ROAD SAFETY COMMITTEE

Inquiry into pedestrian safety at carparks

Melbourne—27 July 2009

Members

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Witnesses

Mr G. Mavroyeni, Executive Director, Road Safety and Network Access, VicRoads; and
Mr D. Shelton, Director Road User Safety, VicRoads.
The CHAIR—Welcome and thank you for being here to assist our Road Safety Committee inquiry into pedestrian safety in carparks. If you could proceed with your presentation and we may ask questions as we go.

Mr MAVROYENI—John and the team, we thought we would make a short PowerPoint presentation basically to lead our discussion but please feel free to stop at any point and ask questions or make comments. That would be totally appreciated. It is only a very short PowerPoint presentation.

Overheads shown.

Mr MAVROYENI—A basic outline of the presentation this morning, we will look at the responsibilities for the design and safety of carparks, have a look at the crash data in carparks, the guidelines that are available for the design and operation of carparks and we will have a finish off with looking at opportunities to improve safety in carparks. I think it is important to get an understanding about carparks. The ones that we have presented in our submission are essentially those that are available for public access, so these are carparks like shopping centres, carparks at railway stations, highway rest areas, those sort of carparks. We have not included those that are gated or require access cards for access by various people, not for the general public usage. That is not part of our submission. It is also important to note that VicRoads has no statutory responsibility for the operation of carparks, but we are a referral authority. If there is a carpark developed abutting an arterial road, those submissions come through to VicRoads and our interest there is mainly about the safety and operation proposals for the entry and exit points to these particular carparks.

Mr TRESIZE—What about the highway rest areas?

Mr MAVROYENI—Highway rest areas are certainly very much a part of our responsibility. We have design and operational responsibility for those ones.

Mr LEANE—VicRoads are responsible—I understand what you are saying—for the entries and exits of the carparks, but the safety inside the carparks, as far as pedestrians and vehicles interacting whose responsibility is that?

Mr MAVROYENI—That would be the developer's responsibility and also the council who approved the permits to build such carparks.

Mr LEANE—Ongoing responsibilities? If the council gives its permit do they have any responsibility ongoing or is it the operator of that particular shopping centre?

Mr MAVROYENI—That is a good question. I am not sure what the arrangements are there, but you would think the developer, being their private property, would have responsibility for that. Council may be involved because of the approval process possibly, but VicRoads does not have any jurisdiction in private carparks.

The CHAIR—Having said that, George, there is certainly third party insurance through the registration fees.

Mr MAVROYENI—Yes.

The CHAIR—If a person is injured in a carpark—though it may be private—a pedestrian is hit by a car, certainly then the third party registration, in terms of the injuries sustained by that pedestrian, do you have an interest in that?

Mr MAVROYENI—The Transport Accident Commission certainly would have an interest in that. That is their jurisdiction. I think it would come down to whether that carpark is available for public use or not. That is something that the committee could perhaps clarify with the [TAC]. For carparks that are open for public utilisation I understand that the TAC insurance has coverage in those areas. In private carparks, such as accommodation and that sort of thing where you would need an access card, I am not sure whether the TAC coverage is in that area but that is something that the committee could clarify.
Mr TILLEY—We talked about responsibility under the act and that is the road itself being a road related area, you have ingress and egress from the carpark, the responsibility there and the legislation as it applies to road users within the carpark. There is a grey area about responsibility with VicRoads as a corporation.

Mr MAVROYENI—Yes. It comes down to the determination of that carpark as to whether it is there for public use or not. I understand the developers have the opportunity to take the grey out of it by gazetting a carpark for public road use. That is my understanding. That is one way of making it very clear whether a carpark does or does not apply under the Road Safety Act through the process of gazettal. In that process of gazettal, then it is a public roadway and the regulatory signs that are utilised in those carparks would apply.

Mr TILLEY—Would it be the case, by gazetting, including private carparks in Victoria, would each and every one of them have been gazetted?

Mr MAVROYENI—I do not think that is the case but that is something the committee could check. My understanding is that it is not always the case.

Mr TILLEY—Thank you.

Mr MAVROYENI—Looking at statistics—with all of our statistics that we are presenting here today covers a six-year period, 2003-08, inclusive. What we see here is the distribution of serious casualty crashes over that six-year period and basically what we have is about four fatalities which is less than one per year, and a total of 135 serious injury crashes over the six-year period, around 23 serious injury crashes a year. It is interesting the four fatalities are rather unique. I suppose they are all unique but this is rather unusual, so to speak. A driver had a heart attack and in that process accelerated and hit a pedestrian. A driver got a foot caught in a steering lock and accelerated and collided with a pedestrian. A pedestrian was hit by a reversing truck in a loading bay. A one-year-old child unfortunately was unseen by the driver, run over by a delivery truck. Very unusual in those types of fatal crashes.

Mr LEANE—Is there any breakdown in the serious injuries? Are they mainly pedestrian?

Mr MAVROYENI—Yes, these are all pedestrian crashes. In our written submission we gave a breakdown of the nature of those pedestrian crashes. On page 16 of our submission there is a breakdown of the nature of those.

Mr TRESIZE—You said unusual; I can understand the person who had a heart attack or the one who got a foot caught in the steering lock, but you mention a child was unseen. That is really on the cards all the time, especially in carparks.

Mr MAVROYENI—Yes. Two of those are extremely unusual and the other two are potentials.

Mr TRESIZE—The potential is there.

Mr MAVROYENI—Looking at further casualty crash data, the time of day that these occurred, and we see that about 75 per cent of these serious casualty crashes occur in the daytime; 19 per cent occur in the dark and about six per cent occur at dusk or dawn. I guess that is not all that unusual because you would expect the most utilisation of carparks to occur during daytime operations. If we look by gender, 58 per cent of serious casualties involve females. You would need to have a look at that to see what utilisation split there is between male and female. Intuitively in shopping centres you might expect more females to be using those carpark—and this is all carparks, not only shopping centres.

The CHAIR—The drivers involved in these collisions is there a gender breakdown?

Mr MAVROYENI—No, we do not have that information, John. If we look at it by age group, these are in five-year age groupings from zero to 90 plus. Generally, typically you see six or seven serious casualties in each of these age groups. A few peaks in the 15 to 19 age group; in the 45 to 49 are the ones that
stand out compared to others, but again difficult to explain why we see those peaks without some further information to relate to.

The CHAIR—Again you do not have data on the drivers, their age, not their gender?

Mr MAVROYENI—No, we do not have information on the age of the drivers. If we look at crashes in carparks relative to the road toll we can say if they were to be included they would make up .3 per cent of the total road toll on a yearly basis. We have also given a breakdown there of the road toll involving pedestrians, not in carparks but on the road itself and that is around nine per cent. Crashes involving pedestrians in carparks is a very small figure relative to the rest of the road toll. Pedestrian crashes in carparks are not included in the road toll.

Mr SHELTON—There are two principal sets of guidelines that are used in the design and operation of carparks: the first of these is the Australian Standard 2890. It covers off-street parking and it covers a range of aspects. The submission goes through each of those with a small amount of detail but I think the important thing to note is the bottom dot point there, 'Other than speed limit signs, the standard is silent on speed management.' The other important standard are the Austroads standards. Austroads, as you will be aware, is the association of road agencies across Australia and they maintain a very large suite of over 90 guidelines of traffic and road use management. They were recently updated and re-released this year. The traffic management guide is an important component of that. It is the basic reference guide for municipal engineers. It gets quite heavily used across the suite there. It includes a Part 11 on parking and it separately includes—I have not listed it here—Part 13 on pedestrians.

There is quite a bit more detail in the Austroads guides than there are in the Australian Standards where there is a high level of consistency between the two. Important features of the guides are recommending separate entrances and exits to carparks for vehicles and pedestrians; restricting pedestrian movement on circulation roads around larger carparks.

Mr LEANE—What is a circulation road?

Mr SHELTON—A circulation road is usually a road that will allow a car to find a carpark by moving right around. If you break down the hierarchy of roads within a carpark you will have access components and circulation.

Mr LEANE—Is that where the problem is, do you think?

Mr SHELTON—Where the crashes have actually occurred?

Mr LEANE—Yes.

Mr SHELTON—I think the problem is essentially one where you have the conflicts between the pedestrians and the drivers. Whether or not that is on the circulation roads or not, I could not say, but certainly as we said a little while earlier there is both good and poor design where if you are separately identifying pedestrians, making it clear to drivers, expect pedestrians, slow down for pedestrians, you can fit that into a circulation road as well as any other part of the carpark. Benefits of raised pedestrian footpaths are much easier visibility for motorists and pedestrians, and using layouts where parking aisles are parallel to the desired pedestrian route. I will also get to that in a moment. There are good and bad practices and the Austroads guide teases some of those out and provides some figures to demonstrate to designers.

We have listed in our submission some areas for consideration, opportunities for improvement, and then broken it up into vehicle engineering, road engineering and education. Much of the work around vehicle engineering and pedestrians has actually come out of New South Wales. The incident research management centre in New South Wales in 2002 presented a report that covered off some aspects of this area, finding that rearward facing video systems were quite effective to assist drivers. However, the feature that is perhaps more familiar to most of us are the proximity sensors on the rear of cars which are quite good for sensing static objects behind cars; found not to be so good for pedestrians which are both smaller in size and often moving. There is further work to be done there to determine whether in fact the combination of those two are the best
outcome.

Road engineering: Austroad and Australian Standards, I mentioned earlier, there is opportunity to provide a greater focus on speed management treatments and not just the installation of speed signs. It means low traffic areas, things like speed humps, are more effective to reducing speed. Finally in the education area, whilst guides and standards are available, the degree to which municipal engineers utilise those is somewhat unclear. There may be benefit in further promotion of those.

Mr MAVROYENI—To developers as well.

Mr SHELTON—Back to developers, yes. Of course, continuing our current work with parents, we provide a lot of information to parents through child care centres and the like, and it is often the parental supervision of children in carparks that might be at fault in these instances.

The CHAIR—In relation to some carparks I think you need to reverse into rather than drive into. Is there any data to compare the accident rates in those areas that you need to reverse into carparks rather than drive into carparks?

Mr MAVROYENI—We do not have a distribution of the forward entry and reverse entry ones. That is something we would need to have a look at. From the crash information, very broadly, I understand there are more forward-facing crashes with pedestrians than what there are with rear crashes, reversing vehicle crashes into pedestrians is my understanding. There is still a significant number though of reversing direction crashes into pedestrians nonetheless.

The CHAIR—The issue of—it is very prevalent actually—the amount of people that drive these all-wheel drive high vehicles. Some of them have the technology of the camera.

Mr MAVROYENI—They do, yes.

The CHAIR—It is obviously not on every single car.

Mr MAVROYENI—No.

The CHAIR—Because there are so many more high vehicles, the all-wheel drive vehicles, is that a bigger problem than we would have with—

Mr MAVROYENI—It really has not come through our statistics as such, John. Intuitively I think what you are saying makes some sense and that is why we are starting to see these innovations coming into the newer vehicle fleet, particularly the bigger ones, to improve the sensing and visibility of rear directions. There's been a little bit of work done, as we understand, with the sensors and cameras and we are understanding from the work that has been done that if you have a vehicle that is fitted with a camera and a sensor there seems to be greater reliance on the sensor rather than the visual camera shot. There are also quite a few new vehicles: my new Ford, for example, has a sensing device, no video footage at all but it has the sensing device to assist with safer reversing.

Mr SHELTON—The important thing there I think is that the cameras that are more effective for pedestrians. The reversing sensors are quite adequate for protecting the vehicle itself from fixed objects.

The CHAIR—in terms of enforcement on private carparks, who looks after the enforcement?

Mr MAVROYENI—If it is a carpark that is gazetted or is available for public use then the road rules apply so the police would have jurisdiction in those carparks. But as we have seen, the numbers are very small when you look at the comparison with the road toll.

Mr SHELTON—You would need a very intelligence based approach to it if you were going to take police off the streets and put them in the carparks. You would want to know that that is a very high-risk location and there is greater benefit being in the carpark than out on the street.
Mr WELLER—In your presentation you spoke about separating pedestrians and cars. That is always going to be difficult because there is going to be someone moving from their car to the pedestrian zone.

Mr MAVROYENI—It is an inherent part of carparks, isn't it, that you have both cars and people in the same space, yes. That is what the Austroads guidelines seek, to provide some guidance for designers. I refer you to page 26 of our submission which is good and bad practice of the guidelines. You can either have the pedestrians moving somewhat willy-nilly amongst the traffic or you can give them some dedicated space in the form of an aisle that minimises their interactions with traffic is a recommended approach.

The CHAIR—In relation to speed limits in carparks, is there a set speed limit or is there a standard?

Mr SHELTON—What the guidelines would be encouraging is as little reliance as possible on the speed limit itself. It is really about creating the environment that you feel you must travel slowly and not rely on the speed sign. Our speed zone guidelines do indicate that if you were to include a speed limit it would be 30 kilometres or less per hour. If it was designated to be a shared zone with pedestrians having priority, that is typically around 10 kilometres an hour I think.

The CHAIR—That would be horses for courses because in the carpark that I use, 30 kilometres an hour would be extreme.

Mr MAVROYENI—Yes, a lot of them are much lower.

The CHAIR—If they were to do 30 kilometres an hour they will not be breaking the law?

Mr MAVROYENI—If there was a regulatory sign there, that is correct.

Mr TRESIZE—I would imagine most carparks would be designated shared zone space where you have that 10 K.

Mr MAVROYENI—I am not sure about most but certainly a lot are shared zones, yes, these days.

Mr TILLEY—Understanding the responsibility of a driver of a motor vehicle reporting a crash where there is injury, property damage or whether there is an offence being committed, they have a responsibility to report that crash to police. In the capture of the statistics and the data that VicRoads has provided us with today, are there possibly incidents where there is a shortcoming or a shortfall in the figures in particular of injury, a minor injury, to a pedestrian there is no reporting to the police. Is there any anecdotal suggestion or evidence to suggest, somewhere along the line, a missing capture of data?

Mr SHELTON—It is not inconceivable but we have not become aware of that under-reporting you are suggesting.

Mr MAVROYENI—In the road crash data we know there is under-reporting of minor crashes or property damage or minor injury. We know that is there. That could well translate to the same situation in carparks.

Mr TILLEY—What I am probably trying to lead to is the sharing of information from Victoria Police and VicRoads with crash data collection. We see publicly that TAC presents road toll statistics of injuries, whether it be motor vehicle, heavy vehicle or motorcycle and so on. Is there a shortfall or a gap—

Mr MAVROYENI—Between organisations?

Mr TILLEY—Yes.

Mr MAVROYENI—No, it is the same information. We rely on the police information to come into our road crash information system and then it can be distributed in various ways. That information is then sourced by the TAC and back through the police as well for further consideration, strategy, policies, that sort
of thing. It is the same information set. We rely on the police information.

Mr Weller—You said in the presentation that you were only responsible for the carparks on the side of your roads, rest areas and that type of thing.

Mr MAVROYENI—Rest areas, but we also do look at access point design for developments that are abutting arterial roads.

Mr Weller—Who is responsible then for checking out carparks to see if they need the specifications of Australian standards?

Mr MAVROYENI—Like any building development they go through an application for planning and then for building permits. It is the municipal councils that do that checking. In turn they refer those on to VicRoads if it is abutting an arterial road. The developers themselves have a responsibility to design to the standards that we saw to make sure they have good design practices built in.

Mr Weller—Through the planning process that would be overseen that they adhere to that?

Mr MAVROYENI—Yes. The applications would go through to local governments and they would check those designs, I would expect, as part of the process before giving any permit.

The Chair—in relation to the road toll, the fatalities that occur at carparks, are they included in the road toll?

Mr MAVROYENI—They are not, no. Victoria is guided by the Australian Bureau of Statistics guidelines which exclude areas off roadways from being included in the road toll, open areas like beaches and private lands and that which we do not have any control or jurisdiction over. Under [ABS] guidelines they indicate we should not be including those areas in the road toll statistics.

The Chair—How about other states, is there a uniformity on that, or internationally? Do they do the same thing?

Mr MAVROYENI—I am not sure about internationally, but across the nation pretty much everyone is, as I understand it, very similar in the categorisation of crashes in carparks not being included in the road toll statistics. We could check that for you and come back to you.

The Chair—in the carpark that I use where my office is located; the other day I had an incident where a seven-year-old come out of nowhere and luckily I was doing five K’s an hour and if anyone else knew they could possibly do 30 K's an hour without breaking the law, I think that child would have been either seriously injured or killed. I am grappling with the issue that there is no set speed limit—30 kilometres is very fast, it is very dangerous. To think if people knew this and they knew that was within the boundaries of the law and they are not breaking the law, that would be a fairly dangerous situation.

Mr MAVROYENI—Really, 30 kilometres is the highest speed limit. These are only guidelines so it is not mandatory. As I say the best effect that we could have is to encourage designers to make the design of that carpark such that when you drive in there you would feel uncomfortable driving more than 10 kilometres an hour. That is really key to any operation of the roadway, and not have a reliance on the speed limit signs. You have to make the environment feel such that you should be travelling at a much lower speed and that would give us better outcomes.

The Chair—it is depending on commonsense; sometimes it needs some enforcement.

Mr Weller—What is VicRoads policy on speed humps within carparks and car stops which may be things for pedestrians to trip over?

Mr MAVROYENI—we do not have a policy on that as such, but what you will find is information in the Austroads guides where VicRoads is a contributor to that information. You would be looking at best
practice guides to avoid the tripping potential. The carpark design—circulation of roadways' the positioning of entrances relative to locating roadways—and best practice.

Mr SHELTON—That is right. That would normally include for tripping potential. There would be coloured line marking on the approach to those things to indicate there is a change in the elevation of the surface. That sort of thing is not uncommon.

The CHAIR—Are there certain instances where we categorise carparks in saying that they are shared zones? If it is a shared zone the speed is 10 kilometres.

Mr MAVROYENI—In the VicRoads guidelines on speed management we do have references to shared zone and this is where the pedestrians are deemed to have priority. In those circumstances we recommend a speed limit of no greater than 10 kilometres an hour.

The CHAIR—But it is a recommendation?

Mr MAVROYENI—It is in a guideline, yes, it is not a mandatory requirement.

Mr SHELTON—The guide is reasonably clear that rather than relying on speed limits, particularly at these load speeds, constraints to speed are the best way of managing speed.

Mr TILLEY—in an ideal world there is a separation of pedestrians from motor vehicles.

Mr SHELTON—Yes.

Mr TILLEY—Taking an occasional carpark, such as the MCG, where we see large numbers of pedestrians coming out and flooding the vehicles and trying to leave all at the same time, two things: the number of incidents of injuries, for instance, at Yarra Park. Do you have any idea of the injury count from, in particular, Yarra Park and the MCG?

Mr MAVROYENI—No, we do not have a breakdown on carparks in particular locations. We only have a grossed up number from the police reports.

Mr LEANE—if you go to an industrial premises, the amount of effort to separate forklifts from pedestrians is amazing. It is an interesting scenario we have with the carparks and the pedestrians in shopping centres, especially little kids. One thing I noticed at Crown Casino carpark—I was there recently, I was going to the aquarium—is, I do not know if they have something in the surface of the road but all cars make this screechy noise. If you are going five K's an hour and you sound like you are doing burn-outs, screechy the whole time, I think that is an interesting approach they have used as well, not only to slow cars down as far as the design, but I think that is very effective.

Mr MAVROYENI—I am not sure whether that has been deliberately done for safety or for some other structural reason.

Mr LEANE—if they have done it by mistake I think it is a good mistake. You cannot but notice if there is a car in your vicinity because of that noise. It would be an interesting thing for us to follow up.

The CHAIR—in some carparks I have noticed that there are designated walking areas for pedestrians and they are guided towards that painted path. It is usually yellow with stripes across.

Mr MAVROYENI—Yes.

The CHAIR—a lot of them do not have designated walkways for pedestrians to guide them to safety, and everybody understands that is a walkway for pedestrians.

Mr MAVROYENI—Yes.
The CHAIR—Do you think that should be implemented more across the board?

Mr MAVROYENI—Again I am not familiar with the guidelines intently but I would expect that that would be one of the best practice inclusions that you would have very clear demarked areas for pedestrians, a clear demarcation. That would be the sensible thing to do.

Mr SHELTON—The best practice is definitely to separate where you can, as again referred to in that figure on page 26 which I think is the sort of thing you are talking about. The degree of adherence to that I could not comment on, although I have personally noticed that not all carparks have that.

Mr TILLEY—As Shaun was saying—and we see new, innovative motor vehicles, for example, the hybrid motor vehicle which makes far less noise—is there anything that may be able to assist in relation to the future with quieter motor vehicles, as we spoke about, the noise that vehicles make on the pavement surface?

Mr MAVROYENI—That particular issue has been raised with us at VicRoads and also with vehicle manufacturers. It has been acknowledged that it is a problem and some work needs to be done to assist pedestrians, also vision impaired people. I am not sure what the answer is yet. I know the industry is aware of it and is giving it some consideration.

The CHAIR—Thank you very much.

Witnesses withdrew.

Hearing suspended.