



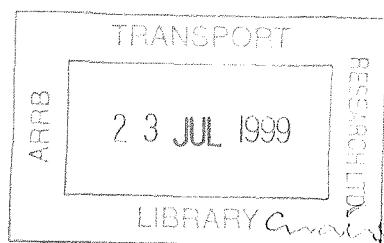
# STAYSAFE 40

## A 50 KM/H GENERAL URBAN SPEED LIMIT FOR NEW SOUTH WALES: PROGRESS REPORT AND EDITED MINUTES OF EVIDENCE

Report 13/51

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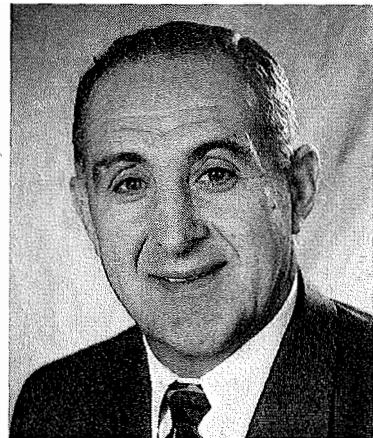
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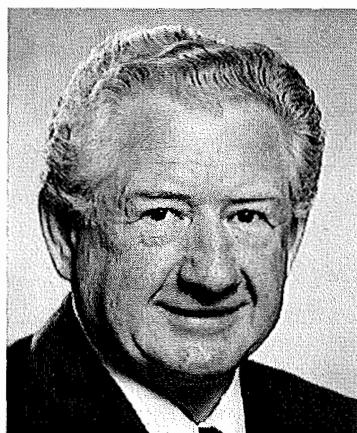
# staysafe



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(Chairman)  
*Member for Londonderry*



**Mr Jeff Hunter, M.P.**  
(Deputy Chairman)  
*Member for Lake Macquarie*



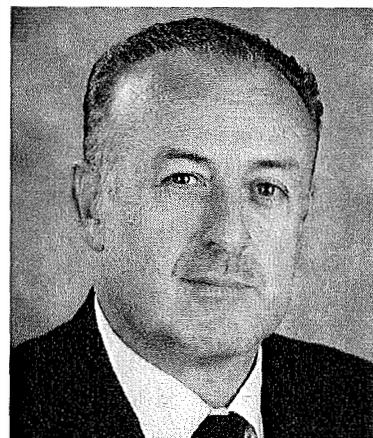
**The Honourable  
Andrew Manson, M.L.C.**



**Mr John Mills, M.P.**  
*Member for Wallsend*

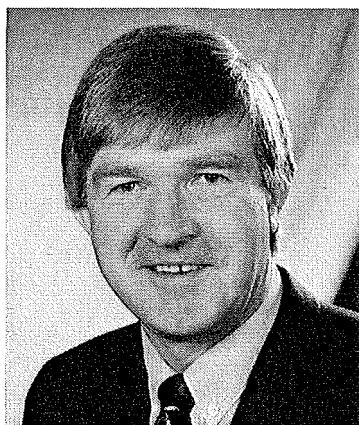


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*Member for Rockdale*

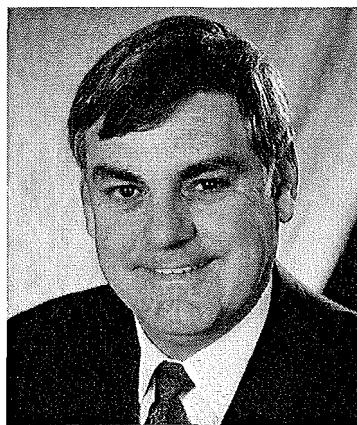


**Mr Bob Harrison, M.P.**  
*Member for Kiama*

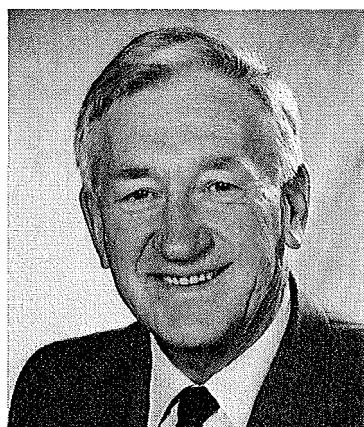
# MEMBERS OF THE STAYSAFE COMMITTEE OF THE 51ST PARLIAMENT



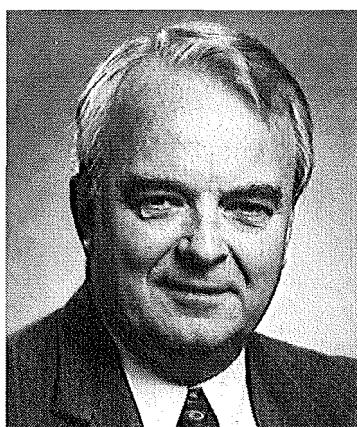
**Mr Russell Smith, M.P.**  
*Member for Bega*



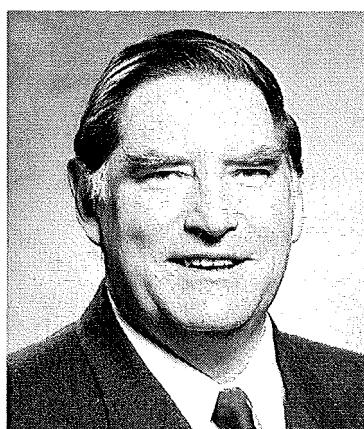
**Mr Bruce Jeffery, M.P.**  
*National Party Whip and  
Member for Oxley*



**Mr Jim Small, M.P.**  
*Member for Murray*



**The Honourable  
John Tingle, M.L.C.**



**The Honourable  
John Jobling, M.L.C.**  
*Opposition Whip*

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Director of the STAYSAFE Committee      Mr Ian Faulks

Project Officer      Mr David Emery

Research Officer      Mr Chris Papadopoulos

Assistant Committee Officer      Ms Corazon de Vega

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### Introductory remarks

This report documents progress in implementing the findings and recommendations of the STAYSAFE Committee's report:

STAYSAFE 34 (1996). A 50 km/h general urban speed limit for New South Wales. Seventh report of the Joint Standing Committee on Road Safety of the 51st Parliament. Sydney: Parliament of New South Wales.

It also includes the edited minutes of evidence of the STAYSAFE Committee's inquiry into a reduction in the general urban speed limit from 60 km/h to 50 km/h.

The STAYSAFE 34 report was distributed widely: to all persons who gave written or verbal evidence to the STAYSAFE Committee, to State and Territory road safety authorities, and to all local government authorities in New South Wales. The Committee has prepared this additional report in order to make available to legislators and policy makers throughout Australia further relevant information relating to the implementation of a 50 km/h general urban speed limit. As well, the report includes relevant information on the safety, amenity and mobility implications of a lower general urban speed limit, as presented to the Committee's inquiry.

The STAYSAFE Committee took evidence from a wide range of witnesses, including the Roads and Traffic Authority, police, other relevant New South Wales Government departments, road safety organisations, local government representatives, traffic and municipal planning consultants and academics. That evidence is reproduced here in its entirety. Selected exhibits received, and selected submissions received, are also reproduced.

For readers who will peruse this volume in tandem with the STAYSAFE 34 report, the report's page number references relating to the minutes of evidence will not tally with the page numbering in the present volume, as the original minutes of evidence have been re-formatted, and the pages numbered sequentially, rather than beginning from page one on each hearing day. It is therefore recommended that readers of the report note the date on which the minutes were taken, and turn to that date in this volume to begin their search.

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## STAYSAFE 34 (1996)

The STAYSAFE 34 (1996) was debated in the Legislative Assembly on 16 April 1997. The following edited transcript has been taken from the Hansard record of the debate on that day:

**Mr GIBSON (Londonderry):** Speeding is a major factor in road trauma and the major cause of more than one-third of the fatal crashes in New South Wales each year. Speeding ranks with drink driving as the leading cause of crashes on our roads. If the Government is ever to make a dent in the speeding problem it must break the present speed culture. I believe that a 50 km/h speed limit will go a long way to achieve that and make young people realise they should not speed. Hopefully the next generation will carry through that achievement and break down today's speeding culture. The general urban speed limit in New South Wales and throughout Australia is 60 km/h, which is very high by world standards. Most other countries have an urban speed limit of 50 km/h, and in many jurisdictions the speed limit is even lower. Some countries have urban speed limits of 40 km/h and even 30 km/h. It is important to note that I am speaking only of residential streets; not main roads or thoroughfares, just where people live. I suppose that what the committee is trying to do in the report is to give the streets where people live back to the families and the people to enjoy.

The report outlines the way in which the STAYSAFE Committee would like to see a lower general urban speed limit put in place: as one action within an integrated package of measures associated with traffic management, traffic law, police enforcement, and communications strategies designed to educate drivers. If the initiatives on drink-driving and compulsory seat belts have been the most important developments in reducing the road toll, the adoption of a lower general urban speed limit can be seen as another significant piece in the road toll puzzle. Indeed, there is a good argument for proclaiming a 50 km/h general urban speed limit as the single most important factor in the attempt to reduce the road toll by a significant margin over the next few years.

Research evidence and statistics show that for every 1 km/h reduction in the average speed of motor vehicles on our roads, a 3 per cent reduction in road crashes can be expected.

Every study throughout the world has supported that finding. It is hard to estimate exactly, but I suggest that it would be reasonable to project a reduction in road fatalities and road trauma by about 7 to 10 per cent a year if New South Wales implements a 50 km/h general urban speed limit. That is, there would be a drop of 30 to 50 deaths each year together with a drop of about 500 to 600 in the number of persons hospitalised. This leads to a conservative estimate of at least \$30 million in savings in health costs, property damage and losses to the community. I think it likely that these savings would be more in the range of \$50 million each year if productivity losses and other costs associated with road deaths and serious injuries are included. So not only would families be saved trauma; there would also be a significant economic saving.

Let me stress that the 50 km/h speed limit will affect local streets only. Main traffic routes will retain their current speed limits. This reflects the STAYSAFE Committee's chief concern with respect to a 60 km/h speed limit: the danger posed to pedestrians, particularly

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children and the elderly. Children spend far more time than adults do in walking, so their exposure to traffic, particularly in residential streets, is much higher than that of adults. Reducing speed limits in these streets will mean children have a safer environment to walk and play in. Moreover, the local streets where we have our homes will become less a conduit for cars and more a space where people can live without the danger of fast traffic. As I said before, we are trying to give the streets back to the people.

The week before last there was a road safety seminar in Parliament House. There were representatives of every Australian road safety committee in every government. Representatives from New Zealand and the Federal Government also attended. After the two-and-a-half-day seminar the first motion passed stated that every State and New Zealand agreed that a 50 km/h general urban speed limit should be introduced as soon as possible. It is often said that the solution to the speeding problem is more and better designed driver education and driver training programs so that drivers can better perceive and respond appropriately to the variety of road conditions that occur, yet still drive at the speed they wish rather than in accord with any speed limit set by the roads authority and enforced by police. That argument shows the lack of understanding in the community about the role which excessive speeding plays in serious injuries and deaths on urban roads.

The facts are simple: it is pure physics. If a car travelling at 60 km/h and a car doing 50 km/h on the same road have to stop suddenly, the car that was travelling at 60 km/h will still be travelling at 40 km/h when the car that was travelling at 50 km/h has stopped. So there is a far greater chance of preventing accidents and injury to pedestrians with a 50 km/h general urban speed limit. Drivers might know all the things to look out for as road hazards but if they are driving too fast then they are the hazard. In the words of a British road safety advertisement, "If you can't stop in time, you are going too fast, aren't you?"

I know that there will be accusations that this is just another revenue-raising exercise by the Government. Nothing could be further from the truth. To demonstrate this point, the STAYSAFE Committee has recommended a major revision of speeding offences and penalties. The primary penalty for minor speeding offences—for example, a driver exceeding the speed limit by no more than 10 km/h—should be demerit points rather than a heavy monetary fine. STAYSAFE proposes that the current system of a fine of \$109 and loss of one demerit point be changed so that the fine is only \$65 and the driver loses two demerit points.

The report was tabled in the Parliament in November last year. It was good to see that the police picked up the idea of doubling the demerit points for speeding offences. The trial over the Easter period achieved outstanding results. STAYSAFE has recommended that a three-month moratorium be placed on the issuing of fines for minor speeding infringements on roads affected by the new speed limit. STAYSAFE has stressed the crucial role which local councils will play in the successful implementation of a 50 km/h general urban speed limit. In a modern society, where the pace of life is so much faster than it once was, it will be difficult for some people to understand the necessity of slowing drivers down. But, as the report notes, a 50 km/h general urban speed limit will add virtually nothing to travel times. Surveys involving 26 million kilometres have been conducted. It has been found that perhaps 17 seconds could be added per journey, which is a minimal increase.

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STAYSAFE recognises that the report into the proposed introduction of a 50 km/h general urban speed limit has, of necessity, touched upon more general issues relating to excessive speeding on all New South Wales roads, including rural highways, freeways and urban traffic routes. There are general issues associated with technologies for detection of excessive speeding, the standard operating procedures for police enforcement in relation to excessive speeding, road design and urban and transport planning, and traffic management strategies for the safe and efficient movement of motor vehicles that merit further and more detailed examination than was possible in this inquiry. It is hope that STAYSAFE will continue its review of speeding and road safety in later inquiries.

A significant aspect of the STAYSAFE Committee's operation is the bipartisan manner in which the committee members conduct their inquiries and deliberations. I am grateful for the hard work of my colleagues, be they government members, Opposition members or crossbench members. Collectively, the contributions and scrutiny of members of the STAYSAFE Committee ensure that policies and programs for road trauma reduction remain focused and are developed and delivered efficiently and effectively.... There is a simple message in the STAYSAFE report into a lower urban speed limit—'When you're in town, slow down'.

**Mr JEFFERY (Oxley):** Following the speech by the Chairman of STAYSAFE, Mr Gibson, there is not a lot to add in relation to the report STAYSAFE 34. As the Chairman said, speeding is a major problem ranking with drink-driving as a leading cause of crashes in New South Wales, causing more than a third of fatal crashes. We are talking only about residential areas. Children can dart out onto a roadway. A driver may be inattentive or momentarily distracted by an unexpected manoeuvre by another vehicle. There may be a misconception about the nature of the roadway-curves, crests, signs or signals. Such events occur commonly in driving.

I repeat the advice given by the chairman of the STAYSAFE Committee that a car travelling at 60 km/h requires about 50 metres to come to a complete halt, a car travelling at 70 km/h requires almost 60 metres, and a car travelling at 80 kilometres an hour requires almost 75 metres. The effects of speed in terms of injuries and deaths are horrific. I shall comment on one or two aspects not raised by the chairman of the committee, the honourable member for Londonderry. During the Easter holiday break demerit points for speeding offences were doubled, and as a result of that I received a few phone calls from angry constituents who claimed that the Government and politicians—myself included, as my constituents know that I am a member of the STAYSAFE Committee—are merely trying to raise revenue.

**The Hon. Richard Amery, Minister for Agriculture:** I hope the honourable member defended us admirably.

**Mr JEFFERY:** It can be difficult to come up with a good answer when one is asked why the police are not concentrating on catching the real crooks rather than picking up people who have a quiet drink before driving home or who drive at a couple of kilometres in excess of the limit. My defence was, of course, that if people do not speed and if they do not drive after drinking, they will have no worries. I was unable to win the argument with my constituents, however. Recommendation 7 of report No. 34 of the STAYSAFE Committee

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states:

The Traffic Act 1901 and associated statutory rules be amended to provide for the imposition of fines and demerit points based on increments of 10 km/h for speeding offences.

Recommendation 8 reads as follows:

The primary punishment emphasis following a conviction of an offence of exceeding the speed limit by 10 km/h or less placed on demerit points rather than on a monetary fine.

In my opinion those are key recommendations. One of the local councils in my electorate, the Kempsey Shire Council, was not in favour of a 50 km/h speed limit. Apparently the main reason for the council's opposition was its perception that it would incur costs for the erection of signs, et cetera. Those concerns should be laid to rest by recommendation 15, which states:

The Minister for Roads:

- (i) ensure that adequate funding is made available to local councils for road markings, signage and associated works to support the implementation of a 50 km/h general urban speed limit; and
- (ii) provide a public assurance to local councils that such funding will be available for road markings, signage and associated works to support the implementation of a 50 km/h general urban speed limit.

When the recommendations of this report are legislated and fully implemented speed limits in residential areas will be restricted. A limit of 50 km/h in residential areas has been trialed in some parts of Sydney and has received overwhelming acceptance. The people want this restriction; they know that it will lead to safer conditions for their children, older residents and all road users. The community as a whole will benefit from the recommendations of this report when they are implemented by the Parliament. I shall bring my remarks to a conclusion, rather than reiterate points made by the honourable member for Londonderry. I realise that other members of the Joint Standing Committee upon Road Safety will wish to make contributions.

I support the remarks made by the chairman of the committee that the committee works with a wonderful bipartisan spirit. The committee gets results without having to go back to the party structure and it makes decisions for the right reasons. It is my belief that the recommendations contained in report No. 34 of the STAYSAFE Committee will be accepted by all.... The committee generates a great deal of work and produces many reports. Its work is of great benefit to the community and improves all aspects of road safety. I know that all members of the STAYSAFE Committee gain great satisfaction from their work on the Committee.

**Mr MILLS (Wallsend):** History will judge report No. 34 of the STAYSAFE Committee, recommending a 50 km/h general urban speed limit for New South Wales, as the second-most significant of all STAYSAFE Committee reports. Of course, it will always be hard to beat the achievements of report No. 1 of 1982, entitled 'Alcohol, drugs and road

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safety', which represented the first serious bipartisan political attempt to tackle the horrendous problem of alcohol-related crashes which so dominated death and injury on our roads. That initiative eventually gained widespread community support. Resulting from report No. 1 of the STAYSAFE Committee and the success of random breath-testing in reducing alcohol-related crashes, today there are some 8,000 or 9,000 people alive who otherwise would not be, some 20,000 people who are alive and healthy rather than being disabled following accidents, and fewer of our public hospital beds occupied by those with serious injuries occasioned by road accidents.

Report No. 34 presents the STAYSAFE Committee recommendations for change in the culture of speeding. Just as, many years ago, we needed to change the booze culture, the drink-driving culture, members of the STAYSAFE Committee have recognised the need to change the culture of speeding. The honourable member for Oxley referred to arguments he had with some of his constituents. I am in the same boat. Many constituents ring me, angry at being fined. They say that they can drive safely at high speeds and should be able to drive at whatever speed they choose. I would say I have lost one or two votes because I put forward the arguments for public safety and community interest in the recommendations of the STAYSAFE Committee.

In an attempt to change the culture of speeding the Committee has made recommendations aimed at changing driver behaviour, to reject excessive and inappropriate speed. I certainly hope that in 10 years time we can look back and again count the road safety success in terms of lives saved and injuries and pain forgone. I thank the former Minister for Roads, the Minister for the Olympics, for giving the STAYSAFE Committee the reference to carry out this inquiry. I request that his successor, the present Minister for Roads, make a decision soon to implement the changes recommended by the STAYSAFE Committee so that a start can be made on the necessary community consultation before the reduced general urban speed limit would commence.

Along with other members of the Committee, I thank the staff, and particularly the director, Ian Faulks, for their work. I also thank my fellow members on the Committee, each and every one of them. Without the spirit of bipartisanship and the dedication of the staff... we would not have made as much progress. I also thank those who made submissions to the inquiry. In all, 201 submissions were received, almost unanimously in favour of a reduced speed limit for local streets in built-up areas, from 60 to 50 km/h.

The STAYSAFE Committee seeks cooperation between the Roads and Traffic Authority and local government to establish a specific hierarchy of local streets, collector roads and sub-arterial and arterial traffic routes within suburbs and towns. Until that is right, the final implementation of the scheme will not be able to be introduced. I know from my own experience on the traffic committees in both Lake Macquarie city and Newcastle city that traffic committees are looking forward to the introduction of a 50 km/h general urban speed limit. It is my opinion that there will be widespread community acceptance of this recommendation, provided consultation is followed right through.

A number of arguments can be made, but if there is one selling point in the report worth mentioning in favour of the Government adopting these recommendations it is that a 50

km/h general urban speed limit would add virtually nothing to travel times while it would help to save lives, reduce the severity of injuries in road crashes and reduce the cost of property damage. The report contains figures to demonstrate that virtually nothing would be added to travel times. That is an important consideration to take into account. I am sure that New South Wales motorists can be persuaded to accept reduced urban speeds. There is popular support for the proposals. A survey by the National Roads and Motorists Association indicates 74 per cent agreement amongst respondents to a proposal for a 50 km/h speed limit in local streets. The Royal Automobile Club of Victoria has undertaken similar surveys. A Roads and Traffic Authority survey shows that 54 per cent of respondents were in favour of such a proposal. I commend the recommendations to the Minister.

**Mr SMALL (Murray):** I am honoured to be a member of the STAYSAFE Committee. This bipartisan parliamentary committee may not be appreciated by everyone because it is perceived to be recommending the making of laws, albeit to save lives, and therefore cannot please everyone. The committee was set up to investigate and make recommendations to the Parliament on aspects of road safety, with the aim of reducing the number of road deaths in this State to the lowest possible level. The aim of governments and parliamentary committees such as STAYSAFE must always be for there to be no deaths on the roads.

When the recommendation for a 50 km/h speed limit in urban residential streets was first mentioned by the STAYSAFE Committee in STAYSAFE 34, queries were raised as to why motorists should be restricted to driving at speeds under 60 km/h when most accidents occur on the major highways. In fact, the statistics of the number of road deaths that occur in urban residential streets are alarming. The road fatalities in residential areas mainly involve the elderly, who often have poor hearing and eyesight, and very young children who play and ride their bicycles on the streets.

The fixing of a maximum speed of 50 km/h in urban streets will not be a handicap. As most residential areas have intersections at each block, it is difficult to drive above a speed of 50 km/h. Motorists travelling above that speed would be driving dangerously, unless they were on a main thoroughfare. In these circumstances the STAYSAFE Committee has had discussions with people throughout the country and metropolitan communities of New South Wales. The committee has also heard evidence from representatives from schools, motoring organisations, the NRMA, the Roads and Traffic Authority, the police and other parties the committee considered had an interest in these issues.

I compliment [the] Director of the STAYSAFE Committee, and the committee members under the chairmanship of the honourable member for Londonderry. All committee members worked in harmony to achieve the results that are contained in the report. The evidence the committee received was not always favourable to every organisation and from every point of view. Everyone agrees and acknowledges that wherever it is possible to save lives, we have a responsibility to do so, even if the measures to be implemented to achieve that end are unpopular. Another matter of importance, particularly for country New South Wales, mentioned in this take-note debate is that councils were concerned that if they did not secure funding to erect and change signage, including painting speed limit signs on the road surfaces, they would not be able to undertake this work.

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The STAYSAFE Committee has recommended that the Government provide funds to enable the Roads and Traffic Authority to undertake this work with the assistance of local councils. The necessary changes may be costly but local government cannot be expected to pay for them. The way to go was to have the Roads and Traffic Authority provide assistance to local councils. If the Minister for Roads can persuade Cabinet to accept the recommendation to introduce a limit of 50 km/h in urban residential streets, one would not expect the necessary legislation to be implemented within six months. Implementation may take 18 months or two years because of the cost factor.

**Mr HARRISON (Kiama):** I support the recommendations contained in STAYSAFE 34. I extend my appreciation to the committee staff and to committee members for their bipartisan approach. It would be remiss of me not to acknowledge the dedication of the chairman of the committee, the honourable member for Londonderry, who has made the reduction of the speed limit in residential streets a personal crusade. I place on record my appreciation for the hospitality that was given to the committee members when they recently toured the Murray area. I acknowledge the assistance and local knowledge of the honourable member for Murray who was able to bring many representatives of local government in the region to talk about the issue with the committee.

It is a tribute to the STAYSAFE Committee and its chairman that the committee did not attempt to make a decision from on high but discussed the issue with the people in southern New South Wales who perhaps do not have the opportunity to talk to so many members of Parliament at the one time on the matter of public safety. I hope that attitude of the STAYSAFE Committee prevails and that committee members are always ready to listen to all points of view, as we did when we toured the Murray area. The recommendations contained in this report for reducing the speed limit to 50 km/h in residential streets excludes main roads and collector roads where the speed limit will be determined by local traffic committees in consultation with local councils and the community and will be indicated by signage.

It is an unfortunate fact of life, as previous speakers have pointed out, that an unusually high number of people are killed in residential areas. Most of the fatalities involve people of senior years, whose reflexes, hearing and ability to move quickly are not what they used to be, and children who, regardless of parental supervision, will play and ride their bicycles on the road. We have a clear obligation to society to ensure that people of senior and junior years are protected from speeding motor vehicles. When the committee toured southern rural New South Wales, there was support, not wildly enthusiastic, for the reduction of the limit to 50 km/h after the advantages were pointed out. But a particular concern was the cost of implementing the necessary signage and the physical restrictions that would be necessary on occasion to ensure that the 50 kilometres speed limit was complied with. Recommendation 15, which I pursued very strongly on behalf of local government, is that:

The Minister for Roads:

- (i) ensure that adequate funding is made available to local councils for road markings, signage and associated works to support the implementation of a 50 km/h general urban speed limit; and
  - (ii) provide a public assurance to local councils that such funding will be available for road markings, signage and associated works to
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support the implementation of a 50 km/h general urban speed limit.

I refer honourable members to p.121 of the report and my questions of Mr Ford from the Roads and Traffic Authority about this aspect. On behalf of councils in this State, it is reasonable to expect that funds for this purpose are not taken from some other area; rather, that they are over and above those already received.

**Mr DEPUTY-SPEAKER:** Order! I understand the honourable member for Bega wishes to speak to this report and I am happy for him to do so. However, I remind committee chairmen that time for debate is limited to 30 minutes for each report. That time limit has already been exceeded so far as the report under discussion is concerned. I merely bring this to the attention of committee chairmen, as 10 reports are listed for discussion, and ask them to observe the 30-minute limit.

**Mr SMITH (Bega):** I shall comment briefly on STAYSAFE 34 and its recommendation of a general speed limit of 50 km/h in urban areas. The bipartisan nature of this joint standing committee has resulted in various pieces of legislation dealing with road safety passing through this House. Many lives have been saved because of the work of this committee. It is a committee that is highly respected by overseas jurisdictions. My initial impression was that this report would be received rather badly in country areas. I believed that country people would see themselves in a different category from city drivers, without the volume of traffic or the clutter, hustle and bustle of the city. After generations of people being restricted to 60 km/h in built-up areas, I was not convinced this proposal would work in the country.

I was shocked that the recommendation was accepted across the board not only by those within country areas, but also by experts who gave evidence to the committee. The decision to adopt this proposal was almost unanimous. The committee learned from other jurisdictions that New South Wales is probably one of the few jurisdictions that has not already implemented the 50 km/h speed limit in residential areas. In this instance New South Wales is not taking the usual lead, but it will certainly catch up. One member of the committee, John Tingle, was concerned whether people would comply with the 50 km/h speed limit because they did not comply with the present speed restrictions. That may be so, but if people drove at 70 km/h in a 60 km/h zone, perhaps they will maintain that 10 km/h difference. In that event, though they may not obey the 50 km/h speed limit, their speed would be reduced to 55 km/h or the present 60 km/h.

Statistics provided in the report reveal that such a reduction in speed has an impact on the stopping time and would reduce trauma, death and much heartache for families. Another relevant point to be stressed at every turn is that this speed limit does not relate to connector roads or those major routes people use to travel to and from work. The speed limit will apply only to residential areas and to that extent provides a dual purpose. Not only will it make residential streets safer, but the secondary benefit is that it will provide a better environment for those people to live in without objectionable major structures and other things outside their homes.

The report contains a number of recommendations and I reiterate most of the comments of other honourable members. However, particular attention should be drawn to the responsibility of paying for the associated costs of introducing this speed limit change. Everyone knows the State Government is hard done by because the Federal Government knocks off funding to the States. The State Government always tries to recoup a little of its costs from local councils. Most roads referred to in this report will be local roads falling under the responsibility of local councils to provide funds for the structural change, which involves signage. STAYSAFE believes the State Government should provide the funding as it is implementing the change. Councils do not have such vast amounts of funds to change significant quantities of road signage. I thank you, Mr Deputy-Speaker, for giving me the opportunity to speak to this report.

(New South Wales Legislative Assembly, Votes & Proceedings, Wednesday 16 April 1997, pp.58-63)

## **Significant events since the release of STAYSAFE 34 (1996)**

There have been several significant events since the release of the STAYSAFE 34 (1996) report.

### *Australian Transport Council*

On 15 November 1996, the Transport Ministers of the Federal, State and Territory governments met in Darwin as the Australian Transport Council, which incorporates the Ministerial Council for Road Transport. The meeting was chaired by the Northern Territory Minister for Transport and Works, the Honourable Barry Coulter, MLA.

This issue of lower urban speed limits was discussed, and the communique of the Darwin meeting records that:

“Ministers discussed lower urban speed limits and agreed that:

- the draft Australian Road Rules should be progressed with a 60 km/h general urban speed limit;
- jurisdictions be able to continue to alter local area speed limits; and
- that the issue can be revisited and the Australian Road Rules amended in the future if determined by Ministers.

Ministers noted NSW advice that NSW had not made a decision to lower the general urban speed limit to 50 km/h following report by the NSW STAYSAFE Committee.”

### *Local government*

STAYSAFE has continued the process of consultation and discussion with local councils commenced in the inquiry stage concerning the proposed introduction of a 50 km/h general urban speed limits, with visits of inspection to the mid-North Coast (Coffs Harbour and Port Macquarie), and the Illawarra and Shoalhaven (Wollongong, Moss Vale, Kiama and Nowra). In mid-1997, the Shires Association, which together with the Local Government Association forms the peak body representing local councils in New South Wales, resolved to reverse its existing policy of non support for a 50 km/h speed limit to a policy of support for a 50 km/h speed

limits.

## Meeting of Parliamentary road safety Committees

At the second meeting of Parliamentary road safety Committees, held in Sydney on 2-3 April 1997, discussed the issue of a 50 km/h general urban speed limit in some detail, with a major paper presented by Gibson (1997) and significant discussion by the seminar participants.

In particular, it was clearly identified that whilst a recent AUSTROADS (1996) report had proposed a local area speed limit of 50 km/h, after substantial evidence was received and examined and after much deliberation, STAYSAFE disagreed with the AUSTROADS proposition and indicated that it preferred a 50 km/h general urban speed limit. The technical distinction between a local area speed limit and a general urban speed limit is discussed in detail in the STAYSAFE 38 report, but the import of it is quite significant in that STAYSAFE was of the view that the desirable situation should be that if a driver cannot tell what the speed limit is in a suburban or residential area, then it should be taken that the speed limit is 50 km/h—rather than requiring the motorist to work out whether they could see a speed limit sign, and if not, then to know which local government area he or she was in, and therefore whether the speed limit was 60 km/h or 50 km/h.

In general discussion, Mr O'Sullivan, Chief Executive Officer, National Road Transport Commission, commented with regard to specific issues affecting the development of the Australian Road Rules:

"General urban speed limit—you will remember one of the earlier versions, I am not sure whether it was a version we showed some of you in our consultations of 50 km/h, and there was a pretty good case for 50 km/h as a general urban speed limit. The position at the moment is that the general urban speed limit is recommended at 60 km/h, given the uncertainties in some States and Territories as to how their governments view 60 km/h. If it is to be 60 km/h pro tem, and that is how I express it, there is no reason in the world why it cannot be amended subsequently. None of this is to be set in concrete, nor should it be."  
(STAYSAFE 38, 1997, p.160)

However, in later discussion the following debate occurred between Mr O'Sullivan and STAYSAFE:

### Mr O'SULLIVAN (NATIONAL ROAD TRANSPORT COMMISSION)::

"The issue of 50 km/h versus 60 km/h is specifically being considered by the Ministers. They did not make a determination in favour of 50 km/h pending the resolution of the STAYSAFE New South Wales results, which are to hand now. That may well be considered again, but I am not sure whether New South Wales is contemplating a general urban speed or not, but if one State has 50 km/h and another State is staying with a limit of 60 km/h, that is a matter of great concern in relation to attempts to have uniformity...."

**Mr GIBSON MP (NEW SOUTH WALES)—in the Chair:** “What happens if you determine a 60 km/h urban speed and New South Wales decides to have an urban speed limit of 50 km/h?”

**Mr O’SULLIVAN (NATIONAL ROAD TRANSPORT COMMISSION):** “As I have just said, I do not think that having a limit of 60 km/h in one State and 50 km/h in another State is acceptable. I think Ministers will have to come to a decision on what will be the general urban speed limit in this country. I do not think we can have 60 km/h speed limit elsewhere and 50 km/h in New South Wales, to answer your question directly.”

**MR WHEATLEY (AUSTRALIAN CAPITAL TERRITORY DEPARTMENT OF URBAN SERVICES):** “The Australian Capital Territory position is to retain a general urban speed limit of 60 km/h.”

**Mr GIBSON MP (NEW SOUTH WALES)—in the Chair:** “But, if New South Wales wanted to pursue a 50 km/h general urban speed limit, what would happen?”

**Mr O’SULLIVAN (NATIONAL ROAD TRANSPORT COMMISSION):** “If New South Wales wanted to pursue that, that could be put to the Ministerial Council and Ministers can make a determination.” (STAYSAFE 38, 1997, pp.162-163)

The debate continued later:

**Mr GIBSON MP (NEW SOUTH WALES)—in the Chair:** “Just let me get this clear. If we decided to go with a 50 km/h general urban speed limit and you said no, what would happen?”

**Mr O’SULLIVAN (NATIONAL ROAD TRANSPORT COMMISSION):** “You could still do it. We would not say no. We are protagonists of the 50 km/h general urban speed limit. Our recommendation to the Ministerial Council was 50 km/h.”

**Mr GIBSON MP (NEW SOUTH WALES)—in the Chair:** “Earlier you said that it would not be permitted.”

**Mr O’SULLIVAN (NATIONAL ROAD TRANSPORT COMMISSION):** “There is a practical difficulty in having one general urban speed limit in one State and another in another State. What happens when someone strays into New South Wales and does not know that there is a 50 km/h limit?”

**Mr CLEARY MHA (TASMANIA):** “The Ministerial Council might say that it does not agree, but a State Minister can do what he likes.”

**Mr AINSWORTH MP (WESTERN AUSTRALIA):** “Mr Chairman, surely part of the role of the Ministerial Council in looking at uniformity is to aim for uniformity in those areas where it is practical common sense to achieve, but to also recognise regional

differences. Perhaps the understanding that should be reached between States is not to necessarily to take the lowest common denominator and do it, or to go the other way and take the highest if you are talking about speed limits and do it, but to recognise that there are differences and to ensure that each State puts in place adequate signage and whatever else needs to be done to make it easy for the transition from one State to the other so that you are not left—as I was years ago in Melbourne—wondering what the sign in the middle of the street that says “No centre right turn” means when people are turning right. It did not make much sense to me.

There are vast differences between States—we have just heard about Tasmania’s problem with gravel roads. Western Australia has some quite good major highways in the north west, but we have a fatigue problem if people are driving along at 90 km/h because they have huge distances to travel. You have to recognise the differences and set the speed limits accordingly, but enforce, if possible, adequate signage so that people are not left wondering what they are facing when they cross borders.” (STAYSAFE 38, 1997, p.167)

Further discussion followed the next day:

**Mr MITCHELL MLA (QUEENSLAND):** “Mr Gibson, you gave an address on the 50 km/h general urban speed limit, which was followed by the Minister’s address. If my understanding is correct, at the ministerial conference all but one of the government areas was keen on the 50 km/h speed limit. Will someone from the State on the move tell us whether Victoria’s opposition related to economics, policing or transport? I understood that only Victoria was opposed to the 50 km/h general urban speed limit.”

**Mr RICHARDSON (VICTORIA):** “I do not think Victoria was opposed to the 50 km/h speed limit. As I recall, it relies on local municipalities to apply to the Minister for Roads and Ports for permission to introduce a 50 km/h speed limit, and that has not been accepted by councils.”

**Mr MITCHELL MLA (QUEENSLAND):** “After having spoken to people individually, I understood that there appeared to be a fairly broad consensus that some States were very keen on it and others were prepared to look at it, and that agreement was not too far away. Can someone who is more in touch with the ministerial meeting tell the group how close we are to consensus?”

**The Hon. J. CLEARY MHA (TASMANIA):** “This issue has been discussed for a couple of years or so. There is great concern that there is a need for consistency across the country for people travelling interstate and across State borders. Even within States different municipalities adopt different speed limits in urban areas, which causes great confusion to the travelling public. I do not know whether we are close at this stage. There is a recognition of community support for reducing speed limits in urban areas. There seem to be waves of support in local areas around the country from time to time. No doubt it will be back on the agenda in May, but it is difficult to predict at this stage. Ministers are reluctant to make the move because it is a major change. We need consistency between all States, otherwise confusion results.”

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**Mr RICHARDSON (VICTORIA):** "I do not know whether recommendations, statements or directions will be issued, at the conclusion of the conference, but I would like the meeting to encourage the Ministerial Council to consider that issue. My understanding and reading of reports from Travelsafe, STAYSAFE and from road safety groups is that significant benefits, including economic benefits, would result from a reduction in speed limits, because loss of production and hospitalisation would decrease. If a statement is to be made at the conclusion of the conference I would like that issue to be considered."

**Mr WHEATLEY (AUSTRALIAN CAPITAL TERRITORY DEPARTMENT OF URBAN SERVICES):** "The Australian Capital Territory is surrounded by New South Wales, so if there is national support for action to introduce a 50 km/h general urban speed limit, we would be obliged to follow suit. But I believe the preference would be to retain the general urban speed limit of 60 km/h, but to introduce the discretion to apply a speed zone of 50 km/h where necessary within the Australian Capital Territory. Most of our accidents occur on the arterial network and not on residential roads. I believe the Australian Capital Territory has consistently taken that view." (STAYSAFE 38, 1997, pp.204-205)

Ultimately, the meeting resolved unanimously:

- "That this combined meeting of the Parliamentary road safety Committees:*
- *supports the introduction of a general urban speed limit of 50 km/h;*
  - *recognises that main roads, arterial and subarterial roads and other carriageways, where appropriate, can be signalled at other limits as determined by relevant State and local authorities to allow for the safe and efficient movement of traffic; and*
  - *calls upon the Australian Transport Advisory Council, the Ministerial Council on Road Transport, and other participating agencies to implement a 50 km/h general urban speed limit as a matter of urgency."* (STAYSAFE 38, 1997, p.247)

## Government announcement of 50 km/h speed limit trial

At the second meeting of the Australasian Parliamentary road safety Committees in Sydney on 2-3 April 1997, the Hon. Carl Scully MP, Minister for Roads, discussed the New South Wales Carr Government's approach to the proposal to introduce a 50 km/h general urban speed limit:

"In terms of the 50 km/h speed limit, most road safety experts will tell governments that lower speed saves lives. It is a matter, and I do not believe I am breaching confidence to say this, that the Chairman of the STAYSAFE Committee regularly puts to me, even ringing me at home. It is a matter that STAYSAFE, in a bipartisan approach, is pushing to government firmly. The Chairman believes in it passionately. It is something I am not unsympathetic about exploring. I am going through what most Ministers do, ensuring that it has the overwhelming support of all the stakeholders in the transport industry, to make sure there are not unintended consequences. The STAYSAFE Committee and its Chairman assure me that those bases have already been touched by them, but I need to satisfy myself.

I am not uninterested in doing it. I think it has a lot of merit but we are not quite at the stage where we could introduce it." (STAYSAFE 38, p.194)

STAYSAFE has welcomed the recent announcement that the Carr Government is to introduce a 50 km/h speed limit in New South Wales. On 21 August 1997, the Minister for Roads, the Hon. Carl Scully MP, released the following public statement:

#### TRIAL OF 50 KM/HR SPEED LIMIT

The State Government is to conduct a major trial of a 50 kilometre an hour urban speed limit.

The Minister for Roads, Carl Scully, announced today a three-month trial would be conducted in a range of Sydney and regional local Government areas from 1 October.

He said the trial would lead to the Government deciding early next year whether a general urban speed limit of 50 km/hr would be introduced in New South Wales.

Fourteen local councils are to be invited to join the trial. They are: -

- Sydney Metropolitan: Bankstown, Campbelltown, Fairfield, Hawkesbury, Hurstville.
- Regional and rural: Albury, Armidale, Dubbo, Gosford, Lismore, Newcastle, Nowra, Queanbeyan, Wagga Wagga.

Mr Scully said speed remained one of the most critical factors affecting road accident, injury and death rates.

"The Government's key objective is to make our roads safer," he said.

"Support for a general urban speed limit of 50 km/hr has been growing.

"There is evidence that a 10 km/hr reduction in the existing limit would increase safety for motorists, cyclists and pedestrians, as well as improving quality of life in residential streets.

"However, the Government believes there needs to be a comprehensive trial before any change of this magnitude is introduced.

"The test will allow a proper assessment of the impact on the community of a 50 km/hr general speed limit."

Mr Scully said letters of invitation were being sent to the Mayors of the 14 local government areas. Additional councils could be included upon request.

## Concluding comments

It now seems that New South Wales is poised to implement a 50 km/h general urban speed limit, and, further, that if New South Wales does take this action then it is likely that most, if not all, Australian jurisdictions will follow suit.

STAYSAFE cautions that much care is required to ensure that the implementation process is successful and that the new lower general urban speed limit is well received by the New South Wales community. STAYSAFE has two particular concerns:

- First, the announcement of the implementation of a 50 km/h speed limit in fourteen local government areas in metropolitan, regional and rural New South Wales may be seen as a de facto endorsement of the AUSTROADS (1996) proposal for a 50 km/h local area speed limit. STAYSAFE 34 (1996) explicitly rejected the concept of local area speed limits, in favour of a lowering of the general urban speed limit from 60 km/h to 50 km/h. A major reason for the rejection of the concept of a local area speed limit is that it manifestly has not worked in Victoria. There, a decision for a State-wide reduction in the speed limit was reversed and replaced by a process where individual local councils could apply to have the speed limit lowered—few councils have sought to do so. In New South Wales, local government does support a reduction in the general urban speed limit, not a local area speed limit. As indicated by New South Wales local government representatives, local areas speed limits are unworkable. Hurstville Council's mayor, Cr Peter Olah is reported as saying about the 50 km/h trial that:  
“... the way it's been set up gives it very little chance of success. People will be driving into and out of 50 km/h and 60 km/h all the time—it just gets pretty unworkable.”
- Second, it is STAYSAFE's view, supported by significant organisations involved in road safety in New South Wales and nationally, that further trials involving specific local government areas may not be necessary. The Mosman-North Sydney 50 km/h area-wide trial, the Hurstville 50 km/h local area traffic management (LATM) program, the Ku-ring-gai 50 km/h trial, and other programs interstate such as the Unley 40 km/h trial clearly support safety and amenity benefits that would accrue from the adoption of a 50 km/h general urban speed limit as a State-wide initiative. The Carr Government should immediately apply the 50 km/h general urban speed limit to all roads in built-up areas in New South Wales that are not traffic routes, that is, all local streets which are not sign posted with a higher speed limit.

STAYSAFE urges the Carr Government to move immediately to adopt a 50 km/h general urban speed limit in New South Wales.

The report of the inquiry into 50 km/h speed limits (STAYSAFE 34, 1996) outlined a comprehensive program for the implementation process, involving significant legislative and policy changes. In particular, STAYSAFE recommended: revision of the current structure for

speeding offences and penalties to provide for increments of 1-10 km/h, 10-20 km/h, 20-30 km/h, and over 30 km/h only, with the 1-10 km/h speeding offence attracting a penalty of demerit points with a small monetary penalty; the Government to examine the feasibility of allowing recorded cautions for isolated instances of the speeding offence of 1-10 km/h, with demerit points and monetary penalties only resulting from two or more offences within any twelve month period; endorsement of the introduction of new laser speed detection and speed camera technologies by police, together with consideration for adoption of policing methodologies suggested to promote better compliance with traffic law; the community to be informed of the new speed limit, its uses on New South Wales roads, and the new policing technology and methods through extensive advertising that informs the community of the changes and allows drivers to identify the choices they must make in modifying their unsafe speeding behaviours.

These recommended initiatives, if undertaken in a co-ordinated and cohesive program, should advance the Carr Government's objective for New South Wales roads to be the safest in the world and for the Road Safety 2000 strategic planning targets of less than 500 deaths and less than 5,500 serious casualties by the year 2000 to be realised.

A significant effort and expenditure has already been incurred in examining, discussing and debating the issues associated with a 50 km/h general urban speed limit: by the STAYSAFE Committee, by local government, by the State and federal bureaucracy and by the New South Wales community. Care should be taken to ensure that the strong support for the reduction in the general urban speed limit is not diminished, and the implementation of a 50 km/h general urban speed limit jeopardised, because of inappropriate action and advice at this crucial time.

## References

AUSTROADS (1996). Urban speed management in Australia. Report AP 118. Sydney, NSW: AUSTROADS.

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## PUBLIC HEARING OF MONDAY 4 DECEMBER 1995

*Roads and Traffic Authority witnesses - NRMA witnesses - New South Wales Police Service witness*

STAYSAFE took preliminary evidence concerning the proposed introduction of a 50 km/h general urban speed limit from witnesses representing the Roads and Traffic Authority, NRMA, and the New South Wales Police Service on Monday 4 December 1995.

### Roads and Traffic Authority witnesses

Preliminary evidence was obtained from Roads and Traffic Authority witnesses:

Mr Christopher Patrick Ford, Director, Road Traffic and Traffic Management  
Mr Gary Leonard Stapleton, Suburban Amenity Manager, Sydney Region  
Mr Raymond David Taylor, General Manager, Road Safety  
Mr Peter Graeme Croft, Manager, Road Environment Safety

**Mr GIBSON (CHAIRMAN):** Mr Ford and gentlemen, your presence before the Committee today is to provide the overview of the position of the Roads and Traffic Authority regarding the inquiry into the proposed introduction of 50 km/h speed limits on residential streets. For the benefit of honourable members and the public here today, I note that the inquiry into the 50 km/h speed limit proposal arose following the provision of a reference from the Hon. Michael Knight, MP, acting in his capacity as Minister for Roads.

The Committee has received an extensive response from the Roads and Traffic Authority to the STAYSAFE Committee's call for submissions. The Roads and Traffic Authority submission has addressed each head of inquiry in some detail. Obviously, each of these terms of inquiry will need detailed examination by the Committee members over the ensuing months. Nevertheless, the Committee welcomes the opportunity to be introduced to the issues involved under the head of inquiry involved today....

The STAYSAFE Committee has received a submission from the Roads and Traffic Authority concerning the inquiry into the proposed introduction of 50 km/h speed limit on local roads in residential areas. Mr Ford, is it your wish that the submission received from the Roads and Traffic Authority be included as part of your sworn evidence?

**Mr FORD:** It is, Mr Chairman.

**Mr GIBSON (CHAIRMAN):** Mr Ford, can you describe and discuss the findings reported in

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previous research into lower residential speed limits that have been conducted in Australia and overseas?

**Mr FORD:** We have a very short presentation on our submission. If it is at all possible, we would like to proceed with that presentation.

**Mr GIBSON (CHAIRMAN):** The Committee agrees with that procedure.

**Mr FORD:** Mr Peter Croft will make the presentation.

**Mr CROFT:** I have a few overhead slides that I will take the Committee through quickly so that you will have an overview of the main points of the submission. The first point I would like to make is that speeding is a major factor in road safety in New South Wales. At this moment, speeding related crashes represent about 30% of fatal accidents, and that means it is directly related to 205 dead and 1,249 serious injuries. Speeding is a key priority in our strategic plan for road safety, which is Road Safety 2000, and it is the subject of a special management program.

Urban roads provide a special focus for our concern about speeding on 60 km/h roads. In one year, we see in this slide that there were 231 fatal crashes and more than 3,000 serious injury crashes on 60 km/h roads. Lower speeds, we understand from our research, are preferred by the community in residential areas. The benefits from this are three-fold: safer streets, improved amenity, and fewer emissions. Putting that into context, the current speeds, as we see by concluded surveys, show us that even on residential streets some 35% of cars exceed the 60 km/h limit that is already in place.

The primary control over speeding is, of course, speed limits. There are two types of speed zones which are on particular routes: the length of road, and general limits, which are default speed limits for areas. The research clearly tells us that where appropriate limits are set and lower speeds are attained, fewer crashes and fewer casualties result.

I turn to an indicative map of a section of the Sydney metropolitan area. We take those roads as having a limit of 60 km/h. In the example shown, the blue represents roads of an arterial nature which have a 70 km/h speed limit. In the top left-hand corner you can see part of a freeway, which has a much higher speed limit. In the bottom of the diagram are a few sections of road coloured orange, and these are typically 40 km/h school zones, for example. Everything else in that fabric of network is subject to the current speed limit of 60 km/h.

A few points about the current 60 km/h speed limit. It is the general default limit for all built-up areas. That applies in metropolitan and rural centres. When nothing else is signposted, the 60 km/h speed limit applies. It is technically inappropriate for all roads throughout the entire road network of the metropolitan area. It is too high for the activities that one observes in most local streets. People are using those roads to play, to get access to their properties, and also to drive along. In terms of international comparison, it is amongst the highest in the world as far as the

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general speed limit is concerned. The submission that we have tendered points out quite clearly that most comparable countries have a 50 km/h speed limit. We have to recognise where we stand as compared with our international colleagues.

Our submission addresses the terms of the inquiry, and in particular talks about the local street speed limit — a general proposal of 50 km/h as the speed limit on all unsigned streets in all built-up areas, metropolitan and rural. No special speed devices are envisaged for this particular proposal, no speed humps and that sort of thing. The new speed limit will in effect replace the general 60 km/h limit. Other roads deserving of more specific zones, such as 40 km/h outside schools or perhaps even in shopping centres, and perhaps 60 km/h on some arterials and 70 km/h on other arterials, can be implemented as needed. That is the essence of the proposal for the local street speed limit.

I return to the map we saw before. This is not a proposal for any particular area. It is purely an indicative example, following on from the map we saw before, where everything was 60 km/h unless otherwise coloured. In this particular situation, everything has a 50 km/h limit unless otherwise coloured. The blue marks, as before, represent the major arterials, subject to 70 km/h; semi-arterial roads are coloured green in this example, and they would remain at 60 km/h. At the other end you can see the orange section, at the bottom of the diagram, which would be the 40 km/h zones outside schools.

That is an indicative example. I refer now to something a little bit more concrete. We are looking at the lower north shore area, around Mosman and North Sydney. That is the area currently in the development of a trial of 50 km/h over that entire area coloured in blue. Roads within that area, which are currently at 60 km/h, would be 50 km/h under this proposal. Those roads which are specially zoned at 40 km/h, for example, would remain 40 km/h. There will be more detail on that from my colleagues later.

A few notes on implementation of what is proposed on the local road speed limit. A major public information campaign is envisaged to inform the general community of exactly what is proposed, the reasons for it, and how it will be implemented. There will be a need for route zoning to continue, as there is at the moment, especially identifying those which need to remain in the route zone, and appropriate signposting to go with that.

Enforcement is a fundamental concern. We are not talking here about any special resources devoted to the long-term sustenance of this. Monitoring is the other main aspect of the proposal, to make sure that the speeds, community attitudes and crashes themselves are appropriately measured and taken into account so that the proposal, when implemented, can be refined.

In terms of benefits estimated to come from the proposed local street speed limit, the main beneficiaries are without question pedestrians — and that usually means children — in local residential streets. There is research referred to in our submission which gives some figures on the extent to which we can expect them to be beneficiaries. We estimate that somewhere between

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100 and 500-odd casualty crashes can be saved each year. That means savings in the order of \$6 million to \$31 million in terms of casualties and deaths arising, for a one-off cost of around \$4 million to \$5 million.

Perhaps more important at the bottom of the slide is credibility and compliance with the limits. That is something which is seen as coming from the proposal. It is fair to say that a lot of disrespect and non-compliance which we observe out there today comes from a lack of credibility of the whole speed zoning system. The proposed local street speed limit, which is the basis of our submission, is seen as a mechanism for addressing that particular problem and leading to credibility and compliance in future. Thank you for your indulgence, Mr Chairman.

**Mr GIBSON (CHAIRMAN):** Mr Ford, the logical question to be asked as a result of that is that you have no doubt that the 50 km/h speed limit is the way to go. Might I ask, how has it taken this long to come to this conclusion that 50 km/h rather than 60 km/h is the way to go?

**Mr FORD:** Mr Chairman, the 50 km/h proposal has been the subject of an AUSTROADS investigation in the last couple of years. The Roads and Traffic Authority was part of that investigation. That submission from AUSTROADS is currently with its executive. So it has taken that time for the various State road authorities to look closely at the proposal and to give comment back to the AUSTROADS body.

**Mr GIBSON (CHAIRMAN):** But, back ten years ago, was it not envisaged that 50 km/h would have been safer than 60 km/h, or was it not an issue then?

**Mr FORD:** Speeding has always been recognised as a major contributor to the road safety problem. In residential areas, however, particularly since the 1980s, it has been emerging as a problem. For example, when I first worked in western Sydney, half of the crashes were occurring on local roads, and that was in 1989. It is probably in that time frame that we have taken a very close look at the issue of speeding on residential streets.

**Mr JEFFERY (STAYSAFE):** Mr Ford, if I might make a couple of remarks first. I note that a Community Advisory Group on Speeding was established by the previous Deputy Premier and Minister for Roads, the Honourable Wal Murray, MP, in January 1993. It provided advice to the Minister in April 1993. Mr Chairman, could I ask that a copy of this advising be tabled and appended to the evidence received today?

**Mr GIBSON (CHAIRMAN):** Yes.

**Mr JEFFERY (STAYSAFE):** Mr Ford, I have two questions arising from that. In general terms, what was the nature of the advice given to the Minister by the Community Advisory Group on Speeding? Did the CAGS report address lowering urban speed limits?

**Mr FORD:** If I may pass that question over to Mr Croft for a response.

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**Mr CROFT:** A whole range of speed limits was addressed by the Community Advisory Group on Speeding. There was reference in that to the possibility of introducing a 50 km/h speed limit in residential streets. I do not think it was quite couched in those terms, but it was part of the recommendation of that group, as I understand it.

**Mr JEFFERY (STAYSAFE):** Mr Croft has said the group did address the lowering of the urban speed limits, Mr Chairman. Perhaps this Committee could write to the Minister for Roads requesting access to all those relevant papers?

**Mr GIBSON (CHAIRMAN):** Yes.

**Mr FORD:** That is fine.

**Mr JEFFERY (STAYSAFE):** A further question to Mr Ford. What were the circumstances involved in changing the New South Wales urban speed limit from 30 mph to 35 mph during the 1960s? Is the Roads and Traffic Authority able to supply reports, briefing papers, memoranda, cabinet submissions, etc., relating to this change?

**Mr FORD:** That decision was taken by the Government at that time in recognition of improving roads and certainly improving vehicles and driver behaviour on roads. We have had a very quick search of our documentation at the Roads and Traffic Authority, and anything that we can turn up in relation to briefing papers, memorandum, cabinets submissions, and so on, we would be more than pleased to hand across to the inquiry.

**Mr GIBSON (CHAIRMAN):** Would there be much material available on that?

**Mr FORD:** Precious little, Mr Chairman.

**Mr SMALL (STAYSAFE):** Looking at overseas as well as local situations, what important lessons can be learned from an examination of the speed management practices in other jurisdictions in Australia and overseas, particularly in terms of identification of current practices for the setting of urban speed limits and the introduction of lower local road speed limits in residential areas?

**Mr FORD:** Again I might ask Mr Croft to respond to that question.

**Mr CROFT:** Research from overseas covers a wide range of examinations of speed limits. I guess one of the most important features to come out of the weight of all that research is that attempts to match speed limits to the road system have borne fruit in terms of reducing crashes and casualties. By that, I mean that in a lot of European cities, for example, there are tight geometric constraints in terms of width and length of streets and so on; they are very conducive to lower speeds and lower speed limits. And, where lower speed limits have been introduced, there have been some savings in crashes and casualties. Similarly, with high speed roads, they are

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able to withstand higher speeds and accorded higher speed limits. That is a lesson that we are in the process of learning about and translating to our practice here.

**Mr SMALL (STAYSAFE):** When you were showing the slides, you did mention that the lower speed of 50 km/h is very high relative to overseas countries. I did not appreciate that our speed limit of 60 km/h was generally higher than those in most residential areas in other countries.

**Mr CROFT:** It certainly is. I do not think we are all alone, but we are very near to having the highest urban speed limit in the world. In recent times, other European countries have reduced their speed limits from 60 km/h to 50 km/h. That is documented in our submission. We have also pointed to the results that that has achieved in terms of safety. France, most recently, and Switzerland a little bit before that, and Denmark notably, have all reduced their speed limits—

**Mr GIBSON (CHAIRMAN):** And the M25 in England.

**Mr CROFT:** —That is very recent, as I understand it. I am not aware of any research results which have shown the effects on numbers that has had. But certainly in other comparable countries, that is comparable in terms of the use of the motor car and the way the built environment is set out and so on. For example, Canada and Sweden have had 50 km/h speed limits for quite some time. I guess we ask the question: Why can we be so different? Can we afford to be so different?

**Mr SMALL (STAYSAFE):** What is known about community concerns with effective speed management in urban areas, particularly vehicle speeds on residential streets? Do you have any further information in that area?

**Mr FORD:** Since the early 1980s the Roads and Traffic Authority and local government have on numerous occasions expressed concerns over effectively managing excess speed on residential roads. In the mid-1980s the former Traffic Authority undertook a number of trials of different techniques for managing speed. Those were the forerunners of our local area traffic management devices. Those devices emanate entirely from concerns being expressed by local communities in those areas at that time.

**Mr GIBSON (STAYSAFE):** Mr Ford, earlier you gave a figure that 30% of all fatalities were speed related. What proportion of that 30% would have occurred in 60 km/h areas?

**Mr CROFT:** It is roughly about 40%. So we are talking about just under 100.

**Mr GIBSON (STAYSAFE):** You are talking about 100 people?

**Mr CROFT:** Yes, 100 people in 60 km/h zones. Not all of those, of course, are necessarily on residential streets as we defined in the map. Some of those 60 km/h zones would probably remain 60 km/h zones. We have been unable to unravel that component for you.

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**Mr HUNTER (STAYSAFE):** What communication strategies are required to support the introduction of 50 km/h local road speed limits in residential areas?

**Mr TAYLOR:** Mr Chairman, I think there are at least three things that we need to do in respect of communicating that shift. The first is that we need to ensure, if there is a change, that every motorist and road user in New South Wales is aware of that change. So the first focus of the strategy would be information flow; people must know that there has been a shift or change.

The second focus would be to ensure that, in the process of travelling the roads, there is a genuine opportunity to comply with the changed regulation. And there, we would be proposing that there would be a period of advice, followed by a period of moratorium in the application of the regulation. In other words, people would be stopped if they were exceeding the limit and they would be advised directly that the limit had changed, rather than being treated as offenders. That would be followed up with a period of enforcement on the basis of normal offences.

I believe a process like that gives people every opportunity to comply willingly with a change and also gives them the opportunity to be notified. Now, that change in application would require a fairly substantial publicity campaign, a mass media campaign, to ensure that people are aware (a) that something had changed, (b) what that change means, and (c) how it affects them. Those are the three questions that they would be interested in.

**Mr HUNTER (STAYSAFE):** So, would you be looking at sending out a circular to every licence holder, or are you speaking about mass media communication?

**Mr TAYLOR:** I would not like to design the campaign here and now, but I think it would probably finish up being a combination of both. I think you would have to use the mass media to signal that there is a shift, and then you would have to use a little bit more detailed targeted information so that people get that information more directly. You may well use the mass media for that purpose, to say: There has been a shift; get your information here.

**Mr FORD:** It may be helpful if Mr Stapleton spoke briefly on the communication strategy that we will employ in the Mosman and North Sydney trial.

**Mr STAPLETON:** I would like to give you some background to how this trial developed and the reasons for it. We were approached some two years ago by the then mayor of Mosman to provide signposting as a means of reducing speed limits in the Mosman area. The mayor thought that the mere provision of signs would accomplish the end that he foresaw, that is, reducing speeds from the present 60 km/h within his residential area down to 40 km/h. The reason for this was that the traditional engineering methods that we had employed in the past, as Mr Ford mentioned to you, the local are traffic management types of measures, were quite expensive — some millions of dollars — in order to accomplish meaningful reductions in speed, and therefore the mayor felt that since the community wanted speed reduction, and he could not afford that type of expense, there should be something else done.

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We felt that it gave us the opportunity then to develop some other mechanism in order to reduce speeds, and not the traditional methods that we had been used to. I met with the then mayor, and also invited North Sydney to be involved in a trial of a particular method of reducing speeds which we had been developed at the Roads and Traffic Authority. It was reasonably unique inasmuch as it used a combination of the traditional forms of speed reduction: one, signposting; two, enforcement; and the third one, which we had not used out here, was the social interactive process.

All of those elements were interactive. That was the basis of this trial: they all worked with each other to provide a result which we think will reduce the speed limit within those residential areas. So, if I can go through each of the interactive elements. We have the traditional low-cost engineering measures, which of course are things like road markings and signposting as such. They are coupled with the enforcement strategy. In a sense, we are trying a new type of enforcement technique, one which was being used by the Queensland Police Service in 1992. It has been trialed and found to be very effective in its entirety. So we are very keen to trial that as part of this project.

The other important element was what we call the social package. What we are doing there is involving the community totally on reporting to us the problems that they are now encountering within their local areas. This communication exercise essentially is something which I think underpins the whole process. Each council is setting up a mechanism by which the community can respond and indicate where the speeds are occurring, what is happening, and those types of processes. So, as I have indicated to you, this particular project is one where we are using three interactive elements. We are hopeful of getting, and I feel sure we will get, some meaningful benefits as a result of the implementation.

At the time, the mayor was very keen on a 40 km/h limit, but at that time there was a project being undertaken in Unley in South Australia, which looked at just using enforcement and speed zone signs as a means of reducing the speed from 60 km/h to 40 km/h. The results of that particular project showed, at least to me anyhow, that 50 km/h was the more reasonable speed to aim for. That was the speed that they were achieving; they were getting nearer 50 km/h in Unley rather than the 40 km/h mark that they had aimed at previously.

So it seemed reasonable to me that that is what we should be aiming for. It is quite interesting that when we did our communication exercise with the local communities in both Mosman and North Sydney, the response from the communities said that some 82% of North Sydney residents and 76% of Mosman residents supported totally a 50 km/h residential speed limit. They felt that 50 km/h was the appropriate level to aim for. So that more or less justified the aim that we had. In fact, that is what we are trying to do at the present time.

**Mr GIBSON (CHAIRMAN):** Could we have a copy of those?

**Mr STAPLETON:** You certainly can. The trial has not started as yet. It has been a matter of

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getting base line information. We have conducted numerous speed surveys, and community input and communication have been the mainstay of this proposal. We are getting advice from the community on where the problem streets are, and they will be treated in a different manner from the other streets. But, as important — and I think you will appreciate just how important this will be — this particular trial is being used to develop what I call a speed management kit. It is not only being focussed on 50 km/h areas; this particular kit, when the model is calibrated, will be looking at problem areas within 80 km/h limit zones, 100 km/h limit zones, 70 km/h limit zones and the like. It just so happens that we are focusing this particular one on the Mosman and North Sydney area.

**Mr GIBSON (CHAIRMAN):** What is the attitude of the Roads and Traffic Authority on other local government areas that want to do the same type of testing?

**Mr STAPLETON:** I have had quite a few approaches from the western councils, and I have indicated to them that once we get this thing sorted out in the Mosman and North Sydney area, where we started, we need to go to those areas to recalibrate the model, because obviously there is a different set of circumstances prevailing in western Sydney than do prevail in the north shore area.

**Mr FORD:** Nevertheless, Mr Chairman, the guidelines that come out of the Mosman-North Sydney exercise would be distributed across all councils in the State.

**Mr HUNTER (STAYSAFE):** You talk about the Mosman-North Sydney exercise, but, generally, what would be the most effective and appropriate strategies that could be adopted to ensure compliance with the 50 km/h speed limit?

**Mr STAPLETON:** As I have indicated, what we are looking at is an interactive process of three different types of methods. Whereas before, at least to my knowledge, it has only ever been a combination of signposting and some engineering element, together with an enforcement strategy, there has never been a social side to it. That has never really come into the equation. I read a paper in America where this was quite a successful technique, and I thought it is worth trying something of that nature out here. They call it Neighbourhood Speed Watch, to be precise.

**Mr SMITH (STAYSAFE):** If there are different circumstances in the north shore areas compared with areas in western Sydney, why are you then sticking with 50 km/h?

**Mr STAPLETON:** No, we are not sticking with 50 km/h. We started off here with the model, and we have to calibrate depending upon conditions. So that, in order to have a model -----

**Mr SMITH (STAYSAFE):** You are basically using a 50 km/h speed limit, are you not?

**Mr STAPLETON:** That is right, yes.

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**Mr HUNTER (STAYSAFE):** Does the Roads and Traffic Authority have the resources to filter this information through to the public?

**Mr STAPLETON:** Of course. That is the idea of it. As Mr Ford indicated to you, once the speed management kit has been developed, it is my intention, and of course the Roads and Traffic Authority's intention, to send this State-wide.

**Mr FORD:** In terms of traffic management strategies, perhaps Peter Croft could give some information on what has been tried historically in respect of engineering treatments and just how successful or otherwise they have been.

**Mr CROFT:** Dating back to the 1970s in several places within Australia, not just within Sydney, there have been trials of lower speed limit areas. I guess one lesson that is prominent to me in all those trials is that where the new lower speed limit has been indicated by signs only, the results have been spectacularly insignificant. Where the speed limits have been introduced with physical devices — and, typically, they have been 40 km/h in local residential areas, with occasional narrowings and some platforms and that sort of thing — they have achieved what they set out to do. Signposts alone have not.

Just picking up on Mr Stapleton's point: what those early studies did not really attempt to do much at all was to tap community views and attitudes about the whole thing. That is where the Mosman, or north shore trial, shall we call it, is different and is the way we do things today. I think we are learning a lot out of that. We know how people feel about speed limits and how we can address their concerns.

In Australia, not a lot has been done in terms of the safety evaluation of those lower speed limit trials. A fair bit has been done on speed measurement, and a reasonable amount has been done on community views after the event. I guess the most recent and best conducted study is the one that Mr Stapleton referred to in Unley, South Australia, which is an older part of the Adelaide fabric, of which we have many examples here in Sydney. I think we have learned a lot from that in recent times.

**Mr JEFFERY (STAYSAFE):** You mentioned the narrowing of streets and the humps and what have you. The cost of this is going to be mainly in local government areas, or urban or country town areas. Who will wear the cost of all this? Are you proposing that the Roads and Traffic Authority or local government will share these costs, or would it be up to the local councils to bear the full cost of the implementation of such a decision?

**Mr FORD:** Where there is a clear safety benefit that we can identify, then the Roads and Traffic Authority will share funding with local government. But where the facilities are provided purely in the interests of improving the amenity of an area, then we would be looking at local government to pick up the cost. But, clearly, where there is a safety benefit identified, the Roads and Traffic Authority would share the funding with local government.

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**Mr CROFT:** If I could amplify that point, Mr Chairman. The proposal for a 50 km/h local street speed limit is not predicated on the requirement for having special devices. The devices that we are talking about currently exist in 40 km/h limits in tight local residential streets or outside schools. The 50 km/h speed limit is not associated with special devices.

**Mr GIBSON (CHAIRMAN):** If the Roads and Traffic Authority is so convinced that 50 km/h is the way to go, why are we doing testing and getting public opinion? What happens if, at the end of the day, the public say no, they do not want it, when you are convinced that that is the way to go?

**Mr FORD:** We are putting this together as a proposal, Mr Chairman, on which we really want public feedback. We do need to get a clear appreciation of the acceptability of this proposal from the public's point of view, broader than the North Sydney and Mosman trials. I mentioned earlier that for some years now we have been under a lot of pressure from local government to look at ways and means of reducing speeds in local residential areas. We do need to get a broader feel of the general community attitude towards the 50 km/h question.

**Mr GIBSON (CHAIRMAN):** Surely you are not saying that 50 km/h is the way to go, but that you need the public to push you over the line to make that decision?

**Mr FORD:** No. We are saying that the proposal that we are putting before you is a 50 km/h speed limit in residential streets, but to get that proposal integrated into our road network we do need community support and we do need the support of local government.

**Mr THOMPSON (STAYSAFE):** Mr Stapleton, you indicated to the Committee the detail of the trials that are going to take place in Mosman and North Sydney local government areas. Could you give an indication of when you expect the trials to start and how long you expect them to go on for?

**Mr STAPLETON:** I certainly can. It is anticipated they will start in mid-December; and once those trials commence, we are looking at revisiting the site in six months' time to conduct further communication exercises with the community as well as further speed trials and the like, just to gain some idea of how effective or otherwise the trials have been. That is the work program.

**Mr THOMPSON (STAYSAFE):** If I could follow on from Mr Hunter's question on traffic management strategies. What changes do you think are required to enable effective enforcement of lower local road speed limits?

**Mr TAYLOR:** Firstly, in the long term, the proposal to maintain a speed limit regime has to be seen to be achieved in the context, broadly, of the existing level of enforcement available in the State. That is in the long term. In the short term, though, what we are proposing is that any change would obviously require assistance in terms of people's understanding of that, and also assistance in respect of enforcing those speed limits at the appropriate time. But, there, we are

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trying to build on the experience that we have built up of the combination of education or publicity and enforcement mechanisms.

What we are proposing is that we have got the resources available substantially across the State in local government now to assist with educating local communities about the issue, and supporting that at local level. That is linked into each of our regional structures. We would take the issue of the 50 km/h speed limit and the development of that, in its education and publicity program, through to the local level so that it has greater meaning.

Then we would support that at the appropriate time — as I indicated earlier, when people are aware of what the change is, and they have an expectation that they should meet that change. We would be prepared to support that with part of the resourcing that we have allocated over this financial year for what is called enhanced enforcement, that is, providing additional resources at appropriate places and times to ensure that the public at that time are aware that it is an important road safety project.

**Mr FORD:** Mr Chairman, Mr Stapleton mentioned earlier Random Road Watch, the strategies employed by the Queensland Police Service. Perhaps Gary could give you a brief rundown of what that entails.

**Mr STAPLETON:** As to this Random Road Watch — and I have a paper here from the Queensland police — which we are adopting that as part of the trial, to see how effective that would be under New South Wales conditions. It appeared from speaking with Queensland police that it was quite effective there. Very simply, it is a random road watch. It provides randomness of resource allocation.

With the limited resources which we have, police are then able to schedule stationary vehicles at randomly selected locations and sections of road, like a random number generator. In effect, the community does not really know where the police are going to be at the time. So, with a very limited resource, it gives the feeling that you could be around the corner. This, I think, is very effective in terms of the very limited resources that police have. So this is part of the trial. We are going to try this particular method as part of our enforcement strategy in the north shore trials.

**Mr GIBSON (CHAIRMAN):** Is that the same type of program that they had in Tasmania a long time ago?

**Mr FORD:** Yes, it is, Mr Chairman. I believe it has also been trialed in New Zealand.

**Mr TAYLOR:** The reason that that is quite significant in relation to the 50 km/h speed limit is that it is a low-level resource. The random nature of the allocation should support — in theory, anyway — ideally, a 50 km/h speed regime in residential streets. That should not take away, in the longer term, the resourcing available for other forms of enforcement on other roads of the State. That is the key issue.

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**Mr GIBSON (CHAIRMAN):** Have you got any data on its trial on the Pacific Highway?

**Mr TAYLOR:** Yes, we do. We have an analysis of the trial on the Pacific Highway. That data can be made available to the STAYSAFE Committee. That analysis, from my understanding, was not as positive as some of the other analyses have been on static enforcement.

**The Hon. J. S. TINGLE (STAYSAFE):** If we did introduce a 50 km/h speed limit on residential streets, would we need to modify the present technologies and present procedures for enforcing it, to support the introduction of that limit? What changes will need to be made?

**Mr TAYLOR:** Clearly, there would be greater detail about this from the point of view of the Police Service. Existing technology would assist with a static enforcement program. I do not think for static enforcement you would need substantially different existing technology. However, there are emerging technologies which would benefit the local street environment. I am sure the Police Service will talk to you about laser speed detection devices.

Those devices have the advantage of being much more discriminatory and avoiding, as I understand it, a lot of the noise that comes into the existing radar-based technology in urban environments. It may be that, ultimately, that is required. The static enforcement procedure probably would not require extensive resourcing at this stage of technology, as it uses, certainly in Queensland, general duties police in that static role.

**The Hon. J. S. TINGLE (STAYSAFE):** What about the question of penalties and the demerit points system? I would imagine there would need to be changes to the Traffic Act 1909 because of the fact that we would be working on different speed limits and so on. And what about the adoption of a cautioning system, since people would need to get used to the lower speed limit? Have you thought of that?

**Mr CROFT:** Speeding penalties are referred to in terms of how many kilometres per hour above the limit one is travelling at when apprehended. So it does not really matter what the limit is in terms of the particular offence. At the moment, if one is travelling 15 km/h above the limit, or between 15 km/h and 30 km/h, or over 30 km/h, there is a particular penalty regime that applies in terms of demerit points and monetary penalties and, at the very top end, licence loss.

Introducing something like a 50 km/h speed limit does not require that any of that structure should change. Coincidentally, there is some review of that penalty structure going on at the moment, and it might well lead to some change. But change is not necessary or essential for the introduction of a 50 km/h speed limit, as we have outlined.

**Mr GIBSON (CHAIRMAN):** Can you be a bit more specific about the review? Does that mean that although it is 15 km/h over the limit, it could be 10 km/h over the limit for penalty points, etc.?

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**Mr CROFT:** I think it is fair to say, Mr Chairman, that that is one of the alternatives that is in the review, as I understand it. At the moment, it is 15 km/h increments. I think if you trace it back, it comes back to 10 mph way back in the early 1970s. But, obviously, we cannot deny what social research is telling us. People think in terms of 10 km/h increments. Our research quite clearly shows that people think in terms of 10 km/h above a limit, or 10 km/h below a limit, and they tend to behave accordingly in their understanding of 10 km/h increments. So it is an alternative that must be looked at.

**Mr JEFFERY (STAYSAFE):** Mr Ford, how will it be decided if a local street will be subject to a 50 km/h speed limit? Who will be involved in the decision-making process?

**Mr FORD:** Under the 50 km/h residential speed limit proposal all residential local roads will be subject to this limit unless there are good reasons for applying a speed limit either above or below that. I am talking about 60 km/h, above, or 40 km/h, below. The processes that we use are currently through our local traffic committees and local government in concert with the Police Service and other community groups that may be involved. For example, with the 40 km/h school zones, we worked very closely with the schools, and we worked very closely with local government and the police in establishing those zones. Mr Stapleton could speak at length about that particular program.

In areas which are, if you like, local roads which are industrial or have very low residential or school activities, it might be appropriate under this proposal to have a 60 km/h limit. My suggestion there is that the proposal that we are talking about here would apply to all urban residential streets unless there were good reasons either to increase the limit to above 50 km/h or to decrease it to below it, as we do with our school zones. The process there would be through the local traffic committee and local government.

**Mr GIBSON (CHAIRMAN):** If you make it too flexible, though, would it not become too much of a dog's dinner, with people driving at 50 km/h and 60 km/h and then turning the corner and being up to 70 km/h?

**Mr FORD:** I agree with that entirely, Mr Chairman. The role of the Roads and Traffic Authority in that process would be to put in place some fairly definitive guidelines that local government and others could employ in making determinations on what would be the appropriate speed.

**Mr CROFT:** Mr Chairman, if I could amplify that point. There are, of course, objective guidelines in place at the moment which help our agency and local government to reach some understanding on what is the appropriate limit for roads. Those guidelines would have to be amended slightly to take account of adding the 50 km/h zone into the other hierarchy of speed limits.

**Mr JEFFERY (STAYSAFE):** Mr Croft, could you describe the NLIMITS system, and indicate whether it has application to the proposed introduction of 50 km/h local road speed limits?

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**Mr CROFT:** NLIMITS is the name given to a computer-based tool which helps practitioners determine what is an appropriate speed limit for a stretch of road. It is currently in use in New South Wales. It is part of using the guidelines which practitioners in our agency do. It is really a compilation, as it were, of the experience and expertise of traffic engineering practitioners. It has developed into a computer-based tool which has all the logic built into it. I guess it is an electronic version of a committee, if you like. It is in place. It would need to be amended slightly, just as the guidelines would need to be amended, to take account of an additional limit of 50 km/h. It is not only in use in New South Wales; it is in use in Queensland and Victoria, and I understand New Zealand is looking to use it as well.

**Mr GIBSON (CHAIRMAN):** Can you send the STAYSAFE Committee some data on that system?

**Mr CROFT:** Certainly. There are published reports available on that which we could make available to the STAYSAFE Committee.

**Mr THOMPSON (STAYSAFE):** What are the implications of the introduction of a 50 km/h speed limit on residential streets in New South Wales for road safety, particularly with reference to the incidence of intersection crashes, and for pedestrian and bicycle safety?

**Mr TAYLOR:** Mr Chairman, if I might commence on that question. I am sure that Peter would like to add to what I say on that. We believe that there would be a quite substantial impact on the general level of road trauma that occurs on residential streets by virtue of a 50 km/h speed limit, even assuming the current level of compliance and/or non-compliance which occurs over the 60 km/h limit. In other words, if you translate that level of compliance or non-compliance to a 50 km/h environment, you should get quite a substantial reduction in casualty crashes, particularly in respect of pedestrian crashes.

There is some recent work that has been undertaken in South Australia which identifies about 180 pedestrian fatality crashes and sets a range of different criteria to apply to those crashes. One of those is that if you reduced the speed limit in that crash environment by 10 km/h, and even assuming a level of non-compliance, you would get something in the region of a 20 to 25% reduction in pedestrian casualties.

The reason that the reduction is so large is the twin effect of speed on road trauma. The increasing or reducing of speed has an effect on both the frequency of crashes that occur and also the severity of those crashes. So, if you reduce speeds even a little across the system, you will stop some crashes happening, because drivers have greater opportunity to manoeuvre, and the wash-off of speed is much quicker at a lower speed. So you will have some crashes not happening at all.

That was in fact shown in the South Australian trial in which, when they applied that information, they found that something in the region of 10% of crashes which occurred and had resulted in

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deaths, if they had applied in a 50 km/h environment, would not even have occurred, the person would not have been hit. So that is an immediate reduction in total trauma. But, as well as that, every crash that occurs would occur at a slightly lower speed, and you would expect the severity of injury resulting from those crashes to be less as a result. So you get a multiplier benefit, if you like, in road safety terms.

**Mr THOMPSON (STAYSAFE):** What do you think would be an appropriate time frame and implementation schedule for introducing a 50 km/h local road speed limit in residential areas within this State?

**Mr FORD:** There is no proposal to introduce a 50 km/h local road speed limit into New South Wales. So we really have not put a lot of thought into the logistics of time frames, etc. But it would be fair enough to say that in the process of implementation we would need to have full community consultation in working out various schemes for various areas. Perhaps Peter could say a little on the logistics of that. A period of up to 12 months may be required before we would have in place schemes which the community is comfortable with in different urban areas of the State. But, as I say, we have no definitive proposal to go with the 50 km/h urban speed limit at this stage, and as such any thought about implementation is very much in the early days.

**Mr THOMPSON (STAYSAFE):** I thought there was mention earlier of a six-month trial on the lower north shore, and therefore surely you must have some idea of a time frame for implementation.

**Mr FORD:** Certainly. With the six-month trial on the lower north shore we are virtually experimenting with those three areas that Mr Stapleton spoke about earlier, as to the engineering devices, the local community communication, and the different styles of enforcement. After that six-month period we would be looking to put in place a package — and that may well take another three months — in the most effective way, given that trial, to effectively put in place a 50 km/h urban speed limit. There are different communities across the State. We have rural versus urban conditions, for example. The adaptation, as Gary mentioned earlier, of the model to suit western Sydney in its own right would take us time.

So it is very hard to put a specific time frame on what we are discussing here. Firstly, we have not really worked through it. Secondly, we are still experimenting, if you like, with our trial. And, thirdly, the next step in that is to look beyond the trial to the application of what we find in different urban areas of the State. And then to communicate that change to the different communities involved. So, Mr Chairman, with all respect ----

**Mr GIBSON (CHAIRMAN):** If I could interrupt. I am getting a mixed message.

**Mr FORD:** I am sorry, Mr Chairman.

**Mr GIBSON (CHAIRMAN):** That is mainly because each speaker has told us exactly what

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they feel about the 50 km/h speed limit — that it is going to save lives, it will decrease the number of accidents, and it will give us greater financial benefits — yet you are saying that you are going to wait until you find a position that the community is comfortable with before you make a decision on it. I ask the question again: If at the end of the day the communities say “We are not comfortable with the 50 km/h speed limit” is the Roads and Traffic Authority going to walk away and say, fine, that’s it, we will leave it at 60?

**Mr FORD:** Mr Chairman, our major concern is to ensure that the 50 km/h speed limit actually works; that we have in place communication strategies and enforcement strategies and engineering strategies which, as a package, are effective in maintaining the 50 km/h speed limit. I am sorry that we have this trouble with communication again. Fundamentally, I need that community support to ensure that we actually get the speed regime that we are after. For example, it would be totally pointless putting a 50 km/h speed limit on a high speed road. That is the end point that we are talking to. So the communication strategies must work, the enforcement strategies must work, and the engineering strategies must work such that, as a package, we have something that we can effectively employ across New South Wales.

**Mr HUNTER (STAYSAFE):** So you are saying that in about 12 months’ time you think you may be able to refine the proposal to a point where it could be implemented if the decision is made to implement it?

**Mr FORD:** Based on the current timing of the north shore trial, yes, that would be appropriate.

**The Hon. J. S. TINGLE (STAYSAFE):** This is fine. We would all like to reduce accidents on our roads, and we would all like to see fewer smashes, but are we just talking fine theory? You talk about getting the enforcement into place, and getting the engineering into place to make the 50 km/h limit work, when we cannot make the 60 km/h limit work. And the 40 km/h limit around schools is not, as far as I can tell, working either. It is a great idea, but what is the point of bringing it in if we are not sure we can make it work in 12 months or two years or three years?

**Mr FORD:** Could I address the latter part first, the 40 km/h limit around schools. When that initiative first came in — and that is going back two or three years now — it was largely put in place with signposting with, if you like, a modicum of engineering treatment. At that stage we were looking at enforcement strategies to go with it — the beat policeman, for example. We have learned a lot over the last two years, and Gary could talk at length about his experiences in that area, but we now believe that in terms of the 40 km/h school zones we have effective guidelines, we have a combination of the engineering treatment, the type of enforcement strategy that needs to be employed, and we also have the very strong local community support, that is, consultation.

**The Hon. J. S. TINGLE (STAYSAFE):** You have got that, but is it working? I do not think it is.

**Mr FORD:** We are getting quite good results in those areas where we are employing that three-

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level strategy. There are enormous numbers of schools across the State, and we have not got all those communities up to that level at this stage. Perhaps Gary would like to talk on some the survey work that we have done, and about the different devices and strategies that we have used in different areas.

**Mr STAPLETON:** Mr Chairman, at a previous presentation I gave to you about our treatment of school zones I mentioned that we are using a three-level treatment. We do appreciate that we will have problems in some areas. So we choose a low-level treatment, which is simply a revised type of sign, a more conspicuous sign. I think I showed that to you as being a yellow-type sign. The next level of treatment that we are using is an engineering type of treatment, inasmuch as we use a road narrowing.

If we look at some of the fundamentals of traffic behaviour, road narrowing does cause a reduction in speed. In effect, the results of our speed surveys have indicated just that. Our last level, or our top level type of mechanism, was a flashing light. We have a flashing light associated with the signs, with, if required, a road narrowing as well. All our road surveys, which you do have a copy of, have indicated that we are getting reductions from those types of treatments. So, in effect, when we talk specifically about school zones, the types of methods that we are employing, notwithstanding the fact that we do have enforcement associated with them, are getting results.

**The Hon. J. S. TINGLE (STAYSAFE):** If we accept that you are getting results with the 40 km/h zones — and I take that with reservation — what about the 60 km/h speed limit? We have never enforced that. We cannot enforce 70 km/h in the harbour tunnel. I am not saying that it is not a good idea; I am saying what is the good of having a good idea if you cannot make it work?

**Mr FORD:** We are working very closely with the Police Service as part of the Speed Management Task Force. The issue you have raised is quite under the microscope at the moment. Ray mentioned earlier our enhanced enforcement program with the Police Service. A good deal of that effort is really going into speed enforcement. We are also looking at drink-driving, etc., but the speed enforcement area is one of those crucial areas that we wish to address very closely with the Police Service.

**Mr TAYLOR:** I think you are absolutely right in terms of urban traffic speeds. The arterial road network, or the network where most vehicles are travelling in the 1960s, 1970s and 1980s, when you look at the speed profiles and the observation data that is taken year by year, those are the areas where we have got the broadest range of speeds and the largest proportion of drivers exceeding the speed limits. They are the most difficult areas to deal with.

My feeling is — and I may be wrong in this — that there is a time of change in respect of dealing with the local street environment. Despite those speeds on those roads, we have already indicated that there is a substantial proportion of the trauma occurring in local street environments and we

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can get some benefits from there. We have clearly got local residents saying, "Hang on, this is our patch, and we are happy to look at our patch being considered." So that the relationship between local residents and the driver who drives through it would generate a different relation in respect of a 50 km/h speed limit.

That is one of the reasons for the community support notion. We have got pretty clear evidence that where communities see a road environment as being one which they think is reasonably related to the speed limit set, then there is a reasonable level of compliance. If we could generate that amongst the communities with respect to the local street environment, clearly identifying what local streets are, and their purpose, then I think we have got a fair chance of being able to achieve that. That is achievable, whilst we work on the enforcement on the main street environment.

**Mr FORD:** If I might add one thought to that. The notion that "This is our patch and somebody is speeding through our patch" is a very common view that comes out of any discussions that we have with local community groups, for example. We have found in the past in a number of cases that it is actually members of that same community group who are actually speeding. It is perceived by the remainder of the community as being somebody from outside the community, whereas in fact it is a member of that community.

The targeted communication — the local acceptance — does go a long way to getting the notion of the patch, if you like, and protecting the patch fairly widespread. We found that in Mosman and North Sydney. There is a stated comment there that the people who are speeding through the residential streets are through traffic motorists. We would be very surprised if that was the case. I think in the main they are residents.

**The Hon. J. S. TINGLE (STAYSAFE):** So you are depending on peer group pressure, in effect?

**Mr FORD:** Yes.

**Mr TAYLOR:** In effect, yes, but it is a powerful influence.

**Mr SMITH (STAYSAFE):** One of the most important aspects of the implementation of the 50 km/h speed limit is its effectiveness once implemented. What are the processes and procedures required to monitor and evaluate the effectiveness of a 50 km/h local road speed limit in promoting road safety?

**Mr FORD:** Perhaps I would ask Mr Croft to answer that question.

**Mr CROFT:** Three things have to be measured. They are the speeds of the vehicles on the streets, the attitudes of the community to the new speed limit, and the crash effects. Those three things have to be measured before any change is introduced, so that we continue our base line

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data and make sure we have got covered everything that we need to have covered. They need to be measured at several points after the implementation or after any further change, so that we can identify those effects and improve or refine and, to include all options, to change.

So there is the need for a development of a proper monitoring and evaluation program that covers all those matters. Discussion has already taken place in research circles as to how that will be done, both within one jurisdiction, like New South Wales, or whether it goes more broadly throughout the nation. So a series of measurements would have been done and the results of those measures would be fed back to the community along with appropriate information and educational material, so that the public is aware of it and could assess and address the concerns of the community about those measurements.

**Mr TAYLOR:** It may be useful to add one point to that. That is that New South Wales is well placed with respect to an existing collection of data in those three years and is, from my experience, far better placed than almost any other State in that regard. So a lot of it has already been done.

**Mr SMITH (STAYSAFE):** Another aspect is residential planning. What are the implications of a lower residential speed limit for residential planning and street design? Are there any major alterations that would have to be undertaken in that respect?

**Mr CROFT:** There are already moves being made towards a lower speed in urban street design. There is a national code which sets out how residential areas need to be developed. A fundamental part of that is a lower speed environment. That is reflected in the lengths of roads and the narrowness of streets, and so on, in a residential setting. This is already addressed in guidelines which our agency has promulgated, Guidelines for Traffic Generating Developments. A section of it talks about subdivision design, and at its very heart is the idea of a lower speed environment, such that narrower and shorter roads are recommended for that very purpose.

So that implementing something like a 50 km/h speed limit as we have been describing would, I suggest, hasten that process and the thinking of local planners and people in our own agency to make sure that new areas which are being designed and constructed would have a lower speed environment, and also so that existing areas could have some minimal treatments, perhaps in different streets or whatever, to make those environments appear to be lower speed environments, and that they are managed so that they are.

**Mr GIBSON (CHAIRMAN):** Will the package of 50 km/h speed limit measures fit into the new urban designs?

**Mr CROFT:** Certainly. As I was alluding to, the way of designing new residential areas is moving towards a lower speed environment. The way of managing and refurbishing existing residential areas is more encouraging these days, with malls and shared space for vehicles and pedestrians. At the very heart of that is a low speed environment. So I see them fitting together

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very well.

**Mr FORD:** Mr Chairman, there are some examples that have been put in place over the last ten years in different areas of Sydney, where local road carriageway widths are significantly lower, where the geometry, the radii for example, are tighter, where parking is not provided for on the carriageway but on a rollover kerb adjacent to the road. There are some examples in Baulkham Hills and Campbelltown where subdivisions have been laid out along those lines.

**Mr GIBSON (CHAIRMAN):** Could you inform us of some of those addresses so that we can have a look at some of those?

**Mr FORD:** Certainly.

**Mr SMITH (STAYSAFE):** Mr Stapleton mentioned the three different designs for a 40 km/h limit outside schools. I have a school in Merimbula, and I have been writing to the authorities and the Minister because of complaints coming in to me, trying to get the solar flashing light system put there. I am afraid I was totally ignored. I was basically told that for the community in which they were exceeding the speed limit there were no changes proposed for the system. That would be at least six months ago that I wrote those letters.

Words are all very good, but when there are indications that the speed is being exceeded and you are being told about that, and even though you say there are three different categories, how do you get into the other categories? We were told when you made your presentation of 300 schools that have this flashing light system. Tathra is another school that I have complained about.

**Mr FORD:** If I might come in on that one. Could you send me details of the two schools involved?

**Mr SMITH (STAYSAFE):** I could send the letter to you.

**Mr FORD:** Yes, please. But could I make this comment. The flashing lights have proven to be extremely popular. As soon as Mr Stapleton put them up, in fact we were absolutely inundated with requests from all over the State to have them outside their schools.

**Mr SMITH (STAYSAFE):** My personal view would be that they should be standard equipment.

**Mr FORD:** It is purely the logistics of catching up with demand. Gary is overworked these days trying to get these things up as quickly as he can.

**The Hon. J. S. TINGLE (STAYSAFE):** I am locked into what Mr Smith was saying, Mr Chairman. It is more important to me that we say to the Roads and Traffic Authority that we think it is a great idea to bring these things in but I would like to be sure that they will actually be implemented. What about the implications of a lower residential speed limit for local government

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traffic planning and practices?

**Mr FORD:** I pick up from what Peter was talking about a moment ago about residential street design. Peter spoke briefly on the implications that the lower speed limit would have in the established local residential streets, those roads that were built in the 1940s, 1950s and maybe even the 1960s where the speed limits were in fact higher. The Authority has put out from time to time guidelines on how to treat established streets with a view to getting the speed limits down. Certainly, the Roads and Traffic Authority for its part would be updating those guidelines to put in place recommendations for appropriate treatments in different urban roads, depending on when the roads were in fact built. Mr Croft might have further comment on that.

**Mr CROFT:** I think that has been basically covered, but I would add that it is in the existing local street area where the greatest challenge lies, and that is to manage it so that we do have a low local speed environment.

**Mr FORD:** There is one other thought, too. The vehicle for implementation does come back to the local traffic committee, in concert with the Police Service and the Roads and Traffic Authority. We do have a consultative forum running in Sydney, and it will be running in other parts of the State in the near future, and we use that as the vehicle to put in place some of these ideas, with elected people in local government and senior officers, if you like, to let the detail follow at the lower level.

Mr Stapleton, for example, has given many presentations to the consultative forum of local government, as did other staff from the Roads and Traffic Authority. One of the areas of major interest is how to manage existing urban roads where the roads were put in place in the 1930s, 1940s, or even prior to that, where speed is an issue, where heavy trucks might be an issue, etc. That forum is there and the guidelines for the local traffic committee provide the vehicle.

**Mr SMALL (STAYSAFE):** Some residential areas have speed humps to try to reduce the speed of traffic flow and also keep down noise levels. If we reduced the speed limit to 50 km/h or thereabouts, would you see the speed humps as not being needed?

**Mr FORD:** In some cases, yes, that would be the case. There are more friendly devices around than speed humps. Let me make that clear. There are a variety of raised platform devices which are easier on the car as well as for the residents who are living adjacent to that particular device. We have had over the last 15 years in Sydney some very poor practice with the installation of speed humps, and unfortunately that has done the speed hump an injustice in many cases.

But, certainly, some of the new traffic management devices that are going in are better thought through. They have a shallower rise on them, so that there is not that abrupt change, and secondly they are more acceptable, in terms of the noise they generate, to local residents living adjacent to the devices.

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**Mr SMALL (STAYSAFE):** A bit like the airport devices that you were talking about, which are a bit more acceptable.

**Mr FORD:** Ten years ago or five years ago even, to have a speed hump put outside your house was a terrible thing to happen; it kept you awake at night. There has been a tremendous amount of retrofit as to how the speed hump is actually profiled without in any way affecting its effectiveness in reducing speeds or reducing the level of noise intrusion locally, to make it a better facility for accommodating buses and vehicles with a more rigid suspension. That retrofit will go on for some little time yet, but it is happening.

**Mr SMALL (STAYSAFE):** I appreciate your answer. The other thing is that where you have a speed limit of 100 km/h you have an 80 km/h speed limit for probationary drivers for the first 12 months. Would you see a reduction in the 50 km/h speed limit for probationary drivers, or would you think they could drive at 50 km/h or 60 km/h speed limit, or whatever speed is set for residential areas?

**Mr FORD:** I would see absolutely no reason to change the regime as it presently exists.

**Mr SMALL (STAYSAFE):** In other words, they would drive at the prevailing speed limit?

**Mr TAYLOR:** At the prevailing speed limit, yes.

**Mr GIBSON (CHAIRMAN):** What effect will the 50 km/h speed limit have environmentally, on green house gas emissions, noise, etc.?

**Mr FORD:** As Mr Croft indicated earlier, based on research that we are aware of, the emissions certainly would be done; and in those areas where we get significantly over 60 km/h speeds occurring, in night time hours particularly, and on the ad hoc occasion, to bring those speeds down, particularly in the night time environs, would have a significant environmental benefit as well.

**Mr GIBSON (CHAIRMAN):** Could that be quantified at this stage?

**Mr FORD:** In terms of the emissions, yes. There has been some quantification. We find that, in terms of urban noise from roads, probably the most difficult area is sleep disturbance and peak noises at night time hours. Any mechanism to bring those noise levels down — and a reduction to a 50 km/h environment would do that — we believe would make significant inroads into reducing sleep disturbance. We can certainly give you quantification on emissions.

**Mr CROFT:** There has been research looking at emissions, fuel consumption and related matters. It is a fact that lower constant speeds lead to the use of less fuel and the emission of fewer noxious gases. That is fact. It is fair to say that in the overall scheme of things, specifically introducing a 50 km/h speed limit as we have described would have quite a small effect on

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emissions and fuel consumption in the totality of the picture moving around the metropolitan area, for example. It is small, but it is in the right direction.

**Mr GIBSON (CHAIRMAN):** What about travel time?

**Mr CROFT:** Again, it is a very small effect. We have addressed that in the submission. We point out that the research results available clearly indicate that it is of the order of seconds that are added to a journey if one drove at the new speed limit. That is understandable when you think about it, because a very small proportion of the time of a journey is actually travelled at the speed limit; most of the time is spent in turning corners, awaiting for cars in front of you, and allowing buses to come out of bus stops, and all those sorts of things. There is a very small effect on journey times. There are some figures in the submission.

**Mr HUNTER (STAYSAFE):** Is there any data on what percentage of drivers are exceeding the 60 km/h speed limit in local streets?

**Mr FORD:** Yes, there is.

**Mr HUNTER (STAYSAFE):** Do you know how many are exceeding the speed limit?

**Mr CROFT:** There is a total in the submission that looks at different types of streets — arterial roads, subarterial roads and local residential streets. In the local residential streets you will find that something like 35% of people travel at greater than 60 km/h speed limit already. In the subarterial roads, you will find that up in the range of 60% of people travel at more than the speed limit. And it is even worse on the arterials. That is why we have seen in recent years the arterials having their speed limits changed.

**Mr HUNTER (STAYSAFE):** You said that in South Australia there was a study showing that during the trial period of a 40 km/h speed limit people were travelling at 50 km/h. If we introduce 50 km/h speed limits in our local residential streets, will we see a corresponding fall of about 10 km/h in the speed of vehicles, so that we will still have 35% of people exceeding 50 km/h once we lower the speed limit, but overall we will have a reduction in the speed of vehicles in those streets?

**Mr CROFT:** I think you are dead right there. What you have just described is what we will see. We will see some reduction, but obviously not everybody will comply. We know that. That is human nature. But there will be a reduction. One of the things that it will enable is the more vigorous apprehension of those people who are currently travelling at inappropriate speeds. People who are travelling at 65 km/h now will be doing so much more than the speed limit in those cases. It will enable them to be apprehended more readily.

**Mr TAYLOR:** In road safety terms, though, that outcome would be terrific. Even if we did not get any better speed compliance under the new regime, we would expect a 20-25% reduction in

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speed, which would be a saving of something like 20 lives and round about 200 serious injuries. That is not to be sneezed at.

**Mr SMITH (STAYSAFE):** That is really the answer to the question.

**Mr TAYLOR:** Yes, we would like to get better compliance, but -----

**Mr SMITH (STAYSAFE):** But, even if it remained the same, you would get better results.

**Mr TAYLOR:** Yes. It is a sort of shifting of the profile back to the left, speaking in terms of graphs.

**Mr GIBSON (CHAIRMAN):** I thank you for your attendance and for your expert evidence.

**NRMA witnesses**

Mr Nigel Charles McDonald, Project Officer  
Mr Andrew Richard Macky, Manager, Traffic Engineering,

**Mr GIBSON (CHAIRMAN):** Thank you, Mr Macky and Mr McDonald, for appearing before the STAYSAFE Committee today. Your presence before the Committee today is to provide the overview of the position of the NRMA regarding the inquiry into the proposed introduction of a 50 km/h local road speed limit on residential streets in New South Wales....

I note that the STAYSAFE Committee has received a submission from NRMA Limited. Would you like that to be included as part of your sworn evidence?

**Mr McDONALD:** Yes, we would.

**Mr GIBSON (CHAIRMAN):** Before I commence with formal questioning, I understand that you have a brief presentation to make to the Committee before we move on to putting formal questions.

**Mr MACKY:** I think we can incorporate that into the questions, if you are happy with that procedure.

**Mr GIBSON (CHAIRMAN):** Yes, I am happy with that. I will then ask the first question. Can you describe and discuss the issues seen as important by the NRMA regarding the findings reported in previous research into lower residential speed limits that has been conducted in Australia and overseas?

**Mr McDONALD:** There has not been a great deal of research or experience with lower speed limits in Australia. Most Australian experience with lower speed limits in local areas has been associated with local area traffic management, which has involved the provision of physical devices, such as speed humps, to reduce speeds.

The Australian trials that the NRMA has noted in our submission include the trial in Unley, South Australia, of a 40 km/h limit; 50 km/h in the Wahroonga-Turramurra area; and the pending 50 km/h speed limit trial in the Mosman and North Sydney areas. There have been a number of 50 km/h trials in Melbourne also, including the suburban municipality of Preston. They have been reported as having little effect on traffic speeds.

A similar trial in New South Wales, in Wahroonga-Turramurra, reached a similar conclusion. However, we would like to point out that those trials have generally been applied to limited geographical areas, over short periods of time, without high levels of education, enforcement or other supporting measures. It is therefore difficult for us to raise any important points or draw

any conclusions from Australian trials. For overseas experience, I will ask Andrew to elaborate on that.

**Mr MACKY:** We have some evidence of reduced speed limits, or 50 km/h general urban speed limits in a number of overseas countries, particularly in Europe. The most recent would be the Danish change, where in 1985 the general urban speed limit was reduced to 50 km/h, and that reportedly resulted in a 24% reduction in fatalities and a 9% drop in crashes. Certainly, if that was applied to the New South Wales situation and last year's road toll, we could possibly have 155 fewer deaths on our roads. It is important to note, though, that whilst the change in 1985 was to a general urban speed limit or a blanket 50 km/h speed limit in urban areas, Danish authorities are now implementing speed zoning whereby they are increasing speed limits on certain roads to better match the speed environment of that particular route.

We need to take some degree of caution when we look at overseas research. Many of those countries have dense urban environments, with typically narrower residential streets than we have in Sydney or in other parts of Australia. Such environments are conducive to a lower speed. Our lower urban densities, wider local roads, and generally more spacious surroundings tend to encourage higher speeds. There is also little data available describing compliance rates with speed limits in those overseas jurisdictions, and therefore it is very difficult to gauge exactly how the community has reacted to those changes.

**Mr HUNTER (STAYSAFE):** What was the NRMA's involvement in the change of the New South Wales urban speed limit from 30 mph to 35 mph in 1964? Is the NRMA able to supply copies of any correspondence, reports, briefing papers and so on relating to that change? I guess what the Committee is interested in is determining an understanding of how attitudes and practices to speed management and, in particular urban speed management, have changed over the last three decades.

**Mr McDONALD:** NRMA has not found any information on how we were involved in that specific change. However, we have found some information in one of our publications, *Road Safety Milestones*, relating to some of the circumstances of the change. We found that on 1 May 1964 the limit in built-up areas was increased from 30 mph to 35 mph, and some of the important points for that change were listed as: firstly, it brought New South Wales into line with other States and Territories and with the national traffic code at the time; secondly, that vehicles as well as roads were now acknowledged as being far superior to what they were when the speed limit was introduced in 1937.

The only other information that we have is that the speed limits increased again from 35 mph, which was 56 km/h, to 60 km/h in 1974, I think it was, to coincide with the conversion to metric units. Apart from that, we cannot provide any further information or documentation.

**Mr GIBSON (CHAIRMAN):** Did NRMA support that increase from 30 mph to 35 mph in the speed limit at the time?

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**Mr MACKY:** I would say that the NRMA would not have opposed that change, given the fact that roads had improved, vehicles had improved, and there were implementations such as the seat belt requirements, which had a dramatic effect on the road toll; and, therefore, in order to balance out those tougher measures with some measures which the community would accept, they would not formally have opposed that 60 km/h limit. But, having said that, I cannot verify that. I cannot verify that because we have not got any documentation to enable me to do so.

**Mr GIBSON (CHAIRMAN):** From what you have just said, I would have thought that roads would have improved a lot from 1964 until now, and cars would have improved also, and they were the reasons that you supported the increase in the speed limit at that time. Yet now you support a decrease in the speed limit. For what reason?

**Mr MACKY:** I think that is a good point, Mr Chairman, but I think we should make one thing clear. The roads that we would like to see a lower limit on are the same roads that were around back in the 1960s and 1970s. Those roads have not changed. On the roads that we do now have and did not have then, such as our freeways, rural freeways and urban freeways, we would like to see speed limits increased, where appropriate, to better match the roadside environment. From our perspective, that will be a crucial step if we are to get community support for lower speed limits in residential areas.

**Mr HUNTER (STAYSAFE):** You said it was on 1 May 1964 that the speed limit was increased from 35 mph. When was the 60 km/h speed limit introduced?

**Mr MACKY:** I think it was in 1974, when the imperial measurements were converted to metric.

**Mr McDONALD:** That increased the speed limit from 56 km/h, which was the equivalent of 35 mph, up to the present 60 km/h.

**Mr HUNTER (STAYSAFE):** What is the present 60 km/h converted back to miles per hour?

**Mr MACKY:** About 36 or 37 mph, I would say.

**Mr HUNTER (STAYSAFE):** From the point of view of the NRMA, what important lessons can be learned from an examination of the speed management practices in other jurisdictions in Australia and overseas, particularly in terms of identification of current practices for setting of urban speed limits and the introduction of lower local road speed limits in residential streets?

**Mr MACKY:** Based on the research that we have been able to obtain, the lesson seems to be that we very much need to ensure that speed limits match the prevailing traffic conditions. One is for the reason that this concept of setting speed limits to better match the road environment reduces speed dispersion. Now, speed dispersion has been identified as a cause of crashes. So, in other words, if you have a stream of traffic or platoon of traffic all travelling at a similar speed, that is much safer than having vehicles travelling at different speeds within that traffic stream.

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A good example can be gained from what happened in Victoria. In 1990-91 there was a parliamentary inquiry into speed limits in Victoria. The result of that inquiry was a decision to have a comprehensive review of speed limits across Victoria. In other words, a review of speed limits on all roads in Victoria. A set of speed zoning guidelines were developed. What resulted was that speed limits were uniformly set across the Victorian road network.

So, in other words, a road of similar appearance or similar traffic characteristics in one part of Victoria would have speed limits similar to a road in another part of the State, given that those two roads had similar traffic characteristics. We feel that such a review is urgently required in New South Wales. The Roads and Traffic Authority has recently reviewed and issued its new speed zoning guidelines. NRMA would like to see these guidelines put into practice immediately and a comprehensive review of all speed limits take place in New South Wales. We feel this is crucial in order to gain uniformity on speed limits but also to gain community support. Mr Chairman, with your permission, perhaps we can quickly demonstrate why we think such a review is required.

**Mr GIBSON (CHAIRMAN):** By all means.

**Mr McDONALD:** We have here a selection of about eight slides of various arterial roads in the Sydney metropolitan area, to demonstrate some of the inconsistencies in speed limits that would be apparent to motorists. The first is of Pennant Hills Road, in the area of West Pennant Hills. It is a recently constructed road, with six lanes, wide median, hazards set back from the roadside, with no roadside poles, with some residential access. Turning traffic is accommodated by turning bays, and most recently signalised intersections. The speed limit here is 70 km/h, and NRMA would agree that that is an appropriate speed zone.

Contrast that to Homebush Bay Drive at Homebush Bay. We are now on a 4-lane road, still divided, but it is a fairly high standard road, with good alignment, wide shoulders, very limited access, with no direct roadside development, no lighting throughout the major length of it, apart from the intersections. You could almost state that it is almost urban freeway type conditions. However, this has exactly the same speed limit, 70 km/h, as Pennant Hills Road.

We move further south to King Georges Road, in the area of South Hurstville. This is four lanes, undivided, frequent residential access, poor vertical alignment, no provision for turning traffic such as turning bays, with roadside poles direct on the kerb line. Yet this again is 70 km/h, the same speed as the roadways at the other two locations. Those are three completely different road environments according to the motorist's perceptions, and yet they have exactly the same speed limit.

Further along King Georges Road again, in the Beverly Hills shopping centre this time: quite a number of lanes, I think six lanes mostly, although the left lane, as shown in the picture terminates, and you can actually see there are parked cars causing a lot of merger movements; there is still a wide median, but there is also a lot of parking activity and a lot of pedestrian activity generated

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by the shopping district, railway station, and the cinema and so on. Again, this has a speed limit of 70 km/h. This is just another of the roadways that motorists travel on when going from, say, Hornsby to the south. Yet all these different road environments have the one speed limit. That does not appear credible in the eyes of the motorist.

Further south is the Kingsway at Gymea. Here we have a six-lane road, wide median, fairly good setback to residential properties, still residential access; there is separation for turning traffic, with a turning bay shown in the picture. These are conditions that could arguably be said to be a lot better than the road in the previous slide that we have seen. The speed limit here drops to 60 km/h.

This is the Pacific Highway at Wahroonga. It is a six-lane road, a fairly narrow median, limited kerbside parking, residential accesses, but all turning movements are accommodated with turning bays and signalised intersections and the like; it is a fairly flat road; the alignment is rather good, compared with some of the other routes; and this has a speed limit of 60 km/h. This is quite inconsistent with what we saw on King Georges Road at South Hurstville. We consider this has a much better road alignment, so again the speed limit is not credible in the eyes of the motorist.

The last slide is of Joseph Street, Lidcombe. This road has six lanes, with median separated traffic; turning bays accommodate turning traffic, along with signalised intersections; it is a fairly limited access route in this particular location from that direction; that is a golf course and grounds for the hospital; and back from where the slide was taken is residential access. Road conditions are quite good. The speed zone here is 80 km/h, which we would consider appropriate. But we would like to contrast that with a road such as Homebush Bay Drive. That is it for the slides.

**Mr MACKY:** Mr Chairman, I think you would appreciate that that gives a snapshot of a relatively small sample of our road network, but the problem is that when we have so many anomalies across our roads, firstly, it is very difficult for the community to understand what the speed limits are; and, secondly, the police are expected to enforce those speed limits, and that again detracts from the credibility of the overall speed enforcement program, fuelling community concerns about revenue raising. Therefore, we think it is vital that the speed limits are set uniformly across the State to better match the road and traffic environments.

**Mr HUNTER (STAYSAFE):** Given the unique perspective of the NRMA, what is known about community concerns with effective speed management in urban areas, particularly vehicle speeds on residential streets?

**Mr MACKY:** Given our role in supporting the community on various issues, we have undertaken a number of surveys over the years through the *Open Road* and independent market research. Some of the research that we have been undertaking indicates that the community does understand that speeding is the main cause of vehicle crashes. The difficulty seems to be in personalising that message, so that each individual realises they have a role to play.

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Some of the reasons why they do not fully appreciate the impact that speeding may have can be gauged through some of the feedback we get. We provide information and access to a number of motorists on various issues, and they often contact us, wanting to know what the NRMA's views are on various issues. Almost 25% of those inquiries relate to speed management issues.

We have undertaken a qualitative review of that feedback to try to gain some understanding as to why drivers and motorists have so many concerns about speed management issues. The typical issues that members raise with the NRMA include: poor communication of speed limits, with it often being stated that signs are infrequent, inconspicuous, obstructed or missing; unrealistic speed limits, as I think those slides would demonstrate; a perception that police enforcement of speed limits is focused on revenue raising rather than road safety, a point often raised in relation to speed camera operations; and, of course, people do have a main concern about speeding or unsafe speeds in local streets.

So there is awareness in the community about the dangers of speeding, but there are a number of impediments which perhaps make it very difficult for authorities to make a connection between why speeding is so dangerous for each individual, not just for somebody else.

**Mr THOMPSON (STAYSAFE):** In supporting the introduction of a 50 km/h local road speed limit in residential areas, what communication strategies are being planned by the NRMA?

**Mr MACKY:** At this stage we have no communication strategies. As far as we are concerned, the introduction of a 50 km/h speed limit is one that needs to be addressed by all stakeholders in a uniform measure, and not individually. Whilst there is no doubt that an effective communication strategy will need to be considered, we feel there are a number of other initiatives which will have to be undertaken before we start talking about local street speed limit, or 50 km/h speed limits in residential streets.

We feel there is an urgent need to review all speed limits in the State; to improve speed limit signposting, and particularly the use of what we term speed limit signs. NRMA is represented on the New South Wales Speed Management Task Force, which has been overseeing a trial of repeater signs. When I say repeater signs, they are speed limit signs which are typically half the size of a normal speed limit sign. We think those signs are crucial at areas where the speed limit, for safety reasons, is not as high as the environment indicates it should be.

So we think there is a very important role for those speed limit repeater signs to be introduced. We also feel that the introduction of a police cautioning system would need to be implemented before a local street speed limit was implemented. These are the sorts of initiatives which will build community support into the speed management program. If the 50 km/h speed limit proposal is to succeed, we will need community support to ensure that it does.

**Mr THOMPSON (STAYSAFE):** From the point of view of the NRMA, what are the most effective and appropriate traffic management strategies that you think should be adopted to ensure

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compliance with 50 km/h local road speed limits?

**Mr MACKY:** Again it comes back to implementing measures such as we have just referred to. We do not feel there is a requirement for extensive traffic engineering measures to ensure compliance with a 50 km/h speed limit. That would really defeat the purpose of having a general lower speed limit in residential areas. We do think it is vital that speed limits on main traffic routes are appropriate. In cases where they should be higher than 60 km/h, we feel that should be implemented.

But, really, it comes back to there being a certain degree of credibility about the overall speed management system. Without those systems in place, it will be very difficult for the community to fully support a lower speed limit on local streets.

**Mr THOMPSON (STAYSAFE):** We heard earlier from the Roads and Traffic Authority about the proposed trial that is to commence in mid-December on the lower north shore, that trial being the development and implementation of a 50 km/h local road speed limit on residential streets in the area of the trial. What has been the involvement of the NRMA in this proposal?

**Mr McDONALD:** NRMA has been a member of the steering committee for the project since it was initiated in 1993. Our involvement to date in the trial has been mainly in the providing of input into the processes and strategy decisions guiding the trial. NRMA has also made a number of more specific contributions to the trials, such as commentary on the design of various levels of intensity of engineering measures applied to zones throughout the area, and also the design and frequency of certain signposting.

NRMA strongly supports the trial and believes that there should be more demonstration projects to assist with relating the benefits and actual effects of 50 km/h speed limits to the community. NRMA would also like to highlight and congratulate the police and the Roads and Traffic Authority on their efforts in undertaking the trial.

**Mr SMITH (STAYSAFE):** First of all I congratulate you on pushing for that overall review of speed limits. I agree that the whole system needs reviewing to bring more uniformity to it. The driving public would be far more likely to abide by the speed limits if they were appropriate. My questions are mainly to do with enforcement, technology, penalties and those types of things. What changes are required to enable effective enforcement of lower local road speed limits? Are there any parallels to be drawn with the NRMA's experience concerning the introduction and use of speed camera technologies in New South Wales?

**Mr MACKY:** There is no doubt that police enforcement is integral to an effective speed management strategy. However, it would be impossible, as well as undesirable, to expect enforcement alone to ensure compliance with a lower speed limit. If people are to travel at 50 km/h, it will be because they endorse the concept of a lower speed limit on local streets, not because they are threatened with enforcement.

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From that perspective, we think it vitally important that the community own this project and therefore that they drive willingly at the lower speed limits. In terms of police enforcement, nevertheless, there may be a need for some highly visible police enforcement immediately after any introduction of a slower speed limit in residential areas. That would really be a case of the police being out there and, if people are exceeding the speed limit, stopping them and either cautioning them or issuing warning letters, so that they can educate the driving public and not just issue infringement notices.

That approach was similar to what was undertaken when speed cameras were introduced in New South Wales. There was, I think, a one-month or two-month period where warning letters were issued to people who had been detected by a speed camera. Research indicates that that measure was very well accepted by the community. Some additional research also indicates that the use of warning letters can be as effective as the use of fines or penalties or demerit points in changing driver behaviour. That really is what enforcement should be all about — changing driver behaviour.

**Mr SMITH (STAYSAFE):** To a large extent, this question has already been answered. Do current speed enforcement technologies, techniques and procedures need to be modified to support the introduction of a 50 km/h local road speed limit on residential streets?

**Mr MACKY:** We do not really feel there is any great need for any changes in enforcement techniques or the addition of new technologies. If such changes were to occur, it would be very easy for the public to perceive the proposed change to a lower speed limit as a revenue raising exercise. I think it is very important that the public understand that this change is all about road safety, about reducing crashes, about reducing fatalities, and not about raising revenue, and therefore we do not think there is any need for broader or more widespread changes in enforcement techniques or technology to support a lower speed limit in residential streets.

**Mr GIBSON (CHAIRMAN):** What sort of time frame are we looking at for the implementation of this 50 km/h speed limit?

**Mr MACKY:** Mr Chairman, we are of the opinion that it should be the public who drive the issue of the 50 km/h speed limit.

**Mr GIBSON (CHAIRMAN):** Could I ask you why?

**Mr MACKY:** Because the public has to endorse this, Mr Chairman. We know that speeding is a very difficult behaviour to address. It is much harder than addressing drink-driving, which has been made socially unacceptable. Speeding does not fall into that category. We need a number of measures and initiatives to change people's attitudes towards speeding. Now, if the public does not support a 50 km/h speed limit, they will not travel at 50 km/h. Arguably, that is why on many local streets now we do not see people abiding by the 60 km/h speed limit.

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It would be impossible for the police to enforce the limit on every street. There are just insufficient police numbers and insufficient police resources to be able to do that. If there is a credible system of speed limits across all roads which would encourage people to comply with speed limits, we think that they would therefore be in a better position to drive at slower speeds in residential areas, knowing that on other routes they can travel at higher speeds.

**Mr GIBSON (CHAIRMAN):** The Committee has listened to the Roads and Traffic Authority and the NRMA and looked at reports, and everybody seems to be telling us that that is the way to go. Would you not say that if the groundswell is too long, that gives the groundswell more time to defeat the proposal?

**Mr MACKY:** Mr Chairman, I would say that if there is a groundswell of opinion against the lower speed limit, it is because we have failed to communicate the benefits of why we wish to introduce a lower speed limit. We need to communicate to the public that this is all about road safety. Any opposition to a lower speed limit would primarily be due to concerns people may have about the revenue raising nature of speed enforcement. Unless we implement the initiative that NRMA has pointed out previously, such as better speed limits across all our roads, and better speed limit signposting, it will be very difficult to gain that community support for a lower speed limit.

**Mr HUNTER (STAYSAFE):** You spoke of the saving of about 100 lives or more a year through this proposal. Have you got any statistics to show what percentage of those 100 lives are children in our local residential streets?

**Mr MACKY:** No. The short answer is no. That was some very broad research undertaken by Danish authorities, demonstrating what sort of change had been achieved over there. We have no details of exactly what sorts of reductions that would achieve by way of less pedestrian crashes or fewer cyclist fatalities.

**Mr HUNTER (STAYSAFE):** Do you have any statistics that show the number of children being killed in accidents in residential areas compared with statistics on arterial roads and so forth? The complaints that come to me in my electorate are from people complaining about speeding in the streets and of parents being fearful for the safety of their children.

**Mr MACKY:** Again, I do not think we have any detailed information on that, but a lot of research indicates that we could certainly reduce or improve safety for vulnerable road users such as pedestrians, young pedestrians or elderly pedestrians, and cyclists, by lowering speed limits in residential areas.

Some research undertaken by McLean from South Australia indicated that a vehicle travelling at 50 km/h under emergency braking conditions will come to a stop within a certain distance. A vehicle travelling at 60 km/h would have reduced its speed to 44 km/h in the same distance that the vehicle travelling at 50 km/h had come to a stop. So, clearly, there are implications that by

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travelling at lower speeds in residential areas there is the increased likelihood of either being able to come to a stop or, if an impact does occur, the impact speed would be a lot lower, which would increase the likelihood of a pedestrian or a cyclist receiving minimal injury from such a collision.

**Mr McDONALD:** The only figures that the NRMA would hold on pedestrian accidents, particularly involving children, would come from the NRMA's compulsory third party (CTP) insurance portfolio, which is only a subset of the information that the Roads and Traffic Authority would hold.

**Mr GIBSON (CHAIRMAN):** Why is it that you would put so much importance on the community input? If you know it is going to save lives and reduce accidents, why do you need the reassurance from the community?

**Mr MACKY:** I accept your point, Mr Chairman, but the thing is that people disobey speed limits now. Why should they abide by a 50 km/h speed limit when it is introduced? If the community does not endorse a 50 km/h speed limit, the only reason they will not endorse it is because we as practitioners have failed to fully communicate the benefits of the new speed limit. If there is a barrier that says the community is not going to support this, we have to ask ourselves why it is that they will not do that.

**Mr GIBSON (CHAIRMAN):** I am sorry to interrupt, but surely that is the same argument that could be put forward with drink-driving?

**Mr MACKY:** Well, it is, but we were able to change community attitudes towards drink-driving to the extent that it is now socially unacceptable. There is still a degree of drink-driving, as we all know, but compared to 10 years ago the attitude is very different. People no longer go to parties and boast about how many drinks they have had and how they will drive home. People now frown on that. But people still talk about how quickly they can travel from A to B. We need to change that behaviour.

**Mr GIBSON (CHAIRMAN):** But drink-driving success came through enforcement.

**Mr MACKY:** It was through very visible enforcement, but it was also through education, Mr Chairman.

**Mr GIBSON (CHAIRMAN):** Why cannot we do the same with the 50 km/h speed limit?

**Mr MACKY:** That is what we are saying. We need to educate the public. We have not been able to do that to date. We need to understand why we cannot do that. Part of the reason is inconsistencies in speed limit signposting, inconsistencies in the type of signposting that we use, so that people are not aware of what the speed limits are. All this does is raise community concerns about revenue raising. That is the biggest barrier to making these changes successful.

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People have a broad perception that the enforcement of speed limits is all about revenue raising. We need to change that attitude so that they understand that speed enforcement is about road safety, and that by travelling at speed limits that are realistic and credible, they will then start abiding by those limits, and that will improve road safety.

**Mr SMITH (STAYSAFE):** If the Government adopts the proposal to introduce a 50 km/h speed limit in residential streets, what comment can you make regarding the adequacy or appropriateness of the current penalties and demerit points system in providing a deterrence for speeding offenders? Can you comment on the desirability of revising the structure of the current speeding offences under the Traffic Act 1909?

**Mr MACKY:** We consider there may be some merit in reviewing the penalty system, but we do not think that that is a prerequisite to the introduction of a 50 km/h speed limit. Really, changes to the penalty systems may change driving behaviour, but we think there are other initiatives which are of a higher priority, such as better speed limits, more speed zoning and better education strategies.

**Mr SMITH (STAYSAFE):** It could be the totally wrong message to be sending at the time.

**Mr MACKY:** I can only say that if we introduce a 50 km/h speed limit and there are tougher penalties brought in, I have an idea what the community reaction might be to that.

**Mr HUNTER (STAYSAFE):** From the point of view of the NRMA, how should it be decided if a local street will be subject to a 50 km/h speed limit?

**Mr MACKY:** We think there needs to be a review of all streets in an urban area and have them classified against a functional hierarchy. Typically, that would mean identifying whether a road is a local access street; a collector route, which means it connects local traffic to the main road system; and then, of course, main roads, which we refer to as arterials or sub-arterials.

Quite clearly, from our perspective, that local street category, or streets which are mainly there for a property access function, would be signposted or would have a 50 km/h speed limit imposed on them. The main traffic routes — the arterials and the sub-arterials — would retain a 60 km/h speed limit or higher. The difficulty comes in determining what speed limit should be applied to collector routes. They serve the dual functions of providing access to properties as well as being a local traffic route.

From our perspective, those routes primarily serve a traffic function, and therefore should retain a 60 km/h limit. Nevertheless, there may be a need to review that against, for example, AMCORD, the Australian Model Code for Residential Developments, which provides criteria which can determine the exact function of the road, whether it is primarily a traffic function or an access function. In instances where there is debate in the community over whether a collector route should retain a 60 km/h limit or have a 50 km/h limit, the use of such criteria would aid in

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determining its exact function, and then an appropriate limit could be applied.

**Mr HUNTER (STAYSAFE):** I could be wrong, Mr Chairman, and I stand to be corrected, but the impression I got from the Roads and Traffic Authority earlier this afternoon was that this proposal, if introduced, should be a blanket speed limit on local roads, and that the local traffic committee at a later date might review whether a local road might be either higher, at 60 km/h, or lower, at 40 km/h. I think what you are suggesting is a much better way to go about it in that you review the situation first and then implement the 50 km/h speed limit on roads that are seen to warrant the new speed limit.

**Mr MACKY:** Mr Hunter, I think it is very important that such a review take place before lower speed limits are introduced. If it were left to each individual local government jurisdiction to determine what routes should have higher limits, we could get a situation where different local government areas applied different speed limits to what are essentially the same roads. We want to try to get some uniformity into the setting of speed limits, to get rid of these inconsistencies that we highlighted in our slides. Whilst those inconsistencies were on main traffic routes, we also want to ensure there is uniformity on how we apply this 50 km/h limit on local roads.

**Mr HUNTER (STAYSAFE):** How do you see the review process working? Who would undertake it? And how long would it take to review all local roads across the State if you want one body to undertake that review to keep consistency?

**Mr MACKY:** There would need to be a case for the Roads and Traffic Authority and local government to play a leading role in determining that functional hierarchy. Police and NRMA would also be in a position to provide comment on that. But, ideally, such a review would have to take place. Most local governments do have what they call their local environment plan, which gives a good indication of what functions each road has within their network. So a lot of the ground work has been done.

It would be the case that in some situations there would be some debate, either within the community or amongst authorities, as to the role of a particular road in a certain network, and this review process would be able to clarify that. To put a time frame on that would be very difficult, but I would think that such a review could be undertaken within six to 12 months, at the most.

**Mr HUNTER (STAYSAFE):** From the point of view of the NRMA, what are the implications of the introduction of a 50 km/h local road speed limit on residential streets in New South Wales for road safety, particularly with reference to the incidence of intersection crashes, and for pedestrian and bicycle safety?

**Mr McDONALD:** The NRMA has found a number of studies that demonstrate that crashes on local streets are a significant contributor to road trauma. For example, a study of casualty crashes in the Melbourne metropolitan area found that 12% of crashes occur completely on the local road network; 5% occurred at the interface between the local road network and the collector road

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network; and also 5% occurred on collector roads. Of those crashes, 30% involved pedestrians or cyclists.

Research has also shown that relatively small reductions in travel speeds can have a major impact on reducing crashes and crash severities. In a study of pedestrian fatalities on arterial roads in Adelaide, for example, it was estimated that a uniform speed reduction of approximately 5 km/h would lead to over 10% of the fatal collisions being avoided completely and 20% being reduced in severity to non-fatal accidents.

Another indicator of the likely impacts of reducing the local street speed limit is given by the relationship between speeds and stopping distances, which Andrew touched on earlier. Under emergency braking, a vehicle initially travelling at 50 km/h will have come to a complete stop in the same distance that a vehicle initially travelling at 60 km/h would still be doing 44 km/h.

**Mr GIBSON (CHAIRMAN):** What was that distance?

**Mr McDONALD:** I do not have the distance, but it is where a vehicle travelling at 50 km/h has actually come to a stop. That is a significant difference, particularly for a pedestrian, but also in the event of a car pulling out from an intersection, for example. The impact of reducing speed in local streets only may not be confined to those local streets.

When viewed as implementing a much more credible speed hierarchy over the entire network, it could lead to the promotion of greater credibility of speed limits, and lead on to great compliance with speed limits in general. This could have significant impacts far greater than just on the local road network. NRMA's written submission provides a lot more detail as to the likely crash reductions from the local speed limit.

**The Hon. J. S. TINGLE (STAYSAFE):** If I may take up on what you were saying there about the greater credibility of speed limits if you manage to bring in this hierarchy. Why would it make speed limits more credible, because they are not very credible at this time, are they? People do not observe them as much as they might. Do I understand you correctly?

**Mr MACKY:** That is the case. Again it is a case of reviewing all speed limits on all our roads. If we can develop a speed hierarchy — and again this is contained in our submission — we are suggesting that if there is greater credibility on higher speed roads with speed limits, that would encourage compliance with those limits and that could result in greater compliance with lower speed limits. It is interesting to note that NRMA undertook some surveys through the *Open Road* back in 1991, I think it was, whereby we supplied pictures of a road in that magazine and requested members to comment on what speed limits they would like to see on those roads.

From the feedback we got, there was a clear understanding that lower speeds in high pedestrian areas or in local streets were required, that is, a speed limit less than 60 km/h was required. But, by the same token, motorists also expect to be able to travel at higher speeds on some of our

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better standard urban roads. If we can get the limits on those higher speed roads correct, that could result in greater compliance with those speed limits at locations where a speed limit of 50 km/h or 40 km/h is deemed appropriate.

**The Hon. J. S. TINGLE (STAYSAFE):** Are you not now touching on the real dichotomy that we have got, that when you ask people who live in an area and are obviously concerned about what pedestrian crossing speed limits should be, they are going to say 50 km/h, but when you ask them how fast they should be able to drive through somebody else's area you will get evidence of that impatience that is a characteristic of so much motoring in that they do not want to be held up? Motorists actually in motion seem to set the speed limit that they thinks is right for that area, regardless of what the locals think.

**Mr MACKY:** There is no doubt that speed limits are a balance between mobility on the one hand and safety on the other hand, but what we do know from the practice of setting speed limits to better match the prevailing traffic conditions is that we do actually get better compliance with speed limits. That has been demonstrated in Sydney in a 1991 report of a review of speed limits on a couple of our major arterials. Most drivers have the perception that where there is a signpost that says 60 km/h they will travel at 10 km/h above that.

**The Hon. J. S. TINGLE (STAYSAFE):** Because they think that is going to be accepted.

**Mr MACKY:** That is right. But this study pointed out that when speed limits were in fact increased on some of these higher standard arterials there was not a corresponding increase in travelled speeds. So, in other words, there was a better understanding or greater credibility with that speed limit, which resulted in greater compliance with the speed limit.

**The Hon. J. S. TINGLE (STAYSAFE):** Could that not be because the speed limit has now been raised to what speed people thought they should do on that road anyway, and therefore the converse is that if they still think they should do 60 km/h in an area are they likely to accept a speed limit of 50 km/h?

**Mr MACKY:** I think the quick answer is yes. If the speed limits are set at a limit which people perceive to be credible, they will conform to that speed limit. Based on the feedback that we have had from our membership — and certainly they are residents but they are motorists as well — the indication they gave us is that, "Yes, we acknowledge the need to drive at slower speeds in certain areas provided that higher speed limits are available on other roads."

**The Hon. J. S. TINGLE (STAYSAFE):** What are the implications of a lower residential speed limit for residential planning and street design? What are the implications for local government traffic planning and practices?

**Mr McDONALD:** The major implication is the need to develop criteria for placing roads in urban areas in one or two categories: either traffic routes or roads, where the primary role is to

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convey traffic; and local streets where the primary role is to provide for a residential access function. Roads would then be zoned at a 60 km/h limit or higher, and streets would then be applied with speed limits of 50 km/h or appropriate school zone speeds. Although this theoretically sounds quite simple, the major difficulties exist in the practice, when we go to implement speed limits, particularly in existing urban areas.

Often, in existing areas, local streets have had traffic roles forced upon them by the road layout and limited access in the area. Grey areas exist for a number of collector routes, where it may be technically and politically quite difficult to classify a road as either a road or a street. In this regard, it is fairly desirable to follow the principles laid out in the Australian Model Code for Residential Development. The implication there is that the principles behind AMCORD will need to be applied to the relevant planning documents, such as local environment plans covering each of the council areas.

AMCORD sets out quite a clear hierarchy of target or design speeds, ranging from as low as 15 km/h in local access lanes and streets through to 40 km/h and 50 km/h up to 60 km/h on major collector routes. NRMA supports the principles identified in AMCORD and also the idea of controlling the vehicle speeds by the prevailing road environment, so that would be through driver attitudes and behaviour.

NRMA is currently participating in a Department of Transport project which is looking at promoting the best practice in design and function of streets and roads, to support all transport needs, community objectives and environmental parameters. This project will take into consideration how to apply applies such as are contained in AMCORD to local council areas.

**The Hon. J. S. TINGLE (STAYSAFE):** What about the speed management strategies of Road Safety 2000? How would the introduction of a new speed limit like this affect that strategy?

**Mr MACKY:** NRMA has played a key role in the development of the Road Safety 2000 strategy. We do not think that the introduction of a 50 km/h speed limit would detract from that strategy in any way. It would probably complement it, because one of the objectives of that strategy is to ensure speed limits match the prevailing traffic conditions. In other words, a 50 km/h speed limit could be an appropriate measure to introduce on local streets.

**The Hon. J. S. TINGLE (STAYSAFE):** Finally, does the NRMA have an opinion or idea about the environmental implications of lower local road speed limits, particularly in regard to greenhouse gas emissions, traffic noise, travel times and things like that?

**Mr McDONALD:** Generally, we have found that it is quite difficult to quantify most of the environmental impacts, such as greenhouse gas emissions, although we have found that in most cases it is expected that they will be relatively insignificant. Looking at noise, for example, the Roads and Traffic Authority's road traffic noise guidelines indicate that a reduction in travel speed from 60 km/h to 50 km/h, all other things being equal, would lead to a noise reduction of

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approximately only 1 decibel. And it is doubtful whether such reduction directly related to speed reduction alone would be perceptible to local residents.

On the other hand, if we manage to change the speed culture, and we achieve things like aggressive acceleration and deceleration, that is likely to have a far more significant impact. In terms of vehicle emissions, while the reduction in steady speeds would lead to reduced emissions — and some figures we have detailed in our written submission — in practical terms, it is considered that the change would be negligible. This is due to the similar acceleration and deceleration demands in a local street network, combined with the small extent of travel that actually occurs in a local road network.

However, we would like to contrast this against other speed management techniques, such as the use of physical devices, which significantly increase vehicle emissions and hence greenhouse gases. In terms of travel times, we would say that these would most likely increase, but again not to a significant level. The same delays would occur due to road alignment, intersection delays, and so on.

**The Hon. J. S. TINGLE (STAYSAFE):** I suppose they are not travelling at 50 km/h in many places.

**Mr McDONALD:** That is right. In most cases the road environment tends to dictate the travelling speed. There is a possible benefit in terms of vehicles that currently use the local road network as a bypass for main roads in that those motorists will be discouraged from using the local street network, therefore leading to some further improvements in amenity and conditions and so on. But that has to be quantified.

**Mr GIBSON (CHAIRMAN):** Mr Tingle mentioned Road Safety 2000. That document was compiled by all bodies connected with road safety. But in the document Road Safety 2000 there is no mention of a reduction of the speed limit to 50 km/h. Is that something that was not looked into in the Road Safety 2000 strategies? Was it something that was forgotten, or is the 50 km/h speed limit concept something that is new?

**Mr MACKY:** The concept of a 50 km/h speed limit has been heavily under the microscope over the last 12 to 18 months. I think the Road Safety 2000 document was initially put together some time ago. However, as I understand it, Road Safety 2000 is to be reviewed quite regularly. I think it is being reviewed at this moment. So perhaps we might see the issue of a 50 km/h speed limit surface in the next draft. But, once again, I think it is important to note that such a strategy would complement what already is in the document.

**Mr GIBSON (CHAIRMAN):** I thank you for your time and for your expertise.

**New South Wales Police Service witness**

Inspector Terence Earle Lester, Acting Commander, Traffic Services Branch

**Mr GIBSON (CHAIRMAN):** Thank you, Inspector Lester, for appearing before the STAYSAFE Committee today. Your presence before the Committee today is to provide the overview of the position of the New South Wales Police Service regarding the inquiry into the proposed introduction of 50 km/h local road speed limits on residential streets in New South Wales....

I note that the Committee has not received a submission from the New South Wales Police Service. Is it the intention of the Police Service to forward a submission to the Committee at a later date?

**Inspector LESTER:** If it is the wish of the Committee that the Police Service should prepare a submission, but at this stage I would like to respond to questions.

**Mr GIBSON (CHAIRMAN):** Do you wish to make an opening statement or would you prefer to go straight into questions?

**Inspector LESTER:** Straight into questions.

**Mr GIBSON (CHAIRMAN):** Can you describe and discuss any previous research sponsored or conducted by the New South Wales Police Service into lower residential speed limits that has been conducted in Australia or overseas?

**Inspector LESTER:** The New South Wales Police Service has not conducted or sponsored any research into lower speed limits in Australia or overseas. However, we do accept that research indicates that, generally, residents have been in favour of reduced speed limits, and with lower general speeds there are likely to be reductions in crash and casualty rates.

**Mr SMITH (STAYSAFE):** Are you able to indicate to the Committee what circumstances were involved in changing the New South Wales urban speed limit from 30 miles mph to 35 mph in 1964? For example, was the raising of the speed limit a response to the then limitations of the police to effectively enforce speed limits, particularly within urban areas? Is the New South Wales Police Service able to supply reports, briefing papers, memoranda, cabinet submissions, etc., relating to this change?

**Inspector LESTER:** No, we do not have anything on record as to the processes that led to the move from 30 mph to 35 mph and through to 60 km/h.

**Mr HUNTER (STAYSAFE):** Based on the information held by the New South Wales Police Service, what important lessons can be learned from an examination of the speed management

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practices in other jurisdictions in Australia and overseas, particularly in terms of identification of current practices for setting of urban speed limits and the introduction of lower local road speed limits in residential areas?

**Inspector LESTER:** One of the important aspects we believe of lower speed limits is that they should, as in all other forms of traffic regulation, be self-enforcing rather than having strong enforcement as the major and sole approach to control. A major aspect of the lower speed limit is the level of compliance, and this level should be achieved first of all by public acceptance and education, linked with appropriate levels of engineering and then enforcement. It is the old three Es, really — education, engineering, and then enforcement — each of which has got to be a strong component.

**Mr GIBSON (CHAIRMAN):** So you are saying that the 50 km/h speed limit is not achievable by enforcement alone?

**Inspector LESTER:** That is right. It has to have those three components.

**Mr GIBSON (CHAIRMAN):** How would you enforce it?

**Inspector LESTER:** The New South Wales Police Service does not see that it is a major strategic change from what we are doing now. It is just a different speed limit, a change of 60 km/h to 50 km/h. We believe that we now have the technology, the practices and the procedures to enforce a 50 km/h speed limit, but we also believe that with all that technology and those practices and procedures and so on we must have the education component and the engineering component.

**Mr GIBSON (CHAIRMAN):** Could it be a major strategic change, the same as random breath testing was?

**Inspector LESTER:** We certainly could introduce the newer speed cameras and the lasers, linked with the 50 km/h speed limit.

**The Hon. J. S. TINGLE (STAYSAFE):** If I could interpose here, Mr Chairman. Surely enforcement of speed limits is designed to stop drivers from speeding and breaking those speed limits, and yet I guess much of the enforcement we have involves catching motorists after they have broken those limits. Here I am talking about the punitive versus the deterrent effect of speed limits. Given that there is likely to be quite a deal of resentment, among some motorists anyway, at having the speed limit drop from 60 km/h to 50 km/h in some streets, is it not going to be a question of catching the offenders after they have been detected speeding? The education you are talking about is fine, but is it really going to be possible to persuade people that a speed of 50 km/h is enough in some streets, or are your speed cameras merely going to catch the drivers already doing 60 km/h or 70 km/h?

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**Inspector LESTER:** The education and enforcement parts are important components, but, as I said early in my opening statement, the engineering aspect also has to be really good as well. We have to have streets that have appropriate speed zones, so that drivers will say to themselves, "I am in a 50 km/h area because this and that is happening." We have got to have standardised speed zoning and engineering, and then link that to enforcement. I agree that enforcement is the last measure. With random breath testing, from 1982 onwards we had major education programs. We did not have too much engineering, but we certainly had technology. We had major enforcement. Those components went together. I think that is the way we have to approach this new speed limit as well.

**Mr HUNTER (STAYSAFE):** What is known about community concerns with effective speed management in urban areas, particularly vehicle speeds on residential streets?

**Inspector LESTER:** The New South Wales police community surveys in January 1995 indicate that the greatest perceived local disorder problem is dangerous, noisy driving within residential areas, and 72% of people considered that the police are responsible for the control of that disorder. It might also be noted that some people seem to have a different set of values.

As Mr Tingle mentioned earlier when the NRMA people were giving evidence, motorists drive through one street and they consider what is a reasonable speed limit for them, and when they get pulled up by the police they make all sorts of excuses. But in their own streets they say that everybody else has got to slow down. So they have conflicting values according to where they live and where they actually drive. I think that is an area we must address.

**Mr THOMPSON (STAYSAFE):** What communication strategies being contemplated by the New South Wales Police Service are required to support the introduction of a 50 km/h local road speed limit in residential areas?

**Inspector LESTER:** The Marketing and Media Branch of the Police Service and the Roads and Traffic Authority will be closely linked in the development of these strategies. It is expected that the education package will be similar to those accompanying the introduction of speed cameras, where the strategies used targeted people within the organisations and outside the organisations to support speed cameras. We do have a high level of acceptance of speed cameras in New South Wales. The Roads and Traffic Authority really does have the major role, and it is supported by the Police Service, in the development of public education. As stated earlier, public acceptance of the 50 km/h speed limit on local streets is important to its success.

**Mr GIBSON (CHAIRMAN):** With the speed cameras, were not the education package implemented by the Police Service and not the Roads and Traffic Authority?

**Inspector LESTER:** Some of the external strategies, such as the publicity strategies, were developed by the Roads and Traffic Authority.

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**Mr GIBSON (CHAIRMAN):** The initial launch, though, was by the police, was it not?

**Inspector LESTER:** Yes.

**Mr THOMPSON (STAYSAFE):** From the point of view of the Police Service, what are the most effective and appropriate traffic management strategies that should be adopted to ensure compliance with 50 km/h local road speed limits? Can you describe the involvement of the New South Wales Police Service in the development of a trial implementation of a 50 km/h local road speed limit on residential streets that is to be launched on the lower north shore in another week or so?

**Inspector LESTER:** To ensure a high level of speed compliance, or a compliance with speed limits generally, it is important that speed limits are appropriate to the various road types and that they are consistent across the State for the function of that class of road. In other words, we have to have consistent speed limits across the State, regardless of what road it is. Local area traffic management schemes will still be required in some areas, but we consider that local level engineering and self-regulating design are preferable.

The Police Service has also been represented on the working party for the trial of a 50 km/h local street speed limit in parts of Mosman and North Sydney. The district commanders and the patrol commanders have been represented, and I also have been on the group on behalf of the New South Wales Police Service. The trial is due to commence in the next few weeks, as you have said, in consultation with the local community and local government. A series of community surveys and questionnaires have been undertaken by a group called GEOPLAN, and generally there is broad community acceptance of a lower speed limit in that area. Various engineering approaches are being trialed, including signposting and road marking and low level engineering.

**The Hon. J. S. TINGLE (STAYSAFE):** Inspector, you mentioned the three Es — education, engineering and enforcement. What changes do you think will be needed to enable effective enforcement of the local lower speed limit, bearing in mind that it will be a new experience for a lot of motorists to have to drive more slowly?

**Inspector LESTER:** From an enforcement perspective, a reduction in the speed limit may not affect what we are doing. I really do think that the first thing we have got to do is convince the public that a 50 km/h speed limit is a really good thing. That is what we should be doing, promoting public acceptance. However, we still consider that there will be an increase in motorists being pulled up by police for not complying with the speed limits until those drivers get used to the idea of driving a little more slowly than they usually do.

It has been the practice with the new strategies to have a limited period of grace, as there was with speed cameras and so on. We would think that is a good idea. It seems appropriate for these circumstances. I certainly would not agree to a two-month period of grace though. The new speed cameras, both vehicle and tripod mounted cameras, are suitable for use within the 50

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km/h local speed areas, although the site selection criteria for those cameras will generally prevent their use to critical areas only and not in all streets. Laser detection devices, which are available to the Police Service, are easily used in residential areas and local streets.

**Mr GIBSON (CHAIRMAN):** I ask you the same question that I have asked of the other parties that have appeared before the Committee today. If you believe that the new 50 km/h speed limit will save lives, reduce accidents and bring about big savings dollar-wise for the State, why do we have to go through this process of convincing the community first before we move to implement the new speed limit? If we had to do that for every law made in this State, we would not make too many laws.

**Inspector LESTER:** I agree. With random breath testing it was a combination of all measures implemented at the one time. We did not beat around the bush and ask, "Is it all right to do this?" We said, "This is what we want to do, and these are the reasons that we are doing it." But we should tell the people why we want to do it. Is it important to them? Is it important to their families? Is it important to other members of the public? They should know all the reasons behind doing it all laid out and introduced properly in a marketing strategy, linked straight away with enforcement of the limit. I have no problem with that at all.

On the practical side, it might take a little while to paint the signs, but it would take about six months to implement. I have no reason to delay the implementation of the new speed limit, if we do the marketing properly and we have the enforcement ready to go.

**Mr HUNTER (STAYSAFE):** Do the current speed enforcement technologies, techniques and procedures need to be modified to support the introduction of a 50 km/h local road speed limit on residential streets?

**Inspector LESTER:** No. We have generally got the technologies, techniques and procedures, and those being used now are able to be adapted to enforce the lower speed limits. With greater emphasis on developing an intelligence-driven tasking of the staff members and the introduction of laser technology, we will be right up there with our ability to enforce the limit.

I do not know whether it has been picked up today or not, but I think the development of speed profiles by local councils is also important to the overall identification of complaints and problem areas in relation to speeds and crashes. It is important for the police, linked to the council and the Roads and Traffic Authority, to be able to have information at the time and day of the speeding complaints and crashes. But, importantly as well, the speed profiles should measure the perceived problem with the actual problem. There might be a perceptual problem, as we found in some areas in North Sydney and Mosman, where people perceive that cars are going too fast, but when we actually measured them, in accordance with the current speed limit anyway, they were not going too fast. The crash rate indicated that there was not a major problem.

**Mr GIBSON (CHAIRMAN):** I was of the impression that you could not be booked for doing

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more than 40 km/h in front of a school but you can be booked for disobeying or misreading the sign. Am I right in thinking that?

**Inspector LESTER:** That is correct.

**Mr GIBSON (CHAIRMAN):** So the 40 km/h limit cannot be enforced per se?

**Inspector LESTER:** We cannot enforce it as a speed limit as such. We can enforce it for driving contrary to notice.

**Mr GIBSON (CHAIRMAN):** What is the difference between that situation and the 50 km/h limit?

**Inspector LESTER:** The 50 km/h limit will not have any qualifications on it. Currently, the 40 km/h speed limits in front of schools have a qualification in that they are restricted to certain times. Our legal opinion within the Legal Services is that because that qualification applies it is not actually a speed limit but is a direction by notice, so we can only report drivers for driving contrary to that notice.

**Mr HUNTER (STAYSAFE):** If the Government adopts the proposal to introduce a 50 km/h local road speed limit on residential streets, what are the implications for the current penalty and demerit point system, including the need for revision of current speeding offences under the Traffic Act 1909 and the adoption of a cautioning system to operate together with a traffic infringement system?

**Inspector LESTER:** The reduction of the speed limit itself does not really require any alteration to the current penalty and demerit point system. However, it seems an appropriate time for review of that system to be carried out. I know that there are reviews on the agenda, both interstate and nationally, for the demerit point system.

Some twelve months ago there was discussion on the development of a cautioning system by the New South Wales Police Service. That discussion actually lapsed due to events that have happened between then and now. It now might be an ideal time, because of this review, to revisit the whole topic of a formal cautioning system. But neither the penalty nor the cautioning system is critical to the introduction of the 50 km/h speed limit.

**Mr SMITH (STAYSAFE):** Inspector, what will be the involvement of the New South Wales Police Service in deciding if a local street will be subject to a 50 km/h speed limit?

**Inspector LESTER:** The major police involvement will be the local traffic committees in actual fact. Each local traffic committee has an input from the local police member, who is trained in patrol traffic services. District and patrol traffic and highway patrol personnel have major input with the Roads and Traffic Authority in their local meetings, which are an important part of their

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calendars. They have got action planning seminars linked together. So that is the type of input there would be.

**Mr HUNTER (STAYSAFE):** Inspector, you may not have been present when the Roads and Traffic Authority made its presentation, but there seemed to be a difference in the way it would be introduced as between the Roads and Traffic Authority and the NRMA. The Roads and Traffic Authority was saying it would be a blanket coverage of residential streets, and then the local traffic committees would be looking at whether the limit in some streets could be lowered to say 40 km/h. The NRMA believed that there should be a review and close scrutiny of what streets would be covered prior to the introduction of the new speed limit so that we could have some consistency in speed limits across the State, if that new speed limit was introduced, instead of the local speed limit being left for the determination of the local traffic committees. It envisaged that some other kind of review panel would travel the State to ensure consistency across the State on what streets are covered. How do you see that review, if that is what you agree with, taking place?

**Inspector LESTER:** We would generally support the AMCORD and the Roads and Traffic Authority approaches to traffic developments which, by design, mean that vehicles could only travel at such and such a speed, with the streets being designed for various levels of speeds. As far as the introduction of the 50 km/h local street speed limit is concerned, we tend to agree that it should be a blanket introduction of a 50 km/h speed limit, then the other streets are by exception, rather than the other way round. From our point of view, it is far more practical to do it that way.

**Mr HUNTER (STAYSAFE):** Because it would be too confusing?

**Inspector LESTER:** To do it the other way would be more confusing. I agree with what you are saying in essence. The problem will be with the older street designs. There is a subdivision called, I think, Glenmore Park near Penrith which is designed on the newer guidelines, and vehicles do not travel at more than 50 km/h because of the street design. But the streets with an older grid layout, with the more spacious streets in the 1960s and 1970s subdivisions, will be the difficult ones. But they are also the more important ones, because I consider they are the more critical areas with higher crash rates because people are travelling too fast in them. We would prefer to have a blanket level with exceptions, rather than have it imposed the other way round.

**Mr SMITH (STAYSAFE):** What are the implications of the introduction of a 50 km/h speed limit on local roads in New South Wales for road safety, particularly with reference to the incidence of intersection crashes, and for pedestrian and bicycle safety?

**Inspector LESTER:** It is generally recognised that a decrease in the level of speed of motor vehicles has a positive impact on crash rates. In the European Transport Safety Council report "Reducing traffic injuries resulting from excessive and inappropriate speed" it was stated, among other things, that 5% of pedestrians struck by a vehicle travelling at 32 km/h die, whereas at 48

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km/h 45% die, and at 64 km/h 85% die.

The authors also state that a 1 km/h decrease in average traffic speed typically results in a 3% decrease in accident frequency. Evidence earlier presented by the Roads and Traffic Authority indicated that research in Adelaide indicates that a lower — by 10 km/h — residential speed limit, with the same degree of enforcement and compliance as at present, could achieve a reduction of about 27% in pedestrian fatalities.

**Mr SMITH (STAYSAFE):** What would be an appropriate time frame and implementation schedule for introducing a 50 km/h local road speed limit in residential areas throughout New South Wales?

**Inspector LESTER:** We discussed this a little earlier. If it were practical, yes, as soon as possible. My mind seems to think that between six to 12 months would be appropriate, but I am sure that with this Committee's push behind it we could probably do it a little more quickly.

**The Hon. J. S. TINGLE (STAYSAFE):** When you say it could take six to twelve months, do you mean to bring it in or to have it functioning effectively?

**Inspector LESTER:** I would say six months for the introduction of the speed limit and 12 months to have it fully on stream.

**The Hon. J. S. TINGLE (STAYSAFE):** I know you have dealt with this before, but I am still interested in the processes and procedures that we need to have to monitor and evaluate how effectively the speed limit is working and particularly its effect on road safety. I am still not sure — I have never been sure — that introducing a lower speed limit is really going to work unless we are sure that people have accepted it and perceive that it is really working. In terms of monitoring and evaluating its effectiveness, how are we going to do that?

**Inspector LESTER:** In conjunction with the local councils, the Roads and Traffic Authority and the Police Service are developing their own local speed profiles. This was linked to crash data. It was done with the North Sydney and Mosman trial that is to commence in a couple of weeks' time. That could be an ideal model to do an evaluation of the whole program. A lot of speed measures and community perception of speed measures have been monitored throughout the whole of the Mosman and North Sydney zones. I think that would be a very good way of assessing how the measure works.

**The Hon. J. S. TINGLE (STAYSAFE):** How it works with respect to road safety?

**Inspector LESTER:** In road safety, yes.

**The Hon. J. S. TINGLE (STAYSAFE):** We have a look at smashes and such things?

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**Inspector LESTER:** Yes. It has to be linked with the smash rate and the casualty rate. Another project that has been linked with the Police Service and the Roads and Traffic Authority is in the western suburbs of Sydney, whereby a level of compliance is measured, first of all with a lot of police enforcement, and then that level of enforcement is reduced to almost zero, and then it is increased again. That actually measures the level of enforcement that is appropriate to make sure the people comply with various speed limits or drink-driving laws, or whatever.

**The Hon. J. S. TINGLE (STAYSAFE):** I suppose dropping back the level of enforcement will give you an idea of whether the motorists have learnt anything?

**Inspector LESTER:** Yes. If we can say that so many patrols a week will reinforce the good driving behaviour of all the people in that area, we can do that far more economically and with far more appropriate use of resources to achieve what we should achieve.

**Mr GIBSON (CHAIRMAN):** Does that mean we have got to have a better way of dealing with P5s?

**Inspector LESTER:** Today I heard that we are putting P5s on the COPS system.

**Mr HUNTER (STAYSAFE):** Earlier you gave statistics on reductions in fatalities, accidents rates and crash rates. If we are looking at selling this lower speed limit for local residential streets, then we are basically looking at the safety of children. Many of the complaints that come through my office involve parents saying that they are worried about the safety of their children because of motorists speeding through their streets. I tried to get some information from the NRMA, but they did not have any, but do you have access to or any information with you today that would indicate the percentage of those fatalities or accident victims are children?

**Inspector LESTER:** No, I do not have anything with me today, but I will take the question on notice, if you wish, and get back to you.

**Mr HUNTER (STAYSAFE):** Do you believe that information is available?

**Inspector LESTER:** I think we could find it somewhere. Even if we do not get the detail, we might be able to get some perspective on the problem.

**The Hon. J. S. TINGLE (STAYSAFE):** What are the implications of a lower residential speed limit for residential planning and street design? And how would modifications associated with low level street engineering affect police operational capabilities? Is one going to work against the other, do you think?

**Inspector LESTER:** I have basically answered this question earlier. We support the AMCORD and the Roads and Traffic Authority approaches to bringing the speed travelled down. The low level engineering modifications, the local area traffic management (LATM) programs, do not

really create a major problem for us, as long as we are aware that the problems are there. There may be a problem with Fire Brigades and the Ambulance Service. As far as I know, the Fire Brigades some time ago said something about access for their heavy vehicles, and the Ambulance Service did make some comment about carriage of critically ill patients. I think, with a bit of consultation with the groups, there would not be a major problem.

**Mr GIBSON (CHAIRMAN):** I would like to ask you a question without notice having nothing to do with the present inquiry. In your opinion, do you think car manufacturers have more of a role to play in road safety than they have at the moment? I am mainly referring to power of motors that are being put into motor cars at the moment. Bear in mind that most new cars today are capable of speeds of more than 200 km/h and our maximum speed limit is 110 km/h. I commented over the weekend that I thought that was a crazy situation.

**Inspector LESTER:** There is a problem. I do not know how to solve that problem. I am a motor cycle rider, and I ride a BMW K100 because it is capable of a certain speed, and I do not ride a 250 cc motorcycle because it will only do 100 km/h. I ride the BMW for other reasons, and I drive a certain type of car for reasons other than the top speed. I think, overall, people have responsibilities for their own safety. The responsibility for their actions rests with the individual drivers.

Legislators are concerned in this instance about the issue here, speed limits. Designers are concerned about the environment and road safety in some areas. I think car manufacturers are also concerned about road safety, but they also have an image that they have to promote. They install airbags and seat belts of high quality, fitting high quality brakes and high quality tyres, and that is part of the image. A Volvo, which is probably regarded as one of the safest motor cars on the road, still has all these safety features, and can still travel at X kilometres an hour.

**Mr GIBSON (CHAIRMAN):** I thank you for your time and for your expert advice.



## PUBLIC HEARING OF MONDAY 20 MAY 1996

*Roads and Traffic Authority witness - Institute of Municipal Engineering, Australia - Bicycle New South Wales witnesses - Child Accident Prevention Foundation of Australia (KIDS SAFE) witnesses*

### **Roads and Traffic Authority witness**

Mr Craig John Moran, Manager, Pedestrian and Urban Amenity

**Mr HUNTER (ACTING CHAIRMAN):** The STAYSAFE Committee has previously received a submission from the Roads and Traffic Authority concerning the inquiry into the proposed introduction of 50 km/h local road speed limits in residential areas. Mr Moran, do you have further documentation which you wish to be included with the submission from the Roads and Traffic Authority as part of your sworn evidence?

**Mr MORAN:** No.

**Mr HUNTER (ACTING CHAIRMAN):** For the benefit of those present, I note that the Committee has scheduled 40 minutes for the taking of evidence for Roads and Traffic Authority witnesses. I think if the questions are well placed and the answers are concise and to the point, then the Committee will be able to keep to its schedule this afternoon. Mr Moran, before I commence with formal questioning, I wonder whether you have any opening statement to make to the Committee.

**Mr MORAN:** No, I do not.

**Mr HUNTER (ACTING CHAIRMAN):** Mr Moran, could you briefly describe your background and experience and indicate your duties as Manager, Pedestrian and Urban Amenity in the Roads and Traffic Authority?.

**Mr MORAN:** Thank you, Mr Chairman, for the introduction. I am a qualified professional engineer with an honours degree in civil engineering. I have a total of 12 years experience in the traffic engineering profession, through a range of positions with the former DMR and now the Roads and Traffic Authority. These included roles as a road design officer, traffic engineering officer, the traffic calming and bicycle leader with the Roads and Traffic Authority Sydney region and now as the Manager of Pedestrian and Urban Amenity within the road safety and traffic management core function directorate.

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This has provided me with extensive practical experience at the coal face in representing the Roads and Traffic Authority to customers on road safety and traffic management issues. In recent years I have specialised in the traffic management side of the business in respect of the Roads and Traffic Authority's traffic engineering operations.

In brief, as the Manager, Pedestrian and Urban Amenity, I am responsible for the development of state wide strategies, policies, performance standards, program guidelines and programs to improve pedestrian access and mobility and urban amenity in a manner which ensures integration between traffic management and road safety outcomes.

**Mr HUNTER (ACTING CHAIRMAN):** I see that the Chairman of the STAYSAFE Committee, Mr Gibson, has arrived, so I will hand the meeting over to him.

**Mr GIBSON (CHAIRMAN):** Mr Moran, the Committee would like to explore the issue of urban amenity or suburban amenity. Can you define the term urban amenity, and describe the philosophical origins of the concept?

**Mr MORAN:** I will try and define it in as simple terms as I possibly can. Unfortunately there is no universal definition, so I will answer this particular question in terms of how urban amenity relates to traffic engineering. Put simply, urban amenity results from strategies and actions designed to reduce the impact of through traffic on suburban streets, and improving the road environment for pedestrian activity. This largely involves restoring a human scale to the roads currently dominated by traffic, without compromising the need for vehicular movement to an unacceptable level. Focused in this regard, it is obviously on the streets in which we live, work and shop. The principal objectives, as I see them, of urban amenity, is to reduce traffic speeds, relocate space to non-traffic activities and enhance the street environment. The primary contribution to urban amenity is through what is known as traffic calming or environmental traffic management, which at a local area or route level, means as a result of actions to restrain traffic speeds and lessen the impact of traffic, compatible with the function of the network or the route. Quality of the road environment for non-traffic activities is the essential underlying theme and within this framework the application of a 50 km/h local street speed limit is an important tool in achieving that end.

**Mr GIBSON (CHAIRMAN):** We often refer to terms such as safety, access and amenity. What does this phrase mean to you?

**Mr MORAN:** To me the phrase, safety, access and amenity, basically means striking a balance between conflicting community objectives for transport. Finding a quality balance is not always easy but is essential if the strategy, or an action, or initiative for that matter, is to be successful and the true measure of success is in the community's view. Establishing a balance primarily results from negotiation and working with various stakeholders and essentially that is what traffic engineering and traffic management is about. It is about finding that balance that integrates the needs and expectations of all stakeholders.

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**Mr HUNTER (STAYSAFE):** If the 50 km/h speed limit is introduced, there are probably going to be a substantial number of motorists who will actually travel above that speed. Now, the evidence before us would suggest that 60 km/h will actually be the speed that people are travelling. The evidence shows that pedestrians involved in a crash are more likely to die than survive if struck at that speed. Do we gain anything from lowering the speed from 60 km/h to 50 km/h?

**Mr MORAN:** Let me start by saying that obviously it would be unrealistic to expect to ever achieve 100% compliance. People who live by the attitude that they can travel at 10 km/h over the speed limit, obviously under a 50 km/h scenario would be travelling at 60 km/h, as you suggest. However, under the current arrangement, the same people who ran by those same attitudes, would be travelling at 70 km/h.

Taking this scenario, under the proposal that the Roads and Traffic Authority has put before you, there would be an overall reduction in speed in the local street environment, which would result in improving the stopping distance. This means people overall would be able to pull their vehicles up quicker and thus improve their ability to avoid an incident in the first instance.

An overall reduction in speed would be beneficial, in terms of amenity and as indicated in the Roads and Traffic Authority's submission of November 1995, evidence from research in Adelaide indicates that a 10 km/h reduction in residential speed limits, even allowing for the same degree of enforcement and compliance which currently exists, could achieve a reduction of about 27% in pedestrian fatalities.

If your scenario is realised, I would say yes, we as a community would benefit from lowering the speed limit.

**Mr GIBSON (CHAIRMAN):** What about enforcement options to get a better compliance for the 50 km/h speed limit? What are your thoughts on that?

**Mr MORAN:** I am afraid I would have to take that on notice. It is not within my speciality.

**The Hon. J. H. JOBLING (STAYSAFE):** Just coming back to the comment about looking at an overall reduction in speed through calming measures, roundabouts, as you find in a lot of councils. I am somewhat concerned that some of the councils may well have gone too far in their actions in introducing calming measures and traffic restriction measures and as a result we have achieved the other end, where certainly you have reduced the speed but have caused complete traffic delays and a virtual grid lock situation.

In other words, the traffic does not move. We have achieved the safety but no movement in traffic. How do you balance the two to get an outcome that is acceptable; that keeps the traffic moving on the minor roads we are talking about, and at the same time ensures pedestrian and amenity safety?

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**Mr MORAN:** I am not sure if your question relates to the introduction of the 50 km/h speed limit or conventional traffic movement.

**The Hon. J. H. JOBLING (STAYSAFE):** Both. If you are reducing it to 50 km/h and you still have these traffic management measures in place — and in a lot of areas they are going to be in place — whilst they are trying to negotiate them at the higher speed, you are going to reduce it even further and traffic won't get through.

**Mr MORAN:** Generally, a properly designed local area traffic management scheme, incorporating roundabouts and speed humps and such measures, is actually designed for an actual travel speed of 40 km/h. Under that scenario, the reduction to 50 km/h local speed limit would have no impact.

**The Hon. J. H. JOBLING (STAYSAFE):** Slowing between the speed humps and everything that is there.

**Mr MORAN:** The speed humps, if they are properly designed and placed, are designed so you should only be able to travel over them at 25 km/h and obtain an average speed of 40 km/h in between. I stress, if they are properly designed.

**Mr HUNTER (STAYSAFE):** That is where my follow up question would come in. Is there a case then for reducing the speed limit on residential streets to 40 km/h, with the expectation that motorists would travel at 45 or 50 km/h and make it more likely to obtain the sort of safety benefits that are at the root of this inquiry?

**Mr MORAN:** Yes, there is a case on technical grounds, as you suggest. However, it again comes back to the question of finding an appropriate balance and of course the need to establish and maintain public credibility.

A 50 km/h limit, as outlined in the Roads and Traffic Authority's submission, is considered an appropriate balance between what is needed, what is manageable and what is publicly acceptable.

The natural low density of the New South Wales, and for that matter Australia's residential environment, is not naturally conducive to encouraging motorists to travel at or around 40 km/h without making physical changes to the environment as have been identified here today.

Thus one could reasonably expect that the introduction of a 40 km/h speed limit without physical measures would result in a higher level of non-compliance and quite possibly a loss of public credibility.

There may well be a valid case for a 40 km/h speed limit in high density residential environments, however that would depend upon the characteristics of the individual area.

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**The Hon. A. B. MANSON (STAYSAFE):** Can you explain the difference between a general speed limit and speed zoning in such a way as to make the difference between these definitions easily understood? Can you provide examples of these applications on both urban and rural roads?

**Mr MORAN:** I will give you a definition which I hope can be easily understood, but I suppose the interpretation of that will be how well it is understood.

Quite simply, the general speed limit is a statutory limit imposed by an Act of Parliament. A speed zoning, on the other hand, enables speed limits to be established for particular road links or areas where that statutory general limit may not be appropriate, indicated by speed limit signs which take precedence over the general limit, other than special general limits for particular groups of vehicles or drivers. It may also confirm the general limit over a length of road.

The establishment of a speed zone would result from investigations having regard to traffic function and physical characteristics.

Turning to some quite simple examples, I trust, in the urban situation the general limit is 60 km/h, which basically applies where there is provision for street lights. An example of a speed zone within an urban environment would be Ryde Road at Pymble, where after investigation and assessment, the speed zone there has been set at 70 km/h because it has been deemed that a 60 km/h limit is not appropriate in those circumstances.

Examples in a rural situation — there is a general State limit of 100 km/h, which applies where there is no provision for street lighting. An example of zoning in a rural situation would be the Lithgow side of the Bells Line of Road where, after investigation, the speed limit has been reduced to 70 km/h, rather than sitting at the 100 km/h.

**The Hon. J. S. TINGLE (STAYSAFE):** Can I seek clarification of that? Is the 50 km/h speed limit the Roads and Traffic Authority is proposing a general speed limit over all urban areas, or a speed zone? What are you actually suggesting?

**Mr MORAN:** It would be suggested as a general speed limit for local streets.

**Mr THOMPSON (STAYSAFE):** Mr Moran, do you see the Mosman/North Sydney 50 km/h trial as a prototype for the proposal before the Committee? In the Committee's research under this inquiry, there seems to be some confusion about that. Can you indicate how the Mosman/North Sydney trial differs from the Roads and Traffic Authority's proposal for a 50 km/h speed limit on local roads?

**Mr MORAN:** Having been the Roads and Traffic Authority's manager for that project for two years, the answer is no, I would not see that particular initiative as a prototype for the proposal before the Committee. However, I do see it as an input to your deliberations and as a convenient

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avenue for tapping community opinion and also practical experience with a 50 km/h limit.

The Roads and Traffic Authority's proposal for a 50 km/h local speed limit is focused on changing the general limit, as I have just mentioned, or statutory limit if you like.

Fifty kilometres per hour would become the rule, rather than the sign posted exception. Additionally, it would only automatically apply to streets having predominantly a local access function and traffic routes would be zoned as 60 km/h.

By contrast, the Mosman and North Sydney initiative involved identifying a residential precinct, including both local access and traffic routes and applying a 50 km/h limit across the whole area.

This basically was the case of 50 km/h being the signposted exception to the current 60 km/h rule.

The Mosman/North Sydney initiative was essentially an exercise in trialing an alternative treatment to conventional local area traffic management using physical measures such as speed humps and roundabouts and it did not provide any different definition between the road functions and motorists as the Roads and Traffic Authority's proposal for a general 50 km/h speed limit does.

**Mr GIBSON (CHAIRMAN):** What was the main reason for doing it that way?

**Mr MORAN:** The project initiated with an approach from local government to the Roads and Traffic Authority to sign post a 40 km/h limit within that precinct initially with Mosman and then North Sydney, because they border. We did not view 40 km/h as being a reasonable and realistic achievable outcome within that environment and we considered that 50 km/h was an achievable outcome.

**Mr HARRISON (STAYSAFE):** If, as has been suggested, all speed limits are reviewed in order to rectify inconsistency in speed zones and to help to win over a motorist in relation to the 50 km/h limit, what would your view be of the appropriate speed limit for busy strip shopping streets, for example, Glebe Point Road in Glebe and King Street in Newtown et cetera, if pedestrians are to gain significantly from a reduction to 50 km/h? Is not there a case for reducing the limit in these streets, even though they are not, strictly speaking, residential roads?

**Mr MORAN:** I might start answering that by saying that the speed of traffic in strip shopping centres or strip shopping streets is not always inappropriate, due to the level of what we traffic engineers call friction which exists within that environment.

By friction I mean you have vehicles parking and unparking, you have people circulating around the system and there are a lot of specific facilities provided for pedestrians in that environment. That friction, by its very nature tends, to keep the speed down.

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Now, in the setting of a speed limit for busy strip shopping streets, it is again a case of achieving community credibility in setting a limit which provides an appropriate balance between traffic function and the physical characteristics.

In shopping precincts where there is a high level of pedestrian activity, a 40 km/h limit would be desirable if traffic function was not a consideration. This would require physical treatment of the road environment, so that motorists on the traffic route are made aware of the surrounding land use and this would obviously be a site specific exercise and it would not be appropriate on major traffic routes, such as King Street, but may be appropriate on Glebe Point Road.

I would suggest that there is a need to consider the management of strip shopping streets as an entity in themselves, through physical means of control and regulation to provide an appropriate balance between traffic function of the route and pedestrian mobility. The Roads and Traffic Authority's main street guidelines have been specifically established for this purpose.

There are a number of things that those guidelines indicate can be done on busy strip shopping streets and the establishment of speed limits is but one of those measures.

**Mr JEFFERY (STAYSAFE):** Mr Moran, a number of councils, particularly those in rural areas, have argued that a 50 km/h limit would not be appropriate in their jurisdictions, because the real problems for them are not associated so much with residential areas, but lie on the higher speed roads within their council area and network. Could you comment on that?

**Mr MORAN (STAYSAFE):** I would expect that the issues of amenity would not be as prevalent in rural towns compared to major urban centres such as Sydney, Newcastle and Wollongong, where you have much higher traffic volumes, therefore you have a lot more traffic passing through the local street system because of the restrictions on capacity on the major routes.

However, as I understand it, in rural centres two-thirds to three-quarters of all casualty accidents occur on the local networks.

**Mr JEFFERY (STAYSAFE):** I have a supplementary question then. I can foresee conflict between the Roads and Traffic Authority and certain councils over their interpretation of the 50 km/h proposal. What precisely is the situation in terms of the power to set speed limits? Does the Roads and Traffic Authority have the final say in the matter and, if so, would the Authority be prepared to override councils who do not want 50 km/h limits in their area?

**Mr MORAN:** I might start by saying the Roads and Traffic Authority is keen to work with local governments through proactive problem-solving rather than conflict. However, as you suggest, conflict is always possible.

Other than general speed limits, which require an Act of Parliament, the requirement to set a speed limit for a local road or area rest with the Roads and Traffic Authority. The Roads and

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Traffic Authority does have the final authority.

Under the Roads and Traffic Authority's proposal for a 50 km/h local road speed limit, it would not be the case of the Roads and Traffic Authority overriding councils in establishing a 50 km/h limit. This would be the general limit all parties would be working with. It would be the Roads and Traffic Authority's responsibility to establish guidelines and work with councils in identifying those routes which would be zoned and signposted at 60 km/h.

We do have the legal authority to do it, but we do it in consultation with councils.

**Mr HUNTER (STAYSAFE):** So that means the local traffic committee having a say on what is on those main feeder roads that would normally be covered with a 50 km/h speed limit, but would be allowed to go to 60 km/h?

**Mr MORAN:** I think the local traffic committee would be the appropriate forum for those negotiations.

**Mr SMALL (STAYSAFE):** The Roads and Traffic Authority's submission raised the issue of the importance of public credibility in the system to be introduced with the introduction of 50 km/h speed limit. If there were a general review of speed limit in tandem with the introduction of a 50 km/h speed limit in residential areas, and assuming this process lead to higher speed limits on certain roads, two results might be expected: that credibility in the setting of speed limits would increase, but that the severity of crash injuries would increase on those roads where speed limits have been raised. Can we be certain that the improvement in injury severity at 50 km/h zones would outweigh increases in injury severity on roads where speed limits have been raised?

**Mr MORAN:** The Roads and Traffic Authority has comprehensive speed zoning guidelines, which help to assess whether a particular road should be speed zoned above or below the prevailing general limit.

Through the consistent application of these guidelines, I do not foresee a situation where improvement through a 50 km/h local street speed limit would be outweighed in other areas.

It should be noted that most of the major road network has already been assessed and zoned in accordance with these guidelines.

It is also interesting to note, as I understand it, recent analysis of urban 70 km/h limits has not indicated a reduction in the level of safety, in fact, I understand it has suggested a reduction in crash rates in those particular routes.

**The Hon. J. H. JOBLING (STAYSAFE):** Mr Moran, following on from both the question of Mr Jeffery and that answer relating to 70 km/h you have given to Mr Small, when you look at the executive summary at page three, we have 40 km/h, 50, 60, 70, 80, 90, 100 and 110 km/h

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variations on the speed limits. Then you come back to item seven on page 27 where you start at 10 km/h going to 110 km/h and road characteristics suggested for each of those.

I would suggest most of the people out there have no concept of what the road characteristics are in relation to speed limits and I would contend that if you were to test most motorists, you would get 100% failure rates on the relationships.

Therefore, what I would like to know is, in your view and the Roads and Traffic Authority's view, when we are dealing with the new proposed 50 km/h general limit and the 60 km/h speed zone, who is going to determine which of these streets are going to have which speed limit, what criteria you are going to apply, precisely how do you propose to resolve the disagreement, and precisely who is going to pick up the cost for all the change in signage, the Roads and Traffic Authority or the local council, or who?

**Mr MORAN:** I think the first part of your question I feel I have already largely answered.

**The Hon. J. H. JOBLING (STAYSAFE):** I do not. I am sorry, I do not.

**Mr MORAN:** Because as I understand it, it relates to identifying what particular roads would be zoned 60 km/h.

**The Hon. J. H. JOBLING (STAYSAFE):** How do you do that?

**Mr MORAN:** The Roads and Traffic Authority will be charged with the responsibility of establishing guidelines to identify what particular roads should be zoned at 60 km/h and, as has been mentioned, that would be applied in a negotiated fashion through the local traffic committees with councils.

**The Hon. J. H. JOBLING (STAYSAFE):** Could you explain what negotiated means?

**Mr MORAN:** In terms of negotiation in the local traffic committee forum, that is basically with representatives of the Roads and Traffic Authority, the local State Member, the police and council.

**The Hon. J. H. JOBLING (STAYSAFE):** I am very familiar with it.

**Mr MORAN:** Working through the process, to see if they can come up with a common solution and from my years of practical experience in attending traffic committees, it is more the rule than the exception that an acceptable resolution is achieved.

**The Hon. J. H. JOBLING (STAYSAFE):** I disagree with you totally. I do not believe that is so. If the Roads and Traffic Authority has the final determinant, I suggest it will insist on its views and it has done so even to the disagreement of both the local council and police on many

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occasions. If need be I can quote chapter and verse. If that happens, how then do you resolve it?

**Mr MORAN:** I am afraid I cannot say any more at this stage, other than our expectations are that we would be able to negotiate these situations with local government.

**The Hon. J. H. JOBLING (STAYSAFE):** Who is going to pay for all this new signage? Are you going to expect the local council to pay?

**Mr MORAN:** No, I would expect that the Roads and Traffic Authority will be looking to minimise so far as possible the burden on local government.

**The Hon. J. H. JOBLING (STAYSAFE):** What sort of figures are we looking at, in the realm of \$12 million to \$15 million?

**Mr MORAN:** I do not have any figures.

**The Hon. J. H. JOBLING (STAYSAFE):** I refer to your own submission, that the Roads and Traffic Authority refers to costing \$12.2 million, saying that extensive publicity is not required.

**Mr MORAN:** But you are asking me how much is the Roads and Traffic Authority going to take the burden off local government, correct me if I am wrong?

**The Hon. J. H. JOBLING (STAYSAFE):** I asked you how much it is going to cost.

**Mr MORAN:** Local government or overall?

**The Hon. J. H. JOBLING (STAYSAFE):** Let us try overall. You agree with your submission of \$12.2 million?

**Mr MORAN:** I cannot dispute that submission.

**The Hon. J. H. JOBLING (STAYSAFE):** So it is going to be a lot of money that has to be found, is it not?

**Mr MORAN:** It would appear.

**The Hon. J. H. JOBLING (STAYSAFE):** Have you that sort of money in your budget?

**Mr MORAN:** I am not in a position to answer that. I will have to take it on notice.

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**The Hon. J. S. TINGLE (STAYSAFE):** Mr Moran, I have to say with great respect that I have listened to a fair bit of what various people had to say about lowering the speed limit overall and

you did say a little while ago that it would be a general speed limit. I find a level of sophistry in the Roads and Traffic Authority's argument. They seem to be saying what should be and not would be.

All of us know perfectly well that people tend to drive at whatever speed they think they can manage on a given road, that is, even the best of us do not consciously comply to a particular limit. On pages 13 and 14 of your submission you list five studies carried out in various parts of Australia on the lowering of speed limits. My impression on reading all of those is that none of them were particularly successful. There were small reductions in speed.

In one case you mentioned the trial in Unley. There was actually an increase in speed on low volume streets, and on any occasion where there was a reduction in speed achieved it was only achieved because of physical traffic calming conditions, speed cameras or other enforcement. We have already heard Inspector Lester tell us at our last hearing that the police have no way of being able to say they could enforce a lower speed limit. So, if you can only get the traffic to reduce speed, in other words to change its behaviour when those sorts of enforcements are not available, what is the point of trying to reduce the limit? It will not work, will it?

**Mr MORAN:** As has been said here earlier today, those people who tend to think that they can travel 10 km/h or something in excess of the speed limit, their speed will be brought down in terms of their relative speed.

**The Hon. J. S. TINGLE (STAYSAFE):** I think that is sophistry. I think those people will travel at the speed they have always travelled. This is an example of the sophistry I was talking about because your own submission suggests that in fact it does not really work and therefore if it is not going to work people are going to drive at the speeds they are used to driving at. I think we are straining at nets. You are saying people will be slowed down and I am suggesting to you that they would not.

**Mr MORAN:** It is not only a case of establishing a speed limit, it is a case of putting into place appropriate community education and in encouraging strategies to go along with it.

**The Hon. J. S. TINGLE (STAYSAFE):** That is what should be. That is the point I am making, it is not what would be.

**Mr GIBSON (CHAIRMAN):** Mr Moran, would you like to make a closing statement?

**Mr MORAN:** No, thank you.

## Institute of Municipal Engineering, Australia

Mr Donald Herbert Sheffield, Executive Director, Institute of Municipal Engineering, Australia

Mr Peter Norman Ullman, Director, Engineering and Technical Services, Manilla Shire Council

Mr Christopher John Little, Divisional Manager Engineering, Hurstville City Council

Mr Geoffrey Alexander Morris, Manager, Traffic and Transport, Hurstville City Council

**Mr GIBSON (CHAIRMAN):** The STAYSAFE Committee has not received a submission from the Institute of Municipal Engineering Australia concerning the inquiry into the proposed introduction of a 50 km/h local speed limit in residential areas. Mr Sheffield, do you any documents today that you wish to table so they can be included as part of your sworn evidence?

**Mr SHEFFIELD:** I do have one document which is some comments and a report from Hurstville City Council which deals with this matter, and I table that. I would also be happy after this hearing to put in a written submission on behalf of the Institute.

**Mr GIBSON (CHAIRMAN):** Thank you.

**Mr HUNTER (STAYSAFE):** Can you describe and discuss the issues seen as important by the Institute of Municipal Engineering Australia regarding findings reported in previous research into lower residential speed limits that have been conducted in Australia and overseas?

**Mr SHEFFIELD:** Yes. If I could start off the answers and I will call on my colleagues. Perhaps if I could just take one second to explain the panel that I have here with me today. The Institute has not formed a firm policy on the issue at the moment but we are looking at it from two different perspectives, the rural engineer and the city engineer. I have representatives of those two groups here with me today. They will join in the answers that I will give.

But to come to the particular question that you have asked, we believe that the major issues are firstly, there is the matter of the relationship between speed and the seriousness of casualties. All of the evidence that we have indicates that there is a strong relationship, and the higher the speed vehicles use in streets the more serious the casualties.

The second issue is the design and layout of the local street system which traditionally is not conducive to lower speeds and we believe that is an issue that needs to be addressed. The third issue is the community pressure that is placed on councils, particularly in urban areas, to implement local area traffic management (LATM) schemes largely to reduce the speed of vehicles

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in local streets and to reduce the loss of amenity that is caused by speeding vehicles.

A fourth issue is the cost of local area traffic management and the problems and side effects that they can cause. A further issue is the difficulty of enforcing speed limits on local streets without the installation of devices or without a number of other initiatives which I will come to later. A further issue that I think is most important is the difficulties that are going to be experienced in convincing the public of the need for lower speeds. I can compare that with the present debate over gun regulations.

There is also the issue in convincing the public that the design of the modern motor vehicle makes it less obvious to drivers and passengers of the speed at which they are travelling. A third point is that the streets that have been built over the years encourage higher speeds, and the fourth issue in that bracket is the NIMBY effect, that it is always somebody else who speeds, not me. That is a perception that we are going to have a great deal of difficulty in overcoming.

Another issue that needs to be addressed is that, particularly under the Roads and Traffic Authority's proposal of the new speed zoning, the Roads and Traffic Authority wants to continue to hold the authority for determining speed zones in consultation with councils. We believe strongly that this should be reversed. It should be local councils that determine the speeds in local streets in consultation with the Roads and Traffic Authority. There will be the perception in the public that this is yet another revenue raising initiative.

We believe one extremely important issue that has to be addressed is that we have to find a way of encouraging individuals to take greater personal responsibility for their own actions and there can be no stronger example of that than in the case of drivers. The other issue we think is important in urban situations is the press for urban consolidation which is placing much greater pressure on the use of streets as community space. We must find the right environment for that to occur. They are the major issues, Mr Hunter, that we believe need to be considered.

**Mr HUNTER (STAYSAFE):** What was the Institute's involvement in the change of the New South Wales urban speed limit from 30 miles per hour to 35 miles per hour in 1964? The committee is interested in understanding how attitudes and practices to speed management and in particular attitudes and practices regarding urban speed management have changed over the last three decades.

**Mr SHEFFIELD:** The Institute's involvement in those days was nil. I think it is only in recent years that the Roads and Traffic Authority and some of the other authorities, particularly the police, have come to appreciate the need for consultation with local government. Certainly local councils have become far more conscious of the problems of speeds in local streets since the days when the main roads system became more congested.

I have spoken at many other venues about this topic and I believe that the start of local area traffic management schemes in Sydney particularly started with the Mosman experience when the council

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could no longer stand through traffic using its local streets. It introduced a whole heap of road closures which effectively brought Military Road to a stop, so much so that the Government stepped in and took away the council's power to close roads. That was not restored until some years later when there was the requirement for councils to consult much more widely.

The other thing that has occurred — and it is changing very slowly but in the eyes of local government not fast enough — is the Roads and Traffic Authority's preoccupation with moving traffic quickly along its main roads at the expense of the local road system in many cases. To make traffic signals more efficient a number of right hand turn restrictions have been placed at those intersections. That has the effect of channelling through traffic into local streets in many cases and we believe that that has been, I guess, instrumental in local government taking a far more aggressive stand to the traffic through local streets.

**The Hon. J. S. TINGLE (STAYSAFE):** From the point of view of the Institute of Municipal Engineering, did we learn anything from what we seem to be hearing about the speed management practices in other parts of Australia and indeed overseas, particularly in terms of identifying the way urban speed limits are set and the introduction of those lower local speed limits? Listening to what you are saying, I have the impression we are getting a mixed bag of results and effectiveness in all these surveys that the Roads and Traffic Authority has talked about. Are we being given any indicators as to whether this is worth doing or not?

**Mr SHEFFIELD:** I certainly have not any personal knowledge of overseas experiences where blanket speed reductions have occurred. My advice is that Australia has the highest general urban speed limit of all of the developed countries. I guess there is an indication that other countries are doing something different to us. Australia has learned a lot from the experience overseas with local area traffic management and we have developed upon that. I think we have got skills in that area that are equal to anything that I have heard about overseas.

**The Hon. J. S. TINGLE (STAYSAFE):** Do I get the impression that you feel the local management level is the one that ought to be emphasised, not blanket bans at government level?

**Mr SHEFFIELD:** I think at the moment that is the case, but I believe with a proper strategy for addressing this we could address that issue that I raised, and that is making drivers more responsible for their own actions. I think the Australian driver has a reputation of being very aggressive and perhaps not as courteous as drivers overseas and that is something we need to address. I think if we can address that in conjunction with this, the two things are compatible.

**Mr MILLS (STAYSAFE):** Given the unique perspective of the Institute of Municipal Engineering, what is known about community concerns with effective speed management in urban areas, particularly vehicle speeds in residential streets?

**Mr SHEFFIELD:** I would like to pass this over to Geoff Morris. I can say that our members are really the front line troops in dealing with the concerns of communities over traffic speeds and

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their problems and that has been instrumental in the Institute taking a much stronger role in this area. We have established a road safety panel within our Institute which looks at this and a whole range of issues and we have also been working with the Roads and Traffic Authority on the local government road safety project which I hope members of the committee will have heard about.

**Mr MORRIS:** I think the submission that Hurstville Council has presented today indicates the council has done a lot of surveying of local residential attitudes to traffic management and there is a lot of information that comes out of that, but a qualitative analysis of that information shows the predominant concern of residents is speed. It is always the first thing that comes to mind when residents complain about traffic conditions. I think that is the crucial thing.

The other thing to say about residential attitudes is that the council has done a number of surveys into residential attitudes to reducing the speed limit. We have five quite large precincts that have been surveyed, ranging in responses from around 100 to over 542. The response rate in favour of reducing the local speed limits ranges from 63% to 85%, and the opposed rates are quite low, usually ranging from 11% to 22%.

Although we do not get many complaints about reducing the speed limit, and Hurstville Council has two 50 km/h precinct trials, there is also two categories of complaints. The first is that some people say, "I have paid for my driver's licence and registration and I want to be able to drive anywhere, any way I want"; and the other category is people have expressed concern that their trip will take longer if speed limits are reduced.

Most councils have adopted road hierarchies which define roads into local, collector, sub-arterial and arterial. Local roads are meant for access to adjoining properties. They are not meant to be used by through traffic on longer trips. As residential amenity and safety are of high significance on those local roads there is justification for a high level of protection for those streets.

The second concern about increasing trip times, most trips should consist of short use of local roads only at the beginning and end of a journey. A large percentage of the middle of the trip should be on roads of higher classification, the collectors, sub-arterial and arterial roads. If that is the case trip times should not vary significantly if the 50 km/h limit is applied to local roads only.

**Mr GIBSON (CHAIRMAN):** What is the most effective and appropriate management strategy that should be adopted to ensure compliance with the 50 km/h local speed limit?

**Mr SHEFFIELD:** We have a number of broad headings for strategies that we would like to raise. The first is a need for wide publicity and community education. The second is there needs to be a trade-off of increased speed and priority on main road networks. There needs to be education and training of council staff, the elected representatives and particularly developers in the use of more innovative street design. There needs to be very clear messages to drivers when they are entering different speed regimes. That is particularly important when they are coming

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into our local streets system. You need to have some way of flagging to drivers that they are now coming into a different environment and they must drive in a different manner.

We need to develop a strategy for introducing lower speed in rural areas. By rural areas I mean the urban part of the rural community. The other thing I think needs to be addressed is police attitude to the enforcement of speed on urban and local streets. So we need to develop a strategy that would address those particular areas.

**Mr GIBSON (CHAIRMAN):** You mentioned trade-offs. How would you see those trade-offs?

**Mr SHEFFIELD:** We believe that, again as Geoff Morris mentioned, it is vital that each council has a road hierarchy that is established in consultation with the other stakeholders in the transport system. That road hierarchy then establishes different speed regimes for each type of street. Local streets I do not believe should have a higher speed of more than 50 km/h, but in certain situations that could be reduced even more. Once you get on to the collector roads and subarterial and arterial roads, obviously higher speeds --

**Mr JEFFERY:** That is what concerned me. You are suggesting we could go higher than 50 km/h?

**Mr SHEFFIELD:** He is, actually.

**Mr SMALL (STAYSAFE):** Coming off a highway into a built-up area of town, in some areas the speed limit is reduced from 110 km/h to 80 km/h and then to 60 km/h. Others are just straight from 100 km/h to 60 km/h. Would you like to comment on that? Do you have any favoured way that there should be a reduction identification in coming down to lower speeds?

**Mr SHEFFIELD:** Perhaps that could be addressed from two viewpoints. I will ask Peter Ullman to give us the rural perspective.

**Mr ULLMAN:** In the rural situation, the road hierarchy is not quite as complicated as it is here in the city. We have basically got only a dual system where we have our local roads and our arterial roads. The trade-off situation that you talk about is appropriate in our circumstance because the community attitude there is, "You are not going to take away my right to travel at 60 km/h". The trade-off being, you are looking at a 60 km/h zone in residential areas but in your longer routes, your more arterial roads where you could get up to 70 km/h or 80 km/h would make it far more acceptable.

In the small town I come from, we come from a 100 km/h zone to a 60 km/h zone. There is that transition of 80 km/h in between and I guess that would be the way to address that.

**The Hon. J. S. TINGLE (STAYSAFE):** I would like to comment on what we have been saying. It seems to me that the more we have a regime of various speed limits, sometimes 10

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km/h clipped off here and there, human nature being what it is, the more chance of people inadvertently breaking those limits; confusion rises as the strata increases. What is the involvement of the Institute in that development and the implementation of the trial of the 50 km/h local road speed limit in the lower north shore of Sydney? It started in February and March and I wondered what the Institute's involvement had been and what you had to say about it.

**Mr SHEFFIELD:** I was originally a member of the steering committee that was looking at that project, but I have not been involved in the more recent meetings. We have members who are part of the councils involved in that, so the Institute is involved in that way.

The other involvement we have had is through the Roads and Traffic Authority Consultative Forum. They have given reports from time to time on the project. In recent times the involvement has been doing well.

**Mr THOMPSON (STAYSAFE):** Was the Institute consulted or otherwise involved in the AUSTROADS project that led to the proposals for 50 km/h local road speed limits?

**Mr SHEFFIELD:** We have been kept informed by receiving draft reports and having the opportunity to comment. We are more heavily involved through our involvement in the Australian Local Government Association, AUSTROADS' partnership plan.

**Mr HARRISON (STAYSAFE):** From the point of view of the Institute, how should it be decided if a local street will be subject to a 50 km/h speed limit?

**Mr SHEFFIELD:** Would the Institute be?

**Mr HARRISON (STAYSAFE):** I mean, what is the Institute's point of view on this? How should the decision be made whether or not a road is subject to a 50 km/h speed limit?

**Mr SHEFFIELD:** As was mentioned earlier, the number one step is for the council to establish its road hierarchy. That would be the principal tool. Road hierarchy needs to be prepared in conjunction with a community, of course, adjoining councils, the Roads and Traffic Authority, police and the other transport authorities and then with the council's town planning initiatives through its LEPs and regional environmental plans.

Chris Little has had a lot of experience in this.

**Mr LITTLE:** I understand you do have a couple of copies of these. That is a Hurstville City Council example of a developed road hierarchy plan. The shaded grey areas are not just residential streets, but residential precincts, so our approach has been on a precinct-by-precinct basis.

We do identify quite clearly that they are entering into a residential precinct where we do have

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50 km/h zones with this style of entry threshold. It is like going through the front door or gate, saying this is something different.

By perimeter treatment, and that is all we seem to need in most cases, we might identify an entire precinct is 50 km/h in there, so that residential precinct is protected.

That leaves the other higher hierarchy roads, where people need to travel longer distances and get to their place of employment, or whatever that might be. They would be able to travel at 60 km/h or, in some cases, as is the case now, 70 km/h on some of the larger state roads.

We are not just looking at streets, but a comprehensive approach to the precincts.

**Mr HARRISON (STAYSAFE):** Are you aware of all councils in the State having done such a study of the hierarchy of roads, or is it something some councils have done?

**Mr LITTLE:** I cannot speak for all councils in the State, but I know the councils in the urban areas are heavily involved not only ensuring the hierarchies are up-to-date, but at the present time the highest priority being State and regional roads are being reviewed, in consultation with both the Roads and Traffic Authority and local councils.

**Mr JEFFERY (STAYSAFE):** I did ask Mr Moran this question earlier when these gentlemen were here. I will ask it again and direct it to this panel. A number of councils, particularly those in rural areas, have argued a 50 km/h limit would not be appropriate in their jurisdictions because the real problems for them are away from the residential areas and on the high speed road network. Can you comment on that statement?

**MR ULLMAN:** If I could, I would like to comment on that. I believe that to be the case. If you approach any authority in the bush, that is the reaction you get, that if you look at the accident statistics, whilst I don't have details with me, most of the accidents, you will find, in our type of area are on the higher speed rural roads.

If you talk to people in our community, speed does not just enter into it, it is the condition of the road that is uppermost in their minds. They just want to go. It is that road condition that is more appropriate, so I agree that that is the comment you do get and I believe it to be so.

Apart from that, with your lower speeds in the residential area, I guess pedestrian related accidents, which are very minimal, obviously the damage caused would be much lower.

**Mr GIBSON (CHAIRMAN):** Mr Ullman, in your area are the bulk of the roads sealed, or do you have dirt roads up there at all?

**Mr ULLMAN:** The bulk are sealed in the town. We have one town in our shire. We have a total of about 650 kilometres of road in the shire and about 240 are sealed, so it gives you an idea

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that there are quite a few gravel roads out there, but they are well out into the bush and they have a speed limit of 100 km/h on them. No-one travels it, no-one can.

**Mr HARRISON (STAYSAFE):** It is on the unsealed roads that the accidents are occurring?

**MR ULLMAN:** No. You will find in our situation that we don't have a lot of accidents, but the ones we do have you will find are basically on the high speed roads.

**Mr HARRISON (STAYSAFE):** That might be a good reason not to seal the roads. It is nothing to do with money, we have safety in mind.

**Mr SMALL (STAYSAFE):** What would be the Institute's view on an appropriate time frame for implementation of a schedule for introducing a 50 km/h speed limit within residential areas?

**Mr SHEFFIELD:** That is a very difficult question. I think the first thing I would do is avoid an election here and how you do that with all the elections going on in every State I do not know. I really think it is not a case of how long before we could implement this, but really how do we get in there and do it, because it seems to us that there is a strong need for a reduced general urban speed limit and we have got to find a way of doing that.

If I had to put a date on it, I would say it would probably take 12 months to do a proper education program, and particularly educating the media. Again, I hesitate to mention that other issue that is on at the moment, but the way the media seems to grab up on dramatic issues is something that would set this back if you got a few lobby groups that came up and made a lot of noise about taking away human rights.

**Mr JEFFERY (STAYSAFE):** Just going by these figures by Hurstville here, 85 beats 15% any time as far as a politician is concerned, so it is pretty good. It might be a good one for an election.

**Mr GIBSON (CHAIRMAN):** I will ask one of Mr Jobling's questions. From the point of view of the Institute of Municipal Engineering Australia, what are the processes and procedures required to monitor and to evaluate the effectiveness of a 50 km/h local speed limit in promoting road safety?

**Mr SHEFFIELD:** I think any sort of evaluation program on a matter as large as this is going to be difficult. You can certainly monitor accident trends by doing a survey at the base line and obtain some base line information and measuring that at periods.

You could do before and after speed checks. You could do surveys of driver perceptions of speed in various streets before and after the implementation. You could do surveys of pedestrian perceptions of speed.

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The difficulty, as I see it, is establishing some sort of control zone so you have something to measure it against and overall there would be a very substantial cost in evaluating and I ask the question, why do it? If it is going to be so good, as has been suggested, we should be getting in there and doing it.

**Mr THOMPSON (STAYSAFE):** I think perhaps the Hurstville experience might go a long way towards answering this question. What are the implications of a lower residential speed limit for residential planning and street design, and what are the implications of a lower residential street limit for local government planning and practices?

**Mr LITTLE:** Perhaps, Mr Chairman, if we are talking about the Hurstville experience, here we have a situation where Hurstville Council's street system is built, so we are actually looking at a process of retrofitting an existing system where the question perhaps goes to the heart of new planning as well as old. I will leave the new planning issue to Mr Sheffield, who is a planner.

In our area, in terms of street design, we have a total refocus in the way we handle the approach to street sign, road design, as traditional civil engineers. All of our projects now, as you might see from the photograph that Geoff showed before, involve sound engineering practice, sound traffic engineering practice and, to be acceptable to the community, some landscaping component as well.

The thing about devices is if we are to retain devices, irrespective of a blanket 50 km/h zone, there will be a need for some traffic speed control devices, hopefully less than what we are doing now, but they have to be acceptable to the community, so the change is heading away from being a traditional civil engineer to having a more holistic view of what is required.

It is sound civil engineering, sound traffic engineering and landscaping expertise that goes into all these things. At the end of day the community has to live with them. There is a change. The change now is if the 50 km/h zone comes in, that helps cement that change.

**Mr SHEFFIELD:** Some of the other matters that I think need to be addressed are that we need to influence a lot of engineers — and this is the role that the Institute will have — to modify their design standards. The design standards for most of our local roads grew up in the Local Government Act of 1919 which specified the width that roads shall be and at least the new Act has removed that requirement.

I guess a lot of conservative councils and conservative engineers still believe that wide roads are essential and they still promote that to their councils, so we need to have an education system of our members, particularly in that area.

We need to also address the community attitudes and perhaps local governments need to be more aggressive in this area by promoting more innovative street design systems.

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I think they are the major points.

**Mr GIBSON (CHAIRMAN):** Mr Sheffield, you mentioned something earlier about Australians being very aggressive drivers. Why do you think that is?

**Mr SHEFFIELD:** I do not know. I guess it is part of the culture of Australia where we have grown up with a lot of wide open spaces, where we can travel a lot faster. That pioneering spirit, I would say, is still there. We do not like being controlled. We perhaps have not had the population either.

**Mr GIBSON (CHAIRMAN):** I will talk about the attitude which a lot of drivers have. If somebody passes another driver on the road, that driver feels that he has to get to the front again; for whatever reason, I do not know, so you are right. Any further questions?

**Mr MILLS (STAYSAFE):** While the two gentlemen are here from Hurstville, I would like to ask a non-engineering question. Was radar enforcement used within the 50 km/h precincts during these times and, if so, what was the strike rate? Were speeds reduced? Was there any deterrent factor in this? Do you have any information on that sort of thing?

**Mr MORRIS:** If I could address the radar, the two areas that have been implemented did not have a severe speeding problem to start with. They were both implemented from the point of view of defending the local road system from threats of increasing arterial traffic caused by the M5 Motorway.

**Mr MILLS (STAYSAFE):** So you laid out the rubber strips and measured the speeds, I hope?

**Mr MORRIS:** Yes, there were before and after studies done. In one area there were marginal decreases in the speeds. It decreased by about three km/h, so it is roughly in line with the other State studies that have been done. It was not a roaring success from the point of view of reducing speeds.

Where it was a success was from the point of view of residential complaints and attitudes. Prior to the introduction we were getting a lot of complaints from people in the area about motorists' behaviour, particularly speed, and after implementation we had virtually no complaints.

The police did not carry out radar patrols in those streets very much at all. There were other higher profile locations around and they still do not. We have not increased the burden on the police for reinforcement in these particular cases. I think that probably answers that question.

**Mr MILLS (STAYSAFE):** Were the figures on the speed reduction listed? I do not see them in this?

**MR MORRIS:** I have not drawn out the detailed statistics, which I could supply at a later date.

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**Mr MILLS (STAYSAFE):** I would be interested in having a look at that, because that is one of the important areas we have to think about, as to whether these trials have had their effect in reducing the speeds, in order to reduce the crash rate.

**MR MORRIS:** If I could say, Mr Chairman, I have got some feelings on that matter. The feelings I have are that to date we have only done piecemeal 50 km/h precincts, very small areas. If you are looking at a percentage basis of Sydney, that would probably be less than half a per cent.

I feel that most motorists travel by habit and they are conditioned to travel at around 60 km/h to 65 km/h. That is the typical street scenario, that they feel comfortable driving at those sorts of speeds.

When they get into our entry to the precincts there is nothing there, other than the entry device they go over, there is nothing there to make them change their behaviour.

I think probably there is a conditioning change that may occur over a period of some years after the implementation of a lower general urban speed limit, where it is widely accepted that there is a 50 km/h precinct on local roads in the area and if the police do an enforcement regime similar to their current enforcement regime, and also there is an education/marketing type campaign done on it, I would say people's habits may change to some degree and reduce the speed and therefore increase the effectiveness of the implementation of 50 km/h limits.

**Bicycle New South Wales witnesses**

Mr Warren Ross Salomon, Executive Director  
Ms Eva Gerencer: Campaigns and Advocacy Manager

**Mr GIBSON (CHAIRMAN):** The STAYSAFE Committee has previously received a submission from Bicycle New South Wales. Do you wish the submission to be included as part of your sworn evidence?

**Mr SALOMON:** Yes.

**Ms GERENCER:** Yes.

**Mr GIBSON (CHAIRMAN):** Could you clarify for the Committee whether Bicycle New South Wales advocates a 50 km/h speed limit applying to all urban roads where the 60 km/h limit currently applies, including main roads with a 60 km/h limit, or whether you see it as being restricted to residential streets only and other appropriate roads such as strip shopping centres, et cetera?

**Mr SALOMON:** I think we certainly see it applying to the general speed limit, the general unposted speed limits. I think it is fairly important that we are in a new regime of speed limiting. I think it is often horses for courses, the type of roads that are posted, but generally the unposted speed limit as well is what we are referring to.

**The Hon. J. S. TINGLE (STAYSAFE):** Bicycle New South Wales seems to suggest that a 50 km/h limit in residential streets is desirable from what I have had the chance to read of this in the last couple of minutes, but that in some situations the speed limit would perhaps be better brought down to 40 km/h or even 30 km/h. Is that realistic? Are you seriously suggesting there should be 30 km/h limits in some streets, or is that what you might call an ambit claim?

**Mr SALOMON:** I think, as I said before, it is horses for courses. What we are looking at is saving lives, particularly the lives of children. I do not think anyone would seriously condone motorists doing whatever they choose through residential street systems.

The evidence that we have seen clearly indicates that for every 10 km/h you drop the speed, you can almost count the number of children you can save.

We are certainly concerned because a lot of our constituents are child cyclists and we are concerned that in this area, where we spend a lot of money in this bussing children to school, and you only have to look at the traffic you can see fall away during school holidays, to see that we are not only bussing them but we are motoring them to school.

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In a sense we think they should be riding their bikes to school. What we have to provide and what we have to look at providing is a safe environment for those children. Children cannot withstand or cannot survive a crash from a motor car even travelling 60 km/h. At a 30 km/h speed limit they have a chance, and that is important.

**Ms GERENCER:** I think it is important to note that overseas, in particular in Europe, it is quite common for 30 km/h speed limits in residential areas and strip shopping areas, where there are a lot of people on the streets.

**Mr GIBSON (CHAIRMAN):** What areas would that be?

**Ms GERENCER:** In the Netherlands, in Germany.

**Mr SALOMON:** Most of the northern European countries

**The Hon. J. S. TINGLE (STAYSAFE):** When you get down to the level where you are looking at reducing the speed of vehicular traffic to reduce that danger to children, are not we really touching on the incompatibility of the two types of traffic, the child cyclists and the car on the one road?

**Mr SALOMON:** I think there are child pedestrians as well. I think we have got to look at this in — I note one of the previous witnesses said in a holistic form. The community, in a sense, has to look at whether it is going to put the mobility of a certain percentage of the community ahead of its general overall level of safety.

I grew up in an urban street system where we played ball and do all sorts of things in the street. That was considered in our community quite a dangerous thing to do. You kept an eye out for the cars and things like that, but generally, so did the cars.

**Mr JEFFERY (STAYSAFE):** Before I ask the same question I have asked a number of other witnesses today on the rural areas, could I say that unlike Mr Small, who is a very keen bike rider, it is only in the last few weekends, after a 30-year break, that I have gone back to riding a bike at weekends, but I must say my perception and my understanding of cyclists has improved greatly in those last few weeks, because it is quite scary at times. It is not only the child on the bike but it is also the adult on a bike.

A number of councils, particularly those in rural areas, have argued that a 50 km/h limit would not be appropriate in their jurisdictions, because the real problems for them are away from the residential areas and on the higher speed road network. Could you please comment on this view?

**Mr SALOMON:** I think personally that local councils have got a much better opportunity there to do something, because generally I think the perception is that local environments are more contained and also local councils are more in touch with their local communities, so I think there

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is a great opportunity to educate a community as to the benefits to them of such a regime.

I should also point out that in my experience of being involved in our organisation, organising major events right across the country, there are some roads at the moment that are posted 100 km/h that I believe should not be posted at that. I think the whole speed regime should be addressed and I think that is this is a good opportunity to do that. It is, in a sense, as I said before, horses for courses.

I think we need to look at the roads in terms of their ability to carry the type of speeds that they are currently carrying and I think certain in the urban areas, it is very easy to identify that a 50 km/h speed limit would be beneficial, but I think the attitude to speed really needs to go deeper than that. It is a matter of how the community believes it can best handle its safety aspects within the road environment.

**Mr JEFFERY (STAYSAFE):** Some of the councils are actually doing that. I know in my area the TAC will look at it going from 100 km/h back to 80 km/h next Friday, so they are looking at that in local government areas.

**Mr SALOMON:** We would certainly applaud that.

**Mr SMALL (STAYSAFE):** You have partly answered this question, but how do you see reduced speed limits in residential streets affecting casualty rates among cyclists, particularly young cyclists?

**Ms GERENCER:** Basically it would decrease the accident rate. There has been enough research to show that, as Warren said earlier, every 10 kilometres you decrease the speed limit you save a certain number of lives. Years ago the National Health and Medical Research Council did a study which showed if you decrease the speed limit from 60 km/h to 50 km/h you have a 48% decrease in injuries. So, in terms of answering your question, it would decrease the casualty rates.

**Mr SMALL (STAYSAFE):** What effect do you think a lower speed limit in urban areas will have on the development and implementation of bicycle networks? Can I broaden that a little? In Canberra, councils, the Roads and Traffic Authority and government are identifying or providing bicycle tracks for cyclists. In Canberra many children ride to school, which is great exercise and they are out of harm's way. Many children ride, run, walk or cycle on those tracks in Canberra and it is working extremely well. Do you see the circumstances for safety being very much in that area of the development of other road benefits?

**Mr SALOMON:** We see the development of a coherent urban network for cyclists as being one of the most important infrastructure gains for cyclists in terms of their ultimate safety right across the community. What we say when talking about a network is we look upon the local streets system as, in a sense, being the feeder component of the network. Having a low speed regime in

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those streets is essential for the success of any kind of measures to make cycling safer.

Then I think the more difficult areas are the kind of areas that perhaps we have seen in other cities, particularly Adelaide, Perth and Canberra, where there have been tracks and lanes developed on the existing road system to actually link up roads in local streets. So the speed regime is very important because, in a sense, having a low speed regime in residential streets, you actually enable cyclists to cycle those streets with minimal amounts of engineering going on in those streets. The community does not have to invest large amounts of money to make those streets safe because, in a sense, by regulating the speed environment and getting general community acceptance to do that, you are creating a large percentage of that network there and then.

Really, in a way that local element is very important to cycling because most trips for cyclists are generally under five kilometres. Mind you, over 60% of motoring trips are under five kilometres as well, so there can be some benefit there. Could I table a leaflet put out by Queensland Transport, the Department of Roads in Queensland? It sets out well the case in the community. We see that as the kind of thing that if this is to go ahead in our State it is a necessary educational tool because it sets out clearly to the community what the benefits are from doing this.

**Mr GIBSON (CHAIRMAN):** For the record can you tell us how many bicycles there are in the State approximately?

**Mr SALOMON:** We estimate roughly as many as cars. Over half the households in New South Wales have a bicycle. Most of them would only be ridden on average 2 or 3 times a year. The trip to work type percentage is down round the level of one or two per cent but in a city the size of Sydney more people cycle to work than catch the ferry to work and it is a significant percentage all the same, roughly 2 million in New South Wales.

**Mr MILLS (STAYSAFE):** From the perspective of Bicycle New South Wales, what is known about community concerns with effective speed management in urban areas, especially vehicle speeds on residential streets?

**Mr SALOMON:** I believe there is a general community concern for the effect of speed on safety. I think there is also community concern that is carried plainly by a minority but it is a vocal minority that in a sense they can go at whatever speed they feel. I think there is an expectation in the way the road system is managed that you can get from point A to point B as quickly as you can. Even the Roads and Traffic Authority's own statistics will show at times that the average speed in urban areas is falling not rising, due to congestion.

We believe unless the Government wants to spend billions on infrastructure programs which ultimately will require more infrastructure programs, the community has to accept the fact that if everybody wants to travel at whatever speed they feel like, somewhere along the line there has to be some compromise made. Part of the whole thing of selling the community on this is that

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most people, particularly those living in residential areas, appreciate the benefits that could come to them from a lower speed regime in their areas. There is a groundswell of support for a lowering of speed. Certainly the only people I have heard in our discussions on the matter have been the people who I would call a vocal minority.

**Mr HARRISON (STAYSAFE):** You have said there has been an average reduction in speed. Has there been a commensurate reduction in injuries to cyclists?

**Mr SALOMON:** The figures tend to fluctuate. Two years deaths of cyclists and serious injuries doubled, but last year it fell back. This year it is pretty much what it was the previous year.

**Mr HARRISON (STAYSAFE):** So there does not seem to be much relationship between the two or there has not been enough reduction in speed.

**Mr SALOMON:** I would not put it necessarily at speed. The point I was trying to make about speed is the perception of motorists that they can get from point A to point B at the fastest speed they can manage is not met by reality. Soon or later they will come up against congestion, sitting in an ever increasing queue, at a traffic light or traffic jam or whatever, but they have this kind of frustration that says, "I should be able to travel at the posted speed limit".

**Mr HARRISON (STAYSAFE):** Yes, "I have only averaged 15 km/h".

**Mr SALOMON:** Yes.

**Mr THOMPSON (STAYSAFE):** From the point of view of Bicycle New South Wales, what are the most effective and appropriate traffic management strategies that should be adopted to ensure compliance with a 50 km/h local road speed limit?

**Mr SALOMON:** I think the community has to be brought in on this. The community has to feel that this is totally for their benefit. It has far reaching implications. It is also for the future of our children's welfare and I think it is also to give the general community an opportunity to have some real benefit and participation in what I would call primary road safety.

It is significant that we have achieved a lot in this State through the introduction of random breath testing. The way it was done in some sense could be used as a model as to the way we might go in this. I believe a broad education program to the community and the benefits it might bring to them is one of the key elements in any kind of progress from here.

**Mr HARRISON (STAYSAFE):** What has been the involvement of Bicycle New South Wales, if any, in the development and trial implementation of the 50 km/h local road speed limit on residential streets in the lower north shore of metropolitan Sydney that commenced earlier this year?

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**Mr SALOMON:** We were not consulted.

**Mr HARRISON (STAYSAFE):** Was Bicycle New South Wales or the Bicycle Federation of Australia consulted or otherwise involved in the AUSTROADS project that led to the proposal to introduce 50 km/h local road speed limits?

**Mr SALOMON:** Same again. We would like to be consulted. We are certainly consulted on a number of issues but not on that.

**Mr GIBSON (CHAIRMAN):** What changes from your perspective are required to enable effective enforcement of the lower local speed limit?

**Mr SALOMON:** I think most of all the attitudes of a significant minority of the community, as I said before, the section of the community that believes it can travel at whatever speed it feels is necessary to get from point A to point B regardless of the operating environment. I think it is quite incredible that pile-ups occur on the Newcastle freeway in absolutely appalling conditions whereby people are still trying to do the posted speed limit even though the prevailing conditions should dictate that they drop their speed limit. There is this perception in the community that, much as it was before the introduction of random breath testing (RBT), you can do whatever you need to do or whatever you feel like doing.

**Mr GIBSON (CHAIRMAN):** So what you are saying in essence is that it is an attitude problem.

**Mr SALOMON:** Very much. It is also an attitude problem that is dictated to a large extent by the messages given to people. We firmly believe that the messages that are contained in the road environment, the physical messages often dictate environments. Personally I think the Roads and Traffic Authority has been very successful at getting the most in terms of capacity and smooth flow out of the Sydney metropolitan road environment in the past 10 years, but in a sense by doing that they raised an expectation in the community that they can maintain those levels of speed and they can maintain that degree of throughput and lack of congestion, but the reality is mounting up against that.

**The Hon. J. S. TINGLE (STAYSAFE):** Everyone says we need education, that we have to change attitudes and behaviour. Do you have any idea how we do it, because that is the most difficult thing in the world to do, to change what people have come to believe is the right way to behave?

**Mr SALOMON:** Certainly that leaflet is a good example, though leaflets on their own do not have much impact. I think the Roads and Traffic Authority has done and is doing a good job in terms of educating, particularly with the Road Safety 2000 program. Also that program attempts to take in other stakeholders in the community. It attempts to involve the community at really a grass roots level and that can only benefit. Also I should have added that we see enforcement as

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a necessary component of this. Random breath testing would not have happened if it was not for the fact that the police were out there showing the public that they might have thought they could get away with it but in reality they do not.

I catch the train when I am not cycling and I was walking home the other Friday night in Old South Head Road and the police were setting up their breath testing. I thought well, this is going on all the time. It is not a holiday. The community is seeing they cannot get away with it. Unless you have that enforcement component, any amount of education will not work. With the education thing a lot can be done and certainly our organisation is always willing to contribute and we are very much a stakeholder in the Road Safety 2000 program.

**Ms GERENCER:** Random breath testing was successful also because it is an ongoing campaign. That is something that for this to be successful it needs to be similarly ongoing.

**Mr JEFFERY (STAYSAFE):** It is no good lowering something if you are not going to enforce it. You need legislation, education and enforcement. With the 40 km/h zonings outside schools, I believe the reason it has not been as successful as it should have been is because of enforcement. You need that continuation of the message. If we are going to go down this path I would like to see what we have now really enforced first, because that is the critical part of this whole exercise.

**Mr SALOMON:** If I could just add, one of the problems we see is that the police and the Roads and Traffic Authority are the managers of the road system. Local government at the moment gets away with that by it only has the power to change the pavement, as you know, so therefore it introduces a lot of local area traffic management treatments which we believe in some sense are a engineer's solution and not totally effective for the dollars spent on them. In a way local government feels powerless by doing this because in a sense they do not have the participation and the involvement as much with the enforcement side of it that they perhaps would like to have.

Traffic police I speak to certainly feel they are under pressure and understaffed when it comes to their resources and would like to do more. Local government and the police are important players in the success of any kind of measures in this regard.

**Mr SMALL (STAYSAFE):** Do you think that the Roads and Traffic Authority does a lot of promotional safety work on bikes? You have mentioned it and I have experienced it. How would you feel if perhaps schools had children's councils which could be part of the local government or meet with the council and could appoint a youth committee on road safety which would take in bicycles? Do you think that would have feedback to give the children's protection input?

**Mr SALOMON:** Most certainly. The Roads and Traffic Authority at present has a program that it is working up safe routes to school. You could not get a better way of the community ensuring primary road safety than to have the children sort this out. Unlike the Victorian scheme where the Government put in a lot of money, it is mainly being done by local councils. A similar scheme in Western Australia was started by one of the councils. That worked because it got the local kids

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and schools involved in actually working out the routes, establishing the routes to school. In a sense it was like giving the children, the schools and community ownership of the scheme, but also it was done by the council so it had the support from above. That type of way forward has got to be the most successful.

**Mr GIBSON (CHAIRMAN):** Is that the City of Melville program you are talking about?

**Mr SALOMON:** Yes.

**Mr GIBSON (CHAIRMAN):** Something on that brochure I believe we do not do enough to promote is "enjoy your driving". That is something we never promote. We never advertise. We put all the nasties on television, the accidents, to shock people into driving better, but we never promote going out and enjoying driving. That is something we might look at also.

**Mr THOMPSON (STAYSAFE):** What do you think might be an appropriate time frame and implementation schedule for introducing the 50 km/h speed limit in residential areas?

**Mr SALOMON:** I do think it is something that needs adequate preparation. Going back to the random breath testing, that was a program that needs adequate preparation so the community, the media and all of the stakeholders within the community sphere, local government, can be brought into the whole program and give their fullest to any kind of program. The previous witness mentioned the time frame of a year. I think in that area is probably correct to ensure the success of it and as Eva mentioned before, it is something where there has to be a commitment to continue it to be ongoing. It perhaps could be brought in ahead of that, in a shorter time frame, but it is all to do with the amount of winning of support in actually getting it up and running.

**Mr HARRISON (STAYSAFE):** From the point of view of Bicycle New South Wales, what are the processes and procedures required to monitor and evaluate the effectiveness of a 50 km/h local road speed limit in promoting road safety?

**Mr SALOMON:** It is certainly something that, once the scheme is set up, needs to be monitored and evaluated as an ongoing thing. What we may find as well is that in certain areas, we are advocating not necessarily a set thing. I mean, you have gathered that what we are saying is each area needs to be looked at on its own merits and its own situation.

Quite obviously around a school zone with a lot of children operating and particularly in strip shopping centres, the speed regime needs to be looked at more closely, but that is the kind of area that needs to be programmed in to any kind of evaluation. It needs to be looked at what is happening in the area. We cannot apply blanket solutions across the board. We have to be fairly sophisticated in the way we approach this.

**The Hon. J. S. TINGLE (STAYSAFE):** What about the environmental implications of a lower local road speed limit, things like traffic noise, greenhouse gases and perhaps the other end of the

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scale, travel time? Do you have any thoughts about that?

**Mr SALOMON:** As far as we know, the 50 km/h urban speed limit in the United States was brought in to save fuel. We see the benefits to our country as being quite substantial in this area. Saving fuel also means, because of less wear and tear on vehicles, stop-start traffic, you are reducing the amount of vehicle emissions. Everyone is concerned these days with the level of emissions in the air. We want Sydney to be a clean city. We want New South Wales to have a clean environment, so I think it can only be of benefit. That is an add-on to the whole thing. The safety benefit is important but there are these other important environmental benefits as well.

**Mr MILLS (STAYSAFE):** Much of the literature on speed documents the importance of public credibility in the speed limit system to achieving satisfactory levels of compliance. It has been put to the Committee that credibility in the speed limit system in general is critical to public acceptance of a 50 km/h limit in residential streets. The argument runs that people will be prepared to wear a lower limit in local streets if other speed limits are adjusted where appropriate to allow people to travel faster. For example, it might mean that speed limits are increased on, say, arterial roads. Does Bicycle New South Wales agree with this suggestion of a trade-off in order to gain acceptance of a 50 km/h limit in residential streets?

**Mr SALOMON:** I would maintain this is already the situation. Our members will ring in and say the speed limit on such and such a road has been increased. They were not told about it and we were not told about it. It is something that is happening all along. We go along with the idea that if a road can be made more safer and adequate lane widths and sight lines can be improved, a high standard can be achieved, then if it can be shown that the road can operate safely at a higher speed limit that is fine.

What is missing at the moment is we are unaware of the way these decisions are made, so we could not comment on whether that would be necessary. But it would be good to have public awareness of what is involved in making a road safer or posting a higher speed limit. Certainly we do not see any problem with that.

**Mr SMALL (STAYSAFE):** This may not have anything to do with a 50 km/h speed limit, but as a keen bike rider I find a majority of dangerous drivers are young men. They are the most inconsiderate people towards cyclists. I have always felt, and I know this is a big ask, that everybody before they actually secure a licence should get on the road and ride a bicycle first to understand and appreciate that cyclists are there, they have a right to be on the road and to be cared for. I do not know whether you want to make any comment on that.

**Mr SALOMON:** As an education means, I do not know how many people in this room learned their road handling skills or road skills on a bike. I certainly did. My first bike as a child was when I was about 9 or 10 and I have not owned a bike since then, so a lot of people are in the situation that they ride their bikes before they become a car driver. Some of you may also be aware that we organise a major public cycling event, called the Roads and Traffic Authority Big

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Ride, which has run for the sixth time around the countryside of New South Wales.

We get a lot of people who go on that event and say that they found riding for that week on a bike has changed their view from behind the windscreen. They are much more courteous, not just to cyclists but to other road users because they realise when you are in that vulnerable position, you see a lot more and you are also aware of not just other cars but pedestrians particularly and other things that are actually happening in the road environment.

So we certainly believe that anything that can be done to encourage children and to educate children before they are of driver age in relation to bicycle safety is absolutely of great benefit to the community. I do not think we can ever do enough, but I think we should do more.

**Mr GIBSON (CHAIRMAN):** Can you tell us from your point of view the concerns you have with roundabouts, particularly single lane roundabouts compared to multi-lane roundabouts on different streets? The answer is fairly obvious.

**Mr SALOMON:** That is right. We have certainly been very public about it lately. One of the things that concerns us most about multi-lane roundabouts is a perception in the motoring public that they are a minor inconvenience to them. I will not give you a New South Wales example but I grew up in Queensland on the outskirts of Brisbane. My parents still live there. There is a particular multi-lane roundabout on the Northern Gateway Arterial and I use this example because I cannot think of an example similar to it though there are probably many in New South Wales.

This roundabout was eventually grade separated with an overhead bridge simply because semi-trailers were going through and tipping over. Basically this roundabout was designed to virtually sort out the traffic, get the traffic through, and the drivers' perception of that was it was a minor inconvenience and they were virtually taking this at speed. The danger that we find to our members is that most motorists regard multi-lane roundabouts in that regard as well. They tend to see them, they will pick their mark on the roundabout and try to get through it as quickly as possible.

Cyclists have great problems with this because basically we are travelling slower and we have to do some very difficult manoeuvres in order to obey the law through these roundabouts. We believe that things like a speed limit should be posted. There can be many suggestions and we are certainly negotiating at the moment with the Roads and Traffic Authority and we expect it to go on at length before we are entirely satisfied, but the speed element is very much an important aspect of these road treatments. It is something that has to be looked at.

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**Child Accident Prevention Foundation of Australia (KIDSAFE) witnesses**

Ms Christine Bowes Gowdie, Executive Officer—New South Wales Division  
Mr Harry Leonard Camkin, Vice-Chair—New South Wales Division

**Mr GIBSON (CHAIRMAN):** Mr Camkin and Ms Gowdie, .... the STAYSAFE Committee has received a response from KIDSAFE to the Committee's call for submissions. Do you wish to the submissions to be attached to your evidence today.

**MS GOWDIE:** Yes.

**MR CAMKIN:** Yes.

**Mr GIBSON (CHAIRMAN):** Would you like to make an opening submission?

**MR CAMKIN:** I would like to stress six points. First of all, KIDSAFE's primary concern is whatever other considerations this inquiry might take into account, that they do give particular regard to the needs of society's most vulnerable road users, namely pedestrians, cyclists, the young and the elderly and our submission focuses on this issue.

The second point I want to make is that KIDSAFE has a vision of a safer world for kids and its mission is seen as minimising serious risk of injury to children growing up in New South Wales.

Our goals and how we work are spelt out in our business plan and our annual report and we have copies of those available if you wish to peruse them.

Members of our governing council bring to KIDSAFE an extensive background in health, business and government, particularly in relation to prevention and control of trauma to children. It has also established a wide network of advisers in relevant fields, including education, road safety and consumer organisations, but only has a very small staff and that staff is expert.

In addition, we have the benefit of having project teams for particular programs. I make that point simply to stress that the expertise we have available in KIDSAFE comes essentially from our network of associations with people in health and road trauma and transport areas.

The third point is that as a major community and professional stakeholder in the issue itself, KIDSAFE does reaffirm its concern that more effective management of excessive speed in urban areas, particularly in residential and other local streets, should have a priority. We see ourselves as a major stakeholder in this issue.

Fourthly, we accept that any substantial or significant improvement in speed management will not come without acceptance by the driving community of the need for reduction in travel speeds on

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local streets. You have already heard substantial words of evidence in this area and we would endorse the concept that a communication strategy is essential, but we would ask that it place emphasis on the vulnerability of particular groups of road users which we are concerned with and we believe that is a major selling point.

We believe the Australian community is very amenable to arguments in favour of vulnerable groups.

The second last point: we believe that an effective implementation of a 50 km/h speed limit within residential streets would reduce the number of children injured in traffic accidents on New South Wales roads by about 250 per year. That is commensurate with substantial other programs that are in place.

Finally, we are aware that there have been recommendations from some quarters for a trade-off for the measures currently under consideration, which would result in the introduction of maintenance of higher limits on arterial roads. That has already mentioned this afternoon.

KIDSAFE would urge extreme caution if such a trade-off represented any further increase in speeds on arterial roads. In fact, the word trade-off is perhaps not the most appropriate to use here, because the speed zoning in urban areas that has taken place in the last few years has effectively achieved that trade-off but we have not reduced the speeds on residential streets.

We would look forward to the institution of specific programs that would substantially reduce the level of road trauma also suffered by vulnerable road users in such areas if in fact there is a further trade-off.

**Mr GIBSON (CHAIRMAN):** Might I say at this stage too, congratulations to KIDSAFE on the outstanding success of the organisation. It has been very good and appreciated by all people, everyone in New South Wales.

You have partly answered my first question in your opening address. Could you justify for the committee whether you advocate the 50 km/h speed limit as a general urban speed limit, or whether you see it as being restricted to residential streets and other appropriate roads, such as strip shopping streets?

**Mr CAMKIN:** Our concern is primarily local streets and other major activities such as strip shopping centres. We acknowledge the difficulties in applying such to major traffic routes. However, the approach that has been proposed by others of a general limit on all roads, but zoning on the principal traffic routes themselves seems the logical and most acceptable way to go.

There is great value in simplicity, we believe, and it might be that such an approach enables us to adopt a fairly simple regime, for example, 50 km/h on roads without a centre line, 60 km/h on roads with a centre line and 70 km/h on roads that are divided.

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That is a simple approach. Most drivers could readily see where they are. Overlay that with appropriate speed zoning depending on circumstances.

The general speed limit approach would seem, if we look at the draft AUSTROADS analysis and the Roads and Traffic Authority analysis, and the analysis within the legislative impact statement of the National Road Transport Commission on uniform road rules, if you look at each of those, it would seem that the general approach plus zoning of the traffic routes would seem to be the cheapest. That would be the view.

**Mr HARRISON (STAYSAFE):** In your opening remarks you made particular reference to trade-offs between residential streets and other roads, but what is your understanding of this trade-off proposal? Who is advancing it and what purpose would such a trade-off serve?

**Mr CAMKIN:** As I suggested, I think it is a bit of an anachronism to call it a trade-off. We are looking for a compensation for trade-offs that have already taken place. It is a concept that has been around for a long time. The now defunct Traffic Authority advocated something like that. The Roads and Traffic Authority, NRMA, AUSTROADS and the Ministers all argued that sort of thing. It looks like it is closer to community expectations and indeed me, than a blanket 60 km/h or 40 km/h everywhere. It is probably more feasible politically.

In reality, I guess the concept is more of a marketing strategy, operating on public perceptions of what is fair and what is appropriate, given most arterial roads are already zoned to 70 km/h.

**Mr HARRISON (STAYSAFE):** What do you know of the level of community concern over residential speed limits, particularly parents' concerns about the safety of their children?

**Mr CAMKIN:** We get a lot of feedback from members of KIDS SAFE, from councillors on the KIDS SAFE council, from members of advisory groups and from public inquiries, particularly from new school parents and so forth, who are concerned with having to get their children to school safely for the first few years.

We are also aware, through our network of contacts, from surveys undertaken by the Community Advisory Group on Speeding in 1993, by NRMA surveys and reported in the Federal Office of Road Safety periodic waves of surveys on road safety issues. All of these point to substantial community concern with maintenance of the 60 km/h limit.

**Mr HARRISON (STAYSAFE):** Thank you. There was a supplementary question but I think you have answered that. I do not see any need to pursue it.

**The Hon. J. S. TINGLE (STAYSAFE):** Let me say, as a parent who has had a child knocked down in the street, I am not questioning the need to protect children. There are a couple of areas that I need to clarify for myself. First of all, you have suggested if we support the Roads and Traffic Authority figures, if we did reduce the speed limit it would save children being injured in

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traffic accidents at the rate of 250 a year. Does that allow for the fact that maybe not all the accidents are directly a product of speed, or are you saying that the children are injured more readily and perhaps more seriously because of the speed?

What I am getting at is, in my own child's case, she simply stepped off the footpath without looking and was seriously injured by a car. It was the most horrific thing that I can remember happening to me as a parent. I do concede the driver had no chance of missing her. Is there any weighting of this figures to allow how much of it was directly attributable to speed of the vehicle? You suggested and some other witnesses suggested that an even lower speed would be better; the triple banger question, and thirdly, what are your feelings about the likelihood of a higher level of compliance, as high as the 60 km/h mentioned in your submission?

**MR CAMKIN:** I, too, had a child knocked down by a car. In fact it did not go to court but I suspect that the blame portion would have been blamed 50% each.

My understanding of the analysis that the Roads and Traffic Authority did, and certain analyses I have seen elsewhere, takes into account the fact not all accidents would be reported. If speeds are in fact lower, there will be a reduction in incidents because of the reaction time and stopping distance.

**The Hon. J. S. TINGLE (STAYSAFE):** And the severity of the injury?

**Mr CAMKIN:** Yes. There would certainly be a reduction in accidents and reduction in severity of accidents that did occur, irrespective of who was at fault. The second point was --

**The Hon. J. S. TINGLE (STAYSAFE):** We are talking about would you suggest perhaps even lower speeds should be looked at?

**Mr CAMKIN:** We are talking about practicalities and there are certainly some circumstances where lower speeds would be acceptable, perhaps with some more education in the community, but very often it is very clear to the majority of people that lower speeds would be appropriate, for example, right outside schools, right at the start and beginning and end of schools, although there are still some people, of course, who do not appreciate the need.

It is a question of practicality and commonsense to a degree, but if we are talking about roads where the prime purpose of the road is access to abutting development, if we can get everyone in the community and a large proportion of the community have already accepted it, but if we get the majority to accept that it requires a different approach, different attitude, to those roads, where the prime purpose is the movement of goods and people, then we have a reasonable case for arguing for even lower speeds.

**Mr JEFFERY (STAYSAFE):** A number of councils, particularly those in rural areas, have argued that a 50 km/h limit would not be appropriate in their areas or districts, because the real

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problem for them is away from the residential areas and mainly on the higher speed road network. Mr Camkin, do you have a view on that concern?

**Mr CAMKIN:** I guess this is the problem inherent in the perpetual search for uniformity. Conditions in Walgett are different to those in Wagga, different to those in Wollongong and different to those in Woollahra, just as they are different in Darwin today as in Sydney.

It is a question of if we want uniformity — and the general consensus these days seems to be that at least we need harmony as much as uniformity in the road rules across the country — there have to be some checks and balances in the system and that uniform rule will not be appropriate in some circumstances.

On the other hand, I think most people would take the view that speeds in local streets in rural areas, in small towns in rural areas, are generally not as great as speeds in local streets in major areas where they are subject to more peak hour traffic, for example, so that a lower speed limit is perhaps not necessary because people are already tending to drive a little bit slower, but at the same time it would do less to disrupt those people.

Distances are shorter therefore if you in fact travel slower, you are going to waste even less time than you have wasted. And finally, it is my understanding that with the exception of effectively villages, where the only street is the main road, there is not much difference in the ratio of accidents to vulnerable road users between local streets and through streets in country areas, compared with metropolitan areas.

They are down a little bit, but my understanding or my recollection from data I have seen up until I retired a couple of years ago, was that those ratios are relatively similar.

**Mr THOMPSON (STAYSAFE):** Mr Camkin, does KIDS SAFE have an involvement in forums which discuss issues of urban design and amenity? For example, there was a lot of media attention to the Radburn-style public housing estates in various parts of Sydney, where inappropriate behaviour by children was identified as a significant issue, and in your submission I note that page five refers to the concept of child friendly environments. Can you comment further on that?

**Mr CAMKIN:** I will ask my colleague, Mrs Gowdie, to comment on that child friendly issue in a moment, but first of all let me say that it is my understanding that the concern about the Radburn sort of estate development and the comment about inappropriate behaviour by children is less of a traffic problem than a behavioural problem by adolescents, rather than younger children.

In fact, I would have thought that the Rayburn estate, as a model development, was relatively safe, or relatively safer than more conventional subdivision practices from a road safety point of view.

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There are other approaches, such as traffic calming approaches, the more logical street subdivision design practices, which are now advocated by most planners and I heard that mentioned earlier this afternoon.

We are generally less involved as a major player in such policy issues, but we are represented at state and national levels on other organisations that do have a say. For example, we are members of the Australian College of Road Safety, members of the Pedestrian Council of Australia and have access to decision making in those areas. Perhaps Ms Gowdie might raise this issue of the safe environments that was mentioned.

**Ms GOWDIE:** This goes to the core of KIDSafe's philosophy, which is that while it is all very well educating people and telling parents to supervise their children, in general blame is not a useful concept in injury prevention. Blaming people rarely stops injuries.

More importantly, and I am quoting here from our 1995-96 annual report, which I will table in a moment, the philosophy emphasises the environment and modification approach to injury prevention. It recognises that while there is no substitute for supervision, no person can be totally vigilant 100% of the time, and that effective injury prevention requires that all of the environment in which a child lives should be as free of hazards as possible.

In that context, I would like to stress that that word, environment, does not refer just to matters ecological, it refers to the physical surroundings of everybody, ourselves, our children, whatever.

I would also like to table KIDSafe's response to a request by the Minister for Local Government to respond to his manifesto on child friendly environments. We are very supportive of that. We feel that children as a group tend to lack advocates, not because people do not like children necessarily, but they are frequently overlooked, but in taking the child friendly environment approach into all government planning processes, with any luck will in time reduce the toll of injury on our children.

It might also be worth mentioning that KIDSafe's concern for the environment modification approach is particularly being addressed at the moment through work we are doing on safer playgrounds. I know that has nothing to do with road safety, but it does give a very good example of making safer playgrounds; rather than yelling at kids, trying to make certain they don't get hurt.

You do not blame children for being children, you try to make it safer for them.

**Mr SMALL (STAYSAFE):** KIDSafe has commented that it looks forward to the institution of specific programs that seek to reduce road trauma suffered by vulnerable road users on higher speed roads. Has KIDSafe developed or been involved in developing model programs or exemplar programs for the use of local traffic engineers in the same manner that other advocacy groups develop model law for adoption?

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**MR CAMKIN:** Not as a major player, but we are supporting programs and such but in relation to perhaps a safer schools program. We feel other organisations are capable of introducing those programs. Let me say though, that we do have something of a track record in the area of educational programs in safety areas, for example, in relation to bicycle helmets and infant restraints in cars and we would be absolutely delighted to manage a program in this area if someone could finance it.

**Mr GIBSON (CHAIRMAN):** Let me say that STAYSAFE's view is safety initiatives are not just derived from road safety perspectives and your perspective in many areas that you pursue are totally relevant to what we are talking about in particular today.

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*MINUTES OF EVIDENCE, 20 MAY 1996*

## PUBLIC HEARING ON MONDAY, 19 AUGUST 1996

*North Sydney Council witnesses - GEOPLAN Urban and Traffic Planning witness - Local Government and Shires Associations of New South Wales witnesses - Pedestrian Council of Australia witness and Sydney City Council witnesses - Mosman Municipal Council witnesses - Centre for Transport Planning, University of South Australia witness - ARRB Transport Research witness - Australian College of Road Safety witnesses - Environment Protection Agency witnesses - New South Wales Police Service witnesses - NRMA witnesses - Roads and Traffic Authority witnesses*

### North Sydney Council

Cr Genia McCaffery, Mayor

Mr Anthony Paul Lehmann, Traffic Engineer

Ms Peta Helen Andersson, Community Road Safety Officer

**Mr GIBSON (CHAIRMAN):** I would like to welcome North Sydney Council to the hearing today. The STAYSAFE Committee has received a submission from North Sydney Council concerning the inquiry into the proposed introduction of the 50 km/h local road speed limit in residential areas. Do you have any other documents that you may wish to be tabled at this stage or during the course of your evidence?

**Mr LEHMANN:** We have nothing for submission, no.

**Mr GIBSON (CHAIRMAN):** Councillor McCaffery, do you wish to make an opening statement to the Committee?

**Cr McCAFFERY:** I suppose the main thing is that it is probably obvious to you that the North Sydney community is very much in favour of the 50 km/h speed limit. Generally the trial has been very successful and very well supported by the community. The main thing is we would like to see it extended to all of North Sydney because at the moment it is only in a portion of the council area. We are certainly getting a lot of requests from residents that it be extended to the whole area.

**Mr GIBSON (CHAIRMAN):** What prompted your council to undertake a 50 km/h speed trial on the lower north shore? What is the result of the community concern about excessive speeds in your area?

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**Mr LEHMANN:** For a long time residents of North Sydney have been concerned about the effect on their day-to-day life of what they perceive as excessive speed. In 1992-93 the Council undertook a council-wide traffic study which showed that the community nominated something like 83 streets to which they would like a 40 km/h speed limit applied. This showed that there was a strong community push for a lower speed limit in their area. Council was aware that Mosman Municipal Council had been negotiating with the Roads and Traffic Authority for a trial of a reduced speed limit in part of their area. At that time we asked that we be included as part of that trial, so about one quarter of North Sydney's area was included in the trial, which was also concurrent with the Mosman trial. The result of the community concern—I guess it is just a matter that the Council started lobbying the Roads and Traffic Authority and asked that it be part of this trial and supported the community by saying that it will endeavour to try to get a reduced speed limit in your areas.

**Mr SMITH (STAYSAFE):** The Committee is particularly interested in the logistical problems which we understand you experienced prior to the implementation of the trial. As we understand it the trial was to commence in late 1995 and in the event did not commence until March 1996. Can you outline to the Committee the reasons for this delay? Can you offer any advice as to how these delays might be avoided in the future?

**Cr McCAFFERY:** I will pass this over to Tony because he really administered the whole operation of the trial.

**Mr LEHMANN:** One of the factors that delayed it was that there were three government bodies involved — the two local government bodies and the Roads and Traffic Authority — and as I understand it there were some staff changes within the Roads and Traffic Authority which caused some deferment. As far as the implementation of the trial, as soon as all decisions were made and the staffing issues were dealt with, I believe it went smoothly. It was just that there was a time delay with regard to the trial. The trial itself was not per se a blanket speed limit and nothing else. There was new signage that had to be installed, new line markings that had to be installed and there was a process involved in sorting out where these signs and lines should go to best meet the community needs and also to make sure that the passing motorist was well aware of the reduced speed limit.

**Mr GIBSON (CHAIRMAN):** Was there a major problem with the delay in getting paint or getting the signs made?

**Mr LEHMANN:** No, once the decision was made it seemed that the process worked quite quickly within the Roads and Traffic Authority's workshop et cetera.

**Cr McCAFFERY:** And we went through quite extensive consultation with the precincts, our local community organisations, to really inform them of what was happening and to see that they supported it before the Council was involved as well.

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**The Hon. A. B. MANSON (STAYSAFE):** What kind of communication strategies were undertaken to inform the public of the change in speed limits? How did you measure their effectiveness?

**Mr LEHMANN:** The consultant appointed by the Roads and Traffic Authority prepared a community consultation strategy. That involved notices in the letterbox. We have four community notices that were put out to all of the households in the area and also it was in Council business papers et cetera. There have been speed surveys which was just a basic change in speed that the vehicles have done, but there have also been interview surveys with numerous households, I think there was about 100 households, to ask their perception of the trial and these community interviews are going to be re-undertaken when the trial concludes.

**Cr McCAFFERY:** I might ask Peta Andersson to make a contribution here on issues that may have been involved in the communication strategies.

**Ms ANDERSSON:** Just to add to that, I was brought into the process in about December last year, so Tony and Genia obviously have the historical perspectives on the process. In terms since I have come into it, as Tony said, GEOPLAN, the consultants, were the main instigators of the community consultation. They did four newsletters from the beginning. Before it was implemented they sent out two and there were various means of doing that. They did letterbox drops, distribution sometimes—I have heard through the grapevine—at traffic lights and things like that to hit the drivers but I am not sure about that in terms of safety and things, it is a bit of a worry. There were also ads in the local papers, the *Mosman Daily* and *North Shore Times*, to highlight awareness, as well as the face-to-face surveys which Tony mentioned with 100 households or so.

In terms of the effectiveness, one thing I wanted to add was I have had a few calls throughout the last six months because my name was on the newsletter as a contact person at North Sydney if people had any complaints or questions and quite a few people said, "I was not informed, I never got the newsletters" and things like that, which may raise concerns in terms of distribution companies being perhaps a bit lax. I am not saying that they were, but some residents did say they were not informed and they never received any newsletter. But since the fourth newsletter came out in the first week of August, I have had about 22 phone calls at least, and I have minuted them and will present them a bit later.

**The Hon. A. B. MANSON (STAYSAFE):** Was your newsletter published in a local paper?

**Ms ANDERSSON:** I do not think the newsletter was actually published as a whole newsletter. I have some copies here. It is quite a lengthy newsletter, for instance, I think number three was about six pages long so it would have been quite difficult to negotiate that. In the beginning stages, say November, December last year before it was implemented, there were quite a number of community meetings advertised through the papers and I think quite thoroughly, just in little composite ads, saying this is what is going to be happening, if you have any problems or questions

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or comments please phone the councils, Mosman or North Sydney councils.

**The Hon. A. B. MANSON (STAYSAFE):** Of the 100 households that were interviewed, what percentage of households involved was this?

**Mr LEHMANN:** I do not understand.

**The Hon. A. B. MANSON (STAYSAFE):** You doorknocked 100 households and interviewed the residents. What percentage of the households in the whole area was affected?

**Mr LEHMANN:** A fairly small percentage. The consultants, GEOPLAN, have better details. There were also three public meetings held in North Sydney, and I believe one in Mosman, prior to the scheme being implemented. You can ask Mosman Municipal Council about that. The meetings were poorly attended, by only about four or five people, which indicates people are not too concerned about the scheme.

**Mr JEFFERY (STAYSAFE):** Mayor McCaffery, you have answered some of my questions. You mentioned that the 50 km/h trial on the lower North Shore was well supported by the community. Mr Lehmann mentioned there was also a strong community push for it, although some of the figures of the meeting do not correlate, and Ms Andersson mentioned the consultative process that was undertaken during the development of the trial. My main question now is: have any surveys been undertaken and analysed since the trial has been in force?

**Cr McCAFFERY:** To go to the point that there was a conflict between the number of people who attended the public meetings and community support, as you are all involved in politics you probably know that people usually attend meetings to oppose proposals. Again, I think that has been the reaction here. When there is great community opposition we receive a lot of phone calls and a lot of letters. I have had one letter and one phone call against this trial from a Mosman resident, not a North Sydney resident, complaining about the amount of signage.

The signage is only needed because of the trial. If we had a 50 km/h an hour limit blanket across the State, or throughout Sydney, that amount of signage would not be needed. This trial is a fairly good test of widespread community support for the 50 km/h speed limit. As to the survey, I will pass that to Mr Lehmann.

**Mr LEHMANN:** I understand the after-surveys are in the process of being undertaken. The trial was commenced in the middle of February and is due for finalisation about this time. The consultants from GEOPLAN may have concluded those interviews but I have not received any information.

**Mr SMALL (STAYSAFE):** What type of signage is being used? It is not the normal speed limit signage one would see?

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**Cr McCAFFERY:** I suppose there has been an overkill really. There are a lot of signs because we are implementing a 10 km/h lower speed limit than applies elsewhere in a small district. It is only parts of Mosman and North Sydney. The Roads and Traffic Authority and the Police Service both believe because this was a trial in a limited area it needed to be heavily signed, otherwise there would be a lot of motorists' complaints that it was unreasonable to book them over the 50 km/h speed limit as it was unusual. So there is marking on the road and there are a lot of signposts. There is quite a dramatic amount of signage as you enter and leave the areas. Obviously, if this was a blanket limit across the State that amount of signage would not be needed.

**Mr SMALL (STAYSAFE):** It was just signage of "50 km/h", not "trial"?

**Cr McCAFFERY:** There are some trial signs as well.

**Mr LEHMANN:** Whenever something strange is implemented there are black-on-yellow temporary hazard type signs. We have those signs as one enters saying it is a 50 km/h speed limit trial from this date to that date. That is a formal type of sign and gives the regulation so it can be enforced. At the gateway of the area we have "Residential Speed Zone" information, but the repeater 50 km/h speed limit signs are about once every 200 metres, which is quite extensive.

**Mr GIBSON (CHAIRMAN):** Would it be possible to table that sign?

**Mr LEHMANN:** Yes.

**Mr GIBSON (CHAIRMAN):** I would like to take the opportunity to congratulate North Sydney Council. It is excellent the way it has been set up by council, in conjunction with the Roads and Traffic Authority, and is worth having a look at by any committee member who has not seen it. I was terribly impressed with it.

**The Hon. J. S. TINGLE (STAYSAFE):** I preface these questions by saying I am a ratepayer and resident of North Sydney, so I know a little bit about it. I agree with Cr McCaffery that most people think it is a good idea to slow traffic down on the roads in the area. The problem North Sydney has is not really with local traffic but passing traffic. What level of support, if any, has been able to be gauged from that passing traffic? To short circuit it, I will ask three basic questions. Has anyone been booked for exceeding the 50 km/h speed limit? In other words, has it been enforced? Could it be the lack of response to North Sydney Council and attendance at the meetings is because many people still do not know about it? I get the impression some people still do not know what it is all about.

Secondly, what is the level of compliance? I ask that question for a good reason. It has been suggested that roads like Military Road would not be affected, so there are mixed limits. In places like Spofforth Street where there is a 50 km/h limit entering and a 60 km/h limit leaving, my impression is that most people ignore the 50 km/h limit. I see them turn into such streets as

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Spofforth Street from Military Road and keep going. Is it possible to obtain a high level of compliance when there are mixed limits? If it was a 50 km/h limit on every road in Sydney motorists would all drive at 60 km/h anyway, but at least we would know what they were doing. Is there evidence to indicate that motorists slow down when they reach that zone? That is the test of the success of the whole proposal.

**Cr McCAFFERY:** I would pass to Mr Lehmann there because I do not think I can answer that.

**Mr LEHMANN:** Halfway through the trial the consultants took speed measurements in a controlled street out of the area to see if there is a correlation in the general changes in speed between weather conditions, congestion, et cetera, and those measurements indicate there is some success with the trial compared with what happens in an unlimited street. That was conducted shortly after the speed limits were put in. The longer term effects — whether the speeds have stayed lower or crept up again, if there has been any enforcement — we will find from later measurements.

With regard to enforcement, I believe only one person has been booked. The highway patrol is the only arm of the Police Service that actually has the technical equipment to enforce the speed limit in court. There is a general improvement in the level of policing associated with general duty officers. The Police Service would be the better body to answer this but, as I understand it, there have been some cautions issued. As to another issue you touched on, Murdoch Street comes to mind. You go from 60 km/h off Military Road into a 40 km/h school zone, then back to 50 km/h on Murdoch Street. so there are changes to the speed limits. I am unaware whether the motorists are aware or knowledgeable they have gone through different speed limits. We have not got any measurements on that.

**The Hon. J. S. TINGLE (STAYSAFE):** This is really the moot point to me. I am in favour of slowing the traffic down, but I am concerned that if we confuse motorists with a variety of speed limits the compliance level will be very low and we will achieve nothing. I am in favour of it but how do we enforce it?

**Cr McCAFFERY:** This is a trial and it is a very limited trial, as I said, because it is only parts of North Sydney and Mosman. Its success is a strong indicator to implement it across the State. If it is reasonably successful in this kind of limited way in very difficult circumstances, because they are such isolated areas, it can be made blanket across the State. From driving around those areas in North Sydney, I believe people are driving slower, maybe because of the amount of signage.

**Mr SMITH (STAYSAFE):** I think generally people look for the signs and recognise the speed limits in other areas. I do not know about school zones. Generally speaking, in a 60 km/h speed limit the traffic generally goes at 70 km/h and at 50 km/h it goes 60 km/h. So you actually reduce the limit but the traffic probably still travels above the actual limit. Motorists tend to do that.

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**Mr GIBSON (CHAIRMAN):** The Committee visited six or seven countries in the last month and speed reduction works overseas. Denmark and other places have been quite successful for 10 years where they changed from 30 km/h to 40 to 50 to 60 to 110 km/h. So I cannot see why we cannot do what they have been doing for 10 years.

**Cr McCAFFERY:** It is driver education too. It will take a period of time for people to make the shift but it is worth starting.

**Mr GIBSON (CHAIRMAN):** The most important aspect of it is that we change the next generation. If young people are used to the speed limit being 50 km/h where they live, when they start to drive, hopefully, they will not have the same emphasis on speed as our generation has. That is where the big win is in road safety.

**Mr SMALL (STAYSAFE):** This question has been partially answered but because there is a mix within it I will ask it. Your trial is based on a blanket speed limit over a certain geographical area within your jurisdiction, excluding the Pacific Highway and Military Road. What would be the response of Mosman Municipal Council — and I assume you can speak for Mosman Council — and North Sydney Council if the new 50 km/h speed limit on residential streets was implemented in New South Wales but not on the sub-arterial roads and collector roads?

**Cr McCAFFERY:** We would support it, but we would also like to see it on the sub-arterial and collector roads. That is a conflict between the Roads and Traffic Authority and ourselves. The only place where there should not be that limit in North Sydney is on Military Road and all other streets should have that limit.

**Mr SMALL (STAYSAFE):** You would still like the 50 km/h speed limit on sub-arterial roads?

**Cr McCAFFERY:** Yes, and only excluded from the major link roads, such as Military Road. We have a number of residential streets that, sadly, have been turned into sub-arterial and collector roads causing great problems for the people who live in those streets. We should be looking at reducing the speed limits on those roads too. Hopefully, traffic ultimately will be reduced but while there is that amount of traffic we should be reducing the speed.

**Mr SMITH (STAYSAFE):** What happens to Military Road?

**Cr McCAFFERY:** It is like the Pacific Highway. Hopefully, long term we will improve public transport, get people out of cars and onto trains and buses.

**Mr SMALL (STAYSAFE):** It is an interesting concept. In recent interviews we were told that where major roads have been interfered with a lot of the traffic bypassed into some of the streets which caused a real problem. I saw an example in Brisbane last week where humps and blisters were installed. The residents did not want them but they did not want the motorists speeding up and down their street and making it dangerous. There is a very large broad-based area and you

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have to be careful what you do. Like the Chairman, I congratulate the council on its initiative on the 50 km/h limit because there is a strong community feeling for it.

**Ms ANDERSSON:** I wanted to respond to something Mr Tingle asked, and was echoed by a few other Committee members. In terms of the enforcement, Mr Lehmann said the Police Service would be able to give you much more detail. One of the concepts to actually get people to comply with the new speed limit was self-enforcement. Admittedly, a lot of the traffic is through-traffic—people who do not live in the area. I have had calls from people objecting to the trial because they are trying to get from A to B as quickly as possible and often using Kurraba Road through Neutral Bay as an alternative access route to Military Road.

One of the self-enforcement strategies, residents were asked to drive 50 km/h, so theoretically a motorist travelling behind needs to drive 50 km/h because it is generally only a one-lane road. I find if I stick to 50 km/h when I drive around the council area, some people get frustrated but they cannot go faster. Another strategy is raising police profile by using Random Road Watch, which, I believe, began in Queensland.

The trial area is broken up into 40 sectors, including laneways and streets, and the general duty police are allocated to each sector randomly by computer for, say, a two-hour period once a week, because, as Mr Lehmann mentioned, normal police stations like North Sydney and Mosman do not have the speed detection equipment that the highway patrol have. The idea is that police cars are in streets, roads and laneways that may never have seen a police car before. Obviously if another call comes, such as theft, domestic violence or other crimes, it takes priority and the cars have to be available. The theory is that when people see a police car they tend to slow down. That has been another method.

**Mr LEHMANN:** This trial was introduced not so much as a road safety issue but more a residential amenity issue. For years the traditional tools of traffic engineers have been speed humps and roundabouts. As we are aware, they have their own problems: they generate a very intrusive noise, particularly in the early hours of the morning. This trial was an attempt to try to adjust the behaviour of motorists using some other method. Road safety spin-offs have certainly occurred and we appreciate those. The results of the first speed surveys show that although there was not a great reduction in the average speed in the area, there was a significant reduction in high speed vehicles, free-flowing vehicles travelling at 100 km/h or 80 km/h in residential areas. Sometimes vehicles travel at those speeds at night, but they have adjusted their behaviour quite significantly. Such road vehicles are often involved in high trauma accidents. If we can reduce them, maybe such incidents can be avoided.

**Mr GIBSON (CHAIRMAN):** Would anyone like to add a further comment?

**Cr McCAFFERY:** We would really like you to promote heavily with the Government the adoption of this measure at least in the Sydney metropolitan area if not throughout the State. In our first traffic survey residents were actually asking for a 40 km/h limit in residential streets. If

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anything, a deal of the community is looking for an even slower speed.

**Mr GIBSON (CHAIRMAN):** I would like to congratulate you once again on your initiative. You mentioned 40 km/h but when I mentioned 30 km/h a few weeks ago people nearly had heart attacks. It gives us a greater chance of successfully introducing the 50 km/h limit.

## GEOPLAN Urban and Traffic Planning

Ms Ludmilla Hawley, Principal

**Mr GIBSON (CHAIRMAN):** I have been advised that you have been issued with a copy of the terms of reference of the STAYSAFE Committee and also a copy of standing orders 332, 333 and 334 of the Legislative Assembly. Is that correct?

**Ms HAWLEY:** Yes.

**Mr GIBSON (CHAIRMAN):** Did you receive a summons issued under my hand in accordance with the Parliamentary Evidence Act 1901 requiring you to attend before this Committee?

**Ms HAWLEY:** Yes.

**Mr GIBSON (CHAIRMAN):** The STAYSAFE Committee has not received a submission from GEOPLAN concerning the inquiry and the proposed introduction of 50 km/h local speed limits in residential areas. Do you have any documents today that you wish to table to be included as part of your sworn evidence?

**Ms HAWLEY:** I have some documents that you may already have copies of. This is the full list of newsletters we have produced in relation to the trial and some information relating to the very first speed surveys which were done immediately after the implementation of the trial in March. Further speed surveys have been conducted, but those results are not yet available. They can be tabled later on or forwarded to you. We also have summary charts from the community survey undertaken at the beginning of the trial to assess support for such a trial.

**Mr GIBSON (CHAIRMAN):** If a 50 km/h speed limit were introduced on a statewide basis, what would be required to ensure a satisfactory level of compliance?

**Ms HAWLEY:** With the 50 km/h trial we have tried to combine engineering and education, information or promotion, however one may define it, and enforcement. The introduction of a 50 km/h trial on a statewide basis would require a fair amount of education and promotion. People want to know why we should lower the speed limit. There is a general misunderstanding among some members of the community, particularly the young, that undertaking additional driver training education immediately makes them a safe driver. The community is not aware of the very close relationship between speed and the severity of an accident, particularly those involving pedestrians. The community is beginning to become aware of it and I notice that advertisements are beginning to send that message, which is very important. Public meetings we have held in North Sydney and Mosman have attracted a small roll up, but those who attended were particularly interested in technical information in that regard. As a result that information was included in our newsletters. Those who attended the meetings said, "You should tell people that

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if they travel at 40 km/h the likelihood of a pedestrian being killed is such and such; if they travel at 70 km/h the likelihood is such and such; and why.”

**Mr SMITH (STAYSAFE):** In the lower North Shore trial what sort of road treatment is applied to draw the attention of drivers to the fact that they are entering or existing a 50 km/h zone? Have the trials been successful in your view?

**Ms HAWLEY:** In terms of the engineering component we are using entry signs, repeater signs, road markings and lane line markings. On entry to the trial area a large 50 km/h sign greets drivers. They have been made much larger than the signs in South Australia, which were the normal speed sign size that tend to get lost in the vegetation and so on. These signs are pretty big. Military Road is a very cluttered environment as one comes into the residential area, so the signs had to be large for people to notice them. Additionally, on every single entry street, whether it is a high traffic street or a low traffic street, there is a pavement marking which has six lines across it and “50” on the road. As people drive through the area, if they have not noticed the sign maybe they will notice the pavement sign.

The main traffic routes in the trial area, which were determined with councils, have repeater signs of a normal size that repeat 50 km/h. The signs on the main traffic routes usually have close by, or immediately near them, the 50 km/h road markings. The main traffic routes have a one travel lane system, represented by a solid line for the parking lane so that people cannot drive in that parking lane even though cars are not parked there. This creates a situation in which there can be no overtaking on the inside lane, which is particularly dangerous to pedestrians because the kerbside lane is the point at which they step off the kerb. It also gives residents greater ability to get out of their private properties without being hit, which is always a concern in high-traffic areas or high-speed traffic areas. Residents complain about never being able to get out of their driveway, so at least they can nose out of their driveway and be in the parking lane.

In some areas we have recommended what we call rumble bars to ensure that people stay in their travel lanes when travelling around bends. When people are driving too fast there is a tendency, even if a double centre line is marked, to go over the double centre line and have a head-on collision. There are a few tight bends along the rat run through North Sydney and Mosman where we have suggested that rumble bars be used. There is not the problem of people coming out of driveways, as there is no access in that area. It should keep people in their travel lanes and keep the speed down towards 50 km/h.

**Mr GIBSON (CHAIRMAN):** You mentioned the rumble strips. Did you use them for the gateway purpose?

**Ms HAWLEY:** No. We did not want to use anything that would make a noise over the travel lane. It is a nuisance to people. North Sydney, and Mosman particularly, are populated by very sensitive, vocal people. They are well educated and they know how to use the media to complain. We did not want to use devices that would only raise the ire of people as to whether they may

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achieve something, but that may actually work against the trial.

**Mr MILLS (STAYSAFE):** What has been the community reaction on the lower North Shore to the 50 km/h trial?

**Ms HAWLEY:** Unfortunately, you have caught us at a time when we have not done the after-community survey. That will be done at the end of the six-month trial, which will probably be in another couple of months. We have given the community an invitation to ring back councils. North Sydney and Mosman councils would be in a better position to tell you what the ad hoc responses are. We will repeat the community survey we undertook previously, which was a random survey of householders based purely on statistical randomness so that we would get information as to what the general population thought about the trial, what is good and what is bad about it. We have had so little response that I would say it has been accepted. In traffic planning we find that if you do something wrong you hear about it, but if you do something right you never hear about it.

**Mr MILLS (STAYSAFE):** Presumably you have been keeping media clippings and so on during the period of the trial.

**Ms HAWLEY:** I have some.

**Mr MILLS (STAYSAFE):** It sounds as if there are not many.

**Ms HAWLEY:** No. There has been more information about what is going on, rather than people complaining about it.

**Mr JEFFERY (STAYSAFE):** Do you have any indication of how the public has reacted to the 50 km/h limit on the traffic routes within the trial area, as opposed to the reaction to that speed limit on residential streets?

**Ms HAWLEY:** No, not yet. That is what we hope to find out when we do the after community survey. The whole area is a blanket 50 km/h. Most of the streets are not treated; they have nothing on them. Minor streets do not have anything on them. About 18 to 20 main routes are heavily treated with pavement markings and so on but the rest have nothing on them. One purpose of community feedback has been to find out whether people felt that there was a specific problem in their street and that there should be signage or pavement markings because, for some reason or another, there may be intrusive traffic going through there. We made sure that we treated all the through traffic routes including the routes going to the zoo and the rat run routes. There may be a difference between the routes that have been treated and those that have not in terms of public perception and response, but we do not know that yet.

**Mr JEFFERY (STAYSAFE) :** You mentioned the pavement markings — you showed us a diagram of the 50 km/h zone — and the signs on the roadway. Are the signs only in white, or is

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there another distinctive gateway in another colour at the entrance to that zone? Do you have red on the bitumen temporarily to draw attention to that?

**Ms HAWLEY:** No, the markings are all in white. Red is not visible at night. The best material for visibility is white, and yellow under certain conditions. We have tended to stick with white because it is a trial. The Roads and Traffic Authority did not want to spend a lot of money on pavement markings; some of the degadur markings can be very expensive. As it was a trial it was felt that we would use this approach first and see how that worked; in time, perhaps more solid and brighter markings could be developed. Also, we did not want to add to the urban clutter. Some people are resistant about all the signs and markings in the urban environment. People feel that they decrease the visual amenity of a street.

**Mr MILLS (STAYSAFE):** What was the word that you used? Was it degadur markings?

**Ms HAWLEY:** Yes. These are the markings such as the yellow 40 km/h markings around schools. That particular treatment is called a degadur treatment. It is a very strong treatment.

**Mr MILLS (STAYSAFE):** Is that on the road?

**Ms HAWLEY:** Yes.

**Mr SMALL (STAYSAFE):** Can you advise the Committee on what effect the 50 km/h speed limit has had on accident and injury rates, traffic speeds and traffic flow within the study precinct? Are you able to point to a contrast between the figures and those representing the areas outside the study precinct? I appreciate that you have not completed your study. However, you might be able to give some indication.

**Ms HAWLEY:** Yes. We have mainly surveyed speed. The whole purpose of the trial was to decrease speed. There has been a decrease not so much in the mean speeds, if we lump all the streets together, but there has been a greater decrease in the mean speeds across the area as a whole than in the two control streets, Cammeray Road and MacPherson Street, outside the trial areas. There has been a decrease in mean speeds and in what we call the 85th percentile speeds. We are particularly interested in the 85th percentile speeds because mean speeds in the area generally are low compared to a lot of areas in the western suburbs for example. What one always tries to do with speed reduction is clip off the tops of the speed ranges. Eighty-fifth percentile speeds represent those speeds at which 15% of motorists are travelling at or above. It is usually about 12 or 15 kilometres over the speed limit.

In a 60 km/h zone we would expect to have 15% of people travelling at 72 km/h to 75 km/h, mainly because they feel that they can get away with it; they feel that there is enforcement leeway. People change their speed depending on their personal assessment of the road conditions. It also relates to people's interpretation of what the speed limit means. From work that I have seen in relation to focus groups and discussions groups on speed limits, many people—this is why I say

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that education is important—think that the speed limit is the minimum speed limit; it is an advisory minimum that you can go, and you are able to go above that. People do not understand that it is the maximum. The message that must get through to the community is that when we talk about 60 km/h that is the maximum that we expect people to go; when we talk about 50 km/h that is the maximum. The fact that the police may or may not be able to enforce 55 km/h or 65 km/h, depending on equipment and so on, and therefore people do not get caught, does not mean that they are not breaking the law. Interestingly enough in this trial, the 85th percentile on those streets where the speeds were highest in the first place has come down the most. We are looking at a reduction of about 5 km/h or more on those streets where the speeds were the highest. Where people are travelling the fastest, they have readjusted their speeds down. Where the speeds were fairly low to begin with, the adjustments have been much lower, which is what we expected.

**Mr SMALL (STAYSAFE):** Do you have any idea in terms of the accidents or injuries?

**Ms HAWLEY:** No. With any accident analysis we must look at at least five years before and five years after the event. Particularly in local areas, accidents are sparsely scattered. To get a big enough sample to be of statistical significance to anything that you have found, you must have a long before and after period in which to do the analysis.

**The Hon. J. S. TINGLE (STAYSAFE):** When you say that the mean speed has lowered, is it clear that it has lowered as a result of greater compliance with the limit or as a result of the self-limiting law of urban traffic? In other words, the more traffic you get the more slowly it must move and it becomes significantly congested.

**Ms HAWLEY:** We took a sample a week or two before the trial began. We measured every car that went along the route before the trial began and immediately after it began, so it is a 100% sampling of all the routes for one week, which is probably the highest sampling in the world. It is not a sample; it is a total population. We measured well in excess of 100,000 or 200,000 trips on the roads that were measured. To say that there may be other effects that could impact on that, after we have looked at that much data before and after, I would say no.

**The Hon. J. S. TINGLE (STAYSAFE):** Not over the space of a week?

**Ms HAWLEY:** No. It is a big sample over a long period. There is no reason to suggest that within a year the traffic volume would increase to such an extent that congestion will impact on these speeds. Congestion would not impact in off-peak periods. In off-peak periods that would readjust the mean speed, so those who perhaps must travel slower in the peak hour would not have to do so in off-peak periods. Given that peak hours in a 24-hour period would be extended in that area to four or five hours, the rest of the 24 hours would still be free speed.

**Mr MILLS (STAYSAFE):** What are the most effective and appropriate traffic management strategies that should be adopted to ensure compliance with the 50 km/h local road speed limit?

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**Ms HAWLEY:** Across the metropolitan area or across the State?

**Mr MILLS (STAYSAFE):** In general.

**Ms HAWLEY:** First and foremost, if it is to be accepted across the State you should educate the public and give people information as to why it is being adopted. It might also be useful to tell people why we had a 60 km/h general urban speed limit in the first place. There is no rhyme or reason that we had 60 km/h in the first place; it is a historic event that occurred when we started having a speed limit back in the 1930s. I understand that 30 mph was established; it was then raised to 35 mph because people thought that cars were better built and therefore more able to cope, the roads were better and so on. There is no scientific background as to why we adopted 60 km/h. To say that we have 60 km/h and therefore we should keep 60 km/h because it has historically been there, that is the only logical reason that one could offer. There is no road safety reason that we have 60 km/h. If we take our example from overseas, some urban speed limits in the United States are lower than ours.

**Mr MILLS (STAYSAFE):** Thirty miles an hour.

**Ms HAWLEY:** The Americans love their cars as much as we do. The community must be told two things: first, 60 km/h is not a God-given thing that we must stick with, because the way we established it was not rational; and, secondly, there are great advantages to be gained from lowering the speed limit in residential areas for these reasons. Lay it on the line and tell people that — I think they will appreciate it. We would still have a peak vocal minority of people who feel that it is unreasonable to lower speed limits and that as drivers they are capable of making their own decisions about how fast they should travel. When we surveyed the population as to whether it would support 50 km/h as the residential speed limit across the metropolitan area, about 70% to 80% of people said that they would support it. When we asked if they would support 40 km/h the percentage dropped significantly; I think it was down to about 30% — you have the charts and figures there. There is great community support, at least in the trial area, for 50 km/h across the metropolitan area, but there is nowhere near as much support for 40 km/h. I think 50 km/h would be a safe thing to sell to the public; it would be acceptable.

**Mr GIBSON (CHAIRMAN):** Members of the Committee recently travelled to the Riverina, and were surprised at the acceptance of a speed limit of 50 km/h. A survey carried out in Leeton showed 73% support for a speed limit of 50 km/h, and the same support applied in every country town visited by the Committee.

**Ms HAWLEY:** It is around about the same in Mosman and North Sydney.

**The Hon. A. B. MANSON (STAYSAFE):** The geographic and urban planning features of North Sydney and Mosman are quite different to those of most of Sydney, particularly new outer suburban areas. Can you elaborate on some of the essential differences and nominate a particular feature of contemporary urban design that may aid an acceptable level of compliance with a speed

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limit of 50 km/h?

**Ms HAWLEY:** There is a big difference between Mosman and North Sydney and areas further out from the central business district. Speeds tend to increase, and there is less traffic on the roads, so there is less congestion, at least in peak hours, to control traffic. Free speed is the rule. The topography and design of the roads is different, with long straight stretches in middle suburbs such as Bankstown and Ryde. Mosman and North Sydney have old, last-century layout roads, rather higgledy-piggledy, with some four-way intersections but a lot of topographies up and down, following ridge lines and so on. Further out the suburbs were historically laid out on more of a grid pattern. In the middle ring of suburbs you start to get higher speeds. A lot of these are being controlled by councils with roundabouts, because there are so many intersections. It is quite a useful way of controlling speed.

Further out in the suburbs, particularly those that were developed in the 1960s, like Minchinbury and Mount Druitt, masses of them were laid out a bit like Canberra, on rather circuitous routes. You constantly drive on an arc on a main road through the suburb and all the other roads feed on to it. They are probably the worst roads of all when it comes to speeding, because there are very few cross-intersections. Most of them are T-intersections because people thought that was the safest way to design intersections. In fact, less accidents occur at T-intersections than at cross-intersections. There is less opportunity to put in roundabouts, which can control speed very effectively.

Also, the width of a road has an impact on how fast vehicles will travel. Mosman and North Sydney have roads that are generally reasonably narrow but are also very congested because they have on-street parking. Anything on the street that interferes with that openness of a street has an impact on the speed at which people travel. If there is a lot of on-street parking, people will go slower. Once you get into the outer suburbs there is very little on-street parking. There are wide roads, or roads even as wide as those in North Sydney but with no impediments, no cross-intersections with roundabouts and no on-street parking. The roads look like continuous stretches of highway, yet they are residential streets. In applying a speed limit of 50 km/h to those existing suburbs of the 1950s, 1960s and 1970s, which were laid out on that sort of mentality, one would have to try much harder than we have tried in Mosman. That is one of the things we will have to think about in producing a kit for the Roads and Traffic Authority.

We are looking probably at more enforcement and more engineering measures, and the introduction of roundabouts and perhaps slowing devices. That did not need to be done in Mosman and North Sydney. In the new subdivisions in Liverpool — Wattle Park for example — and fringe subdivisions in Blacktown and the Rouse Hill area, we are getting into a much greater sensitivity of speed and designing for speed. That has been assisted by the Federal AMCORD guidelines, which you are probably aware of. They have been developed by Professor Hans Westerman and a group of people. Speed has been one of the major inputs: how to design subdivisions where speed is not encouraged. Some of the tricks you use are narrower roads, giving less pavement to the car so drivers do not feel they can go as fast, and making sure you do

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not have continuous roads that go on for two or three kilometres without any impediment.

Mosman and North Sydney have a totally different population, a totally different social group of people, to outlying suburbs. There are many more young people in the western suburbs than there are in Mosman and North Sydney — young people who drive; teenagers, who have the worst record for accidents. They are much less likely to respond rationally to rational information than adults are. The 17-to-25-year age group is over-represented in the outlying suburbs and under-represented in our trial area. That would make a difference also to the behaviour and what would have to be done in terms of engineering, enforcement and education.

**The Hon. J. S. TINGLE (STAYSAFE):** I was going to ask what effect you believe a lower residential speed limit would have on residential planning, street design and engineering. You have probably answered my question. If this lower residential speed limit is adopted will it make much difference to street engineering and design?

**Ms HAWLEY:** Local councils are still not quite sure how to handle this. They could possibly put the onus more on the developers, particularly large developers such as government Departments like Landcom, to prove how they will address speed in their new area subdivisions. Often this is left for councils to pick up. The residential subdivision will have quite a lot of amenity in terms of street lighting, footpaths and so on. All those areas off the road have development conditions attached to them, but the roadway itself and the concept of road safety is still not dealt with very well. I have been involved in looking through the Parklea residential area subdivision, some seven suburbs, and going through it on a school-by-school basis to ascertain whether children will be able to walk to school safely. In many cases they will have to cross main roads carrying 20,000 vehicles a day, where no facilities exist at all.

If those facilities had gone in at the same time as the roads were being built, it would be cheaper all round. It is much more expensive to put in pedestrian refuges or building underpasses or overpasses. We still have not reached the stage where this is automatically fed into the design layout of the new suburbs. That is where we have to head, with all these things designed and paid for at the beginning, so from day one children can walk to school instead of being driven to school. Once the habit of driving kids to school is established, it is much harder to break than if there are facilities to allow them to walk to school safely.

**Mr GIBSON (CHAIRMAN):** Would you like to make a closing statement?

**Ms HAWLEY:** From a personal point of view, it is desirable to head for a residential speed of 50 km/h. The only thing that concerns me is the fact that we are still differentiating between main roads and residential areas. It is controversial to say we are going to lower speed limits on the main road system and much more fashionable to say we are going to raise them. At the moment there is a limit of 70 km/h and 80 km/h on arterial roads in a sort of patchwork quilt of 70 km/h here, 80 km/h there, slipping back to 60 km/h. This is confusing for drivers. People do not really understand why this is happening, and it has an impact on the way people behave in their

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environment. There are just as many pedestrians trying to cross the main road system, and there is a much greater exposure to accidents on the main road system than in residential areas.

I would question whether we need 70 km/h and 80 km/h on Mona Vale Road or some of the heavily built-up roads. This is not the way the Europeans are doing it. They are lowering their speed limits on the main road system as well and are redesigning their main road system so that priority can be given to public transport, cyclists can be accommodated at safer speeds and so on. It could be done in a step-by-step process, but I do not think we should say we will have a limit of 50 km/h in residential areas but to make up for that we will raise the speed limit on arterial roads. I do not agree with that.

**Mr GIBSON (CHAIRMAN):** Should a speed limit of 50 km/h apply to industrial areas as well?

**Ms HAWLEY:** In residential areas we are looking at a different sort of amenity; it depends on the layout of the roads and road safety. Most industrial areas are fairly well contained. If we are going to have a speed limit of 50 km/h it should be across the board. In most industrial areas traffic moves fairly slowly anyway because trucks are off-loading and lorries are turning into driveways, and they constrain free speed a lot of the time anyway. I do not think we should differentiate. I think it is better and simpler to say the speed limit is 50 km/h everywhere once you get off the main road system, and I would prefer the main road system to be 50 kilometres as well.

Getting from A to B is not determined by the speed at which you can travel on the road; it is determined by how many traffic signals you have to go through and whether they are in your favour or not. For example, if there was not a SCATS working on the Pacific Highway and at every intersection there was a red light, it would not matter that you could speed up to 70 between the lights; you would still have to stop at the lights. The travelling time is determined more by intersections in an urban area than by the speed between intersections. How often have you travelled along a road and someone has overtaken you and you have caught up with them at the traffic signals anyway? This happens all the time; it is a well known aspect of road management, particularly with major congested intersections. You are trying to just get people through in convoys at a steady speed where you do not have this big differentiation of speed.

## Local Government and Shires Associations of New South Wales

Cr William Bawden Bott, Vice President  
Mr David Ronald Allen, Senior Policy Officer  
Ms Rhonda Joyce Neuhold, Road Safety Policy Officer

**Mr GIBSON (CHAIRMAN):** The STAYSAFE Committee has not received a submission from the Local Government and Shires Associations of New South Wales concerning the inquiry into the proposed introduction of the 50 km/h local speed limit in residential areas, but it will be presented today, is that so?

**Cr BOTT:** A draft policy has been presented. The only reason it is a draft is that it has not been before the executive for ratification.

**Mr GIBSON (CHAIRMAN):** Do you wish to make an opening statement or would you prefer to proceed to questions?

**Cr BOTT:** Perhaps if we briefly reiterate our position and lead into questions from there. In regard to the 50 km/h general urban speed limit, representatives of the Local Government and Shires Associations attended the meeting of the 177 councils to gain responses as to their positions. The association received 82 submissions, of which 52 were in favour and, obviously, the balance were opposed to it. The interesting breakup was that of those in favour, 25 were from rural councils and 18 were from urban, but all 39 that were opposed were rural. At this particular stage the policy of the two associations in regard to the proposal is divergent. The local government associations' policy supports the general urban speed limit of 50 kilometres; the shires association, the rural-based association, had a policy of support for 50 km/h in 1995, but at the recent conference that policy went to 60 km/h general urban speed limit. Perhaps I will need to address that area in more detail during questions. A rationalisation of the two positions can be arrived at. The common ground in both associations would be the general recognition for uniformity across all spectrums, whatever the determination. The associations believe it should go further than just State level and be uniform at national level. While the divergence in policy is present at this particular time, I am certain that the wish of all local governments is that there should be as near as possible uniformity in the urban speed limit.

**Mr GIBSON (CHAIRMAN):** Was there any consultation with the Roads and Traffic Authority?

**Cr BOTT:** As I understand, there was not a lot of consultation with the Roads and Traffic Authority. I think one reason why there is perhaps a divergence of opinion between the two associations is that there has not been a definitive proposal put to local government for consideration. Corowa is my own area and when this matter was debated my council did not respond to the submissions because there was a misunderstanding, and perhaps ignorance is not the right word, but certainly there was no definitive position before us for consideration. My

council's concern was whether the proposal applied to arterial roads as well as residential streets or was it simply to apply to residential areas.

For that reason I think from the rural area concern has been expressed about uniformity across the spectrum. My area has a major arterial road with little cross intersections, and obviously has not traffic lights upon it. It is a straight forward run for a considerable distance into the centre of the town. It was considered undesirable to reduce the speed limit from 80 km/h, which is what it currently runs at as it proceeds to the built-up and more intensely urban areas back to 60 km/h. It was thought undesirable to be considering 50 km/h. Obviously there is a misunderstanding and there needs to be a definitive position. I suggest a partnership needs to be developed, if the process is to be advanced, in which local government is an active partner in that development and its process of accreditation.

**Mr GIBSON (CHAIRMAN):** Was there much consultation with the Department of Transport?

**Mr ALLEN:** None whatsoever.

**Mr SMALL (STAYSAFE):** The Corowa to Albury road is an arterial road and not an urban road. This proposal is only applicable to urban streets rather than main road structures or through roads.

**Cr BOTT:** That is my point. There needs to be a definitive position. Local government needs to be a partner perhaps not in the development of the definitive position but certainly in the education and extension of it. If that happens, the conflict between the two associations would be resolved.

**The Hon. J. H. JOBLING (STAYSAFE):** Is there any specific reason there was not discussion or contact with the Department of Transport?

**Mr ALLEN:** I suppose our main contact has been with the Roads and Traffic Authority. From our information the Department of Transport has not been involved with the proposal. I am not quite sure what has happened with the Roads and Traffic Authority, but it has definitely not written to us and said, "We want you to be a partner in this process. Let's develop this proposal together, let's work together to find out what the public and community think of it." That process has not occurred and, as Councillor Bott said, I think that is part of the problem. The Roads and Traffic Authority and other agencies have been running the program on their own without consultation or partnership with local government.

**The Hon. J. H. JOBLING (STAYSAFE):** You represent much of rural New South Wales, can you offer any reason why the Roads and Traffic Authority might not be consulting?

**Mr GIBSON (CHAIRMAN):** Were you invited to provide a submission to the AUSTROADS study into the 50 km/h proposal?

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**Mr ALLEN:** Yes.

**Mr HARRISON (STAYSAFE):** The Committee has adopted a procedure of consulting as it has visited other areas around the State. I cannot accept that no consultation has taken place when the Committee is asking everybody to give an opinion.

**Mr GIBSON (CHAIRMAN):** The question related only to the Roads and Traffic Authority. I would have presumed with a project such as this that the Roads and Traffic Authority would have contacted the association and asked it to provide a submission and to work hand in hand with it.

**Mr ALLEN:** Part of the problem is that the Roads and Traffic Authority felt unable to directly put forward a proposal because it has never received ministerial support for that position. It is a bit of a catch-22.

**Mr HARRISON (STAYSAFE):** Nor has anybody else received support.

**Mr ALLEN:** That is right. On the one hand I understand why the Roads and Traffic Authority is reluctant to go that step further.

**Cr BOTT:** We should not bag the process. What I am trying to say is that to make it work there needs to be changes. Local government needs to be involved. If local government is involved in the development and extension, certainly the results will be different to the one we have at this stage. The debate in my association in June did not have sufficient information put forward.

**Mr HARRISON (STAYSAFE):** Given the unique perspective of local councils, what is known of community concerns about effective speed management in urban areas, particularly vehicle speeds on residential roads.

**Ms NEUHOLD:** It is apparent from the Mosman-North Sydney trial that community participation was inherent in the process. From this trial the community has provided positive feedback about the progression of the trial. From our discussions with member councils, it is also important for any trials to occur that community participation is one of the most important aspects. The trial in Mosman-North Sydney has been referred to by other councils in their submissions to this inquiry, and the fact that further trials should occur in differing areas throughout the State. Community participation is the most important component in that.

**Mr HARRISON (STAYSAFE):** Would you give the Committee an indication of the level of council support for the 50 km/h proposal? I was going to ask about the uniform view, but as has already been expressed there is quite a divergence of opinion between the shires and the metropolitan councils. What, if any, concerns have councils expressed with regard to the implementation and enforcement of the proposed limit? Is there a particular concern about the creation of physical impediments and the costs that might be involved? That is something I have

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my own views about. I assume that will arise, if it has not done so already.

**Cr BOTT:** It has not arisen. There was uniformity across all submissions, both those in favour and those in opposition, about the costs of implementation of the proposal. That was a standard position. Concern was also expressed about the method of enforcement. I believe that would probably be related to the number of urban streets and the capacity of the police to adequately police the limit. In rural areas, where pedestrian traffic flows are less heavy than in the urban metropolitan areas, there was generally a view that the reduced speed limit was unnecessary. Let me go back to an earlier question, one that slipped past. It should be remembered that 52% of councils across the State support the proposal. While it is minimal and while there is divergence between the rural and the metropolitan policy position, nonetheless the majority of councils supported it.

In commonality it was felt that, in the implementation phase, there would need to be heavy involvement of the local traffic committee, as to the hierarchy and how it is to be carried forward. The need for trialing is also very important; Mosman and North Sydney have proved that. I do not believe there is any doubt about that. As I said to Mr Manson, there should also be trials in such places as the western suburbs of Sydney where the situation is quite different from Mosman and North Sydney. There should be trials in regional New South Wales and also in the more sparsely populated areas. If that sort of involvement with local government through trialing is carried out as a precursor to the introduction of the limit, I think we would be able to bring it forward with a great deal more public support than currently exists.

**The Hon. J. H. JOBLING (STAYSAFE):** Would you care to offer a suggestion about two or three country areas that you would regard as ideal areas in which to conduct a trial? You may care to think about that.

**Cr BOTT:** Perhaps we do, but when I refer to regional centres obviously the main one would be Albury. There is a difference between Albury and Wagga Wagga—Albury is a metropolitan city and Wagga Wagga is a rural city. You would then need to come down to towns with a population of 5,000 or 6,000—Narrandera or Corowa and those types of towns. It is important out in the western suburbs because the population mix is very different and the density of population is also substantially different. Perhaps there is not the, how shall I put it, the cultural difference. In Mosman and North Sydney, to my limited knowledge, there is perhaps a greater identity of community values, however you would like to put it, than exists, cohesively anyway, in other metropolitan areas. There is a need to trial it in places other than Mosman and North Sydney. There has been certainly great acceptance of it there.

**Mr SMALL (STAYSAFE):** A fair amount of research has already been conducted in Wagga Wagga and the traffic committee is inclined to favour a reduction of the speed limit to 50 km/h. Albury has also undertaken a considerable amount of work on road safety issues. I have spoken to a number of councillors and I agree with you that most councillors going in cold were probably against the proposal. However, after meeting the Roads and Traffic Authority, the police, other

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community groups and other councils, they were convinced of the benefits of the 50 km/h limit.

**Cr BOTT:** That is why the traffic committee is terribly important. The traffic committee consists of all those players and one gets the balanced, informed position that is able to persuade those elected representatives who are coming in cold.

**Mr HARRISON (STAYSAFE):** Obviously, different local government areas have different opinions. For example, it appears that in Albury the council would like to remove every pedestrian crossing in the city area. There would be nothing short of a riot in my electorate if the pedestrian crossings were removed. I have been involved in some intense campaigns for the introduction of pedestrian crossings. One could not really say that Albury equates with the Illawarra, for instance.

**Mr GIBSON (CHAIRMAN):** By way of background, the strongest push for the implementation of a speed limit even lower than 50 km/h has come from western Sydney councils, such as Penrith, Hawkesbury and Blacktown, where speed in local urban streets is a concern. Those western Sydney areas have streets similar to many country towns. As the previous witness said, there are not too many four-road intersections out there; the main roads seem to go on forever with streets running off to the left and to the right.

**Mr JEFFERY (STAYSAFE):** You mentioned that a number of councils, particularly those in rural areas, have argued that a 50 km/h speed limit would not be appropriate in their jurisdiction because the real problems are away from the residential areas and on the higher-speed road network. Could you expand on that statement?

**Cr BOTT:** What you have said is a correct summation of where the opposition is coming from. There has been confusion about whether this limit is going to apply to residential streets or apply as well to arterial roads in rural areas. There is concern in rural areas that the higher-priority arterial roads should be exempt from the proposed 50 km/h general urban speed limit.

**Mr SMALL (STAYSAFE) :** From the point of view of the Local Government and Shires Associations, what are the most effective traffic management strategies that should be adopted to ensure compliance with a speed limit of 50 km/h? You have already mentioned that you conducted a survey but at this stage you probably have not identified those areas that you think would be best to manage the proposal. If you have a view and can answer the question, I would appreciate your comments.

**Cr BOTT:** My feeling would be that correct speed zoning is the most important requirement. In other words, as I said in answer to a question from Mr Jeffery, I believe there would be acceptance of a lower speed limit in residential streets. I conducted a personal survey around my own town yesterday in order to gauge the feeling. I received very strong support which is in line with what Mr Small said earlier that there is very strong support in residential areas for a 50 km/h general urban speed limit.

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I believe the most important thing is to get correct speed determination for the right category of road. The next issue would be enforcement. There is a difficulty with enforcement and I believe the high priority involved in that is probably education. As I said earlier, that is why a definitive proposition needs to be developed in which local government is involved as a partner so that there is a degree of ownership of the whole process. Councils are involved in the process and it is theirs, rather than not understanding what is entailed.

**Mr SMITH (STAYSAFE):** I do not know whether you have sufficient information from the Roads and Traffic Authority to answer my question, which is very specific to the Mosman area where the trial has been conducted. What information should motorists encounter when they leave a major road or sub-arterial collector road and drive into a local or residential street? Have you undertaken a study of that issue?

**Cr BOTT:** I have not, and there is a difficulty with that. I believe the most important thing is signage and appropriate line marking to indicate the change to traffic conditions occurring at that point. With a reduced speed limit obviously there would be opportunity in new subdivisions to create narrow carriageways and grassed verges which would be the desirable way to go, particularly in residential areas. We have actually been doing some of it as we redesign and redevelop features,. There are all sorts of things one can do and I need not go into great detail. One can snake the carriageway and have a retention basis for stormwater drainage in the grassed areas, swale drains and what have you rather than moving it rapidly through the stormwater.

There is an enormous amount of opportunity in new design but the difficulty is that most of the streets have been here and will be here for a considerable length of time. They are designed with width of carriageway and, particularly in the area I come from and in rural areas, with straight construction. With the resources that are available the probability of their being redesigned in the foreseeable future is certainly minimal. In that context I would say that the most important thing is signage and line marking.

**The Hon. J. H. JOBLING (STAYSAFE):** Following on from Mr Smith's question may I just draw you out a little. Taking into account the associations' views and your own experience in local government, what are your views on the implications of a possible lower residential speed limit, firstly, for residential planning and street design; and, secondly, directly in relation to local government traffic planning and practices?

**Ms NEUHOLD:** This is an issue that is quite technical and, unfortunately, the associations are unable to answer at present. We have sought views from several councils but unfortunately have been unable to produce as technical an answer as the Committee requires. There are several implications for the environment and urban form which councillor Bott addressed previously, which need to be addressed on a broader scale initially and then brought down to the technical perspective of individual councils. We also believe this should be taken to a high level, and Mr Allen may care to expand.

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**Mr ALLEN:** A lot of work on urban form is currently being undertaken by the Department of Transport. The Department is considering a range of issues such as public transport, access, environment, amenities and security. I certainly think that the 50 km/h general urban speed limit fits very nicely into the integrated urban form objectives they are trying for. I would certainly recommend that the Committee should invite the Department of Transport to give evidence about what the Department is doing.

**The Hon. J. H. JOBLING (STAYSAFE):** It is pleasing to note that work is being done and that the technicalities are being examined and that councils are reporting back. Are you able to give the Committee any guidance as to when you might find yourselves in a position to give the Committee the advantage of that report? I realise it is an estimate.

**Mr ALLEN:** Probably in three or four weeks we might be able to provide a small report to the Committee.

**The Hon. J. S. TINGLE (STAYSAFE):** Having read the draft submission, what comes through to me is that again and again the question comes up of the practicability of enforcement, which is something you touched on yourself. It seems to me if we remember why we are looking at reducing the speed limit, obviously we are looking at safety and suburban amenity and urban amenity generally, I suppose what we are asking is whether the difficulty of doing it will be justified by the benefit that comes from it? It seems to me the only way to work out what the benefit is by a process first of all, of evaluation which you obviously say should be more widespread and I agree with that, then monitoring it and then enforcing it. How should we go about evaluating it and monitoring it? Do you believe we can actually enforce a 50 kilometre limit when we cannot enforce a 60 kilometre one now?

**Cr BOTT:** I think the answer to the evaluation is that what you have already touched upon, that there does need to be extensive trialing in various localities. The enforcement of it is difficult, I do not deny that, I think probably you have confronted that yourself. As you correctly said, if we cannot enforce a 60 km/h speed limit in a residential area how are we going to be any more efficient or effective in enforcing a 50 km/h speed limit in the same situation? The answer is, of course, we will not be any more effective.

This is a personal opinion, bearing in mind the problems I have got with the policy positions of the two associations being divergent, notwithstanding that there has got to be, and there is going to be, greater amenity in the residential areas by the reduced speed limit and certainly there is going to be greater safety. Even if the enforcement provisions are not improved there is no doubt that the end result, in my view anyway, will be that you will get a safer residential environment and you will get, particularly in new residential areas, a more attractive amenity in terms of the residential situation. I think that the enforcement will not be improved, that is my view anyway and I cannot see why it can be improved until you increase your policing.

**The Hon. J. S. TINGLE (STAYSAFE):** When you talk about more widespread evaluation and

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monitoring and so on, do I gather that you suspect that if you try to, as we are doing in Mosman and North Sydney, and then say in a satellite town like Campbelltown, and then say in places like Wagga Wagga, Tamworth and Orange you would get different results in terms of compliance and effective enforcement?

**Cr BOTT:** I am not sure and that is why I think you need to try to find out what the result is going to be. The other reason I want a trial is that, as I said earlier, through the very process of trialing it there is going to be involvement of your local community, particularly in local government and, I hope anyway, the local traffic committee in the establishment of the trial program. There is going to be press about it, publicity and awareness so that when you come to actually introducing it, instead of it being by legislation tomorrow we go from 60 to 50 and everybody, as they currently do with every piece of legislation, throw their hands in the air and say, "We are not going to be told what to do. We have been driving at 60 kilometres and why should we change?" There is going to be a real appreciation by the people out there in the cities, suburbs and regional areas and the rural areas as to why it is being done and the necessity for it. That is really the real value of trialing; it is part of the education process.

**The Hon. A. B. MANSON (STAYSAFE):** Do local councils have as a matter of course maps of defined road hierarchies for urban areas within their local government areas, or will these road hierarchies have to be established or clarified as part of the implementation process of a 50 km/h general urban speed limit?

**Cr BOTT:** It will vary from local government area to local government area. I am not certain about the urban areas, perhaps David might speak in greater detail there, but in the rural areas it would not be difficult to create a hierarchy. Again I think the important aspect of it is that in development of the hierarchy if it is not currently there, there needs to be very heavy involvement of the traffic committee because obviously it concerns technical people, the Roads and Traffic Authority the police and the engineers as to what the hierarchy should be. It is not a difficult task, no. I am unclear in my own mind as to whether it currently exists across the State but I suspect it would not. There are local government areas where currently it will exist but others where it will not exist.

**Mr MILLS (STAYSAFE):** If a decision were made to introduce a 50 km/h general urban speed limit what role would local councils expect to have in the determination of appropriate speed limits, signage, road treatment and enforcement measures?

**Cr BOTT:** Again I would think that the level of involvement that we would want to have would be through our traffic committees as a major participant in the development of the hierarchy and that is basically it.

**Mr MILLS (STAYSAFE):** Signage?

**Cr BOTT:** Signage, that is right.

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**Mr MILLS (STAYSAFE):** Enforcement measures, the same thing?

**Cr BOTT:** Not a lot of involvement in enforcement measures because really it is not a role of local government, it relates primarily obviously to police enforcement.

**Mr MILLS (STAYSAFE):** The police are on the traffic committees anyway.

**Cr BOTT:** That is right.

**Mr ALLEN:** The other thing is also that there are a lot of road safety officers who are currently in councils at the moment and they would certainly have a role in terms of education and ongoing results in schools and stuff like that to educate the local community. I think local government would have some responsibility.

**Mr MILLS (STAYSAFE):** The willingness of all the local councils to accept and cooperate with the implementation of the 50 km/h general urban speed limit would be necessary for that general lower speed limit to be successful. How can we convince those local councils who are opposed to it at the moment that the new speed limit is desirable and would help to save the lives of their people?

**Cr BOTT:** I think the answers I have given earlier probably cover this, but there is one other that does come to my mind and I do not know whether we are going to come to it or not and that is the issue of cost of the signage of the process. That has been a major negative right across the spectrum. The answer I would give to that is that in this group anyway I am the only one that has been here long enough to remember when the give-way signs came in. I suppose there are many of the parliamentary members that do but the process that was involved then, and I think it is appropriate for this one again this time, was done through a specific vote of the Roads and Traffic Authority. Councils went out and put up the signs without any add-on costs at all but the cost of the signage was supplied by the Roads and Traffic Authority.

There are two ways you can do it, actually. I think a preferable way to do it would be to actually take out a government contract for the production of the signs and then councils again, according to the number of signs that they require, requisition against that government contract for the supply of the signs and the councils meet the cost of erection and what have you. If you like it is a shared arrangement. Wherever you go it is thrown up that we are carrying the cost of this, that and the other thing and the more we spend on this, it is going to be less we are going to have to spend on roads or something else. That is one thing that I think will need to be addressed.

**Mr SMALL (STAYSAFE):** The signage was very strongly brought out in our run down through the Riverina. Councils were all very concerned in that area and I think what Councillor Bott has suggested is the only fair way to go. If the government is going to bring in new laws, it is pretty hard on councils to be able to try to meet the costs. I think that is a very good comment. You might recall it was mentioned about the signs being painted on the roads with the

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50 km/h as being much clearer to a lot of people and there would be that cost effect too.

**Mr JEFFERY (STAYSAFE):** On that, at an earlier meeting with the Roads and Traffic Authority I think that was mentioned, there would have to be an incentive to councils again in this partnership on costs quite obviously. I will have to go back through the minutes but I think there is that acceptance that there would need to be a sharing of the cost involved.

**Mr HARRISON (STAYSAFE):** I am well aware that local government is pinned down to a 2.7% increase which is more than likely slightly below the CPI anyhow, and there would be a substantial cost if it came down to putting pivotal impediments and so on in place. I certainly agree with what Mr Small has said: that if the government is going to come down with a policy like this there should be a help to local government for the cost. In recommendation number three you are saying that local councils should be fully compensated for the implementation costs. I agree with you completely, it should be some sort of shared arrangement. Since it is our initiative we, the government, should be forced to face up to some of the costs, if not all of the costs.

In relation to recommendation four, the further trial of the 50 km/h be completed, who is to oversee these trials? If there is a cost involved in enforcing the 50 km/h general urban speed limit, obviously there is going to have to be some signage produced just for that particular purpose. It may be if not permanent but some physical impediment put in place, at least sandbagging and that sort of thing that might act as an impediment to stop people doing their 60 km/h or 70 km/h. Who is to meet the costs of this and more particularly who is going to oversee the trial and say whether it is a success or not? Is it the police, the local council or the Roads and Traffic Authority?

**Cr BOTT:** Obviously the Roads and Traffic Authority and the police would both need to have a heavy involvement. Again I think if you were doing it to make it work effectively it really needs to have all the players involved in it and therefore the traffic committee needs to have a fairly heavy involvement in the development of it. As to the cost of it, obviously it being a trial I think it would have to be met, it would be unlikely to get support from local government to meet the cost of it on that basis if it is to be a trial. I would say it would have to be government who would have to meet the cost of it. I would see the oversight and development of it would fall, in my view anyway, most appropriately to the traffic committee which does involve all the major players; local government, police and the Roads and Traffic Authority.

**Mr SMITH (STAYSAFE):** I think there should be a stronger emphasis on local government as the community representative. As you said a little while ago it is as much an amenity to the community as a safety measure and probably more so in the urban areas of Sydney.

**Mr HARRISON (STAYSAFE):** There are a lot of things local government would like to be involved in if they had the financial capacity to do so, and they clearly do not have that capacity. State governments have got the habit of drawing them into things even on a dollar- for-dollar basis and that drastically reduces their dollar—

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**Mr SMITH (STAYSAFE):** No, you have misunderstood me, I am not talking about the cost of it, I am talking about the assessment of the program. To my way of thinking the police would be more involved in the implementation and fining and so on whereas if you are going to have residents' input it should come through the council as far as the benefit of living in the area is concerned.

**Cr BOTT:** As to who is going to oversight it, there is another group which has just occurred to me that we have completely overlooked and that is that we now have in existence a liaison committee between local government and the Roads and Traffic Authority and that consists, if you like, of the presidents of our associations together with the principal executives of the Roads and Traffic Authority. That body could be an appropriate body to determine where suitable sites would be for such a trial to take place to actually locate the sites and then to involve their regional managers and traffic committees and what have you. That probably would be an effective way to go into the development of the trial.

I would say one other thing and that is in November the National Australian Transport Council is to meet. I think there will be a determination there as to whether there is to be at a national level a general urban speed limit of 50 km/h. I have some concern for the reasons I have stated earlier, ownership and all the rest of it, that probably New South Wales needs to do further trialing and further education rather than rush forward with the November deadline.

**Pedestrian Council of Australia witness and Sydney City Council witnesses**

Mr Harold Charles Wolfe Scruby, Company Director, Chief Executive Officer and Acting Chair  
Cr Julianna Walton, Councillor, Sydney City Council  
Mr Leonard Paul Thomas Woodman, Road Safety Officer, Sydney City Council

**Mr GIBSON (CHAIRMAN):** We have not received a submission from the Pedestrian Council of Australia. Do you have any documents you wish to table today?

**Mr SCRUBY:** Could I table them as I talk, Mr Chairman?

**Mr GIBSON (CHAIRMAN):** : Yes. Cr Walton will table the submissions from Sydney City Council?

**Cr WALTON:** I will.

**Mr GIBSON (CHAIRMAN):** Mr Scruby, I would like to congratulate the Pedestrian Council of Australia on its great initiative, which has been needed for a long time. Do you wish to make an opening statement?

**Mr SCRUBY:** Thank you. I will give a background of the Pedestrian Council of Australia and then answer the questions of the committee. About 18 months ago, following problems concerning Middle Harbour Public School in trying to get some relief for pedestrians, particularly young children, I by chance spoke to senior people at the National Roads and Motorists Association who had similar concerns. We decided to have a look at whether there was a need for an organisation which represented pedestrians.

We contacted the police, the Roads and Traffic Authority, and a lot of other interested parties, including STAYSAFE. We are very grateful to the Roads and Traffic Authority and the NRMA that they put some money into commissioning a report on the need for a pedestrian advocacy group. I table that report, which was completed about nine months ago by an organisation called Keys Young. There was a very strong recommendation, and with that came incorporation. In fact, well over 100 organisations were interviewed and 99 of the 100 said there was a strong need for a pedestrian advocacy group.

A lot of meetings with various other organisations followed and we then decided to set up the Pedestrian Council of Australia. Most of the people I will mention now have formally endorsed and supported the Pedestrian Council. All of the organisations have attended our meetings and support us informally; some are waiting for written acceptance. The council was incorporated about two weeks ago. Its patrons are Dame Leonie Kramer and Sir Laurence Street and its

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supporters include ACROD, Australian Institute of Urban Studies, Australian Tourist Commission, Australian College of Road Safety, Children's Accident Prevention Foundation, which is known as KIDS SAFE, Combined Pensioners and Superannuants Association, Council on Aging, Federation of Parents and Citizens Association, the NRMA, the New South Wales Parliamentary STAYSAFE Committee—which has been attending as an observer rather than a member—Paraquad, People Against Drink Driving, Royal Australasian College of Surgeons—Trauma Committee, and the Sydney City Council. Our honorary solicitors are Minter Ellison and our honorary auditors are Pannell Kerr Forster.

Within two weeks we will represent six million pedestrians in this State and 18 million in this country. I am sure you will be seeing more of us. This is our structure and our background report, why we exist and what we want to achieve, which I will table,

**Mr GIBSON (CHAIRMAN):** What effect will the 50 kilometre speed limit have on the people you represent?

**Mr SCRUBY:** It would have a major effect. There are approximately 350 pedestrians a year killed on our roads. That is a tragedy no one has to question. I think everyone round this table knows the slower a vehicle travels the less chance of injuring a person, a human being, a body, flesh and bones. Clearly we cannot have vehicles travelling at zero, but similarly we cannot have vehicles travelling at 100 km/h down our streets. The 50 kilometre zone is a compromise and in most areas almost becomes the default speed that would suit most people. It is a speed also at which people will end up at their destination in no less than 15 to 20 seconds later. That is not a great sacrifice to make if it means a life or a limb.

Perhaps I could read the prepared responses to the questions you put to us. The first question was how we sought to reduce accidents and the amenity and safety of people, particularly children and the elderly. It was very interesting to see in the *Sydney Morning Herald* today how much our population will be aging in the future and how much more difficult it will be in 20 years' time for people to cross the road. Point one, there is much evidence to show that a reduction in speed means a reduction in the severity of injury to a pedestrian. As examples I pass around the Roads and Traffic Authority submission to STAYSAFE, the UK speed kills campaign, and a German study.

**Mr GIBSON (CHAIRMAN):** We have many witnesses before us today. Would you table those responses and we will ask questions off the cuff?

**Mr SCRUBY:** The best thing I could give you is this German study. Admittedly it does not give an exact correlation of 50 km/h to 60 km/h but it shows going from 54 km/h to 64 km/h the likelihood of death increases from 45% to 70%. Every death on our roads costs our community about \$700,000. That does not include the trauma and the tragedy it inflicts upon the families. I have not been able to find a better example than this German study. Mr Woodman will talk after me and he has studies from Helsinki which show very similar results. I ask you to note that from

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54 km/h to 64 km/h the likelihood of death is increased from 45% to 70%. I think that chart shows it all.

**The Hon. J. S. TINGLE (STAYSAFE):** There is an old saying that a pedestrian is someone who has found somewhere to park his car. Do we define a pedestrian as anyone on foot on a public road?

**Mr SCRUBY:** We have gone a bit further than that, Mr Tingle. We see pedestrians as people in wheelchairs and also people in these new motorised electric scooters. It is very important to define these people as pedestrians. I know the word "pedestrian" comes from foot but it is important that we see a person in a wheelchair as a pedestrian — particularly while the Paralympics are on. We are starting to see more and more of the community in these electric wheelchairs and these people occasionally have to cross streets as well.

**The Hon. J. S. TINGLE (STAYSAFE):** That is what I wanted to know. It seemed to me the definition should be wider.

**Mr SCRUBY:** Perhaps the committee might like to define pedestrian.

**Mr WOODMAN:** Mr Scruby tabled a study from Germany. I provide copies of two documents: one an article from a magazine about transportation and engineering entitled "Driving speeds and pedestrian safety in the city of Helsinki". They have done a lot of studies using video cameras at junctions and from that have determined that lower speeds were necessary and also the vehicles that needed to be watched were the ones travelling on their own, not in a pack or platoon, as they refer to it. The second is a paper submitted to the Society of Automotive Engineers in the United States by the University of Zurich. It is a full report on the speed limit reduction from 60 km/h to 50 km/h linked with pedestrian injuries.

Just a slight addition to that. The most recent copy of *New Scientist* informs us that Saturday was the 100th anniversary of the first pedestrian to be killed by a motor car, at Crystal Palace in England. That motor car was not travelling any more than nine miles per hour, which is slightly under 16 km/h. I provide copies for the Committee.

**Mr GIBSON (CHAIRMAN):** That is an interesting story because there were only three cars on the road when that pedestrian was killed, so it can happen anytime. Cr Walton, would you like to give a response on behalf of Sydney City Council at this stage?

**Cr WALTON:** I table a letter from the Lord Mayor, Frank Sartor. The purpose of the letter and my appearance is to reinforce the fact there are pedestrians in high concentration on non-residential roads. I know the focus of this committee is on the question of speed limits on residential roads but the Lord Mayor and I thought it was important that we promote the fact that there is a very high concentration of pedestrians in places like the city centre, which would be a key example, and also in all the former high streets throughout Sydney. There were some press

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reports which intimated as a trade-off for lower speed limits and more protection for pedestrians in residential streets there might be higher speed limits on so-called arterial roads.

You need to take into account a great deal more than the status of a road under the guidelines of the Roads and Traffic Authority. The mere classification of a road as arterial does not mean that it does not have a high concentration of pedestrians. Indeed, in some cases you might expect it to be otherwise, because arterial roads are roads like Military Road, Mosman, and Parramatta Road, Leichhardt, which are major shopping streets; the city centre being the heart of it all. I will show you something I am about to table, which Len could expand on if you need him to. We have a problem with pedestrian deaths and pedestrian accidents on non-residential roads. We also had a problem on mixed residential and non-residential roads in Millers Point until the introduction of a 40 km/h speed limit. Len is just showing the pedestrian accident record, which is summarised on this sheet.

In Millers Point the City Council, with the cooperation and assistance of the Roads and Traffic Authority, introduced a 40 km/h speed limit after two women were killed on George Street North and in the vicinity of George Street North. We would like to be reassured that a general speed limit of 50 km/h would not override the lower speed limits that have been introduced by us and by other councils in areas in which we believe they are appropriate. The Committee needs to ensure that we end up with lower speeds, not just lower speed limits. To that end, for lower speed limits to translate into lower speeds you need enforcement and reinforcement by physical messages that these are lower speed roads.

**Mr GIBSON (CHAIRMAN):** The Committee is very heartened to hear support today for the 50 km/h speed limit from just about every sector of the community. But the question that has come up many times during the hearings is the enforcement of such a limit. Do you think such a speed limit can be enforced?

**Mr SCRUBY:** A wonderful saying was brought to my attention by Barry O'Keefe, who was the mayor when I was at Mosman Council. He made the point that non-enforcement of laws encourages their disobedience. If we are thinking of bringing in 50 km/h zones we have to do it in tandem with education and enforcement. Without both it will fail. We would be 100% behind the establishment of a 50 km/h zone in residential streets, but it has to have proper enforcement. Let me illustrate how bureaucracy can go a bit silly. For several years 40 km/h zones have applied outside schools. It was through the Hon. Peter Collins and the assistance of the Hon. Bruce Baird that we finally got a 40 km/h zone established outside the Middle Harbour school. It took years to break through the bureaucracy to establish that it was an important zone. When we won the 40 km/h zone outside the school I pointed out that it still was not allowed to be enforced. That occurred in March 1995 and it was reported in the *Sydney Morning Herald*. In the meantime I wrote through the Hon. Michael Photios to the Minister asking why new speed cameras could not be put in place. May I quote from the letter I received from Mr McManus, the Parliamentary Secretary for Police, writing to Mr Photios on behalf of the Minister for Police. These words are important:

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Speed cameras cannot be used within 200 metres of a changed speed zone.

I do not know whether he has the right word, but “cannot” is not the word I would have used. The letter continues:

Bearing this in mind, and the fact that many school zones are of such short length, it is inappropriate to use camera technology. Specifically, the placement of a police vehicle in a school zone may cause a traffic hazard or adversely affect the safety of children. The cameras are used where it has been established that they are able to make a significant reduction in road trauma.

Please assure Mr Scruby that policing of speed limits in school zones is enforced through the issuing of a driving contrary to notice rather than exceeding the speed limit infringement notice.

This is a copy of the notice: people are fined \$99 and lose three points. It is a nonsense. I have spoken to many police about this issue and they would be very keen to enforce the law in the appropriate zones. Technology is with us today: laser speed cameras can detect these speeds. As a community we have to get used to changing speed zones. I do not think there is a person in the community who would object to someone being booked for speeding in a school zone. Our children are our greatest asset. I am sorry I did not bring a video today, but I did not realise you had the equipment. About two weeks ago there was a wonderful piece on Ray Martin about how young people up to the age of 12 have no, or very limited, peripheral vision.

All the children are under the age of 12 in the school zone we are discussing here, yet we are not allowed to enforce the 40 km/h speed limit where they cross a busy four-lane street. It is an absurdity. The *Sunday Telegraph* again raised this issue in April, and I will hand around the article. But there is still no enforcement. Apparently a tripartite group decides where speed cameras will be used. That is a good thing in one respect because we have to use our resources as wisely as possible. I might be wrong, but I think that a speed camera would probably pay for itself in its first week of operation. I do not know the inner workings of the Police Service with the Roads and Traffic Authority and Consolidated Revenue, but it seems to me an accounting system has been set up which makes the Police Service pay for the cameras, but the fines go to Consolidated Revenue without passing through the Police Service.

We would like to see a speed camera outside every school. We have to protect our children. It is legally a nonsense that police will issue this notice because it requires a police officer to try to judge the speed of a vehicle visually then go to court to prove it. Any barrister would knock that on the head in a minute. We need technology. If we cannot enforce 40 km/h zones using modern-day technology, how will we enforce 50 km/h? I live less than 200 metres from Spit Road, which is a 60 km/h or 70 km/h zone. As soon as people turn into my street it is a 50 km/h zone. Because I am 200 metres from Spit Road the police cannot enforce the speed limit outside my house. What use is it to me? We must get to a point where we understand that enforcement is a major part of making the system work.

**Mr GIBSON (CHAIRMAN):** STAYSAFE 26, published in November 1994, made recommendations to the Parliament along those very lines. It seems quite simple: move back 200

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metres the 40 km/h sign in front of each school. That would correct the problem. I cannot see why we are taking so long to fix the problem.

**Mr SCRUBY:** It may, but then it creates another problem if we move to 50 km/h because, as I have just highlighted, it means that every time you turn out of a 60 km/h zone into a 50 km/h zone it is 200 metres before you can be accused of breaking the law.

**Mr GIBSON (CHAIRMAN):** We will move the signs another 200 metres.

**Mr SCRUBY:** Let's just move Spit Road. My other recommendation relates to your comment recently that we should take sputum tests for drug driving.

**Mr GIBSON (CHAIRMAN):** I know what you were going to say.

**Mr SCRUBY:** Take them down at the Spit. Use Spit Road. I also wanted to bring to your attention the culture that exists within our community. One of the best cars on the road in terms of passenger safety has to be Volvo. The company has done more work in that area than any other company and spearheaded it throughout our community, yet a few years ago it got the image of being driven by old men wearing hats. We have had six Volvos, so I plead guilty. Let me read to you what Volvo is now publishing. It is introducing the wilder side of Volvo, the 850 T5R, which is a bullet with wheels. It does 0 to 100 km/h in seven seconds and out on the autobahn it can do 245 km/h, which all proves that the T5R is sure to help you perform well in another race, the rat race. We have complained about this promotion to the Advertising Standards Council, but we are knocked back every time. STAYSAFE investigated kids washing windscreens, yet Legal and General is now running an ad that shows a couple out on the road washing car windscreens and making a big joke of it. We have also complained about that to the Advertising Standards Council, but it has been knocked back. Yet the rules of the Advertising Standards Council say it cannot have ads that promote breaking the law. I hope the STAYSAFE Committee starts to look at some advertisements in the media to make people realise that this sort of image, this sort of culture has to go. In 10 years' time such advertising will be as stupid as cigarette advertising is today.

**Mr HARRISON (STAYSAFE):** I do not think it could get more stupid than it is already.

**Mr SCRUBY:** A bullet on wheels. What do bullets on wheels do?

**Mr GIBSON (CHAIRMAN):** We recently visited Volvo in Gothenburg and we brought up that very subject. The clear answer from Volvo was that it was done from a marketing point of view following research so that it could hold its share of the market. Volvo is now advertising speed, not safety. It is the first time it has changed its advertising.

**Mr SCRUBY:** The TV advertisement we complained about depicted a Volvo travelling all over the road, chased by a police car, finally becoming airborne. The ad says, "We have lift off." This

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is not the type of culture Australia needs. We have to slow down the vehicles. The maximum speed limit in Australia is 110 km/h on freeways and 100 km/h on the open roads. We cannot have vehicles doing 245 km/h or even promoted as such. We have to bring down speed limits. Nought to 100 km/h in seven seconds is a school zone; they are doing 100 km/h before they get to the end of the zone.

**Mr GIBSON (CHAIRMAN):** I take it from what you have said this morning that you support the 50 km/h speed limit?

**Mr SCRUBY:** Yes. We have followed Victoria in a lot of ways, and I think it offers a lot of out-of-the-circle thinking. If you exceed the speed limit by 30 km/h in Victoria you lose your licence. In New South Wales it is 45 km/h. That would mean if you did more than 70 km/h in a school zone you could potentially lose your licence. People would start to think twice about speeding through school zones. It means that under the proposed legislation if you do more than 80 km/h in a residential street you lose your licence. That would make people think twice about speeding in residential streets. If you can emulate Victoria and make that part of your considerations, please do so. This has to happen quickly. You are all familiar with Saint Augustine's prayer, "Lord, give us chastity and continence, but not yet." We should not procrastinate. Let us get on with this; the Committee knows that the wider community wants this.

**Mr JEFFERY (STAYSAFE):** You said that you support a 50 km/h general urban speed limit. In view of your passionate plea today, do you believe that speed limit should be lowered to 30 km/h in residential streets, instead of 50 km/h?

**Mr SCRUBY:** Yes. In our submission we state that there is room for all types of lesser zones. We are not saying that because we bring the standard down to 50 km/h, that suddenly gives us reasons to make other streets higher. All areas outside residential streets and inside should be considered on their merits, and in consultation with the community generally through its traffic committees, the NRMA, the Roads and Traffic Authority, the Police and the Pedestrian Council. Once these speed limits are established proper enforcement must take place. No-one should be allowed to suggest that it is revenue raising; that is absolute nonsense. As the police force gets its image back and starts to become the organisation that we want it to be, it should be left unfettered to enforce. It is important to emphasise that random use of these cameras and technology must be the way that we will enforce the law. At present everyone knows where the cameras are located.

Mr Woodman told us that in the United Kingdom speed cameras are set and fixed in certain black spots. The cameras are simply left there full-time, like we leave a red light camera there. The cameras stay there permanently; they have had a marked impact on the accident rate. But in the same instance the police must be able to use speed cameras randomly, so that when you travel in a back street you can expect to see a camera, just as much as you might see a drink-drive bus. Enforcement should be random, not prescribed. No-one should have the right to tell the police where they can use these things; the police should be allowed to use them where they want, so

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that the element of surprise is always there all of for us. I wonder whether the Committee could look at the cost of speed cameras, how much revenue they generate and why people say that they do not have the funding and the resources to use speed cameras. If you privatise them you would have a thousand of them out there tomorrow, and they would make a big profit.

**Mr GIBSON (CHAIRMAN):** Would you like to add anything else before we close this part of the hearing?

**Cr WALTON:** Two things occurred to me as Mr Scruby was speaking. First, we need to remember that kids are not getting killed just outside schools; they are getting killed on their way to and from school on various sorts of roads well outside the technical school zone. They are killed near their homes, they are killed near their shops and they are killed when they get off a bus close to their homes. We need to make them safer everywhere. Secondly — Mr Scruby said this, and he will forgive me for mentioning it because it is important — you cannot use enforcement as a revenue raising exercise if the major penalty is points or loss of licence, rather than a monetary penalty. Apart from the fact that monetary penalties do not necessarily address the real problem, it is moving towards restrictions on your right to drive the vehicle in future, which is perhaps a better targeted and less open to contention kind of enforcement.

**Mr SMALL (STAYSAFE):** I do not think that the Sydney metropolitan area has many roundabouts. As your organisation is nationwide, do you have any comment to make about roundabouts? Roundabouts are marvellous for sorting cars but they do not sort people. Do you have any comments to make about safety aspects in relation to roundabouts?

**Mr SCRUBY:** We are in a catch-22 with roundabouts. There is no doubt that they are a wonderful device for vehicles, and I have been a strong advocate of them. A representative of the Council on the Ageing has expressed concerns for the council's members. Disabled or elderly people who are trying to cross at a roundabout must have 10 sets of eyes, because the whole culture is to get vehicles through quickly. The driver is always looking to his or her right and the pedestrian is crossing to his or her left. It is a difficult problem. Sooner or later you will have an inquiry into roundabouts because they are growing at a geometric progression through our cities. I do not know the answer. I do not know how you are meant to cross at a roundabout.

**Mr SMALL (STAYSAFE):** In country areas crossings have been moved away from roundabouts — it may be a chain or 50 metres down the road.

**Mr SCRUBY:** Elderly people who have difficulty walking must now cross further up the road, although they used to cross at the roundabout. We must think this one through as we get older and want to walk more — we will be promoting lots of walking.

**Mr HARRISON (STAYSAFE):** If you are promoting lots of walking why not promote walking 50 metres from the roundabout to cross the road? As cars are getting faster and I am getting slower I would not dream of crossing at a roundabout.

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**Mr SCRUBY:** That might be the answer.

**Mr HARRISON (STAYSAFE):** As Mr Small said, in country towns people are crossing roads 50 metres or more in the middle of a block.

**Cr WALTON:** The trouble is that that inconveniences pedestrians if they are trying to get to a place directly across the road. If it is difficult for people to walk in the first place, you are adding a level of inconvenience for those who can least cope with it.

**Mr HARRISON (STAYSAFE):** If we must provide for pedestrians, one end result would be to remove all roundabouts. The problem is insoluble.

**Cr WALTON:** When the casino went in at Pyrmont, Sydney City Council deliberately had certain roads redesigned to remove the roundabouts because they were considered a pedestrian risk. In some cases we succeeded. You will find few, if any, roundabouts near the casino because they were considered a threat to pedestrian safety.

**Mr SCRUBY:** I believe that the national road rules contain a recommendation that vehicles give way to pedestrians crossing on their left at corners. If that is the case, it will create double jeopardy at roundabouts. I do not know the answer, but I think that we should seriously consider the problem.

**The Hon. J. H. JOBLING (STAYSAFE):** Mr Scruby kindly presented to the Committee a graph entitled "Probability of pedestrian injury and death". One segment is transposed incorrectly, the figures are incorrect or there is a sampling error. The figures for both minor injury probability and major injury probability appear to be out of kilter with all the other figures.

**Mr SCRUBY:** I noticed that as well. I pulled this off the Internet and then did a graph on my computer. It could simply be sampling probability or a glitch. The important statistic to look at relates to deaths.

**The Hon. J. H. JOBLING (STAYSAFE):** I accept that. I simply wanted to clarify that there was not some peculiar reason that had alluded me.

**Mr SCRUBY:** These statistics are supported by the Helsinki study.

**Mr HARRISON (STAYSAFE):** I shall make another point about moving pedestrian crossings 50 metres away from roundabouts. On an equal number of occasions people would save walking 50 metres to the corner to cross and cross in the middle of the street instead. In other instances I admit that it would almost balance itself out. Some people would not walk as far as the intersection to cross the road; they would cross in the middle of the street.

**Mr SCRUBY:** You are assuming that there will be a pedestrian crossing. Ted Mack always said

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that pedestrian crossings increase rather than reduce the number of accidents.

**Mr HARRISON (STAYSAFE):** I continue to hear that. Of course, the more people crossing at pedestrian crossings, the more likely it is for someone to be knocked down. If pedestrian crossings were not there, people would cross anywhere, which would greatly enhance the number of people being killed on the roads.

## Mosman Municipal Council witnesses

Cr Virginia Erica Howard, Mayor  
Mr Scott Ronald Turner, Manager, Infrastructure and Development

**Mr GIBSON (CHAIRMAN):** The Committee has received a submission from Mosman Municipal Council concerning the inquiry. Do you wish to table any other papers during the course of your evidence?

**Mr TURNER:** No.

**Mr GIBSON (CHAIRMAN):** Do you wish to make an opening statement to the Committee or would you prefer to answer questions now?

**Cr HOWARD:** I think it would be best to have questions straight away.

**Mr GIBSON (CHAIRMAN):** What prompted your council to undertake a trial of a 50 km/h speed limit on the lower North Shore? What is the result of community concern about excessive speeds in your area? Before you answer, allow me to congratulate you on the initiative of Mosman Municipal Council.

**Cr HOWARD:** We are absolutely delighted to be a part of it. Traffic has been a major concern in Mosman for many years. Back in the 1970s we spent quite a lot of money on road closures in the area, which were highly contentious. Then in the 1980s local area traffic management schemes, particularly speed humps and chicanes, were implemented at a cost of about \$210,000, which was very divisive in the community. In April 1995 a community perception survey was carried out in Mosman. People were asked to indicate the main areas of concern in the community, and 57% of people indicated traffic issues as the main item of concern. To put that in perspective, the next biggest issue was right down to 26%, and that was a drainage stormwater issue, so you can see how important traffic is in Mosman.

The benefits of those two schemes I mentioned in the 1970s and the 1980s were not very noticeable and the community was not very happy with either of them. In 1987 we held a poll of electors, or a referendum, which showed that up to 77% of people did not favour any more speed humps, chicanes or road closures. That shows the level of antagonism towards them. In 1989 we started a campaign to introduce a speed limit of 40 km/h in residential streets, but we were told by the Roads and Traffic Authority that could only be part of a local area traffic management scheme. There was general support for lowering the speed limit but there really was not general support for a speed limit of 40 km/h; it was considered to be just a bit too low. A market survey was carried out of residents in February 1991, in which 62 per cent of residents wanted national legislation to lower the speed limit. In that survey 55% favoured a speed limit of 50 km/h in residential streets and 45% wanted a speed limit of 40 km/h in residential streets.

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At the same time we surveyed what people thought about the traffic control devices that had been implemented in the 1980s, and their level of support had gone even lower. That is why we are firmly behind the limit of 50 km/h. It would achieve what quite a lot of money had not achieved in Mosman without the antagonism and community unrest that the other two things had created.

**Mr JEFFERY (STAYSAFE):** The Committee is particularly interested in the logistic problems you experienced prior to the implementation of the trial. I understand the trial was to commence in late 1995 but did not commence until March this year. Can you outline the reasons for the delay and can you offer advice as to how these impediments might be avoided in the future?

**Cr HOWARD:** I will ask Scott to answer that question.

**Mr TURNER:** As the Committee is aware, quite a lot of signposting and line marking was carried out in association with the trial. It took us a considerable time to determine which streets we were going to treat with line marking and signs. Signs are an issue in themselves to Mosman residents; they do not like a proliferation of signs, so we deliberately spent some time figuring out exactly where we were going to put them. Once we had done that the delays were basically internal Roads and Traffic Authority problems relating to the logistics of actually putting in a large number of signs over a short time and installing a length of line marking over a short time as well. That, in combination with the Christmas break, led to the delay.

**Mr JEFFERY (STAYSAFE):** Have you any suggestions about how such impediments might be avoided in future?

**Mr TURNER:** I think it was just a matter of bad timing. As I said, all of that was done by the Roads and Traffic Authority, which was doing other things as well and could not meet the deadline. Rather than install half the signs, a decision was taken to put the whole lot back until after Christmas. I think it is just a matter of getting the timing right.

**Mr JEFFERY (STAYSAFE):** Did the Roads and Traffic Authority work in partnership with you all the time or were you on the outskirts while the Roads and Traffic Authority did most of the work?

**Mr TURNER:** The Roads and Traffic Authority employed a consultant who basically ran the show in a lot of ways, but they were very good. We had regular meetings with them at which we, the consultant, North Sydney Council and the police were involved on a fairly regular basis. It went quite well.

**CHAIRMAN (STAYSAFE):** Has the trial finished?

**Mr TURNER:** It is still under way. It is due to finish very shortly, I think in October.

**The Hon. J. H. JOBLING (STAYSAFE):** Obviously communication, whether from State

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governments or local government bodies, with residents are critical to achieve your ends. What communication strategies were undertaken to inform residents of Mosman of the change in speed limits, who was responsible for them, and how did you measure the effectiveness of what had obviously cost them money?

**Cr HOWARD:** We tried to communicate in quite a few ways. We held two public meetings, which were quite extensively advertised but very poorly attended. I think we only had 12 residents in total at the two meetings. Some people think maybe that is apathy, but I think that shows people were happy with it, so therefore they did not want to come to the meetings. I will come back to why they were happy with it. A newsletter was sent to all residents in the areas where the trial was to be held. There was an article in Mosman council's *News*, which is circulated every two months. I know I wrote a mayoral column on it in the local newspaper and there was also at least one general interest article in the *Mosman and Lower North Shore Daily* alerting people to the fact that the trial was on. As a result of all that, in the end I think we have had three letters of opposition, that is all. Mosman people are not noted for being backward in expressing their opinions. They will express it on anything else! I have had two phone calls of opposition, that is all. We have had about six letters supporting it and I think we have had about 12 phone calls from the half of Mosman that was not covered by it asking if they could have it as well. From all that, we would have to say, yes, there is community acceptance. I know this is hearsay, but from just talking to people there is an acceptance of it. It is recognised as being something that the Mosman community is very happy with and has wanted for quite a long time.

**The Hon. J. H. JOBLING (STAYSAFE):** Did council get professional outside help to prepare the various newsletters or were they prepared purely in-house?

**Cr HOWARD:** The newsletters were done in conjunction with the Roads and Traffic Authority.

**Mr TURNER:** They were prepared by the consultant, but we certainly had a lot of input into the content. There was a vetting process before they were actually put out to the public.

**The Hon. J. H. JOBLING (STAYSAFE):** If it is not a confidential figure, what sort of expenditure would this have been to council?

**Mr TURNER:** It did not cost the council anything other than staff time. The Roads and Traffic Authority funded that part of it, but I could not tell you a dollar figure.

**The Hon. J. H. JOBLING (STAYSAFE):** Having undertaken that task and proceeded to the advertising and testing of the trial, have you or are you about to undertake a testing program of its effectiveness? If so, what are you doing? If it has been undertaken, what are the results?

**Mr TURNER:** In terms of the communication strategies, there has not been anything to test effectiveness. Basically we have gauged effectiveness by responses we have received. Some telephone surveys were carried out by this consultant before the process started and there will be

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follow-up telephone surveys conducted at the end of the trial. I understand there is a content to try to gauge the effectiveness of the communication strategy.

**The Hon. J. H. JOBLING (STAYSAFE):** As you say, there have been only a couple of phone calls and letters?

**Mr TURNER:** Yes.

**Cr HOWARD:** In fact, more letters and more phone calls supporting.

**Mr TURNER:** The major response we have had is from people outside the trial area asking, "Please can we have it here?" If I can put it in perspective, more than 300 Mosman residents have managed to write to us in opposition to Optus. If they hated the 50 km/h speed limit, they certainly would have managed to write.

**The Hon. A. B. MANSON (STAYSAFE):** My questions have been partially answered, but perhaps you may wish to add something else. What has been community reaction to the 50 km/h trial? What consultative proposals were undertaken during the development of the trial? Have you analysed any of the surveys that have been undertaken?

**Mr TURNER:** As we have already said, we have had a positive reaction overall to the trial. There have been some initial speed surveys done. Obviously there were some surveys before the trial started, and there has been one set of surveys done immediately after it started. The results of those are fairly encouraging. They are showing a drop in speed, although not a large drop. There has been another set of surveys done just recently, but we do not have the results yet. One of the other things that we have been looking at is our accident rate on our local roads. We will be having a look at that as part of the trial, although it is going to be difficult to judge an accident rate on a trial over a short period of six months. However, from 1993 to 1994 there was an increase of 40% of accidents on our local roads. That was despite council targeting its black-spot areas on its local roads. We spent some of our own money and we received some money from the Roads and Traffic Authority to build things like roundabouts, pedestrian refuges, et cetera. Basically, by statistical definition we have eliminated most of our black spots on our local roads, yet the accident rate is going up. To get that rate down even further we need to target driver habits and maybe a driver education-type campaign because they are not specific locations that stand out as having a large accident rate. Things like speed and poor judgment are really the issues on the local roads. Whilst we still have black spots on our main roads, the accident rate on local roads is still going up despite spending all this money. The reduced speed limit would help in that regard. We will be looking at the accident rate at the end of the trial, but hopefully it will have an effect.

**Cr HOWARD:** One of the things that has been commented on is that the only negatives appear to have been the amount of white paint that had to be used and the number of signs. The white paint in particular seemed to offend a few people. It was nothing to do with the actual 50 km/h

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speed limit, but just the way it was signposted.

**The Hon. J. S. TINGLE (STAYSAFE):** Obviously this proposal stands or falls on compliance. There is no use bringing in a rule or new speed limit unless people observe it. I asked this question of the representatives of North Sydney Council: what have the police done or what level of enforcement has been provided? When you say you have not had much objection to the trial, is that because people agree, as we all do, that it is a good idea, but they question whether it is practical and can be done? If we are going to keep roads like Military Road at a 60 km/h speed and arterial, side and collector roads run at a 50 km/h speed, the confusion continues between two speed limits. Would it be better to have all roads at 50 km/h or separate them further? In other words, will the interest and support for a 50 km/h general urban speed limit translate into better driving habits despite that confusion?

**Cr HOWARD:** I do not think we have any statistics on whether people are driving slower except that I work at North Sydney and drive on these streets every day to and from work. Obviously, I have done a little bit of my own surveys as I go. My perception is that people are driving slower than they were before. They are not doing 50 km/h, but they are not doing the 70 km/h they used to do. They have dropped to about a 60 km/h because before this trial started I used to drive at 50 km/h just a few times to see what happened and you would get 10 cars behind you. If you drive at 50 km/h now, you do not get that happening. It is only my personal observation, but people have dropped their speeds a bit. Most people acknowledge there is a distinction between main roads and when you get off the main road. Obviously, Spit and Military roads, six lanes wide, are main roads. If the speed limit for those roads was 60 km/h, as soon as you leave them I think people acknowledge that they are into a 50 km/h zone. Obviously that is where signposting is required, as soon as you come off one of those roads. I will let Scott comment on the policing aspects.

**The Hon. J. S. TINGLE (STAYSAFE):** Have the police booked anyone?

**Mr TURNER:** Not that I am aware of, although I have received calls from residents saying that they had seen people pulled over by police. Whether or not they were issued with a ticket, I cannot comment. The police are probably better qualified to speak about their Random Road Watch, which was the concept employed to enforce the limit. Basically my understanding is that it is a reallocation of existing resources rather than additional resources.

**The Hon. J. S. TINGLE (STAYSAFE):** That prompts the question whether the existing resources are enough?

**Mr TURNER:** Yes. I think they have had problems in Mosman. Mosman is one of the smallest stations in Sydney. They only have one general duties car and they have had some problems.

**Mr SMALL (STAYSAFE):** Your trial is based on a blanket speed limit over a certain geographical area within your jurisdiction including everything except the Pacific Highway and

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Military Road. If a new 50 km/h speed limit on residential streets but not on arterial and collector roads were introduced throughout New South Wales, what would be the response of Mosman Council?

**Cr HOWARD:** Council would be fully supportive of it except that it would argue that it should also be on collector roads and probably on sub-arterial roads. Council would argue that it is only main roads where that speed limit should not apply.

**Mr SMALL:** That would certainly slow down through traffic. We are grateful for your opinion.

**Cr HOWARD:** It would slow down traffic but make for safer streets.

**Mr SMALL (STAYSAFE):** In some country areas when there has been a campaign to slow down traffic on flow-through roads motorists have diverted and travelled down urban streets. This has caused a great deal of concern and councils in some areas have installed calming or slowing devices. The suggestion is that the flow-through roads are necessary and I would be interested in your comments.

**Cr HOWARD:** Country towns may be different and would probably have less traffic volume than city streets.

**Mr SMALL (STAYSAFE):** That comparison is probably correct. I do not know about residential streets but certainly the traffic flow in most country towns would be less than the traffic flow on the main thoroughfares of your area.

**Mr TURNER:** I think the reason for our opinion is that in our area the regional or secondary roads are basically residential streets and do not run through commercial areas — Ourimbah Road and McPherson Street, for example.

**Mr SMALL (STAYSAFE):** That explains your reasoning and that is fair comment.

**Mr HARRISON (STAYSAFE):** Despite the fact that there has been very little public response to the trial taking place in your area, as you mentioned, it seems that people do not object to the idea of a lower speed limit. I have taken on board something that was said earlier. Despite attention to known black spots, the accident rate is increasing. That is also despite the fact that your observation, Cr Howard, is that people have slowed down a little. In my opinion that is a paradox.

**Mr TURNER:** That was the accident rate before the trial commenced.

**Cr HOWARD:** We have not calculated the accident rates while the trial has been in progress.

**Mr HARRISON (STAYSAFE):** Another matter worthy of comment is that people in your local

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government area apparently favour a lower speed limit but object strongly to chicanes that would physically slow up motorists. I can understand the objection to speed humps because I believe speed humps are positively dangerous. They can cause motorists to career in the wrong direction, into front yards and off the road, but I believe that chicanes and other devices such as roundabouts that force people to slow down are a good idea. If people are really committed to the idea of slower speed limits why will they not accept the installation of physical impediments to ensure that they do slow down?

**Cr HOWARD:** I should have been more specific. In any survey that we have conducted Mosman residents have always accepted roundabouts. Speed humps are disliked in our fairly narrow streets because of the noise associated with cars braking to go over the humps and going up in the gears to get through them. People who live nearby find the noise is not worth the bother. In Mosman the chicanes are regarded as more dangerous than any other device because cars are forced onto the wrong side of the road in order to get through. Even in the case of a very well-constructed chicane, if a motorist sets his mind to it he can go shooting through it at great speed on the wrong side of the road. Motorists can have great fun going through chicanes; they are quite like speedways. I have tried it a few times.

**Mr HARRISON (STAYSAFE):** People have a lot of respect for their cars. Even those people who do not have much respect for pedestrians would do anything rather than damage their cars.

**Cr HOWARD:** Installing the devices is also very expensive, whereas reducing the speed limit involves such a small expense.

**Mr HARRISON (STAYSAFE):** What oversighting took place in your trial to ensure that people were slowing down? Did people get involved in enforcement or compilation of an assessment of what occurred?

**Mr TURNER:** We have conducted speed surveys and traffic counts — they were done before the trial commenced and just after it commenced — which showed a drop in the general speed of vehicles. It varied from location to location, but there was an overall small decrease. Another set of speed surveys were conducted recently but we do not have the results of those as yet.

**Cr HOWARD:** I will be interested to see the new accident statistics when they are published, I expect they will be down a little.

**The Hon. J. H. JOBLING (STAYSAFE):** It has been suggested by some people—I do not know whether kindly or unkindly—that North Sydney and Mosman councils are considering installing calming devices and lower speed limits in order to keep motorists out of residential areas and with a view to deliberately forcing them back on to the main arterial roads, such as Military Road or the Pacific Highway. Has any work been done in relation to the number of vehicles that are traversing the major roads such as Military Road or the Pacific Highway? Has the number of vehicles increased? What travel time factor is involved? What is the average speed with the extra

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vehicles on the road? Have you encountered a gridlock situation, apart from the normal bank-up of traffic on those streets?

**Cr HOWARD:** The numbers have certainly increased.

**Mr TURNER:** I do not have any figures off the top of my head but the Roads and Traffic Authority regularly compiles data on the main road routes and I understand the volume has increased, in particular since the tunnel was opened. We have not conducted any studies of travel times through Mosman, along the main road route.

**The Hon. J. H. JOBLING (STAYSAFE):** Would you care to offer an opinion?

**Cr HOWARD:** I thought that Military Road-Spit Road had one of the slowest peak-hour travel times in Sydney, and 14 km/h comes to mind.

**Mr TURNER:** A survey was conducted recently, possibly by the NRMA. I think that someone conducts regular surveys about the slowest routes in Sydney.

**The Hon. J. H. JOBLING (STAYSAFE):** It is a little unfair to pose such a detailed question. Perhaps if the figures are available the witnesses would be prepared to send them on to the Committee.

**Mr TURNER:** Certainly.

**Cr HOWARD:** Coming back to the early part of your question. You suggested that perhaps Mosman and North Sydney councils were doing this deliberately to keep people out. One of the reasons that we want the speed limit lowered is because we acknowledge that we always will be a through suburb. A lot of the traffic speeding through Mosman is through traffic and it was simply an effort to get motorists to stay on 50 km/h so that we do not have children knocked down and pets killed all the time. It certainly was not to isolate Mosman and put up the barricades exercise.

**Mr HARRISON (STAYSAFE):** It was an attempt to regulate residential streets, obviously.

**Cr HOWARD:** I wish we could but we cannot, because we are a through suburb.

**Mr HARRISON (STAYSAFE):** You want to discourage motorists from viewing those streets as a quicker way through and prevent them from darting in and out.

**Cr HOWARD:** That is true. It may be that a 50 km/h limit would keep them on Military Road or Spit Road, but I suspect that those two roads are so slow that people will always use our back streets, no matter what.

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**Centre for Transport Planning, University of South Australia witness**

Professor Michael Anthony Peter Taylor

**Mr GIBSON (CHAIRMAN):** I am advised that you have been issued with a copy of the Committee's terms of reference, and also a copy of the Legislative Assembly Standing Orders 332, 333 and 334 which relate to the examination of witnesses. Is that correct?

**Professor TAYLOR:** That is correct.

**Mr GIBSON (CHAIRMAN):** Did you receive a summons issued under my hand in accordance with the provisions of the Parliamentary Evidence Act 1901?

**Professor TAYLOR:** I did.

**Mr GIBSON (CHAIRMAN):** The Committee has not received a submission from you. Do you wish to table any written evidence?

**Professor TAYLOR:** Yes, there are a number of reports and a short bulletin that I would like to leave with the Committee.

**Mr GIBSON (CHAIRMAN):** What role did you play in AUSTROADS project that resulted in the report into urban speed management in Australia?

**Professor TAYLOR:** I was a corresponding member of the working group that was preparing the technical report on that.

**Mr HARRISON (STAYSAFE):** What important lessons can be learned from an examination of the speed management practices in other jurisdictions in Australia and overseas, particularly regarding identification of current practices, the setting of urban speed limits and the introduction of lower local road speed limits in residential areas?

**Professor TAYLOR:** There are a number of things that we should consider. I would start by saying that the existing 60 km/h limit is too high for urban residential streets. I think many people are of that view and I am sure that is not the first time you have heard that. There are questions about how that limit came into being in this country in the first place. They are very interesting and I believe there have been some historical accidents along the way, in terms of the way that the speed limit was changed.

Modern speed management practices are tending to want to identify the appropriate travel speed with the particular road that the traffic is moving on, and therefore differentiating between streets according to a functional hierarchy with local access streets at one end, arterial roads at the other

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and freeways beyond that. We have seen attempts to rezone roads, particularly on the arterial road system where it is felt that speeds higher than 60 km/h are justifiable. The question then is: what about lower speed limits for less important streets, streets that form more of an access function rather than a traffic throughput function?

Of course, questions about how one sets a speed limit are very complicated and cover a large number of factors beyond the movement of traffic. I think that is something not commonly understood in the community. For instance, if I wanted to simplify I would argue that it is the amount and type of pedestrian activity one could reasonably expect on a street would be a major determinant about what the speed limit on that street should be. In a residential environment one can expect reasonably high levels of pedestrian activity, particularly by those people who are perhaps most vulnerable as pedestrians — the young and the elderly. Therefore, the speeds of vehicles using those streets might well be set in accordance with those other road users who are likely to be present in that environment. That is one of the criteria that is used in assessing speed limits. There is a range of issues from the residential street point of view, the local road, it is the other land-use related factors that should have the majority of the weight, whereas one might view an arterial road differently. There is the question of shopping centres and so on those roads.

**Mr MILLS (STAYSAFE) :** The Committee understands that you played a pivotal role in the Unley speed trial. Would you please describe the trial and its outcome and tell the Committee what we can learn from it that would enable the successful transition to a lower general urban speed limit?

**Professor TAYLOR:** The Unley speed trial involved a 40 km/h limit on a small residential area in the city of Unley in metropolitan Adelaide. I was asked to chair the working party which oversaw the initial trial of that special speed limit. The other aspect of that trial was that not only was a lower limit imposed in the area, but that the limit was enforced by a systematic program of speed limit enforcement by the South Australian Police. In fact, we were using the frequency of enforcement in the area as one of our control variables. Originally our intention was that we started with low enforcement and then wound the enforcement up in measured doses. It was a scientifically designed experiment and we had to curb the enthusiasm of some of the police officers incidentally who wanted to do more than the dose which would be effected. We had very strong cooperation from the police, let me say this straight away, perhaps a little too much occasionally because we needed to measure that as a scientific experiment that was being conducted.

We were given certain criteria which would rate the enforced speed limit as an absolute success if we could achieve certain levels of speed reduction. They were regarded as the levels of reduction in speeds that you would have got had the area been treated with physical devices. Some streets in the area had already had physical treatments but most had not. There were a number of what we regard as problem streets which were in line to have physical treatments, humps or whatever, put on them but the locals did not want that, I guess mirroring the comments we have just heard about attitudes to such things in Mosman and elsewhere. The locals said,

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"Look, we have had humps enclosures and all of these for nearly 20 years, isn't there something else you can do instead" and this idea was put forward.

The outcomes are interesting. Firstly, there were statistically significant reductions in speed in the area. However, whether these reductions are altogether practically observable when we measured them scientifically is another question. It is a bit like saying we could absolutely determine that 98 is different from 100, but for practical purposes, if that was your score in a cricket match, does it make all that much difference? Because of the way the data was collected we found very strong evidence of reductions in speed. The major reductions occurred as soon as the speed limit zone was put in place and those reductions were maintained throughout and there were, in fact, continuing reductions but at a very much reduced rate over time. At the same time we were also doing attitude surveys, a sequence of surveys of the people who lived in the area as to what their opinions and views of the success or otherwise of the lower speed limit were.

In fact, the people to begin with were very much in favour of the scheme. I have got some exact statistics here but you can say that 80% of the population in the area, people who lived in the area, were in favour of the lower speed limits and that percentage was maintained throughout the survey, throughout the study period and the official trial ended at the end of 1993. However, the speed limit area has remained in place and its popularity amongst its local residents has also been maintained over that time. We are told, and we have to get data here from Unley Council who have continued to monitor it, that in fact the reductions were maintained. Certainly additional treatments have been taken into account in the area and these are to do basically with informing people that they have entered a different traffic environment. Although the area was signed according to the established Australian standards around the periphery, there was some difficulty for people inside it to perhaps remember. You turn a corner and suddenly your old habits about how you drive come back. I could feel myself doing it when I drove through the area, "No, I can't do that."

There have been now a lot of repeater signs put into the area to give people continual reminders about it. In terms of the scientific criteria for speed reduction that was set the 40 km/h trial did not work. However, it did obtain significant reductions that have been maintained. Our psychologists who were involved in the project who came from the Australian Road Research Board and Flinders University said that the fact that you were able to maintain this change in people's behaviour in the area over a sustained period is a significant result of itself and that normally when such a change has been obtained the effects die away and people revert to their old ways later on and that has not happened.

'There is a great about the trial that we have learned about drivers behaviour, lower speeds in residential areas. One of the problems with extrapolating from a trial in one area is that the area is different to the rest of the surrounding suburban areas. In the surrounding suburban areas the 60 km/h speed limit applies; some of those areas, some of those streets have physical treatments to try to reduce speeds, some do not, but if you were looking at a general urban speed limit you are looking then at something which is the norm, the expected way of behaving everywhere. To

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extrapolate from behaviour, if you like, in a special area to outside, it has to be done reasonably carefully although we are bold enough to make certain recommendations about the effectiveness of posting lower speed limits on reducing speeds in residential streets. The recommendations, conclusions and analyses on which they are based are in the report on the trial which I am pleased to leave with you and which I think may be of use to you. There is also a summary document which basically has the summary of the trial, conclusions and recommendations lifted from the report which is easier reading.

**The Hon. A. B. MANSON (STAYSAFE):** Do you have any reports or papers that you were going to table? The proposed reductions to 50 km/h in urban areas, I take it that refers to the 50 km/h?

**Professor TAYLOR:** Yes, in fact the follow up to the Unley trial, one of the recommendations there was that in South Australia we needed to have a widespread community debate about just what the general urban speed limit ought to be. As a consequence of that the Minister for Transport in South Australia then asked me to chair another committee which, in fact, did an investigation of the general speed limit and reported to her at the end of 1994.

**The Hon. A. B. MANSON (STAYSAFE):** Could you briefly outline the outcome of that?

**Professor TAYLOR:** Yes, in fact, again I have a copy of the report here which I can also leave with you. This report basically started with a preparation of a position paper which was made available for the community at large. The position paper argued, we believe, without bias in favour of (1) status quo; (2) a 50 km/h speed general limit; and (3) a 40 km/h general speed limit. The cases for each were presented and put out for community consideration. We called for submissions from the community at large with the position paper as a reference document from which to start. We got a large number of responses, some 120-odd. They came from all over, local councils were very involved, other government organisations, private organisations, private individuals and we found from those that the community reaction was split down the middle: half the people very much supportive of the lower speed limit and half did not want it at all. We thought, well I suppose you got the people who have strong views on this subject who have responded.

As a consequence of that we also undertook some market research to get the general feeling of community attitudes towards speed limits surveyed in the metropolitan area and in country towns and cities because the general urban speed limit is going to apply to all built-up areas. Interestingly enough that shows the community also split 50-50 so we were not getting the extremes, the submissions we had actually mirrored, if you like, the distinct gap in the population. Those who were in favour of lower speed limits want much lower speed limits, they want 40 km/h or occasionally less. Those who were in favour of basically the status quo include those who believe there should be no speed limit anywhere under any circumstance, which is quite interesting. As you might expect, we found that people in the metropolitan area were more in favour of lower speed limits than those from the country, but then the people in the metropolitan

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area were subjected, I suggest, to more traffic problems than people in the country typically are.

We also commissioned surveys of actual speeds on residential streets in the metropolitan area but speed surveys done in quite a different way to the norm. Normally when speed data is collected it is because some street has been identified, somebody says there is a problem. The problem is speeding on the street, go and collect some data and see if there is a problem. What we wanted to do was actually find streets at random, what just happens generally where people do not look at it? We commissioned a series of surveys on arterial roads, sub-arterials, collectors and local streets to look at the kinds of speeding behaviour or the speed distribution on those particular streets. By and large we found that the fastest speeds are on the higher standard roads, as you would expect. The local streets tend to have lower speeds but there are some, we could identify a group, I do not know, I think we probably said 15% of the streets we surveyed in a sample of local streets, where there were speeds in excess of what we would have expected or what would have been considered to be the norm compared to everything else.

On the basis of all this evidence we then looked at what recommendations would be for a general urban speed limit. Our conclusion is that a 50 km/h limit at the present time was the appropriate result, meaning that arterial roads would have to be signed at a higher speeds above that, they would be at their existing speeds or whatever might be adjusted. We included the sub-arterials, collectors, local crossing roads which is, at least, a South Australian condition, as being amongst the 50 km/h streets unless there were exceptional circumstances when one would have to look at what happened in that particular street. We believe that in the longer run for local streets a 40 km/h speed limit is more appropriate but that is too big a gap to expect the community to be able to accept initially.

I suppose we wanted a gradual evolutionary way to lower speeds but the potential for some special areas to have 40 km/h limits posted should be allowed as long as appropriate physical treatments were considered on those streets, that is, we do believe that to have proper observance of a speed limit of 40 km/h it is not sufficient just to put up a sign, you have to do some other things to the street environment to encourage that kind of traffic behaviour. There is quite an amount of analysis behind these general recommendations that is again contained in the body of the report and I am happy to leave this with you. Were there any follow up questions on it I would be happy to tackle those as well. Our Minister has been very pleased with this report and I think on a number of occasions now she has indicated that although she would prefer national uniformity to prevail in this thing, if it appears as though that is not the case then South Australia will go its own way to reduce the speed limit to 50 km/h.

**Mr SMALL (STAYSAFE):** STAYSAFE is aware of significant research into traffic calming and into making the main streets of towns and suburbs more friendly to all road users. How can this work, which seems complementary to the proposal of a 50 km/h general urban speed limit, be better integrated into a general package of measures to reduce vehicle speeds in situations where there is a risk conflict between road users? I appreciate from your opening you are looking at less than 50 km/h but can you still use the same terminology?

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**Professor TAYLOR:** The option for 50 km/h is one thing that we have considered, certainly in this second study. It was one of the three options that was under consideration. I guess in this area it is moving beyond the local residential streets into what do we do on those more important roads where there are strip shopping centres and other centres of commercial activity that arterial road traffic still passes through and what are appropriate traffic management measures for those kinds of environments.

As I said before, the setting of speed limits is a complex business. The level of pedestrian activity or pedestrian-related activity on a particular section of road is a factor that needs to be taken into special consideration and should be a primary determination for the speed limit. That kind of activity includes car parking and people waiting for buses on the side of the road, as well as general pedestrian movement along or crossing the street in that shopping centre environment.

It is a matter of offering to drivers appropriate visual or sensory cues to realise their environment. By and large, we are seeing that kind of work in terms of redesign of street scapes in commercial areas, whether it is pedestrian refuges, medians in the middle of roads, footpath widening, indented parking bays. All those sorts of things have come to the fore.

**Mr SMALL (STAYSAFE):** Would you suggest that the lower speed of 40 km/h would be better than any calming devices?

**Professor TAYLOR:** No. The 40 km/h limit should be applied to residential areas in the longer term, once we establish a culture of compliance with lower speeds in those areas. Where we are looking at calming of arterial road traffic, I do not think it would be a hard and fast rule that a 40 km/h limit was necessarily appropriate in that environment. It would not be quite as clear cut as in the residential street environment. However, 50 km/h might be an appropriate speed on those sections of arterial roads, whereas away from those centres that arterial road might be more appropriately signed at 60 km/h.

**Mr GIBSON (CHAIRMAN):** What is your comment to the groups that advocate if the residential speed limit is reduced to 50 km/h the speed limit on main roads should be lifted?

**Professor TAYLOR:** I have a couple of responses. The first is as to the amount of travel people actually undertake on the local street system and its proportion of their journey. I guess I am coloured by the city in which I now live where there is little reason not to use the arterial road system. One can appreciate that in some areas of Sydney other considerations might come into play. Basically, the general traffic planning principle has been one of a functional hierarchy of roads as a classification, with the idea that traffic is encouraged to use the arterial road system for as much of its journey as it should. Therefore, it is only the start and finish of a journey that should take place on the local street system. A lower speed limit on the local streets should not have an undue effect on travel times.

**Mr SMITH (STAYSAFE):** Professor Taylor, in general terms you have answered my question

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with your description of the Unley trial. In more specific terms, would you indicate the most effective and appropriate traffic management strategies that need to be implemented to ensure compliance with the 50 km/h local road speed limit and, in particular, what modifications are desirable or required to improve the road infrastructure and street signage?

**Professor TAYLOR:** There are a number of things there. Firstly, the question of the signing of the speed limits. The more important roads with speed zones higher than the general limit would obviously have to be signed and motorists given information they have left those roads and gone on to other parts of the network. So there is a significant amount of speed zone signage to be put in place. In the case of the Unley trial, it was realised that repetition of the message about the speed limit had to be given to drivers. Of course, we then have the question of it being a one-off zone as opposed to the rest of the network and if this was the norm and had become established in the community perhaps that repetition would not be required. But you would still need a distinction between the roads zoned at a faster speed and those set at the general limit. The road environment would still need to be made very clear to motorists. It is only fair to everybody in the community that people are not left wondering about the speed limit when they turn the corner.

**Mr SMITH (STAYSAFE):** You do not see physical barriers or anything of that description are required?

**Professor TAYLOR:** Not for the 50 km/h limit. If you go to a lower limit such as 40 km/h there are other physical treatments that would be required, whether it be some form of painted markings. It has been suggested, for instance, one way of identifying roads with higher speed limits would be those that had marked traffic lanes. That is one way with us already that might be used as a signal of one kind of speed environment.

**Mr SMITH (STAYSAFE):** One of the things that generally the committee is concerned about, particularly the Hon. J. S. Tingle, is compliance.

**Professor TAYLOR:** Again, I can relate to the only experience there. As you will see in the report, there was a general shift downward of the speed distributions measured. However, it is one of those tantalising things, because the speed was up at the extreme behaviours. It would appear a small percentage of motorists were still travelling at the same speeds they adopted before. There is anecdotal evidence of people who did not know the previous speed limit or the present speed limit and drove the same pattern anyway. There was certainly some evidence that a small number of drivers at the very fast speeds had not completely gone, whereas most of the speeds had shifted down. You can see quite a distinct trend. There is a potential problem there but it is maybe not unlike other areas of road safety we have faced, like drink driving.

**The Hon. J. H. JOBLING (STAYSAFE):** You have referred several times in various answers to signage and about jogging people's memories, particularly when changing zones. Even if it is purely your own view, rather than from a study, would you amplify further in this particular regard as to what sort of information or signage a motorist should encounter when they leave a

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major road and drive into a local residential road if the 50 km/h speed limit is proceeded with or a lower speed limit?

**Professor TAYLOR:** In the Unley case, which is good example of practice, the main method of indicating the change of speed limit was what is now the Australian standard local area traffic sign, which is a rectangular sign, the speed limit at the bottom and a picture of a couple of people and a house, indicating a local traffic area. That has later been reinforced by pavement markings where the number 40 km/h has been painted on to the road surface a little downstream of the sign. Then there are further reminders on the side streets that come from the main street. Again, there is the question about people turning the corner and reverting to other driving habits; so there are reminder signs on the side of the road, either a small speed limit sign of the standard variety or the local area traffic sign, being used as repeater devices.

**The Hon. J. H. JOBLING (STAYSAFE):** Is that strong enough to jog the motorist's memory or to ensure that the motorist deals with it? Obviously it will be more critical in the early stages until drivers grow used to it. It is the transitional period that concerns me.

**Professor TAYLOR:** My understanding of what has happened in Unley since those repeaters have gone into place is they have worked enough to jog drivers' memories of the zone they are in. Those additional treatments were found necessary. There were also changes about the placement of the initial signs to give drivers a good chance to see them as they made their turning manoeuvre out of a main road into a side street.

**The Hon. J. H. JOBLING (STAYSAFE):** Can you suggest other options that you feel might work?

**Professor TAYLOR:** The other option, of course, is enforcement of the speed limit, which is perhaps not a physical treatment but a managerial treatment. Many local councils seem to be in favour of having the ability to undertake that enforcement. I do not know what the status is in New South Wales but it has been resisted so far in South Australia. Many councils have put up their hands and said they are quite prepared to undertake enforcement of the speed limit.

Again, I contrast between 40 km/h and 50 km/h. In the case of 40 km/h, I think it is established that physical measures are needed to succeed. Maybe with 50 km/h the initial indication and perhaps reminders. noting if the 50 km/h limit is the norm then it would be expected, in the long term at least, that became people's understanding of the speed they are supposed to be travelling at.

**The Hon. J. S. TINGLE (STAYSAFE):** Drivers in New South Wales seem to have a cheerful disregard for the speed limit being a maximum. A former Premier once rather indiscreetly blabbed on television that the police radar threshold was set 16 km/h over the posted limit. The worry I have is that if we lower the speed to 50 km/h what can we do to make people drive at or below 50 km/h, because we cannot seem to make them drive at or below 60 km/h? Are we merely going

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to reduce the overall limit by 10 km/h and still drive at 60 km/h? What can we do?

**Professor TAYLOR:** One positive effect might be they drive at 60 km/h rather than 70 km/h. Drivers in other parts of Australia also believe there are tolerances. There is strong evidence to suggest indeed there are tolerances, although what they are is a guarded secret. The tolerance by police is for common sense reasons. We do not know how accurate are the speedometers on cars.

**The Hon. J. S. TINGLE (STAYSAFE):** We are told that speedometers are likely to be out 6% either way in general. Should the police tolerance be lower?

**Professor Taylor:** The tolerance is different in different places, put it that way. The general rule of thumb might be an allowance of 10%.

**Mr GIBSON (CHAIRMAN):** As we are talking about road safety, why should we have a tolerance at all?

**Professor TAYLOR:** That is a very good question. If you take the hard view, the speed limit ought to be the maximum speed. However, we have a culture in this country where the speed limit is taken as a guide. That means that some people would drive a bit faster and some people a bit less. There is the question of being able to change to a culture which says the speed limit is the maximum speed and you are not supposed to exceed it. You are probably better versed than I as to the reactions to enforcement of speed limits. There is some feeling it is merely revenue raising, another form of taxation, and that the motorist is not really doing anything wrong. There is a case for bringing home the road safety message about speeding and trying to change through education people's attitudes and the culture that goes with it. It is not an easy or short-term process.

**Mr JEFFERY (STAYSAFE):** How would you sell the concept of a lower speed limit?

**Professor TAYLOR:** Funnily enough, there are arguments basically on the grounds of amenity and environmental impact that would weigh closely with the community which, in fact, have not been put in this debate. Motorists can save a lot of fuel and generate less noise and air pollution by travelling slower on residential streets.

**Mr JEFFERY (STAYSAFE):** Apart from the safety angle?

**Professor TAYLOR:** The safety angle is another one but there are a variety of things that could be presented. Indeed, we have considerable data from other work we have done to indicate that the use of physical speed control devices probably increases emissions, noise and fuel consumption. We can encourage people to drive smoothly at a lower speed by indicating to them it will not take that much, if any longer, to reach their destination, and there are other advantages associated with it. Campaigns are crafted around that, plus the road safety message, particularly

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the safety of pedestrians who, in urban areas, are most at risk from speeding traffic in terms of our ability to do things about other road users. But we are finding that pedestrian accidents are emerging as a major source of worry because we do not seem to have had a major impact on them.

**Mr GIBSON (CHAIRMAN):** Would you mind if we followed up in writing the environmental aspects of what you are saying? Time does not permit us to do so today. If you could also take on notice a question regarding your role in the project with the NRMA regarding licensing, that would also be appreciated.

**Professor TAYLOR:** That project has only just commenced, so we have no results, but I would be happy to provide that information later.

**ARRB Transport Research witness**

Mrs Deborah Donald, Senior Research Engineer

**Mr GIBSON (CHAIRMAN):** The STAYSAFE Committee notes that it has not received a submission from you. Would you like to submit any written submissions during the course of your evidence?

**Mrs DONALD:** No, nothing additional.

**Mr GIBSON (CHAIRMAN):** What role did ARRB Transport Research play in the AUSTROADS project that resulted in the report on urban speed management in Australia?

**Mrs DONALD:** ARRB Transport Research was engaged by the previous Government to assist with the research, report and preparation of working papers and reports. This work was done by myself and Dr Peter Kearney, who cannot attend today because he is out of the country.

**Mr HARRISON (STAYSAFE):** What important lessons can be learned from an examination of the speed management practices in other jurisdictions in Australia and overseas, particularly in terms of identification of current practices for setting of urban speed limits and the introduction of lower local speed limits in residential areas?

**Mrs DONALD:** You probably heard all this before from Professor Taylor, and what I will tell you is not markedly different.

**Mr HARRISON (STAYSAFE):** It is an identical question.

**Mrs DONALD:** An urban speed limit of 60 km/h is very high. Most other countries have 50 km/h or 40 km/h, and a lot of European countries are considering introducing 30 km/h. The other main difference is that overseas countries often have limits on arterial roads as well, and we are talking about a local road limit. Care must be taken in that regard. When looking at reports that talk about overseas countries and the lowering of speed limits, we have to be wary of whether they mean arterial roads or local roads, in other words what roads they are talking about. Although speed limits overseas are lower, it is difficult to get information on the actual speed of vehicles, which, as you know, can be two different things. Not a lot of information is available about what the actual speeds are on those roads. The fact that a country has an urban speed limit of 30 km/h or 40 km/h does not necessarily mean that vehicles are travelling at those speeds.

**Mr JEFFERY (STAYSAFE):** Has ARRB produced any other reports or papers that you think are relevant for the Committee to examine as part of its inquiry into the proposed introduction of a 50 km/h general speed limit?

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**Mrs DONALD:** I brought a number of them with me to leave with the Committee.

**Mr JEFFERY (STAYSAFE):** Would you like to table them?

**Mrs DONALD:** Yes. The first is a report from Hui Tan entitled *The effectiveness of 90 degree bends in controlling speed on urban roads* and talks about the design of urban roads and how that can be used to slow traffic. As you have already heard today, if you have a nice wide, straight, local street, vehicles will travel at high speed. This report looked at about 14 90 degree bends in three different suburbs and the speed changes that occurred. Another report, *Sharing the main street*, relates to a later question. It was prepared by the Roads and Traffic Authority and the Federal Office of Road Safety. Dr Ray Brindle from ARRB Transport Research was very involved in this area. Another report entitled *Towards traffic calming* was prepared by the Federal Office of Road Safety, the Department of Transport and Dr Ray Brindle and contains information and pictures of methods people have tried. It really is a practitioners' manual but will probably be useful for the Committee. The last one, again by Dr Ray Brindle, who is also unavailable because he is out of the country, is a report called *Living with traffic*, a compilation of 27 of his papers relating to traffic calming, written between 1979 and 1992. In particular, papers 16 and 17 talk about the relationship between traffic management, speed and safety in neighbourhoods. Paper 17 deals with *Local street traffic management: is European practice really relevant?* The Committee will find those reports useful.

**Mr SMITH (STAYSAFE):** The Committee is aware of significant research into traffic calming and making the main streets of towns and suburbs more friendly to more road users, which seems complementary to the proposal of a 50 km/h general urban speed limit. How can this work and be better integrated into a general package of measures to reduce vehicle speeds in situations where there is a risk of conflict between road users?

**Mrs DONALD:** Probably the best thing I could do is refer to the work by Professor Hans Westerman and Dr Ray Brindle contained in some of those documents. They held a number of workshops with planners, designers and engineers. It really is an overall topic whereby you get a range of professionals together and end up with a much better overall package. It also refers to the original design of the area. If roads are badly designed, as in the case of straight, wide pavements, it is very hard to keep speed down.

**Mr MILLS (STAYSAFE):** What is known about community concerns with effective speed management in urban areas, particularly vehicle speeds on residential streets?

**Mrs DONALD:** A number of surveys have been carried out in this area, some of which were referred to by Professor Taylor. The Austroads report, of which you have a copy, includes comments about quite a few of the reports. Perhaps the latest one, which is not included, was conducted in Tasmania, South Australia and New South Wales in May and June. I have the New South Wales results. Firstly we looked at a random selection and, secondly, we targeted some streets in which, if 50 km/h were to be introduced, the streets would be changed. As far as

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whether 50 km/h was a good idea, 68% of people in the target street said it was a good idea and 75% of random people said it was a good idea. Around 19% in both areas thought it was a bad idea and between 8% and 15% were undecided or neutral. Whilst only 68% of people thought that 50 km/h was a good idea, it is worth noting that without any sort of push or publicity it is a pretty good result.

**Mr HARRISON (STAYSAFE):** What communication strategies are required to support the introduction of 50 km/h local road speed limits in residential areas?

**Mrs DONALD:** Section 7.2 in the AUSTROADS report covers that in a lot of detail. Basically it can be listed as group meetings, area meetings, advertising, facts sheets and brochures, in other words the normal sort of publicity. If a blanket limit is to be applied with no signs, it is important that drivers are told what is happening. If they are not told, obviously they will not know. The main things outlined in the report were paid advertising, facts sheets, media advocacy and the importance of coordination, if at all possible. If something is introduced in more than one State there is scope for economies of scale by using similar materials.

**The Hon. J. S. TINGLE (STAYSAFE):** The available research evidence seems to suggest that it is not possible to enforce a 50 km/h limit across an entire residential urban street network unless some form of device is used to make drivers travel at the proper speed limit without police swarming all over them. I have in mind things such as chicanes, raised platforms and the like. Is this the only way in which we can slow traffic down once we lower the limit? Does it really slow down traffic any way?

**Mrs DONALD:** When we worked on the AUSTROADS report it was strongly felt that the concept of a hierarchy was very important, a hierarchy of streets and a hierarchy of speed limits to match it. As was mentioned previously, it was not envisaged that if the speed limit changed that speed limits would drop overnight. To develop the whole concept of care will take time. It is felt that a hierarchy will bring about such changes. It is also important to note that drivers on a number of local roads are not travelling at 60 km/h now because they are short roads or cul-de-sacs. People who live within a short distance of an intersection, back out of their driveways and start driving will not be driving at 60 km/h when they reach the intersection. Therefore we are not talking about 100% of local roads having difficulties. Drivers are not doing those speeds on some local roads now. A general speed limit of 50 km/h still leaves 40 km/h to be supported with local area traffic management devices and for school areas to make that even stronger.

**The Hon. J. S. TINGLE (STAYSAFE):** What are the best and most appropriate traffic management strategies that can be adopted to ensure compliance? We have probably really answered that, have we not? Is there any other strategy that you can think of?

**Mrs DONALD:** The awareness of drivers that they are off the main network, in a local network, and an awareness of what is expected.

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**The Hon. J. S. TINGLE (STAYSAFE):** If we have 60 km/h on one road and 50 km/h on the other we will eventually get used to dropping our speed when we move from one road to another, but how long will it take? You said that speed will not drop overnight?

**Mrs DONALD:** We should get some drop.

**The Hon. J. S. TINGLE (STAYSAFE):** But not a total transformation. Will driver awareness develop at a rate to make the speed limit effective?

**Mrs DONALD:** We would hope so. Part of that has to do with arterial roads that are now zoned at 60 km/h, 70 km/h and 80 km/h and the whole idea of the hierarchy. Hopefully drivers would become aware of that.

**Mr GIBSON (CHAIRMAN):** What about signs, gateways et cetera?

**Mrs DONALD:** The AUSTROADS report contains four different options ranging from sign everything to sign nothing. Certainly, the least expensive and the least visually intrusive is to have it exactly as it is now, except that the general limit is 50 km/h and not 60 km/h. There are two options in between, which are outlined in detail in the AUSTROADS report.

**Mr MILLS (STAYSAFE):** In your view what sort of information should a motorist encounter when he or she leaves a major road and drives onto a local residential street?

**Mrs DONALD:** It would be best to have no signs — as it is now, except 50 km/h would apply instead of 60 km/h. The only problem is that you must ensure that the roads that will remain at 60 km/h are in place before you bring in a 50 km/h speed limit. Some areas in Victoria did that some time ago and it seems to work well.

**Mr MILLS (STAYSAFE):** Are you suggesting that only those roads that are above the base limit should be marked?

**Mrs DONALD:** Yes, unless you have a school zone or a specific area that is 40.

**Mr MILLS (STAYSAFE):** Which is lower?

**Mrs DONALD:** Yes.

**Mr HARRISON (STAYSAFE):** Drivers in New South Wales are more experienced with the tolerance of speed in excess of the posted speed limit. It seems likely that after a 50 km/h limit is introduced drivers will travel above the speed limit at least some of the time. What comment can you make regarding strategies and tactics to deal with this habitual or "sanctioned" speeding of five to 10 km/h above the posted speed limit?

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**Mrs DONALD:** It is difficult to talk about tolerances. It is for the police to decide the appropriate tolerance. As part of the AUSTROADS study it was certainly discussed that once speed limits were seen to be appropriate — they have certainly become more appropriate over the past five years or so — tolerances could possibly be reduced. As Professor Taylor said, the speed limit means the maximum.

**Mr HARRISON (STAYSAFE):** Do you mean that it has become more appropriate over the past few years because so many roads are now 70 km/h, some are 80 km/h and so on?

**Mrs DONALD:** It has been matched much more towards the road hierarchy. It was certainly seen as a possibility. As mentioned in the AUSTROADS report, there might be scope for reducing tolerances particularly on traffic routes and then on local roads. It was seen as a similar enforcement regime as now; it was not seen to require heavy enforcement. It is impracticable.

**Mr SMALL (STAYSAFE):** In general, at 50 km/h pedestrians involved in a crash are just as likely to die as to survive. Is there a case for reducing the speed limit on residential streets to 40 km/h or 30 km/h, as is now implemented, or at least being considered, in many European countries?

**Mrs DONALD:** When we were doing the work involved in the AUSTROADS report we felt that 50 km/h was more acceptable to the driving public. Care had to be taken not to put everyone off side by putting in 40 km/h, which is probably a bit low. The report states that that is not to say that in the future attitudes will have changed and that possibly 40 km/h would be more appropriate. We based it on a range of things. We concluded that vehicle speeds would be similar, whether a 40 km/h or 50 km/h limit was applied.

**Mr SMALL (STAYSAFE):** Do you support 50 km/h at this stage?

**Mrs DONALD:** Yes, it was felt that 50 km/h had much more community support, although that may change in the future.

**The Hon. J. S. TINGLE (STAYSAFE):** Are you able to comment on the likely effect on fuel consumption, vehicle emission levels and traffic noise of a 50 km/h general urban speed limit as opposed to the current 60 km/h limit? Is it likely to make much difference if we reduce the limit?

**Mrs DONALD:** Obviously it depends on the amount of speed reduction. Professor Taylor has been doing some work involving modelling of local traffic areas and the impact of various measures on pollution, but the final report is not yet available. We have said that, as well as speed, smoothness of travel is important. In fact speed humps carry a full penalty for that reason.

**The Hon. J. S. TINGLE (STAYSAFE):** Because of stopping and starting, going through gears and so on?

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**Mrs DONALD:** That is right. Generally the lower speed limit would reduce fuel consumption and traffic noise, but the amounts are fairly small. Traffic noise problems depend on where your house is sited and where your windows are. One very noisy car can cause problems, rather than speeding vehicles.

**Mr HARRISON (STAYSAFE):** You referred to a study entitled *Is European practice really relevant?* What was the conclusion of that study?

**Mrs DONALD:** It is in one of the documents I have given to the Committee. Basically, we should not discount European practice. The 15 km/h or 20 km/h zone was not considered relevant to Australian conditions because it is based on very narrow streets, on children playing in the streets and on that sort of thing. The 30 km/h and 40 km/h zones were considered more relevant because they related to similar streets and areas. The difference is that we do not know a lot about the actual speeds in those areas.

## Australian College of Road Safety witnesses

Mr Leigh Grant Palmer, President  
Dr John Michael Henderson, Member

**Mr GIBSON (CHAIRMAN):** I note that the Committee has not received a submission. Are there any documents that you would like to table during your evidence?

**Mr PALMER:** Yes.

**Mr GIBSON (CHAIRMAN):** Can you state the charter of the Australian College of Road Safety and briefly describe the history of the college: when it was established, what are its current activities, what policy statements and other publications it produces, and so on?

**Mr PALMER:** The Australian College of Road Safety was formed in 1988. Its main purpose was to bring together people from the many disciplines working in road safety. At that time it was considered that there was no formal avenue or forum for these sections to meet, network or work on joint policies. The range of disciplines involved includes traffic engineers, epidemiologists, road trauma specialists, researchers, enforcement agencies, policy makers, industry representatives, motoring associations, insurance companies and many others who have a stake in road safety. The aim of the Australian College of Road Safety is to facilitate the strategies of intersectoral cooperation and community participation by providing mechanisms of communication between agencies and individuals committed to reducing road trauma in Australia.

The national executive committee represents a cross-section of road safety departments and disciplines. In most States, chapter committees reflect the various road safety organisations and programs run in that State. There is more detail in the submission. It is important to note that we have a number of corporate memberships, including all the Australian national, State and territory road safety authorities: the Federal Office of Road Safety, the Queensland Department of Transport, the New South Wales Roads and Traffic Authority, the Department of Urban Services in the Australian Capital Territory, VicRoads, the Tasmanian Department of Transport, the South Australian Department of Transport, Main Roads Western Australia and the Road Safety Council of the Northern Territory. The committee includes members of Australian automobile associations—the National Roads and Motorists Association, the RACV and so on — police departments, local government associations, community organisations, education departments, driver training associations, injury prevention and control organisations and a number of people who are enthused by the idea of a reduction in the road toll.

**The Hon. J. S. TINGLE (STAYSAFE):** How do you see a 50 km/h speed limit — that is, a lower speed limit — in residential streets affecting casualty rates among pedestrians and cyclists? We have talked a little about pedestrians in the wider context today. Do you believe that a reduction in the speed limit to 50 km/h will provide significant benefits, particularly for the very

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young and the elderly? Generally speaking, what difference will a lower speed limit make to pedestrian casualty rates?

**Mr PALMER:** As others have noted, the basic laws of physics clearly show that a higher vehicle speed reduces the time available to drivers to avoid conflict with pedestrians, and that if a pedestrian is struck the higher energy transfer will result in more severe injuries. Clearly, there is a connection between injury and the square of the power of velocity. Others have noted in experimental studies that 12% of car and pedestrian collisions that occurred at 60 km/h would not have occurred at 50 km/h. In 15% of those cases pedestrians would not have been killed. This led to an overall reduction in fatal pedestrian collisions of 27%. A Zurich study indicated that there was a reduction of 16% in all accidents in that city; injuries were down 20% and fatalities were down 25%. Those figures are reflected in the AUSTROADS study, which is a comprehensive review. I understand that the Committee has seen some of that evidence. There is a connection between the experimental work and the actual work to the extent that there will be a case for greater reductions, particularly for the elderly as they are more frail.

**The Hon. J. S. TINGLE (STAYSAFE):** Is there a continuum effect anywhere? We are talking about a 50 km/h limit, and we have heard about a 40 km/h limit. Is there an optimum practical upper speed limit in terms of reduced trauma or disaster? Should we go to 45 km/h or 40 km/h? Are we going low enough?

**Mr GIBSON (CHAIRMAN):** Probably zero.

**Dr HENDERSON:** At zero no-one moves.

**The Hon. J. S. TINGLE (STAYSAFE):** What is the upper limit at which you get the major effect of reducing casualties?

**Dr HENDERSON:** There is not a one-for-one relationship between a speed limit and travelling speed. There is a rather flexible arrangement; if you lower the speed limit you will reduce travelling speeds to some extent but not necessarily to where you want the limit to be. Cars travelling at 30 km/h or 40 km/h in a local street is perfectly reasonable as elderly pedestrians or children will have time to see them and cars will have time to stop. Setting the limit at 40 km/h does not necessarily mean that cars will travel at 40 km/h.

There is certainly a continuum between nice, objective physical measurements like impact, speed, injury and consequences and you can relate that to age as well. That is all textbook stuff. It is much less of an easy continuum between the imposition of a speed limit and outcome in terms of injury reduction.

**The Hon. J. S. TINGLE (STAYSAFE):** Is a speed limit of 50 km/h a happy compromise?

**Dr HENDERSON:** In my view 50 km/h is a happy compromise.

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**Mr PALMER:** It is a compromise between the ability to move around and the downside of moving around quickly.

**Mr SMITH (STAYSAFE):** Do you think a speed limit of 60 km/h is appropriate in busy shopping streets and main streets of country towns?

**Mr PALMER:** It is an interesting question as to whether, when we are talking about local streets, we are really talking about streets where people live or where they carry out other activities. In the commercial street the issue is about the separation between through traffic and heavy pedestrian traffic. A Newark report concluded that the commercial environment had significantly fewer fatal crashes than did other environmental types. The very nature of the activity tends to slow the vehicles down. We in the college are of the view that we should be promoting the separation of activities rather than trying to impose the speed limit; that the imposed speed limits may not work; and that when there is a lot of activity there will not be that high speed. We were talking outside about the main street of Goulburn, with its near by-pass beside the railway line and the higher speed by-pass further away. That seems to be an appropriate place, where vehicles are travelling at 50 km/h or less with or without a speed limit sign, and the after-hours effect is such that people could travel at a higher speed where there is greatly reduced conflict.

**Mr HARRISON (STAYSAFE):** What is the view of the Australian College of Road Safety on the argument that a reduction to 50 km/h in residential streets should be accompanied by an increase in speed limits on major urban roads?

**Dr HENDERSON:** The college is of the view that we should not be trading these things off, that we should be looking at the most appropriate speed for each particular environment. Therefore, we should be trying to match the speeds to the activities that are in existence. We support the establishment of hierarchies within the network and the main thing is to look at them in their own right and see what is appropriate for each particular environment.

**Mr PALMER:** The college, like yourselves, is very conscious about the need for good public relations and the need to sell these sorts of concepts with great care. It has already been picked up wrongly that a 50 km/h local street limit is in some way a trade for letting people hoon around at higher speed on other roads. It is very important for spokesmen in governments and administration not to give that sort of impression. It may well be that roads are zoned to the higher speed, but that is happening all the time anyway, and some are being zoned at a lower speed. Any idea of a trade-off is absolutely unwarranted.

**Mr SMITH (STAYSAFE):** Can you comment on the danger to pedestrians on residential streets in urban areas, as opposed to those in small country towns? In your view is there any significant difference?

**Dr HENDERSON:** We discussed this and we felt that the issue was the environment, and

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essentially there was no fundamental difference between urban conditions and country conditions. As we noted in our submission, a child is a child and will still chase a ball whether it is in a country town or a city street. There will clearly be a higher prevalence of high-density dwelling in urban areas, but given that density it is the same whether it is in the country or the city.

**Mr SMALL (STAYSAFE):** What are the processes and procedures required for monitoring and evaluating the effectiveness of a local road speed limit of 50 km/h in promoting road safety?

**Dr HENDERSON:** In our view the importance in evaluating any such measure is going to be in the detail of the implementation and the processes and procedures. It would be a mistake to decide to impose this measure and see how many deaths it reduces. The number measured that way will not be high and probably will not be high enough to appear in statistics. There is a danger that people will be disappointed in a measure which may have been oversold by some enthusiasts. That is a trap. It will be important to work through the details. Mr Palmer might be able to expand on some, and I am sure others have given the details of how it will be enforced; what level of authoritarianism, if you like, will be enforced, particularly in the early days; how it is going to be signed; how public relations are going to be organised; and how the traffic flows following the implementation. All those factors will need evaluation.

**Mr SMALL (STAYSAFE):** It has been stated that perhaps more trials are needed throughout the State, even though trials have been held in North Sydney and Mosman. It is thought that more trials would give a greater message and increase awareness. Do you agree with that, or do you think a speed limit of 50 km/h should be implemented immediately?

**Mr PALMER:** That is a difficult question to answer. The college is probably of the view that there would be greater impact if it was an Australia-wide approach. Obviously this Committee is not empowered to deal with that issue. The college would not want to stop.

**Mr SMALL (STAYSAFE):** Some witnesses referred this morning to a national approach rather than a State approach.

**Dr HENDERSON:** The way the scheme is now being considered, whether it is statewide or nationwide, its aims go beyond tightly specific and identifiable ones. I think everybody hopes and believes it will add to the safety of local streets, but because that is only a fairly small proportion of the total urban pedestrian problem, which is mostly on arterial roads—which will continue to be 60 km/h or 70 km/h—the benefits as seen in the newspapers will not be particularly high. We hope speeds will be lower, we hope amenity and other improvements will flow. But most analysts who have written about this subject refer to wider benefits such as, one hopes, a cultural change in approach to the using of cars in areas where people are living, children are playing and old people are staggering down to the pub. I do not see the point in doing any more trials. You cannot prove that that will be the effect; you hope it will be. I think the literature is sound enough now to make it firm ground to move on from, but I do not believe you are going to get the effect of this measure unless it is done at least statewide.

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**The Hon. A. B. MANSON (STAYSAFE):** What is the contribution of the Australian College of Road Safety to the process of developing national uniform traffic laws — the Australian road rules? Did the Australian College of Road Safety produce a submission to the National Road Transport Commission on this issue, and can the Committee obtain a copy of the college's submission.

**Mr PALMER:** Members of the college have represented their own organisation in putting their views to the National Road Transport Commission on the draft Australian Road Rules. The rules have been discussed at length at the executive committee meeting and the college welcomes the development of a simplified and consistent set of rules for application across Australia. A copy of the college's submission in March 1995 from the first round of public consultations is in the tabled documents. This was written before the 50 km/h issue was included in those draft Australian Road Rules. However, our immediate past president, Harry Camkin, wrote in the recent journal of *Road Wise* updating the previous comments, and those details are attached to our submission. The college welcomes the inclusion of the proposal for a local street speed limit of 50 km/h and believes this will contribute greatly to road safety in Australia, but perhaps, along the lines that Dr Henderson has indicated, we are hopeful for a supplementary spin-off in total driver attitude.

**Mr MILLS (STAYSAFE):** In many European countries speed limits of 40 km/h or even 30 km/h are being implemented in residential streets. What are their reasons for doing that, and do those same reasons apply in New South Wales and Australia?

**Dr HENDERSON:** I am sure the reasons are the same as they are here. They are in search of greater safety and amenity and the recognition that pedestrians, cyclists and residents have rights as well as motorists. I am pleased you asked that question, because I think too much is being made of some of the European speed limits. I understand many of you have visited Europe, and so have I. I grew up there and I drove extensively through Europe within the last two years. If people think Australian motorists disobey speed limits they should try France, Spain, Italy and countless other countries in Europe. The fact that a limit is written does not necessarily have any relationship whatsoever to the speed at which people travel. I found the degree of non-compliance with speed limits in other countries, apart from Britain, extremely low, and in general lower than in this country, where the level of compliance, particularly on the higher speed roads, is very high. It is not warranted to simply assume that because a country, municipality or administration in Europe imposes a limit of 40 km/h it is a good idea for us.

**Mr PALMER:** The important thing seems to be in the public acceptance and the attitude of our drivers that a speed limit needs to be the right speed for the environment. Signposting alone will not achieve that. Where there have been significant reductions in speed associated with signposting, it has been because either a lot of activity or a lot of physical devices have been engineered into the road network to make it difficult to achieve anything more than that speed. Motorists drive a lot by the way they read the environment, and that important component and the engineering or the feedback mechanism is an important component beyond just the speed limit.

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We are of the view that it is a lot harder to achieve a reduction—whether we can go down to 40 km/h or 30 km/h — than by purely signposting and limiting. When it has been achieved it has been in association with a lot of other things.

**The Hon. J. S. TINGLE (STAYSAFE):** In your opinion do we have the enforcement resources to make a speed limit of 50 km/h work? My impression is we cannot enforce the speed limit of 60 km/h. Can we enforce a speed limit of 50 km/h?

**Mr PALMER:** I cannot speak for New South Wales, but in my view across the nation we cannot afford the enforcement that is necessary unless there is public acceptance. If a vast majority of the public believes that is the right thing to do, we will have a greater level of compliance. Where they do not believe it is the right thing to do, we will have non-compliance and we will probably not be able to afford to achieve compliance.

**Dr HENDERSON:** I think the bottom line is that good laws do not need heavy enforcement. If people are convinced that in local streets a speed limit of 50 km/h is a good law because it helps almost everybody and does not significantly stop people getting from A to B in a reasonable time, there will be a high degree of compliance. Whether the police are heavily enforcing is immaterial because in practice, as Mr Tingle implies, it would be impossible for them to do so.

**Mr PALMER:** If I could add to that. The question was asked about the evaluation process. The evaluation process needs to be on how well it was implemented. I think we would support, “Let’s go with it”, but look at how well it was implemented, did we get it on the right streets, are these streets ones that the public think are correct.

**Mr GIBSON (CHAIRMAN):** That process would be carried out in consultation with councils and other organisations, is that right?

**Mr PALMER:** Absolutely crucial to undertake consultation.

## Environment Protection Authority witnesses

Mr Christopher Ray Eiser, Acting Manager, Air Policy  
Ms Susan Elizabeth Dawson, Director, Environmental Policy  
Mr Geoffrey John Mellor, Manager, Noise Policy

**Mr GIBSON (CHAIRMAN):** The Committee has not received a submission from the Environment Protection Authority, but you wish to table a submission and answers to questions?

**Ms DAWSON:** Yes. We would like to table answers specifically to the questions asked.

**Mr GIBSON (CHAIRMAN):** Do any of you wish to make a statement?

**Ms DAWSON:** I would like to make a brief opening statement. The Environment Protection Authority recognises that speed limits are an absolutely critical issue for the community primarily because they are fundamental from a safety perspective. To date it is fair to say that environment issues have not figured prominently in the policy reckoning given the primacy of the safety concerns. If the issue of speed limits is approached from a different angle, the question could be asked, what is the potential effectiveness of changing speed limits and what effect might that be as a pollution control strategy? The answer we would appear to come up with is that it would have a marginal impact as a pollution control strategy. In the short time available to prepare for this particular presentation the Environment Protection Agency has not found any bank of research or conclusive evidence that shows whether reducing speed limits would be better or worse for the environment.

The unresearched impression of the experts in the field of noise and air is that any environmental implications in lowering the speed limit from 60 km/h to 50 km/h in terms of air quality or noise management would be basically incidental. The benefits would be likely to be small or uncertain and they certainly would not be able to be relied upon as a central reason for determining the matter. The Environment Protection Agency within this area wants to stress that it takes very seriously the business of improving air quality and noise pollution and has a number of primary strategies in the development of air quality management. These strategies derive from the results of the metropolitan air quality study, which was conducted at a cost of \$10 million from 1992 to 1995 throughout Sydney, the Hunter and the Illawarra. As a result of the completion of the metropolitan air quality study New South Wales now has an extensive monitoring network which reports air pollution indices twice daily for five regions in Sydney, the Hunter and Illawarra.

It has the best emission inventory for any Australian region covering the sources and relative contribution of those sources of air pollution. For the first time it has an understanding of the air flow between the Sydney, Hunter and Illawarra regions and it has a sophisticated computer modelling tool integrating monitoring, inventory and air flow data, which is the first designed for use in New South Wales to predict air quality implications of urban and transport planning

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decisions and industrial developments. The metropolitan air quality study shows that motor vehicles are a major contributor to photochemical smog precursors and a significant source of airborne particulates. In the Sydney region more than 80% of oxides of nitrogen are generated by motor vehicles. Diesel-powered vehicles have shown to be a disproportionate source of oxides of nitrogen and fine particles. However, the crucial issue in all of that is how far cars travel in order to produce this pollution and how often, not the speed at which they travel.

In addressing this problem of air quality the Environment Protection Agency is leading the development of a whole of government air quality management plan for the greater metropolitan region, which sets a framework for addressing all forms of pollutants. A part of that will be the smog action plan, which will deal with all emission sources contributing to photochemical smogs. To address the motor vehicles emissions aspect, the plan will include a transport strategy that will incorporate vehicle-based measures for reducing emissions as well as a land use and transport strategy, which will incorporate measures aimed at reducing vehicle kilometres travelled. At the end of the day it is really most likely that there will be two main strategies to be pursued in this area. The first will be that there will need to be initiatives geared towards achieving a more compact city where people are required to travel shorter distances to get where they want to go in work or leisure terms and strategies to ensure that there is improved public transport.

It is well recognised by the Environment Protection Agency that noise is a form of pollution that can affect health, it can disturb sleep, make learning harder, increase fatigue and lower productivity. The Environment Protection Agency is currently pursuing a range of options for reducing noise pollution and is in the process of updating the Noise Control Act. At the broadest level, in order to address noise pollution issues, the Environment Protection Agency is seeking better integration of the planning and pollution control systems. That initiative is endeavouring to recognise that noise problems are sometimes the result of bad planning decisions, such as when developments are allowed to be too close together or new development is located too close to noise generating development. The crucial issue for noise prevention is to better link the environment protection legislation with land use planning. The best approach in short is to prevent problems from occurring in the first place.

With specific reference to motor vehicles and noise, it is important to recognise that motor vehicles cause two sorts of noise pollution. Firstly there is pollution from busy traffic where noise from each vehicle blends into the general roar. Secondly there is noise from individual vehicles, which are excessively noisy. These stand out from general traffic noise or from a quiet background. Excessive noise can result from vehicles not meeting their design standards, for example, vehicles with worn out mufflers, non-standard mufflers or pipes, or the mufflers or resonators are removed from the vehicle. In the final analysis though, the extent to which a car creates noise is most likely to be a function of a complex range of factors, for instance, the type of vehicle, its age, the road condition, the grade of the road, driver behaviour and surrounding terrain.

To the extent that speed is an issue, it is most likely to be secondary to those concerns. It is for

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those reasons that the Environment Protection Agency efforts tend to focus on reducing road traffic noise by working with road builders, vehicle standard setters, land use planners and driver educators to achieve the desired environmental results. The Environment Protection Agency is due to complete a totally revised road traffic noise guideline later in the year and this draft guideline has been developed in collaboration with the Roads and Traffic Authority. Basically we expect that the guidelines will indicate that road traffic noise needs to be considered on a location by location basis and that noise can be addressed by a range of strategies including vehicle standards, driver education, building design and road design.

In short, the Environment Protection Agency takes air and noise management issues very seriously, but to date the question of vehicle speed has not emerged as a priority approach for addressing these problems. If the Committee wished to promote speed control as a principal environmental management strategy, there would need to be a substantial body of primary research undertaken by road authorities. It would be essential for detailed and scientifically robust research to be done on a range of issues, including issues such as the average speed at which people drive; the extent to which drivers abide by speed limits; the actual effect of speed limits on the speed at which cars move around our roads; the link between speed limits and travel behaviour; the way people drive under different speed limits; whether reducing speed limits encourages people to change their mode of transport, such as to switch to public transport. If there are speed differentials in an area, do people change routes and if they do, does this create more of an impact than the change of speed per se? What are the impacts of speed on fuel consumption?

I am sure there are many other questions that might be appropriate to that sort of primary research and it may well be that the Roads and Traffic Authority and organisations such as the NRMA have done or are planning to do primary research on these issues, but even if that territory is canvassed thoroughly and scientifically, in order to address the question of speed and environmental impacts, you would still need to go a step further and do a series of modules of research related to that particular question. That research would need to address questions such as whether speed significantly influences noise and/or air pollution; to what extent speed limit changes within a particular range or between a range of speeds influences noise and/or air pollution. Are the impacts on air and noise different? For example, if speed decreases, are air emissions less but noise greater? Is the impact of speed changes different depending on the sort of vehicle used, such as light or heavy vehicles, diesel versus petrol or LPG versus petrol?

Are the air emissions implications different for vehicles which have catalytic converters as opposed to those which do not? To what extent does the choice of the speed control device, such as humps versus signs, change the noise impacts? What is the impact of different gear ratios on vehicles? What is the relative noise impact of driver behaviour on non speed parameters such as braking, gear change, horn use, music systems and so on? I could go on but I think I have possibly made the point.

**Mr GIBSON (CHAIRMAN):** You mentioned that 80% of pollution problems in Sydney are

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caused by the motor car. What is the percentage of cars that really have an effect on that 80% of pollution? Would it be 10% or 20% of older vehicles?

**Ms DAWSON:** I am not quite sure that I necessarily understand your question.

**Mr GIBSON (CHAIRMAN):** If 80% of Sydney's pollution problem is caused by emissions from car exhausts, what percentage of that problem is caused by older model motor cars?

**Mr EISER:** I do not have the exact numbers.

**Mr GIBSON (CHAIRMAN):** Just use a ballpark figure. Is it 10%?

**Mr EISER:** It is more than 10%. The population is about 50-50. When we refer to an older motor vehicle we refer to one made pre-1986. It has different technology. After 1986 we had catalytic converters on cars. It is roughly the same number in population at the moment, but the bulk of kilometres travelled, about 60% to 70%, are travelled by those later model vehicles. The older cars are becoming less of a problem but they contribute, on average, about five times the amount of pollution of a later model vehicle. The emissions from older model vehicles are still significant but are being phased out.

**Mr GIBSON (CHAIRMAN):** The AUSTROADS study indicated that 4.2% cent or 48 million litres less fuel would be used if the speed limit was dropped from 60 km/h to 50 km/h. You are saying that if the speed limit is dropped to 50 km/h the burning of 48 million litres of fuel per year would make no difference. I find that hard to believe.

**Mr EISER:** It is a question of how you drop the speed limit from 60 km/h to 50 km/h. If you do it by putting in traffic calming devices so that a vehicle has to brake and accelerate, you will not get the benefits from the reduction in speed limit. When we calculate emissions we look at a drive cycle and do not merely calculate emissions at 60 km/h. We take a normal drive cycle for Sydney, which ranges from stopping to idling and all the way through to accelerating up to 100 km/h on an expressway; and from idling and stopping at traffic lights to accelerating away from those traffic lights.

When we calculate emissions from vehicles we tend to look at a real driving cycle rather than extending the 60 km/h. If you were able to keep cars at a constant speed of 60 km/h and in the same gear and then reduce the speed limit to 50 km/h, there would be an improvement in fuel consumption and a drop in emissions. However, when you have a real time situation, a real life situation, you are accelerating and decelerating and how you bring the speed down can affect fuel consumption and also affect emissions.

**Mr GIBSON (CHAIRMAN):** If we are burning 48 million less litres of fuel, surely that has to have an effect on the environment and the atmosphere.

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**Ms DAWSON:** We have not seen the assumptions that the AUSTROADS study is predicated upon. There is an enormous number of complexities, depending on how you deal with the business of reducing the speed limit. If we were to test all those assumptions it may be that some of them would not apply to the real world situation, and the question of how drivers actually respond to a decreasing speed limit in the real world.

**The Hon. J. S. TINGLE (STAYSAFE):** Could I just make the point that we are talking about a speed limit of 60 km/h or 50 km/h. I am trying to pluck a figure out of my memory. My memory is that a survey taken some time ago showed that the average speed travelled in the Sydney area was between 30 km/h and 35 km/h, averaged over distance and time. We are not talking about traffic travelling at 50 km/h, are we? We are talking about traffic labouring along at an average speed of 30 km/h to 35 km/h. Is that not so?

**Ms DAWSON:** We have not had access to the research to which you are referring, but that is one of the primary issues that we would need to satisfy ourselves about to understand the answer to this question. We suspect that, irrespective of the posted speed limits, current actual speeds may be dramatically different and driver behaviour might be dramatically different from that which the speed signal indicates. Yes, we share some of the expectation that all is not as it seems.

**The Hon. J. S. TINGLE (STAYSAFE):** Referring to an answer to an earlier question, you suggested that a possible indirect benefit of lower speed limits will be to promote a shift from private car use to alternative transport modes, including walking, cycling and public transport, and that this would be welcomed by the Environment Protection Authority. I do not follow your reasoning. Are you suggesting that because cars have a slower speed limit fewer people will want to use them?

**Ms DAWSON:** No. If there is a safety benefit in lowering the speed limit in the urban environment and the average pedestrian or cyclist feels safest on the road, we suggest that there may be an indirect benefit and a choice to change mode.

**Mr HARRISON (STAYSAFE):** A theory is beginning to evolve about the use of leaded and unleaded fuel. I do not know how factual it is but the theory seems to be that unleaded fuel which contains carcinogens and benzene, which I think was one of the additives mentioned, are in some respects every bit as dangerous and sometimes even worse than lead.

**Ms DAWSON:** Fuel science is a very complex matter and one that my colleague is better acquainted with than I.

**Mr EISER:** In terms of leaded and unleaded fuel at the moment there is no difference in the benzene content or aromatic content of the fuel, which are the two parameters one looks at when looking at benzene. Certainly, in later model vehicles using unleaded petrol, the catalytic converter takes out in excess of 90% of the benzene. With the advent of the unleaded petrol program, we have a reducing inventory of benzene emissions into the atmosphere.

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We look very closely at the benzene content and the aromatic content of the fuel. That is why we picked a low octane number unleaded petrol as a different route to that taken in Europe for example, which has a high octane unleaded petrol. We have about a 91-93 octane petrol and Europe has about 96 octane petrol. They are getting that extra octane by using materials such as aromatics in benzene which are very good for octane enhancement. In Australia the benzene content and aromatic content of leaded and unleaded petrol are basically the same, the only difference being the amount of lead.

**Mr HARRISON (STAYSAFE):** Additives are now being promoted and placed on the market to encourage people with older style motor cars that do not have catalytic converters to use unleaded petrol plus the additive. Have you conducted any research on whether that is contributing anything, either improving the situation or making it worse, so far as emissions are concerned?

**Mr EISER:** We have tested a few additives but our policy basically is that where the vehicle can be used on unleaded petrol and the manufacturer says it should be used on unleaded petrol, that it should be used on unleaded petrol wherever possible. If the manufacturer does not recommend the use of unleaded petrol, we recommend the use of leaded petrol. The lead content of petrol is quite low. Some additives on the market may have some effect. We find a marginal effect from additives such as octane boosters. They seem to do everything from allowing your car to run on unleaded petrol to giving a spring clean.

**Mr HARRISON (STAYSAFE):** I suppose its real effect is to allow the motorist to run his car on unleaded petrol without burning out the valves of the motor.

**Mr EISER:** We would be very careful about using an additive that said it would do just that because there are other parameters on the engine that need to be looked at and a motorist could risk damage to his vehicle. Some of the older vehicles on the market cannot take the low octane unleaded petrol, they need a higher octane, and in some cases the use of lead or a valve lubricant, to prevent subsequent damage.

**Mr GIBSON (CHAIRMAN):** Would you care to add anything, Mr Mellor?

**Mr MELLOR:** I do not think so. What has been said is contained in the submission.

## New South Wales Police Service witnesses

Inspector Terence Earle Lester, Acting Commander, Traffic Services Branch

Inspector Kerry William Grainger, Commander, Traffic Technology Section

Senior Sergeant Raymond Keith Smith

Senior Sergeant John Walter Lovatt

**Mr GIBSON (CHAIRMAN):** I note we have not received a submission. Is there any documentary evidence or anything that you would like the table during the course of your evidence?

**Inspector LESTER:** There is a formal submission on the way, a copy of which you have and also there is a copy of our responses with which you have been supplied.

**Mr GIBSON (CHAIRMAN):** Would you like to make an opening statement or will we go straight into questions?

**Inspector LESTER:** No, we might go straight into questions.

**Mr GIBSON (CHAIRMAN):** On average how many speeding offences are detected by officers of the New South Wales Police Service each calendar year? Of these offences how many relate to speeding offences in urban areas?

**Snr. Sgt. SMITH:** In 1991-92 there were 452,545 speeding offences detected. In the next financial year 1992-93, 481,494. In 1993-94, 343,852. In 1994-95, 367,616. The Police Service traffic penalty system captures speeding offence data in broader categories than those required by the Committee. Whilst information relating to speeding offences can be provided on a statewide regional district and patrol basis, it is not possible to distinguish between offences committed on major arterial roads and residential streets. Nor is it possible to determine the speed limits applicable to the areas where speeding offences are detected.

**Mr GIBSON (CHAIRMAN):** The figures relate to the overall number of fines but you cannot say how many were from urban streets or main roads, is that right?

**Snr. Sgt. SMITH:** That is correct.

**The Hon. A. B. MANSON (STAYSAFE):** Is the speed camera technology used currently employed on collector and local roads as well as arterial and subarterial roads? Are there any plans for the wider development of speed camera technology, for example, on a wider variety of roads than those as negotiated between the police, the Roads and Traffic Authority and the

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NRMA including on residential streets? Using the stationary speed camera sites including those at intersections fitted with red light cameras and speed cameras mounted in police vehicles rather than on roadside devices?

**Inspector GRAINGER:** Speed camera devices are only operated at locations which have been assessed and approved in accordance with negotiated police, Roads and Traffic Authority and NRMA speed camera site criteria. Any site, irrespective of what type of road, which conforms to the agreed criteria can be approved as a speed camera site. Further to that, negotiations have taken place between the police, the Roads and Traffic Authority and the NRMA in regard to broadening site criteria and to expand the range of sites suitable for this type of operation. This type of operation was recently approved. The new criteria will give the Police Service greater flexibility in deploying this type of technology while maintaining a focus on the reduction of road trauma. In regard to the different types of speed camera technologies the Service has looked at stationary type speed camera equipment. The papers are currently with the Minister for Transport seeking approval. In this regard a certain legislative change and gazettal is required. A number of sites including existing red light camera sites are currently under consideration.

**Mr GIBSON (CHAIRMAN):** Would the police prefer to put the cameras on any street rather than go through this procedure with the Roads and Traffic Authority and the NRMA?

**Inspector LESTER:** In one way but with a limited amount of resources we have also got to make sure that the speed camera activities or any of our road safety activities are directly related to the reduction of road trauma. One of the main things that we are about is relating our activities to reduction of road trauma. It saves a lot of criticism coming from other areas saying we are doing it for other reasons. I think the speed camera activity at this stage is more important to relate that directly to the reduction of road trauma. By having some sort of site selection criteria relating to the use of cameras we basically at this stage agree with that so we can directly relate it.

**Mr HARRISON (STAYSAFE):** The response given by Inspector Grainger seems to be at variance with a claim made in evidence given earlier on this morning that the use of speed cameras in the proximity of school zones was not permissible because of the requirement that there be a 200-metre restriction on using them when you came into a different speed zone, which is pretty much effectively the length of a school zone anyhow. Inspector Grainger has indicated that the police are at liberty to use them anywhere. Could you comment on that?

**Inspector LESTER:** No, we are not at liberty to use them anywhere.

**Mr HARRISON (STAYSAFE):** That is what I understood was said.

**Inspector LESTER:** We are at liberty to use them only at the locations that have been approved as speed camera sites throughout the State.

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**Mr HARRISON (STAYSAFE):** Is it true to say that there is a complete restriction on using them in the location of speed zones outside schools?

**Inspector LESTER:** No, because some of the school zones may well fit into the site selection criteria, but generally what you are saying is right. What we are both saying is exactly right. Most of the school zones are too short. In response to a question a little later on when we talk about new laser technology it might satisfy you as far as enforcing speed limits within school zones.

**Mr GIBSON (CHAIRMAN):** Would random speed camera operations be better?

**Inspector LESTER:** That is what we are heading for. With the new site selection criteria it is a lot looser. Our standing operating facilities at the moment restrict us to one site per roll of film virtually. The new cameras, the new traffic packs, will allow us to move on the same roll of film and take up to 600 shots. The new site selection criteria, the new standard operating procedures and a lot of other things are currently in the Minister's office awaiting approval. Hopefully they will be signed off very soon and it changes again.

**Mr GIBSON (CHAIRMAN):** It is a little bit like fighting Mike Tyson with one hand tied behind your back, in a lot of ways.

**Inspector LESTER:** One might say that.

**The Hon. J. S. TINGLE (STAYSAFE):** If, in fact, the cameras and technology are concentrated in areas where you are going to reduce accident trauma, is the inference they would not normally be used in areas of low speed limits such as 50 km/h roads? Would that mitigate against their being used there because if you have a 50 km/h limit and people observe it we hope there will not be so many accidents. In other words you would be looking at 100 km/h limits and 80 km/h limits more than, say, 50 km/h limits.

**Inspector LESTER:** If speed is a factor in crashes that is where we use whatever technology is available to us. Now if that is the new lasers, if it is a radar or if it is a speed camera, depending on the areas, we are still restricted because the manufacturer's requirement for the operation of radar is quite strict because you have got all sorts of bounce and Inspector Grainger can explain this more technically than I can, so we are restricted in using them where there are signs and where there is Armco railing and stuff like that. However, with the lasers it will go a fair way in solving that problem. If speed is a problem in a specific area, it does not matter what speed limit it is, we will attempt to enforce it.

**Mr SMALL (STAYSAFE):** STAYSAFE is aware that the New South Wales Police Service is to introduce laser technology to support speed enforcement operations. What are the costs and benefits associated with the technology?

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**Inspector GRAINGER:** The Police Service has carefully considered the question of laser technology as a form of speed enforcement. We are currently awaiting gazettal of devices and amendment to regulations to allow the use of this equipment. The benefit of the laser device is basically its ease of use suitable for multilane road applications, suitable for use in heavy traffic flows and it is suitable for use in short runs such as residential streets and school zones. On a cost-benefit basis the cost of a laser device is approximately half the cost of current stationery radar.

**Mr SMALL (STAYSAFE):** Are there reports or other documentation that you can forward to the Committee regarding the use of laser technology for speed enforcement, particularly any documents which might describe and discuss the experience of other States and Territories with the technology?

**Inspector GRAINGER:** I am not in possession of any documents but I can report that laser equipment is being used in a number of other States which is detailed in the chart. Basically Tasmania has eight devices, the ACT 12, Western Australia 30, South Australia 33 and New South Wales will be taking 60 devices into use shortly.

**Mr SMALL (STAYSAFE):** If any information came forward I am sure we would very much appreciate it if that is possible. The Police Service has indicated that it supports a limited period of grace in relation to the enforcement of new speed limits in residential streets in similar fashion to the moratorium on speeding offences directed to speed camera technology at the time the cameras were introduced. Has the Police Service been involved in any formal discussions with relevant organisations on this suggestion? If so, what is the outcome of these discussions.

**Inspector LESTER:** It is the desire of the Police Service to utilise enforcement efforts for the purpose of facilitating modification of driver behaviour and to promote subsequent voluntary compliance with the traffic law. We are saying it should be almost self-enforcing. As Dr Michael Henderson said earlier, we should not have to use major enforcement techniques to make this system work. It is not and never has been our particular aim to punish motorists. For this reason the Police Service would support a limited period of grace in relation to the enforcement of any new speed limit in residential areas, just in an effort to reaffirm with the motoring public that our activities are road safety related and aimed at the reduction of the road toll. Discussions have taken place between the Police Service and the Roads and Traffic Authority and there has been general agreement between the two organisations. Should a general urban speed limit or residential speed limit of 50 km/h be introduced, the Police Service would participate in any consultation concerning a period of grace.

**Mr GIBSON (CHAIRMAN):** Should we still have a tolerance on our speed limit? Should we let a driver do 66 km/h in a 60 kilometre zone, or whatever the tolerance may be?. I note in Victoria if it is a 60 km/h limit it is 60 km/h.

**Inspector LESTER:** Our formal position is there is no such thing as a tolerance, full stop. We

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leave it to the discretion of the constable who is actually working the area, with his or her knowledge of and intelligence on that particular area and street, whether or not to enforce at particular levels. The Commissioner did issue general guidelines in April 1994 or 1995, I am not sure which year, that if a person is less than 10% cent over the limit some other action apart from an infringement notice might be more appropriate. In other words, waggle a finger or a caution. Formally there is not such thing as a tolerance in New South Wales.

**Mr GIBSON (CHAIRMAN):** Most people in New South Wales believe there is a tolerance. If a 50 km/h speed limit is implemented people will probably think they are entitled to do 55 km/h. So does that not defeat our criteria before we even start?

**Inspector LESTER:** To some extent it may. But not only do we have an external marketing process with the members of the public of New South Wales, we have an internal marketing process to be carried out with the operation of police in New South Wales to make sure they enforce at whatever is the appropriate level.

**The Hon. J. S. TINGLE (STAYSAFE):** We have already touched on this. The committee has expressed concern previously about the ability of police to effectively enforce the 40 km/h limit in school zones both from the point of view of the length of the zone and availability of resources. In STAYSAFE 26 we made recommendation 28 to address this issue. Would you indicate to the committee what action the Police Service has taken with regard to that recommendation relating to a 40 km/h speed limit in school zones?

**Snr. Sgt. LOVATT:** In line with the recommendation referred to, the Police Service addressed the issue of guidelines for the use of speed detection technology in school zones. The amended guidelines, which are still subject to final approval, now include all school zones as approved camera sites. The most significant step towards addressing the problem of speeding in the school zones is represented by the Police Service efforts to commence laser speed enforcement in this State. The nature of these devices makes them ideal for deployment in this type of area. Roads and Traffic Authority funding has allowed the purchase of 60 of these devices. Discussion has also been held with the Roads and Traffic Authority concerning problems associated with the policing of school zones. The discussions have centred around the signposting requirements for these zones and the actual offence committed by persons disobeying the signposting in these zones.

**Mr JEFFERY (STAYSAFE):** Does the New South Wales Police Service conduct joint enforcement operations, for example random breath testing and speed enforcements? If not, does the Police Service have plans to do so?

**Inspector LESTER:** The New South Wales Police Service does conduct joint enforcement operations. The current guidelines allow for the combined operation of random breath testing and speed enforcement at the same time. Road trauma research has long indicated there is a variety of major causal factors directly related to frequency and severity of road trauma: that is, speed,

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alcohol, occupant restraint, and fatigue. As a consequence, police enforcement operations are designed to address the variety of causal factors which traffic intelligence indicates are relevant at the time. We can cost efficiently and effectively enforce that area.

**Mr JEFFERY (STAYSAFE):** The committee in recommendation 17 of the STAYSAFE 27 report — which report I have a lot of passion for, as the parliamentary secretary to the Minister for Police would understand — made a recommendation that the New South Wales Police Service install video cameras and recorders in highway patrols and accident investigation squad vehicles. That was to record drivers' behaviour. This technology would be very appropriate for use in areas that are otherwise difficult for police, such as speed offences in a 40 km/h speed zone outside schools and also speed offences on residential streets and local roads. Apart from what has happened in Parliament, what has been the progress in implementing this recommendation?

**Inspector LESTER:** We have one type of video recording system that is being tested within the Police Service. The initial results are proving quite effective and are quite positive. The Police Service will be further evaluating other types of on-board videos — there are quite a few on the market — before decisions are made, and there will be consultation with the Privacy Committee and the judiciary. From first-hand experience the Privacy Committee is very interested in on-board videos. The effectiveness or otherwise of the devices cannot be commented on prior to these proper evaluations being carried out. Following evaluation of all the available equipment the appropriate tendering policies will be employed, along with the application for capital funding for the purchase and the fitting of the devices. So whilst there is one on trial, we are gradually proceeding down the line to get them on board.

**Mr JEFFERY (STAYSAFE):** Is the Privacy Committee interested positively or negatively?

**Inspector LESTER:** I am sure with appropriate negotiation we can come up with a solution to both sides of the argument — the police enforcement side and the Privacy Committee. The major concern is what is called technology creep. The new speed cameras use frontal photography and the Privacy Committee is concerned, as with the videos, that the Police Service uses the speed camera or the on-board video for exactly what we say we are going to use it for and not allow it to creep into other areas and do other things we did not say we would do in the first place. Technology creep is their major concern. We can certainly work our way through negotiations and come up with a good solution from both sides.

**Mr HARRISON (STAYSAFE):** In previous evidence on 4 December 1995 the New South Wales Police Service indicated a current proposal to reduce the general urban speed limit to 50 km/h would be an appropriate time to review the current penalty and demerit point system in New South Wales. Has a review of the demerit point system taken place or commenced?

**Inspector LESTER:** The demerit point system is administered by the Roads and Traffic Authority. The Police Service is able to provide some advice in this regard though. A task force was created and met earlier this year to address the review of the demerit point system. Its

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members comprised representatives from various sections of the Roads and Traffic Authority and the police Traffic Services Branch. A basic philosophy was agreed upon and that was that the demerit points should be allocated to persons for road safety related offences rather than just technical breaches. A draft document has been prepared setting out the recommended demerit point offences and that has gone for consideration to the Ministers of both organisations.

**Mr HARRISON (STAYSAFE):** The committee has suggested that the current speeding offences under the Traffic Act 1909 should be revised to specify increments of 10 km/h rather than the current increments of 15 km/h. This would bring the speeding offences increments in line with the increments in posted speed limits. Does the New South Wales Police Service support such a suggestion?

**Inspector LESTER:** Basically we do support such a suggestion. The issue has been considered at length and the Police Service has participated in consultations with the Roads and Traffic Authority on this issue through its representation on the speed management task force. A number of concerns were identified by the police organisation during the consultation and were raised with the Roads and Traffic Authority. The latest advice we have is such that it would appear that the concerns held can be overcome and that there is no real impediment to the introduction to the system. It is also understood, however, that the Roads and Traffic Authority has corresponded with road safety authorities in other States of Australia and received information about what those authorities are doing so we have consistency.

**Mr GIBSON (CHAIRMAN):** You mentioned you had concerns. What concerns did you have?

**Inspector LESTER:** Probably the base concern was 10 km/h and under where an offender received one demerit point and no fine and there was a legal impediment where there was no right to appeal. An offender received an infringement notice, lost one point and did not get a monetary fine. Because of that, there was some complicating factor that it could not be appealed against, which goes against the grain in most of western society. So there must be some sort of right of appeal. We are working through that and it is looking good.

**Mr MILLS (STAYSAFE):** The Police Service acknowledged in previous evidence last December that there had been discussion on the development of a cautioning system about two years ago. Has there been any further examination of the question of a formal cautioning system to operate in conjunction with the traffic infringement notice system?

**Inspector LESTER:** It was indicated in earlier evidence that the Police Service previously considered this on-the-spot cautioning system. At that stage we prepared a file to go to the Minister for Police. The matter was then considered by Cabinet and it was decided to defer the proposal. The Police Service was further advised that it would be appreciated if it could arrange for no further action to be taken in regard to implementation of this proposal until the matter was further considered by Cabinet. To date, no further advice has been received. So, after two years, it may have been lost in the system. However, papers relating to the proposal are being

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resubmitted for consideration by the current Government. We have copies of the main file, so we will breathe new life into it.

**Mr MILLS (STAYSAFE):** The committee has heard a lot about the importance of effective public education and communication strategies if we are going to implement lower speed limits successfully. Is the Police Service working with the Roads and Traffic Authority on possible communication strategies in relation to a new urban speed limit?

**Inspector LESTER:** Yes, we consider this is one of the key things in the whole process of introduction of the 50 km/h residential speed limit. We have had early consultation between the Police Service Traffic Services Branch and the Roads and Traffic Authority. Agreement in general terms has been reached and should a decision be made to implement or reduce general urban speed limits then steps can be taken to swiftly introduce the suitable marketing and public education strategy. The Roads and Traffic Authority is the driver of the marketing and public education, but we would certainly support that.

**Mr GIBSON (CHAIRMAN):** Would the Roads and Traffic Authority or the Police Service implement that?

**Inspector LESTER:** The Roads and Traffic Authority is the driver of the marketing side of it.

**Mr MILLS (STAYSAFE):** I want to revisit the school zone question. I think I heard you say, Sergeant Lovatt, that the proposal that is currently awaiting consideration by the Minister is that all school zones be camera sites?

**Snr. Sgt. LOVATT:** That is right. It will not fit the criteria. At the moment there has to be a number of crashes and it has to meet certain criteria before it is allocated a camera location. If they allocate the 40 km/h zone as a camera site, we can put the camera there.

**Mr MILLS (STAYSAFE):** Without it being a black spot.

**Snr. Sgt. LOVATT:** That is right.

**Mr MILLS (STAYSAFE):** What about this 200 metres guideline? Is that a legislated thing or a regulation?

**Snr. Sgt. LOVATT:** It is a policy for operating the radar.

**Mr MILLS (STAYSAFE):** It is an operational policy within the Police Service?

**Snr. Sgt. LOVATT:** Yes, you have to work within 200 metres of the signpost and lots of the areas do not fall within that category. But if it is legislated and the speed signs are gazetted we can then report the motorist for speeding rather than for driving contrary to notice, which is what

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we are doing now.

**Mr HARRISON (STAYSAFE):** Even if it is the subject of policy, perhaps that could be related back to school zones?

**Snr. Sgt. LOVATT:** Yes.

**Mr HARRISON (STAYSAFE):** That should not take too much effort at all.

**Inspector LESTER:** No, that is actually one of the major pilots.

**Snr. Sgt. LOVATT:** The laser radar would be ideal for enforcement in school zones.

**Mr GIBSON (CHAIRMAN):** Is it not like saying we can conduct random breath testing only after a drunken driver has crashed? It is a silly situation that we have to wait until so many accidents have occurred until we can do anything.

**Snr. Sgt. LOVATT:** As you said before, our hands are tied behind our backs. We have been given equipment that we cannot use for what we want. Safety officers do speed checks at various locations. They might not meet the criteria for crashes, but local residents are complaining. Council officers do their speed checks and there is no doubt that speed is there, but we cannot work with it.

**Mr HARRISON (STAYSAFE):** It is understandable that if you are coming from a 100 km/h zone into a 60 km/h zone, even if you take your foot off the accelerator immediately, it takes some time to slow up, otherwise you would have to start slowing down 200 metres before you reached the sign.

**Mr GIBSON (CHAIRMAN):** But by the same token, all motor cars have a brake. If a horse jumps out in front of your car, you will pull it up nine times out of 10. Surely it only means that you put a warning sign further down the road that in 200 metres you will be in a 60 km/h zone.

**Snr. Sgt. LOVATT:** That is done now.

**Inspector LESTER:** The point is that it was nice to have the deceleration zone for 200 metres after the change of speed limits, but another factor involves radars, which includes cameras. You cannot operate them in a certain area of reflective material, whether it is a vehicle or whether it is a sign. So technically we have to be careful of that as well. Lasers do not do that. They will be an excellent piece of technology and they will go a long way to solving our problems both in 40 km/h school zones and residential speed limits in the same area. You just point the laser. If members of the Committee have not yet had the opportunity of seeing one, I would invite you to come out one day and we will demonstrate it for you.

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**Mr MILLS (STAYSAFE):** Accepted. Thank you.

**Mr GIBSON (CHAIRMAN):** We would also like to have a look at any documentation applicable to the laser, if that is appropriate.

**Inspector LESTER:** We can arrange that for you.

**Mr SMALL (STAYSAFE):** Will the laser or any future technology clearly identify the vehicle? When you issue an infringement notice or a fine can you identify the car at the relevant speed? Many people dispute they were doing the alleged speed and say that other cars were travelling along the highway at the same speed at the same time the infringement was issued. Do you see that technology will help you in that regard in the future? Will the laser do that?

**Inspector LESTER:** Traffic packs and current speed cameras are excellent. Members of the public can obtain a photograph of their own vehicle, if it is their vehicle, which shows the number of the car and across the top is printed the site and the speed. That occurs now. Laser technology is a simple hand gun. It is not attached to a camera. The only way we can record that is with either a digital camera, or an ordinary camera as we have now. But when you are considering \$7,500 for a laser or \$100,000 for a speed camera, you have to start weighing up the cost efficiency of the operation.

**Mr SMALL (STAYSAFE):** Lots of drivers write in and say they were not travelling at the speed for which they were fined, yet on the highway many trucks are still travelling at that speed. It would be helpful if there were some way to identify that person so that there could be no excuse. It would be wonderful to have it, but it sounds as though it would not be cost effective.

**Mr HARRISON (STAYSAFE):** Proof has been available has it not?

**Inspector GRAINGER:** Yes, photographs are available on application.

**Inspector LESTER:** If it is an ordinary radar offence, or an ordinary laser offence you will not get a photograph, but if it is a camera offence you can get the photograph.

**Mr SMALL (STAYSAFE):** But the camera offence would only be in the city where they are set up?

**Inspector LESTER:** Some rural areas have them.

**The Hon. A. B. MANSON (STAYSAFE):** The New South Wales Police Service previously indicated in submissions to the inquiry into pedestrian safety that the community and road education scheme, or CARES, was to be expanded from the focus on bicycle safety to allow for training in both bicycle safety and pedestrian safety. The Committee supported this initiative in recommendation 33 of the STAYSAFE 26 report. What action has been taken to ensure that

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CARES centres and other similar centres throughout the State offer both bicycle and pedestrian safety training for young people?

**Inspector LESTER:** The issue has been examined by the CARES coordinating committee, which has endorsed that as a valuable statewide strategy. In other words, it wants to do it in little groups. The provision of physical devices necessary to support the initiative is dependent upon funding for local CARES centres. Funding for these types of programs is always a problem, and it is not known when the program will be introduced on a broad-based scale. At this stage only one centre has completed the required works and that is the CARES centre site at Prospect under the administrative control of the Prospect police district. To date the educative aspects of the program have not been commenced but it is anticipated they will commence in the next couple of weeks.

## NRMA witnesses

Mr Nigel Charles McDonald, Project Officer  
Mr Andrew Richard Macky, Manager, Traffic Engineering,  
Mr Stephen James Gray, Project Officer, Road Safety

**Mr GIBSON (CHAIRMAN):** I note that the STAYSAFE Committee has previously received a submission from the NRMA. Is there any further documentation you wish to table during the course of your evidence?

**Mr MACKY:** No.

**Mr GIBSON (CHAIRMAN):** Would you like to make an opening statement or would you prefer to go straight into questions?

**Mr MACKY:** I have a brief opening statement. On behalf of NRMA I would like to thank the STAYSAFE Committee for inviting us to give further evidence to the inquiry of the Committee into 50 km/h local road speed limits in residential areas. The submission of the NRMA, which was tabled on 4 December 1995, canvasses a range of issues that NRMA considers needs to be addressed to generate broad community support for a 50 km/h speed limit in residential streets. We trust our submission has assisted the Committee in its inquiries to date. However, I understand the Committee has further questions it would like to pose to NRMA. Nigel, Stanley and I would be happy to answer them and any additional questions you may have.

**Mr GIBSON (CHAIRMAN):** What work has the NRMA done on speed management since the NRMA's witnesses last gave evidence to this inquiry that might assist the Committee in its deliberations?

**Mr MACKY:** NRMA has not undertaken any specific activity in speed management that might assist this Committee. It has, however, contributed to the development of the 1996-97 New South Wales Speed Management Task Force Action Plan, one issue of which is to look at the introduction of lower speeds in local streets. It has continued its membership on the steering committee that is overseeing the Mosman-North Sydney trial, and it is also in the process of preparing an article on speed management for the next issue of the *Open Road*, which will include a questionnaire seeking member feedback on various issues including a 50 km/h residential street speed limit.

**Mr GIBSON (CHAIRMAN):** Your submission strongly recommends that the Mosman-North Sydney trial be fully evaluated before any decision is taken to implement a 50 km/h local street speed limit. What is the justification for such a recommendation when it seems that the Mosman-North Sydney trial is not a model that could be introduced effectively on a statewide basis? After all, the trial includes a 50 km/h limit on arterial, subarterial and collector roads, roads which would not be affected by the proposal before the Committee in this inquiry.

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**Mr McDONALD:** The Mosman-North Sydney trial is a scientific study of a 50 km/h speed limit on a range of streets, being primarily local residential streets. Therefore, it is a model which would form a good basis to represent a statewide implementation of a 50 km/h speed limit. The study was developed as a full scientific study, planned, implemented and monitored with input from all relevant stakeholders, unlike a number of previous trials. The study also includes an extensive assessment of community attitudes, and NRMA sees one of the key elements of the trial as the assessment of community feedback. Ultimately the success of a 50 km/h speed limit will depend on community acceptance. Appropriate communication strategies might also be developed from this information. Additionally, an assessment of the trial may be beneficial to demonstrate a full consideration assessment and subsequent commitment to a lower residential street speed limit. The merits of the scheme can be communicated to the New South Wales community in addition to providing realistic expectations of what we are likely to achieve with a lower speed limit. The trial and evaluation will finally provide local New South Wales experience under local conditions.

**Mr SMALL (STAYSAFE):** I understand that last year you undertook a study tour on speed management to Europe. What can you tell us about the information on speed management you gleaned from that tour?

**Mr MACKY:** I did undertake a study tour of Europe and the United Kingdom and looked at various traffic management issues. Obviously speed management was a priority. I had the opportunity to look at the issue of speeding in light of what was happening in New South Wales and Australia with respect to a lower speed limit in residential areas. One thing that struck me was that the residential areas of Europe, which have lower speed limits, are typically represented by very narrow streets with little properties set back from the road boundary, very dense housing areas and a lot of pedestrian and cyclist activity in addition to vehicle activity.

These conditions are much more conducive to a lower speed limit than what we have in Australia, where we typically have wider streets, a greater property set back and less activity in our regions. Another issue I looked at was the implementation of 30 km/h speed limits in some countries, notably, Germany and the Netherlands.

My main observation was that either those limits were applied in conjunction with traffic calming devices or the road layout was such that a 30 km/h speed limit was appropriate for the given conditions. I also noted that the speed limit on the motorways was typically in the order of 120 km/h or higher. Based on my observations and experience, the design standards of some of those roads is certainly no better than what we have on some of our rural freeways in New South Wales.

Another key issue I looked at was the development of intelligent transport systems and the various technologies associated with that, and the potential for variable speed limits which are used extensively on many European motorways to better reflect the prevailing speed limit based on travel conditions, weather conditions and so on. We would like to see that pursued with much

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more effort in New South Wales. I acknowledge that the NRMA will be conducting a trial of this technology on the M4 motorway. The NRMA fully supports that because there are a number of opportunities to have a system whereby speed limits clearly reflect the prevailing travel conditions.

**Mr GIBSON (CHAIRMAN):** Public opinion does not support what the NRMA is saying about increasing the speeds on those roads. The STAYSAFE committee also toured Europe. We found that many speed limits in urban areas were based on 30 km/h in black spots and so on. We did not find many areas, apart from in the old cities, that had smaller, narrower and less windy streets than those in the Sydney central business district. Dublin has the widest streets in the world. There is a great comparison between many European cities and Sydney. On the European freeways and tollways countries have gone in the opposite direction to what the NRMA is saying. They are talking about bringing down the speed limit on most freeways and tollways. At certain hours the speed limit on a specific stretch of the M25 around London is down to 50 km/h; until 12 months ago it had an unrestricted speed. Even Europe is moving — and it is moving much quicker than we are. For example, Denmark has had a 50 km/h speed limit for 10 years; many other European cities are the same. What we found in Europe would be almost the opposite to what you found.

**Mr MACKY:** That is interesting. You raised a number of points that I should like to address. Firstly, Denmark introduced a blanket 50 km/h speed limit in 1985. Clearly, it has also recognised the need to introduce higher speed limits on its traffic routes, and it is introducing speed limits of 60 km/h or higher on its traffic routes. That information was passed on to me by the police officers and traffic authority officers whom I met. European countries are looking at reducing their speed limits on freeways to 120 km/h. For example, Germany has an unrestricted speed limit on many sections of its motorways and is looking at opportunities to bring it down. A report of the European Transport Safety Council refers to reducing motorway speed limits to 120 km/h throughout the European Union. With respect to the M25, that represents a parking lot. It is well acknowledged—

**Mr GIBSON (CHAIRMAN):** So does the autobahn and most of the others.

**Mr MACKY:** That is why they have introduced variable speed limits.

**Mr GIBSON (CHAIRMAN):** You just told me that in Germany they are increasing it.

**Mr MACKY:** No, I did not; I said that they had unrestricted speed limits but were looking at reducing them through the introduction of variable speed limits. They will be able to post credible limits in areas where there is a lot of traffic or where adverse weather conditions exist. Whilst I certainly agree that there are a number of points or issues in Europe that we can take on board, we also need to be aware of Australian conditions and how we apply speed limits to reflect those conditions. I am certainly not suggesting that the NRMA is opposed to the introduction of 30 km/h or 40 km/h speed limits, but it would need to be done in areas where there is a demonstrated need for such speed limits and where the road environment or the physical layout supports such

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speed limits. The European Transport Safety Council also noted that such limits should primarily be put in place where the physical environment encourages self-compliance.

**Mr HARRISON (STAYSAFE):** In general, at 50 km/h pedestrians involved in a crash are just as likely to die as to survive. Is there a case for reducing the speed limit on residential streets to 40 km/h or even 30 km/h, as is now implemented, or at least being considered, in many European countries?

**Mr GRAY:** Certainly, research evidence indicates that lower speeds significantly reduce the severity of crashes for pedestrians, so lower speed limits are an important consideration in terms of pedestrian safety. This must be balanced with the needs of other road users and the likelihood of compliance by motorists. The NRMA believes that to reduce the residential speed limit to a blanket limit of, say, 30 km/h, which is effectively half the present limit, may be considered by motorists to be too severe. This may seriously hinder compliance with the new limit. The proposed reduction to 50 km/h would be seen by most road users as a reasonable balance. It would provide an increased level of safety for pedestrians, which is important, and still allow reasonable access for motorists. Nevertheless it should be noted that the setting of speed limits in general should be related to the context of the road and the traffic environment in a specific area. This would allow us to have a range of potential speed limits, as Mr Macky suggested, set according to the context of each individual area.

**Mr MACKY:** As I said, the NRMA is certainly not opposed to the implementation of 30 km/h or 40 km/h speed limits in appropriate areas, provided that they are supported by traffic calming devices or the road layout.

**Mr GIBSON (CHAIRMAN):** No witness today has spoken against the 50 km/h speed limit. However, all the so-called experts have told us that a 50 km/h speed limit should not need calming devices. You are saying that we need calming devices to bring in a 50 km/h speed. On what do you base your suggestion that we need calming devices, because the NRMA is the only body that has made that suggestion?

**Mr MACKY:** The NRMA has not suggested that. I said that 30 km/h or 40 km/h speed limits would need the support of traffic calming devices. We support the introduction of a 50 km/h limit because it can be implemented without the need for traffic calming devices. To answer Mr Harrison's question, some research I came across indicated that in Germany 74% of motorists exceeded the speed limit when 30 km/h speed limits were put in place. We must bear in mind that, while we can introduce measures to support 30 km/h speed limits, there still may be difficulties in getting motorists to travel at that speed. That issue is of great concern to the NRMA. We do not want to introduce rules that people do not obey and that cannot be effectively enforced.

**Mr HARRISON (STAYSAFE):** Do you accept that it is a hypothetical question and no consideration is being given to that at present?

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**Mr MACKY:** Certainly, but as I said, the introduction of those speed limits must be supported by appropriate devices.

**Mr JEFFERY (STAYSAFE):** In northern Europe, road safety and traffic management issues are commonly dealt with in conjunction with environmental issues — something that could perhaps be termed green safety. The move towards lower speed limits and better compliance with speed limits seems to be an outcome of this joining of safety and environmental considerations. This joining of safety and environmental considerations does not seem to occur in Australia or New South Wales. Why do you think Australian road safety workers have not followed the European lead? How do you think the joining of safety and environmental considerations could be better effected?

**Mr McDONALD:** From the NRMA's knowledge of northern European practice we understand that environmental considerations and road safety considerations are addressed in conjunction, but that environmental issues are not treated as a primary objective. From our knowledge of a small number of instances in which they have been considered together, we understand that projects have been instigated on a road safety basis, then environmentally beneficial side effects have been identified, but generally more to assist in promoting the projects so that they gain further acceptance in the community, not to meet environmental goals. The primary role and driving force behind these projects has been road safety. In relation to the likely environmental effects of a reduced speed limit in New South Wales, as stated in our December submission to the Committee, it would appear that the benefits would appear negligible. Direct changes in noise pollution and vehicle emissions would be expected to be insignificant.

Any long-term environmental benefits, for example, from lower emissions as a result of a less aggressive driving approach on residential streets are unable to be quantified and may be open to public scepticism if used as a marketing tool for the proposal. However, having said that, we point out that the environment is only one component of amenity as defined in our submission. Amenity as a whole may be a valid marketing tool or selling point for the proposal, in addition to the road safety benefits. Such points may include the improved perception of safety in our local streets, especially for pedestrians and vulnerable road users.

**Mr GIBSON (CHAIRMAN):** I do not know whether you have seen the AUSTROADS report, which suggests that we will burn 48 million litres of fuel less in the first year. Do you think that that is an environmental plus?

**Mr McDONALD:** Our understanding of that study is that, first, AUSTROADS looked at steady speeds to obtain its figures, so it is not a true reflection of the real environment. Secondly, the figures assume that we will achieve speed reductions with a change in the speed limit. To some extent, it may not be realistic to expect these reductions, particularly if existing travel speeds are below the speed limit that we aim to set on some roads.

**Mr GIBSON (CHAIRMAN):** The AUSTROADS report is in a graduated form, for example,

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if the average speed falls by 10 km/h, 48 million litres of fuel will be saved; if the average speed falls by only 7 km/h, X litres of fuel will be saved, and so on. It would have to be a plus for the environment, even if we burn 25 million litres of fuel less.

**Mr McDONALD:** That is certainly true. There may be a plus but we expect it to be relatively small, compared to other potential environmental improvements. In that regard it would be negligible.

**The Hon. J. S. TINGLE (STAYSAFE):** The NRMA has suggested that a review of speed limits everywhere should be undertaken to help to build public credibility in speed limits, thereby winning public support for a 50 km/h speed limit in residential streets. The Roads and Traffic Authority has told the Committee that this has virtually been done and that there is little room to move on speed limits. The Roads and Traffic Authority also does not agree with the NRMA proposal to raise speed limits on the best freeways to 120 km/h. The idea that speeds should be increased on some roads does not appear to have any support among those who have given evidence today. What justification is there for your argument?

**Mr MACKY:** Firstly, the NRMA disputes the Roads and Traffic Authority's assertion that there has been a review of speed limits on all roads. We recognise that lot of good work has been done in recent years in addressing this issue, but the NRMA thinks there are still inconsistencies in posting speed limits. We drew the attention of the Committee to this problem last year when we provided evidence on 4 December. This has also been reinforced by feedback from our members and from various other stakeholders. The NRMA believes there is still a credibility gap between drivers' expectations, current speed zoning and the communication of speed limits. With respect to the issue of a speed limit of 120 km/h and the general setting of speed limits, we certainly have not recommended a random increase of speed limits on some roads to compensate for a reduction of speed limits on other roads. We have stated for a number of years that speed limits should be set to reflect the driving environment and the relative safety of different road environments. We feel that establishing a more credible system of speed limits in the eyes of the community is one of a number of important measures that will encourage greater compliance with speed limits.

Our support for trialing a speed limit of 120 km/h on high-standard rural freeways is based not only on our personal observations but on feedback from our membership and from various other sources. In 1993, the then State Government formed the Community Advisory Group on Speeding in recognition of the fact that community input and involvement were integral to the success of the New South Wales Speed Management Program. Membership of that group comprised local government, various road transport operators, the medical profession, the Country Women's Association, New South Wales Farmers Association, and a broad cross section of stakeholders. One of the recommendations of the group was that the community would appreciate a commitment to examine the potential for increasing the limit on appropriate sections of rural freeways.

This view is not something the NRMA has devised or made up. It is something we have

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canvassed with our membership and it also has the support of a variety of other stakeholders. It should also be noted that the roads we are talking about where this would apply are really only high-standard rural freeways. Currently in New South Wales a speed limit of 110 km/h can apply on the high-standard two-lane rural roads; that is undivided rural roads with one lane in each direction. We are saying that limit is perfectly safe on a two-lane rural highway, yet on the other hand we have a four-lane divided carriageway, a freeway-standard road and we are saying that the same limit is applicable to that road. In the eyes of the community I think there is a bit of a credibility gap there.

**The Hon. J. S. TINGLE (STAYSAFE):** There may be, but if we seriously envisaged raising the speed limit on those best roads to 120 km/h — and I agree that some of those roads could be travelled at 120 km/h—it would add another speed limit to the confusion we have heard about today. We have heard about speed limits of 40, 50, 60, 80, 100 and 110 km/h. Speed limits seem to lose credibility if they constantly change on one long stretch of road. People become irritated and think they are meaningless. Would that not mitigate against credibility rather than support it?

**Mr MACKY:** I agree absolutely. The whole basis of speed zoning is to have credible speed limits on our roads system, but not so much that speed limits change so frequently people do not understand what the speed limit is. It is a case of ensuring that there is a minimum length of road which would be speed zoned and that it is speed zoned accordingly. The issue of not knowing the speed limit comes back to how that speed limit is communicated. One of the concerns we have raised in our submission is that there needs to be an improvement in the communication of speed limits to road users so that they are in no doubt whatsoever what the prevailing speed limit is.

**Mr GIBSON (CHAIRMAN):** If the speed limit on those roads is increased to 120 km/h, would you also increase the speed limit of trucks and buses by 10 km/h?

**Mr MACKY:** That issue needs to be looked at. We are certainly suggesting that. We are saying that there may be merits in increasing the general speed limit.

**Mr GIBSON (CHAIRMAN):** Surely if that is the case it would have to apply to buses on open roads as well.

**Mr MACKY:** Currently it does not, in New South Wales for example.

**Mr GIBSON (CHAIRMAN):** It is 10 km/h less. If the speed limit is increased to 120 km/h, you say the NRMA supports trucks and buses travelling at 110 km/h on those main roads?

**Mr MACKY:** Currently in New South Wales the speed limit for trucks and buses is 90 km/h unless the vehicle is fitted with a speed limiting device.

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**Mr GIBSON (CHAIRMAN):** But it is 100 km/h.

**Mr MACKY:** I am not in a position to comment on that. There is that differential. The development of the Australian road rules recommends that a speed limit of 100 km/h be applied to all trucks and buses, and that would still have a speed differentiation of 20 km/h on those highest standard roads.

**Mr GIBSON (CHAIRMAN):** You are saying these roads are good enough for cars to increase their speed by 10 km/h to 120 km/h, yet they are not safe enough or good enough for trucks and buses to travel at that speed?

**Mr MACKY:** I appreciate the point you are making, and it is valid one. Research has shown that speed variance or increased speed dispersion can actually be detrimental to road safety. A number of studies highlight that problem.

**Mr GIBSON (CHAIRMAN):** I am asking whether to NRMA believes the increase in the speed limit should apply to trucks and buses?

**Mr MACKY:** We certainly recognise that there are scientific studies, but we also have to accept the fact that we need to deal with the community. I am not sure whether the community would support increasing the speed limits of trucks and buses to be in line with the general speed limit for all vehicles.

**Mr HARRISON (STAYSAFE):** I inferred from what the NRMA said that if the speed limit on buses and trucks was increased to 110 km/h and they were governed, they would travel at that speed on other roads where the speed limit was 100 km/h. That is not a practical suggestion. I gather the NRMA is saying that whilst the speed of private cars may be increased to 120 km/h, trucks and buses that are governed to 100 km/h would maintain that speed. Is that correct?

**Mr MACKY:** As I said, the community may support the introduction of a speed limit of 120 km/h on some roads, but whether there would be broad community support for increasing speed limits for trucks and buses is another issue that cannot be dismissed and has to be considered.

**Mr HARRISON (STAYSAFE):** If the relativity of 10 km/h were to be maintained, trucks and buses would have to be governed at 110 km/h. That would mean they could travel at 110 km/h on roads that had a speed limit of 80 or 100 km/h.

**Mr MACKY:** Some people might say that trucks and buses are already travelling at those sorts of speeds on other roads.

**The Hon. J. H. JOBLING (STAYSAFE):** I wish to refer to motorist compliance and compliance with the multiplicity of zonal changes that have been discussed, particularly the possibility of a speed limit of 50 km/h. Will you address the question of the sort of information

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a motorist should encounter when leaving a major road to travel on a local or residential road? How can older motorists be educated to ensure that they understand what they have encountered if a speed limit of 50 km/h is imposed when they leave the major road? How would you ensure that they get the message?

**Mr McDONALD:** The NRMA would envisage that it would be similar to the current situation. The blanket speed limit would be 50 km/h and all other routes signposted appropriately. Therefore, we would see that current traffic routes would be signposted at 60 km/h and the speed limit clearly communicated on those routes to motorists, with particular attention being given to any areas that might not meet driver expectations, where they may expect a higher or lower speed limit. As a basis for discussion the NRMA has also suggested that a suitable road environment prompt for the speed limit may be centre-line markings. Any roads that have centre-lines would be expected to be speed zoned at 60 km/h or above and roads without centre-line marking would generally be expected to have a speed limit of 50 km/h, again with special attention to signposting in locations where that does not occur. It is important to emphasise that this will not be a no-cost activity; there will be significant costs associated with clearly signposting and communicating the new limits to motorists.

**The Hon. J. H. JOBLING (STAYSAFE):** You suggested that there would be no centre-line marking on roads with a speed limit of 50 km/h. On some of the narrower roads with parked vehicles, would that not create in the minds of some drivers a judgmental problem with the width of the road? What would be the benefits of having no centre-line marking other than that it would be different?

**Mr McDONALD:** Basically the background for that suggestion was that most of the roads where we would expect a limit of 50 km/h to apply currently do not have markings. We would need to give some attention to any areas that do have markings to ensure that motorists are not confused. That was the primary reason.

**Mr MACKY:** This has just been put forward for discussion. Many of our local streets where a speed limit of 50 km/h would apply do not have any line marking. Therefore, it is a clear and relatively simple message to drivers that if there is no line marking they are in a local environment and should drive accordingly. Obviously in some areas line markings exist. It has been raised as a point for general discussion.

**The Hon. J. H. JOBLING (STAYSAFE):** I am equally concerned about some older drivers who have been driving for many years. If a speed limit of 50 km/h applies, the absence of a centre-line would not remind them of that speed limit. It will take quite a while for it to sink in unless there is a standard "50" or a house sign. Would you consider marking the speed limit on the road or putting a brick band across the road? Without such a sign I do not believe one could guarantee that an alarm bell would ring to indicate that the speed limit was 50 km/h.

**Mr MACKY:** That is an important point. With any introduction of a lower speed limit there

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would have to be extensive community education and a publicity campaign. I do not think the problem will be sorted out immediately; it needs to be considered in great detail. How do we effectively communicate speed limits to the road user? If a general speed limit of 50 km/h applies on our network and we advise drivers that where the speed limit is signposted 60 km/h or higher they know they are on a traffic route, that would probably be the most appropriate way of differentiating between those local streets where a lower limit applies and your main traffic routes.

**The Hon. J. H. JOBLING (STAYSAFE):** Motorists travel from State to State. Would you suggest that this should be a uniform arrangement throughout the States or will you take your chances with interstate drivers and hope they read the book or remember the difference?

**Mr MACKY:** It would be far more appropriate to have uniform road rules across the nation. It simplifies things and it overcomes the problem of drivers from different jurisdictions not knowing what rules apply in different areas. We would prefer to see a national approach undertaken particularly on this issue, where so many potential benefits are available to the community.

**The Hon. A. B. MANSON (STAYSAFE):** If there were a general review of speed limits in tandem with the introduction of a 50 km/h speed limit in residential areas, and assuming this process led to a higher speed limit on certain roads — for example, NRMA's proposal to raise speed limits on the best freeways to 120 km/h — two results might be expected: that the credibility of the setting of speed limits would increase but severity of crash injuries would increase on those roads where speed limits have been raised. Can we be certain that the improvement in injury severity in 50 km/h zones will outweigh increases in injury severity on roads where speed limits have been raised?

**Mr MACKY:** From NRMA's perspective it is not a case of trading off slower speeds on some roads in return for higher speeds on others. Nor is it a case of suggesting that any casualty increases, which may occur on higher speed roads, will be acceptable because there will be a greater reduction of casualties on other roads. Our premise for a higher speed limit on some of those highest standard rural freeways is based on the perception that our road network is far too complex to warrant general speed limits and that we need a credible system of limits that reflects the driving environment and relative safety of different roads. Currently we have speed limits of 110 km/h on two-lane undivided roads and, therefore, we think it is appropriate to have a higher speed limit on the higher standard freeways. We are talking about four-lane divided carriageway roads.

The proportion of the network that we are talking about is very minor, but in the eyes of the community it could have significant ramifications by having a more credible system of speed limits in place. Another point is that it should be noted that according to the 1994 Roads and Traffic Authority Statistical Statement, which is the most recently published report, only 1.5 % of casualty crashes occurred on roads where a 110 km/h speed limit applied. In other words, that is on all rural roads where 110 km/h applied. The sections of road we are referring to again only

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represent a small percentage of those roads and, therefore, we do not think there will be a dramatic increase in crash risk. The other point is that on many of these roads that the NRMA would want a 120 km/h speed limit applied, travel speeds on those roads exceed the 110 km/h speed limit and most people drive quite safely in excess of those speed limits.

**Mr MILLS (STAYSAFE):** What role will the NRMA have regarding the introduction of the new 50 km/h urban speed limit in New South Wales, first in providing information to its members and, second, in cooperative activities with the Roads and Traffic Authority, police and other organisations such as councils?

**Mr GRAY:** We have a number of ways to provide information to our NRMA members, particularly through the NRMA magazine *Open Road*, with which you would be familiar. That can be used significantly to highlight the benefits of a new speed limit, if such comes in, and also provide general information about the whole proposal at the planning and implementing stages. It is possible that the *Open Road* could be used as a feedback mechanism for gauging public reaction before, during and possibly after the implementation of a 50 km/h limit. We can also utilise the NRMA branch network, which is now across New South Wales, to channel information to members and people from the general public. It is possible that the proposed limits might be the focus of some activity during road safety activities that our branches commonly undertake in their local areas, particularly during October, which is road safety month within the NRMA. If this speed limit were introduced, there is a possibility that that might be part of that road safety month.

We could also inform people about the new 50 km/h limit as part of our general ongoing road safety campaigns, particularly utilising newspapers, radio and television. NRMA has a long history of cooperative campaigns and activities with all other major stakeholders in road safety. We are certainly a major stakeholder in Road Safety 2000. We have representation on the Road Safety Advisory Committee and the Road Transport Advisory Committee and all road safety task forces as Mr Macky mentioned earlier. That includes, of course, the Speed Management Task Force. We have been involved in cooperative campaigns on many issues, not just speed, but also child safety, seat belts and child restraints, drink-driving and fatigue. We are very happy to continue to liaise and work with those organisations in the implementation of a new 50 km/h limit, if there were any indications of that happening.

**Mr GIBSON (CHAIRMAN):** You mentioned the possibility that the *Open Road* could be used for public feedback. How could that be done?

**Mr GRAY:** Because the *Open Road* goes to all of our members, which is more than two million members in the State, it is possible it could be used to conduct something like a survey to get feedback from people on the new limits, for example, within a period of time after it was introduced. A carefully constructed survey with appropriate questions could possibly be included in the *Open Road* and responses collated as they were returned to get an idea of what people are saying about the new speed limit and any problem with it. It is just an idea.

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**Mr GIBSON (CHAIRMAN):** Is it possible to say now that the *Open Road* would be used for that purpose?

**Mr GRAY:** I cannot give a 100% assurance on that, but it seems likely at this stage, given some long-term planning, we would be able to utilise the magazine.

**Mr MACKY:** There are certainly opportunities to use the publication. One problem is that the *Open Road* is a bi-monthly publication and the lead-up time is extraordinary.

**Mr GIBSON (CHAIRMAN):** Do you control the publication?

**Mr MACKY:** No.

**Mr GIBSON (CHAIRMAN):** Perhaps that is another reason you cannot say whether the magazine could be used in the manner suggested?

**Mr MACKY:** That is quite right. Certainly we try to work with the editors to include articles.

## Roads and Traffic Authority witnesses

Mr Christopher Patrick Ford, Director, Road Safety and Traffic Management

Mr Raymond David Taylor, General Manager, Road Safety

Mr Peter Graeme Croft, Manager, Road Environment Safety

Mr Craig John Moran, Manager Pedestrian and Urban Amenity

**Mr GIBSON (CHAIRMAN):** The STAYSAFE Committee has received a submission from the Roads and Traffic Authority previously. Do you wish to table any further documentation during the course of evidence?

**Mr TAYLOR:** We have two packages of information to present.

**Mr GIBSON (CHAIRMAN):** Mr Ford, would you care to make an opening statement or would you prefer to proceed to questions?

**Mr FORD:** I would prefer to go straight to questions.

**Mr GIBSON (CHAIRMAN):** Have you identified any key elements that would form a strategy for substantially reducing the road toll by the year 2000? How important do you see the 50 km/h speed limit in residential streets to such a strategy?

**Mr FORD:** Road Safety 2000 is the Government's strategy for reducing the road toll for New South Wales. Speed management is an integral part of that strategy. Lower speed limits in residential areas or in special precincts are in turn a key part of the speed management strategy.

**Mr MILLS (STAYSAFE):** In the Committee's research under this inquiry there seems to be some confusion about whether the Mosman-North Sydney 50 km/h trial is a prototype for the general proposal regarding 50 km/h speed limits. Can you indicate how the Mosman-North Sydney trial differs from the Roads and Traffic Authority's proposal for a 50 km/h speed limit on urban roads in New South Wales?

**Mr MORAN:** The Mosman-North Sydney 50 km/h initiative should not be seen as a prototype for a general 50 km/h urban residential speed limit. However, it is a convenient avenue for tapping community opinion and practical experience with a 50 km/h limit under urban New South Wales conditions. Any 50 km/h urban residential speed limit would be focused on changing the general limit, that is to say that 50 km/h would be the rule rather than the signposted exception and would automatically apply only to streets identified as having a predominantly local access function. Designated traffic routes would be zoned at 60 km/h. By contrast the Mosman-North Sydney initiative involved identifying an entire precinct incorporating both local access and traffic routes and applying a 50 km/h zone across the entire area. That is to say that the 50 km/h limit is a signposted exception under the current 60 km/h rule. The Mosman-North Sydney initiative

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was and remains primarily a trial of alternative treatment to conventional traffic calming using physical means to reduce the impact of through traffic on residential precincts. The effectiveness of a community feedback mechanism and the feasibility of random enforcement methods, which have been incorporated into that particular trial, may well be elements of that trial with more general applicability for a lower urban residential speed limit.

**Mr MILLS (STAYSAFE):** The available research evidence seems to indicate that it is not possible to enforce the 50 km/h limit across an entire urban residential street network without some form of alteration to the road environment or road infrastructure that compels drivers to travel at the appropriate limit without a significant and targeted police presence. The Committee refers here to chicanes, raised platforms and such engineering measures. Can you comment?

**Mr CROFT:** A general urban residential speed limit of 50 km/h, as we are considering here, will be introduced as a general default limit — that is, it is applicable on all roads unless signposted or speed zoned otherwise. There should be no intention in a general limit like that to rely on road devices such as speed humps and so on. Such devices are more properly reserved for special areas where there is a lower speed limit than the general limit. Evidence from Australian experience indicates that special areas or precincts with lower limits, such as 40 km/h, indeed work better than by installing physical devices. There is evidence from Australia and elsewhere that a 50 km/h general limit can be implemented without road engineering devices and, indeed, should be as a general rule.

**Mr GIBSON (CHAIRMAN):** You have argued that it should not be a default speed limit, that it should be known as the local street speed limit. Is there any particular reason for that?

**Mr CROFT:** It is a matter of terminology in these times of impending change. Certainly the way the notion is being considered by the Committee is that something like a 50 km/h limit should be introduced as a general default limit, rather than the signposted exception. So, in theoretical terms, it is a general limit. The current general limit is, of course, 60 km/h. There is good advice around that, in order to avoid confusion in the mind of the community, we should be talking about introducing something which is new and has a specific purpose rather than merely lowering something we already have.

**Mr HARRISON (STAYSAFE):** The Committee has noted recent media accounts of the so-called smog-dog or a vehicle emissions detection and measurement device developed and to be deployed by the Roads and Traffic Authority. Are you able to describe the development of this device, its intended operational use and the statutory context in which the device would be deployed?

**Mr TAYLOR:** I have sought information from our environmental branch on this issue. I do not claim to have personal expertise, but the information I can provide for the Committee is that the Roads and Traffic Authority is currently trialing a remote sensing technology and regards it as a screening mechanism. It is not being used as part of any vehicle enforcement program and I

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understand that it uses infra-red technology to detect invisible emissions. It uses cameras to assist in the administration of the program but those cameras are not related to speed or red light cameras. The further information I have is that if they prove effective at identifying polluting vehicles they will be used to screen for vehicle emissions and identify those vehicles that require more rigorous emissions testing to identify mechanical problems. That would be done either in an emissions testing facility or from the roadside. It is a device to screen out vehicles that do not require such testing.

The advantages are that, as a screening mechanism, it would mean that only polluting vehicles would need to undergo rigorous testing. It is important to note that the advice I have received is that those polluting vehicles are not necessarily older vehicles. Many new vehicles can be gross polluters particularly if their emission control equipment is faulty or out of service. I can undertake to give further detailed information if there are follow-up questions, but because of my limited technical knowledge I cannot undertake to answer those here.

**Mr HARRISON (STAYSAFE):** Many councils, including those who have expressed support for the proposal, have indicated that they expect the State to meet many of the costs associated with implementation. What does the Roads and Traffic Authority consider to be the appropriate means of meeting such costs?

**Mr FORD:** The likely cost will be incurred in the identification of routes which should remain at 60 km/h, signposting those routes, publicity, advertising, public education regarding any changes and, initially, raising the level of enhanced enforcement on certain sensitive routes. If the 50 km/h proposal were to be endorsed by the Government, it would be an essential element of a major policy initiative area to the Roads and Traffic Authority and, consequently, the Roads and Traffic Authority would meet the initial costs of implementing such proposals. In the longer term, costs such as those associated with signposting would be shared between the Roads and Traffic Authority and councils as is the present policy position.

**Mr HARRISON (STAYSAFE):** Would that be on a 50-50 basis?

**Mr FORD:** That is correct—well, it depends on the proposal. It would be at least on a 50-50 basis. The Roads and Traffic Authority does fund above the 50-50 level, depending on the application. We can fund up to 100%, provided that there is a clearly demonstrated road safety outcome. We start with a minimum of 50-50 and work up from that.

**Mr HARRISON (STAYSAFE):** Have you made an assessment of the likely cost to the Government?

**Mr FORD:** Yes, we have. In our earlier submission we indicated a figure of the order of about \$5 million. A bit of guesswork is involved, of course.

**Mr HARRISON (STAYSAFE):** I would think that is a conservative estimate.

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**Mr FORD:** That is over and above our current level of funding for councils for initiatives on local roads. That amount of money is really quite substantial. The \$5 million is additional funding, over and above the amount of money which we currently fund for local government.

**Mr HARRISON (STAYSAFE):** The money that is currently allocated is fully expended, so effectively the cost would be \$5 million.

**Mr FORD:** I am saying that the additional cost over and above that would be \$5 million. We currently fund a number of what we call local area traffic management initiatives or lower speed initiatives on local roads.

**Mr HARRISON (STAYSAFE):** My understanding is that that money is fully expended every year. Is that so?

**Mr FORD:** Yes, it is. That is correct.

**Mr HARRISON (STAYSAFE):** Effectively, you would have \$5 million to work with, is that so?

**Mr FORD:** Over and above that, yes.

**Mr HARRISON (STAYSAFE):** Unless you were to divert money from somewhere else.

**Mr FORD:** If the Government elected to run this initiative and we had to divert money from somewhere else, we would. It would become a government policy position and the funds would be made available.

**Mr SMALL (STAYSAFE):** The Committee has a concern about the logistics of the introduction of a 50 km/h speed limit. What time period is being contemplated for the preparation of the introduction of a 50 km/h speed limit, assuming that the Government supports the introduction of a 50 km/h speed limit in one form or another? The Committee has also heard much about the importance of effective public education and communication strategies in the successful implementation of a new speed limit in residential streets. What developmental work has been programmed, or is in progress currently, regarding possible communications strategies to introduce and support a new urban speed limit of 50 km/h?

**Mr TAYLOR:** Certainly the implementation of a 50 km/h limit would involve appropriate community consultation and a public education program would be essential, supported by information materials, publicity and advertising activities; identifying and signposting those routes that would remain at 60 km/h; and development of initial targeted enforcement activities.

In the scheduling of that we would try to avoid periods such as the December-January period as being atypical or untypical periods of traffic flow for implementing such a major change. Also,

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that would avoid a clash with other major road safety campaigns that we currently run across the State at those times of the year. Our submission indicated that our estimate is six to nine months for those basic tasks.

In the context of the nature of communication strategies pages 30 and 31 of the Roads and Traffic Authority submission identified a number of communication strategies we considered would be appropriate for this initiative. They include such things as being prepared to hold stakeholder forums, advertising, generation of facts sheets for information, involving ourselves in media advocacy and a range of public education activities that would be relevant to implementation.

The communication program would have three clear phases. The first phase would be before the implementation or changeover to 50 km/h. That phase would be focused on informing and advising the public of what to expect, and also re-enforcing any public support of the policy. I would see that as the first phase. The second phase would be when something occurs, if something is agreed to and it occurs. It is essentially a message designed to explain for drivers how they can distinguish between a 50 km/h road and every other road. That is the simple message at the point of implementation. I think there would be a third phase, which would be a follow-up phase, where we would be seeking feedback, trouble shooting, information.

**Mr SMALL (STAYSAFE):** The introduction of speed cameras in New South Wales was funded by a specific diversion to the New South Wales Police Service of monetary fines collected for speed-related traffic infringements. Has a similar diversion of revenue been contemplated to support the costs associated with the introduction of a 50 km/h speed limit?

**Mr TAYLOR:** No.

**Mr SMALL (STAYSAFE):** Has the Roads and Traffic Authority ever proposed to Treasury that some percentage or proportion of the revenue generated from monetary fines collected for traffic infringements be used for road safety or traffic enforcement activities? If so, when was this proposal made, why was it being proposed, what was being proposed and what was the response of relevant government agencies such as Treasury?

**Mr FORD:** The concept has been debated within the advisory committees of the Roads and Traffic Authority. No decision to support such a proposal has resulted from those deliberations. Certainly no formal proposal has been submitted to Treasury. This is clearly a policy decision and is a matter for determination by the Government. If I may come back to the earlier question with respect to the diversion of funds to facilitate enforcement, two points are important.

Firstly, we have quite a comprehensive program with the police on targeted enforcement whereby, at crucial times during the year, the Roads and Traffic Authority meets the cost of additional enforcement activities. Those activities are an integral part of a campaign. It may be the Christmas campaign, for example, or the Easter campaign or a holiday period campaign; or it might target a vulnerable road user group, for instance elderly pedestrians.

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The second point might assist. As part of the Mosman-North Sydney trial the police, in concert with us, are looking at extending this notion of targeted enforcement whereby we are getting a better presence of police without necessarily increasing the amount of resources we need to do that — a better utilisation of the police enforcement resource. That is based on a New Zealand model. If that is successful, and we will know that by the end of September, we can certainly extend that application further, in which event we are effectively getting better use of the resource as well as putting additional funds into enforcement over the crucial periods of the year. An enforcement strategy is being developed and trialed as part of this process.

**The Hon. J. H. JOBLING (STAYSAFE):** As I understand it, available research seems to suggest that pedestrians who are involved in a crash at a speed of about 50 km/h are just as likely to die as to survive. Whether or not you agree with that, from your point of view is there a case for reducing the speed limit on residential streets to 40 km/h or even 30 km/h, as is being implemented or at least considered in many European countries? If your answer is no, would you explain to the Committee your reasons for saying that?

**Mr CROFT:** Research evidence is that in a crash typically some braking occurs from the prevailing speed to the actual impact speed. The lower the prevailing speed limit and prevailing speeds, the greater the opportunity for a vehicle to be able to reduce its speed in the event of an impending crash. In terms of simple physics, a crash at a speed of 40 km/h or 30 km/h is obviously going to be better than a crash at a speed of 50 km/h. If the application of a 30 km/h or 40 km/h speed limit could achieve such a reduction in crash speeds, it would certainly be safer to have that.

The Roads and Traffic Authority's submission to which you referred makes the judgment that in practice in New South Wales there may well be a substantial level of excessive speeding in a lower limit environment, which would negate any benefit we would expect from generally an approach to lower speeds. These figures are acknowledged already in the fact that there are special 40 km/h and 30 km/h areas in areas where the need is regarded as special, for example, to accommodate pedestrian and cycling traffic particularly near schools or in some shopping centres, parks and confined residential areas.

The community and the drivers are prepared to accept those areas as different from the general road network and as deserving of a lower speed limit. We know that. Lower limits such as 40 km/h in those areas may continue to be implemented under any proposal that the Committee is considering at the moment. They could be implemented by councils in partnership with the Roads and Traffic Authority under guidelines which exist at the present.

**The Hon. J. H. JOBLING (STAYSAFE):** In specific urban areas a bullbar added to the vehicle will compound the injury quite substantially, I take it?

**Mr CROFT:** The issue of bullbars is something of a rather controversial nature which has been discussed in other forums, but it would exacerbate the situation.

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**The Hon. J. S. TINGLE (STAYSAFE) :** We all agree that there are a tremendous number of drivers in New South Wales who seem to regard the posted speed limit as a suggestion rather than the maximum, who assume that there is a tolerance level over that 60 km/h or whatever it might be. When we bring in a 50 km/h limit, do you believe it will be possible to actually get those drivers to reduce their speed and observe the 50 km/h limit when so many of them ignore the 60 km/h limit and drive at 70 km/h or 75 km/h? How do you propose to deal with that?

**Mr TAYLOR:** Firstly, it is not just an Australian or a New South Wales circumstance because wherever speeding is an issue in the world we find that it is a contributing factor to crashes, and that sort of driver-speeding behaviour is a manifestation. But taking that as a background, we believe that the long-term aim of a speed management strategy is to shift that road user behaviour ultimately in a voluntary sense both with an attitude to speeding as an understanding that it is directly related to crash and injury causation. That community response quite clearly requires speeding to be ultimately seen as a socially undesirable behaviour because it is linked to crashes in the same way other major factors are.

But the experience of our drink-driving behaviour provides clear evidence that this is not going to happen overnight and we need to take a long-term time frame. We are talking about a 15 or 20 year change in attitudes. Having said that, over recent years some of our recent speed observation studies on residential streets in particular, and that is where we are talking about now, show some reductions in average speeds and average speeds are very close to the speed limit of 60 km/h currently.

**Mr FORD:** Mr Moran will correct me if I get this wrong, but our preliminary work on the Mosman-North Sydney trial, for example, tends to indicate that while we are not getting a significant shift on the average speeds which are around the 50 km/h mark, the gross speeds over that have come down substantially. The gross offender, if you like, has come back into the range of the average behaviour, and that is very important from our perspective.

**The Hon. J. S. TINGLE (STAYSAFE):** Is he driving at 60 km/h instead of 70 km/h?

**Mr FORD:** No, he is driving at 55 km/h instead of 70 km/h.

**Mr HARRISON (STAYSAFE):** Is that brought about by the fact that the driver in front of him or the driver somewhere up the line has dropped his speed back so everyone else has to drop back?

**Mr FORD:** Those factors certainly influence that outcome.

**Mr HARRISON (STAYSAFE):** You can only drive along those roads as fast as the slowest driver likes to go.

**Mr FORD:** Yes, that is true, and as you say, a lot of them are single file, aren't they effectively?

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**Mr GIBSON (CHAIRMAN):** It is a bit like everybody wearing a new suit, black shoes and somebody turns up with white shoes on, I suppose, in a way. Everyone conforms to that speed.

**The Hon. J. S. TINGLE (STAYSAFE):** Where are we at with this process of identifying the road hierarchy for urban roads in New South Wales? I note that the Committee has seen, for example, the roads hierarchy for Wagga Wagga.

**Mr CROFT:** It is a fundamental aspect of speed zoning and setting speed limits that the hierarchy of speed limits and speed control, if you will, matches the hierarchy of roads; it is fundamental. Already there is a clear hierarchy of roads in metropolitan areas in New South Wales particularly with regards to arterials, sub-arterials and so on. The advent of a proposal for a 50 km/h limit and the associated need to identify some roads which should remain at 60 km/h provides a good opportunity to complete the examination of that hierarchy to make sure we have got those 60 km/h roads well identified.

The process of identifying those roads which would remain at 60 km/h under a 50 km/h proposal like that has been considered already by some councils, not all, as they go on with looking at the hierarchy of roads in their area. Existing speed zoning guidelines provide the basis for this already. Identification on a statewide basis would be the first major implementation task, which we have mentioned already, should such a proposal be accepted and endorsed by government.

**Mr GIBSON (CHAIRMAN):** Representatives from the Local Government and Shires Associations were in here a little earlier today. They mentioned to us that there has been no liaison between the Roads and Traffic Authority and that body which represents every council in this State on this issue. Is there a reason for that?

**Mr FORD:** There is ongoing liaison with respect to lower speed limits in residential areas. In fact, all councils in New South Wales have our guidelines and our update to those guidelines. I believe they are represented on the Speed Management Task Force.

**Mr GIBSON (CHAIRMAN):** They expressed their concern here today that they had not been consulted. I will double check on that through Hansard but I am pretty certain that is the message they gave us today.

**The Hon. J. H. JOBLING (STAYSAFE):** This, in particular, was the Shires Association half of the Local Government and Shires Associations, which may help with this question: whilst you talk to the parent body, do you separately talk to the local government groups which are more urbanised than the Shires Association who are more countrified?

**Mr FORD:** Yes, that may be where the confusion is coming in. We talk directly to the councils and directly to the shires associations but not in all cases do we go to the intermediate level and that may be where the problem is coming in. I would be pleased to take that up.

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**The Hon. A. B. MANSON (STAYSAFE):** What sort of information will a motorist encounter when he or she leaves a major road and drives onto a local residential area, for instance, from a sub-arterial or collector road?

**Mr CROFT:** If we look at what we have got at the moment, the current 60 km/h general urban speed limit and the motorist leaves a major road which might be at 60, 70, 80 or 90 km/h or something like that, and turns into a local street he receives absolutely no indication whatsoever other than the geometry of the street to indicate that it is 60 km/h. This is because all motorists are expected to know and are, in fact, inculcated with the understanding that, 60 km/h is the default limit: it is 60 km/h everywhere unless signposted otherwise.

An identical approach would be the case for a proposal which had 50 km/h as a general urban speed limit, that is, if it is not signposted, it is 50 km/h. At the point of changeover there might well be a need for some introductory or interim advice in some particular areas, either signage or road markings, to remind drivers that the law has changed. We would expect that would be in the vast minority of cases. If, in fact, it was deemed necessary that could be provided at some strategic locations, not at every point of diversion to a 50 km/h area. It would be provided only as an initial reminder of the change in the law but it is the law which the people need to know. Our advertising and publicity campaigns would ensure that that message got through.

**The Hon. A. B. MANSON (STAYSAFE):** What, if any changes are likely to the 40 km/h speed limits outside schools if a 50 km/h general urban speed limit is introduced?

**Mr CROFT:** Absolutely no changes whatsoever are envisaged other than what we are talking about here.

**Mr HARRISON (STAYSAFE):** A strongly argued aspect of the submission received from the Roads and Traffic Authority is the need for extensive community consultation and community acceptance of 50 km/h speed limits. What information regarding community attitudes, beliefs and knowledge about speed has been gained from regular community surveys conducted by the Roads and Traffic Authority over, say, the last decade?

**Mr FORD:** A couple of points in respect to that question. The Roads and Traffic Authority has initiated regular action over certainly the period that I have been working with the organisation designed to tap community perspective on that issue. These have included a range of methods such as commissioned surveys, community consultation procedures and advertising for community input. There is a wide range of information which has been developed on the speeding issue about community views. They include things like a community acceptance that speeding is related to crashes at least at a cognitive level — that is what I think the community is saying at a cognitive level: it is related; speeding is a major crash contributor; community support for speed cameras has come out of those surveys; community support for the need for speed zone review in an ongoing way; community support for the education of drivers around the issue of speeding and more recently the Roads and Traffic Authority has been given perspectives of the

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community's view on the notion of a 50 km/h local street limit from those surveys.

**Mr HARRISON (STAYSAFE):** Can these community surveys be tabled today? Have the community surveys been published as research notes or consultant reports?

**Mr FORD:** They can be tabled today and I have got a package here for the Committee and, no, we have not published those to date.

**Mr GIBSON (CHAIRMAN):** What information regarding vehicle speeds generally, and urban and residential speeds specifically, has been gained from the regular speed surveys conducted by the Roads and Traffic Authority over the last decade?

**Mr CROFT:** Through more than ten years now we have been doing a regular series of speed surveys throughout New South Wales on urban and rural roads across the State. Each survey collects comprehensive information on the vehicle type, vehicle speeds and some detailed statistics on the distributions of speeds and so on. In the last few years we have added to that by having some more regular speed surveys undertaken on the metropolitan network, and that is sampling speeds on various types of road, local access streets, distributor roads, sub-arterials and arterials and so on. We are getting a pretty good picture on speeds and their distribution across the various types of roads. This has been done primarily to provide background information for the very proposal or notion that we are discussing today.

**Mr GIBSON (CHAIRMAN):** Have those results been published?

**Mr CROFT:** They have indeed. There have been some technical papers and research notes which I can table here and some follow-up bulletins since the last substantial report.

**Mr GIBSON (CHAIRMAN):** What use is made of these surveys by the Roads and Traffic Authority?

**Mr CROFT:** It is like an ongoing monitoring exercise in that as we develop our speed management strategies, in particular our urban speed management strategies, we can draw on this supply of detailed information to make sure that we have got it under tab. We use that in conjunction with attitudinal surveys which Mr Taylor has already mentioned so we have got a good feel for how things are and how people are dealing with it.

**Mr TAYLOR:** There is another use for the data which is probably unrelated to what we are talking about today. In the urban context the information is used to improve the operation of our signal system, to improve the coordination of traffic signals, to identify areas where we have got excessive delay where we need remedial treatment at intersections and sections of roads. It helps us to define the program of works in the traffic management area as well as to identify the issues that Mr Croft spoke about in the speed management area.

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**The Hon. J. S. TINGLE (STAYSAFE):** If we are to modify the residential street network to assist the enforcement if you like of the introduction of a 50 km/h limit, if we put in things like chicanes, humps and platforms and so on, has any consideration been given to the effect on access for emergency service vehicles such as ambulances, fire brigades and so on?

**Mr TAYLOR:** If a residential area is modified with the modifications that we are talking about are worked up in such a way as not to impede emergency vehicle access, that has a significant impact — perhaps I will give you a few examples. Some years ago one of the councils here in Sydney artificially narrowed a number of their residential streets which in turn made garbage collection services difficult and in some areas it made emergency access quite difficult. At that time we got involved in that process and put in place some design guidelines for residential streets which includes the use of chicanes and other types of device which by their nature do not put any limitation on access by emergency vehicles. Nevertheless that access will definitely be slower; the intent is to slow the vehicles down. Ambulances, fire brigades and police vehicles, garbage trucks and other collection services, their access is all taken into account in putting together our guidelines.

**The Hon. J. S. TINGLE (STAYSAFE):** Are those guidelines in place and accepted?

**Mr TAYLOR:** Yes they are.

**The Hon. J. H. JOBLING (STAYSAFE):** From the Roads and Traffic Authority's point of view, what would you say to this Committee you would expect to be the major difficulty that you will encounter with the introduction of a 50 km/h default limit?

**Mr TAYLOR:** There would be a number of difficulties in implementation of a 50 km/h. I suspect initially the major difficulty will be, in fact, the public education campaign. We do need to put a lot of time and effort into that and to, in fact, draw on the resources of other organisations to support the Roads and Traffic Authority, for example, the NRMA and the police, the local government mechanisms.

To have a clearly identifiable network in the community's mind, particularly in the non-urban areas of this State. I am talking about those country towns, for example, or regional cities where there is quite a significant residential urban content where the speeds for their roads by their very nature may be higher. So we will need to work through with local government particularly and the Police Service what is appropriate in different parts of the State and put together, one, a very clearly defined public education program that is not global but applies to Sydney, Newcastle, Wollongong, Tamworth and other major centres. That will take us some little time to put in place.

Secondly, to have in place a well thought through community feedback on that implementation. So to that extent we would put in place a 008 hot line, for example. There could well be a number of cases where we have poor understanding of what we are on about. so the community

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feedback is vital. To promulgate the answers community-wide is also very important. So, in summary, public education is crucial and feedback from that public education to community groups is equally crucial. The public education we are talking about is not universal; it applies differently in different parts of the State. So to get that right is absolutely vital.

**The Hon. J. H. JOBLING (STAYSAFE):** In looking at the two points that you have raised, education and feedback, what sort of time would you anticipate to put in to place and to operate such a program, in other words, to be able to introduce such a program in general terms. Where in that program, with feedback, would you reasonably anticipate that you would understand whether you had been successful?

**Mr FORD:** I will ask Mr Taylor to help me here. In part of Mr Taylor's earlier comment about staged implementation, phase one talked about general information prior to the implementation of any such scheme and phase two talked about community consultation, feed back, the media advocacy, et cetera. That is assuming in phase two there is a well thought through strategy for implementation that precedes that. We were talking of a period of six to nine months, if I recall correctly.

**Mr TAYLOR:** That is correct. We believe we need that period of time for the two key activities to be undertaken, that is, the preparation and the implementation of the public education. By the way, the feedback mechanisms I would see applying from the earliest phase of the public education program. One of the ways to assess its success is you would expect a change in the nature of questions and issues people raised in feedback, presumably a hot line. Initially, I think people would still be confused as to what it means. Initially they would be confused as to which roads a 50 km/h zone applied to or whether a 50 km/h zone applied to all roads.

I would expect part of that first phase would be designed to overcome that confusion and move into the implementation phase. You would expect the sort of questions coming back to be more precise later on as people became more comfortable. Equally you need the six to nine months to ensure working with local government and making sure the arterial roads, the through roads that were to be zoned at 60 km/h or above were in fact zoned and signed in preparation.

**Mr FORD:** In the speed management surveys that we have conducted over the last few years we have a gleaning of community attitudes towards lower speed limits. So we have made some progress down this path already. It is not comprehensive by any means but we do have some understanding of some of the issues that people would raise. We have made a start on this. We are not coming from a zero base.

**The Hon. J. H. JOBLING (STAYSAFE):** You refer to assessing the information and determining the success of such a project in education and community feedback. Who would undertake that and how would you propose to undertake it?

**Mr FORD:** Once we have a strategy for implementation in place, and that includes the public

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education component, we would actually put the education campaign into place, and that would be a fairly broad-based campaign. We would bring independent people in to evaluate the effectiveness of it, as we do now. So with any road safety campaign we run, for example, any evaluation of that campaign is undertaken independently of the organisation. If you like, direct face-to-face interviews with the targeted groups we are trying to influence.

**The Hon. J. H. JOBLING (STAYSAFE):** Could you indicate the type of group or person you have employed in the past in such a position?

**Mr TAYLOR:** Depending upon the nature of the project we have commissioned the Australian Road Research Board to be involved in evaluation studies and the Monash University Accident Research Centre for an independent analysis. There would be commissioned works through the University of New South Wales, key personnel in the university environment, and sometimes we would commission work from commercial providers of those services, depending upon the nature.

**Mr GIBSON (CHAIRMAN):** Has the Roads and Traffic Authority done a specific 50 km/h zone survey of attitudes?

**Mr FORD:** Not specifically.

**Mr TAYLOR:** No, but they are included in our fairly consistent speed survey. That question and some of the information are provided for you, Mr Chairman, that is the response to questions of the 50 km/h zone, particularly amongst the more difficult target group, if you like, the younger speeders. We have a view about what they feel about it.

**Mr CROFT:** Already there has been preparatory work done towards evaluating what might be the effects of any such change. That arose in the AUSTROADS area. As a result of the AUSTROADS report there was a subsequent AUSTROADS active program project to commence this preparatory work for evaluation. The Australian Road Research Board transport research already conducted some initial attitudinal surveys in three States — Tasmania, South Australia and New South Wales. While it has not been published, I understand the results of those surveys indicate an increase in the proportion of people who support the notion of a 50 km/h zone speed limit.

**Mr GIBSON (CHAIRMAN):** You have also done an Australia-wide survey too that gives the same or better result?

**Mr CROFT:** The Federal Office of Road Safety has been doing some work in the same area.

**Mr SMALL (STAYSAFE):** I refer here to the new car assessment program—NCAP. Does the new car assessment program testing procedures include a pedestrian vehicle interaction test, as occurs in the United Kingdom's new car assessment program? What information relevant to the debate over lower urban speeds could be gained from such a pedestrian vehicle interaction test?

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**Mr TAYLOR:** A pedestrian interaction test is not part of the official new car assessment program which is run by a conglomerate of the new car assessment program organisations in Australia. However, as part of this year's road safety program there is testing being undertaken to identify the pedestrian friendliness or unfriendliness, as the case may be, of vehicle fronts, including a pedestrian dummy who consistently gets knocked over at crash lab. That is designed for two purposes. One, to assess the effectiveness of current frontal designs and their pedestrian friendliness, particularly with respect to bonnets and the reinforcing under bonnets and the rail near the windscreen. Also we are doing some of that testing to assess the injury outcomes from bull bar equipped vehicles as well.

**Mr GIBSON (CHAIRMAN):** Has the Roads and Traffic Authority examined how motorists perceive driving in a 50 km/h or even a 40 km/h environment and how they actually drive in such environments? What information about motorists' beliefs and about vehicle low speed performance can be factored into the various strategies to support a 50 km/h speed limit?

**Mr FORD:** In terms of 40 km/h — in fact, we have quite a bit of experience with the 40 kilometre zones — one, we have very strong support from the local communities involved in the introduction of the 40 km/h speed zones. It is driven mainly by amenity considerations rather than by road safety considerations — reductions in speed, noise, et cetera. Over the years we have put a fair bit of effort into measuring the stated attitudes both before and after, together with the response on the road and, to be perfectly candid, we have had mixed success. The success 10 to 15 years ago was marginal on both counts. I remember some of the early local area traffic management schemes we put in around Sydney. I think it would be about a 50% success rate.

We drew on that and put together some guidelines which in fact worked. That in turn has been supported by other work designed to get community acceptance; that is broad community acceptance, not just local community acceptance in terms of lower speed precincts. The best example I can think of is the work we did in Windsor and the Richmond area four or five years ago. We turned that into guidelines to circulate to local governments. So the councils then had a set of procedures for effective community consultation, together with a set of procedures for appropriate technical application, devices, et cetera.

We have learned a lot from that work in relation to an introduction of the 50 km/h zone, or a 40 km/h or 30 km/h zone for that matter. We would be building on that information, particularly in the public education and community consultation part of the process. The technical applications are fairly well understood. It is in the other areas where we would have to do considerable work, as I mentioned earlier.

**Mr GIBSON (CHAIRMAN):** What consultation has there been between the Roads and Traffic Authority and the Department of Transport over the 50 km/h speed initiative?

**Mr FORD:** We deal with the Department of Transport on a number of issues, mainly in relation to road-based transport, for example, buses and taxis, regulations that affect their safety, their

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road worthiness. We have consultation on bus ways, speed limits for buses under certain circumstances, and how buses perform in a lower speed precinct. In a lot of cases their suspension is more rigid than motor cars. We have to make special provisions for that type of vehicle in that precinct. Specifically in relation to the introduction of the 50 km/h limit, there has not been any significant consultation with the Department of Transport, principally because the onus is with the Roads and Traffic Authority and local government to implement.

However, as part of any application that affects bus operations through the local traffic committees and consultative mechanisms we would be talking directly with the Department of Transport. I am talking about their bus routes in residential streets which may be impacted by the imposition of a device if required, for example, to bring the speed limit down. As a matter of course we would talk to the bus operators and the Department of Transport as to what is the most appropriate treatment.

**Mr HARRISON (STAYSAFE):** Has the Roads and Traffic Authority held any discussions with its equivalent bodies in other States to see if it is being considered elsewhere? In the course of our recent visit to the Riverina there was confusion about speed limits on main roads, like 100 km/h in Victoria coming straight down to 90 km/h when you get into New South Wales. Would this lead to conflict with other States or is this something that has been considered generally for all of Australia? What progress has been made, if any, from discussions with other States?

**Mr TAYLOR:** Two or three issues are germane to that. The first is that a lower local street speed limit has been considered in the National Road Safety Strategy Implementation Task Force, which is a group of road safety people from each State who look at the nature of key initiatives that might impact on and reduce the road toll. Through dealing with the task force we know that there is reasonably strong support in South Australia for looking to this sort of initiative as a support. Secondly, we have cross-border initiatives on road behaviour to try to take account of the fact that there may be differences in particular States, and I refer to things like Operation Range, which you may have heard of when you were down in the southern part of the State, a joint initiative between our police and our Victoria counterparts. Associated with that is the notion of providing some advice for interstate visitors when there are key changes in the legislation. I noticed that was discussed in earlier evidence. It seems to me a good idea came out of that, one which was applied when Victoria changed its left-turn rule. There was advice at the border for all drivers that the left-turn rule had changed. Even if they were not going to do a left turn for a while, even if they were not going into an urban environment straight away, there was clear advice at the border, which is a good idea. It is a good idea to do it at all borders.

**Mr FORD:** The 50 km/h proposal has been addressed by the working party of AUSTROADS, which is the national body. Through the National Road Transport Commission we have on the agenda a number of changes that affect a variety of traffic regulations in the interests of moving to a clearly nationally consistent set of rules. Any introduction of the 50 km/h speed limit would be part of that. Deliberations before the national road transport forum would be designed entirely to address the issue of uniformity about which you are concerned. Any proposal for a 50 km/h

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implementation would be put through that forum.

**Mr SMALL (STAYSAFE):** At present it is most likely that New South, and I assume the Minister and the Government would accept the 50 km/h, given the support evident here as well as your support for it. Would you envisage a long period of implementation? If the Minister gave approval and the Government passed legislation, could you see it happening within six months or sooner, or would you have to wait for the national road rules to be implemented?

**Mr FORD:** As I understand it, the national road rules will be up and running by about November next year.

**Mr TAYLOR:** They will be. My feeling is that there is no need to wait a substantial time. If the New South Wales Government felt there were genuine benefits to be gained and wanted to implement something, it could. One of the issues in a national arrangement is an interest in the result of the consultative processes taking place in New South Wales. Those consultative processes are being awaited.

**Mr FORD:** While the timetable for the changes I have mentioned under the national code has been agreed to, there is very strong consultation between the States. As Mr Taylor indicated, the other States are taking a keen interest in the processes involving STAYSAFE, which was initially the work of AUSTROADS. We indicated earlier a six- to nine-month implementation period. By its nature, as Mr Taylor has indicated, that must go across borders to address the tourist issue that was raised earlier. In that process we would consult with South Australia, Victoria and Queensland with a view to getting, if not a joint implementation, at least a commitment to a timetable that would affect the other States. In other words, while we would not want to be seen to be acting outside the intent of what has been discussed through the national road transport forum, it would be a staged implementation in any event if it affected the other States. We would work out with the other States the timetable to support that. I am suggesting that we would not have a situation in which New South Wales was out on its own with respect to the other States.

**Mr GIBSON (CHAIRMAN):** But by the same token, if the New South Wales Government decided to go that way tomorrow, that is the way it would go. It would not wait for the national body.

**Mr FORD:** I am sorry, I communicated poorly.

**Mr SMALL (STAYSAFE):** You explained it fairly well.

**Mr FORD:** We would have agreement in principle through that forum to a national initiative. I might add, it already is in that forum. But in terms of the staging and implementation it would be in different jurisdictions right from day one. As you quite properly pointed out—

**Mr GIBSON (CHAIRMAN):** South Australia has already intimated it does not matter how the

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national body goes, it will implement 50 km/h anyway.

**Mr HARRISON (STAYSAFE):** Hypothetically, if you did not get the support of any State in the long run, would the Roads and Traffic Authority recommend to the Government that it proceed with it?

**Mr FORD:** If the Government in New South Wales decided that was the way to go —

**Mr HARRISON (STAYSAFE):** If the Government makes a decision to do anything, that is it, but would you recommend it to the Government in that circumstance?

**Mr FORD:** In part it depends very much on the deliberations of this Committee. If this Committee strongly supported the 50 km/h we definitely would recommend it.

**Mr HARRISON (STAYSAFE):** Regardless of what went on in any other place?

**Mr FORD:** Yes.

**Mr GIBSON (CHAIRMAN):** I would like to thank the Members of the Committee. It has been another long day for us. I would also like to thank the staff of STAYSAFE and Hansard for working so hard all day.



## PUBLIC HEARING ON MONDAY, 2 SEPTEMBER 1996

*Department of Transport witness*

### Department of Transport witness

Ms Margaret Jane Abraham, Manager, Urban Structure

**Mr GIBSON (CHAIRMAN):** I note that we have not received a submission from you. Is there any written submission you would like to table?

**Ms ABRAHAM:** There is not.

**Mr GIBSON (CHAIRMAN):** What are the current primary transport documents for New South Wales, and how do they relate to the objectives of the Government as stated in the Road Safety 2000 Plan?

**Ms ABRAHAM:** The primary transport planning document in New South Wales, which I can table, is *Integrated Transport Strategy for the Greater Metropolitan Region*, which was prepared in conjunction with *Metropolitan Planning Strategy—Cities for the 21st Century*, which were both released in January 1995. Both the integrated transport strategy and the Road Safety 2000 plan emphasise the importance of integrated transport and land use, planning and management. In this regard the important element of the integrated transport strategy and objective is to manage travel demand and maximise walking, cycling and using public transport by influencing the location, design and type of urban development. In particular, this complements the objective of Road Safety 2000 and improves road safety by encouraging safer and more sustainable transport modes.

**The Hon. A. B. MANSON (STAYSAFE):** Can you describe the work of the Shaping up Streets and Roads Task Force? How did it come to be established? Who are the members of the task force? What are its achievements to date? What are its current and projected future activities? What other information can you give us about it?

**Ms ABRAHAM:** It was established by our Department of Transport following a successful series of seminars and a design workshop on integrated transport and urban structure held in June last year. I will table a report about those seminars. The seminars were attended by more than 200 practitioners in local government, urban development and private consultancy, and by others. They highlighted the need to address traffic engineering and design practice to encourage alternative modes to the car and to better integrate streets and roads with the surrounding urban

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structure. The task force was formed in July 1995 and has met six times in the past year. The objective of the task force is to promote best practice in the planning, design and management of streets and roads. Best practice in this context is taken to mean an across-disciplinary approach, not just to be the bailiwick of traffic engineers, directed towards the best environmental, social and economic outcomes.

We are particularly interested in the way in which streets and roads can be designed to improve access for walking, cycling and using public transport. The task force comprises me as chair, Martin Kensey from the NRMA, John Grinsell representing the Roads and Traffic Authority Network Development, Craig Moran representing the Roads and Traffic Authority Traffic Management Directorate, Chloe Mason from the Environment Protection Authority, Terry Davis from Landcom, Kate Veitch from the Department of Urban Affairs and Planning, Alex Gooding representing the Western Sydney Regional Organisation of Councils, Rhonda Neuhold representing the Local Government and Shires Associations, and Geoff Morris representing the Australian Institute of Traffic Planning and Management, a professional organisation.

The task force has undertaken a survey of practitioners to ascertain current practice in street and subdivision design, which covered 22 councils in the greater metropolitan region. It has also produced the first issue of a quarterly newsletter, which I will table. On 11 July it held a seminar on streets and roads modes, which was attended by over 90 traffic and transport professionals, mainly from local councils. It has also shared information on the relevance of programs to its objective with members of the task force. Its priorities for the next year are to continue publication of the newsletter and to develop a best practice program involving a seminar and awards and case study sheets to encourage and award best practice in the design of movement networks by local government, which will be part sponsored by the NRMA.

**Mr GIBSON (CHAIRMAN):** Could the Committee be given a copy of the questions relating to the submissions that went to local government?

**Ms ABRAHAM:** We could give the Committee a copy of the survey and the results. I will take that on notice and provide them.

**Mr MILLS (STAYSAFE):** In evidence from witnesses from the Roads and Traffic Authority the Committee has been introduced to the concept of urban amenity or suburban amenity. Is this concept used in the exercise of the transport planning function? If so, how is it used?

**Ms ABRAHAM:** By urban amenity I take you to mean the quality of the immediate physical environment, for which we often use the term livability. Streets, roads and public transport may either contribute or detract from that urban amenity. We believe that transport planning has two aspects: first, to improve the ability to safely and easily live and move in your local area. It implies a human scale of development, with opportunities for social and economic interaction, and thus consideration of how to ameliorate the negative impacts of traffic and promote alternative modes for cars and trucks that might improve the amenity of that area. Second, it implies

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increased access to a wide range of facilities and services through land use planning and the careful location and design of development as well as the design and development of transport services. That is how we basically understand urban amenity.

**Mr JEFFERY (STAYSAFE):** A common phrase we hear in this inquiry is safety, mobility, access and amenity. What does this phrase mean to you with regard to the exercise of transport and planning functions within the Department of Transport?

**Ms ABRAHAM:** This phrase could summarise the characteristics of a successful urban structure, or a successful transport system. However, they are not necessarily mutually supportive. For example, the more people or goods move around, the less amenity there may be in a local area. We seek to achieve a quality balance between those four objectives according to the desires or vision of the local community for its area, balanced with the objectives of the region in relation to environment quality, social equity and economic vitality. We seek to achieve a balance in the transport planning activities for which we are responsible by involving key stakeholders in the early stages of the project.

For example, we are involved in the planning and design of public transport infrastructure, including bus-rail interchanges. In the case of Liverpool station, where we will build a major bus-rail interchange, we have worked closely with the council, the Roads and Traffic Authority, the railways, local taxi operators, local business and other landowners and users so that the result will be a quality design with local support, as well as funding from all agencies, to provide a package of improvements that will increase accessibility to that station. In fact, the result will be not only a new station concourse and a new bus-rail interchange but also new arrangements for commuter parking, traffic management, pedestrian access, et cetera. That is how we try to achieve the balance between safety, mobility access and amenity. A key objective of the task force is to promote best practice in the design and management of streets and roads, which was something we explored in the recent seminar. The best projects were to seek to achieve the appropriate balance between those aspects.

**Mr SMALL (STAYSAFE):** My question relates to the planning process for integrated transport, private passenger vehicles, goods vehicles, public passenger vehicles, cycling and pedestrian movements. How much importance is placed on the lower urban speed limits as an element in achieving a better, more efficient transport environment?

**Ms ABRAHAM:** Speed limits are one thing in the tool box of traffic and transport management, a technique that can be used to achieve a safer and more sustainable transport environment. Speed limits need to be appropriate to the function of the street or the road network under consideration. For example, where an arterial road is dominated by its role as a freight route speed limits may be higher, but when the same road becomes the spine of a commercial shopping strip the commercial or social function provided may warrant a lower speed environment. Generally environmental cues, such as other speed control devices apart from speed signage, are seen to be just as important in modifying driver behaviour, which is evidenced by local area traffic

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management schemes or main street treatments that are already in evidence in this city.

**Mr GIBSON (CHAIRMAN):** Does the Department of Transport have any thoughts on what the urban speed limit should be?

**Ms ABRAHAM:** No, it is not a major issue for us, and we have not made a submission specifically on that issue. It is just part of a package of issues that we are interested in. We see that as mainly an issue for the Roads and Traffic Authority.

**Mr SMALL (STAYSAFE):** Has the Department of Transport been involved in any way in the Mosman-North Sydney 50 km/h trial, that is, with regard to modification of bus routes and bus stop locations, evaluation of implications for transport planning, and so on? Has the Department of Transport been involved in any of the older 50 km/h trials, where traffic-calming devices were utilised, such as those at Wahroonga, Turramurra and Hurstville?

**Ms ABRAHAM:** It is a long question, and the short answer is no. But I understand that the local passenger transport operators have been. It would be the normal course of events that they would be consulted.

**Mr JEFFERY (STAYSAFE):** Is there any reason that you have not been invited to be involved in such trials?

**Ms ABRAHAM:** I think it relates to the core functions of the Department of Transport. Our role is in strategic transport planning; it is not in detailed traffic management or local traffic schemes. We have been aware of it. We certainly have been involved in the development, for example, of guidelines for use of speed control devices on public transport routes, but not on those specific schemes. We are made aware of them, but the most appropriate involvement is either by the actual operators who are running buses in those areas or by the local councils themselves.

**Mr JEFFERY (STAYSAFE):** Coming back to safety, mobility, access and amenity, you are involved in that and you have made recommendations?

**Ms ABRAHAM:** Generally. In the sense of making public transport more effective and walking and cycling more attractive, as part of the broader transport strategy.

**Mr GIBSON (CHAIRMAN):** The Department of Transport did not play a role in relation to 40 km/h speed limits outside schools, etc.?

**Ms ABRAHAM:** No. We were only consulted in terms of our responsibilities as a regulator of passenger transport vehicles.

**Mr GIBSON (CHAIRMAN):** Should you have a say in those sorts of things?

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**Ms ABRAHAM:** I think it is a level of detail. It is something that we would get involved in if there was considered to be a major issue that could not be handled by consultation between the responsible agency, which has been the Roads and Traffic Authority, and public transport authorities. It is my understanding that that has not been the case, that we have not become involved.

**The Hon. J. S. TINGLE (STAYSAFE):** You mentioned cooperation with the Roads and Traffic Authority and others on interchanges and things of that sort. You have told us that the main role of the Department of Transport is in traffic management.

**Ms ABRAHAM:** No, that is not true.

**The Hon. J. S. TINGLE (STAYSAFE):** I misunderstood you. Bearing in mind that passenger transport has to fit in with the general flow of traffic, has the Department of Transport developed an opinion about whether we can use either traffic calming devices or speed limits, or do we have to use a combination of traffic calming devices, speed limits and all the other things? Do you have a philosophy on that?

**Ms ABRAHAM:** I think the view that would be supported by the expertise in our division and the literature would be that a package approach is always necessary, that dealing with one aspect alone is unlikely to make the most impact.

**The Hon. J. S. TINGLE (STAYSAFE):** I refer back to your comment that sometimes road speed limits have to change when an area becomes part of a shopping centre. Obviously, something would have to be applied to change traffic behaviour?

**Ms ABRAHAM:** Yes.

**The Hon. J. S. TINGLE (STAYSAFE):** Obviously, what you are saying is that there may be a need for speed limits, some traffic calming devices and other gadgets as well?

**Ms ABRAHAM:** Yes. Certainly, I think that is something that many companies and the Roads and Traffic Authority have been trying to do.

**The Hon. A. B. MANSON (STAYSAFE):** What influence has the new urbanism movement had on the transport planning function within the Department of Transport?

**Ms ABRAHAM:** I thought it might be best to start with a definition of new urbanism. It is one name. There are others that are also in use, such as transit-oriented development or new, traditional town planning of urban villages, but they are all roughly the same concept. It is a concept that has gained great momentum, particularly in the United States, for a movement to a form of development which recognises that physical coherence of a community is an essential aspect and that we should move back towards town making, that we should be developing an

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urban form, based on a town, with all the facilities and services of a town. The new urbanism seeks to produce a built environment which is diverse in use and in population, one that is scaled to the pedestrian and capable of supporting both cars and viable and attractive public transport. It contrasts with conventional suburban development, which is characterised by segregated land uses, high car dependence, relatively disconnected street systems, low residential densities, and limited public transport and local employment opportunities. Probably the best Australian version of what new urbanism is about—and I will table this document—is a report prepared for the Commonwealth Government on transit-supportive urban design, which explains the concepts. There is a good diagram on page five which contrasts conventional suburban development with new urbanism, which might explain the concept better.

As stated in the integrated transport strategy, the Department has actively promoted the need to refocus urban development to maximise the attractiveness of walking, cycling and public transport. In that regard we have worked with the other State agencies, local councils and developers. At the time that we held the seminars last year, we produced a brochure, which I will table, which explains the need to integrate transport with urban structure, in the sense that the urban structure will influence whether people drive their cars or use other modes. The objective is to give people transport choice such that they can walk, cycle, use public transport or use their car as appropriate in their daily lives; that they should not be denied any of those choices by lack of access. So the key issues in terms of principles, which are not exclusive to new urbanism but might be considered supported by transit-oriented development, are: connected street networks, which allow maximum penetration for pedestrians in public transport—permeability is the term used; concentrating densities and the mix of uses at major public transport modes so that you can maximise the number of people who live and work within walking distance of public transport; planning your streets and roads such that they cater for all modes, not just for cars or trucks; creating safer pedestrian environments and increasing the pedestrian catchments of centres in public transport services; controlling parking supply in locations which have good public transport; and, in terms of urban design, orienting buildings to face streets so that those areas are attractive pedestrian environments where people feel safe.

**Mr GIBSON (CHAIRMAN):** What would an exponent of new urbanism have to say about the current urban environment, particularly with, for example, the Radburn policy?

**Ms ABRAHAM:** It is a critique of that sort of suburban development that separates pedestrians from streets and puts them through open space developments. In fact, you may be aware that those Radburn estates in south-western Sydney are being redesigned by the Department of Housing.

**Mr GIBSON (CHAIRMAN):** Can we assume that the Department of Transport is not trying to move the pedestrians from streets, etc.?

**Ms ABRAHAM:** I am not sure what your question is.

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**Mr GIBSON (CHAIRMAN):** That there is no physical separation.

**Ms ABRAHAM:** Again, you have to seek a quality balance, and I cannot give you a broad brush answer to that as it would depend on the local situation. Generally speaking, as has been evidenced in many of those sorts of Radburn estates, the concern is that where pedestrians are separated from streets and placed in, say, unlit areas that feel unsafe, where there are no people, for example short laneways, they do not use them; they become termed rape and pillage opportunities. Therefore, people cannot walk. The issue is whether you want to encourage people to walk, how best to do that, and how to maintain their safety.

**Mr GIBSON (CHAIRMAN):** We can all see the problems now but why did not the Department of Transport foreshadow the present situation 25 years ago?

**Ms ABRAHAM:** I guess we are not alone. I think the question is, why didn't local councils and the planning and traffic engineering professions generally do so? I am thinking back to my own training. I am not sure how far the history of the Department goes back then, but those sorts of designs were sought to achieve safe street environments through lowering traffic speeds, providing the cul-de-sacs and those sorts of environments where they felt children would be safer. As usual, as human beings, we have solved one problem and created others, and we are always trying to catch up with ourselves.

**Mr SMITH (STAYSAFE):** I understand that the transport planning area of the Department of Transport has been involved in seminars and exercises in recent years that have attempted to address transport issues arising out of what can be called the spaghetti sprawl of Sydney suburbs. What are some of the suggestions that have been given to improve these environments for road users other than private vehicles? Do these suggested improvements have any safety benefits?

**Ms ABRAHAM:** I have actually already outlined the improvements that would certainly improve those sorts of areas for public transport operation. For example, I mentioned more connected street networks. A lot of buses cannot actually operate in many of these suburbs because there are no direct road links that link one neighbourhood cell to another neighbourhood cell. Footpaths had been a major neglected issue. Trying to create centres with less segregation of land uses so that people do not have to travel as far by car is another suggestion. The safety benefit of these suggestions is certainly broader than just the consideration of vehicular conflict. If we aim to achieve a more attractive environment for pedestrians and therefore encourage walking as a suitable mode, particular for short trips, then consideration of the perception of personal safety from other people is just as important as the perception of safety from vehicles. As I said, pedestrians do not find lonely, unlit laneways away from streets safe, neither do they find being on a very busy road with no protection safe. So I guess that is the challenge to provide a vibrant, attractive walking environment that is also safe from traffic. Obviously traffic calming measures and urban design measures have the most important role to play there.

**The Hon. J. S. TINGLE (STAYSAFE):** As we learn more about ways of achieving better

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access, mobility and safety for everybody, obviously we can apply those principles to what we are doing in the future in the way of subdivisions. What about the stuff that is already there? How do you do it in places like Newtown or Lightning Ridge? Can we really apply it, and should we be seeking to, all over the State, or are we talking about what we are going to do in the future?

**Ms ABRAHAM:** That is a very important issue and one raised at our seminars last year — what do we do about the thousands of hectares of stuff that is not amenable to walking and public transport? There are a few initiatives that may address that, and are worth supporting. Firstly, as I mentioned, the Department of Housing has been working on its older estates in south-west Sydney progressively retrofitting those estates to remove the narrow pedestrian walkways and to link the heads of cul-de-sacs and reconnect the streets so that they can get pedestrian access and bus access. They have also been reorienting dwellings to the streets so that there are eyes on the streets for the children playing and people catching the bus. The second initiative is the concept of the use of bus-only links between neighbourhoods. As you may be aware, conventional suburban design does not provide through links between residential neighbourhoods in order to discourage traffic running through. However, that also discourages effective bus operation because they have to go in to service the neighbourhood and then come out.

A report was prepared by consultants for Penrith City Council on an appropriate bus-only traffic device where you would not want through car traffic but you may want a bus to operate. I have not got a copy to table but I could get a copy made. It recommends a passive device that relates to the difference between the wheel base of the bus and the wheel base of a car which allows the buses to pass but inhibits cars. It is used with landscaping and signage. They did an international review of devices. As I understand it, a number of councils are interested in the application of that sort of device which could either be incorporated into the planning of new areas and retrofitted into existing areas. In terms of retrofitting, obviously the provision of cycleways, footpaths and bus shelters could help make it more attractive and safer for those other modes. Traffic calming or speed control devices may be appropriate as long as attention is given to the needs of buses and cyclists and their complaint about road humps.

**The Hon. J. S. TINGLE (STAYSAFE):** There are obviously areas where we are going to have all sorts of problems. I refer again to King Street, Newtown, where there are speed limits and where a driver would be flat out getting up to 50 km/h taking into account the quality of the road and the width of the road. It is going to mean that all the traditional ways of managing the traffic or calming it are not going to work, except to take out on-street parking. Depending on the place we look at it can be a very complex issue.

**Ms ABRAHAM:** Exactly.

**Mr GIBSON (CHAIRMAN):** Is the Department of Transport planning anything to make the environs of schools safer than they are today?

**Ms ABRAHAM:** My expertise is in transport planning. Are you talking about public bus

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operation?

**Mr GIBSON (CHAIRMAN):** My question relates to pedestrians, cyclists, cars, buses, and to everything that takes place around a school.

**Ms ABRAHAM:** We are working on a committee with the Environmental Protection Authority looking at how to encourage alternative modes for journeys to schools, because obviously a lot of parents are using cars much more than they did, say 20 years ago. The independent mobility of children has rapidly decreased in all western countries actually. We are working with the Environmental Protection Authority on that on some pilots to encourage children to actually go back to walking and using buses to school, as we probably all did when we were younger. As our role is a strategic one, the Streets and Roads Task Force is trying to promote best practice in that sort of thing. We would be interested in finding useful case studies of councils and communities that have dealt with that effectively.

**Mr SMALL (STAYSAFE):** I am not sure if it happens in urban areas, but in country regions there are traffic committees which meet with local council representatives, the police, an Roads and Traffic Authority representative and the local Member or a nominee. Should the Department of Transport also have a representative at those committee meetings where there are discussions on heavy transport movements or similar issues?

**Ms ABRAHAM:** That issue is being reviewed. Our problem obviously is resources. We are a very small Department. There are only ten transport planners covering the whole State. We have been a non-voting member on traffic committees and we are called in to traffic committees if there is a major issue relating to public transport that has not been sorted out. We are not in a position to attend every meeting of every traffic committee across the State.

**Mr SMALL (STAYSAFE):** I can site examples of heavy traffic movements through some country towns, but the cost of designing bypasses for those areas is very expensive. You say you have been able to attend traffic committees, that you do not have voting rights on them, but that on the other hand your resources may not allow you to be present at all such meetings.

**Ms ABRAHAM:** That is something that is going to be reviewed with the Roads and Traffic Authority about our involvement in the operation of those committees and perhaps how to use the appropriate triggers for our involvement to address major developments or major issues.

STAYSAFE also noted a recent paper written by Ms Abraham that discusses transport planning and suburban amenity issues, amongst other issues. A copy of this paper follows overleaf.

## **Abraham, M. (1996). Planning for transport choice. Paper presented at the ITE Regional Conference, Melbourne, 15-16 MAY 1996.**

While transport professionals are giving increasing attention to moderating the use of cars and making walking, cycling and public transport more attractive, many transport planning and traffic engineering practices work to undermine the availability of transport choice. Is it possible to create environments that are friendly to pedestrians, cyclists and public transport users and that manage car and commercial vehicle travel? This paper explores the concept of planning for transport choice and the key issues which need to be addressed to encourage alternative modes to the private car through urban and transport planning.

### **Introduction**

In the search for more sustainable and livable urban environments, increasing attention has been given to moderating the use of cars and making walking, cycling and public transport more attractive. These modes are more space, energy and often cost efficient than cars and provide mobility for a wider range of people, including young and older people without cars. However, it is clear that those of us who have cars, and I believe this is especially true for women, find them the most convenient, safe and reliable means of travel to carry out our daily activities. How do we manage car travel and provide viable alternatives?

We need to create (some would say, recreate) an environment that is friendly to pedestrians, cyclists and public transport users, and that can manage car travel over time. We need to make land use and development decisions that encourage people to use non-car modes for at least one or more of the trips between home, work, shopping, school and other personal business. This requires planning for transport choice.

This paper explores the key issues and directions related to planning for transport choice and in particular, what traffic engineering issues need to be addressed to encourage walking, cycling and public transport wherever possible.

### **Critiques for conventional planning**

There are numerous critiques of the suburbs created by post-war planning and engineering practice, noting their emphasis on the needs of traffic rather than the needs of people, and encouraging mobility at the expense of environmental quality and, some argue, community cohesion (Calthorpe 1993; Kaufman & Morris, 1995). Such critiques also note the mismatch of the form of conventional suburbia, designed for the traditional family unit, with current trends of ageing population with a minority of households with children.

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These critiques are a powerful indictment of the professionalisation or specialisation of different aspects of "town making". The separation of land uses, street and road design which focus on managing car travel rather than encouraging walking, cycling and public transport, and planning policies which neglect the influence of urban form on travel behaviour, have all contributed to car reliance and the reduction of transport choice.

The New Urbanists, among others, have promoted the following concepts with benefits for alternative modes to the car (Kaufman & Morris, 1995):

- highest densities and concentration of a mix of land use into two centres within walking distance of public transport nodes and routes
- interconnected, walkable streets leading to close and useful destinations
- narrow streets with footpaths, trees and on-street parking
- active frontages on the street eg porches, balconies, pedestrian entries, to provide "eyes" on the street
- pedestrian focus — the vehicle is subservient
- main street retailing rather than "big box" shopping malls, surrounded by car parking.

Various simulation and descriptive studies have tended to support the transport benefits of such neo-traditional design, particularly higher proportions of walking and transit use and shorter trip lengths in neo-traditional neighbourhoods (Kulash, 1990; Chellman, 1991; Friedman et al., 1992; McNally & Ryan, 1993; Holtzclaw, 1994; and others cited in Crane, 1996). Analysis of the 1991 Home Interview Survey in Sydney echoes this research. A comparison of three types of neighbourhoods—high density around stations, traditional (originally tram-based) and conventional suburban—shows fewer overall pension trips, fewer vehicle trips and a higher proportion of public transport and walking trips in high density and traditional neighbourhoods (Rosenkrantz, 1995).

However, a recent analysis by Crane (1996) has questioned the transport benefits of grid street neighbourhoods, noting that the increase in access provided by a connected street system reduces the cost of travel for all modes and that the number of car trips may not necessarily be lowered and indeed, may increase. He concludes that the transport benefits of neotraditional developments are more likely to be due to traffic calming features and the clustering of destinations within walking distance, than from a grid-like street network.

On the other hand, the problems posed to efficient public transport operations by conventional suburban planning and street design are highlighted by the work of Fleming and Pund (1993). This analysis of operations in Western Sydney shows the negative effect of "island suburbs" with circuitous street networks and few connections on bus service directness, frequency and profitability.

This study evaluated bus service operations for Blacktown, Mt Druitt and Campbelltown in Sydney. These areas have similar socio-economic profiles and relative public transport levels. The primary differences were directness of bus services as a function of street network design.

Higher passenger loads with fewer buses in service were generated in Blacktown and Mt Druitt which had greater road connectivity than in Campbelltown, where “island suburbs” have disconnected street networks, requiring longer, more circuitous and expensive bus trips. As a result, even if bus travel was free, only people with no alternative would use it.

The new urbanist critique has been useful in highlighting the ways in which the physical environment—the province of planning and engineering—can affect travel behaviour as well as urban liveability. Many of the new urbanist principles have been taken up and adapted by public transport agencies in the USA and Canada in the form of handbooks and guidelines (Ministry of Transportation, Ontario, 1992; Tri-Met Oregon, 1993; NJTransit, 1994). Such public transport friendly design guidelines are also being developed by consultants to the Queensland Department of Housing, Local Government and Planning.

### **Putting planning in its place**

Most evidence suggests that it is difficult to truly influence travel demand and moderate car use unless there is an integrated package of strategies (Moore and Thorsnes, 1994; Newman and Kenworthy, 1995). With some variations, these regional strategies include:

- improving the quantity and quality of public transport, pedestrian cycling and HOV infrastructure
- increasing the price of car travel relative to other modes of travel
- calming traffic on an area-wide basis, in favour of non-car modes and non-car based land uses
- re-orienting urban development through restricting urban sprawl, encouraging higher density development and creating mixed use centres at public transport nodes — including “urban villages”.

Most economists and even planners would agree that pricing would be the most effective means of getting people out of cars and into public transport. However, it is also the most politically unacceptable. Moore and Thorsnes (1994) categorise urban and land use planning strategies as “second best” to pricing. Be that as it may, they are still important, as they have the ability to influence the costs of travel indirectly, and can be manipulated by local communities. Closer attention to how urban planning measures can encourage walking, cycling and public transport is an important part of the package approach and long overdue.

### **Planning for transport choice**

Let us take a generalised view of development practice, as determined by State and local policies and plans, as it relates to transport. Development practice until now, at least in NSW, has tended to:

- promote higher density residential development in dispersed locations
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- consider the likely traffic generation of a proposed development and what measures can be used to accommodate, rather than moderate that traffic. This usually takes the form of a traffic study, not an integrated transport and land use plan.
- segregate land uses to minimise amenity conflicts but maximise trip lengths
- provide a hierarchy of roads with limited penetration for bus services and minimal provision for pedestrians (eg footpaths), cyclists and public transport users (eg bus stops). Where provision is made for pedestrians and cyclists, they are segregated from car traffic as much as possible in the name of road safety
- provide road systems with capacity for peak daily traffic flows
- provide public transport services only when warranted by demand, primarily focused on school and work trips
- fund road improvements through developer contributions, but not public transport facilities
- provide infrastructure (particularly road) without considering the complementary management measures needed to ensure that it does not have unwanted side effects and that it achieves its objectives.

This is not planning for transport choice.

Planning for transport choice is planning for all passenger transport modes according to the needs of the local community and agreed objectives for the region. In particular, more attention needs to be given to the requirements of pedestrians, cyclists and public transport users than in the past; as much as has been given to the requirements of cars and commercial vehicles. Residents should have the opportunity to safely walk or cycle to the nearest community facilities, such as shops and schools. The route to the nearest station, tram or bus stop should be safe and direct.

Obviously, it isn't easy. It requires a multi-disciplinary approach and trade offs between competing objectives. It requires attention to the details as well as the broad strategic vision of what needs to be achieved e.g. a walkable town. It requires more iterative, rather than sequential processes and the management of places rather than functions.

Some key issues and directions that enable planning for transport choice are discussed below.

### **Accessibility mapping and “transit-oriented development”**

The starting point for planning for transport choice is a good understanding of the regional and local movement networks. In particular, the regional network of designated public transport corridors with high quality services (10-20 minute frequencies, stop facilities etc) needs to be identified. In most cities, this will mainly the rail, trunk bus and ferry networks.

Along these corridors councils need to create and promote opportunities for a variety of development types which are:

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- compatible with the relevant forms of public transport (e.g., offices, not truck distribution centres) and
- correspond to the level of service provided (e.g., highest densities and land uses mixes need highest service frequencies).

At a more local level, bus “super-stops” with high frequency services adjacent to extended hours retail should be identified as key nodes on which “transit-oriented development” can focus.

Once the hierarchy is developed, access by walking, cycling and public transport can be mapped for each area to ascertain strengths, weaknesses and opportunities. For example, comparing a 400 metre radius around a rail station with actual walking distances, can identify where pedestrian links may be improved to maximise the potential catchment. Or relative accessibility can be expressed as a ratio of the number of jobs/retail and leisure activities that can be reached in a given time by car, compared to those that could be reached by public transport in the same time.

The London Borough of Hammersmith and Fulham has adopted an approach under which improved accessibility is rewarded by higher plot ratios and tapered parking requirements. The Netherlands Government has adopted a business location policy, titled “The Right Business in the Right Place”, which matches the accessibility of locations with the mobility requirements of business. For example, people-intensive land uses with a high need for public transport must be located proximate to main public transport interchanges in town centres, with fast rail services and easy access by cycling and walking (United Kingdom Department of Environment and Transport, 1995).

Transport planners, not just traffic engineers, are needed to work with land use planners to map accessibility and maximise development opportunities close to good public transport.

## Different sorts of plans

Instead of the usual separate plans for arterial roads, road hierarchies, traffic management, development control plans and parking policies, there needs to be an integrated approach. AMCORD 95 recommends the planning of “integrated movement networks”. This requires a partnership between the State and local government.

The needs of walking, cycling and public transport also need to be considered as early as possible in the planning and design process. It is more expensive to retrofit roads, neighbourhoods and centres for efficient public transport operation once major development or works have taken place.

A good example of this approach is the City of South Sydney’s “Strategy for a Sustainable South Sydney 1995 which overlays strategies for:

- environment

- land use and transport
- character and identity
- community well-being
- city management

The goal for land use and transport is to:

“Develop a sustainable environment whereby activities are located close together and walking, cycling, public transport and sharing private vehicles are the main means of travel.”

Not a goal for the faint-hearted! Detailed and integrated strategies are spelt out for pedestrian networks, cycling facilities, public transport, private vehicles and traffic management, freight and services, mixed use zones and urban growth around stations, commercial centres and open space.

## **Streets and roads for all modes**

There are a number of other issues of interest to transport engineers which need to be examined in more detail when seeking to obtain a balanced transport system, with transport choice.

As stated earlier, conventional subdivision's street and road networks have not supported alternative modes to the car. Expertise in designing highways and streets would appear to be much further advanced than expertise in designing for all modes.

### *The classification of streets*

It can be argued that conventional road hierarchies based on traffic volumes are insufficiently dynamic or multi-modal to support transport choice. Indeed, New Urbanists argue that they are obsolete and that connectivity should be encouraged .

New models are required which are multi-dimensional and which enable transport planners to make trade offs between traffic flow, walkability, permeability for public transport and activity. Streets and roads *and their environments* need to be considered together. AMCORD 95 defines streets as local traffic routes where the residential environment is dominant and roads as corridors where the movement function is dominant. Is such a classification sufficiently dynamic to cope with an increasing mix of uses and housing types?

### *Arterial roads*

For example, there is considerable debate at the moment about the form and function of arterial roads. New urbanists argue that such roads should encourage alternative modes through allowing active frontages and designs which include side roads - “integrator arterials”. The alternative, evident in more recent urban areas, is walled off arterials, which are “sewers for cars”. These arterials are certainly not pedestrian or public transport environments.

Pedestrians, and hence buses, like to be on active streets with cars, but obviously only up to a point. Westerman (1996) believes that the concept is inappropriate for major traffic routes with volumes in excess of 15,000-20,000 vehicles per day, due to the effect of vehicle emissions on health.

#### *Pedestrian safety*

It can also be argued that in trying to reduce conflicts between vehicles and people (i.e., separating them as much as possible), we have discouraged walking as a mode. The tendency has been to remove risk rather than manage it. Pedestrian only links between cul-de-sacs or in open spaces are often unlit, lonely and without natural surveillance. The New South Wales Department of Housing is retrofitting public housing estates planned on the Radburn model to remove such "rape and pillage opportunities" and re-orient townhouses to streets, rather than open space.

Streets and roads need to be designed with the pedestrian in mind. Footpaths are essential on both sides of trunk public transport routes and on at least one side of connected residential streets. Traffic calming techniques can be used successfully to cue drivers that they are entering a pedestrian environment and arterial roads can be adapted to shared use (Roads and Traffic Authority, 1993). Such techniques have been taken up enthusiastically by many councils.

More connected street systems can be more direct and efficient for non-car modes but require attention to issues of pedestrian safety at intersections, traffic noise and unwanted traffic in residential streets. Traffic calming techniques are required to address these issues and maintain permeability for pedestrians and public transport.

#### *New forms of public transport*

Of course, the changing nature of urban structure and urban living is also generating new forms of public transport, such as the concepts of Personal Public Transport or Personal Rapid Transport, which merge the convenience of private transport with the benefits of public transport. These will, however require lumpy up front capital expenditure, and hence government support, and major institutional changes to the way bus and taxi services are regulated. With minimum technological and institutional change, larger operators such as Westbus in Sydney are successfully operating high frequency midi-buses on a hail and ride basis in Penrith. Such services still need, however, to be complemented with priority treatments, efficient interchange facilities and clustered activity centres to be profitable.

### **Towards an agenda**

Providing for transport choice depends on many factors, not all of which are related to urban structure and planning. However, there are ways of adapting the form and design of urban areas so that the need to travel is minimised and options such as walking, cycling and public transport become feasible alternatives to the car.

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This paper has raised just a few of the directions and issues which need to be considered when planning for transport choice. It is heartening to note the comprehensive work which has been undertaken by Hans Westerman for AUSTROADS on the relationship between roads and land use planning, which also addresses these issues and others, and in much more detail. NSW looks forward to the promotion and dissemination of the information which Westerman has collected and distilled.

However, in order to successfully plan for transport choice, the following points need to be considered in setting the agenda for change:

- More information is needed on the advantages and disadvantages of a range of movement network designs in order to allow local communities to increase transport choice.
- Funding for transport choice is not yet available. There is Commonwealth funding for roads which is managed by road authorities with a history and capability focused on highway construction. There is no Commonwealth funding for urban public transport. In New South Wales, public transport infrastructure must be funded by consolidated revenue, and now public/private joint ventures such as the new southern railway linking the airport with the Sydney central business district. Road funds are guaranteed by secured sources, such as fuel taxes. A recent positive initiative has been to use some of the fuel tax levy for bus priority facilities but this is still a proportionately small amount.
- Who is responsible for planning for transport choice? Obviously, all levels of Government and all urban professions are implicated. Planning for transport choice requires a multi-disciplinary, inter-agency approach. Is there a need for a new profession which combines traffic engineering, urban design and land use planning skills? Or is a more consultative, iterative process required? How do we promote best practice? This issue is being examined in New South Wales by a Sharing Streets and Roads Taskforce chaired by the New South Wales Department of Transport, comprising representatives from a wide range of stakeholders:
  - the Department of Urban Affairs and Planning
  - the Roads and Traffic Authority
  - the Environment Protection Authority
  - the NRMA
  - Landcom
  - the Australian Institute of Traffic Planners and Managers
- Many local practitioners look to State authorities for guidance and policy direction. However, the appropriate transport authorities in most states are still roads authorities. Roads are a sub-set of transport. Increasingly, public transport agencies are concentrating on core operations. Who should provide guidance on planning for transport choice? What prospect is there of multi-modal agencies and funding, such as the United Kingdom Department of Transport and the American metropolitan transit boards?

We cannot force people to walk, cycle or use trains or even live at higher densities. Nor should we. We can, however, remove the barriers to choosing alternative transport modes and housing

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types and demonstrate the “liveability” gains from doing it properly.

## **APPENDIX A: BIBLIOGRAPHIC DETAILS OF SELECTED DOCUMENTS RECEIVED IN EVIDENCE**

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**APPENDIX B:           ROADS AND TRAFFIC  
AUTHORITY SUBMISSION  
TO THE INQUIRY**

# **Submission to STAYSAFE**

**Inquiry into 50 km/h  
Local Street Speed Limits  
in Residential Areas**



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## ***Executive Summary***

### ***Speed and Accidents***

*Excessive speed is a major contributor to the accident and casualty situation in NSW, and is estimated as contributing to one-third of fatal crashes. Significant emphasis is therefore placed on developing strategies to better manage speeds on the road network.*

*Speeding has been identified as a key priority area in the NSW Road Safety Strategic Plan, "Road Safety 2000", and there is now in place a comprehensive speed management program to address the speeding situation in NSW. A fundamental aspect of this program is the management of speeds on the urban road network.*

*There is a case for a lowering of speeds on local residential streets. Benefits are expected for improved safety, amenity and emissions related to lower speeds. A large proportion of the community would prefer lower speeds, and lower speed limits, on local streets.*

### ***Speed Limits***

*The existing 60 km/h General Urban Speed Limit is considered too high for the majority of local streets. While valid arguments can be proposed for introduction of either 40 km/h or 50 km/h limits on most local streets, a 50 km/h limit is considered an appropriate balance between what is needed, what is manageable, and what is publicly acceptable.*

*The most efficient way of introducing this 50 km/h limit is by applying it as a general limit for the majority of local streets, to be known as the Local Street Speed Limit. Speed zoning would be used for roads more suited to speeds above or below this limit.*

### ***Local Street Speed Limit***

*The proposal for the new speed limit may be summarised as follows:*

- *The speed limit for local streets would generally be 50 km/h, applying on all unsigned streets in all built-up areas, in metropolitan centres and rural towns.*
- *This speed limit would be known as the Local Street Speed Limit, and be applied as a general limit by regulation.*
- *It would replace the current general urban speed limit of 60 km/h which applies to the wide range of roads in built-up areas.*
- *Roads or sections of road not suitable for a general limit of 50 km/h would have higher or lower speed limits, according to traffic function and physical characteristics, and would be signposted accordingly, as at present.*

- *Introduction of a 50 km/h limit on local streets would provide a hierarchy of urban speed limits which included*

<i>40 km/h</i>	<i>Speed Zones</i>	<i>Residential or shopping areas generally where physical devices (eg. narrowings, humps) are applied, and at school zones located in 60 km/h and 70 km/h zones.</i>
<i>50 km/h</i>	<i>Local Street Limit</i>	<i>The majority of streets providing a local access function in built-up urban areas, including residential and commercial areas.</i>
<i>60 km/h</i>	<i>Speed Zones</i>	<i>Undivided traffic routes having direct access from abutting development; also school speed zones in 80 and 90 km/h zones.</i>
<i>70 km/h</i>	<i>Speed Zones</i>	<i>Higher standard urban traffic routes, generally divided roads with some or full direct access from abutting development; also for undivided roads having low levels of direct access from abutting development.</i>
<i>80-90 km/h</i>	<i>Speed Zones</i>	<i>Higher standard urban traffic routes, generally divided roads with no access from abutting development; also for undivided roads having very low levels of direct access from abutting development; also limited application on outer urban arterials.</i>
<i>100-110 Km/h</i>	<i>General Limit</i>	<i>Open road speed limit, and limits for high standard freeways and motorways</i>

- *Road sections not suitable for the general 50 km/h limit would be identified and speed zoned before the new limit was introduced.*
- *Casualty crash reductions of between 100 and 520 per year with annual savings ranging from \$6 million to \$31 million are estimated following implementation of a 50 km/h local Street Speed Limit. Estimated identifiable once-off costs are \$4 -\$5 million.*
- *Particular attention would be paid to publicity, education and enforcement strategies in implementing the change, and a major public information campaign would be mounted.*
- *Community and interest group input on the change would be encouraged via public discussion papers and processes based on the information referred to in this submission.*
- *Adequate monitoring and evaluation of the impacts of changes to urban speed management on vehicle speeds, accidents, travel times and amenity would be conducted.*
- *The new speed limit would be incorporated into the Australian Road Rules, currently being drafted by the National Road Transport Commission (NRTC).*

*The Local Street Speed Limit is seen as part of an urban speed management strategy which also includes extension of traffic route speed zoning practices, and continuing developments in enforcement strategies and techniques.*

## ***Summary Responses to Terms of Reference***

*The material contained in this submission covers all aspects of the terms of reference for the inquiry. The major points, as they relate to the individual terms of reference, may be summarised as follows:*

- 1 *previous research into lower residential speed limits in Australia and overseas*

The few studies undertaken in Australia have considered lower speed limits (40 or 50 km/h) in confined residential areas within the overall 60 km/h general limit. These have been introduced by signposting alone or by signposting together with LATM devices, and usually without special enforcement activity. Evaluation of the lower limits has been confined to effects on speeds and community opinions rather than on accidents. Better results (in terms of reducing speeds and deterring unnecessary traffic) have been obtained where LATM devices are also present. Signs without LATM devices require a local street geometry which is encouraging of lower speeds, or a special enforcement effort. Survey research indicates that, generally, residents have been in favour of the reduced limits, and their perception of the effects has often been optimistic. Overseas studies indicate that where lower speed limits have been imposed in urban areas, speed reductions have been accompanied by crash and casualty reductions.
- 2 *speed management practices in New South Wales and in other jurisdictions in Australia and overseas, particularly in terms of current practices for setting urban speed limits*

During the early 1960s, the different states had variously 30 or 35 mph general urban speed limits. NSW changed from 30 to 35 mph in May 64, to come into line with other states and the National Road Traffic Code. Upon metrication in July 1974, the general urban speed limit was converted from 35 mph (56.3 km/h) to 60 km/h. The general urban speed limit of 60 km/h is technically inappropriate for all roads in the wide range of road types included in an urban area. It is too high for residential streets and other local areas where there is high pedestrian activity and/or property access movements by vehicles; it is often too low for efficient vehicle movement on major traffic routes. The inappropriateness of the general limit has bred contempt for the limit and undermined community credibility of the speed limit system. Lower speed limits in appropriate areas (residential, schools, shopping) - and higher limits on arterial routes - are requested and accepted by the community. Extensive speed zoning on arterial routes in recent years has helped overcome inappropriateness at the upper speed levels. The system of speed limits in an urban area should match the range of road types.

- 3 *community concerns with effective speed management in urban areas, particularly vehicle speeds on residential streets*
- Survey research indicates that the community wants and will accept a lower speed environment for the local streets where they live, but there is still some resistance to the installation of speed humps in local streets. People will not always slow down sufficiently when driving down other people's residential streets.
- People want higher speed limits on major traffic routes, and want a clear indication of what the speed limit is on a particular road.
- Recent survey research by the NRMA has indicated that the community is divided on the issue of a "lower general urban speed limit", but with a trend towards greater acceptance of the concept, particularly for residential streets. The specific concept of a new local street speed limit has not been presented to the community.
- 4 *the most effective and appropriate traffic management strategies to be adopted to ensure compliance with 50 km/h local road speed limits, including an assessment of trials under way on the lower North Shore of metropolitan Sydney*
- A 50 km/h local street speed limit would replace the current 60 km/h general urban speed limit. There is no requirement for additional physical devices, or additional enforcement resources, specifically to sustain such a new limit.
- The fundamental strategy will be to ensure that the speed limits on all road types are consistent with their function. Introducing a 50 km/h local street speed limit will mean that some of the more major roads will need to remain at 60 km/h and be specifically signposted. Those areas which need speed limits below the 50 km/h limit will need to be specifically identified, signposted and often supported with physical devices, as they are at present. The North Shore trial involves the introduction of a 50 km/h speed limit on local residential streets in specially defined areas of North Sydney and Mosman. The trial itself has not yet commenced, but there has been extensive consultation with the local community in preparation for its introduction in December 1995. This consultation has yielded further information on community attitudes about local street speeds and speed limits, indicating broad acceptance of a lower speed environment.

- 5 *the decision processes involved in the selection of the local streets to be subject to a 50 km/h speed limit*
- All streets in a built-up urban area are subject to a general urban speed limit, unless otherwise indicated. At present this limit is 60 km/h. Under the proposal, all local streets would be subject to a new 50 km/h limit unless their traffic function dictated that a higher or lower limit was more appropriate. There are comprehensive Speed Zoning Guidelines which help to assess whether a particular road should be speed zoned above or below the general limit. The RTA would continue to determine appropriate speed zoning in consultation with local councils, and hold the formal authority for any change. Streets not subject to the 50 km/h local street speed limit would be assessed in accordance with this process.
- 6 *communication strategies required to support the introduction of 50 km/h local road speed limits in residential areas, including advertising, publicity, and education of drivers and the general public*
- The central thrust would be to outline clearly exactly what is proposed, and the reasons for it, particularly the safety (and amenity) benefits. Community views as measured in surveys would be acknowledged and addressed in advertising and promotional material. A large scale multi-media campaign would be developed to support the program, with emphasis initially on ensuring community knowledge of the change and subsequently on reminding drivers it is in force. A brochure setting out the safety and amenity advantages of such a new speed limit for residential streets, and addressing known community concerns, is under development.
- 7 *changes required for the effective enforcement of lower local road speed limits, including an assessment of speed enforcement technologies, techniques and procedures, and operational instructions*
- The 50 km/h local street speed limit would be subject to enforcement in the same way as the current 60 km/h general limit - as part of the normal deployment of Police patrols, and in response to specific problem sites. Following introduction of a new limit, a special period of "enhanced" enforcement, targeting local streets, would be negotiated with Police. The initial focus would be on intercepting offending drivers and cautioning them about the new limit, followed some weeks later by full enforcement of the limit. There is no fundamental requirement for a permanent increase in enforcement resources specifically for the new limit. Continued adoption of developing technologies (such as laser speed guns) and alternative deployment strategies (such as random patrol allocation) will continue to assist in the effectiveness and efficiency of speed enforcement patrols on residential streets. The increasing involvement of local councils in monitoring and managing the speed problem will also assist.

- 8 *implications for the penalty and demerit point system, including the need for revision of current speeding offences under the Traffic Act, and the possible adoption of a cautioning system to operate together with a traffic infringement system*
- Introduction of the new limit would require only a change in the regulations to amend the general urban limit from 60 to 50 km/h. Speeding offences are specified in terms of the amount by which a speed limit is exceeded, not in terms of the limit itself. This general approach would remain.
- There is no fundamental requirement for a change in the speeding penalty system specifically for the new limit. The new limit would provide an opportunity to consider revision of the current penalty system structure to assist the management of speeds. This might well include provision for a cautioning system as an additional tool available to Police for achieving compliance. Such a review is proceeding separately, but is not essential to introducing the new limit.
- 9 *the road safety implications of introducing a 50 km/h local road speed limit, particularly in terms of a reduction in intersection crashes, and for pedestrian and bicycle safety*
- The new limit would enable the apprehension of those who drive at the currently legal, but inappropriate, speeds on residential streets. The major beneficiaries of the new limit are expected to be pedestrians and bicyclists on urban streets - these are predominantly children. Lower speeds provide drivers with a greater chance of stopping before collisions can occur, and when collisions do occur, lower speeds mean less severe injury outcomes. Intersection collisions between vehicles can benefit similarly.
- Evidence from research in Adelaide indicates that a lower (by 10 km/h) residential speed limit, with the same degree of enforcement and compliance as at present, could achieve a reduction of about 27% in pedestrian fatalities. Evidence from overseas indicates that where the general urban speed limit has been reduced from 60 to 50 km/h, there have been substantial savings in crashes and casualties.
- 10 *an appropriate schedule for introducing a 50 km/h local road speed limit in residential areas through NSW*
- Time would be required for communication with the community to explain and promote the new limit, and prepare further advertising material for its introduction. Time would also be required for the identification of those road sections for which a higher speed zone would be appropriate, and for the appropriate signposting of those sections. All such zoning would need to be complete before the new limit was brought into effect. It is estimated that the above tasks would occupy about 6 to 9 months. Developments in adjacent states should be considered, but the unpreparedness of another state to act should not inhibit a NSW initiative.

- 11 *processes and procedures required to monitor and evaluate the effectiveness of a 50 km/h local road speed limit in promoting road safety*
- It is necessary to assess the overall impact of the new limit, and some details of its implementation, in order to determine how best to refine its operation for the future. Relevant measurements will be required of speeds, community acceptance and accident experience - both before, and at several points after, introduction of the limit.
- Results from the monitoring and evaluation activities should be used to promote further the new limit as part of the overall speed management program for road safety. Such information would also form the basis of regular feedback bulletins to the community on the progress of the initiative and its success.
- 12 *implications of a lower residential speed limit for local government traffic planning and practices, and in the longer term, limit for residential planning and street design*
- A well-defined hierarchy of road types is the basis of road and traffic planning in local government areas. The new speed limit is an integral part of better matching the speed management system to the road function hierarchy. Introducing the new limit will assist in reviewing road classes, both in planning new areas and managing or adapting older areas.
- A lower speed urban environment is a central feature of emerging practice in residential area planning and design. The relevant national code (AMCORD) and the RTA guidelines on traffic generating developments emphasise the benefits of low-speed design features, such as narrow and short streets, for both safety and amenity, and recommend their adoption. Introduction of a new lower speed limit will assist and encourage this practice.
- 13 *future directions in speed management in urban areas*
- The speed limit system in general, and urban speed management in particular, are essential elements of the speed management strategy established under Road Safety 2000.
- Much of the loss in public credibility for the speed limit system stems from the inappropriate nature of the current general urban limit across the entire range of road types. Introducing the new limit addresses this directly.
- A basic concept in the speed management strategy is to ensure that the speed environment, as evidenced by street design and traffic management (including speed limits), is appropriate and acceptable. Introducing the new limit is crucial to achieving this.
- Accident and casualty savings from introducing the new limit will help achieve the Road Safety 2000 targets.

- 14 *environmental implications of lower local road speed limits, particularly in terms of traffic noise, greenhouse gas emission, and travel time*
- The effects on all these areas, as a direct result of introducing the new limit, would be extremely small. Lower constant speeds will, in the absence of other factors, result in lower noise, lower fuel consumption and lower levels of noxious exhaust emissions. Lower speed levels brought about by physical devices can be associated with increases in noise, fuel consumption and emissions as vehicles accelerate through them. Lower speeds mean increased travel times, but studies examining urban driving behaviour indicate that on a typical journey, only a few seconds of additional travel time will arise directly from a lower speed limit environment.

## **1. INTRODUCTION**

Speed is a major contributing factor to road trauma. Higher speeds increase the risk of accidents occurring and lead to more severe injuries when accidents do occur. Speeding therefore has a double effect on road trauma - it influences crash frequency and crash severity.

Excessive speed is a major contributor to the accident and casualty situation in NSW, and is estimated as contributing to 30 % of fatal crashes. This requires that significant emphasis be placed on developing strategies to better manage speeds on the road network.

Speeding has been identified as a key priority area in the NSW Road Safety Strategic Plan, "Road Safety 2000", and there is now in place a comprehensive speed management program to address the speeding situation in NSW. A fundamental aspect of this program is the management of speeds on the urban road network.

Observation surveys of speeding behaviour indicate that high speed levels in urban areas generally, rather than rural speeds, constitute the problem. Urban speed management is therefore of particular concern to road safety agencies. There has emerged in recent years a general proposal for the introduction of lower speed limits in urban areas, and inquiries in several jurisdictions have given serious consideration to this issue. In NSW, the Parliamentary Joint Standing Committee on Road Safety (STAYSAFE) has undertaken an inquiry with terms of reference as set out below.

This present document has been prepared and submitted to assist the inquiry.

## **TERMS OF REFERENCE**

The STAYSAFE Committee announced an "**Inquiry into 50 km/h Local Road Speed Limits in Residential Areas**" with the terms of reference for the inquiry seeking information on the following:

- previous research into lower residential speed limits in Australia and overseas
- speed management practices in New South Wales and in other jurisdictions in Australia and overseas, particularly in terms of current practices for setting urban speed limits
- community concerns with effective speed management in urban areas, particularly vehicle speeds on residential streets
- the most effective and appropriate traffic management strategies to be adopted to ensure compliance with 50 km/h local road speed limits, including an assessment of trials under way on the lower North Shore of metropolitan Sydney
- the decision processes involved in the selection of the local streets to be subject to a 50 km/h speed limit
- communication strategies required to support the introduction of 50 km/h local road speed limits in residential areas, including advertising, publicity, and education of drivers and the general public
- changes required for the effective enforcement of lower local road speed limits, including an assessment of speed enforcement technologies, techniques and procedures, and operational instructions

- implications for the penalty and demerit point system, including the need for revision of current speeding offences under the Traffic Act, and the possible adoption of a cautioning system to operate together with a traffic infringement system
- the road safety implications of introducing a 50 km/h local road speed limit, particularly in terms of a reduction in intersection crashes, and for pedestrian and bicycle safety
- an appropriate schedule for introducing a 50 km/h local road speed limit in residential areas through NSW
- processes and procedures required to monitor and evaluate the effectiveness of a 50 km/h local road speed limit in promoting road safety
- implications of a lower residential speed limit for local government traffic planning and practices, and in the longer term, limit for residential planning and street design
- future directions in speed management in urban areas
- environmental implications of lower local road speed limits, particularly in terms of traffic noise, greenhouse gas emission, and travel time

## **SCOPE OF SUBMISSION**

This submission presents consideration of the issues seen to be most pertinent to introduction of a new local street speed limit as a *major road safety initiative* for NSW.

Specific consideration is given to -

- the current practice for setting urban speed limits, in the context of national and overseas practice;
- the safety benefits from introducing a new speed limit on local streets;
- community views on speeds and speed limits on local residential streets, in terms of road safety and quality of the environment;
- the most effective way of implementing the new speed limit;
- the technical and social pre-conditions necessary for introducing the new limit;
- the implications for traffic management, public education and enforcement.

It is acknowledged that enforcement is an integral component of speed management, and elements of enforcement practice are therefore considered in this submission as they relate to implementation of the specific proposal. Detailed consideration of enforcement policies and operational practices is not presented. It is understood that these are to be covered in a submission from the NSW Police Service.

## 2. THE SPEEDING PROBLEM

### SPEEDING AND ACCIDENTS

There are strong *a priori* grounds for expecting that higher speeds will result in an increasing number of accidents. The faster a vehicle travels, the longer the stopping distance will be and the less the opportunity the driver will have to avoid unexpected conflicts with other road users or to correct his or her own lapses or errors. The reaction distance component of stopping distance, i.e. the distance travelled during the 1-2 seconds it takes for the driver to identify an emergency situation and initiate a response, increases in direct proportion to the speed of the vehicle. The braking distance component, i.e. the distance over which the vehicle travels before its brakes bring it to a halt, increases in proportion to the square of the initial travel speed. There may also be other factors which increase the probability of a collision in some circumstances, such as the increased probability of skidding or other loss of control, less time for other road users to react, and less attention to monitoring the environment due to the increased demands of the vehicle control task.

In a recent review of speed and crash involvement, Fildes and Lee (1993) cite a number of studies which demonstrate a link between speed and accident occurrence.

The relation between higher speed and crash involvement would appear to be more robust. Fildes, Rumbold and Leeming (1991) found that drivers who were travelling faster than average when their speed was unobtrusively measured were more likely to report, when they were subsequently stopped and interviewed, that they had been involved in accidents. In a detailed study which collected data at the accident scene, Treat et al (1977) assessed excessive speed as a definite causal factor in 7 to 8% of crashes, and was a probable factor in up to 16% of crashes. Note however that in a similar study carried out in Australia, McLean et al (1979) found that in only 4% of fatal urban crashes was the driver "travelling too fast to respond appropriately". Although the latter two studies give an indication of the possible extent of the crashes attributable to excessive speed, they do not show that speed increases crash risk. This would require a demonstration that vehicles which travel faster than average have a higher risk of crashing, a demonstration which is yet to occur.

The task of proving a link between higher speeds and crash involvement has been made difficult by the lack of objective measure of pre-crash speed in most crashes. Fildes and Lee have suggested that it would be necessary to fit "black box" speed monitors to vehicles to overcome this problem. These monitors would have to be inspected for a substantial sample of crashed vehicles to enable a reliable analysis. A research project of this type is currently in progress through the Austroads strategic road safety research program.

There are similarly clear *a priori* grounds for expecting a relationship between speed and the severity of injuries sustained in crashes. The energy exchange between the vehicle and the object collided with increases with the square of their relative speed. Thus small increases in speed can result in a great increase in the forces applied to vehicle occupants in a collision, e.g. a 20% increase in impact speed will result in a 44% increase in the energy to be dissipated, and a 50% increase in impact speed will increase the energy to be dissipated by 125%.

Empirical evidence to confirm this relationship has been more readily obtained than is the case with the relationship between speed and accident occurrence. Fildes and Lee report a number of studies which demonstrate a curvilinear relationship between speed and injury severity. Of special interest in the context of safety on local streets is the effect of vehicle speeds on pedestrian and bicyclist injuries.

Clear evidence that lower speeds result in fewer deaths and injuries comes from a number of studies, comprehensively reviewed by Fildes and Lee, where the speeds of vehicles in general have been reduced through reducing the speed limit or by systematic enforcement of the speed limit. In such studies, it is usually not possible to separate the effects of lower speed on crash occurrence from the effects on injury severity. Despite some of the studies relating changes in casualties to changes in speed limits without actually reporting changes in speed distribution, there is an impressive body of work which shows that higher speed limits increase casualties and lower speed limits reduce casualties. The weight of evidence in these studies, and in those that do report changes in speed distributions, confirms that reduced speeds is indeed the mechanism through which lower casualties are achieved.

## THE NSW SITUATION

### Urban Crashes

A large proportion of all crashes occurs in urban areas. In 1994, for example, more than 70% of all crashes occurred on NSW roads with a 60 km/h or less speed limit. The problem is not confined to the major metropolitan areas: comparable proportions for metropolitan and country urban areas are 82% and 48%.

### Speeding-Related Crashes

A speeding-related crash is defined as one in which at least one vehicle (i) was identified by the Police as travelling at an excessive speed, and/or (ii) had performed a manoeuvre characteristic of excessive speed.

In 1994, almost one-third (31%) of fatal crashes and 18% of serious injury crashes were speeding-related - representing the death of 205 people and serious injury to another 1,249 people.

Of all speeding-related serious casualty crashes (fatal plus serious injury crashes combined) in NSW, more than one-third (37%) occurred in the major metropolitan areas, and 4 out of 5 of these were on 60 km/h roads. Urban roads in country areas accounted for a further 21% of all speeding-related serious casualty crashes. Overall, more than 40% of all speeding-related serious casualty crashes occur on roads with a speed limit of 60 km/h.

## Speeds

Speed surveys throughout NSW indicate that a large proportion of drivers continue to travel at speeds in excess of the speed limit. A recent survey (November 1994) showed that in 60 km/h residential zones, approximately 50% of drivers exceed the speed limit by 10 km/h or higher.

A later survey (June 1995) gives more detail for speeding behaviour by car drivers in the Sydney Metropolitan Area:

Road Class (All 60 km/h Speed Limit)	Time Period of survey	Mean (km/h)	85%ile (km/h)	% exc Speed Limit
<b>SUB-ARTERIAL</b>	0500-0800	64	70	72
	1100-1400	61	69	52
	1600-1900	63	69	67
	2100-2400	60	68	46
<b>COLLECTOR</b>	0500-0800	64	71	69
	1100-1400	64	72	68
	1600-1900	62	70	60
	2100-2400	63	70	60
<b>RESIDENTIAL</b>	0500-0800	-	-	-
	1100-1400 #	57	66	37
	1600-1900	-	-	-
	2100-2400 #	57	66	35
	Day *	57	65	35
	Night *	57	66	36

It is clear that even on residential streets, more than one-third of drivers are exceeding the applicable speed limit of 60 km/h.

## PEDESTRIAN CRASHES IN URBAN AREAS

Cairney (1986) discovered that for casualty crashes in the Melbourne Metropolitan Area, 22% occurred on local streets, and 30% of these involved pedestrians or cyclists.

Richardson (1994) reports that 30% of accidents in the Perth Metropolitan Area occur on local streets. Since pedestrian and cyclist accidents are typically dispersed over the network with few "black spots" where accidents are concentrated and engineering measures worthwhile, lowering vehicle speeds is one of the few strategies available for increasing safety on local streets.

Data on the effect of vehicle speeds on the severity of pedestrian accidents is particularly relevant to the issue of appropriate speeds. Ashton (1982) documents the effects of pedestrians being struck by cars travelling at different speeds. Pedestrians struck at impact speeds less than 25 km/h usually sustain only minor injuries, and those struck at speeds greater than 30 km/h usually sustain severe injuries. Where impact speeds are less than 50 km/h the injuries are likely to be survivable, but at speeds greater than 55 km/h the pedestrians are more likely to be killed than to survive.

While there appear to be no studies dealing specifically with the effects of vehicle speeds on cyclist injuries, it is reasonable to expect a broadly similar relationship between vehicle speed and injury outcomes.

A recent analysis of some 180 fatal crashes in Adelaide (McLean et al 1994) presents curves which show the relationship between speed and stopping distance for different initial speeds. It demonstrates how small differences in initial speed can make a great difference to the consequences to pedestrians with whom cars collide. For example, imagine the case of a pedestrian suddenly stepping into the carriageway in front of a car 26 m away, and the driver seeing the pedestrian and braking immediately. If the car were travelling at 60 km/h, the pedestrian would be struck at 40 km/h, a speed at which serious injury is the most likely outcome, and survival uncertain. On the other hand, if the car had been travelling at 50 km/h, the car could have stopped just in time to avoid the pedestrian altogether.

McLean et al applied such a technique to a sample of pedestrian fatal accidents which occurred in the Adelaide Metropolitan Area. Most accidents had occurred on roads with a 60 km/h speed limit. Using standard accident reconstruction techniques, they estimated the probable speed of the vehicle in each collision. They then estimated the likely outcomes of the crash under a number of different possible scenarios, including one where the vehicle was travelling 5 km/h slower than it had actually been in the real collision. Even this modest 5 km/h reduction in speed would have resulted in 32% of the pedestrians surviving, and in 10% of cases a collision would have been avoided altogether.

Under a scenario where the speed limit was 10 km/h lower (ie. at 50 km/h), and was complied with to the same degree as compliance with the current limit, it was indicated that there could be a 27% reduction in fatal pedestrian crashes - about half of these being avoided altogether, and the others reduced to injury-only cases.

These data demonstrate how relatively small changes to speeds can have large effects on safety outcomes. Although it is not possible to be precise about the extent to which changes in speed limit would reduce accidents, or what the impacts of different limits would be, we can be confident that reducing speeds would reduce the number and severity of accidents, and that the lower the speeds the greater these effects would be. More detailed analysis of these possible effects is given in Section 5 of this submission.

## A CASE FOR CHANGE

A number of recent social, cultural and technical developments suggest that change in urban speed management practices is not only possible, but is desirable, and would be readily accepted by the community.

### Community Views

Perceptions are changing of what constitutes an appropriate balance between safety, amenity and use of motor vehicles on local streets. Many successful LATM schemes have been implemented in Australia over the last few years, with stated intents of reducing vehicle speeds and discouraging through traffic. These successful examples have generated higher expectations about the amenity which local streets can provide.

The trial of the 40 km/h limit in Unley, South Australia, was prompted by a rejection on the part of residents of further physical devices as an acceptable strategy for managing speeds on a network which already had extensive physical treatment. Besides indications of growing public resistance to the extensive use of physical devices, it is clear that the costs of using such devices to achieve lower speeds over the entire local street network would be prohibitive. This has encouraged a readiness to consider lower speed limits as a way of achieving the appropriate balance.

There is evidence from a number of surveys that a substantial proportion of the community would prefer speed limits to change. Two surveys carried out recently in NSW using random samples suggest majority support for a 50 km/h limit. A study carried out for the NRMA in 1993 tested reaction to a proposal to introduce a 50 km/h limit on urban roads with no centreline. Forty nine percent agreed with the idea and 42% disagreed. A survey carried out for RTA in the same year found that 54% thought that a 50 km/h general urban speed limit was a good idea and 41% thought it was a bad idea. Care was taken to explain that the 50 km/h limit would be implemented as part of an overall package of speed measures.

The membership of the RACV also indicated support for reduced speed limits in a range of situations through their responses to an article in the organisation's magazine. In response to a photograph of a typical local street, 46% indicated they thought the speed limit should be 50 km/h, 24% that it ought to be 40 km/h, and only 30% that it ought to remain at 60 km/h (Williams 1992). Although the respondents were not randomly selected, the large number who chose to respond (over 7,000) indicates a high level of interest in the issues.

A survey carried out in South Australia in 1994 reinforces this picture of reasonably strong community support for lower speed limits. Of a random sample of over 700 people interviewed by telephone in October 1994, almost half (48%) indicated support for a lower speed limit on local streets in the Adelaide Metropolitan area. This is rather high, considering there has been little general discussion of the issue, and little or no selling of the concept of a lower speed limit at that stage.

Of those who supported a reduction in the limit, 57% favoured a general limit of 40 km/h or lower. When asked about an appropriate speed for their street - arguably reflecting their views as residents rather than drivers - 81% of those who supported a lower limit opted for 40 km/h or lower.

There also appears to be support from local government for a change to speed limits. A survey of Victorian municipalities showed that 50 metropolitan areas supported a 50 km/h general urban speed limit and only four did not support it. The non-metropolitan municipalities which responded to the survey were evenly divided for and against, but only 26% of them responded to the survey (Municipal Association of Victoria 1994).

## **Enforcement Practice**

The availability of new technology in the form of laser speed detection and slant radar, and more recently of speed cameras, means that much more extensive speed enforcement is possible, and that it is now possible to enforce compliance with speed limits in places where it was never practical before. Detailed evaluation of the Victorian experience with speed cameras on arterial roads has demonstrated that they can be effective in reducing speeds over the long term, and that considerable accident reductions are associated with them (Cameron, Cavallo and Gilbert 1992). Thus there is for the first time the possibility of really effective enforcement of limits on local streets. The experience with the Unley trial suggests that even minimal levels of enforcement can achieve a change in speed behaviour in association with new limits.

## **International Practice**

Finally, it is increasingly being accepted that Australia should be matching or exceeding international best practice over a wide range of economic and regulatory issues. Compared to other jurisdictions, the general urban speed limit which applies over most of the non-arterial network in Australia is high by international standards, as are the limits generally applied in designated local traffic areas. The questions must be asked as to whether Australia needs to be, or can afford to be, so different or whether there would be benefit in adopting a practice similar to that in most comparable countries.

### **3. SPEED MANAGEMENT IN NSW**

The speed limit system in general, and urban speed management in particular, are essential elements of the Speed Management Strategy established under "Road Safety 2000", the NSW strategic plan for road safety.

#### **SPEED MANAGEMENT STRATEGY**

The Speed Management Strategy targets all drivers who exceed the speed limit, and those who drive at speeds which are inappropriate for prevailing conditions. The key objectives of the strategy are to ensure the community drives consistently at safe speeds, to implement an effective system for managing the speeding problem, and ultimately to make speeding socially unacceptable. Key integrated elements of the program include communication and public education, speed limits and speed zoning, enforcement, regulation and legislation.

A basic concept in the speed management strategy is to ensure that the speed environment, as evidenced by street design and traffic management (including speed limits), is appropriate and acceptable.

Much of the loss in public credibility for the speed limit system stems from the inappropriate nature of the current general urban limit across the entire range of road types. There is public concern that speed limits and the speed zoning regime do not reflect functional needs in all circumstances. Speed limits in urban areas is a key issue for the program in 1995, with action planned on speed zone revision and on the local street speed limit question.

#### **URBAN SPEED MANAGEMENT**

The fundamental aim of speed management is to establish an appropriate balance between safety and amenity on the one hand and mobility on the other. The traditional approach to speed management is based on the setting and enforcement of speed limits.

Urban areas span a wide range of functional road classes which differ markedly in terms of traffic operations, vehicle mix, road use, accident patterns and speed behaviour. Urban speed management is a complex issue which not only involves the setting and adjustment of speed limits, but also has significant implications for enforcement policies and practices and, ultimately, for urban planning and management strategies. Consideration must also be given to the concerns of those who use the road network, as drivers, passengers, cyclists or pedestrians, and to those who live with the consequences of road use as residents or occupants of commercial premises.

Extensive reviews of speed zoning procedures and widespread application of new zoning criteria on the arterial road network (major traffic routes) have recently taken place in most States. Action in the area of local streets has yet to be implemented. Consequently, the present major focus is speed management on local streets, seeking to extend rational speed management principles to cover the entire urban network.

## **4. URBAN SPEED LIMITS AND SPEED ZONING**

### **CURRENT PRACTICE**

The principles and general guidance for speed control through the application of speed limits is set down in Australian Standard AS 1742 - Manual of Uniform Traffic Control Devices: Part 4 - Speed Controls. It remains the basis from which the more detailed Speed Zoning guidelines, setting out arrangements for determining, declaring and installing speed zones in the jurisdiction concerned, have been developed.

Responsibility for setting speed limits in NSW rests with the RTA, with responsibility being devolved to regions with direct authority to set limits. The RTA has developed comprehensive technical guidelines (Traffic Engineering Manual - Section 3: Speed Zoning) for the setting and adjusting of speed limits.

#### **Types of Speed Limits**

*General limits* are imposed by statute and are applicable to all roads in a general area unless signposted otherwise. Nationally, there is one general urban speed limit (GUSL) of 60 km/h. Most States have a general rural limit of 100 km/h, the exceptions being WA with 110 km/h, and NT with no general rural limit.

*Speed zones* are speed limits based on engineering assessments of road, traffic and land-use characteristics. They are established for particular lengths of road, particular defined areas and/or for particular times of day for which the prevailing general limit is not appropriate.

#### **Road Classification**

The terms 'arterial', 'sub-arterial', 'collector' and 'distributor' are in use throughout much of Australia to describe different classes of road in urban areas, but these words are defined differently in the different jurisdictions. Additionally, many road classifications have their origins in administrative or funding arrangements, rather than in a functional hierarchy for traffic management purposes.

Roads may be more simply classified as either *traffic routes* or *local streets*. The primary function of traffic routes is to enable travel between localities, while the primary function of local streets is to enable access within a locality. It is recognised that many roads must cater for both movement and access functions (eg traffic routes with abutting residential or commercial development).

#### **Urban Speed Limits**

During the early 1960s, the different States in Australia had variously 30 or 35 mph general urban speed limits. NSW changed from 30 to 35 mph in May 64, to come into line with other states and the National Road Traffic Code. Arguments in favour of the increase were that vehicles and roads were then far superior than when the 30 mph limit was introduced in the 1930s, and that vehicles were already travelling at commensurate speeds. Upon metrication in July 1974, the general urban speed limit was converted nationally from 35 mph (56.3 km/h) to 60 km/h.

## Current Speed Limits in NSW

Until the 1980s, urban areas in NSW were almost exclusively subject to the general urban speed limit of 60 km/h, applying across the entire range of road types, with a few higher standard roads speed zones at 80 km/h. Following a major review of speed zoning practice in the late 1980s, there has since been substantial application of speed zones on major traffic routes, and lower speed zones in local traffic areas. The speed limit hierarchy which generally applies now on urban roads in NSW is as follows:

Traffic Routes	60	70	80	90
Local Streets	40	60		

Detailed characteristics of the urban road types to which speed limits apply are given in the following table:

Speed Limit		Road Characteristics
10 km/h	Speed Zone	Shared zones in residential or commercial areas (eg. for service vehicles in shopping malls).
30 km/h	Speed Zone	Commercial or recreational areas where there is considerable pedestrian activity (eg. Centennial Park)
40 km/h	Speed Zone	Residential or shopping areas generally where physical devices (eg. narrowings, humps) are applied; also school speed zones located in 60 km/h and 70 km/h zones
50 km/h	Speed Zone	Limited application on local streets in some residential areas.
60 km/h	General Limit	The vast majority of local streets, and many undivided traffic routes having direct access from abutting development; also school speed zones located in 80 and 90 km/h zones.
70 km/h	Speed Zone	Higher standard urban traffic routes, generally divided roads having provision to safely store turning or crossing vehicles but with some or full direct access to the road from abutting development; also for undivided roads having low levels of direct access from abutting development.
80 km/h	Speed Zone	Higher standard urban traffic routes, generally divided roads having provision to safely store turning or crossing vehicles and no access from abutting development directly to the main carriageways; also for undivided roads having very low levels of direct access from abutting development.
90 km/h	Speed Zone	Limited application on outer urban arterials; lower standard urban freeways.
100-110 km/h		High standard arterial roads and urban freeways.

The vast majority of local streets in all jurisdictions are still subject to the statutory general urban speed limit of 60 km/h. However, there is increasing concern among both residents and those professionals involved in road safety that this is inappropriately high for many of the activities in these streets. There is a growing tendency to give greater weight to the safety and amenity needs of those who live in the streets through greater control of those who drive along them.

Government agencies in most jurisdictions have considered the issue of appropriate local street speed limits over the last few years in the course of developing speed management programs within their road safety strategies. A common thread of the reports produced by these agencies has been the call for a lowering of speeds in residential areas, in association with adjustments to zoning and enforcement practices.

## **RECENT DEVELOPMENTS IN SPEED ZONING**

Most jurisdictions have been active in re-examining zoning policies and practices in recent years. An important thrust of these developments has been not only to have limits more suitable to road and traffic conditions, but also to make the overall speed zoning system more credible and acceptable to road users. This has led to greater choice in selecting values for speed limits (the addition of 40, 50, 70 and 90 km/h zones) and greater flexibility in applying speed zones, but particularly on urban arterial roads. These changes to practice have been widely implemented in most jurisdictions, and constant zoning review is generally a feature of road authority annual programs..

The consistent application of these zones has been aided by the development of computer-based expert advisory systems, or 'advisers', which embody the knowledge and experience of speed zoning practitioners to suggest appropriate speed limit levels on which expert practitioners can make final judgments. Three States, Victoria, New South Wales and Queensland, now use such systems (VLIMITS, NLIMITS and QLIMITS, see eg. Donald 1992). While the core of these systems is a consistent set of decision rules, they reflect subtle differences in practice. The development of a consolidated national system (AUSLIMITS) is planned.

In local residential areas the need for lower speeds has long been recognised, and there is now an established history of setting speed zones lower than the prevailing general limit, typically at 40 km/h. Often, but not always, these zones have been designated in association with the installation of physical devices, mainly in residential streets experiencing high traffic volumes where residents perceive a safety problem, to force a reduction in speeds and deter through traffic.

Such local area traffic management (LATM) treatments have been broadly successful, but their installation has been restricted by considerations of expense, and more recently by complaints of residents relating to inconvenience and noise. The introduction of lower limits without accompanying physical devices has been less successful in modifying speeds by practically significant margins.

Some advances have been made in guidelines for the planning and design of new residential areas to prescribe road network designs which will encourage lower speeds, but much needs to be done in effectively implementing these.

## **AUSTRALIAN INQUIRIES INTO SPEED ZONING**

Government agencies in most jurisdictions are addressing these concerns in the course of developing speed management programs within their road safety strategies. Parliamentary committee inquiries and inter-agency reviews of road safety, traffic calming and local area traffic management issues have led to discussion papers and proposals for changes to speed management practices. A common thread has been the call for a lowering of speeds in residential areas, in association with adjustments to zoning and enforcement practices.

Some States began work in this area during the 1980's, and by mid-1994 nearly all States and Territories had carried out or were contemplating reviews of speed limits and speed zoning practices and procedures.

The most recent State inquiry has been in South Australia, in 1994, where a recommendation has been made for the introduction of a general urban speed limit of 50 km/h to replace the current 60km/h general limit. This recommendation echoes those of previous inquiries in Victoria (1991) and Queensland (1994). More recently, the issue of urban speed management has been examined from the national perspective by Austroads, and while a final report has not yet been released, the draft report circulated to States and Territories has presented a case for introduction of a 50 km/h speed limit to apply to local streets as a general speed limit. A convenient summary of the issues covered in that study is given in Croft (1995).

## LOWER SPEED LIMITS IN RESIDENTIAL AREAS

Several Australian studies have examined the effects of lower speed limits on traffic speeds. Some have also examined the effects of lower limits on residents' opinions regarding the safety and amenity of their street.

The first 40 km/h zone in Australia was introduced as part of a comprehensive LATM scheme in the Shire of Corio (McDonald 1984). As the lower limit was introduced in conjunction with extensive application of physical devices and as the speed measurements were made in the vicinity of these devices, little of direct relevance to the question of lower speed limits *per se* can be concluded from this scheme.

In another early trial of lower speed limits in Australia, a 50 km/h zone introduced in the Melbourne suburban municipality of Preston had little impact on speeds either at the time of introduction of the limit, or after a brief week-long enforcement campaign (Ove Arup Transportation Planning 1982).

A later more extensive trial in Sydney compared different approaches to introducing the 40 km/h limit. Speeds in all areas fell by between 3 and 6 km/h, with the lowest speeds being achieved in an area which had previously been fitted with physical devices. Social surveys showed that lower speed limits were popular and perceived as an effective way of lowering speeds (Webster and Schnerring 1986).

A similar series of trials was conducted in several Melbourne suburbs where Local Traffic Precincts were designated (Traffic Planning Section 1987). All areas had a 40 km/h limit imposed. With signposting only, 85th percentile speeds increased by 3.5 km/h. Speeds were unchanged in areas which had pre-existing treatments, or where only new threshold treatments had been installed. Speeds only fell where the 40 km/h limit was imposed in conjunction with new physical treatments inside the area as well as new threshold treatments.

The longest-running trial to date has been held in Unley, SA, where a local area speed limit of 40 km/h was imposed on a trial basis (Cairney and Fackrell 1993). The trial of the limit came about largely through resident rejection of further physical speed reducing devices. A feature of the trial was the systematic use of speed camera enforcement to encourage compliance. Reductions of approximately 5 km/h were achieved at the beginning of the trial before enforcement commenced. Only very slight further reductions were achieved throughout the trial despite relatively heavy enforcement towards its end. At the conclusion of the trial, 85th percentile speeds were approximately 50 km/h and

mean speeds approximately 38 km/h. There was a clear trend for the greatest speed reductions to occur in streets which initially had the highest speeds. A potential source of concern was that speeds tended to increase on very low volume streets on which mean speeds were initially about 2 km/h or more below the 40 km/h trial speed limit. Despite many residents believing that the 40 km/h limit had not reduced speeds, they were overwhelmingly in favour of the limit and its continuation.

Currently in Sydney, a new approach to a local area speed management strategy is being developed for the Lower North Shore area. The RTA, local councils, the Police and the NRMA, have been undertaking extensive consultation with the local community prior to introducing a trial 50 km/h speed limit in a few local residential areas. This consultation has yielded further information on community attitudes about local street speeds and speed limits, indicating broad acceptance of a lower speed environment. The trial itself will utilise signs and pavement markings, and involve a period of special augmented enforcement, using random patrol allocation, and continued community consultation. It is scheduled for introduction in December 1995, and will be closely monitored via speed surveys and community opinion as to its effects on suburban amenity.

It is important to note that, with the exception of the Unley trial, the various Australian trials to date have been evaluated over relatively short periods and have not made use of systematic enforcement. All of them, the Unley trial included, covered a limited geographical area. There has therefore been no trial sufficiently extensive to give definitive guidance as to what is likely to happen with a lower speed limit applied widely as a general limit. However, there have been some relevant changes in practice overseas, for example in Denmark, where the general urban speed limit has been reduced from 60 to 50 km/h. These studies are reviewed later.

### **Community Views**

There is a range of responses to questions that have been asked about the proposal to reduce the general urban speed limit from 60 km/h to 50 km/h.

The questions asked in 1993 and 1994 put particular emphasis on the fact that the proposal was part of a package that did not involve the reduction of all urban speed limits. In each case opinion was divided, with the majority opinion alternating between the proposal being a "good idea" and the proposal being a "bad idea".

Driver acceptance of the proposal to reduce the general urban speed limit from 60 km/h to 50 km/h appears to depend on the nature of the question being put to them. A possible explanation for this variation in responses is that community understanding of the proposal is limited, and as such the nature of the question being used to measure acceptance of the proposal has a major impact on drivers' responses.

### **COMPARISON WITH OVERSEAS PRACTICE.**

Australia has a high urban speed limit compared to most other comparable developed countries, where the urban speed limit is generally 50 km/h - as shown by the examples in the following table. Some European countries have recently reduced their urban speed

limits from 60 km/h to 50 km/h. Some of these other countries also permit zoning at lower speeds, eg. in residential areas.

Country	Urban Speed Limit (km/h)
Australia	60
New Zealand	50
Canada	50
USA	40-56
Sweden	50
Germany	50
UK	48
Denmark	50
France	50

With the benefit of hindsight, and now that community attitudes to road safety and environmental issues have undergone marked changes, the metrication of speed limits in Australia in 1974 can be viewed from a new perspective. The decision to adopt 60 km/h rather than 50 km/h as the general urban limit appears to have been an unfortunate choice which has led Australia in the opposite direction to international trends.

The international trend is towards even lower speed limits on local streets. One of the recommendations of the European Transport Safety Council Report, discussed later, was to encourage the use of 30 km/h or lower speed limits in residential areas where appropriate layouts could be achieved, together with more general use of traffic calming in built-up areas.

### **Recent Overseas Experience with Lower Limits**

Data about the likely effects of different speed limits comes from two sources, broad international comparisons and before-after studies of countries which have changed their speed limits.

Despite differences in operating environments, international comparisons can yield useful indications of likely effects of changed speed limits in Australia. Preston (1990) compared death rates of pedestrians aged 25-64 in a number of European countries and the US. Countries with an urban speed limit of 50 km/h or less had an average death rate 30% lower than the average for countries with an urban limit of 60 km/h. Although there is overlap between the two groups, there is a clear tendency for the 50 km/h or less group to have lower death rates. The same pattern appears to hold for death rates for child pedestrians aged 6-9, a group which generally tends to have a very high accident involvement rate.

A number of countries have had successes with lower speed limits which are relevant to the present investigation. The case studies presented here are recent cases where accident reductions can confidently be attributed to speed reductions resulting from changes in speed limits, with or without supporting physical devices. They do not constitute an exhaustive list.

The UK installed approximately 70 zones where a limit of 20 miles per hour (32 km/h) replaced the usual 30 miles per hour (48 km/h) urban speed limit. These lower limits were supported by physical devices in key streets, mainly speed humps. Substantial speed reductions were achieved, from 40-48 km/h before to 22-37 km/h after the introduction. An average reduction in injury accidents of 70% was achieved, falling from an average of 3.32 per area before to 0.98 after (cited in Jorgensen 1994).

Norway reduced its urban speed limit from 60 km/h to 50 km/h. (Norwegian Traffic Safety Handbook, cited in Jorgensen 1994). Average speeds reduced by 3.5 - 4 km/h, or about 6%. A small and insignificant increase in total accidents occurred, but the number of fatal accidents reduced by 45%. Mean speed was reduced by up to 10 km/h if the average pre-change speeds were already over 50 km/h. If pre-change speeds were below 50 km/h, then imposing speed limits as low as 40 km/h or 30 km/h had no effect on mean speeds.

Denmark changed from a general urban limit of 60 km/h to 50 km/h in 1985. On major roads, average speeds of 58 km/h fell by 2-5 km/h. Minor roads had lower average speeds to begin with - 45 km/h - and smaller speed reductions of up to 1 km/h. Total accidents fell by 9%, fatalities by 24%, serious injuries by 7% and slight injuries by 11%. The accident reductions were statistically significant only on the major roads (Engel and Thomsen 1991, cited in Cameron 1992).

Walz et al (1983) describe the effects of reducing the speed limit from 60 km/h to 50 km/h in Zurich, Switzerland. Pedestrian collisions fell by 20% and pedestrian deaths by 25%. The number of collisions with slow vehicles such as buses and trucks remaining unchanged, this reduction was attributed to a reduction in vehicle speeds following the change in speed limits. The severity of injuries, as assessed by the Injury Severity Scale, was reduced.

More recently, in December 1990, France changed from a general urban limit of 60 km/h to 50 km/h, with provision to reduce limits to 30 km/h or increase them to 70 km/h where conditions are appropriate (Page 1993). Average daytime speeds fell from 65 km/h to 60 km/h in the month following the change, recovered to some extent, then steadily declined to finish at 60 km/h at the end of the two-year study period. Injury accidents and fatalities both decreased substantially in the month following the introduction of the 50 km/h limit. The reductions over the two year period following the introductions were more modest. However, a number of other road safety measures were introduced during this period, including a very controversial points demerit system and changes in restraint use laws. Nevertheless, the accident reductions in towns, particularly in the smaller centres, were much greater than that experienced in the open country. Page concluded that the 50 km/h limit had saved 14,500 injury accidents and 580 fatalities in its first two years of operation. The latter figure approximates to 3% of road fatalities in France.

These studies need to be treated with some caution. Although the changes in speed limits in these studies is similar to that proposed for Australia later in this report, it cannot simply be assumed that similar reductions would be achieved in an Australian context. It is not possible to tell from the reports to what extent the accident reductions were achieved on traffic routes rather than local streets, or how the length, cross-section, sight distance, pedestrian activity, traffic flow and other relevant factors compare with Australian conditions. Nevertheless, the fact that all reductions in speed limits led to

reductions in casualties, particularly the more serious casualties, suggests that reducing urban speeds in Australia would also reduce casualties.

The European Transport Safety Council (ETSC) recently released a discussion paper which presents an overview of the current research findings on speed behaviour, its management, and its relationship to accidents and accident severity (ETSC 1995). The paper formulates a set of recommendations for actions to be taken across the whole European Union in order to reduce casualties related to excessive speeds of motor vehicles. It is estimated, on the basis of extrapolation from several studies carried out on various types of road in Europe and the US, that a 1 km/h decrease in mean traffic speed will result in a 3% accident reduction, and that a 5 km/h reduction in speed would therefore bring about a 15% accident reduction. Although there is no reason to expect that exactly the same speed decrease-accident reduction relationship would apply on local streets in Australia, it highlights the point that substantial accident reductions may result from modest changes in speed.

The ETSC document has two sets of recommendations, the first relating to the application of known measures, the second relating to research. Many of the recommendations for the application of known measures coincide with the conclusions derived in the present document, although they are usually given in more general terms. These recommendations include:

- the establishment of a clear functional hierarchy for roads, reinforced by physical adaptation of the road and appropriate speed limits;
- harmonisation of motorway limits throughout the European Union;
- encouraging the use of speed zones lower than the general limits on motorways and rural roads;
- encouraging international best practice in the enforcement of speed limits, including the best use of speed cameras; and
- promoting information campaigns which target the consequences of speeding and encourage better understanding of the need for appropriate speed.

## **PROPOSAL FOR CHANGE**

On the basis of the foregoing, there appears a good case for changing current urban speed limit setting practice within Australia. Specifically, there would appear to be systemic benefits (in rationalising the system) and safety benefits (in reduced speeds and crashes) from introducing a new speed limit for local streets which is lower than the present general urban speed limit level of 60 km/h.

## **5. EFFECTS OF A LOWER SPEED LIMIT**

### **OVERVIEW OF EFFECTS**

Lower speed limits will have impacts on safety, amenity, emissions and access only to the extent that drivers change their behaviour to comply with the new limits. Since it is impossible to predict this in advance, it is not possible to be precise about the extent of the benefits and disbenefits different options for changes to urban speed management are likely to deliver. While the reduction in the incidence and severity of accidents is likely to be directly related to the extent of speed reduction, impacts on amenity and perceived safety are less dependent on a change in driver behaviour.

The evidence from several studies suggests that residents view the quality of life on their street as improved as a result of lower speed limits, and welcome the lower limits even when actual speeds change very little or not at all. Other factors are likely to affect the benefits experienced by different jurisdictions, such as the extent to which lower speed zoning already applies, and the extent of the road network which is likely to be affected by a change in speed limit practice.

One possible major benefit may be a changed public perception of speed management and its validity. If the public can be persuaded that a new system reflects a more rational match between speed limits and road, traffic and land use characteristics, there may be an increased willingness to conform to the new requirements and support changes which may ultimately amend established driving patterns. The opportunity that this represents should be kept clearly in mind during the planning for any transition.

A parallel may be drawn here with experience from other road safety initiatives. In areas such as drink-driving, speed cameras and seat-belt usage, community support has become stronger after implementation of the initiative and its associated enforcement and public education activities once a clear public safety benefit has been identified.

Estimation of the more tangible benefits and disbenefits is made difficult by the lack of data relating specifically to local streets, by the age of the data that does exist, and by the assumptions that are required to jointly apply data from different sources. An attempt has been made to quantify the safety and fuel consumption benefits, and to estimate the travel time disbenefits.

Because of the uncertainty as to what speed reductions are likely to be achieved, the approach taken has been to examine a range of possible effects associated with greater or lesser changes to average speeds on local streets. A speed reduction of 5 km/h has been adopted as the mid-range of the scenarios examined, with a 2 km/h reduction as the lowest change, and 7 km/h as the greatest change.

The benefits and disbenefits are summarised in the following table, with details of their derivation given in the subsequent sections. The tentative nature of these estimates cannot be emphasised too strongly.

Speed Reduction Achieved	Amenity	Reductions in casualty accidents	Reductions in fuel consumption	Increases in travel time
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2 km/h	Some improvement	104 \$6 million	0.5% 7 million litres	5 s per person per day
5 km/h	More improvement	312 \$19 million	2% 27 million litres	12 s per person per day
7 km/h	Greatest improvement	520 \$31.2 million	3.5% 48 million litres	20 s per person per day.

## ROAD SAFETY

The general nature of the effects of reduced speed on accidents has been discussed earlier. This section attempts to predict the accident savings which might be achieved with different speed reductions.

Cairney (1986) found that approximately 2,300 casualty accidents occurred on local streets in Melbourne in 1981. McLean et al (1994) found that 15% of the fatal pedestrian accidents they studied occurred on local streets, and that a 5 km/h reduction in vehicle speeds would have resulted in 1% of their total sample of accidents being avoided, ie. approximately 6% of the accidents on local streets would have been avoided altogether.

Assuming that all casualty accidents would be reduced by 6% at 5 km/h, and extrapolating from this 5 km/h reduction, it seems reasonable to expect reductions of 2% with a reduction in speeds of 2 km/h, and 10% with reductions of 7 km/h. This is equivalent to a reduction of 104 casualty accidents with a 2 km/h reduction, 312 with a 5 km/h reduction, and 520 with a 7 km/h reduction. These estimates are quite conservative given the outcomes from overseas studies and represent the lower end of expected outcomes. A value of \$60,000 has been adopted as the cost of an urban casualty accident, the figure currently used by VicRoads for planning purposes (E. Vincent, personal communication). This is equivalent to savings of \$6 million, \$19 million and \$31 million under each of the three speed reduction scenarios. These estimates possibly underestimate the costs of casualty accidents, as accidents on local streets are likely to include a high proportion of pedestrian accidents, which have high costs.

## AMENITY

The likely effects of a lower speed limit on the amenity of local streets is particularly difficult to assess, partly because amenity is not well defined.

Safety ratings by residents in the Unley 40 km/h speed trial in South Australia remained unchanged during the course of the trial. On the other hand, most people viewed their street more favourably under the 40 km/h speed limit, with 81% indicating support for the lower speed limit, even though the speed reductions achieved were generally seen as small. All other Australian trials of lower residential speed limits where resident opinion was canvassed have produced similar findings. A recent follow-up survey of the residents of the Unley trial area revealed that, more than two years after the start of the trial, the high level of support for the 40 km/h limit remains unchanged.

Recent surveys in South Australia have shown that, assuming reductions similar to those found in the Unley 40 km/h Local Area Speed Limit Trial, speeds on local streets would exceed a 40 km/h limit only to about the same extent that speeds on arterial roads currently exceed the 60 km/h speed limit. If the needs of those who live in a local streets

are to be given greater weight than those who drive through them, then the speed limit in that street should be lower than that applying on the arterial network. Otherwise not only are the needs of drivers taking precedence over residents' needs, but there will be little or no scope for pursuing lower speeds in the local network.

It can reasonably be anticipated that reducing speeds on local streets would reduce traffic noise, although it is not possible to estimate by how much noise levels would be reduced or what the effects on amenity would be. The exact reductions experienced in any particular dwelling would be determined by the prevailing traffic speed, the mix of traffic, distance from the road, and the presence of fences, walls and other environmental features. It is questionable whether this would have any perceptible impact. It may be conjectured that in many local street settings, it is isolated, noisy vehicles travelling fast in otherwise quiet conditions which are the main source of nuisance rather than overall noise levels. To the extent that a change in speed management brings about a reduction in the speeds of these vehicles, a reduction in noise nuisance is possible.

While physical devices do reduce speeds on local streets, they do so at the cost of increased noise from braking and acceleration. Indeed, increased noise experienced in dwellings immediately adjacent to the devices appear to be one of their main drawbacks.

While amenity improvements may be difficult to quantify, their importance relative to readily quantifiable benefits, such as objective safety, should not be underrated. Safety improvements will naturally be welcomed by everyone, even though only a few people will benefit and these individuals are unlikely ever to know that they had in fact benefited. Conversely, even a small improvement in amenity will be apparent to many people and is likely to attract wide community support.

## ENVIRONMENT

Recent theoretical and empirical work demonstrates that physical devices can result in increased fuel consumption, while driving at steady speeds lower than 60 km/h results in lower fuel consumption.

Van Every and Holmes (1992) provided a theoretical analysis suggesting that physical speed control devices could increase fuel consumption by 30-50% above that obtained by driving at a steady speed. They further assumed that an increase in fuel consumption results in a proportionate decrease in air quality, and therefore concluded that using physical devices to control speeds rather than a speed limit was likely to increase emissions by 30-50%.

This claim was confirmed by measurements made by Lines and Morgan (1992) using an instrumented car. They also demonstrated that on local streets, maintaining a steady speed of 50 km/h used 4.2 per cent less fuel than it did at 60 km/h, and at 40 km/h, 14.5 per cent less fuel than at 60 km/h.

The NAASRA Roads Study (1984) estimated travel on urban local streets for the whole of Australia in 1981 to be 13,300 million km. Total vehicle km travelled in NSW appear to have increased by 14.5% between 1981 and 1994 (ABS 1983, RTA 1993). Assuming travel on local streets to have grown by the same amount, current travel on urban local streets may be estimated at 15,200 million km. Extrapolating from the finding of a

reduction of 4.2% in fuel reduction when speeds are reduced from 60 km/h to 50 km/h, it has been assumed that fuel reductions of 0.5%, 2%, and 3.5% would be achieved with speed reductions of 2 km/h, 5 km/h and 7 km/h.

Assuming an average fuel consumption of 9 litres per 100 km, the total savings under the three speed reduction scenarios would be 7 million litres, 27 million litres and 48 million litres. These savings range between 0.04% and 0.3% of total current fuel consumption (Australian Institute of Petroleum 1994). Although the expected benefits from reduced fuel consumption are therefore small, they nevertheless support the case for using speed limits rather than physical devices to lower speeds.

More recently reported work (Watson 1995 - cited by the AAA) has examined the possible effects on vehicle emissions of reducing urban speed limits. It concluded that a speed limit reduction from 60 to 50 km/h would increase carbon dioxide and fuel consumption by about 3%, but that hydrocarbon emissions would be reduced slightly, and nitrous oxide emissions reduced quite substantially (13%). However, it must be noted that this study concentrated on sub-arterial roads, with their typical traffic volumes and journey profiles, so the results are of doubtful relevance to the residential street network.

## TRAVEL TIMES

Both the time spent and distance travelled in local streets is relatively small in a properly developed road hierarchy, so that the disadvantages to drivers of lower speed limits will also be relatively small (Office of Road Safety 1994). In practice, the parts of the journey when a driver is held up by other traffic, negotiating corners, or giving way at intersections, which will be largely unaffected by a lower speed limit, are likely to be the major source of delays.

The Western Australian discussion paper on traffic calming makes a similar point through a worked example (Ministerial Task Force 1994). "For most journeys by private motor vehicles, travel times will change only marginally if the speed limit in local areas is lowered. A typical journey in the Perth metropolitan area might last, say 20 minutes. This would usually not involve more than 2 kms travel on local streets. If the local area speed limit was reduced to 30 km/h from 60 km/h, this would mean a maximum theoretical increase in travelling time of two minutes. In the real world it would be even less."

The people likely to be disadvantaged by a reduction in speeds in local streets without any compensating gain in amenity are drivers who use local streets to avoid arterial roads whenever possible, even for longer journeys. The WA discussion paper points out that, to the extent that such people observed a lower speed limit, their journey times will be affected more than a similar journey on the arterial network. However, these are the very people who cause much of the traffic problem in local streets, which in turn make expensive LATM treatments necessary. Keeping out of local streets because of increased travel times might represent a cost to these individuals, but would be a benefit for the rest of the community.

## Special Transport Issues

The potential impact of lower speed limits on public transport vehicles must also be considered. A simple simulation of bus travel in local areas suggests that the impact

would be minor (Office of Road Safety 1994). Assuming the speed limit on bus routes was reduced from the current 60 km/h to 50 km/h, bus travel time would increase by a maximum of 8 to 10 seconds per kilometre of travel within local streets. Based on this estimate, the travel time on a typical route of 14 km length, 6 km of which is within local streets, would increase by 50 to 60 seconds at most over the whole route. Closely spaced bus stops and frequent corner turning in local areas will mean that only a small part of the total time that a bus spends in local streets will normally be at a speed exceeding 40 or 50 km/h, so the effects of a lower limit are likely to be even smaller.

Delivery vehicles are subject to similar influences, and will only have their travel times increased in proportion to that part of their journeys spent travelling at speeds greater than 40 km/h or 50 km/h off the arterial system. This is likely to be small.

Emergency vehicles responding to calls will still be free to maximise their speed subject to safe operation, and may possibly even benefit from the lower speeds of other vehicles and from a reduction in the future installation of physical slowing treatments.

### **Estimates of Effects**

Returning to the three speed reduction scenarios of 2 km/h, 5 km/h and 7 km/h, travel time increases of 2 seconds per km, 5 seconds per km and 8 seconds per km respectively would be expected. Although applying the estimate of 15,200 million km for travel on urban local streets derived from the NAASRA Roads Study results in estimates of the total annual delay under the three scenarios of 8 million hours, 21 million hours, and 34 million hours, when averaged over the entire Australian population, these approximate to 5 seconds per person per day, 12 seconds per person per day, and 20 seconds per person per day.

Economic theory requires that travel time increases must adversely impact productive activity before it is appropriate to assign monetary values to them. As it is implausible that the small daily increases in travel time resulting from lower speeds on urban local streets have any measurable impact on productive activity, and as it is unlikely that any individuals will ever be faced with long delays as a result of the lower speeds, calculation of monetary costs of increased travel time would be inappropriate.

It also seems likely that these increases would be too small for individuals to notice.

## **6. APPLYING A NEW SPEED LIMIT**

### **GENERAL PRINCIPLES**

The following principles ought to guide the processes of setting general urban limits and speed zoning :

- establishing a balance between mobility, safety, and the amenity of adjoining land;
- meeting driver expectations, to the extent consistent with the first principle, thereby making speed limits self-enforcing where possible;
- achieving consistency across the whole jurisdiction (in this case nationally);
- deterring speeders by adequate enforcement and narrow tolerances;
- developing a culture of compliance; and
- minimising the costs of signing, speed management devices and enforcement, consistent with the optimum safety and amenity outcomes.

### **Communicating Speed Limits to the Driver**

Apart from special one-off information campaigns to advise the community of any new arrangements, sign posting is the principal means of communicating speed limits to drivers, except in areas where general speed limits apply. In particular, care in the provision and sighting of repeater signs will be a necessary feature of speed management initiatives. There are few alternatives at present, and it does represent an extension of existing signing practice with which all drivers are familiar. However, a scheme based on physical cues provided by road features such as centre line markings or medians has some appeal for future consideration.

For the present, in addition to signing, reliance must be placed on consistency of practice to enable the motorist to recognise the speed limit which applies, with a reasonable degree of certainty, basing the decision on a combination of road, land use and traffic characteristics. Additionally, at the time of implementation advisory signage can be 'erected' to direct drivers attention to a change in the 'traffic law' which applies in the State. This process can be enhanced by physical treatments, such as low-impact physical devices in low speed zones and restricting parking or right turns in higher speed zones.

### **DETERMINING THE SPEED LIMIT LEVEL**

The central contention is that speed management should be based on a rational hierarchy of speed zones applied to reflect different road and traffic conditions in a reasonable and consistent fashion. In applying these concepts to local streets, a range of limits from 40-60 km/h appears to be appropriate.

Comparison with overseas practice, consideration of impacts with pedestrians and cyclists at relatively high speeds, environmental impacts, and community preferences and aspirations all suggest that the current limit of 60 km/h, used as the general urban speed limit, is too high for many of the roads to which it applies. A 60 km/h limit clearly still has a place in the hierarchy of limits, but would seem to be appropriate on traffic routes with suitable geometric characteristics rather than on local streets having only an access function.

In Australia, 40 km/h zones applied on residential streets have generally been popular with residents, and have achieved a degree of speed reduction when backed by physical devices or enforcement. There appears to be strong support for 40 km/h limits on residential streets among those living in 40 km/h trial areas, but it seems unlikely that a high degree of compliance would be achieved if a 40 km/h limit were more widely applied. For the present at least, a 40 km/h speed limit appears to be inappropriate for local streets unless geometric characteristics limit speeds to this level or speed reduction devices are installed. The application of 40 km/h zones should, however, continue where appropriate, for example - school speed zones.

If 60 km/h is too high for local streets and 40 km/h is too low to achieve a high level of compliance, then a 50 km/h limit would appear to be appropriate for the majority of local streets. The indications are that an acceptable degree of compliance would be achieved if this speed limit were widely applied over the local street network.

There are a number of other reasons why 50 km/h would be a suitable choice for the majority of local streets. A 50 km/h limit for local streets is probably a sufficient change from the current 60 km/h general limit to make it clear to drivers that the system has changed and to cause them to re-evaluate and modify their habitual speed choices. Although the safety and amenity benefits will be lower than would be the case with a 40 km/h limit, it is thought that the difference between a 40 km/h limit and a 50 km/h limit would be small, as the two options are likely to result in similar speed distributions. With a 50 km/h option, it is expected that a much higher proportion of drivers would comply with the limit, building respect for and encouraging compliance with the whole hierarchy of limits. Opting for a 50 km/h limit also has the advantage of retaining a distinct difference between the general street network and special situations zoned at lower speeds, such as school zones and local residential precincts.

Finally, there has already been a considerable amount of discussion on this issue in Australia over the last few years, and there seems to be a clear consensus emerging in technical circles that 50 km/h is the preferred option.

Introduction of a 50 km/h limit on local streets would provide a hierarchy of speed limits as summarised in the following

Traffic Routes	60	70	80	90	100	110
Local Streets	40	50				

The major difficulty may be in reaching agreement as to which of those streets that serve both movement and access functions are to have limits greater than 50 km/h applied. Existing guidelines for speed zoning will need to include criteria to assist in resolving such issues. It may be anticipated that residents and local government will oppose a higher limit on some roads where State road authorities believe the traffic function warrants it. This could be addressed by a regionally based series of consultations with groups of local councils as a precursor to implementation to gain general agreement, especially for specific routes.

## HOW BEST TO APPLY A NEW SPEED LIMIT

There are a number of ways in which a 50 km/h limit could be applied to local streets. These include:

- Option 1. retaining a 60 km/h GUSL and signing individual streets where a 50 km/h limit was appropriate;
- Option 2. introducing a general limit of 50 km/h to apply on all local streets, and signing those streets where a higher or lower speed limit was appropriate;
- Option 3. defining areas or precincts where the 50 km/h limit would apply and be indicated by peripheral signposting;
- Option 4: abolish the use of a GUSL, signing all streets where either a 50 km/h or a 60 km/h limit applied.

Each of these options has different implications for the costs and difficulties of implementation. The signing requirements of these options may be directly compared as shown in the following table.

	Streets having a speed limit of 50 km/h	Streets appropriate for a speed limit of 60 km/h
Option 1 (retain 60 km/h GUSL)	Signs needed	No signs needed
Option 2 (introduce general limit of 50 km/h)	No signs needed	Signs needed
Option 3 (introduce 50 km/h in precincts)	Signs at boundaries	No signs needed
Option 4 (abolish concept of a general limit)	Signs needed	Signs needed

The intangible nature of many of the costs of implementation make it impossible to give a complete and balanced account of each of the courses of action described above. The one area where the costs are known and can be evaluated with some confidence is in terms of the amount of signing required.

Based on creating a comprehensive speed hierarchy with the majority of local streets having a speed limit lower than 60 km/h, VicRoads (Cunningham and Barton 1993) undertook an analysis of different options for signing streets in the Melbourne Metropolitan region. The two options of relevance to this current submission were:

- retaining a 60 km/h general limit and signing downwards as appropriate – estimated to cost \$12.2 million (extensive publicity not required);
- introduction of a 50 km/h general limit, signing upwards for the arterials and downwards where appropriate -- estimated to cost \$3.4 million, with a further \$1 million required for publicity.

Assuming that proportionately similar amounts of signing would be required in cities in NSW, the cost of implementing these options could be calculated. The important aspect, however, is the relative difference in costs among the alternatives.

No firm costing is available for either Option 4 (sign all streets) or Option 3 (use of precincts). Option 4 would be the most expensive of the four alternatives and that for Option 3 would fall between the costs for Options 1 and 2. It must be emphasised that this analysis is in terms of the costs of physical signing only, and takes no account of the administrative, political or other costs associated with determining where a 60 km/h limit should apply, or how widely the precincts of Option 3 should be implemented.

Thus, considered from the point of view of the number of signs, their cost and associated visual clutter, and efficiency in covering the majority of local streets in all urban areas, the best option for applying a 50 km/h limit would appear to be by means of a 50 km/h general limit. In effect, this would mean a lowering of the current general urban speed limit from 60 km/h to 50 km/h, with speed zones of 60 km/h applied to those roads for which a lower speed limit would not be appropriate.

It is important, however, to consider the nomenclature that might be adopted for this initiative.

The term 'general urban speed limit' (GUSL) is possibly misleading to the general public as it appears to refer to a speed limit applying to all urban roads. Any suggestion of "lowering the GUSL" might therefore meet with resistance from the community if it is interpreted to mean applicability to "all urban roads". With the advent of more specifically applied speed zoning on traffic routes, as has been achieved in recent years, the term GUSL may no longer be appropriate.

The issue is rather one of adopting a general default speed limit for local streets, and it is proposed that a term such as **Local Street Speed Limit**, which accurately reflects this more limited scope, is more appropriate. Implementation of the new limit would be marketed in terms of "introducing a new limit" rather than "lowering" the existing limit.

## 7. PROPOSAL FOR A LOCAL STREET SPEED LIMIT

On the basis of the foregoing discussion, a proposal for a new lower speed limit applicable to local residential streets may be formulated as follows:

- The speed limit for local streets would generally be 50 km/h, applying on all unsigned streets in all built-up areas, in metropolitan centres and rural towns.
- This speed limit would be known as the as **Local Street Speed Limit**, and be applied as a general limit by regulation.
- It would replace the current general urban speed limit of 60 km/h which applies to the wide range of roads in built-up areas.
- Roads or sections of road not suitable for a general limit of 50 km/h would have higher or lower speed limits, according to traffic function and physical characteristics, and would be signposted accordingly, as at present.
- Introduction of a 50 km/h limit on local streets would provide a hierarchy of speeds as below.

Speed Limit		Road Characteristics
10 km/h	Speed Zone	Shared zones in residential or commercial areas (eg. for service vehicles in shopping malls).
30 km/h	Speed Zone	Commercial or recreational areas where there is considerable pedestrian activity (eg. Centennial Park)
40 km/h	Speed Zone	Residential or shopping areas generally where physical devices (eg. narrowings, humps) are applied, and at school zones located in 60 km/h and 70 km/h zones
50 km/h	General Limit	The majority of streets providing a local access function in built-up urban areas, including residential and commercial areas.
60 km/h	Speed Zone	Undivided traffic routes having direct access from abutting development; also school speed zones in 80 and 90 km/h zones.
70 km/h	Speed Zone	Higher standard urban traffic routes, generally divided roads having provision to safely store turning or crossing vehicles but with some or full direct access to the road from abutting development; also for undivided roads having low levels of direct access from abutting development.
80 km/h	Speed Zone	Higher standard urban traffic routes, generally divided roads having provision to safely store turning or crossing vehicles and no access from abutting development directly to the main carriageways; also for undivided roads having very low levels of direct access from abutting development.
90 km/h	Speed Zone	Limited application on outer urban arterials; lower standard urban freeways.
100-110 km/h	Speed Zone	High standard arterial roads and urban freeways.

- Road sections not suitable for the general 50 km/h limit would be identified and speed zoned before the new limit was introduced.
- Particular attention would be paid to publicity, education and enforcement strategies in implementing the change, and a major public information campaign would be mounted.
- Community and interest group input on the change would be encouraged via public discussion papers based on the information referred to in this submission.
- Adequate monitoring and evaluation of the impacts of changes to urban speed management on vehicle speeds, accidents, travel times and amenity would be conducted.
- The new speed limit would be incorporated into the Australian Road Rules, currently being drafted by the National Road Transport Commission (NRTC).

## **8. IMPLICATIONS OF A NEW SPEED LIMIT**

A well-defined hierarchy of road types is the basis of road and traffic planning in local government areas. The new local street speed limit is an integral part of better matching the speed management system to the road function hierarchy.

There are important implications, therefore, for traffic engineering practices such as speed zoning, for approaches to enforcement of speeds on different road types, for the management and treatment of existing local streets, and for the planning and design of new residential streets.

Speed zoning guidelines, which provide detailed requirements and guidance for the setting and adjustment of speed limits, will need to be amended where necessary to accommodate the new limit. Similarly, computer-based expert advisory tools for this process will need to be updated.

Introducing the new limit will provide a new safety focus to assist the RTA and local councils in the review of road classes, and may provide an impetus to complete what is already a well developed urban road hierarchy system in NSW. This has implications both in planning new areas and managing or adapting older areas.

A lower speed urban environment is a central feature of emerging practice in residential area planning and design. The relevant national code (AMCORD) and the RTA guidelines for Traffic Generating Developments emphasise the benefits of low-speed design features, such as narrow and short streets, for both safety and amenity, and recommend their adoption. The widespread acceptance of a hierarchy of road types with well-defined operational characteristics should provide planners and developers with clear goals for future urban development.

Introduction of a new local street speed limit will assist and encourage this practice.

## **9. IMPLEMENTATION ISSUES**

The effectiveness of the proposed changes to urban speed management will depend critically on the implementation process. This implementation process extends well beyond the designation of speed limits and the posting of signs, and embraces communicating the concept, enforcement, and ultimately the creation of a culture of compliance. The detailed planning for each of these is a matter for the RTA and other stakeholder agencies. The following material gives a broad outline of the process and identifies the key issues which will have to be addressed in implementation plans.

### **APPLYING THE NEW SPEED LIMIT**

The essential task is to ensure that determinations of limits are made on the basis of proper assessments, and that zoning is carried out in a co-ordinated fashion.

*Road Hierarchy Planning.* Establishing a clear functional hierarchy of roads is the basis of a proper approach to traffic calming and traffic management. It is also, ideally, a pre-requisite for introducing a matching hierarchy of speed limits. Such hierarchies, and the classification of roads accordingly, are more developed in some jurisdictions than in others. In most cases, the need to examine zoning requirements on major traffic routes will facilitate the further classification of roads sufficiently to introduce a minimum level speed limit hierarchy. It is recognised that in the past, implications for funding arrangements have distorted or prevented the development of functional hierarchies. If such hierarchies are to be developed for the purposes of speed management, it may be necessary to separate the question of funding from the question of functional classification.

*Non-metropolitan planning.* Rural towns (other than large provincial centres) may need a special approach with regard to defining an appropriate road hierarchy, and persuading stakeholders and the general public of the need for change. Emphasis might best be placed on the benefits for safety that would come from lower speeds on residential streets, with secondary consideration given to the need for zoning on sub-arterials. This might be effectively addressed through regional activity involving information seminars and discussions.

*Speed zone assessments.* This is essential for all road sections where the general speed limits will not apply.

*Signing.* It will be essential to ensure that traffic routes which are to retain a 60 km/h limit are adequately signposted, particularly with regard to repeater signs. Guidance for the consistent installation and spacing of these signs is required. There might well be a need for augmented linemarking to reinforce the functional hierarchy of roads at the sub-arterial and collector levels. In addition, for those local streets whose geometry suggests a speed limit greater than the general limit and where compliance or safety is a problem, application of a minimal level of physical devices (such as narrowings, or deviations without vertical displacement) might be appropriate.

*Order of implementation.* If implementation is to proceed smoothly, the steps in the implementation should proceed as follows:

1. reach agreement on defining a road hierarchy and the rules and procedures for allocating roads to different functional classes;
2. agree on the hierarchy through application of the rules and procedures;
3. ensure that traffic routes which will retain a 60 km/h limit are adequately sign posted, with special attention to the number and location of repeater signs;
4. if a lower local street speed limit has not been implemented, signpost local streets at the required limit.

*Public transport.* Special consideration needs to be given to the effects upon service schedules. Although these effects are likely to be small, details such as the impact of short delays on making connections need to be considered. The impact of physical devices should also be considered.

## COMMUNICATING THE NEW LIMIT

The essential task is to convince the public of the benefits which will flow from the changes to speed management practices, to win their support for these changes and encourage individual compliance. Success will depend in large measure in persuading the public that the changes have a rational basis and that enforcement is carried out in a fair, reasonable and consistent fashion, with safety as the prime consideration.

To better understand the community's attitude to the proposal it will be necessary to provide the community with further information about the issues relating to the proposal. The distribution of information about the issues relating to the proposal is being organised by the RTA and will facilitate the development of an informed community opinion about the proposal. The RTA will be monitoring a sample of the driving as part of a continuous tracking survey that will extend over a six month period beginning in November 1995. As part of the survey drivers' responses to the following will be monitored: their awareness of the proposal to reduce speeds limit in local streets from 60 km/h to 50 km/h, and their acceptance of the proposal to reduce speeds limit in local streets from 60 km/h to 50. The change in drivers' responses will provide an indication of the impact of community debate on the proposal over the six month period. The results of this survey will be reported in February and May of 1996. The RTA will also be exploring the concerns and perceived benefits that members of the community have regarding the proposal, as part of indepth interviews being conducted to test the communications effectiveness of various road safety advertisements.

*Communication Strategy* Considerable reliance will need to be placed on appropriate publicity to support the case for change. This will range from educational material to explain the need for change and the details of the changes proposed, to promotional material and associated media activities to facilitate the introduction of the new system.

*Stakeholder communication forums.* Open meetings with groups affected by the proposed changes will provide opportunities to put the message across in detail, address concerns raised in the consultation process and get feedback about the effectiveness of communication strategies.

*Paid advertising.* Paid advertising is justified by the magnitude of the changes proposed, and by the extent in the changes of long-established driving habits which will be necessary. It is essential that advertising is timed and co-ordinated with other activities to produce maximum effect.

*Fact Sheets.* These will assist stakeholders to disseminate relevant facts to their constituents.

*Media advocacy.* A co-ordinated effort should be made to encourage media interest in the process and its outcomes, and to encourage public debated through the media. Past experience with Random Breath Testing suggests that a degree of appropriately managed negative coverage can play a useful role in keeping the issue controversial.

*Co-ordinated messages and releases.* To gain maximum benefit from public statements from various organisations and maximise credibility it will be helpful to ensure co-ordination of the content and timing of paid advertising, media releases and appearances, and other material.

## ENFORCEMENT

The essential task is to ensure that best use is made of the available enforcement resources in encouraging compliance with changed speed zoning.

*Commitment.* It is particularly important that Police with responsibility for speed enforcement are convinced of the benefits likely to flow from changes to speed management practice in order that they are committed to the level of enforcement required, and give positive messages to the public in the course of these duties. The RTA would identify enforcement programs in this area as relevant to the criteria applicable for "enhanced enforcement" funding and seek relevant program submissions from the Police.

*Introduction phase.* A high level of highly visible enforcement on roads where the speed limit has changed would be desirable shortly after the introduction of new limits. This might be best handled by a period of "police cautions", with the regular penalties being imposed after a suitable settling-in period.

*Implications for operational planning.* As it is to be expected that the patterns of offences and, eventually, the pattern of accidents, will change following changes in speed limits, local commanders will have to pay particular attention to the allocation of speed enforcement resources over the initial phase.

*Long-term implications.* In the longer term, Police resources which can be devoted to enforcement of speeds on local streets on a sustainable basis is likely to be small. The options for ensuring an adequate minimum level of enforcement in the longer term will have to be considered in the context of the police role in the Road Safety 2000 Strategy and existing co-ordination mechanisms at central, regional and local levels.

## EVALUATION

The essential task is to gauge the effects of the changed limits. This implies, in all the cases listed below, that adequate 'before' phases of before and after studies are carried out well in advance of the changes, and that a high level of commitment to the evaluation process is maintained.

*Traffic speeds.* It will be essential to monitor speeds on affected roads to determine whether worthwhile speed reductions have been achieved. Ideally, this monitoring would extend to traffic routes and local streets not directly affected by the changes.

*Safety and emissions.* It will be essential to determine to what extent the expected benefits have been realised.

*Community attitudes and perceptions.* It will be essential to determine the extent to which residents perceive the safety and amenity of their neighbourhood to have improved, and the extent to which traffic is still perceived as a problem.

*Journey times.* A logical analysis of the likely impact of the proposed changes on travel speeds suggests that the impact on journey times will be very small, but adequate empirical data is lacking. It will therefore be particularly important to monitor journey times.

## ACHIEVING COMPLIANCE

The essential task is creating a driving culture where there is a high level of voluntary compliance with the revised speed limits.

*Continuing public education.* Continuing education regarding the safety benefits of modest speed reductions will help build support for systematic speed management..

*Continuing deterrence-based enforcement.* Continuing, visible enforcement of speed limits will help establish lower speeds as habitual behaviour.

*Continuing feedback.* Feedback, particularly if it shows increasing compliance levels, will help establish driving near the posted limit as the norm.

## **10. SUMMARY COMMENTS**

There is a case for a lowering of speeds on local roads. Benefits are expected from improved safety, amenity and emissions related to lower speeds, and a large proportion of the community would prefer lower speed limits on local streets.

While valid arguments can be developed for introduction of either 40 km/h or 50 km/h limits on most local streets, a 50 km/h limit is considered an appropriate balance between what is needed, what is manageable, and what is acceptable.

The most efficient way of introducing this 50 km/h limit appears to be by applying it as a general limit for the majority of local streets, using signposting for roads more suited to alternative speed zoning. Authorities will need to define an adequate system of traffic routes for which the 50 km/h limit may not be appropriate.

Given the wider range of speed zones now better matched to road and traffic characteristics, the term General Urban Speed Limit is less appropriate for the default speed limit applicable to the remaining streets. A term such as Local Street Speed Limit is more suitable for the new general limit.

The Local Street Speed Limit is seen as part of an urban speed management strategy which also includes extension of traffic route speed zoning practices, and continuing developments in enforcement strategies and techniques.

The following comments summarise the main points made in this submission:

- Other countries have lowered their urban speed limits. In those cases where published studies are available, crashes and casualties generally appear to have been reduced.
- Australia has little experience with reduced urban limits, and no experience with a reduced widespread limit. Early work suggested that speed reductions were only obtained when lower limits were introduced in confined local areas in conjunction with physical devices, although more recent work has shown that reductions can be maintained when the lower limits are supported by modest levels of enforcement. It is difficult to generalise from these limited trials to system-wide changes.
- The current general urban speed limit in Australia, 60 km/h, is high compared to the general urban limits applying in other comparable countries, and is considered too high for the activities in local residential streets.
- Several Australian jurisdictions have recently re-examined the issue of speeds on local streets, and all have endorsed the principle that lower speeds would be more appropriate. A lower speed limit for local streets is a common endorsement in these inquiries.
- Lower speeds from lower speed limits on local streets are likely to deliver benefits in terms of reduced crashes and reduced vehicle noise and emissions.

- Increases in travel time due to reduced travel speeds on local streets are likely to be insignificant.
- Surveys in three States, conceived and commissioned independently of one another, indicate a high level of community support for lower speed limits on local streets.

## **11. RECOMMENDATIONS**

A new **Local Street Speed Limit** of 50 km/h is recommended for application in all urban areas in NSW.

It would be characterised by the following:

- The speed limit for local streets would generally be 50 km/h, applying on all unsigned streets in all built-up areas, in metropolitan centres and rural towns.
- This speed limit would be known as the **Local Street Speed Limit**, and be applied as a general limit by regulation.
- It would replace the current general urban speed limit of 60 km/h which applies to the wide range of roads in built-up areas.
- Roads or sections of road not suitable for a general limit of 50 km/h would have higher or lower speed limits, according to traffic function and physical characteristics, and would be signposted accordingly, as at present.
- Road sections not suitable for the general 50 km/h limit would be identified and speed zoned before the new limit was introduced.
- Particular attention would be paid to publicity, education and enforcement strategies in implementing the change, and a major public information campaign would be mounted.
- Community and interest group input on the change would be encouraged via public discussion papers and processes based on the information referred to in this submission.
- Adequate monitoring and evaluation of the impacts of changes to urban speed management on vehicle speeds, accidents, travel times and amenity would be conducted.
- The new speed limit would be incorporated into the Australian Road Rules, currently being drafted by the National Road Transport Commission (NRTC).

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## **STAYSAFE Inquiry into 50 km/h Local Road Speed Limit**

### **Terms of Reference**

The inquiry requires an assessment of :

- 1 previous research into lower residential speed limits in Australia and overseas
- 2 speed management practices in New South Wales and in other jurisdictions in Australia and overseas, particularly in terms of current practices for setting urban speed limits
- 3 community concerns with effective speed management in urban areas, particularly vehicle speeds on residential streets
- 4 the most effective and appropriate traffic management strategies to be adopted to ensure compliance with 50 km/h local road speed limits, including an assessment of trials under way on the lower North Shore of metropolitan Sydney
- 5 the decision processes involved in the selection of the local streets to be subject to a 50 km/h speed limit
- 6 communication strategies required to support the introduction of 50 km/h local road speed limits in residential areas, including advertising, publicity, and education of drivers and the general public
- 7 changes required for the effective enforcement of lower local road speed limits, including an assessment of speed enforcement technologies, techniques and procedures, and operational instructions
- 8 implications for the penalty and demerit point system, including the need for revision of current speeding offences under the Traffic Act, and the possible adoption of a cautioning system to operate together with a traffic infringement system
- 9 the road safety implications of introducing a 50 km/h local road speed limit, particularly in terms of a reduction in intersection crashes, and for pedestrian and bicycle safety
- 10 an appropriate schedule for introducing a 50 km/h local road speed limit in residential areas through NSW
- 11 processes and procedures required to monitor and evaluate the effectiveness of a 50 km/h local road speed limit in promoting road safety
- 12 implications of a lower residential speed limit for local government traffic planning and practices, and in the longer term, limit for residential planning and street design
- 13 future directions in speed management in urban areas
- 14 environmental implications of lower local road speed limits, particularly in terms of traffic noise, greenhouse gas emission, and travel time

## **APPENDIX C: NRMA SUBMISSION TO THE INQUIRY**



NRMA Submission to STAYSAFE

December 1995

## **50 km/h Local Street Speed Limit**

NRMA Submission to STAYSAFE

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## 1. Introduction

### 1.1. Scope of NRMA submission

- 1.1.1. The issue of a 50km/h Local Street Speed Limit in Residential Areas cannot be considered in isolation from other elements of an overall speed management strategy.
- 1.1.2. This submission canvasses a range of issues which NRMA considers needs to be addressed in order to generate broad community support for a 50km/h speed limit in residential streets. Measures such as improved speed zoning and speed limit signposting, coupled with appropriate community consultation and education programs, will be required to ensure the successful implementation of a lower residential speed limit.

### 1.2. NRMA involvement in speed management

- 1.2.1. NRMA is closely involved in speed management issues. We are represented on the NSW Speed Management Task Force, which develops strategies and countermeasures for speed management in this state. NRMA was a member of the Community Advisory Group on Speeding, which was established by the Minister for Roads in 1993 to provide community advice to the Government on strategies to tackle speeding behaviour.
- 1.2.2. NRMA also recently represented the Australian Automobile Association (AAA) on the Project Team that conducted the AUSTROADS Urban Speed Management Project. The basic objective of the Project Team was to develop a national framework for urban speed management, concentrating mainly on the local street network.

### 1.3. Member feedback

- 1.3.1. NRMA annually receives over 1200 reports from members about specific locations where they feel road safety or traffic efficiency needs to be improved. We also receive many enquiries and comments about more general traffic management issues, that do not concern specific locations. A considerable proportion of these enquiries (almost 25%) relate to speed management issues (excluding Local Area Traffic Management schemes).

1.3.2. A qualitative review of this feedback has been conducted for this submission. We have extracted a number of issues of concern predominantly from a driver's perspective but also issues that concern residents and vulnerable road users such as pedestrians and cyclists.

1.3.3. Typical issues that members raise with NRMA include:

- Poor communication of speed limits. It is often stated that signs are infrequent, inconspicuous, obstructed or missing.
- Unrealistic speed limits.
- A perception that Police enforcement of speed limits is focused on "revenue raising" rather than road safety. This is often related to complaints about speed camera operations.
- Speeding or unsafe speeds in local streets.

1.3.4. In addition to unsolicited enquiries, NRMA has actively sought community feedback on speed management issues, including local street speed limits, through surveys in NRMA's *The Open Road* journal and independent market research. Appendix A provides details of this work.

## 1.4. Summary of Recommendations

1.4.1. We believe our involvement in various speed management issues as outlined above enables NRMA to make a meaningful contribution to the debate on lower urban speed limits. It is our view that the concept of a reduced speed limit on local streets needs to be implemented as part of an overall package of speed management initiatives.

1.4.2. Speeding is a very difficult behaviour to address and much harder than drink driving, for example, to make socially unacceptable. Changing community attitudes is a long term process, and cannot be achieved through "quick fix" solutions such as additional enforcement operations or tougher penalties. It is therefore necessary to develop a package of elements that will generate community support for speed management initiatives and enable a 50km/h local street speed limit to be introduced with broad community endorsement.

## 1.5. Speed management initiatives

1.5.1. There is a clear need for in-depth crash analysis to determine the exact role of speeding as a causal factor in crashes (Fildes, 1993).

- 1.5.2. NRMA supports speed zoning — setting speed limits to match primarily the safety of a road and its roadside environment. Suitable speed zoning encourages more uniform and appropriate driving behaviour, which has demonstrated road safety benefits. Realistic speed limits also encourage greater levels of driver self compliance with the set limit.
- 1.5.3. NRMA believes there is still a credibility gap between drivers' expectations, current speed zoning and the communication of speed limits. It is strongly recommended that a suitable program be developed within a reasonable timeframe to ensure a review of all speed limits in NSW, as a credible system of speed limits is fundamental to the success of the speed management program.
- 1.5.4. Slower traffic speeds can reduce the occurrence and particularly the severity of crashes. However, setting unrealistically slow travel speeds across our urban road environments is neither achievable nor desirable in terms of its overall impact on society. While recognising the need for slower speeds on some roads, we believe there is a need to differentiate between different road environments that are encountered in Sydney and other major centres in NSW. As a basis for community discussion, NRMA suggests:

10km/h	shared zones (with extensive treatments)
40km/h	traffic calmed areas (with physical devices)
50km/h	local streets (without continuous centrelines)
60km/h	urban roads (with continuous centrelines)
70km/h	urban roads with medians
80-100km/h	high standard urban divided roads, country roads
110km/h	freeways and selected rural highways
120km/h	safest high standard rural freeways

- 1.5.5. One of the drawbacks of signposting different speed limits based on road design and safety considerations, is potential confusion to drivers. Feedback from members suggests drivers may become confused if the speed limit is not well signposted. In a recent survey, 34% of respondents stated they often experienced this problem (NRMA, 1995). Only 14% of respondents claimed they never experienced this problem. Clear and unambiguous signposting (including pavement markings and frequent reminder signs) is vital to the success of such a scheme.

- 1.5.6. Through its representation on the Speed Management Task Force, Community Advisory Group on Speeding and various other forums, NRMA has been promoting the development of a trial for speed limit reminder signage. NRMA strongly recommends that the current trials be evaluated as soon as possible, and an effective speed limit repeater sign system be developed and implemented at locations where:
  - the posted limit is slower than the speed at which one would drive comfortably if there were no speed limit signs
  - the speed limit changes from adjacent sections of the road, or adjacent roads
  - the roadside development changes markedly at the site, but the speed limit remains unchanged
  - the site has a severe crash problem
  - there is a high proportion of speeding drivers.
- 1.5.7. Publicity to inform and educate the public about speed zoning and signposting initiatives should be regularly conveyed to the community.
- 1.5.8. While there is a clear acceptance by the community that speeding is a major road safety issue, there is a degree of cynicism about speed enforcement. To address this, CAGS (1993) outlined a range of initiatives that could be introduced, which included visible Police operations, the introduction of a Police Cautions System, and dedication of revenue from traffic fines to road safety improvements. While Police have made positive moves to improve the visibility of enforcement operations, the community has not seen any action on the other recommendations.
- 1.5.9. NRMA strongly supports the introduction of an Official Cautions System for minor traffic offences and feels that such a proposal should be implemented as soon as possible. This would assist in enhancing the credibility of enforcement operations and their focus on more serious traffic offences. Such a system would also further enhance the Police role in driver education, and this would be of vital importance if community attitudes towards speed enforcement are to be changed.
- 1.5.10. Dedication of a portion of fines revenue to road safety is also recommended. This would send a clear message to the community that enforcement is linked to road safety and changing driver behaviour.

- 1.5.11. Regular communications to the public demonstrating the success of Police enforcement in achieving speed and crash reductions at specific crash locations or routes should be undertaken.
- 1.5.12. Demonstration projects such as the Mosman/North Sydney trial provide the opportunity to experience a concept first hand. NRMA is keen to see more demonstration projects in areas where slower speeds would provide benefits to all road users, for example through selective shopping strings. NRMA supports the development of well designed and implemented demonstration projects as a means of raising awareness and educating the community on the benefits of slower speed environments.
- 1.5.13. The implementation of a 50km/h local street speed limit would largely depend on community attitudes. NRMA strongly recommends that the Mosman/North Sydney trial be fully evaluated before any decision is taken to implement a 50km/h local street speed limit.

## 1.6. Introducing a 50km/h local street speed limit

- 1.6.1. NRMA strongly supports national uniformity in traffic regulations and standards across Australia. On the issue of urban speed limits, NRMA would prefer to adopt a national approach that is consistent across all states and territories.
- 1.6.2. NRMA considers that the establishment of a clear functional hierarchy of roads, that is based on traffic functions rather than funding arrangements, is integral to the success of an urban speed management program. Roads within this functional hierarchy can be categorised as:

*Arterials/sub arterial roads.* Roads that mainly serve a traffic flow function, catering for relatively high volume or long distance travel.

*Collectors.* Collectors connect the local street network to the arterial and sub-arterial system, serving a dual purpose of local traffic flow and local access functions.

*Local streets.* Streets that carry relatively low volumes of traffic, primarily catering for local, short distance trips and access to properties.

- 1.6.3. Based on the above hierarchy, NRMA recommends that a 50km/h speed limit apply only on *local streets*, with speed limits of 60km/h or higher applying on *arterials* and *sub-arterials*. The determination of a suitable speed limit for collector routes is less clear, as they serve both traffic flow and property access functions. The Australian Model Code for Residential Developments (AMCORD) outlines a performance based assessment that could be used to determine the main function of a particular collector, taking into consideration factors such as road user needs including public transport, pedestrians and cyclists; route connectivity and urban planning considerations.
- 1.6.4. NRMA recommends that a speed limit of 60km/h be maintained on collectors. Where a lower speed limit is considered more appropriate, low cost engineering treatments such as linemarking or kerb extensions should be used to create a 50km/h speed environment.
- 1.6.5. NRMA strongly believes that genuine community consultation must be undertaken, and significant levels of community support achieved, if the 50km/h local street speed limit is to be successful. Encouraging and actively seeking feedback from the community would demonstrate a commitment from authorities to act on issues of concern to the public and promote community ownership of the proposal.
- 1.6.6. An effective communications and marketing strategy, involving television, radio and print media, will be required to inform and educate the public. Any communication strategy will need to incorporate a range of strategies from brief and simple messages to detailed information, and targeting varying cultural backgrounds. Consideration could also be given to the use of high profile personalities to promote the concept of slower speed limits and gain community support for the proposal.
- 1.6.7. NRMA feels there is a clear need not only to communicate widely and openly with the community as a whole, but also with key stakeholders such as Local Government and Police to ensure a consistent approach is adopted.
- 1.6.8. While some high visibility Police presence may be appropriate during the initial implementation of a local street speed limit, NRMA considers that Police enforcement of a 50km/h speed limit should not differ from current enforcement activities that target excessive speeds in residential streets.

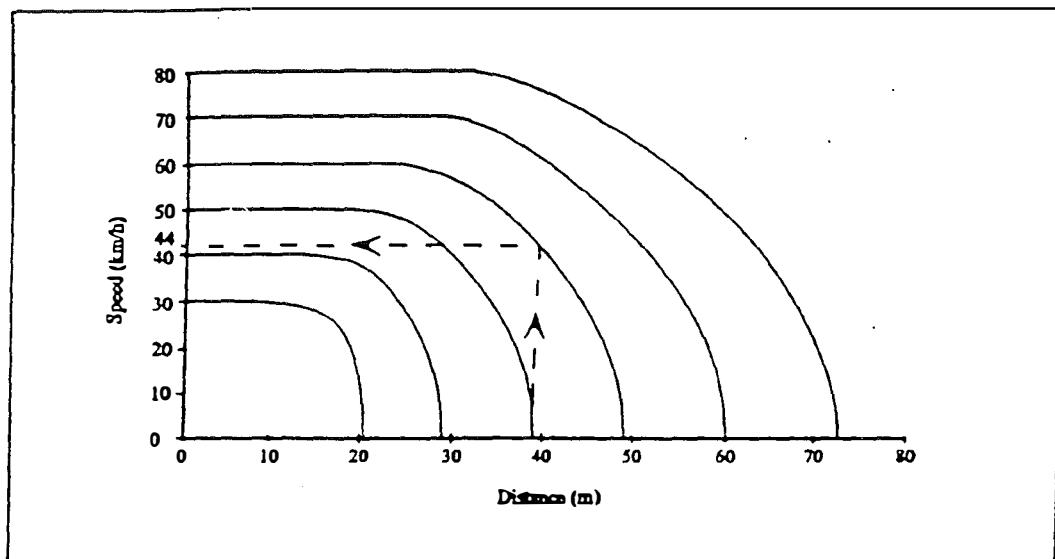
- 1.6.9. As has been the case with previous enforcement operations, NRMA recommends that any initial period of enforcement should be based on the philosophy of awareness and education, with warnings issued to drivers who have infringed the new limit. Such an approach was undertaken following the implementation of speed cameras in NSW, and RTA attitudinal surveys indicated this approach was well received (RTA, 1992).
- 1.6.10. While NRMA would not support the use of radar speed cameras to enforce a local street speed limit unless the location had an adverse crash history.
- 1.6.11. NRMA does not see a need for any alterations or additions to the existing penalty structure to accompany any introduction of a 50km/h local street speed limit. While there may be some merit in reviewing the existing speeding penalties structure, NRMA considers other initiatives would be more effective in altering driver behaviour at this time.
- 1.6.12. The introduction of a Police Cautions System, and the issuing of warning letters for a set "public education" period following the introduction of a local street speed limit, is strongly recommended. Previous experience indicates that such an approach could be just as effective as fines in altering driver behaviour (Zaal, 1994).
- 1.6.13. NRMA would not support the use of non Police personnel to enforce local street speed limits. If another agency such as Local Government were permitted to enforce speed limits, NRMA believes the likely variance in operations would detract from current enforcement practices. NRMA firmly believes that having speed enforcement under the control of one enforcement agency with suitable qualified personnel provides a much more professional and credible approach.
- 1.6.14. NRMA believes that any measures adopted to address traffic problems should be fully evaluated both in terms of engineering and community impacts. Evaluations of a 50km/h local street speed limit would need to include:
  - speed reductions
  - crash savings
  - monitoring of noise levels/vehicle emissions
  - travel time changes
  - community attitudes
- 1.6.15. In the case of a reduced local street speed limit, NRMA feels a long term approach should be adopted as the initiative is essentially looking for long term modifications and benefits.

- 1.6.16. A 50 km/h local street speed limit should not detract from the need to continue to identify and implement countermeasures at "blackspots" and other problem locations within the local street network. This would include the use of Local Area Traffic Management schemes only in areas where excessive speeds and volumes have contributed to a high crash frequency which cannot be addressed through a 50km/h local street speed limit.
- 1.6.17. For future residential developments, NRMA supports the concept of laying out the street network of new developments so that vehicle speeds and movements are greatly influenced and possibly controlled by the road environment.

## 2. Speed and crashes

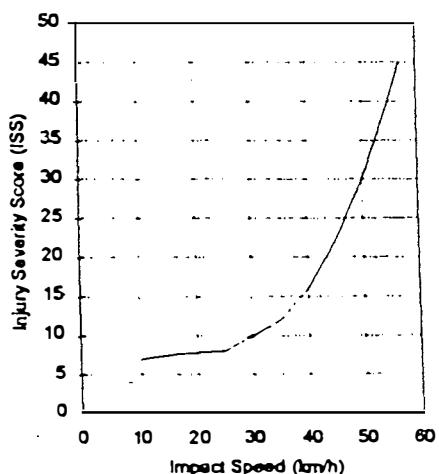
### 2.1. Causes and Outcomes

- 2.1.1. Speeding is widely considered to be a major contributor to crashes. The higher the speed, the greater the braking distance. The reaction distance (the distance travelled during reaction time) also increases, thereby reducing opportunities to correct driver error or avoid conflicts with other road users. Excessive speeds on roads which are not designed to accommodate such speeds can therefore increase the risk of a crash.
- 2.1.2. The latest NSW Roads and Traffic Authority data (RTA 1995) indicate speeding to be a factor in around 31% of fatal crashes, 18% of serious injury crashes and 13% of all reported crashes.
- 2.1.3. In 1994, speeding was considered to be a contributing factor in more crashes than alcohol or fatigue on NSW roads. Nevertheless, the role of speeding and crash involvement is not well understood. The identification of excessive speed as a factor in crashes cannot always be determined directly from Police reports. Although the NSW Roads and Traffic Authority has established criteria to determine whether speed was a contributing factor in crashes (Appendix C), there is a clear need for in-depth crash analysis to determine the exact role of speeding as a causal factor in crashes (Fildes 1993).
- 2.1.4. The consequence of speed in crashes is more readily understood. The faster the collision, the greater the likelihood of a casualty. This is explained by elementary physics which states that impact force is a function of mass times velocity squared. For example, an impact speed of 60km/h compared to 50km/h will result in 44% more energy being dissipated in a crash. This relationship is particularly critical for vulnerable road users such as pedestrians and cyclists, as this additional energy exchange could significantly affect crash severity in the event of a collision.
- 2.1.5. Recent analysis by the Road Accident Research Unit (McLean, 1995) produced curves which show the relationship between speed and stopping distance for different initial speeds (Table \*.\*). As an indication of the potential benefits of a 50km/h local street speed limit, under emergency braking, a vehicle initially travelling at 60km/h would still be travelling at a speed of 44km/h at the distance a vehicle initially travelling 50km/h has come to a stop (McLean 1995).

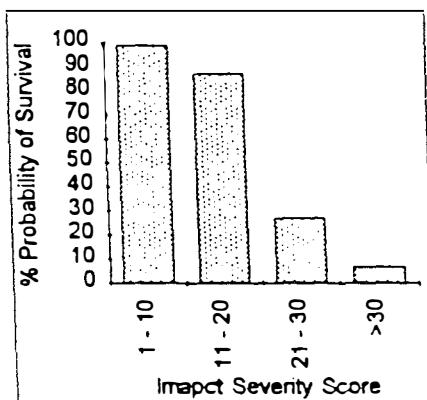


**Figure 2.1.5. - Relationship between speed and distance from initial speed (McLean 1995).**

- 2.1.6. Compounding the significant differences in stopping distance and impact speeds between initial travel speeds identified by McLean, research has shown that slight increases in impact speed can lead to large increases in severity. For example, McLean determined that a pedestrian hit at 35km/h has almost a 90% chance of survival while at 45km/h the same pedestrian has less than a 30% chance of survival.



**Figure 2.1.6a. - Impact speed and pedestrian injury severity (McLean 1995)**



**Figure 2.1.6b. - Pedestrian injury and probability of survival (McLean 1995)**

- 2.1.7. Research has shown that a relatively small reduction in travel speeds can have a major impact on reducing crashes and crash severities. In a study of pedestrian fatalities on arterial roads in Adelaide, it was estimated that even a uniform speed reduction of 5 km/h would lead to over 10% of collisions being avoided and over 20% being reduced in severity to non fatal crashes (McLean 1995).

- 2.1.8. It has been shown that crashes on local streets are a major factor in road trauma. A study of casualty crashes in the Melbourne metropolitan area revealed that 12% of crashes occurred on local links, 5% at the local/collector interface and 5% on collector roads (Cairney 1986). Of these crashes, 30% involved pedestrians or cyclists.
- 2.1.9. A Perth study reported a similar distribution of crashes on local streets (Richardson 1994). The Perth study also highlighted the dispersed nature of pedestrian and cyclist crashes, reflecting the need for an area wide strategy in addition to targeted "blackspot" countermeasures.
- 2.1.10. In view of these studies, slowing travel speeds through lower speed limits in local streets could be an effective countermeasure in reducing crashes in the local street network.

### 3. Speed management

#### 3.1. Urban speed limits

- 3.1.1. Urban speed limits appear to have their origins in the 1930's with the introduction of a 30 mph (48 km/h) limit in built-up areas in 1937. In 1964 this was raised to 35 mph (56 km/h) in NSW in recognition of improvements in roads and vehicles and to bring NSW in line with other states (NRMA 1988).
- 3.1.2. In 1965, legislation for signposted limits (zoning) was introduced in NSW and extended progressively on main roads and major highways. On 1 July 1974, speed limits were converted to metric measurements and the urban 35 mph (56 km/h) limit was raised to 60 km/h.

#### 3.2. Speed zoning

- 3.2.1. One of the fundamental objectives of speed limits is to achieve an acceptable balance between road safety and amenity on one hand with mobility on the other. This has given rise to the concept of speed zoning — setting speed limits to match primarily the safety of a road and its roadside environment. Speed zoning takes into consideration features such as road alignments, widths, clearances, roadside obstacles, traffic conflicts, 85th percentile speeds, crashes and adjacent land use in order to determine the most appropriate speed limit for a section of road.
- 3.2.2. Suitable speed zoning encourages more uniform and appropriate driving behaviour, which has demonstrated road safety benefits. Realistic speed limits also encourage greater levels of driver self compliance with the set limit. A study in Sydney indicated that speed limit increases on six major arterial routes did not result in a corresponding increase in travel speeds, supporting the argument that in urban areas, motorists drive at a speed that feels "comfortable" given the characteristics of the road environment (Amos, 1991).
- 3.2.3. Even though the intent of speed limits is to establish a maximum speed that is considered reasonable for safety and mobility, it is important to set the limit at a level that motorists will perceive as realistic, encouraging voluntary levels of compliance. Research worldwide has shown that it is very difficult to effectively enforce rules that do not receive broad community support. This is particularly important in relation to speed management, as there is broad community cynicism about enforcement of existing speed limits.

### 3.3. NSW practice

- 3.3.1. Australian Standard AS 1742.4 - *Speed Controls*, provides the basis for speed zoning guidelines although it is now considered dated in its limited advice, and in need of revision. Elements of this Standard have been incorporated into the NSW Roads and Traffic Authority's recently issued *Traffic Engineering Manual - Part 3 - Speed Zoning*, and computer based expert advisory systems such as *NLIMITS*.

*NLIMITS* is a program which assesses traffic conditions and advises appropriate speed limits. The program requires input on appropriate factors such as lane and median width, road alignment, adjacent land use, 85th percentile speed, traffic volumes and crash history in determining the suitable speed limit.

The main benefit of the program is that it removes most of the guess work previously involved in speed limit determination (although it still requires some interpretation on the part of the operator), and can ensure a uniform decision making process is followed by a range of practitioners.

- 3.3.2. NRMA is pleased to see the development of *NLIMITS* and the release of the RTA's new speed zoning guidelines. Despite some improvements in speed zoning and speed limit signposting, NRMA believes there is still a credibility gap between drivers' expectations, current speed zoning and the communication of speed limits. It is strongly recommended that a suitable program be developed within a reasonable timeframe to ensure a review of speed limits in NSW utilising the new guidelines is conducted, as a credible system of speed limits is fundamental to the success of the speed management program.
- 3.3.3. A similar review was successfully undertaken in Victoria. In 1990/91 the Victorian Parliamentary Social Development Committee held its Inquiry into Speed Limits in Victoria. In response to the Committee's recommendation that all speed limits in Victoria be reviewed, the Speed Management Policy Committee was established to develop new speed zoning guidelines. The Policy Committee consisted of representatives from VicRoads, Victoria Police, Royal Automobile Club of Victoria (RACV), Municipal Association of Victoria, Institute of Municipal Engineers and the Australian Road Research Board (ARRB).

- 3.3.4. Before and after studies were undertaken by the RACV on a selection of arterial roads to determine the impact of speed zone changes. The RACV concluded that generally there was a greater level of compliance with the new speed limits and it appeared motorists were more willing to comply with a speed limit that better matched the roadside environment.

### 3.4. Speed Hierarchy

- 3.4.1. NRMA believes speed limits should be set to reflect the driving environment and the relative safety of different types of roads. We feel that establishing a more credible system of speed limits in the eyes of the community is one of a number of important measures that will encourage greater compliance with speed limits generally.

- 3.4.2. Slower traffic speeds can reduce the occurrence and particularly the severity of crashes. However, setting unrealistically slow travel speeds across our urban road environments is neither achievable nor desirable in terms of its overall impact on society. While recognising the need for slower speeds on some roads, we believe there is a need to differentiate between different road environments that are encountered in Sydney and other major centres in NSW. As a basis for community discussion, NRMA suggests:

10km/h	shared zones (with extensive treatments)
40km/h	traffic calmed areas (with physical devices)
50km/h	local streets (without continuous centrelines)
60km/h	urban roads (with continuous centrelines)
70km/h	urban roads with medians
80-100km/h	high standard urban divided roads, country roads
110km/h	freeways and selected rural highways
120km/h	safest high standard rural freeways

- 3.4.3. NRMA surveys on appropriate speed limits, conducted through *The Open Road* in October 1991 (NRMA 1991) and reported in April 1992 (NRMA 1992), indicated considerable community support for differentiating speed limits according to the road environment. Similar surveys conducted by the Royal Automobile Club of Queensland (RACQ 1992) and the Royal Automobile Club of Victoria (RACV 1992) have reported similar results on community attitudes to such a hierarchy (see Appendix A).

### 3.5. Signposting

- 3.5.1. One of the drawbacks of signposting different speed limits based on road design and safety considerations, is potential confusion to drivers. Feedback from members suggests drivers may become confused if the speed limit is not well signposted. In a recent survey, 34% of respondents stated they often experienced this problem (NRMA, 1995). Only 14% of respondents claimed they never experienced this problem. Clear and unambiguous signposting (including pavement markings and frequent reminder signs) is vital to the success of such a scheme, and is particularly important.
- 3.5.2. Through its representation on the Speed Management Task Force, Community Advisory Group on Speeding and various other forums, NRMA has been promoting the development of a trial for speed limit reminder signage. NRMA strongly recommends that the current trials be evaluated as soon as possible, and an effective speed limit repeater sign system be developed and implemented at locations where:
  - the posted limit is slower than the speed at which one would drive comfortably if there were no speed limit signs
  - the speed limit changes from adjacent sections of the road, or adjacent roads
  - the roadside development changes markedly at the site, but the speed limit remains unchanged
  - the site has a severe crash problem
  - there is a high proportion of speeding drivers.

Reminder signs also play an important role in maintaining community support for road safety initiatives such as speed cameras. Such support is required to ensure the maximum road safety benefits are derived from these schemes.

## 4. Studies and experience with lower speed limits

### 4.1. Australian experience

- 4.1.1. Most Australian experience with lower speed limits in local areas has been associated with the implementation of Local Area Traffic Management (LATM) schemes, which has involved the provision of physical devices such as speed humps and thresholds to reduce vehicle speeds. While many schemes involving physical devices have been broadly successful, their installation is restricted by expense and community opinion.
- 4.1.2. NRMA surveys have found that the community is evenly divided on the use of LATM (NRMA 1993). Recent market research has confirmed this earlier finding, with 45% of respondents favouring more widespread use of traffic calming devices while 51% opposed it (NRMA 1995). In view of these polarised views, NRMA recommends the use of LATM only in areas where excessive speeds and volumes have contributed to a high crash frequency.
- 4.1.3. While the use of traffic calming devices have traditionally been applied in the local street network on an area wide basis, recent innovations include the use of low cost engineering measures to reduce speeds on minor traffic routes. Results from studies by van den Dool and McKeown (1991) indicated that such techniques could be successful in improving safety while maintaining vehicle throughput on appropriate roads.

### 4.2. Reduced speed limits

- 4.2.1. Limited information is available on lower speed limits that have not been supported by physical devices. A number of 50 km/h trials in Melbourne, including the suburban municipality of Preston have been reported as having had little effect on traffic speeds. A similar trial in NSW in the Wahroonga/Turramurra area reached a similar conclusion. These trials have generally been applied to limited geographical areas, over short periods and without appropriate education, enforcement and other supporting measures. It is therefore difficult to draw firm conclusions from these trials.

#### **4.3. The Unley experience**

- 4.3.1. In December 1991, South Australia's first trial of a 40km/h speed limit commenced in the City of Unley in Adelaide. The area selected for the study included the inner eastern suburbs of Unley, Hyde Park, and Unley Park. The trial concluded in March 1993.
- 4.3.2. The objective of the Unley trial was to assess the reductions in traffic speeds following the imposition of the lower limit accompanied by systematic police enforcement using radar speed cameras at low and high levels of intensity. In particular, it was desired to establish whether such enforced lower speed limits could serve as an alternative to the installation of physical devices within local traffic management schemes. The study involved signposting, monitored enforcement, speed surveys and community attitude surveys.
- 4.3.3. Although some speed reductions were achieved, overall compliance with the 40km/h speed limit was low, even during periods of high enforcement. The study also concluded that 40km/h speed limits should be comprehensively supported by physical speed control devices (DOTSA 1993). A 50km/h speed limit in local streets may be achievable without requiring extensive engineering measures, provided it has the support of the community.

#### **4.4. Mosman/North Sydney**

- 4.4.1. During December 1995, a trial of a 50km/h speed limit will commence in parts of the Mosman and North Sydney Local Government Areas. This demonstration project incorporates low-cost engineering, enforcement and social strategies and is a co-operative effort between the NSW Roads and Traffic Authority, NSW Police, Mosman and North Sydney Councils and NRMA.
- 4.4.2. One of the primary objectives of the Mosman and North Sydney project is to develop a co-ordinated strategy which includes low cost and sustainable engineering and enforcement measures to support a 50 km/h residential speed limit. Vehicle travel speeds will be closely monitored in addition to community attitudes and perceptions of the trial.
- 4.4.3. NRMA strongly supports this project as it will provide an opportunity to raise community understanding and involvement in debates over slower speed limits, as well as provide a more rigorous evaluation of a lower speed limit in residential streets.

#### 4.5. Demonstration projects

- 4.5.1. Demonstration projects such as the Mosman/North Sydney trial provide the opportunity to experience a concept first hand. NRMA is keen to see more demonstration projects in areas where slower speeds would provide benefits to all road users, for example through selective shopping strings. NRMA supports the development of well designed and implemented demonstration projects as a means of raising awareness and educating the community on the benefits of slower speed environments.
- 4.5.2. The implementation of a 50km/h local street speed limit would largely depend on community attitudes. NRMA strongly recommends that the Mosman/North Sydney trial be fully evaluated before any decision is taken to implement a 50km/h local street speed limit.
- 4.5.3. The results of this trial will then enable authorities to evaluate a suitable implementation strategy which would need to include extensive community education and promotion programs. Such programs should also continue through the initial stages of implementing a local street speed limit.

#### 4.6. Overseas experience

- 4.6.1. A comparison of some overseas urban speed limits with Australia is shown in the following table. Australia has one of the highest general urban speed limits in the world.

Country	Urban Speed Limit (km/h)
UK	48
France	50
Germany	50
Sweden	50
Canada	50
USA	40-56
New Zealand	50
Australia	60

Table 4.5.1. General urban speed limits in several countries

- 4.6.2. A comparison of pedestrian fatality rates among 13 countries with a 50km/h (or less) urban speed limit, and 7 countries with a 60km/h urban speed limit concluded that a reduction in the urban speed limit might reduce the number of fatalities by up to 28% (Fieldwick and Brown 1987).

- 4.6.3. When Denmark reduced the speed limit in built up areas from 60km/h to 50km/h in 1985, it reportedly resulted in a 24% reduction in road fatalities and 9% drop in crashes. If this result were applied to the NSW road toll, 157 fewer deaths would occur based on last year's figure, amounting to substantial savings to the community. Although the 50km/h limit was introduced as a general urban speed limit, Danish authorities are now introducing speed zoning on traffic routes so that speed limits better match the road environment (Macky, 1995).
- 4.6.4. In Zurich, Switzerland, the urban area speed limit was lowered from 60km/h to 50km/h in 1980 and at the same time the open road speed limit was reduced (due to political pressure from green groups to reduce vehicle emissions). It is reported that this lead to 20% reduction in pedestrian crashes and a 25% reduction in pedestrian fatalities (Walz et al. 1983). The severity of injuries also reduced.
- 4.6.5. Applying this research to Australian conditions requires some caution. Many of these countries have dense urban environments with typically narrow residential streets. Such environments are conducive to lower speeds. Our lower urban densities, wider local roads and generally more spacious surroundings tend to encourage higher speeds. Also, there is little data describing compliance rates with speed limits before and after the speed limit changes were introduced, and community attitudes towards these changes.

## 5. Implementing a 50km/h local street speed limit

### 5.1. National uniformity

5.1.1. NRMA strongly supports national uniformity in traffic regulations and standards across Australia. On the issue of urban speed limits, NRMA would prefer to adopt a national approach that is consistent across all states and territories.

### 5.2. Functional and speed hierarchies

5.2.1. One of the priorities in the National Road Safety Action Plan stated "that Governments implement a nationally harmonious urban speed management policy which recognises the specific needs of traffic routes and local access streets."

5.2.2. NRMA considers that the establishment of a clear functional hierarchy of roads, that is based on traffic functions rather than funding arrangements, is integral to the success of an urban speed management program. Roads within this functional hierarchy can be categorised as:

*Arterials/sub arterial roads.* Roads that mainly serve a traffic flow function, catering for relatively high volume or long distance travel.

*Collectors.* Collectors connect the local street network to the arterial and sub-arterial system, serving a dual purpose of local traffic flow and local access functions.

*Local streets.* Streets that carry relatively low volumes of traffic, primarily catering for local, short distance trips and access to properties.

5.2.3. Based on the above hierarchy, NRMA recommends that a 50km/h speed limit apply only on *local* streets, with speed limits of 60km/h or higher applying on *arterials* and *sub-arterials*. The determination of a suitable speed limit for collector routes is less clear, as they serve both traffic flow and property access functions. The Australian Model Code for Residential Developments (AMCORD) outlines a performance based assessment that could be used to determine the main function of a particular collector, taking into consideration factors such as road user needs including public transport, pedestrians and cyclists; route connectivity and urban planning considerations.

- 5.2.4. NRMA recommends that a speed limit of 60km/h be maintained on collectors. Where a lower speed limit is considered more appropriate, low cost engineering treatments such as linemarking or kerb extensions should be used to create a 50km/h speed environment.
- 5.2.5. Such an approach would complement the hierarchy of speed limits proposed in Section 3, which would utilise physical cues to determine the speed environment. For example, non linemarked streets (typically *local* streets according to the functional classification) would be zoned at 50km/h, and roads with centrelines, which would include most *collectors*, would retain a 60km/h limit. Higher standard roads, comprising of *arterials* and *sub-arterials*, would be zoned at 60km/h or higher.

### 5.3. Co-ordination among agencies

- 5.3.1. It is reported that when France changed from a general urban limit of 60km/h to 50km/h in 1990, some significant problems occurred due to the lack of communication with Local Government. This was apparently related to the fact that the concepts, benefits and methods of implementation were not clearly communicated.
- 5.3.2. NRMA feels there is a clear need not only to communicate widely and openly with the community as a whole, but also with key stakeholders such as Local Government and Police to ensure a consistent approach is adopted.

### 5.4. Evaluation and countermeasures

- 5.4.1. NRMA believes that any measures adopted to address traffic problems should be fully evaluated both in terms of engineering and community impacts. This would include:
  - speed reductions
  - crash savings
  - monitoring of noise levels
  - travel time changes
  - community attitudes
- 5.4.2. In the case of a reduced local street speed limit, NRMA feels a long term approach should be adopted as the initiative is essentially looking for long term modifications and benefits.
- 5.4.3. A 50 km/h local street speed limit should not detract from the need to continue to identify and implement countermeasures at "blackspots" and other problem locations within the local street network.

## 6. Enforcement

### 6.1. Enforcement and speed

- 6.1.1. NRMA is supportive of police enforcement of traffic laws as a road safety countermeasure. Police enforcement should primarily be visible and aimed at deterring unsafe driver behaviour, rather than just apprehending offenders once an offence has been committed. NRMA considers that speed enforcement should be used to deter excessive speeding at locations and times for which there is evidence of increased crash risk and/or injury severity associated with speed.
- 6.1.2. While there is a clear acceptance by the community that speeding is a major road safety issue, there is a degree of cynicism about speed enforcement. To address this, CAGS (1993) outlined a range of initiatives that could be introduced, which included visible Police operations, the introduction of a Police Cautions System, and dedication of revenue from traffic fines to road safety improvements. While Police have made positive moves to improve the visibility of enforcement operations, the community has not seen any action on the other recommendations.

### 6.2. Changing community attitudes towards enforcement

- 6.2.1. NRMA strongly believes there is a need to introduce an Official Cautions System for minor traffic offences and feels that such a proposal should be implemented as soon as possible. This would assist in enhancing the credibility of enforcement operations and their focus on more serious traffic offences. Such a system would also further enhance the Police role in driver education, and this would be of vital importance if community attitudes towards speed enforcement are to be changed.
- 6.2.2. Dedication of a portion of fines revenue to road safety is also recommended. This would send a clear message to the community that enforcement is linked to road safety and changing driver behaviour.

### 6.3. Enforcement of a local street speed limit

- 6.3.1. Although Police enforcement is integral to an effective speed management strategy, it would be impossible, as well as undesirable, to expect enforcement alone to ensure compliance with a lower speed limit. Community support and self compliance is essential if a 50km/h local street speed limit is to be successful. Research worldwide has shown that it is very difficult to effectively enforce rules that do not receive broad community support.

- 6.3.2. The Unley trial clearly demonstrated that high levels of enforcement will not ensure compliance with an unrealistic speed limit. Broad community acceptance, not just from local residents but all road users, is a vital prerequisite. Where inappropriately high 85th percentile speeds remain after speed limits have been reduced, appropriate traffic management solutions should be developed rather than placing an emphasis on enforcement.
- 6.3.3. While some high visibility Police presence may be appropriate during the initial implementation of a local street speed limit; NRMA considers that Police enforcement of a 50km/h speed limit should not differ from current enforcement activities that target excessive speeds in residential streets.
- 6.3.4. As has been the case with previous enforcement operations, NRMA recommends that any initial period of enforcement should be based on the philosophy of awareness and education, with warnings issued to drivers who have infringed the new limit. Such an approach was undertaken following the implementation of speed cameras in NSW, and RTA attitudinal surveys indicated this approach was well received (RTA, 1992).

#### **6.4. Speed cameras**

- 6.4.1. NRMA supports the use of radar speed cameras at high crash locations. NRMA would not support the use of radar speed cameras to enforce a local street speed limit unless the location had an adverse crash history.

#### **6.5. Penalties**

- 6.5.1. NRMA does not see a need for any alterations or additions to the existing penalty structure to accompany any introduction of a 50km/h local street speed limit. While there may be some merit in reviewing the existing speeding penalties structure, NRMA considers other initiatives would be more effective in altering driver behaviour at this time.
- 6.5.2. The introduction of a Police Cautions System, and the issuing of warning letters for a set "public education" period following the introduction of a local street speed limit, is strongly recommended. Previous experience indicates that such an approach could be just as effective as fines in altering driver behaviour (Zaal, 1994).

## **6.6. Enforcement by other agencies**

6.6.1. NRMA would not support the use of non Police personnel to enforce local street speed limits. If another agency such as Local Government were permitted to enforce speed limits, NRMA believes the likely variance in operations would detract from current enforcement practices. NRMA firmly believes that having speed enforcement under the control of one enforcement agency with suitable qualified personnel provides a much more professional and credible approach.

## 7. Building community support

### 7.1. Timing of initiatives

7.1.1. A local street speed limit cannot be considered in isolation from other elements of an overall speed management strategy. Speeding is a very difficult behaviour to address and much harder than drink driving, for example, to make socially unacceptable. Changing community attitudes is a long term process, and cannot be achieved through "quick fix" solutions such as additional enforcement operations or tougher penalties. It is therefore necessary to develop a package of elements that will generate community support for speed management initiatives and enable a 50km/h local street speed limit to be introduced with broad community endorsement. Initiatives include:

- Development of a hierarchy of speed limits
- Review of speed limits on all roads to ensure a uniform system of speed limits are in place
- Clearly communicated speed limits using signs and markings, and repeater signs where appropriate
- Publicity to inform and educate the community about speed zoning and signposting initiatives
- Introduction of a Police Cautions System for minor traffic offences
- Dedication of fines revenue to road safety activities
- Regular communications to the public demonstrating the success of Police enforcement in achieving speed and crash reductions at specific crash locations or routes
- Continued implementation of lower speed limit demonstration projects at appropriate locations and communication of the benefits to the public

7.1.2. Apart from the above speed management initiatives, NRMA recommends that the Mosman/North Sydney trial be fully evaluated before any decision is taken to proceed with implementing a 50km/h local street speed limit.

## 7.2. Community consultation and discussion

- 7.2.1. NRMA strongly believes that **genuine** community consultation must be undertaken, and significant levels of community support achieved, if the 50km/h local street speed limit is to be successful. Encouraging and actively seeking feedback from the community would demonstrate a commitment from authorities to act on issues of concern to the public.
- 7.2.2. An effective communications and marketing strategy, involving television, radio and print media, will be required to inform and educate the public. Any communication strategy will need to incorporate a range of strategies from brief and simple messages to detailed information, and targeting varying cultural backgrounds. Consideration could also be given to the use of high profile personalities to promote the concept of slower speed limits and gain community support for the proposal.

## 8. Likely impacts of lower speeds

### 8.1. Safety

- 8.1.1. The likely impacts on safety are hard to predict without having a reasonable assumption of the likely reduction in vehicle travel speeds. Nevertheless, the introduction of credible speed limits on all major traffic routes prior to the implementation of a local street speed limit could result in greater compliance with speed limits generally, including travel speeds in accordance with a 50km/h speed limit.
- 8.1.2. As an example of the potential safety benefits, Nilsson's (1992) fourth power rule determined that a change in average speeds will change the occurrence of fatal crashes in proportion to the fourth power of the ratio of speeds. It was also determined that serious injury crashes and minor injury crashes would vary in proportion to the third and second powers respectively.

Crash Severity and occurrence reduction	Average Speed Reduction		
	4%	7%	10%
Fatal	15%	25%	34%
Serious Injury	12%	20%	27%
Minor Injury	8%	14%	19%

Table 8.1.2. Possible severity savings from reduced speeds

- 8.1.3. Assuming Nilsson's analysis was applicable to Australian conditions, a 4% reduction in average speeds could reduce the incidence of fatal crashes by 15%, serious injury crashes by 12% and minor injury crashes by 8%. Clearly, only small reductions in speed have the potential to lead to substantial benefits from reduced accident frequencies and severities.
- 8.1.4. Placing an economic figure on the potential accident reductions, AUSTROADS indicate annual savings for Victoria alone to be in the order of \$6 million to \$31 million for uniform reductions of 2km/h and 7km/h respectively.

## 8.2. Repair savings

- 8.2.1. NRMA believes that in addition to reduced road trauma from a lower speed limit, there is the potential to make significant savings in vehicle repair costs. NRMA's Technical Research Centre have attempted to determine the potential repair savings from reduced impact speeds.
- 8.2.2. Based on known information from NRMA's Low Speed Crash Tests at 15km/h, and estimating the likely damage at an impact speed of around 11km/h, repair cost savings of around 3% for this low impact could be achieved. With the overall cost of accident damage to the NSW community estimated at around \$978 million in 1993/94, a conservative 3% saving represents nearly \$30 million annually. Of course, this figure relates to all collisions and not those just occurring on local roads. However, it provides some indicative information on the potential benefits of reducing crashes through improvements in overall speed behaviour.

## 8.3. Amenity

- 8.3.1. The concept of amenity is not well defined. For the purposes of traffic assessment, amenity can be defined as the inherent sense of well-being experienced by the residents of a given street environment. A resident's sense of well-being is typically influenced by six principal factors, namely:
  - Environmental factors, including traffic noise and air quality;
  - Ease of access (particularly driveway access);
  - Actual safety performance in terms of vehicular and pedestrian accidents;
  - Perceived safety levels, particularly for young and elderly pedestrians;
  - Overall aesthetic value of the roadside environment (setback to properties, level of vegetation, night lighting etc); and,
  - Ease and safety of on-street parking.
- 8.3.2. Prevailing traffic speeds have a direct influence on a number of the factors mentioned above. However, anecdotal evidence suggests that while past approaches to speed management such as the use of physical devices are often effective in reducing traffic speeds, they may often be judged by affected residents to be detrimental to the overall amenity of a given road or street.

- 8.3.3. Although amenity itself may be difficult to quantify, its importance should not be underestimated. This is particularly the case in the areas of political acceptance and marketing.
- 8.3.4. The continuing strong support in the Unley trial for a lower speed limit by around three quarters of the local community, in the face of acknowledged small speed reductions could be a reflection of the perceived amenity improvements (USLAG & DOTSA 1993). It is noteworthy that while approximately two thirds considered the reduced limit ineffective in comparison to physical devices, support for the scheme continued.

#### **8.4. Mobility**

- 8.4.1. The proposal for a 50 km/h speed limit in local streets would essentially only effect the part of a motorist's journey near home, which on average would only be several hundred metres or less. Given that the average trip length in Australia is about 14km, the distance travelled at the lower speed and the difference in time will be minor.
- 8.4.2. As an example of the likely travel time increases, AUSTROADS estimated that a uniform 7 km/h reduction would probably add an extra 20 seconds onto an average person's trip. Impacts on buses and other public transport vehicles would be negligible, as factors such as stopping frequency have a greater impact on overall journey times.
- 8.4.3. Should the potential amenity benefit of discouraging some inappropriate through traffic from local areas come to fruition, one mobility concern is that the surrounding main road network be maintained with sufficient capacity to cater for the modified route selection.

#### **8.5. Environment**

- 8.5.1. It would generally be assumed that a decrease in travel speeds would result in a reduction in fuel consumption. In 1992, Lines and Morgan estimated that a reduction of on-road speeds from 60km/h to 50km/h would lead to 4% less fuel consumption and therefore reduce vehicle emissions. Research conducted by Kenworthy et al (1984) indicates that the optimum fuel consumption plateaus in the area of 40 to 60km/h.

- 8.5.2. This research tends to indicate that, in practical terms, a reduction in maximum vehicle speeds from 60km/h to 50km/h is unlikely to significantly reduce vehicle related pollution on its own. The contribution of vehicle emissions from local streets alone is also unlikely to be a significant proportion of vehicle related pollution.
- 8.5.3. The insignificant changes in fuel consumption likely from a reduction in speed limit can be contrasted against the estimated increases in fuel consumption from the application of physical devices which is in the order of 30-50% (Van Every and Holmes 1992).
- 8.5.4. The factors contributing to the level of traffic noise in residential areas include:
  - traffic volumes (daily);
  - percentage heavy vehicles;
  - type of street surface;
  - traffic speeds;
  - road grade;
  - setback of homes;
  - degree of exposure (angle of view) of individual houses to roadway.
- 8.5.5. The reduction in the level of traffic noise due to a travel speed reduction of 60km/h to 50km/h will also be site specific as the factors do not relate linearly. On a case specific basis, it could be expected that a reduction of 1dB(A) might be achieved. This is relatively insignificant when compared to the OECD desirable level at the facade of residential premises of 55dB(A) L<sub>10</sub> [18 hour].

## 8.6. Speed 'culture'

- 8.6.1. It is important to highlight that a change in the speed limit may not immediately result in travel speeds in accordance with the lower limit. The objective of a local street speed limit should be viewed as an initiative to change long-term driving habits.
- 8.6.2. This was the approach adopted overseas and has been successful in countries such as Denmark. The experience has also been identified to a limited extent in the Unley 40km/h trials in Adelaide where tentative stages of a lower speed culture have been noted (USLAG 94). Speed reductions achieved at the beginning of the trial have been maintained at least a year following the trial

without any additional promotion, enforcement or other change in circumstance from pre trial conditions.

- 8.6.3. NRMA feels that a 50km/h local streets speed limit is part of a long term strategy aimed at achieving a change in the 'speed culture' of the community. Nevertheless, other components of the speed management strategy such as credible speed limits, publicity, education and visible policing are essential if the community is to support a 50km/h local street speed limit

## 9. Future options

### 9.1. Urban planning

- 9.1.1. The ultimate solution to the management of speeds, and traffic generally, lies not with imposed traffic regulations but with urban planning.
- 9.1.2. NRMA supports the concept of laying out the street network of new developments so that vehicle speeds and movements are greatly influenced and possibly controlled by the road environment. Emphasis needs to be placed on such an approach not only to address the concerns outlined in this report, but also to encourage more environmentally sustainable transport and better communities.
- 9.1.3. This approach is being pursued in AMCORD. This document is intended to act as a national guideline for new subdivisions, and will hopefully address existing problems in local streets. NRMA supports the general principles guiding AMCORD.
- 9.1.4. The January 1995 Draft AMCORD document quotes the following Target Speeds or Design Speeds for various road classifications used by AMCORD.

15 km/h      Local Access Lanes and Places

40 km/h      Local Access Streets

50 km/h      Minor Collectors (20km/h at pedestrian/cyclist crossings)

60 km/h      Major Collectors

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## Appendix A Motoring Club Member Surveys

### A.1 NRMA *The Open Road* Survey

- A.1.1. In October 1991, NRMA sought community feedback on appropriate speed limits for various conditions through *The Open Road* (NRMA 1991). Members were asked to nominate a speed limit they felt appropriate for a given, generalised situation. The survey generated significant community interest with nearly 4,400 responses received.
- A.1.2. The results of NRMA's *The Open Road* survey, as tabled below, clearly demonstrate that motorists recognise a link between road safety and vehicle speeds. The major finding was motorists acknowledging that speed limits should reflect the safety of a road and its roadside environment.

Road Environment	Desired Speed Limit (Survey average)	NRMA suggested appropriate speed limit
<b>Urban</b>		
• Near schools	47	40 <sup>1</sup>
• In busy shopping centres	47	40
• In residential areas with speed humps, roundabouts etc.	48	40 <sup>2</sup>
• In local residential streets	55	50 <sup>3</sup>
• General urban limit in built up areas	63	60 <sup>4</sup>
• On busy four lane roads	77	70 <sup>5</sup>
• On six lane roads with median islands	91	70 <sup>6</sup>
• On major traffic routes without houses or shops	94	80
• On freeways in city areas	90	90
<b>Country</b>		
• On traffic routes through towns near busy shopping areas or houses	64	60 <sup>7</sup>
• On low standard sections of two lane highways (eg narrow, winding, steep)	84	80
• General limit on the open road without street lights	104	100
• On high quality two lane highways with little traffic	106	110
• On four lane highways with wide medians	112	110
• On freeways	119	120

<sup>1</sup> Existing NSW & ACT school limits and Wombat crossings  
<sup>2</sup> Speed control devices restrict speeds

- |   |   |
|---|---|
| 3 | On streets without linemarking                                |
| 4 | On streets with linemarking                                   |
| 5 | If they have medians  |
| 6 | May be higher with better medians or little roadside activity |
| 7 | Preferably bypass for through traffic                         |

A.1.3. Other relevant findings from the survey included 84% support for the concept of speed zoning - setting speed limits to match the safety of a road and its roadside environment, and 83% indicated they would then be more likely to comply with the posted speed limits.

## A.2 RACV Royalauto Survey

A.2.1. In August 1992, the Royal Automobile Club of Victoria (RACV) conducted a speed limit survey through the *Royalauto* magazine. Approximately 7,200 responses were received (RACV 1992).

A.2.2. RACV gave members a number of 10km/h increment options close to the existing speed limit for given situations and asked members to select one option. NRMA's interpretation of selected results from RACV's speed limit survey are summarised as tabled below.

Road Environment	Most common member selection	RACV suggested limit
Busy shopping centre, during hours only	40	40
2 lane residential road with cul-de-sac	50	50
2 lane collector in a residential area	50	50
4 lane divided urban road with wide median	80	70/80
6 lane urban road with narrow median	80	70
6 lane urban highway with service roads	90	80
Typical rural local road	80	80
2 lane undivided rural highway	100	100
6 lane divided rural freeway	110	110

A.2.3. The results are largely complimentary to NRMA's *The Open Road* survey, with some minor exceptions that are most likely a result of survey methodology. These results have assisted the RACV in developing a hierarchy of speed limits that is almost a duplicate of NRMA's in urban areas.

## Appendix B Motoring Club Market Research

### B.1 NRMA Market Research

- B.1.1. The NRMA Speeding Survey was first conducted in February 1993 to ascertain perceptions as to the main causes of motor vehicle accidents and to elicit suggestions of possible ways of reducing the incidence of speed related crashes. The second phase of the survey was conducted in May 1995 (NRMA 1995).
- B.1.2. The study consisted of 550 random telephone interviews amongst NSW/ACT drivers. 250 interviews were conducted in the Sydney metropolitan area, 150 in the Canberra/Wollongong/Newcastle areas and 150 interviews in Other NSW areas.
- B.1.3. The results were weighted by area, age and sex to ensure that the results would be truly representative of the NSW/ACT population.
- B.1.4. Two additional questions included in the 1995 survey related to the issue of urban speed limits. The questions asked the respondents to rate their level of agreement with two suggestions to reduce the incidence of speed related crashes:

*"Reducing the general urban speed limit from 60km/h to 50km/h," and*

*"Introducing a 50 km/h speed limit on local residential streets only, but maintaining existing speed limits on other roads."*

- B.1.5. In summary, the results were:

74% of respondents agree with the proposal to introduce 50 km/h on "local residential streets only."

Only 39% agree with the suggestion of reducing the general urban limit to 50 km/h.

- B.1.6. Further details are contained in the following pages.

# NRMA Speed Survey

May 1995



As part of NRMA's involvement in speed management issues, a speeding survey was conducted in May 1995 to ascertain perceptions as to the main cause of motor vehicle accidents and to elicit suggestions of possible ways of reducing the incidence of speed related crashes.

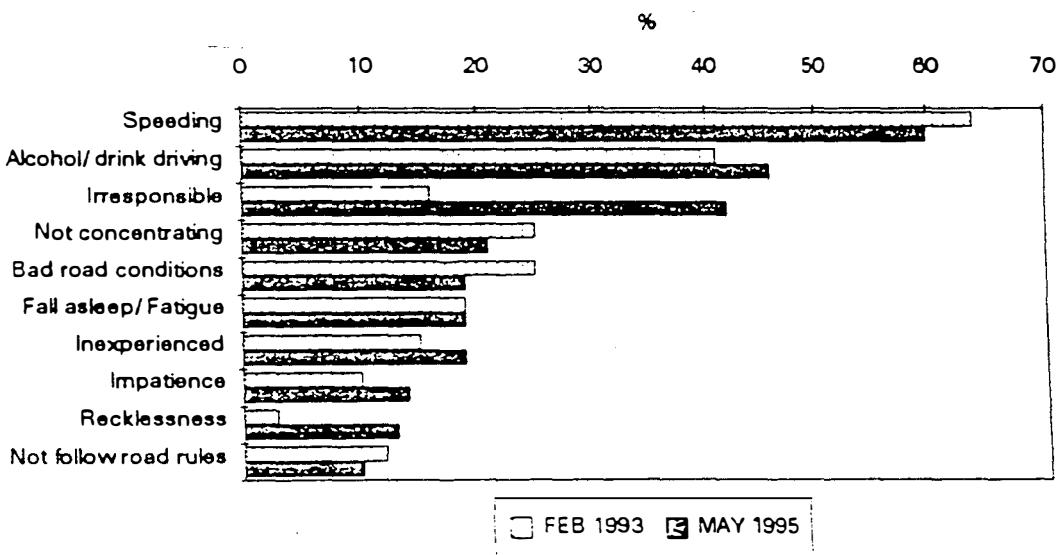
The study consisted of 550 random telephone interviews amongst NSW/ACT drivers. 250 interviews were conducted in the Sydney metropolitan area, 150 in the Canberra/Wollongong/Newcastle areas and 150 interviews in the Other NSW areas.

The results were weighted by area, age and sex to ensure that the results would be truly representative of the NSW/ACT population.

Responses from the May 1995 survey have been compared with results obtained from an earlier speeding survey, conducted by NRMA in February 1993. The February 1993 survey was conducted specifically to assist the Community Advisory Group on Speeding (CAGS) in developing speed reduction countermeasures.

## Speed Related Accidents

Respondents were asked what they believed to be the main causes of motor vehicle accidents. Any cause that was identified by more than 10% of respondents in either year is shown below.



# NRMA Speed Survey

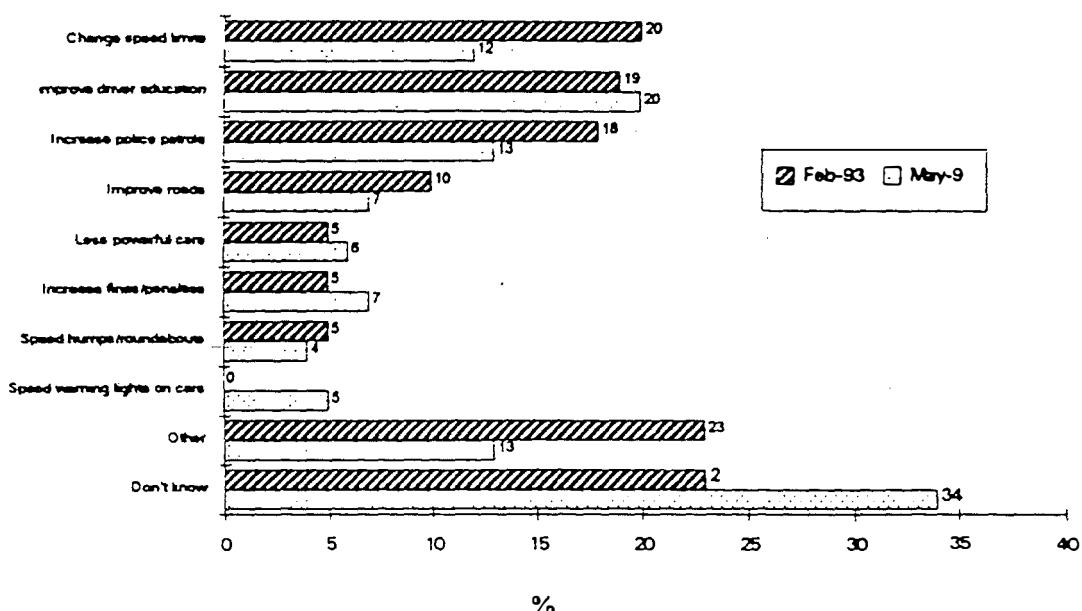
May 1995



The findings show that a large part of the community continue to perceive speeding and drink driving to be two of the main causes of motor vehicle accidents. There was also a significant increase in the number of respondents citing irresponsible or careless driving as a major cause.

## Ways of reducing speed related crashes (unprompted)

Respondents were asked if they could think of ways of reducing the incidence of speed related crashes. Results of this unprompted question are illustrated below.



Improving driver education, increasing police enforcement and changing speed limits were the three most frequently mentioned ways of reducing speed related crashes.

## Ways of reducing speed related crashes (prompted)

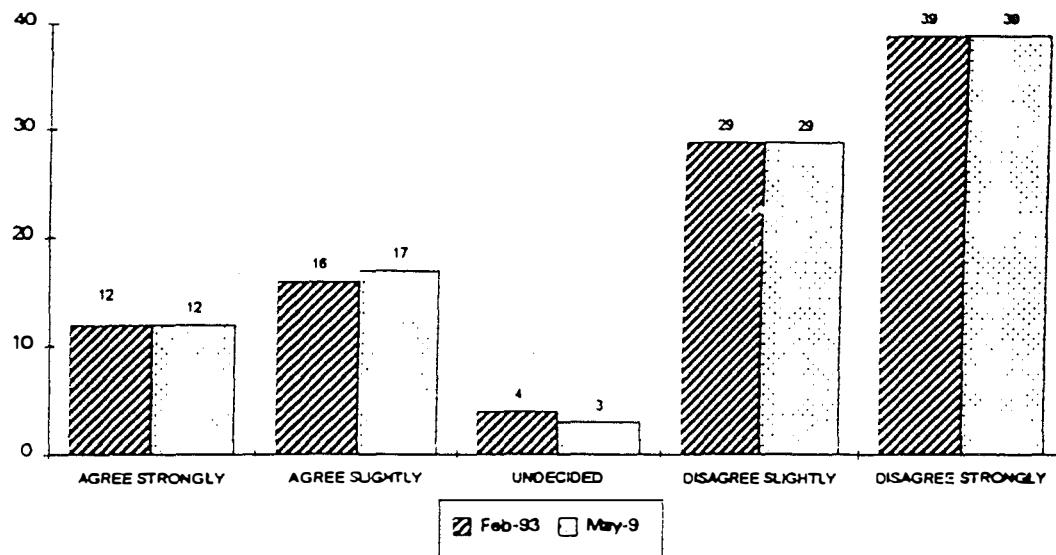
Respondents were read several ways in which the incidence of speed related crashes could be reduced. After each one, respondents were asked to indicate their level of agreement. The results are outlined on the following pages.

# NRMA Speed Survey

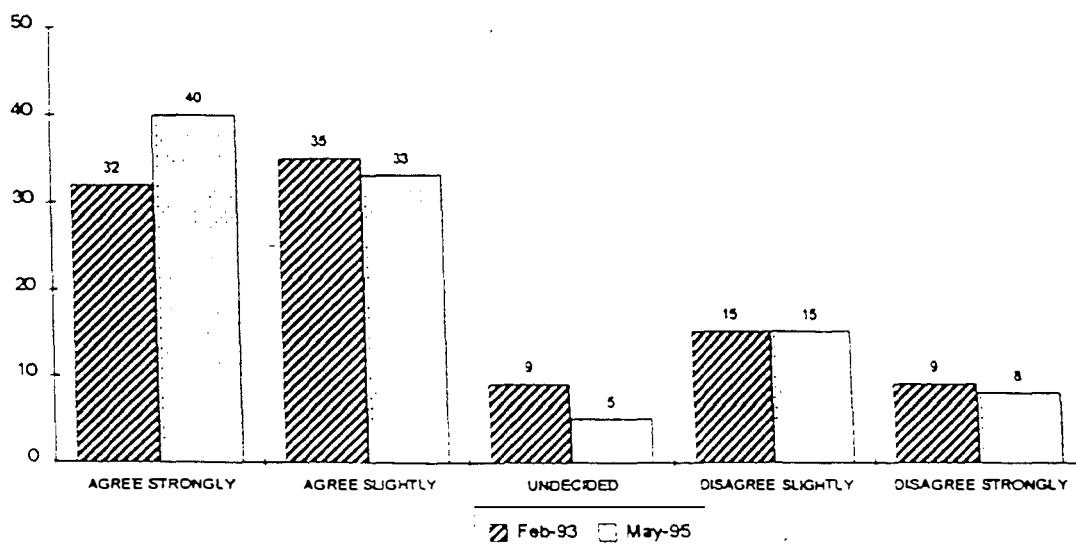
May 1995



## *Agreement with Decreasing all Speed Limits*



## *Agreement with Keeping Speed Limits as they are*

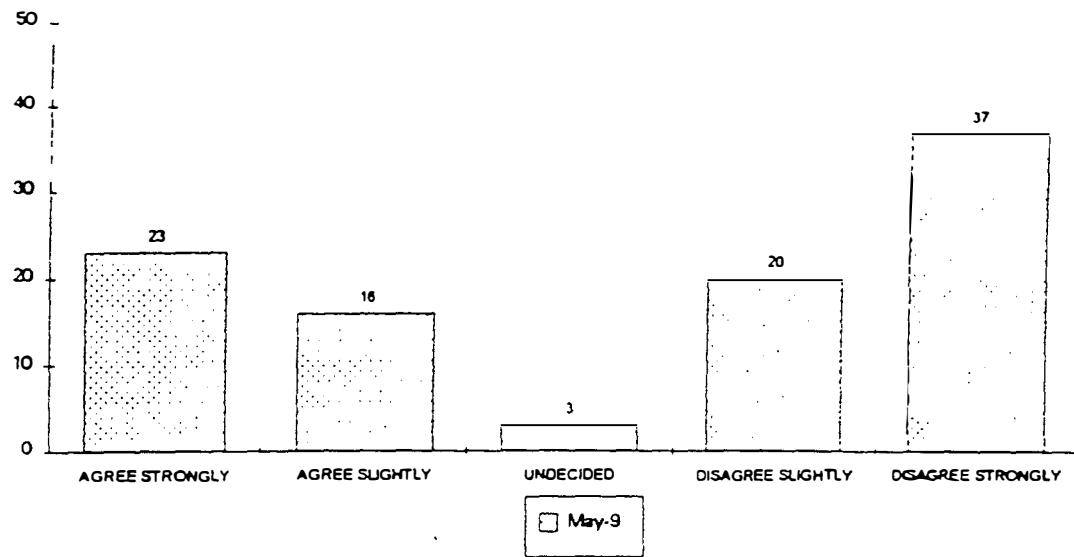


# NRMA Speed Survey

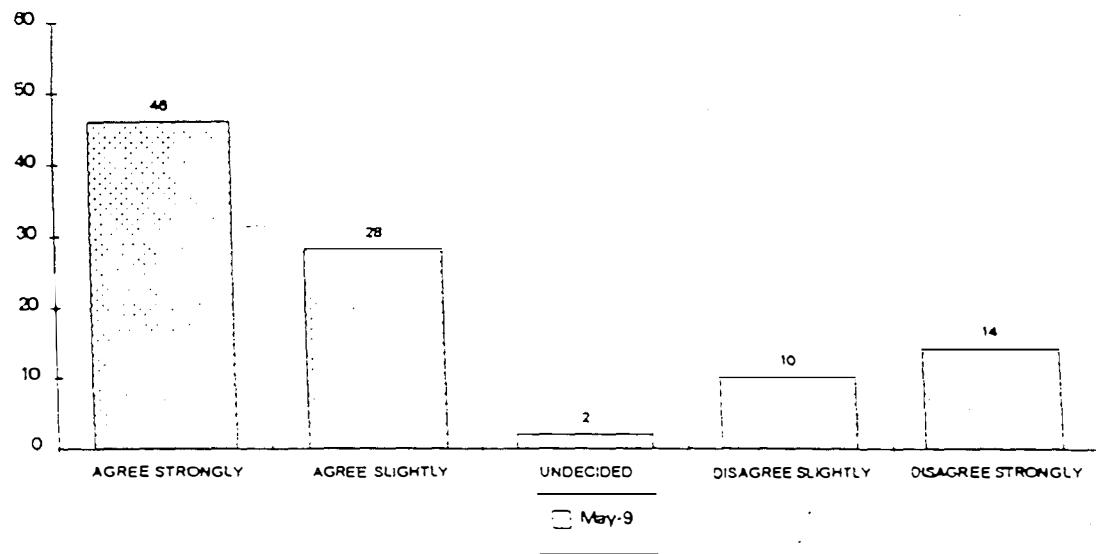
May 1995



## *Agreement with Reducing the General Urban Speed Limit from 60 km/h to 50 km/h*



## *Agreement with Introducing a 50 km/h Speed Limit on Local Residential Streets Only but Maintaining Existing Speeds on Other Roads*

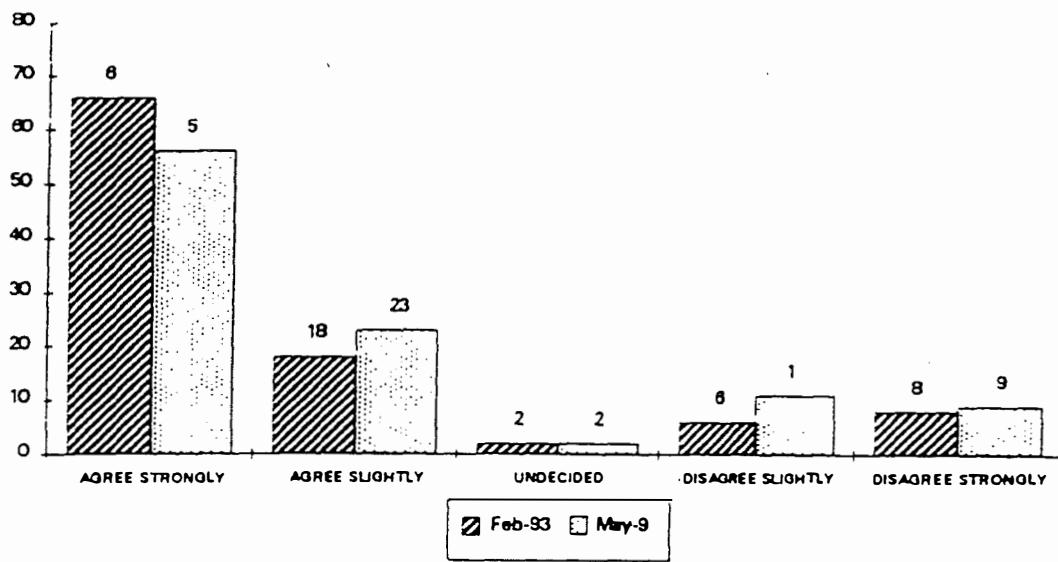


# NRMA Speed Survey

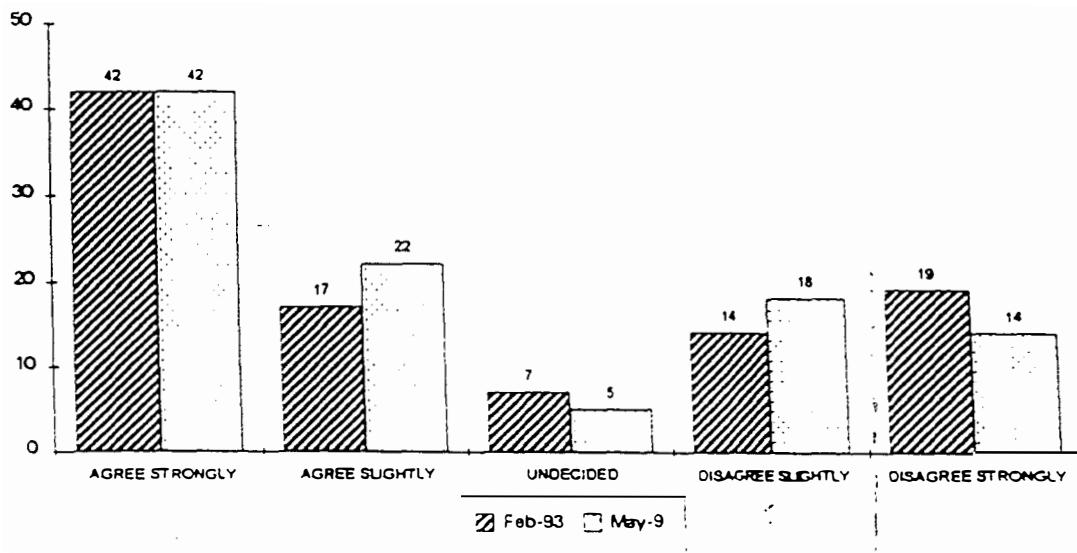
May 1995



## Agreement with Introducing Special Speed Limits for Different Conditions (eg low levels of light, heavy rain)



## Agreement with Increasing or Changing Enforcement/Penalties for Speeding

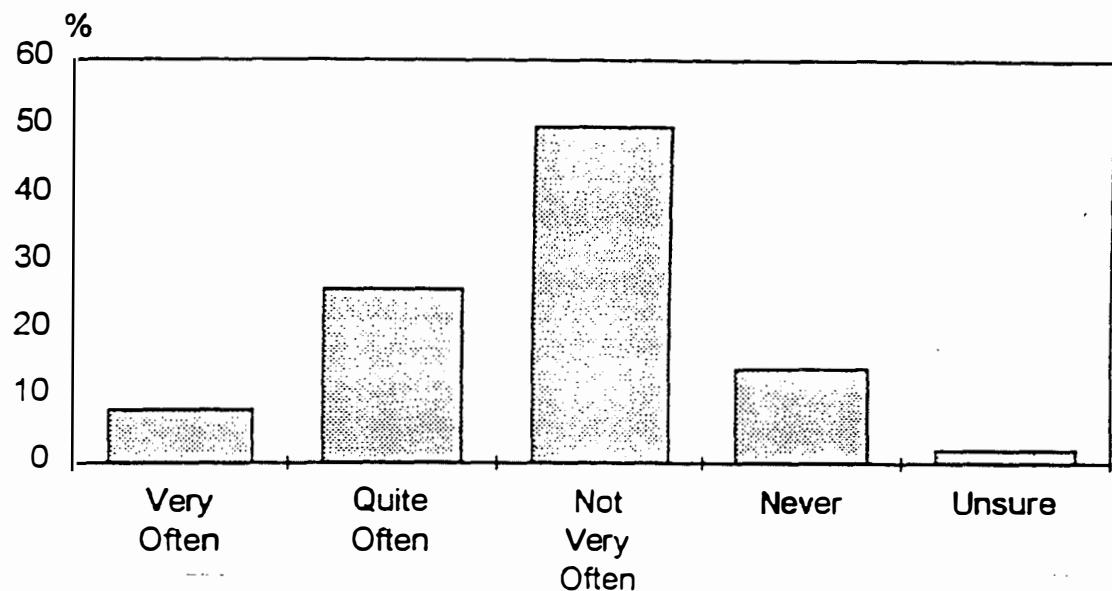


# NRMA Speed Survey

May 1995



## *Frequency of Not Knowing the Speed Limit Due to Insufficient Signposting*



## B.2 RACQ Market Research

- B.2.1. In October/November 1994, the Royal Automobile Club of Queensland (RACQ) included two speed limit questions as part of a mail out survey to 500 members. The RACQ questions read:

*"Do you think the general urban speed limit, unless otherwise signed, should be reduced to 50 km/h?"*

*"Do you think the general highway/freeway limit, unless otherwise signed, should be increased to 110 km/h?"*

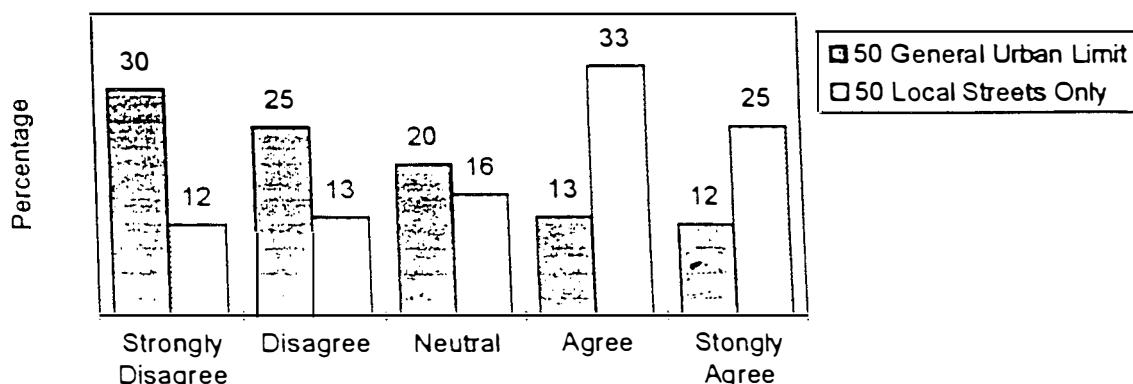
- B.2.2. Given the three options of Yes/No/No Opinion, the strong responses to the questions were:

50 km/h speed limit	79% No
110 km/h speed limit	81% Yes

- B.2.3. The response to the 50 km/h general urban limit question is clearly worth highlighting. NRMA feels the strong opposition to the proposal is based on the lack of understanding and method of implementation proposed. This is demonstrated in RACQ's later survey and the response to NRMA's Speeding Survey.

- B.2.4. During 1995, RACQ conducted a similar survey asking members to rate their level of agreement with various proposals to reduce speed related crashes. Preliminary results from the survey are as follows:

RACQ preliminary  
survey results

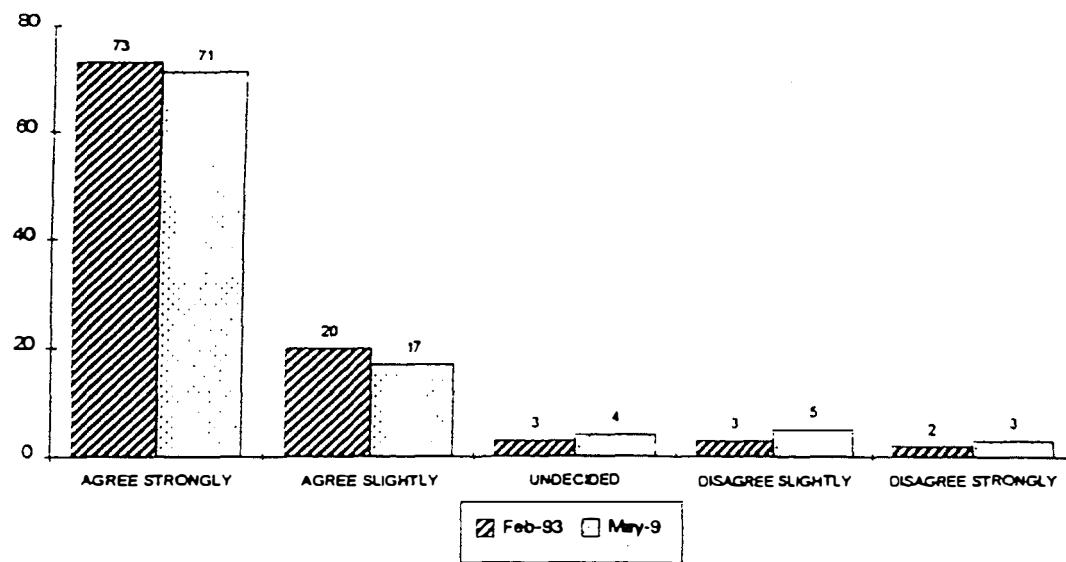


# NRMA Speed Survey

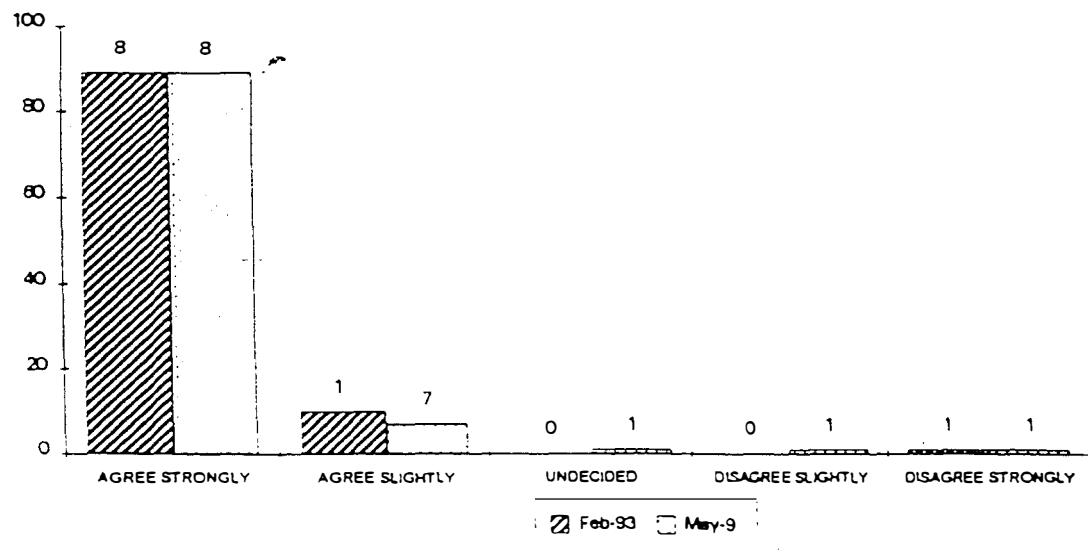
May 1995



## *Agreement with Introducing Defensive Driver Training*



## *Agreement with Introducing Road Safety Education in Schools*

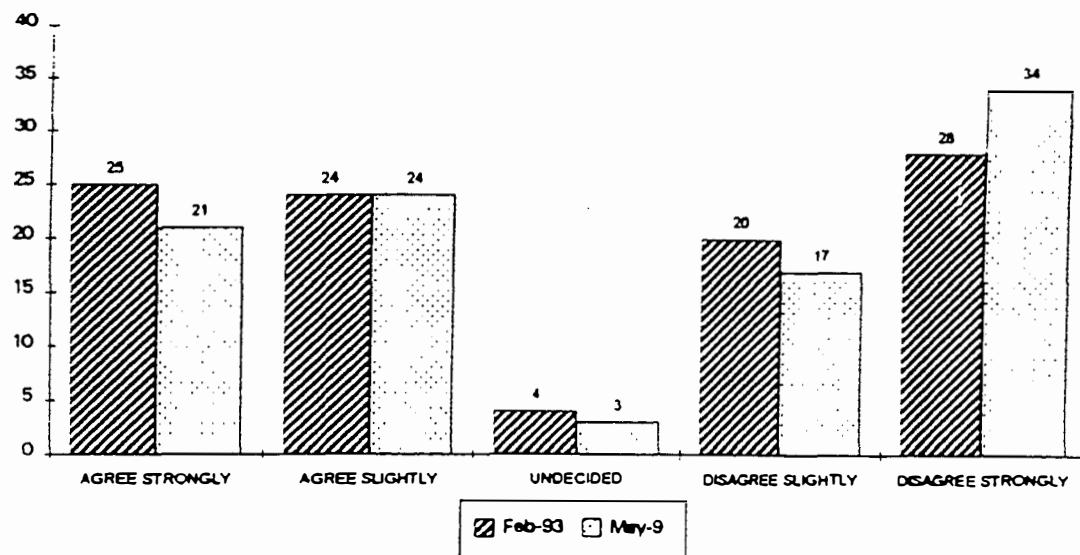


# NRMA Speed Survey

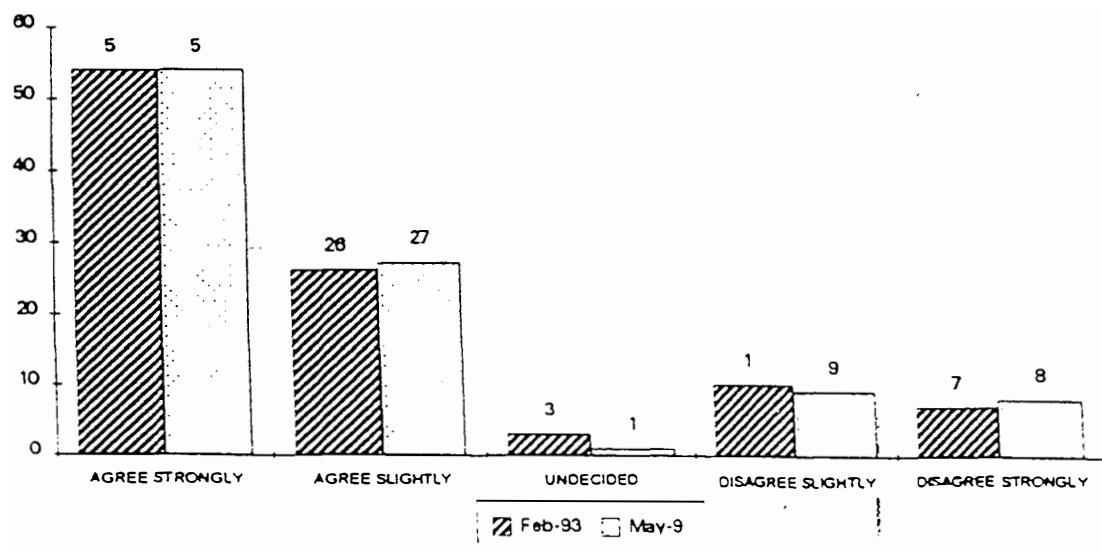
May 1995



## *Agreement with Introducing More Physical Means to Slow Traffic (eg speed humps)*



## *Agreement with Increasing Police Enforcement of Speed Limits*



## **Appendix C      RTA Criteria for Speed Involvement**

The identification of speeding (excessive speed for the prevailing conditions) as a contributing factor in road traffic accidents cannot always be determined directly from police reports of those accidents. Certain circumstances, however, suggest the involvement of speeding. The Roads and Traffic Authority has therefore drawn up criteria for determining whether or not an accident is to be considered as having involved speeding as a contributing factor.

**Speeding is considered to have been a contributing factor to a road traffic accident if that accident involved at least one *speeding* motor vehicle.**

**A motor vehicle is assessed as having been *speeding* if it satisfies the conditions described below under (a) or (b) or both.**

- (a) The vehicle's controller (driver or rider) was charged with a speeding offence; or the vehicle was described by police as travelling at excessive speed; or the stated speed of the vehicle was in excess of the speed limit.
- (b) The Vehicle was performing a manoeuvre characteristic of excessive speed, that is:

while on a curve the vehicle jack-knifed, skidded, slid or the controller lost control; or

the vehicle ran off the road while negotiating a bend or turning a corner and the controller was not distracted by something or disadvantaged by drowsiness or sudden illness and was not swerving to avoid another vehicle, animal or object and the vehicle did not suffer equipment failure.

**B.2.5. In summary, the RACQ results show:**

Approximately 58% of respondents agreeing with a proposal to introduce 50 km/h on local streets only. 16% of respondents were neutral on the idea.

Only around 15% of respondents agreed with reducing the general urban speed limit to 50 km/h, with 16% neutral on the idea.

**B.2.6. RACQ's findings reinforce the trends shown by NRMA's survey results with the exception of a much higher neutral proportion. Possibly due to the option of neutral compared to undecided.**