COMMONWEALTH OF AUSTRALIA

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HOUSE OF REPRESENTATIVES

STANDING COMMITTEE ON TRANSPORT AND REGIONAL SERVICES

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HOUSE OF REPRESENTATIVES

STANDING COMMITTEE ON TRANSPORT AND REGIONAL SERVICES

Wednesday, 3 December 2003

Members: Mr Neville *(Chair)*, Mr Gibbons *(Deputy Chair)* Mr Andren, Mr Haase, Ms Ley, Mr McArthur, Mr Mossfield, Ms O'Byrne, Mr Schultz and Mr Secker

Members in attendance: Mr Andren, Mr Gibbons, Mr Haase, Ms Ley, Mr Mossfield and Mr Neville

Private briefing: Train illumination

WITNESSES

Committee met at 9.36 a.m.

BROAD, Mrs Merrilea Jean, (Private Capacity)

DUGGAN, Mr Gregory Jason, (Private capacity)

MORRISSEY, Mrs Karen, (Private capacity)

CHAIR—I declare open this committee briefing and inform our visitors today that this is part of an investigation the committee is holding into train illumination. We have not yet decided whether to formalise this by holding a full inquiry, but we are looking at aspects of the problem. For that reason, we have asked Hansard to record our activities today. We may use that as background material if we do formalise an inquiry later. Welcome to today's hearing. How would you like to handle this? Would you like to lead off, Merrilea?

Mrs Broad—Yes. I would firstly like to thank the members of the committee on behalf of my family and the Jensen and Smith families for allowing Karen and I to attend this morning. On the screen you will see the location—it is a map which will give you an idea of where the rail line is located. It is quite a busy area where our particular accident happened. On the screen you will see photos of the crossing. They are in sequence going down to the crossing. I would like you to keep in mind that this is classed as an open road approach. In other words, there is a speed limit of 110 kilometres an hour.

I have asked this question of many people in the course of the last three years and I always receive the same or very similar answers. If, when driving a car, you look in the rear-view mirror and see a police car with its flashing lights on, what do you automatically do? Someone said, 'Tromp it,' but that was a bit facetious, I think. My automatic reaction, as was the case with everybody I asked, is to take your foot off the accelerator, slow down and become very, very aware of your surroundings. This is exactly what should be happening at all crossings but especially at passive crossings like the one in the photos. We need to identify the train as the hazard, just like overwidth vehicles, mining vehicles, emergency vehicles, shire vehicles, farm vehicles, planes, boats and railway maintenance vehicles. They all have strobe or rotating beacons to warn us of the hazard because they are attention getting.

The upgrading of signage, the removal of vegetation and the installation of rumble strips are necessary for the driver of the vehicle to be able to identify the crossing. The strobe lights needed on trains are to identify the train. It is as simple as that. There are two issues. The side view of the train, if it has strobe lights, allows the driver of the vehicle as he is approaching the crossing to know that the hazard is there. The driver is then warned before reaching the crossing. During our inquest, the state coroner, Mr Alistair Hope, very quickly identified this and stated:

> A USA Federal Railroads Administration Report has concluded that head lights of the type on the locomotive in question does not provide an effective warning to motor vehicle drivers unless the motor vehicle is stopped at the crossing. It is clear these studies were known to Westrail for at least five years before the crash and in that circumstance it is difficult to understand why no additional lights were in use on the train to make it more visible.

CHAIR—I do not want to sound mawkish, but what was the nature of the crash? Did the car go into the side of the train or did the train go into the car?

Mrs Broad—I can answer that now, but I will explain it later on, if that is okay.

CHAIR—That is okay. Would you point out where the crossing is.

Mrs Broad—That is the whole point.

Mr HAASE—The answer to your question, Chair, is no.

Mrs Broad—I would really rather leave that. You will see it. Everything that is on here is in your notes, so you can refer to it later. He also stated:

It appears likely that the inadequate train lighting was a factor in the crash and resulting deaths.

Crossing lights, or ditch lights, have now been installed on all WA trains. As you can see on the photo, they are at the front bottom of the train. There is an explanation, but it is also in your handout. Once again, we have the attention to the front of the train for the driver of the vehicle who is stationary at the crossing. The state coroner stated:

Such lighting should be in addition to and not as an alternative for ditch lighting.

I make the point that it is now classed as crossing lights. The only difference is that they cross over. The ditch lights were straight in front. These give you a cross-eyed effect. It is as simple as that. There has been a lot of confusion with the two different names.

Mr MOSSFIELD—Is it of any advantage with the crossing lights?

Mrs Broad—I personally do not think so, but they seem to think that it is a better effect. Instead of the ditch lights, which literally did tend to go down a little more into the ditch, which is what they were made for, these are just giving the cross-effect so that you are not losing supposedly one light across on the other. But that depends.

CHAIR—Are they on all the time, or only when they come to crossings?

Mrs Broad—Supposedly only when they come across the crossings. They should be flashing on and off. In the WA state coroner's annual report of 2001-02, which was tabled in parliament, he stated:

Unfortunately, it would appear from the correspondence from the families of the deceased that trains in WA still do not have lights illuminating them from a side-on view.

It would seem that Westnet does not accept that there should be any lights on the top of trains and so trains remain the most dangerous and poorly lit vehicles which motorists may encounter at night.

With the time lines which you have in what I have given you, you can clearly see that there has been no lack of meetings, reports, letters, trials and videos. What we are clearly lacking is the continuity needed within the departments which then flows through to the representatives

who sit on the Railway Crossing Protection Committee. There should be no allegiance to any department. Their expertise should be brought to these meetings.

Why is it, then, that coroners in three states are able to identify the problems and the solutions to accidents of this nature? It is because they are impartial. They have no allegiance to a government department or a rail group. I will read two excerpts from the Victorian state coroner's speech at the symposium held at Monash University in February 2002 entitled 'Get Active at Passive Crossings' and an excerpt from the inquest by the New South Wales state coroner into the five deaths at Bells Crossing in New South Wales. The Victorian state coroner stated:

> Eleven years ago, inquests into seven fatal accidents that occurred at railway crossings in 1989 were held to try and identify any common features. The important issue that arose from this was the need for a motorist negotiating a crossing to be told if a train is approaching. It also must be noted that speed, alcohol and drugs did not appear to be an issue. It is noted that the Railway Level Crossing Road Safety Co-ordination Committee (Vic) was then (1989) considering strobe lights on locomotives. I consider that installation of strobe lights on trains would not only benefit passive crossings but would also assist increasing awareness of an approaching train at crossings where lights and boom barriers are installed. Many of the deaths examined during the inquest may well have been avoided by the installation and operation of strobe lights on locomotives.
>
> Some 13 years after the inquests, although development work has been undertaken by government agencies on inexpensive and effective means of warning motorists of an approaching train, we are yet to see the widespread introduction of new and innovative technology to save lives in the area of railway level crossings.

The New South Wales state coroner said:

> The real tragedy in this matter is not whether the driver made an error of judgment but that in this day and age when we all strive to reap the benefits of new technology, such as computers, advances in medicine, trains that travel at 160kph and even faster, we still have a 19th century approach to level crossings on the basis that they are traversed by horse and cart.

The duplicity is glaringly obvious: WA is following Victoria in the same issues but 13 years later. We have apparently learned nothing from these accidents. Why do we bother going through these inquests if the coroner's recommendations are not being seriously acted upon? We have found over the last 3½ years that the sheer volume of nothing can be shovelled around for a very long period of time. These departments have access to all the information, statistics and data that they need. We three families have acquired the information by our own means and have come to the same conclusions that the three state coroners have.

Why are we still doing trials? We just cannot understand why programs are not on the ground and running effectively. The state coroners now have a database with which they can access coronial information from other states. It is obviously a much needed and helpful tool which I am sure will guide and reinforce the decisions that these state coroners make. As we all know, the role of the coroner is to investigate unnatural deaths and, where appropriate, make recommendations on public health and safety to avoid recurrences. I seriously suggest to this committee that we start listening to their recommendations and implementing them for the benefit of all road users as well as allowing the coroners court to work efficiently and effectively.

The trial report is one of many. It is this one that we had done. The trial for conspicuity of enhanced lighting treatments for railway locomotives was held at Yarramony crossing at Jennacubbine on 25 January 2002. This is our particular crossing. This trial, unfortunately, was flawed and cost the taxpayer $75,000. The Minister for Planning and Infrastructure at a meeting after the trial had difficulty coming to terms with the outcome. She felt that it was inaccurate and not robust enough to present to a national forum.

If you look at the photos, they are of the crossing going from the top of the hill down to the crossing, which is the south approach. This is the approach our children took. There is then the north approach from the sign to the crossing. I will just go through them. There is the crossing looking up to the south approach. This is the other side. I have lost count of how many we have.

Mrs Morrissey—Are they the new signs? They were faded.

Mrs Broad—They were. I will show you later on the difference between the signage from the first accident there to now. That is straight after our accident. As can you see, the roadside vegetation is in abundance. You will also notice that some of the vegetation has been cut down. This happened straight after the accident—the day after the accident. Even after the inquest, we were unable to find out who cut all this vegetation down. It is quite a lot. There is one picture missing. We actually saw bulldozer marks. A whole tree had actually been pulled out. What is very obvious is that someone felt there was a severe visibility problem on the approach to the crossing.

The diagram shown is from the trial report. This is where the observers were in the trial. You will notice they are at 140 metres, which is from the 210 mark down to the 70-metre mark that was unattended. On the north approach, the observers only went 120 metres from the crossing. This leaves 110 metres from the sign, which happens to be around the bend and you cannot see, with no observers. All rail crossing signs are 230 metres from a crossing. On page 5 of the trial report methodology, it states:

Vegetation along the roadside seriously restricted the day time view at a number of the points as did the bend on the road on the north side crossing. It was therefore not possible to have viewing stations evenly spaced across the site.

These are the most crucial parts of the approaches to the crossing for the driver to be warned before the crossing that a train is approaching, and they have left it out. The trial report also states:

Austroads recommends stopping distances of 170 metres for vehicles travelling at 100kph equivalent to 7 seconds travel time.

You leave out those areas and you are in serious trouble. This information has been totally disregarded. It really has left a huge gap. It is giving you less than seven seconds to be aware. The speed limit is 110 along this road and along a lot of these roads with the open road approach, which is what they are classed as.

I do not think there would be any debate over the fact that this is unacceptable. One fact does come into this discussion with all these reports. I have all of them here; there are several of them—the fatal crash investigation and compliance audit report; the road safety review; the level

crossing safety report; the report into improving safety at passively protected level crossings; the conspicuity of enhanced lighting treatments for railway locomotives; the FRA report from the USA, which was extensively referred to during the inquest; the report on the effect of strobe lights on train drivers, which I do not have at the moment because it has not been sent to me; a contract report on the investigation of the use and design of rumble strips; and the report of the trial of rumble strips on level crossings, which should have been finished at the end of the November, so there is no report yet. These reports have so far given us better signage at some passive crossings. Once again, following Victoria, there has been a huge amount of paperwork but there is barely anything new or innovative on the ground and running effectively. It just is not good enough. If you read any these reports it is nothing short of disgraceful.

This is not the only crossing that is not up to standard. These agencies need to physically travel to these sites, because all these maps, diagrams and photos are just not enough. They do not give the proper perspective that is truly needed to appreciate all the aspects involved in this issue.

I think the issue can be epitomised by this example. When we first inquired into the removal of the vegetation along the roadside and the railway line as well as the signage and the band of trees in the paddock, it was very apparent that this was a hot potato that no-one wanted. Signage belonged to Main Roads. Vegetation on the roadside belonged, unfortunately, to two shires—Northam and Goomalling. The trees in the paddock belonged to the farmer. The vegetation along the rail line belonged to Westrail. When you have a problem with all these issues, things start to become very complicated. Include in that scenario the Railway Safety Protection Committee, the Commissioner of Railways, the rail group using the rail line and the minister and the issues become totally and utterly lost in the bureaucratic system.

I do not know, but maybe we need to have a zone or a corridor from the rail signs down to the crossings that incorporates all of the above and becomes the sole administration of the Railway Safety Protection Committee in each state. The fluidity of the process may then be unencumbered by all these different agencies and we may end up having a proactive instead of a reactive approach to all the aspects of rail safety because it is desperately needed.

The fatal accident on Saturday, 8 July 2000 that involved Jess, Hilary and Christian occurred at approximately 6 p.m. about 25 kilometres north-east of Northam, an hour and a half from Perth. They were on their way to a 21st. They collided with a 28-wagon fully loaded grain train. There were no drugs, speed or alcohol issues associated with this accident. There were no skid or swerve marks from the vehicle at the crossing. As an accident this sounds very familiar: a Saturday night, teenagers driving and, unfortunately, it ending in tragedy. We see it all the time, unfortunately too many times, so that I think we have become a little blase.

Until our accident, I never realised the ripple effect that such a tragedy generates. Obviously, it firstly affects the family and friends. It immediately affected all the people at the young man's 21st that they were going to attend. That is not a great way for a young man to remember his 21st. It affects all emergency staff attending the accident—St John Ambulance, the police, the hospital staff, all local people, the two farmers in the adjoining paddock where the accident occurred, the morgue attendants who had to deal with the identifications and the coroner's staff, who had to deal with our very extensive inquiries over many months. It affected the schools and the schools community where the funerals were held. Between 600 to 700-odd people were at each funeral,

which I might add covered a huge part of WA. It affected friends that were attending university to the extent that they deferred for up to six months. The communities that these young people were born and bred in and were still involved with are still deeply affected. I might add that they cannot afford to lose these types of vibrant young rural people.

Then there are the two train drivers. The families are on a par with us. They did not lose a family member but they saw every second of that accident. We can only imagine what happens. Thank goodness my imagination is vivid enough. Their images are too graphic and not easily, if ever, expelled. Their families have to carry them for the rest of their lives.

We read about and grieved for the five young men who lost their lives at Bells Crossing in New South Wales. Whole communities are affected by these tragedies. Our plea is to stop the ripple effect and make the trains and not just the crossings more visible. We desperately need someone with the strength and commitment to carry this through. For three years we have fought for this issue and, believe me, over those 3½ years it has taken its toll on the families. We need to grieve for them, not be standing up and fighting for them. The adage that my darling daughter Jess would always recite was, 'It ain't worth it if it's easy.' Well, she has that right because it has not been easy, but I would like to think it is going to be worth it. It has been a frustrating and long haul, but be in no doubt that we will continue for as long as it takes to achieve the result for these three kids that we have been fighting for.

In three years, none of us, none of the three families, have ever been the emotive parents. We learned very early on. We had a comment that we were classed as just the emotional parents. So we have been very, very careful with every meeting that we have been to that we do not show any emotion. We are very clinical and it is about facts. But today I am going to be the emotive parent because I think these three children deserve it.

Jess loved politics at school. As soon as she turned 18, she registered to vote. I might add there were many phone calls to her friends, which made their life an absolute misery, to do the same. She believed that you voted to have a voice in parliament, state or federal. Hilary had her sights set on being a politician and had a great ability to debate any issues strongly and with passion. Her belief in the system was absolute. The last thing my father-in-law said to her four days before the accident was, 'I'll be voting for you in a few years.' I might add he was a very good judge of character. Christian was extremely safety conscious. He urged his father to procure Main Roads signs from the local shire to enable Christian to erect them at the appropriate positions on the approaches to their homestead, ironically to make it safer for motorists. It was an old rail line.

They believed in the power of one. The power of one voice can be very strong. The power of these three young vibrant people should be resounding. We would like to hope that the system they believed in will not fail them. Thank you.

I did forget something, and I am sorry about that. They are the signs. There was an accident in 1997. The top one is prior to that accident. The second one is prior to our accident. With a fair bit of pushing and shoving and jumping up and down, that is now the signage that is there. You would have to see that there is a huge difference in the approach to that. It does make the crossing. But if you look later at the photos, you will also see that if you are approaching the crossing coming down that hill, you need more than that to be able to see that train approaching.

CHAIR—Is the road actually ramped up slightly?

Mrs Broad—It is. That is the top of the hill. If you go a bit further, you go down. We still have not reached our 230-metre sign yet. Go down, and there we are.

CHAIR—Please forgive me, but did the car slam into the side of the train?

Mrs Broad—No, it did not.

CHAIR—The train hit the front of it?

Mrs Broad—Yes. It was a typical right angle accident. The statement that the train driver made in the coroner's report, which I have, was that they never even turned. It was as though they never saw the train. There was no braking and there were no skid marks. The only marks on the crossing were these. You can see that that is the crossing. The car was right over the top. You can see the marks where it was dragged. They never even looked that way. It is very hard to understand why on earth three young people in the front of a Landcruiser at night in the dark did not see the train. They were not speeding. They were doing 90 kilometres an hour, far less than the speed limit.

CHAIR—It would have been dusk, wouldn't it?

Mrs Broad—It was dark then.

CHAIR—It was dark by then?

Mrs Broad—It was pitch dark. It was 6 p.m.

Mr HAASE—It was winter.

Mrs Morrissey—It was also the time when the farmers were in their paddocks with their tractors, which have the single light. So you are going along and seeing light here and there. You have a sense of not turning. You have assessed that you have tractors working there, so you are not having a clarification about what you are viewing.

CHAIR—Do you want to add something to that?

Mrs Morrissey—I have a presentation too, thank you.

CHAIR—While it is fresh in our minds, we might ask colleagues if they have any questions for Merrilea at this stage.

Mr HAASE—I have a question to clarify something. When you were explaining the diagram about the visibility tests and the locations from the crossing, if you go back to that, you made a comment about some of the viewing sections being missing. What is the point you are making? Are you saying that where there are no distances from the crossing that is an indication that those gaps in the viewing area are in fact where view is obliterated because of foliage or something?

Mrs Broad—Yes.

Mr HAASE—You are saying that the places marked are the only points along those approaches where there is a clear visibility of the line?

Mrs Broad—According to them, yes. They thought it was better.

Mr HAASE—That is clear for me now. That was my only question.

Mr MOSSFIELD—The observation viewing that we have been talking about is just simply cleared vegetation, is it? Is there anything there besides that?

Mrs Broad—As in what they can see?

Mr MOSSFIELD—Yes.

Mrs Broad—This is a far better picture for me to be able to show you. If you are coming down that road—and it is a little hard for me to see—in between you will have a bit of a clearing. It will not be quite as big as these ones here. That has been my problem all along. How on earth can you have a trial if you do not have viewers all the way along to be able to see if those lights will penetrate, which is the whole point? That is why we want the lights on the train. It will get through the vegetation. It will flick off things. That is the problem that we have had. On all country roads, there will be a flick there and it will be a bit of a space and there will be more trees. Somehow you have to have something. It does not matter whether it is there or not there. The point is you need something to get their attention to there or to there.

How many drivers drive down a road—I certainly do not—looking around? It is an unknown road and they had never been on it before. You really are concentrating on what is in front of you. You need something to pick that peripheral view up to get your attention.

Mr GIBBONS—I take your point about the strobe light. What if the strobe lights are on top of those warning signs only to be switched on when a train is within 200 metres either way? Would that have helped in your circumstance?

Mrs Broad—I cannot say it would not have helped. But the problem is it is classified as a passive crossing. The way that they assess that is counting how many trains per day there are and how many cars are going over the crossing. To them, it is not viable. To us, it was far easier to put it on the train that is moving all the time than do all these crossings when you do not have the power, be it solar or whatever. It is a bit like a road train. If you have it, you can see the length and the distance. To me, it is just very easy.

Mr GIBBONS—Obviously in this situation the car was hit by the train because the car had proceeded across the line. But what would stop another circumstance where a car, if it did not see the train after it was over the crossing, ran into the rolling stock?

Mrs Broad—Do you mean going into a wagon?

Mr GIBBONS—Yes.

Mrs Broad—I will be really honest with you. When we first started this, we wanted it all down the train. We wanted it like a truck. Karen will show you a few bits and pieces. Then you have exactly the same thing. How does anybody, when they are in a motor car, identify a road train? It is literally because of the lighting on it.

Mrs Morrissey—You need to see the form.

Mrs Broad—The form—that it is that long to show it is a single, a double or whatever. We seem to be losing this. It is very hard to be able to get across to people that we desperately need that. One light on a train is just not enough.

Ms LEY—I think it is very compelling evidence. It is so disappointing that time has passed and nothing has been done. I might add that the five young men killed at Bells Crossing were in my electorate.

CHAIR—We might ask Karen to give her presentation.

Mrs Morrissey—I want to comment on the report about Jennacubbine. The report is not even based on reality, even without the issue of not having those sightings of people further back. It is not how it happens when you are sitting there. People are in motion and things are happening, and driving is a complex sort of business. You can see things, but what you need is something to draw your attention to it if there is a danger.

CHAIR—At that time, did the train have the revolving light?

Mrs Broad—Our train had one headlight. It did not have those crossing lights that I showed you.

CHAIR—What about the revolving warning light?

Mrs Broad—Nothing, no. Can I quickly add that we had a meeting with the rail safety committee at that crossing. We only had three members. I cannot remember how many members are on it, but three came—the chair and two others. One was a policeman and two were from Main Roads. One of the most telling comments—not from the policeman because he had had a lot to do with traffic, so this sort of thing was very obvious and clear to him—was that one of the gentlemen turned around and said, 'It really isn't like the photos and it just gives you a totally different perspective.' That is why I make quite a point about it. I have all these. I am happy to leave them. You can read them, believe me. There was report after report after report with photos. I can sit here with photos, but until these people get out there and really see the huge thing, we are not going to ever get a better system. It is vastly different, I think.

Mrs Morrissey—When news came to us on Sunday morning following the accident in Jennacubbine in July 2000, we in our community were devastated. You would need to understand, as some of you will, the deeply connected social threads within our communities to fully comprehend the depths of our devastation. We are not many families. We are as one family. A loss for one family is a loss for all families. A loss for three families has touched community members from almost every region in Western Australia, across Australia and, indeed, across the Tasman.

The Western Australian Government Railway Commission is at present experimenting with the provision of a rotating beacon installed on the top of engines. The Railway Crossing Protection Committee believes that these experiments deserve every encouragement so that eventually all engines will be equipped with a satisfactory rotating beacon. It also considers that experiments should be carried out with a view to providing similar beacons for guard vans. If engines and guard vans are equipped with beacons of adequate brilliance, vehicle drivers will be alerted to a much greater degree than they are at present by the train's whistle or siren. These beacons should prove especially effective at night.

Following a spate of serious accidents at railway level crossings in Western Australia, cabinet decided that an interdepartmental committee, to be known as the Railway Crossing Protection Committee, should be appointed to review the safety requirements for all railway level crossings in the state. It was September 1964.

The lives of many innocent people who did not see the train have been lost to our families, communities and to our nation through the deplorable consequences of chronic inaction over a staggering 40 years. The House of Representatives Standing Committee on Transport and Regional Services hearing today foreshadows an inquiry on train illumination, the implementation of which has been hampered by poorly researched information, poor agency process and a lack of commonsense vision.

Do trains need to be illuminated? The country community answer is yes. Motor vehicle drivers not seeing the train is causing a loss of life. Statistics are showing that attention to railway crossings is only a part solution in providing warning to motorists. Train horn sound has diminishing capacity as an effective warning device in modern vehicle travel, forcing greater dependency on the visibility of the train.

Lights on trains are needed to assist motorists in detecting that there is an oncoming train, recognising the train for what it is—a potential hazard—and estimating the amount of time which the train will take to arrive at the crossing. There is an urgent need to make freight trains visible to motorists through appropriate lighting as they approach and cross our roadways. Once the locomotive has crossed the road and its light has disappeared into the next paddock, there is a serious lack of visibility of the wagons as they then cross the road.

The rail crossing accident which claimed the lives of three of our young citizens has brought into focus this issue of inadequate lighting on trains and the anomalies which have been allowed to continue to exist despite recommendations to the contrary. This accident occurred in dark conditions at about 6 p.m. approximately 35 minutes after sunset on 8 July 2000 at a railway level crossing on Yarramony Road near Jennacubbine in Western Australia. I will hereafter refer to this accident and its location as Jennacubbine.

These three people, through their tragic loss of life, have shown us beyond all reasonable doubt that train locomotives and wagons crossing country roads do not have appropriate hazard and visibility warning lights. Not one of the three young people saw or heard the train. The driver, Christian Jensen, with passengers Jess Broad and Hilary Smith, were travelling to celebrate the coming of age of a friend. Tragically, they did not arrive at their friend's 21st celebration and would not live to celebrate their own.

Christian Jensen, while just 20 years of age, was a proficient and experienced driver. His family home, a 106,000 hectare property, gave him early driving experience and later experience in long-distance driving on country and unsealed remote area roads in all conditions. With diminishing local country communities, he with his friends became part of a very mobile group of young country Australians who travel extensively to connect with other young people. Christian often had passengers. In my daughter Adeline's words, 'He would never put anyone's life at risk. He wouldn't take unnecessary risks. He always drove safely. He was always careful.'

Adeline's recollections as a passenger confirm in my mind that Christian's primary focus was safety. He demonstrated clearly that even under the pressure of some of his peers, he would not put himself, his passengers or other road users at risk. In our community, he demonstrated a considerable civic responsibility by urging his father to take steps to have signs put in place on a road near an old railway line where he was concerned that there were safety problems. Significantly, nothing warned Christian of the horrendous hazard approaching the roadway as he drove towards the railway crossing at Jennacubbine and that out of the paddock alongside him a train would appear and ultimately claim his life and those of his precious passengers.

Christian, a competent, careful driver, had not been driving above the speed limit. The road was dry, the weather fine, visibility and eyesight were good. There was no influence of alcohol or drugs. Being early evening, they were not fatigued. They were three bright, young responsible people sitting three abreast in the front seat and not one could see the train which was approaching to cross their roadway and ultimately claim their valuable lives. The train was not well lit.

Following the coronial inquest into the accident in October 2001, Western Australian state coroner Alistair Hope recommended immediate action in the implementation of hazard warning lights on top of locomotives in addition to, and not as an alternative for, ditch lighting and the attachment of light to wagons to ensure greater visibility of rail freight approaching level crossings. Mr Hope said that trains remain the most dangerous and poorly lit of all large vehicles which motorists may encounter at night.

While this accident occurred in Western Australia, the lack of adequate lighting to illuminate trains and identify them as a hazard is not a uniquely Western Australian safety problem. Indeed, significant support has come from citizens in all states of Australia. In Adelaide in South Australia in 2001 and Charleville in Queensland in 2002, I joined people from rural and remote regions from every state and territory of Australia for the federal conference of the Isolated Children's Parents Association of Australia. It was the fourth forum I had attended, which was representative of a broad spectrum of country people where the issue of visibility of trains approaching a crossing in country roads was raised. Again, clear support was given to the need to position rotating flashing lights on all locomotives operating outside the metropolitan area and clearance lights on railway wagons comparative to lighting on road trains.

In response to the declaration by the Western Australian minister for transport that lights on trains was a national issue, I travelled in August 2002 from Charleville to Brisbane and then by train and bus 2,500 kilometres to Melbourne through the interior talking to people to find out whether the poor visibility of trains was an issue in country communities in the east. I took one bag, a wool coat and a notebook for 14 days. I can confidently convey to this committee today that from the responses I received, concerns in the east are clearly the same as in the west. The

near unanimous view of those I spoke to living in towns along the line was that train visibility is an issue and that it was common sense to put rotating hazard and side lights on trains.

I made many observations, but the most telling of all appeared on the adjacent rail lines with infrastructure maintenance vehicles and railway plant involved in rail construction. They on their track were fitted with rooftop strobe flashing warning lights while the trains on our track, moving at speed and clearly more of a hazard, had no recognised hazard lighting. Railway plant hire laying new tracks south of Sydney and Campbelltown displayed on the top front of the plant a central flashing light with red and white lights on either side. If this lighting is considered appropriate by Worksafe for its employees in this vehicle on the rail line, why are the employees of a more hazardous vehicle on a rail line without similar or improved hazard lighting?

Calling my journey a national crusade, the newsprint media, with significant readership, printed supportive articles under these headings: 'Commonsense plan to cut down on tragedy', 'Turning light on rail collisions', 'Train plan is a good idea, mum', 'Night trains still dangerous'. A petition with some 2,500 signatures was presented to the upper house of Western Australia in 2002 and a standing committee was formed. A second petition was presented to the lower house in Western Australia in 2003 with 2,385 signatures and about another 200 to hand arriving too late for the main presentation. At the Wagin Woolarama, a large country show which attracts people from many country centres, 93 per cent of people presented with a petition that was signed.

Based on Western Australian government railway information, Western Australia has 5,583 kilometres of rail. This means approximately one signature supporting the fitting of lights on trains for every kilometre of railway line in Western Australia. The Country Women's Association has pursued the issue of adequate train illumination with parliamentarians. The Western Australian branch of the Australian Rail, Tram and Bus Industry Union also supports effective lighting on trains for the health and safety of train drivers. At the state Liberal Party conference in 2003, the shadow minister for transport in Western Australia gave 'yes' as the short answer when asked if in government the recommendations of the coroner's findings would be implemented.

On tour in 2003, Australian country singer and well-respected advocate for country communities, Lee Kernaghan, added his support and is quoted in Western Australia's biggest selling rural newspaper, *Farm Weekly*, as saying that lighting on trains should be uniform with that of larger vehicles and that people simply have to be able to see them coming. To a crowd of 2,000 supporters, Lee Kernaghan said, 'We have to work hard to make trains as easy to see from the road as possible.'

As we have progressed with this hearing, it is important to recognise that many country crossings have no lighting at all and most will never have the advantage of boom gates. Boom gates are proven to give the best crossing protection, the highest form of traffic control after bridges. A boom gate is lit with three flashing lights on the boom which acts as a block across the traffic lane. In addition, two flashing lights are on display at the side of the crossing. This gives a five flashing light warning to the motorist on approach to the crossing. Obviously authorities are aware of the value of attaching lights to an obstacle when it is placed across a roadway. Importantly, the success of the boom gate provides a ready-made pattern of lighting which can be fitted to the sides of trains in the knowledge that it has proven effective.

It is incomprehensible that the single most powerful vehicle, the heaviest vehicle on land, incapable of stopping at short notice or swerving, can enter and cross our roads in this day and age of the new millennium and in dark conditions without hazard and adequate illumination lights. In the case of Jennacubbine, a Westrail freight train with two engines, 28 wagons and 1,624-tonne load travelling at 61 kilometres an hour took 700 metres to stop. The train had a single narrow light beam intended for the train driver to see the track. It becomes even more incomprehensible that the train, a very serious hazard, was not well lit given the studies which identified limitations with the headlight were known to the train owners for at least five years before the crash. In that circumstance, it is difficult to understand why no additional lights were in use to make the train more visible.

If we presume a lack of priority in addressing the issue of train conspicuity and doing something about it, the most devastating discovery to support this has been the uncovering of the 1964 report entitled 'Railway level crossing protection in WA: A review of the safety requirements for all rail level crossings in the state'. It is distressing for the families that in highest probability, had rotating beacons been installed on trains from 1964, they would still have their children with them. As a citizen, it is disturbing to find that not only have significant past recommendations and findings been disregarded but that if it were not for the determination of the three families and our supportive community members, the 2001 recommendations would by now also have settled under the dust of non-application only to be revived at the next tragic accident, as is becoming apparent. This appears to be the tendency.

Too often the cause of an accident is blurred by speed or alcohol. Many accidents go unexplained. Almost four decades later, in 2001 at Jennacubbine, there was a rail crossing accident where no excuse could be made to cover the stark reality that the train was invisible to the occupants of the vehicle. The state coroner's findings on the Jennacubbine accident and recommendations made were not new to rail safety but a devastatingly sad and tragic echo of an earlier recommendation. Improvements in light technology and alternative power sources are all that have changed in the intervening years.

Alison Wooden of Wagga Wagga in New South Wales, mother of Kyle Wooden, one of the five young men who lost their lives in January 2001 when a train split their car in half near Albury in New South Wales, tells me her son was five years of age when recommendations were made to make Bells Crossing safe. That is another recommendation made and not carried through, another loss of young country lives in country Australia. That is two recommendations not acted on in two states. In the space of six months, that is two accidents on either side of the continent. That is eight young Australians, looking forward to the best years of their lives, lost.

Recommendations, particularly by well-qualified independent sources such as the state coroner, must be given due respect and response, particularly when failure to do so will in all likelihood result in permanent disablement, if not further loss of life, the cost of which is more profound than statisticians can ever adequately estimate. After reading Annemaree Jensen's document entitled 'Serious questions over the validity of the 1995 federal railroad administration and locomotive lighting study', it is of great concern that this FRA report by the US department of transportation, which questions its own validity, even without the serious question raised about flaws in the research process, is being regarded as an authority on the subject of train illumination, carrying significant influence on those making critical decisions about transport

safety which ultimately affect Australian lives. Even valid controlled research at its best must be worked with and not in place of everyday real life experiences to gain the best results.

The judgment of people about issues within their own living experience and environment is generally trustworthy. They are not scientists but they are the living, active researchers by virtue of their location and experience. Merrilea and David Broad and Laurie and Cathy Jensen live close to mining activity and are constantly exposed to the high standard and effectiveness of hazard lighting on vehicles in the safety conscious mining industry. Their insistence of a transfer of this technology to trains is based on sound proven judgment and personal experience.

Like the Jensen and Broad families, I live in an active goldmining region of Western Australia on an isolated property hundreds of kilometres from the city and large regional centres. It means I travel extensively on country roads in all weather conditions day and night at all hours, sometimes with as many as seven passengers, being children. My access road is the Great Northern Highway crossed by rail lines and a primary route for heavy haulage to the Kimberleys, iron ore and natural gas resource developments further north, road trains 55 metres in length carting stock and stores, highway giants transporting infrastructure and equipment for gold and iron ore mining.

The outstanding visible safety feature of these vehicles to other road users is their standard of lighting. The road trains are well illuminated, easily identifiable by height and length and have a 360 degrees hazard light visible from a distance on top of their vehicle which attracts attention and alerts to particular danger. An escort vehicle will have rotating flashing lights in addition to flashing headlights.

It is extraordinary to say the least that road safety authorities have identified lighting applications for all vehicles from the smallest bush bikes, with front and back lights and multiple reflectors to make them visible to us on the roadway, yet these lighting principles have not been applied to trains, the most dangerous of all vehicles to enter and cross public roadways. While trains remain inadequately illuminated, there is a high social and economic cost to families and communities. There appears sufficient evidence to indicate a negligent disregard for basic requirements of duty of care in relation to train illumination. The issue of liability and compensation payouts in the event of future accidents is real. Lighting on trains will prove cost effective. The Western Australian state coroner's statement, 'I do not accept that it is premature to take steps towards the lighting of trains,' has the support of the wider Australian community.

CHAIR—I do not want to cramp your style. We only have this room until 10.55 a.m. and we have to hear from Mr Duggan.

Mrs Morrissey—I have one paragraph left.

CHAIR—Is that the end of it?

Mrs Morrissey—That is it.

CHAIR—That is all right. I am sorry.

Mrs Morrissey—That is fine. The resistance of rail operators to illuminate trains and the incapacity and outright inaction of safety agencies to provide regulatory guidelines to ensure trains are properly illuminated and the failure of governments to provide the necessary prompts to speed up the research and implementation of appropriate train illumination needs to be urgently addressed. Are you willing to go out onto a country road you do not know at night and drive around knowing that freight trains with cargo have only a beam of a headlight and two lights in front to notify you of their presence?

CHAIR—Thank you very much. That is a good submission. I am sorry to have to hurry you.

Mrs Morrissey—I was over time.

CHAIR—Mr Duggan, this is an informal hearing. What form will your presentation take?

Mr Duggan—It is just a straight paper. I will talk you through this paperwork. I do have a video.

CHAIR—Although it is not a formal hearing, we are getting Hansard to record it. We may at a later date decide to formalise this by having a full inquiry. This would become very important background material, of course.

Mr Duggan—First of all, at present, many of the rural crossings have inadequate passive warning signs to prevent accidents. Work on this project that I am doing has gone on for approximately two years. I will provide some insight into the problems and the consequences. I will show an effective method of improving safety standards.

A large number of rural level crossings have only passive warnings, such as site triangles, humps and signs. These are only to warn of a crossing, not that there is a train on the crossing. Freight train carriages are not required to be equipped with lights because, as yet, there really has not been a light suitable until now. Fifty per cent of these accidents are at dawn, dusk or night and involve vehicles running into the side of trains because there is no light provided and the train wagons themselves are the colour of night. I forget the exact colour, but it is a dark green.

Evidence on fatalities and deaths as such and not on the injured, quadriplegics and paraplegics shows that the sides of trains are not as deadly as the front of trains. The sides of trains reject cars and injure passengers of the motor vehicle. Australia has a large number of level crossings in rural areas that may be inadequately marked. The size and type of warning signs vary. There is no set standard. Active warning signs do not prevent all accidents. Maybe more lights will help that. There were 87 fatal accidents from 1988 to 1998. These statistics—

CHAIR—These are at level crossings?

Mr Duggan—Yes. All these statistics have come from the Australian bureau. Sixty-six per cent are front of impact, 16 are side impact. Believe it or not, for 18 per cent the impact is unknown. So if you just run on the 16 per cent, that means 14 people died in this period just by running into the side of trains. This survey does not also take into account anybody on private roads, such as their own properties, with level crossings. It is not counted.

Mr ANDREN—There have been a couple of them on roads around the central west that are private roads. Can you address the 83 per cent in daylight? How effective might lights be in daylight, when you get around to it?

Mr Duggan—Yes. Why I have marked the 83 per cent at daylight and the 17 per cent at dawn, dusk or dark is that you have to consider that those periods are when there is very low traffic compared to daylight hours, when everyone is running to and from work. So 85 per cent of these are in fine weather and 67 per cent are in rural areas or non-capital cities. Only 10 per cent occurred where there were boom gates in place. Forty-one per cent occurred with active systems and 44 per cent occurred with passive systems, the latter of which are our rural ones. Forty-six per cent of fatalities did not see the train, see any sort of warnings or were unable to heed a warning.

There are more statistics of what motor vehicle break-up was. Twenty-six per cent were aged 60-plus. In some cases, the safety defences in place at level crossings might not have adequately protected the road user from a collision with a train. Between 1997 and 2001, 179 fatalities occurred at level crossings, including 118 pedestrians and 60 motor vehicle deaths. In this period, there have been 60 in four years; in the previous report there were 87 over 10 years. So there is a strong increase.

With regard to reflective trials, a 1994 report on eight reflective sheets trialled over two years in worst conditions shows that two years without washing these reflective strips led to a 80 to 90 per cent loss of reflectivity. When these strips were washed, they only regained between four and 29 per cent of their original reflectivity anyway.

This is my part of it—the train safety light proposal. Solar powered LED lights would be fitted to freight cars with one light on each side of the car. Of course, the solar panel would be mounted, which also incorporates a collector box in the top front centre of each wagon. Each of these little lights has a life of 25 years, so they do not wear out. They are vibration proof, so they do not blow. Even in extreme periods of cloud cover, a strong light will be emitted from that for over three days, even if that did not get any more charge.

Mr ANDREN—Even if it was parked in a shed?

Mr Duggan—Even if it was parked in a shed, for three days this light would still go. The lights, of course, are easily fitted and maintained, economical and efficient. They increase the visibility of freight trains and improve safety. The next section is on government assistance by supporting the mandatory fitting of these lights to freight cars in preference to reflective strips. I have noted this on mine. If it is not made this way, they have told me they will not use them anyway. In other words, if it is not made mandatory—I have spoken to rail users—and they have to pay for it, they will not be using them. I had a lot of trouble even getting them to trial these lights. I ended up using a Cowra firm. I still did not even get to trial them on a grain wagon. There was nothing available. I wrote letters and so on, but they were all either ignored or they sent me back some big story about how insurance would not cover it.

Government assistance is needed for the initial fitting of these lights, if government funded trials have to be done, for them to be used on both government and commercial carriers. Of course, this will decrease fatalities, serious injury and long-term disability, reducing the cost to

individuals, business and government. This will bring freight trains into line with heavy road vehicles. Road trains, which we have spoken about, have to have side lights so they can be seen. This will bring them into line with them.

I have done a question and answer sheet, which is pinned on that, too. I think it will answer quite a few questions. Before we go that far, I will just show you, if you like, this video of the trial that we did and the light itself. I will just switch this on.

Mr GIBBONS—How long does the video go for?

Mr Duggan—About four minutes maximum. I have done this both in a steady fixed light version and in a flashing unit. It is visible not just from the side of trains but on huge angles as well because this thing has an output. You can see even on the side of that that you are still getting the output from the side.

Mr GIBBONS—What sort of globes are in it?

Mr Duggan—This is an LED, which is vibration proof.

Mr ANDREN—Is there anything for the front of the train, a strobe or anything?

Mr Duggan—Not as such. I have not done anything. I have worked on solar power. As far as the strobe goes, I see that the strobe is just a common light that is used in every mine vehicle and whatever that can be fixed on. They do not need solar power. They have actually got power from the engines. This is a remedy for the side of these wagons. This, by the way, is of course only a prototype. I have worked even further on this thing. I have got it to where the solar panel will be housed in this box. The box will have a clear lid. The clear lid is made of polycarbonate, fully UV stabilised, so it will not become any weaker in the sun. So if it was even used in a predicament where coal or something was dropped on it, it is not really going to cause any damage because it is polycarbonate, which is a very hard material. It is made out of the same material as this. It will not hurt it.

A video was then shown—

Mr Duggan—This is the train at night with only its front headlight. You will notice, as the film comes around, that you do lose view of the headlight once it is fully side on. This is a light brown train, mind you, so it is not really the colour of night. So that is going through with no light on and no flashing lights. This is virtually a daylight period. You can still see the light there.

CHAIR—Where was this taken, by the way?

Mr Duggan—Between Orange and Cowra at Mandurama.

CHAIR—That is a rail motor, is it?

Mr Duggan—They are little motors that they do weddings and so on with.

Mr ANDREN—Is that where you would put it, on the lower side?

Mr Duggan—I think on a tie rail, which is the same as a truck. That is with the flashing light. The following one is a fixed one going through. You will notice that even from a big distance when this train is a few hundred metres down this track, side on you can still see this. On an approaching train, that is one flashing light. If you look at 40 of them coming, I am sure you would see them.

CHAIR—How many would you propose per wagon?

Mr Duggan—One each side per wagon centre.

Mr ANDREN—They fit on the side of the wagon, as you said. Apparently, Queensland Rail claim their wagons are at maximum width and cannot fit extra lights on the side. Does that make sense?

Mr Duggan—No. That does not help them get out of it. Underneath these wagons there have to be provisions where we can put simple fittings for these lights to go on so they can hang down and still only be level with the side, which is the same as a tie rail of a truck, once again.

Mr ANDREN—In a season up around the tablelands where you have phalaris about four feet high, isn't it going to obliterate it as it comes in?

Mr Duggan—It would to a certain extent, but remember that train lines are usually built up. This thing anyway, a tie line on a train, is about waist height. I would say in the case of these ladies, with the trees and so on, if you do not get a view of the headlight between those trees, at least when there are 40 of these, you will have to see some of them or more, depending on how long the train is.

Mr ANDREN—I am interested in the statistic that about 87 per cent, according to the stats that you provided, occur in daylight. At dusk and dark, sure, but I am wondering about daylight. It strikes me that in daylight you will need the suggestion made earlier about solar panel things on top of each crossing too.

Mr Duggan—Yes.

Mr ANDREN—That would be for optimum safety.

Mr Duggan—It could be. But when I thought long and hard about this, I came up with the fact that if they are on the crossing and they are vandalised or tampered with or whatever and they are inactive, that is when you will get an accident. I feel they have to be—

Mrs Morrissey—All of our heavy haulage vehicles travel in daytime. They work their hazard lights in the daytime and they are very clear from a long distance.

Mr ANDREN—Do they have them on the trucks? Do they have them along the side?

Mrs Morrissey—Not on the side, no, but they have them on top. You can see them for many kilometres.

Mr Duggan—One of the problems is that you cannot run one of those beacons from solar power. They draw an incredible amount of power.

Mrs Broad—But what you are meaning is one on the front and those all on the side.

Mr ANDREN—Have any of the mine trains got them along the side, that you are aware of, or have they only got them at the front?

Mrs Broad—I cannot honestly say. I could find out. Off the top of my head—

Mr HAASE—I can answer that. There is none. There is only the one strobe on the top of a vehicle and then static lights along the side.

Mr Duggan—That is coming from the generator on the logo.

Mrs Morrissey—This is the issue about lights and availability. These are strobe lights.

Mr Duggan—Of course, I looked at all options, but there is no other way but solar power. Voltage over distance drops dramatically. I think on the third car of road trains the voltage has already dropped to where some incandescent globes will not even turn on. That is what caused the original manufacture of LED lighting. Some of them drop down to even nine volts. They start at 12 at the front and they are already down to nine, so you can imagine what you are trying to ask a train to do. You also have the fatigue and failure of couplings, which comes to this question and answer sheet. With those couplings for wiring, it is just not going to work. It would have to be solar.

Mrs Morrissey—Pushbikes generate their own through the rotation of the wheel. That is how in our area we have a mantle of safety because John Flynn got the electricity by pedal radio. He peddled to get the electricity. Wouldn't there be a way that we could use the wheels?

Mr Duggan—There could be, but the generating system once again would be a high wearing factor. I looked at that side of it too and I feel that it would be something that would cost a lot of money every few years.

CHAIR—How much did this unit cost?

Mr Duggan—It is on here. It is $80 plus GST per wagon, which would give that solar collector and battery box—the whole thing—the full wiring, the two lights and fitting instructions. At the moment, the reflective stripes that they have on the sides of these things are worth $20 a wagon. Looking at the statistics of how high wearing they are, my battery in three years is being replaced at a cost of approximately $12. Those reflective strips need to be replaced every two years at $20.

Mr HAASE—Is the $80 a fixed situation, would you imagine, or would possible economies of scale, if you were selling millions of these things, come into effect?

Mr Duggan—That is working on a base that I have to order and bring these components into the country at a minimum of 1,000 at a time to do it.

Mr HAASE—Okay.

CHAIR—I will have to wind this up. It is very interesting stuff. It has certainly stimulated the committee. Over the holiday period, I wonder whether the secretariat might write to the state rail authorities and/or the private organisation in South Australia and ask what the current status of their plan involving illumination at level crossings and trains is. Even though we can pick it up from the ATSB, we can ask them for their level crossing accident and death statistics, say, for the last 10 years. We will get those resources together over the holidays and just see if we have enough gravitas there to do a full inquiry.

Mr ANDREN—Greg provided some from the Australian Transport Safety Bureau.

CHAIR—I saw that, yes.

Mr ANDREN—That is up to date. The point he made, too, was about the quadriplegia and the injury. All the other associated costs and family trauma and so on are just not included in this.

Mr Duggan—Yes.

Mrs Broad—I can give you WA's for the last 24 years, if you would like to me send it to you. I have actually defined it so you can look at dusk, dawn or boom gates. I got that from Main Roads and I have provided it.

CHAIR—I would like to actually find out what the state rail authorities are doing. I would like to get a letter back from them. I know we can pick this up from the ATSB. I would like them to say what their fatalities and major injuries and accidents are just to see what their attitude is and whether they do have a strategy.

Mr ANDREN—We have gone from slow diesels and rail motors to XPTs overnight on some of these tracks, and the tracks are still as they were in the 1800s in many areas.

Mr HAASE—The point is made. We have a situation which is made for the horse and cart and we are travelling at 110 kilometres an hour.

CHAIR—We have the tilt rail in my area and it travels at 200 kilometres an hour, so you can imagine—

Mrs Broad—There is not much chance, is there?

CHAIR—No. I forget how many kilometres it takes to pull up and things like that. I am sorry to say that we will have to end the hearing. You will recall that Michelle O'Byrne gave us some draft terms of reference for an inquiry into salvage. That has gone to the minister's office. I have been told unofficially that he is going to approve that, although he has altered one paragraph in it. That should come back to us while we are on holidays. I would like a resolution, if I could, authorising the secretariat to commence work on that in our absence and, if necessary, advertise. Could you move that?

Mr HAASE—Pending the moving of it, are we talking about developing a visitation program over the holidays, or are we going to be consulted about that later?

CHAIR—I thought later.

Mr HAASE—Okay. I so move.

CHAIR—On that note, I thank our guests from Western Australia, Merrilea and Karen. They were excellent presentations. I thank you, Greg, for your innovation in setting this program on track. It has been very interesting. We cannot tell you at this stage whether we will go into a full inquiry, but you have certainly stimulated us into putting a lot more thought into it. Once again, I thank you. I declare this meeting closed.

Committee adjourned at 10.55 a.m.