TRANSCRIPT

ROAD SAFETY COMMITTEE

Inquiry into serious injury

Melbourne — 10 September 2013

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Mrs C. Thompson, acting principal policy officer, and

Dr M. Legge, road safety data analyst, Office of Road Safety, Government of Western Australia.

The DEPUTY CHAIR — I first of all extend the apologies of Murray Thompson, who is the chair of the committee. He was unable to attend unfortunately, due to illness, but he asked me to extend his apologies to both of you. We thank you both for joining us and for your contributions in this public hearing of the joint-party Road Safety Committee inquiry into serious injury. As you understand, the evidence given is protected by parliamentary privilege; however, any comments made outside the hearing are not afforded such privilege. The transcript will become a matter of public record. If I may ask you to you introduce yourself, for the benefit of Hansard, and advise the organisation that you represent.

Mrs THOMPSON — My name is Mrs Claire Thompson. I am from the Office of Road Safety at Main Roads WA at Waterloo Crescent in East Perth, Western Australia.

Dr LEGGE — Hello. I am Dr Matthew Legge. I am a road safety data analyst at the Office of Road Safety, based at Main Roads, Waterloo Crescent, East Perth.

Mrs THOMPSON — Matthew and I have both prepared the ORS submission. Matt has provided responses against the terms of reference (a) to (c), and I, Claire Thompson, have responded against items (d) to (f). We understand you would like us to focus today on the use of willingness to pay as a means of costing serious injury and the implications and experience in WA and also to speak to you about our experience and progress in data exchange in WA. Is that in keeping with your expectations?

The DEPUTY CHAIR — Yes. Thank you.

Mrs THOMPSON — Great. Matt will first speak to us about willingness to pay, and then we will both speak on data exchange.

Dr LEGGE — The adoption of willingness to pay in WA predated my starting to work at the Office of Road Safety, but from what I can reconstruct from the documents that were archived in our systems the use of willingness to pay was adopted because it was felt that the human capital approach was no longer considered best practice in costing crashes and injuries. That is basically because it was not as theoretically sound as the willingness-to-pay approach, one of the reasons being that a fundamental premise of public sector economics is that public policy decisions should generally reflect the preferences of those who will be directly affected by them, and in this case it is the individuals' preference for reducing their risk of premature death and injury due to road crashes.

It was also felt that the value that the community places on avoiding death and serious injury may be higher than the values that are covered by the human capital approach, which are basically focused on the future loss of income if a crash occurred. Also, road safety is felt to be a public good, and it cannot really be traded in conventional markets using the human capital values. The value of human life — there is no upper limit to that, so that was not really felt to be captured properly with the human capital approach. That was the main reason why it seems to have been adopted in WA. Also the road agency here, Main Roads WA, had started to work on adopting willingness to pay independent of what the Office of Road Safety was investigating at around the same time, I think for the same reasons we have just enumerated. Also, the use of the willingness-to-pay approach seems to fit in much more closely with the West Australian road safety strategy, Towards Zero, which is more of a person-orientated view that recognises the intrinsic value of a person's life. Within this strategy we have adopted a cost perspective that is looking at the cost to the community as a whole rather than the government or specific parts of government.

I also have some information here about, really, the nuts and bolts of how we adopted the willingness-to-pay values from the New South Wales pilot, if you want to cover that now or at a later time.

Mr TILLEY — That would be great now, thanks.

The DEPUTY CHAIR — Good. Thank you.

Dr LEGGE — So you want the details?

The DEPUTY CHAIR — Yes, thank you.

Dr LEGGE — Basically the New South Wales figures were the result of a pilot that was conducted by PricewaterhouseCoopers on their behalf. They used a stated-preference model approach in trying to get the

values that people were willing to pay to avoid death or serious injury. They basically designed two sorts of surveys, one specifically for road users, such as drivers and passengers of motor vehicles, and another one specifically for pedestrians. Because it was a pilot they recruited around 300 people. 213 of them were car users and 99 of them were pedestrians. About two-thirds of the car users were based in Sydney, so that gave them the urban costings, and the other 71 were from Bathurst, which was what they used for non-urban costings.

There are some critiques about the pilot study in that it is a pilot and the sample size is quite small and restricted to those two areas, so it may not be representative of the whole state. But at the moment it is the only thing available in Australia that actually records Australian values. That is the main reason why we are using it. They spent quite a bit of effort in designing the two sets of surveys for car users and pedestrians, trying to make sure that the information describing the safety improvements were expressed in terms that the respondents could understand. Also, quite a bit of care was taken in communicating risk in terms of the number of people killed and seriously injured on the roads within the survey.

Basically they set up two surveys, one for pedestrians and one for car users, and they asked the respondents to rate the relative safety of two sets of scenarios in each question — whether they would use option A or option B. They set up a path from place A to place B. They said the road was X kilometres long and on this stretch of road so many people were killed and so many people injured over a 12-month period; that was how they presented the risk. They also presented the costs involved in using that section of road in terms of tolls and also vehicle maintenance and fuel costs. They asked each respondent to compare two road scenarios of that type 10 times and that information was the basis of the surveys. From that they derived the costs and benefits for people from an urban and non-urban perspective.

I am not an economist, so I am not sure if that is the best way of going about collecting that information, but it seems that they did take a lot of care to make sure that it was phrased in ways that a normal person off the street could understand and respond to in a way that minimised confusion.

The DEPUTY CHAIR — Do you believe that it is appropriate to use values gathered in a different jurisdiction whose population may differ, for example, having different levels of risk acceptance?

Dr LEGGE — We had one of our local health economists, Dr Delia Hendrie, look into this — whether the New South Wales willingness-to-pay approach was appropriate for WA. In the document she produced she stated that they were suitable for use in Western Australia, even though there would probably be a different perception of risk and value of different sorts of scenarios, the main reason being that if the values are not an order of magnitude different from what would be expected in WA, they would be a reasonable estimate. The idea is that we would be using the New South Wales values until a national value produced by Austroads has been formulated, and that would have the same sorts of problems to a lesser degree. They would be surveying people from all over Australia, but for the moment the values from New South Wales are the only ones available and they are not thought to be too far off what they might be in WA. We think they are reasonable for use here — at least until the Australia-wide ones become available. I have some points about the consequences of adopting a willingness to pay compared to human capital approach. If you like, I could go to them.

The DEPUTY CHAIR — Sure. Yes.

Dr LEGGE — One of the things is that the human capital approach was thought to be understating the benefits being derived for the community from road safety initiatives, potentially resulting in road safety interventions not being favoured due to a low economic return. The higher values of risk reduction from fatalities under willingness to pay were resulting in higher benefit-cost ratios for road safety projects than the current ratios based on the human capital approach. When we were doing the calculations we found that a fatal crash under willingness to pay was of the order of about $6.5 million in 2011 dollars compared to about $2 million under human capital. If you have a way of ranking or prioritising interventions where the number of fatalities or serious injuries is the primary measure or one of the main measures for the prioritisation, you are going to have a change in the order of which problems get addressed first. That has been mainly used in the costing of black spot treatments and intersection rankings here in WA. We have been using it in reporting to the road safety council, to the Ministerial Council on Road Safety here in WA as well and in our annual reports. But mainly the willingness to pay has been used in the black spot and intersection rankings.

Mrs THOMPSON — We have largely finished on the willingness-to-pay area. I wonder if we could invite you to ask any further questions about that issue. Do you want to do that now, or do you want to wait until the end?

Mr PERERA — The committee is aware that serious injury costs under the New South Wales WTP approach are lower than those in the hybrid human capital approach. The committee understands that one concern that arises from this difference is that a WTP approach to calculating costs could lead to the prioritisation of projects that are fatality focused rather than serious injury focused, to the detriment of serious injuries. That prioritisation would be further exacerbated under the WTP approach as compared to the hybrid HC approach. What are your views on this issue? Has WA had to deal with this as yet?

Dr LEGGE — When we report on crash statistics here we have been moving towards more reporting on people being killed and seriously injured, combined. We did note that when we were comparing the human capital and the willingness-to-pay approaches to costings for different injury severities, the willingness-to-pay values for hospitalisations or other serious injuries were quite a bit lower than what was under the human capital approach. We think that because people do not really have a good grasp of what a serious injury as a result of a crash can mean in terms of injuries, the time spent in hospital and basically the long-term recovery afterwards.

Basically people's experience of that is maybe more towards shorter term things like having their appendix out or going into hospital for childbirth, so those are much more shorter term and they are probably their only experience with hospitalisation, so they underestimate the impact of what a serious injury as a result of a crash or a fall or anything else might cause. We did note that and we did realise that that is a potential problem with the interventions.

There is also some thought that the interventions for fatalities may not be the same for serious injuries for various reasons — say, for the role of alcohol. About 30 per cent of our fatalities are involved in alcohol-related crashes compared to something closer to 10 per cent for hospitalisations and serious injuries. We understood that that was a potential problem, but we have not actually had a way of addressing that specifically. We are aware it is a problem but we do not know how it actually affects road design interventions and stuff like that so far.

Mr TILLEY — Thank you, Matthew and Claire. Whilst we are talking about willingness to pay I want to expand on it, particularly in consideration to regulatory impact statements. The committee is aware of the principle and the adoption of the willingness-to-pay approach to calculate road injury costs in Western Australia. Are you able to tell us if the willingness-to-pay approach has been implemented as a formal method by which regulatory impact statements and other government evaluation tools, such as business case analysis, assess the cost of both fatalities and serious injuries?

Mrs THOMPSON — Probably someone who is a little bit higher than our level could report on that kind of information, but we can tell you that both human capital and willingness-to-pay approaches have been used side-by-side in our crash books. Until we are confident of moving forward, we are trying to compare the two approaches. We have not had any direct involvement in regulatory impact statement development. There might be other people more able to respond with that information.

Mr TILLEY — I will just continue on that a little bit. As you were saying in relation to that question, this might apply to a different section to yours but are you aware of other policy areas in the West Australian government that might be using the willingness-to-pay costing methodology?

Mrs THOMPSON — Certainly within Main Roads itself I know that Maurice Cammack, who is in the finance area of Main Roads here in WA, has been very involved in the use of that information. I think he would be a really good source to advise you on that.

Dr LEGGE — Claire is just checking his details now.

Mr TILLEY — Terrific.

Mrs THOMPSON — I have his phone number here if you would like it.

Mr TILLEY — Okay.

Mrs THOMPSON — It is 08 9323 4238.

Mr TILLEY — Thank you. Are you aware of any non-transport areas where the willingness-to-pay costing methodology might be used — outside of Main Roads?

Mrs THOMPSON — Not really, no.

Mr TILLEY — Thank you. You have to try. If you do not ask, you do not get anywhere.

Mrs THOMPSON — You are right.

Mr ELSBURY — Thank you for your time today. The committee understands that some willingness-to-pay values are comprised of both direct cost of crashes, such as hospital treatment costs, property damage and so on, and values stated by survey participants relating to what they are willing to pay to reduce their relative risk of injury or death. What, if any, are the issues around the potential of double counting of costs?

Dr LEGGE — My understanding from reading the documents for the New South Wales values was that it was only derived from the survey information and responses from the participants. They did not actually use the direct costs of hospitalisation, funeral costs, police attendance or anything like that; it was just purely based on the survey responses from the participants. I believe that the BITRE has a high [inaudible] of mainly human capital with some nominal values for pain and suffering that might come under the banner of willingness to pay, but I am not fully cognisant of that approach.

Mr PERERA — Your submission refers to a Curtin-Monash Accident Research Centre research report which recommends that cost calculations should be applied to both the injured person and the crash level. Can you expand on that recommendation, particularly the idea of calculating the cost of the crash level?

Dr LEGGE — When we publish the willingness-to-pay values and the human capital costs in our annual crash books and other publications we work out both the cost of the crashes and the cost of the individual injuries. The cost of the crashes is derived from the average number of people involved in the crashes and the severity of injuries. For example, say that in 2012 we had a fatal crash with on average 1.2 people killed, 0.5 of a person seriously injured, 3 people with minor injuries and a property damage component. To work out the cost of a fatal crash based on those figures we take the value of a fatality under willingness to pay and multiply that by 1.2. We then take the 0.5 for a hospitalisation and multiply that by the cost of hospitalisation and add that to the 1.2 for that fatality. We then count up the number of people with minor injuries and multiply that by the cost of a minor injury and add that to the total. Then we add a property damage component. That gives us the average cost of a fatal crash.

We basically derive the cost of crash from the number of people involved in a crash on average by the injury severity and then add a property damage cost of between $8000 and $11 000 depending on which year it is.

Mr PERERA — Thank you. How do you get the property damage cost? From the insurance?

Dr LEGGE — That was actually taken from the human capital. I will just see if I can find a reference to it in one of the Austroads reports. In the second paragraph of the second page of our submission, under section 2.1.1.1.1 'Human capital approach', we refer to a document called *Guide to Project Evaluation Part 4 — Project Evaluation Data, 3rd Edition*. That has the estimate of a property damage component of a crash in 2001 dollars, and then we just took that value and applied CPI value to it to adjust for inflation. That is where the property damage component came from.

Mr TILLEY — Would you rather just have a conversation and we can ask some questions rather than you just going through your submission? If it is all right, I just want to first move to term of reference (b), which is about processes, data sharing and linkages and those types of things. If you are not happy with that or you want to say a few words first followed by us asking you some more questions, I am sure the committee would be more than happy with that.

The DEPUTY CHAIR — Yes.

Mr TILLEY — I was just going to ask you some questions and then we can just talk around those questions if that suits both of you.

Mrs THOMPSON — All right. That is fine with us. If you would prefer to do that, go right ahead.

Mr TILLEY — Your submission referred to the development of an ERSIS. Can I ask what that stands for?

Mrs THOMPSON — It stands for enhanced road safety information system.

Mr TILLEY — Terrific. I am just writing that down.

Mrs THOMPSON — The origin of that particular acronym came from some work that C-MARC, which is the Curtin-Monash Accident Research Centre, did for us in 2011. I guess we really started to have a look at what an enhanced system might look like and what the frameworks might be that might have to underpin such a system. In looking at the frameworks, we are really trying to look at risk in the road safety sense. It means looking at the measurement of points in the system where risk may occur and where you may be able to intervene. That is considered to be a road trauma risk claim if you like. It means looking at target setting in road safety and the different levels at which you can set road safety targets, whether they are at the highest level of social costs or a more intermediate measure, which is the actual number of crashes and injuries, or intermediate risk factors such as seatbelt wearing and travel speeds. It could be looking at outputs or physical deliverables like things that the police do in terms of their enforcement activities or levels of advertising.

Considering both of those frameworks and also the safe system approach, which is pretty ingrained in those safety strategies across the country, gives us a big picture about the types of measures we might need to collect to be able to understand risk in the system to set targets and to ensure that we are considering the bigger picture for road safety. That is just a little bit of information about the genesis behind why you might want an ERSIS in the first place.

I did send you a copy of the report but probably not in time for you to read it before today's hearing, but I am hoping that it will get to you. The report outlines the different datasets we have in Western Australia and the current arrangements we have for linking the different datasets. It also looks at the key requirements for moving to either an interim system or an ideal system and the different things you might need to do in terms of adding other datasets, creating better linkages between those and also creating overall better interconnectivity. The report also looks at trying to develop a multi-user access system, which would facilitate the construction of a physical database that an IT service provider could then cost and scope. That is a little bit of information about that particular report.

Mr TILLEY — That is good so far. How long have you been working on this?

Mrs THOMPSON — It was tabled at the Road Safety Council in, I believe, November or December 2011. We spent a bit of time last year trying to have a business case developed, and we learnt quite a lot. We realised that in actual fact you could not jump straightaway to a technical solution; you really needed to take a step back and have a look at the various things that we currently have in place in this state and try to provide the justification for why you might want such a system into the future.

For us it is really important to be able to monitor and report on key performance targets against our road safety strategy. We also see that it could facilitate further cutting-edge research. It can improve our policy and make it more informed because it is based on better evidence and data and enables us to report better. It would also enable us to answer more ad hoc queries easily, and it could also be used as a planning tool over and above the need for just responding to road safety issues. We can see an awful lot of benefits in having such a system.

We learnt a lot in some of the early discussions we had last year. Now we are at a point where in April and May this year we commissioned the development of another business case; we have just received that. That has four different options to realisation — comparing either more of an off-the-shelf kind of product, doing nothing or a couple of different approaches that either build on existing systems or move into completely new territory.

Mr TILLEY — If you were a betting woman, where would you go?

Mrs THOMPSON — I think we have some really solid foundations in this state. If you can just give me a couple of seconds, I will just explain a couple of those. We are well recognised in Western Australia, at least the data linkage branch is, for doing data linkage. The origins of that were in the injury research centre — —

Dr LEGGE — The accident prevention research unit.

Mrs THOMPSON — Sorry, that was an earlier name. The road accident prevention research unit. I believe you have spoken to Professor Mark Stevenson. The next iteration of the research centre was the injury research centre. He headed up that centre for a while. Data linkage has been done in this state for a long time. Diana Rosman, who I believe is presenting to you as well, will give you some more information about how we are placed internationally with data linkage.

When the injury research centre folded, the Road Safety Council was still very keen to ensure that data linkage continued in this state, so since 2007 we have funded the data linkage branch to do a lot of data linkage. A significant piece of work that came out of the linkage and analysis of the linked data was done by Ann-Marie Chapman, Laura Miller and Di Rosman in 2011. It looked at comparing the different injury severity measures, particularly recommending the use of abbreviated injury scores coming out of the trauma centres and also the calculation of a derived ICISS score. We have some good foundations in data linkage. We have not done an awful lot apart from Ann-Marie's early work. But certainly, given the fact that we have now been able to include motor drivers licence information in the set of data links, we now have a lot more potential to actually do some more work.

We have also been hampered a little bit by national delays in providing some fatality information in terms of the information coming out of the ABS. We have also struggled a little bit with having data analysts who can actually analyse linked data. I guess in part you can possibly point the finger at us for not being a bit more cognisant of what you can actually do with that data. But I think it was only towards the end of 2011 that we actually received the Department of Transport licensing data, so we are in a fairly good space to start making some use of that.

The other major thing we have here in this state, and I do not believe any other states have it, is online crash reporting. Our Insurance Commission of Western Australia introduced the online crash reporting facility in 2010. That allows online reporting 24/7 of any crash involving an injury or property damage over $3000. Currently — I will call it the OCRF — the online crash reporting facility accounts for about 60 per cent of all crash reports. The remainder of the reports are collected on paper. Predominantly the paper-based forms are forms where the crash was attended by a police officer or where a member of the public has fronted up at a police station. It was thought that we would use that online crash reporting facility as a central crash database, but in reality it has really largely met the needs of both the insurance commission and the WA police service.

There was an intention to broaden it and allow an actual crash map and also road user movement codes to be introduced, and therefore to also meet the needs of our roads agency here, but budget cuts have kind of gotten in the way of that, so it has not proceeded. But there is an intention, I think, to create a crash capture centre for WA. That would predominantly meet the needs of three agencies — that is, the police, the insurance commission and main roads — and then, given the experience we have with other linkage, the health data can be linked in. So I think we have some fairly solid foundations on which to build an enhanced system. We probably need to start with what we have and with what our plans were around establishing a crash capture centre first. I guess we are building on existing foundations rather than starting from scratch.

Mr TILLEY — Western Australia should be congratulated; you are well ahead of the game. A lot of hard work and effort has gone into it. I want to talk to you about a little bit of money.

Mrs THOMPSON — Yes. We were reading the submission of Associate Professor Stuart Newstead and Professor Mark Stevenson yesterday, and I think their assessment of us only being a nose in front is probably fairly correct. We have this draft business case, and it has identified quite a lot of problems that we currently have existing. We do not have coordination, and formal coordination, between the agencies that collect the data and those that consume it. We do not have an overarching framework or a governance committee that can take a whole-of-government approach to data collection and sharing. We have different means and needs around categorising data, and we have some inefficient and costly systems and some incomplete data sharing. We are doing perhaps better than some places, but it will all come down to intent and funding in the end.

We have prepared a funding submission for our Road Trauma Trust Account for 2014–15, and we are anticipating that an ERSIS will be a multi-staged kind of process and will include four or five stages over several years. But we are not guaranteed that that initial funding submission will be funded or that we can make any progress into the future. The business case that we have had developed is a useful thing to have done. It

certainly enabled us to confirm the business of the project and also to review and reset the objectives of the project. We do intend to put this in front of our road safety council in October of this year.

I guess, for us, that will be a test case of whether or not we can move on into the future. They have already indicated their initial support for the C-MARC report in 2011, so now it will be up to them to put their money where they see a priority. Fingers crossed, they will see the value in it. The other thing the business case has done is it has actually tried to demonstrate some benefits in terms of the savings around analysts' time and the amount of wasted time that we have to expend in terms of sourcing information and cleaning it and ensuring that it is correct. That is one thing.

The other thing is the inefficiencies around the paper-based forms that WA police are forced to use. They may need to be consolidated into a system. I think we are on a fairly strong footing if we can sell this as something that has benefit across government. Whether or not the Road Safety Council sees those benefits, I do not know.

Mr TILLEY — When you talk about dollar amounts, do you have any forecast dollar amount in the costs and resources to implement an integrated crash dataset?

Mrs THOMPSON — That is the million-dollar question, is it not?

Mr TILLEY — Yes.

Mrs THOMPSON — In our business case they really warned us about that. They said that until we have actually gone through stage 1, which is the business analysis stage, and also the stage at which the vendors have had an opportunity to propose solutions in a competitive environment, we are not going to really have a good idea of costs there. I think there are some dangers, really, in putting up guesstimates because it may be that the project will be unfairly charged on the basis of those guesstimates. They may also limit further funding allocations and freeze the expectations around a system rather than allowing each individual stage of the project to live and die on the basis of its own justification. We currently pay about $300 000 to the data linkage branch, at the moment, per year to do data linkage for us. Obviously it could be as little as having to link the data or it could be a lot more than that, depending on the kind of system we end up with.

Mr TILLEY — Yes. You have spoken to it to some extent while we have been having this conversation now, but what is the motivation for developing an integrated database, given the capabilities of your linked data and data-linking branch?

Mrs THOMPSON — The data linkage branch sits within the Department of Health and we have found that in a lot of cases individual agencies have their own requirements and business needs. We have certainly found that with the online crash reporting facility housed with ICWA and developed with the WA police. At every point of including an agency the basis seems to refer back to the agency priority. It is not to say that the data linkage branch could not then have a whole-of-government approach. I guess there are a lot of other issues around privacy too. We need to decide whether or not we build a system that only requires us to link the health data on at the end or whether we start with the health data in the beginning.

If we do start with the health information as the basis, I guess it would make a lot of sense to house it within the data linkage branch. Given that we are probably going to start with a crash capture centre, there would be a lot more benefits in starting with other datasets that are established and then bolting on the health data, and getting permission to bolt that information on afterwards. We may be able to just strip off certain indicators. For example, the ICISS information is currently being updated at the data linkage branch. As an injury severity measure, at the very least, we could bolt that quite easily onto a crash capture centre. We would have a good measure of injury severity and then have a lot of crash-based information. There are many ways of skinning the cat, but I think possibly we would go with a crash capture centre first at this stage.

The DEPUTY CHAIR — Thank you, Claire and Matthew. We are just about there. I have two questions, following terms of reference (d) and (e). They have reasonably long preambles, but the questions are very straightforward.

Your submission refers to safer speeds as a key countermeasure that has the capacity to reduce injuries and death. This committee is aware that there are various approaches to speed management in different jurisdictions, including overseas. For example, the committee has heard that in the Netherlands urban speed limits are

30 kilometres per hour, while arterial or freeway roads allow higher speeds of up to 130 kilometres per hour. In other European jurisdictions the speeds tolerated on high-performing roads with advanced road safety characteristics are greater still. It appears that this approach to speed management is intended to deal with points of conflict between road users, particularly bicyclists and pedestrians, in urban environments, such as those at intersections, while allowing higher speeds on roads designed to cater for the safe movement of goods and people at higher speeds. What are your views on allowing higher speeds on arterial or freeway roads that are capable of allowing higher travel speeds safely, while reducing urban speed limits?

Mrs THOMPSON — I think we are very clear here in Western Australia about the fact that reduction in travel speeds does lead to reduction in injury crashes, and we are aware of a 5 per cent decrease in average speed leading to a 10 per cent decrease in all injury crashes and a 20 per cent decrease in fatal crashes. We are very clear that speed is a major factor in crashes in Western Australia and internationally as well.

In reducing urban limits we have certainly seen some success. When our 50-kilometre limits were introduced in 2001, we did see a 20 per cent reduction in all crashes that were on 50-kilometre and 60-kilometre roads, so we are very supportive of reducing speed limits in particular areas. We are very aware of what impact speeds are in certain crash scenarios that will lead to injury outcomes. Certainly in the case of vulnerable road users, it is very unlikely that they will survive much above a speed limit above 30 kilometres, by conflicts between cars for 50 kilometres, head-on conflicts between cars 70 kilometres, and then roads with no possible head-on or side conflicts between road users the impact speed that is survivable may be higher than that. Knowing that speed reduction actually works and that we need to minimise particular interactions, we are certainly keen on lowering urban speed limits.

Perhaps we are more hesitant when it comes to in any way increasing speed limits in the more freeway kind of environments. I have seen over the years that where speed limits have been increased they have been associated with increased death and serious injury, and it does require an extremely high standard of road to be able to allow higher speed limits to not lead to further crash and injury implications.

The DEPUTY CHAIR — What particular example can you provide us, Claire, in relation to increased speed limits that have led to increased fatalities or serious injuries? Is there any particular example you think about?

Mrs THOMPSON — I believe that in the Northern Territory they have had open speed limits for a very long period of time, and I think that has been one example where, when speed limits have been introduced, crashes and injury outcomes have reduced. I believe there are probably other situations around Australia where the speed limits have been increased. There are certainly experts in the field like Max Cameron at the Monash University Accident Research Centre who are probably best placed to answer these kinds of questions. Max has certainly contributed to a lot of the speed countermeasure work that we have done here in Western Australia and he has helped us to design a speed reduction strategy. You can find a lot of that information on our website. Rather than me speculate, I would rather you speak to other experts. The other place you could probably look to is the OECD. There is another OECD report on speed management, and I should imagine there will be examples in there that might be useful to you.

The DEPUTY CHAIR — Thank you for that, Claire. Finally, according to the submission from the Institute for Road Safety Research in the Netherlands, 'road crashes resulting in fatalities are different types of crashes than road crashes resulting in serious road injuries'. The institute suggests that the causes of crashes resulting in serious road injuries can be traced to system errors rather than extreme behaviour. On this basis the institute concludes that policy aiming to reduce the number of serious road injuries needs to be different to that aimed at a reduction of road fatalities. In contrast, your submission suggests that the WA Towards Zero strategy does not differentiate between countermeasures that target fatalities or serious injuries, the implication being that 'effective countermeasures will reduce both equally'. How do you reconcile these two positions?

Mrs THOMPSON — That is a difficult one. I did actually attend the national road safety conference in Brisbane a week or so ago, and I certainly did see Fred Wegman — I think he is from SWOV, but I am not sure which organisation he is from — present information that came out of the Centre for Automotive Safety Research in South Australia done in 2011 by Lisa Wundersitz and Matthew Baldock. They looked at the relative contributions of system failures and extreme behaviours in crashes in South Australia and they found that in fatal crashes there was more involvement of extreme behaviour. It is not that that information is new to

us; I guess we have a fairly small number of fatal crashes here in Western Australia and for us and the modelling that we have done we have needed to base it on larger numbers but have intentionally focused on death and serious injury in a combined sense.

I think we understand that that probably is in contrast to that information now. I guess we have taken advice from the Monash University Accident Research Centre in designing our strategy, trying to look at the safe system approach and trying to focus on each of the cornerstones and the potential for reducing death and serious injury. Maybe that is something that might need to be revised or considered in our review, which will happen probably next year. But I guess that was the best information we had in 2008–09 when the strategy was developed.

The DEPUTY CHAIR — Fair enough. Claire and Matthew, we thank you very much for the time you have put into your submission and your contribution today. We very much appreciate that.

Mrs THOMPSON — You are very welcome.

Dr LEGGE — Thank you.

The DEPUTY CHAIR — I confirm that you will receive a transcript of your contribution. Should you have to, you are welcome to correct any typographical or factual errors. If you have any additional information, could you send that to or communicate with the committee's executive officer or research officer, Yuki or John. We thank you again for your enormous effort.

Committee adjourned.