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THE PARLIAMENTARY STANDING COMMITTEE ON PUBLIC WORKS MET IN THE CONFERENCE ROOM, TALL TIMBERS, SMITHTON ON THURSDAY 15 NOVEMBER 2001.

BASS HIGHWAY - DETENTION RIVER BRIDGE - BRIDGE REPLACEMENT AND REALIGNMENT OF ITS APPROACHES.

Mr GRAEME NICHOLS, PROJECT MANAGER, DEPARTMENT OF INFRASTRUCTURE, ENERGY AND RESOURCES; AND **Mr PHILIP MILLIN**, ENVIRONMENTAL CONSULTANT, MILLIN EMS PTY LTD, WAS CALLED, MADE THE STATUTORY DECLARATION AND WAS EXAMINED.

CHAIR (Mr Wing) - Mr Nichols, would you care to lead?

Mr NICHOLS - I will; I will deal with the bridge and the road approaches and the costing and economic and social justification and Mr Millin will deal with the environmental factors.

This project is one of the nominated projects in the Infrastructure funding which covers this financial year's funding and next financial year's funding, so the \$3.5 million will cover those two financial years. Detention River bridge is located at the mouth of the river of the same name, about 500 metres from the coast. The site is located 37 kilometres from Smithton on the north-west coast of Tasmania. The bridge is a critical element from the Bass Highway, linking Somerset to Smithton and carries about 2 000 vehicles per day; a high percentage of these - 17 per cent - are heavy vehicles. The bridge has a number of deficiencies and, whilst it is only 60 years old, it is reaching the end of its life. Pitt and Sherry, our consultants for this project, have developed a number of options and I will deal with these a bit further on.

The economic and social justification for the project - the need for the project - dealing with that in detail. The bridge has severe corrosion of reinforcement in the concrete. It was built in the 1940s, commensurate with the technology available at the time. This has been found to be inadequate for an estuarine position where we have an ingress of salt into the concrete. There is also expansion joint deterioration, limited width for current vehicles - the bridge is only about seven metres wide; it has curves on and off the bridge which results in the trucks passing fairly close. Minor damage occurs to trucks on a regular basis. There are also an approach road alignment deficiencies and there have been numerous accidents on the road approaches. There is also a need to increase the strength of the bridge to carry increased vehicle masses and high productivity vehicles. All in all, with the number of problems on the bridge, it is not considered to be economically viable to strengthen and deal with all those problems and replacement is seen as the only viable option.

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There are a number of difficulties at the site which meant that we had to look at a number of options for the bridge alignments. We have looked at nine options; we have actually retreated from the ninth and we feel that having looked at all these options - which focused on upstream and downstream alignments of the bridge without bypassing the whole town, which I think would have an adverse economic effect on some of the businesses there - we focussed on four of the options as being the most suitable.

Option 1 was a curved bridge downstream. That involved fairly minimal roadworks - about 400 metres - plus a bridge on the downstream side of the existing bridge. It had very complex geometry for the bridge and also cut off the accesses to the houses on the north-west side of the site. We didn't pursue that any more because of the inherent safety risks with option 1. It didn't have any effect on the BP service station, I might add, or on Myoora Park.

We then started looking at the upstream options and the next option was option 3, which was a logical change - the bridge immediately upstream of the existing and parallel to it. The problem with that particular option was that it had an adverse effect on Myoora Park where there is a stand of *Eucalyptus viminalis* - mature trees that there is quite a bit of interest in. We wanted to minimise that effect on the park and option 3 pushed the road away from the BP service station into that park, which was not seen to be desirable, but had limited effect on the properties on the western side of the bridge. We decided that the next best options would be to skew the bridge a little bit to bring the road alignment back towards the BP service station. After a few options we had a look at option 6, which was quite heavily skewed and pushed the road right towards the BP service station a little bit too far. We then looked at three more options that reduced that skew and we came up with option 8, which actually missed the BP service station and minimised the effect on the park. Option 8 is the one that's detailed in the report to the Parliamentary Standing Committee. It was a little bit trial and error but we did arrive at what we think is the optimal solution.

In description of the proposal, starting at the western end, we start about 400 metres from the bridge. We're picking up the second curve west of the bridge; we're matching the entrance to the houses that are on the north-west side of the bridge; we're providing a shoulder widening for passing vehicles there just to improve the safety into that facility. There are two owners on the southern side of the road in that corner, Mr Dennis and Mr Smith. We're retaining the access to both those people but we are looking - there is a new access road there - at bringing the access in for Mr Smith from Loosemore Road -

Mrs NAPIER - Which one is Mr Smith's?

Mr NICHOLS - Mr Smith is here and Mr Dennis is there. They are related -

CHAIR - We saw that road.

Mr NICHOLS - Yes, that's right. Mr Dennis would like to get rid of the right-of-way that Mr Smith has over his property and up to now Mr Smith has been resistant but now favours the route from Loosemore Road if we upgrade it for him. We're just investigating that but that doesn't really affect the overall design and this access will be retained here anyway to give access to Mr Dennis.

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Mr GREEN - Loosemore Road is towards Smithton?

Mr NICHOLS - Yes, that's right.

Mr GREEN - About another 500 metres or so?

Mr NICHOLS - That's right. The council did require Mr Smith to put that access in and there is a track over which-

CHAIR - 500 metres, is it?

Mr NICHOLS - Yes. Mr Smith is not allowed to bring trucks over this access so he's thinking that maybe it's a good idea to have just one access to his home rather than two like he has at the moment.

Mrs NAPIER - What about that track into the spot along by the river?

Mr NICHOLS - DIPWE want that closed.

Mr MILLIN - May I add, Mr Chairman, closed to vehicle traffic, but obviously they'll allow pedestrians to move into that river -

Mrs NAPIER - If people are going into that, they're going to have cross the road after having come over the pathway on the bridge?

Mr MILLIN - Yes, they'll have to.

Mrs NAPIER - Do we know what the attitude of the locals is to having that closed off?

Mr MILLIN - We haven't actually canvassed that amongst the locals that we're closing that off, but it's one of the preferred options of the department of Environment.

Mrs NAPIER - I've no doubt it is.

Mr MILLIN - It's mainly to prevent vehicles getting close to rivers because river environments are very sensitive and they suffer long-term degradation with vehicles coming and going and the concern is that if that access is left open that it's going to be very difficult to manage that river in the future.

Mr NICHOLS - Moving on, as you can see, the new bridge is slightly askew to the existing bridge. We're providing a walkway on the bridge, as per existing. The proposed pedestrian walkway shown here has been modified so that it doesn't go north of the existing road alignment. As is shown there, it would have quite an effect on the existing car parking arrangements next to the park, so we're bringing it around and then down the existing roadway and under the bridge and back along to the service station on a much shorter route than what is shown there. We're providing access to the existing car parking area as shown. We're also providing parking on each side of the road, as you can see - the eastbound lane is right adjacent to the service station and for the westbound lane we're using the existing highway lane, so we'll mark that out.

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What we're trying to prevent is the situation at the moment with the BP service station where trucks park right across the entrance and block up traffic and cars can't get in and out and if they do there's some element of danger for them. We're providing a median there in front of the service station, which was a council requirement, so that will stop the trucks parking directly in front of the service station and make it a little bit safer.

CHAIR - The median strip will stop that?

Mr NICHOLS - Yes, that's right.

CHAIR - Where will they park now? Is there adequate room for them?

Mr NICHOLS - They will park there and along here. We're providing about 60 metres in each direction.

Mrs NAPIER - Presumably the normal diagonal car parking that's out in front of the service station will be still there?

Mr NICHOLS - Yes. It's just to try to keep the trucks from blocking up the entrance and creating an unsafe situation. As you can see, adjacent to the phone box - which is staying - the new highway is virtually in the same position square on to the service station. As you move east along the service station, the new highway is moving away from the service station. I don't think that will have any effect upon its viability as a service station - it's more of a takeaway shop and general goods. We haven't moved it away far enough that it will be unsighted.

Mr GREEN - Mr Chairman, just while we're talking about the walkway, given that it's going to be a shorter route than was previously determined on here, I noticed in the report itself that you're planning on having it gravelled. Is there any chance that it could be asphalted?

Mr NICHOLS - We could do, but at an additional cost.

Mrs NAPIER - What would be the additional cost?

Mr NICHOLS - It would only be thousands of dollars, it wouldn't be tens of thousands.

Mrs NAPIER - It's going down a slope, isn't it?

Mr GREEN - Yes, I'm just thinking it's a heavy rainfall area and you're up for constant maintenance. There are a lot of people with young children et cetera, crossing over there and especially on a downhill slope, as Mrs Napier points out, gravel tracks are quite dangerous.

Mr NICHOLS - Yes, that's a fair comment. I might just say a word about the demolition because once the project is finished of course the existing bridge will be demolished and in that is probably a more environmentally critical time so we are specifying - and Philip will go through the ins and outs of the environmental side of it - to try to protect the existing abutments at the same time of the previous bridge and we're removing piles from in the river, too. You may have noticed that there are piles and I have had

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representation from a local person who uses the river to pull them out because of the danger of them in there.

Mr GREEN - This is the heritage -

Mr MILLIN - The timber piles, just to clarify that.

CHAIR - What's your reaction to that request?

Mr MILLIN - I think that's a good idea. We have been asked by the heritage people to at least retain the piles that are on the banks so that people can see what was there before.

CHAIR - But the ones in the river will be removed?

Mr MILLIN - That's right.

Mr NICHOLS - Moving on to the last section, we're starting to move back onto the highway alignment in this drawing and the major effect here is on two accesses which we're regrading. The Baptist camp is south of the highway, at chainage zero up to about 120, and it presently has two accesses which are oblique to the road and we're providing a new central access to that site and they're supportive of that and may be purchasing some of the land back that fronts the front of their property. That's a brief description of the work.

There are also sections following that that show what the project looks like at various chainages. The cross-section of the road will provide for 3.5 metre lanes and 1.5 metre shoulders and 0.5 metre verges. On the bridge the shoulders will be 1 metre, in accordance with our standards.

Mrs NAPIER - But there's a footpath on this one, isn't there?

Mr NICHOLS - Yes, there is.

Mrs NAPIER - 1.5?

Mr NICHOLS - Yes. We prepared a concept for the bridge using what the industry considers is a fairly standard beam- the super T beams, 1 200 millimetres deep. In our concept design we have four spans and the piers are shown as blade piers and they will be piled. Our concept design shows the crosshead arrangement. Our specification, which is being written at the moment, reflects the basic parameters of this design so, for instance, we've specified minimum span lengths of 20 metres which means that the bridge will either be four or five spans maximum.

Mr GREEN - What is it now?

Mr NICHOLS - Only about 13 metre spans and that's 65. There would be about five spans but they're very short.

CHAIR - So the exact number will be determined by the contractor?

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Mr NICHOLS - Yes, that's right. It will be a design-and-construct contract.

Mr GREEN - Are they driven piles?

Mr NICHOLS - Yes.

Mrs NAPIER - Can I just ask a question about that footpath. At the moment if you want to come from the service station behind the bridge or if you're coming from the other side of the river from the township and walk across the footpath and you actually have to do that loop to go under to go to the service station and, if I recall most people have been taking a shortcut straight down that bit of a hill, I just wonder whether it was sensible to put a series of steps up parallel with the bridge so if people wanted to go up or down the steps then they can or they can do the loop because otherwise people are going to make their own way. A lot of people, if they don't need that gradient and are in a rush, it would otherwise actually going to be encouraging them to cross the road instead of having to do the longer walk.

Mr NICHOLS - That's why we've shortened the loop to about half its length with an occasional step -

Mrs NAPIER - Would it be much more expensive to put an option of some steps up the side there where people are obviously going?

Mr NICHOLS - I think we've probably managed to cover that. We were thinking of doing that with this big loop but -

Mrs NAPIER - I'm not opposed to the loop at all because I think if you've got prams, little kids or if you're an older person you're going to want to do the longer loop but for a lot of other people they'll take that shortcut anyhow. I was thinking, in order to reduce the excuses for taking a shortcut across the highway, if you actually know there's a series of steps down and it's a quick, safe trek underneath the bridge, it's just a good way to keep people off the highway.

Mr MILLIN - If I may just respond, the actual loop cuts in along the alignment of the existing highway so, in effect, where you would be proposing to put the stairs is where the loop cuts back to come down below the bridge. There won't be much of a difference on the return footpath.

Mrs NAPIER - If it's a much shorter loop, then people are going to have less excuse to cross the road?

Mr MILLIN - That's right. There are also guide barriers that extend further along there.

Mr NICHOLS - On the bridge we have nine metres between kerbs and a footpath 1.5 metres wide. It will be a reinforced or pre-stressed concrete bridge, not steel. There are a few words here that describe reasons why we selected this type of superstructure and span lengths to the bridge's fairly uniform geometry. The bridge is straight, it doesn't have complex geometry. It has a skew but it doesn't make it a complex bridge to design or construct. We have used precast beams of a reasonable weight because craneage becomes a critical issue. We have avoided putting the abutments in the water building out

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because of the fact that the side that we would probably build out on would be the eastern side where the river bank cuts back but, unfortunately, that is also where the deep water is and that would have an undue effect on the force of the main river channel. We have also opted to use stainless steel in the concrete to give us durability and protection because, being in a saltwater environment we need that protection. By using stainless steel we are trying to get the full 100 years' life that we seek, if not perhaps more. We believe that is probably a good way to try to achieve those durability requirements.

Most of the structure will be built from reinforced or pre-stressed concrete except for the fences, which will be galvanised and painted steel or aluminium. Asphalt will be provided on the superstructure and in our concept design it will be quite thick at the centre to give the cross falls across the bridge, but it will be 50 millimetres minimum thickness at the kerbs.

Just a final word about the demolition: the piers and poles will be removed to riverbed level. I noticed in the specification we have put that it will be 300 millimetres below riverbed level.

Social impacts. I have mentioned that we have two landowners affected and they are both located on the south-west side of the project. We will be acquiring land from both those people on their frontage. We are making some alterations to the hard stand in front of the service station to improve safety there.

I will just pass over to Philip to talk about the environmental effects.

Mr MILLIN - Mr Chairman, I will deal with the environmental effects of the site and touch on some of the social and heritage issues as well. The site itself is located in an estuary of one of the many rivers that drain the northern part of Tasmania. It is regarded as a sensitive environmental area. The bridge itself will be constructed at the head of what is called Pebbly Bay where the Detention River flows into Bass Strait. The bridgeworks and the associated roadworks will affect both the terrestrial environment being on either side of the river and the aquatic environment of the estuarine area. I will deal with each of those separately.

On the terrestrial side, one of the main constraints faced with the alignments of the various options that were considered in the design was the presence of a parkland called Myoora Park on the north side of the highway on the eastern approach. Myoora Park is recently named, however it has been a recreational area for many years. Circular Head Council presently has a lease on the land until 2058, I believe. The area itself is regarded as very high conservation significance. It is what is called a coastal white gum forest or *Eucalypt viminalis* and in this part of the coast there are only two of those remnants left - one here and one at Pegs Beach. Our initial discussions with the Department of Primary Industries, Water and Environment was to try to minimise the impacts on that Myoora Park to the extent possible. The options we considered, the one on the downstream side of the existing bridge structure, would have had fairly big impacts on that Myoora Park, as well as the residences on the west side of the bridge. The other alignments which brought the road across and providing the curvature would have extended further into that Myoora Park area. The adopted alignment was a fair compromise between maintaining safe distances from the existing service station and cutting into the edge of that Myoora Park coastal forest area. In the discussions we've had with the conservation

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division in DPIWE they were quite satisfied that we would minimise the impact on the older part of the forest, however there's a number of trees - I'll estimate about 60 or 70 - that will be taken out along the northern side of the highway.

CHAIR - There are plenty left, aren't there?

Mr MILLIN - There are a number further into the forest and our argument was that the edge bit that we were taking out would not affect the older more mature trees further to the north and our mitigation measures would be that, upon completing construction, we would replant densely vegetation to stop rubbish being thrown into the Myoora Park area. The park itself, there's a plan of management being developed for that and we've been sensitive to that plan of management and tried to work in with what the local community desired, including the Circular Head Council personnel and the personnel from the Department of Primary Industries, Water and Environment. That's all I would like to say about that bit at this stage.

Further along the eastern approach the road is very close to the arm of Wilsons Creek, which is still within the estuarine area of the low Detention River, and as the alignment moves further north is also starts impacting onto that estuarine area which could make embankment fills or what have you a bit more complicated but it would also have a bigger impact on the estuary itself.

I will talk about some of the fauna that lives in this part of the world. What brings me there is that in Wilsons Creek there is known to be the giant freshwater lobster or crayfish, which is a threatened species, so impacts in that area really needed to be minimised. The other threatened species that is thought to be in the area is the Australian grayling - that is listed both in the Tasmanian legislation and the Commonwealth legislation. The construction methods and the mitigation measures that are proposed for this project will aim to reduce impacts on those species and we believe overall the impacts will not be significant.

Mr GREEN - There's no bridge work on Wilsons Creek though, is there?

Mr MILLIN - Not under the present contract, no. The roadwork stops before it gets to Wilsons Creek but if the alignment was further to the north then the roadworks, where they run parallel to Wilsons Creek, could start impinging on that part of the estuary.

Mr GREEN - There's no lobsters in the estuary?

Mr MILLIN - Not down below there, higher up.

Overall water quality - one of the potential impacts is generally on the water quality of the estuary and with the bridge construction and the road construction there's obviously potential for turbidity, which is basically eroded soils and run off into the water, concrete washings and cement spills and what have you from the bridge construction, and probably of more importance is using heavy machinery with hydraulic hoses and what have you, the spill of oils and fuels during refuelling. Those measures have been recognised and there are specifications written into the contract to compel the contractor to take all precautions against spills and minimising turbidity and run-off into the river.

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As far as flooding is concerned, it's not expected that the waterway will change or the flooding regimes will change as a result of the bridge and one of the key mitigation measures against impacting on those threatened fish species is to maintain the channelway throughout construction so the passage from the estuary into the upper parts of the river is not impeded.

As far as the terrestrial environment is concerned on the western approach, there's some valuable vegetation communities at the western-most extent of the works which will not be impacted. There's a little fernery down there, which is a natural assemblage of native fern plants, which will obviously be pointed out and marked for protection during construction and the other issue is the riparian - the trees along the river zone will be impacted on in the immediate area of the bridge but again the extent of clearing and so on will be limited during construction.

There are a number of other species in the terrestrial area that are known to use the area, namely the spotted tail quoll, the eastern bandicoot and the eastern quoll. Evidence of those is from road kills in the past and there's really little that can be done about mitigating impacts on those sorts of animals. What we will attempt is to ensure passageway beneath the bridge on both sides between the abutment and the first pier so that there's some passageway there, but it's very difficult to stop animals from crossing roads otherwise unless you start using fences and tunnelling and what have you. It wasn't considered warranted to do that in this project.

I would like to talk about the historic setting of the bridge. Going way back to the early part of the 1800s it was the crossing point for the road from Wynyard to Stanley. The first bridge was a horse bridge - 1860s, I believe. In 1907, a timber bridge was built - we can still see remnants of that bridge, being the timber piles in the river channel and then there's some masonry abutments on either side. That bridge, while at least it's site is recognised as having historic heritage and the actual remnants on the river bank will be protected during construction. The piles in the middle of the river, we've decided that those really need to be removed because of their hazard to navigation of the river and that will be discussed with the Tasmanian Heritage Council prior to the work being carried out.

The historic abutment on the eastern side won't be affected by the construction, however on the western side the masonry abutment is right next to the existing abutment and during demolition there's potential that that might be damaged somewhat. The contractor will be required to repair that using historic materials and try to reinstate what is there at present.

The other item of heritage values is a monument to the Dallas family who, I believe, ran the shop for a number of generations and generally served the transport industry. That monument is outside of the construction area and will be protected from things like stockpiles and storage of machinery and plant for the bridge construction works.

With respect to the Aboriginal issues, there was an Aboriginal survey carried out of the area and, due to the extensive disturbance since the area has been settled by Europeans, there were no relics discovered on site. It is however recognised as an area of importance to the Aboriginal people because of their long use of the area, so one of the important matters there would be for the contractor to be aware of the possible presence

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of Aboriginal relics and to take the appropriate steps if any such relics are discovered during construction.

Mr Chairman, that's about all I have to say about the environmental controls and the historic and heritage controls.

CHAIR - Thank you very much, Mr Millin.

Mr GREEN - Mrs Napier made the point about the road access on the western side or that existing track and you mentioned that the department want that track closed off, would there be provision on that side of the new roadworks for parking along -

Mr NICHOLS - No, we've made no provision for it. People entering that area will have to walk into that area.

Mrs NAPIER - Do we have any idea of how many people use it?

Mr GREEN - I have never seen anyone there, personally.

Mrs NAPIER - Just from the wear on the track it looked as if it gets used reasonably often from what I could see. Presumably, it's a good fishing spot.

Mr GREEN - Well, it might be at some stages but it's not the side of the river that the channel is on.

Mrs NAPIER - Yes, true.

Mr GREEN - Obviously people go there for some reason. There is an old track that runs parallel with the fence there, isn't there?

Mr NICHOLS - Yes, that's right.

Mr GREEN - That will be where the new road enters, I take it?

Mr NICHOLS - That's right. We're moving the fence back there to make way for the new road alignment.

Mr GREEN - So you'll be acquiring some land from Mr Dennis or Mr Smith?

Mr NICHOLS - That's right.

Mr GREEN - And there's no provision to have a bit of a buffer between that boundary fence and -

Mr NICHOLS - There will be a little bit of ground but not a great deal, just enough to allow the roadworks and drain and not a lot more.

Mr GREEN - When I walked along there when we had our site visit that track only went about another 25 metres beyond, so I assume that once the new road goes in that that will

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cut that back probably to about 10 or 15 metres in terms of the available access for that track.

Mr NICHOLS - Yes, that's reasonable.

Mrs NAPIER - I would be interested in - I don't have local knowledge about that - but I just know if you've got a good spot and people like going in there then they're going to get there one way or the other, so the only other option they have is to presumably go in and park in some area where this access for the houses are on that side and then walk across the road.

Mr NICHOLS - That's quite feasible.

Mrs NAPIER - There is adequate parking so that they would be able to cross not - if you have them crossing at the bridge that's probably the worst spot -

Mr NICHOLS - There's a large area for parking on the other side of the bridge, which is not much further to walk.

Mrs NAPIER - Yes, but the concern about that one though is you have them walking - they have the footpath but then they have to cross the road.

Mr NICHOLS - They would anyway.

Mrs NAPIER - So that really raises the question of how many people use it and I guess we just need a bit of local knowledge on that. Do any of the people in the houses there know what the usage rate is over there?

Mr MILLIN - We haven't actually canvassed that particular issue with the local population because all along we had been looking at trying to improve that access. The initial designs were to try to make that access more freely available but then we looked at the safety issues of usage of an access straight off the bridge there by vehicles was one factor and the other factor was when the project was presented to Crown Land Services, to the various divisions of the department of Environment they came back and one of their main management approaches, I suppose, to these natural areas is to try to minimise vehicle access into places where there are no formed roads.

Mrs NAPIER - If you keep people out it's much easier to look after the place.

Mr MILLIN - Well, in a sense it is, yes, but trying to keep vehicles to roads and letting people enjoy those sort of natural settings to walk in.

Mr GREEN - On the issue of the removal of the old pylons, I think that's a very good idea. It surprised me. There is an issue with regard to young people diving off the bridge. Is there provision for appropriate signage?

Mr NICHOLS - We're moving a long way away from the existing bridge - do you mean the piles of the old bridge?

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Mr GREEN - I'm raising it because every time I have gone past and seen young people jumping and diving, those pylons are just there and it's a terrible worry.

Mr NICHOLS - We'll 10 or 15 metres further away -

Mr GREEN - Yes, but I still don't think it's appropriate to have people diving off the bridge there in a tidal river such as that. Will there be appropriate signage to advise people that there is no diving?

Mr NICHOLS - We haven't thought of providing it, but it's probably a thing to raise.

Mr GREEN - In terms of the demolition of the old bridge, with the contract itself, has it been built in that that material is to be taken to a specific area as part of the demolition?

Mr NICHOLS - No, we really leave it to the contractor to come up with the solution to that problem.

Mr GREEN - I see.

Mr NICHOLS - The same as with Sorell, it's probably easier for them to come up with a multitude of solutions rather than us to focus on one.

Mr GREEN - Right. I'm aware of a couple of projects on in the area that could probably use the material, so that hasn't been predetermined at this stage?

Mr NICHOLS - No, but what I can do is at the pre-tender meeting bring these to the attention of the contractor. If you could provide me with those projects that are looking for material, I will pass that on to the contractors and they will then approach those organisations.

Mr GREEN - Thank you, I will do that. Obviously when the construction of the bridge and the road is underway there will be quite a bit of activity around the existing business there, what sort of consultation has there been with the business with regard to the interference that the construction is going to have? I am aware of other road constructions that have caused myself, as a local member of Parliament, a lot of heartache in people not wanting to visit the business once the construction work actually starts? Are the business proprietors well and truly aware of the -

Mr NICHOLS - Yes, definitely. Mrs Dennis has seen the plans and we've consulted with her a number of times on it. She hasn't raised that question at this stage. I guess there will probably be an issue when they're working on the northern side of the road adjacent to the BP service station when it will be difficult for eastbound trucks to park on that side.

Mr GREEN - That was the point I was getting to, is there going to be some provision for allowing vehicles to get off the road so they can still patronise the business during the construction phase?

Mr NICHOLS - To be honest, that will be fairly difficult because they can't have trucks parked right in the middle of the roadworks and until they've finished the roadworks

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there's no car park on that side of the road. It's a bit of the chicken and the egg type situation. We can't really extend the damage to Myoora Park by putting in additional earthworks just to provide temporary parking. We really want to minimise the effect on the park and we've certainly made an undertaking to all concerned that we'll do that. It is a vexing question.

Mr MILLIN - The only comment I could make is a general specification in the contract to make allowance wherever practical and feasible through the construction phase but it would be very difficult to actually section off part of the contract area to say, 'That is for parking and the contractor must make provision for that' because they'd need the access for their working machinery of course.

Mr NICHOLS - I think what will happen is that the contractor will come in and do the basic earthworks which will enable him to get to the bridge site. If we award this project about April - March-April is what we're looking at - so he will probably have a couple of months to do the earthworks and then he'll start work on the bridge. During the next *x* number of months there won't be any work happening on the northern side and probably very little work happening on the northern side anyway while he constructs the bridge. Then he'll come back in October-November and complete the roadworks once the bridge is well and truly nearing completion. Whilst there will be a few months of disruption, it won't be 40 weeks of disruption because the extended time is to allow the bridge to be constructed, not the roadworks.

Mr GREEN - There is only one other question, Mr Chairman. The turn-off, if you're heading east turning right into the Baptist camp there, is there going to be provision for a right-hand turning lane within that?

Mr NICHOLS - Not a right turn slot. Actually, I don't think we showed that on the plan - no, we haven't - but we have since provided a left side widening - the most basic turning facility which is just a short widening. The volume of cars don't justify anything more than that.

Mr GREEN - What about turning right heading west into the housing development?

Mr MILLIN - On the west side of the bridge?

Mr GREEN - Yes.

Mr NICHOLS - There's a passing bay shown on the first plan.

Mr GREEN - That widening there?

Mr NICHOLS - Yes, that's right. That is the same standard as what we're providing at the camp.

Mr GREEN - Right.

Mrs NAPIER - So it's wide enough for a car to be able to travel on in effect?

UNEDITED TRANSCRIPT

Mr NICHOLS - Yes. If someone is propped in the middle of the road turning right a car can move to the left and get past it without too much hassle.

Mr GREEN - The markings on the road don't ensure that people travel that lane all the time.

Mr NICHOLS - No, that's right. You need a right-turn slot to get to that standard and the traffic volumes don't justify that standard. We do have a formula - and I can't quote from it; I haven't used it myself - that enables us to make a calculation and determine the volumes that require that. There's three levels of right-turn facility. Type A is what we're providing and then there's type B, which is a much superior facility, still a left-side turning facility and then type C is the right-turn slot, which is the highest standard. We generally only use that if it's a reasonably major junction.

Mr GREEN - I can't see where there'd be much additional cost, given that you're broadening the road there at that stage. It's just ensuring that the line markings are appropriate.

Mr NICHOLS - Down at the Channel Highway where we've provided right and left turn slots the cost of those is \$250 000 each but that's full right and left.

Mr GREEN - Yes, similar to what they've done in some sections of the Bass Highway.

Mr NICHOLS - You might be looking at \$100 000 to provide a right-turn slot, where this is a much reduced facility and I'm not too sure what the cost of that would be but probably only \$20 000 instead of \$100 000. A right-turn slot would probably come right back to the bridge by the time we've got the chevron and extend right up until the next corner. It's a much more substantial facility, hence why we're looking at so much more money.

CHAIR - Thank you very much, gentlemen. We appreciate your evidence and your submission which is easy to read and the right size paper and is very good.

THE WITNESSES WITHDREW.