ROAD SAFETY COMMITTEE

Inquiry into improving safety at level crossings

Melbourne — 5 May 2008

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Mr T. Sargant, chair, Victorian Rail Crossing Safety Steering Committee, and

Mr G. Walker, chair, Railway Crossing Technical Group, Department of Transport.

The CHAIR — Welcome to the public hearings of the Road Safety Committee's inquiry into safety at level crossings. All evidence taken at this hearing is protected by parliamentary privilege as provided by the Constitution Act 1975 and is also subject to the provisions of the Parliamentary Committees Act 2003. Having said that, any comments you make outside the hearing may not be accorded such privilege.

As you can see, we are recording the evidence, and we will provide a proof version of the transcript at the earliest opportunity so you can correct it as appropriate. If you could start by stating your name, the organisation you belong to and proceed with your presentation, we will ask questions as we go.

Mr SARGANT — I am Tom Sargant. I am the general manager safety and asset manager of the public transport division of the Department of Transport.

Mr WALKER — I am Geoff Walker. I am the general manager and asset manager of VicTrack**.** I am also chair of the Railway Crossing Technical Group and a state representative on the ALCAM and VRCSSC national committees.

Mr SARGANT — We thought that rather than doing a presentation — you have seen that we have presented to the committee already and you have seen our submission — that the time would be best spent if you asked questions to Geoff and myself straightaway, if that is okay. Geoff has also brought a small package of information as well from the technical group.

Mr WELLER — Does the Railway Crossing Technical Group carry out any research?

Mr WALKER — The Railway Crossing Technical Group reports back to the Victorian Rail Crossing Safety Steering Committee, which Tom chairs. VicTrack delivers the upgrade program on behalf of the steering committee and also facilitates the undertaking of research and development.

Mr WELLER — So you are saying that VicTrack does the research and development?

Mr WALKER — Facilitates it. The industry does the research and development, but we will assist the industry by helping it through the type of approval process and working our way through the various stakeholders.

Mr SARGANT — So the technical group coordinates the research, amalgamates it all and discusses it across industry. Also Geoff liaises at a national level through ALCAM and VRCSSC and ultimately the ATC.

Mr WELLER — So is there any research that you are involved in at the moment in this area?

Mr WALKER — In the handout that I just gave you, probably the main one we are doing is Bentleigh where we have another 'train coming' warning device, a "Red Man" warning device, and also the safety gate latch. The safety gate latch is the first one of its type that we are aware of, and a mechanical gate latch at that. New South Wales has an electro-magnetic style.

The 'train coming' device is the first one in Australia and the "Red Man" was in other states, so we are following other states in that line. We are also looking at flange gap filler share-type technology to assist with wheelchairs. We are also having discussions about various types of track circuits which could cut down on cost and make it more cost effective installing upgrades at crossings. But there is a number in this document set out for various structures we are looking at.

The CHAIR — I just noticed in terms of the membership that makes up this committee, there is no trucking association or trucking group on there. Is there a reason for that?

Mr SARGANT — When the committee was first set up it was fundamentally dealing with the rail industry to make sure things could be used technically within the rail industry. We do have VicRoads representation and MAV as well so the road groups are represented. But the trucking industry, you are right, is not represented.

Mr KOCH — Is there no private sector there?

Mr KOCH — Connex is there, Pacific National is there, and that is where it slows down. They are rail users, as John indicates, but there are no road users whatsoever, especially in the private sector.

Mr SARGANT — No.

Mr KOCH — Is that likely to change in the future or are we going to continue down this line, Tom?

Mr SARGANT — It is something that we have recently started to look at, but we have not formally adopted it at this stage. But it is a good idea.

Mr KOCH — Obviously railway level crossing safety is associated with both parties; no longer is it the province of the rail industry.

Mr SARGANT — I agree.

Mr KOCH — I think these committee hearings have certainly brought back to the forums, and it has certainly been outlined, the concerns the rail industry has now that it never had due to the weight of some of the transports using roads. They are not being hit directly by the front of the train but, in some cases, are pulling into the sides of trains, which offer very little passenger protection. I support John's comments. I think it is high time that some of these dedicated we-are-rail technical groups in actual fact share some of the responsibility and duty of care across the — —

Mr SARGANT — That is where we have been looking for that input from VicRoads in particular but from MAV as well. I understand that VicRoads has had a number of forums which involve road users and we are hoping to get that. Other areas we have started to pick up on which are not of a technical nature are the human factors research as well. It is something we have done recently and have only just kicked off.

Mr MULDER — Can I just ask a question of either Geoff or Tom? Is there a dedicated research and development fund? If you are going to undertake some research — you are talking about this one here and another train coming — is that a individual project that is funded? How do you actually get funding to undertake that type of work?

Mr WALKER — The funding is all approved by the steering committee. We have a budget allocation for that.

Mr SARGANT — But the budget allocation has never gotten in the way. If indeed there is some worthwhile research to be undertaken and the budget is not there, we would make applications to see if we can get some more. Budget has never been a constraint for research.

Mr MULDER — We have had two groups giving evidence here today who have raised an issue about a lack of research and development work being undertaken, and in one case a lack of an actual facility on which you can carry out testing and I suppose basic research on new technologies. Is that an issue, do you think?

Mr SARGANT — From my experience I have not seen an idea yet which has not been able to be tested in the field and not warranted a specialist test facility. There is certainly bench testing that goes on for individual components to make sure that they meet the requirements, particularly with train detection. That is probably the most important aspect. There is a fair bit of bench testing before we actually go out in the field. But, no, we do not have a dedicated level crossing set up in an environment to conduct testing. But if the need arose we could establish one.

Mr MULDER — You could do it anyway.

Mr WALKER — We have not actually set up various devices. Egate is one location or at Yooralla for the special needs community. We set up at the appropriate location as required.

The CHAIR — Can you just expand on the low-cost level crossing warning device? When you say low-cost, we automatically think about whether it is non-fail safe or whether it is fail safe. Can you expand on that?

Mr WALKER — We work in partnership with SKM on all of this and Brent. So we are utilising SKM to do worldwide research or a search of what technology is out there. We have been trialling a low-cost device for a period of time, but we wanted to see what else is around the world. But as you said, the significant issue there is that it is non-fail safe. The current liabilities associated with that to the rail industry in particular, that is an impediment to bringing that sort of technology in, I believe.

Mr LEANE — What is non-fail safe? What component you talking about? Train detection?

Mr WALKER — Yes, train detection. The whole device needs to be fail safe — that is, if it fails, it fails in a safe manner.

Mr LEANE — So in that, i this the one in here as far as the Hilux system on trial near Creswick?

Mr WALKER — That is one of them, yes.

Mr LEANE — What are they actually trialling at Creswick?

Mr WALKER — It is a blind trial to check the reliability of the equipment. It has been going for quite a while. But what we have been doing is that we have said we will engage SKM and we have been working with SKM to do a worldwide research to see what is out there and bring it up to speed.

Mr LEANE — At Creswick — is that the train detection system?

Mr WALKER — It is the loop.

Mr LEANE — It that an inductive loop or something like that?

Mr WALKER — Yes, that is right.

Mr LEANE — Would that inductive loop be any different to what is used in the traffic signal system that we use here?

Mr SARGANT — It is not dissimilar.

Mr LEANE — And the problem with them is they can just tune off.

Mr SARGANT — And then if it does and a train comes along, you run the risk of the protection equipment not activating.

Mr LEANE — So are the results of that test far off?

Mr WALKER — It has been fairly reliable to date. What we are doing is looking worldwide to see what is around, because this has been around for a while now, and we need to make sure about what else is out there. There is a lot of technology around. It is a matter of doing the evaluation to work out what is most appropriate. We need to focus the resource on what is going to achieve the best outcomes. It is a matter of seeing what is out there and what is most — —

Mr LEANE — Tom, you were saying that is the important part as far as detecting the train — is that important because that is the most costly?

Mr SARGANT — No, because that is what fundamentally triggers the equipment in the first place. Everything else is in cabinets. The train detection gear is out in the weather, so making sure that — it has got to be low enough voltage so that you do not electrocute someone but high enough so that you are going to get a decent current across the shunt so that if it shorts out the system detects it. So with corrosion and all that sort of thing it needs to be pretty spot-on.

Mr KOCH — Geoff, what particularly does your group do that others do not do? It seems to be — in our deliberations — a lot of duplication in process across people who have made submissions. Where is your group's particular priority in the work you undertake versus that of other groups?

Mr WALKER — Are you talking about R and D in specific or in general?

Mr KOCH — Yes, R and D, and beyond R and D in actual implementation.

Mr WALKER — VicTrack is the agent for delivery of the program. We are delivering the upgrade program on behalf of the state. We report back to the steering committee and the working party to get general cross-industry input and discussion. What we do in R and D is that if there is any new technology we log it, so we

keep a record of when it came in. We then also contact the individuals concerned. There is a lot of new technology being suggested, some with very little information. Their pricing that they are putting in their documents — we look at it and it looks extremely cheap for what they are offering. So we log all applications or suggestions, and then we provide the information back through the technical group and ultimately back to the steering committee.

Mr KOCH — So yours is actually a drafting process? You actually do not do any R and D?

Mr WALKER — No, we do not do the R and D. We facilitate — —

Mr KOCH — But with the budget you have got, you would be very limited if you tried.

Mr WALKER — Yes, and with the amount of technology out there — companies come to us and we also research around the world to try and find out what is there and identify what is an opportunity. So we are not starting something from scratch. But with the technology we implemented down at Bentleigh we actually did provide assistance to a small company for the gate latch, for example. We did expend $10 000 or $12 000 to assist that company in refining the designs. We provide assistance and facilitation of R and D.

Mr KOCH — So do Connex or Pacific National or others make a contribution to your technical group? Will they do that stuff, or do you do that on behalf of VicTrack only?

Mr WALKER — The financial contribution comes through the steering committee, through the technical group, and then we have a technical working party. Connex and others give time and their expertise and input.

Mr MULDER — With these new and emerging technologies that get rolled out on an annual basis, does that create a dilemma in terms of the minute you look at something and think that perhaps it is worthwhile pursuing and then all of a sudden there is another new and emerging set of technologies and so on and so on and so on? I mean, at what point do you say, 'We are going to make a decision on something; we are not going to look any further than this?'

Mr WALKER — It seems to me it is with IT; it is with all types of new technologies, and it creates a bit of a dilemma.

Mr SARGANT — I do not think you can ever say we are going to stop at this and never look any further, because there will always be a better idea that comes along. Some ideas look really promising, and we will pursue those ideas some way, but the minute we say enough is enough I think we have lost the plot.

Mr MULDER — But does it stop you making an actual decision because there are always new and emerging technologies?

Mr SARGANT — No, what will stop it is either that it is not practical or it is not reliable. One of the greatest strengths of the rail industry, and it also can be an impediment, is that the amount of testing for reliability and continuous operation means that if something eventually gets deployed, you can be certain that it is going to be pretty much spot-on. At the same time that does create a long lead time to roll something out. That is where some of the bigger inroads can be made probably in providing signals to road users, some of the things we talked about in our earlier presentation, I think we have mentioned in here too, GPS-type things. There should be other opportunities there.

Mr KOCH — Geoff, I guess your particular group, and Tom and others at the forefront of all this emerging safety opportunity that we are trying to implement, has really hurried along in the last couple of years. When do you actually foresee some of these opportunities, like GPS and some of that stuff, actually coming to a head and being affordable to a position where it can go across your industry and the road freight industry? Are there any horizons there that we are trying to work towards or are we still trying to collate all this stuff and put it together for an outcome?

Mr WALKER — Given the proliferation of GPS devices, I think there is a real opportunity there that we could maybe see something towards later this year, early next year for rolling out if the research can be done to get — —

Mr KOCH — More in a pilot area or across the industry? Are we trialling it at that stage, are we looking at having coverage in five years time?

Mr SARGANT — I would like to have a trial some time this year and depending on the success of the trial, rolling it out later on. The beautiful thing about GPS devices is that they do not need to be fail-safe. It is a reminder to the driver, it is not something that is absolutely crucial. If someone does not have the GPS device turned on or it is not working, we have still got the flashing lights or the booms, the stop signs, the road hardware that alerts and ultimately protects the driver.

Mr KOCH — I think we are finding that ultimately it does not necessarily protect the drivers. The better coverage we get actually brings locations of trains to the driving public's attention more so than — —

Mr SARGANT — I think if you look at the number of successful crossings of level crossings that people undertake each day — the number of cars that cross the railway line and the number of trains that cross the road — there are millions and millions that occur successfully each year around the state. I think the systems that we have in place protect the road users. We need to get better but sometimes people make mistakes.

Mr KOCH — I concede that. By majority, the system certainly does. But that is not the area we are after. We are after the 2 or 3 per cent at the top end that give us the grief.

Mr SARGANT — Or 0.02 per cent.

Mr KOCH — Whatever.

Mr SARGANT — It is that small.

Mr MULDER — Tom, has there been any estimate carried out at this point in time in terms of the cost of implementing ALCAM if the actual cost of the works has been identified by the auditors?

Mr SARGANT — Geoff is probably better to talk about ALCAM in detail, but it does not say that an upgrade must be done here or you must have the next 500 level crossings upgraded to bells and booms. That is not the role of ALCAM. ALCAM is purely a tool to guide you in whether you upgrade one crossing over another.

Mr MULDER — But the information that has gone out to councils actually identified on behalf of the councils what works are their responsibility. Is that as I understand it?

Mr WALKER — There are two parts to ALCAM, and the part you are talking about there is really a systematic audit of the entire state to identify the issues. The point is the issues were there already and the responsibilities were already there, but it is bringing it to people's attention. As you said, there are quite a number of issues. Some of the issues are minor: it might be a sign with black on white versus white on black. In fact, a sign of non-compliance is one that has a crosshatch with a red dot in the middle instead of the whole thing being yellow; it says 'non-compliance'.

It is a matter of really doing a risk-based analysis of that and saying, 'Well, by spending money replacing a sign or putting a yellow dot instead of a red dot, is that improving safety?'. I would say not, so why should anyone spend money doing that?

However, if the sign is in the wrong spot or the mark is not correct, clearly that should be done. But we are at the stage now where we are collating information and we need to analyse it and do a risk-based analysis to determine where the money should be focused to get the best value in improving safety.

Mr SARGANT — And the responsibility to do that and the need to do that would have existed before ALCAM.

Mr MULDER — I understand.

Mr SARGANT — In terms of that, that is something that has not cost a cracker, and it is highlighted so that people are aware where things can be improved.

Mr MULDER — But eventually someone is going to have to undertake all of this work.

Mr SARGANT — But they would have had to have done it anyway

Mr MULDER — Yes, but now it has been highlighted to them, for instance a council, here are issues in relation to safety requirements at these particular level crossings, once they have been advised of it then naturally they will realise they have to do something about it.

Mr SARGANT — So they would not have had to have done something about it beforehand?

Mr MULDER — Possibly if they were not advised that standards had changed or, you know, maybe standards had changed or there has not been an audit carried out in the past. Here is the information in front of you. I know what you are saying: that if someone goes through after an accident and looks through those bigger issues and an investigation reports a number of issues, deficiencies, naturally they would be in trouble in that regard, but I am saying here when an audit is being conducted, here are the issues: this one has been identified; here are your absolute responsibilities; now we want you to respond to them. I would imagine that would have a stronger emphasis in terms of legal liability than — —

Mr SARGANT — I would argue, if I were a council, that I had those responsibilities in any case. It is fantastic that someone else has provided me a checklist to make sure I am carrying out my duties in any case, so here if there are a couple of things that I missed out, I will assess that. As Geoff said, if it is a case of a sign that provides the correct warning in accordance with the standard but is the wrong colour but still conveys a warning I would say, 'I have assessed that and I think that is fine'. But it has highlighted that maybe I should be a bit more vigilant with my tree pruning at this intersection, and I will prioritise that a bit earlier than I might have done.

Mr LEANE — Can I ask, has the rail crossing technical group — obviously the best thing to do is to separate the road and the rail, but the second thing and in the price range that they were looking at, is there anything better than bells and booms? Bells and booms with the fair dinkum rail circuit that triggers it and all that — can you see anything better on the horizon?

Mr SARGANT — Closure.

Mr LEANE — That is a separate issue — separation. Obviously we understand that is the number 1. In my personal opinion, I am struggling to find something better. There has been some dialogue about traffic lights instead of booms and bells, and you might want to comment on what that is, but I have seen so many people drive through red lights, and we all probably have, that I would be questioning if that is the answer, without a boom. So is there anything at you as a technical group are identifying that would surpass putting in booms and bells where we can?

Mr WALKER — No, not at this point in time. One of the issues being discussed is the fact that one of the advantages of traffic lights is that the light goes green, amber, red, so people clearly understand amber means you stop if safe to do, red you do stop. At a crossing with flashing lights there is no gradation technically or under the law: you stop, full stop, which is not practical if you are right on top of it. So there is some discussion about whether to put in an extra stage or, not an extra stage, but actually make that clear. There is technology overseas where they maybe have an amber light, so it is the same sort of thing; you get a bit more warning. But apart from that, at the end of the day there is not much discussion about anything else.

Mr WELLER — And GPSs will be complementary to those — — ?

Mr SARGANT — It would be an enhancement to what is already there.

The CHAIR — Apparently a GPS system installed by a Kalari transport company alerts heavy vehicles to the presence of school buses. Could that be possible to alert trucks of trains?

Mr SARGANT — Yes.

The CHAIR — Is that the trial we are talking about? The GPS trial that we are talking about, is that just warning people that they are coming to a level crossing?

Mr SARGANT — I guess there are two parts to a trial. The issue with having it that they are approaching a train is that where you have a train running parallel to a highway or something like that, people are just going to have a warning that they are following a train. They will either pull over and wait for the train to go — — so that is a technical issue we need to get around if we have it mounted on the train.

It should be relatively simple to have something at an actively controlled crossing that broadcasts to road users that there is a train in the vicinity. But passive crossings are something that we are looking at maybe having the GPS coordinates alert the road user when they are approaching. Again, we still have to do a bit more work as to how far out we alert them, how smart is the unit that is able to say that, how effective is it to the road user in receiving that message and what actions do they take.

Mr LEANE — Would it alert them that there is a train coming in time or just alert them they are coming to a crossing?

Mr SARGANT — At this stage at a passively controlled crossing it would just alert them they are coming to a crossing until we can find a smart way of dealing with the issue of where the train can send out a message to alert people that there is a train coming. That is the challenge.

Mr KOCH — Tom, is work being done at the smart end?

Mr SARGANT — Yes.

Mr KOCH — Or are we still looking?

Mr SARGANT — No. Work is being done in that we are talking to suppliers. We are seeing what is being done in Europe. Apparently it works in Europe and we are not sure whether that technology has been deployed in the equipment that is here. We are still asking what is able to be done with what — —

Mr KOCH — What is possible.

Mr SARGANT — What is possible not just in the Victorian context but also in the Australian context ultimately as well because we have to do something. There is no point in us doing solution A, New South Wales doing solution B and Queensland doing solution C. It would be like having broad gauge, standard gauge and narrow gauge.

Mr KOCH — As it was put on the table this morning, it is more important that we actually travel the highways not in the full knowledge there is a crossing there but that we are in danger of hitting a train.

Mr SARGANT — I agree.

Mr KOCH — We want to know where the train is, and I think that was really an important point that was made this morning. That is the end we should be working to in many ways in front of expending big budgets on making crossings more visible and what have you. I think that point was well made this morning. It is about what might be going to cross your path versus what you are going to run over.

Mr SARGANT — Also, for everything that we do we need to make sure that there is good solid research behind its effectiveness both prior to installation or prior to trial, and then a good evaluation of the trial to see whether it is really effective.

Mr KOCH — In saying that, the evaluation of ripple strips — where is that going?

Mr SARGANT — We have an evaluation program under way with the Australian road research board to look into that.

Mr KOCH — Any early outcomes?

Mr SARGANT — I have not had a report yet. Geoff? No.

Mr MULDER — The committee has heard evidence here from representatives of the ARTC who spoke about the Western Australian experience that in a very short period of time people who live particularly close become immune to the rumble strips and they are not effective. Have you gone back to Western Australia because I know when the rumble strips were rolled out here there were claims they were rolled out based on evidence and research that had been carried out in Western Australia?

Mr SARGANT — Yes, we have the research paper that Western Australia did and that was one possible concern, but it was not conclusive that that is the case. Obviously familiarity of everyone with crossings is always

going to be an issue no matter what level of protection or control we have. I do not know how we deal with that issue. I guess it depends on the route and who is more likely to use the route as well.

Mr MULDER — In relation to reflective strips on the goods trains, what is stopping that from taking place? It seems to be such a very small amount of money to put a reflective strip on the side of a goods wagon.

Mr SARGANT — They do have reflective strips.

Mr MULDER — All of them?

Mr SARGANT — Yes.

Mr KOCH — They are just too dirty. You cannot see them. They do not wash them.

Mr MULDER — That is the issue.

Mr SARGANT — That is exactly right. I was standing at Glenhuntly Road with my son who loves to watch trains. It was only on the weekend and I saw the Long Island train come up and it had reflective strips.

Mr MULDER — Prominent? Big reflective strips?

Mr SARGANT — A white strip. Three of them on each wagon. Some were very clean and highly visible. Some were not quite as clean as would have been desirable.

Mr TREZISE — Tom, what about the visibility of the locomotives — strobe lighting, livery colour?

Mr SARGANT — Livery is obviously one thing I thought was fairly good, and in the daytime it is pretty good. But lighting at night is important. All locomotives are fitted with ditch lights, which research had previously shown was the best solution there. I know strobe lights were trialled and there was concern about the perceived speed the train was coming at that could confuse motorists. I think that was the outcome from the research.

Mr TREZISE — It is amazing to note you can divide the submissions we have received into two categories. The transport industries, for example, support strobe lighting.

Mr SARGANT — Support it, yes.

Mr TREZISE — And the rail industry does not support strobe lighting.

Mr SARGANT — I am quite happy to revisit the research. This was done in the late 90s, and I am more than happy to revisit it, certainly if the road industry would be keen to do it. But again we need to make sure it is done robustly, because we would not want to deploy something that confused motorists and then led to a catastrophic outcome.

Mr KOCH — Naturally.

Mr SARGANT — At the same time if it is going to improve safety then let us roll it out.

Mr TREZISE — Even today we had Peter Cairney speaking against the lighting, saying that at night-time the larger lights were pretty much just dull with the strobe lighting, and he was saying clearly that was not as effective, as compared with Stuart St Clair from the Australian Trucking Association, who supported strobe lighting. That is pretty much reflective of what we have been hearing all the way along.

Mr SARGANT — Is he basing his evidence on research or just his opinion?

Mr TREZISE — No, his opinion.

Mr KOCH — It was anecdotal.

Mr WELLER — Mind you, if you are out in the country in the middle of the day and there is a tractor with a strobe light on the top of it, you see it for miles.

Mr SARGANT — I know exactly that. I spent a bit of time at my former brother-in-law's farm, and sitting on the tractor you see lights for miles, even plane lights, but the thing is — —

Mr WELLER — No, I am talking about if I am in a truck or a car and there is a tractor with an implement on the road in front of you — it could be a mile or so in front — you will see that strobe light.

Mr KOCH — That was the example that Stuart, as a practising transport driver, gave. He said that when he went down the road and there was a grader or shire truck with a strobe light on, there was absolutely no error about what was going on.

Mr TREZISE — You can pick it up for miles.

Mr KOCH — Yes, and you make provision for it.

Mr SARGANT — Maybe something that comes on in the country would be worthwhile. In the metropolitan area it may cause problems, because of the sheer number of trains. In country town centres people might see that the sheer number — —

Mr KOCH — But the strobe light, Tom, could mainly just come on as the flashing lights come on. It would not be left going on the train forever; it would be purpose used, I would imagine.

Mr MULDER — Locked to the whistle.

Mr KOCH — Yes, or something would activate it in that last 500 or 600 metres and then it would close itself down again and get on with its job.

Mr SARGANT — Linking it to the whistle might be a good idea.

Mr LEANE — We have had a couple of submissions about the rumble strips that come up when the train is coming rather than being there all the time. Have you had anyone submit to you about that?

Mr SARGANT — No.

Mr LEANE — I suppose, going back to what I asked you before, if you are going to put a power supply in and a train circuit detector, you might as well just put in some bells and booms, might you not?

Mr SARGANT — Yes, I think the motorisation of rumble strips going out several hundred metres would make a difference/

Mr LEANE — You would never see them. What they do is they have a pump and they come up when the train is coming.

Mr SARGANT — Right.

Mr LEANE — Have you not seen them?

Mr WELLER — The theory behind them is that rather than telling you there is a crossing coming up, they tell you there is actually a train coming, because the rumble strips rumble when there is a train coming; they do not rumble when you are just approaching the crossing.

Mr LEANE — Rather than all the time.

Mr SARGANT — Okay.

The CHAIR — Why would it be that some people get familiar with level crossings and therefore ignore some of the warnings, and yet when it comes to other roads the drivers are more careful about their driving?

Mr SARGANT — I guess because in the country areas where they successfully go through a crossing without seeing a train, continually doing that — continually either disobeying a stop sign or just going through a give way sign and not even looking — reinforces that behaviour. I am only speculating, but I have read some

research in this regard. Also, people are expecting trains within certain time bands during the day, so if there is an out-of-course train, that may catch that sort of behaviour as well.

The CHAIR — But it does not appear just to be that. It appears that somehow with the flashing lights and the boom gates some people just want to ignore the fact that that means stop. Why would that be?

Mr SARGANT — I honestly do not know. That is where part of the human factors research that we are embarking on will give us some ideas in that regard.

Mr WALKER — This human factors research, I think, is a key step. There is a lot of research around human behaviour but more about communication. What we are saying is that any engineering change we are making is to influence human behaviour and there is not much, if anything, on that. So we are really, as far as I can see, leading the world in looking at that relationship. We can talk about all different types of technology, but at the end of the day we are trying to influence human behaviour. Do rumble strips, for example, improve behaviour for better or for worse? Do wind barriers and flashing lights? We really need to understand that.

The CHAIR — We are talking about GPS, for example. Technology has developed so that in certain tunnels the radio frequency is disrupted by a message that comes across, and obviously there is the intelligent speed adaptation technology that is available. There are a number of things that are available. It just seems like we are going to trial something that is going to tell us that there is a railway crossing but that is not enough information. I am not sure what, in terms of the infrastructure requirements, would accommodate the actual warning that a train is coming to that railway level crossing. I just think that instead of spending so much money on other infrastructure works, maybe this is more feasible, and maybe this should be researched.

Mr SARGANT — Still, train detection is the key thing and if we have the message being broadcast by the train, that is one thing. If we have some form of train detection either through an induction loop or treadle or track circuit or axle counter or something, that might be able to provide a signal. As long as the road user is not reliant on that to determine whether it is safe to cross a crossing. As soon as they become reliant on it that lifts the standard that is required. I know that if I approach a set of flashing red lights and they are not flashing, I will not even stop. If I am a motorist, I will keep going. I do not know about all of you, but I think that is a fairly reasonable —

Mr KOCH — You only stop because they are flashing.

Mr SARGANT — Exactly. Therefore we have to make sure that they are certainly going to flash when a train is coming and if there is something wrong they are going to flash as well.

Mr KOCH — That is right.

The CHAIR — So basically you are saying we could never move away to a system that is non-fail-safe.

Mr SARGANT — I do not believe so. As a primary form of control, I do not believe so.

Mr LEANE — But as an advisory?

Mr SARGANT — As an advisory, yes. So even if we were to use a low-cost level crossing device, my personal view is that I would only deploy that in addition to a stop sign or in addition to a give way sign. It would not be big whooping flashing lights, but it would just be something else to catch the driver's eye, so that their primary warning is still the sign and the low-cost device would be a secondary warning to say, 'Hey, fair dinkum, you really need to stop here'.

Mr LEANE — Have you got the statistics on, I suppose over the last few years, how many accidents have occurred with people going through wigwag and not seeing the train coming the other way? I think another train coming sign that you are testing now — I know you are testing them for pedestrians —

Mr SARGANT — None for motorists. It is only pedestrians.

Mr LEANE — Yes, I would have thought it would have been a good idea. Are there many situations where we have had that — wigwags?

Mr SARGANT — Not for motorists; they are policed.

Mr LEANE — Not for motorists, all right, but with pedestrians, we have. That seems like a sensible tool to be looking at too.

Mr SARGANT — As I have said before, pedestrians tend to take their lives into their own hands far more than motorists. They think it is more important to put their lives in danger to catch the train or get to that appointment rather than be late but alive. It is human nature.

Mr KOCH — That is a harsh reality, isn't it?

The CHAIR — Thank you very much for your contribution.

Committee adjourned.