

**THE PARLIAMENTARY STANDING COMMITTEE ON PUBLIC WORKS MET IN
HENTY HOUSE, LAUNCESTON, ON FRIDAY 14 AUGUST 2009.**

EAST TAMAR HIGHWAY/DILSTON BYPASS

Mr GUNADASA GINNELIYA, PROJECT MANAGER, DEPARTMENT OF INFRASTRUCTURE ENERGY AND RESOURCES, **Mr DAVID CONLEY**, DESIGN MANAGER, PITT & SHERRY, AND **Mr DION LESTER**, PLANNER, PITT & SHERRY, WERE CALLED, MADE THE STATUTORY DECLARATION AND WERE EXAMINED.

CHAIR (Mr Harriss) - Gentlemen, you are all familiar with the processes of this committee. The site inspection, as always, helps to inform committees, especially with roadworks construction, about the terrain in which we are considering the project. It gives a good appreciation of the ground issues so we are grateful for that this morning.

Let us get straight into it.

Mr GINNELIYA - I will start by giving you an overview of the project and this will be followed by the design features and description of technical issues from Mr Conley, followed by the planning and environmental issues by Mr Lester.

Mr GOODES - Could I clear one thing up?

CHAIR - Ron, this is no different to what we have said out on site. This is for the committee to challenge this group as to their presentation to us. You are only one person here with an interest in the project. If the gallery was full and everybody wanted to ask, 'Can I clear one thing up?', or ask the department things - the process has to be that you make your presentation to us after these gentlemen make their presentation. You have the opportunity to listen to the presentation and you can make some judgments about that and add to yours when you give yours to us.

Mr GOODES - I feel you have made a mistake in mentioning that Mr Chandler is from the Dilston Safety Committee because he is not. He is representing himself.

CHAIR - Ron, we have a document. We will address that with you later. It is not a matter for consideration right now. We have sworn the witnesses and until being sworn you cannot even speak because whatever you say has to be on oath.

We need to proceed.

Mr GINNELIYA - In June 2006 the Australian Government and the Tasmanian Government signed a memorandum of understanding to do some upgrading of the East Tamar Highway between Launceston and Bell Bay and I have a copy of that East Tamar Highway Upgrade package. The Australian Government allocated \$60 million and the Tasmanian Government allocated \$8 million, so with that combined package a number of projects were identified between Launceston and Bell Bay. Some of them are shoulder widening, resealing, upgrading of junctions, pavement work et cetera.

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However, the two largest projects were the upgrading of the Batman Highway junction and Dilston bypass. From the time it was announced in June 2006, the department engaged Pitt & Sherry to do some planning work so the planning work started from July and as part of that planning process a number of upgrading options for the Dilston bypass was considered. I have the planning report and it tells us of a detailed assessment of the planning process.

At the end of that planning phase the department also conducted a public consultation phase in February and March 2007 which included a public display and at that time there was overwhelming community support to do the long bypass instead of the short bypass followed by the recommendation given by our consultant based on a number of criteria. The long bypass became the superior choice, as explained at the site visit, for a number of reasons. The long bypass was adopted and then we went to the next stage of the design process which was the preliminary design. At that time there was one scope change, which was the inclusion of the wire rope safety fencing which was not included in the original design. The original package was \$39 million and with the inclusion of the wire rope safety fencing and median strip it jumped to \$43 million.

With that in mind, design works progressed and various consultation took place between the service authorities, property owners, farmers and the council. That went on for some time between November and December 2007 at which time the department submitted the development application to the council. Mr Lester will talk in more detail about the planning issues. At that time we were advised that it has to be a combined rezoning and development application. Based on that advice we submitted an application and we also displayed some of the design drawing at the site of this.

The community at that time had seen those design drawings and they expressed their concern. A meeting was held on 12 December 2007 at which they expressed their reservations. They were happy with the bypass but they were not happy with the northern and southern junction arrangement. Discussions went on and a letter was submitted to the minister. At that time the minister was Jim Cox who in due course announced an independent safety assessment of the junction upgrade which was carried out in January or February 2008. I have a copy of that safety assessment by Mr Robert Morgan, an independent expert from Melbourne. The department agreed at the end of the day that those recommendations were to be fully carried out as part of the upgrade.

The council considered our development application at that time. A lot of meetings were held, there were newspaper articles and lobbying, media releases and questions raised in Parliament. During that time they were all there. The council approved the development application with the recommendation of installing a roundabout at both the northern and the southern intersection. The department was not satisfied with that and we were planning to appeal that development application but we were told by the RPDC that the process we followed was not correct procedure so that planning application was not unnecessary, according to the RPDC -

Mr GREEN - Sorry, was not unnecessary?

Mr GINNELIYA - It was not necessary in the sense that it was not the correct procedure to be followed. We were told that the process was invalid and not required.

Mr GREEN - Okay.

Mr GINNELIYA - We can do the development application directly, and Mr Lester might talk a bit later about that. At that time there was a concerted effort between various parties, between the department and the council. Various media sessions were held between the community groups, the council and the department and there were representatives from the community who went to see the minister through our senior department officials and a process was undertaken to see whether some kind of understanding or compromise could be achieved, but nothing happened. Then the department submitted another development application as recommended by RPDC, which happened in 2009. With that again the council recommended this. They approved the application subject to ensuring roundabouts at the northern end - for the second time. At that time the department decided not to appeal the second application and to negotiate with the council whether a compromise position can be achieved. Through those negotiations a couple of mediation sessions were held. Through those discussions the department agreed to enhance or upgrade the southern junction with one single ramp heading south, which was the biggest concern for the community. For the northern junction the biggest concern at that time was the foggy and icy conditions so that it may be unsafe for people to take right turns heading south. The department agreed to use modern technology to detect foggy and icy conditions which would illuminate some speed reduction signs and advanced warning signs.

With that package of work the council agreed that it is the best compromise we can achieve. It was accepted and we were given amended approval in 2009 and then we started. We are at the moment finalising the detail design. Subject to the committee's decision, we should be able to go to tender soon, within a month or so I suppose. The current cost of the project is \$48.7 million. We intend to complete the job towards the end of 2011. If we find reasonably good weather over winter we might be able to complete a bit earlier as well. We have sent to Canberra to change the upgrade package because the original completion date was at the end of 2009, so they have accepted the change in the timing in that regard.

Mr CONLEY - A lot of what I have said earlier probably covers the situation. We sought these transport efficiency outcomes and the road will be good for trucks. Clearly we have the constraints at each end. You have quite steep approaches in the vicinity of Barnards Creek and you saw the terrain this morning up at Doctors Rise. For the actual bypass itself, it will meet the needs of all road users very well by restricting the grades to 3 per cent. That will keep the truck speeds up. The overtaking opportunities with the two-plus-one configuration should be beneficial to your faster moving traffic and, of course, there are safety benefits with the wire rope.

I guess the debate is probably going to move down to these two junctions. I probably cannot add a lot more about particulars of design. I can be more expansive if you wish but you pre-empted this morning that you would like to have a look at the junctions, and we have these bigger scale drawings.

Mr LESTER - As Guna highlighted, the planning process was somewhat of a saga, it is fair to say. The advice from Launceston Council early on throughout the consultation was that it would require a combined scheme amendment and DA. They did not think that the existing scheme provisions allowed for the submitting of a development application.

The department took the position that that was appropriate and forwarded the necessary documentation to down that pathway for which, as Guna highlighted, the T-junctions and the design issues were one thing. Once it got to the RPDC they came to the decision that it was not required. Under LUPA, if you do not need to change the scheme, if the scheme as it stands now can deal with the development, then you cannot follow that route - from a legislative perspective. So they rejected what is called a section 43A combined planning scheme amendment and development application on the basis that they did not have any power to see it because the existing planning scheme ordinance can accept an application for this road. So we went back and that process took a number of months because there was a statutory public exhibition period and various other periods as council assessed it.

Then the department went back and submitted what was then a valid straight development application. Then, of course, that was subject to some amendment, as Guna explained, with the southern junction. But subsequently the Launceston City Council has accepted the position of the commission and did not challenge that, and accepted the second DA earlier this year and approved it with conditions. It took a little bit longer than probably should have but we got there in the end.

More broadly, from an environmental perspective, the planning issues and Aboriginal heritage are the two key constraints or challenges associated with this route. It is a fairly benign route from an environmental perspective. It goes through what has been pasture and has been for quite a long time. As David pointed out when we were at site, there is the Burnside Mill towards Doctors Rise. There has been a fair bit of work put into that because that is a very historic structure and it has elements associated with its landscape. The trees are one of them and they are quite important. There was quite some investigation into the landscape elements of that Burnside property and also the structural elements. As a result the highway was moved further away and there has been a detailed structural inspection. There will be ongoing work to make sure that the property maintains an appropriate curtilage, which we have, but also that the highway works and the vibrations do not damage that.

There was not a great deal from a flora point of view. There are no threatened species located throughout the route. There are some patches of vulnerable forest, eucalyptus viminalis, and some melaleuca ericifolia, which is a tea tree, in some of the lower sections and which is actually being offset as a result. So the impact that the highway is having, which is minimal, will be offset as part of the rehabilitation and landscaping plan.

It is on an interface between pasture and bushland so from a faunal point of view the key issue with this highway is road kill and there are extensive measures being undertaken for road kill. There are a number of crossing culverts throughout. They have been designed in a fashion that will allow for various native species to go under the highway. Almost extensively along the eastern side of the highway there will be fencing to prevent wallabies and other native animals getting across, so the only way they should get across that highway is through the provisions that we have made underneath for medium-sized fauna, such as wallabies and the like, and also some of the smaller stuff. The culverts are in positions which are low and they take water but you can design them so they are little animal walkways so that when they are carrying water they are still appropriate for devils and quolls and such things to get across.

We have done some extensive fauna work. There were issues raised in the community about the green and gold frog. The route itself does not contain any habitat. There was a second survey looking at between 500-800 metres further upstream from any creek or waterway that crossed the route to make sure that there was no habitat upstream. Similarly with the Australian grayling; every single waterway that it crosses has been surveyed for Australian grayling and found not to contain any. Beyond that, from a flora and fauna point of view, it is a clear site, fairly benign.

Aboriginal heritage: there were two sites and they are indicated on the plan you have that shows the northern junction. No, I think it might be the other one.

There are two Aboriginal heritage sites located along the route and there have been extensive investigations over a number of months looking at those sites, under permit, obviously, from Aboriginal Heritage Tasmania. Those investigations are complete now so there is no further need to undertake any field survey. There does need to be some dating of some of the artefacts that were found, which is a process to inform the final reporting. This will then go to Aboriginal Heritage Tasmania for endorsement and a subsequent permit to destroy the sites, which will happen over the next few weeks in fact, I would anticipate.

Noise is the only other issue I probably should mention. Noise modelling has been undertaken and background measurements taken for this. As you would appreciate, because the highway is moving a considerable distance away from the existing residences the amenity of Dilston and the residences along the route is substantially increased as a result. It is obviously a greenfield site so from a noise perspective the only two properties that are within cooe are the Burnside Mill and Dilston Lodge and both of those are within DIER's guidelines as far as noise is concerned. Both of those actually experience an improvement anyway within their noise because the highway is going from right out the front of their house to many hundreds of kilometres in their backyard.

Mrs NAPIER - One of the issues we looked at was that northern intersection and the extent to which there was an opportunity for southern turning traffic to, if you like, get onto the road. How many cars are likely to be able to sit in that spot and wait for a space to enter the road?

Mr CONLEY - I have a bigger drawing here than the one you have and if I put it in the middle of the table it might assist. The turning volumes are not high there but we have space. As you can see, that is the width of a lane. We made two turning lanes so that there any delayed vehicles waiting to right turn were not holding ones back that wanted to turn left. This was one of the recommendations from Robert Morgan who was the safety auditor. These are very wide traffic islands and they will be highly visible. No-one should be confused about what they are confronting here. The movements are broken up into a series of steps so this right turner has to cross the traffic stream. We have made this wide so that if people misjudge it or approach it with some speed because they saw a car approaching - and bear in mind all the traffic coming up here will be pulling up a fairly steep hill, so even though it is a 100 kph design the grade itself will limit the speeds. I know you only have to put your foot down but the average speeds will tend to be lower. This is quite forgiving and different from perhaps other configurations that you might see in a rural situation in Tasmania, so if someone comes into this at even 30 or 40 kilometres an hour they will not shoot across the road, they have time and a bit

of space to adjust, and of course there is significant room. This is a sheltered lane for several hundred metres and then there is what we call a left-side merge where you will have to merge in with the traffic stream but it enables you to break that move into two distinct sequences.

There is a lot of room for manoeuvre, there are dedicated lanes and the layout should be quite clear. In that sense it should be quite a forgiving design and it is a much higher standard than has been implemented at anything comparable.

Mrs NAPIER - What kind of markings do you use to make sure that someone does not pull into the north-heading lane? If you are relatively new to the area and you have not been into the intersection before, it might be a bit confusing. What kind of markers do you use to make sure they don't pull into the second of the lanes that they have to cross?

Mr CONLEY - I guess it is just obvious because you see this wide open space in front of you. A hazard board will sit here - directionals - which doesn't actually 'Select this lane' but it guides you into it. In a sense it is intuitive, there's not a cross in that lane. It is a much tighter turn to get in there. This layout is based on Australian design standards, this is the way you lay them out and they work, but I suppose to answer the question, there is nothing specific but it is intuitive.

Mr GREEN - What are the sight distances, given the grade?

Mr CONLEY - The sight distance is appropriate -

Mr GREEN - You can get a good look down the hill?

Mr LESTER - You have unlimited sight distance down the hill, basically.

Mr GREEN - We couldn't get to that spot.

Mr CONLEY - No, we couldn't because it's in the middle of the trees but it's pretty much unlimited going down there because of the width of the road and it is pretty straight through there. There is no real impediment to sight distance.

Mr HALL - You gave it as a 100 kmh speed limit coming up the hill, but there is a restriction at the intersection itself?

Mr CONLEY - No. The whole of the East Tamar Highway, other than where it's through towns and so on, is mostly, I believe, a 100 kmh speed limit - it might even be 110 in some. There is no speed sign saying it will be 110 kmh, the same as on the Midland or the Bass Highway.

Mr GREEN - It is only 110 kmh on National Highways.

Mrs NAPIER - It is actually 110 kmh on it and I think that is because it is part of the Federal network. It used to be regarded as a national highway but I notice in this it was referred to as a State link road or something.

Mr GINNELIYA - It's an AusLink road now. That's how we got the money. It's not going to go to 110 kmh, it's designed for 100 kmh and will remain 100 kmh.

Mrs NAPIER - I'm pretty sure that the signs up there at the moment have 110 kmh.

Mr CONLEY - There will be no speed reduction through the -

Mr HALL - Through the intersection - that was the question I had.

Mr CONLEY - No. As it is done currently - and you see on the Midland Highway - there is no speed limit sign posted at junctions; it is only built-up areas that would normally attract speed limits.

Mr HALL - Some attract a 80 kmh speed reduction, don't they?

Mr CONLEY - In some areas they do -

Mr HALL - A couple of hundred metres either side.

Mr CONLEY - More generally in built-up areas, and perhaps on designated roads like the East Derwent Highway from the Midland Highway through to Lindisfarne. It has been pretty much an 80 kmh speed limit for 10 or 15 years.

Mr GREEN - And the Longford intersection.

Mr CONLEY - Yes, which is again -

Mr HALL - Where that speed camera is.

Mr CONLEY - If you looked at lots of intersections on both the Midland and Bass highways, the road to Oatlands, Ross and Tunbridge, there is no speed reduction on them.

Mrs NAPIER - Where there was a reference to the eagles, and there is quite a bit of eagle activity down the river, you are saying that that is an unused nest?

Mr LESTER - It turned out to be a raven's nest. Bill Brown got involved from the threatened species section. There were two. There was an eagle's nest. The diminalis forest is potential habitat for masked owls, but there were no nests. There was a subsequent call back but there were no nests throughout that area. To explain that, often ravens use disused eagles' nests. So it is an active raven's nest; it may or may not be a disused sea eagle nest. They often make them and the ravens use them when they've moved on.

Mrs NAPIER - With the Burnside flour mill, there is quite a bit in your presentation in terms of monitoring the impact on the structure and there is an agreement with people who own it that there is the potential for remedial works, if required. What is your assessment of the likelihood of damage to the Burnside mill?

Mr CONLEY - We think it is a very low likelihood. On one of the overview drawings, this is a big cutting up here. We initially thought it had a lot of rock in it but we have drilled

to the bottom and it is all clay, so given it is soft material there won't be blasting. So probably next to no impact. Again we will be having heavy equipment which generate vibration, but the distance back to the mill is over 150 metres and it is unlikely that the vibrations will be of a level to cause any damage - and we have set a limit on them. We have said that they must put detectors at the mill and equipment must not generate what is called a peak particle velocity greater than a certain limit. If that limit is exceeded - and they have to do tests before they start the work - then they will have to come up with a different construction methodology.

Firstly, we are pretty confident it will not be an issue and, secondly, there are measures in place if things are a little different from what we are expecting.

Mr HALL - While we are on the Burnside mill, it talks about the fact that it is in pretty poor condition at the moment so I presume it is not inhabited at this stage.

Mr CONLEY - No, it is just a shell. I think it has been used as a farm shed in the past.

Mr HALL - That's all it has been?

Mr CONLEY - Yes. It is not restored.

Mrs NAPIER - We have had representation from Mr Goodes in relation to Doctors Hill, and we are about to receive a presentation of that. We went out to the pumping station to look at the area. In essence, the argument is that the gradient of Doctors Hill should be reduced in order to come closer to the average of about a 5 per cent design.

Mr CONLEY - I think to choose between 5 per cent or 6.5 per cent is a minimal gain, unless you are able to make it flat. There is a massive amount of earthworks even on what Mr Goodes is proposing to achieve - the 5 per cent. It raises the embankment height - the large embankment behind Burnside - from 15 metres to 22.5 metres or more. We have said that the height of 15 metres is about the practical limit, not from a construction point of view - engineers can do anything; it is not a structural limitation - but in terms of cost, impact on the environment and visual impact. We have had some difficult negotiations with Mr Hudson at Burnside. He has been opposed to the road from day one and he has been quite open in his statements and has made representations in the political arena. Part of that resulted us in moving the road right up to the tree line to get it as far as possible away from his property. It will be a significant impact as it is - at 15 metres high - I suspect more than Mr Hudson might envisage. That is nearly as high as this building and so on. It will be a big impact. There are measures that can be put in place. It can be screened with trees to attempt to mitigate the impact, but not to go to another level, to take it to 5 per cent, for what I see in the end as a marginal gain. If I were to take this committee out to a couple of areas and say that is 5 per cent and that is 6.5, I do not think you would see a discernible difference. So it is a marginal gain.

On the East Derwent Highway, if you go through Lindisfarne and past Geilston Bay High School heading towards Risdon Vale and you climb the four lanes and on the right is the turn off to Risdon Vale, that is 6.5 per cent. It is not a massively steep road. The Tasman Bridge is about 5 per cent. I would put it to you that there is not a discernible difference between driving up the Tasman Bridge or driving up the East Derwent Highway, and the East Derwent Highway is over 6 per cent. It has a T-junction, crosses four lanes and has

a number of parallels with this. It has an excellent safety record. We would always prefer perfect drain and flood conditions and so on, but I do not believe it is warranted to go to that level of work for what I see as a marginal gain.

Mrs NAPIER - What kinds of costs would we be looking at?

Mr CONLEY - We have not costed that. It would be a large amount of extra earthworks. It is a very big fill. We have a culvert structure underneath Doctors Creek that is already 80 metres long. By raising it seven and a half metres you would add another 30 metres to that. It is 110 metres long. Again, there is an environmental issue. With the length we have we unfortunately create, on a creek, a long dark tunnel which all the little creatures in the creek do not like. If you just focus on costs it is probably a \$1.5 million structure we have there, so if you increase it from 80 metres to 110, say 40 per cent, there is another \$600 000. The earthworks could well be another 50 000 or 60 000 cubic metres at \$15 for each cubic metre, so that is \$1 million in earth works. It would exceed \$2 million and it would really have to be designed so we could look at it and see what the implications are. There would be some environmental issues we would have revisit. There are design costs. We would really have to look at it in detail. It would be a significant change to the project.

CHAIR - Interesting that you gave the comparison between East Derwent Highway and the Tasman Bridge. If you had asked me which was the steeper I would have said the Tasman Bridge, and I travel both regularly.

Mr CONLEY - I am not sure why that is.

Mr HALL - It depends if you ride a bike up the highway.

Mr CONLEY - It might be that on the bridge you get this more closed in feeling, narrow lanes, more traffic, all that sort of thing.

Mr GREEN - What would be the gradient on Doctors Hill right now?

Mr CONLEY - Parts of that are 8 per cent and we are coming up at 6.5 and joining in at 6 per cent.

Mr GREEN - You said it will be changed with respect to road width to enable wire rope barriers to go up the centre of that section. That does that go up onto the next rise, coming up Doctors Hill?

Mr CONLEY - It continues for 1.6 kilometres approximately.

Mr GREEN - Does it continue on past the base of the next hill and up that hill? It comes up on top of where we stood at the pump station and then flattens out. Then takes another rise.

Mr CONLEY - If that is within the 1.6 kilometres then the answer is yes. I am not sure if the map shows it.

Mr GREEN - Yes, it does.

Mr CONLEY - There is a kilometre -

Mr GREEN - It will go right up onto the top of that next hill?

Mr CONLEY - Yes.

Mr GREEN - That has a tradition of being a bad spot, particularly on a icy days at the base of that.

Mr CONLEY - Yes. We cannot take the fog and ice away but I guess that is one of the benefits of the wire rope, that it does prevent that head-on collision scenario.

Mrs NAPIER - Just for the record, I wonder if you could outline how you see these fog and ice warnings applying to the northern intersection. I know we talked about it when we were down at the pumping station but it might be just worth getting that on the record as to how you see it operating and picking up Mr Hall's point about whether it will also pick up instances when the smoke might be as a result of a fire in those hills?

Mr CONLEY - Yes, and Gunadasa might have to help me out here, but I think we will take that as a question on notice about the smoke. It is basically a weather monitoring station and it has sensors in the ground that can detect ice on the road and it can detect fog and it will be linked to an electronic sign at each side. The exact location of these has not been determined yet but you will have signs on the approach -

CHAIR - Similar to Dysart hill, is that the sort of thing you are talking about?

Mr CONLEY - Yes, similar to that - flashing lights and then a predetermined message and there could be a number of messages if it is ice or if it is fog and there will be a posted speed limit. It would become a regulatory speed limit.

Mrs NAPIER - I must say that those signs that are down the highway at the moment are very good where they warn you of a speed change coming up and then they tell you how fast you are going. They are really good.

Mr CONLEY - Anything like an orange flashing light that you can see from a distance, and they are pretty distinctive. If you are travelling along a section of highway, it could be 3 kilometres away, you can often see those orange flashing lights as they are highly visible. Even though it is a long way in the distance it just alerts you to the fact that there is something occurring up ahead.

Mr GINNELIYA - Mr Chairman, I have a drawing which I can show you in terms of that. At the southern most point of the junction there will be a weather station and, as Mr Conley said, they have loops which are linked to the mini-computer program to this speed reduction sign. It will be similar to an electronic sign like that for the school speed reduction. It can be visible even in foggy, icy, wet conditions, it does not matter, and even during other conditions as well. It can be pre-programmed to reduce to 80 or even to 60 and in addition to that there will be an electronic warning sign telling you exactly what it is, whether it is fog or whether it is ice. The warning will come as well and then if the motorists are speeding, there will be another sign that will flash 'Slow down, slow

down; too fast, slow down, too fast' so we will have three messages, a speed reduction and the type of warning sign followed by a third one which tells you to 'slow down, too fast; slow down, too fast'. So it does three things and that is applicable to traffic heading towards George Town as well as traffic heading down south and also coming from side roads as well. I will table this drawing.

Mr HALL - I have two very quick questions to put on the record with regard to the question I asked this morning about any traffic disruption during construction. As we know, most of it is a greenfield site so that is good and that takes out most of the problems but there is just a little bit, I think, towards the southern end you mentioned this morning.

Mr CONLEY - Yes. There will be clearly tie-ins at each end and at the northern end there are some level changes as you join into the work right outside the pump station. There will be some inevitable disruption to traffic and traffic might be forced to travel on a gravel surface for part of that work, which was something I didn't go into this morning. At the southern end where the bypass diverges away from the existing road, we have quite a deep cut in there and it will need to be staged, but it is in the four-lane section so two lanes of the bypass will be built and the traffic will be diverted onto that and transferred onto the bypass and then the remaining two lanes would be constructed.

Mr HALL - We have sometimes criticised in the past with regard to the costings and I must congratulate the department in this case. We have pages on it; it is very detailed.

CHAIR - You had the same detail for the Channel Highway.

Mr HALL - Yes. Not being an engineer, I can only presume that your contingency percentages are correct. Under section 2 'Earthworks' you have, for example, erosion control fabric and a 30 per cent contingency. I would have thought that you'd have a known cost for that sort of thing. I presume that is the poly-type black stuff that they put down.

Mr CONLEY - Yes.

Mr HALL - There is a contingency that adds up to \$135 000 but I would have thought that was a fairly known cost.

Mr CONLEY - The cost is known but the area that you need to apply it to is a bit unknown. It is put on the cutting faces where needed. We have fairly stiff sort of places - you would have seen some of the red clays in that little quarry that we looked at. We are trying to get vegetation over all the cut batters, which is again an environmental consideration. We are trying to prevent rilling and erosion of them and we have quite a comprehensive regime there to establish the vegetation. With some of it we are just hopeful that by applying topsoil at the right time of the year with spray seeding we can get good generation and it is all done and dusted and works well. Some of the more difficult areas might need the erosion control, so that is why there is a variability.

CHAIR - Thank you, gentlemen.

THE WITNESSES WITHDREW.

Mr RON GOODES WAS CALLED, MADE THE STATUTORY DECLARATION AND WAS EXAMINED.

CHAIR (Mr Harriss) - Welcome, Ron. As you noted earlier, we have accepted your submission into the formal processes of the committee. You are welcome to speak to the submission and expand upon it, if you wish.

Mr GOODES - Firstly, at Doctors Hill where we were this morning, opposite the pump station, a section has been recently completed by another contractor. The actual longitudinal grades there are something of the order of 8.4 per cent. I could have measured those for you this morning with a straightedge. That is the Johnstone McGee & Gandy design on the northbound side. On the southbound side the Pitt & Sherry design takes over and that has a longitudinal grade of something like 6.05 per cent. This particular area is the steepest and frostiest part of the whole East Tamar Highway. If we want to look at pictures taken, what they actually look like -

Mrs NAPIER - I think I have seen these.

Mr GOODES - This particular photo here gives some idea of the long, sweeping left-hand bend. It will actually get slightly sharper because this is the existing bend going down towards Windermere whereas the new bypass will be pulling more round to the left. So you are going to have a long, sweeping left-hand bend with longitudinal grades of something like 8.4 per cent, 6.5 per cent, on the steepest and frostiest part of the East Tamar Highway.

Peter Todd, the Chief Engineer of DIER, wrote an official report letter to the City Manager of Launceston - I will read a couple of parts from it.

On page 4, clause 4 he said: 'A large cost investment that will be applied to the Dilston Bypass to give the advantage of a 3 per cent maximum grade design philosophy that has been applied at Dilston. There has been a cost premium to apply to limit the grades to 3 per cent.' That means that any estimates that have been prepared have been prepared for a maximum grade of 3 per cent. That is from Peter Todd.

He also says on page 4, clause 6: 'The project where the bypass rejoins the existing highway as Doctors Rise, trucks would have difficulty stopping and starting on the 6.5 per cent grade when required to give way.' In other words, the Chief Engineer, Peter Todd, is saying in an official letter to the Launceston City Council, that 6.5 per cent is too steep a grade for trucks to work on. With an 8.4 and a 6.5 per cent at this particular spot, and frost as well and a long, sweeping left-hand bend, we are just asking for trouble.

To prove just how dangerous DIER regard it, we have just seen the picture of the intelligent transport system. There are 16 devices there to try to overcome the dangers of it - 16 devices in 1 kilometre. That is what DIER think of it. Further along the road where they have done some new work recently, just past the Dilston Bypass by a kilometre or two, which was all designed also for the 100 kph trucks to speed them up and a fortnight after they were finished they put up 75 kph warning signs. They are not speed limiting signs but yellow signs warning the traffic, warning people that 75 kph was the safe, desirable speed after they had just finished spending millions with Van Ek

Contracting on upgrading the road to be suitable for 100 kph safety for trucks. That, again, is showing just how dicey all of these frosty conditions are. To me, there is not a lot involved in changing them to the grade I have shown. You have probably seen it on the drawing, the 5 per cent. That 5 per cent I have here is for 1 kilometre. The top of it is up near where we drove off the highway and into the pumping station, where that house drive is. That is chainage 8 700 and down there where I've got the other end of it it is chainage 7 700, exactly 1 kilometre away. I designed that so that it has exactly 50 metres fall, which means 50 metres in 1 kilometre is a 5 per cent grade. The extra filling is there, as David Conley said, and is about 7.5 metres. He said it is desirable not to have that, but DIER has standard roadworks specifications - R22, R23, R32 and R4 - and I have worked to those, as you may have seen.

Mr GREEN - With respect to the 7 metres you just talked about, the other evidence we heard was with respect to 7 metres on top of 15 metres.

Mr GOODES - They are both shown on the drawing I submitted of this. Shane, do you have the drawing that I submitted with the yellow highlighting?

SECRETARY - I only got the electronic copy.

Mr GOODES - There is the filling that is going to go in anyway. The current DIER design is down here and that is the 15 metres from there to the pre-cast culvert. There is the other 7.5 metres to give this 5 per cent grade. That 5 per cent grade is going to be much safer than the 8 per cent and the 6.5 per cent. There is no getting away from the fact that this corner is very dicey. The very fact that you have this drawing and the fact that the chief engineer has said that 6.5 per cent for trucks is a grade that is difficult for them to stop and start when they have to give way.

Mr GREEN - We are talking about 22 metres of fill.

Mr GOODES - Yes, 22 metres of fill. That is no particular worry; as David Conley said, engineers can do anything. I have put in fills that are 20 metres high in some of the work I have done over the last 20-30 years. It is something that can be done.

CHAIR - Ron, you have quoted from that letter from Peter Todd where he says it is difficult for trucks to stop and start at 6.5 metres, would you concede then that by not building a roundabout the trucks aren't required to stop and start - that is the very reason for not having a roundabout, so that they can continue on as they come up the grade because they will have the right of passage.

Mr GOODES - Yes, but trucks can be required to stop and start at any time.

CHAIR - I understand that, but I want to get into context for the purposes of this hearing the fact that you have relied heavily on Peter Todd's own comment that it is difficult for trucks to stop and start but that a roundabout would have required them to stop and give way. This proposed design, no matter what the gradient, doesn't require them to stop and start; they continue on.

Mr GOODES - We acknowledge now that roundabouts are not a good idea. At one stage every alderman in the council was pushing for roundabouts - and it is about this time that

Peter Todd came up with this. If you read exactly what he says, it does not only apply to a roundabout. He says, 'It is difficult for trucks to stop' -

CHAIR - To be fair, he is responding to the matter of roundabouts. 'They are not considered the appropriate solution in this case' - that is the heading to that paragraph. Isn't that a fair observation?

Mr GOODES - That thing that I read is in clause 6, which is headed 'Roundabouts', but it is not only referring to roundabouts. You read it.

CHAIR - I think it does, with respect. That is what he is addressing; he is addressing specifically the roundabout 'is not considered the appropriate solution'. It is regarding that issue, a roundabout, and clearly to me that is what he is talking about. Anyway, other committee members will make their own judgment about that.

Mr GOODES - Yes, and at one stage several months ago roundabouts were the hot favourite. As I say, the Launceston City Council at one stage all voted in favour of roundabouts but I did a report at the end of December which said that roundabouts and T-junctions are not suitable on this particular spot.

At the middle of this bend, fair enough you do not have a roundabout, but you have a T-junction. Remember that Bell Bay is the busiest port in Tasmania and it will have trucks travelling 24-hours a day because large overseas freighter ships do not like working only daylight hours. There will be trucks driving 24-hours a day from Bell Bay and most of them will be at least B-doubles and some of them might even be B-trebles. They have to come around here and perhaps get to a depot in time. The same with log trucks.

Are you familiar with the Heavy Vehicle Stability Tasmania report that was prepared by the Government some months ago?

CHAIR - No.

Mr GOODES - This was prepared by the transport industry and the State Government and it was done by some New Zealand experts and paid for by the Government.

Mr GREEN - It was about static thresholds for rollovers.

Mr GOODES - In broad terms the survey report found that at least 12.5 per cent of laden vehicles in Tasmania have poor rollover stability. These vehicles have static rollover threshold values below that which is regulated in New Zealand and also the minimum proposed by the National Transport Commission in the performance-based standards. The survey report also found that 36 per cent of log trucks would not be able to meet the SRT requirement without some reduction in their load capacity.

Now this is a corner where we have shocking frosts and black ice and a long sweeping bend. A lot of these trucks will be working 24-hours a day to cover their hire purchase amounts and we are going to put those into a T-junction which we already acknowledge by putting 16 signs within the one kilometre. By coincidence it is the same one kilometre that I showed on my 3 per cent is really dicey. The other 7.5 kilometres back to the Rocherlea overpass are all pretty right. The designers have done fairly well

in trying to get closer to DIER's 3 per cent grades although there are places where they are 4 per cent, but we have a shocking one kilometre of road which is asking for a black spot to occur. This black spot must not be allowed to proceed at any excuse. Forget about the extra bit of filling. It is not going to be visible from the old valuable flour mill or whatever it is because it is up the hill a little bit and in amongst some very tall trees on some very rough bush.

The culvert - increasing from 80 metres perhaps to 100 metres - will be precast. You are talking about \$2 million but it is not a particularly big culvert. You can see the size of that culvert if you go and have a look along Windermere Road. That same creek, which is called Doctors Creek or Simons Creek, goes through underneath the East Tamar Highway and then comes out through Windermere Road. If you go and have a look at the size of the culvert in Windermere Road, it is not a huge culvert and this one will be exactly the same size. If anything it will be smaller because it has less catchment area. So it is not a huge thing and to make it a bit longer, from 80 metres to 100 metres, is not a big deal. The filling can be found. Along further to the north where Van Ek Constructions were doing some work, they actually went into an adjacent farmer's property and dug him some waterholes to get the additional filling that they wanted for a bit of filling along there, and that was not a bit of road that was going to save lives. It was a bit of road that might have helped trucks. Instead of travelling at 90 kph perhaps the trucks might be able to travel at 100 kph. That was the only reason for that and they went and dug waterholes for a farmer to do that. I am not criticising that. I have done that.

With the West Tamar wetlands, I did the filling for the parking there, for the Lands department when I worked for Works Tasmania. We went along to Eldon Griffiths, an orchardist at Legana, and I extended one of his waterholes to get the filling. I have done the same on a timber bridge approach down at Powranna. There is nothing wrong with digging holes for farmers to get cheap filling. The same thing can be done here one way or another. There is a lot of rough bush that is not used much behind the pump station where we were today and that is right next to this job.

CHAIR - You have made your point well about the filling and about the grade. Where the filling comes from is immaterial, and you have made that point that the grade can be reduced.

Mr GOODES - Yes, and the chief engineer has actually stressed the large cost investment that will be applied to Dilston to the advantage of the 3 per cent maximum grade. I am not talking about a 3 per cent maximum grade. I think 3 per cent is unreasonable. I think he is wrong there, but the 5 per cent is quite a pragmatic grade. That is why I am stressing it and it is only for one kilometre. This black spot must not be allowed to proceed at any excuse. These excuses about an ugly view out of the window of the flour mill or something, why should that be held against people's lives? What if you have a B-double sometime in the next 20 years that goes over sideways as it is going along that long sweeping curve? Driver error is one of the big problems with accidents. If someone coming down that long sweeping curve hits a school bus on a foggy morning or a tourist bus then it is going to be an horrendous smash.

Also, some of these signs will not be regarded. Some will. Some of them do show up well but we have to have these rather sophisticated electronic signs in operation 24 hours

a day for the next two or three decades for them to be effective. The very fact that they have been spelled out is enough to tell us just how seriously DIER really think this corner is.

CHAIR - Okay. You have made that point three times.

Mr GOODES - That is all I want. I just want to get that one kilometre safe.

Mrs NAPIER - The question is where you get \$1.6 million from.

Mr GOODES - Again, David is trying to prove a point. He talks about \$2 million for the culvert, but it is a fairly simple straightforward culvert. It is not all that big. It will be pre-cast at Invermay and put in one at a time. It is not going to be an enormous expense. I do not know where he grabbed his figures from, but this is a dicey thing. He is trying to prove his point and he wants it to go just like it is, but it is going to cost lives in the coming two or three decades.

Thanks for giving me the chance to make my point.

CHAIR - Thank you; it is part of the process.

THE WITNESS WITHDREW.

Mr GEORGE CHANDLER, DILSTON BYPASS SAFETY COMMITTEE AND **Mr TONY WALKER** WERE CALLED, MADE THE STATUTORY DECLARATION AND WAS EXAMINED.

CHAIR (Mr Harriss) - Welcome, gentlemen.

Mr WALKER - Part of the reason I am here today is that George did mention to me a week ago that he might not necessarily be able to get to this, so I undertook this independently but on behalf of the Dilston people. I did not know that George was going to be here today.

CHAIR - Thank you. We would be grateful to hear your evidence to the committee, please.

Mr CHANDLER - Very briefly, originally two T-junctions were proposed. There were two meetings of residents of the Dilston-Windermere-Swan Bay-Rostella-Los Angelos Road communities and as a result of those two meetings a safety committee was set up. Ron is a member of the safety committee, and Tony and I, and we have quite a number of other people who are members.

This area really does need the bypass. It is not just a matter of like; it is need. There have been 17 people killed in that area just in the time I have lived there, and I would not know how many injured. I think the insurance companies work on about 58 injuries for every death so it gives you a bit of an idea.

The main point is that negotiations with DIER and the Launceston City Council and the bypass committee occurred over a period of about two years. As a result a compromise was reached between those three groups and that compromise is, as you have before you, the underpass at the southern junction. We did traffic counts and the vast number, I think 90 per cent, of people travel in that direction and there is an improved seagull junction at the northern end. Residents and the committee accepted that compromise but we do harbour concerns regarding the northern junction.

Mr WALKER - The committee felt that T-intersections on high-speed highways are not a good idea. We looked at the Bass Highway as our example of best practice, where you will not find a T-intersection between Launceston and Deloraine. Everything is either underpass or overpass, as it should be. However, we realise that there are financial constraints on the project. Our original objection was that there are no alternatives for residents of the areas we represented to access the highway and make that difficult right-hand turn, turning south. Acceptance of the compromise proposal took into consideration that the people who would normally use the northern access have an alternative - they can drive down on the old road and use the underpass at the southern access. So for nervous people and inexperienced drivers, for school buses, for people with horse floats - whatever - they have an alternative to access the highway, and that was why we felt that the compromise in all the circumstances was acceptable to the committee.

Mr CHANDLER - I should add that the man in charge of our school buses was most concerned - and I do have a letter from him about that - and so was one of the school bus

drivers who resided in the area. But that was dealt with by DIER in the concerns and, as Tony said, has given us at least one safe method of getting on the highway.

Mrs NAPIER - Given that 90 per cent of the cars go south, what indication is there of the percentage of people who are likely to continue to use that northern access?

Mr CHANDLER - That will be the 10 per cent that head to George Town to work.

Mrs NAPIER - - Okay. So you are saying that the feeling within the community is that predominantly if people wish to go south they are more likely to use the southern access?

Mr CHANDLER - What we are saying is that somebody from George Town in foggy or icy conditions or in cases where there is very heavy traffic, can say, 'Blow it, I am not going to try to cross that lot' and continue right through the length of the bypass and come back the other way. It does provide that opportunity through the road to the overpass.

Mr WALKER - It is very hard to say. The original DIER estimate was 60:40, wasn't it Guna? You are saying 40 per cent on the northern, 60 per cent on the southern. We felt that was a bit heavily weighted to the northern, to be honest; we thought it would probably be more like 70:30, but I guess you cannot really predict how people will behave and people may still try to make that right-hand turn on the northern access if it will be quicker for them. But there is an alternative now for anyone who is nervous about using that access.

Mrs NAPIER - In terms of the evidence presented about the angle of inclination of that Doctors Hill section, is there general community concern about that, or is it more to do with the actual nature of the intersection?

Mr CHANDLER - The concern is that there is a curved downhill slope, and heavily-laden trucks will have a difficulty stopping if there is a problem. It might help if I give an example. About two weeks ago a Jones's garbage truck was parked right near Doctors Creek, in the middle of the road to turn down the old Windermere Road. A loaded B-double came down Doctors Hill, recognised that he was not going to stop, couldn't get through on the left-hand side because of the bridge, so he was going to go on the driver's side and just bore through. Then he saw the car coming the other way, so he locked up everything he could and did a brilliant job of stopping, except the trailer behind jack-knifed and cover-drove the car straight into the bushes near where the creek is. The lady was not hurt. One of the residents who were there said the three of them - the two truck drivers and the lady - were totally shaken up by the whole thing. Those are the sorts of situations that make us concerned. Some are going to use the southern outlet all the time and are not particularly concerned. Others that are using the northern outlet to go north are concerned.

CHAIR - -Just on that example you have just given, what sort of a distance was there in terms of stopping? Just looking at the scale -

Mr CHANDLER - from the time the driver saw it? He would have seen it at about Los Angeles Road.

CHAIR - I am not familiar with the area.

Mr CHANDLER - It is about 200 metres. And that is not very steep downhill - it levels out at that point, but he did get a bit of speed up going down the hill.

Mr GOODES - Talking about people being aware of the grade at the northern end, it is almost impossible to find out what the grade is on Doctors Hill at the moment. I managed to get it - in the DIER office there is a great big green sign which says, 'Plans are available for inspection'. I went in and asked them to let me see the plan that was being worked over by Van Ek Contracting and prepared by Johnstone, McGee and Gandy, (*names are correct*) and one of their men showed it to me - it was in a filing cabinet. That was the only way I was able to realise that that road got as steep as 8.4 per cent. I was able to go in and look at that plan, but most people wouldn't have even been able to read the plan. I haven't been able to look at that plan since because after we had a deputation in Hobart with the minister, the minister realised that there was an engineer living at Dilston who could read plans, and for some reason we were then not able to get access. So most people wouldn't know the actual slope on that bit of road.

CHAIR - Any other questions?

Mr CHANDLER - We are not wishing in any way to back off on what the community and committee have agreed with the council and with DIER. We just wanted to say that is a very brief outline of where we stand, and we have pointed out some of the concerns. But we are not in any way backing out of the agreement on anything like that. What we wanted to say very clearly is that we do need that underpass at the southern end - it is critical. The bypass does take an awful lot of danger from that section.

CHAIR - Thanks very much, gentlemen, we appreciate that. Is there any need to have the departmental people back for further evidence or questioning?

Mrs NAPIER - Yes, I have a question about that grading issue. You heard the evidence presented. I accept what you are saying in terms of it requiring additional fill, which would increase the width of the fill area and increase the length of the culvert that would be required. Given the fact that we are dealing with a curve which can only be avoided if we had slung the road over to the other side of the pumping station, what is your assessment of the risk on that 6-8 per cent gradient in that area.

Mr CONLEY - I guess my assessment is that it is not much improved by making it 5 per cent. The 8 per cent already exists adjacent to the pump station, so unless we look at lengthening the bypass it is not easy to take out. We heard Mr Chandler relate the incident on that section - the traffic goes down there every day now; I guess the complicating factor in the future is that we are putting a new junction in. While there might be a number of near-misses, traffic goes up and down this every day when there is fog and ice. I'm not aware that it is a significant black spot area. I am not saying it is not hazardous at times. That is the evidence from Mr Goodes and we have seen the photographs of the frost and ice. We will have a wider road, separated by a wire rope safety fence, so that mitigates some of the potential incidents. It does not take away every possibility. Once your car loses friction with the road, whether at 5 per cent or 6.5 gradient, if you slide then you slide. There is not enough gain in changing that grade. The work here is significant in design. This is not a small design. This is not protecting

my patch. I do not own this. I have other work to do and I am not trying to defend this process.

The whole thing with road design is the compromise in fitting all these things in. I would not underestimate the cost of doing this. The Doctors Creek element is a substantial structure. It is three or four metres high and five or six metres wide. It is valued at over \$1 million, so to extend it by 40 per cent is \$400 000. I did check the numbers in the estimates, though that is a little different from what I said before. The earthworks will be significant. There will be issues with the northern junction. We have a very steep approach coming up to the northern junction to get onto the highway. If we then lift the highway by another three metres we have an even steeper approach. So there is a flow-on effect from these design changes. Also, I would not underestimate reopening the environmental scenario with respect to Burnside. All of these things have to be balanced against making the safest road we can.

In summary, I don't think there is much difference between 6.5 and 5 per cent. If we felt that this was fundamentally flawed then we would have to look at a completely different situation, not a slightly different one. We feel that this junction will work. We have enhanced safety features in it. It is heavily signed, in response to concerns raised by Dilston people. I have asked how we can mitigate this, and we can put in the flashing lights. It will be well signed and people will be well aware of it.

Mrs NAPIER - If it did turn out to be a black spot, how difficult would it be to overcome the problem, which might include reducing the gradient?

Mr CONLEY - Reducing the gradient is never as easy as right at the start. It is much harder to fix when it is built. It would be a significant undertaking. Were the department to revisit this in the future, you would be looking at a substantial deviation. It would go behind the pump station and be a major project in itself. Having built a T-junction there, with enhanced safety features, there is not a whole lot of cosmetic treatment you could do. It reflects best practice for T-junctions. The next stage is another form of control. We have ruled out a roundabout so if you were to retain it then you are looking at grade separation. That is the ultimate solution, but it is a pretty difficult site, with the steep terrain, to put in overpasses.

Mrs NAPIER - You would probably take that connecting road underneath.

Mr CONLEY - I'm not sure how you would do it. It would not be easy.

Mrs NAPIER - When we were on site somebody gave us a guesstimate of what it would cost if we went behind the pump station in a straight line.

Mr GINNELIYA - It would be nearly \$3 million.

Mrs NAPIER - What is the gradient of the connecting road as part of the T-junction?

Mr CONLEY - It follows the existing highway, and that is about 8 per cent, then it swings around and rolls over to meet highway. We have designed it so that the approach to the junction from 120-odd metres back is sufficient for you to be elevated so you can see the road ahead.

Mr GREEN - Why is there not just a north merge on that northern intersection? Why doesn't everybody who is coming out of Los Angelos Road and going south go on the old road, come out and under the underpass?

Mr CONLEY - So you did not have an entry but just a slip lane and a way out to head north - it is an option.

Mr GREEN - If you can avoid people turning across traffic you are far better off.

Mr CONLEY - We had an early discussion with the community about this. Our understanding was they wanted full connectivity.

Mr GREEN - There is nowhere between that intersection and the southern outlet where anybody wanting to turn south can go. There is nowhere to visit along this road, in other words.

Mr CONLEY - No, that is true. But if someone has slipped out and headed north and gone to George Town and then wants to come home, they will travel 18 kms extra to do so. That is the issue. It is a 9 km bypass. We always felt that full connectivity at each end was the right way to go with the bypass.

Mr GREEN - So the community did not want to have to go down that far?

Mr CONLEY - No, I think that is right. We came to the conclusion about full connectivity. We put that to the first meeting of the community and everyone pretty much accepted it. At various times there was consideration of a single connection in the middle. Again, that still adds 8 kms to the journey. We felt that anything less than full connectivity would meet strong community opposition, so we put this to them. People were pretty happy with that, and then it was just a matter of the particular format of the junctions. In an extreme situation, though, that would be an option.

Mr GREEN - So a lot of thought was given to a central location?

Mr CONLEY - Some thought was, but it was finding the right spot for it. It logically ought to be near Dilston Lodge, which is a heritage property. That area is down in the flood plain and is subject to settlement, unless we put it further to the south. In the end we felt, and you would have seen this in the rollout of wire rope, that if you ask people to go a kilometre extra it is hard to get acceptance. Even in the best case, with a mid-point, it is 8-9 kms extra. They were the factors.

Mr GREEN - I just wanted to make sure it was talked through and consulted.

CHAIR - Ron, we have heard your evidence and the responses of the department and we will make our judgment. Gentlemen, thank you all.

THE WITNESSES WITHDREW.