ROAD SAFETY COMMITTEE

INQUIRY INTO IMPROVING SAFETY AT LEVEL CROSSINGS

Melbourne — 7 April 2008

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Mr T. Ryan, general manager, asset management, Australian Rail Track Corporation.

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 further subject to the provisions of the Parliamentary Committees Act 2003. Having said that, any comments you make outside the hearing may not be afforded such privilege. As you can see, we are recording the evidence, and we will provide a proof version of the Hansard transcript at the earliest opportunity so that you can correct it as appropriate. If you could just state your full name and the organisation you belong to and then proceed with your presentation.

Mr RYAN — I am Timothy Francis Ryan and I represent the Australian Rail Track Corporation. We do not have a presentation for you today. We made a submission to the inquiry and I was just going to speak very briefly to that.

In that submission we identified three statements that we make about level crossings, the first of which is that we think there are a whole lot of driver behaviour issues and near miss issues and we refer to those in the submission as largely anecdotal evidence. Since that time the behavioural coordination group which is operating — I think the simplest way to explain it is that it is operating under the auspices of the Standing Committee on Transport — has conducted a national survey of driver attitudes to level crossings, including a telephone survey of about 4400 people, and some focus groups. I guess that, together with some draft work that has been done by the same group in looking at enforcement in some trials here in Victoria — a paper it has not yet published but presented some of it at a national workshop recently — has probably confirmed our worst fears about the issue of driver behaviour at level crossings.

The headline message from the national survey is that 25 per cent of all drivers self-admit they take risks at level crossings, which they would not ordinarily take at a road intersection. And the headline issue out of the enforcement study, where they instrumented a stop sign level crossing, was that a very large percentage of people do not stop at the stop sign, even after enforcement.

I think that is the first clear evidence of something that the industry has thought about for a long time — that these issues, or the behaviours that we see at level crossings, are quite different in terms of the risk people will take in their response to the treatments than they are on road intersections. I am not aware of any corresponding study that would say that that many people would drive through a stop sign at a road intersection, for example. The total number of incidents is not high relative to other road safety issues but understanding why people are doing what they are doing is very important. I think the model that was used by the industry was to have a look at how the road safety people investigate the causes of road accidents and incidents, and they do it in much the same way, in disciplined study. I think those results are very interesting and probably confirm our worst fears.

The other thing that has probably happened in the intervening period since we made the submission is that there has been a degree of crystallisation in approaching level crossing safety at a national level, including further initiatives by SCOT to put together the work that is happening in every state, because there are lots of things happening in lots of states. Australian Rail Track Corporation operates in five states, so we get to see a fair bit of what everybody is doing. To some extent there has been duplication of effort looking at issues even as elementary as education campaigns, although increasingly each state is using each other's now. But, for example, the use of red-light camera enforcement in the states is subject to investigation in nearly every state. That ranges from a first look at it to using those cameras for fines and enforcements in Western Australia, which they started last month or the month before.

Mr KOCH — GPS technology — how many states are investigating that, do you know?

Mr RYAN — I think everybody is having a look at GPS. Most people have had a look at it in the context of using it to warn about the proximity of the train, and most of that is pretty unsophisticated, so that the biggest weakness with it is that you can often tell that there is a train around but it is very difficult to tell when you are in conflict with the train. For example, if you drove from Melbourne to Adelaide you would have an almost constant warning that there is a train nearby but that is probably because it is on the track beside you. The fundamental problem they have had is working out when you are going to have a conflict with the train as opposed to the train being near you. I have no doubt that the smart young gurus will work that out with the TomToms and figure it out over time. The trains do not all have GPS on them yet, but it is not far away. I think that sort of technology is coming but it is not yet an immediate solution for anyone.

Mr KOCH — What do you as an authority on behalf of those five jurisdictions take on board as far as road safety goes? I am of the belief that in recent times the ARTC has been well rewarded by the federal government in relation to doing some of this research.

Mr RYAN — First of all, ARTC quite unashamedly argues that level crossing safety is a road user issue and a road safety issue — —

Mr KOCH — Regrettably I think there is a disparity between rail users and road users that is coming through in relation to all these submissions, and I personally do not believe we are going to move far forward

before there is a recognition we are talking about holistic safety, whether it is road or rail, and it is addressed in that manner.

Mr RYAN — I am happy to look at holistic safety but fundamentally most of our risk issues have been as a result of changes in road users — stacking and queuing and the permission for B-doubles and even normal trucks to operate on roads where no account has been taken of how you get on and off the road. In Western Australia, for example, you have got B-triple routes that go from point A to point B, but nobody has thought about what happens if that truck goes off that approved route onto a side route or a farm or anything else. I hear what you are saying, but we unashamedly run the position it is a road user issue.
Sorry, I forget the first bit of the question.

Mr KOCH — It is just with the resourcing, what are you doing in relation to the five jurisdictions?

Mr RYAN — I think there is a misconception that ARTC has been well rewarded. We receive no recurrent funding from the federal government. The only funding we have received from it is for major upgrade programs on the rail network, so we do not have access to recurrent funding from the commonwealth government. Where we have done upgrades that require changes to level crossings, we have done them as part of the upgrades.

Mr KOCH — ARTC also has assets that it is obviously very aware of and wants to protect. You made a statement in relation to driver behaviour. Your assets are exposed as well as those of road users. What is the ARTC doing about that situation from your own point of view, even if it is only to protect your assets? You do not see your responsibility mainly as a road user, as you have said, but your assets are also at risk, what are you doing about driver behaviour to give some assurance for your own assets?

Mr RYAN — We are active participants in level crossing initiatives in every state and we have funded education campaigns in the past where they have been targeted — particularly in New South Wales last year — at specific behavioural issues. We are quite happy to be a player in that but we take the fundamental view that we will control the risks that we can control but for others who control the risks, they should come to the party. The new national safety legislation finally provides a mechanism which forces road and rail to engage via a requirement to enter into interface agreements at level crossings. I think that is a major step forward and that now we are seeing a sensible discussion at the table because people have to go there.

Mr MULDER — In relation to last year, for instance, how many near misses did your operators report through the year? Do you know that?

Mr RYAN — I would have to go and check the numbers, but near-miss reporting is not a very exact science. There are two reasons. At various times, train drivers are very good at reporting near misses, but they do get concerned when nothing happens and so it drops off. I do remember the New South Wales number: there were 190 near misses, but they are not good numbers. There was one particular level crossing in the Hunter Valley. The name escapes me, but there is a road leading into an air force base and there was a particular problem there, so the drivers reported that aggressively for six months because the people at the air force base said there was not an issue. The near-miss data is not flash.

Mr MULDER — A bit subjective.

Mr RYAN — Yes. The more useful data, now that some science from road safety is being applied, is the sort of thing we have seen in the Victorian enforcement study. As I said, I think it is unpublished at the moment, but it instrumented a level crossing and showed us how many people do not stop at the stop sign. That really is the sort of data we need. There are better numbers in urban areas where video camera technology has been used.

Mr KOCH — Just to continue my line of thought in relation to your own assets, I am disappointed in not only your own submission but the attitude of others in relation to rail and the protection of your assets. We around this table have heard repeatedly about road users that historically if a car was hit it was like hitting a rabbit, and the train came out the other end successfully, with not a lot of damage. All that has changed now, with the weight on the road, with B-doubles. It does not have to be even a B-double — it can be just an articulated vehicle — and your assets are actually being bumped off the railway line. Earlier today we heard, and we were aware of it, that the Lismore accident in Victoria 18 months ago came to a cost of $30 million, of which only possibly $10 million will be recovered. I think somewhere along the line that there has to be greater dual effort between rail and road users to try to not only create some safety for road users but also look after the assets of both clients.

Mr RYAN — I accept that it is true that with passenger motor vehicles typically the outcome is not a lot of an issue for the railway; it is just an operational interference for the most part. With the big heavy truck accidents, they are causing the industry serious costs. The question is: where can you do the most about it? It is very difficult to control the train. Other than fundamentally slowing trains down at level crossings, can you reduce the consequence from a rail perspective of those heavy vehicle accidents? We have a lot of them that even happen at controlled crossings. Increasing the engineering focus is not necessarily the answer. We run

the position that it is a road user issue because we have not been able to get people to engage. The road authorities have not engaged; the road safety people have not engaged. We have to work with them — we accept that. We ought to look at engineering solutions — we accept that. But in the end a lot of the issues that we face as to our primary risk to the assets can be dealt with other than mucking around with the railway, frankly. The biggest risk we think we face now is stacking, where the B-doubles on the highway are going to hanging back over the level crossing. It will not matter almost what warning system we have got in, the freight trains will not stop.

Mr MULDER — Is there any evidence at this point in time that rumble strips will be playing any part in reducing near misses at level crossings?

Mr RYAN — My understanding of the research — and I come from Western Australia so I tend to know a bit more about Western Australia than I do about other states — is that where the research was done on rumble strips at relatively low train frequency stop signs in country areas, the issue that you are trying to overcome is driver familiarity with the level crossing. Therefore the rumble strip effect wears off very quickly — that is, they are regular users of that crossing, there are low train numbers and so the effect of it wears off very quickly.

It is interesting in the national behavioural study — and I would have to check the exact number — something like 20 per cent of people admitted that they had not recognised they were about to cross a crossing until they had gone over it or gone through it. They just get so used to it that they drive down the road and go across the level crossing without any recognition that they have seen it.

Mr LEANE — Do you know of anywhere in the country where there is being tested the low-cost level crossing stuff with inductive loops and that sort of thing?

Mr RYAN — The fundamental problems with finding a low-cost level crossing are three things: one, how do you tell the train is there? The conventional method of detecting trains with track circuits and a signalling system like you have in the metropolitan area is very expensive. The largest part of our network has none of that on it. It is dark territory in that sense. You have to be able to detect the train, and then you have got to be able to have a warning, so you need something that is low power and capable of running on solar. There was a trial done in South Australia of inductive loops, which are basically what controls traffic lights. There has been some work in Victoria. However, I am aware of where inductive loops are being used in Western Australia for other than a level crossing — that is, to control a set of self-restoring points. I do not think that technology is very far away.

The issue with low-cost treatments has always been the argument about fail-safe — that is, you have to have double and triple redundancy so that the warning never fails. We have a view, which we have expressed to the Department of Infrastructure here in Victoria, that it is possible to have a non-fail-safe — therefore, a lower cost technology that has the sort of reliability that you see at traffic lights — which would enhance the primary warning. If you disassociate it from the primary warning, then if it fails you still rely on the primary warning.

Mr LEANE — The primary warning being the stop sign.

Mr RYAN — The best way I can explain that is the stop signs. So you have a stop sign with some enhanced warning that is different to the stop sign, like the flashing advanced warning lights. On the day it does not work, the stop sign is there. Frankly, fundamental principles like this we would need to go back to the road industry for. If the traffic lights are not working, you fall back to the 'give way to the right' rule, unless there is some other primary indication. We think the suggestion that has come out of Victoria that we have a look at something that is closer to an alert and is as low as reasonably possible to enhance the primary warning would get us somewhere.

I think inductive loop technology is a very good source. There was a presentation at the ITS workshop of one company that had used inductive loops on the wall of a tunnel to detect a train, which seemed to me to be very interesting, but at least you can get that low cost and low power. There is a famous site in Western Australia which was the subject of a three death accident, and it cost $420 000 to get the power in there. If you think about the 9000 passively protected public level crossings in the country and start talking those sorts of numbers, you are not going to get there.

The CHAIR — Tim, are you aware of any technologies that could be implemented at level crossings that would make them safer?

Mr RYAN — I certainly think advance warning signs are, without doubt, a major improvement, even at automatically protected crossings. Again, the Western Australians have an example — —

The CHAIR — Sorry, what did you say, the VS?

Mr RYAN — Sorry?

The CHAIR — What sort of crossings?

Mr RYAN — Advance warning signs. Even at active level crossings, which trigger another set of

circumstances — and they have lots of examples where they had their orange flashing lights. At one level crossing called Liverseys they had had five deaths and 11 major accidents on a highway — boom gated, the whole lot. Advance warning signs have not had an incident at that level crossing since. One of the problems about the stop sign level crossings is that there are not many trains. So the event of a car and a train arriving together is quite rare, even on some of the major highways. So clearly people are not looking at what we have got out there now. We need to figure out a way of triggering some other warning, and I think that is probably the best way.

The CHAIR — The ARTC I think upgraded the interstate rail communication system to use the new 3G and 850 technology. Can you expand on that?

Mr RYAN — We wanted to have the capacity for digital transmission to locomotives across the whole country, and so we have entered a deal with Telstra where will buy the 3G services, and in the areas where there is inadequate coverage from their commercial perspective — for example, on the Nullarbor; there are not a whole lot of mobile customers out there — we are paying $50 billion to put 3G in everywhere where there are spots that Telstra would not normally put a commercial tower in. So by the middle of next year we should have the entire interstate network with 3G coverage, and part of that program is that we are funding — again, I have a few too many numbers in my head to remember them accurately — about 440 radio conversions in the rolling stock to give us digital communications with the trains and GPS.

The CHAIR — Would that then lead to the ITS? In terms of intelligent transport systems, is there a possibility that the train could somehow communicate with a vehicle to notify it of its imminent arrival at a certain level crossing?

Mr RYAN — Yes, there is. In fact one of the papers at the recent ITS conference that was in Melbourne — I have to remember which city I am in! — actually was one of our contractors that was putting that system together and it talks about the option for using it. The issue is knowing where the road vehicles are going to go. We could potentially have a GPS signal from the train, but then how do you interpret that in the car? At the moment all they have got is proximity, and the difficulty with that is that 95 per cent of the time the train and the vehicle do not come together, but if a vehicle turned off the highway and had a TomTom or one of these navigation maps, then you might be able to do something smart with that. I think they are real possibilities for the future. Certainly the digital capability is coming; the question is: how quickly do you get all the cars fitted out? With respect to the farmers who I used to be employed by, the old farm utes do not exactly run around with a whole lot of modern technology. It might be a few years, but those sorts of possibilities are real.

The CHAIR — It could be the radio that is on the vehicle.

Mr RYAN — Yes.

The CHAIR — It does not have to be a GPS.

Mr RYAN — There are systems obviously in tunnels and other places that turn things on and off.

Mr LEANE — But what you are saying, Tim, is there is a problem with the signal that comes from the train that will jam your radio. If you are running parallel and, like you said, 95 per cent of our rail runs beside a highway — —

Mr RYAN — Yes.

Mr LEANE — You are getting a signal all the time.

Mr RYAN — It will frustrate people, but I am sure the — —

The CHAIR — You could have a 5-minute break and wait for the train to go, I suppose.

Mr RYAN — I am sure the smart people will figure out that stuff over time. I think those sorts of capabilities are great. They are not going to get us there tomorrow morning, but they are coming.

The CHAIR — Thank you very much for your attendance.

Mr RYAN — Thank you very much.

Committee adjourned.