PUBLIC

THE PARLIAMENTARY STANDING COMMITTEE ON PUBLIC WORKS MET ON FRIDAY, 17 MARCH 2017, AT EPPING FOREST HALL, 13517 MIDLAND HIGHWAY, EPPING FOREST

MIDLAND HIGHWAY SAFETY UPGRADE PACKAGE - EPPING FOREST TO POWRANNA

Mr TED ROSS, PROJECT DIRECT, AND **Mr STEFANO CONFORTI**, PROJECT MANAGER, STATE ROADS, DEPARTMENT OF STATE GROWTH, AND **Mr ROSS MANNERING**, ASSOCIATE, ROADS AND TRAFFIC ENGINEER, PITT AND SHERRY CONSULTANTS, WERE CALLED, MADE THE STATUTORY DECLARATION AND WERE EXAMINED.

CHAIR - Thank you for appearing before the committee. The committee is pleased to hear your evidence today. Before you begin giving your evidence, I would like to inform some of the important aspects of committee proceedings. A committee hearing is a proceeding in Parliament. This means it receives the protection of parliamentary privilege. This is an important legal protection that allows individuals giving evidence to a parliamentary committee to speak with complete freedom without the fear of being sued or questioned in any court or place out of Parliament. It applies to ensure that Parliament receives the very best information when conducting its inquiries.

It is important to be aware that this protection is not accorded to you if statements that may be defamatory are repeated or referred to by you outside the confines of the parliamentary proceeding.

This is a public hearing. Members of the public and journalists may be present and this means your evidence may be reported. Do you understand?

Messrs ROSS, CONFORTI AND MANNERING - Yes.

CHAIR - Would you like to make an opening statement, Stefano?

Mr CONFORTI - I thank you for the opportunity to have the Department of State Growth here to describe the project as the Midlands Highway, Epping Forest to Powranna. I will introduce the members of the team from State Growth. Ted Ross is the project director looking after the whole Midlands Highway safety upgrade. Ross Mannering, from Pitt and Sherry is the designer who is helping the Department of State Growth with the whole project.

The Epping Forest to Powranna section of road is part of the Midlands Highway Safety Upgrade, which is approximately 150 kilometres and this section of road is about 11 kilometres. This is approached with the same philosophy as the rest of the project, installing a safety barrier in the middle between the two northbound and southbound lanes of the highway. It will provide overtaking opportunities and will improve the intersections and turning facilities.

The project from Epping Forest to Powranna Road will include two U-turns and three intersections for turning facilities. It will have three northbound overtaking opportunities and three southbound opportunities to overtake which is two more than existing ones - two more in each direction.

A typical section of the road will include a 2.1 metre section which includes the wire rope safety barrier and a two plus one, which means an overtake with two lanes going one direction and one lane in the opposite direction with 2.5 metre shoulder each side.

Civil works will improve both the vertical and horizontal alignment which the engineering designers have been working on.

There has been a public display and an extensive stakeholder engagement process and the department has been talking to the land owners on either side of the section of road. We had a public display which happened last year in Epping Forest which was attended by most of the land owners. A development application was passed in early January and we are now prepared to go to tender for these particular contracts at the end of April. The implementation of the works will be around July/August and if you have specific questions, perhaps we can go through them.

CHAIR - I would like to open it up to the committee then; thanks for that Stefano. Ross, are there any other comments you wanted to add?

Mr ROSS - No, not at this stage.

Mr VALENTINE - It has a wide shoulder - what is the shoulder width again?

Mr MANNERING - The sealed shoulder is two metres wide.

Mr VALENTINE - Just thinking of cyclists that may use this route. Do we know how many cyclists are using the Midland Highway? Do you have any information on that?

Mr ROSS - I do not think the department has any specific numbers on that, but I would say it would be very low.

Mr VALENTINE - A low number. Most would use the east coast and the like, talking about cycling tourism.

Mr ROSS - It would not be a desirable cycle route within Tasmania.

Mr VALENTINE - No, but I am thinking some people who do use it for cycling, would this allow a significant amount of refuge to travel in?

Mr MANNERING - Yes, that is right. Although we do not encourage cyclists to use it because of the high vehicle speeds on the road, the two metre width is sufficient for cyclists. Normally, a desirable width is about one and a half metres, so the envelope for a cyclist is about a metre and then half a metre because of flexibility for moving about within a zone. We have two metre shoulders on this job.

Mr VALENTINE - And the shoulders are all sealed?

Mr MANNERING - They are.

Mr VALENTINE - And hopefully without too much rock on them anyway.

Mr MANNERING - Yes, the shoulders are sealed and then outside that again we have another half metre gravel verge. Yes, but you do get a bit of debris off the road from the vehicular traffic putting that onto the shoulder. Certainly those shoulders are wide enough to enable cyclists to position themselves clear of the traffic.

Mr VALENTINE - In the documentation on this, 2.4 drainage, on page 4, it talks about;

> 'culverts that are at risk of causing inundation of the road have been identified to be upgraded. Some cross drains do not meet the T8 requirement but are not at risk of causing inundation of the road. These drains generally did not meet the requirements due to the site constraints therefore these pipes will be retained.'

Is there a issue with the way water can escape from the road? Are there any major issues still?

Mr MANNERING - They are not major issues, there are some challenges. The grade, as you would have seen as we drove through the road before, that the drain either side of the road is quite flat in places. One of the challenges is getting the roadside drains to get enough grade on them to get the water to run away. Normally we like to have a minimum of 0.5 per cent grade for the drains to get the water to grade. In a few spots we have had some challenges so we have had to grade the drains separately to the alignment of the road to get the water to run to them feed into the major water courses that cross the road. We have worked through that as part of developing the design. That has influenced how much land we need if we need the deepen drain to get the water to flow we need a bit more room to get that to happen. We have worked through the process and that has helped us to find where we have needed to acquire land.

Mr VALENTINE - Obviously a largely impervious layer like a road is shedding quite a lot of water. Are there many places on this section where water shedding is going to lead to damming of water as opposed to it having an escape route?

Mr MANNERING - Yes, the way we have designed it is so it can get away. One of the advantages on projects like this out in a fairly rural area, there are big catchments. The actual widening of the footprint of the road, even though the area of the road is getting bigger, that impervious area in the scheme of the overall catchment is actually quite small.

Mr VALENTINE - It is not that big.

Mr MANNERING - Yes.

Mr SHELTON - From my memory of the old road, it hasn't been a highway for many years and the culverts are low enough to prevent water from creating an issue for the surface. You need to make sure that when the water comes off the surface and into the drains, that it then gets away. As Rob mentioned, it does not pool and runs off, which is, like you say, the challenge that you face, Ross. Typically there are opportunities.

Mr MANNERING - Yes. Importantly for us too, from a road asset management perspective, we want to get the water away. If it lies in the drains, it increases its potential for infiltrating the pavement. That could cause premature deterioration. We do not want to be back having to re-strengthen the pavement soon after. We have worked hard to get those drains right to provide that protection that we want.

Mr VALENTINE - On page 5, you have a table. You have culvert change and size. For the first one, the comment is, 'Draining system will have less than 500 millilitres free board. This pipe needs to be shallow due to the,' - what is 'IL', ingress?

Mr MANNERING - Invert.

Mr VALENTINE - Invert level?

Mr MANNERING - Yes, so the level of the bottom of the pipe.

Mr VALENTINE - 'Of the receiving existing drainage system'. It is a lineball sort of situation. Will is still allow the water to escape?

Mr MANNERING - Yes, that is right.

CHAIR - I have a question in regard to the negotiations and what is going on with the utilities. You say here that it is ongoing. Can you give me an update on where you are with Aurora?

Mr CONFORTI - There have been site visits and talking with TasNetworks. They have an overhead line crossing from east to west and running along the west section of road that we are looking at, which would be relocated. Pitt and Sherry, the designer, provided a design to TasNetworks. They have done the revision of the design. They came with an offer to us, which is currently being seen by the department and will be signed soon. That is pretty much the biggest relocation that we are going to do.

CHAIR - And Telstra?

Mr CONFORTI - There will be Telstra as well. We are still looking into it. At the moment we are doing the detailed design for the works. We will negotiate these works with the infrastructure providers.

CHAIR - Do you think it is going to come within the cost parameters that you have already indicated for your project?

Mr CONFORTI - Yes. The relocation of the utilities were included in the bigger estimate for the works. They seem to be in the budget. They did not come over the budget.

Mr VALENTINE - In relation to that, once the utilities are in place, they are obviously not within the assets. They are outside the main assets of the state Government. If they decide to come back at a later time and need to dig trenches and the like, they are not going to be digging up state government asset, are they? I am thinking particularly of telecommunications.

Mr CONFORTI - Telecommunications are normally positioned immediately outside the broad alignment while the TasNetworks poles are just inside the road reserve, just adjoining the fencing.

Mr VALENTINE - That is fine. I understand.

Mr CONFORTI - That is the general principle, but depending on circumstances -

Mr VALENTINE - The reason I asked the question was, when we were in local government, we would go in and put in a new road and new footpaths and things, and then all of a sudden, Telco would come along and want to dig a trench right through the middle of the new asset, effectively reducing its life. That is not the circumstance here. That is what I wanted to clarify. Thank you.

Mr CONFORTI - It is not.

Mr SHELTON - As we are both local government, the thought came to me also, Rob. I would not imagine it is the issue here. We are talking about a strip of the Midlands Highway and there is not likely to be any other reason to dig the asset up. As Rob has mentioned, we have seen it many times in the past where local government, or a body, has resealed a piece of road or whatever - a footpath - and then two months after that it is dug up again because of another - whether it is a gas pipeline or whatever. Does State Growth go through a process of asking the major utilities what their forward planning is and whether that forward planning affects a project you are looking at? Is there that forward thinking?

Mr CONFORTI - Yes that is part of the concept design when we go through these considerations. In addition to that we may have private services crossing the road. That is usually irrigation. They insert it in the culverts or their stock underpasses. I believe we have some of them along this stretch of road, which we have been checking on. We have been talking to the landowners to make sure there are no additional ones that we do not know of.

Mr VALENTINE - It is pipes you are talking about? Are you talking about irrigation pipes?

Mr CONFORTI - Yes. Irrigation pipes generally.

Mr MANNERING - I can explain that if you like. The normal water pipe assets like steel water mains and those sorts of things are really easy to track with a locator so we can find them. Some of the poly ones can't be detected as easily, especially smaller diameter pipes. So consultation with landowners is important, getting the knowledge from them about where they have infrastructure so we can take that into account in the design. We do go to a lot of effort to talk to landowners and understand where they have assets so if we need to lower them or if they have plans for a future one, we can deal with that in the design.

Mr SHELTON - Or whack some conduit in the ground to accommodate an electric fence going from one side of the road to the other or a two-inch trough main or whatever?

Mr MANNERING - Yes.

Mr SHELTON - That is good.

Mr VALENTINE - The problem we had in local government was Telstra were not obliged to let us know where their assets were. So it was forever an issue. They did not want to let people know where the assets were because they saw it as a security risk. If you know where an asset is you can chop it. That was a very difficult thing. This does not apply so that is good.

CHAIR - I would like to move to the property acquisition. There is quite a considerable number of pieces of land that were acquired. What we saw on the site visit was the need to widen a lot of that land through the Houghton property. Can you give me an overview of progress on the resolution? Are there any issues with the land acquisition and negotiations?

Mr MANNERING - We have done quite extension consultation with all the landowners along the length of the job. We have had some really good discussions, probably some of the best I have seen on the Midland Highway projects we have been involved with. Landowners are providing input around how they use their properties - stock movement and machinery movement - which has helped us to incorporate some of those things into the design. One of the important things for us, especially from a cost perspective is making sure when we get into construction that we do not have the landowner coming back and saying that he did not think it was going to look like this. It is expensive to retrofit those things once we have a contractor on board. We have gone through talking to all the landowners about what the road upgrade is going to look like and understanding from them how that is going to impact on the operation of their properties. Then we try to incorporate into the design mitigations and things to accommodate the way they use the property. We are confident that we have those things in the design.

As we mentioned on the site inspection, we have some unlicensed accesses that we are in discussion with landowners about closing. We are still working through that process as part of the detailed design.

CHAIR - So the negotiations on the land acquisitions in terms of cost and the access to land to begin the build once the tender is let, is that all in order?

Mr CONFORTI - The landowners have been provided with a notice to treat. The consultant is currently working on the survey plans, which will soon be provided to the landowners and to the Valuer-General. We do not know yet the exact area which will be acquired but we are well into the process.

CHAIR - You are not aware of any problems?

Mr ROSS - No. The notice to treat process is the commencement of an acquisition process, which is a compulsory acquisition process. This gives us certainty of being able to undertake works. Whilst sometimes negotiations can continue for some time, the property is as good as vested with us, so we can commence construction.

CHAIR - Without issues of trespass.

Mr ROSS - That is right.

CHAIR - Yes.

Mr VALENTINE - Do you do your consult with the land owner before you issue the notice to treat?

Mr ROSS - Yes.

Mr VALENTINE - It sounds sensible.

Mr CONFORTI - We do not get involved in quantifying the value of the land. That is just solely the job of the Valuer-General.

CHAIR - In terms of the unlicensed accesses that you mentioned with us, where are we at with that? It sounds like is not completed yet. Do you just fence them off?

Mr CONFORTI - We had extensive discussion to explain exactly what is happening to all the landowners, and still have to formalise the access and fencing agreement. That is basically the description of what we have been negotiating with them. We require the signature of the landowner, which I understand, is just a few days away.

CHAIR - Likely to occur, in your opinion?

Mr CONFORTI - Yes.

Mr ROSS - All the landowners have been notified the accesses will be closed. At the moment we are going through a process where some of those landowners, are questioning our decision to close those accesses. We are in the process of providing them information in regards to why they have to be closed and are an unlicensed access.

CHAIR - Good.

Mr VALENTINE - There are not any showstopper issues coming up?

Mr ROSS - It is not a showstopper. It is just a process we have to go through where we need to notify the landowners of what we are intending to do.

Mr VALENTINE - Hopefully we are notifying them of what we intend to do after we have considered their concerns and the impact it might have on them. That is the main concern for us.

Mr SHELTON - I understand the process we have and the Government can do land acquisitions and closing off accesses - From the committee's point of view, and Rob has mentioned showstoppers - there is none of the landowners at the moment jumping up and down and threatening to take the Government to court over issues been raised through this process? Everything you can see is going to be satisfied through the normal process?

Mr ROSS - Yes.

CHAIR - I would like to clarify, on the land acquisition as we are passing through land that has covenant on it. Is any of the land we have had to acquire Crown land that we are going through covenant - could I have an answer on that, or covenanted land - is there such a word?

Mr ROSS - When you acquire land with a covenant on it, the acquisition process extinguishes the covenant on that section of land.

CHAIR - We cannot end up with an Environmental Protection and Biodiversity Act issue, in needing to do works on land with special species on it?

Mr CONFORTI - No. We have been talking to the relevant officers and they have knowledge of what we are doing. We have been working with them.

Mr VALENTINE - That is in 3.4 under 'flora'. I have a question along those lines, but whether you want to go to that -

CHAIR - Yes, by all means.

Mr VALENTINE - Just past the dot points there is a paragraph:

> Approval will be required under the State Threatened Species Protection Act, and an application for a permit to take the threatened flora will be prepared by State Growth. No species listed under the Commonwealth Environment Protection and Biodiversity Act 1999 were identified in surveys.

What is the process if you find a threatened - and I think there is one threatened species -

CHAIR - Yes, there is one.

Mr VALENTINE - What is the process from here with regard to that now? Where are you up to with that? You say it will be required under the State Threatened Species Protection Act, have you applied for it to be?

Mr CONFORTI - We did apply and as far as I know we have obtained that permit which we provided to the consultant to insert into the tender documentation.

CHAIR - *Eucalyptus amygdalina.*

Mr SHELTON - Along the lines of the acquisition, we talked about this third lane or the private lane that is being created between Fairfield and Bend Road . I want to put on record that through the negotiations, this will be a private road on private land, but part of the contract is to construct that lane way to a specific standard. Is that the plan?

Mr CONFORTI - Yes, it is. It is the case.

Mr SHELTON - After the contractor has finished, the land owner will take ownership of that and it is his responsibility to maintain in the future.

Mr MANNERING - That is correct. As part of the construction works the track will get built and it will get built to the standards we specify. Like all projects the department undertakes, the contract administration team will make sure the contractor builds to the standard we have requested. Once they have built it to that standard, the ongoing maintenance gets handed over to the land owner. Yes, we are building a track suitable for the use it is going to get and making sure at the end of the job it has been built to the standard required for his ongoing use.

Mr SHELTON - So the process you're doing is no different to shifting of the pivot irrigator close to the road now where you have got to move it away. The project encompasses those costs in the project and then at the satisfaction of the land owner they take it over at the end.

Mr MANNERING - Yes, that is right. As part of the consultation process we do fencing and accesses and work with the landowners and agree on exactly what is going to be done. We have worked through a process with fencing and access agreements so that they get left with a written record of what we have agreed to provide for them. Once construction finishes, we both have a record of what we said we were going to do. If anything has not matched up there is a way to rectify that. Everything we agree with the land owners gets incorporated into the design documentation,

whether drawings or contract specification that goes with the works. All gets given to the contractor to implement and build.

Mr VALENTINE - Do you work out with the land owner about the loading of the road? If they are putting major gear down that road, do you work out with them first the standard it should be built to or do you dictate to them what the standard -

Mr MANNERING - No, we talk to them about the types of vehicles they use. Some farmers have only semi-trailers coming in, others like a lot of the ones along here have got B-doubles, harvesters, those sorts of things. We get that information from them to understand it and then we work up the design. We show them what we have worked up to accommodate their needs to make sure it fits their needs and that goes into the documents. That is the process we work through.

CHAIR - I would like to turn the committee's mind now to the construction of the road itself and the issues within the road like the drainage and road surface. Do we have any questions in regard to the specific designs, the issues we raised outside the hearing so we can get them on the record, the G-turns, the P-turns, the widths?

Mr VALENTINE - I had a couple more questions.

CHAIR - Sorry, I do apologise.

Mr VALENTINE - That is all right, Madam Chair. My only further comment was on 3.4 at the bottom of the page, you are talking about State Growth working with the Department of Primary Industry, Parks, Water and Environment and land owners to pursue the relevant requirements of these covenants and then compliance statements. Has there been any changes as a result of this single statewide planning scheme coming into play with regard to this? Compliance statements under the Northern Midlands Interim Planning Scheme. You know there is a new statewide planning scheme coming into play. Has there been any issue or problem with the changing over from the interim to the statewide planning scheme that you know of? Is there likely to be?

Mr MANNERING - Not to my knowledge with this project. We have submitted the development application. The development application has been approved so we have been through that process. It has been fine for this project but whether the change in the planning scheme might have meant some changes to this project, I am not aware.

Mr VALENTINE - The other question on that page is 3.6: Aboriginal Heritage. Who certifies the plan in the end? It talks about construction management.

Mr MANNERING - The unanticipated discovery plan? Is that the one?

Mr VALENTINE - Yes, who certifies that plan, just out of interest?

Mr MANNERING - The department's environment development group in consultation with Aboriginal Heritage Tasmania has worked through and developed that plan. It gets used and incorporated into the contract documents.

Mr VALENTINE - That is all I wanted to know; that they were consulted in some way. That is fine. There is no particular issue there.

On page 12, 3.8, Landscape and Visual Aspect Impacts, 'a notice of giving a change proposed to the existing highway between Epping Forest and Powranna'. You are talking about 12 historic plantings between Epping Forest and Powranna. Can you run us through any issues that there have been with regard to eliminating some of those historic plantings? I note you have here that you are going to do some further plantings if you run into issues with the local community in taking out heritage trees that might have been planted. Memorial trees, or are there any community issues there that are going to pop up and bite us at a later point?

Mr MANNERING - The answer to that is no. We are working through with pioneer trees and with the landowners to replace those on their property, if they want them, as part of that process. We are still working through that as part of finalising fencing and access agreements. The only other thing from a community perspective, which you might have noticed on the site inspection, is that there are a couple of crash markers from fatalities along the road. The department has a process in place for consulting with families about that on projects where work is going to be undertaken.

Mr VALENTINE - Very good.

Mr SHELTON - On those 12 trees, are they mainly on the private properties?

Mr MANNERING - Some are within the existing road reservation.

Mr SHELTON - What species are they?

Mr MANNERING - Now you are testing me.

Mr SHELTON - I travel this road a lot. You don't see any oak or Douglas firs.

Mr CONFORTI - As far as I know, on this section of road there are no European or continental species. They are all natives.

Mr SHELTON - In identifying these historical trees?

Mr VALENTINE - It is Pioneer Avenue.

Mr SHELTON - How have we identified that there are 12 historic plantings if they are natives? I am trying to understand whether its is a tree that has grown up there and has been there a long time, or whether it is a tree that has been planted and has significant cultural issues with one of the landowners? If it was on their land, they would know about it. If it is in the road reserve then -

Mr CONFORTI - We were advised this information by an external specialised historical heritage consultant. They provide us the specific information.

Mr SHELTON - I will have to have a look through the plans and find out. They are marked, aren't they?

Mr MANNERING - Yes, they are marked on the plans. What Stefano says is right. For this project State Growth engaged a specialist heritage consultant. They go through and look at the history of the use of the highway. They have picked up where those plants through that process, whether it is through talking to people who know about history of highways - there are some well

documented books and things on the history - or talking to landowners about it. That is what has helped to identify those trees.

Mr SHELTON - I will have look at that. There could be a tree where a bushranger was hanged or something.

Mr VALENTINE - I wouldn't get too close to the tree. You might meet a ghost.

Laughter.

Mr CONFORTI - As part of the stakeholders' engagement, we never had any comment from any of the local community about these trees so I suppose they are not of concern for the landowners.

CHAIR - In terms of the horizontal and vertical realignment that needs to take place on this section of road, it is clear, from being a regular traveller on this highway, that there are areas where visibility is not good. Can you explain what you have done in this design process to improve and make sure we make it to AusRAP3 standard - the best we can make it so it is value for money? Ultimately, that is the question we will be coming back to at the end of this meeting.

Mr MANNERING - As part of the design process we have reviewed the existing geometry of the highway, both horizontally and vertically. As you will appreciate, the highway is very straight so from a horizontal point of view there are no issues there. Through that review we did identify two sections vertically that required some improvement so we have those works incorporated into the project.

We have one other spot where we have not been able to improve the geometry completely. To balance that we have widened the sealed shoulder a little. If there was an object on the road, which is what we assess in terms of sight distance, if you are driving your car you can see an object that is 200 ml high on the road. We have widened the shoulder so that if you saw the object you could manoeuvre around it. We have incorporated that into the project and that is very much part of the value-for-money process. One of the big things with these projects is trying to retain use of the existing pavement. In the cost estimate, paper materials are a big component of the project. Where we can reuse the existing highway, that means we can extend the funding for the program further and improve the safety benefits along the highway. Where we want to try and retain the existing pavement, we have widened the shoulder a little to help with that.

At the moment we only have two overtaking opportunities along this section of road. We have one northbound section and one southbound section. Everywhere outside of that there are opportunities to overtake but they mean you have to cross to the opposite side of the road. As part of the project we are increasing those overtaking opportunities to three northbound and three southbound. From a vertical alignment point of view we are reducing the need for people to cross on to the wrong side of the road on those vertical curves. It will make a substantial difference to the safety of the highway.

CHAIR - You are taking out the bend in the road, is that right? Can we put that on the record? Can you explain that to me?

Mr MANNERING - Yes, we are. Along the job there is a bit of a horizontal kink in the road which we suspect from, an historical point of view, might have to do with geo-technical conditions

when the highway was originally constructed. As part of the project we are going to take that kink out because ground improvement techniques are a lot better these days than they have been in the past. That will straighten the alignment through there. It is also one of the sections where we have some of the new overtaking opportunities going in. Straightening the alignment makes it more appropriate for us to be able to put those in. If we left in the kink, we probably would not be able to achieve that same outcome.

Mr VALENTINE - If it was diverted before to get around geo-technical issues, why are we able to do it today without having the same geo-technical problems? Do you think it might have been because it was a marsh? How do we stabilise a major highway on top of a marsh today? Have techniques changed?

Mr MANNERING - We are working through the detailed design at the moment in terms of how we are going to do that treatment. Access to hard rock these days is a lot easier than it was in the past. What we normally do a lot with soft foundations is put in a rock drainage blanket - a large rock that allows the water to permeate through the rock without getting into the embankment and the pavement layers above. Being able to do that is a lot easier these days than it has been in the past.

Mr VALENTINE - Do you do geo-tech drilling through that semi-marsh area to find out where the bedrock actually is and how much loading it can take?

Mr MANNERING - As part of the developing the design, we have done extensive geo-technical investigations along the highway, both in the existing pavement itself to understand the strength of the existing road pavement and in the locations where we are also widening the pavement to understand the conditions where we will be widening the road and building it over the top.

Mr VALENTINE - Thank you.

CHAIR - While we were on a site visit at the Powranna intersection, near the Powranna sale yards I think we identified that. Could you explain why you think the design of that intersection will be sufficient for the traffic? How will it deal with B-doubles turning right out of the Powranna Road to turn south, and trucks coming in from the north to turn left to turn into the Powranna Road?

Mr MANNERING - Our project actually finishes at the Powranna Road junction; that is the northern extent of our project. We have a U-turn facility, a G-turn facility, going on the southern side of Powranna Road. The existing junction there has turn lanes provided already. There is a left-turn lane as you are heading north. The traffic can move out of the through lane to turn left. Also traffic coming from the north heading south is able to move into a right-turn lane to be able to turn in from there. That gets them out of the way of the through traffic while they are waiting for a gap in the opposing direction of traffic.

For the volumes that we anticipate at the junction, at the moment, that geometry works well. It is consistent with other treatments along the highway with similar sorts of volumes. It is an appropriate treatment for that location. One of the things we are conscious of is because the feed lot operates on both sides of the highway there, there are movements out of the feed lot up to Powranna Road into there, so we have a gap in the median barrier at the feed lot access on the eastern side of the highway. Vehicles can turn right and go up and then turn left into Powranna Road. We have made that available to them. Then for the left turn, for vehicles turning out of the

feed lot heading south, there is a new southbound-overtaking opportunity that commences almost immediately south of the junction. For a vehicle accelerating out of there, there is an opportunity for following vehicles to be able to move past them efficiently so they are not holding up the vehicles on the highway, and minimising any risk of rear-end collisions.

CHAIR - Mr Shelton raised the issue that Elders Australia might have been closed in Launceston and so Elders would also be running sales. In other words, the capacity would significantly increase at the Powranna saleyards. Could you make some comment about that?

Mr SHELTON - In the past the Launceston City Council has said that the saleyards may close one day and that Elders may end up somewhere else. There has only been a general discussion. I would not like anybody to say that I had indicated that Elders were shifting down there. I just wanted to make that point, that there is a possibility that one day that could become the sale centre from the north and have both companies operating out of that one venue and therefore basically doubling what is there today.

Mr MANNERING - Today is the first day we have heard about that. We think what we have there is appropriate at the moment but we will make more inquiries and see whether the timing it does change anything in terms of our consideration of the project. As we mentioned when we were out on site, if that did happen down the track there is nothing to preclude us being able to come back and make some modifications to the intersection in the future, especially if there is not high certainty about it at the moment. What we are doing is not going to preclude any upgrades from being considered in the future.

Mr VALENTINE - At that site, the current turning facility that is there - it is not really a turning facility, it is almost an access to a farm.

Mr SHELTON - Yes, that is all.

Mr VALENTINE - There will be a turning facility on that side but will it be further west than that current sealed area we went into?

Mr MANNERING - Yes, the turning facilities that will go into Powranna Road will be what we call an off-line turning facility. You turn right into Powranna Road and then you perform the U-turn.

Mr VALENTINE - Obviously, you can turn either way there.

Mr MANNERING - Yes.

Mr SHELTON - One of the difficulties with these situations is that we have already been out on site and asked all the questions. It now is a matter of trying to get them on record so that we are seen to be scrutinising you guys in this process.

There was one issue we talked about along the highway where there is an opportunity to do a U-turn where the break in the road is at Forton access. You might explain to the committee the its purpose of that so we fully understand why it is there.

Mr MANNERING - The turning facilities have been incorporated along the highway with the objective of minimising gaps in the barrier, and to provide U-turn facilities at appropriate gaps for

the public and to accommodate the agricultural needs of the adjacent landowners. We have formal U-turn facilities for public use at the northern end of the job at Powranna Road and also across the road at Belleview Road. The other U-turn facilities along the job are primarily associated with agricultural use and the landowners' needs. We are not signing those for public vehicles. They are very much for familiar users of the site and people associated with agricultural activities of adjacent landowners.

Mr VALENTINE - When you do your surfacing, I noticed that they are using chip seal. Is that the full intention to be chip seal or hot mix?

Mr MANNERING - With this project we are primarily a chip seal. We put down a primer seal for the project initially. That primer seal has volatiles in it. Twelve months later we come back and do a reseal over the top and we use another stone that interlocks with that. It is predominantly a chip seal. Where we have high turning movements from heavy vehicles - P-turns up near the feed lot -we use an asphalt mix for that because of the screwing forces of the heavy vehicles. We do have a mixture on the job but generally we are using a chip seal, which does allow our safety dollar to go further.

Mr VALENTINE - We have noticed on a lot of projects - and not just in the life time of your government, Madam Chair, I must say that - you get a lot of stripping of chips off the top of the tarmac. It is very dangerous. I know in the south-east that there has been a lot of that and I have brought up questions on this in Parliament. I am not sure why that has been. It is absolutely deadly for a motor cyclist, because you have loose rock then smooth and then rough and smooth and it is not great when you only have the size of your fist as grip on the road.

What are we doing to make sure when contractors lay this stuff they are laying it at the right temperature, thickness and aggregate to stop that from happening? It has happened a lot. My colleague says as you drive through various areas, you see bald sections where the chip seals come right off. I have been noticing it has happened a lot over the last eight years.

Mr ROSS - The department has a specification and we contract out these works to a professional contractor to undertake the sealing works. Where they have defects including things like stripping, it is the responsibility of the contractor to then mitigate against any issues. For example, on some sections where there is a strip they have come back and reduced speed.

Mr VALENTINE - That is the trouble.

Mr ROSS - They are also made to sweep these areas and come back and rectify them. It is contractual arrangements and whilst we can have people out of the road who are inspecting this, at the end of the day we are relying on professional contractors to undertake this work.

Mr VALENTINE - That is right. It is a real issue because as soon as it starts to strip off the department comes in and puts in speed limit signs because they don't want to be liable for accidents that might be caused through the insufficient surface. A contractor has to arrange to then reseal it or whatever they have to do. At the end of the day it is very costly to have to go back and revisit things all the time and it is very inconvenient for the public.

Somebody who used to be an engineer way back when I was in the department, between 1974 and 1984, said a lot of this happens because they get the specifications wrong. I would not want to question that at all because I am not an expert. It would be interesting for you to read his article but

it is making sure there is enough tarmac there to have the chip seal embed itself firmly into to the tarmac and the two levels of aggregate he used.

I would like to have some comfort if you can tell me what your experience is on that.

Mr MANNERING - There is no doubt in historic times the department has been well aware of some of those issues arising. One of the key things they did last year is, they have changed their standard specifications. The current roadwork specifications and the ones this project will be built to are actually a slightly modified version of the Vic Roads standard specifications, so the same specifications they use in Victoria.

That decision to change those specifications has been all about getting, not just sealing practices but all road constructions practises, lifting the bar to improve the quality of those things. Sealing is covered by that and the sealing works in this project will have to be accordance with those Vic Roads specifications.

Mr VALENTINE - How long did you say it has been since that was changed?

Mr MANNERING - I think maybe June/July last year.

Mr ROSS - All contracts that have been let since June/July last year.

CHAIR - I understand, and my recollection might not be accurate so please clarify this, that we have extended the limitation period for when they have to repair defects. Did it not used to be that it was only for 12 months and it is a much longer period they now have to come back and rectify defects if the surface strips or does any of these other things on the surface, is that right?

Mr ROSS - If there is a defect on the road within the defects period that is cause to extend the defects period. The contractor not only has to make the original date of the defect period. They will have to fix the defect and the defects period starts again. If you have stripping issues, the superintendent is allowed to extend that period and make the contractors responsible until he thinks it is deemed to be acceptable and fit for purpose.

CHAIR - This came up in one of the very first public works meetings I had in 2014 and there was a change in how we were doing defects. I was trying to address Mr Valentine's concerns that was different from how it used to be, but I cannot remember the detail. Is that right? I want to be sure I am right on that.

Mr MANNERING - I would have to double check whether there has been any change to defects liability period. Certainly historically defects liability period for roadworks was 52 weeks, 12 months. I would have to double check whether there has been any recent modifications.

Certainly as Ted was alluding to is if there is an issue that needs to be dealt with within the period, the contractor is required at the direction of the superintendent to go back and rectify that. Once the defect period does pas, the maintenance contract kicks in when the department then becomes responsible for maintenance. The maintenance contractor in their performance requirements takes over for looking after the road and making sure it is in a fit condition.

Mr ROSS - There is one other change thing we have done. Traditionally, when Ross was talking about a two-stage process for sealing a road. The first one is a temporary primaseal that

generally last for 12 months until you put down a final seal. Previously we have been undertaking final seals as part of a separate statewide contract. We are actually bringing that back in so contractors will be responsible for also doing the final seal. The idea is you are making the same contractor who builds and constructs the initial temporary seal also responsible to do the final sealing process. That is another change from which we will get much better results.

Mr VALENTINE - I might pass the paper on to you for your view obviously it is not giving a direction it is just giving you information that might be worth looking at.

CHAIR - Ross, if you could clarify that information and get it back to Scott in terms of the defect period that would be useful to have please.

Mr VALENTINE - During the construction process one thing that really annoys road users is travelling through at night when there is a 40 kilometre or 60 kilometre sign up. While workers are in place you can understand it. You have to travel slowly. You have signs on the road and you have to remember the slow speeds are there for the safety of the workers. They knock off largely at 4.30 in the afternoon and all night people are travelling at 40 kilometres and getting frustrated. I have been there obeying the speed limits and have had people right up behind. The opportunity for accidents is probably quite significant because people get frustrated and want to pass. Is there any instruction given to contractors they can put a different speed sleeve over those signs once they have finished working on that site, assuming the pavement can put up with a higher speed at night? What is being done to save frustration for motorists during the construction process?

Mr ROSS - Over the last few months we have been reviewing the some projects, especially down south, Kempton to Melton Mowbray, Mona Vale job currently under construction, south of Perth. We have been working very closely with the industry about the level of disruption on the road and frustration experienced by drivers.

What we have been doing is working with the industry to explain to them about the need for us to be more consistent throughout the project, and advising people on the reasons why the speed limits have to be what they are. More recently we have also had a traffic engineer do a review looking at where we can try to maintain high speeds.

We would like to make sure contractors, when they finish a section of works, that they can go back up to a higher speed, or if they can have higher speeds at night. We are working through a process of saying, 'What do we need to do in order to meet that type of requirement?'

Mr VALENTINE - Only where it is safe, obviously to do so.

Mr ROSS - Yes, where it is safe. We are looking at writing that in to this contract as a way of specifying a requirement for the contractor to maintain a safe site, but also to maintain appropriate speeds.

Mr VALENTINE - Does a contractor have the authority to actually put up the speed they think is applicable, or do you dictate to them what speed will be used?

Mr ROSS - They are required to undertake traffic management in accordance with the Australian Standard. The department has a process where we review those traffic management plans before they are implemented. What we are looking at doing as part of this contract is providing more detail in regards to not only in accordance with the Australian Standard, but actually

providing more detail around the performance-type requirements we want in terms of managing the speeds.

We are putting the reliance on the contractor then to work out what mitigating measures they need to do to make sure they can work safe. What we are trying to do in a contractual way, is to promote high speeds where appropriate and reduce speeds where they have to as well. At the moment we do not - we would agree that we do not quite have the balance we would like.

Mr VALENTINE - There are some places where you can travel for three or four kilometres at 80 kilometres an hour and there is not a person in sight. Of course you get people then putting their foot down and around the corner -

Mr ROSS - The speed limits are not only there for the safety of the workers; they are also there for the safety of drivers. In many instances we have other roadside hazards, like drop-offs or machinery or loose gravel.

Mr VALENTINE - No lines or whatever.

Mr ROSS - Yes. We are also managing the safety of the motorists.

Mr SHELTON - I believe I am right in saying, and I get frustrated too driving through this and my wife gets more frustrated, but the reality is the contractor owns the liability on that work site?

Mr ROSS - When we let a contract, the contractor takes on responsibility for maintaining and is responsible for the safe passage of motorists and of their workers through the site.

Mr SHELTON - The line has been covered at any point or whatever, and even though it is not all day, you can understand a contractor not being willing to raise the speed limit. There is some negotiation and I am glad you are working with the industry to try to remove some of the frustration.

Mr VALENTINE - Or refine it.

Mr SHELTON - Or refine it. That is good.

Mr ROSS - It is not just - the department recognises it is our responsibility too.

Mr VALENTINE - You have an overarching responsibility. It is interesting though when they put a speed limit sign up of 40 kms an hour - this morning I was travelling at 40 kms for a few kilometres down the road, and there is a person absolutely right on my hammer like, 'Speed up,' and I thought, no, I am not. Presumably the police can actually book someone for going over that speed. Those speed limit signs are legal?

Mr ROSS - Yes. There is a few other things we are doing. All our contractors work with local police in regards to policing if there is an issue.

Mr VALENTINE - If there is an issue.

Mr ROSS - Yes. Sorry, I lost my train of thought. Give me a moment.

Mr SHELTON - I have no more questions on the actual project itself.

CHAIR - Do you have any other questions specifically?

Mr VALENTINE - No, I have not.

CHAIR - Okay. The fundamental question we have to answer for Public Works is to determine whether this is value for money. Could you address -

Mr CONFORTI - Traditionally the normal process for designing a job goes through three phases, that is, concept design, preliminary design and then detailed design. In the Department of State Growth we have a process of reviewing every one of the stages. There are a number of people involved in the process and some of them are specialised in certain fields who look at the design to that stage, concept, preliminary and then detailed design, and make comments for potential improvements. These comments are taken on board by the consultant, by the designer, and incorporated in the design in each stage.

In addition for the Midlands Highway project we added two additional processes. One is a review from an external consultant. It is another set of eyes from experienced designers to advise us and the designer of things that may have been overlooked or potentially subject to improvement. Another process, perhaps the most important, we also have a constructability review made by an external contractor. They look at the design from the contractor point of view and suggest if there are potential savings or ways to construct the job in a more economical way.

For that review we make sure there is no conflict of interest and do not involve the contractors that potentially could tender for the job. This external review does not have any interest as a consequence to that particular job and they can give us their best advice.

CHAIR - And the outcome was?

Mr MANNERING - The constructability review we are still to embed into the design, but the key thing with this job is value for money. It is an 11 kilometre job and in the report, the P50 cost estimates of $32.4 million works out about $2.9 million a kilometre. This is pretty good relative to the other sections of the highway we are upgrading, especially when you consider the overtaking opportunities we are embedding in this project. Because the barrier is going in and whilst the key objective of the project is primarily is improving safety, we are also trying to maintain safe overtaking opportunities. We are going from having one overtaking opportunity in each direction to three, so have a wider cross section in terms of the upgrade. From that perspective the job does provide good value for money in terms of works delivery.

CHAIR - Very good. Mr Eaton has raised some questions it is worthwhile getting some answers on. Would you like me to read the questions? He has asked the value for money which we have dealt with. The work only provides for a level 3 highway standard, just above the average value - we know the understanding that we are targeting AusRAP3, I do not think we need to explain that. We understand this is what the Midland Highway upgrade is about. Has consideration been given to an upgrade at a future date to allow for a four line highway?

Mr ROSS - In regards to this section of road, the traffic volumes only warrant the treatment we have selected in terms of the two plus one. Our position is the sections we are upgrading are

the northern and southern end and we are extending not existing four lane sections. In terms of future upgrades of this section how far ahead would we have looked at the traffic volumes?

Mr MANNERING - We would have looked at 10 years advance of now in terms of traffic growth.

Mr ROSS - Even then they are still well below any warrant for a four lane section through this section. We are quite comfortable what we are proposing here is going to last for a very long time.

Mr VALENTINE - No doubt the surface will degrade at some point of time over 10 years. The traffic volumes might be greater then the four lanes and possibly need attention.

Mr MANNERING - I will clarify that. From a traffic volume perspective we probably look 10 years in advance. From a pavement perspective, we normally design for 20 years to make sure.

Mr VALENTINE - Can you explain the P50? What does P50 and P90 mean for the uninitiated?

Mr MANNERING - P90 means there is only a 10 per cent chance, or we estimate there is only 10 per chance the value of the project will come in over that value which means P50 is essentially 50 per cent chance of it being above that value. When we are going through our process requesting federal funding for these jobs we have to give them an estimate of what is required and they have some rules about how they want the cost estimates prepared and developed.

State Growth would have been required for this job because it is over $25 million but even on jobs less than $25 million, the department normally goes to the level of detail above where they need to be to meet the federal government's expectations.

Mr VALENTINE - So they are not surprised?

Mr MANNERING - Yes, and they get that level of rigor detail. We work through a process called probabilistic cost estimation. On a simple cost estimate you might work out what you think construction costs are going to be and say at the state we are at in the project and the level of detail, a 20 per cent contingency is appropriate. With this process, we work through each of the significant construction items and look at the potential for variability around quantity of the activity. What the rate might be. We do that for all the things we know about in the job and then we look at contingent risk. They are things we do not expect to happen, but if they did what that might mean for the project. We embed that into the cost estimate and the software package we use runs simulations. It runs a whole heap of scenarios and then it samples some bits of distribution and the P50 and the P90 comes out.

Mr VALENTINE - Weather patterns and all sorts of things would come into that I suppose. You would have your quality surveyor estimates on a standard piece of road but then you might have a lot of geo-technical you have to do.

Mr MANNERING - Yes, that is right. All those sorts of things.

Mr ROSS - It is not only 50 per cent or projects will go over but 50 per cent would come under. So from a program perspective we have a series of projects down the midlands and we are

expecting there to be some sort of variability above and below on each project, but on average all the projects come in at the total of the P50.

Mr VALENTINE - Do you scavenge the current materials on the road surface and reuse in the project?

Mr MANNERING - Yes. That is a big way we provide value for money and what we are doing.

Mr VALENTINE - That is where the value for money comes in?

Mr MANNERING - Yes. We try to reuse the existing pavement wherever we can. A lot of the sections on the highway, depending on their conditions, it depends on the existing seal fitness a bit but we would munch up the existing pavement, put some more gravel on the top and then reshape it to join with the new bits of widening.

Mr VALENTINE - Thank you.

CHAIR - Another question that he asks is in regard to the shoulder widths - the 2.5 versus the 3 and 4 metre shoulder widths. Can you address those issues as I think we have gone for 2 metre shoulder width?

Mr MANNERING - We have two metre wide sealed shoulders with a half metre gravel verge outside that. Because we have the central 2.1 metre median with the flexible safety barrier in the middle, we have also 1.05 on the right hand side of the lanes as well. The width is on the shoulder, and because we prefer people were not stopping on the side of the road in those locations, is enough for them to stop. I am not sure where the 3 to 4 metres comes from. That is not the requirement in Ausroads guidelines.

Mr ROSS - When you are talking about 150 kilometres of road and if you are trying to do an extra two metres on either side of the highway, you would be spending a lot of money and we do not think that would provide value for money.

CHAIR - Very good.

Mr VALENTINE - Two metres wide certainly allows for pedestrian refuge if anyone is walking it and also allows the cycling refuge. It is important to keep in mind we might have those sorts of users on the road.

Mr SHELTON - Just for clarification, I have worked with Terry and presumably the rest know him, he is a traffic engineer and so questions more around traffic rather than engineering of roads so he is about safety and that sort of thing.

Mr ROSS - The treatment we are selecting here is innovative in terms of working in regards to a safe systems approach where the wire rope down the middle was specifically addressing the significant crash history on this highway of head-on collisions and loss of control. A lot of other road authorities are looking at what we are doing and think we are showing some great leadership. Tasmania should be commended in regards to the approach of what we are doing on this highway.

Mr VALENTINE - But we do not use those flexible barriers on really twisty, turny stuff?

Mr MANNERING - No, that is right. There are some constraints on the radius of the curves where you can use flexible safe barriers so yes, where the radii get too tight we go to a semi-flexible steel W-beam or some other -

Mr SHELTON - The reality is that wire rope twisting around a corner will not work.

Mr VALENTINE - No, it does not.

Mr SHELTON - You hit it one place and -

Mr VALENTINE - It will pull out in another.

Mr SHELTON - Yes, it does not actually perform how it is meant to perform.

Mr VALENTINE - So we are not using any W-beam in this?

Mr MANNERING - I will have to double-check but certainly not in the median and our horizontal geometry as you can appreciate from out there on site is very straight for this section of the road. Generally the flexible safety barrier is fine. Now that I have had a chance to think about it there are some sections where we have steel beam and some of those are on the approaches to structures. As we get closer to the structure, we transition the stiffness of the barrier. As on some of the barriers up at the Powranna rail overpass, there is a concrete barrier across so what we need to do is to transition the stiffness down - if we just had wire rope on it and you hit the wire rope, you could potentially hit the end of the concrete barrier. We transition the flexible safety barrier into the steel barrier and then stiffen that up until it transitions into the concrete barrier so it reduces.

Mr VALENTINE - With those W-beams, do you have a lower beam that runs along and protects motorcyclists that come off at that point and stops them from hitting the major post? Do you know what I am talking about? On the east coast they have a heck of a lot of it and its motorcycle-friendly stuff.

Mr SHELTON - A double beam basically.

Mr VALENTINE - Yes. It is just a smooth beam that runs along under the W-beam. I am wondering whether that is being factored into this for those things.

Mr MANNERING - Not on this particular project because of the geometry and its straightness. The department does have -

Mr VALENTINE - On bends? You have that outside bends in particular and -

Mr ROSS - Yes. On this job you are dealing with very high speeds.

Mr VALENTINE - Yes.

Mr ROSS - In terms of motorcycle safety, in straightening some of the horizontal sections, for example, on this job - that section where we are removing the horizontal bend or curve in the road, that is where the benefit is for the motorcyclists in doing that. Also, in providing a clear zone, we

talked about removing some of the trees that are right next to the road. That is where we are providing significant benefit for the motorcycles.

CHAIR - Do we have any other questions?

Mr VALENTINE - This gentleman raises, 'This width reduction is considered unsafe for attending to a disabled vehicle at the road edge'. You did make some comment about the width of the shoulder.

CHAIR - That is what that was about.

Mr VALENTINE - That has been covered, do you think?

CHAIR - It is 2.5 metres and there is another 1.2 metres on the right-hand side of the road for a vehicle coming past that can move into that to get around another vehicle if it had to.

Mr MANNERING - Yes, that is right. The 2.5 metre width is enough for a light vehicle to position themselves off the road. The little bit of room on the other side gives that flexibility for someone to move around.

Mr ROSS - Very much part of the design consideration, especially in the areas where we have a single lane with wire rope on either side, is to make sure that we had sufficient room for a vehicle to park on the side or to undertake some maintenance.

Mr VALENTINE - It could be a truck, could it not?

Mr MANNERING - Yes, it could. Just picking up on what Pete said, along the sections where we do not have barriers on the side because we have not got roadside hazards, we have quite flat batter slopes, which are traversable. They are a 6 to 1 grade so you could get a bit further off the road, apart from just the sealed shoulder and the verge.

Mr SHELTON - One more comment, which I am sure the gentlemen have heard before. We are talking about width now. You cannot engineer every problem out of these things. When you go to create a safe road, there are issues with it. From the agricultural point of view, we are talking of vehicles breaking down. If a slow-moving header, for instance - and they are very wide - happens to break down in a double-roped area, inside and outside, then it will cause a traffic flow problem.

Mr VALENTINE - They are not going anywhere, are they?

Mr SHELTON - We have raised it before. In an emergency situation, if there is an accident and you want to get an ambulance through you can actually rip the rope down and out. In a slow-moving header situation, then there can be substantial delays for the commuting traffic if they get stuck behind that. It is one of those compromises that you have to make.

Mr MANNERING - Yes.

Mr SHELTON - You cannot make the road 30 metres wide in order to cope with that situation where the possibility is very low.

Mr MANNERING - It is one of those things. Some of the turning facilities we have put in and the opportunities for landowners who have property on either side of the highway is to help minimise the number of times they would have to take that sort of machinery down the highway. That mitigates it.

Mr SHELTON - I am mainly talking about contractors getting from one point to the other. Worst-case scenario, inevitably the header will break down when you are in between two roads, not necessarily when there is plenty of room on the side of the road.

Mr VALENTINE - It is called Murphy's Law.

Mr SHELTON - Exactly.

CHAIR - The final question that Mr Eaton has raised, which we have not discussed, is question 4. Basically with the road configuration of two and one with the wire rope in the middle, he is seeking clarification in regard to police enforcement, emergency vehicle access and diversion routes in the event of accidents and closure of the one-lane section of the road. Could you address that issue, please?

Mr ROSS - As part of the last public consultation I talked to some SES volunteers who explained how they would divert traffic around these sorts of sections. They have their own plans that they are developing. They have not raised any significant concerns with us. As Mr Shelton said, you can drop the wire rope if required but there are also sufficient places in which we have gaps in the fence to be able to divert vehicles around any incidents.

Mr VALENTINE - So you can take the wire down. Do the posts just pull out?

Mr ROSS - Yes.

CHAIR - Thank you very much. It has been a pleasure receiving evidence from you today. As I advised you at the commencement of your evidence, what you have said to us here today is protected by parliamentary privilege. Once you leave the table you need to be aware that privilege does not attach to comments you may make to anyone, including the media, even if you are repeating what you said to us today. Do you understand that?

WITNESSES - Yes.

CHAIR - Thank you very much. I declare the meeting closed.

THE WITNESSES WITHDREW.