is based on reported crash data and trends for the 1999–2003 period. The intent of the report is to highlight the key road safety issues and trends in Auckland City.

Despite the rise in the road toll for 2003, which followed a sharp drop in 2002, the national trend remains downward. However, this is not the case in Auckland City. While the progress made towards reducing Auckland City fatalities and serious injury casualties during the late 1990s appears to have been ‘locked in’, further progress has not been evident since 2000. It remains imperative, not only that we maintain achievements to date, but that we also develop and implement new initiatives to achieve our shared vision of a safer Auckland City.

The following table shows the approximate number of casualties per ward for the 1999–2003 period.

Ward	Fatal	Serious	Minor
Hobson	13	243	1,304
Penrose	22	174	989
Avondale/Roskill	13	131	758
Balmoral	8	90	554
Western Bays	1	68	434
Eastern Bays	11	71	300

Major road safety issues

Auckland City

- Vulnerable road users
- Safe road environment
- Crossing and turning/intersections
- Arterial speed

Nationally

- Speed
- Alcohol
- Failure to give way
- Restraints



2003 road trauma for Auckland City

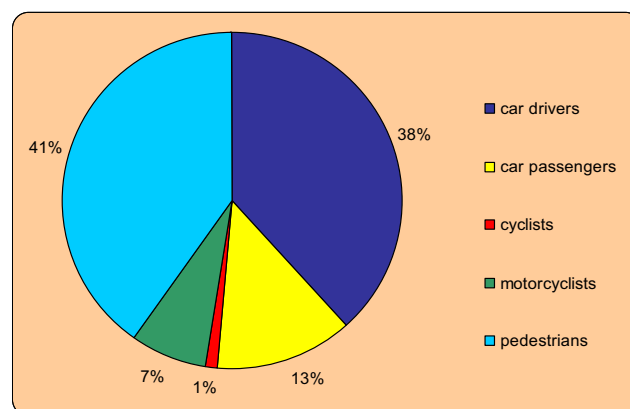


Deaths	25
Serious casualties	160
Minor casualties	1,334



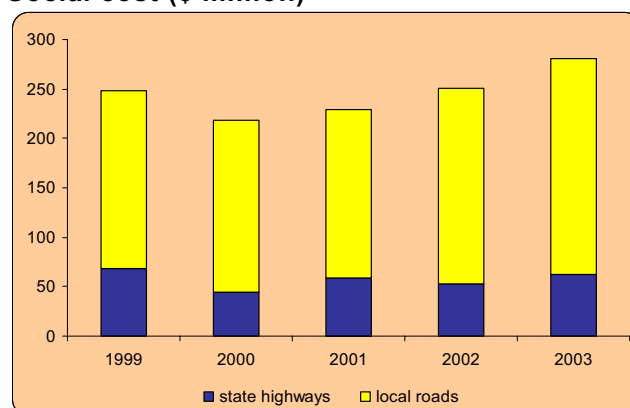
Fatal crashes	22
Serious injury crashes	130
Minor injury crashes	1,062
Non-injury crashes	5,098

Road deaths 1999–2003



Estimated social cost of crashes*

Social cost (\$ million)

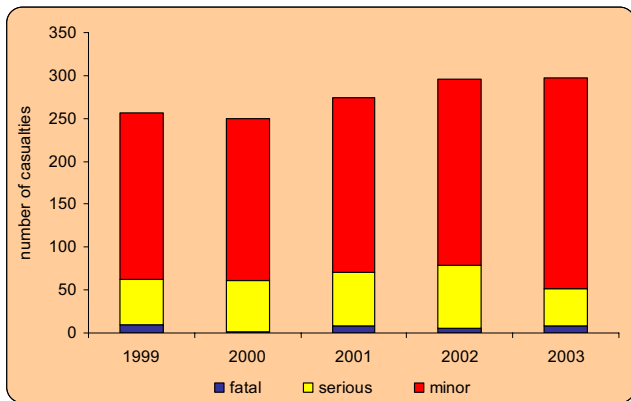


*The estimated social cost includes loss of life or life quality (estimated by the amount New Zealanders are prepared to pay to reduce their risk of fatal or non-fatal injury), loss of output due to injuries, medical and rehabilitation costs, legal and court costs, and property damage. These costs are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

Vulnerable road users

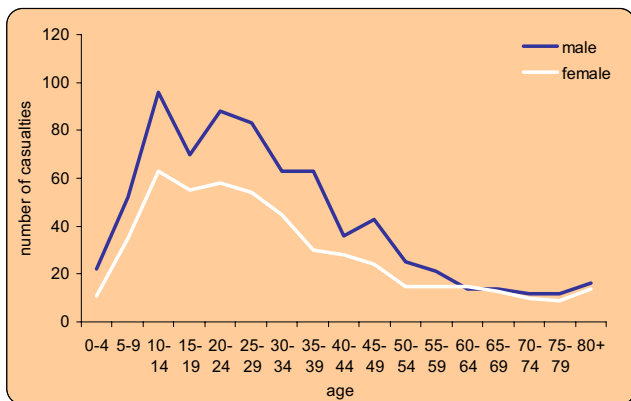
Vulnerable road users, such as pedestrians and cyclists, continue to be a group likely to suffer fatal or serious injury while using roads in Auckland City. Pedestrian casualties in particular are considerably over-represented when comparison is made with peer group cities and national data. Of the 84 fatalities in Auckland City from 1999 to 2003 inclusive, 35 were vulnerable road users (42 percent).

Vulnerable road users injured



The nature of the city is such that vulnerable road users are interacting continuously with motorised traffic throughout the network, and inevitably when conflict occurs, regardless of who is at fault, it is the vulnerable road user who bears the more serious consequences. Pedestrians represented 18 percent of all casualties in Auckland City, compared with 14 percent of all casualties in the rest of New Zealand.

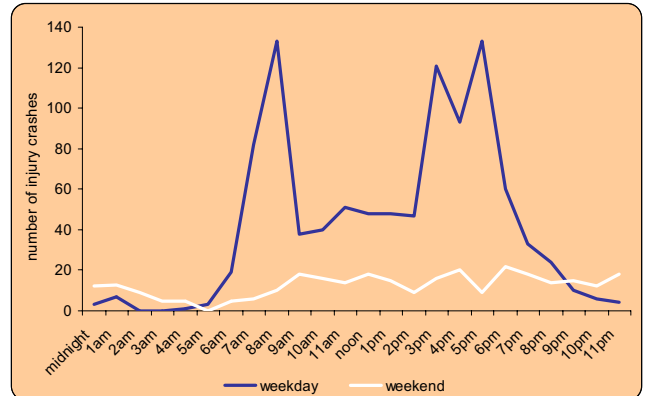
Age and gender of vulnerable road users



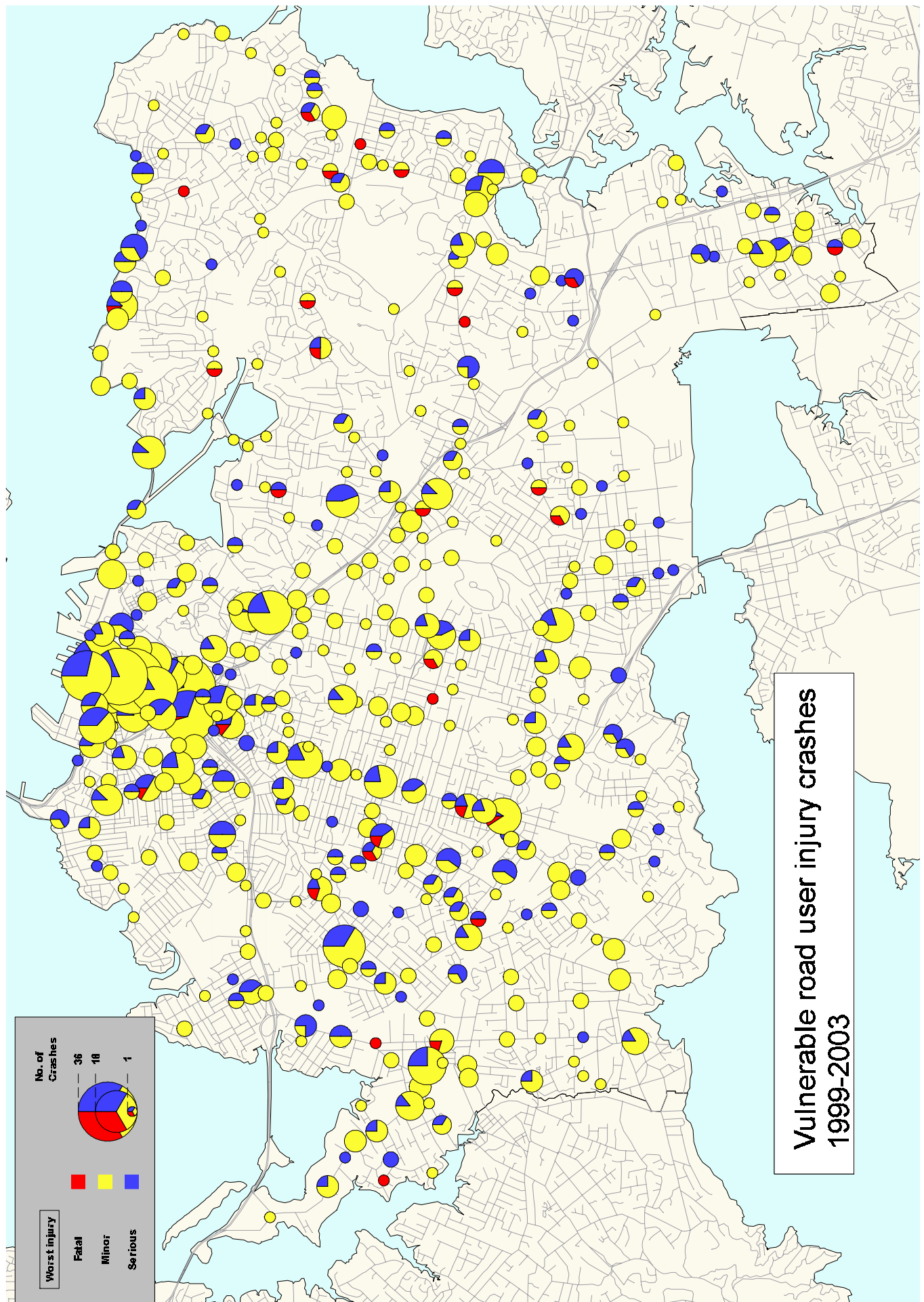
Compared with the national average, pedestrians and cyclists in the 20 to 44 age group in Auckland City are at higher risk while children are at lower risk. However, child pedestrians remain the group facing by far the greatest risk overall, in line with national statistics.

There are clear peaks in the time distribution of these crashes during weekday morning and afternoon school travel times.

Vulnerable road user crashes by time



Safety engineers, therefore, need to have a good understanding of activities that place pedestrians on busy roads, and their locations. They need to adopt engineering measures that provide for the safest possible interaction with traffic in key locations, particularly where pedestrian numbers are high and where children need to cross busy roads.



Safe road environment

Current road safety initiatives in Auckland City still have some potential to be realised and must, therefore, be continued and even expanded. But new approaches are necessary if the city is to contribute sufficiently to national road safety targets and achieve its own ‘safe city’ vision against continued growth in population and vehicle travel.

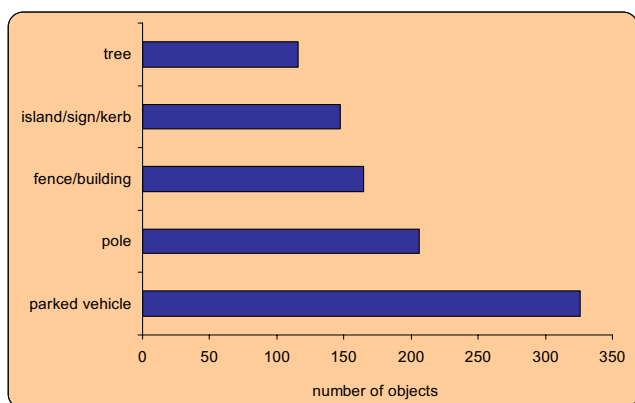
One proven method of achieving further road safety gains is the proactive and effective management of the road environment for safety. Auckland City must therefore face the challenge of progressively making its road environments safer.

Around a quarter of urban local road injury crashes in Auckland City involved a vehicle colliding with a roadside object. Parked vehicles represented the object most commonly struck (8.5 percent of all urban crashes), while poles (5.3 percent) were still prevalent, despite ongoing removal programmes. Hitting a fence, building, sign, island and/or kerb represented around eight percent of urban crashes. Crashing into trees accounted for around three percent.

While overall the percentage of crashes involving alcohol continues to decrease, alcohol still features prominently in crashes where parked vehicles and roadside objects are struck.

Best hazard management practice implies the elimination of items that don’t need to be in the road environment. But for those traffic control devices, services, and other items of street furniture that do need to be there, it is imperative they be designed, positioned and protected to minimise the risk of injury in the event of being struck.

Objects struck on urban local roads 1999–2003



Crashes occurring in darkness have climbed from 31 percent of all crashes in 2001 to 35 percent in 2003, a significant increase. The proportion of night crashes in which an object was struck has reached 50 percent, which is very high by comparison with other urban localities. This certainly implies a need to manage night-time parking on arterial routes and to improve lighting and night-time visibility of hazards which cannot be eliminated.

Trees and vegetation can greatly improve the visual streetscape of intensely developed environments, but if they are poorly sited or not adequately maintained, they can cause serious safety issues. In the example below, drivers approaching this busy intersection can not see the primary traffic signals due to an overgrown tree.

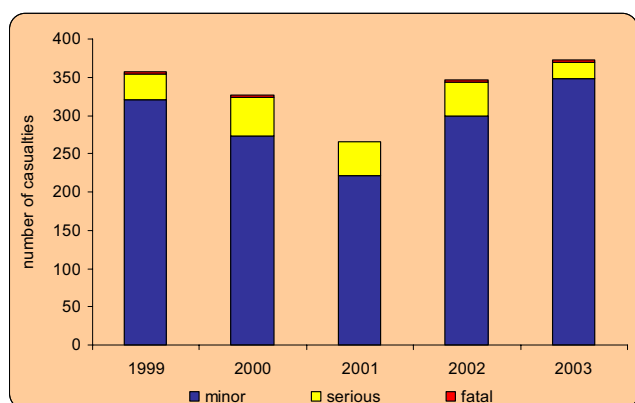


Pruning of the lower branches would allow the traffic signals to be clearly seen. Crash reduction studies carried out in Auckland City regularly find similar faults over the entire roading network.

Crossing and turning/intersections

Crossing and turning crashes remain the most prevalent crash type in Auckland City. These accounted for 33 percent of all injury crashes reported in the 1999–2003 period. The vast majority of these occurred at intersections where crossing and turning conflicts principally occur.

Casualties in crossing and turning crashes

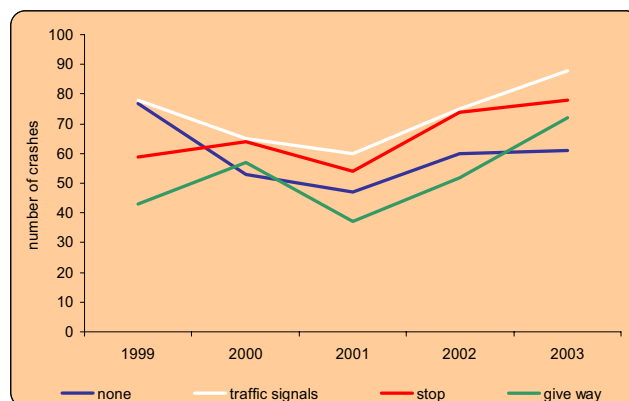


While Auckland City is not over-represented when compared with peer group cities and all New Zealand data, the high volume of traffic activity in Auckland City means that opportunities for addressing these crashes must be actively sought. Failure to give way or stop continues to be the predominant factor contributing to crossing/turning crashes, while poor observation remains the second. The number of reported crossing/turning crashes was trending downwards until 2001, but has increased again by almost 50 percent since then.

While many crossing/turning crashes do not result in injury due to low impact speeds, it is this type of crash that can result in serious or fatal injury as speeds increase, such as on arterial roads at off-peak times. It is, therefore, critical that traffic signals be sequenced, phased and timed to minimise the crash risk at times of the day when speeds are higher. It is also essential that design decisions are based on actual measured off-peak speeds, rather than the legal speed limit or a theoretical speed.

The majority of crossing/turning crashes occurred at intersections, but 16 percent occurred as vehicles entered or left driveways. The most common crash involved an oncoming vehicle turning right in front of another vehicle (37 percent). A vehicle turning right out of a side street into a vehicle travelling straight through was the next most common, followed by right angle collisions.

Crossing and turning crashes by traffic control type

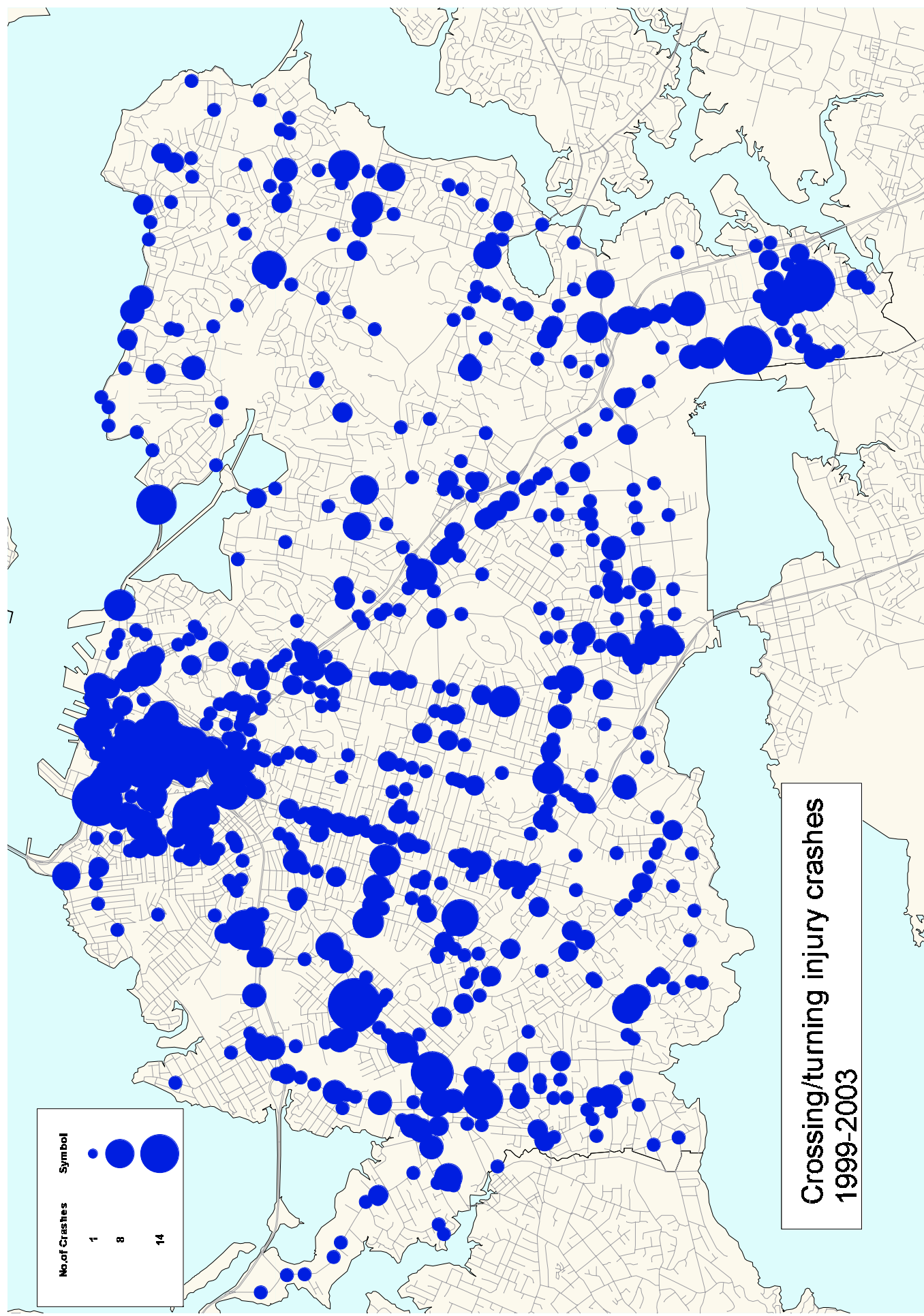


The above graph shows that crash numbers for all of the different control types at junctions have increased since 2001.

The five worst crash locations for this type of crash over the last five years are:

Intersection	Reported injury crashes
New North Road and Asquith Avenue	14
Church Street and High Street	13
Fanshawe Street and Beaumont Street	13
Portage Road and Saleyards Road	12
Karangahape Road and Queen Street	9

For intersections to operate as safely as possible, it is essential that the messages conveyed to road users be delivered clearly. Therefore, the maintenance of signs, markings and advance visibility is extremely important.

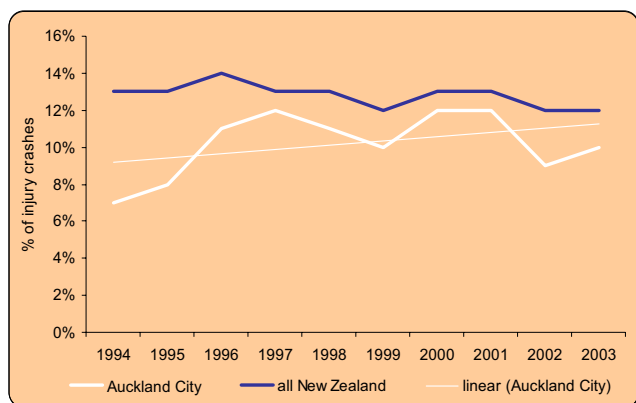


80 Arterial speed

Driving 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 City network have continued to trend gradually upwards since the early 1990s, despite a gradual downward trend in peer group cities and all of New Zealand.

Urban speed-related crashes



Additional effort, particularly through police enforcement on key arterial routes, will be required in the short to medium term to halt and reverse this unfavourable trend.

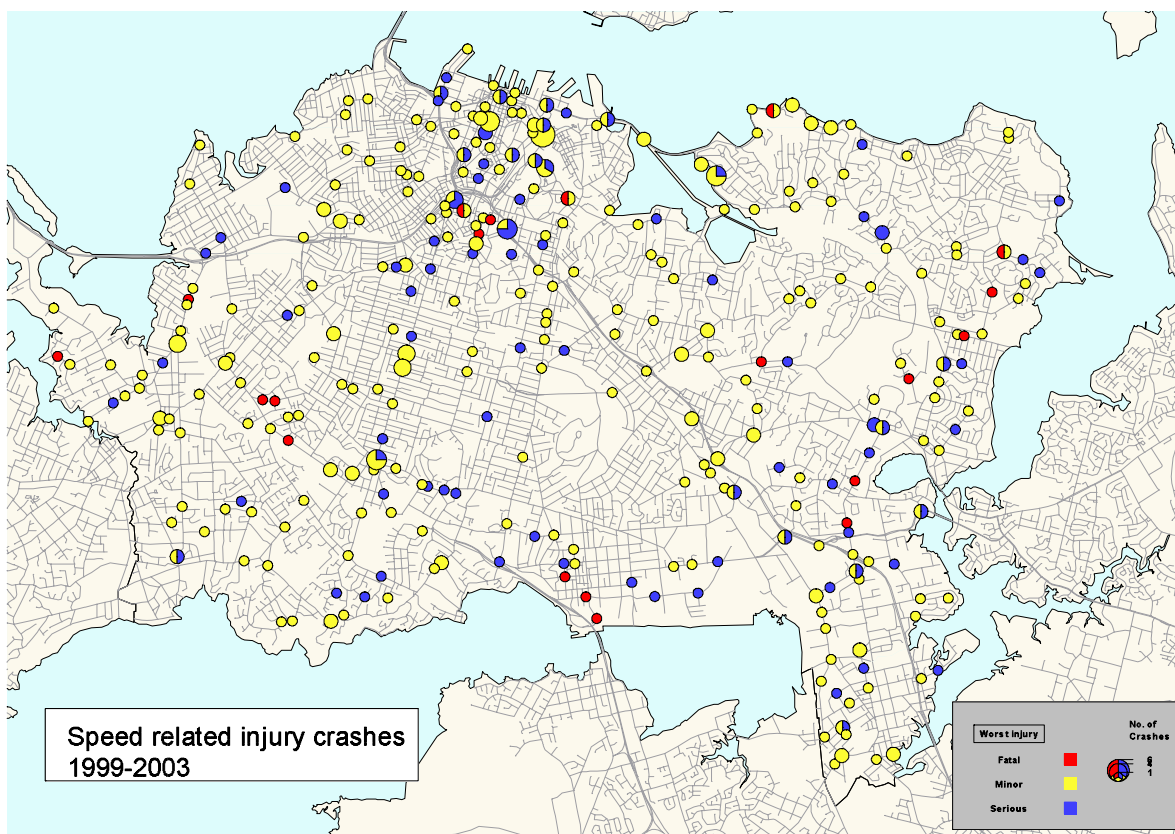
In the latest New Zealand travel survey, 23 percent of drivers in the Auckland region agreed with the statement: ‘Not much chance of an accident when speeding if careful’.

However, only 18 percent of drivers throughout New Zealand were in agreement. This reinforces the view that a speeding culture still exists to a greater extent in Auckland than in other parts of New Zealand.

Travel survey results:

Question	Response	All New Zealand	Auckland region
Not much chance of an accident when speeding if careful.	Agree/strongly agree	18	23
The risk of being caught speeding is small.	Agree/strongly agree	33	32
Enforcing the speed limit helps to lower the road toll.	Agree/strongly agree	79	80
Should there be more use of 60 and 80 km/h limits?	Yes	57	58

Speed-related crashes with the greatest risk of fatal or serious injury often occur at times when arterial roads are uncongested. It is important that safety engineers understand and address light traffic and night environment issues. Along with alcohol, speeding also features prominently in crashes involving collision with parked vehicles or roadside objects.



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 19 percent in Auckland City (15 percent at local road sites and 30 percent at state highway sites). This equates to a saving of over 350 injury crashes.

Less than half of over 300 sites and routes investigated by road safety specialists have had the recommended safety improvements implemented. This is well below the national implementation figure of 62 percent. Funding subsidy levels for minor safety works have been increased substantially in recent years by Transfund New Zealand but the city has not been able to commit sufficient funds for its share to implement the improvements.

To obtain the proven safety benefits of crash reduction studies, the city needs to ensure uncompleted safety recommendations from past studies are implemented as soon as possible. Analysis of the crashes at all completed sites should then be undertaken regularly to ensure that safety has improved and sites have been re-examined if no improvement has occurred. Further crash reduction studies should be undertaken to continue the reduction of crashes with appropriate commitment to fund the improvements.

Where to get more information

For more specific information relating to road crashes in Auckland City, please refer to the 1999 to 2003 Road Safety Data Report, the LTSA's Crash Analysis System or contact the LTSA as listed below.

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